
Sensor Actuator Interface**Introduction**

SAI Passive

SAI Active

SAI accessories and bus system accessories

FBCon

JACKPAC® signal converter

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one side without connector

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SAI accessories / Bus system accessories

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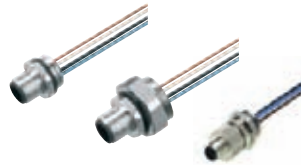
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Universal Pro

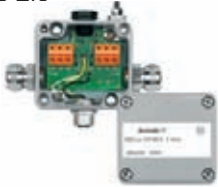
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JACKPAC® signal converter

JACKPAC®

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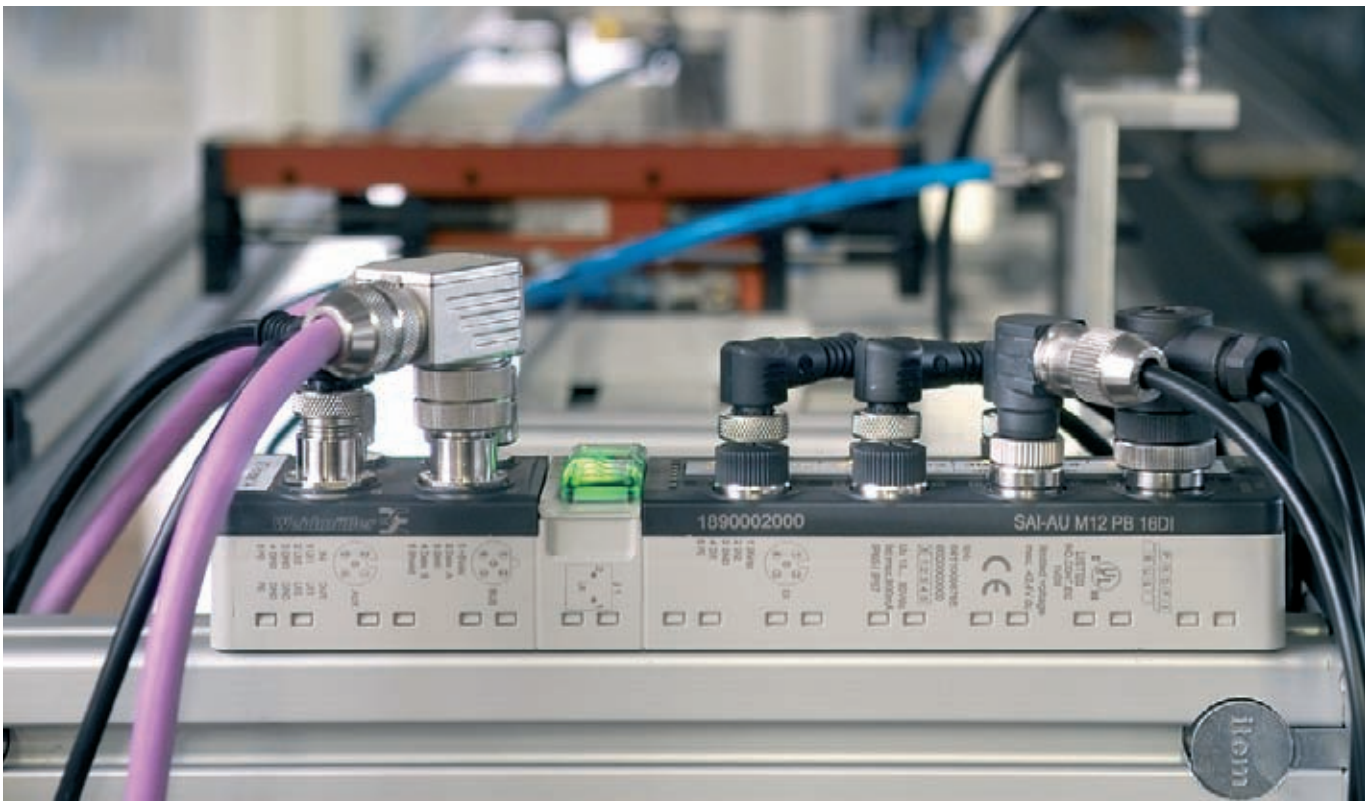


Sensor Actuator Interface

Introduction	Sensor Actuator Interface	A.2
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Quality down to the smallest detail

It is not just by chance that Weidmüller finds itself among the global market-leaders in the distributors sector. In their development of SAI distributors, Weidmüller engineers – often in cooperation with major users – have always concentrated on achieving rational, cost-effective installation concepts, and have supplied the markets with well-conceived products. Those products have set standards in terms of functionality and quality – worldwide. The best example of this is the new SAI Universal Pro System for sensors and actuators, which reliably optimises installation time. These days, often the only way of achieving savings is by simplifying the installation work and improving the reliability and safety of the products. And that means quality right down to the tiniest detail. Therefore, modern installation concepts have to be designed to save materials, money, time, space and weight right from the outset. Products that enable such concepts are therefore vital. And this is exactly where you can rely on Weidmüller’s quality, experience and power of innovation.



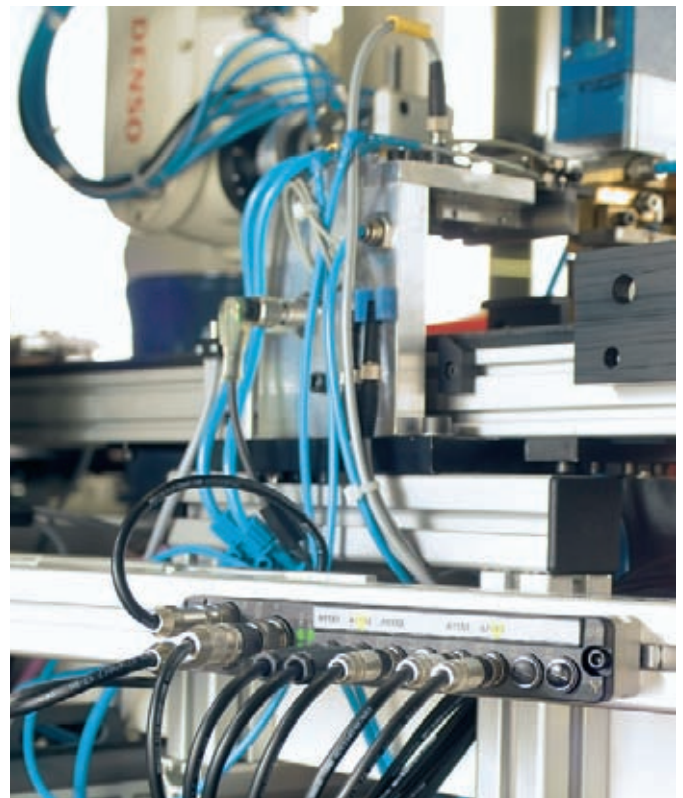
Weidmüller can supply SAI distributors in all customary forms, with four, six or eight connections as required in various designs – for normal and extreme applications.

SAI distributors from Weidmüller are integrated into machines and systems by “direct mounting”. They combine the signals from sensors and actuators within the machines and systems themselves. This is an easy way of cutting installation and service costs because we use pre-assembled cables and conventional M5/M8/M12 round plug connectors. On the other side of the distributor a bus cable leads to the control. Depending on which type of SAI distributor is being used, the bus cable is either permanently attached (SAI-F) or can be connected to screw or tension clamp terminals (SAI-M). This latter form greatly enhances ease of servicing and cuts the cost of materials drastically. A fault in a cable means that only this connection terminal with its hood has to be replaced, and not the whole distributor.

Another practical detail is the generous size of the marking area. That encourages clear labelling, which in turn simplifies fault-finding and maintenance work, and cuts downtimes to a minimum.

Halogen Free – UL listed cables for 2 million cycles.

The Weidmüller standard SAI M12 and Push-Pull distributors have been upgraded by the addition of halogen free busbar cables. Furthermore, the cable has a UL listing. This top-notch quality is a great help to users when applying for approval for the complete machine. Moreover, the line is certified for 2 million cycles at 10d. This capability exceeds that of many standard cables currently on the market. And another bonus: these extras will not cost you any extra!



Sensor Actuator Interface Passive

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Sensor Actuator Interface Passive – Overview



Technical data

Material data		M5	M8	M12
Insulating material	Housing	PA 6 GF	PBT (UL 94 V0)	PBT (UL 94 V0)
	Contact carrier	PA66	PBT (UL 94 V0)	PBT (UL 94 V0)
Base material	Contact	CuSn4	CuSn6	CuSn6
	Screw socket	CuZn, nickel-plated	CuZn, nickel-plated	CuZn, nickel-plated
Temperature range		-25 ...+90	-20...+90	-20...+90
Colour	Housing	grey, RAL 7032s	grey, RAL 7032	grey, RAL 7032
	PG & contact carrier		black	black
Cable sheathing		PUR	PUR	PUR
Cable type		PUR/PVC	PUR/PVC	halogen free, UL
O-ring		Viton	Viton	Viton
Housing seal				foamed PUR
Type of connection, hood version			tension clamp	screw/tension clamp
Clamping range	mm ²		0.08...1.0	0.08...1.5
AWG No.			28...18	22...14
Stripping length, hood version	mm		100	100
Stripping length, screw version	mm		–	7
Stripping length, tension clamp version	mm		7	10
Contact surface			tinned	tinned
BL3.5 / B2L				
Contact base material			Cu alloy	Cu alloy
BL3.5 / B2L				
Torques				
Hoods	Nm		0.8	0.8
Blanking plugs	Nm		0.5	0.5
Mechanical data				
Ingress Protection Class*	IP	67	68 (M16/M23 IP67)	68
Suitability for cable carrier	cycles at 15d	1 million 15d	1 million 15d	2 million 10d
IDC connection				
Max. connect. frequency of a cable with same cross-section				–
Stripping length	mm			–
Conductor cross-section (flexible)	mm ²			–
Smallest strand diameter	mm			–
Conductor insulation material				–
Conductor outside diameter	mm			–
Cable outside diameter	mm			–
Pin assignment				–
Electrical data to VDE 110 (Apr 97)				
Operating voltage	V-	10 ... 30	10 ... 30	10 ... 30
Max. current carrying capacity per I/O signal	A	1	2 (Derating)	2 (Derating)
– total with single supply	A	3	8	10 (9 A for F-version)
– total with dual supply	A	–	–	2 x 8 = 16
Rated voltage	V _{eff}	24	32	32
Test voltage	kV _{eff}		1.0	1.0
Pollution severity			3	3
Insulation resistance	Ω		> 10 ⁹	> 10 ⁹
Other data				
Dimensions	see drawings on page	B.56 - B.57	B.48 - B.52	B.10 - B.15
Fixing holes	see drawings on page	B.56 - B.57	B.48 - B.52	B.10 - B.15
Function indicators				
for operating voltage		1 LED, green	1 LED, green	2 LEDs, green
for I/O function		1 LED, yellow (per function)	1 LED, yellow (per function)	1 LED, yellow (per function)
Current isolation (SAI-... -M)			–	via 2 jumper plugs
Cable strain relief (SAI-... -M)			M20	M20
Max. cable diameter (SAI-... -M)	mm		10–14	6–12

* only when plugged in and secured



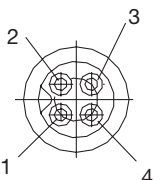
Technical data

Material data		IDC	M12 Push-Pull
Insulating material	Housing	PBT (UL 94 V0)	PA 6 GF
	Contact carrier	PBT (UL 94 V0)	PBT (UL 94 V0)
Base material	Contact	CuZn, pre-nickel- & gold-plated	CuSn6
	Screw socket	CuZn, nickel-plated	CuZn, nickel-plated
Temperature range		-20 ... +90	-25 ... +80
Colour	Housing	grey, RAL 7032	grey, RAL 7032
	PG & contact carrier	black	black
Cable sheathing		PUR	PUR
Cable type		PUR/PVC	halogen free, UL
O-ring		Viton	Viton
Housing seal		foamed PUR	foamed PUR
Type of connection, hood version		screw/tension clamp	tension clamp
Clamping range	mm ²	0.08 ... 1.5	0.08 ... 1.5
AWG No.		22 ... 14	22 ... 14
Stripping length, hood version	mm	100	100
Stripping length, screw version	mm	7	7
Stripping length, tension clamp version	mm	10	10
Contact surface		tinned	tinned
BL3.5 / B2L			
Contact base material		CU-Alloy	CU-Alloy
BL3.5 / B2L			
Torques			
Hoods	Nm	0.8	0.8
Blanking plugs	Nm	0.5	
Mechanical data			
Ingress Protection Class*	IP	67	68
Suitability for cable carrier	cycles at 15d	1 million 15d	2 million 10d
IDC connection			
Max. connect. frequency of a cable with same cross-section		10	
Stripping length	mm	15 ... 20	
Conductor cross-section (flexible)	mm ²	0.25 ... 0.5	
Smallest strand diameter	mm	0.1	
Conductor insulation material		PVC/PE/PUR	
Conductor outside diameter	mm	1.2 ... 1.6	
Cable outside diameter	mm	3.5 ... 5.0	
Pin assignment		see next page	
Electrical data to VDE 110 (Apr 97)			
Operating voltage	V-	10 ... 30	10 ... 30
Max. current carrying capacity per I/O signal	A	2 (Derating)	2
- total with single supply	A	10 (9 A bei F-Version)	10
- total with dual supply	A	2 x 8 = 16	
Rated voltage	V _{eff}	32	32
Test voltage	kV _{eff}	1.0	1.0
Pollution severity		2	3
Insulation resistance	Ω	> 10 ⁹	
Other data			
Dimensions	see drawings on page	B.28 - B.29	B.19 - B.25
Fixing holes	see drawings on page	B.28 - B.29	B.19 - B.25
Function indicators			
for operating voltage		2 LEDs, green	1 LED, green
for I/O function		1 LED, yellow (per function)	1 LED, yellow (per function)
Current isolation (SAI-... -M)		via 2 jumper plugs	
Cable strain relief (SAI-... -M)		M20	M20
Max. cable diameter (SAI-... -M)	mm	6-12	6-12

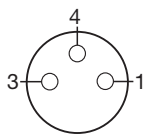
* only when plugged in and secured

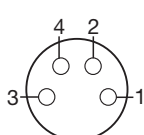
Contact assignment

M5 connector position (view on socket)

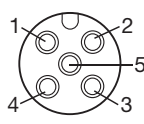
4-pole	Pole	Colour code	Assignment
	1	brown	+ 24 V DC
	2	white	input/output 2
	3	blue	0 V DC
	4	black	input/output 1

M8 connector position (view on socket)

3-pole	Pole	Colour code	Assignment
	1	brown	+ 24 V DC
	3	blue	0 V DC
	4	black	input/output 1


4-pole	Pole	Colour code	Assignment
	1	brown	+ 24 V DC
	2	white	input/output 2
	3	blue	0 V DC
	4	black	input/output 1

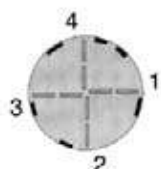
M12 Push-Pull connector position (view on socket)

5-pole	Pole	Colour code	Assignment
	1	brown	+ 24 V DC
	2	white	input/output 2*
	3	blue	0 V DC
	4	black	input/output 1
	5	grey	PE

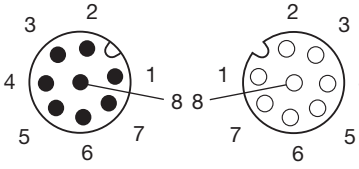
*) = 5-pole version only

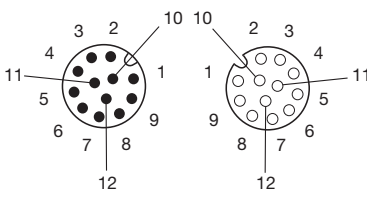
SAI-M/SAI-F – IDC

3-pole	Pole	Colour code	Assignment
	●	brown	+ 24 V DC
	●●	white	Input/output
	●●●	blue	0 V DC

4-pole	Pole	Colour code	Assignment
	1	brown	+ 24 V DC
	2	no colour	Input/output 2
	3	blue	0 V DC
	4	black	Input/output 1

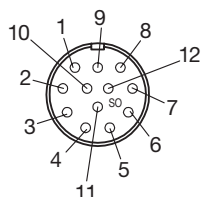
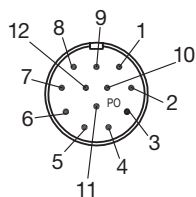
M12

8-pole	Pole	Colour code	Assignment
	1	white	signal 1
	2	brown	signal 2
	3	green	signal 3
	4	yellow	signal 4
	5	grey	+ 24 V DC
	6	pink	signal 5
	7	blue	0 V DC
	8	red	signal 6

12-pole	Pole	Colour code	Assignment
	1	brown	+ 24 V DC
	2	blue	0 V DC
	3	white	Input/output 1
	4	green	Input/output 2
	5	pink	Input/output 3
	6	yellow	Input/output 4
	7	black	Input/output 5
	8	grey	Input/output 6
	9	red	Input/output 7
	10	violet	Input/output 8
	11	grey/pink	Input/output 9
	12	red/blue	Input/output 10

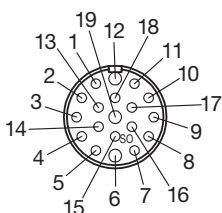
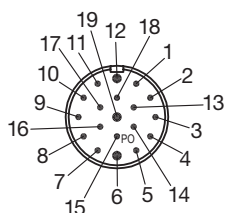
M23

12-pole



Pole	Colour code	Plug-in station	Contact M12
1	white	1	4
2	green	2	4
3	yellow	3	4
4	grey	4	4
5	pink	5	4
6	red	6	4
7	black	7	4
8	violet	8	4
9	blue (-)	1-8	3
10	blue (-)	1-8	3
11	brown (+)	1-8	1
12	green-yellow (PE)	1-8	5

19-pole



Pole	Colour code	Plug-in station	Contact M12
1	violet	8	4
2	red	6	4
3	grey	4	4
4	red/blue	2	2
5	green	2	4
7	grey/pink	1	2
8	white/green	3	2
9	white/yellow	5	2
10	white/grey	7	2
11	black	7	4
13	yellow/brown	6	2
14	brown/green	4	2
15	white	1	4
16	yellow	3	4
17	pink	5	4
18	grey/brown	8	2
6	blue (-)	1-8	3
12	green-yellow (PE)	1-8	5
19	brown (+)	1-8	1

Connection plan

Connection plan

Conductor colour

Terminal Connection No.	Connector position	M5/M8 contact		M12- contact	IDC contact		Potential	Conductor colour	Colour code
		3-pole	4-pole	3-pole	4-pole				
1	= 1	4	4	4	2	4	E/A 1-1	white	WH
2	= 2	4	4	4	2	4	E/A 2-1	green	GN
3	= 3	4	4	4	2	4	E/A 3-1	yellow	YE
4	= 4	4	4	4	2	4	E/A 4-1	grey	GY
5	= 5	4	4	4	2	4	E/A 5-1	pink	PK
6	= 6	4	4	4	2	4	E/A 6-1	red	RD
7	= 7	4	4	4	2	4	E/A 7-1	black	BK
8	= 8	4	4	4	2	4	E/A 8-1	violet	VT
9	= 1	-	2	2*		2	E/A 1-2	grey/pink	GYPK
10	= 2	-	2	2*		2	E/A 2-2	red/blue	RDBL
11	= 3	-	2	2*		2	E/A 3-2	white/green	WHGN
12	= 4	-	2	2*		2	E/A 4-2	brown/green	BNGN
13	= 5	-	2	2*		2	E/A 5-2	white/yellow	WHYE
14	= 6	-	2	2*		2	E/A 6-2	yellow/brown	YEBN
15	= 7	-	2	2*		2	E/A 7-2	white/grey	WHGY
16	= 8	-	2	2*		2	E/A 8-2	grey/brown	GYBN
17	= 1, 3, 5, 7	1	1	1	1	1	U1 + (24 V DC)	brown	BN
18	= 1, 3, 5, 7	3	3	3	3	3	U1 - (0 V)	blue	BU
19	= 2, 4, 6, 8	-	-	1	1	1	U2 + (24 V DC)	red*	RD*
20	= 2, 4, 6, 8	-	-	3	3	3	U2 - (0 V)	black*	BK*
21	= 1, 2, 3, 4, 5, 6, 7, 8	-	-	5	-	-	PE	green/yellow	GNYE

* Contact used in 5-pole version only

Plug insert, hood version

Note:

SAI distributors with fixed cable have a single supply conductor as standard. The voltage U1 is supplied to all the sockets. An SAI distributor with fixed cable but with separate supply voltage is available on request.

Pin assignment



Tension clamp connection



Screw connection



Are you already a Weidmüller customer?

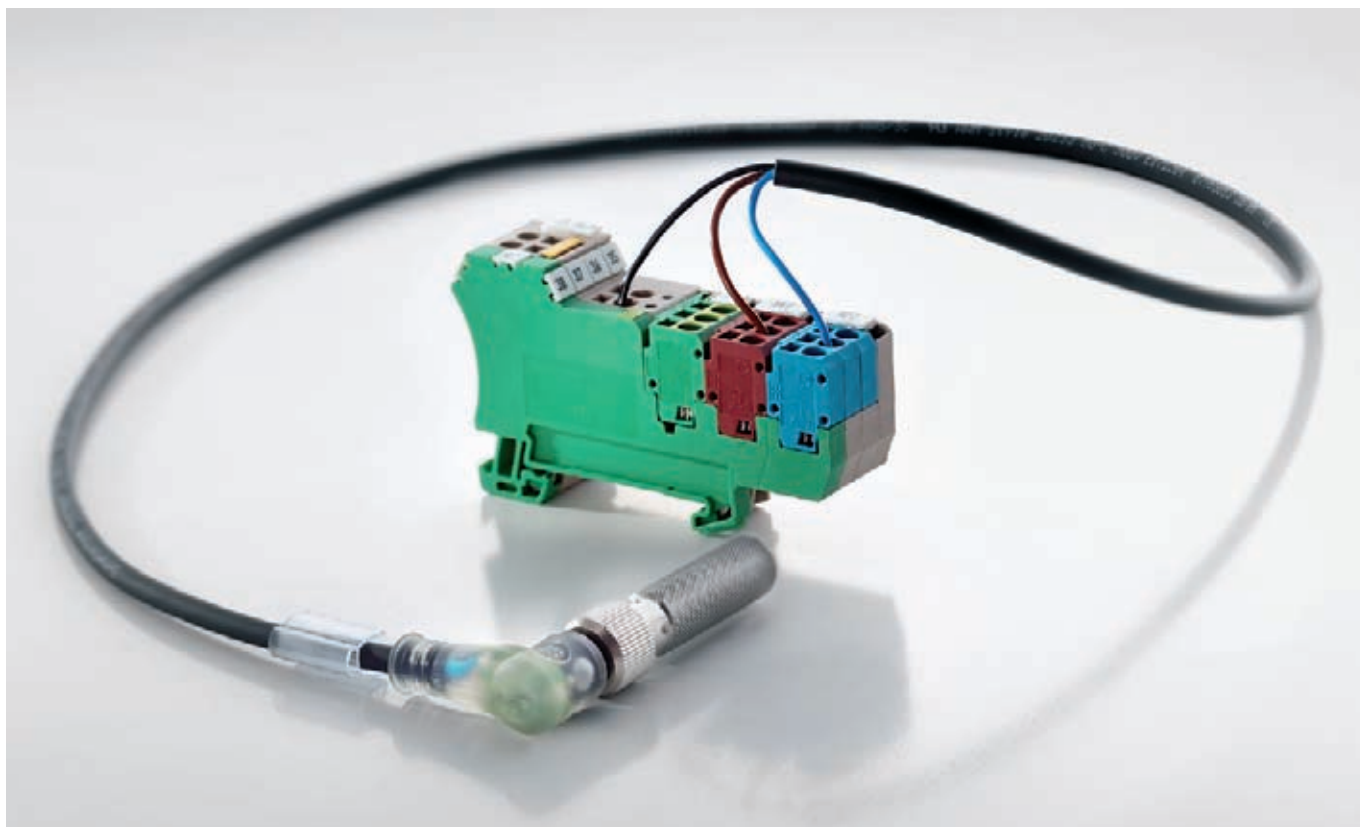
Then why not order your M12 or M8 cables from us!

Weidmüller supplies an extremely wide range of M12 and M8 cables – naturally with proven Weidmüller quality.

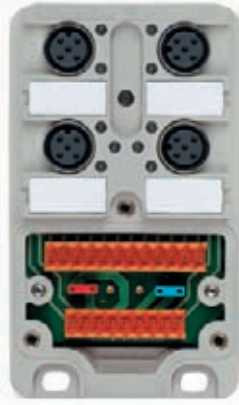
To answer as many demands as possible, we offer:

- PVC cables
- PUR/PVC cables
- PUR/halogen-free cables

Of course, with very short delivery times and favourable conditions. Do not hesitate to contact us. Ask for a bid. It doesn't hurt to ask.



SAI distributor with plug-in connection hood: SAI-M



- Integrated plug-in connector in connection hood
- M12 robust metal thread for sensor/actuator connection, now also available with plastic thread as an alternative
- Quick replacement of bus cables
- Bus cable can be supplied pre-assembled
- Two connection systems for bus cable: screw or tension clamp
- Very flat connection hood: no higher than smallest 90° M12 round plug
- Distributor and connection hood can be supplied separately
- Connection hood compatible with 4-, 6- and 8-channel SAI distributors (upgrades only entail changing the base module)
- IP 68 Ingress protection class (IDC IP 67),
- Housing made from Pocan (PBT):
 - high dimensional stability
 - good electrical and mechanical properties
 - flame-retardant without dioxin or furan formers
 - resistant to coolants and lubricants
- UL/CSA approvals for M12 SAI distributor
- SAI distributor available in pollution severity class 3
- Cable exit on top
- Weidmüller SAI distributors have the largest storage capacity in the connection hood
- Female connectors integrated into the metal plate for fast and reliable connections
- Wide range of M8 and M12 cables and plug-in connectors
- Various cable length's available
- Metal hoods and housings also available
- Plug-in connection module for bus cables increases flexibility on site
- Integral, plug-in electrical isolation for two separate electric circuits (e.g. for emergency stop)
- Simple and vibration-resistant connections on site
- Captive metric screws (grade 8.8 steel) have a +/- head
- M12 and IDC connections
- 1:1 arrangement available

Overview of M12 Distributors



Fixed cable version

- Pre-assembled bus cable minimises installation time and reduces wiring errors
- Cable carrier-compatible versions are available with polyurethane (PUR) sheathing



M12 Push-Pull quick-fit connection system

M12 Push-Pull is the new connection system for sensors and actuators. It is downward-compatible to the existing M12 system, which means that both old M12 and new M12 Push-Pull lines can be used together on these SAIs. M12 Push-Pull decreases installation time and increases installation safety by means of colour coding and provides an audible click on locking for added reassurance.



SAI ECO – the cost-effective alternative

Weidmüller SAI distributors with hood have long since been standard fittings in machines and installations.

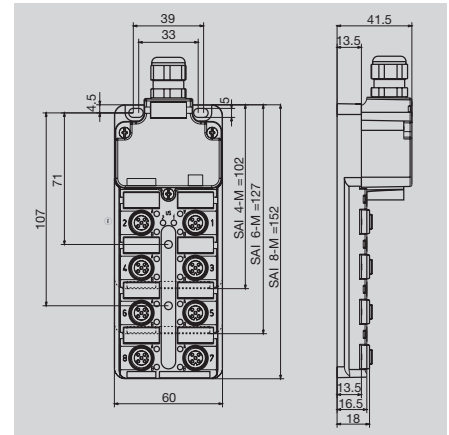
Why plastic threaded rings?

There were some applications, however, that called for a further version. In some applications it is necessary to avoid all metal parts, unless these are made from stainless steel. In such cases stainless steel is then used for screws and nuts only, but the M12 threaded rings can also be made from plastic. Such modules can now be supplied on request.

The use of plastic rings therefore results in a cheaper alternative. Although the service life and resistance are reduced when compared to metal, this is acceptable for some applications.

M12 distributors

Hood version



Ordering data

Complete modules	
	4 channel
	6 channel
	8 channel
Without initiator-LED, for analogue signals	4 channel
Without initiator-LED, for analogue signals	8 channel
Tension clamp connection	4 plug-in slots
Tension clamp connection	8 channel
Base unit	
	4 channel
	6 channel
	8 channel
Without initiator-LED, for analogue signals	4 channel
Mounting hood	
Tension clamp connection	
Tension clamp connection	
Screw connection	
Screw connection	
Complete modules, NPN-switched	8 channel
Note	

SAI-4/6/8-M

4-pole

Type	Qty.	Order No.
SAI-4-M 4P M12	1	1705920000
SAI-6-M 4P M12	1	1705930000
SAI-8-M 4P M12	1	1705940000
SAI-4 M 4P M12 UT	2	1705921000
SAI-6-M 4P M12 UT	2	1705931000
SAI-8-M 4P M12 UT	2	1705941000
SAI-4/6/8-MH BLZF3.5	1	1752080000
SAI-4/6/8-MH BLZF3.5 SV	50	1752080050
SAI-4/6/8-MH BL3.5	1	1724750000
SAI-4/6/8-MH BL3.5 SV	50	1724750050
Other versions on request		

SAI-4/6/8-M

5-pole

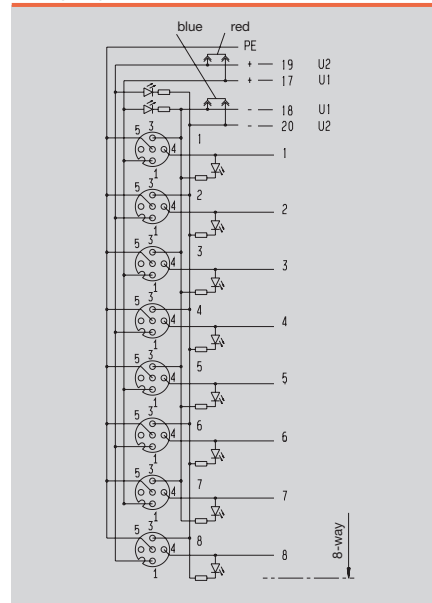
Type	Qty.	Order No.
SAI-4-M 5P M12	1	1701230000
SAI-6-M 5P M12	1	1701240000
SAI-8-M 5P M12	1	1701250000
SAI-4-M 5P M12 OL	1	1800000000
SAI-8-M 5P M12 OL2	1	1816610000
SAI-4-M 5P M12 ZF	1	1854000000
SAI-8-M 5P M12 ZF III	1	1767880000
SAI-4-M 5P M12 UT	2	1701231000
SAI-6-M 5P M12 UT	2	1701241000
SAI-8-M 5P M12 UT	2	1701251000
SAI-8-M 5P M12 OL UT	2	1740191000
SAI-4/6/8-MH BLZF3.5	1	1752080000
SAI-4/6/8-MH BLZF3.5 SV	50	1752080050
SAI-4/6/8-MH BL3.5	1	1724750000
SAI-4/6/8-MH BL3.5 SV	50	1724750050
SAI-8-M 5P M12 NPN	1	1781060000
Other versions on request		

Technical data

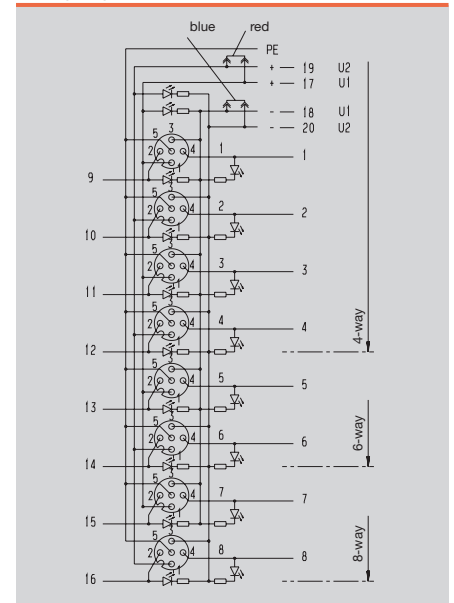
Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	3 A
Total current max.	10 A
Pollution severity	3
Protection class	IP 68
Ambient temperature range	-20 ... 90 °C
Housing material	Pocan
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickeled, gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	0.08 ... 1.5 mm ²
Suitable for dragline cable (fixed cable connection)	

With dual power supply: 2x8 = 16A total current
Clamping range up to 2.5 mm² with screw connection

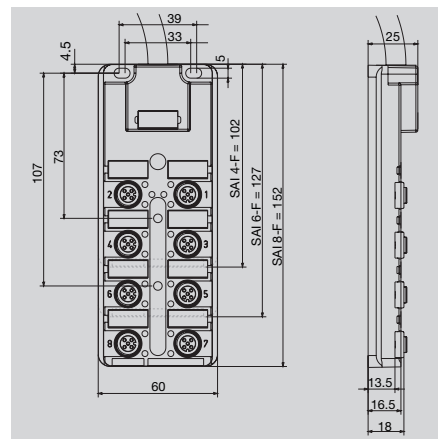
Wiring diagram



Wiring diagram



Fixed cable version



Ordering data

4 channel	
Cable length 3 m	
Cable length 5 m	
Cable length 10 m	
Cable length 15 m	
Cable length 20 m	
6 channel	
Cable length 3 m	
Cable length 5 m	
Cable length 10 m	
Cable length 15 m	
Cable length 20 m	
8 channel	
Cable length 3 m	
Cable length 5 m	
Cable length 10 m	
Cable length 15 m	
Cable length 20 m	
8 channel with reinforced fixed cable*	
Cable length 2 m	
Cable length 5 m	
Cable length 10 m	
Cable length 15 m	
Cable length 20 m	

Note

SAI-4/6/8-F		4-pole	
Type	Qty.	Order No.	
SAI-4-F 4P PUR 3M	1	9456180000	
SAI-4-F 4P PUR 5M	1	9456190000	
SAI-4-F 4P PUR 10M	1	9456200000	
SAI-4-F 4P PUR 15M	1	9456210000	
SAI-4-F 4P PUR 20M	1	9456230000	
SAI-6-F 4P PUR 3M	1	9456460000	
SAI-6-F 4P PUR 5M	1	9456470000	
SAI-6-F 4P PUR 10M	1	9456480000	
SAI-6-F 4P PUR 15M	1	9456490000	
SAI-6-F 4P PUR 20M	1	9456510000	
SAI-8-F 4P PUR 3M	1	9456740000	
SAI-8-F 4P PUR 5M	1	9456750000	
SAI-8-F 4P PUR 10M	1	9456760000	
SAI-8-F 4P PUR 15M	1	9456770000	
SAI-8-F 4P PUR 20M	1	9456790000	
Other versions on request			

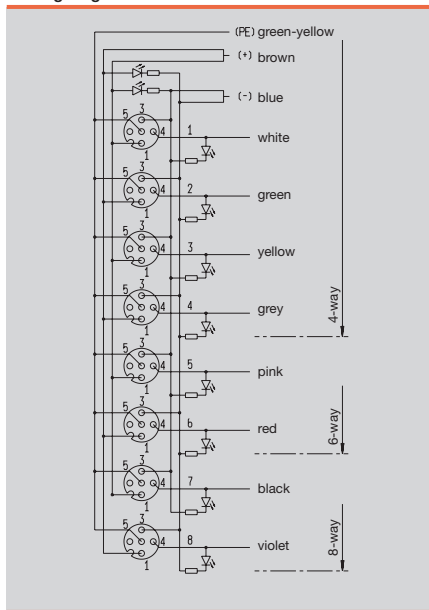
SAI-4/6/8-F		5-pole	
Type	Qty.	Order No.	
SAI-4-F 5P PUR 3M	1	9456320000	
SAI-4-F 5P PUR 5M	1	9456330000	
SAI-4-F 5P PUR 10M	1	9456340000	
SAI-4-F 5P PUR 15M	1	9456350000	
SAI-4-F 5P PUR 20M	1	9456370000	
SAI-6-F 5P PUR 3M	1	9456600000	
SAI-6-F 5P PUR 5M	1	9456610000	
SAI-6-F 5P PUR 10M	1	9456620000	
SAI-6-F 5P PUR 15M	1	9456630000	
SAI-6-F 5P PUR 20M	1	9456650000	
SAI-8-F 5P PUR 3M	1	9456880000	
SAI-8-F 5P PUR 5M	1	9456890000	
SAI-8-F 5P PUR 10M	1	9456900000	
SAI-8-F 5P PUR 15M	1	9456910000	
SAI-8-F 5P PUR 20M	1	9456930000	
SAI-8-F 5P 2M 0.5/1.0U	1	7915030000	
SAI-8-F 5P 5M 0.5/1.0U	1	9457590000	
SAI-8-F 5P 10M 0.5/1.0U	1	9457600000	
SAI-8-F 5P 15M 0.5/1.0U	1	1784510000	
SAI-8-F 5P 20M 0.5/1.0U	1	1784500000	
Other versions on request			

Technical data

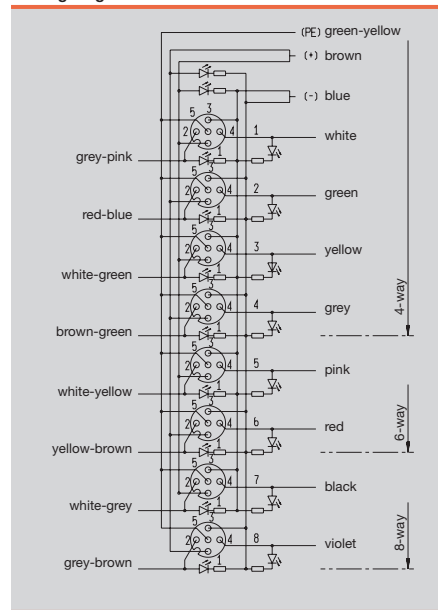
Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	3 A
Total current max.	9 A
Pollution severity	3
Protection class	IP 68
Ambient temperature range	-20 ... 80 °C
Housing material	Pocan
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickel- gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	
Suitable for dragline cable (fixed cable connection)	Yes

* 3x1mm² und 16x0.5mm² total current 12A

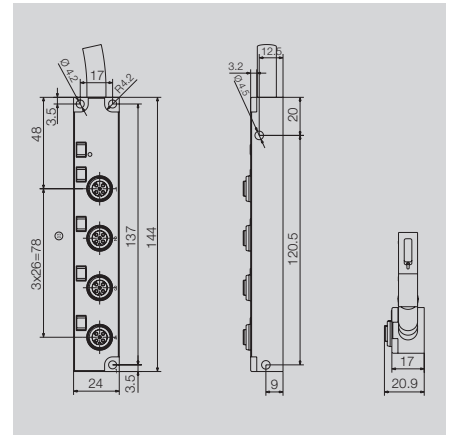
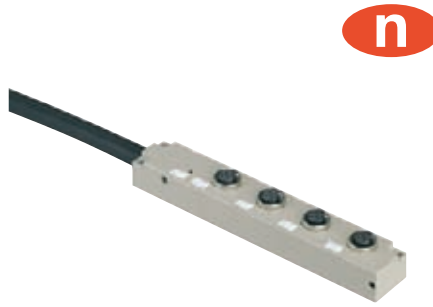
Wiring diagram



Wiring diagram



M12 distributors

Fixed cable version
thin design

Ordering data

4 channel
Cable length 5 m
Cable length 10 m
Note

SAI-4-F M12 L

4-pole

Type	Qty.	Order No.
SAI-4-F 4P M12 L 5M	1	1070650000
SAI-4-F 4P M12 L 10M	1	1070660000
Other versions on request		

SAI-4-F M12 L

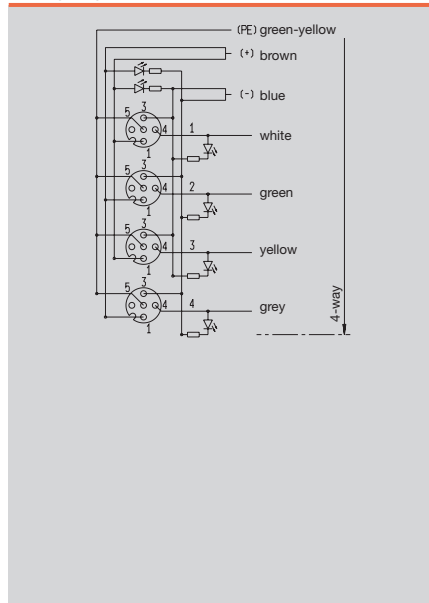
5-pole

Type	Qty.	Order No.
SAI-4-F 5P M12 L 5M	1	1070630000
SAI-4-F 5P M12 L 10M	1	1070640000
Other versions on request		

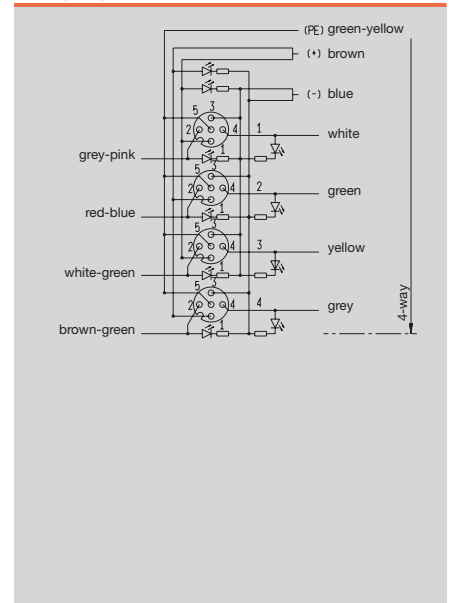
Technical data

Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	3 A
Total current max.	9 A
Pollution severity	3
Protection class	IP 68
Ambient temperature range	-20 ... 80 °C
Housing material	PA 6 GF
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickeled, gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	
Suitable for dragline cable (fixed cable connection)	Yes

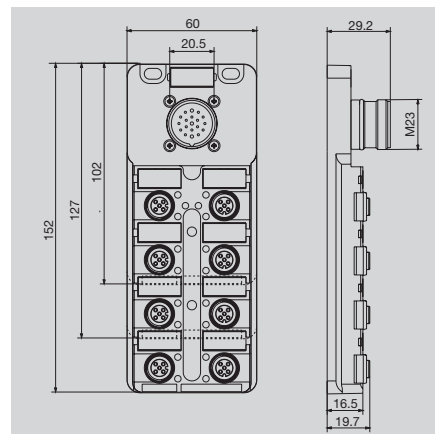
Wiring diagram



Wiring diagram



with M23 outlet



Ordering data

Complete modules	
	4 channel
	6 channel
	8 channel
Note	

SAI-4/6/8-S

4-pole

Type	Qty.	Order No.
SAI-4-S 4P M12	1	9456000000
SAI-6-S 4P M12	1	9456010000
SAI-8-S 4P M12	1	9456020000
Other versions on request		

SAI-4/6/8-S

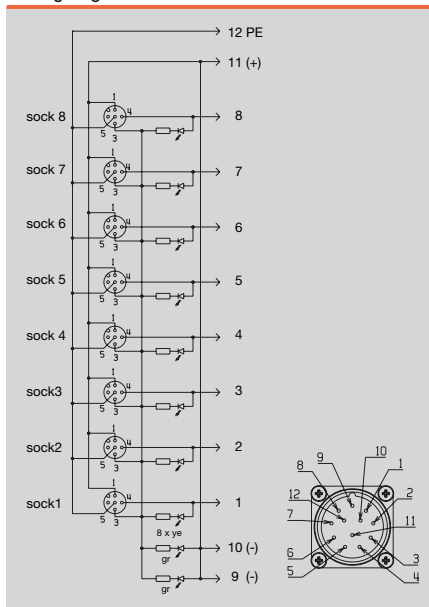
5-pole

Type	Qty.	Order No.
SAI-4-S 5P M12	1	9456000001
SAI-6-S 5P M12	1	9456010001
SAI-8-S 5P M12	1	1795470000
Other versions on request		

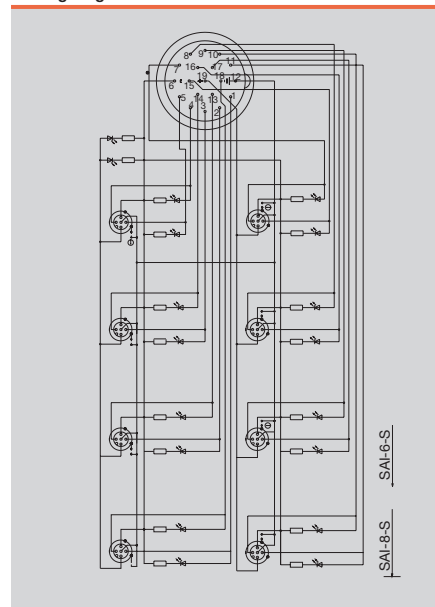
Technical data

Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	3 A
Total current max.	10 A
Pollution severity	3
Protection class	IP 68
Ambient temperature range	-20 ... 90 °C
Housing material	Pocan
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickel- gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	
Suitable for dragline cable (fixed cable connection)	

Wiring diagram



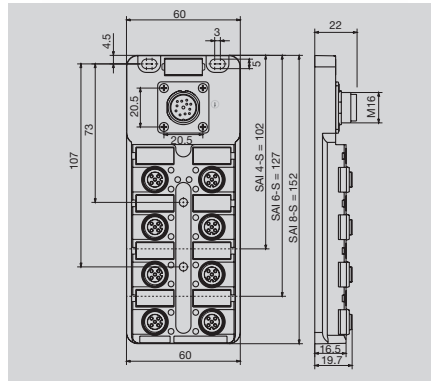
Wiring diagram



M12 distributors

with M16 outlet

SAI-8-M16



Ordering data

Complete modules	8 channel
Note	

SAI-8-M16

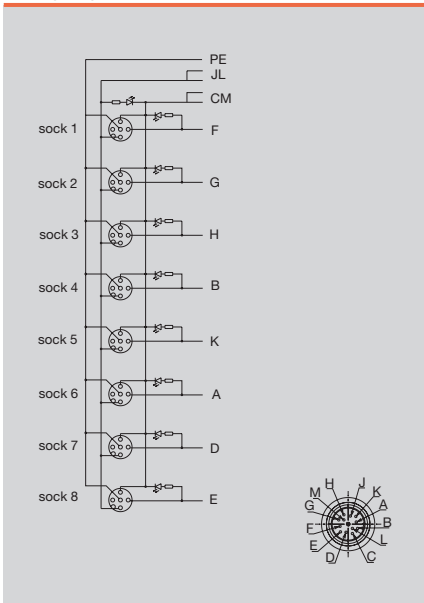
4-pole

Type	Qty.	Order No.
SAI-8-M16 4P M12	1	1831020000
Other versions on request		

Technical data

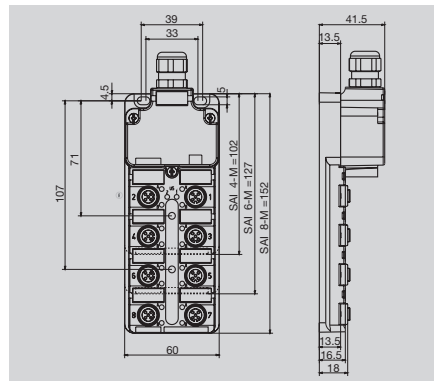
Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	3 A
Total current max.	6 A
Pollution severity	3
Protection class	IP 67
Ambient temperature range	-20 ... 90 °C
Housing material	Pocan
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickeled, gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	
Suitable for dragline cable (fixed cable connection)	

Wiring diagram



**Hood version
with DIP-switch coding**

SAI-8-M M12 DIP



Ordering data

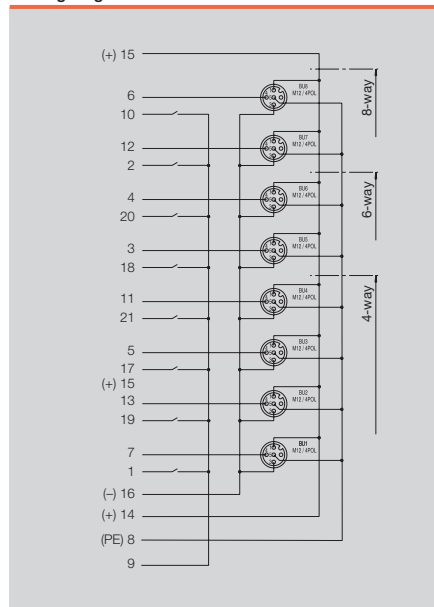
Complete modules	8 channel
Note	

SAI-8-M M12 DIP		4-pole
Type	Qty.	Order No.
SAI-8-M-4P M12 DIP	1	1059430000
Other versions on request		

Technical data

Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	3 A
Total current max.	8 A
Pollution severity	3
Protection class	IP 68
Ambient temperature range	-20 ... 90 °C
Housing material	Pocan
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickel- gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version (fixed cable connection)	0.08 ... 1.5 mm ²
Suitable for dragline cable	

Wiring diagram



SAI Passive

B

SAI ECO

SAI ECO – the cost-effective alternative

B

The Weidmüller SAI distributors with hoods have long since been standard fittings in machines and installations.

Why plastic threaded rings?

There were some applications, however, that called for a further version. In some applications it is necessary to avoid all metal parts. In such cases stainless steel is then used for screws and nuts only, but the M12 threaded rings can also be made from plastic. Such modules can now be supplied on request.

The use of plastic rings therefore results in a cheaper alternative. Although the service life and resistance are reduced when compared to metal, this is acceptable for some applications.

Cost-effective alternative

The ECO modules were developed to optimise costs. Many details of these modules were adapted in such a way that they can still be used wherever standard modules were used in the past, but the individual solutions have now become simpler:

- One-way disconnecter: Up until now it was usual to achieve electrical isolation devised by Weidmüller by way of jumpers. To reduce costs, these jumpers have been replaced by solder bridges. These are simply cut to provide electrical isolation.
- No protective caps: Normally, Weidmüller M12 distributors are always supplied with two protective caps. These were not always required and so they have been omitted.
- Standard cable gland: The vibration-resistant black screw cable gland has been replaced by a standard IP 68 cable gland.

These cost-cutting measures result in yet more applications for Weidmüller SAI distributors.

Greater reliability than with comparable systems

Plastic threaded rings are nothing new. However, the problem in the past was that the threaded rings formed part of the housing and were therefore made from the same plastic.

Weidmüller has once again pioneered a new and better solution. Weidmüller plastic rings are manufactured separately, which means that a more suitable, more durable material can be chosen. The Weidmüller production method is also patented.



Special threaded ring increases durability

M12 Push-Pull: SAI distributors and cables, with rapid-connection technology

SAI distributors with M12 Push-Pull plug



Whereas the standard M12 system requires the sleeves to be laboriously screwed on and that operation is hindered by the vibration guard, M12 Push-Pull works with one click, just like those well-known garden hose systems. The audible locking function guarantees a safe and reliable connection as well as a good seal.

M12 Push-Pull is currently supplied by Weidmüller and five other international companies

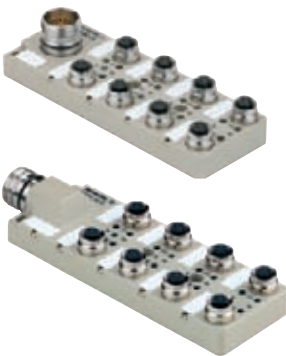
M12 Push-Pull connections provide sufficient space for using T-pieces. The SAI module is slimmer and now only 54 mm wide.

The new SAI M12 Push-Pull distributors can be used with M12 plug-in connectors but also with the new M12 Push-Pull plug-in connectors.

The SAI distributors are available in fixed cable, hood, bayonet connection and M23 versions.

M12 Push-Pull speeds up installation and increases installation reliability thanks to the colour coding and the audible click when locking it into place.

M12 Push-Pull M23 versions



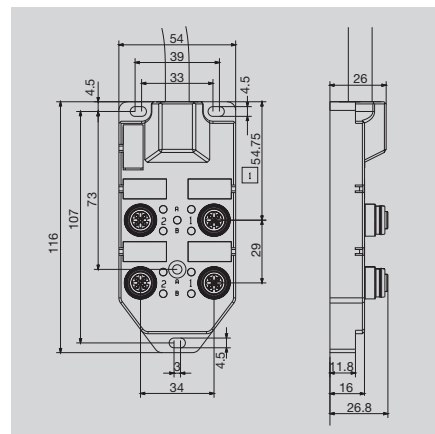
M12 Push-Pull hood version



M12 Push-Pull with bayonet connection



Fixed cable version



Ordering data

4 channel	
	Cable length 2 m
	Cable length 5 m
	Cable length 10 m
8 channel	
	Cable length 2 m
	Cable length 5 m
	Cable length 10 m
Note	

SAI-4/8-F

4-pole

Type	Qty.	Order No.
SAI-4-F 4P FC 2M	1	1848080000
SAI-4-F 4P FC 5M	1	1848060000
SAI-4-F 4P FC 10M	1	1848050000
Other versions on request		

SAI-4/8-F

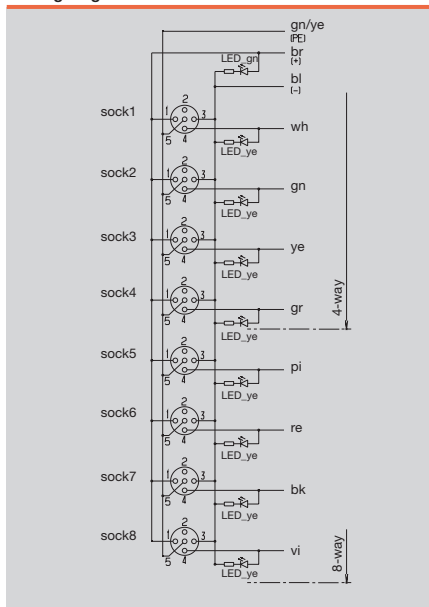
5-pole

Type	Qty.	Order No.
SAI-4-F 5P FC 2M	1	1847940000
SAI-4-F 5P FC 5M	1	1847950000
SAI-4-F 5P FC 10M	1	1847930000
Other versions on request		

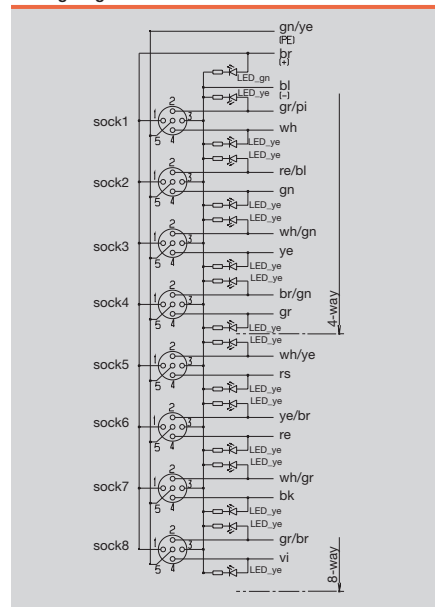
Technical data

Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	4 A
Total current max.	10 A
Pollution severity	3
Protection class	IP 67
Ambient temperature range	-25 ... 80 °C
Housing material	PA 6 GF
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickeled, gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	
Suitable for dragline cable (fixed cable connection)	Yes
Master trunk cable 3x1mm ² x n x 0.34mm ² ; Hallogen	

Wiring diagram

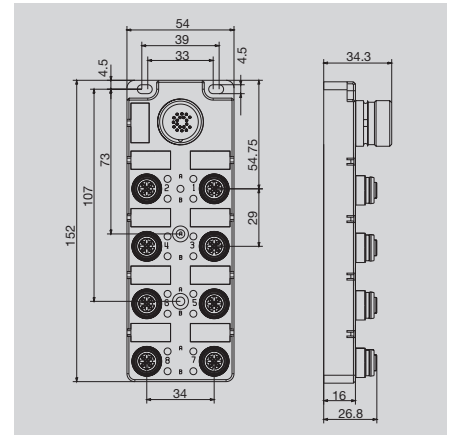


Wiring diagram



M12 Push-Pull

with M23 outlet



Ordering data

Complete modules	
	4 channel
	8 channel
Note	

SAI-4/8-S

4-pole

Type	Qty.	Order No.
SAI-4-S 4P FC	1	1847960000
SAI-8-S 4P FC	1	1847920000
Other versions on request		

SAI-4/8-S

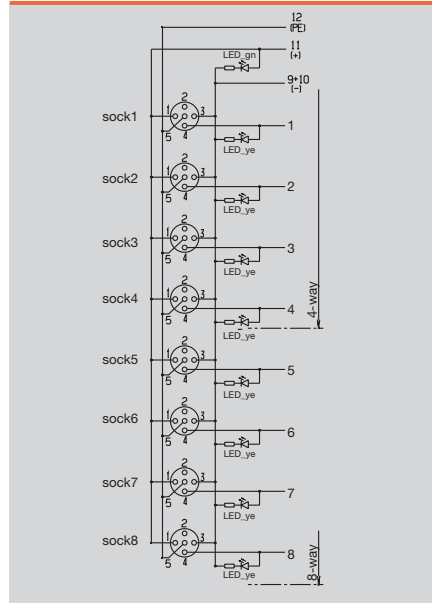
5-pole

Type	Qty.	Order No.
SAI-4-S 5P FC	1	1847970000
SAI-8-S 5P FC	1	1848040000
Other versions on request		

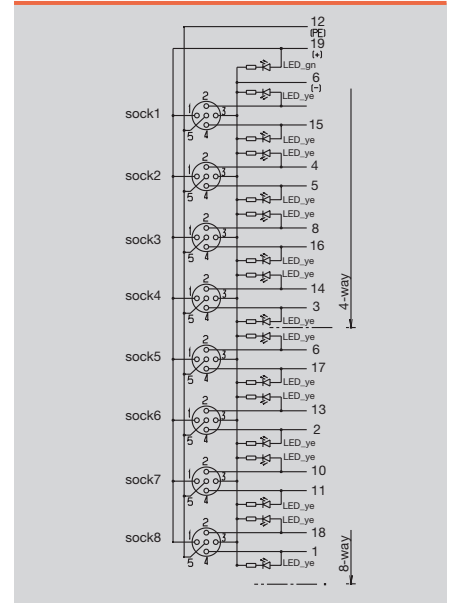
Technical data

Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	4 A
Total current max.	9 A
Pollution severity	3
Protection class	IP 67
Ambient temperature range	-25 ... 80 °C
Housing material	PA 6 GF
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickelated, gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	
Suitable for dragline cable (fixed cable connection)	

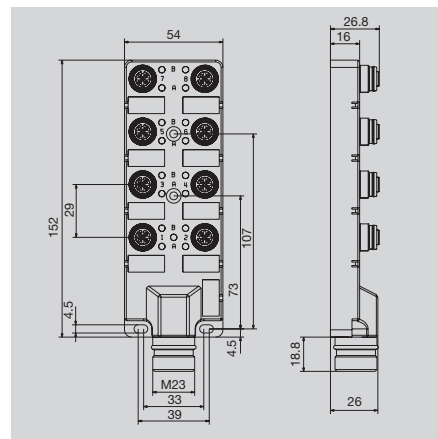
Wiring diagram



Wiring diagram



with M23 outlet on front



Ordering data

Complete modules	
	4 channel
	8 channel
Note	

SAI-4/8-SH

4-pole

Type	Qty.	Order No.
SAI-4-SH 4P FC	1	1859110000
SAI-8-SH 4P FC	1	1859120000

SAI-4/8-SH

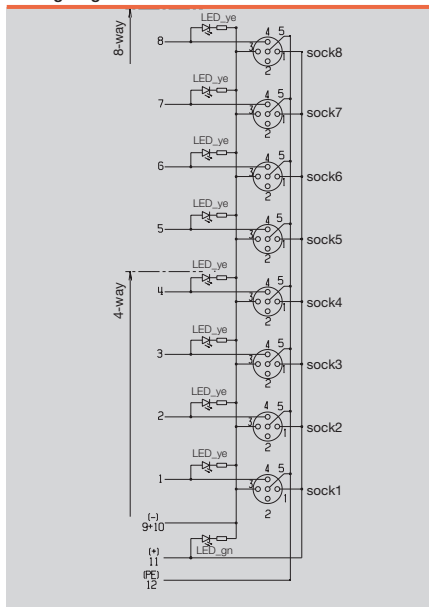
5-pole

Type	Qty.	Order No.
SAI-4-SH 5P FC	1	1859130000
SAI-8-SH 5P FC	1	1859140000

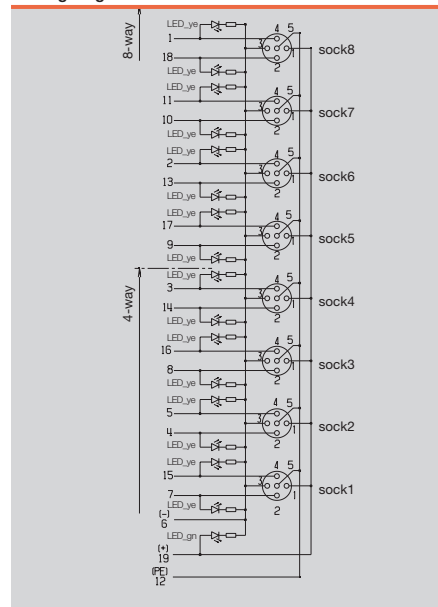
Technical data

Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	4 A
Total current max.	9 A
Pollution severity	3
Protection class	IP 67
Ambient temperature range	-25 ... 80 °C
Housing material	PA 6 GF
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickel- gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	
Suitable for dragline cable (fixed cable connection)	

Wiring diagram



Wiring diagram



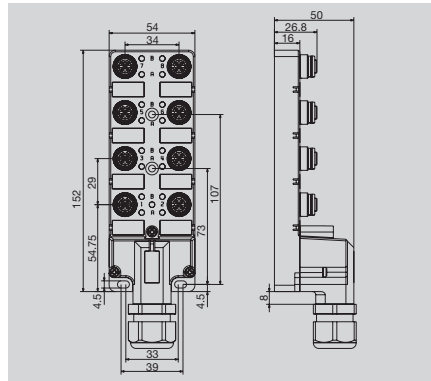
SAI Passive

B

M12 Push-Pull

Hood version

SAI-8-M



Ordering data

Complete modules	8 channel
Note	

SAI-8-M

5-pole

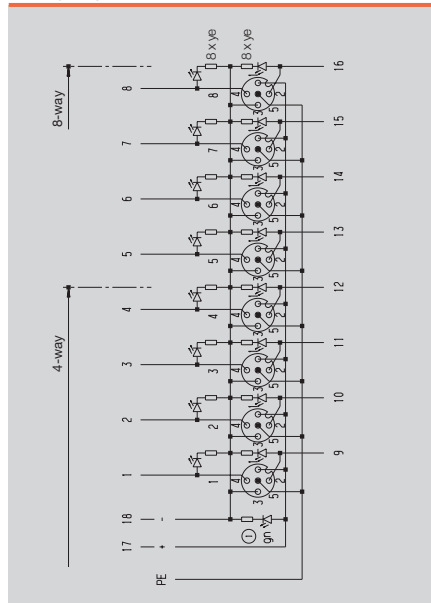
Type	Qty.	Order No.
SAI-8-M 5P FC	1	1848070000
Other versions on request		

Technical data

Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	4 A
Total current max.	
Pollution severity	3
Protection class	IP 67
Ambient temperature range	-25 ... 80 °C
Housing material	PA 6 GF
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickeled, gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	
Suitable for dragline cable (fixed cable connection)	

Master trunk cable 3x1mm² x n x 0.34mm²; halogen-free

Wiring diagram

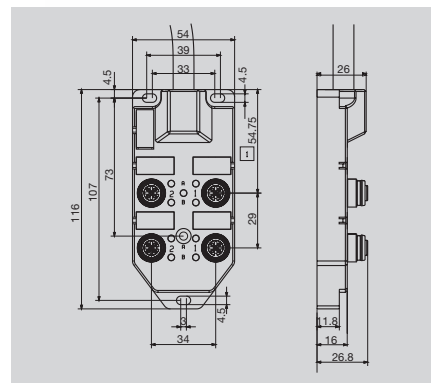
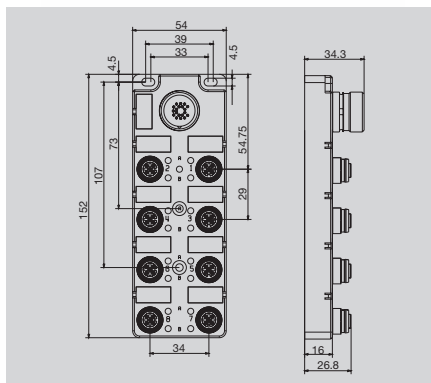


Terminal	Slot M12	Contact	Colour
1	1	4	white
2	2	4	green
3	3	4	yellow
4	4	4	grey
5	5	4	pink
6	6	4	red
7	7	4	black
8	8	4	violet
9	1	2	grey/pink
10	2	2	red/blue
11	3	2	white/green
12	4	2	brown/green
13	5	2	white/yellow
14	6	2	yellow/brown
15	7	2	white/grey
16	8	2	grey/brown
17	1-8	1	brown (+)
18	1-8	3	blue (-)
PE	1-8	5	green/yellow (PE)

CNOMO

SAI-4/8-S

SAI-4/8-F



Ordering data

4 channel	Cable length 5 m Cable length 10 m
8 channel	Cable length 5 m Cable length 10 m
M23	4 channel 8 channel
Note	

SAI-4/8-S		5-pole	
Type	Qty.	Order No.	
SAI-4-S 5P CNOMO	1	1861540000	
SAI-8-S 5P CNOMO	1	1861580000	

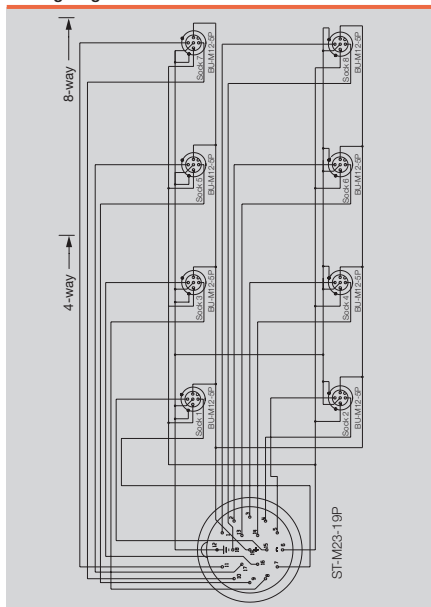
SAI-4/8-F		5-pole	
Type	Qty.	Order No.	
SAI-4-F 5P CNOMO 5M	1	1861570000	
SAI-4-F 5P CNOMO 10M	1	1861560000	
SAI-8-F 5P CNOMO 5M	1	1861550000	
SAI-8-F 5P CNOMO 10M	1	1861590000	

Technical data

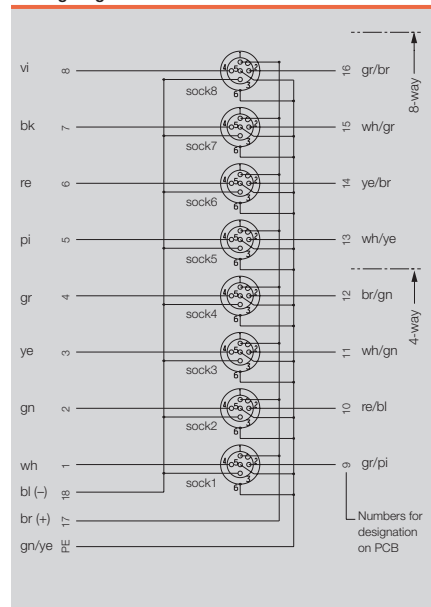
Rated voltage	50.0 V DC
Operating voltage	10 ... 50 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	4 A
Total current max.	12, 8 A
Pollution severity	3
Protection class	IP 67
Ambient temperature range	-25 ... 80 °C
Housing material	PA 6 GF
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickel, gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	
Suitable for dragline cable (fixed cable connection)	Yes

Max. total current with 4-channel distributor is 8A. And with 8-channel distributor is 12A

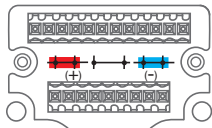
Wiring diagram



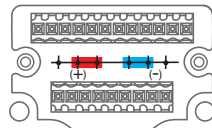
Wiring diagram



IDC – the quick connection



Factory setting
(see wiring diagram)
Current bridged



Current isolated



Hood version

- Compact IDC connection cuts production, commissioning and maintenance work
- Knurled metal nut – robust, safe handling requiring little force
- The dimensions of the IDC distributor correspond to and are compatible with the standard SAI distributor.
- Plug-in connection module for bus cables enhances on-site flexibility
- Three sizes for 4, 6 and 8 channels
- 3-pole version with one I/O signal per channel, 4-pole version with two I/O signals per channel
- Individual on-site assembly of sensor/actuator lines
- Fast, reliable connection with IDC connection element
- IP 67 Ingress protection classification.

SAI fixed cable version

- Pre-assembled bus cables minimise installation work and avoid wiring errors
- 3 sizes for 4, 6 and 8 channels
- Highly flexible, cable carrier-compatible bus cables with polyurethane (PUR/PVC) sheathing
 - 3 x 0.75 mm²
 - n x 0.34 mm²,
- 3-pole version with one I/O signal per channel, 4-pole version with two I/O signals per channel



IDC connection element

Ordering data

Type	Qty.	Order No.
SAI-SA-3-IDC	1	9457720000
SAI-SA-4-IDC	1	1766810000



The significant advantages of Weidmüller tools:

- Easy handling
- Very small, ideal for confined assembly conditions
- Patented solution
- Metal Connectors

Insulation displacement connections on Weidmüller SAI distributors are currently the smallest but also the most robust connection elements on the market. Thanks to their extremely small dimensions, corresponding distributors are available with the same dimensions in M12 or IDC versions.

For large series, e.g. where more than 100 modules are used every year, we recommend using a special tool to simplify the handling of the connected lines even further. However, this tool is not always necessary because all connection elements can be readily tightened by hand.

IDC tool



Ordering data

Type	Qty.	Order No.
SAI-IDC-Tool	1	1795020000

Screwty

The IDC elements can also be tightened with the Weidmüller Screwty.



Ordering data

Type	Qty.	Order No.
Screwty M12	1	1900001000

Protective cap M12 for IDC

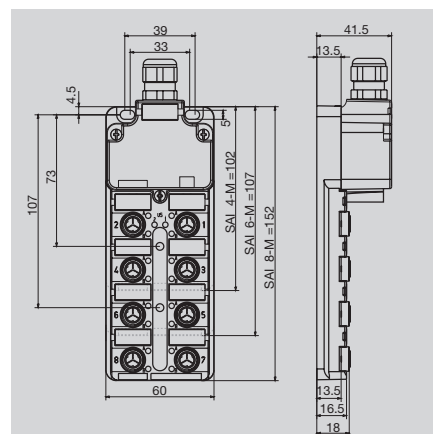


Ordering data

Type	Qty.	Order No.
SAI-SK-M12 IDC	10	1794850000

M12 IDC

Hood version



Ordering data

Complete modules	
	4 channel
	6 channel
	8 channel
Base unit	
	4 channel
	6 channel
	8 channel
Mounting hood	
	Tension clamp connection
	Tension clamp connection
	Screw connection
	Screw connection
Note	

SAI-4/6/8-M IDC

3-pole

Type	Qty.	Order No.
SAI-4-M 3P IDC	1	1760040000
SAI-6-M 3P IDC	1	1760050000
SAI-8-M 3P IDC	1	1760060000
SAI-4-M 3P IDC UT	2	1760041000
SAI-6-M 3P IDC UT	2	1760051000
SAI-8-M 3P IDC UT	2	1760061000
SAI-4/6/8-MH BLZF3.5	1	1752080000
SAI-4/6/8-MH BLZF3.5 SV	50	1752080050
SAI-4/6/8-MH BL3.5	1	1724750000
SAI-4/6/8-MH BL3.5 SV	50	1724750050
Other versions on request		

SAI-4/6/8-M IDC

4-pole

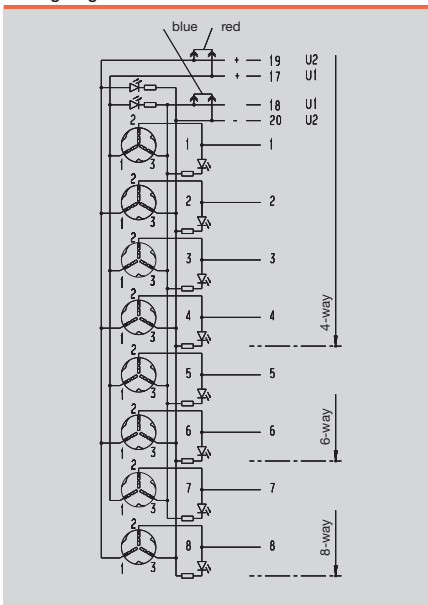
Type	Qty.	Order No.
SAI-4-M 4P IDC	1	1766780000
SAI-6-M 4P IDC	1	1766790000
SAI-8-M 4P IDC	1	1766800000
SAI-4-M 4P IDC UT	2	1766781000
SAI-6-M 4P IDC UT	2	1766791000
SAI-8-M 4P IDC UT	2	1766801000
SAI-4/6/8-MH BLZF3.5	1	1752080000
SAI-4/6/8-MH BLZF3.5 SV	50	1752080050
SAI-4/6/8-MH BL3.5	1	1724750000
SAI-4/6/8-MH BL3.5 SV	50	1724750050

Technical data

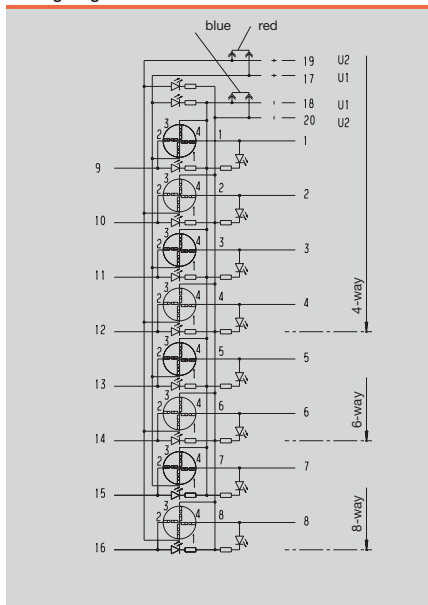
Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	3 A
Total current max.	10 A
Pollution severity	2
Protection class	IP 67
Ambient temperature range	-20 ... 90 °C
Housing material	Pocan
Contact carrier material	PBT UL 94 V0
Base material of contacts	
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	0.08 ... 1.5 mm ²
Suitable for dragline cable (fixed cable connection)	

With dual power supply: 2x8 = 16A total current
Clamping range up to 2.5 mm² with screw connection

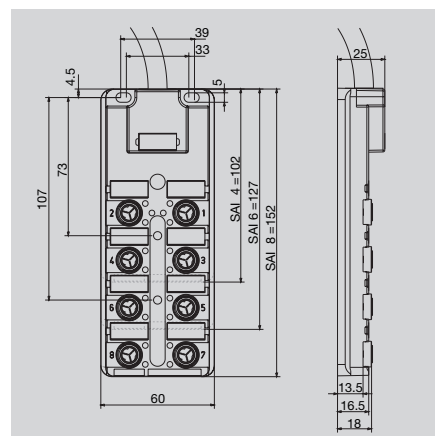
Wiring diagram



Wiring diagram



Fixed cable version



Ordering data

4 channel	
	Cable length 5 m
	Cable length 10 m
6 channel	
	Cable length 5 m
	Cable length 10 m
8 channel	
	Cable length 5 m
	Cable length 10 m
Note	

SAI-4/6/8-F IDC

3-pole

Type	Qty.	Order No.
SAI-4-F 3P IDC PUR 5M	1	1766720000
SAI-4-F 3P IDC PUR 10M	1	1766730000
SAI-6-F 3P IDC PUR 5M	4	1766740000
SAI-6-F 3P IDC PUR 10M	1	1766750000
SAI-8-F 3P IDC PUR 5M	1	1766760000
SAI-8-F 3P IDC PUR 10M	1	1766770000
Other versions on request		

SAI-4/6/8-F IDC

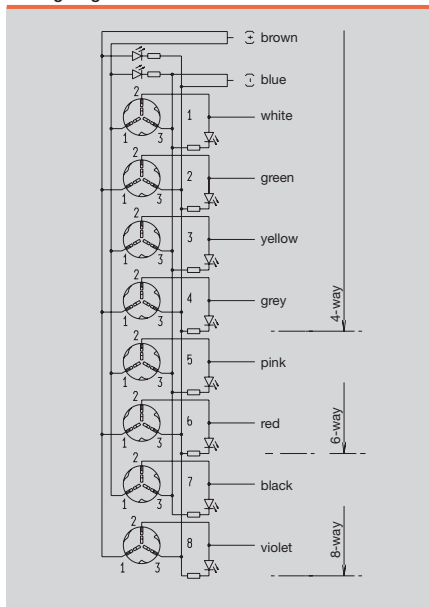
4-pole

Type	Qty.	Order No.
SAI-4-F 4P IDC PUR 5M	1	1766660000
SAI-4-F 4P IDC PUR 10M	1	1766670000
SAI-6-F 4P IDC PUR 5M	1	1766680000
SAI-6-F 4P IDC PUR 10M	1	1766690000
SAI-8-F 4P IDC PUR 5M	1	1766700000
SAI-8-F 4P IDC PUR 10M	1	1766710000
Other versions on request		

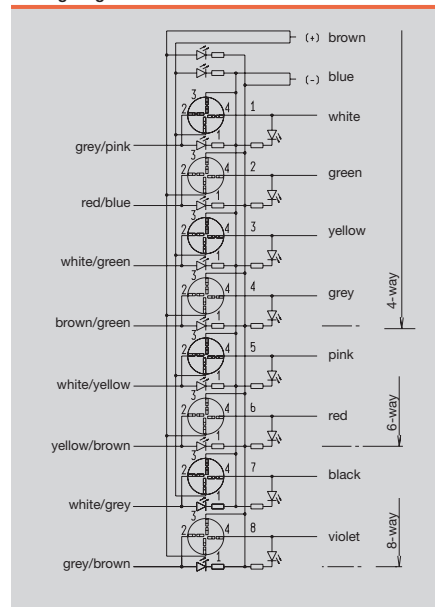
Technical data

Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	3 A
Total current max.	9 A
Pollution severity	2
Protection class	IP 67
Ambient temperature range	-20 ... 80 °C
Housing material	Pocan
Contact carrier material	PBT UL 94 V0
Base material of contacts	
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	
Suitable for dragline cable (fixed cable connection)	Yes

Wiring diagram



Wiring diagram



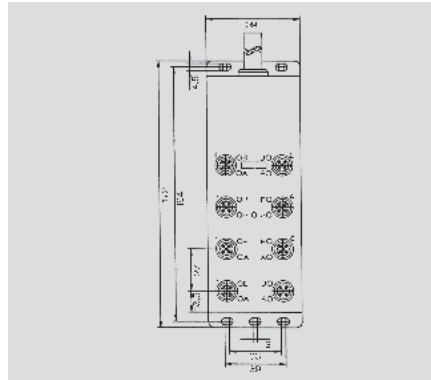
M12 VA stainless steel

Fixed cable version

- 5-pole, 2 signals per socket
- green LED operating indicator and yellow LED function indicator
- with stainless steel housing and cable glands

Ideal for machinery within the Food and Beverage Industries

SAI-8-F 5P M12 5M VA



Ordering data

Male plug

M12 connectors in stainless steel

Note

Technical data

Temperature range 0 °C/+ 60 °C

Materials:

Housing stainless steel 1.4404/316L

Contact carrier PVC

Contact CuZn, pre-nickel & 0.8 µm gold platin

Threaded bush stainless steel 1.4404/316L

O-ring EPDM

Mechanical data:

Ingress protection class IP69K

only in screwed condition
with associated mating pieces

Electrical data:

Contact resistance $\leq 5\text{m}\Omega$

Current-carrying capacity 4 A per channel

12 A max. total

Operating voltage 10-30 V DC

Rated voltage 32 V AC eff

Pollution severity 2 to VDE 0110

Accessories (included)

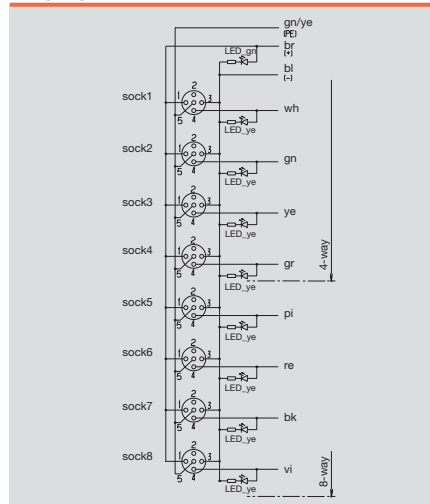
4 protective caps for channels not assigned

SAI-8-F 5P M12 5M VA

5-pole

Type	Qty.	Order No.
SAI-8-F 5P M12 5M VA	1	1865310000
SAIS-5/9-VA	1	1920700000

Wiring diagram



Tension-clamp connection M12, stainless steel

SAIS / SAIB VA

5-pole, straight



Ordering data

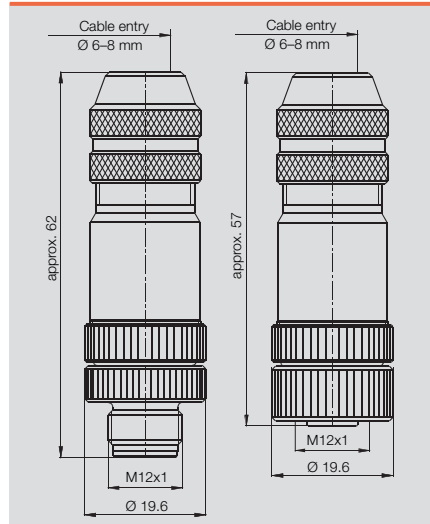
Male plug	
	5-polig, PG 9
	5-polig, PG 9
Female socket	
	5-polig, PG 9
	5-polig, PG 9
Note	

Type	Qty.	Order No.
SAIS 5/9-VA	1	1920700000
SAIS 5/9-VA-B-COD	1	1920720000
Female socket		
SAIB 5/9-VA	1	1920710000
SAIB 5/9-VA-B-COD	1	1920730000
Note		

Technical data

Number of Poles		5
Type of connection		Tension clamp connection
Housing material		14V32
Connection thread		M12
Cable-connection diameter	mm	6...8
Connection cross-section	mm ²	0.25...0.5
Rated current	A	4
Rated voltage	V	125 V
Temperature range	°C	-40 ... 85
Ingress protection class		IP 69 k
Contact surface		CuSnZn
Note		
		PB = PROFIBUS (B-COD)

Dimensioned drawing



Sensor-actuator distributors for special applications

All-metal

SAI-4/8-FMM M12



Shielded cable, e.g. for analogue initiators

Some applications need full shielding from sensor to control. This is possible with the all-metal SAI distributors. The distributors are supplied with an EMC cable gland. Initiator LEDs are omitted.

Especially thick trunk cable

It is sometimes advisable to use the machine manufacturer's standard trunk cable. This cable will usually have a relatively large outside diameter and will therefore require plenty of space (SAI-4/6/8 MHD).

All-metal fixed cable distributors

Weidmüller metal distributors have proved their worth in many situations. They are available as 4- and 8-channel M12 versions with cable lengths of 5 or 10 m. Metal distributors are also necessary when ESD requirements must be complied with. The conductive metal surface provides low surface resistance.

Advantages:

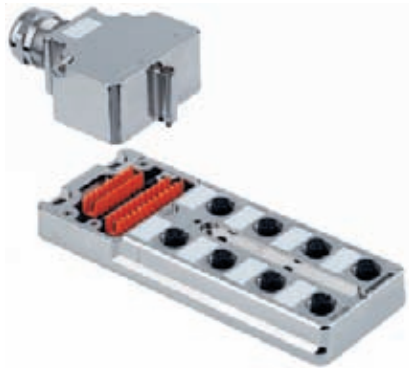
- no ESD/EMC problems
- high resistance to chemicals or mechanical loads
- standard mounting dimensions

SAI-M with metal hood

SAI-4/6/8 MMS SAI-4/6/8 MM

MMS: **M**odular, **M**etal, **S**hield

MM: **M**odular, **M**etal



SAI-4/6/8 MH

MH: **M**odular, **H**igh



SAI-4/6/8 MHD

MHD: **M**odular, **H**igh, sealed

(for especially thick cables)



SAI-4/6/8 MMS with EMC cable gland in metal housing

Especially tough conditions where plastic is totally unsuitable. In certain cases it makes sense to avoid the use of plastics altogether. In such cases a distributor made completely from metal is required that can be connected to others using metal cable glands, without additional connections for the shielding.

Cable gland: M20

For cables with outside insulation diameter from 10 mm to 14 mm. Listed below are just some of the cable sizes that are suitable for the SAI distributor with M20 cable gland:

- 14 x 0.50 mm² bis 16 x 0.50 mm²
- 8 x 0.75 mm² bis 15 x 0.75 mm²
- 8 x 1.00 mm² bis 10 x 1.00 mm²
- 5 x 1.50 mm² bis 7 x 1.50 mm²

Cable gland: M25

For cables with outside insulation diameter from 13 mm to 18 mm. Listed below are just some of the cable sizes that are suitable for the SAI distributor with M25 cable gland:

- 21 x 0.50 mm²
- 18 x 0.75 mm² bis 21 x 0.75 mm²
- 14 x 1.00 mm² bis 20 x 1.00 mm²
- 8 x 1.50 mm² bis 16 x 1.50 mm²

Overview of metal distributors

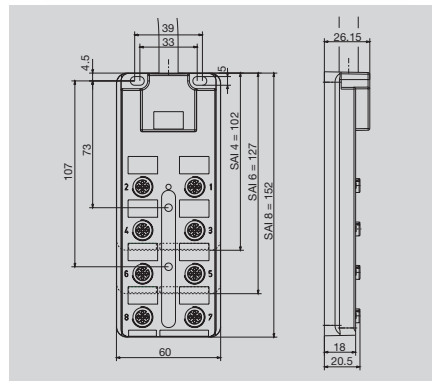
Type	SAI-UT	Sockets	M12	Poles-Hood	Form	Cable gland	Cable gland	Length	Order No.
SAI-4-MH-4P M12	PBT	4	4	Zn-G	high	M20	plastic		1705922000
SAI-6-MH-4P M12	PBT	6	4	Zn-G	high	M20	plastic		1705932000
SAI-8-MH-4P M12	PBT	8	4	Zn-G	high	M20	plastic		1705942000
SAI-4-MH-5P M12	PBT	4	5	Zn-G	high	M20	plastic		1701232000
SAI-6-MH-5P M12	PBT	6	5	Zn-G	high	M20	plastic		1701242000
SAI-8-MH-5P M12	PBT	8	5	Zn-G	high	M20	plastic		1701252000
SAI-4-MHD-5P M12	PBT	4	5	Zn-G	high	M25	plastic		1701233000
SAI-6-MHD-5P M12	PBT	6	5	Zn-G	high	M25	plastic		1701243000
SAI-8-MHD-5P M12	PBT	8	5	Zn-G	high	M25	plastic		1701253000
SAI-4-MHD-4P M12	PBT	4	4	Zn-G	high	M25	plastic		1705923000
SAI-6-MHD-4P M12	PBT	6	4	Zn-G	high	M25	plastic		1705933000
SAI-8-MHD-4P M12	PBT	8	4	Zn-G	high	M25	plastic		1705943000
SAI-4-MMS-4P M12	Zn-G	4	4	Zn-G	low	M20	EMC		1783540000
SAI-8-MMS-4P M12	Zn-G	8	4	Zn-G	low	M20	EMC		1783530000
SAI-4-MMS-5P M12	Zn-G	4	5	Zn-G	low	M20	EMC		1783520000
SAI-8-MMS-5P M12	Zn-G	8	5	Zn-G	low	M20	EMC		1783510000
SAI-4-MM-5P M12	Zn-G	4	5	Zn-G	low	M20	brass		1783500000
SAI-8-MM-5P M12	Zn-G	8	5	Zn-G	low	M20	brass		1783490000
SAI-4/6/8 MH-MH BL 3.5				Zn-G	high	M20	plastic		1724752000
SAI-4/6/8 MH-MHD BL 3.5				Zn-G	high	M25	plastic		1724753000
SAI-8-MH-5P M12 ZF III	PBT	8	5	Zn-G	high	M20	plastic		1782760000
SAI-8-MMS-5P M12 ZF III	Zn-G	8	5	Zn-G	high	M20	plastic		1782740000
SAI-4/6/8 MH-MH BL-ZF 3.5				Zn-G	high	M20	plastic		1782750000
SAI-4-FMM-4P M12 5M	Zn-G	4	4					5 m	9456190002
SAI-4-FMM-4P M12 10M	Zn-G	4	4					10 m	9456200002
SAI-8-FMM-4P M12 5M	Zn-G	8	4					5 m	9456750002
SAI-8-FMM-4P M12 10M	Zn-G	8	4					10 m	9456760002

Note: The cable outside diameter can vary from manufacturer to manufacturer. It is therefore possible that the cable glands hold other cables firmly despite a different strand lay-up. In each case, it is best to first measure the cable diameter and then choose an appropriate distributor.

M12 metal distributors

Fixed cable version

SAI-4-FMM



Ordering data

4 channel	Cable length 5 m Cable length 10 m
8 channel	Cable length 5 m Cable length 10 m
Note	

SAI-4-FMM

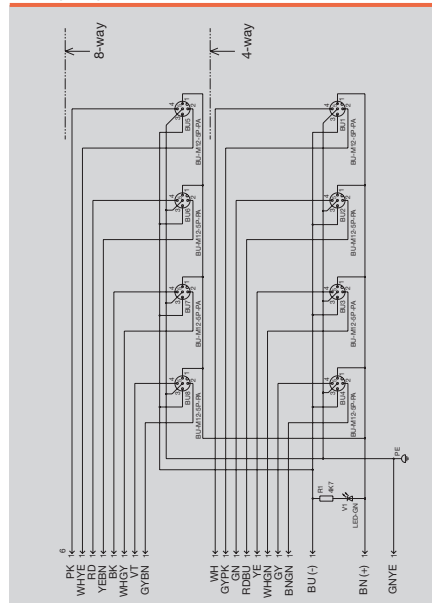
4-pole

Type	Qty.	Order No.
SAI-4-FMM-4P M12 5M	4	9456190002
SAI-4-FMM-4P M12 10M	3	9456200002
SAI-8-FMM-4P M12 5M	1	9456750002
SAI-8-FMM-4P M12 10M	3	9456760002
Other versions on request		

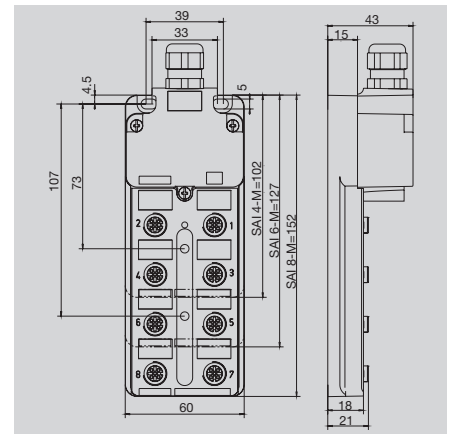
Technical data

Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	3 A
Total current max.	9 A
Pollution severity	3
Protection class	IP 68
Ambient temperature range	-20 ... 90 °C
Housing material	CuZn, nickel-plated
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickel- gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	silver
Flammability class UL 94	V-0
Clamping range of hood-version	
Suitable for dragline cable (fixed cable connection)	Yes

Wiring diagram



Hood version



Ordering data

Complete modules, 4-pole	
	4 channel
	8 channel
Complete modules, 5-pole	
	4 channel
	8 channel
Tension-clamp connection, high cover	
	8 channel
Base unit	
	8 channel
Mounting hood	
	Screw connection
Note	

SAI-4/6/8-MMS

Type	Qty.	M12	Order No.
SAI-4-MMS 4P M12	1		1783540000
SAI-8-MMS 4P M12	1		1783530000
SAI-4-MMS 5P M12	1		1783520000
SAI-8-MMS 5P M12	1		1783510000
SAI-4/6/8 MH-MM BL 3.5	1		1724754000
With EMC cable gland			

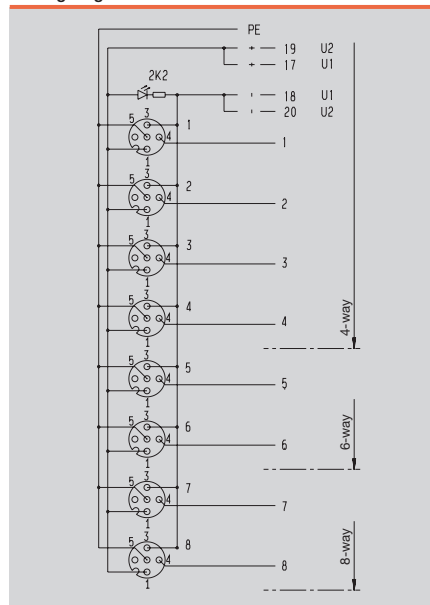
SAI-4/6/8-MM

Type	Qty.	M12	Order No.
SAI-4-MM 5P M12	1		1783500000
SAI-8-MM 5P M12	1		1783490000
SAI-8-MMH 5P M12 ZF	1		1782740000
SAI-8-MM 5P M12 UT	2		1783491000
SAI-4/6/8 MH-MM BL 3.5	1		1724754000
MM without initiator LED and with standard metal cable gland			

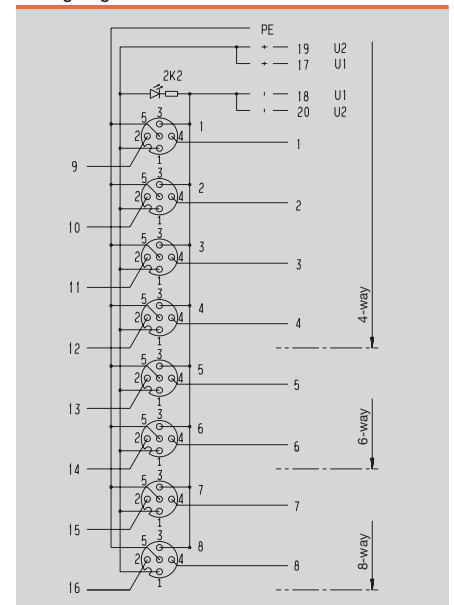
Technical data

Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	3 A
Total current max.	10 A
Pollution severity	3
Protection class	IP 68
Ambient temperature range	-20 ... 90 °C
Housing material	CuZn, nickel-plated
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickel-coated, gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	silver
Flammability class UL 94	V-0
Clamping range of hood-version	0.08 ... 1.5 mm ²
Suitable for dragline cable (fixed cable connection)	

Wiring diagram



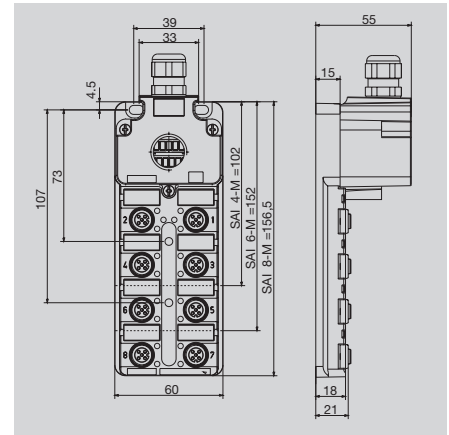
Wiring diagram



M12 metal distributors

Hood version with M20 outlet

For cables with 10-14 mm outer diameter



Ordering data

Complete modules	
	4 channel
	6 channel
	8 channel
Tension clamp connection	8 channel
Mounting hood	
	Tension clamp connection
	Screw connection
Note	

SAI-4/6/8-MH

4-pole

Type	Qty.	Order No.
SAI-4-MH-4P M12	1	1705922000
SAI-6-MH-4P M12	1	1705932000
SAI-8-MH-4P M12	1	1705942000
SAI-4/6/8 MH MH BLZF3,5	1	1782750000
SAI-4/6/8 MH-MH BL 3.5	1	1724752000
Other versions on request		

SAI-4/6/8-MH

5-pole

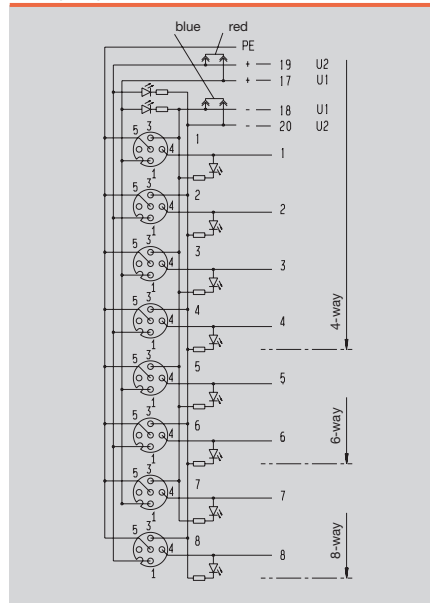
Type	Qty.	Order No.
SAI-4-MH-5P M12	1	1701232000
SAI-6-MH-5P M12	1	1701242000
SAI-8-MH-5P M12	1	1701252000
SAI-8-MH-5P M12 ZF III	1	1782760000
SAI-4/6/8 MH MH BLZF3,5	1	1782750000
SAI-4/6/8 MH-MH BL 3.5	1	1724752000
Other versions on request		

Technical data

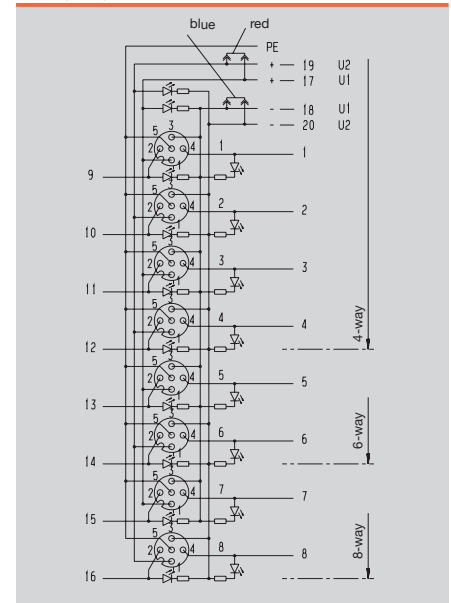
Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	3 A
Total current max.	10 A
Pollution severity	3
Protection class	IP 68
Ambient temperature range	-20 ... 90 °C
Housing material	CuZn, nickel-plated
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickel-coated, gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	silver
Flammability class UL 94	V-0
Clamping range of hood-version	0.08 ... 1.5 mm ²
Suitable for dragline cable (fixed cable connection)	

With dual power supply: 2x8 = 16A total current
Clamping range up to 2.5 mm² with screw connection

Wiring diagram

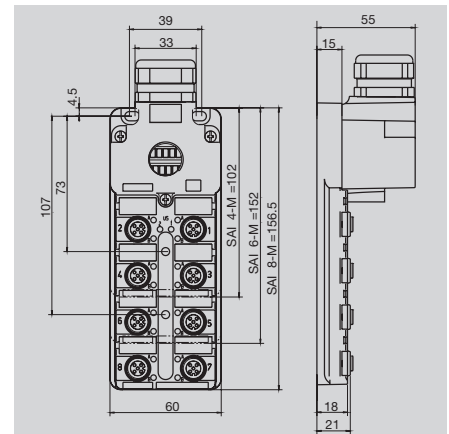


Wiring diagram



Hood version with M25 outlet

For cables with 13-18 mm outer diameter



Ordering data

Complete modules	
	4 channel
	6 channel
	8 channel
Mounting hood	
	Screw connection
Note	

SAI-4/6/8-MHD		4-pole	
Type	Qty.	Order No.	
SAI-4-MHD-4P M12	1	1705923000	
SAI-6-MHD-4P M12	1	1705933000	
SAI-8-MHD-4P M12	1	1705943000	
SAI-4/6/8 MH-MHD BL 3.5			
Other versions on request			

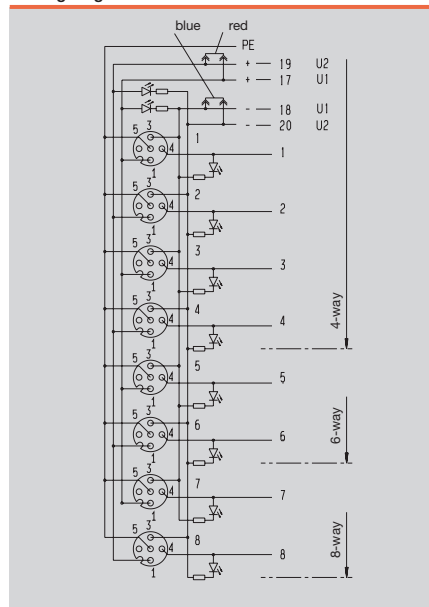
SAI-4/6/8-MHD		5-pole	
Type	Qty.	Order No.	
SAI-4-MHD-5P M12	1	1701233000	
SAI-6-MHD-5P M12	1	1701243000	
SAI-8-MHD-5P M12	1	1701253000	
SAI-4/6/8 MH-MHD BL 3.5			
Other versions on request			

Technical data

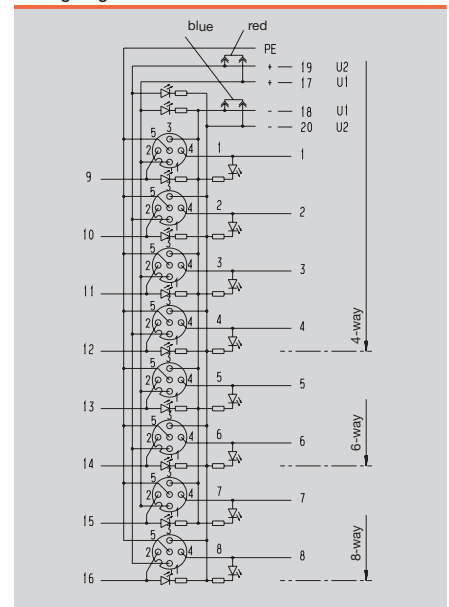
Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	3 A
Total current max.	10 A
Pollution severity	3
Protection class	IP 68
Ambient temperature range	-20 ... 90 °C
Housing material	CuZn, nickel-plated
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickel-coated, gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	silver
Flammability class UL 94	V-0
Clamping range of hood-version	0.08 ... 1.5 mm ²
Suitable for dragline cable (fixed cable connection)	

With dual power supply: 2x8 = 16A total current
Clamping range up to 2.5 mm² with screw connection

Wiring diagram



Wiring diagram



For switching with five no-voltage contacts in an M12 without LED

with hood



Emergency stop wiring

Sometimes a machine builder will need more than two floating contacts in one M12 plug-in connector. This is the case, for example, in the wiring for some “emergency stop” circuits. It was for this application that Weidmüller developed the 1:1 SAI distributor.

This SAI distributor has four M12 plug-in connectors with five floating contacts in one socket connector. The distributor is supplied complete with hood.

When connecting PT100 3- and 4-conductor initiators, we recommend the new shielded metal version. If you need other circuit configurations, simply contact us.

Note: This distributor should not be used as base module for active bus distributors.

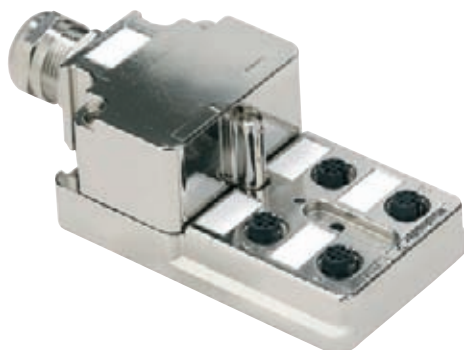
base element



Wiring diagram

Socket	Contact	BL 3.5 contact
1	1	1
1	2	2
1	3	3
1	4	4
1	5	5
2	1	6
2	2	7
2	3	8
2	4	9
2	5	10
3	1	11
3	2	12
3	3	13
3	4	14
3	5	15
4	1	16
4	2	17
4	3	18
4	4	19
4	5	20
-	-	21

metal



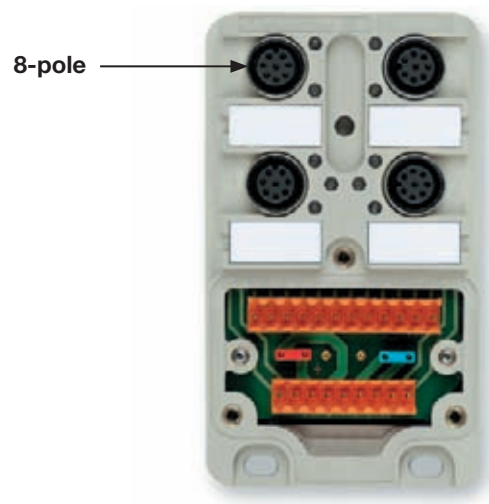
Technical data

Current per channel	2A
Total current	8A
LEDs	No LEDs are integrated at any point.

Ordering data

Type	Qty.	Order No.
SAI-4-M 5P M12 1:1 (plastic hood)	1	1806010000
Base element (plastic)	1	1806011000
SAI-4-MMS 5P M12 1:1 (Metal hood)	1	1897680000

SAI distributor with 8 poles per M12



Applications

This distributor can be used both as a base module for satellite solutions (SAI-Combi) and for connecting sensors/units with more than two contacts.

SAI-Combi

A sub-distribution board can be connected to every M12 with the help of the SAI-4-M 8P in conjunction with the SAI Active bus hood. This SAI should then be a 4-channel distributor with one channel per socket. The SAI-4-M 4P M12 is particularly suitable.

Part No. **1705920000**.

Sensors, units with more than two signals in one line

As one socket in this module contains four signal paths and, in addition, two +, two – and one PE, components with more than two signal lines can be connected to this module. Eight-pole connecting cables are available on request.

Wiring

M12 socket	M12 contact	BL 3.5 connection	PLC input	Supply
1	1	1	E0.0	
1	2	3	E0.1	
1	3	5	E0.2	
1	4	7	E0.3	
2	1	2	E0.4	
2	2	4	E0.5	
2	3	6	E0.6	
2	4	8	E0.7	
3	1	9	E1.0	
3	2	11	E1.1	
3	3	13	E1.2	
3	4	15	E1.3	
4	1	10	E1.4	
4	2	12	E1.5	
4	3	14	E1.6	
4	4	16	E1.7	
1/3	5	17		24 V
2/4	5	19		24 V
1/3	6/7	18		0 V
2/4	6/7	20		0 V
1/2/3/4	8	PE		PE

The jumpers in the distributor enable the potentials of 17 and 19 or 18 and 20 to be bridged. Contacts 6 and 7 are bridged in the 8-pole M12 in order to increase the current-carrying capacity, total current per M12: 2 A, signal current per pin: 1 A

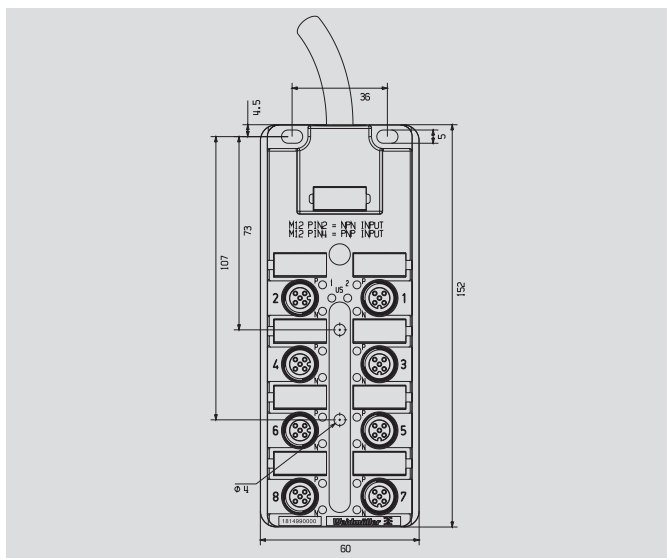
Ordering data

Type	Qty.	Order No.
Complete module: SAI-4-M 8P M12	1	1807640000
Base separate: SAI-4-M M12 UT	1	1807641000
Matching hood passive: SAI-4/6/8-MH-BL3.5	1	1724750000

Technical information: The distributor does not include any signalling LEDs. Supply LEDs and electrical isolation are provided.

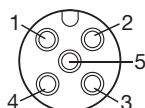
Fixed cable version

Fixed cable version

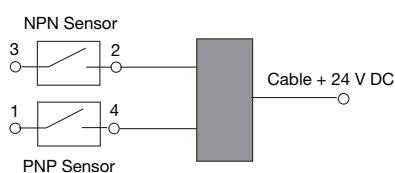


M12 sockets

- Pin 1 = +24 V DC
- Pin 2 = NPN input
- Pin 3 = 0 V DC
- Pin 4 = PNP input
- Pin 5 = PE



Wiring diagram (schematic)



This distributor includes the option of attaching either a PNP sensor or an NPN sensor with 2- or 3-conductor connection to an M12 socket.

Eight inputs are available in total. In the case of a switched sensor, a + signal on the corresponding wire is connected through and the appropriate LED is illuminated.

The upper LED "N" is illuminated for NPN sensors and the lower LED "P" for PNP sensors. Do not connect a T-piece to the M12 socket.

The existing M12 plug-in connectors are wired in such a manner that the PNP sensor can be connected to pin 4 and the NPN sensor to pin 2.

The distributor has eight channels and 5 m of cable. Other versions are also available.

Pin assignment

M12 socket	Pin	Function	Pin	Function	Output	Wire colour	Wire size
1	4	PNP	2	NPN	1	white	0.34 mm ²
2	4	PNP	2	NPN	2	green	0.34 mm ²
3	4	PNP	2	NPN	3	yellow	0.34 mm ²
4	4	PNP	2	NPN	4	grey	0.34 mm ²
5	4	PNP	2	NPN	5	pink	0.34 mm ²
6	4	PNP	2	NPN	6	red	0.34 mm ²
7	4	PNP	2	NPN	7	black	0.34 mm ²
8	4	PNP	2	NPN	8	violet	0.34 mm ²
all	1	24 V DC				brown	0.75 mm ²
all	3	0 V DC				blue	0.75 mm ²
all	5	PE				green/yellow	0.75 mm ²

Technical data

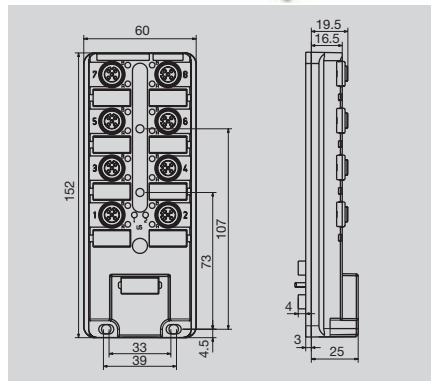
Operating voltage	24 V DC ±20 %
Operation temperature	0...80 °C
Storage temperature	-25...80 °C
Ingress protection class	IP68
PUR cable	5 m
Max. no-load current for 2-wire NPN sensors	2 mA DC

Ordering data

Type	Qty.	Order No.
SAI-8-F 5P NPN-PNP 5M	1	181499000

Wall bushing

SAI-8-B 5P M12 SL



Ordering data

Note

SAI-8-B 5P M12 SL

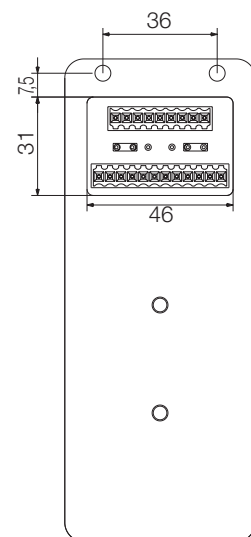
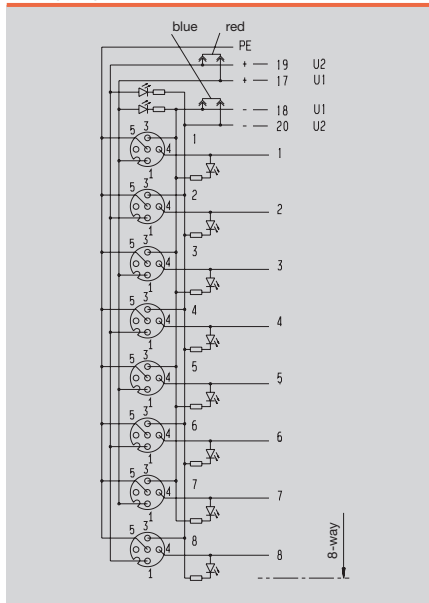
5-pole

Type	Qty.	Order No.
SAI-8-B 5P M12 SL	1	1847560000
BL 3.5 connector included in delivery		

Technical data

Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	3 A
Total current max.	10 A
Pollution severity	3
Protection class	IP 65
Ambient temperature range	-20 ... 90 °C
Housing material	Pocan
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickeled, gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	0.08 ... 1.5 mm ²
Suitable for dragline cable (fixed cable connection)	

Wiring diagram



Overview

Distributors for system cabling

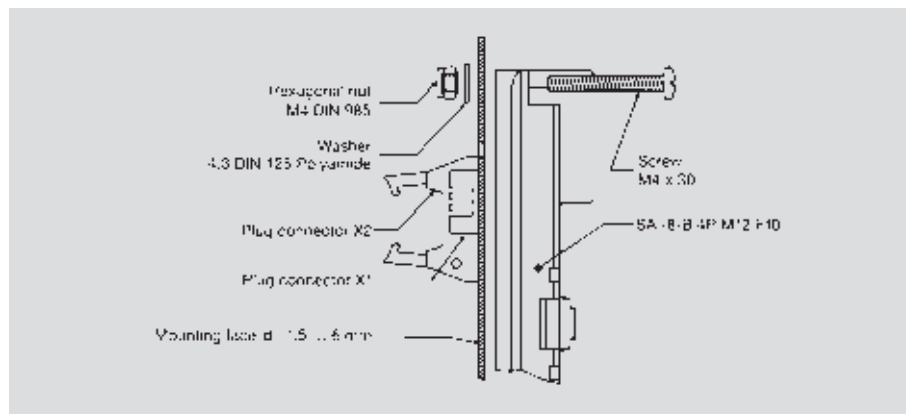
On-site distribution is becoming more important. For example, in some places the IP 20 I/O module has to be mounted in housings directly on the machine. This is where a simplified form of wiring is essential.

Weidmüller now offers two simple solutions

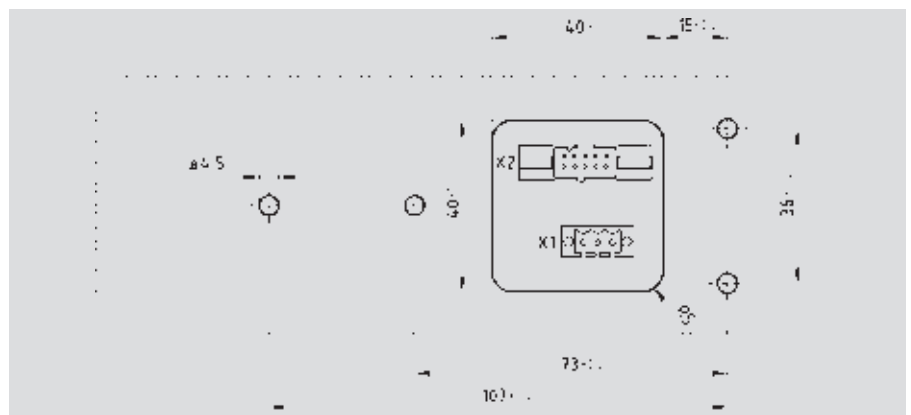
- A distributor equipped at the rear with a standardised ribbon cable connector, which is compatible with the Weidmüller PLC system interface.
- Weidmüller also offers a unique solution for feeding bus cables through panels that can be plugged in from both sides.

Advantages

- Sensors and actuators can be plugged in from outside
- Through-panel version can be mounted in cut-outs in steel panels
- Standardised ribbon cable connector inside
- Plus: M12 through-panel feed that can be plugged in from both sides



Drilling template



Advantages of system cabling

Fast

- Time-saving installation
- Reduces commissioning and troubleshooting times
- On-site wiring cuts wiring costs

Safe

- Reduces installation errors
- Using system cables instead of individual wires improves clarity in control cabinets
- Direct marking corresponding to the PLC

Variability

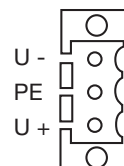
- Additional I/O modules available
- Cable length options
- Easy replacement of I/O interfaces provides flexibility

Contact assignment

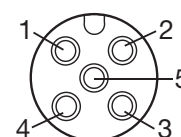
Male connector X1

M12 socket		Male connector X1
1 ... 8	Pin 1	U +
1 ... 8	Pin 3	U -
1 ... 8	Pin 5	PE

Male connector X1



M12 socket

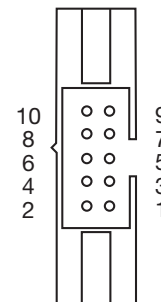


Contact assignment

Male connector X2

M12 socket		Male connector X2
1	Pin 4	1
2	Pin 4	2
3	Pin 4	3
4	Pin 4	4
5	Pin 4	5
6	Pin 4	6
7	Pin 4	7
8	Pin 4	8
1 - 8	Pin 1	9
1 - 8	Pin 3	10

Male connector X2



Technical data

Operating voltage	
Outputs	
Inputs	
Mounting conditions	
Mounting surface	
Surface temperature	
Ingress protection class	
Fixings	
Note:	

10 - 30 V (DC)
max. 1 A per channel / max. 8 A in total
max. 1 A in total
sheet steel, flat, min. 1.5 mm thick, or panels with at least equivalent stability, max. 6 mm thick
max. 40 °C
IP67/IP68 only in conjunction with control cabinets with equivalent class of protection
4 screws + washers + nuts / torque: 0.8 Nm
Connect the male connector 3.5 (X1) when using actuators

Ordering data

Type	Qty.	Order No.
SAI-8-B 4P M12 F10	1	1812170000

Pre-assembled hood version

In some instances it is helpful to order the hoods pre-assembled.



SAI distributor with pre-assembled hood Colour-coded cable

Ordering data		4-pole
Type	Length	Order No.
8-channel		
SAI-8-MF 4P PUR 5M	5 m	1799960000
SAI-8-MF 4P PUR 10M	10 m	1789190000

Ordering data		5-pole
Type	Length	Order No.
4-channel		
SAI-4-MF 5P PUR 5M	5 m	1804600000
SAI-4-MF 5P PUR 10M	10 m	1804580000
8-channel		
SAI-8-MF 5P PUR 5M	5 m	1804590000
SAI-8-MF 5P PUR 10M	10 m	9457430000
8-channel, without initiator LED		
SAI-8-MF 5P PUR 5M OL	5 m	9457350000

Pre-assembled hood Colour-coded cable

Ordering data		4-pole
Type	Length	Order No.
SAI-4/6/8-MHF 4P PUR 4M	4 m	1791450400
SAI-4/6/8-MHF 4P PUR 6M	6 m	1791450600
SAI-4/6/8-MHF 4P PUR 9M	9 m	1791450900
SAI-4/6/8-MHF 4P PUR14M	14 m	1791451400
SAI-4/6/8-MHF 4P PUR20M	20 m	1791452000
SAI-4/6/8-MHF 4P PUR28M	28 m	1791452800
SAI-4/6/8-MHF 4P PUR34M	34 m	1791453400

Matching base module

Type	Qty.	Order No.
SAI-4-M-4PM12UT	1	1705921000
SAI-6-M-4PM12UT	1	1705931000
SAI-8-M-4PM12UT	1	1705941000

Pre-assembled hood

Ordering data		5-pole
Type	Length	Order No.
SAI-4/6/8-MHF 5P PUR 4M	4 m	1791460400
SAI-4/6/8-MHF 5P PUR 6M	6 m	1791460600
SAI-4/6/8-MHF 5P PUR 9M	9 m	1791460900
SAI-4/6/8-MHF 5P PUR14M	14 m	1791461400
SAI-4/6/8-MHF 5P PUR16M	16 m	1791461600
SAI-4/6/8-MHF 5P PUR20M	20 m	1791462000
SAI-4/6/8-MHF 5P PUR28M	28 m	1791462800
SAI-4/6/8-MHF 5P PUR34M	34 m	1791463400
SAI-4/6/8-MHF 5P PUR40M	40 m	1791464000
SAI-4/6/8-MHF 5P PUR50M	50 m	1791465000
SAI-4/6/8-MHF 5P PUR55M	55 m	1791465500

Matching base module

Type	Qty.	Order No.
SAI-4-M-5PM12UT	1	1701231000
SAI-6-M-5PM12UT	1	1701241000
SAI-8-M-5PM12UT	1	1701251000

Overview

Fixed cable version



Compact dimensions, readily accessible M8 connections, eye-catching design

The unconventional design of this generation of SAI M8 distributors catches the eye immediately. Their shape is helpful because in this patented design the sockets are no longer arranged in simple rows. Instead, some are on 45° bevelled surfaces. That considerably improves the accessibility of the screw connections for the sensor and actuator cables. Ease of use, compact dimensions and the eye-catching design are the obvious advantages of this M8 generation.

The following variations are available:

- SAI M8 distributor with removable connection hood; the bus cable can be connected either vertically or horizontally
- SAI M8 distributor with permanently attached, pre-assembled bus cable, 5 or 10 m long; this version is particularly slim and is therefore ideal for mounting in confined spaces
- SAI M8 distributor with metal-plated M23 thread

Hood version



M23 version



SAI-M8-Line

M8 distributor with M12 outlet



M8 distributor line / fixed-cable version



M8 distributor with solder pins



n

Extra-narrow M8 distributor for confined spaces

Single-row M8 distributors are the smallest sensor-actuator modules currently available with this thread size and it is precisely their size that is decisive for applications. Therefore, this form has become very popular. It is important to maintain the widest possible range of options. The SAI-M8-Line products can provide many interesting solutions:

- 4- and 6-channel modules with 8-pole M12 bus connection
- 8- and 10-channel modules with 12-pole bus connection
- 4-, 6-, 8-, 10- and 12-channel distributors with fixed cable connection, the 4-, 6- and 8-channel modules also with 4 poles

It is important to note that the distributors can be labelled with the same markers as the Weidmüller 5 mm modular terminals. Therefore, no new tags had to be introduced. The modules can also be mounted sideways and are completely encapsulated.

Consequently, Weidmüller SAI distributors represent stability, robustness, flexibility and compactness in one unit.

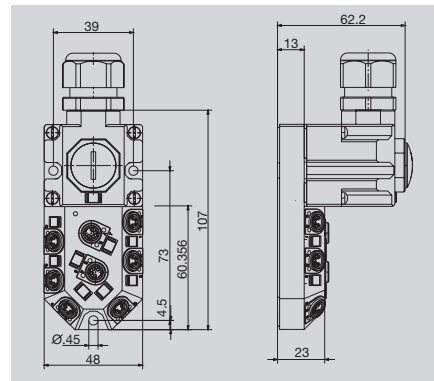
PCB version of a complete SAI distributor

During the design of PCBs, it is often necessary to plug in different external data lines. There are a variety of connectors available for this purpose. For machine construction, the M8 and M12 connectors have become established as the standard solutions for sensor and actuator wiring. When attempting to mount these PCB-type connectors to the PCB, there is a significant risk that they will not be firmly attached to the board. Now, the SL version of the SAI distributor series solves this problem. The distributor can be completely mounted onto a PCB. It features soldering pins for the electrical connection to the PCB. The distributor itself should be slightly raised up during assembly by means of washers. This provides some clearance under the box. Naturally, the power supply channels are bridged in the distributor. This saves space on the PCB since there is no need for holes on any assembly surface. Thus the reverse side can be used for other purposes.

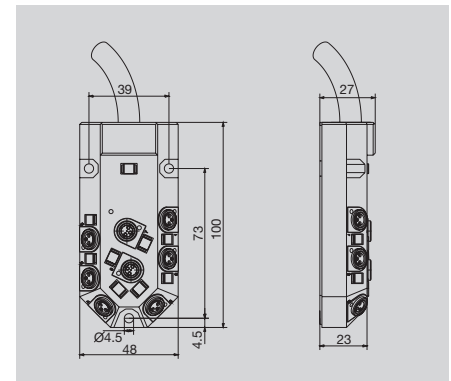
M8 distributors

Hooded/fixed cable version

SAI-4/8-M



SAI-4/8-F



Ordering data

3-pole	
Cable length 5 m (with fixed cable version)	4 channel 8 channel
Cable length 10 m (with fixed cable version)	4 channel 8 channel
4-pole	
Cable length 5 m (with fixed cable version)	4 channel 8 channel
Cable length 10 m (with fixed cable version)	4 channel 8 channel
Note	

SAI-4/8-M

Type	Qty.	M8	Order No.
SAI-4-M 3P M8	1		1784680000
SAI-8-M 3P M8	1		1784670000
Other versions on request			
SAI-4-M 4P M8	1		1784700000
SAI-8-M 4P M8	1		1784690000
Other versions on request			

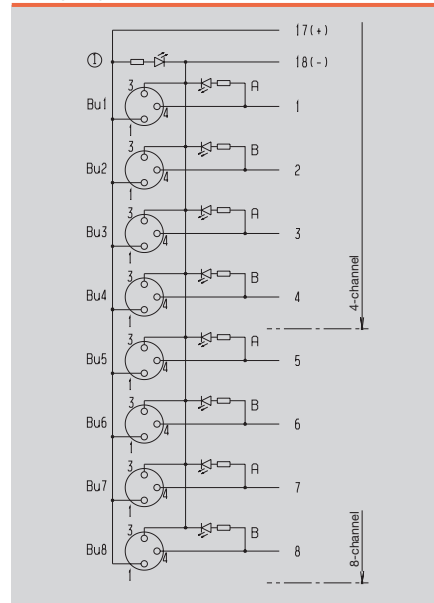
SAI-4/8-F

Type	Qty.	M8	Order No.
SAI-4-F 3P M8 PUR 5M	1		1784640000
SAI-8-F 3P M8 PUR 5M	1		1784620000
SAI-4-F 3P M8 PUR 10M	1		1784630000
SAI-8-F 3P M8 PUR 10M	1		1784610000
Other versions on request			
SAI-4-F 4P M8 PUR 5M	1		1784600000
SAI-8-F 4P M8 PUR 5M	1		1784580000
SAI-4-F 4P M8 PUR 10M	1		1784590000
SAI-8-F 4P M8 PUR 10M	1		1784570000
Other versions on request			

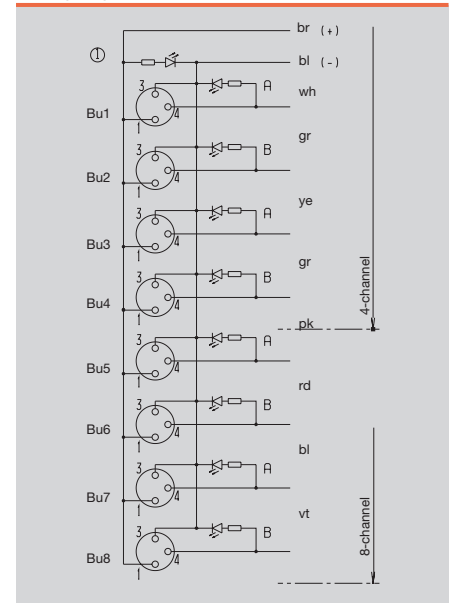
Technical data

Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	2 A
Total current max.	8 A
Pollution severity	3
Protection class	IP 68
Ambient temperature range	-20 ... 80 °C
Housing material	Pocan
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickel- gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	0.08 ... 1 mm ²
Suitable for dragline cable (fixed cable connection)	Yes

Wiring diagram



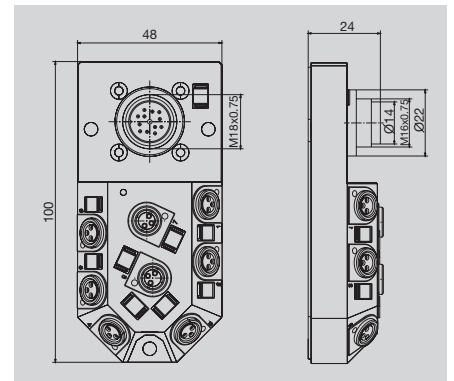
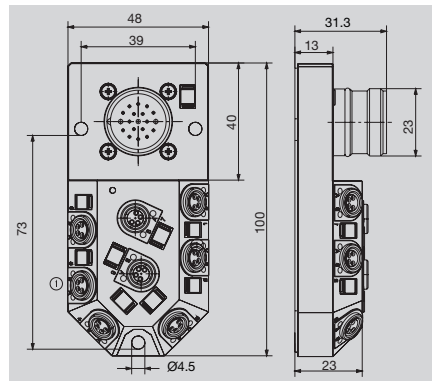
Wiring diagram



With M23/ M16 outlet

SAI-4/8-M23

SAI-8-M16



Ordering data

3-pole	8 channel
4-pole	4 channel
	8 channel
Note	

SAI-4/8-M23

M23

Type	Qty.	Order No.
SAI-4-M23 4P M8	1	1784660000
SAI-8-M23 4P M8	1	1784650000
Other versions on request		

SAI-8-M16

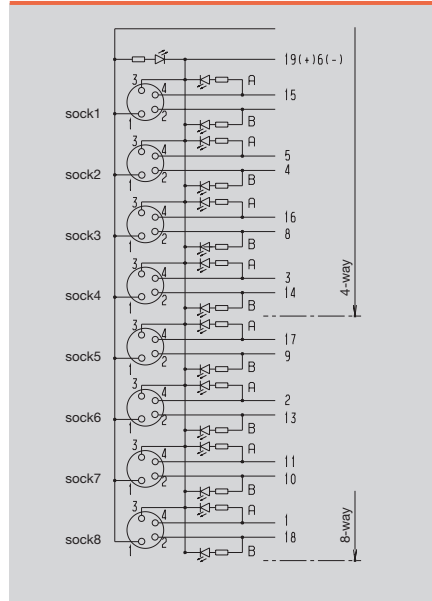
M16

Type	Qty.	Order No.
SAI-8-M16 3P M8	1	1795900000
Other versions on request		

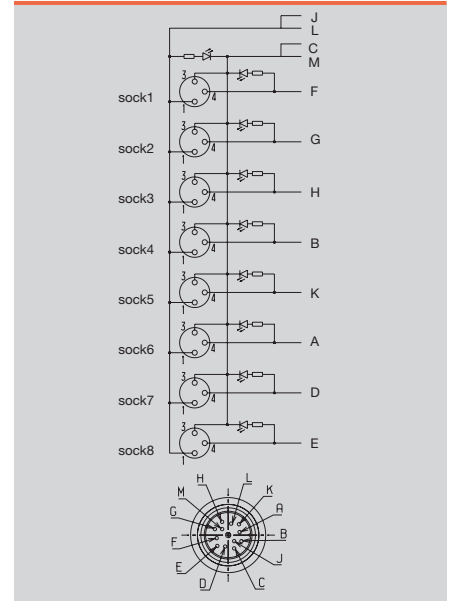
Technical data

Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	2 A
Current-carrying capacity per slot	2 A
Total current max.	8 A
Pollution severity	3
Protection class	IP 68
Ambient temperature range	-20 ... 90 °C
Housing material	Pocan
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickel- gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	
Suitable for dragline cable (fixed cable connection)	

Wiring diagram



Wiring diagram

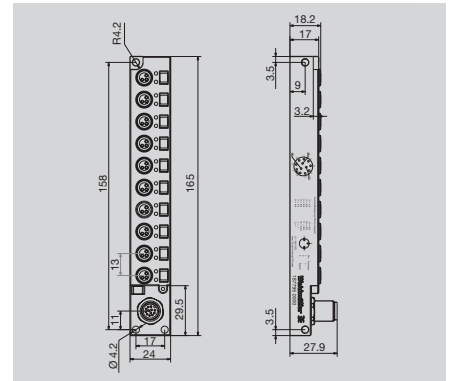
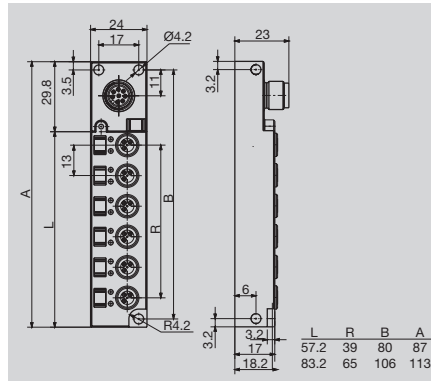


M8 distributors

Line

SAI-4/6-S

SAI-5/8-S



Ordering data

3-pole	
	4 channel
	6 channel
	8 channel
	10 channel
3-pole without LED	
	6 channel
Note	

SAI-4/6-S

M12

Type	Qty.	Order No.
SAI-4-S 3P M8 L	1	1828740000
SAI-6-S 3P M8 L	1	1828730000
SAI-6-S 3P M8 L OL	1	1932380000
Other versions on request		

SAI-5/8-S

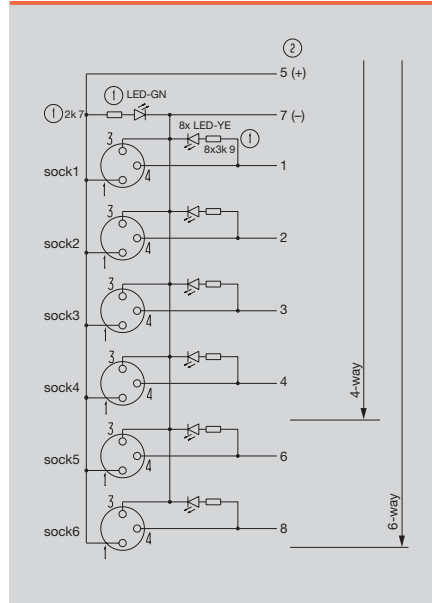
M12

Type	Qty.	Order No.
SAI-8-S12 3P M8 L	1	1871680000
SAI-10-S12 3P M8 L	1	1877950000

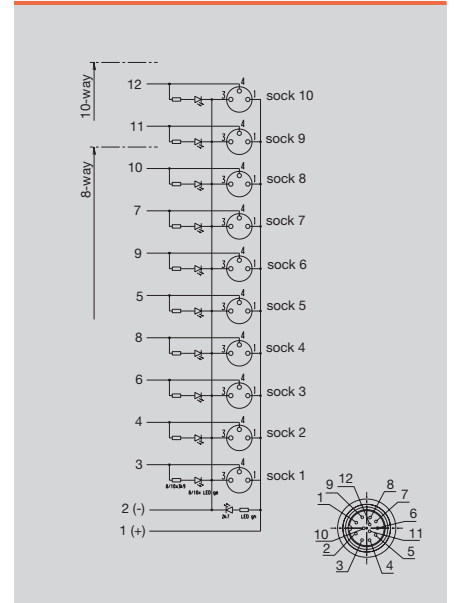
Technical data

Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	1 A
Current-carrying capacity per slot	2 A
Total current max.	6 A
Pollution severity	3
Protection class	IP 68
Ambient temperature range	-25 ... 80 °C
Housing material	Pocan
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickeled, gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	
Suitable for dragline cable (fixed cable connection)	Yes

Wiring diagram

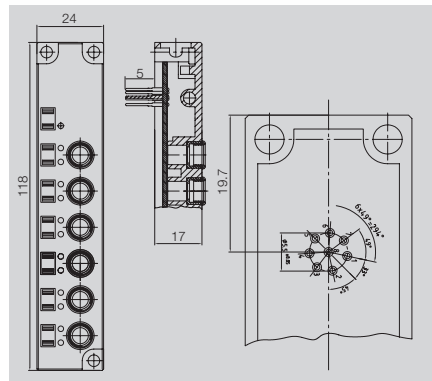


Wiring diagram



Line
PCB version

SAI-6-S M8 L SL



Ordering data

3-pole	6 channel
Note	

SAI-6-S M8 L SL

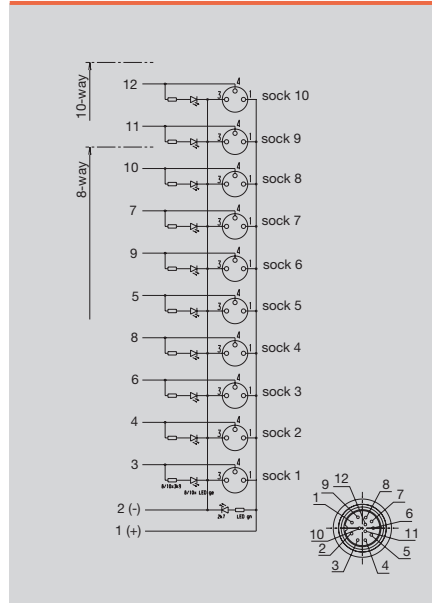
3-pole

Type	Qty.	Order No.
SAI-6-S 3P M8 L SL	1	1057720000
Other versions on request		

Technical data

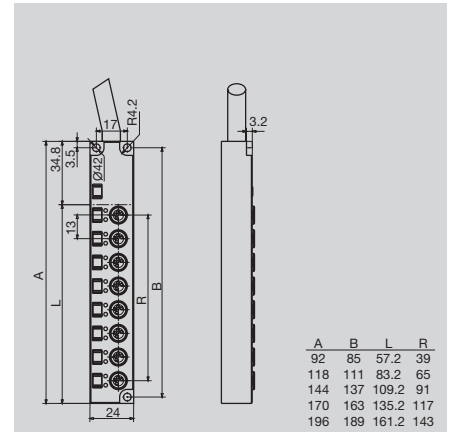
Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	1 A
Current-carrying capacity per slot	2 A
Total current max.	6 A
Pollution severity	3
Protection class	IP 68
Ambient temperature range	-25 ... 80 °C
Housing material	Pocan
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickel- gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	
Suitable for dragline cable (fixed cable connection)	Yes

Wiring diagram



M8 distributors

Line / Fixed cable version



Ordering data

Cable length 5 m (with fixed cable version)	
4 channel	SAI-4-F 3P M8 L 5M
6 channel	SAI-6-F 3P M8 L 5M
8 channel	SAI-8-F 3P M8 L 5M
10 channel	SAI-10-F 3P M8 L 5M
12 channel	SAI-12-F 3P M8 L 5M
Cable length 10 m (with fixed cable version)	
4 channel	SAI-4-F 3P M8 L 10M
6 channel	SAI-6-F 3P M8 L 10M
8 channel	SAI-8-F 3P M8 L 10M
10 channel	SAI-10-F 3P M8 L 10M
12 channel	SAI-12-F 3P M8 L 10M
Note	

SAI-4/6/8/10/12-L

3-pole

Type	Qty.	Order No.
SAI-4-F 3P M8 L 5M	1	1828720000
SAI-6-F 3P M8 L 5M	1	1828700000
SAI-8-F 3P M8 L 5M	1	1828680000
SAI-10-F 3P M8 L 5M	1	1828660000
SAI-12-F 3P M8 L 5M	1	1828640000
SAI-4-F 3P M8 L 10M	1	1828710000
SAI-6-F 3P M8 L 10M	1	1828690000
SAI-8-F 3P M8 L 10M	1	1828670000
SAI-10-F 3P M8 L 10M	1	1828650000
SAI-12-F 3P M8 L 10M	1	1828630000

SAI-4/6/8/10/12-L

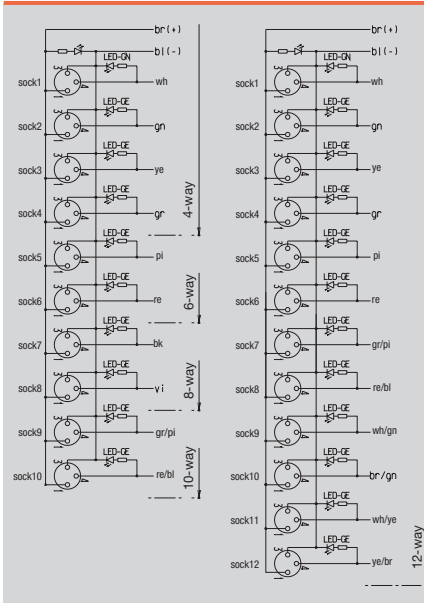
4-pole

Type	Qty.	Order No.
SAI-4-F 4P M8 L 5M	1	1849680000
SAI-6-F 4P M8 L 5M	1	1849700000
SAI-8-F 4P M8 L 5M	1	1828620000
SAI-4-F 4P M8 L 10M	1	1849690000
SAI-6-F 4P M8 L 10M	1	1849670000
SAI-8-F 4P M8 L 10M	1	1828610000

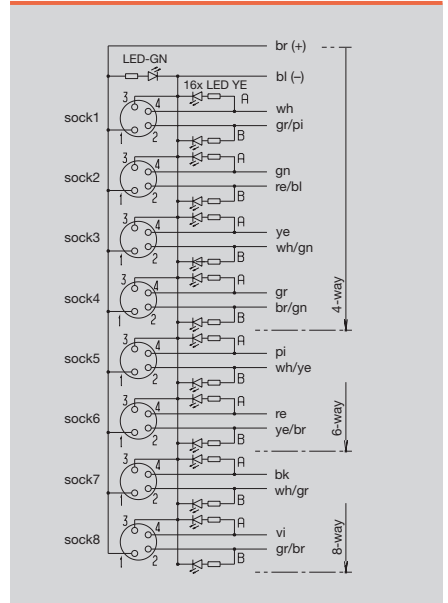
Technical data

Rated voltage	32.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	1 A
Current-carrying capacity per slot	2 A
Total current max.	6 A
Pollution severity	3
Protection class	IP 68
Ambient temperature range	-25 ... 80 °C
Housing material	Pocan
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickeled, gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	
Suitable for dragline cable (fixed cable connection)	Yes

Wiring diagram



Wiring diagram



Overview

M5-Line with M12 outlet



The Weidmüller SAI-M5 distributors are currently the smallest SAI distributors in the world

Whether mobile phones or computers – as the functionality increases so the size of the components decreases! Today, machine designers face the same problem. Space is at a premium here as well, even in large machines, particularly where the sensor components are located. In the past the M8 distributor solved these problems. However, these units are now considered to be too large. The first move was to make the sensors smaller. Then it was the turn of the cables and distributors.

These extremely small units are surprisingly easy to handle. M5 plug-in connectors have three or four poles and are thus equivalent to M8 plug-in connectors.

But in contrast to the M8 plug-in connectors, the different pole numbers here are compatible with each other. The advantage is obvious: 4-pole units which are required, for example, for antivibrant sensors can now be plugged into one and the same distributor with standard NOC applications. In the M8 system special adapters are required. Besides their actual size, in some applications module weight is critical too. For example, the speed of a handling machine is influenced by the weight of the moving parts. Here again, the M5 system offers outstanding advantages, with its almost unrivalled small size and light weight.

Fixed cable version



There is no version for custom bus cable assembly for this SAI distributor, which is delivered with a plug-in connection and a fixed cable connection. A compact 12-pole M12 plug-in connector has been developed as a plug-in connection specifically for this distributor.

This ratio of surface area to number of connections is reminiscent of the computer industry. The M16 bus connection is also integrated in the module as an option, so the SAI M5 can be used as a combined SAI system as well. A Y-configuration is possible in conjunction with the M16 splitter.

M5-Line with M16 outlet



The fixed cable version is particularly suitable for standard applications where the distributor is permanently installed and the electrical installation does not have to be disconnected after installation. The bus cable is reduced in cross-section to save weight here too.

M5 distributors



Quality comes in little packages...

This is the motto with which Weidmüller developed its distributor with M5 plug-in connectors. The outstanding feature of these connectors is their size. Attention has also been given to stability and good conductivity.

For a comparison of sizes, take a look at the photos on the left.

These products are ideal for handling machines where light weight and small size are vital.

Comparing the sizes



M12 M8 M5



M12 M8 M5

Marking

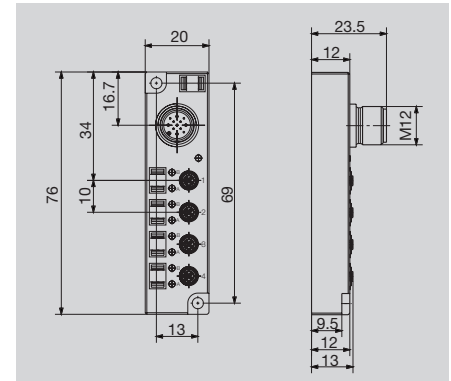
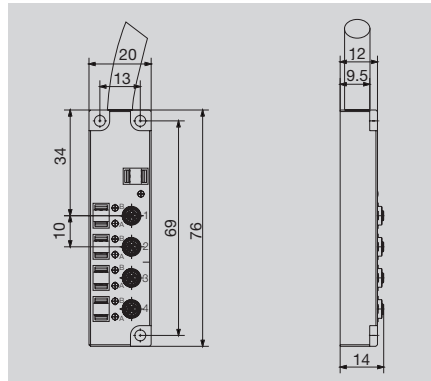
Each channel is marked with the channel number. Each initiator LED can be exactly allocated with the letters A and B. In addition, the distributor and every channel can be marked.

M5 distributors

Line

SAI-4/8-F

SAI-4/8-S



Ordering data

3-pole	
Cable length 5 m (with fixed cable version)	4 channel 8 channel
Cable length 10 m (with fixed cable version)	4 channel 8 channel
4-pole	
Cable length 5 m (with fixed cable version)	4 channel 8 channel
Cable length 10 m (with fixed cable version)	4 channel 8 channel
Note	

SAI-4/8-F

M5

Type	Qty.	Order No.
SAI-4-F 3P M5 L5M	1	1851740000
SAI-8-F 3P M5 L5M	1	1851760000
SAI-4-F 3P M5 L10M	1	1845820000
SAI-8-F 3P M5 L10M	1	1845830000
SAI-4-F 4P M5 L5M	1	1851770000
SAI-8-F 4P M5 L5M	1	1851750000
SAI-4-F 4P M5 L10M	1	1845800000
SAI-8-F 4P M5 L10M	1	1845810000
Other versions on request		

SAI-4/8-S

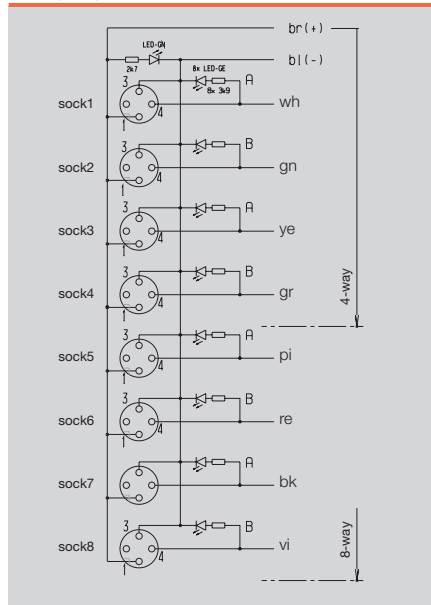
M5

Type	Qty.	Order No.
SAI-8-S 3P M5	1	1845850000
SAI-4-S 4P M5	1	1845840000
Other versions on request		

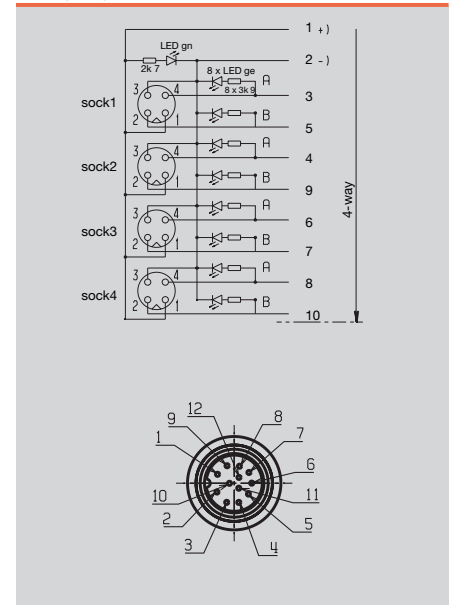
Technical data

Rated voltage	24.0 V DC
Operating voltage	10 ... 30 V
Current carrying capacity per I/O signal	1 A
Current-carrying capacity per slot	3 A
Total current max.	3 A
Pollution severity	3
Protection class	IP 67
Ambient temperature range	-25 ... 80 °C
Housing material	PA 6 GF
Contact carrier material	CuZn, nickel-plated
Base material of contacts	Au (gold)
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	
Suitable for dragline cable (fixed cable connection)	Yes

Wiring diagram

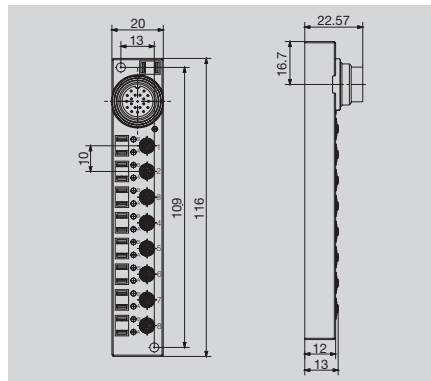


Wiring diagram



Line

SAI-4/8-S16



Ordering data

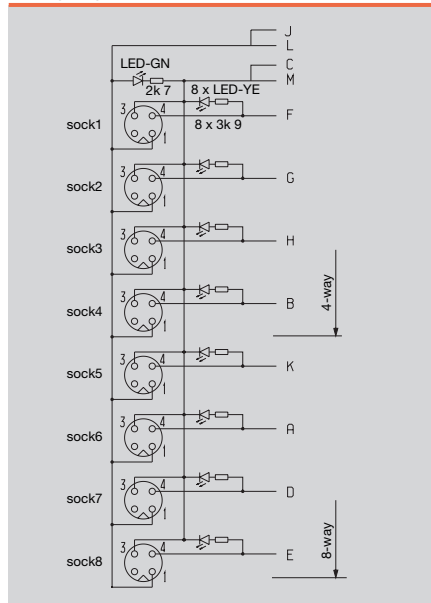
3-pole	4 channel
	8 channel
4-pole	4 channel
	8 channel
Note	

SAI-4/8-S16		M5
Type	Qty.	Order No.
SAI-4-S16 3P M5	1	1845890000
SAI-8-S16 3P M5	1	1845880000
SAI-4-S16 4P M5	1	1845870000
SAI-8-S16/19P 4P M5	1	1845860000
1845870000, 1845880000 and 1845890000 with M16 / 12-pole 1845860000 with M16 / 19-pole		

Technical data

Rated voltage	24.0 V DC
Operating voltage	10 ... 30 V
Current carrying capacity per I/O signal	1 A
Current-carrying capacity per slot	3 A
Total current max.	3 A
Pollution severity	3
Protection class	IP 67
Ambient temperature range	-25 ... 80 °C
Housing material	PA 6 GF
Contact carrier material	CuZn, nickel-plated
Base material of contacts	Au (gold)
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	
Suitable for dragline cable (fixed cable connection)	

Wiring diagram



SAI Ex i distributor for Ex i zone 1



Available for the first time: passive SAI distributors with M12 connection technology in IP 68 ingress protection classification for Ex i hazardous area applications.

SAI Ex i distributor certified for zone 1 of potentially explosive areas, even for G and D zones.

The SAI Ex i distributors are available with four or eight connections for simple connection of NAMUR sensors. Distribution boxes with costly certification are thus a thing of the past. These modules are suitable for process engineering, but also for “standard” machine applications. The versions are available with or without yellow LEDs.

The distributors are provided with a removable connection hood. This detail also helps to reduce costs because only the defective bus cable needs to be replaced – and not the entire distributor.



World first: SAI distributor for Ex i zone 22

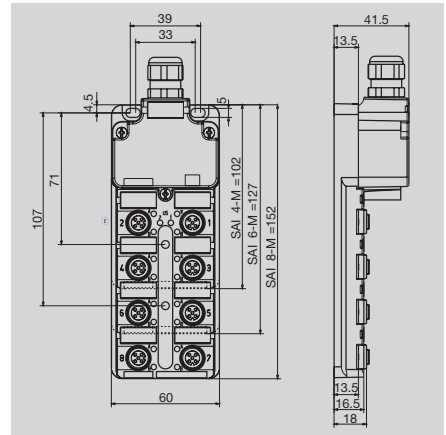
In some areas of machine design only Ex i-certified devices are permitted.

The wiring of these modules corresponds to that of standard SAI distributors. However, these components were specially developed, manufactured, checked and certified for zone 22 modules. All zone 22 modules are therefore provided with suitable printing.



Hood version

Zone 1



Ordering data

Complete modules	
	4 channel
	6 channel
	8 channel
Without initiator LED	4 channel
Without initiator LED	8 channel
Note	

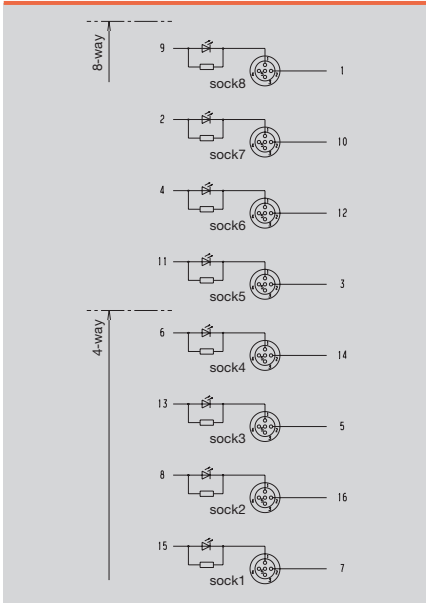
SAI-4/8-M Ex i		4-pole	
Type	Qty.	Order No.	
SAI-4-M 4P Exi Z1 IL	1	1868360000	
SAI-8-M 4P Exi Z1 IL	1	1868370000	
SAI-4-M 4P Exi Z1 OL	1	1868350000	
SAI-8-M 4P Exi Z1 OL	1	1894380000	

SAI-4/8-M Ex ia		5-pole	
Type	Qty.	Order No.	
SAI-4-M 5P M12 Ex ia	1	1896050000	
SAI-6-M 5P M12 Ex ia	1	1896070000	
SAI-8-M 5P M12 Ex ia	1	1896090000	

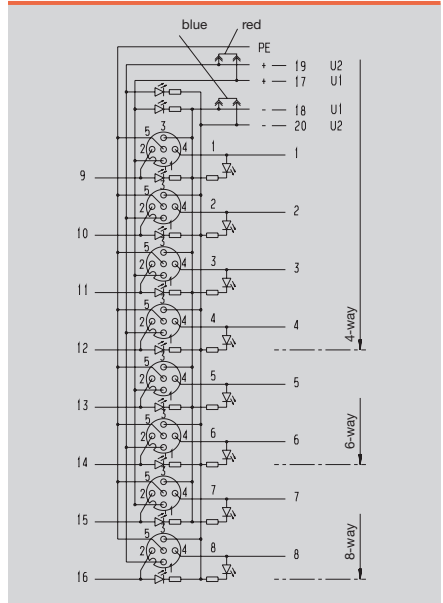
Technical data

Rated voltage	30.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	100 mA
Current-carrying capacity per slot	100 mA
Total current max.	2.3 A
Pollution severity	3
Protection class	IP 68
Ambient temperature range	-20 ... 40 °C
Housing material	Pocan
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickeled, gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version (fixed cable connection)	0.1 ... 1.5 mm ²
Suitable for dragline cable	

Wiring diagram



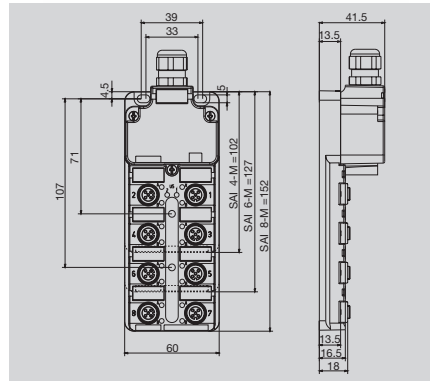
Wiring diagram



M12 distributors

Ex i distributor for the
Ex i zone 22

SAI-4/6/8-M



Ordering data

Complete modules	
	4 channel
	6 channel
	8 channel
Note	

SAI-4/6/8-M

5-pole

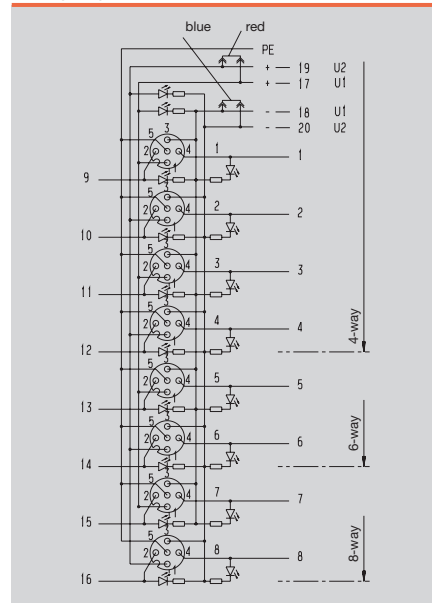
Type	Qty.	Order No.
SAI-4-M 5P Ex Z22	1	1861850000
SAI-6-M 5P Ex Z22	1	1861840000
SAI-8-M 5P Ex Z22	1	1861530000

Technical data

Rated voltage	30.0 V DC
Operating voltage	10 ... 30 V DC
Current carrying capacity per I/O signal	100 mA
Current-carrying capacity per slot	100 mA
Total current max.	2.3 A
Pollution severity	3
Protection class	IP 68
Ambient temperature range	-20 ... 80 °C
Housing material	Pocan
Contact carrier material	PBT UL 94 V0
Base material of contacts	CuZn, pre-nickel- gold-plated
Threaded sockets	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	0.1 ... 1.5 mm ²
Suitable for dragline cable (fixed cable connection)	

A higher current is allowed when using a lower voltage. A total capacity of 3W per plug-in station should not be exceeded.

Wiring diagram



Sensor Actuator Interface Active

SAI Active	Introduction	C.2
	SAI Active Universal	C.6
	SAI Active Universal – PROFIBUS-DP	C.8
	SAI Active Universal – DeviceNet™	C.16
	SAI Active Universal – CANopen	C.18
	SAI Active Universal – Modbus TCP	C.22
	SAI Active Universal – EtherNet/IP	C.24
	SAI Active Universal – PROFINET	C.26
	Industrial Ethernet	C.28
	SAI Active Universal Pro	C.34
	SAI Active Universal Bluetooth	C.44
	AS-Interface Modular	C.48
	AS-Interface Line	C.50

SAI bus systems – Overview

SAI Active Universal Universal compact modules

SAI Active Universal Pro Extendable I/O-System



SAI Bluetooth Wireless compact modules



SAI Active AS-Interface Modular plug-on modules

SAI AS-Interface Line Narrow compact modules



SAI Active family

The SAI-Active family encompasses fieldbus components for PROFIBUS-DP, DeviceNet™, CANopen, Modbus TCP, Ethernet IP, Profinet® and AS-Interface and supports the aim of entirely modular and decentralised industrial automation extending from the lowest field level to the control level. Automation technology with this kind of structure is transparent, efficient and cost effective. To fully benefit from the cost-saving effects of fieldbus-networked I/O systems, the input and/or output units should be distributed “locally” directly where the process operates. Modules with IP67 ingress protection class are for use in environments with high levels of harmful substances and moisture.

The various product series are designed for different applications. The Line series is of very compact design so that the devices find space even for applications in restricted conditions. The modularity of the hood-type distribution boards gives users the advantage of installing the electronics and connection level separately and being able to choose the right I/O configuration, fieldbus and connection type for the respective requirements.

The Universal family wins over through extended diagnostic capabilities and modern design and is equipped for the latest requirements.



The Extension Pro supports special functions and enables considerably more I/O points per fieldbus node. The Extension IO modules are designed especially small for this.

The following manuals are available for ordering. The EDS and GSD files will be made available for download on the Weidmüller home page (www.weidmueller.com).

Manuals

	Order No.
Universal	
PROFIBUS-DP, German	5651720000
PROFIBUS-DP, English	5651730000
CANopen, German	5655370000
CANopen, English	5655310000
DeviceNet, German	5655330000
DeviceNet, English	5655320000
Modbus TCP, German	5659470000
Modbus TCP, English	5659480000
Universal Pro	
PROFIBUS-DP, German	5663600000
PROFIBUS-DP, English	5663590000
Bluetooth	
Bluetooth-PB, German	1071640000
Bluetooth-PB, English	1073380000

EDS files

	File name
Universal DeviceNet™	
SAI-AU M12 DN 16DI	WI190670.EDS
SAI-AU M12 DN 16DI/8DO	WI190671.EDS
SAI-AU M12 DN AI/AO/DI	WI190672.EDS
SAI-AU M8 DN 16DI	WI190673.EDS
SAI-AU M8 DN 16DI/8DO	WI190674.EDS
Universal Ethernet IP	
SAI-AU M12 EIP 16DI	WI190690.EDS
SAI-AU M12 EIP 16DI/8DO	WI190691.EDS
SAI-AU M12 EIP AI/AO/DI	WI190692.EDS
SAI-AU M8 EIP 16DI	WI190693.EDS
SAI-AU M8 EIP 16DI/8DO	WI190694.EDS
Universal Pro DeviceNet™	
SAI-AU M12 DN GW 16DI	WI193857.EDS
Universal CANopen	
SAI-AU M12 CAN 16DI	WI190665.EDS
SAI-AU M12 CAN 16DI/8DO	WI190666.EDS
SAI-AU M12 CAN AI/AO/DI	WI190667.EDS
SAI-AU M8 CAN 16DI	WI190668.EDS
SAI-AU M8 CAN 16DI/8DO	WI190669.EDS

GSD files

	File name
Universal Profibus-DP	
SAI-AU M12 PB AI/AO/DI	WIAU09D1.GSD
SAI-AU M12 PB 16DI/8DO	WIAU09D2.GSD
SAI-AU M12 PB 16DI	WIAU09D3.GSD
SAI-AU M8 PB 16DI/8DO	WIAU09D4.GSD
SAI-AU M8 PB 16DI	WIAU09D5.GSD
SAI-AU M12 PB 8I/8O 2A	WIAU0AAB.GSD
SAI-AU M8 PB 8I/8O 2A	WIAU0B60.GSD
Universal Pro	
SAI-AU M12 PB GW 16DI	WIAU0A74.GSD
SAI-AU M8 PB GW 16DI	WIAU0A74.GSD
Universal Bluetooth	
SAI-AU M12 GW PB/BT 12I	WIAU0A75.GSD

Engineering table for PROFIBUS with M12

When planning the automation of a facility, you must have a wide variety of components available. This engineering table provides you, on one page, with all the relevant information from each Universal Pro component.

PROFIBUS Gateway



PROFIBUS cables



Extension IO modules



Sub-Bus cables



Ordering data

	Order No.
Gateway PROFIBUS-DP	
16DI SAI-AU M12 PB GW 16DI	1938550000
Stand-alone modules for PROFIBUS-DP	
16DI SAI-AU M12 PB 16DI	1890020000
16DI/8DO SAI-AU M12 PB 16DI/8DO	1890010000
4AI/2AO/4DI SAI-AU M12 PB AI/AO/DI	1890000000
DP terminating resistor	
SAIEND PB M12 5P B-COD	1784770000
PROFIBUS-DP cable, both ends	
0.3 m SAIL-M12GM12G-PB-0.3D	1873310030
1.5 m SAIL-M12GM12G-PB-1.5D	1873310150
3.0 m SAIL-M12GM12G-PB-3.0D	1873310300
5.0 m SAIL-M12GM12G-PB-5.0D	1873310500
10 m SAIL-M12GM12G-PB-10D	1873311000
15 m SAIL-M12GM12G-PB-15D	1873311500
25 m SAIL-M12GM12G-PB-25D	1873312500
30 m SAIL-M12GM12G-PB-30D	1873313000
40 m SAIL-M12GM12G-PB-40D	1873314000
PROFIBUS-DP cable, only with connector (socket)	
0.5 m SAIL-M12BG-PB-0.5D	1873320050
1.5 m SAIL-M12BG-PB-1.5D	1873320150
3.0 m SAIL-M12BG-PB-3.0D	1873320300
10 m SAIL-M12BG-PB-10D	1873321000
15 m SAIL-M12BG-PB-15D	1873321500
25 m SAIL-M12BG-PB-20D	1873322000
PROFIBUS-DP cable, only with connector (male plug)	
0.5 m SAIL-M12G-PB-0.5D	1873300050
1.5 m SAIL-M12G-PB-1.5D	1873300150
3 m SAIL-M12G-PB-3.0D	1873300300
5 m SAIL-M12G-PB-5.0D	1873300500
10 m SAIL-M12G-PB-10D	1873301000
15 m SAIL-M12G-PB-15D	1873301500
20 m SAIL-M12G-PB-20D	1873302000
PROFIBUS connector for self-connection	
Stecker (male plug) SAISM 5/8S M12 5P B-COD	1784790000
Plug/socket SAIBM 5/8S M12 5P B-COD	1784780000
Extension IO modules M12	
8 DI SAI-AU M12 SB 8DI	1938610000
8 DO 2A SAI-AU M12 SB 8DO 2A	1938680000
8DI/8DO (optional) SAI-AU M12 SB 8DIO	1938640000
2 counters SAI-AU M12 SB 2COUNTER	1938730000
4 AI SAI-AU M12 SB 4AI	1938690000
4AO SAI-AU M12 SB 4AO	1938700000
4PT100 SAI-AU M12 SB 4PT100	1938710000
4 Thermo SAI-AU M12 SB 4THERMO	1938720000
Sub-Bus cables with straight connectors on both ends	
0.3 m SAIL-M8GM8G-4S-0.3Q-SB	1981900030
1.0 m SAIL-M8GM8G-4S-1.0Q-SB	1981900100
1.5 m SAIL-M8GM8G-4S-1.5Q-SB	1981900150
3.0 m SAIL-M8GM8G-4S-3.0Q-SB	1981900300
5.0 m SAIL-M8GM8G-4S-5.0Q-SB	1981900500
10 m SAIL-M8GM8G-4S-10Q-SB	1981901000
15 m SAIL-M8GM8G-4S-15Q-SB	1981901500
20 m SAIL-M8GM8G-4S-20Q-SB	1981902000
Sub-Bus terminating resistor	
SAIEND CAN M8 4P	1955340000

SAI Active Universal – Standards

The SAI Universal Family is tested according to the strictest industrial standards. These tests take place in accredited laboratories. Before the sealing test, the modules are subjected to an aging process.

Conforming to EMC directives

Testing standard	Test result
EN 610000-4-2 (ESD)	Criterion B
EN 610000-4-3 (Immunity to radiated interference)	Criterion A
EN 610000-4-4 (Burst)	Criterion B
EN 610000-4-5 (Surge)	Criterion B
EN 610000-4-6 (Immunity to conductive disturbances)	Criterion A
EN 610000-4-8 (Magnetic field 50 Hz)	Criterion A
EN 61000-4-11 (Voltage drop)	Criterion A

Mechanical tests

Testing standard	Test result
Resistance to vibration, acc. to EN 60068-2-6	Sinusoidal vibrations 10...150 Hz, 0.75 mm and 100 m/s ²
Schock test, acc. to EN 60068-2-27	Schock testing with 300 m/s ² und 9 ms
Schock test, acc. to EN 60068-2-29	Continuous shock testing with 250 m/s ² and 6 ms

Climate tests

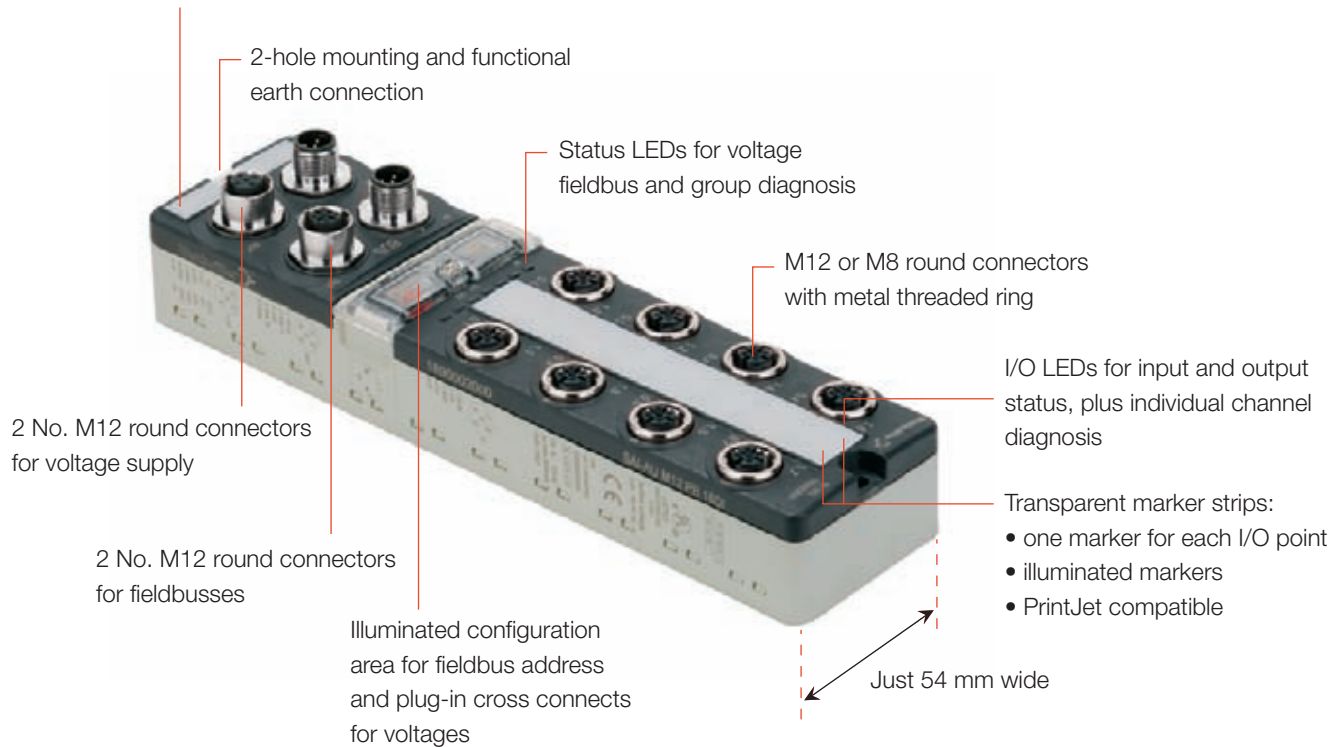
Testing standard	Test result
EN 60529	Protection class IP 67 (test after 168 hours aging at +85 °C and 2 h at -25 °C)
EN 60068-2-1 cold	operational, 0 °C; non-operational, -25 °C
EN 60068-2-2 dry and warm	operational, +60 °C; non-operational, +85 °C
EN 60068-2-30 Moist and warm non-condensing	operational, -25 °C ... 55 °C non-operational, -25 °C ... 55 °C
Temperature fluctuation acc. to IEC 60068-2-14	operational, -40 °C ... 70 °C non-operational, -40 °C ... 80 °C

UL standards

Testing standard	Test result
UL 508	USL/CNL – 1 and 4X type rating for accessories for Programmable Controllers
UL 50	Hosedown test, Icing Test (enclosure marked Type 4, 4X)

SAI Active Universal

2 No. MultiCard markers or 1 No. 40 mm long strip for printing IP addresses



The SAI-Active Universal range is the result of the many years of experience Weidmüller has gained with distributors for industry. Besides the established fieldbus systems – PROFIBUS-DP, DeviceNet™ and CANopen – the range also includes Industrial Ethernet modules. The following Ethernet dialects are supported:

- EtherNet/IP
- Modbus TCP
- Profinet

The housing has been tailored to the demands of industry. That is why it is resistant to aggressive cleaning agents, vibration, shocks and heat, and is sealed against water and dust ingress.

Connection technology

The concept behind the new distributors promotes rapid and simple installation in harsh environments. Conventional, standardised M8 and M12 connectors form the backbone of the Weidmüller connection concept. Robust metal

threaded rings plus standard pin assignments ensure safety and fewer mistakes during wiring. Two M12 connections are provided for the fieldbus – there is no need for an external T-piece and the modules can be easily interconnected. As specified in the standards, B-coding is used for PROFIBUS-DP, A-coding for DeviceNet™ and CANopen. The functional earth is easy to connect thanks to a metal clip in the fixing hole. Secure contact is created automatically when the module is screwed to an earthed metal base. In other situations there is sufficient space at the screw position for a round cable lug for connecting an earthing cable.

Two central fixing holes ensure simple and reliable mounting. The configuration area for the module is situated below the transparent cover. Two rotary switches are provided for setting the fieldbus addresses – up to max. 126 for PROFIBUS-DP.

Power supply

The modules can be supplied with up to **four different voltages**. In addition to the module voltage, which is also used for the inputs, three supply terminals are available for the outputs. The outputs can also be switched off separately to suit the application. **Two cross connects** provide the option of bridging the electrical power supply.



Illumination concept

The illuminated configuration area is still unique and represents a very interesting feature. It indicates that the module is on and operating. Furthermore, it is easier to see the two rotary switches for setting the fieldbus addresses.

I/O statuses are indicated by means of cleverly designed **optical fibres arranged like arrowheads**. These point in the direction of the markings and connectors. The light also illuminates the corresponding marker, which allows it to be quickly and clearly read under working conditions. In addition, the voltage supplies, group diagnostic messages and fieldbus statuses are indicated by means of seven status indicators.



Labelling

A marker is available for every I/O channel as well as two markers for the module as a whole. The markers do not have to be fitted individually on the I/O side. Marker strips offer the added advantage of rapid installation. An additional **40 mm wide marker** has been specially adapted to suit the module. This allows longer texts such as markings with up to 40 characters to be fitted and clearly read without hindrance.

Diagnosis

Every I/O channel is constantly scanned for errors. If an error is detected, this is indicated directly at the connection and a signal is sent via the fieldbus. The individual channel diagnostics is complemented by a module diagnosis for overvoltages, short-circuits and the fieldbus.

Outputs

The outputs are short-circuit-proof and protected against polarity reversal. Two outputs which can be operated with max. **2 A output power** are available for high-performance actuators. The 16DI/8DO allows the user to customise the configuration to suit the application as well as choose between 16DI and 8DI/8DO.

Analogue modules

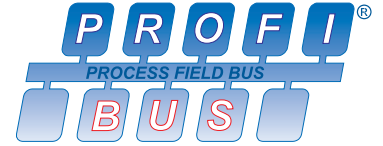
The analogue Universal Pro module is uniquely versatile. The **configuration** between current and voltage is selected via the configuration software of the master. Further connection options, e.g. PT 100, are possible with Jackpac®. These modules are simply installed between distributor and sensor to convert the signals.

The module can accept additional digital inputs.

Complementary products

Cables and accessories provide a perfect finish to the Weidmüller range of distributors. A MultiCard is included with each module for marking purposes. The **new M12 blanking plugs** can now be fitted more easily manually and with the correct torque using the Weidmüller Screwty tool. Two additional slots allow the plug to be fitted with either a small or large slotted screwdriver.

The PROFIBUS-DP system



Principle

PROFIBUS-DP is a master–slave system consisting of one master (usually implemented in the PLC) and up to 31 slaves per segment. During operation, the master constantly interrogates the slave stations. Several masters can also be integrated within one network to relay the transmission authorisation (token passing). PROFIBUS-DP uses a physical layer based on the RS 485 standard which has performed excellently in industrial applications.

The system uses a shielded, twisted pair cable and is extremely resistant to electrical interference. PROFIBUS-DP is suitable for connecting a large number of I/O points. Up to 126 addressable subscribers enable the connection of thousands of analogue and digital I/O points within a network.

Every PROFIBUS-DP module has a so-called GSD file which contains detailed information about the module (I/O data volume, possible transmission rates, update status, etc.). The station GSD file is required in order to configure a station within the PROFIBUS-DP system.

The GSD files are available on the Weidmüller website at www.weidmueller.com.

Network structure

The network is a line structure with an active bus terminator at both ends. To activate the bus terminator, in the PG version the connector box must be pulled out of the bus terminator and the switch set to position 1.

The M12 version uses a bus terminator connector (order No. 1784770000).

Ideally, there should be no stub cables; Weidmüller modules have two special connections for the fieldbus.

Maximum system extension

PROFIBUS-DP can accommodate max. 32 devices per segment. One segment corresponds to a subsection between two repeaters. If no repeaters are used, the complete network corresponds to one segment. The following table indicates the maximum extension options.

Bus extension

Transmission rate	Length of bus line	Stub cable length Total segment	No. of repeaters (max.)
9.6 kBit/s	1200 m	6.6 m	7
19.2 kBit/s	1200 m	6.6 m	7
93.75 kBit/s	1200 m	6.6 m	7
187.5 kBit/s	1200 m	6.6 m	7
500 kBit/s	400 m	6.6 m	7
1.5 MBit/s	200 m	6.6 m	4
12 MBit/s	100 m	preferably none	4

Max. 126 nodes can be addressed at all transmission rates. The maximum extension with 7 repeaters is 9.6 km (8 x 1.2 km).

Addressing

The address setting for the corresponding station is set manually by means of two coded rotary switches.

Transmission rate

The transmission rate must be identical throughout the whole network, and is defined by the master. The bps rate is compared automatically upon switching on. No adjustments need to be made at the module.

At 12 Mbps the typical response time is < 1 ms per 1000 I/O points.

The bps rate cannot be changed during operation!

PROFIBUS-DP Universal

SAI-AU

M8



SAI-AU

M12



Ordering data

IO variants
8 digital inputs / 8 digital outputs
16 digital inputs
16 digital inputs / 8 digital outputs
4 analogue inputs / 2 analogue outputs / 4 digital inputs
Note

Type	Qty.	Order No.
SAI-AU M8 PB 8DI/8DO 2A	1	1975450000
SAI-AU M8 PB 16DI	1	1906550000
SAI-AU M8 PB 16DI/8DO	1	1906640000
Note		

Type	Qty.	Order No.
SAI-AU M12 PB 8DI/8DO 2A	1	1968220000
SAI-AU M12 PB 16DI	1	1890020000
SAI-AU M12 PB 16DI/8DO	1	1890010000
SAI-AU M12 PB AI/AO/DI	1	1890000000
Note		

Technical specifications of bus system

Bus user	Slave
Transmission rate	Max. 12 Mbps
Diagnosis indication	red
Fieldbus interface	RS 485
Electrical isolation available	Yes
Station addresses	Rotary switch 1-125
Baud rate	automatic
Note	

Technical data

General data	
Insulation material of housing	PBT
Flammability class UL 94	V-0
Operating temperature	0 °C ... 55 °C
Storage temperature	-25 °C ... 70 °C
Protection class	IP 67
Electrical data	
Rated voltage	24.0 V DC (18...30 V)
max. current-carrying capacity per output signal	0.5, 2.0 A
Output level	Short-circuit-protected
Total current max.	10 A
Digital input type	TYPE 1 to EN 61131-2
Analogue outputs	-10...+10 V, 0...+10 V, 0...20 mA, 4...20 mA
Analogue inputs	-10...+10 V, 0...+10 V, 0...20 mA, 4...20 mA
Resolution	12-bit
Accuracy	< 0.2 %
Note	

Accessories

Plug
Metal plug, Male M12, B-coded, straight
Metal plug, Socket M12, B-coded, straight
Connecting plug in M12 Plug
Miscellaneous accessories
Marker, transparent
M8 protective cap
M12 protective cap
Note

Type	Qty.	Order No.
SAISM 5/8S M12 5P B-COD	1	1784790000
SAIBM 5/8S M12 5P B-COD	1	1784780000
SAIEND PB M12 5P B-COD	1	1784770000
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK M8	50	1802760000
SAI-SK-M12-UNI	20	2330260000
Voltage supply with standard M12 plug-in connectors (see Chap. D)		
Note		

PROFIBUS-DP-VA plug-on module

SAI-HS DP VA

Circular plug IP69K



Ordering data

IO variants	
	8 inputs / 8 outputs
Note	

Technical specifications of bus system

Bus user	Slave
Transmission rate	Max. 12 Mbps
Diagnosis indication	red
Fieldbus interface	RS 485
Electrical isolation available	Yes
Station addresses	Rotary switch 1-99
Baud rate	automatic

Note

Accessories

Plug	
	Stainless steel plug, Socket PG 9, straight
	Stainless steel plug, Socket PG 9, straight
	Stainless steel plug, Male PG 9, straight
	Stainless steel plug, Male PG 9, straight
Note	

Type	Qty.	Order No.
SAI HS DP 8DI/8DO VA	1	1889760000
VA plug-in connectors on p. D.8		

Type	Qty.	Order No.

Technical data

General data	
Insulation material of housing	V4A
Flammability class UL 94	V-0
Operating temperature	0 °C ... 55 °C
Storage temperature	-25 °C ... 70 °C
Protection class	IP 69 k
Electrical data	
Rated voltage	24.0 V DC (20.4...28.8 V)
(Indication via) UL	LED green (UL)
max. current-carrying capacity per output signal	2.0 A (derating)
Output level	Short-circuit-protected
Total current max.	8 A
Digital input type	TYPE 1 to EN 61131-2
Input current at „0“ min.	< 1.5 mA
Input current at „1“	> 2 mA
Switching thresholds	9 V
E/A function indicator	LED red/green (Uq)
Sensor voltage indicator	LED red/green (Ui)

Type	Qty.	Order No.
SAIB 5/9-VA	1	1920710000
SAIB 5/9-VA-B-COD	1	1920730000
SAIS 5/9-VA	1	1920700000
SAIS 5/9-VA-B-COD	1	1920720000

Sub-D



This compact connector provides a convenient bus connection for all standardised PROFIBUS-DP devices. A data transmission rate of max. 12 Mbps is possible. An additional Sub-D connector on top of the plug enables analysis/programming devices to be connected without modifying the wiring.

The 9-pin sub-D connector is available in four versions:

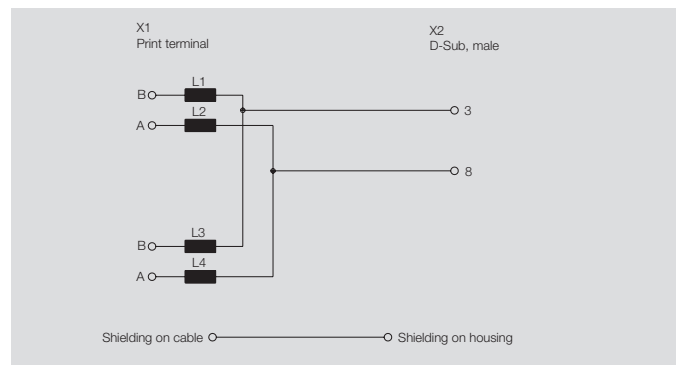
1. without terminating resistor
2. with built-in terminating resistor
3. with switch-in terminating resistor and connection for programming unit via IDC connection
4. with switch-in terminating resistor and connection for programming unit via tension clamp connection.

- T-piece functions
- Good shield contact
- Ample space for connecting the bus cable
- Cable entry can be closed off with blanking panel
- Fully insulated housing
- Reliable strain relief

Technische Daten

Data transmission rate		max. 12 Mbps
ESD		protection to IEC 801-2
Operating temperature	°C	0 ... 60
Storage temperature	°C	-25 ... +80
Ingress protection class		IP 40
Dimensions (LxWxH)	mm	64.6 x 47.5 x 16
Housing material		PC UL 94 V-1
Plug-in connector		sub-D 9-pin
Cable connection		2 No. horizontal
Cable diameter	mm	4.5 ... 8
Single conductor cross-section	mm ²	rigid max. 1.5 flexible max. 1.0
Type of connection	Screw	8395500000 and 8460860000
	IDC	1916980000
	Tension clamp	1934200000
Note		

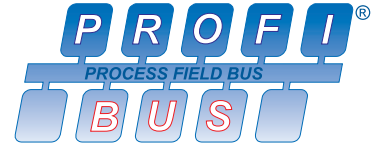
PB-DP SUB-D



Ordering data

Type	Qty.	Order No.
PB-DP SUB-D	1	8395500000

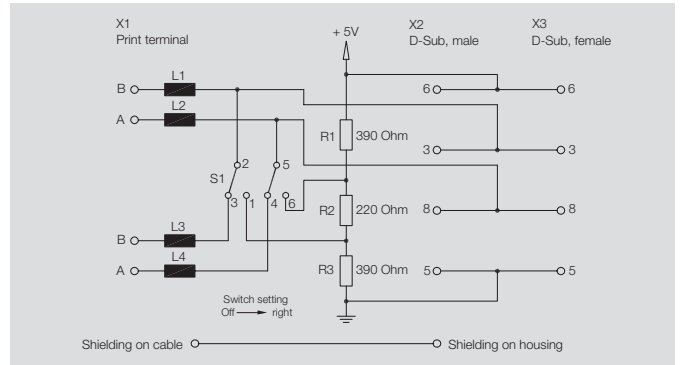
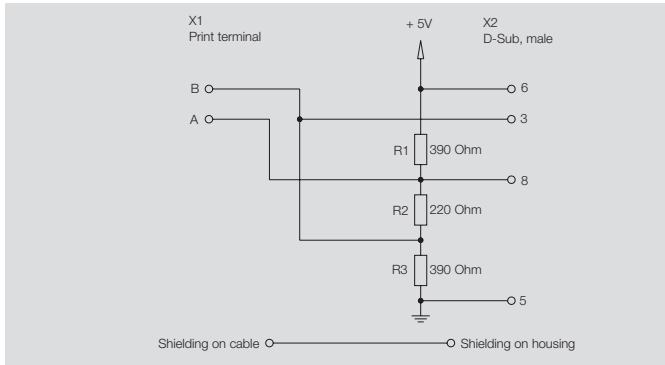
Sub-D



PB-DP SUB-D TERM



PB-DP SUB-D IDC/ZF TERM PS



Ordering data

Type	Qty.	Order No.
PB-DP SUB-D TERM	1	8460860000

Ordering data

Type	Qty.	Order No.
PB-DP SUB-D IDC TERM PS	1	1919680000
PB-DP SUB-D ZF TERM PS	1	1934200000

The DeviceNet™ system



Principle

DeviceNet™ is a fieldbus system from the USA that is being increasingly employed in Europe and Asia. In terms of the physical layers 1 and 2 of the ISO 7-layer model, DeviceNet™ is based on CAN (Controller Area Network).

The ISO application layer (layer 7) in DeviceNet™ makes use of the so-called “Common Industrial Protocol” (CIP). This is an open standard which is also used for ControlNet™ and Ethernet/IP. In the future this will enable permanent communication between the field level and the Internet.

DeviceNet™ is a multi-master system and its protocol prioritises the data traffic in such a way that I/O signals have a higher priority than configuration data.

Every DeviceNet™ module has a so-called EDS file (**E**lectronic **D**ata **S**heet), containing an exact description of the module. All information about I/O and status data required by a master, e.g. a PLC or IPC, are saved in this file and can be used to integrate the module step by step into the control program.

The EDS files are available for downloading on the Weidmüller website at www.weidmueller.com.

Network structure

ISO 11898 prescribes a line structure for the DeviceNet™ network.

A line structure has a terminating resistor of 120 Ω at each end. A bus terminator connector (order No. 1784760000) can be plugged into the “Bus OUT” output socket of the Weidmüller DeviceNet™ SAI distributors.

Ideally, there should be no stub cables; Weidmüller modules have two special connections for the fieldbus. The number of subscribers is limited to 63.

Addressing

Any address from 1 to 63 is possible. The address setting of the station can be set manually at the device or via the master. Two coded rotary switches are located underneath the cap, with separate adjustment of tens and units.

Bus line length, transmission rate

The maximum length of the bus line depends on the transmission rate (baud rate). The following table serves as a guide for an optimum bus design:

Max. bus expansion in m	Data rate in kbps
500	125
250	250
100	500

DeviceNet™ (M12 A-coded)

Pin	Assignment
1	shield
2	Vplus
3	CAN-GND
4	CAN-H
5	CAN-L
Housing	shield

DeviceNet™ Universal

SAI-AU

M8



SAI-AU

M12



Ordering data

IO variants	
	16 digital inputs
	16 digital inputs / 8 digital outputs
	4 analogue inputs / 2 analogue outputs / 4 digital inputs
Note	

Type	Qty.	Order No.
SAI-AU M8 DN 16DI	1	1906730000
SAI-AU M8 DN 16DI/8DO	1	1906740000
Note		

Type	Qty.	Order No.
SAI-AU M12 DN 16DI	1	1906700000
SAI-AU M12 DN 16DI/8DO	1	1906710000
SAI-AU M12 DN AI/AO/DI	1	1906720000
Note		

Technical specifications of bus system

Bus user	Slave
Transmission rate	Max. 500 kbps
Diagnosis indication	red
Fieldbus interface	RS 485
Electrical isolation available	Yes
Station addresses	Rotary switch 1-63
Baud rate	automatic
Note	

Technical data

General data	
Insulation material of housing	PBT
Flammability class UL 94	V-0
Operating temperature	0 °C ... 55 °C
Storage temperature	-25 °C ... 70 °C
Protection class	IP 67
Electrical data	
Rated voltage	24.0 V DC (18...30 V)
max. current-carrying capacity per output signal	0.5, 2.0 A
Output level	Short-circuit-protected
Total current max.	8 A
Digital input type	TYPE 1 to EN 61131-2
Analogue outputs	-10...+10 V, 0...+10 V, 0...20 mA, 4...20 mA
Analogue inputs	-10...+10 V, 0...+10 V, 0...20 mA, 4...20 mA
Resolution	12-bit
Accuracy	< 0.2 %
UL certification in preparation	
Note	

Accessories

Plug	
	Terminating resistor in M12 plug
	Metal plug, Male M12, 5-pole, shield A-coded
	Metal plug, Socket M12, 5-pole, shield A-coded
Miscellaneous accessories	
	Marker, transparent
	M8 protective cap
	M12 protective cap
Note	

Type	Qty.	Order No.
SAIEND CAN-M12 5P A-COD	1	1784760000
SAIS-M-5/8S M12 5P A-COD	1	1784740000
SAIB-M-5/8S M12 5P A-COD	1	1784750000
Note		
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK M8	50	1802760000
SAI-SK-M12-UNI	20	2330260000
Voltage supply with standard M12 plug-in connectors (see Chap. D)		
Note		

The CANopen system



Principle

A CAN network is based on a server-client principle with a serial bus connecting network subscribers having equal access status. The electrical connection consists of a twisted pair cable with or without shielding depending on the application.

CANopen was defined as a uniform protocol for networking the different CANopen subscribers. The protocol stipulates the significance of the data for the corresponding device type (e.g. I/O modules, drives, shaft encoders, controls).

This means it is now easy for application programmers to use all types of CANopen-compatible components irrespective of the manufacturer.

CANopen subscribers in the same device series organise their data in the same way. The characteristics of these device classes are summarised in “device profiles”.

An object directory is defined in CANopen nodes and describes all device parameters. This is used not only for device description but also as a data access interface by other CANopen devices.

Larger, non-time-critical data quantities are transmitted using “service data objects” (SDO). In addition, at least two “process data objects” (PDO) are available for transmitting process data.

Manufacturer-specific objects and other functions are described in the manual. Every CANopen module has a so-called EDS file (Electronic Data Sheet) containing an exact description of the module.

All information about I/O and status data required by a master, e.g. a PLC or IPC, are saved in this file and can be used to integrate the module step by step into the control program.

The EDS files are available for downloading on the Weidmüller website at www.weidmueller.com.

Network structure

ISO 11898 prescribes a line structure for the CANopen network. A line structure has a terminating resistor of 120 ohms at each end.

The cable gland version of the Weidmüller CANopen SAI distributors have an internal switch for activating the terminating resistor.

The M12 version has a bus terminator connector (order No. 1784760000). Ideally, there should be no stub cables; Weidmüller modules have two special connections for the fieldbus.

Addressing

Any address from 1 to 126 is possible with CANopen. The address is set by means of two coded rotary switches in the module.

Bus line length, transmission rate

The maximum length of the bus line depends on the transmission rate (bps rate). The following table serves as a guide for an optimum bus design:

Bus expansion

Max. bus expansion	Data rate in kbps
7000 m	10
3500 m	20
600 m	125
300 m	250
90 m	500
40 m	1000

CANopen (M12 A-coded)

Pin	Assignment
1	shield
2	not used
3	CAN-GND
4	CAN-H
5	CAN-L
Housing	shield

CANopen Universal

SAI-AU

M8



SAI-AU

M12



Ordering data

IO variants
16 digital inputs
16 digital inputs / 8 digital outputs
4 analogue inputs / 2 analogue outputs / 4 digital inputs
Note

Type	Qty.	Order No.
SAI-AU M8 CAN 16DI	1	1906680000
SAI-AU M8 CAN 16DI/8DO	1	1906690000
Note		

Type	Qty.	Order No.
SAI-AU M12 CAN 16DI	1	1906650000
SAI-AU M12 CAN 16DI/8DO	1	1906660000
SAI-AU M12 CAN AI/AO/DI	1	1906670000
Note		

Technical specifications of bus system

Bus user	Slave
Transmission rate	Max. 1 Mbps
Diagnosis indication	red
Fieldbus interface	RS 485
Electrical isolation available	Yes
Station addresses	Rotary switch 1-125
Baud rate	automatic
Note	

Technical data

General data	
Insulation material of housing	PBT
Flammability class UL 94	V-0
Operating temperature	0 °C ... 55 °C
Storage temperature	-25 °C ... 70 °C
Protection class	IP 67
Electrical data	
Rated voltage	24.0 V DC (18...30 V)
max. current-carrying capacity per output signal	0.5, 2.0 A
Output level	Short-circuit-protected
Total current max.	8 A
Digital input type	TYPE 1 to EN 61131-2
Analogue outputs	-10...+10 V, 0...+10 V, 0...20 mA, 4...20 mA
Analogue inputs	-10...+10 V, 0...+10 V, 0...20 mA, 4...20 mA
Resolution	12-bit
Accuracy	< 0.2 %
UL certification in preparation	
Note	

Accessories

Plug
Terminating resistor in M12 plug
Metal plug, Male M12, 5-pole, shield A-coded
Metal plug, Socket M12, 5-pole, shield A-coded
Miscellaneous accessories
Marker, transparent
M8 protective cap
M12 protective cap
Note

Type	Qty.	Order No.
SAIEND CAN-M12 5P A-COD	1	1784760000
SAIS-M-5/8S M12 5P A-COD	1	1784740000
SAIB-M-5/8S M12 5P A-COD	1	1784750000
Note		
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK M8	50	1802760000
SAI-SK-M12-UNI	20	2330260000
Voltage supply with standard M12 plug-in connectors (see Chap. D)		
Note		

Modbus TCP



Principle

Modbus TCP is a fieldbus system for automation technology based on Ethernet TCP/IP. It has been accepted by the Internet Engineering Task Force (IETF) as a draft RFC standard and has been made available for all to use by Schneider Automation. Modbus TCP is based on Modbus, a well established industrial application protocol. The Modbus object models remain unchanged.

A connection is set up via TCP/IP by the server (e.g. I/O device) being addressed via port number 502. Commands are initiated by the client (Master) and executed by the server (slave). The length of a Modbus telegram is max. 256 bytes.

Network structure

Like Standard Ethernet, Modbus TCP installations are also wired with a star structure. The star structure is characterized by a central signal distributor (switch) with individual connections to all the network's terminals. A line or tree structure can be set up with the help of a 3-port switch in the device or in the proximity of each device.

Weidmüller can supply products for the network infrastructure – please refer to our Industrial Ethernet catalogue.

Addressing

The addressing is carried out via a BOOTP (Internet Bootstrap Protocol) inquiry via the client, using the Dynamic Host Configuration Protocol (DHCP), or the user can set the IP address with a software tool.

Bus extension/transmission rate

The transmission rate is 10 or 100 Mbps. Weidmüller modules detect the transmission rate automatically and set themselves accordingly. The maximum length of the bus cable is the same for both transmission rates.

The following table can serve as a guide for bus installations complying with the standard:

Max. bus extension (m)	Data rate (Mbps)
100	10
100	100

Modbus TCP Universal

SAI-AU

M8



SAI-AU

M12



Ordering data

IO variants	
	16 digital inputs
	16 digital inputs / 8 digital outputs
	4 analogue inputs / 2 analogue outputs / 4 digital inputs
Note	

Type	Qty.	Order No.
SAI-AU M8 IE 16DI	1	1906880000
SAI-AU M8 IE 16DI/8DO	1	1906890000
Note		

Type	Qty.	Order No.
SAI-AU M12 IE 16DI	1	1906850000
SAI-AU M12 IE 16DI/8DO	1	1906860000
SAI-AU M12 IE AI/AO/DI	1	1906870000
Note		

Technical specifications of bus system

Bus user	Server
Transmission rate	10 / 100 Mbps
Diagnosis indication	red
Fieldbus interface	IEEE 802.3
Electrical isolation available	Yes
Station addresses	via DHCP
Baud rate	automatic
Note	

Technical data

General data	
Insulation material of housing	PBT
Flammability class UL 94	V-0
Operating temperature	0 °C ... 55 °C
Storage temperature	-25 °C ... 70 °C
Protection class	IP 67
Electrical data	
Rated voltage	24.0 V DC (18...30 V)
max. current-carrying capacity per output signal	0.5, 2.0 A
Output level	Short-circuit-protected
Total current max.	8 A
Digital input type	TYPE 1 to EN 61131-2
Analogue outputs	-10...+10 V, 0...+10 V, 0...20 mA, 4...20 mA
Analogue inputs	-10...+10 V, 0...+10 V, 0...20 mA, 4...20 mA
Resolution	12-bit
Accuracy	< 0.2 %
Note	
UL certification in preparation	

Accessories

Plug	
	Metal plug Ethernet, Male M12, D-coded, straight
	Metal plug Ethernet, Socket M12, D-coded, straight
Miscellaneous accessories	
	Marker, transparent
	M8 protective cap
	M12 protective cap
Note	

Type	Qty.	Order No.
SAISM-4/8S-M12-4P D-COD	1	1892120000
SAIBM-4/8S-M12-4P D-COD	1	1892130000
Note		
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK M8	50	1802760000
SAI-SK-M12-UNI	20	2330260000
Note		
Voltage supply with standard M12 plug-in connectors (see Chap. D)		

The EtherNet/IP system



Principle

EtherNet/IP (Ethernet Industrial Protocol) is an open standard that was developed by Rockwell Automation and the Open DeviceNet Vendor Association (ODVA) for industrial networks. EtherNet/IP is based on the Ethernet TCP/IP standards and the Common Industrial Protocol (CIP).

CIP an open standard that is implemented in ISO layer 7, and is also used for ControlNet™ and DeviceNet™ installations. This enables continuous communications between the field level and the Internet. The protocol includes a control component for cyclic, real-time-compatible I/O signal transmission (implicit messaging) and an information component for the configuration, diagnosis and management messages (explicit messaging).

The I/O data uses the User Datagram Protocol/Internet Protocol (UDP/IP) and the information data uses TCP/IP protocols.

The IEEE802.3 standard is incremented on layers 1 and 2 (physical media and data link respectively).

Addressing

The Dynamic Host Configuration Protocol (DHCP) is used to assign addresses to modules in EtherNet/IP networks.

Network structure

Like Standard Ethernet, EtherNet/IP installations are also wired with a star structure. The star structure is characterised by a central signal distributor (switch) with individual connections to all the network's terminals. A line or tree structure can be set up with the help of a 3-port switch in the device or in the proximity of each device.

Weidmüller can supply products for the network infrastructure – please refer to our Industrial Ethernet catalogue.

Transmission rate

The transmission rate is 10 or 100 Mbps. Weidmüller modules detect the transmission rate automatically and set themselves accordingly. The maximum length of the bus cable is the same for both transmission rates.

The following table can serve as a guide for bus installations complying with the standard:

Max. bus extension (m)	Data rate (Mbps)
100	10
100	100

EtherNet/IP Universal

SAI-AU

M8



SAI-AU

M12



Ordering data

IO variants
16 digital inputs
16 digital inputs / 8 digital outputs
4 analogue inputs / 2 analogue outputs / 4 digital inputs
Note

Type	Qty.	Order No.
SAI-AU M8 EIP 16DI	1	1906930000
SAI-AU M8 EIP 16DI/8DO	1	1906940000
Note		

Type	Qty.	Order No.
SAI-AU M12 EIP 16DI	1	1906900000
SAI-AU M12 EIP 16DI/8DO	1	1906910000
SAI-AU M12 EIP AI/AO/DI	1	1906920000
Note		

Technical specifications of bus system

Bus user	Server
Transmission rate	10 / 100 Mbps
Diagnosis indication	red
Fieldbus interface	IEEE 802.3
Electrical isolation available	Yes
Station addresses	via DHCP
Baud rate	automatic
Note	

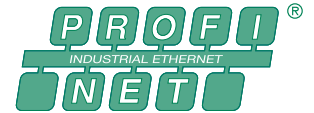
Technical data

General data	
Insulation material of housing	PBT
Flammability class UL 94	V-0
Operating temperature	0 °C ... 55 °C
Storage temperature	-25 °C ... 70 °C
Protection class	IP 67
Electrical data	
Rated voltage	24.0 V DC (18...30 V)
max. current-carrying capacity per output signal	0.5, 2.0 A
Output level	Short-circuit-protected
Total current max.	8 A
Digital input type	TYPE 1 to EN 61131-2
Analogue outputs	-10...+10 V, 0...+10 V, 0...20 mA, 4...20 mA
Analogue inputs	-10...+10 V, 0...+10 V, 0...20 mA, 4...20 mA
Resolution	12-bit
Accuracy	< 0.2 %
UL certification in preparation	
Note	

Accessories

Plug
Metal plug Ethernet, Male M12, D-coded, straight
Metal plug Ethernet, Socket M12, D-coded, straight
Miscellaneous accessories
Marker, transparent
M8 protective cap
M12 protective cap
Note

Type	Qty.	Order No.
SAISM-4/8S-M12-4P D-COD	1	1892120000
SAIBM-4/8S-M12-4P D-COD	1	1892130000
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK M8	50	1802760000
SAI-SK-M12-UNI	20	2330260000
Voltage supply with standard M12 plug-in connectors (see Chap. D)		
Note		



PROFINET system description

Principal function

PROFINET is the open Industrial Ethernet standard for automation from PROFIBUS & PROFINET International (PI). Profinet implements TCP/IP and IT standards. It is capable of real-time Ethernet and can integrate fieldbus systems. The Profinet design is distinguished mainly by the type of data exchange used to meet the speed requirements.

There are two Profinet perspectives – Profinet-CBA and Profinet-IO:

- Profinet-CBA (component-based automation) is suitable for component-based communications via TCP/IP and real-time communications for the real-time demands of modular systems engineering. Both communication channels can be used in parallel.
- Profinet-IO was created for real-time (RT) communication and synchronous communication (IRT: isynchronous real-time) with decentralized peripheral devices. The designations RT and IRT only describe the real-time characteristics of the communication within the Profinet-IO.

Process data and alarms within the Profinet-IO are always transmitted in real time (RT). Profinet „real time“ is based on the definition from the IEEE and IEC. This specifies that only a limited time is allowed within a bus cycle for the execution of real-time services.

This RT communication is the basis for Profinet-IO data exchange. Real-time data is handled with a higher priority than TCP(UDP)/IP data packets. RT is the foundation for real-time communications in the decentralized peripheral zone. Bus cycle times in the 2–6 ms range are possible with this data exchange mechanism.

Addressing

Module addresses for the Profinet-IO are assigned automatically using DCP (the discovery configuration protocol).

Network structure

With the integration of a managed, two-port switch in all Profinet modules, it is then possible to implement linear, star or tree network topologies.

Transmission rate

The transmission rate is 100 Mbit/s. The maximum segment length is 100 m.

PROFINET Universal

SAI-AU

M8



SAI-AU

M12



Ordering data

IO variants	
	16 digital inputs
	16 digital inputs / 8 digital outputs
	4 analogue inputs / 2 analogue outputs / 4 digital inputs
Note	

Type	Qty.	Order No.
SAI-AU M8 PN 16DIM	1	1019310000
SAI-AU M8 PN 16DI/8DOM	1	1019320000

Type	Qty.	Order No.
SAI-AU M12 PN 16DIM	1	1019270000
SAI-AU M12 PN 16DI/8DOM	1	1019280000
SAI-AU M12PN4/2AIO4DIOM	1	1019290000

Technical specifications of bus system

Bus user	Server
Transmission rate	100 Mbps
Diagnosis indication	red
Fieldbus interface	IEEE 802.3
Electrical isolation available	Yes
Station addresses	via DCP
Baud rate	automatic

Note

Technical data

General data	
Insulation material of housing	PBT
Flammability class UL 94	V-0
Operating temperature	0 °C ... 55 °C
Storage temperature	-25 °C ... 70 °C
Protection class	IP 67
Electrical data	
Rated voltage	24.0 V DC (18...30 V)
max. current-carrying capacity per output signal	2.0 A
Output level	Short-circuit-protected
Total current max.	8 A
Digital input type	TYPE 1 to EN 61131-2
Analogue outputs	-10...+10 V, 0...+10 V, 0...20 mA, 4...20 mA
Analogue inputs	-10...+10 V, 0...+10 V, 0...20 mA, 4...20 mA
Resolution	12-bit
Accuracy	< 0.2 %

Accessories

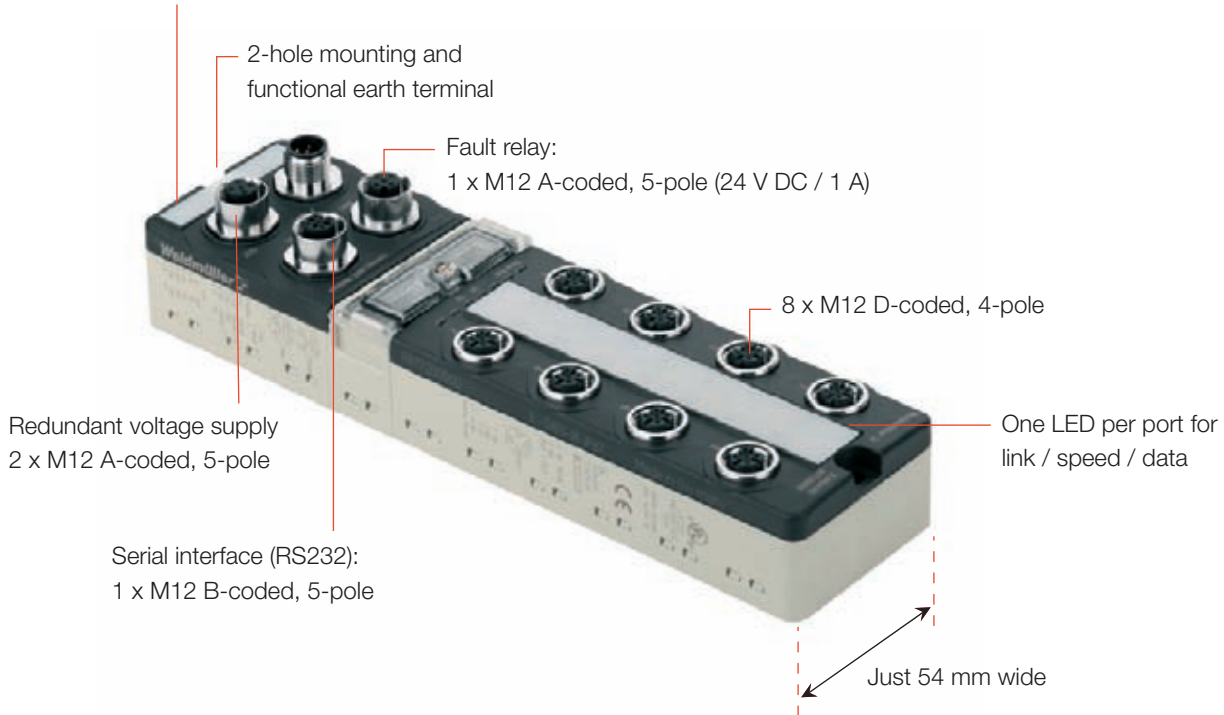
Plug	
	Metal plug Ethernet, Male M12, D-coded, straight
	Metal plug Ethernet, Socket M12, D-coded, straight
Miscellaneous accessories	
	Marker, transparent
	M8 protective cap
	M12 protective cap
Note	

Type	Qty.	Order No.
SAISM-4/8S-M12-4P D-COD	1	1892120000
SAIBM-4/8S-M12-4P D-COD	1	1892130000
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK M8	50	1802760000
SAI-SK-M12-UNI	20	2330260000

8-port switch in IP67

2 x Multicard markers
or 1 No. 40 mm long strip
for printing IP addresses

C



Switches are the central components of a network. They prevent data collision, allow rapid packet switching and enhance data throughput. Not only do Weidmüller switches meet the demands placed on the Fast Ethernet with its transmission rate of up to 100 Mbit/s, but they are also downward compatible with the older networks that have a transmission rate of 10 Mbit/s (IEEE 802.3). They recognise the speed automatically.

Weidmüller's unmanaged switches are Plug & Play devices for easy installation of Ethernet networks. They do not need to be either configured or parameterised.

Weidmüller's managed switches enable industry networks to be structured in order to optimise transport routes and times for network traffic. The various network components are cabled together hierarchically in a physical star. The main distributor in the field, in this case the Industrial Ethernet switch IE-SW-8-M-IP67, is the central switching point. All Weidmüller switches are protocol transparent. Each port forms both a network segment and a collision domain that are intrinsic to the port itself. The entire network bandwidth is available to each of these segments. This results in enhanced network performance not only over the network as a whole, but also in each individual segment. The switch examines each packet passing through for the MAC address of the target segment and is able to forward it directly there.

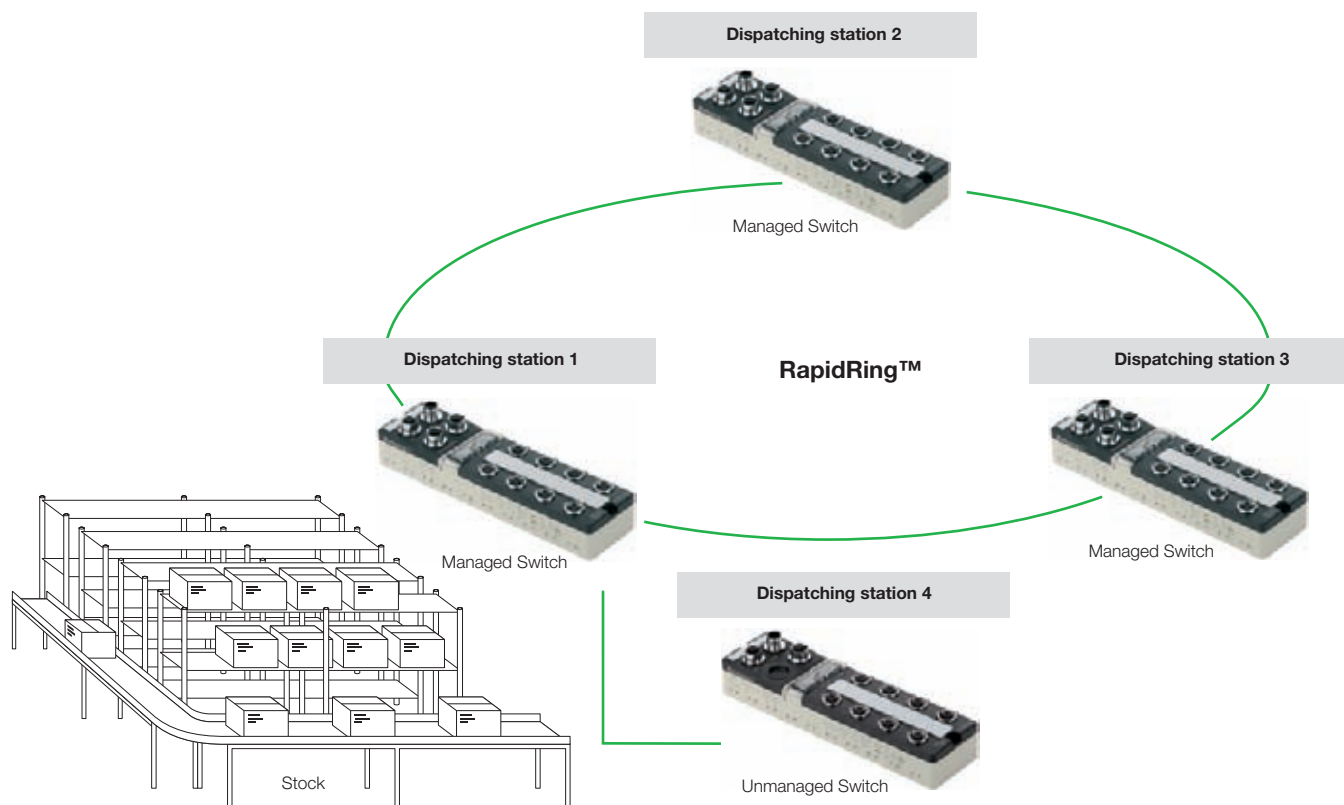
For direct connection to the network in the field, Weidmüller offers an IP 67 switch with eight Ethernet ports for use in tough environments.

- Robust plastic housing (IP67 ingress protection class) for use in the field, complying with UL94 flammability rating V0
- Strip markers – wide range of marking systems and products
- Eight Ethernet ports with M12-D-coded plug-in connectors
- Temperature range from $-40\text{ }^{\circ}\text{C}$ to $+60\text{ }^{\circ}\text{C}$

The features of the managed IP67 switch from Weidmüller include the following:

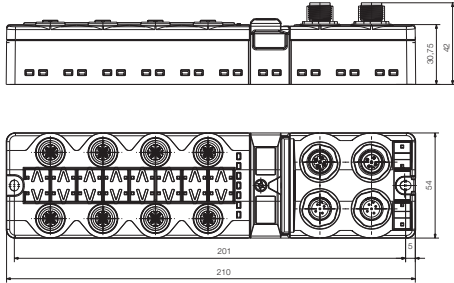
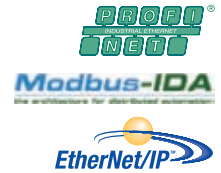
- Port trunking
- Port mirroring
- VLAN IEEE 802.1Q
- Filtering and forwarding table with fixed entries
- Selective multicast control
- Quality of service
- Configurable relay functions
- Access to the address table
- Configuration via Web interface or terminal program
- SNMP V.1-capability
- RSTP and RapidRing™
- IGMP snooping with querier functions
- Auto-crossing, auto-negotiation, auto-polarity
- Broadcast limitation
- Flow control IEEE 802.3x
- DHCP
- RMON (statistics, history, alarms, occurrences)

Stock control with the Weidmüller Industrial Ethernet Switches in IP67



IP 67 unmanaged switch

- IP 67 housing
- M12 D-coded plug-in connector



IP 67 unmanaged switch

Industrial Ethernet on the machine itself with simple and secure M12 plug-in connectors.

With their IP 67 class of protection and operating temperature range of -40°C to +60°C, these switches are ideal for use in the field.

In addition, the following functions are supported:

- Autonegotiation
- Redundant voltage supply
- Error relay PLC support

Ordering data

Number of ports	8 x M12
------------------------	---------

Type	Order No.
IE-SW8-IP67	8877190000

Accessories

M12 protective cap	
Marker, transparent	
Note	

Type	Order No.
SAI-SK-M12-UNI	2330260000
ESG 8/13.5/43.3 SAI AU	1912130000

Cables and connection elements are found starting at Chapter D.

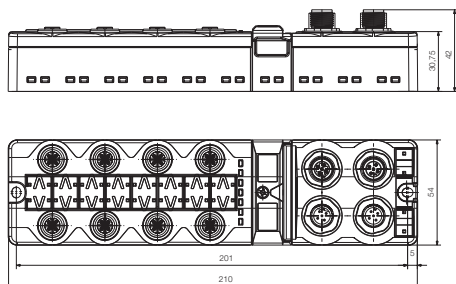
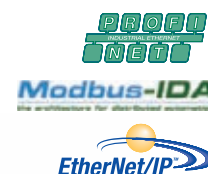
Technical data

Housing	Plastic
Length / Width / Height	210 mm / 54 mm / 31 mm
AC input voltage, min.-max.	8-24 V AC
DC input voltage, min.-max.	10-36 V DC
Input power AC / DC	max. 5 W
Input frequency	47 - 63 Hz
Operating temperature, min.-max.	-40 °C-60 °C
Storage temperature, min.-max.	-40 °C-85 °C
Installation	Wall
Protection class	IP 67
Standard	IEEE 802.3; 802.3u; 802.3x; Class I, Division 2
Data rate	10BASE-T/100BASE-TX
Segment length	Cooper 100 m
Functionality	„Auto-negotiation, redundant power supply, error relay for PLC support“
Flow control	half-duplex/full duplex
Status indication	Link, Power, Run, Status
Buffer memory	256 KByte per 8 ports
Address memory	4 K MAC addresses per 8 ports
Approvals	cULus, CE, EN55024, EN 55022, Gost R
Aging	300 s
Supported protocols	Profinet RT, Modbus TCP, TCP/IP, Ethernet/IP

Note:

IP 67 managed switch

- IP 67 housing
- M12 D-coded plug-in connector



IP 67 managed switch

Industrial Ethernet on the machine itself with simple and secure M12 plug-in connectors.

With their IP 67 class of protection and operating temperature range of -40°C to +60°C, these switches are ideal for use in the field.

The following features are supported:

- Autonegotiation
- Redundant voltage supply
- Error relay for PLC support
- SNMP V1
- Rapid Ring™
- RSTP 802.3w
- IGMP snooping
- Querier
- Port mirroring
- Port filtering
- Port setup functionality
- VLAN
- QoS
- TOS
- Diffserv
- MAC-based trunking
- Autocrossover
- Autopolarity
- Filtering and forwarding table
- DHCP-Client

Ordering data

Number of ports	Type	Order No.
8 x M12	IE-SW8-M-IP67	8877200000

Accessories

Type	Order No.
M12 protective cap	SAI-SK-M12-UNI 2330260000
Communication cable	IE-C-RS232-M12 8874290000
Marker, transparent	ESG 8/13.5/43.3 SAI AU 1912130000

Note
Cables and connection elements are found starting at Chapter D.

Technical data

Housing	Plastic
Length / Width / Height	210 mm / 54 mm / 31 mm
AC input voltage, min.-max.	8-24 V AC
DC input voltage, min.-max.	10-36 V DC
Input power AC / DC	max. 5 W
Input frequency	47 - 63 Hz
Operating temperature, min.-max.	-40 °C-60 °C
Storage temperature, min.-max.	-40 °C-85 °C
Installation	Wall
Protection class	IP 67
Standard	IEEE 802.3; 802.3u; 802.3x; Class I, Division 2
Data rate	10BASE-T/100BASE-TX
Segment length	Cooper 100 m
Functionality	„Auto-negotiation, redundant power supply, ring topology; error relay for PLC support“
Flow control	half-duplex/full duplex
Status indication	Link, Power, Run, Status
Buffer memory	256 KByte per 8 ports
Address memory	4 K MAC adress
Approvals	cULus, CE, EN55024, EN 55022, Gost R
Aging	300 s
Supported protocols	Profinet RT, Modbus TCP, TCP/IP, Ethernet/IP

Note:

M12, metal (EMC), D-coded

SAISM / SAIBM

4-pole, straight (Screw connection)

SAISM / SAIBM

4-pole, straight (Tension clamp connection)



Industrial Ethernet

Ordering data

Male plug	4-pole, PG 9
Female socket	4-pole, PG 9

Type	Qty.	Order No
SAISM-4/8S-M12-4P D-COD	1	1892120000
SAIBM-4/8S-M12-4P D-COD	1	1892130000

Type	Qty.	Order No
SAISM-4/8S-M12 4P D-ZF	1	1892120001
SAIBM-4/8S-M12 4P D-ZF	1	1892130001

Information

Other versions on request

Other versions on request

Technical data

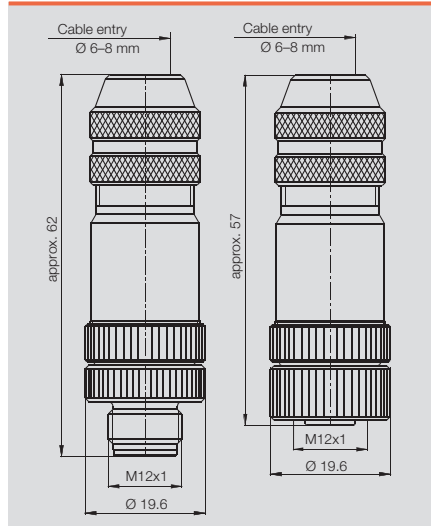
Number of Poles		4
Type of connection		screw
Housing material		CuZn
Connection thread		M12
Cable-connection diameter	mm	6...8 (PG9)
Connection cross-section	mm ²	0.14...0.5 (D-COD)
Rated current	A	4
Rated voltage	V	250 V (4-pole)
Temperature range	°C	-40 ... 85
Ingress protection class		IP 67
Contact surface		CuSnZn (B-COD) / gold-plated (D-COD)

Information

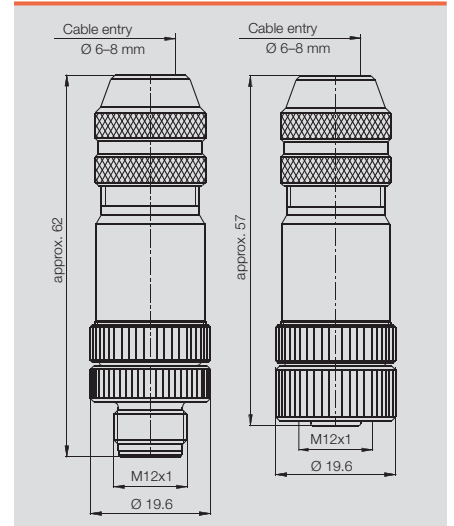
Number of Poles		4
Type of connection		Tension clamp
Housing material		CuZn
Connection thread		M12
Cable-connection diameter	mm	6...8 (PG9)
Connection cross-section	mm ²	0.14...0.5 (D-COD)
Rated current	A	4
Rated voltage	V	250 V (4-pole)
Temperature range	°C	-40 ... 85
Ingress protection class		IP 67
Contact surface		CuSnZn (B-COD) / gold-plated (D-COD)

Number of Poles		4
Type of connection		Tension clamp
Housing material		CuZn
Connection thread		M12
Cable-connection diameter	mm	6...8 (PG9)
Connection cross-section	mm ²	0.14...0.5 (D-COD)
Rated current	A	4
Rated voltage	V	250 V (4-pole)
Temperature range	°C	-40 ... 85
Ingress protection class		IP 67
Contact surface		CuSnZn (B-COD) / gold-plated (D-COD)

Dimensioned drawing



Dimensioned drawing



SAI Active Universal Pro

The trend from IP20 to IP67 or from switchgear cabinets to cabinet-less machines has reached a peak with IP67 I/O slaves. These plug & play solutions completely do away with connection of individual conductors. This not only saves time, errors when connecting individual wires no longer occur. IP67 bus modules are the most modern and cost-effective solution for the connection of sensors and actuators.

What is a sub-bus system?

Machine installations nowadays use standardised bus systems. In Europe, for example, PROFIBUS-DP is mostly used and in North America, DeviceNet. The controllers provide the respective interfaces, making connection of a bus system very simple. Nevertheless, there can be isolated problems. The two most significant are:

- The number of addresses is limited. With modular designs in which each slave is a true station with bus address, the total number of channels is limited.
- The costs for a PROFIBUS slave are higher than those for a slave that integrates a manufacturer-specific bus.

For these reasons, sub-bus systems have become established especially in large installations. Sub-bus systems enable I/O stations to supply further I/O stations via an additional line independent of the main bus. The advantage of SAI Universal Pro is that the gateways are slaves themselves and can therefore process I/O information. That means sensors and actuators can be directly connected to gateways from Weidmüller.

What do I have to consider?

Stand-alone modules or sub-bus system instead

Both systems are necessary and offer the optimal solution in your applications. What is important is finding the right solution for the respective application. You are then faced with the question of when which solution is optimal. The usual solution nowadays is to position a gateway directly after the controller and to wire the entire machine with the sub-bus system. The reasons for this are the transmission rates and the limited length of a sub-line.

For the connecting cables between the sub-bus modules, it is important to use a cost-effective solution and not to introduce new special accessories. **For connecting the sub-bus stations, Weidmüller uses M8 shielded sensor cables.**

This is new.

Transparent connection

The monitoring of each individual connection means that errors are quickly detected and eliminated. On the one hand, all I/O channels are diagnosed and, on the other, the sub-bus line is monitored at every Extension IO.

This means that faulty wiring is immediately detected in the course of installation. In addition, the gateway IO passes a message to the PLC stating exactly where the error is located in the sub-bus connection.



Transmission reliability

To ensure the same transmission reliability in the bus system as in the main line, the SAI Universal PRO system uses CAN. As a result of the many applications in the market, this solution in particular is especially cost-effective and resistant to faults.

There are many IO gateways available such as PROFIBUS-DP, DeviceNet, USB and the Ethernet dialects: EtherNet/IP and Modbus TCP.

The gateways have 16 digital inputs and the USB module additionally has 8 outputs. The USB is connected to a USB port on a PC and works on any USB port once the relevant drivers have been installed. An implementation using the Modbus standard protocol is possible.

Extension IO modules

In addition to the familiar digital input and output modules, the SAI Pro system also includes a counter module, thermo, PT100 and analogue modules. This extensive range offers all the possibilities.

Special labelling concept

Our modular terminals usually use marker strips. We have logically transferred this system to the SAI Active Universal and Universal Pro modules. It goes without saying that the labels can be printed using the PrintJet.

Special illumination concept

As on our standard SAI Universal modules, the Pro modules have illuminated markers to make recognition particularly easy and for relating the LEDs to the channels.

Flexible assembly

The transverse holes enable mounting of the Extension IO modules from the side. Elongated holes help with assembly alignment.



Technical features

Max. no. stations	15
Bus structure	Line
Max. length	10 - 50 m
Addressing	Automatic



Gateway I/O

SAI-AU GW

16DI



SAI-AU GW

8DI / 8DO



Ordering data

Bus system	
PROFIBUS-DP	
Profibus-DP	
DeviceNet	
Modbus TCP	
Ethernet/IP	
PROFINET	
USB	
Note	

Type	Qty.	Order No.
SAI-AU M8 PB GW 16DI	1	1024310000
SAI-AU M12 PB GW 16DI	1	1938550000
SAI-AU M12 DN GW 16DI	1	1938570000
SAI-AU M12 IE GW 16DI	1	1938580000
SAI-AU M12 EIP GW 16DI	1	1019490000
SAI-AU M12 PN GW 16DIM	1	1019480000
Note		

Type	Qty.	Order No.
SAI-AU M12 USB GW 8I8O	1	1962240000
Note		

Technical data

Bus user	Slave
Diagnosis indication	red
Note	

Technical data

General data	
Insulation material of housing	PBT
Flammability class UL 94	5VA
Operating temperature	0 °C ... 60 °C
Storage temperature	-20 °C ... 85 °C
Protection class	IP 67
Electrical data	
Rated voltage	24.0 V DC (18...30 V)
max. current-carrying capacity per output signal	0.5 A
Output level	Short-circuit-protected
Total current max.	4 A
Digital input type	TYPE 1 to EN 61131-2
E/A function indicator	LED yellow
Sensor voltage indicator	LED green
UL certification in preparation	
Note	

Accessories

Miscellaneous accessories	
Marker, transparent	
M12 protective cap	
Note	

Type	Qty.	Order No.
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK-M12-UNI	20	2330260000
Note		

Extension IO digital modules

SAI-AU Digital

M8



SAI-AU Digital

M12



Ordering data

IO variants	
	8 inputs
	8 outputs
	8 inputs / 8 outputs
Note	

Type	Qty.	Order No.
SAI-AU M8 SB 8DI	1	1938600000
SAI-AU M8 SB 8DO 2A	1	1938660000
SAI-AU M8 SB 8DIO	1	1938630000

Type	Qty.	Order No.
SAI-AU M12 SB 8DI	1	1938610000
SAI-AU M12 SB 8DO 2A	1	1938680000
SAI-AU M12 SB 8DIO	1	1938640000

Technical data

Bus user	15
Diagnosis indication	red
Electrical isolation available	No
Station addresses	automatic
Baud rate	automatic
Insulation material of housing	PBT
Flammability class UL 94	5VA
Operating temperature	0 °C ... 60 °C
Storage temperature	-25 °C ... 85 °C
Protection class	IP 67
Rated voltage	24.0 V DC (20.4...28.8 V)
Output level	Short-circuit-protected
Note	

Extension module - technical specifications

General data	
Input filter	configurable
max. current-carrying capacity per output signal	0.5, 2.0 A
Total current max.	4, 8 A
Digital input type	TYPE 1 to EN 61131-2
E/A function indicator	LED yellow
Sensor voltage indicator	LED green

Accessories

Miscellaneous accessories	
	Marker, transparent
	M8 protective cap
	M12 protective cap
Note	

Type	Qty.	Order No.
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK M8	50	1802760000
SAI-SK-M12-UNI	20	2330260000

Extension IO analogue modules

SAI-AU Analog

M12



SAI Active

C

Ordering data

IO variants
4 inputs
4 outputs
Note

Type	Qty.	Order No.
SAI-AU M12 SB 4AI	1	1938690000
SAI-AU M12 SB 4AO	1	1938700000
Note		

Type	Qty.	Order No.
Note		

Technical data

Bus user	15
Diagnosis indication	red
Electrical isolation available	No
Station addresses	automatic
Baud rate	automatic
Insulation material of housing	PBT
Flammability class UL 94	5VA
Operating temperature	0 °C ... 60 °C
Storage temperature	-25 °C ... 85 °C
Protection class	IP 67
Rated voltage	24.0 V DC (20.4...28.8 V)
Output level	Short-circuit-protected
Note	

Extension module - technical specifications

General data	
Scan interval for each channel	configurable 5 ms up to 250 ms
Accuracy	< 0.2 % of measurement range end value
Offset error	< 0.1 % of measurement range end value
Linearity	< 0.05 %
Temperature coefficient	< 300 ppm/K of measuring range end value
Voltage range	0 ... +10 V, -10 V ... 10 V
Current range	0 ... 20 mA, 4 ... 20 mA
Inputs	
Input resistance	≥ 100 kΩ
Resolution of voltage range, inputs	11 bit + 1 bit sign (1 LSB = 4.88 mV)
max. Input current (differentiated)	- 50 mA ... +50 mA
Input resistance, current	< 125 Ω
Resolution of current range, inputs	11-bit (1 LSB = 9.76 μA)
Outputs	
Analogue bandwidth	100 Hz
Load resistance, voltage	≥ 1 kΩ
Resolution of voltage range, outputs	11 bit + 1 bit sign
Load resistance, current	≤ 600 Ω
Resolution of current range, outputs	12-bit
UL certification in preparation	

Accessories

Miscellaneous accessories
Marker, transparent
M8 protective cap
M12 protective cap
Note

Type	Qty.	Order No.
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK M8	50	1802760000
SAI-SK-M12-UNI	20	2330260000
Note		

Extension IO counter modules

SAI-AU Counter

M12



Ordering data

IO variants	
	2 inputs
Note	

Technical data

Bus user	15
Diagnosis indication	red
Electrical isolation available	No
Station addresses	automatic
Baud rate	automatic
Insulation material of housing	PBT
Flammability class UL 94	5VA
Operating temperature	0 °C ... 60 °C
Storage temperature	-25 °C ... 85 °C
Protection class	IP 67
Rated voltage	24.0 V DC (20.4...28.8 V)
Output level	Short-circuit-protected
Note	

Accessories

Miscellaneous accessories	
	Marker, transparent
	M8 protective cap
	M12 protective cap
Note	

Type	Qty.	Order No.
SAI-AU M12 SB 2Counter	1	1938730000
Note		

Type	Qty.	Order No.
Note		

Extension module - technical specifications

General data	
Bit depth	32-Bit
Switching frequency	100 kHz
No. inputs	2 x enables, 2 x counters, 2 x count directions
Voltage rating inputs	24 V DC
No. outputs	2
Output current outputs	0.5 A
Note	

Type	Qty.	Order No.
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK M8	50	1802760000
SAI-SK-M12-UNI	20	2330260000
Note		

Extension IO thermo modules

SAI-AU Thermo

M12



Ordering data

IO variants	
	4 inputs
Note	

Technical data

Bus user	15
Diagnosis indication	red
Electrical isolation available	No
Station addresses	automatic
Baud rate	automatic
Insulation material of housing	PBT
Flammability class UL 94	5VA
Operating temperature	0 °C ... 60 °C
Storage temperature	-25 °C ... 85 °C
Protection class	IP 67
Rated voltage	24.0 V DC (20.4...28.8 V)
Output level	Short-circuit-protected
Note	

Accessories

Miscellaneous accessories	
	Marker, transparent
	M8 protective cap
	M12 protective cap
Note	

Type	Qty.	Order No.
SAI-AU M12 SB 4Thermo	1	1938720000
Note		

Type	Qty.	Order No.
Note		

Extension module - technical specifications

General data	
Sensor	Type J, K, L, B, E, N, R, S, T, U, mV measurement
Temperature range	depends on sensor type, preset type K, -100 °C ... 1370 °C
Resolution	0.1 °C per digit
Conversion time	250 ms (configurable up to 70 ms)
Measurement error	< ± 0.5% (of measurement range end value)
Input filter	configurable
Cold-trap compensation	External PT1000 connection on pins 1 and 3 (GND)
Note	

Type	Qty.	Order No.
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK M8	50	1802760000
SAI-SK-M12-UNI	20	2330260000
Note		

Extension IO PT100 modules

SAI-AU PT100

M12



Ordering data

IO variants

Note

Type	Qty.	Order No.
SAI-AU M12 SB 4PT100	1	1938710000

Type	Qty.	Order No.

Technical data

Bus user	15
Diagnosis indication	red
Electrical isolation available	No
Station addresses	automatic
Baud rate	automatic
Insulation material of housing	PBT
Flammability class UL 94	5VA
Operating temperature	0 °C ... 60 °C
Storage temperature	-25 °C ... 85 °C
Protection class	IP 67
Rated voltage	24.0 V DC (20.4...28.8 V)
Output level	Short-circuit-protected

Note

Accessories

Miscellaneous accessories
Marker, transparent
M8 protective cap
M12 protective cap

Note

Extension module - technical specifications

General data	
Type of sensor	N100, N1000, N120, PT100, PT1000, PT200, PT300, PT500
	Potentiometer connection, Resistance measurement
Temperature range for PT sensors	-200 °C ... +850 °C
Temperature range for Ni sensors	-60 °C ... +250 °C
Resistance measurement	max. 4000 Ω
Potentiometer	100 to 4000 Ω (3-conductor connection)
Resolution	0.1 °C per digit
Conversion time	250 ms (configurable up to 65 ms)
Measurement error	< ± 1 °C
Input filter	configurable
Measured current	typ. 0.5 mA

Type	Qty.	Order No.
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK M8	50	1802760000
SAI-SK-M12-UNI	20	2330260000

Universal Pro cables



The four-pole Standard M8 sensor cables are especially well suited for the Universal Pro system. With their diameter of 0.34 mm², these cables allow a system to be expanded up to 50 meters. The 360° shielding guarantees that signal transmission is error-free.

Technical data

Cable construction	
No. of poles	4
Sheathing colour	grey
Material	PUR/PUR
Core cross-section	0.34 mm ²
Contact surface	Gold-plated
Nominal voltage	30 V
Rated current	4 A
Protection class	IP 67
Ambient temperature, min.	-30 °C
Ambient temperature, max.	90 °C

Note	L in the drawing is the cable length
-------------	--------------------------------------

Ordering data

Male, straight - female, straight	Type	(Qty. = 1)	Order No.
0.3 m	SAIL-M8GM8G-4S-0.3Q-SB		1981900030
1.0 m	SAIL-M8GM8G-4S-1.0Q-SB		1981900100
1.5 m	SAIL-M8GM8G-4S-1.5Q-SB		1981900150
3.0 m	SAIL-M8GM8G-4S-3.0Q-SB		1981900300
5.0 m	SAIL-M8GM8G-4S-5.0Q-SB		1981900500
10.0 m	SAIL-M8GM8G-4S-10Q-SB		1981901000
15.0 m	SAIL-M8GM8G-4S-15Q-SB		1981901500
20.0 m	SAIL-M8GM8G-4S-20Q-SB		1981902000
Female, straight - open end			
1.5 m	SAIL-M8BG-4S-1.5Q-SB		1981910150
3.0 m	SAIL-M8BG-4S-3.0Q-SB		1981910300
5.0 m	SAIL-M8BG-4S-5.0Q-SB		1981910500
10.0 m	SAIL-M8BG-4S-10Q-SB		1981911000
Note	Other versions on request		

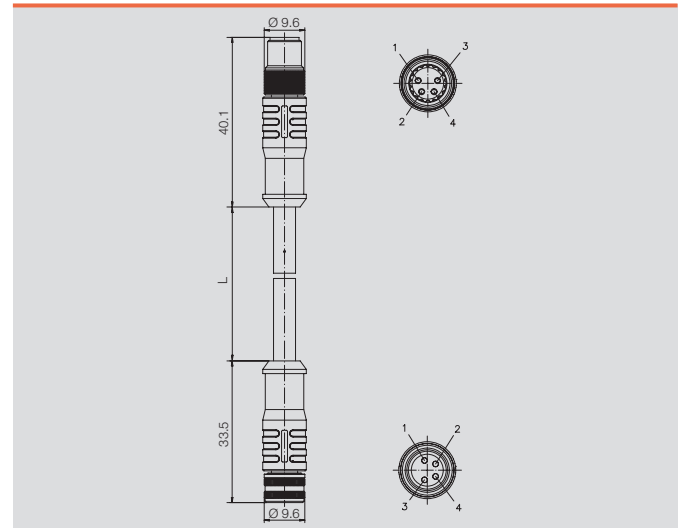
Terminating resistor



Ordering data

Type	Qty.	Order No.
SAI END CAN M8 4P	1	1955340000

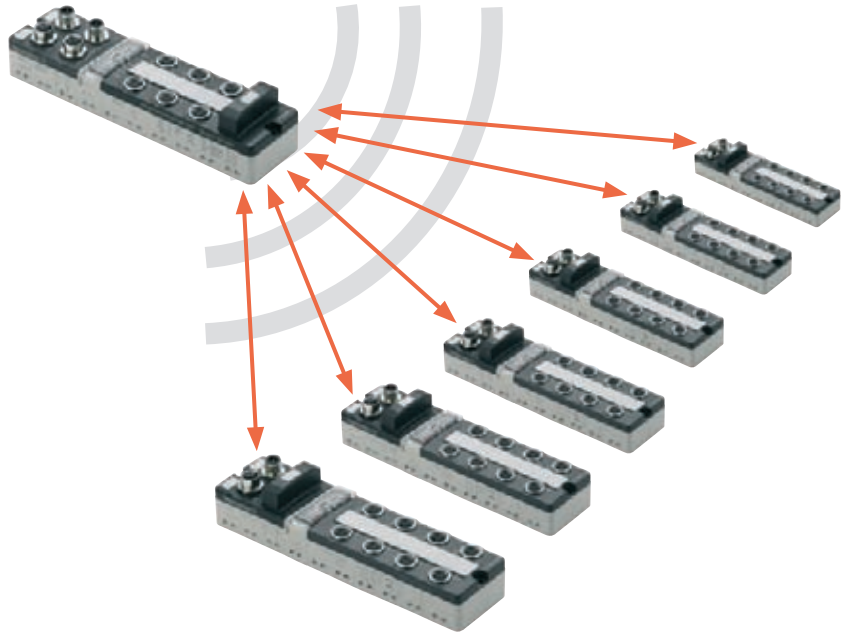
Dimensions



SAI-Bluetooth

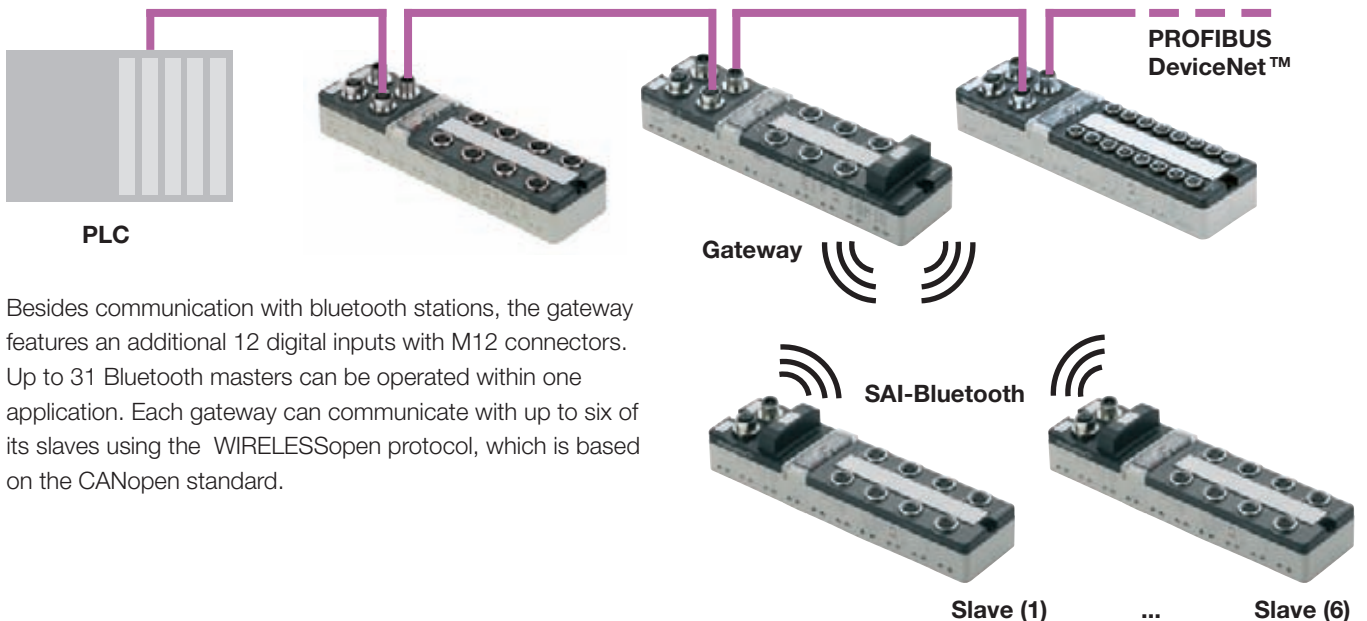
The Concept

A Bluetooth master can perform wireless communication with up to six slave stations. All stations function as field devices with IP67 protection. The connection from the sensor or actuator utilizes a M12 connector.



The Implementation

The Bluetooth gateway (master) functions as a slave in a PROFIBUS-DP network or a DeviceNet™ network. Together with the slaves, it is configured via GSD or EDS files.

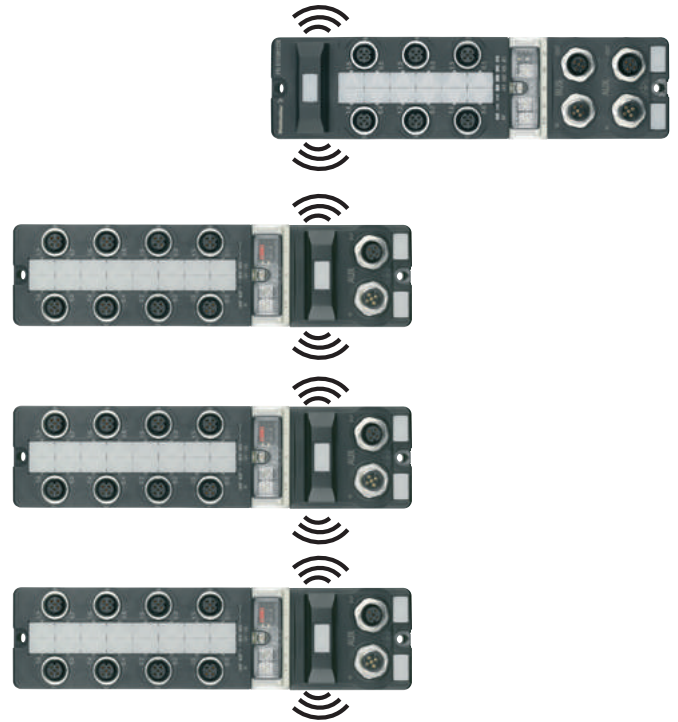


Besides communication with bluetooth stations, the gateway features an additional 12 digital inputs with M12 connectors. Up to 31 Bluetooth masters can be operated within one application. Each gateway can communicate with up to six of its slaves using the WIRELESSopen protocol, which is based on the CANopen standard.

The Products

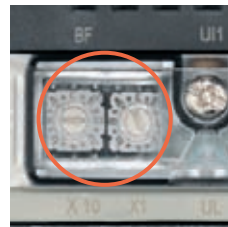
- Profibus or DeviceNet™ slave with 12 digital inputs and Bluetooth gateway function (master) for 6 Bluetooth slaves
- Bluetooth slave with 16 digital inputs
- Bluetooth slave with 8 digital inputs and 8 digital inputs or outputs (configurable)
- Bluetooth slave with 4 digital and 4 analogue inputs and 2 digital and 2 analogue outputs

All I/O signals on M12 connectors



Advantages

- Interference-resistant data communication without cable, e.g., for mobile sections of the facility.
- Classic distributor with the standard installation procedure
- Configuration as standard PROFIBUS-DP components
- Full network transparency also for wireless stations
- Convenient address settings, in illuminated address space
- Comprehensive diagnosis and status display on each module, for operating voltages and communication
- Generous surface for identification marking, with background lighting and arrow-shaped status display. Additional colour display change in event of I/O error



Gateway

SAI-AU

M12



Ordering data

IO variants	
	12 digital inputs
	12 digital inputs
Note	

Type	Qty.	Order No.
SAI-AU M12 GW PB/BT 12I	1	1006980000
SAI-AU M12 GW DN/BT 12I	1	1060020000

Type	Qty.	Order No.

Technical specifications of bus system

Bus user	Slave
Profibus transmission rate	Max. 12 Mbps
DeviceNet transmission rate	Max. 500 kBaud
Diagnosis indication	red
Fieldbus interface	RS 485
Electrical isolation available	Yes
Station addresses	Rotary switch 1-125
Baud rate	automatic
Note	

Technical data

General data	
Insulation material of housing	PBT
Flammability class UL 94	V-0
Operating temperature	0 °C ... 55 °C
Storage temperature	-25 °C ... 70 °C
Protection class	IP 67
Electrical data	
Rated voltage	24.0 V DC (18...30 V)
Digital input type	TYPE 1 to EN 61131-2
UL certification in preparation	

Accessories

Plug	
	Metal plug, Male M12, B-coded, straight
	Metal plug, Socket M12, B-coded, straight
	Connecting plug in M12 Plug
	Terminating resistor in M12 plug
	Metal plug, Male M12, 5-pole, shield A-coded
	Metal plug, Socket M12, 5-pole, shield A-coded
Miscellaneous accessories	
	Marker, transparent
	M12 protective cap
Note	

Type	Qty.	Order No.
SAISM 5/8S M12 5P B-COD	1	1784790000
SAIBM 5/8S M12 5P B-COD	1	1784780000
SAIEND PB M12 5P B-COD	1	1784770000
SAIEND CAN-M12 5P A-COD	1	1784760000
SAIS-M-5/8S M12 5P A-COD	1	1784740000
SAIB-M-5/8S M12 5P A-COD	1	1784750000
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK-M12-UNI	20	2330260000

Slaves

SAI-AU

M12



Ordering data

IO variants
16 digital inputs
16 digital inputs / 8 digital outputs
4 analogue inputs / 2 analogue outputs / 4 digital inputs
Note

Type	Qty.	Order No.
SAI-AU M12 BT 16DI	1	1006940000
SAI-AU M12 BT 16DI/8DO	1	1006930000
SAI-AU M12 BT4AI2AO2DIO	1	1006920000

Type	Qty.	Order No.

Technical data

General data	
Insulation material of housing	PBT
Flammability class UL 94	V-0
Operating temperature	0 °C ... 55 °C
Storage temperature	-25 °C ... 70 °C
Protection class	IP 67
Electrical data	
Rated voltage	24.0 V DC (18...30 V)
max. current-carrying capacity per output signal	0.5, 2.0 A
Output level	Short-circuit-protected
Total current max.	8 A
Digital input type	TYPE 1 to EN 61131-2
Analogue outputs	-10...+10 V, 0...+10 V, 0...20 mA, 4...20 mA
Analogue inputs	-10...+10 V, 0...+10 V, 0...20 mA, 4...20 mA
Resolution	12-bit
Accuracy	< 0.2 %

Note

Accessories

Miscellaneous accessories
Marker, transparent
M12 protective cap
Note

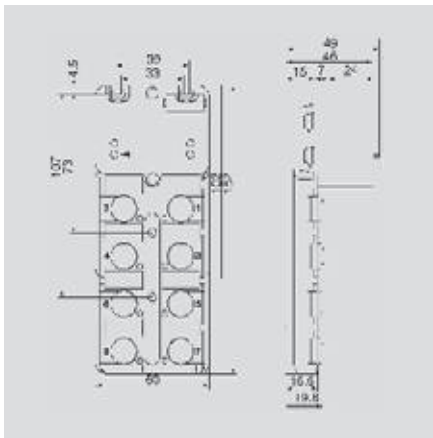
Type	Qty.	Order No.
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK-M12-UNI	20	2330260000

System description for Actuator/Sensor Interface



The AS-Interface is defined in the standards EN 50295 and IEC 62026-2. The ASI bus was developed to satisfy the need for a system that guarantees low-cost data transmission. To achieve this, a number of decisions were made. The system is specialised for the transmission of digital signals, for example. In addition, use of the otherwise usual shielded cables was abandoned and a simple unshielded, but coded twisted pair system was chosen. The necessary data security was achieved through transmission in Manchester code. A separate power supply is not required for input modules since these are powered via the data cable. Since the original definition did not satisfy requirements, the system was further developed to enable transmission of analogue data in addition, and the number of stations was increased. ASI has since become established in various sectors. The important limiting factors are:

- The number of stations may not exceed 62.
- The necessary speed may not be less than 5 ms for 31 slaves or 10 ms for 62 slaves.



Weidmüller offers its SAI AS-Interface Modular distributors in M12 and IDC in Versions 2.0 and 2.1. The most noteworthy advantages are pluggable electronics, infrared addressing and the high IP68 (M12) ingress protection class. The M12 threaded metal ring remains a special feature, since it offers greater solidity and reliability.

Pluggable electronics

The connection element is mechanically separate from the electronics. This makes it possible to install the entire sensor-actuator cabling before the electronics are plugged in, making it easy to replace the electronics without having to undo the wiring.

Infrared addressing

The unreliability suffered with the earlier system of addressing via M12 is eliminated. Loose contacts are a thing of the past, as are leaks at the addressing socket.

IP68 ingress protection class with special marking

The approval tests at Weidmüller are checked for ageing. AS Interface hood-type distributors are first checked for leaks after 168 hours of ageing. This is done by measuring resistance under water. This test procedure guarantees extremely resistant distributors.



Parameters

Transmission rate	167 kbaud
Max. segment length	100 m
Cycle times	5 ms (31 slaves), 10 ms (62 slaves)
Number of stations	31 for standard slaves, 62 for A/B slaves

SAI-ASI Modular

SAI-ASI Modular

SAI-ASI Modular

31 slaves

62 slaves/ AB slaves



Ordering data

Type of plug-on fitting	
	4 inputs
	4 outputs
	2 inputs / 2 outputs
	4 inputs / 4 outputs
Note	

Type	Qty.	Order No.
SAI-ASI-S H 4A	1	1799270000
SAI-ASI-S H 4E	1	7902090000
SAI-ASI-S H 2E/2A	1	1799280000
SAI-ASI-S H 4E/4A	1	7902100000
Note		

Type	Qty.	Order No.
SAI-ASI-S H AB 4E	1	1848440000
Note		

Technical specifications of bus system

Bus user	Slave
No. of subscribers	31/ 62
Transmission rate	167 kbits
Diagnosis indication	red
Station addresses	Infrared
AS interface specification	V2.1
Note	

Technical data

General data	
Insulation material of housing	PBT
Flammability class UL 94	V-0
Operating temperature	-20 °C ... 70 °C
Storage temperature	-40 °C ... 85 °C
Protection class	IP 68
Electrical data	
Rated voltage	26.5 ... 31.6 V
max. current-carrying capacity per output signal	2.0 A
Output level	Short-circuit-protected
Total current max.	2 A
Digital input type	TYPE 1 to EN 61131-2
E/A function indicator	LED yellow
Sensor voltage indicator	LED green
Note	

Accessories

Lower section for 4 I/O-channel modules	
with 4 No. M12 connections	
With 4 IDC connections	
Lower section for 8 I/O-channel modules	
with 8 M12 connections	
With 8 IDC connections	
Note	

Type	Qty.	Order No.
SAI-ASI 4E W BOTTOM	1	1762470000
SAI-ASI 4 IDC BOTTOM	1	1917370000
Note		
SAI-ASI 4E/4A W BOTTOM	1	1762290000
SAI-ASI 8 IDC BOTTOM	1	1917360000
Note		

Actuator-Sensor Interface Line



The new space-saving SAI AS-Interface family makes new applications possible. The narrow 24 mm form of the modules means that they can fit into a very small installation space. The length is also remarkable, since the M8 module with 4 connections is only 123 mm long.

The ribbon cable locks into the base part, while the coded cable rules out the possibility of misconnection. The piercing connectors make the module easy to connect with the help of a screwdriver. Pure input modules only require the yellow ribbon cable. The additional voltage for the outputs is fed to the module via the black cable.

The implementation of the new AS-Interface specification 3.0 means that modules with 8 inputs on one address with 62 slaves are possible in one network. Also modules with 4 inputs and 4 outputs with 62 slaves are now available. These modules require an M4 master.

All modules are certified by the AS-Interface Association and conform to the AS-Interface specifications.

The outputs as well as the supply for sensors are protected against short circuits and overload. These faults are signalled to the master using the peripheral bit. At the same time, the AS-I and fault LEDs blink alternately red/green in accordance with the AS-Interface specification.

All outputs can be simultaneously operated at the maximum current capacity of 0.5 A.

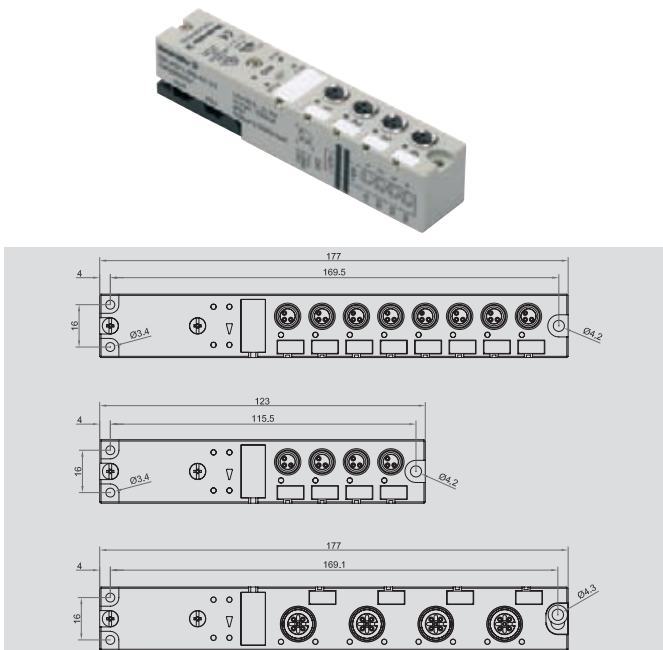
The housing has IP67 class of protection, which guarantees resistance to water and dust. The addressing is performed via the infrared adapter with the user-friendly hand programming tool.

With the Weidmüller MultiCard markers, each I/O point can be individually marked, while a further marker is available for the complete module.

There are eight module versions, with four different I/O configurations available:

- 4 inputs
- 8 inputs
- 4 outputs
- 4 inputs and 4 outputs

Each I/O variant is available in two connection versions. The sensors or actuators can be connected with 5-pole M12 or 3-pole M8 plug-in connectors.



SAI-ASI Line V3

SAI-ASI Line

SAI-ASI Line

M8

M12



Ordering data

IO variants	
	4 inputs
	4 outputs
	4 inputs / 4 outputs
	8 inputs
Note	

Type	Qty.	Order No.
SAI-ASI-L-M8-4I V3	1	1962640000
SAI-ASI-L-M8-4O V3	1	1962660000
SAI-ASI-L-M8-4I/4O V3	1	1962670000
SAI-ASI-L-M8-8I V3	1	1962650000
Note		

Type	Qty.	Order No.
SAI-ASI-L-M12-4I V3	1	1962680000
SAI-ASI-L-M12-4O V3	1	1962700000
SAI-ASI-L-M12-4I/4O V3	1	1962710000
SAI-ASI-L-M12-8I V3	1	1962690000
Note		

Technical specifications of bus system

Bus user	Slave
No. of subscribers	62
Transmission rate	167 kbits
Diagnosis indication	red
Station addresses	Infrared
AS interface specification	V3.0
Note	

Technical data

General data	
Insulation material of housing	PBT
Flammability class UL 94	V-0
Operating temperature	-25 °C ... 60 °C
Storage temperature	-25 °C ... 85 °C
Protection class	IP 67
Electrical data	
Rated voltage	26.5 ... 31.6 V
max. current-carrying capacity per output signal	0.5 A
Output level	Short-circuit-protected
Total current max.	2 A
Digital input type	TYPE 1 to EN 61131-2
E/A function indicator	LED yellow
Sensor voltage indicator	LED green
Note	

Accessories

Miscellaneous accessories	
	M12 protective cap
	M8 protective cap
Note	

Type	Qty.	Order No.
SAI-SK-M12	30	9456050000
SAI-SK-M8	50	1802760000
Note		

AS-Interface programming accessories

AS-Interface infrared programming adapter



AS-Interface IR adapter for addressing AS-Interface modules with infrared interface.

- Usable with handheld address programmer (order no. 1805410000).
- Converts TTL signals of the handheld addressing unit into optical signals for the AS-Interface modules and vice versa.
- Connection to addressing unit by M12 plug-in connector and infrared head to AS-Interface modules.
- Cable length 1 m

Handheld AS-Interface address programmer



Function

- Addressing or programming of up to 62 slaves. Display of all slaves present on the bus, reading and writing of slave addresses and slave parameters. Switches between and displays the various operating modes by means of a MODE button. Display of the "peripheral fault flag" (Version 2.1). Addressing of slaves via optical data interface (Version 2.1) with special IR adapters.

Power supply

- Built-in rechargeable battery. Charging time approx. 12 hours. Operating time with fully charged battery: 8 hours, corresponding to around 250 read/write operations. 230 V AC charger included. IP20 class of protection.

Ordering data

Type	Qty.	Order No.
SAI-ASI IR adapter	1	1804500000

Ordering data

Type	Qty.	Order No.
SAI-ASI handheld	1	1805410000

AS-Interface power supply / Gateway

AS-Interface power supply



Technical data

Input	
Input voltage	85 – 270 V DC / 120 – 400 V AC
Input current (115 V / 230 V AC)	max 0.85 Aeff
Back-up fuse	at 115 V AC 3.5 delay-action / at 230 V AC 1.75 delay-action
Output	
Output voltage	30.5 V DC
Max. output current	4.0 A
Resistant to overloads, continuous short-circuits and no-load conditions	
Fuse data	
Resistance to high voltages	Input / output 3.75 k V AC
Output fuse	not needed because of short-circuit resistance
Class of protection	Class 1, with PE connection (EN 60950)
Terminal protection class	IP20 (VGB4)
MTBF	> 380,000
Operational and environmental data	
Operating temperature	–30°...+70°
Storage temperature	–30°...+105°
Humidity	95 % relative humidity, average for year
Mounting position	standing
Distance	no clearance necessary
Pollution severity	2 acc. to VD 0110 part 1
General data	
Dimensions (B x H x T)	79 x 100 x 120 mm
Terminal rail	Snaps on to TS 35 / 7.5
Housing colour	black
Weight	1.5 kg
Protection class	IP 20

Ordering data

Type	Qty.	Order No.
SAI-ASI PU 4A	1	1002830000

Gateway PROFIBUS-DP-AS-Interface



Technical data

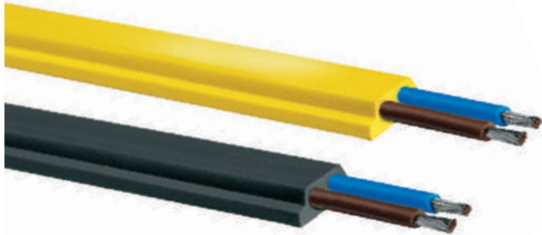
Rated operational current	Master power supply A, approx. 200 mA from the AS-i-circuit
Rated operational voltage	AS-i-voltage 30 V DC
Connections	9-pole PROFIBUS Sub-D
Baud rates	9.6-12,000 Kbaud
AS-i-cycle time	150 µs (number of slaves + 2)
Insulation voltage	> 500 V
EMC	acc. to EN 50082, EN 50081 / automatic detection
Ambient temperature	0 °C ... +55 °C
Storage temperature	–25 °C ... +85 °C
Housings	Snaps on to TS 35/7.5
Dimensions (L, B, H)	120 mm, 75 mm, 83 mm
Protection class acc. to DIN 40050	IP20
Weight	460 g
AS-i-specification	3.0
DIN	19245 part 3
Indicators	
LCD	AS-i slave address indicator, error messages
LED green (power)	power supply OK
LED green/red (MNS)	PROFIBUS-DP status
LED red (config error)	configuration error
LED green (U AS-i)	AS-i voltage OK
LED green (AS-i active)	AS-i operation normal
LED green (prg enable)	automatic slave programming possible
LED yellow (prj mode)	configuration mode active
Buttons	2 (mode/set)

Ordering data

Type	Qty.	Order No.
Gateway AS-i PB DP 3.0	1	1004040000

AS-Interface ribbon cables

AS-Interface ribbon cable, rubber



Technical data

Use	AS-Interface
Colour	yellow, black
Type of cable	profiled cable
Conductor cross-section	2 x 1.5 mm ²
Material	EPDM (rubber)
Halogen-free	yes
Temperature range (at rest)	-40 °C ... +85 °C
Temperature range (moving)	-25 °C ... +85 °C
Flammability class	flammable
Ozone/weather-resistant	partially resistant
Minimum bending radii	fixed: 12 mm movable: 24 mm
Flexural properties	no break after 30,000 backward and forward movements

Ordering data

Type	Designation	Qty.	Order No.
AS-KG-ge	Ribbon cable yellow	100 m	9455110000
AS-KG-sw	Ribbon cable black	100 m	9455120000

Coupling module single from ribbon cable to round cable



Technical data

Connection AS-Interface	ribbon cable
No. connectable cables	2
Type of cable	ribbon cable, yellow + black
Flexible lead cross-section	1.5 mm ²
Connection type	piercing technology
Type of cable	PUR solid
Conductor cross-section	0.34 mm ²
Cable length	2 m
Operating voltage	≤ 40 V
Operating current	≤ 4 A
General data	
Pollution severity DIN EN 0110	3
Ambient temperature	-25 °C ... +75 °C
Storage temperature	-40 °C ... +85 °C
Housing material	PA 6-GF-FR
Shock resistance	30 g/11 ms
Vibration resistance	10 ... 55 Hz; 1.0 mm amplitude
Specific data	
Ingress protection class DIN 40050	IP 67
Weight	20 g
Pin assignment	
Pin 1:	AS-Interface "+" blue
Pin 3:	AS-Interface "-" brown

Ordering data

Type	Qty.	Order No.
SAI-ASI T FR	1	1925010000

Bridge module ribbon cable



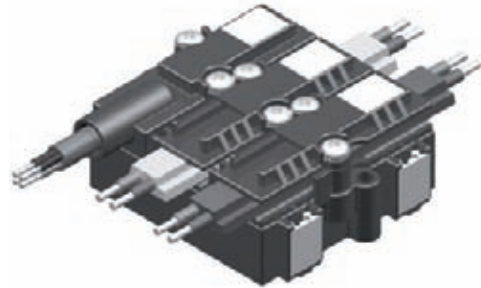
Technical data

Connection AS-Interface	ribbon cable
No. connectable cables	2
Type of cable	ribbon cable, yellow + black
Flexible lead cross-section	1.5 mm ²
Connection type	piercing technology
Type of cable	PUR solid
Conductor cross-section	0.34 mm ²
Cable length	2 m
Operating voltage	≤ 40 V
Operating current	≤ 4 A
General data	
Pollution severity DIN EN 0110	3
Ambient temperature	-25 °C ... +75 °C
Storage temperature	-40 °C ... +85 °C
Housing material	PA 6-GF-FR
Shock resistance	30 g/11 ms
Vibration resistance	10 ... 55 Hz; 1.0 mm amplitude
Specific data	
Ingress protection class DIN 40050	IP 65
Weight	20 g without cable
Pin assignment	
Pin 1:	AS-Interface "+"
Pin 2:	ext. power supply "-"
Pin 3:	AS-Interface "-"
Pin 4:	ext. power supply "+"

Ordering data

Type	Qty.	Order No.
SAI-ASI T FF small	1	1026090000

Coupling module ribbon cable to round cable / yellow + black (2 m)



Technical data

Connection AS-Interface	ribbon cable
No. connectable cables	2
Type of cable	ribbon cable, yellow + black
Flexible lead cross-section	1.5 mm ²
Connection type	piercing technology
Type of cable	PUR solid
Conductor cross-section	0.34 mm ²
Cable length	2 m
Operating voltage	≤ 40 V
Operating current	≤ 4 A
General data	
Pollution severity DIN EN 0110	3
Ambient temperature	-25 °C ... +75 °C
Storage temperature	-40 °C ... +85 °C
Housing material	PA 6-GF-FR
Shock resistance	30 g/11 ms
Vibration resistance	10 ... 55 Hz; 1.0 mm amplitude
Specific data	
Ingress protection class DIN 40050	IP 65 / IP 67
Weight	50 g without cable
Pin assignment	
Pin 1:	AS-Interface "+"
Pin 2:	ext. power supply "-"
Pin 3:	AS-Interface "-"
Pin 4:	ext. power supply "+"

Ordering data

Type	Qty.	Order No.
SAI-ASI T FFR	1	1924980000

SAI accessories and bus system accessories

SAI accessories	Coding systems	D.2
	Customizable plug	D.4
	Plugs – accessories	D.22
	Marking systems	D.25
	Protective sleeve adapter	D.28
	Overview of sensor cables	D.29
	Overview of bus cables	D.33
	Sensor cables: one end without connector	D.40
	Sensor cables: Connecting cables	D.58
	Sensor cables: Twin sensor cables	D.78
	Power cables	D.81
	Built-in plugs	D.84
	Valve plugs	D.88
	Valve plugs with integral seal	D.92
	Valve plugs for custom assembly	D.96
	Cables 3, 4, 5 poles	D.98
	Connecting cables for Weidmüller distributors	D.99
	Tools	D.100
Bus system accessories	PROFIBUS-DP	D.106
	PROFIBUS-PA	D.110
	Customisable plugs for CAN/DeviceNet and PROFIBUS-PA	D.115
	CAN/DeviceNet	D.116
	Universal Pro	D.118
	Customisable plugs for Industrial Ethernet	D.119

Coding systems for round connectors

Round connectors are used for wiring sensors, actuators and data cables. To prevent wiring errors, there are different coding systems: for M12, the plug-in connectors are coded A, B and D. The M12 A-coded plug-in connector is available with 3 to 5 pins, 6 to 8 and 9 to 12 pins. There is no coding for M8 and M5.

The arrangement of the pins in the M8 plug-in connector (asymmetrical) rules out the possibility of 3 and 4-pole M8 plug-in connectors being connected together. In the case of M5 plug-in connectors, 3 and 4-pole plug-in connectors can be connected together since the pins are symmetrically arranged.

D

A-coded Sensor wiring 5-pole

Pole	Colour code	Assignment
1	brown	+ 24 V DC
2	white	Input/output 2*
3	blue	0 V DC
4	black	Input/output 1
5	grey	FE
	Housing	shield**

*) = only 5-pole version **) = only with shielded version

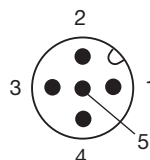
Signal assignment for data cables



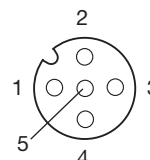
M12 connector – PA 4-pole

Pole	Assignment
1	DATA-B (red wire)
3	DATA-A (green wire)
4	shield (optional)
Housing	shield

2 to 5-pole:



Male



Female

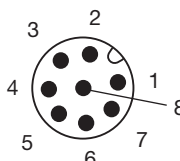
DeviceNet CANopen M12 connector 5-pole

Pole	Assignment
1	shield
2	V+
3	V- (CAN_GND)
4	CAN_H signal
5	CAN_L signal

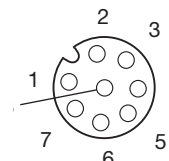
8-pole

Pole	Colour code	Assignment
1	white	signal
2	brown	signal
3	green	signal
4	yellow	signal
5	grey	+ 24 V DC
6	pink	signal
7	blue	0 V DC
8	red	signal

6 to 8-pole:



Male

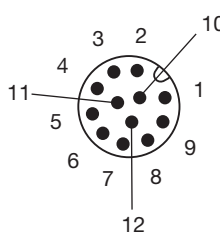


Female

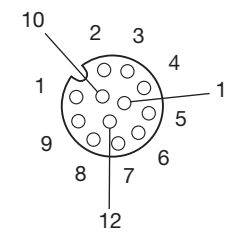
12-pole

Pole	Colour code	Assignment
1	brown	+ 24 V DC
2	blue	0 V DC
3	white	input/output 1
4	green	input/output 1
5	pink	input/output 1
6	yellow	input/output 1
7	black	input/output 1
8	grey	input/output 1
9	red	input/output 1
10	violet	input/output 1
11	grey/pink	input/output 1
12	red/blue	input/output 1

9 to 12-pole:



Male



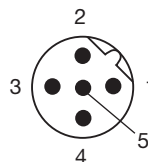
Female

B-coded

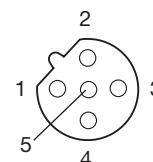
M12 connector – DP
5-pole

Pole	Assignment
1	+5 V DC
2	Data A (green wire)
3	GND
4	Data B (red wire)
5	shield (optional)
Housing	shield

3 to 5-pole:



Male



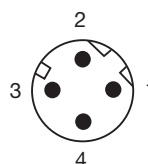
Female

D-coded

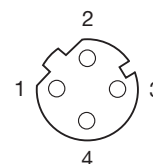
Industrial Ethernet connector – DP
4-pole

Pole	Assignment
1	TD+ (transmit data +)
2	RD+ (receive data +)
3	TD - (transmit data -)
4	RD - (receive data -)
Housing	shield

4-pole:



Male



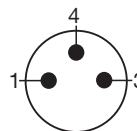
Female

M8 connector position

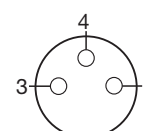
3-pole

Pole	Colour code	Assignment
1	brown	+ 24 V DC
3	blue	0 V DC
4	black	Input/output 1

3-pole:



Male



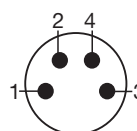
Female

M8 connector position

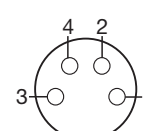
4-pole

Pole	Colour code	Assignment
1	brown	+ 24 V DC
2	white	Input/output 2
3	blue	0 V DC
4	black	Input/output 1

4-pole:



Male



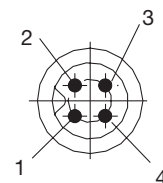
Female

M5 connector position

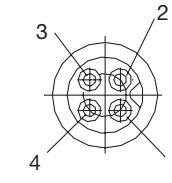
4-pole

Pole	Colour code	Assignment
1	brown	+ 24 V DC
2	white	Input/output 2
3	blue	0 V DC
4	black	Input/output 1

4-pole:



Male



Female

Overview of M8 and M12 screw connections

M8



Plugs and sockets (screw connection) for custom assembly to make up M8 and M12 connections.

Machine builders frequently need individual cable lengths. To meet this demand, Weidmüller can supply M8 and M12 plug-in connectors for custom assembly.

D

M12

M12 Metal



The plug-in connectors are available with different cable gland diameters. In the 90° versions, the outgoing direction of the cable can be changed in 90° steps. The connected plug-in connectors comply with IP 67 ingress protection classification. There are also plug-in connectors available for double assignment of distributors.

Screwty



This is the perfect tool for all common cable glands on sensor and actuator cables.

The Screwty fits M12 and M8 round plugs. Both types can be used for the plugs and sockets on custom cables.

The handle of every Screwty has a conventional 1/4 inch fitting and can be used for all sizes. Simply turn the tool to tighten or release a round plug.

Of course, the Screwty is also available with a torque fitting. This adjustable attachment can be used for all sizes. The torque can be infinitely adjusted between 0.5 and 1.7 Nm.

IDC-Tool



Weidmüller offers various products with insulation displacement connection for M12 connectors. These include the IDC connection elements, which can be directly screwed to a distributor, such as part nos. 9457720000 and 1766810000. In addition, there are two M12 IDC adapters with part nos. 1781550001 and 1781540001. All four elements can be fitted by hand with no additional tools. When there are many connections to be made in a day, however, use of the copyright protected IDC tool is recommended. This tool works like a knurled screw on the terminal.

Screw connection M12, A-coded

SAIS / SAIB

3- and 4-pole, straight



SAISW / SAIBW

3- and 4-pole, angled



Ordering data

male	
	3-pole, PG 7
	3-pole, PG 9
	4-pole, PG 7
	4-pole, PG 9
Socket	
	3-pole, PG 7
	3-pole, PG 9
	4-pole, PG 7
	4-pole, PG 9
Note	

Type	Qty.	Order No.
SAIS-3/7	1	1021470000
SAIS-3/9	1	1021480000
SAIS-4/7	1	9457550000
SAIS-4/9	1	1807340000
Other versions on request		

Type	Qty.	Order No.
SAISW-3/7	1	1021280000
SAISW-3/9	1	1021290000
SAISW-4/7	1	9457290000
SAISW-4/9	1	1807360000
Other versions on request		

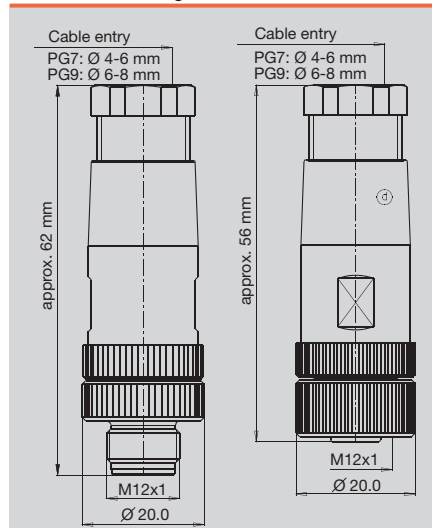
Technical data

No. of poles	3/4
Type of connection	screw
Housing material	PBT
Connecting thread	M12
Cable connection diameter	4...6 mm (PG7)/ 6...8 mm (PG9)
Connection cross-section	0.25...0.75 mm ²
Rated current	4 A
Rated voltage	250 V
Temperature range	-40 ... 85 °C
Protection class	IP 67
Contact surface	CuSnZn
Note	

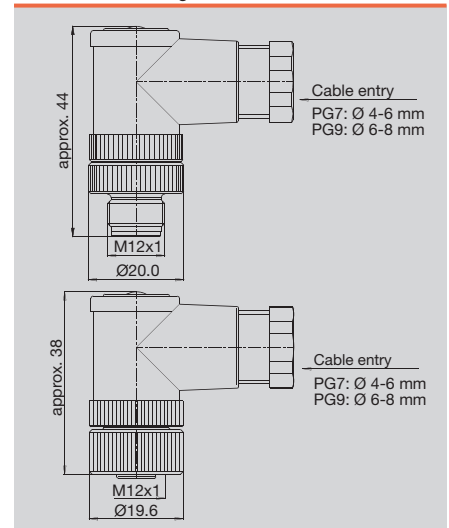
No. of poles	3/4
Type of connection	screw
Housing material	PBT
Connecting thread	M12
Cable connection diameter	4...6 mm (PG7)/ 6...8 mm (PG9)
Connection cross-section	0.25...0.75 mm ²
Rated current	4 A
Rated voltage	250 V
Temperature range	-40 ... 85 °C
Protection class	IP 67
Contact surface	CuSnZn
Note	

No. of poles	3/4
Type of connection	screw
Housing material	PBT
Connecting thread	M12
Cable connection diameter	4...6 mm (PG7)/ 6...8 mm (PG9)
Connection cross-section	0.25...0.75 mm ²
Rated current	4 A
Rated voltage	250 V
Temperature range	-40 ... 85 °C
Protection class	IP 67
Contact surface	CuSnZn
Note	

Dimensioned drawing



Dimensioned drawing



Customizable plug

Screw connection M12, A-coded

SAIS / SAIB

5- and 8-pole, straight



SAISW / SAIBW

5- and 8-pole, angled



D

Ordering data

male	
	5-pole, PG 7
	5-pole, PG 9
	8-pole, PG 9
Socket	
	5-pole, PG 7
	5-pole, PG 9
	8-pole, PG 9
Note	

Type	Qty.	Order No.
SAIS-5/7	1	9456940000
SAIS-5/9	1	1807350000
SAIS-8/9	1	1836970000
SAIB-5/7	1	9457250000
SAIB-5/9	1	1807250000
SAIB-8/9	1	1836960000
Other versions on request		

Type	Qty.	Order No.
SAISW-5/7	1	9456950000
SAISW-5/9	1	1807370000
SAIBW-5/7	1	9457260000
SAIBW-5/9	1	1807330000
Other versions on request		

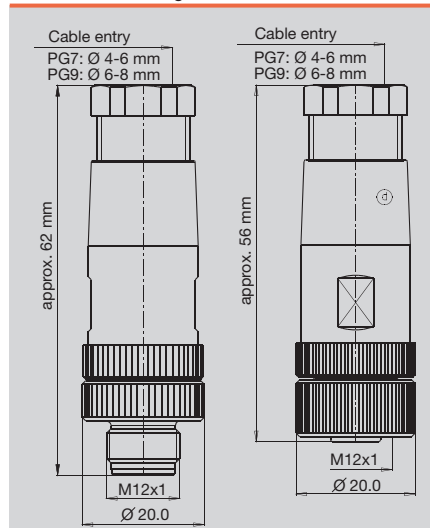
Technical data

No. of poles	5/8
Type of connection	screw
Housing material	PBT
Connecting thread	M12
Cable connection diameter	4...6 mm (PG7)/ 6...8 mm (PG9)
Connection cross-section	0.25...0.75 (5-pole)/ 0...25 (8-pole)
Rated current	4 (5-pole)/ 2 (8-pole)
Rated voltage	125 V 5-pole / 60 V 8-pole
Temperature range	-40 ... 85 °C
Protection class	IP 67
Contact surface	CuSnZn
Note	

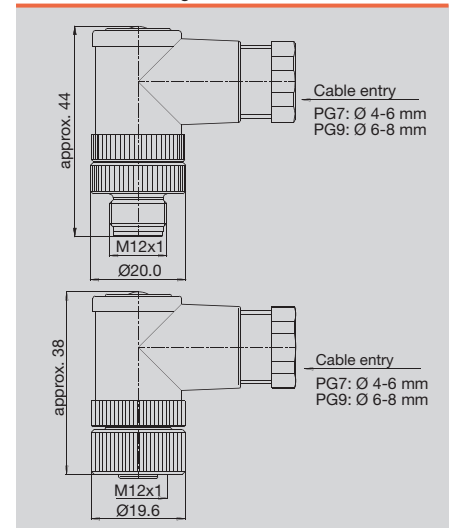
No. of poles	5/8
Type of connection	screw
Housing material	PBT
Connecting thread	M12
Cable connection diameter	4...6 mm (PG7)/ 6...8 mm (PG9)
Connection cross-section	0.25...0.75 (5-pole)/ 0...25 (8-pole)
Rated current	4 (5-pole)/ 2 (8-pole)
Rated voltage	125 V 5-pole / 60 V 8-pole
Temperature range	-40 ... 85 °C
Protection class	IP 67
Contact surface	CuSnZn
Note	

No. of poles	5/8
Type of connection	screw
Housing material	PBT
Connecting thread	M12
Cable connection diameter	4...6 mm (PG7)/ 6...8 mm (PG9)
Connection cross-section	0.25...0.75 (5-pole)/ 0...25 (8-pole)
Rated current	4 (5-pole)/ 2 (8-pole)
Rated voltage	125 V 5-pole / 60 V 8-pole
Temperature range	-40 ... 85 °C
Protection class	IP 67
Contact surface	CuSnZn
Note	

Dimensioned drawing



Dimensioned drawing



Screw connection M12, A-coded

SAIS / SAIB

SAISW / SAIBW



Ordering data

male	
	4-pole, PG 7
	5-pole, PG 7
Socket	
	4-pole, PG 7
	5-pole, PG 7
Note	

Type	Qty.	Order No.
SAIS-4/7-(KV)	1	1921060000
SAIS-5/7-(KV)	1	1921050000
Other versions on request		

Type	Qty.	Order No.
SAISW-4/7-(KV)	1	1962620000
SAISW-5/7-(KV)	1	1962610000
Other versions on request		

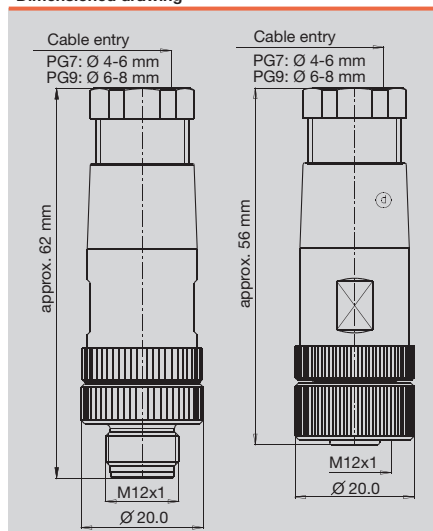
Technical data

No. of poles	4/5
Type of connection	screw
Housing material	PBT
Connecting thread	M12
Cable connection diameter	4...6 mm (PG7)/ 6...8 mm (PG9)
Connection cross-section	0.25...0.75 mm ²
Rated current	4 A
Rated voltage	250 V 4-pole / 125 V 5-pole
Temperature range	-40 ... 85 °C
Protection class	IP 67
Contact surface	CuSnZn
Note	

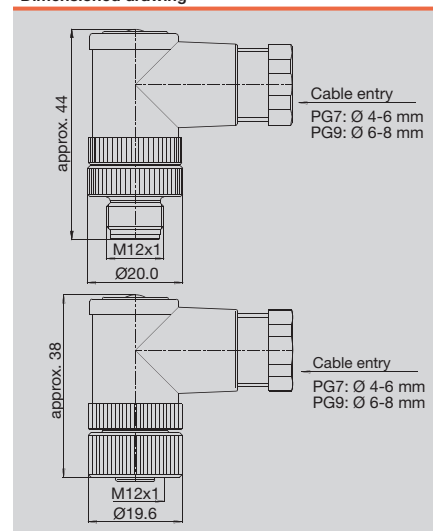
No. of poles	4/5
Type of connection	screw
Housing material	PBT
Connecting thread	M12
Cable connection diameter	4...6 mm (PG7)/ 6...8 mm (PG9)
Connection cross-section	0.25...0.75 mm ²
Rated current	4 A
Rated voltage	250 V 4-pole / 125 V 5-pole
Temperature range	-40 ... 85 °C
Protection class	IP 67
Contact surface	CuSnZn
Note	

No. of poles	4/5
Type of connection	screw
Housing material	PBT
Connecting thread	M12
Cable connection diameter	4...6 mm (PG7)/ 6...8 mm (PG9)
Connection cross-section	0.25...0.75 mm ²
Rated current	4 A
Rated voltage	250 V 4-pole / 125 V 5-pole
Temperature range	-40 ... 85 °C
Protection class	IP 67
Contact surface	CuSnZn
Note	

Dimensioned drawing



Dimensioned drawing



KV = plastic cable gland

Customizable plug

Tension clamp connection M12,
stainless steel
A-coded
B-coded

SAIS / SAIB VA

5-pole, straight



D

Ordering data

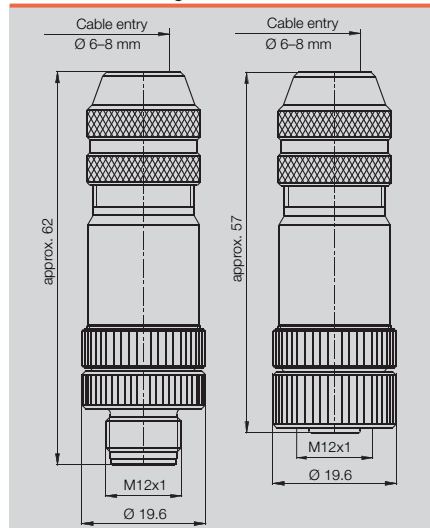
male	
	5-pole, PG 9
	5-pole, PG 9
Socket	
	5-pole, PG 9
	5-pole, PG 9
Note	

Type	Qty.	Order No.
SAIS 5/9-VA	1	1920700000
SAIS 5/9-VA-B-COD	1	1920720000
SAIB 5/9-VA	1	1920710000
SAIB 5/9-VA-B-COD	1	1920730000

Technical data

No. of poles	5
Type of connection	Tension clamp connection
Housing material	14V32
Connecting thread	M12
Cable connection diameter	6...8 mm
Connection cross-section	0.25...0.5 mm ²
Rated current	4 A
Rated voltage	125 V
Temperature range	-40 ... 85 °C
Protection class	IP 69 k
Contact surface	CuSnZn
Note	PB = PROFIBUS (B-COD)

Dimensioned drawing



PB = PROFIBUS (B-COD)

**Screw connection M12, metal (EMC)
A-coded**

FBCon / SAIS

4- and 5-pole, straight



SAISW / SAIBW

4- and 5-pole, angled



Ordering data

male	
	4-pole, PG 9
	5-pole, PG 9
Socket	
	4-pole, PG 9
	5-pole, PG 9
Note	

Type	Qty.	Order No.
FBCon M12 4P M EMC	1	9455640000
SAIS-M-5/8S M12 5P A-COD	1	1784740000
Other versions on request		

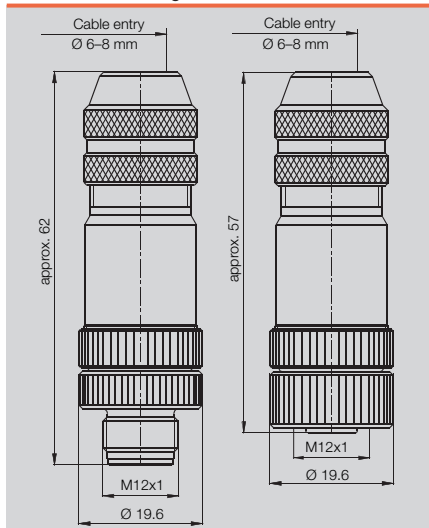
Type	Qty.	Order No.
SAISW-M-4/8 M12	1	1803930000
SAISW-M-5/8 M12	1	1803940000
Other versions on request		

Technical data

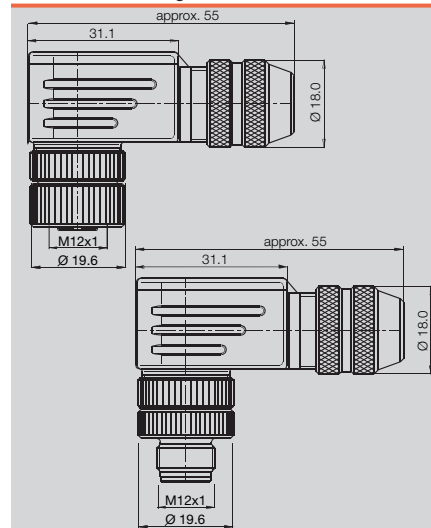
No. of poles	4/5
Type of connection	screw
Housing material	CuZn
Connecting thread	M12
Cable connection diameter	6...8 mm (PG9)
Connection cross-section	0.25...0.75 mm ²
Rated current	4 A
Rated voltage	250 V 4-pole / 125 V 5-pole
Temperature range	-25 ... 85 °C
Protection class	IP 67
Contact surface	CuSnZn (B-COD) / gold-plated (D-COD)
Note	

No. of poles	4/5
Type of connection	screw
Housing material	CuZn, nickel-plated
Connecting thread	M12
Cable connection diameter	6...8 mm (PG9)
Connection cross-section	0.25...0.75 mm ²
Rated current	4 A
Rated voltage	250 V 4-pole / 125 V 5-pole
Temperature range	-40 ... 85 °C
Protection class	IP 67
Contact surface	CuSnZn
Note	

Dimensioned drawing



Dimensioned drawing



Customizable plug

Screw connection M12, metal (EMC)
B-coded
D-coded



Industrial Ethernet

SAISM / SAIBM

4- and 5-pole, straight



SAIS / SAIB

4-pole, straight



D

Ordering data

male	
	4-pole, PG 9
	5-pole, PG 9
Socket	
	4-pole, PG 9
	5-pole, PG 9
Note	

Type	Qty.	Order No.
SAISM-4/8S-M12-4P D-COD	1	1892120000
SAISM 5/8S M12 5P B-COD	1	1784790000
SAIBM-4/8S-M12-4P D-COD	1	1892130000
SAIBM 5/8S M12 5P B-COD	1	1784780000

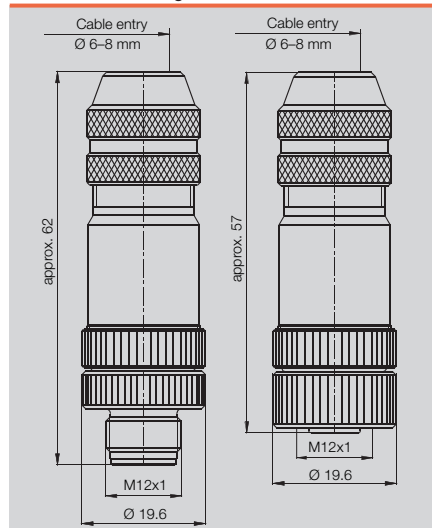
Type	Qty.	Order No.
SAIS-4-IDC-M12B-COD	1	1864730000
SAIB-4-IDC-M12B-COD	1	1864740000

Technical data

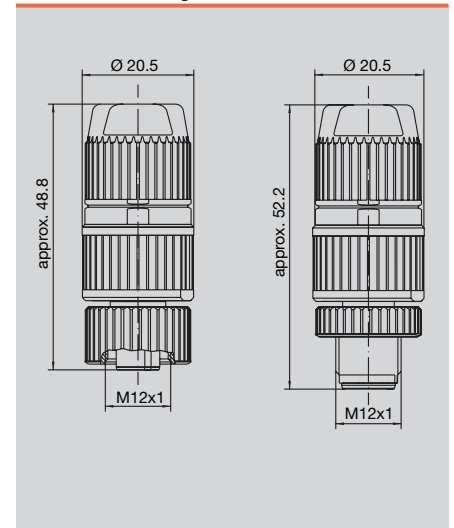
No. of poles	4/5
Type of connection	screw
Housing material	Brass
Connecting thread	M12
Cable connection diameter	6...8 mm (PG9)
Connection cross-section	0.25...0.75 mm ² (B-COD) / 0.14...0.5 mm ² (D-COD)
Rated current	4 A
Rated voltage	250 V 4-pole / 125 V 5-pole
Temperature range	-25 ... 85 °C
Protection class	IP 67
Contact surface	CuSnZn (B-COD) / gold-plated (D-COD)
Note	

No. of poles	4
Type of connection	Insulation displacement connection IDC
Housing material	CuZn
Connecting thread	M12
Cable connection diameter	7...8.8 mm
Connection cross-section	0.34...0.75 mm ²
Rated current	4 A
Rated voltage	32 V
Temperature range	-25 ... 85 °C
Protection class	IP 67
Contact surface	tinned
Note	
PB = PROFIBUS (B-COD) IE = Industrial Ethernet (D-COD)	

Dimensioned drawing



Dimensioned drawing



**Screw connection M12, metal (EMC)
B-coded**



SAISW / SAIBW



Ordering data

male	5-pole, PG 9
Socket	5-pole, PG 9
Note	

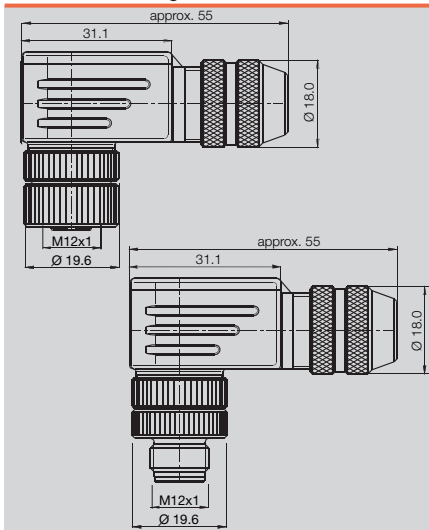
Type	Qty.	Order No.
SAISW-M-5/8 M12 B-COD	1	1944570000
SAIBW-M-5/8 M12 B-COD	1	1944580000
Other versions on request		

Technical data

No. of poles	4/5
Type of connection	screw
Housing material	CuZn, nickel-plated
Connecting thread	M12
Cable connection diameter	6...8 (PG9)
Connection cross-section	0.25...0.75
Rated current	4 A
Rated voltage	250 V 4-pole / 125 V 5-pole
Temperature range	-40 ... 85 °C
Protection class	IP 67
Contact surface	CuSnZn
Note	

No. of poles	4/5
Type of connection	screw
Housing material	CuZn, nickel-plated
Connecting thread	M12
Cable connection diameter	6...8 (PG9)
Connection cross-section	0.25...0.75
Rated current	4 A
Rated voltage	250 V 4-pole / 125 V 5-pole
Temperature range	-40 ... 85 °C
Protection class	IP 67
Contact surface	CuSnZn
Note	

Dimensioned drawing



Customizable plug

Tension clamp connection, metal
D-coded

Industrial Ethernet

SAISM / SAIBM

n



D

Ordering data

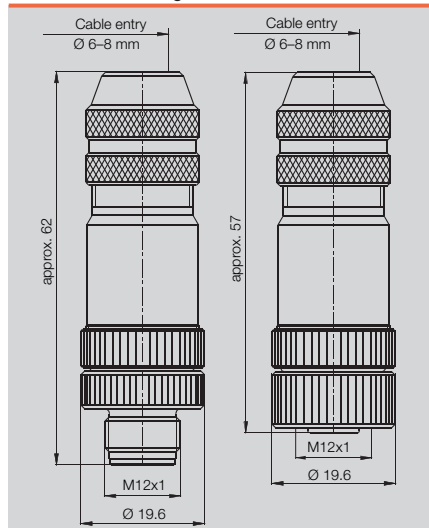
male	4-pole, PG 9
Socket	4-pole, PG 9
Note	

Type	Qty.	Order No.
SAISM-4/8S-M12 4P D-ZF	1	1892120001
SAIBM-4/8S-M12 4P D-ZF	1	1892130001

Technical data

No. of poles	4
Type of connection	Tension clamp connection
Housing material	CuZn
Connecting thread	M12
Cable connection diameter	6...8 mm (PG9)
Connection cross-section	0.14...0.5 mm ²
Rated current	4 A
Rated voltage	250 V
Temperature range	-25 ... 85 °C
Protection class	IP 67
Contact surface	gold-plated
Note	

Dimensioned drawing



**Tension clamp connection M12
A-coded**

SAIS-ZF

5-pole, straight



Ordering data

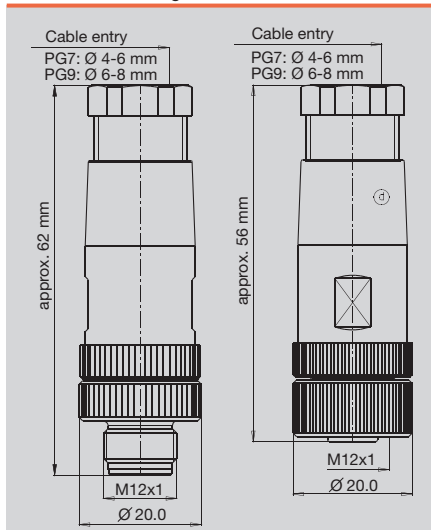
male	5-pole, PG 7
Socket	5-pole, PG 7
Note	

Type	Qty.	Order No.
SAIS-5/7-ZF	1	1906390000
SAIB-5/7-ZF	1	1924970000

Technical data

No. of poles	5
Type of connection	Tension clamp connection
Housing material	PBT
Connecting thread	M12
Cable connection diameter	4...6 mm
Connection cross-section	0.25...0.5 mm ²
Rated current	4 A
Rated voltage	250 V
Temperature range	-40 ... 85 °C
Protection class	IP 67
Contact surface	CuSnZn
Note	

Dimensioned drawing



Customizable plug

M8 screw connection

SAIS / SAIB

3- and 4-pole, straight



Ordering data

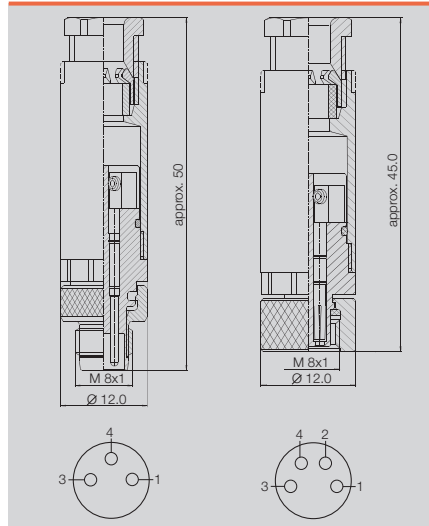
male	
	3-pole
	4-pole
Socket	
	3-pole
	4-pole
Note	

Type	Qty.	Order No.
SAIS-M8-3P	1	1803860000
SAIS-M8-4P	1	1803850000
SAIB-M8-3P	1	1803870000
SAIB-M8-4P	1	1803880000
Other versions on request		

Technical data

No. of poles	3/4
Type of connection	screw
Housing material	PBT
Connecting thread	M8
Cable connection diameter	3.5...5 mm
Connection cross-section	0.14...0.5 mm ²
Rated current	4 A
Rated voltage	60 V
Temperature range	-40 ... 85 °C
Protection class	IP 67
Contact surface	gold-plated
Note	

Dimensioned drawing



Solder connection M8, shielded
screw connection M8, shielded

SAISM / SAIBM

3- and 4-pole, solder connection, straight



SAISM / SAIBM

3- and 4-pole, screw connection, straight



Ordering data

male	
3-pole	
4-pole	
Socket	
3-pole	
4-pole	
Note	

Type	Qty.	Order No.
SAISM-M8-3P(TL)	1	1921030000
SAISM-M8-4P(TL)	1	1921040000
SAIBM-M8-3P(TL)	1	1921010000
SAIBM-M8-4P(TL)	1	1921020000

Type	Qty.	Order No.
SAISM-M8-3P-(IF)	1	1010060000
SAISM-M8-4P-(IF)	1	1010070000
SAIBM-M8-3P-(IF)	1	1010080000
SAIBM-M8-4P-(IF)	1	1010090000

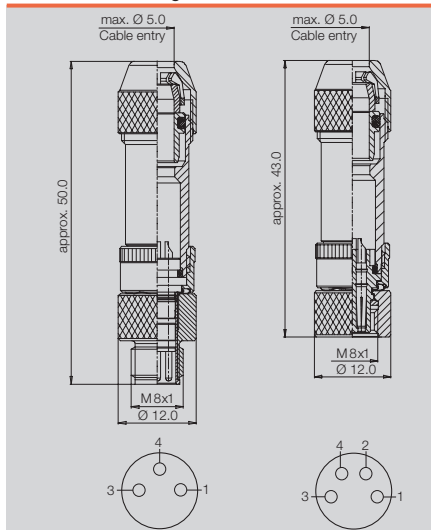
Technical data

No. of poles	3/4
Type of connection	Solder
Housing material	CuZn
Connecting thread	M8
Cable connection diameter	3.5...5 mm
Connection cross-section	0.25 mm ²
Rated current	4 A
Rated voltage	60 V
Temperature range	-40 ... 85 °C
Protection class	IP 67
Contact surface	gold-plated
Note	

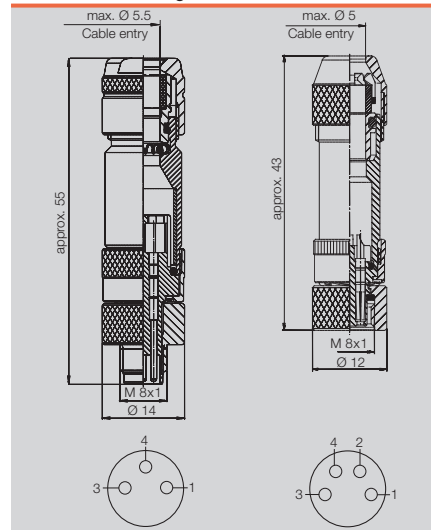
No. of poles	3/4
Type of connection	screw
Housing material	CuZn, nickel-plated
Connecting thread	M8
Cable connection diameter	3.5...5 mm
Connection cross-section	0.14...0.50 mm ²
Rated current	4 A
Rated voltage	60 V
Temperature range	-25 ... 85 °C
Protection class	IP 67
Contact surface	gold-plated
IF = Iris-type spring	

No. of poles	3/4
Type of connection	screw
Housing material	CuZn, nickel-plated
Connecting thread	M8
Cable connection diameter	3.5...5 mm
Connection cross-section	0.14...0.50 mm ²
Rated current	4 A
Rated voltage	60 V
Temperature range	-25 ... 85 °C
Protection class	IP 67
Contact surface	gold-plated
IF = Iris-type spring	

Dimensioned drawing



Dimensioned drawing



Customizable plug

Solder connection M8

SAISW / SAIBW

3- and 4-pole, angled



D

Ordering data

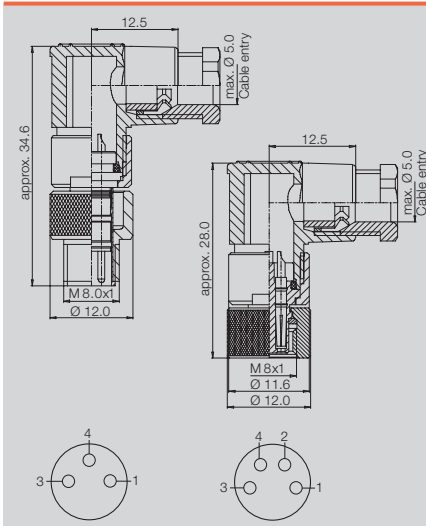
male	
	3-pole
	4-pole
Socket	
	3-pole
	4-pole
Note	

Type	Qty.	Order No.
SAISW-M8-3P(TL)	1	1920990000
SAISW-M8-4P(TL)	1	1921000000
SAIBW-M8-3P(TL)	1	1920970000
SAIBW-M8-4P(TL)	1	1920980000
Note		

Technical data

No. of poles	3/4
Type of connection	Solder
Housing material	CuZn
Connecting thread	M8
Cable connection diameter	3.5...5 mm
Connection cross-section	0.25 mm ²
Rated current	4 A
Rated voltage	60 V
Temperature range	-40 ... 85 °C
Protection class	IP 67
Contact surface	gold-plated
Note	

Dimensioned drawing



IDC coding systems

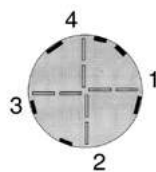
SAI-M/SAI-F

IDC



3-pole

Pole	Colour code	Assignment
●	brown	+ 24 V DC
●●	white	input/output
●●●	blue	0 V DC



4-pole

Pole	Colour code	Assignment
1	brown	+ 24 V DC
2	uncoloured	input/output 2
3	blue	0 V DC
4	black	input/output 1

IDC connection elements

Ordering data

Type	Qty.	Order No.
SAI-SA-3-IDC	1	9457720000
SAI-SA-4-IDC	1	1766810000
SAI-SA-3-IDC (1Set)	1*	1896740000

*) One set contains 100 pieces.

IDC insulation displacement connections

The insulation displacement connection on Weidmüller SAI distributors is presently the smallest and most robust IDC connection on the market. The connection element is available in 3 and 4-pole versions. The connection system enables you to perform individual fabrication of sensor/actuator cables quickly and reliably on the spot. Conductor cross-sections are from 0.25 mm² to 0.5 mm².



M8 and M12 insulation displacement connection (IDC)

M8



The assembly of round plugs is very time-consuming.

The cable has to be stripped and possibly also fitted with a wire end ferrule.

But the IDC plug-in connector system enable Weidmüller to offer a quick-fit connection system that saves users working time and hard cash.

The IDC quick-fit quick connection system is available for M12 and M8.

M12



Screwty



This is the perfect tool for all common cable glands on sensor and actuator cables.

The Screwty fits M12 and M8 round plugs. Both types can be used for plugs and sockets on custom cables.

The handle of every Screwty has a conventional 1/4 inch fitting and can be used for all sizes. Simply turn the tool to tighten or release a round plug.

Of course, the Screwty is also available with a torque fitting. This adjustable attachment can be used for all sizes.

The torque can be infinitely adjusted between 0.5 and 1.7 Nm.

**Insulation-displacement connection
M12
A-coded**

SAIS IDC / SAIB IDC

3- and 4-pole, straight



SAISW IDC / SAIBW IDC

3- and 4-pole, angled



Ordering data

male	4-pole
Socket	4-pole
Note	

Type	Qty.	Order No.
SAIS-4-IDC M12 small	1	1781550001
SAIB-4-IDC-M12 small	1	1781540001
Other versions on request		

Type	Qty.	Order No.
SAISW-4-IDC M12	1	1812870000
SAIBW-4-IDC M12	1	1812890000
Other versions on request		

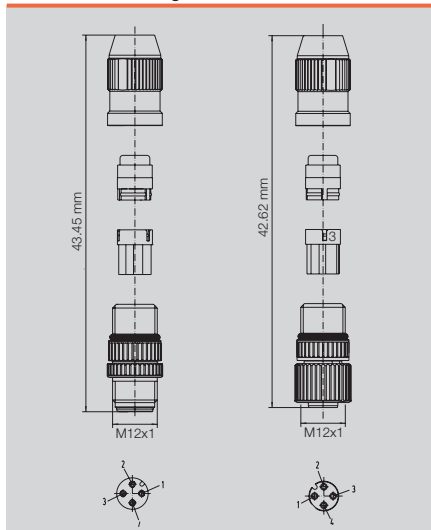
Technical data

No. of poles	3/4
Type of connection	Insulation displacement connection IDC
Housing material	CuZn
Connecting thread	M12
Cable connection diameter	4...5.1mm
Connection cross-section	0.14...0.34 mm ²
Rated current	4 A
Rated voltage	32 V
Temperature range	-25 ... 85 °C
Protection class	IP 67
Contact surface	tinned
Note	

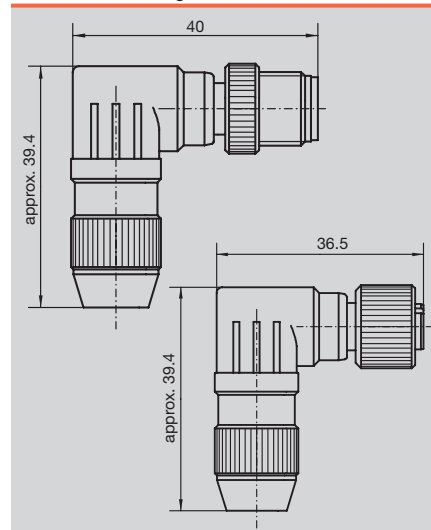
No. of poles	3/4
Type of connection	Insulation displacement connection IDC
Housing material	CuZn
Connecting thread	M12
Cable connection diameter	4...5.1mm
Connection cross-section	0.14...0.34 mm ²
Rated current	4 A
Rated voltage	32 V
Temperature range	-25 ... 85 °C
Protection class	IP 67
Contact surface	tinned
Note	

No. of poles	3/4
Type of connection	Insulation displacement connection IDC
Housing material	CuZn
Connecting thread	M12
Cable connection diameter	4...5.1mm
Connection cross-section	0.25...0.5 mm ²
Rated current	4 A
Rated voltage	32 V
Temperature range	-25 ... 85 °C
Protection class	IP 67
Contact surface	tinned
Note	

Dimensioned drawing



Dimensioned drawing



Customizable plug

**Insulation-displacement connection
M12 (0.75)
A-coded**
SAIS IDC / SAIB IDC (0.75)
3- and 4-pole, straight


D

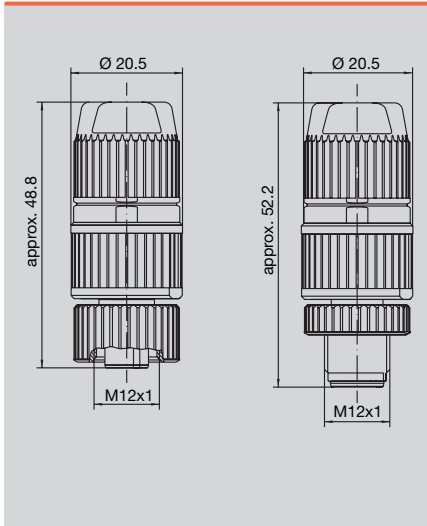
Ordering data

male	
	3-pole
	4-pole
Socket	
	3-pole
	4-pole
Note	

Type	Qty.	Order No.
SAIS-3-IDC (0,75) M12	1	1852720000
SAIS-4-IDC (0,75) M12	1	1852740000
SAIB-3-IDC (0,75) M12	1	1852730000
SAIB-4-IDC (0,75) M12	1	1852750000
Other versions on request		

Technical data

No. of poles	3/4
Type of connection	Insulation displacement connection IDC
Housing material	CuZn
Connecting thread	M12
Cable connection diameter	5.5...8 mm
Connection cross-section	0.34...0.75 mm ²
Rated current	6 A
Rated voltage	50 V (0.75)
Temperature range	-25 ... 85 °C
Protection class	IP 67
Contact surface	tinned
Note	

Dimensioned drawing


**Insulation-displacement connection
M8**

SAIS IDC / SAIB IDC

3- and 4-pole, straight



Ordering data

male	
	3-pole
	4-pole
Socket	
	3-pole
	4-pole
Note	

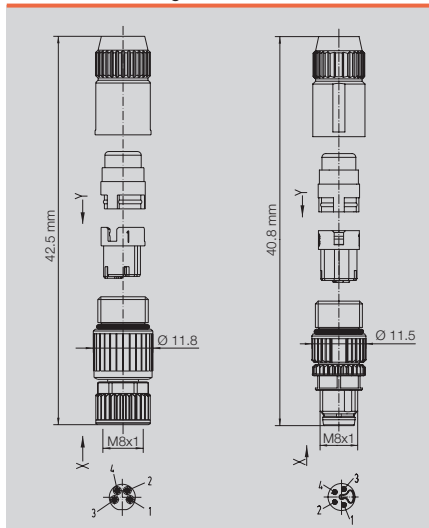
Type	Qty.	Order No.
SAIS-3-IDC M8 small	1	1784040001
SAIS-4-IDC M8 small	1	1784060001
SAIB-3-IDC-M8 small	1	1784030001
SAIB-4-IDC-M8 small	1	1784050001
Other versions on request		

Technical data

No. of poles	3/4
Type of connection	Insulation displacement connection IDC
Housing material	CuZn
Connecting thread	M8
Cable connection diameter	3.2...5.4 mm
Connection cross-section	0.14...0.34 mm ²
Rated current	4 A
Rated voltage	32 V
Temperature range	-25 ... 85 °C
Protection class	IP 67
Contact surface	tinned
Note	

No. of poles	3/4
Type of connection	Insulation displacement connection IDC
Housing material	CuZn
Connecting thread	M8
Cable connection diameter	3.2...5.4 mm
Connection cross-section	0.14...0.34 mm ²
Rated current	4 A
Rated voltage	32 V
Temperature range	-25 ... 85 °C
Protection class	IP 67
Contact surface	tinned
Note	

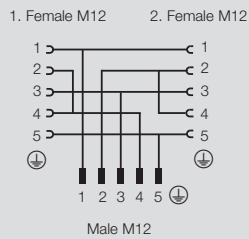
Dimensioned drawing



T distributor

M12/M12

Mounting screw M3

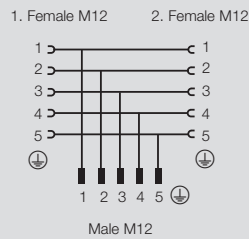


Ordering data

Type	Qty.	Order No.
Distribution, pin 2 + 4 bridged		
SAI-Y-5S B2-4 M12/M12	1	1783410000

M12/M12

Mounting screw M3

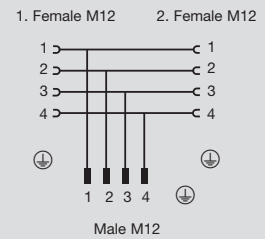


Ordering data

Type	Qty.	Order No.
Parallel distribution		
SAI-Y-5S PARA M12/M12	1	1783430000

M12/M12

Mounting screw M3

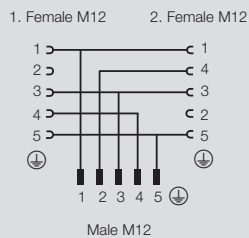


Ordering data

Type	Qty.	Order No.
SAI-Y-4S-M12/M12	1	1060730000

M12/M12

Mounting screw M3

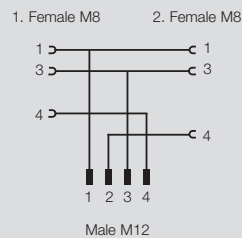


Ordering data

Type	Qty.	Order No.
Distribution, pin 2 + 4 bridged		
SAI-Y-5S-M12/M12	1	1826880000

M12/M8

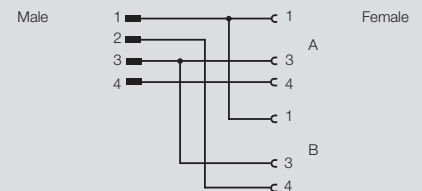
Mounting screw M3



Ordering data

Type	Qty.	Order No.
Individual distribution		
SAI-Y-4-4/2-4 M12/M8	1	1783420000

M8/M8



Ordering data

Type	Qty.	Order No.
SAI-Y-4S M8/M8	1	1805660000

Twin-plugs and wall bushings



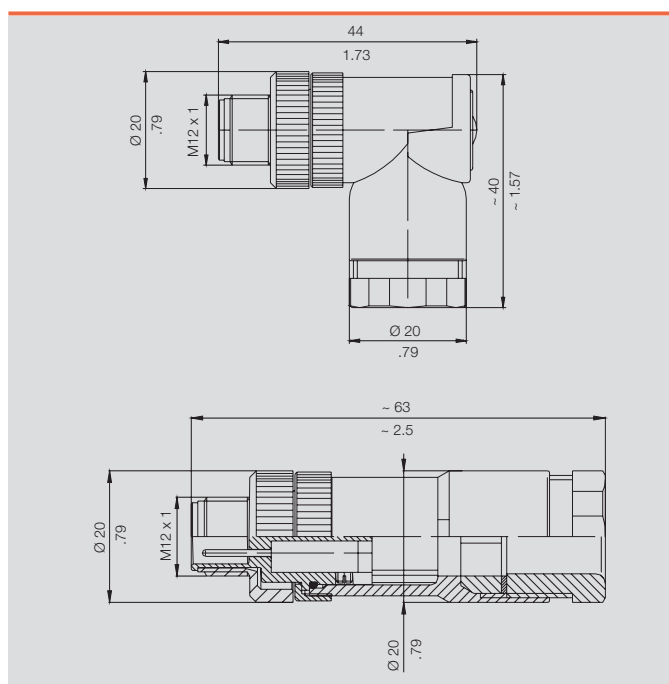
Miniature twin-plugs

Purpose-built machines often require individual cable lengths for the initiator cables. In some cases, two cables have to be of different lengths even when going to the same connector position.

To resolve this difficulty, we offer male and female connectors with two cable outlets that you can fabricate as you wish. The miniature twin plug is available with a 90° outlet and a straight outgoing cable direction. The 90° version can be twisted as you wish in steps of 90°.

Ordering data

Type	Qty.	Order No.
SAIS-ZW-5 (straight)	1	9457540000
SAIS-ZWW (90°)	1	1837560000



Wall bushing

In general machine building, it is common to have cables passing through the walls of control cabinets. To meet the need for a wall penetration with M12 plug-in connectors, the M12 bushing is included in the range. The wall bushings is available as 5-pole.

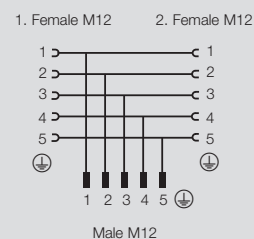
In addition, a bushing for PROFIBUS plug-in connectors (PB) is available

Ordering data

Type	Länge	Codierung	Qty.	Order No.
SAI-WDF-5P M12 60 mm	60 mm	A	1	1819450000
SAI-WDF-5PB M12 60 mm	60 mm	B	1	1820690000

M12/M12

Mounting screw M4



Ordering data

Type	Qty.	Order No.
SAI-Y-5S M12/M12 2 BO	1	1881710000

Protective caps for SAI distributors

Protective cap M5

Protects against external effects when the I/O is not in use. For SAI M5 distributors.



Ordering data

Type	Qty.	Order No.
SAI-SK-M5	50	1855310000

Protective cap M8

Protects against external effects when connector positions are not in use. For SAI M8 distributors.



Ordering data

Type	Qty.	Order No.
SAI-SK-M8	50	1802760000

Protective cap M12

Protects against external effects when connector positions are not in use. For SAI M12 distributors.



Ordering data

Type	Qty.	Order No.
SAI-SK	30	9456050000

Protective cap M12

Protects against external effects when connector positions are not in use. For SAI metal distributors.



Ordering data

Type	Qty.	Order No.
SAI-SK-M12-M	30	1802750000

Protective cap M12 IDC

Protects against external effects when connector positions are not in use. For SAI distributors with IDC connection.



Ordering data

Type	Qty.	Order No.
SAI-SK IDC	10	1794850000

Protective cap M12 Universal

Protects against external effects when connector positions are not in use. For SAI M12 Universal distributors.



Ordering data

Type	Qty.	Order No.
SAI-SK-M12-UNI	20	2330260000

Hand operation possible. Screwty compatible.

Protective cap M12 connector

Protection from external influences. For open plugs. For attaching to cable.



Ordering data

Type	Qty.	Order No.
SAI-SK-M12 BU	1	8425960000

Protective cap M12 connector

Protects against external effects. For open plugs or sockets.



Ordering data

Type	Qty.	Order No.
Protective cap connector (yellow)	50	1781520000



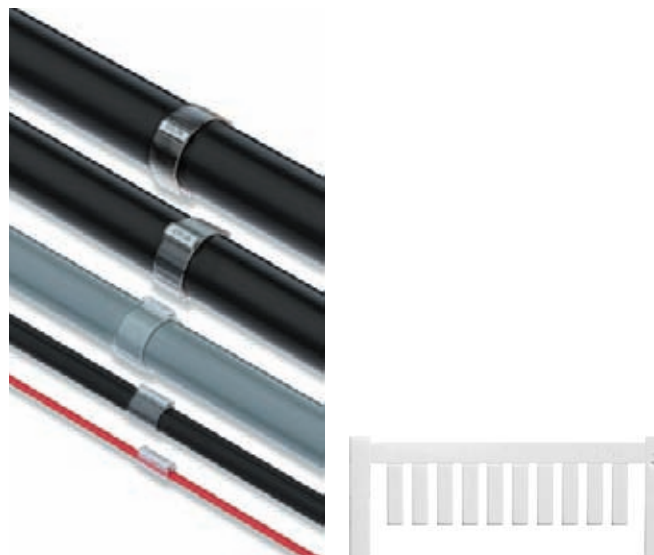
Marker tags for sensor cables

Sleeves for marking sensor cables

To enable unique marking of sensor/actuator cables, these can be identified with a marker tag. Each cable has a sleeve that accepts a marker tag. Cables open at one end have one sleeve, connecting cables have two marker sleeves. The TM-I 18 is available in various colours.

Ordering data

Type	Colour	Order No.
TM 203/18 VO	transparent	1798480000
TM-I 18 NEUTRAL WS	white	1718431044
TM-I 18 NEUTRAL GE	yellow	1718431687



The Weidmüller PrintJet marking system prints marker tags quickly, reliably and individually.

The **PrintJet PRO** inkjet printer prints markers for electric connectivity. These markers can be used for clear equipment identification on devices, cables and connectors. The labelling makes servicing, maintenance and troubleshooting much easier. Water-based ink is used for the black or spot colour printing. The print is crystal clear and resistant to environmental influences.

The **PrintJet PRO** prints plastic markers in **MultiCard** format. In combination with the user-friendly **M-Print® PRO** software and the attached loader, the printer becomes an essential part of the production. The inkjet process being used, the subsequent fusing, as well as the printer cartridge and ink have all been specially adapted by Weidmüller for industrial use. The printer has excellent long-term use capabilities, thanks to its integrated loader.

Ordering data

PrintJet PRO

Type		Order No.
PrintJet PRO 115V		1024050000
PrintJet PRO 230V		1001180001
Accessories		
PJ PRO TNTK INK SET BK	Ink tank starter set, black	1027090000
PJ PRO TNTK INK SET COL	Ink tank starter set, colour	1027110000
PJ PRO TNTK INK K	● Ink tank Black	1027040000
PJ PRO TNTK INK C	● Ink tank Cyan	1027050000
PJ PRO TNTK INK M	● Ink tank Magenta	1027060000
PJ PRO TNTK INK Y	● Ink tank Yellow	1027070000
PJ PRO TNTK FL	Ink tank fluid	1027080000



Marker tags for distributors

Marker tags can be affixed to distributors to ensure unique identification. For marking of our standard M12 products, ESG 9/20 tags are used, M8 and M5 distributors can be labelled with WS 10/5 and DEK 5 markers. For labelling metal distributors, self-adhesive ESG 9/17 must be used.

In the case of the SAI Active family, we differentiate between SAI Active Universal and SAI Active Line. For labelling of Active Universal, we offer ESG 8/13.5/43.3 SAI AU. For labelling of Active Line, the ESG 9/6 is used.

All of these markers are available in MultiCard format and can therefore also be printed using our innovative PrintJet marking solutions.

D

DEK for marking of M8 and M5 distributors



DEK – Blank

Type	Colour	Length	Qty.	Order No.
DEK 5/5 MC	white	5 mm	1000	1609801044

DEK – Custom printing

Type	Colour	Length	Qty.	Order No.
DEK 5/5 MC	white	5 mm	200	1609810000

WS for marking of M8 and M5 distributors



WS – Blank

Type	Colour	Length	Qty.	Order No.
WS 10/5 MC	white	10 mm	720	1635000000
WS 15/5 MC	white	15 mm	480	1609880000

WS – Custom printing

Type	Colour	Length	Qty.	Order No.
WS 10/5 MC	white	10 mm	144	1635010000
WS 15/5 MC	white	15 mm	96	1609890000

ESG for marking of M12 Universal distributors



Ordering data

Type	Colour	Width/Length	Qty.	Order No.
ESG 9/20 MC NEUTRAL WS	white	20 mm/9 mm	200	1609940000

ESG for marking of M12 Universal distributors



Ordering data

Type	Colour	Qty.	Order No.
ESG 8/13.5/43.3 SAI AU	transparent	5	1912130000

SlimFix Clip

The SlimFix Clip combines two advantages in one: its unique closure mechanism offers the reliability of a closed marker with ease of attaching an open marker. The Clip closure mechanism also allows quick, no fuss attachment of the markers after the wires have been installed. SlimFix Clip markers are suitable for wires and cables with external diameters up to 5 mm. Long sequences of characters are possible on the large marking surface – up to 30 mm.

- Halogen free, flammability class V2 material
- Narrow markers with reliable attachment thanks to compensation feature
- Clip closure mechanism ensures permanent attachment following wire installation
- Rapid attachment without tools
- Three sizes for wire cross-sections from 0.5 – 4.0 mm²
- Available in lengths of 12, 21 and 30 mm
- Markers available in the proven MultiCard format
- Additional marking surface for precise assignment to projects
- Custom-printed markers supplied to your specifications



D

Technical data

Material	Polyamide 66, halogen-free
UL 94 flammability rating	V2
Temperature range	-40 °C to 100 °C
Printing	black

Ordering data

Type	Wire, ext. ø	Wire cross-section
SFC 0	1.5 - 2.5 mm	0.5 - 1.0 mm ²
SFC 1	2.0 - 3.5 mm	0.75 - 2.5 mm ²
SFC 2	2.5 - 5.0 mm	2.5 - 4.0 mm ²
SFC 2,5	4.0 - 6.0 mm	4.0 - 10.0 mm ²

Colour

● brown	● orange	● green
● violet	● grey	

Special printing Specify special printing and colours per diskette, Excel file or using the M-Print® PRO software.

Minimum order quantity 1 pack

Note: SlimFix Clip markers can be printed with PrintJet.



SFC - blank

Technical specification

Material	Polyamide
UL 94 flammability rating	V2
Min. temperature, continuous	-40 °C
Max. temperature, continuous	100 °C

Ordering data

Type	Length	Qty.	Order No. white	Order No. yellow	Order No. blue	Order No. red	Custom printing
SFC 0/12	12	200	1813130000	1813160000	1813170000	1813150000	
SFC 1/12	12	200	1747320001	1747320004	1747320002	1747320003	
SFC 2/12	12	120	1758320001	1758320004	1758320002	1758320003	
SFC 2,5/12	12	120	1062000000	1062010000	1062030000	1062020000	1062040000
SFC 0/21	21	200	1813190000	1813210000	1813220000	1813200000	
SFC 1/21	21	200	1779080001	1779080004	1779080002	1779080003	
SFC 2/21	21	120	1805810000	1805780000	1805770000	1805790000	
SFC 2,5/21	21	120	1062050000	1062070000	1062090000	1062080000	1062110000
SFC 0/30	30	150	1813240000	1813260000	1813270000	1813250000	
SFC 1/30	30	150	1805760000	1805730000	1805720000	1805740000	
SFC 2/30	30	90	1805870000	1805830000	1805820000	1805850000	

Protective sleeve adapter



In machine construction, it is very common for cables to be run in the open air. To be able to protect cables from damage through a wide range of causes such as rodents, it is sometimes necessary to protect the cable with a protective sleeve.

To fasten the protective sleeve to a plug-in connector designed for custom assembly, Weidmüller offers a protective sleeve adapter. This adapter is used instead of the PG7 cable gland. The protective sleeve is quick to fit, protecting the cable straight away.

Ordering data

Type	Qty.	Order No.
SAI-SSA-PG7	10	1938300000

Fitting a protective sleeve adapter



1. Unscrewing the PG7 cable gland



2. Screwing on the protective sleeve adapter



3. Fitting a PG7 protective sleeve

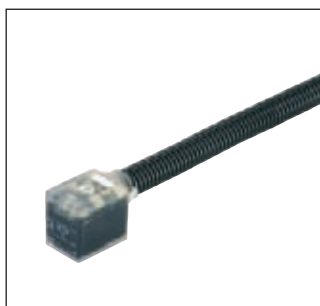


4. Finished

Connection of protective sleeve adapter to other plug connectors



1. Connect the protective tubing to the tube union



2. Finished

The protective sleeve is also suitable for protecting cables with valve plugs. A corresponding connecting piece is already present on valve plugs with moulded seal.

SAI cables – a reliable connection

Weidmüller cables are high quality. Weidmüller offers the following features with its cables, so that the right sensor cable can be available for every application:

PUR/PVC

PUR/PVC sensor cables consist of a PUR external sheathing. PUR is resistant to oil. This cable version can also be used for dragline chain-carrying applications. In general, PUR is more flexible than PVC. Thus the cable has a better resistance to abrasion. It unites the positive properties of both PVC and PUR. PUR/PVC cables can be recognized since their article description ends with a “U”.

PUR/PUR halogenfrei

PUR/PUR sensor cables display an extreme resistance to flammability and to oil. This type of cable is well suited for applications with high dragline cycles. Insurance policies often recommend halogen-free cabling because these cables release less poisonous gas and steam during a fire when compared to a PVC cable. The use of these cable can end up saving lives. We recommend PUR/PUR sensor cables when you are dealing with extreme demands. The article description of all PUR/PUR cables ends with “Q”.

PVC/PVC

The PVC/PVC sensor cables are especially well-suited for those applications which make minimal use of draglines. PVC is an inexpensive alternative. PVC cable can be recognized since their article description ends in “V”.

Cables resistant to welding splatter, recyclable

Sensor cables which are resistant to welding splatter are used mainly in the automotive industry. The cables are resistant to torsion, twisting and welding beads. Thus they can be used near a welding robot. These cables are highly valued for their suitability with draglines. It is also important to remember that they can be recycled. The article descriptions of these welding-splatter resistant cables end with a “T”.

Weidmüller has the ideal solution for every application. Our special strengths lie in the area of customer-specific solutions.

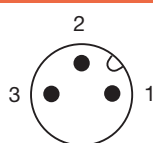


Technical data for sensor cables

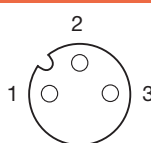


M12

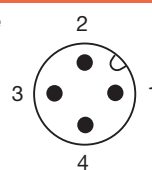
Male



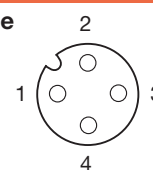
Female



Male



Female



Technical data

Material properties	
Core cross-section	0.34 mm ²
Cladding material	PUR
Wire core insulation	TPE
Conductor cross-section	4.3 ± 0.2
Colour coding	brown, blue, black
Suitable for dragline cable carriers	Yes*
Min. bending radius, flexible	10 x conductor cross-section
Min. bending radius, rigid	5 x conductor cross-section
Temperature, flexible	-25 °C / +80 °C
Temperature, rigid	-50 °C / +80 °C
UL	Yes
Colour	black
Free from halogens	Yes

Note

3-pole		
PUR/TPE	PUR/PVC	PVC/PVC
0.34 mm ²	0.34 mm ²	0.34 mm ²
PUR	PUR	PVC
TPE	PVC	PVC
4.3 ± 0.2	4.8 ± 0.2	4.8 ± 0.2
brown, blue, black	brown, blue, black	brown, blue, black
Yes*	Yes*	Reduced*
10 x conductor cross-section	10 x conductor cross-section	10 x conductor cross-section
5 x conductor cross-section	5 x conductor cross-section	5 x conductor cross-section
-25 °C / +80 °C	-5 °C / +80 °C	-5 °C / +80 °C
-50 °C / +80 °C	-30 °C / +80 °C	-30 °C / +80 °C
Yes	Yes	Yes
black	black	black
Yes	No	No

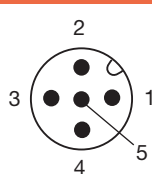
* Additional information available on request.
Applies to unshielded M12 and M8 cables.

4-pole		
PUR/TPE	PUR/PVC	PVC/PVC
0.34 mm ²	0.34 mm ²	0.34 mm ²
PUR	PUR	PVC
TPE	PVC	PVC
4.7 ± 0.2	5.2 ± 0.2	5.3 ± 0.2
brown, white, blue, black	brown, white, blue, black	brown, white, blue, black
Yes*	Yes*	Reduced*
10 x conductor cross-section	10 x conductor cross-section	10 x conductor cross-section
5 x conductor cross-section	5 x conductor cross-section	5 x conductor cross-section
-25 °C / +80 °C	-5 °C / +80 °C	-5 °C / +80 °C
-50 °C / +80 °C	-30 °C / +80 °C	-30 °C / +80 °C
Yes	Yes	Yes
black	black	black
Yes	No	No

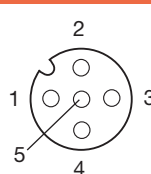
* Additional information available on request.
Applies to unshielded M12 and M8 cables.

M12

Male



Female



Technical data

Material properties	
Core cross-section	0.34 mm ²
Cladding material	PUR
Wire core insulation	TPE
Conductor cross-section	5.0 ± 0.2
Colour coding	brown, white, blue, black, grey
Suitable for dragline cable carriers	Yes*
Min. bending radius, flexible	10 x conductor cross-section
Min. bending radius, rigid	5 x conductor cross-section
Temperature, flexible	-25 °C / +80 °C
Temperature, rigid	-50 °C / +80 °C
UL	Yes
Colour	black
Free from halogens	Yes
Suitable for torsion	Yes

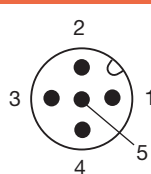
Note

5-pole		
PUR/TPE	PUR/PVC	PVC/PVC
0.34 mm ²	0.34 mm ²	0.34 mm ²
PUR	PUR	PVC
TPE	PVC	PVC
5.0 ± 0.2	5.6 ± 0.2	5.7 ± 0.2
brown, white, blue, black, grey	brown, white, blue, black, grey	brown, white, blue, black, grey
Yes*	Yes*	Reduced*
10 x conductor cross-section	10 x conductor cross-section	10 x conductor cross-section
5 x conductor cross-section	5 x conductor cross-section	5 x conductor cross-section
-25 °C / +80 °C	-5 °C / +80 °C	-5 °C / +80 °C
-50 °C / +80 °C	-30 °C / +80 °C	-30 °C / +80 °C
Yes	Yes	Yes
black	black	black
Yes	No	No

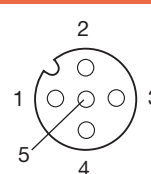
* Additional information available on request.
Applies to unshielded M12 and M8 cables.

M12 Protected against welding splatter

Male



Female



Technical data

Material properties	
Core cross-section	0.34 mm ²
Cladding material	PUR
Wire core insulation	PVC
Conductor cross-section	4.9 ± 0.2
Colour coding	brown, blue, black
Suitable for dragline cable carriers	Yes*
Min. bending radius, flexible	7.5 x conductor cross-section
Min. bending radius, rigid	7.5 x conductor cross-section
Temperature, flexible	-30 °C / +120 °C
Temperature, rigid	-40 °C / +120 °C
UL	Yes
Colour	black
Free from halogens	Yes
Suitable for torsion	Yes

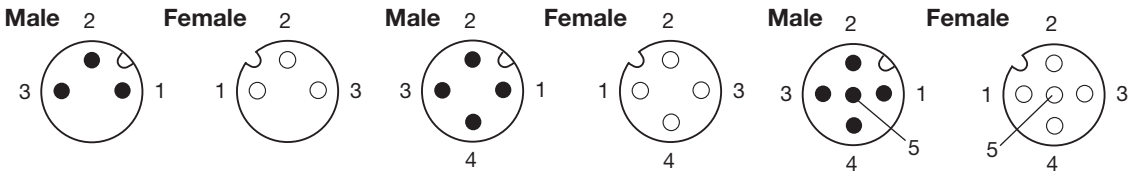
Note

3-pole	4-pole	5-pole
PUR/PVC	PUR/PVC	PUR/PVC
0.34 mm ²	0.34 mm ²	0.34 mm ²
PUR	PUR	PUR
PVC	PVC	PVC
4.9 ± 0.2	4.9 ± 0.2	5.1 ± 0.2
brown, blue, black	brown, white, blue, black	brown, white, blue, black, grey
Yes*	Yes*	Yes*
7.5 x conductor cross-section	7.5 x conductor cross-section	7.5 x conductor cross-section
-30 °C / +120 °C	-30 °C / +120 °C	-30 °C / +120 °C
-40 °C / +120 °C	-40 °C / +120 °C	-40 °C / +120 °C
Yes	Yes	Yes
black	black	black
Yes	Yes	Yes

* Additional information available on request.



M12 shielded



Technical data

Material properties

- Core cross-section
- Cladding material
- Wire core insulation
- Conductor cross-section
- Colour coding
- Suitable for dragline cable carriers
- Min. bending radius, flexible
- Min. bending radius, rigid
- Temperature, flexible
- Temperature, rigid
- UL
- Colour
- Free from halogens

	3-pole	4-pole	5-pole
PUR/TPE	PUR/TPE	PUR/TPE	PUR/TPE
Core cross-section	0.34 mm ²	0.34 mm ²	0.34 mm ²
Cladding material	PUR	PUR	PUR
Wire core insulation	TPE	TPE	TPE
Conductor cross-section	5.0 ± 0.2	5.4 ± 0.2	5.7 ± 0.2
Colour coding	brown, blue, black	brown, white, blue, black	brown, white, blue, black, grey
Suitable for dragline cable carriers	Yes*	Yes*	Yes*
Min. bending radius, flexible	10 x conductor cross-section	10 x conductor cross-section	10 x conductor cross-section
Min. bending radius, rigid	5 x conductor cross-section	5 x conductor cross-section	5 x conductor cross-section
Temperature, flexible	-25 °C / +80 °C	-25 °C / +80 °C	-25 °C / +80 °C
Temperature, rigid	-40 °C / +80 °C	-40 °C / +80 °C	-40 °C / +80 °C
UL	Yes	Yes	Yes
Colour	black	black	black
Free from halogens	Yes	Yes	Yes

Note

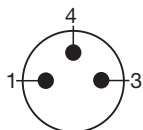
* Additional information available on request.

Overview of sensor cables

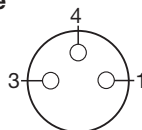


M8

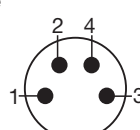
Male



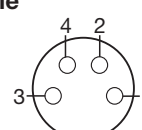
Female



Male



Female



Technical data

Material properties	
Core cross-section	0.25 mm ²
Cladding material	PUR
Wire core insulation	TPE
Conductor cross-section	4.1 ± 0.2
Colour coding	brown, blue, black
Suitable for dragline cable carriers	Yes*
Min. bending radius, flexible	10 x conductor cross-section
Min. bending radius, rigid	5 x conductor cross-section
Temperature, flexible	-25 °C / +80 °C
Temperature, rigid	-50 °C / +80 °C
UL	No
Colour	black
Free from halogens	Yes
Note	

3-pole

PUR/TPE	PUR/PVC	PVC/PVC
0.25 mm ²	0.25 mm ²	0.25 mm ²
PUR	PUR	PVC
TPE	PVC	PVC
4.1 ± 0.2	4.6 ± 0.2	4.1 ± 0.2
brown, blue, black	brown, blue, black	brown, blue, black
Yes*	Yes*	Reduced*
10 x conductor cross-section	10 x conductor cross-section	10 x conductor cross-section
5 x conductor cross-section	5 x conductor cross-section	5 x conductor cross-section
-25 °C / +80 °C	-5 °C / +80 °C	-5 °C / +80 °C
-50 °C / +80 °C	-30 °C / +80 °C	-30 °C / +80 °C
No	No	No
black	black	black
Yes	No	No
* Additional information available on request. Applies to unshielded M12 and M8 cables.		

4-pole

PUR/TPE	PUR/PVC	PVC/PVC
0.25 mm ²	0.25 mm ²	0.25 mm ²
PUR	PUR	PVC
TPE	PVC	PVC
4.4 ± 0.2	4.5 ± 0.2	4.8 ± 0.2
black, brown, white, blue	black, brown, white, blue	brown, blue, black
Yes*	Yes*	Reduced*
10 x conductor cross-section	10 x conductor cross-section	10 x conductor cross-section
5 x conductor cross-section	5 x conductor cross-section	5 x conductor cross-section
-25 °C / +80 °C	-5 °C / +80 °C	-5 °C / +80 °C
-50 °C / +80 °C	-30 °C / +80 °C	-30 °C / +80 °C
No	No	No
black	black	black
Yes	No	No
* Additional information available on request. Applies to unshielded M12 and M8 cables.		

Technical data for bus cables



M 12



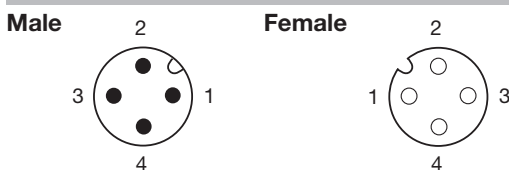
Technical data

Material properties	
Core cross-section	0.34 mm ²
Cladding material	PUR
Wire core insulation	TPE
Conductor cross-section	7.8 ± 0.2
Colour coding	red, green
Suitable for dragline cable carriers	Yes*
Min. bending radius, flexible	15 x conductor cross-section
Min. bending radius, rigid	7.5 x conductor cross-section
Temperature, flexible	-20 °C / +60 °C
Temperature, rigid	-40 °C / +70 °C
UL	No
Colour	violet
Free from halogens	Yes
Note	
* Additional information available on request. ** for rigid installation	

2-pole	
PUR/TPE	PVC/PVC
0.34 mm ²	0.34 mm ²
PUR	PVC
TPE	PVC
7.8 ± 0.2	7.8 ± 0.2
red, green	red, green
Yes*	No**
15 x conductor cross-section	-
7.5 x conductor cross-section	-
-20 °C / +60 °C	-5 °C / +60 °C
-40 °C / +70 °C	-20 °C / +70 °C
No	No
violet	violet
Yes	No
Note	
* Additional information available on request. ** for rigid installation	

4-pole	
PUR/TPE	PVC/PVC
2x 0.34 + 2x 0.22 mm ²	2x 0.34 + 2x 0.22 mm ²
PUR	PVC
TPE	PVC
7.0 ± 0.3	7.0 ± 0.3
red, black (0.34 mm ²) + white, blue (0.22 mm ²)	red, black (0.34 mm ²) + white, blue (0.22 mm ²)
Yes*	No
10 x conductor cross-section	10 x conductor cross-section
5 x conductor cross-section	5 x conductor cross-section
-10 °C / +80 °C	-10 °C / +80 °C
-40 °C / +80 °C	-40 °C / +80 °C
Yes	Yes
black	black
Yes	No
Note	
* Additional information available on request.	

M 12




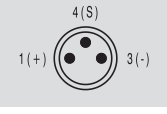









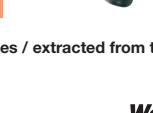
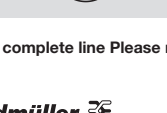


Technical data

Material properties	
Core cross-section	1.0 mm ²
Cladding material	PVC
Wire core insulation	PE
Conductor cross-section	8.0 ± 0.4
Colour coding	red, green
Suitable for dragline cable carriers	No
Min. bending radius, flexible	-
Min. bending radius, rigid	-
Temperature, flexible	-5 °C / +60 °C
Temperature, rigid	-30 °C / +80 °C
UL	No
Colour	black
Free from halogens	-
Note	

2-pole	
PVC/PE	PVC/PE
1.0 mm ²	1.0 mm ²
PVC	PVC
PE	PE
8.0 ± 0.4	8.0 ± 0.4
red, green	red, green
No	No
-	-
-	-
-5 °C / +60 °C	-5 °C / +60 °C
-30 °C / +80 °C	-30 °C / +80 °C
No	No
black	blue
-	-
Note	

Overview of sensor cables

	One end free	No. of poles	Cable material	One end free			M8 socket straight			
				PUR	PUR halogen-free	PVC	PUR	PUR halogen-free	PVC	
One end free			1.5 m							
			3.0 m							
			5.0 m							
			10.0 m							
			variable							
M8 plug	straight		1.5 m	1824590150	1926970150	1927230150	1824570150	1926890150	1927150150	
			3.0 m	1824590300	1926970300	1927230300	1824570300	1926890300	1927150300	
			5.0 m	1824590500	1926970500	1927230500	1824570500	1926890500	1927150500	
			10.0 m	1824591000	1926971000	1927231000	1824571000	1926891000	1927151000	
			variable	1824590000	1926970000	1927230000	1824570000	1926890000	1927150000	
	90°			1.5 m	1906270150	1926990150	1927250150			
				3.0 m	1906270300	1926990300	1927250300			
				5.0 m	1906270500	1926990500	1927250500	***	***	***
				10.0 m	1906271000	1926991000	1927251000			
				variable	1906270000	1926990000	1927250000			
	M12 plug	straight		1.5 m	1857550150	1927050150	1927310150			
				3.0 m	1857550300	1927050300	1927310300			
				5.0 m	1857550500	1927050500	1927310500			
				10.0 m	1857551000	1927051000	1927311000	On request	On request	On request
				variable	1857550000	1927050000	1927310000			
90°				1.5 m	1857560150	1927070150	1927330150			
				3.0 m	1857560300	1927070300	1927330300			
				5.0 m	1857560500	1927070500	1927330500	***	***	***
				10.0 m	1857561000	1927071000	1927331000			
				variable	1857560000	1927070000	1927330000			
M12 plug		straight		1.5 m	9457810150	1926620150	1925430150	1824570150	1926890150	1927150150
				3.0 m	9457810300	1926620300	1925430300	1824570300	1926890300	1927150300
				5.0 m	9457810500	1926620500	1925430500	1824570500	1926890500	1927150500
				10.0 m	9457811000	1926621000	1925431000	1824571000	1926891000	1927151000
				variable	9457810000	1926620000	1925430000	1824570000	1926890000	1927150000
	90°			1.5 m	9456100150	1926630150	1925440150			
				3.0 m	9456100300	1926630300	1925440300			
				5.0 m	9456100500	1926630500	1925440500	***	***	***
				10.0 m	9456101000	1926631000	1925441000			
				variable	9456100000	1926630000	1925440000			
M12 plug	straight		1.5 m	9457610150	1926640150	1925450150				
			3.0 m	9457610300	1926640300	1925450300				
			5.0 m	9457610500	1926640500	1925450500	***	***	***	
			10.0 m	9457611000	1926641000	1925451000				
			variable	9457610000	1926640000	1925450000				
	90°			1.5 m	9456690150	1926700150	1925510150			
				3.0 m	9456690300	1926700300	1925510300			
				5.0 m	9456690500	1926700500	1925510500	On request	On request	On request
				10.0 m	9456691000	1926701000	1925511000			
				variable	9456690000	1926700000	1925510000			
M12 plug	90°			1.5 m	1906260150	1926710150	1925520150			
				3.0 m	1906260300	1926710300	1925520300			
				5.0 m	1906260500	1926710500	1925520500	***	***	***
				10.0 m	1906261000	1926711000	1925521000			
				variable	1906260000	1926710000	1925520000			
M12 plug	90°			1.5 m	9457670150	1926720150	1925530150			
				3.0 m	9457670300	1926720300	1925530300			
				5.0 m	9457670500	1926720500	1925530500	***	***	***
				10.0 m	9457671000	1926721000	1925531000			
				variable	9457670000	1926720000	1925530000			

Preferred types / extracted from the complete line Please make a separate inquiry for information about the M8 snap-on version, twin cabling and others.

M8 socket

straight



PUR PUR halogen-free PVC

9457850150	1927000150	1927260150
9457850300	1927000300	1927260300
9457850500	1927000500	1927260500
9457851000	1927001000	1927261000
9457850000	1927000000	1927260000

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1880470150	1926900150	1927160150
1880470300	1926900300	1927160300
1880470500	1926900500	1927160500
1880471000	1926901000	1927161000
1880470000	1926900000	1927160000

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On request	On request	On request
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9456660150	1938070150	1938200150
9456660300	1938070300	1938200300
9456660500	1938070500	1938200500
9456661000	1938071000	1938201000
9456660000	1938070000	1938200000

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On request	On request	On request
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90°



PUR PUR halogen-free PVC

9457380150	1927060150	1927320150
9457380300	1927060300	1927320300
9457380500	1927060500	1927320500
9457381000	1927061000	1927321000
9457380000	1927060000	1927320000

1824580150	1926910150	1927170150
1824580300	1926910300	1927170300
1824580500	1926910500	1927170500
1824581000	1926911000	1927171000
1824580000	1926910000	1927170000

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1857670150	1926950150	1927210150
1857670300	1926950300	1927210300
1857670500	1926950500	1927210500
1857671000	1926951000	1927211000
1857670000	1926950000	1927210000

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9457980150	1938050150	1938180150
9457980300	1938050300	1938180300
9457980500	1938050500	1938180500
9457981000	1938051000	1938181000
9457980000	1938050000	1938180000

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1906330150	1938060150	1938190150
1906330300	1938060300	1938190300
1906330500	1938060500	1938190500
1906331000	1938061000	1938191000
1906330000	1938060000	1938190000

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90° angle with 2 LEDs



PUR PUR halogen-free PVC

9457460150	1927090150	1927350150
9457460300	1927090300	1927350300
9457460500	1927090500	1927350500
9457461000	1927091000	1927351000
9457460000	1927090000	1927350000

1877250150	1926930150	1927190150
1877250300	1926930300	1927190300
1877250500	1926930500	1927190500
1877251000	1926931000	1927191000
1877250000	1926930000	1927190000

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1857660150	1926920150	1927180150
1857660300	1926920300	1927180300
1857660500	1926920500	1927180500
1857661000	1926921000	1927181000
1857660000	1926920000	1927180000

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1857680150	1926960150	1927220150
1857680300	1926960300	1927220300
1857680500	1926960500	1927220500
1857681000	1926961000	1927221000
1857680000	1926960000	1927220000

On request On request On request

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9457760150		
9457760300		
9457760500	***	***
9457761000		
9457760000		

9456670150	1938080150	1938210150
9456670300	1938080300	1938210300
9456670500	1938080500	1938210500
9456671000	1938081000	1938211000
9456670000	1938080000	1938210000

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1906340150	1938090150	1938220150
1906340300	1938090300	1938220300
1906340500	1938090500	1938220500
1906341000	1938091000	1938221000
1906340000	1938090000	1938220000

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Overview of sensor cables

D

		No. of poles	Cable material	M12 socket		
				straight		
One end free			1.5 m 3.0 m 5.0 m 10.0 m variable			
M8 plug	straight		1.5 m 3.0 m 5.0 m 10.0 m variable	1937950150 1937950300 1937950500 1937951000 1937950000	1938100150 1938100300 1938100500 1938101000 1938100000	1938230150 1938230300 1938230500 1938231000 1938230000
	straight		1.5 m 3.0 m 5.0 m 10.0 m variable	***	***	***
	90°		1.5 m 3.0 m 5.0 m 10.0 m variable	On request	On request	On request
	90°		1.5 m 3.0 m 5.0 m 10.0 m variable	***	***	***
M12 plug	straight		1.5 m 3.0 m 5.0 m 10.0 m variable	9457230150 9457230300 9457230500 9457231000 9457230000	1926490150 1926490300 1926490500 1926491000 1926490000	1925300150 1925300300 1925300500 1925301000 1925300000
	straight		1.5 m 3.0 m 5.0 m 10.0 m variable	***	***	***
	straight		1.5 m 3.0 m 5.0 m 10.0 m variable	***	***	***
	90°		1.5 m 3.0 m 5.0 m 10.0 m variable	1821050150 1821050300 1821050500 1821051000 1821050000	On request	On request
	90°		1.5 m 3.0 m 5.0 m 10.0 m variable	***	***	***
	90°		1.5 m 3.0 m 5.0 m 10.0 m variable	***	***	***
	90°		1.5 m 3.0 m 5.0 m 10.0 m variable	***	***	***
	90°		1.5 m 3.0 m 5.0 m 10.0 m variable	***	***	***

M12 socket

straight



90°



PUR	PUR halogen-free	PVC
9457910150	1926780150	1925590150
9457910300	1926780300	1925590300
9457910500	1926780500	1925590500
9457911000	1926781000	1925591000
9457910000	1926780000	1925590000

PUR	PUR halogen-free	PVC
9457320150	1926820150	1925630150
9457320300	1926820300	1925630300
9457320500	1926820500	1925630500
9457321000	1926821000	1925631000
9457320000	1926820000	1925630000

PUR	PUR halogen-free	PVC
9457740150	1926830150	1925640150
9457740300	1926830300	1925640300
9457740500	1926830500	1925640500
9457741000	1926831000	1925641000
9457740000	1926830000	1925640000

PUR	PUR halogen-free	PVC
9457690150	1926840150	1925650150
9457690300	1926840300	1925650300
9457690500	1926840500	1925650500
9457691000	1926841000	1925651000
9457690000	1926840000	1925650000

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1937960150	1938110150	1938240150
1937960300	1938110300	1938240300
1937960500	1938110500	1938240500
1937961000	1938111000	1938241000
1937960000	1938110000	1938240000

***	***	***
1937990150	1938140150	1938270150
1937990300	1938140300	1938270300
1937990500	1938140500	1938270500
1937991000	1938141000	1938271000
1937990000	1938140000	1938270000

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***	***	***

1937970150	1938120150	1938250150
1937970300	1938120300	1938250300
1937970500	1938120500	1938250500
1937971000	1938121000	1938251000
1937970000	1938120000	1938250000

***	***	***
1938000150	1938150150	1938280150
1938000300	1938150300	1938280300
1938000500	1938150500	1938280500
1938001000	1938151000	1938281000
1938000000	1938150000	1938280000

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***	***	***
***	***	***

9457390150	1926530150	1925340150
9457390300	1926530300	1925340300
9457390500	1926530500	1925340500
9457391000	1926531000	1925341000
9457390000	1926530000	1925340000

***	***	***
9457310150	1926540150	1925350150
9457310300	1926540300	1925350300
9457310500	1926540500	1925350500
9457311000	1926541000	1925351000
9457310000	1926540000	1925350000

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9457340150	1926510150	1925320150
9457340300	1926510300	1925320300
9457340500	1926510500	1925320500
9457341000	1926511000	1925321000
9457340000	1926510000	1925320000

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9457270150	1926550150	1925360150
9457270300	1926550300	1925360300
9457270500	1926550500	1925360500
9457271000	1926551000	1925361000
9457270000	1926550000	1925360000

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***	***	***

1815670150	1926570150	1925380150
1815670300	1926570300	1925380300
1815670500	1926570500	1925380500
1815671000	1926571000	1925381000
1815670000	1926570000	1925380000

***	***	***
1906310150	1926580150	1925390150
1906310300	1926580300	1925390300
1906310500	1926580500	1925390500
1906311000	1926581000	1925391000
1906310000	1926580000	1925390000

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***	***	***

9456500150		
9456500300		
9456500500	On request	On request
9456501000		
9456500000		

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***	***	***
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9457900150	1926590150	1925400150
9457900300	1926590300	1925400300
9457900500	1926590500	1925400500
9457901000	1926591000	1925401000
9457900000	1926590000	1925400000

Overview of sensor cables

D

		No. of poles	Cable material	M12 socket					
				90° angle with 2 LEDs					
				PUR	PUR halogen-free	PVC	PUR	PUR halogen-free	PVC
One end free			1.5 m 3.0 m 5.0 m 10.0 m variable	9457800150 9457800300 9457800500 9457801000 9457800000	1926650150 1926650300 1926650500 1926651000 1926650000	1925460150 1925460300 1925460500 1925461000 1925460000	9456380150 9456380300 9456380500 9456381000 9456380000	1926660150 1926660300 1926660500 1926661000 1926660000	1925470150 1925470300 1925470500 1925471000 1925470000
M8 plug	straight		1.5 m 3.0 m 5.0 m 10.0 m variable	***	***	***	***	***	***
			1.5 m 3.0 m 5.0 m 10.0 m variable	***	***	***	***	***	***
	90°		1.5 m 3.0 m 5.0 m 10.0 m variable	***	***	***	***	***	***
			1.5 m 3.0 m 5.0 m 10.0 m variable	***	***	***	***	***	***
M12 plug	straight		1.5 m 3.0 m 5.0 m 10.0 m variable	9457790150 9457790300 9457790500 9457791000 9457790000	1926600150 1926600300 1926600500 1926601000 1926600000	1925410150 1925410300 1925410500 1925411000 1925410000	***	***	***
			1.5 m 3.0 m 5.0 m 10.0 m variable	***	***	***	***	***	***
			1.5 m 3.0 m 5.0 m 10.0 m variable	***	***	***	***	***	***
			1.5 m 3.0 m 5.0 m 10.0 m variable	On request	On request	On request	***	***	***
	90°		1.5 m 3.0 m 5.0 m 10.0 m variable	***	***	***	On request	On request	On request
			1.5 m 3.0 m 5.0 m 10.0 m variable	***	***	***	***	***	***
			1.5 m 3.0 m 5.0 m 10.0 m variable	***	***	***	***	***	***
			1.5 m 3.0 m 5.0 m 10.0 m variable	***	***	***	***	***	***

Overview of assembled M8 and M12 SAI cables

Weidmüller uses descriptive article numbers when dealing with SAI cables. The following overview indicates the main types. The last four digits of the part numbers show the length in cm. For example, the cable with order number 9457450500 is 500 cm long.

The article designation indicates the length in meters. For example, a ...1.5U cable has a length of 1.5 meters. The overview uses X to indicate the lengths in order to indicate generality.

Order No.	Type
1815670000	SAIL-M12WM12W-3-X.XU
1821050000	SAIL-M12WM12G-3-2.5U
1824570000	SAIL-M8GM8GS-3-X.XU
1824580000	SAIL-M8GM8WS-3-X.XU
1824590000	SAIL-M8G-3-X.XU
1857550000	SAIL-M8W-3-X.XU
1857560000	SAIL-M8W-4-X.XU
1857660000	SAIL-M8GM8WS-4-X.XU
1857670000	SAIL-M8WM8WS-3-X.XU
1857680000	SAIL-M8WM8WS-4-X.XU
1877250000	SAIL-M8GM8WS-3LX.XU
1880470000	SAIL-M8GM8GS-4-X.XU
1906260000	SAIL-M12W-4-X.XU
1906270000	SAIL-M8G-4-X.XU
1906300000	SAIL-M12GM12G-4-X.XU
1906310000	SAIL-M12W-M12W-4-X.XU
1906330000	SAIL-M12WM8WS-3-X.XU
1906340000	SAIL-M12WM8WS-4-X.XU
1906410000	SAIL-M12G-M12W-4-LD-X.XU
1925300000	SAIL-M12GM12G-3-X.XV
1925310000	SAIL-M12GM12G-4-X.XV
1925320000	SAIL-M12GM12G-5-X.XV
1925340000	SAIL-M12GM12W-3-X.XV
1925350000	SAIL-M12GM12W-4-X.XV
1925360000	SAIL-M12GM12W-5-X.XV
1925380000	SAIL-M12WM12W-3-X.XV
1925390000	SAIL-M12WM12W-4-X.XV
1925400000	SAIL-M12WM12W-5-X.XV
1925410000	SAIL-M12GM12W-3LX.XV
1925420000	SAIL-M12GM12W-4LX.XV
1925430000	SAIL-M12G-3-X.XV
1925440000	SAIL-M12G-4-X.XV
1925450000	SAIL-M12G-5-X.XV
1925460000	SAIL-M12BW-3LX.XV
1925470000	SAIL-M12BW-4LX.XV
1925510000	SAIL-M12W-3-X.XV
1925520000	SAIL-M12W-4-X.XV
1925530000	SAIL-M12W-5-X.XV
1925570000	SAIL-M12BG-3-X.XV
1925580000	SAIL-M12BG-4-X.XV
1925590000	SAIL-M12BG-5-X.XV
1925630000	SAIL-M12BW-3-X.XV
1925640000	SAIL-M12BW-4-X.XV
1925650000	SAIL-M12BW-5-X.XV
1926490000	SAIL-M12GM12G-3-X.XQ
1926500000	SAIL-M12GM12G-4-X.XQ
1926510000	SAIL-M12GM12G-5-X.XQ
1926530000	SAIL-M12GM12W-3-X.XQ
1926540000	SAIL-M12GM12W-4-X.XQ
1926550000	SAIL-M12GM12W-5-X.XQ
1926570000	SAIL-M12WM12W-3-X.XQ
1926580000	SAIL-M12WM12W-4-X.XQ
1926590000	SAIL-M12WM12W-5-X.XQ
1926600000	SAIL-M12GM12W-3LX.XQ

Order No.	Type
1926610000	SAIL-M12GM12W-4LX.XQ
1926620000	SAIL-M12G-3-X.XQ
1926630000	SAIL-M12G-4-X.XQ
1926640000	SAIL-M12G-5-X.XQ
1926650000	SAIL-M12BW-3LX.XQ
1926660000	SAIL-M12BW-4LX.XQ
1926700000	SAIL-M12W-3-X.XQ
1926710000	SAIL-M12W-4-X.XQ
1926720000	SAIL-M12W-5-X.XQ
1926760000	SAIL-M12BG-3-X.XQ
1926770000	SAIL-M12BG-4-X.XQ
1926780000	SAIL-M12BG-5-X.XQ
1926820000	SAIL-M12BW-3-X.XQ
1926830000	SAIL-M12BW-4-X.XQ
1926840000	SAIL-M12BW-5-X.XQ
1926890000	SAIL-M8GM8GS-3-X.XQ
1926900000	SAIL-M8GM8GS-4-X.XQ
1926910000	SAIL-M8GM8WS-3-X.XQ
1926920000	SAIL-M8GM8WS-4-X.XQ
1926930000	SAIL-M8GM8WS-3LX.XQ
1926950000	SAIL-M8WM8WS-3-X.XQ
1926960000	SAIL-M8WM8WS-4-X.XQ
1926970000	SAIL-M8G-3-X.XQ
1926980000	SAIL-M8GS-3-X.XQ
1926990000	SAIL-M8G-4-X.XQ
1927000000	SAIL-M8BS-4-X.XQ
1927050000	SAIL-M8W-3-X.XQ
1927060000	SAIL-M8BS-4-X.XQ
1927070000	SAIL-M8W-4-X.XQ
1927080000	SAIL-M8BS-4-X.XQ
1927090000	SAIL-M8BWS-3LX.XQ
1927150000	SAIL-M8GM8GS-3-X.XV
1927160000	SAIL-M8GM8GS-4-X.XV
1927170000	SAIL-M8GM8WS-3-X.XV
1927180000	SAIL-M8GM8WS-4-X.XV
1927190000	SAIL-M8GM8WS-3LX.XV
1927210000	SAIL-M8WM8WS-3-X.XV
1927220000	SAIL-M8WM8WS-4-X.XV
1927230000	SAIL-M8G-3-X.XV
1927240000	SAIL-M8BS-3-X.XV
1927250000	SAIL-M8G-4-X.XV
1927260000	SAIL-M8BS-4-X.XV
1927310000	SAIL-M8W-3-X.XV
1927320000	SAIL-M8BWS-3-X.XV
1927330000	SAIL-M8W-4-X.XV
1927340000	SAIL-M8BWS-4-X.XV
1927350000	SAIL-M8BWS-3LX.XV
1937950000	SAIL-M8GM12G-3-X.XU
1937960000	SAIL-M8GM12W-3-X.XU
1937970000	SAIL-M8WM12W-3-X.XU
1937980000	SAIL-M8GM12G-4-X.XU
1937990000	SAIL-M8GM12W-4-X.XU
1938000000	SAIL-M8WM12W-4-X.XU
1938040000	SAIL-M12GM8GS-3-X.XQ

Order No.	Type
1938050000	SAIL-M12GM8WS-3-X.XX
1938060000	SAIL-M12WM8WS-3-X.XQ
1938070000	SAIL-M12GM8GS-4-X.XQ
1938080000	SAIL-M12GM8WS-4-X.XQ
1938090000	SAIL-M12WM8WS-4-X.XQ
1938100000	SAIL-M8GM12G-3-X.XQ
1938110000	SAIL-M8GM12W-3-X.XQ
1938120000	SAIL-M8WM12W-3-X.XQ
1938130000	SAIL-M8GM12G-4-X.XQ
1938140000	SAIL-M8GM12W-4-X.XQ
1938150000	SAIL-M8WM12W-4-X.XQ
1938170000	SAIL-M12GM8GS-3-X.XV
1938180000	SAIL-M12GM8WS-3-X.XV
1938190000	SAIL-M12WM8WS-3-X.XV
1938200000	SAIL-M12GM8GS-4-X.XV
1938210000	SAIL-M12GM8WS-4-X.XV
1938220000	SAIL-M12WM8WS-4-X.XV
1938230000	SAIL-M8GM12G-3-X.XV
1938240000	SAIL-M8GM12W-3-X.XV
1938250000	SAIL-M8WM12W-3-X.XV
1938260000	SAIL-M8GM12G-4-X.XV
1938270000	SAIL-M8GM12W-4-X.XV
1938280000	SAIL-M8WM12W-4-X.XV
9456100000	SAIL-M12G-4-X.XU
9456150000	SAIL-M8W-3-X.XU
9456380000	SAIL-M12BW-4LX.XU
9456500000	SAIL-M12WM12G-5-X.XU
9456660000	SAIL-M12GM8GS-4-X.XU
9456670000	SAIL-M12GM8WS-4-X.XU
9456690000	SAIL-M12W-3-X.XU
9457230000	SAIL-M12GM12G-3-X.XU
9457270000	SAIL-M12GM12W-5-X.XU
9457310000	SAIL-M12GM12G-5-X.XU
9457320000	SAIL-M12BW-3-X.XU
9457340000	SAIL-M12GM12G-5-X.XU
9457380000	SAIL-M8BWS-3-X.XU
9457390000	SAIL-M12GM12W-3-X.XU
9457450000	SAIL-M8BS-3-X.XU
9457460000	SAIL-M8WS-3-X.XU
9457610000	SAIL-M12G-5-X.XU
9457670000	SAIL-M12W-5-X.XU
9457690000	SAIL-M12BW-5-X.XU
9457730000	SAIL-M12BG-4-X.XU
9457740000	SAIL-M12GM12G-5-X.XU
9457760000	SAIL-M12GM8WS-3LX.XU
9457770000	SAIL-M12GM8GS-3-X.XU
9457790000	SAIL-M12GM12W-3LX.XU
9457800000	SAIL-M12BW-3LX.XU
9457810000	SAIL-M12G-3-X.XU
9457820000	SAIL-M12BG-3-X.XU
9457850000	SAIL-M8W-3-X.XU
9457900000	SAIL-M12WM12W-5-X.XU
9457910000	SAIL-M12GM12G-5-X.XU
9457980000	SAIL-M12GM8WS-3-X.XU

Sensor cables with plug at one end only

M8



M12 with LED



M12



Sensor/actuator cable pre-assembled with M8/M12 plug-in connector at one end

Machine designers frequently require individual cable lengths. Sensor cables with a connector fitted at one end only can be easily adapted to the corresponding situation. The cables are available in many different versions: straight, 90° and with all common pole numbers (3, 4 and 5). Male plugs and Female sockets can be assembled to suit individual customer requirements for connecting cables. The cable sheathing is of PUR (polyurethane) and is suitable for use with cable carrier systems. Plugs and cables are in neutral black.

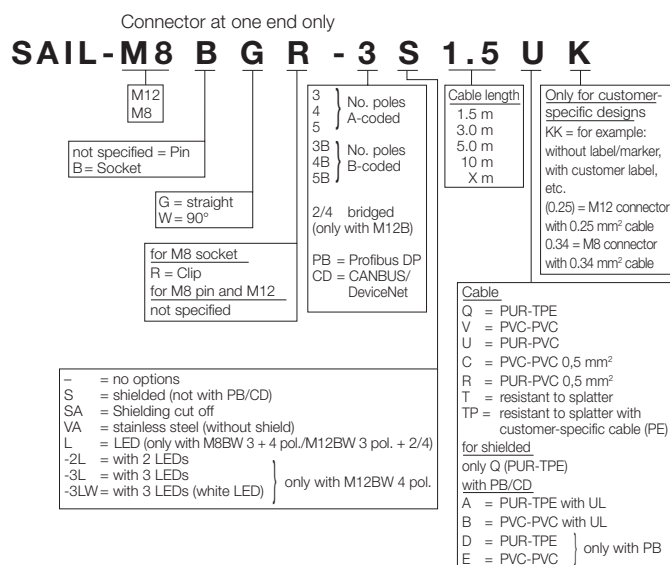
Sensor cables

Weidmüller can supply various cable lengths as indicated in the following table:

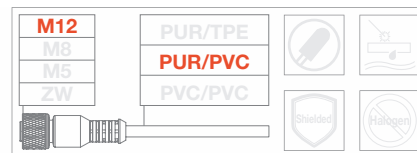
Typical cable lengths are:

- 1.5 m
- 3.0 m
- 5.0 m
- 10.0 m

Example of designation



M12 one side without connector
PUR / PVC
A-coded



Ordering data

Male, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Socket, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	

		3-pole	
Type	Order No.	Type	Order No.
SAIL-M12G-3-1.5U	9457810150	SAIL-M12W-3-1.5U	9456690150
SAIL-M12G-3-3.0U	9457810300	SAIL-M12W-3-3.0U	9456690300
SAIL-M12G-3-5.0U	9457810500	SAIL-M12W-3-5.0U	9456690500
SAIL-M12G-3-10U	9457811000	SAIL-M12W-3-10U	9456691000
Other versions on request			

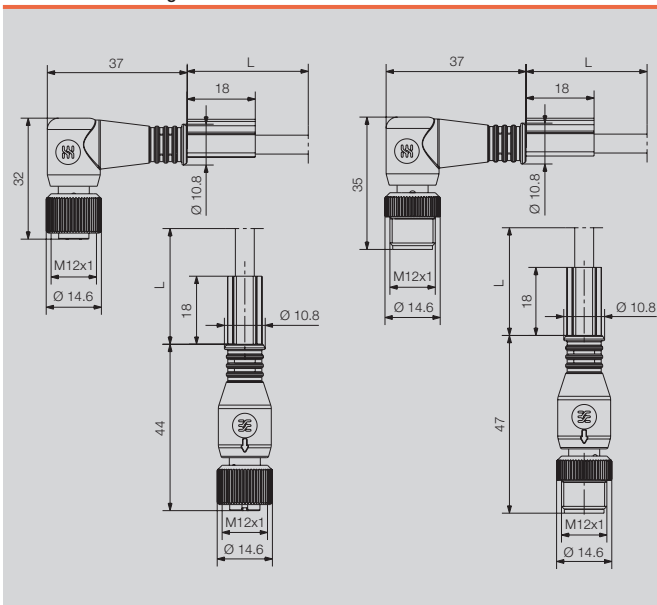
		4-pole	
Type	Order No.	Type	Order No.
SAIL-M12G-4-1.5U	9456100150	SAIL-M12W-4-1.5U	1906260150
SAIL-M12G-4-3.0U	9456100300	SAIL-M12W-4-3.0U	1906260300
SAIL-M12G-4-5.0U	9456100500	SAIL-M12W-4-5.0U	1906260500
SAIL-M12G-4-10U	9456101000	SAIL-M12W-4-10U	1906261000
Other versions on request			

		5-pole	
Type	Order No.	Type	Order No.
SAIL-M12G-5-1.5U	9457610150	SAIL-M12W-5-1.5U	9457670150
SAIL-M12G-5-3.0U	9457610300	SAIL-M12W-5-3.0U	9457670300
SAIL-M12G-5-5.0U	9457610500	SAIL-M12W-5-5.0U	9457670500
SAIL-M12G-5-10U	9457611000	SAIL-M12W-5-10U	9457671000
Other versions on request			

Technical data

Sheathing colour	black
Rated current	4 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.34 mm ²
Contact surface	gold-plated
Temperature range	-30 ... 80 °C
Rated voltage	250 V (3- and 4-pole) / 125 V (5-pole)
(acc. to VDE standard 0110 ISO group C)	

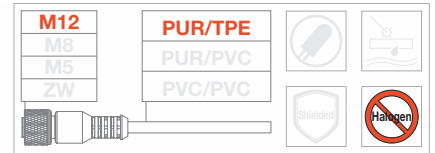
Dimensioned drawing



L in the drawing is the cable length

Sensor cables

M12 one side without connector
PUR / TPE halogen-free
A-coded



Ordering data

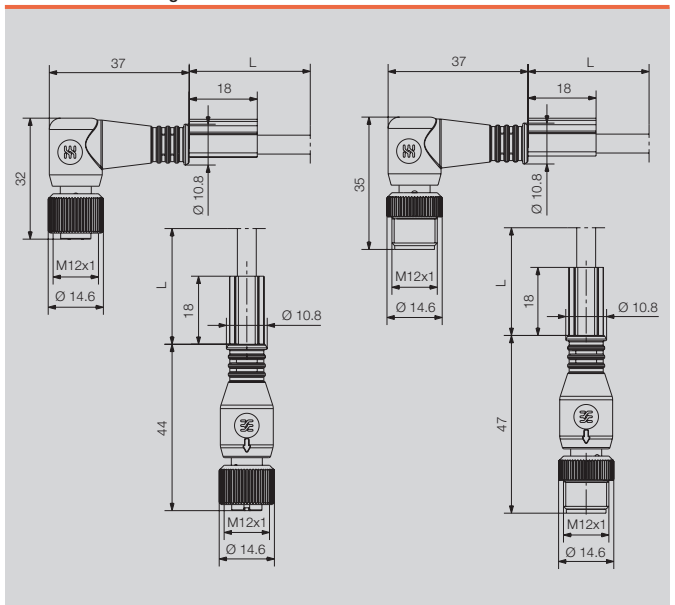
		3-pole		4-pole		5-pole	
		Type	Order No.	Type	Order No.	Type	Order No.
Male, straight	1.5 m	SAIL-M12G-3-1.5Q	1926620150	SAIL-M12G-4-1.5Q	1926630150	SAIL-M12G-5-1.5Q	1926640150
	3.0 m	SAIL-M12G-3-3.0Q	1926620300	SAIL-M12G-4-3.0Q	1926630300	SAIL-M12G-5-3.0Q	1926640300
	5.0 m	SAIL-M12G-3-5.0Q	1926620500	SAIL-M12G-4-5.0Q	1926630500	SAIL-M12G-5-5.0Q	1926640500
	10.0 m	SAIL-M12G-3-10Q	1926621000	SAIL-M12G-4-10Q	1926631000	SAIL-M12G-5-10Q	1926641000
Male, angled	1.5 m	SAIL-M12W-3-1.5Q	1926700150	SAIL-M12W-4-1.5Q	1926710150	SAIL-M12W-5-1.5Q	1926720150
	3.0 m	SAIL-M12W-3-3.0Q	1926700300	SAIL-M12W-4-3.0Q	1926710300	SAIL-M12W-5-3.0Q	1926720300
	5.0 m	SAIL-M12W-3-5.0Q	1926700500	SAIL-M12W-4-5.0Q	1926710500	SAIL-M12W-5-5.0Q	1926720500
	10.0 m	SAIL-M12W-3-10Q	1926701000	SAIL-M12W-4-10Q	1926711000	SAIL-M12W-5-10Q	1926721000
Socket, straight	1.5 m	SAIL-M12BG-3-1.5Q	1926760150	SAIL-M12BG-4-1.5Q	1926770150	SAIL-M12BG-5-1.5Q	1926780150
	3.0 m	SAIL-M12BG-3-3.0Q	1926760300	SAIL-M12BG-4-3.0Q	1926770300	SAIL-M12BG-5-3.0Q	1926780300
	5.0 m	SAIL-M12BG-3-5.0Q	1926760500	SAIL-M12BG-4-5.0Q	1926770500	SAIL-M12BG-5-5.0Q	1926780500
	10.0 m	SAIL-M12BG-3-10Q	1926761000	SAIL-M12BG-4-10Q	1926771000	SAIL-M12BG-5-10Q	1926781000
Socket, angled	1.5 m	SAIL-M12BW-3-1.5Q	1926820150	SAIL-M12BW-4-1.5Q	1926830150	SAIL-M12BW-5-1.5Q	1926840150
	3.0 m	SAIL-M12BW-3-3.0Q	1926820300	SAIL-M12BW-4-3.0Q	1926830300	SAIL-M12BW-5-3.0Q	1926840300
	5.0 m	SAIL-M12BW-3-5.0Q	1926820500	SAIL-M12BW-4-5.0Q	1926830500	SAIL-M12BW-5-5.0Q	1926840500
	10.0 m	SAIL-M12BW-3-10Q	1926821000	SAIL-M12BW-4-10Q	1926831000	SAIL-M12BW-5-10Q	1926841000
Note	Other versions on request		Other versions on request		Other versions on request		

Technical data

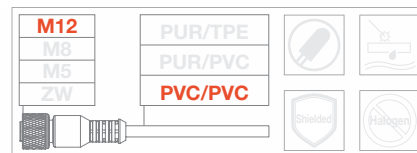
Sheathing colour	black
Rated current	4 A
Material	PUR/ TPE
Protection class	IP 67
Core cross-section	0.34 mm ²
Contact surface	gold-plated
Temperature range	-50 ... 80 °C
Rated voltage	250 V (3- and 4-pole) / 125 V (5-pole)
(acc. to VDE standard 0110 ISO group C)	

L in the drawing is the cable length

Dimensioned drawing



M12 one side without connector
PVC / PVC
A-coded



Ordering data

Male, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Socket, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Note	
Other versions on request	

		3-pole	
Type	Order No.	Type	Order No.
SAIL-M12G-3-1.5V	1925430150	SAIL-M12G-3-1.5V	1925430150
SAIL-M12G-3-3.0V	1925430300	SAIL-M12G-3-3.0V	1925430300
SAIL-M12G-3-5.0V	1925430500	SAIL-M12G-3-5.0V	1925430500
SAIL-M12G-3-10V	1925431000	SAIL-M12G-3-10V	1925431000
SAIL-M12W-3-1.5V	1925510150	SAIL-M12W-3-1.5V	1925510150
SAIL-M12W-3-3.0V	1925510300	SAIL-M12W-3-3.0V	1925510300
SAIL-M12W-3-5.0V	1925510500	SAIL-M12W-3-5.0V	1925510500
SAIL-M12W-3-10V	1925511000	SAIL-M12W-3-10V	1925511000
SAIL-M12BG-3-1.5V	1925570150	SAIL-M12BG-3-1.5V	1925570150
SAIL-M12BG-3-3.0V	1925570300	SAIL-M12BG-3-3.0V	1925570300
SAIL-M12BG-3-5.0V	1925570500	SAIL-M12BG-3-5.0V	1925570500
SAIL-M12BG-3-10V	1925571000	SAIL-M12BG-3-10V	1925571000
SAIL-M12BW-3-1.5V	1925630150	SAIL-M12BW-3-1.5V	1925630150
SAIL-M12BW-3-3.0V	1925630300	SAIL-M12BW-3-3.0V	1925630300
SAIL-M12BW-3-5.0V	1925630500	SAIL-M12BW-3-5.0V	1925630500
SAIL-M12BW-3-10V	1925631000	SAIL-M12BW-3-10V	1925631000
Other versions on request		Other versions on request	

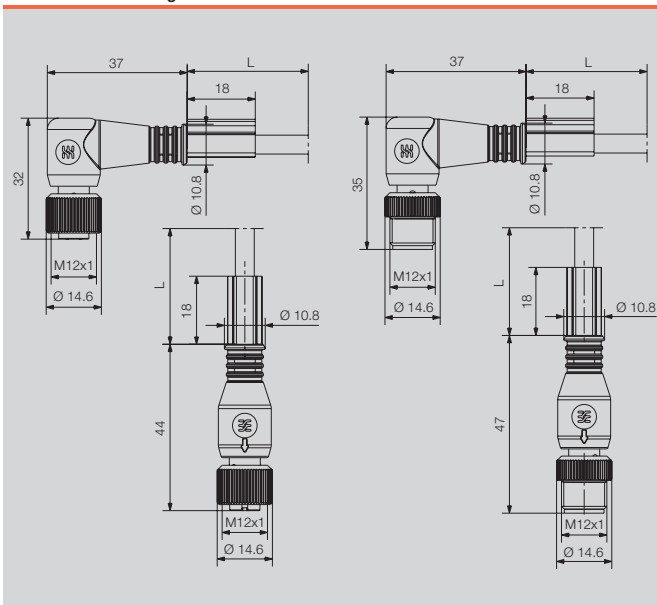
		4-pole	
Type	Order No.	Type	Order No.
SAIL-M12G-4-1.5V	1925440150	SAIL-M12G-4-1.5V	1925440150
SAIL-M12G-4-3.0V	1925440300	SAIL-M12G-4-3.0V	1925440300
SAIL-M12G-4-5.0V	1925440500	SAIL-M12G-4-5.0V	1925440500
SAIL-M12G-4-10V	1925441000	SAIL-M12G-4-10V	1925441000
SAIL-M12W-4-1.5V	1925520150	SAIL-M12W-4-1.5V	1925520150
SAIL-M12W-4-3.0V	1925520300	SAIL-M12W-4-3.0V	1925520300
SAIL-M12W-4-5.0V	1925520500	SAIL-M12W-4-5.0V	1925520500
SAIL-M12W-4-10V	1925521000	SAIL-M12W-4-10V	1925521000
SAIL-M12BG-4-1.5V	1925580150	SAIL-M12BG-4-1.5V	1925580150
SAIL-M12BG-4-3.0V	1925580300	SAIL-M12BG-4-3.0V	1925580300
SAIL-M12BG-4-5.0V	1925580500	SAIL-M12BG-4-5.0V	1925580500
SAIL-M12BG-4-10V	1925581000	SAIL-M12BG-4-10V	1925581000
SAIL-M12BW-4-1.5V	1925640150	SAIL-M12BW-4-1.5V	1925640150
SAIL-M12BW-4-3.0V	1925640300	SAIL-M12BW-4-3.0V	1925640300
SAIL-M12BW-4-5.0V	1925640500	SAIL-M12BW-4-5.0V	1925640500
SAIL-M12BW-4-10V	1925641000	SAIL-M12BW-4-10V	1925641000
Other versions on request		Other versions on request	

		5-pole	
Type	Order No.	Type	Order No.
SAIL-M12G-5-1.5V	1925450150	SAIL-M12G-5-1.5V	1925450150
SAIL-M12G-5-3.0V	1925450300	SAIL-M12G-5-3.0V	1925450300
SAIL-M12G-5-5.0V	1925450500	SAIL-M12G-5-5.0V	1925450500
SAIL-M12G-5-10V	1925451000	SAIL-M12G-5-10V	1925451000
SAIL-M12W-5-1.5V	1925530150	SAIL-M12W-5-1.5V	1925530150
SAIL-M12W-5-3.0V	1925530300	SAIL-M12W-5-3.0V	1925530300
SAIL-M12W-5-5.0V	1925530500	SAIL-M12W-5-5.0V	1925530500
SAIL-M12W-5-10V	1925531000	SAIL-M12W-5-10V	1925531000
SAIL-M12BG-5-1.5V	1925590150	SAIL-M12BG-5-1.5V	1925590150
SAIL-M12BG-5-3.0V	1925590300	SAIL-M12BG-5-3.0V	1925590300
SAIL-M12BG-5-5.0V	1925590500	SAIL-M12BG-5-5.0V	1925590500
SAIL-M12BG-5-10V	1925591000	SAIL-M12BG-5-10V	1925591000
SAIL-M12BW-5-1.5V	1925650150	SAIL-M12BW-5-1.5V	1925650150
SAIL-M12BW-5-3.0V	1925650300	SAIL-M12BW-5-3.0V	1925650300
SAIL-M12BW-5-5.0V	1925650500	SAIL-M12BW-5-5.0V	1925650500
SAIL-M12BW-5-10V	1925651000	SAIL-M12BW-5-10V	1925651000
Other versions on request		Other versions on request	

Technical data

Sheathing colour	black
Rated current	4 A
Material	PVC/PVC
Protection class	IP 67
Core cross-section	0.34 mm ²
Contact surface	gold-plated
Temperature range	-30 ... 80 °C
Rated voltage	250 V (3- and 4-pole) / 125 V (5-pole)
(acc. to VDE standard 0110 ISO group C)	

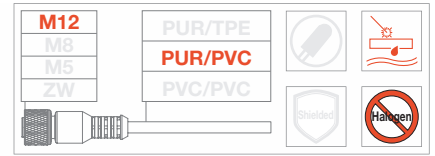
Dimensioned drawing



L in the drawing is the cable length

Sensor cables

M12 one side without connector
Protected against welding splatter
A-coded



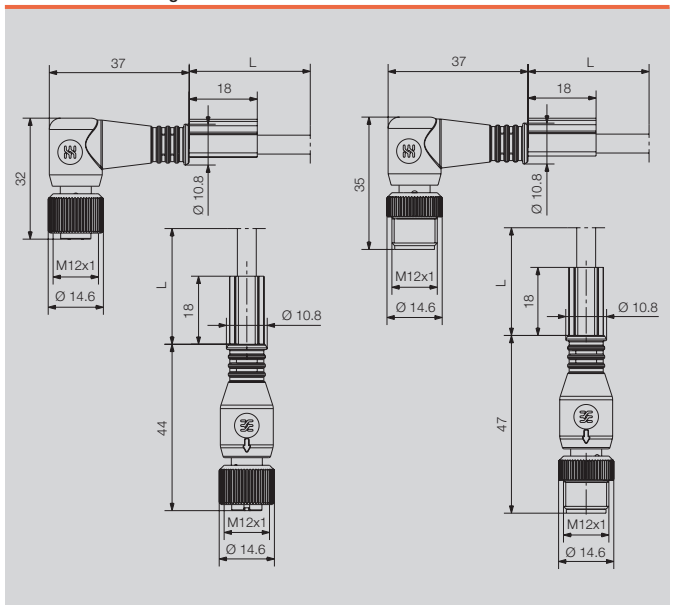
Ordering data

		3-pole		4-pole		5-pole	
		Type	Order No.	Type	Order No.	Type	Order No.
Male, straight	1.5 m	SAIL-M12G-3-1.5T	1021750150	SAIL-M12G-4-1.5T	1021770150	SAIL-M12G-5-1.5T	1021650150
	3.0 m	SAIL-M12G-3-3.0T	1021750300	SAIL-M12G-4-3.0T	1021770300	SAIL-M12G-5-3.0T	1021650300
	5.0 m	SAIL-M12G-3-5.0T	1021750500	SAIL-M12G-4-5.0T	1021770500	SAIL-M12G-5-5.0T	1021650500
	10.0 m	SAIL-M12G-3-10T	1021751000	SAIL-M12G-4-10T	1021771000	SAIL-M12G-5-10T	1021651000
Male, angled	1.5 m	SAIL-M12W-3-1.5T	1021760150	SAIL-M12W-4-1.5T	1021790150	SAIL-M12W-5-1.5T	1021660150
	3.0 m	SAIL-M12W-3-3.0T	1021760300	SAIL-M12W-4-3.0T	1021790300	SAIL-M12W-5-3.0T	1021660300
	5.0 m	SAIL-M12W-3-5.0T	1021760500	SAIL-M12W-4-5.0T	1021790500	SAIL-M12W-5-5.0T	1021660500
	10.0 m	SAIL-M12W-3-10T	1021761000	SAIL-M12W-4-10T	1021791000	SAIL-M12W-5-10T	1021661000
Socket, straight	1.5 m	SAIL-M12BG-3-1.5T	1968590150	SAIL-M12BG-4-1.5T	1968580150	SAIL-M12BG-5-1.5T	1021670150
	3.0 m	SAIL-M12BG-3-3.0T	1968590300	SAIL-M12BG-4-3.0T	1968580300	SAIL-M12BG-5-3.0T	1021670300
	5.0 m	SAIL-M12BG-3-5.0T	1968590500	SAIL-M12BG-4-5.0T	1968580500	SAIL-M12BG-5-5.0T	1021670500
	10.0 m	SAIL-M12BG-3-10T	1968591000	SAIL-M12BG-4-10T	1968581000	SAIL-M12BG-5-10T	1021671000
Socket, angled	1.5 m	SAIL-M12BW-3-1.5T	1968560150	SAIL-M12BW-4-1.5T	1968570150	SAIL-M12BW-5-1.5T	1021690150
	3.0 m	SAIL-M12BW-3-3.0T	1968560300	SAIL-M12BW-4-3.0T	1968570300	SAIL-M12BW-5-3.0T	1021690300
	5.0 m	SAIL-M12BW-3-5.0T	1968560500	SAIL-M12BW-4-5.0T	1968570500	SAIL-M12BW-5-5.0T	1021690500
	10.0 m	SAIL-M12BW-3-10T	1968561000	SAIL-M12BW-4-10T	1968571000	SAIL-M12BW-5-10T	1021691000
Note							

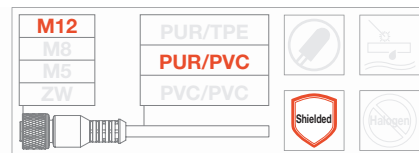
Technical data

Sheathing colour	black
Rated current	4 A
Material	Protected against welding splatter
Protection class	IP 67
Core cross-section	0.34 mm ²
Contact surface	gold-plated
Temperature range	-30 ... 90 °C
Rated voltage	250 V (3- and 4-pole) / 125 V (5-pole)
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



M12 one side without connector
high-pole 7 / 8 / 12-pole
A-coded



Ordering data

Socket, straight, shielded	1.5 m
	3.0 m
	5.0 m
	10.0 m
Socket, angled, shielded	5.0 m
	10.0 m
Socket, straight	1.5 m
	3.0 m
	5.0 m
	10.0 m
Socket, angled	5.0 m
	10.0 m
Note	

7-pole	
Type	Order No.
SAIL-M12BW-7-(S)-5.0U	1865420500
SAIL-M12BW-7-(S)-10U	1865421000
Other versions on request	

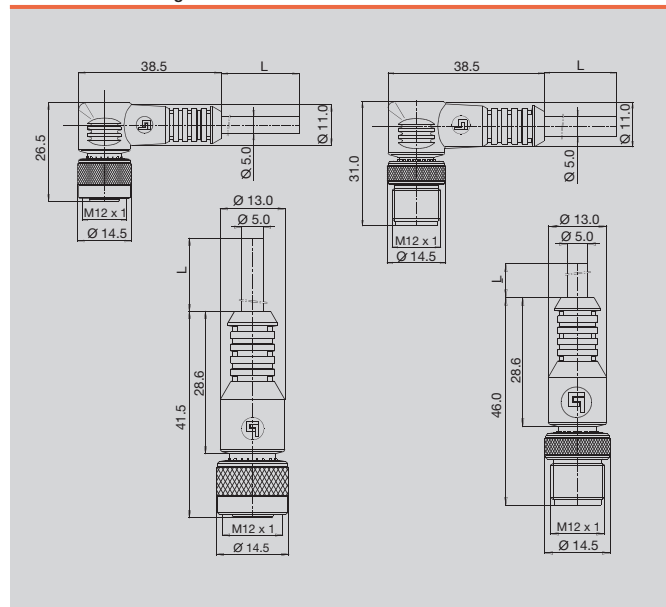
8-pole	
Type	Order No.
SAIL-M12BG-8-(S)-1,5U	1890520150
SAIL-M12BG-8-(S)-3,0U	1890520300
SAIL-M12BG-8-(S)-5,0U	1890520500
SAIL-M12BG-8-(S)-10U	1890521000
SAIL-M12BG-8-1.5U	1865870150
SAIL-M12BG-8-3.0U	1865870300
SAIL-M12BG-8-5.0U	1865870500
SAIL-M12BG-8-10U	1865871000
SAIL-M12BW-8-5.0U	1883460500
SAIL-M12BW-8-10U	1883461000
Other versions on request	

12-pole	
Type	Order No.
SAIL-M12BG-12-5,0U	1879710500
SAIL-M12BG-12-10U	1879711000
SAIL-M12BW-12-5,0U	1898240500
SAIL-M12BW-12-10U	1898241000
Other versions on request	

Technical data

Sheathing colour	black
Rated current	1 A
Material	PUR/PVC
Protection class	IP 67
Contact surface	gold-plated
Temperature range	-25 ... 85 °C
Rated voltage	60 V
(acc. to VDE standard 0110 ISO group C)	

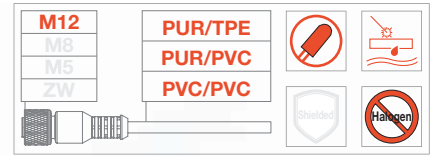
Dimensioned drawing



L in the drawing is the cable length

Sensor cables

M12 one end without connector with 2 LEDs with 2 LEDs A-coded socket, angled



Ordering data

PUR / PVC	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
PUR / TPE halogen-free	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
PVC / PVC	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Resistant to welding splatter	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Note	
Other versions on request	

3-pole

Type	Order No.
SAIL-M12BW-3L1.5U	9457800150
SAIL-M12BW-3L3.0U	9457800300
SAIL-M12BW-3L5.0U	9457800500
SAIL-M12BW-3L10U	9457801000
SAIL-M12BW-3L1.5Q	1926650150
SAIL-M12BW-3L3.0Q	1926650300
SAIL-M12BW-3L5.0Q	1926650500
SAIL-M12BW-3L10Q	1926651000
SAIL-M12BW-3L1.5V	1925460150
SAIL-M12BW-3L3.0V	1925460300
SAIL-M12BW-3L5.0V	1925460500
SAIL-M12BW-3L10V	1925461000
SAIL-M12BW-3L1.5T	1004330150
SAIL-M12BW-3L3.0T	1004330300
SAIL-M12BW-3L5.0T	1004330500
SAIL-M12BW-3L10T	1004331000

4-pole

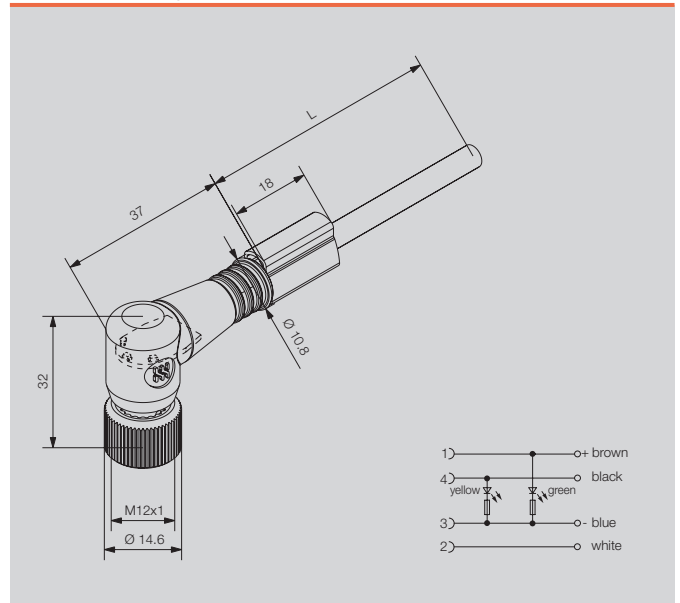
Type	Order No.
SAIL-M12BW-4-2L1.5U	9456380150
SAIL-M12BW-4-2L3.0U	9456380300
SAIL-M12BW-4-2L5.0U	9456380500
SAIL-M12BW-4-2L10U	9456381000
SAIL-M12BW-4-2L1.5Q	1926660150
SAIL-M12BW-4-2L3.0Q	1926660300
SAIL-M12BW-4-2L5.0Q	1926660500
SAIL-M12BW-4-2L10Q	1926661000
SAIL-M12BW-4-2L1.5V	1925470150
SAIL-M12BW-4-2L3.0V	1925470300
SAIL-M12BW-4-2L5.0V	1925470500
SAIL-M12BW-4-2L10V	1925471000
SAIL-M12BW-4-2L1.5T	1007000150
SAIL-M12BW-4-2L3.0T	1007000300
SAIL-M12BW-4-2L5.0T	1007000500
SAIL-M12BW-4-2L10T	1007001000

Technical data

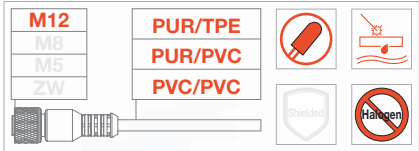
Sheathing colour	black
Rated current	4 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.34 mm ²
Contact surface	gold-plated
Temperature range	-50 ... 80 °C
Rated voltage	250 V (3- and 4-pole) / 125 V (5-pole)
(acc. to VDE standard 0110 ISO group C)	

L in the drawing is the cable length

Dimensioned drawing



M12 one end without connector with 3 LEDs with 3 LEDs A-coded socket, angled



Ordering data

PUR / PVC	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
PUR / TPE halogen-free	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
PVC / PVC	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Resistant to welding splatter	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Note	

4-pole

Type	Order No.
SAIL-M12BW-4-3L1.5U	1963940150
SAIL-M12BW-4-3L3.0U	1963940300
SAIL-M12BW-4-3L5.0U	1963940500
SAIL-M12BW-4-3L10U	1963941000
SAIL-M12BW-4-3L1.5Q	1963950150
SAIL-M12BW-4-3L3.0Q	1963950300
SAIL-M12BW-4-3L5.0Q	1963950500
SAIL-M12BW-4-3L10Q	1963951000
SAIL-M12BW-4-3L1.5V	1963960150
SAIL-M12BW-4-3L3.0V	1963960300
SAIL-M12BW-4-3L5.0V	1963960500
SAIL-M12BW-4-3L10V	1963961000
SAIL-M12BW-4-3LW1.5T	1022930150
SAIL-M12BW-4-3LW3.0T	1022930300
SAIL-M12BW-4-3LW5.0T	1022930500
SAIL-M12BW-4-3LW10T	1022931000

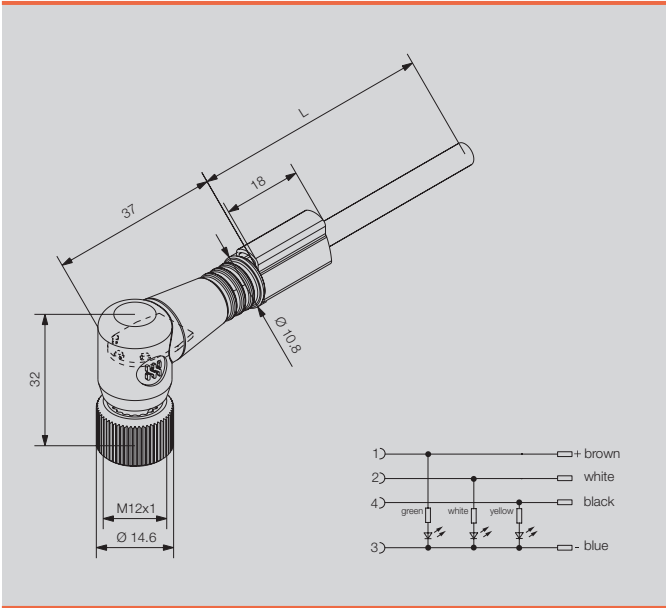
Type	Order No.

Type	Order No.

Technical data

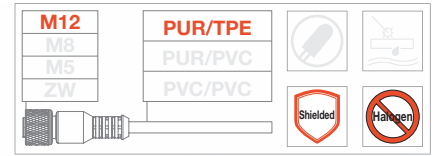
Sheathing colour	black
Rated current	4 A
Material	Protected against welding splatter
Protection class	IP 67
Core cross-section	0.34 mm²
Contact surface	gold-plated
Temperature range	-30 ... 90 °C
Rated voltage	250 V (3- and 4-pole) / 125 V (5-pole)
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



Sensor cables

M12 one side without connector shielded
A-coded



Ordering data

Male, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Socket, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	

3-pole

Type	Order No.
SAIL-M12G-3S1.5Q	1906470150
SAIL-M12G-3S3.0Q	1906470300
SAIL-M12G-3S5.0Q	1906470500
SAIL-M12G-3S10Q	1906471000
SAIL-M12W-3S1.5Q	1906500150
SAIL-M12W-3S3.0Q	1906500300
SAIL-M12W-3S5.0Q	1906500500
SAIL-M12W-3S10Q	1906501000
SAIL-M12BG-3S1.5Q	1867410150
SAIL-M12BG-3S3.0Q	1867410300
SAIL-M12BG-3S5.0Q	1867410500
SAIL-M12BG-3S10Q	1867411000
SAIL-M12BW-3S1.5Q	1906950150
SAIL-M12BW-3S3.0Q	1906950300
SAIL-M12BW-3S5.0Q	1906950500
SAIL-M12BW-3S10Q	1906951000

Other versions on request

4-pole

Type	Order No.
SAIL-M12G-4S1.5Q	1906480150
SAIL-M12G-4S3.0Q	1906480300
SAIL-M12G-4S5.0Q	1906480500
SAIL-M12G-4S10Q	1906481000
SAIL-M12W-4S1.5Q	1059650150
SAIL-M12W-4S3.0Q	1059650300
SAIL-M12W-4S5.0Q	1059650500
SAIL-M12W-4S10Q	1059651000
SAIL-M12BG-4S1.5Q	1812540150
SAIL-M12BG-4S3.0Q	1812540300
SAIL-M12BG-4S5.0Q	1812540500
SAIL-M12BG-4S10Q	1812541000
SAIL-M12BW-4S1.5Q	1808970150
SAIL-M12BW-4S3.0Q	1808970300
SAIL-M12BW-4S5.0Q	1808970500
SAIL-M12BW-4S10Q	1808970000

Other versions on request

5-pole

Type	Order No.
SAIL-M12G-5S1.5Q	1926690150
SAIL-M12G-5S3.0Q	1926690300
SAIL-M12G-5S5.0Q	1926690500
SAIL-M12G-5S10Q	1926691000
SAIL-M12W-5S1.5Q	1906520150
SAIL-M12W-5S3.0Q	1906520300
SAIL-M12W-5S5.0Q	1906520500
SAIL-M12W-5S10Q	1906521000
SAIL-M12BG-5S1.5Q	9456140150
SAIL-M12BG-5S3.0Q	9456140300
SAIL-M12BG-5S5.0Q	9456140500
SAIL-M12BG-5S10Q	9456141000
SAIL-M12BW-5S1.5Q	1906540150
SAIL-M12BW-5S3.0Q	1906540300
SAIL-M12BW-5S5.0Q	1906540500
SAIL-M12BW-5S10Q	1906541000

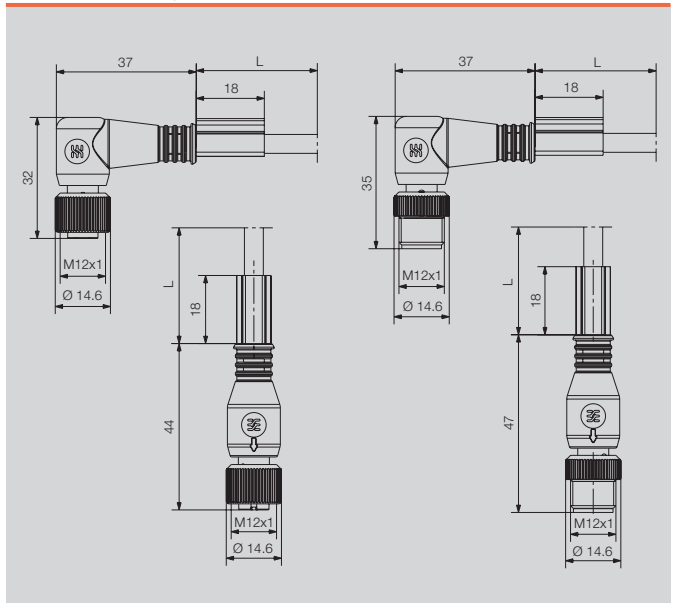
Other versions on request

Technical data

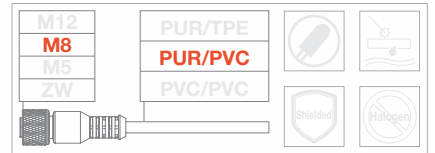
Sheathing colour	black
Rated current	4 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.34 mm ²
Contact surface	gold-plated
Temperature range	-25 ... 85 °C
Rated voltage	250 V (3- and 4-pole) / 125 V (5-pole)
(acc. to VDE standard 0110 ISO group C)	

L in the drawing is the cable length

Dimensioned drawing



**M8, one end without connector
PUR / PVC**



Ordering data

Male, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Socket, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Note	

3-pole

Type	Order No.
SAIL-M8G-3-1.5U	1824590150
SAIL-M8G-3-3.0U	1824590300
SAIL-M8G-3-5.0U	1824590500
SAIL-M8G-3-10U	1824591000
SAIL-M8W-3-1.5U	1857550150
SAIL-M8W-3-3.0U	1857550300
SAIL-M8W-3-5.0U	1857550500
SAIL-M8W-3-10U	1857551000
SAIL-M8BG-3-1.5U	9457450150
SAIL-M8BG-3-3.0U	9457450300
SAIL-M8BG-3-5.0U	9457450500
SAIL-M8BG-3-10U	9457451000
SAIL-M8BW-3-1.5U	9457380150
SAIL-M8BW-3-3.0U	9457380300
SAIL-M8BW-3-5.0U	9457380500
SAIL-M8BW-3-10U	9457381000
Other versions on request	

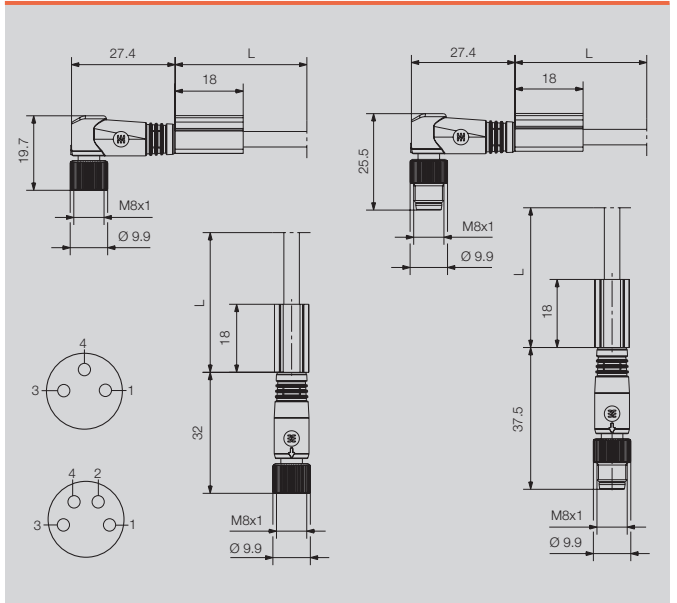
4-pole

Type	Order No.
SAIL-M8G-4-1.5U	1906270150
SAIL-M8G-4-3.0U	1906270300
SAIL-M8G-4-5.0U	1906270500
SAIL-M8G-4-10U	1906271000
SAIL-M8W-4-1.5U	1857560150
SAIL-M8W-4-3.0U	1857560300
SAIL-M8W-4-5.0U	1857560500
SAIL-M8W-4-10U	1857561000
SAIL-M8BG-4-1.5U	9457850150
SAIL-M8BG-4-3.0U	9457850300
SAIL-M8BG-4-5.0U	9457850500
SAIL-M8BG-4-10U	9457851000
SAIL-M8BW-4-1.5U	9456150150
SAIL-M8BW-4-3.0U	9456150300
SAIL-M8BW-4-5.0U	9456150500
SAIL-M8BW-4-10U	9456151000
Other versions on request	

Technical data

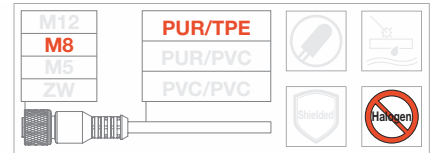
Sheathing colour	black
Rated current	4 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.25 mm ²
Contact surface	gold-plated
Temperature range	-30 ... 80 °C
Rated voltage	60 V
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



L in the drawing is the cable length

Sensor cables

M8 one side open
PUR / TPE halogen-free

Ordering data

Male, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Socket, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	

3-pole

Type	Order No.
SAIL-M8G-3-1.5Q	1926970150
SAIL-M8G-3-3.0Q	1926970300
SAIL-M8G-3-5.0Q	1926970500
SAIL-M8G-3-10Q	1926971000
SAIL-M8W-3-1.5Q	1927050150
SAIL-M8W-3-3.0Q	1927050300
SAIL-M8W-3-5.0Q	1927050500
SAIL-M8W-3-10Q	1927051000
SAIL-M8BG-3-1.5Q	1926980150
SAIL-M8BG-3-3.0Q	1926980300
SAIL-M8BG-3-5.0Q	1926980500
SAIL-M8BG-3-10Q	1926981000
SAIL-M8BW-3-1.5Q	1927060150
SAIL-M8BW-3-3.0Q	1927060300
SAIL-M8BW-3-5.0Q	1927060500
SAIL-M8BW-3-10Q	1927061000

Other versions on request

4-pole

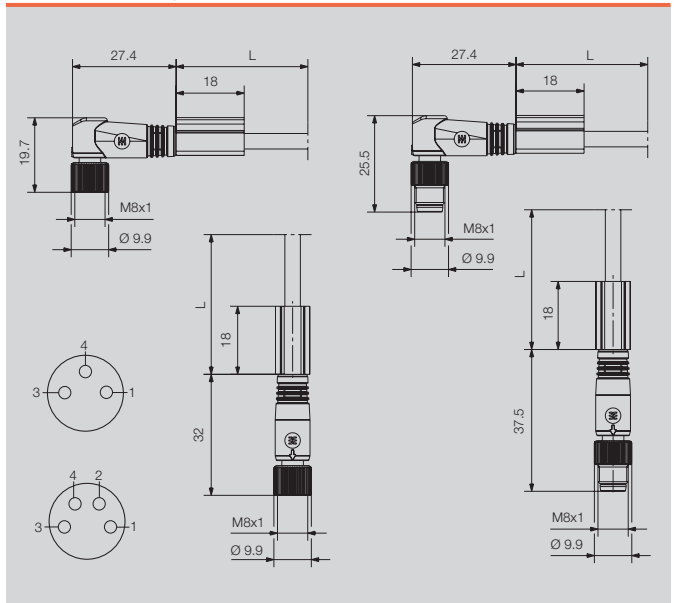
Type	Order No.
SAIL-M8G-4-1.5Q	1926990150
SAIL-M8G-4-3.0Q	1926990300
SAIL-M8G-4-5.0Q	1926990500
SAIL-M8G-4-10Q	1926991000
SAIL-M8W-4-1.5Q	1927070150
SAIL-M8W-4-3.0Q	1927070300
SAIL-M8W-4-5.0Q	1927070500
SAIL-M8W-4-10Q	1927071000
SAIL-M8BG-4-1.5Q	1927000150
SAIL-M8BG-4-3.0Q	1927000300
SAIL-M8BG-4-5.0Q	1927000500
SAIL-M8BG-4-10Q	1927001000
SAIL-M8BW-4-1.5Q	1927080150
SAIL-M8BW-4-3.0Q	1927080300
SAIL-M8BW-4-5.0Q	1927080500
SAIL-M8BW-4-10Q	1927081000

Other versions on request

Technical data

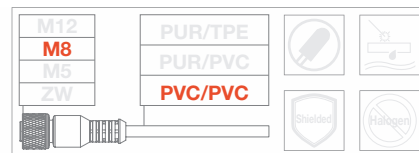
Sheathing colour	black
Rated current	4 A
Material	PUR/ TPE
Protection class	IP 67
Core cross-section	0.25 mm ²
Contact surface	gold-plated
Temperature range	-50 ... 80 °C
Rated voltage	60 V
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



L in the drawing is the cable length

M8 one side open
PVC / PVC



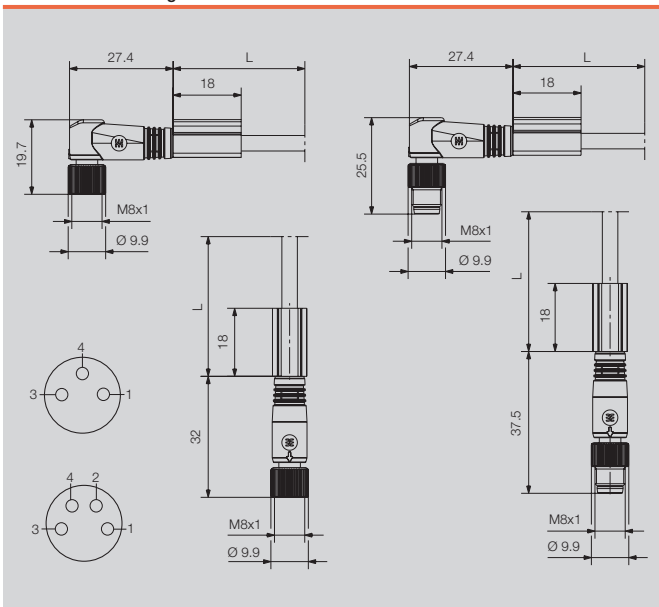
Ordering data

		3-pole		4-pole			
		Type	Order No.	Type	Order No.	Type	Order No.
Male, straight	1.5 m	SAIL-M8G-3-1.5V	1927230150	SAIL-M8G-4-1.5V	1927250150		
	3.0 m	SAIL-M8G-3-3.0V	1927230300	SAIL-M8G-4-3.0V	1927250300		
	5.0 m	SAIL-M8G-3-5.0V	1927230500	SAIL-M8G-4-5.0V	1927250500		
	10.0 m	SAIL-M8G-3-10V	1927231000	SAIL-M8G-4-10V	1927251000		
	Male, angled						
Male, angled	1.5 m	SAIL-M8W-3-1.5V	1927310150	SAIL-M8W-4-1.5V	1927330150		
	3.0 m	SAIL-M8W-3-3.0V	1927310300	SAIL-M8W-4-3.0V	1927330300		
	5.0 m	SAIL-M8W-3-5.0V	1927310500	SAIL-M8W-4-5.0V	1927330500		
	10.0 m	SAIL-M8W-3-10V	1927311000	SAIL-M8W-4-10V	1927331000		
	Socket, straight						
Socket, straight	1.5 m	SAIL-M8BG-3-1.5V	1927240150	SAIL-M8BG-4-1.5V	1927260150		
	3.0 m	SAIL-M8BG-3-3.0V	1927240300	SAIL-M8BG-4-3.0V	1927260300		
	5.0 m	SAIL-M8BG-3-5.0V	1927240500	SAIL-M8BG-4-5.0V	1927260500		
	10.0 m	SAIL-M8BG-3-10V	1927241000	SAIL-M8BG-4-10V	1927261000		
	Socket, angled						
Socket, angled	1.5 m	SAIL-M8BW-3-1.5V	1927320150	SAIL-M8BW-4-1.5V	1927340150		
	3.0 m	SAIL-M8BW-3-3.0V	1927320300	SAIL-M8BW-4-3.0V	1927340300		
	5.0 m	SAIL-M8BW-3-5.0V	1927320500	SAIL-M8BW-4-5.0V	1927340500		
	10.0 m	SAIL-M8BW-3-10V	1927321000	SAIL-M8BW-4-10V	1927341000		
	Note		Other versions on request		Other versions on request		

Technical data

Sheathing colour	black
Rated current	4 A
Material	PVC/PVC
Protection class	IP 67
Core cross-section	0.25 mm ²
Contact surface	gold-plated
Temperature range	-30 ... 80 °C
Rated voltage	60 V
(acc. to VDE standard 0110 ISO group C)	

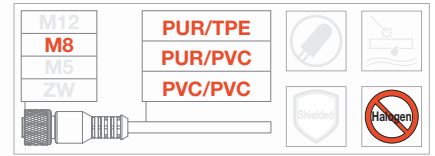
Dimensioned drawing



L in the drawing is the cable length

Sensor cables

M8 one end without connector
snap connection
socket, straight



Ordering data

PUR / PVC	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
PUR / TPE halogen-free	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
PVC / PVC	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Note	

3-pole

Type	Order No.
SAIL-M8BGR-3-1.5U	1827020150
SAIL-M8BGR-3-3.0U	1827020300
SAIL-M8BGR-3-5.0U	1827020500
SAIL-M8BGR-3-10U	1827021000
SAIL-M8BGR-3-1.5Q	1948610150
SAIL-M8BGR-3-3.0Q	1948610300
SAIL-M8BGR-3-5.0Q	1948610500
SAIL-M8BGR-3-10Q	1948611000
SAIL-M8BGR-3-3.0V	1948710300
SAIL-M8BGR-3-1.5V	1948710150
SAIL-M8BGR-3-5.0V	1948710500
SAIL-M8BGR-3-10V	1948711000
Other versions on request	

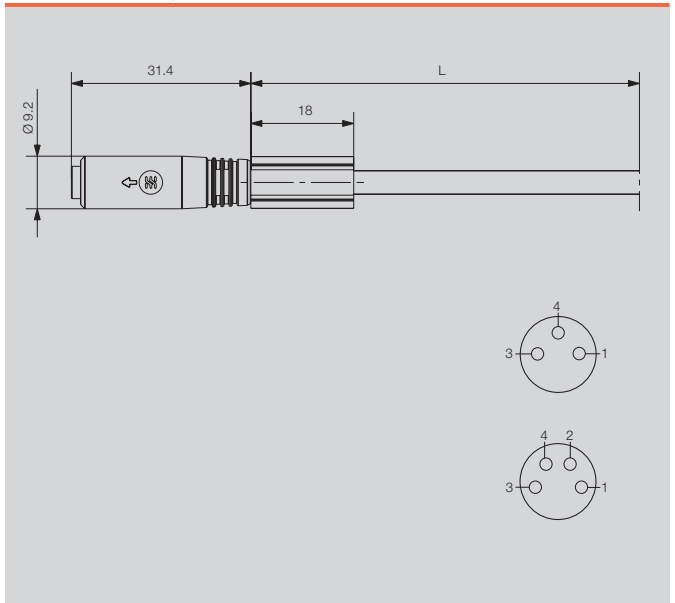
4-pole

Type	Order No.
SAIL-M8BGR-4-1.5U	1948530150
SAIL-M8BGR-4-3.0U	1948530300
SAIL-M8BGR-4-5.0U	1948530500
SAIL-M8BGR-4-10U	1948531000
SAIL-M8BGR-4-1.5Q	1948630150
SAIL-M8BGR-4-3.0Q	1948630300
SAIL-M8BGR-4-5.0Q	1948630500
SAIL-M8BGR-4-10Q	1948631000
SAIL-M8BGR-4-1.5V	1948730150
SAIL-M8BGR-4-3.0V	1948730300
SAIL-M8BGR-4-5.0V	1948730500
SAIL-M8BGR-4-10V	1948731000
Other versions on request	

Technical data

Sheathing colour	black
Rated current	4 A
Material	PUR/PVC
Protection class	IP 65
Core cross-section	0.25 mm ²
Contact surface	gold-plated
Temperature range	-30 ... 80 °C
Rated voltage	60 V
(acc. to VDE standard 0110 ISO group C)	

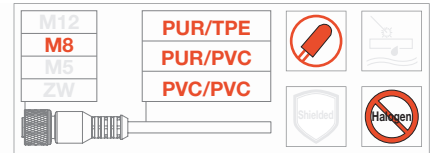
Dimensioned drawing



L in the drawing is the cable length

Sensor cables

M8 one end without connector with LED socket, angled



Ordering data

PUR / PVC	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
PUR / TPE halogen-free	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
PVC / PVC	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Note	
Other versions on request	

3-pole

Type	Order No.
SAIL-M8BW-3L1.5U	9457460150
SAIL-M8BW-3L3.0U	9457460300
SAIL-M8BW-3L5.0U	9457460500
SAIL-M8BW-3L10U	9457461000
SAIL-M8BW-3L1.5Q	1927090150
SAIL-M8BW-3L3.0Q	1927090300
SAIL-M8BW-3L5.0Q	1927090500
SAIL-M8BW-3L10Q	1927091000
SAIL-M8BW-3L1.5V	1927350150
SAIL-M8BW-3L3.0V	1927350300
SAIL-M8BW-3L5.0V	1927350500
SAIL-M8BW-3L10V	1927351000
Other versions on request	

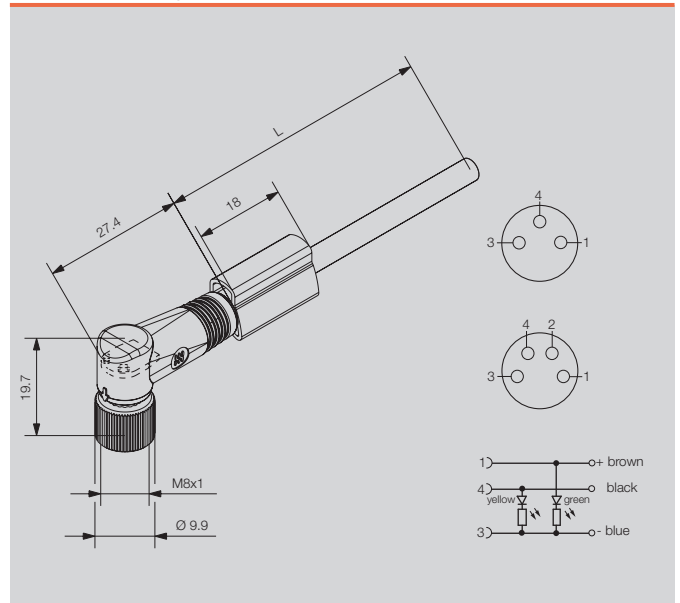
4-pole

Type	Order No.
SAIL-M8BW-4L1.5U	1906400150
SAIL-M8BW-4L3.0U	1906400300
SAIL-M8BW-4L5.0U	1906400500
SAIL-M8BW-4L10U	1906401000
SAIL-M8BW-4L1.5Q	1927100150
SAIL-M8BW-4L3.0Q	1927100300
SAIL-M8BW-4L5.0Q	1927100500
SAIL-M8BW-4L10Q	1927101000
SAIL-M8BW-4L1.5V	1927360150
SAIL-M8BW-4L3.0V	1927360300
SAIL-M8BW-4L5.0V	1927360500
SAIL-M8BW-4L10V	1927361000
Other versions on request	

Technical data

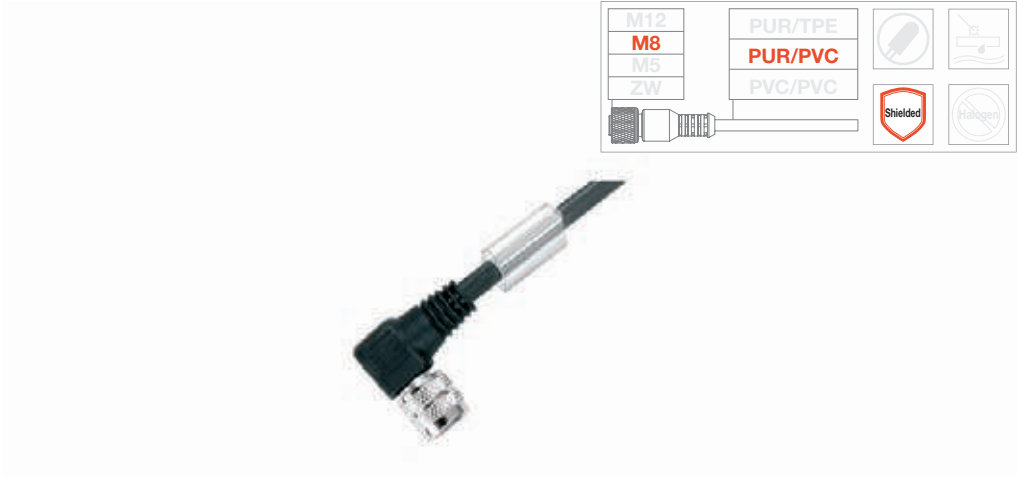
Sheathing colour	black
Rated current	4 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.25 mm ²
Contact surface	gold-plated
Temperature range	-30 ... 80 °C
Rated voltage	60 V
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



L in the drawing is the cable length

M8, one end without connector, shielded



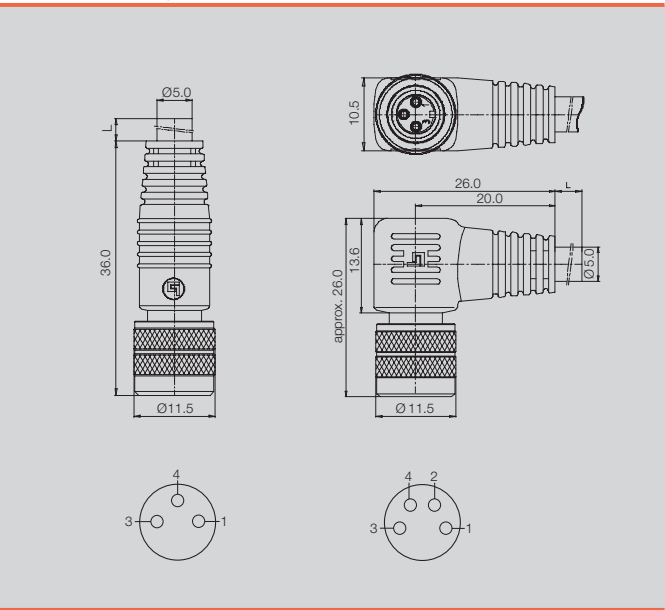
Ordering data

Male, straight		3-pole		4-pole			
Type	Order No.	Type	Order No.	Type	Order No.	Type	Order No.
1.5 m	SAIL-M8G-3S1.5U	1906560150	SAIL-M8G-4S1.5U	1906570150			
3.0 m	SAIL-M8G-3S3.0U	1906560300	SAIL-M8G-4S3.0U	1906570300			
5.0 m	SAIL-M8G-3S5.0U	1906560500	SAIL-M8G-4S5.0U	1906570500			
10.0 m	SAIL-M8G-3S10U	1906561000	SAIL-M8G-4S10U	1906571000			
Male, angled							
1.5 m	SAIL-M8W-3S1.5U	1906580150	SAIL-M8W-4S1.5U	1906590150			
3.0 m	SAIL-M8W-3S3.0U	1906580300	SAIL-M8W-4S3.0U	1906590300			
5.0 m	SAIL-M8W-3S5.0U	1906580500	SAIL-M8W-4S5.0U	1906590500			
10.0 m	SAIL-M8W-3S10U	1906581000	SAIL-M8W-4S10U	1906591000			
Socket, straight							
1.5 m	SAIL-M8BG-3S1.5U	1906600150	SAIL-M8BG-4S1.5U	1906610150			
3.0 m	SAIL-M8BG-3S3.0U	1906600300	SAIL-M8BG-4S3.0U	1906610300			
5.0 m	SAIL-M8BG-3S5.0U	1906600500	SAIL-M8BG-4S5.0U	1906610500			
10.0 m	SAIL-M8BG-3S10U	1906601000	SAIL-M8BG-4S10U	1906611000			
Socket, angled							
1.5 m	SAIL-M8BW-3S1.5U	1906620150	SAIL-M8BW-4S1.5U	1906630150			
3.0 m	SAIL-M8BW-3S3.0U	1906620300	SAIL-M8BW-4S3.0U	1906630300			
5.0 m	SAIL-M8BW-3S5.0U	1906620500	SAIL-M8BW-4S5.0U	1906630500			
10.0 m	SAIL-M8BW-3S10U	1906621000	SAIL-M8BW-4S10U	1906631000			
Note	Other versions on request			Other versions on request			

Technical data

Sheathing colour	black
Rated current	4 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.25 mm²
Contact surface	gold-plated
Temperature range	-25 ... 85 °C
Rated voltage	60 V
(acc. to VDE standard 0110 ISO group C)	

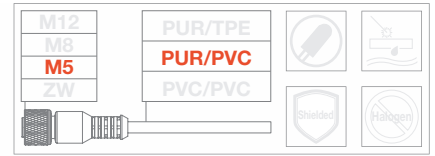
Dimensioned drawing



L in the drawing is the cable length

Sensor cables

M5, one end without connector



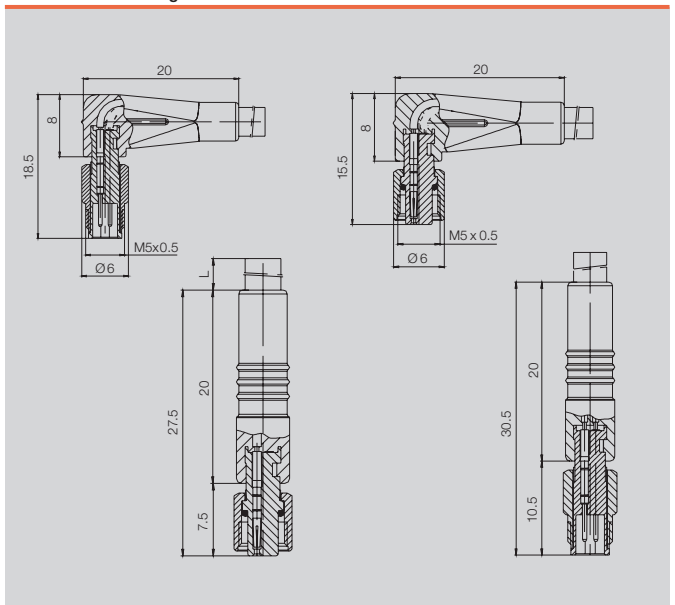
Ordering data

		3-pole		4-pole			
		Type	Order No.	Type	Order No.	Type	Order No.
Male, straight	1.5 m	SAIL-M5G-3P-1.5U	1854060150	SAIL-M5G-4P-1.5U	1871700150		
	3.0 m	SAIL-M5G-3P-3.0U	1854060300	SAIL-M5G-4P-3.0U	1871700300		
	5.0 m	SAIL-M5G-3P-5.0U	1854060500	SAIL-M5G-4P-5.0U	1871700500		
	10.0 m	SAIL-M5G-3P-10U	1854061000	SAIL-M5G-4P-10U	1871701000		
Male, angled	1.5 m	SAIL-M5W-3P-1.5U	1873280150	SAIL-M5W-4P-1.5U	1873240150		
	3.0 m	SAIL-M5W-3P-3.0U	1873280300	SAIL-M5W-4P-3.0U	1873240300		
	5.0 m	SAIL-M5W-3P-5.0U	1873280500	SAIL-M5W-4P-5.0U	1873240500		
	10.0 m	SAIL-M5W-3P-10U	1873281000	SAIL-M5W-4P-10U	1873241000		
Socket, straight	1.5 m	SAIL-M5BG-3P-1.5U	1873290150	SAIL-M5BG-4P-1.5U	1873250150		
	3.0 m	SAIL-M5BG-3P-3.0U	1873290300	SAIL-M5BG-4P-3.0U	1873250300		
	5.0 m	SAIL-M5BG-3P-5.0U	1873290500	SAIL-M5BG-4P-5.0U	1873250500		
	10.0 m	SAIL-M5BG-3P-10U	1873291000	SAIL-M5BG-4P-10U	1873251000		
Socket, angled	1.5 m	SAIL-M5BW-3P-1.5U	1873260150	SAIL-M5BW-4P-1.5U	1873270150		
	3.0 m	SAIL-M5BW-3P-3.0U	1873260300	SAIL-M5BW-4P-3.0U	1873270300		
	5.0 m	SAIL-M5BW-3P-5.0U	1873260500	SAIL-M5BW-4P-5.0U	1873270500		
	10.0 m	SAIL-M5BW-3P-10U	1873261000	SAIL-M5BW-4P-10U	1873271000		
Note	Other versions on request		Other versions on request				

Technical data

Sheathing colour	black
Rated current	1 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.25 mm ²
Contact surface	gold-plated
Temperature range	-25 ... 80 °C
Rated voltage	125 V
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



L in the drawing is the cable length

M23 cables



Ordering data

Male, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Socket, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	

		12-pole	
Type		Type	Order No.
SAIS-M23-12P-AN-1,0M		SAIS-M23-12P-AN-1,0M	1906290100
SAIS-M23-12P-AN-3,0M		SAIS-M23-12P-AN-3,0M	1906290300
SAIS-M23-12P-AN-5,0M		SAIS-M23-12P-AN-5,0M	1906290500
SAIS-M23-12P-AN-10M		SAIS-M23-12P-AN-10M	1906291000
SAIS-M23-12P-ST-1,0M		SAIS-M23-12P-ST-1,0M	1906280100
SAIS-M23-12P-ST-3,0M		SAIS-M23-12P-ST-3,0M	1906280300
SAIS-M23-12P-ST-5,0M		SAIS-M23-12P-ST-5,0M	1906280500
SAIS-M23-12P-ST-10,0M		SAIS-M23-12P-ST-10,0M	1906281000
SAIB-M23-12P-AN-1,0M		SAIB-M23-12P-AN-1,0M	1877440100
SAIB-M23-12P-AN-3,0M		SAIB-M23-12P-AN-3,0M	1877440300
SAIB-M23-12P-AN-5,0M		SAIB-M23-12P-AN-5,0M	1877440500
SAIB-M23-12P-AN-10M		SAIB-M23-12P-AN-10M	1877441000
SAIB-M23-12P-ST-1,0M		SAIB-M23-12P-ST-1,0M	1886440100
SAIB-M23-12P-ST-3,0M		SAIB-M23-12P-ST-3,0M	1886440300
SAIB-M23-12P-ST-5,0M		SAIB-M23-12P-ST-5,0M	1886440500
SAIB-M23-12P-ST-10M		SAIB-M23-12P-ST-10M	1886441000

ST = straight
AN = 90° elbow

		19-pole	
Type		Type	Order No.
SAIS-M23-19P-AN-1,0M		SAIS-M23-19P-AN-1,0M	1818090100
SAIS-M23-19P-AN-3,0M		SAIS-M23-19P-AN-3,0M	1818090300
SAIS-M23-19P-AN-5,0M		SAIS-M23-19P-AN-5,0M	1818090500
SAIS-M23-19P-AN-10M		SAIS-M23-19P-AN-10M	1818091000
SAIS-M23-19P-ST-1,0M		SAIS-M23-19P-ST-1,0M	1818160100
SAIS-M23-19P-ST-3,0M		SAIS-M23-19P-ST-3,0M	1818160300
SAIS-M23-19P-ST-5,0M		SAIS-M23-19P-ST-5,0M	1818160500
SAIS-M23-19P-ST-10M		SAIS-M23-19P-ST-10M	1818161000
SAIB-M23-19P-AN-1,0M		SAIB-M23-19P-AN-1,0M	1818140100
SAIB-M23-19P-AN-3,0M		SAIB-M23-19P-AN-3,0M	1818140300
SAIB-M23-19P-AN-5,0M		SAIB-M23-19P-AN-5,0M	1818140500
SAIB-M23-19P-AN-10M		SAIB-M23-19P-AN-10M	1818141000
SAIB-M23-19P-ST-1,0M		SAIB-M23-19P-ST-1,0M	1818180100
SAIB-M23-19P-ST-3,0M		SAIB-M23-19P-ST-3,0M	1818180300
SAIB-M23-19P-ST-5,0M		SAIB-M23-19P-ST-5,0M	1818180500
SAIB-M23-19P-ST-10M		SAIB-M23-19P-ST-10M	1818181000

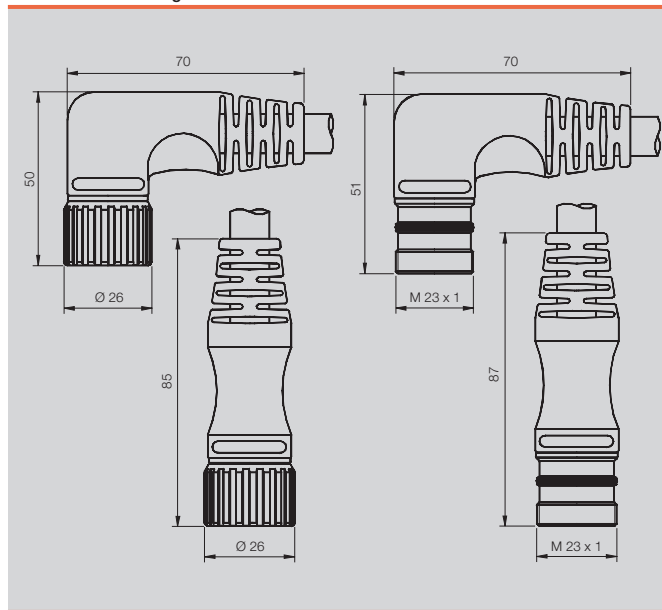
Other versions on request

Type	Order No.

Technical data

Sheathing colour	black
Rated current	8 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.34, 0.75 mm²
Contact surface	gold-plated
Temperature range	-40 ... 125 °C
Rated voltage	150
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



Connecting cables

M12/M12



M8/M8



Many applications with sensors require suitable connecting cables. The connecting cables are available in different designs. The M12/M8 plug-in connectors are available in straight and 90° versions and also with LEDs.

- When plugged in, the M12 connecting cables comply with IP68 ingress protection class.
- The cable sheathing is black and made of polyurethane (PUR or PVC).
- The connecting cables are supplied with two marking sleeves.

Corresponding tags TM-I 18 for the marking sleeves can be found in this chapter.

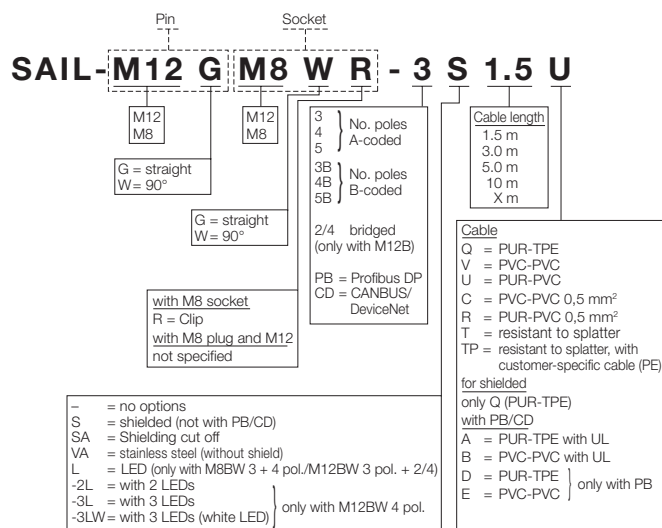
Sensor cables

Weidmüller can supply various cable lengths as indicated in the following table:

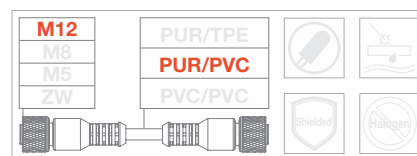
Typical cable lengths are:

- 1,5 m
- 3,0 m
- 5,0 m
- 10,0 m

Example of designation



Connecting cables
M12 to M12
PUR / PVC
A-coded



Ordering data

Male, straight - Socket, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Bridge between Pin 2 and 4	1.5 m
Bridge between Pin 2 and 4	3.0 m
Bridge between Pin 2 and 4	5.0 m
Bridge between Pin 2 and 4	10.0 m
Male, straight - Socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Bridge between Pin 2 and 4	1.5 m
Bridge between Pin 2 and 4	3.0 m
Bridge between Pin 2 and 4	5.0 m
Bridge between Pin 2 and 4	10.0 m
Male, angled - female socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Note	Other versions on request

3-pole	
Type	Order No.
SAIL-M12GM12G-3-1.5U	9457230150
SAIL-M12GM12G-3-3.0U	9457230300
SAIL-M12GM12G-3-5.0U	9457230500
SAIL-M12GM12G-3-10U	9457231000
SAIL-M12GM12G-2/4-1.5U	9456990000
SAIL-M12GM12G-2/4-3.0U	9456990300
SAIL-M12GM12G-2/4-5.0U	9457070000
SAIL-M12GM12G-2/4-10U	9457080000
Note	Other versions on request

4-pole	
Type	Order No.
SAIL-M12GM12G-4-1.5U	9457190000
SAIL-M12GM12G-4-3.0U	1906300300
SAIL-M12GM12G-4-5.0U	9457100000
SAIL-M12GM12G-4-10U	9457110000
SAIL-M12GM12W-4-1.5U	9457310150
SAIL-M12GM12W-4-3.0U	9457310300
SAIL-M12GM12W-4-5.0U	9457310500
SAIL-M12GM12W-4-10U	9457311000
SAIL-M12WM12W-4-1.5U	1906310150
SAIL-M12WM12W-4-3.0U	1906310300
SAIL-M12WM12W-4-5.0U	1906310500
SAIL-M12WM12W-4-10U	1906311000
Note	Other versions on request

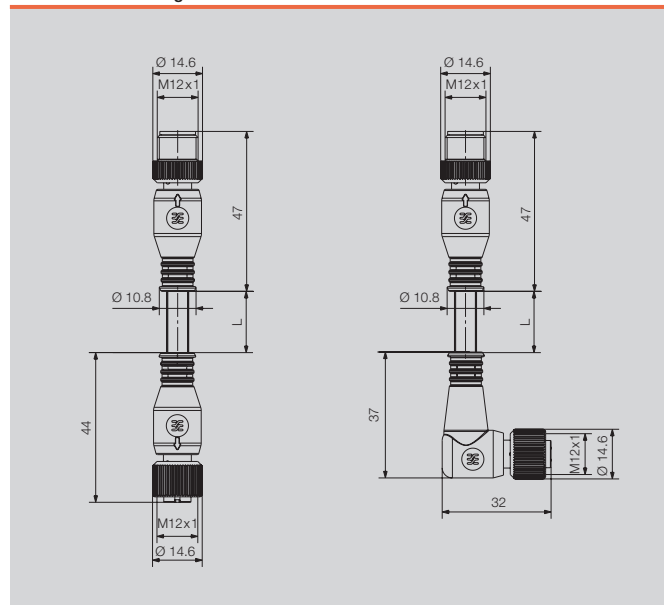
5-pole	
Type	Order No.
SAIL-M12GM12G-5-1.5U	9457340150
SAIL-M12GM12G-5-3.0U	9457340300
SAIL-M12GM12G-5-5.0U	9457340500
SAIL-M12GM12G-5-10U	9457341000
SAIL-M12GM12W-5-1.5U	9457270150
SAIL-M12GM12W-5-3.0U	9457270300
SAIL-M12GM12W-5-5.0U	9457270500
SAIL-M12GM12W-5-10U	9457271000
SAIL-M12WM12W-5-1.5U	9457900150
SAIL-M12WM12W-5-3.0U	9457900300
SAIL-M12WM12W-5-5.0U	9457900500
SAIL-M12WM12W-5-10U	9457901000
Note	Other versions on request

Technical data

Sheathing colour	black
Rated current	4 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.34 mm ²
Contact surface	gold-plated
Temperature range	-30 ... 80 °C
Rated voltage	250 V (3- and 4-pole) / 125 V (5-pole)
(acc. to VDE standard 0110 ISO group C)	

L in the drawing is the cable length

Dimensioned drawing



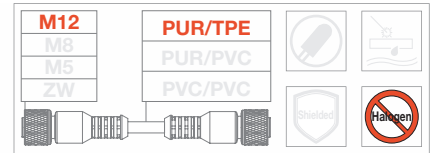
Sensor cables

Connecting cables

M12 to M12

PUR / TPE halogen-free

A-coded



Ordering data

Male, straight - Socket, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Bridge between Pin 2 and 4	1.5 m
Bridge between Pin 2 and 4	3.0 m
Bridge between Pin 2 and 4	5.0 m
Bridge between Pin 2 and 4	10.0 m
Male, straight - Socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Bridge between Pin 2 and 4	1.5 m
Bridge between Pin 2 and 4	3.0 m
Bridge between Pin 2 and 4	5.0 m
Bridge between Pin 2 and 4	10.0 m
Male, angled - female socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Note	

3-pole

Type	Order No.
SAIL-M12GM12G-3-1.5Q	1926490150
SAIL-M12GM12G-3-3.0Q	1926490300
SAIL-M12GM12G-3-5.0Q	1926490500
SAIL-M12GM12G-3-10Q	1926491000
SAIL-M12GM12G-2/4-1.5Q	1926520150
SAIL-M12GM12G-2/4-3.0Q	1926520300
SAIL-M12GM12G-2/4-5.0Q	1926520500
SAIL-M12GM12G-2/4-10Q	1926521000
Note	
Other versions on request	

4-pole

Type	Order No.
SAIL-M12GM12G-4-1.5Q	1926500150
SAIL-M12GM12G-4-3.0Q	1926500300
SAIL-M12GM12G-4-5.0Q	1926500500
SAIL-M12GM12G-4-10Q	1926501000
SAIL-M12GM12W-4-1.5Q	1926540150
SAIL-M12GM12W-4-3.0Q	1926540300
SAIL-M12GM12W-4-5.0Q	1926540500
SAIL-M12GM12W-4-10Q	1926541000
SAIL-M12WM12W-4-1.5Q	1926580150
SAIL-M12WM12W-4-3.0Q	1926580300
SAIL-M12WM12W-4-5.0Q	1926580500
SAIL-M12WM12W-4-10Q	1926581000
Note	
Other versions on request	

5-pole

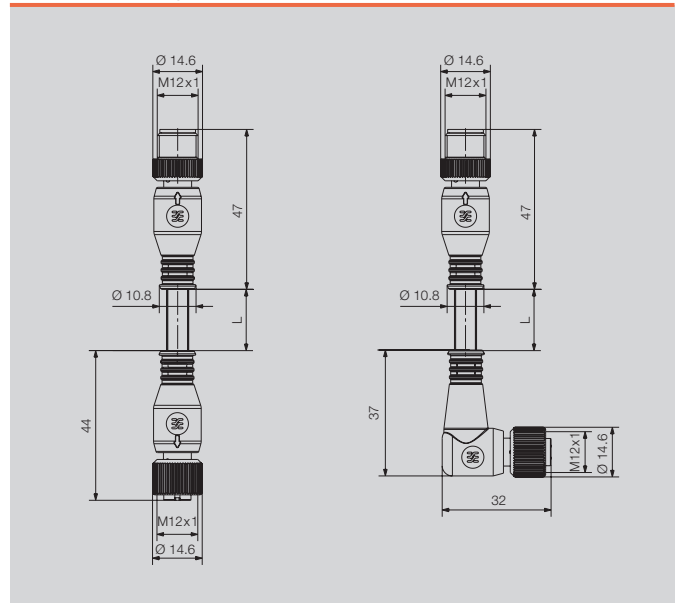
Type	Order No.
SAIL-M12GM12G-5-1.5Q	1926510150
SAIL-M12GM12G-5-3.0Q	1926510300
SAIL-M12GM12G-5-5.0Q	1926510500
SAIL-M12GM12G-5-10Q	1926511000
SAIL-M12GM12W-5-1.5Q	1926550150
SAIL-M12GM12W-5-3.0Q	1926550300
SAIL-M12GM12W-5-5.0Q	1926550500
SAIL-M12GM12W-5-10Q	1926551000
SAIL-M12WM12W-5-1.5Q	1926590150
SAIL-M12WM12W-5-3.0Q	1926590300
SAIL-M12WM12W-5-5.0Q	1926590500
SAIL-M12WM12W-5-10Q	1926591000
Note	
Other versions on request	

Technical data

Sheathing colour	black
Rated current	4 A
Material	PUR/ TPE
Protection class	IP 67
Core cross-section	0.34 mm ²
Contact surface	gold-plated
Temperature range	-25 ... 80 °C
Rated voltage	250 V (3- and 4-pole) / 125 V (5-pole)
(acc. to VDE standard 0110 ISO group C)	

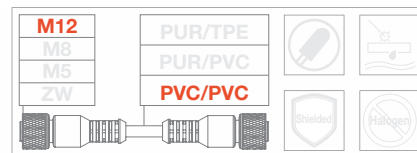
L in the drawing is the cable length

Dimensioned drawing



Connecting cables

M12 to M12
PVC / PVC
A-coded



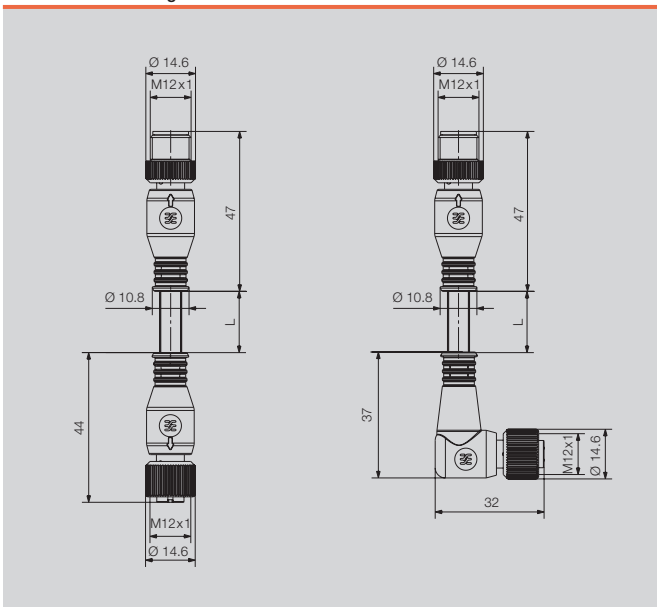
Ordering data

		3-pole		4-pole		5-pole		
		Type	Order No.	Type	Order No.	Type	Order No.	
Male, straight - Socket, straight	1.5 m	SAIL-M12GM12G-3-1.5V	1925300150	SAIL-M12GM12G-4-1.5V	1925310150	SAIL-M12GM12G-5-1.5V	1925320150	
	3.0 m	SAIL-M12GM12G-3-3.0V	1925300300	SAIL-M12GM12G-4-3.0V	1925310300	SAIL-M12GM12G-5-3.0V	1925320300	
	5.0 m	SAIL-M12GM12G-3-5.0V	1925300500	SAIL-M12GM12G-4-5.0V	1925310500	SAIL-M12GM12G-5-5.0V	1925320500	
	10.0 m	SAIL-M12GM12G-3-10V	1925301000	SAIL-M12GM12G-4-10V	1925311000	SAIL-M12GM12G-5-10V	1925321000	
	Bridge between Pin 2 and 4	1.5 m	SAIL-M12GM12G-2/4-1.5V	1925330150				
	Bridge between Pin 2 and 4	3.0 m	SAIL-M12GM12G-2/4-3.0V	1925330300				
	Bridge between Pin 2 and 4	5.0 m	SAIL-M12GM12G-2/4-5.0V	1925330500				
	Bridge between Pin 2 and 4	10.0 m	SAIL-M12GM12G-2/4-10V	1925331000				
	Male, straight - Socket, angled	1.5 m	SAIL-M12GM12W-3-1.5V	1925340150	SAIL-M12GM12W-4-1.5V	1925350150	SAIL-M12GM12W-5-1.5V	1925360150
		3.0 m	SAIL-M12GM12W-3-3.0V	1925340300	SAIL-M12GM12W-4-3.0V	1925350300	SAIL-M12GM12W-5-3.0V	1925360300
5.0 m		SAIL-M12GM12W-3-5.0V	1925340500	SAIL-M12GM12W-4-5.0V	1925350500	SAIL-M12GM12W-5-5.0V	1925360500	
10.0 m		SAIL-M12GM12W-3-10V	1925341000	SAIL-M12GM12W-4-10V	1925351000	SAIL-M12GM12W-5-10V	1925361000	
Bridge between Pin 2 and 4		1.5 m	SAIL-M12GM12W-2/4-1.5V	1925370150				
Bridge between Pin 2 and 4		3.0 m	SAIL-M12GM12W-2/4-3.0V	1925370300				
Bridge between Pin 2 and 4		5.0 m	SAIL-M12GM12W-2/4-5.0V	1925370500				
Bridge between Pin 2 and 4		10.0 m	SAIL-M12GM12W-2/4-10V	1925371000				
Male, angled - female socket, angled		1.5 m	SAIL-M12WM12W-3-1.5V	1925380150	SAIL-M12WM12W-4-1.5V	1925390150	SAIL-M12WM12W-5-1.5V	1925400150
		3.0 m	SAIL-M12WM12W-3-3.0V	1925380300	SAIL-M12WM12W-4-3.0V	1925390300	SAIL-M12WM12W-5-3.0V	1925400300
	5.0 m	SAIL-M12WM12W-3-5.0V	1925380500	SAIL-M12WM12W-4-5.0V	1925390500	SAIL-M12WM12W-5-5.0V	1925400500	
	10.0 m	SAIL-M12WM12W-3-10V	1925381000	SAIL-M12WM12W-4-10V	1925391000	SAIL-M12WM12W-5-10V	1925401000	
	Note	Other versions on request		Other versions on request		Other versions on request		

Technical data

Sheathing colour	black
Rated current	4 A
Material	PVC/PVC
Protection class	IP 67
Core cross-section	0.34 mm ²
Contact surface	gold-plated
Temperature range	-30 ... 80 °C
Rated voltage	250 V (3- and 4-pole) / 125 V (5-pole)
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



L in the drawing is the cable length

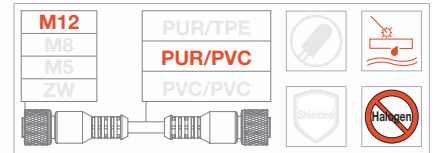
Sensor cables

Connecting cables

M12 to M12

Protected against welding splatter

A-coded



Ordering data

Male, straight - Socket, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, straight - Socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Note	

3-pole

Type	Order No.
SAIL-M12GM12G-3-1.5T	1021710150
SAIL-M12GM12G-3-3.0T	1021710300
SAIL-M12GM12G-3-5.0T	1021710500
SAIL-M12GM12G-3-10T	1021711000
Other versions on request	

4-pole

Type	Order No.
SAIL-M12GM12G-4-1.5T	1021730150
SAIL-M12GM12G-4-3.0T	1021730300
SAIL-M12GM12G-4-5.0T	1021730500
SAIL-M12GM12G-4-10T	1021731000
Other versions on request	

5-pole

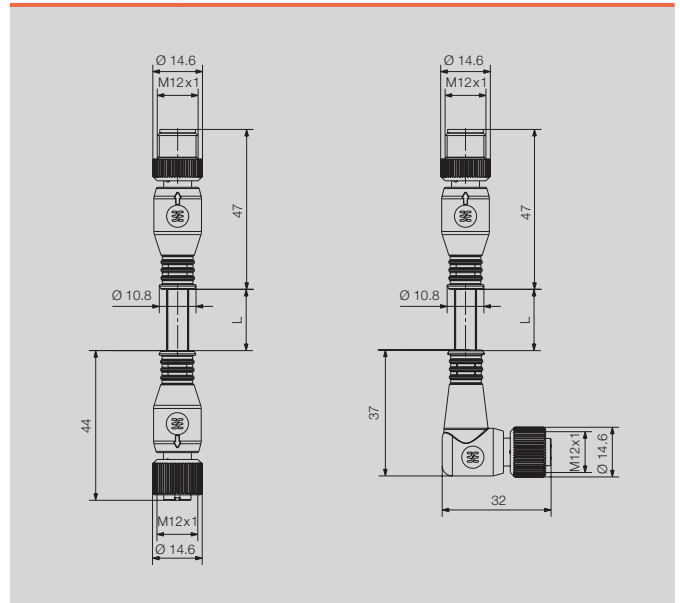
Type	Order No.
SAIL-M12GM12G-5-1.5T	1011970150
SAIL-M12GM12G-5-3.0T	1011970300
SAIL-M12GM12G-5-5.0T	1011970500
SAIL-M12GM12G-5-10T	1011971000
Other versions on request	

Technical data

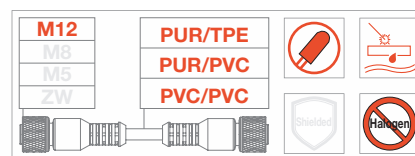
Sheathing colour	black
Rated current	4 A
Material	Protected against welding splatter
Protection class	IP 67
Core cross-section	0.34 mm ²
Contact surface	gold-plated
Temperature range	-30 ... 90 °C
Rated voltage	250 V (3- and 4-pole) / 125 V (5-pole)
(acc. to VDE standard 0110 ISO group C)	

L in the drawing is the cable length

Dimensioned drawing



Connecting cables
M12 to M12, 2 LEDs
A-coded
male, straight -
socket, angled



Ordering data

PUR / PVC	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
PUR / TPE halogen-free	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
PVC / PVC	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Resistant to welding splatter	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Note	
Other versions on request	

3-pole

Type	Order No.
SAIL-M12GM12W-3L1.5U	9457790150
SAIL-M12GM12W-3L3.0U	9457790300
SAIL-M12GM12W-3L5.0U	9457790500
SAIL-M12GM12W-3L10U	9457791000

4-pole

Type	Order No.
SAIL-M12GM12W-4-2L1.5U	1906410150
SAIL-M12GM12W-4-2L3.0U	1906410300
SAIL-M12GM12W-4-2L5.0U	1906410500
SAIL-M12GM12W-4-2L10U	1906411000

Type	Order No.

D

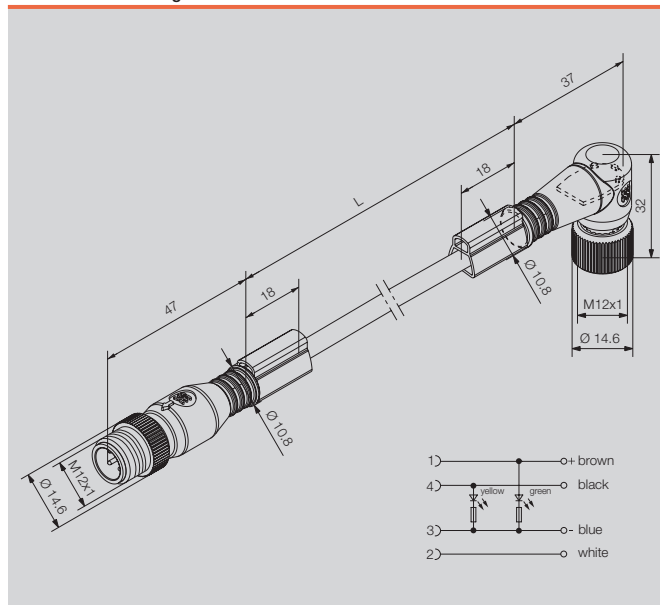
Technical data

Sheathing colour	black
Rated current	4 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.34 mm ²
Contact surface	gold-plated
Temperature range	-50 ... 80 °C
Rated voltage	250 V

(acc. to VDE standard 0110 ISO group C)

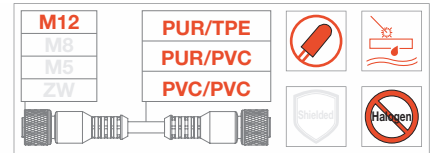
L in the drawing is the cable length

Dimensioned drawing



Sensor cables

Connecting cables
M12 to M12, 3 LEDs
A-coded
male, straight -
socket, angled



D

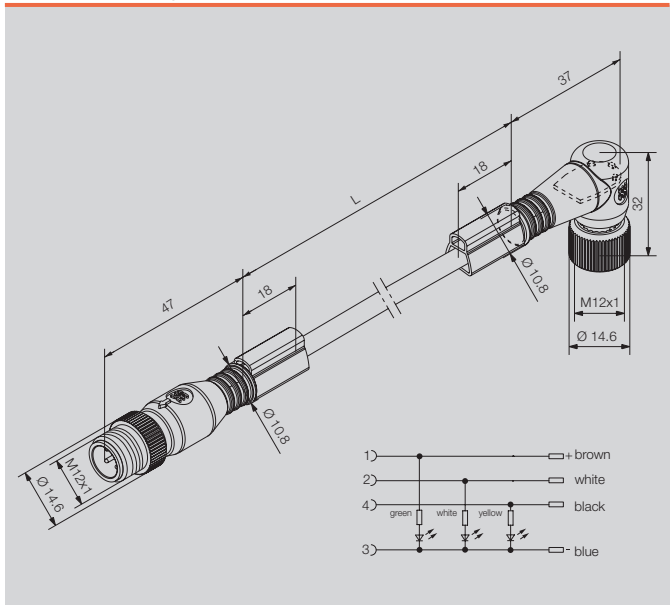
Ordering data

		4-pole					
		Type	Order No.	Type	Order No.	Type	Order No.
PUR / PVC	1.5 m	SAIL-M12GM12W-4-3L1.5U	1963910150				
	3.0 m	SAIL-M12GM12W-4-3L3.0U	1963910300				
	5.0 m	SAIL-M12GM12W-4-3L5.0U	1963910500				
	10.0 m	SAIL-M12GM12W-4-3L10U	1963911000				
PUR / TPE halogen-free	1.5 m	SAIL-M12GM12W-4-3L1.5Q	1963920150				
	3.0 m	SAIL-M12GM12W-4-3L3.0Q	1963920300				
	5.0 m	SAIL-M12GM12W-4-3L5.0Q	1963920500				
	10.0 m	SAIL-M12GM12W-4-3L10Q	1963921000				
PVC / PVC	1.5 m	SAIL-M12GM12W-4-3L1.5V	1963930150				
	3.0 m	SAIL-M12GM12W-4-3L3.0V	1963930300				
	5.0 m	SAIL-M12GM12W-4-3L5.0V	1963930500				
	10.0 m	SAIL-M12GM12W-4-3L10V	1963931000				
Resistant to welding splatter	1.5 m	SAIL-M12GM12W-4-3LW1.5T	1020930150				
	3.0 m	SAIL-M12GM12W-4-3LW3.0T	1020930300				
	5.0 m	SAIL-M12GM12W-4-3LW5.0T	1020930500				
	10.0 m	SAIL-M12GM12W-4-3LW10T	1020931000				
Note		Other versions on request					

Technical data

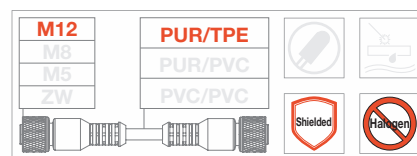
Sheathing colour	black
Rated current	4 A
Material	Protected against welding splatter
Protection class	IP 67
Core cross-section	0.34 mm ²
Contact surface	gold-plated
Temperature range	-30 ... 90 °C
Rated voltage	250 V (3- and 4-pole) / 125 V (5-pole)
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



L in the drawing is the cable length

Connecting cables
M12 to M12
A-coded
shielded



Ordering data

Male, straight - Socket, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, straight - Socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, angled - female socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Note	

		3-pole	
Type	Order No.	Type	Order No.
SAIL-M12GM12G-3S1.5Q	1058490150	SAIL-M12GM12G-4S1.5Q	1058500150
SAIL-M12GM12G-3S3.0Q	1058490300	SAIL-M12GM12G-4S3.0Q	1058500300
SAIL-M12GM12G-3S5.0Q	1058490500	SAIL-M12GM12G-4S5.0Q	1058500500
SAIL-M12GM12G-3S10Q	1058491000	SAIL-M12GM12G-4S10Q	1058501000
SAIL-M12GM12W-3S1.5Q	1059470150	SAIL-M12GM12W-4S1.5Q	1059480150
SAIL-M12GM12W-3S3.0Q	1059470300	SAIL-M12GM12W-4S3.0Q	1059480300
SAIL-M12GM12W-3S5.0Q	1059470500	SAIL-M12GM12W-4S5.0Q	1059480500
SAIL-M12GM12W-3S10Q	1059471000	SAIL-M12GM12W-4S10Q	1059481000
SAIL-M12WM12W-3S1.5Q	1059720150	SAIL-M12WM12W-4S1.5Q	1059730150
SAIL-M12WM12W-3S3.0Q	1059720300	SAIL-M12WM12W-4S3.0Q	1059730300
SAIL-M12WM12W-3S5.0Q	1059720500	SAIL-M12WM12W-4S5.0Q	1059730500
SAIL-M12WM12W-3S10Q	1059721000	SAIL-M12WM12W-4S10Q	1059731000
Other versions on request		Other versions on request	

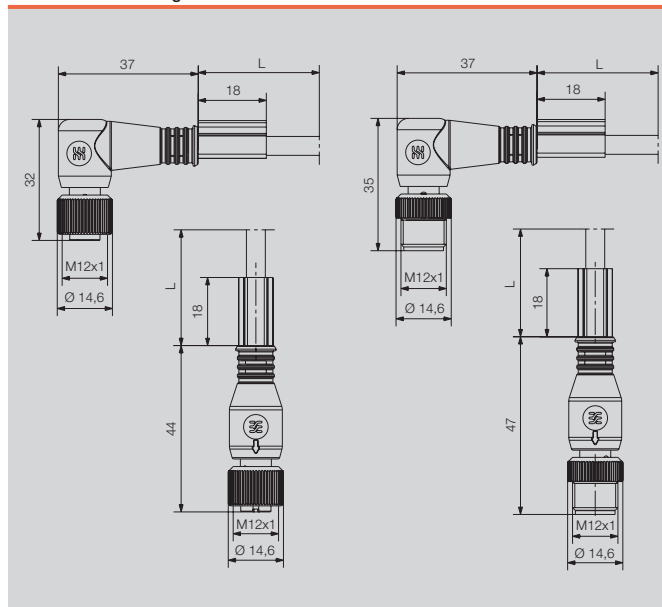
		4-pole	
Type	Order No.	Type	Order No.
SAIL-M12GM12G-4S1.5Q	1058500150	SAIL-M12GM12G-5S1.5Q	1058510150
SAIL-M12GM12G-4S3.0Q	1058500300	SAIL-M12GM12G-5S3.0Q	1058510300
SAIL-M12GM12G-4S5.0Q	1058500500	SAIL-M12GM12G-5S5.0Q	1058510500
SAIL-M12GM12G-4S10Q	1058501000	SAIL-M12GM12G-5S10Q	1058511000
SAIL-M12GM12W-4S1.5Q	1059480150	SAIL-M12GM12W-5S1.5Q	1059540150
SAIL-M12GM12W-4S3.0Q	1059480300	SAIL-M12GM12W-5S3.0Q	1059540300
SAIL-M12GM12W-4S5.0Q	1059480500	SAIL-M12GM12W-5S5.0Q	1059540500
SAIL-M12GM12W-4S10Q	1059481000	SAIL-M12GM12W-5S10Q	1059541000
SAIL-M12WM12W-4S1.5Q	1059730150	SAIL-M12WM12W-5S1.5Q	1059740150
SAIL-M12WM12W-4S3.0Q	1059730300	SAIL-M12WM12W-5S3.0Q	1059740300
SAIL-M12WM12W-4S5.0Q	1059730500	SAIL-M12WM12W-5S5.0Q	1059740500
SAIL-M12WM12W-4S10Q	1059731000	SAIL-M12WM12W-5S10Q	1059741000
Other versions on request		Other versions on request	

		5-pole	
Type	Order No.	Type	Order No.
SAIL-M12GM12G-5S1.5Q	1058510150	SAIL-M12GM12W-5S1.5Q	1059540150
SAIL-M12GM12G-5S3.0Q	1058510300	SAIL-M12GM12W-5S3.0Q	1059540300
SAIL-M12GM12G-5S5.0Q	1058510500	SAIL-M12GM12W-5S5.0Q	1059540500
SAIL-M12GM12G-5S10Q	1058511000	SAIL-M12GM12W-5S10Q	1059541000
SAIL-M12WM12W-5S1.5Q	1059740150	SAIL-M12WM12W-5S3.0Q	1059740300
SAIL-M12WM12W-5S3.0Q	1059740300	SAIL-M12WM12W-5S5.0Q	1059740500
SAIL-M12WM12W-5S5.0Q	1059740500	SAIL-M12WM12W-5S10Q	1059741000
SAIL-M12WM12W-5S10Q	1059741000	Other versions on request	

Technical data

Sheathing colour	black
Rated current	4 A
Material	PUR/ TPE
Protection class	IP 67
Core cross-section	0.34 mm ²
Contact surface	gold-plated
Temperature range	-25 ... 80 °C
Rated voltage	250 V (3- and 4-pole) / 125 V (5-pole)
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing

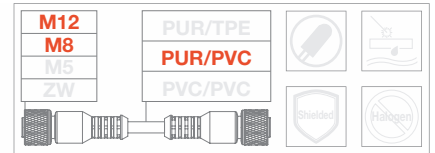


L in the drawing is the cable length

Sensor cables

Connecting cables

M12 to M8
PUR / PVC



Ordering data

Male, straight - Socket, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, straight - Socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, angled - female socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	

3-pole

Type	Order No.
SAIL-M12GM8G-3-1.5U	9457770150
SAIL-M12GM8G-3-3.0U	9457770300
SAIL-M12GM8G-3-5.0U	9457770500
SAIL-M12GM8G-3-10U	9457771000
SAIL-M12GM8W-3-1.5U	9457980150
SAIL-M12GM8W-3-3.0U	9457980300
SAIL-M12GM8W-3-5.0U	9457980500
SAIL-M12GM8W-3-10U	9457981000
SAIL-M12WM8W-3-1.5U	1906330150
SAIL-M12WM8W-3-3.0U	1906330300
SAIL-M12WM8W-3-5.0U	1906330500
SAIL-M12WM8W-3-10U	1906331000

Other versions on request

4-pole

Type	Order No.
SAIL-M12GM8G-4-1.5U	9456660150
SAIL-M12GM8G-4-3.0U	9456660300
SAIL-M12GM8G-4-5.0U	9456660500
SAIL-M12GM8G-4-10U	9456661000
SAIL-M12GM8W-4-1.5U	9456670150
SAIL-M12GM8W-4-3.0U	9456670300
SAIL-M12GM8W-4-5.0U	9456670500
SAIL-M12GM8W-4-10U	9456671000
SAIL-M12WM8W-4-1.5U	1906340150
SAIL-M12WM8W-4-3.0U	1906340300
SAIL-M12WM8W-4-5.0U	1906340500
SAIL-M12WM8W-4-10U	1906341000

Other versions on request

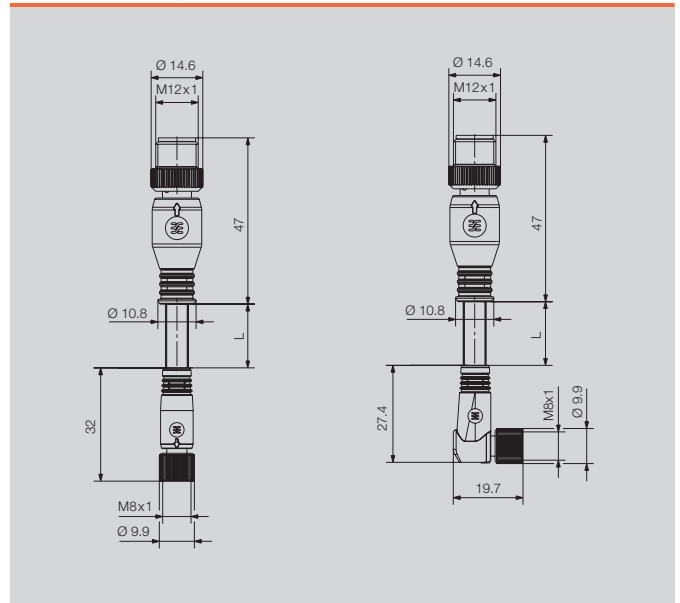
Type	Order No.

Technical data

Sheathing colour	black
Rated current	4 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.25 mm ²
Contact surface	gold-plated
Temperature range	-30 ... 80 °C
Rated voltage	60 V

(acc. to VDE standard 0110 ISO group C)

Dimensioned drawing



L in the drawing is the cable length

Connecting cables
M12 to M8
PUR / TPE halogen-free



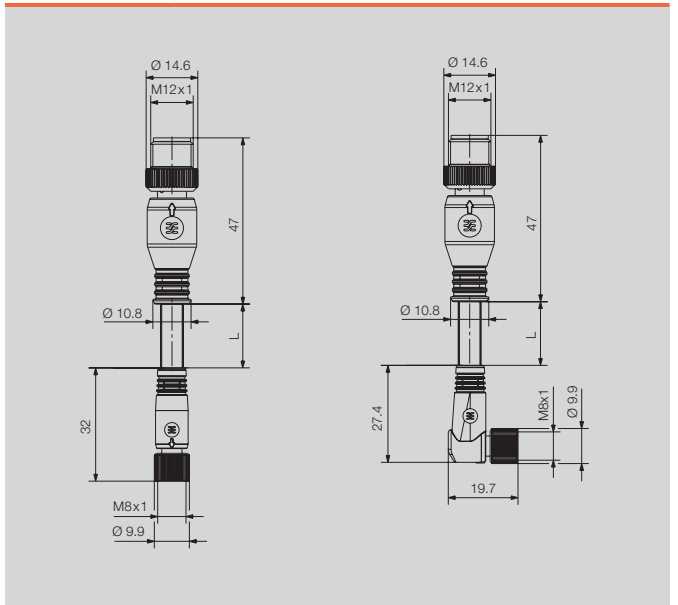
Ordering data

		3-pole		4-pole			
Type		Type	Order No.	Type	Order No.	Type	Order No.
Male, straight - Socket, straight	1.5 m	SAIL-M12GM8G-3-1.5Q	1938040150	SAIL-M12GM8G-4-1.5Q	1938070150		
	3.0 m	SAIL-M12GM8G-3-3.0Q	1938040300	SAIL-M12GM8G-4-3.0Q	1938070300		
	5.0 m	SAIL-M12GM8G-3-5.0Q	1938040500	SAIL-M12GM8G-4-5.0Q	1938070500		
	10.0 m	SAIL-M12GM8G-3-10Q	1938041000	SAIL-M12GM8G-4-10Q	1938071000		
Male, straight - Socket, angled	1.5 m	SAIL-M12GM8W-3-1.5Q	1938050150	SAIL-M12GM8W-4-1.5Q	1938080150		
	3.0 m	SAIL-M12GM8W-3-3.0Q	1938050300	SAIL-M12GM8W-4-3.0Q	1938080300		
	5.0 m	SAIL-M12GM8W-3-5.0Q	1938050500	SAIL-M12GM8W-4-5.0Q	1938080500		
	10.0 m	SAIL-M12GM8W-3-10Q	1938051000	SAIL-M12GM8W-4-10Q	1938081000		
Male, angled - female socket, angled	1.5 m	SAIL-M12WM8W-3-1.5Q	1938060150	SAIL-M12WM8W-4-1.5Q	1938090150		
	3.0 m	SAIL-M12WM8W-3-3.0Q	1938060300	SAIL-M12WM8W-4-3.0Q	1938090300		
	5.0 m	SAIL-M12WM8W-3-5.0Q	1938060500	SAIL-M12WM8W-4-5.0Q	1938090500		
	10.0 m	SAIL-M12WM8W-3-10Q	1938061000	SAIL-M12WM8W-4-10Q	1938091000		
Note		Other versions on request		Other versions on request			

Technical data

Sheathing colour	black
Rated current	4 A
Material	PUR/ TPE
Protection class	IP 67
Core cross-section	0.25 mm ²
Contact surface	gold-plated
Temperature range	-50 ... 80 °C
Rated voltage	60 V
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



L in the drawing is the cable length

Sensor cables

Connecting cables

M12 to M8
PVC / PVC



D

Ordering data

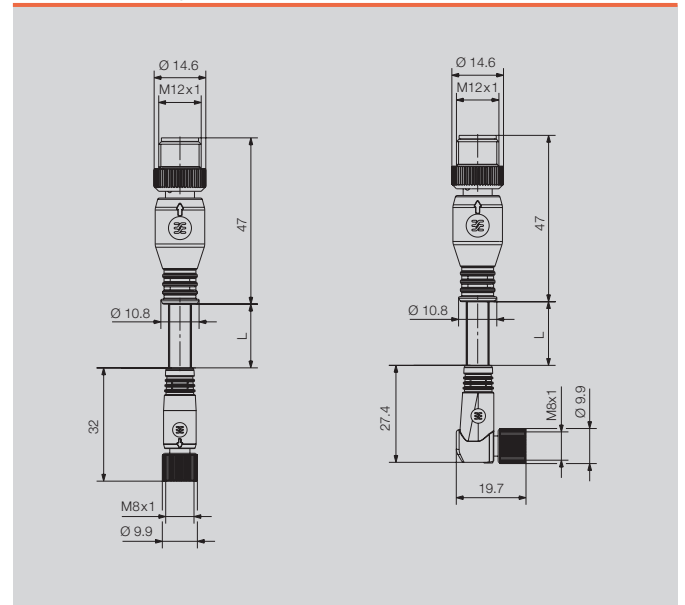
		3-pole		4-pole			
		Type	Order No.	Type	Order No.	Type	Order No.
Male, straight - Socket, straight	1.5 m	SAIL-M12GM8G-3-1.5V	1938170150	SAIL-M12GM8G-4-1.5V	1938200150		
	3.0 m	SAIL-M12GM8G-3-3.0V	1938170300	SAIL-M12GM8G-4-3.0V	1938200300		
	5.0 m	SAIL-M12GM8G-3-5.0V	1938170500	SAIL-M12GM8G-4-5.0V	1938200500		
	10.0 m	SAIL-M12GM8G-3-10V	1938171000	SAIL-M12GM8G-4-10V	1938201000		
Male, straight - Socket, angled	1.5 m	SAIL-M12GM8W-3-1.5V	1938180150	SAIL-M12GM8W-4-1.5V	1938210150		
	3.0 m	SAIL-M12GM8W-3-3.0V	1938180300	SAIL-M12GM8W-4-3.0V	1938210300		
	5.0 m	SAIL-M12GM8W-3-5.0V	1938180500	SAIL-M12GM8W-4-5.0V	1938210500		
	10.0 m	SAIL-M12GM8W-3-10V	1938181000	SAIL-M12GM8W-4-10V	1938211000		
Male, angled - female socket, angled	1.5 m	SAIL-M12WM8W-3-1.5V	1938190150	SAIL-M12WM8W-4-1.5V	1938220150		
	3.0 m	SAIL-M12WM8W-3-3.0V	1938190300	SAIL-M12WM8W-4-3.0V	1938220300		
	5.0 m	SAIL-M12WM8W-3-5.0V	1938190500	SAIL-M12WM8W-4-5.0V	1938220500		
	10.0 m	SAIL-M12WM8W-3-10V	1938191000	SAIL-M12WM8W-4-10V	1938221000		
Note		Other versions on request		Other versions on request			

Technical data

Sheathing colour	black
Rated current	4 A
Material	PVC/PVC
Protection class	IP 67
Core cross-section	0.25 mm ²
Contact surface	gold-plated
Temperature range	-30 ... 80 °C
Rated voltage	60 V

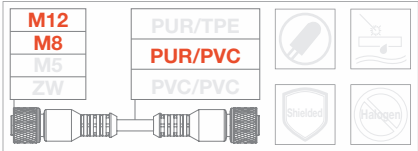
(acc. to VDE standard 0110 ISO group C)

Dimensioned drawing



L in the drawing is the cable length

Connecting cables
 M12 to M8
 Snap connection
 PUR / PVC



Ordering data

Male, straight - Socket, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, straight - Socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	

3-pole	
Type	Order No.
SAIL-M12GM8GR-3-1.5U	1984530150
SAIL-M12GM8GR-3-3.0U	1984530300
SAIL-M12GM8GR-3-5.0U	1984530500
SAIL-M12GM8GR-3-10U	1984531000
SAIL-M12GM8WR-3-1.5U	9457570150
SAIL-M12GM8WR-3-3.0U	9457570300
SAIL-M12GM8WR-3-5.0U	9457570500
SAIL-M12GM8WR-3-10U	9457571000
Other versions on request	

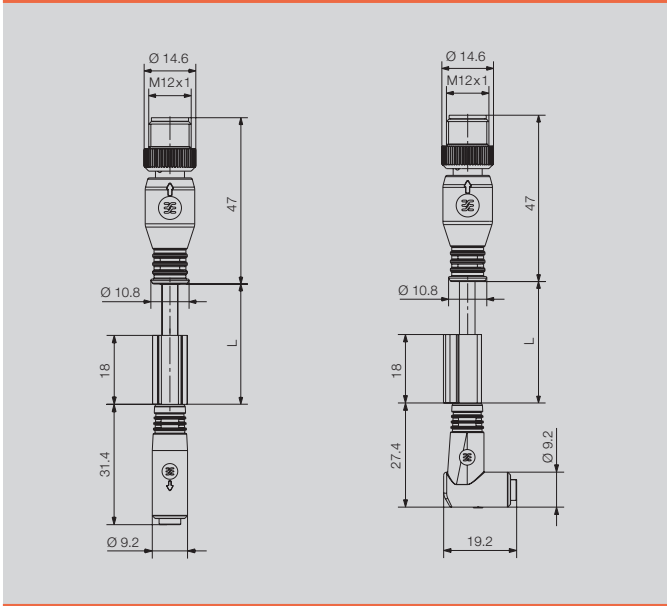
Type	Order No.

Type	Order No.

Technical data

Sheathing colour	black
Rated current	4 A
Material	PUR/PVC
Protection class	IP 65
Core cross-section	0.25 mm ²
Contact surface	gold-plated
Temperature range	-30 ... 80 °C
Rated voltage	60 V
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing

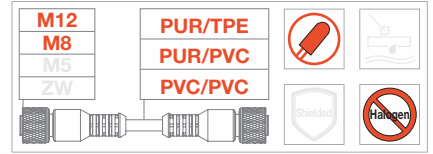


L in the drawing is the cable length

Sensor cables

Connecting cables

M12 to M8, LED



D

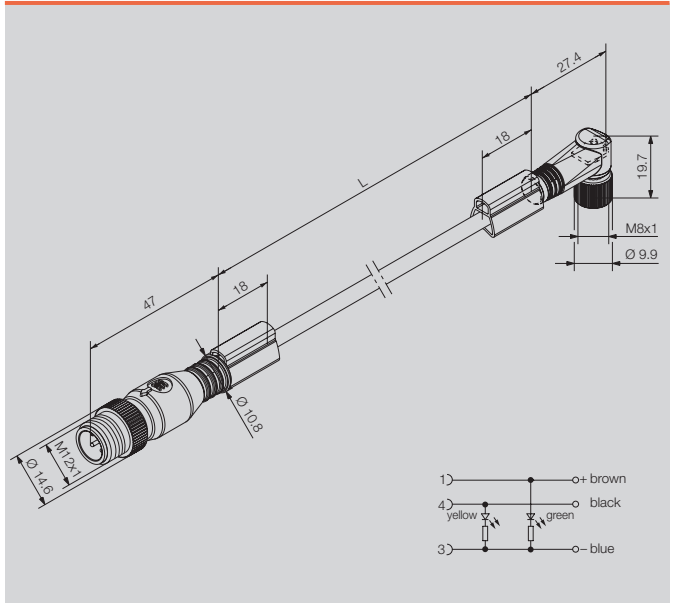
Ordering data

		3-pole		4-pole			
PUR / PVC	Type	Type	Order No.	Type	Order No.	Type	Order No.
	1.5 m	SAIL-M12GM8W-3L1.5U	9457760150	SAIL-M12GM8W-4L1.5U	1906430150		
	3.0 m	SAIL-M12GM8W-3L3.0U	9457760300	SAIL-M12GM8W-4L3.0U	1906430300		
	5.0 m	SAIL-M12GM8W-3L5.0U	9457760500	SAIL-M12GM8W-4L5.0U	1906430500		
	10.0 m	SAIL-M12GM8W-3L10U	9457761000	SAIL-M12GM8W-4L10U	1906431000		
PUR / TPE halogen-free							
	1.5 m	SAIL-M12GM8W-3L1.5Q	1962270150	SAIL-M12GM8W-4L1.5Q	1962280150		
	3.0 m	SAIL-M12GM8W-3L3.0Q	1962270300	SAIL-M12GM8W-4L3.0Q	1962280300		
	5.0 m	SAIL-M12GM8W-3L5.0Q	1962270500	SAIL-M12GM8W-4L5.0Q	1962280500		
	10.0 m	SAIL-M12GM8W-3L10Q	1962271000	SAIL-M12GM8W-4L10Q	1962281000		
PVC / PVC							
	1.5 m	SAIL-M12GM8W-3L1.5V	1962290150	SAIL-M12GM8W-4L1.5V	1962300150		
	3.0 m	SAIL-M12GM8W-3L3.0V	1962290300	SAIL-M12GM8W-4L3.0V	1962300300		
	5.0 m	SAIL-M12GM8W-3L5.0V	1962290500	SAIL-M12GM8W-4L5.0V	1962300500		
	10.0 m	SAIL-M12GM8W-3L10V	1962291000	SAIL-M12GM8W-4L10V	1962301000		
Note	Other versions on request			Other versions on request			

Technical data

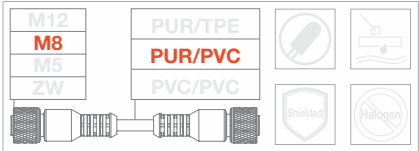
Sheathing colour	black
Rated current	4 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.25 mm ²
Contact surface	gold-plated
Temperature range	-50 ... 80 °C
Rated voltage	60 V
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



L in the drawing is the cable length

Connecting cables
M8 to M8
PUR / PVC



Ordering data

Male, straight - Socket, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, straight - Socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, angled - female socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Note	
Other versions on request	

		3-pole	
Type	Order No.	Type	Order No.
SAIL-M8GM8G-3-1.5U	1824570150	SAIL-M8GM8G-3-1.5U	1824570150
SAIL-M8GM8G-3-3.0U	1824570300	SAIL-M8GM8G-3-3.0U	1824570300
SAIL-M8GM8G-3-5.0U	1824570500	SAIL-M8GM8G-3-5.0U	1824570500
SAIL-M8GM8G-3-10U	1824571000	SAIL-M8GM8G-3-10U	1824571000
SAIL-M8GM8W-3-1.5U	1824580150	SAIL-M8GM8W-3-1.5U	1824580150
SAIL-M8GM8W-3-3.0U	1824580300	SAIL-M8GM8W-3-3.0U	1824580300
SAIL-M8GM8W-3-5.0U	1824580500	SAIL-M8GM8W-3-5.0U	1824580500
SAIL-M8GM8W-3-10U	1824581000	SAIL-M8GM8W-3-10U	1824581000
SAIL-M8WM8W-3-1.5U	1857670150	SAIL-M8WM8W-3-1.5U	1857670150
SAIL-M8WM8W-3-3.0U	1857670300	SAIL-M8WM8W-3-3.0U	1857670300
SAIL-M8WM8W-3-5.0U	1857670500	SAIL-M8WM8W-3-5.0U	1857670500
SAIL-M8WM8W-3-10U	1857671000	SAIL-M8WM8W-3-10U	1857671000
Other versions on request		Other versions on request	

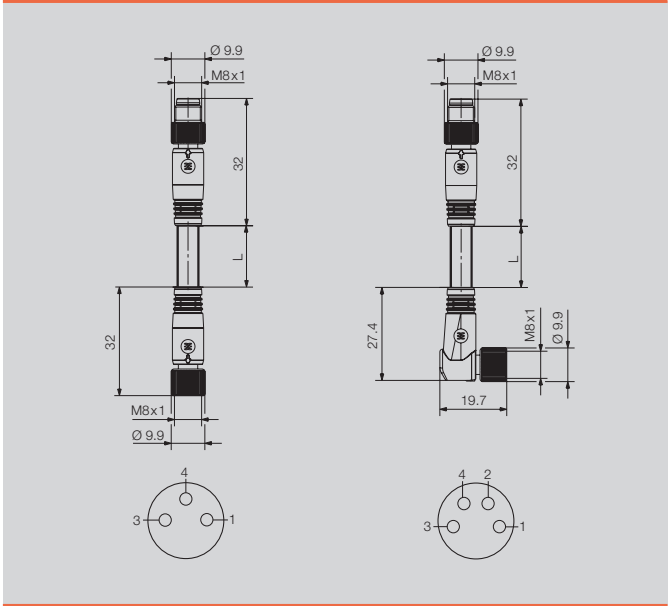
		4-pole	
Type	Order No.	Type	Order No.
SAIL-M8GM8G-4-1.5U	1880470150	SAIL-M8GM8G-4-1.5U	1880470150
SAIL-M8GM8G-4-3.0U	1880470300	SAIL-M8GM8G-4-3.0U	1880470300
SAIL-M8GM8G-4-5.0U	1880470500	SAIL-M8GM8G-4-5.0U	1880470500
SAIL-M8GM8G-4-10U	1880471000	SAIL-M8GM8G-4-10U	1880471000
SAIL-M8GM8W-4-1.5U	1857660150	SAIL-M8GM8W-4-1.5U	1857660150
SAIL-M8GM8W-4-3.0U	1857660300	SAIL-M8GM8W-4-3.0U	1857660300
SAIL-M8GM8W-4-5.0U	1857660500	SAIL-M8GM8W-4-5.0U	1857660500
SAIL-M8GM8W-4-10U	1857661000	SAIL-M8GM8W-4-10U	1857661000
SAIL-M8WM8W-4-1.5U	1857680150	SAIL-M8WM8W-4-1.5U	1857680150
SAIL-M8WM8W-4-3.0U	1857680300	SAIL-M8WM8W-4-3.0U	1857680300
SAIL-M8WM8W-4-5.0U	1857680500	SAIL-M8WM8W-4-5.0U	1857680500
SAIL-M8WM8W-4-10U	1857681000	SAIL-M8WM8W-4-10U	1857681000
Other versions on request		Other versions on request	

D

Technical data

Sheathing colour	black
Rated current	4 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.25 mm ²
Contact surface	gold-plated
Temperature range	-30 ... 80 °C
Rated voltage	60 V
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



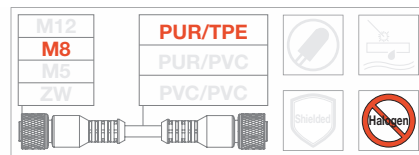
L in the drawing is the cable length

Sensor cables

Connecting cables

M8 to M8

PUR / TPE halogen-free



Ordering data

Male, straight - Socket, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, straight - Socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, angled - female socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Note	

		3-pole		4-pole	
Type	Order No.	Type	Order No.	Type	Order No.
SAIL-M8GM8G-3-1.5Q	1926890150	SAIL-M8GM8G-4-1.5Q	1926900150		
SAIL-M8GM8G-3-3.0Q	1926890300	SAIL-M8GM8G-4-3.0Q	1926900300		
SAIL-M8GM8G-3-5.0Q	1926890500	SAIL-M8GM8G-4-5.0Q	1926900500		
SAIL-M8GM8G-3-10Q	1926891000	SAIL-M8GM8G-4-10Q	1926901000		
SAIL-M8GM8W-3-1.5Q	1926910150	SAIL-M8GM8W-4-1.5Q	1926920150		
SAIL-M8GM8W-3-3.0Q	1926910300	SAIL-M8GM8W-4-3.0Q	1926920300		
SAIL-M8GM8W-3-5.0Q	1926910500	SAIL-M8GM8W-4-5.0Q	1926920500		
SAIL-M8GM8W-3-10Q	1926911000	SAIL-M8GM8W-4-10Q	1926921000		
SAIL-M8WM8W-3-1.5Q	1926950150	SAIL-M8WM8W-4-1.5Q	1926960150		
SAIL-M8WM8W-3-3.0Q	1926950300	SAIL-M8WM8W-4-3.0Q	1926960300		
SAIL-M8WM8W-3-5.0Q	1926950500	SAIL-M8WM8W-4-5.0Q	1926960500		
SAIL-M8WM8W-3-10Q	1926951000	SAIL-M8WM8W-4-10Q	1926961000		
Other versions on request		Other versions on request			

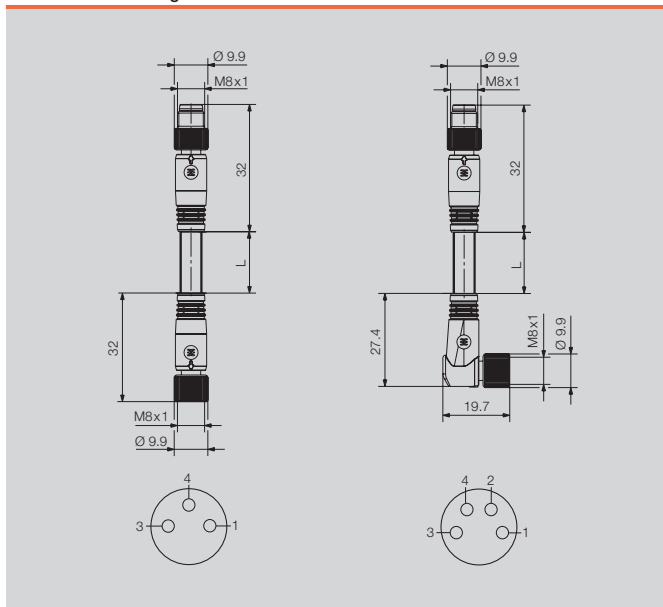
Type	Order No.	Type	Order No.

Type	Order No.

Technical data

Sheathing colour	black
Rated current	4 A
Material	PUR/ TPE
Protection class	IP 67
Core cross-section	0.25 mm ²
Contact surface	gold-plated
Temperature range	-50 ... 80 °C
Rated voltage	60 V
(acc. to VDE standard 0110 ISO group C)	

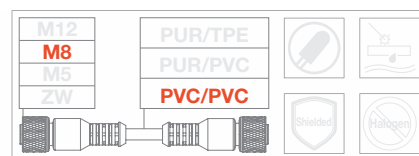
Dimensioned drawing



L in the drawing is the cable length

Connecting cables

M8 to M8
PVC / PVC



SAI accessories



Ordering data

Male, straight - Socket, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, straight - Socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, angled - female socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	

3-pole	
Type	Order No.
SAIL-M8GM8G-3-1.5V	1927150150
SAIL-M8GM8G-3-3.0V	1927150300
SAIL-M8GM8G-3-5.0V	1927150500
SAIL-M8GM8G-3-10V	1927151000
SAIL-M8GM8W-3-1.5V	1927170150
SAIL-M8GM8W-3-3.0V	1927170300
SAIL-M8GM8W-3-5.0V	1927170500
SAIL-M8GM8W-3-10V	1927171000
SAIL-M8WM8W-3-1.5V	1927210150
SAIL-M8WM8W-3-3.0V	1927210300
SAIL-M8WM8W-3-5.0V	1927210500
SAIL-M8WM8W-3-10V	1927211000
Other versions on request	

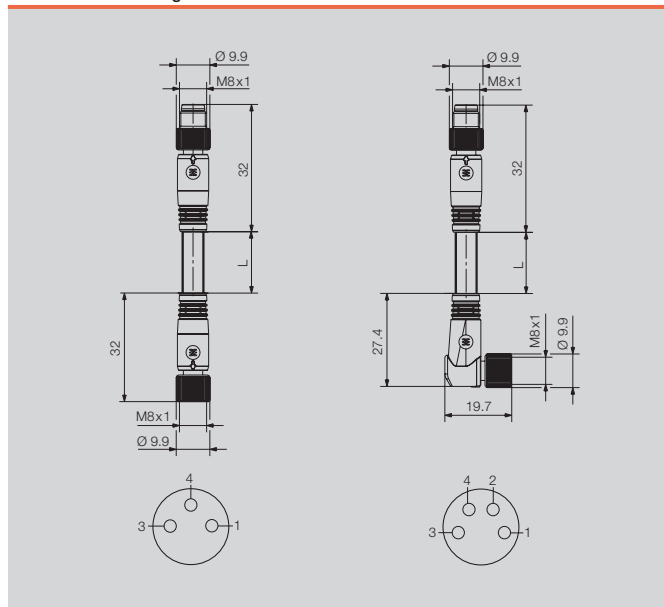
4-pole	
Type	Order No.
SAIL-M8GM8G-4-1.5V	1927160150
SAIL-M8GM8G-4-3.0V	1927160300
SAIL-M8GM8G-4-5.0V	1927160500
SAIL-M8GM8G-4-10V	1927161000
SAIL-M8GM8W-4-1.5V	1927180150
SAIL-M8GM8W-4-3.0V	1927180300
SAIL-M8GM8W-4-5.0V	1927180500
SAIL-M8GM8W-4-10V	1927181000
SAIL-M8WM8W-4-1.5V	1927220150
SAIL-M8WM8W-4-3.0V	1927220300
SAIL-M8WM8W-4-5.0V	1927220500
SAIL-M8WM8W-4-10V	1927221000
Other versions on request	

Type	Order No.

Technical data

Sheathing colour	black
Rated current	4 A
Material	PVC/PVC
Protection class	IP 67
Core cross-section	0.25 mm ²
Contact surface	gold-plated
Temperature range	-30 ... 80 °C
Rated voltage	60 V
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



L in the drawing is the cable length

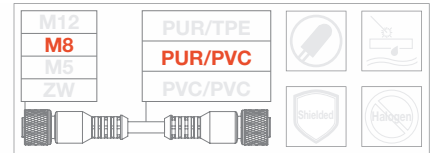
Sensor cables

Connecting cables

M8 to M8

Snap connection

PUR / PVC



Ordering data

Male, straight - Socket, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, straight - Socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, angled - female socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Note	

3-pole

Type	Order No.
SAIL-M8GM8GR-3-1.5U	1948470150
SAIL-M8GM8GR-3-3.0U	1948470300
SAIL-M8GM8GR-3-5.0U	1948470500
SAIL-M8GM8GR-3-10U	1948471000
SAIL-M8GM8WR-3-1.5U	1948480150
SAIL-M8GM8WR-3-3.0U	1948480300
SAIL-M8GM8WR-3-5.0U	1948480500
SAIL-M8GM8WR-3-10U	1948481000
SAIL-M8WM8WR-3-1.5U	1948490150
SAIL-M8WM8WR-3-3.0U	1948490300
SAIL-M8WM8WR-3-5.0U	1948490500
SAIL-M8WM8WR-3-10U	1948491000
Other versions on request	

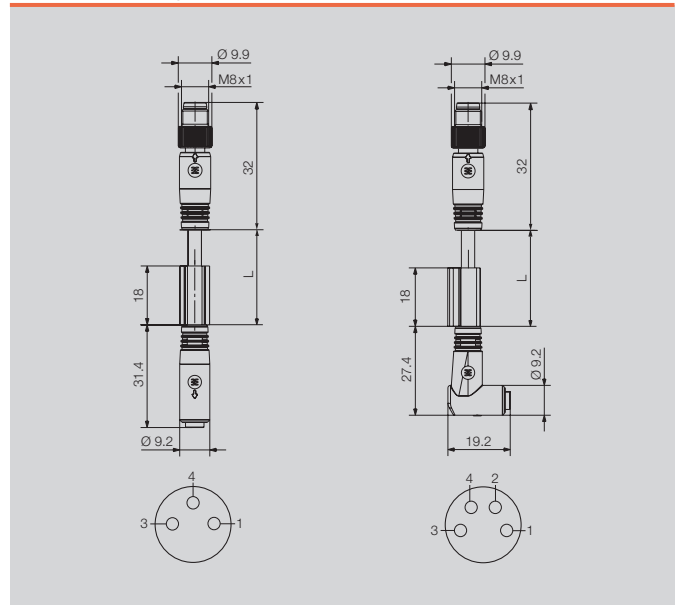
4-pole

Type	Order No.
SAIL-M8GM8GR-4-1.5U	1948500150
SAIL-M8GM8GR-4-3.0U	1948500300
SAIL-M8GM8GR-4-5.0U	1948500500
SAIL-M8GM8GR-4-10U	1948501000
SAIL-M8GM8WR-4-1.5U	1948510150
SAIL-M8GM8WR-4-3.0U	1948510300
SAIL-M8GM8WR-4-5.0U	1948510500
SAIL-M8GM8WR-4-10U	1948511000
SAIL-M8WM8WR-4-1.5U	1948520150
SAIL-M8WM8WR-4-3.0U	1948520300
SAIL-M8WM8WR-4-5.0U	1948520500
SAIL-M8WM8WR-4-10U	1948521000
Other versions on request	

Technical data

Sheathing colour	black
Rated current	4 A
Material	PUR/PVC
Protection class	IP 65
Core cross-section	0.25 mm ²
Contact surface	gold-plated
Temperature range	-30 ... 80 °C
Rated voltage	60 V
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



L in the drawing is the cable length

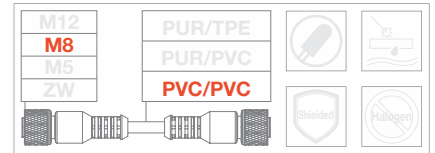
Sensor cables

Connecting cables

M8 to M8

Snap connection

PVC / PVC



Ordering data

Male, straight - Socket, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, straight - Socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, angled - female socket, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Note	

3-pole

Type	Order No.
SAIL-M8GM8GR-3-1.5V	1948650150
SAIL-M8GM8GR-3-3.0V	1948650300
SAIL-M8GM8GR-3-5.0V	1948650500
SAIL-M8GM8GR-3-10V	1948651000
SAIL-M8GM8WR-3-1.5V	1948660150
SAIL-M8GM8WR-3-3.0V	1948660300
SAIL-M8GM8WR-3-5.0V	1948660500
SAIL-M8GM8WR-3-10V	1948661000
SAIL-M8WM8WR-3-1.5V	1948670150
SAIL-M8WM8WR-3-3.0V	1948670300
SAIL-M8WM8WR-3-5.0V	1948670500
SAIL-M8WM8WR-3-10V	1948671000
Other versions on request	

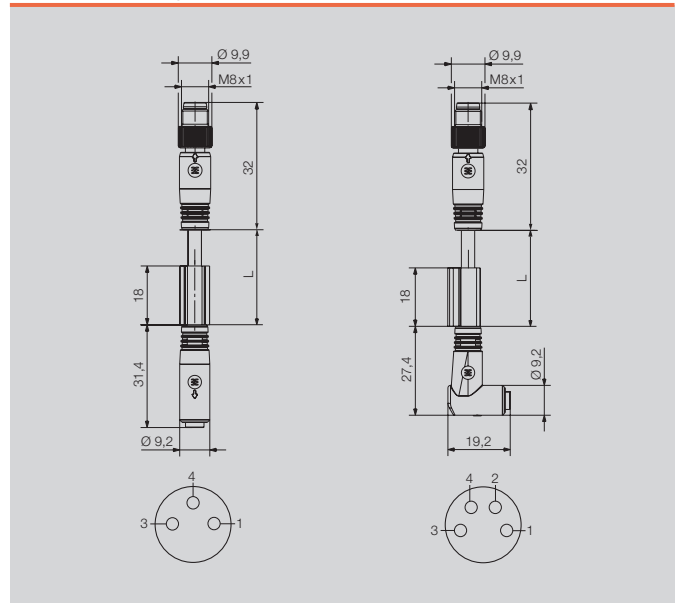
4-pole

Type	Order No.
SAIL-M8GM8GR-4-1.5V	1948680150
SAIL-M8GM8GR-4-3.0V	1948680300
SAIL-M8GM8GR-4-5.0V	1948680500
SAIL-M8GM8GR-4-10V	1948681000
SAIL-M8GM8WR-4-1.5V	1948690150
SAIL-M8GM8WR-4-3.0V	1948690300
SAIL-M8GM8WR-4-5.0V	1948690500
SAIL-M8GM8WR-4-10V	1948691000
SAIL-M8WM8WR-4-1.5V	1948700150
SAIL-M8WM8WR-4-3.0V	1948700300
SAIL-M8WM8WR-4-5.0V	1948700500
SAIL-M8WM8WR-4-10V	1948701000
Other versions on request	

Technical data

Sheathing colour	black
Rated current	4 A
Material	PVC/PVC
Protection class	IP 65
Core cross-section	0.25 mm ²
Contact surface	gold-plated
Temperature range	-30 ... 80 °C
Rated voltage	60 V
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



L in the drawing is the cable length

Twin sensor cables with three plug-in connectors: M12/M8

M12/M8



In general, two sensor cables can be fed with a M12 connector to the distributor. A wide variety of wiring arrangements are possible with these cables. All M12 and M8 connections can be implemented.

Weidmüller has all the necessary components ready. With mechanical engineering, this type of application is an exception.

4-pole connection

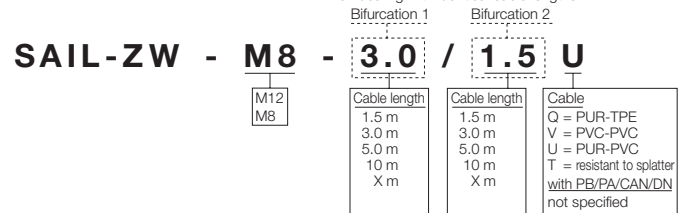
In the SAI distributor, the 4-pole socket is fitted with pins 1, 3, 4 and 5. The 4-pole SAI plug is fitted with pins 1, 2, 3 and 4. This corresponds to market standards.

Special care must be taken when wiring combinations of 4-pole plugs and distributors.

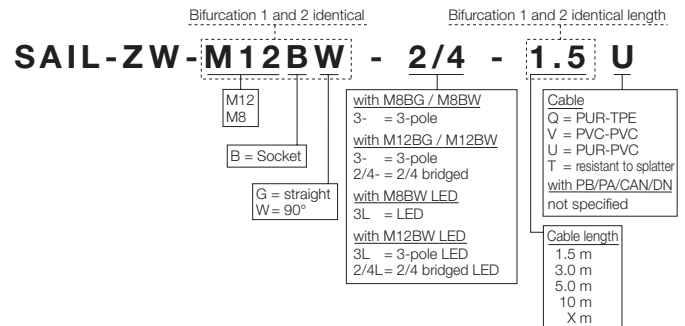
Designation

Twin plug
Bifurcation open for "1" and "2" ends

One designation is no longer necessary when dealing with identical cable lengths.

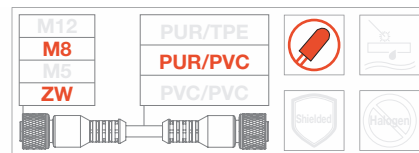


Twin plug
Connecting cable



Twin cabling

M12 to M8 or M12



Ordering data

Male, straight - 2 female sockets, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, straight - 2 females, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male straight - 2 female sockets angled with LED	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, straight - open ended	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Note	Other versions on request

3-pole

Type	Order No.
SAIL-ZW-M8BG-3-1.5U	9457490150
SAIL-ZW-M8BG-3-3.0U	9457490300
SAIL-ZW-M8BG-3-5.0U	9457490500
SAIL-ZW-M8BG-3-10U	9457491000
Male, straight - 2 females, angled	
SAIL-ZW-M8BW-3-1.5U	1964300150
SAIL-ZW-M8BW-3-3.0U	1964300300
SAIL-ZW-M8BW-3-5.0U	1964300500
SAIL-ZW-M8BW-3-10U	1964301000
Male straight - 2 female sockets angled with LED	
SAIL-ZW-M8BW-3L1.5U	9457410150
SAIL-ZW-M8BW-3L3.0U	9457410300
SAIL-ZW-M8BW-3L5.0U	9457410500
SAIL-ZW-M8BW-3L10U	9457411000
Male, straight - open ended	
SAIL-ZW-M12-3-1.5U	1964310150
SAIL-ZW-M12-3-3.0U	1964310300
SAIL-ZW-M12-3-5.0U	1964310500
SAIL-ZW-M12-3-10U	1964311000

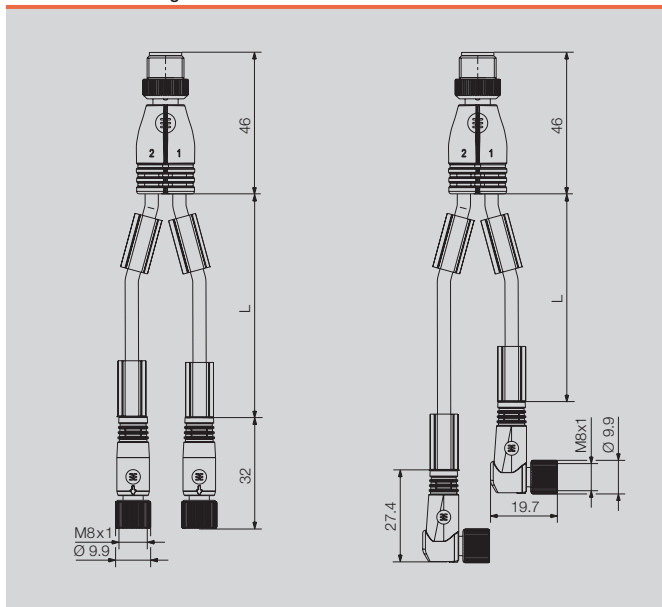
Type	Order No.

Type	Order No.

Technical data

Sheathing colour	black
Rated current	4 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.25 mm ²
Contact surface	gold-plated
Temperature range	-25 ... 80 °C
Rated voltage	250 V
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



L in the drawing is the cable length

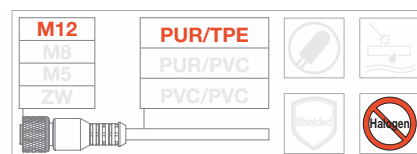
B-coded M12 cables



Connector coding is very important whenever the potential for damage exists when connectors are incorrectly plugged together. This risk is particularly high when you are working with different voltages in your facility and these voltages must be plugged in. For example, it is not unusual to connect 110 or 230 V with a M12 plug-in connector. However if a 24 V electric potential is connected with a 110 or 230 V line, it will inevitably lead to destructive results. B-coding has been introduced for such cases. B-coded connectors are shaped so that they can not be fitted together unless extreme force is used. This coding makes it safe to use the standard M12 connector system in a single machine for different voltages which may exceed 24 V. For the SAI Active Universal System, the power plug is A-coded since it only provides 24 V. The Profibus DP also takes advantage of this coding scheme. It is currently the only bus system using B-coded M12 plugs for IP67-protected connections. In this case, special approved bulk stock cable is used instead of the power cables.

D

Power cables

M12, one end without connector, unshielded
B-coded

D

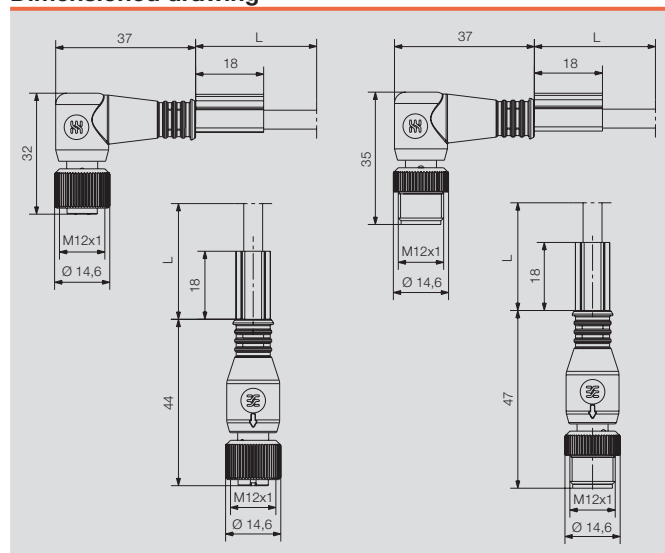
Ordering data

Male, straight		3-pole		4-pole		5-pole	
Type	(Qty.=1)	Type	(Qty.=1)	Type	(Qty.=1)	Type	(Qty.=1)
1.5 m		SAIL-M12G-3B-1.5Q	1057770150	SAIL-M12G-4B-1.5Q	1057780150	SAIL-M12G-5B-1.5Q	1057790150
3.0 m		SAIL-M12G-3B-3.0Q	1057770300	SAIL-M12G-4B-3.0Q	1057780300	SAIL-M12G-5B-3.0Q	1057790300
5.0 m		SAIL-M12G-3B-5.0Q	1057770500	SAIL-M12G-4B-5.0Q	1057780500	SAIL-M12G-5B-5.0Q	1057790500
10.0 m		SAIL-M12G-3B-10Q	1057771000	SAIL-M12G-4B-10Q	1057781000	SAIL-M12G-5B-10Q	1057791000
Male, angled		3-pole		4-pole		5-pole	
1.5 m		SAIL-M12W-3B-1.5Q	1057800150	SAIL-M12W-4B-1.5Q	1057810150	SAIL-M12W-5B-1.5Q	1057820150
3.0 m		SAIL-M12W-3B-3.0Q	1057800300	SAIL-M12W-4B-3.0Q	1057810300	SAIL-M12W-5B-3.0Q	1057820300
5.0 m		SAIL-M12W-3B-5.0Q	1057800500	SAIL-M12W-4B-5.0Q	1057810500	SAIL-M12W-5B-5.0Q	1057820500
10.0 m		SAIL-M12W-3B-10Q	1057801000	SAIL-M12W-4B-10Q	1057811000	SAIL-M12W-5B-10Q	1057821000
Female, straight		3-pole		4-pole		5-pole	
1.5 m		SAIL-M12BG-3B-1.5Q	1057740150	SAIL-M12BG-4B-1.5Q	1057750150	SAIL-M12BG-5B-1.5Q	1061880150
3.0 m		SAIL-M12BG-3B-3.0Q	1057740300	SAIL-M12BG-4B-3.0Q	1057750300	SAIL-M12BG-5B-3.0Q	1061880300
5.0 m		SAIL-M12BG-3B-5.0Q	1057740500	SAIL-M12BG-4B-5.0Q	1057750500	SAIL-M12BG-5B-5.0Q	1061880500
10.0 m		SAIL-M12BG-3B-10Q	1057741000	SAIL-M12BG-4B-10Q	1057751000	SAIL-M12BG-5B-10Q	1061881000
Female, angled		3-pole		4-pole		5-pole	
1.5 m		SAIL-M12BW-3B-1.5Q	1061890150	SAIL-M12BW-4B-1.5Q	1061900150	SAIL-M12BW-5B-1.5Q	1057760150
3.0 m		SAIL-M12BW-3B-3.0Q	1061890300	SAIL-M12BW-4B-3.0Q	1061900300	SAIL-M12BW-5B-3.0Q	1057760300
5.0 m		SAIL-M12BW-3B-5.0Q	1061890500	SAIL-M12BW-4B-5.0Q	1061900500	SAIL-M12BW-5B-5.0Q	1057760500
10.0 m		SAIL-M12BW-3B-10Q	1061891000	SAIL-M12BW-4B-10Q	1061901000	SAIL-M12BW-5B-10Q	1057761000
Information		Other versions on request		Other versions on request		Other versions on request	

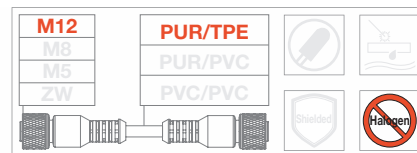
Technical data

Sheathing colour		black
Rated current	A	4
Material		PUR / TPE
Ingress protection class		IP 67
Cross-section	mm ²	0.34
Contact surface		gold-plated
Rated voltage	V	250 (3- and 4-pole)/ 125 (5-pole)
(Acc. to VDE standard 0110 ISO group C)		
Mechanical values		
Temperature range	Stationary	°C
	moving	°C
Min. permitted bending radius	Stationary	5 x cable diameter
	moving	10 x cable diameter
Max. permitted acceleration	m/sec ²	5
Max. permitted travelling speed	m/min	200 (At 5 m horizontal travel distance)
Guaranteed bending cycles		≥ 2 Mio (At ≥ 10 x cable diameter)
Permitted horizontal travel at 5 m/sec ²		5 m
Permitted vertical travel at 5 m/sec ²		2 m
Information		L in the drawing is the cable length

Dimensioned drawing



M12 connection cable
Unshielded
B-coded



Ordering data

Straight / straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, angled / Female, straight	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Male, straight / Female, angled	
1.5 m	
3.0 m	
5.0 m	
10.0 m	

		3-pole	
Type	(Qty.=1)	Order No.	
SAIL-M12GM12G-3B-1.5Q		1057830150	
SAIL-M12GM12G-3B-3.0Q		1057830300	
SAIL-M12GM12G-3B-5.0Q		1057830500	
SAIL-M12GM12G-3B-10Q		1057831000	
SAIL-M12WM12G-3B-1.5Q		1057870150	
SAIL-M12WM12G-3B-3.0Q		1057870300	
SAIL-M12WM12G-3B-5.0Q		1057870500	
SAIL-M12WM12G-3B-10Q		1057871000	
SAIL-M12GM12W-3B-1.5Q		1057900150	
SAIL-M12GM12W-3B-3.0Q		1057900300	
SAIL-M12GM12W-3B-5.0Q		1057900500	
SAIL-M12GM12W-3B-10Q		1057901000	

		4-pole	
Type	(Qty.=1)	Order No.	
SAIL-M12GM12G-4B-1.5Q		1057840150	
SAIL-M12GM12G-4B-3.0Q		1057840300	
SAIL-M12GM12G-4B-5.0Q		1057840500	
SAIL-M12GM12G-4B-10Q		1057841000	
SAIL-M12WM12G-4B-1.5Q		1057880150	
SAIL-M12WM12G-4B-3.0Q		1057880300	
SAIL-M12WM12G-4B-5.0Q		1057880500	
SAIL-M12WM12G-4B-10Q		1057881000	
SAIL-M12GM12W-4B-1.5Q		1057910150	
SAIL-M12GM12W-4B-3.0Q		1057910300	
SAIL-M12GM12W-4B-5.0Q		1057910500	
SAIL-M12GM12W-4B-10Q		1057911000	

		5-pole	
Type	(Qty.=1)	Order No.	
SAIL-M12GM12G-5B-1.5Q		1057850150	
SAIL-M12GM12G-5B-3.0Q		1057850300	
SAIL-M12GM12G-5B-5.0Q		1057850500	
SAIL-M12GM12G-5B-10Q		1057851000	
SAIL-M12WM12G-5B-1.5Q		1057890150	
SAIL-M12WM12G-5B-3.0Q		1057890300	
SAIL-M12WM12G-5B-5.0Q		1057890500	
SAIL-M12WM12G-5B-10Q		1057891000	
SAIL-M12GM12W-5B-1.5Q		1057920150	
SAIL-M12GM12W-5B-3.0Q		1057920300	
SAIL-M12GM12W-5B-5.0Q		1057920500	
SAIL-M12GM12W-5B-10Q		1057921000	

Information

Other versions on request

Other versions on request

Other versions on request

Technical data

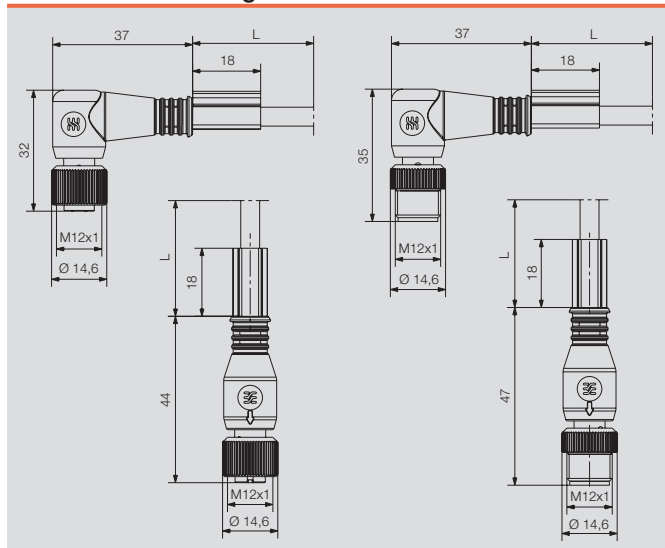
Sheathing colour	black
Rated current	A 4
Material	PUR / TPE
Ingress protection class	IP 67
Cross-section	mm ² 0.34
Contact surface	gold-plated
Rated voltage	V 250 (3- and 4-pole)/ 125 (5-pole)
(Acc. to VDE standard 0110 ISO group C)	
Mechanical values	
Temperature range	Stationary °C -50 ... 80
	moving °C -25 ... 85
Min. permitted bending radius	Stationary 5 x cable diameter
	moving 10 x cable diameter
Max. permitted acceleration	m/sec ² 5
Max. permitted travelling speed	m/min 200 (At 5 m horizontal travel distance)
Guaranteed bending cycles	≥ 2 Mio (At ≥ 10 x cable diameter)
Permitted horizontal travel at 5 m/sec ²	5 m
Permitted vertical travel at 5 m/sec ²	2 m

black
4
PUR / TPE
IP 67
0.34
gold-plated
250 (3- and 4-pole)/ 125 (5-pole)
-50 ... 80
-25 ... 85
5 x cable diameter
10 x cable diameter
5
200 (At 5 m horizontal travel distance)
≥ 2 Mio (At ≥ 10 x cable diameter)
5 m
2 m

Information

L in the drawing is the cable length

Dimensioned drawing



M12, M8, M5 built-in plugs

For connection of cables to sensors and actuators, different built-in connectors are needed at the device end.

M12



M12 plug-in connectors are available with the following numbers of poles: 4 to 5-pole and 8-pole. Built-in connectors for M12 connections are all A-coded and have individual leads of 0.5 m. Fixing of the FP version is achieved with the supplied lock-nut. Also available are built-in connectors that can be screwed in from the front.

M8



M8 connector requirements are covered by the 3 and 4-pole built-in male and female connectors. Like the M12 built-in connectors, these have a lock-nut for fastening into a housing wall. These connectors too have 0.5 m long leads attached.

M5



Of course, Weidmüller also offers corresponding built-in connectors for the smallest plug-in connectors, M5. The M5 built-in connector is available in 3 and 4-pole versions. This plug-in connector too has a lock-nut. The individual lead length with M5 built-in connectors is 0.2 m.

The cross-sections of the individually attached leads are available from the technical data of the various families of plug-in connectors.

M12 (M16)

SAIE-M12 FP



M12 (M16)



Ordering data

male	
4-pole	
5-pole	
8-pole	
Socket	
4-pole	
5-pole	
8-pole	
Note	

Type	Qty.	Order No.
SAIE-M12S-4-0.5U-FP-M16	1	1861160000
SAIE-M12S-5-0.5U-FP-M16	1	1861170000
SAIE-M12S-8-0.5U-FP-M16	1	1861180000
SAIE-M12B-4-0.5U-FP-M16	1	1861190000
SAIE-M12B-5-0.5U-FP-M16	1	1856110000
SAIE-M12B-8-0.5U-FP-M16	1	1861210000
FP with M16 cable gland FP = can be positioned as required		

Type	Qty.	Order No.
SAIE-M12S-4-0.5U-M16	1	1861090000
SAIE-M12S-5-0.5U-M16	1	1861100000
SAIE-M12S-8-0.5U-M16	1	1861110000
SAIE-M12B-4-0.5U-M16	1	1861120000
SAIE-M12B-5-0.5U-M16	1	1836910000
SAIE-M12B-8-0.5U-M16	1	1861140000
Other versions on request		

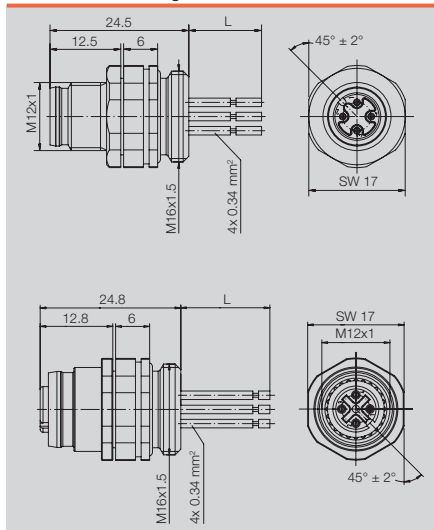
Technical data

No. of poles	4/5/8
Type of connection	screw
Housing material	CuZn, nickel-plated
Connecting thread	M12
Connection cross-section	0.34 (4-pole) / 0.25 (8-pole)
Rated current	4 A
Rated voltage	250 V (4-pole) / 125 V (5-pole) / 60 V (8-pole)
Temperature range	-25 ... 85 °C
Protection class	IP 67
Contact surface	gold-plated
Note	

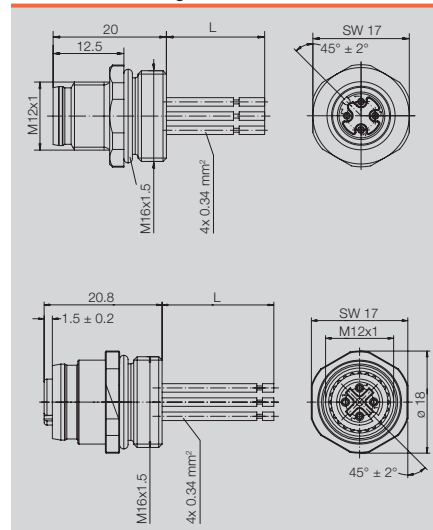
No. of poles	4/5/8
Type of connection	screw
Housing material	CuZn, nickel-plated
Connecting thread	M12
Connection cross-section	0.34 (4-pole) / 0.25 (8-pole)
Rated current	4 A
Rated voltage	250 V (4-pole) / 125 V (5-pole) / 60 V (8-pole)
Temperature range	-25 ... 85 °C
Protection class	IP 67
Contact surface	gold-plated
Note	

No. of poles	4/5/8
Type of connection	screw
Housing material	CuZn, nickel-plated
Connecting thread	M12
Connection cross-section	0.34 (4-pole) / 0.25 (8-pole)
Rated current	4 A
Rated voltage	250 V (4-pole) / 125 V (5-pole) / 60 V (8-pole)
Temperature range	-25 ... 85 °C
Protection class	IP 67
Contact surface	gold-plated
Note	

Dimensioned drawing



Dimensioned drawing



Built-in plugs

M12 (PG 9)

SAIE-M12 PG



D

Ordering data

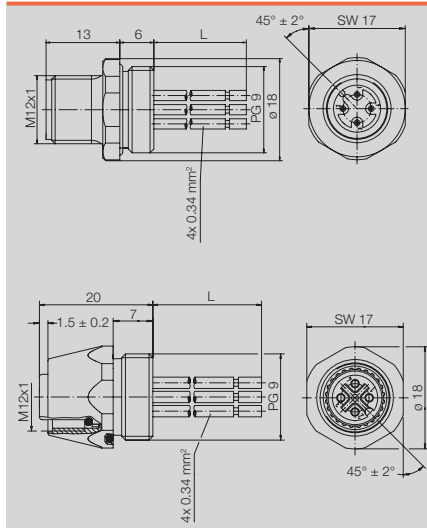
male	
	4-pole
	5-pole
	8-pole
Socket	
	4-pole
	5-pole
	8-pole
Note	

Type	Qty.	Order No.
SAIE-M12S-4-0.5U-PG9	1	1861220000
SAIE-M12S-5-0.5U-PG9	1	1856120000
SAIE-M12S-8-0.5U-PG9	1	1861240000
with PG cable gland		
SAIE-M12B-4-0.5U-PG9	1	1861250000
SAIE-M12B-5-0.5U-PG9	1	1814890000
SAIE-M12B-8-0.5U-PG9	1	1861270000

Technical data

No. of poles	4/5/8
Type of connection	screw
Housing material	CuZn, nickel-plated
Connecting thread	M12
Connection cross-section	0.34 (4-pole) / 0.25 (8-pole)
Rated current	4 A
Rated voltage	250 V (4-pole) / 125 V (5-pole) / 60 V (8-pole)
Temperature range	-25 ... 85 °C
Protection class	IP 67
Contact surface	gold-plated
Note	

Dimensioned drawing



M8

SAIE-M8 FP



M5

SAIE-M5



Ordering data

male	
	3-pole
	4-pole
Socket	
	3-pole
	4-pole
Note	

Type	Qty.	Order No.
SAIE-M8S-3-0.5U-FP-M8	1	1861280000
SAIE-M8S-4-0.5U-FP-M8	1	1861290000
SAIE-M8B-3-0.5U-FP-M8	1	1856130000
SAIE-M8B-4-0.5U-FP-M8	1	1856140000
Fixing nut included FP = can be positioned as required		

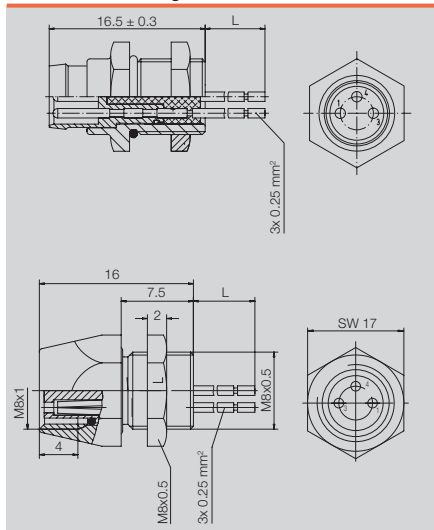
Type	Qty.	Order No.
SAIE-M5S-3-0.2U	1	1873050000
SAIE-M5S-4-0.2U	1	1873030000
SAIE-M5B-3-0.2U	1	1873060000
SAIE-M5B-4-0.2U	1	1873040000
Fixing nut included		

Technical data

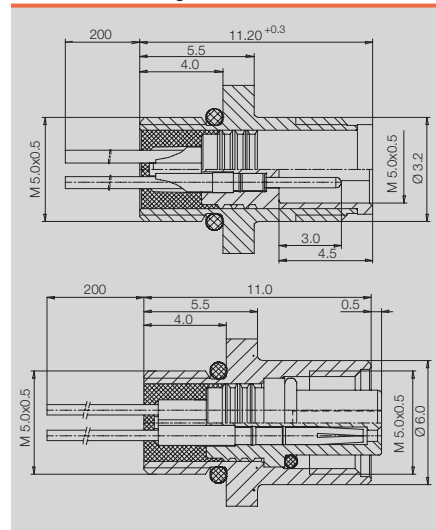
No. of poles	3/4
Type of connection	screw
Housing material	CuZn, nickel-plated
Connecting thread	M8
Connection cross-section	0.25
Rated current	4 A
Rated voltage	60 V
Temperature range	-25 ... 85 °C
Protection class	IP 67
Contact surface	gold-plated
Note	

No. of poles	3/4
Type of connection	screw
Housing material	CuZn, nickel-plated
Connecting thread	M5
Connection cross-section	0.14...0.25
Rated current	1 A
Rated voltage	125 V
Temperature range	-25 ... 80 °C
Protection class	IP 67
Contact surface	gold-plated
Note	

Dimensioned drawing



Dimensioned drawing



Introduction, valve plug, ISO 4400



Machine builders frequently need different cable lengths for valve plugs. Valve plugs with free cable ends can be used to adjust the cable exactly to the lengths required.

Weidmüller can of course also supply valve plugs as connecting cables with M12 plugs.

The status of the valve plug is shown by an LED. Every valve plug is fitted with a protective circuit.

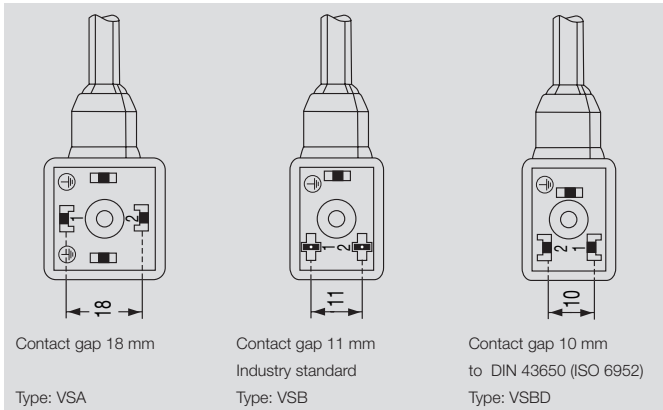
The Weidmüller range includes valve plugs of type A, B and C to DIN and industry standards.

Weidmüller plugs comply with IP67 ingress protection class when plugged in.

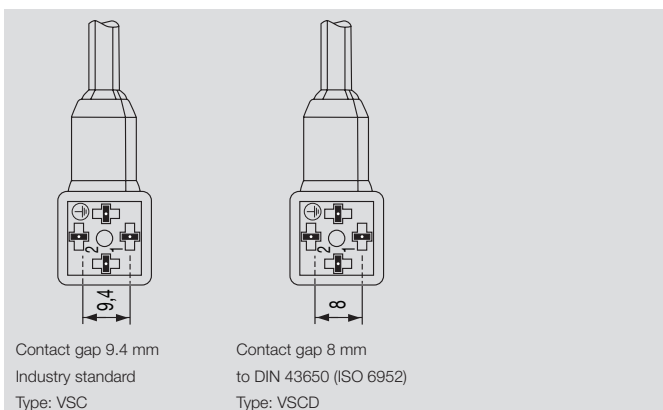
The outgoing direction is also crucial. Weidmüller can supply 0° versions, i.e. the outgoing direction of the cable is at the PE contact.

**Valve plug
Type A**

**Valve plug
Type B**



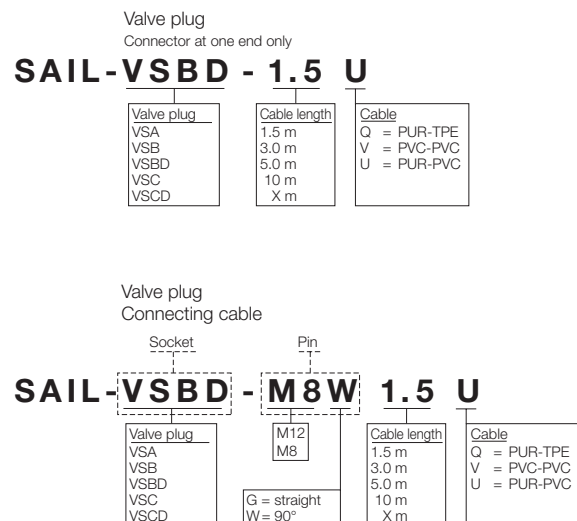
**Valve plug
Type C**



Types

Type	Contact gap
Type A	18 mm
Type B industry standard	11 mm
Type B DIN	10 mm
Type C industry standard	9.4 mm
Type C DIN	8.0 mm

Example of designation



Type A



Ordering data

Open cable end - valve plug		A	
Type	Order No.	Type	Order No.
1.5 m	SAIL-VSA-1.5U	9457710150	
3.0 m	SAIL-VSA-3.0U	9457710300	
5.0 m	SAIL-VSA-5.0U	9457710500	
10.0 m	SAIL-VSA-10U	9457711000	
Male straight - valve plug			
1.5 m	SAIL-VSA-M12G-1.5U	9457040000	
3.0 m	SAIL-VSA-M12G-3.0U	9457830000	
5.0 m	SAIL-VSA-M12G-5.0U	9457130000	
10.0 m	SAIL-VSA-M12G-10U	9457131000	
Male angled - valve plug			
1.5 m	SAIL-VSA-M12W-1.5U	1857690150	
3.0 m	SAIL-VSA-M12W-3.0U	1857690300	
5.0 m	SAIL-VSA-M12W-5.0U	1857690500	
Note		Other versions on request	

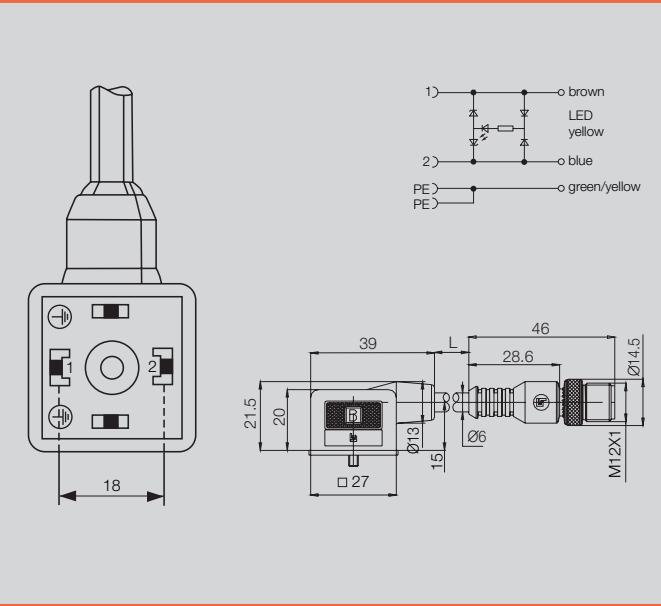
Type	Order No.	Type	Order No.

D

Technical data

Sheathing colour	grey
Rated current	4 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.75 mm ²
Contact surface	tinned
Temperature range	-25 ... 80 °C
Rated voltage	24 V
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



L in the drawing is the cable length

Valve plugs

Type B/BD

B = Industrial standard
BD = DIN Standard



D

Ordering data

Open cable end - valve plug	Type	Order No.
1.5 m	SAIL-VSB-1.5U	9457930150
3.0 m	SAIL-VSB-3.0U	9457930300
5.0 m	SAIL-VSB-5.0U	9457930500
10.0 m	SAIL-VSB-10U	9457931000
Male straight - valve plug		
1.5 m	SAIL-VSB-M12G-1.5U	9457680150
3.0 m	SAIL-VSB-M12G-3.0U	9457680300
5.0 m	SAIL-VSB-M12G-5.0U	9457680500
10.0 m	SAIL-VSB-M12G-10U	9457681000
Male angled - valve plug		
1.5 m	SAIL-VSB-M12W-1.5U	1857700150
3.0 m	SAIL-VSB-M12W-3.0U	1857700300
5.0 m	SAIL-VSB-M12W-5.0U	1857700500
10.0 m	SAIL-VSB-M12W-10U	1857701000
Note	Other versions on request	

B

Type	Order No.
SAIL-VSB-1.5U	9457930150
SAIL-VSB-3.0U	9457930300
SAIL-VSB-5.0U	9457930500
SAIL-VSB-10U	9457931000
SAIL-VSB-M12G-1.5U	9457680150
SAIL-VSB-M12G-3.0U	9457680300
SAIL-VSB-M12G-5.0U	9457680500
SAIL-VSB-M12G-10U	9457681000
SAIL-VSB-M12W-1.5U	1857700150
SAIL-VSB-M12W-3.0U	1857700300
SAIL-VSB-M12W-5.0U	1857700500
SAIL-VSB-M12W-10U	1857701000
Other versions on request	

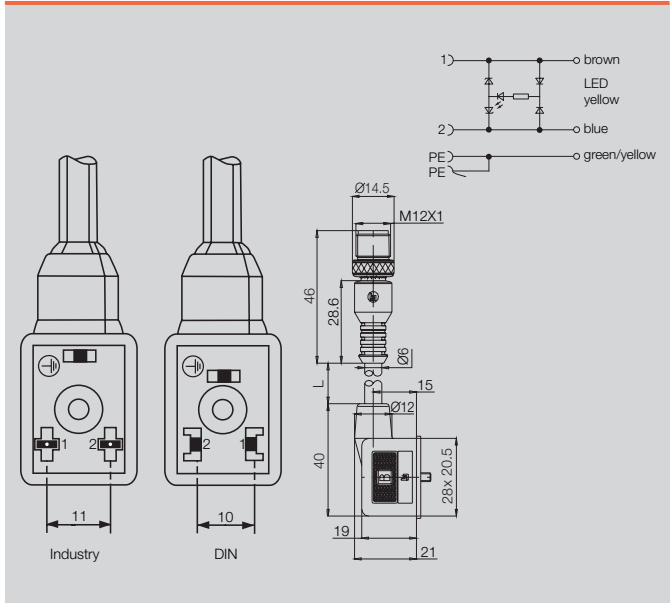
BD

Type	Order No.
SAIL-VSBD-1,5U	9456070150
SAIL-VSBD-3.0U	9456070300
SAIL-VSBD-5.0U	9456070500
SAIL-VSBD-10U	9456071000
SAIL-VSBD-M12G-1.5U	9457780150
SAIL-VSBD-M12G-3.0U	9457780300
SAIL-VSBD-M12G-5.0U	9457780500
SAIL-VSBD-M12G-10U	9457781000
SAIL-VSBD-M12W-1.5U	1857710150
SAIL-VSBD-M12W-3.0U	1857710300
SAIL-VSBD-M12W-5.0U	1857710500
SAIL-VSBD-M12W-10U	1857711000
Other versions on request	

Technical data

Sheathing colour	grey
Rated current	4 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.75 mm ²
Contact surface	tinned
Temperature range	-25 ... 80 °C
Rated voltage	24 V
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



L in the drawing is the cable length

Type C/CD

C = Industrial standard
 CD = DIN Standard



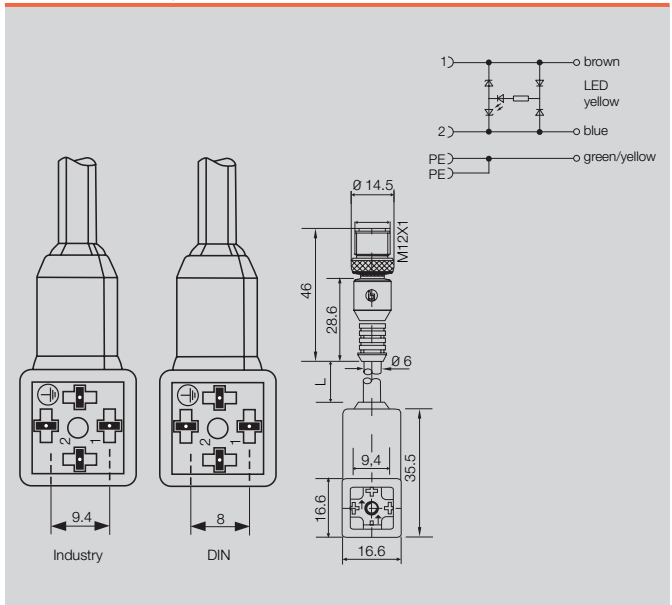
Ordering data

		C		CD		D	
Open cable end - valve plug	Type	Type	Order No.	Type	Order No.	Type	Order No.
1.5 m	SAIL-VSC-1.5U	SAIL-VSCD-1.5U	9457920150	SAIL-VSCD-1.5U	9456240150		
	SAIL-VSC-3.0U	SAIL-VSCD-3.0U	9457920300	SAIL-VSCD-3.0U	9456240300		
	SAIL-VSC-5.0U	SAIL-VSCD-5.0U	9457920500	SAIL-VSCD-5.0U	9456240500		
	SAIL-VSC-10U	SAIL-VSCD-10U	9457921000	SAIL-VSCD-10U	9456241000		
Male straight - valve plug	SAIL-VSC-M12G-1.5U	SAIL-VSCD-M12G-1.5U	9457400150	SAIL-VSCD-M12G-1.5U	9456170150		
	SAIL-VSC-M12G-3.0U	SAIL-VSCD-M12G-3.0U	9457400300	SAIL-VSCD-M12G-3.0U	9456170300		
	SAIL-VSC-M12G-5.0U	SAIL-VSCD-M12G-5.0U	9457400500	SAIL-VSCD-M12G-5.0U	9456170500		
	SAIL-VSC-M12G-10U	SAIL-VSCD-M12G-10U	9457401000	SAIL-VSCD-M12G-10U	9456171000		
Male angled - valve plug	SAIL-VSC-M12W-1.5U	SAIL-VSCD-M12W-1.5U	1857720150	SAIL-VSCD-M12W-1.5U	1857730150		
	SAIL-VSC-M12W-3.0U	SAIL-VSCD-M12W-3.0U	1857720300	SAIL-VSCD-M12W-3.0U	1857730300		
	SAIL-VSC-M12W-5.0U	SAIL-VSCD-M12W-5.0U	1857720500	SAIL-VSCD-M12W-5.0U	1857730500		
	SAIL-VSC-M12W-10U	SAIL-VSCD-M12W-10U	1857721000	SAIL-VSCD-M12W-10U	1857731000		
Note	Other versions on request		Other versions on request				

Technical data

Sheathing colour	grey
Rated current	4 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.75 mm ²
Contact surface	tinned
Temperature range	-25 ... 80 °C
Rated voltage	24 V
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



L in the drawing is the cable length

Introduction

Type A



When building special machines, individual cable lengths are frequently required which are then joined directly to Weidmüller's IDC distributors. Our product portfolio of course contains a corresponding valve plug for such applications.

This valve plug has a transparent enclosure with integral seal. In addition, a protective sleeve can be slipped over the cable to protect the connected line. The connection cross-section is 0.5 mm² for direct connection to our SAI IDC distributor. The status of the valve plug is indicated by an LED. All valve plugs are fitted with protective circuits.

Type B



The Weidmüller range includes valve plug forms A, B and C to DIN and industry standards. The plug conforms to ingress protection class IP 67 when plugged in.

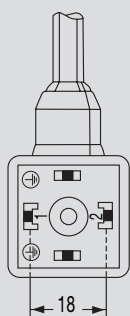
Type C



Type

Type	Contact gap
Type A	18 mm
Type B industry standard	11 mm
Type B DIN	10 mm
Type C industry standard	9.4 mm
Type C DIN	8.0 mm

Valve plug Type A



Contact gap 18 mm

Type VSA

Valve plug Type B



Contact gap 11 mm
industry standard

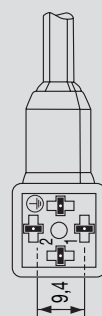
Type VSB



Contact gap 10 mm
to DIN 43650 (ISO 6952)

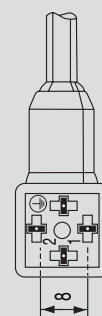
Type VSBD

Valve plug Type C



Contact gap 9.4 mm
industry standard

Type VSC



Contact gap 8 mm
to DIN 43650 (ISO 6952)

Type VSCD

Type A

Suitable for IDC plug-in connectors and protective hose connection



Ordering data

Open cable end - valve plug	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Note	

		A	
Type		Type	Order No.
SAIL-VSA-1.5U(0.5)			1845120150
SAIL-VSA-3.0U(0.5)			1845120300
SAIL-VSA-5.0U(0.5)			1845120500
SAIL-VSA-10U(0.5)			1845121000
Note	Supplied without protective hose		

Type	Order No.

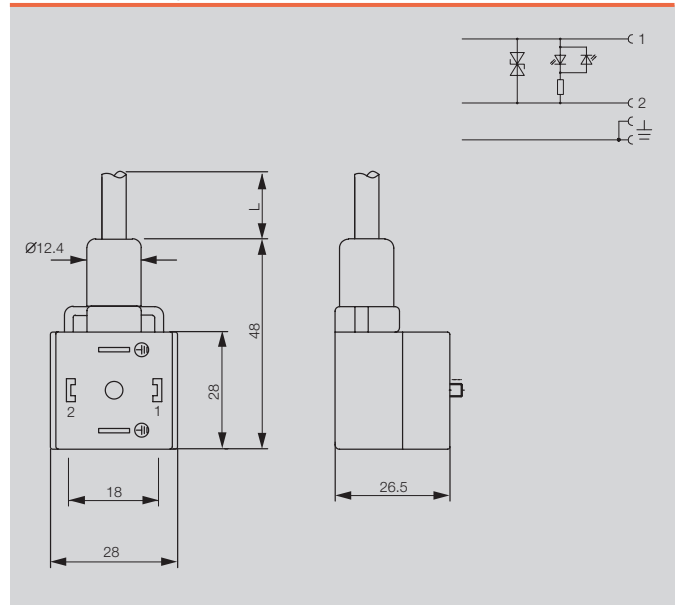
Type	Order No.

D

Technical data

Sheathing colour	black
Rated current	4 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.50 mm ²
Contact surface	tinned
Temperature range	-25 ... 80 °C
Rated voltage	24 V
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



L in the drawing is the cable length

Valve plugs with integral seal

Type B/BD

B = industry standard
BD = DIN standard

Suitable for IDC
plug-in connectors and protective
hose connection



Ordering data

Open cable end - valve plug	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Note	

B

Type	Order No.
SAIL-VSB-1.5U(0.5)	1845140150
SAIL-VSB-3.0U(0.5)	1845140300
SAIL-VSB-5.0U(0.5)	1845140500
SAIL-VSB-10U(0.5)	1845141000
Supplied without protective hose	

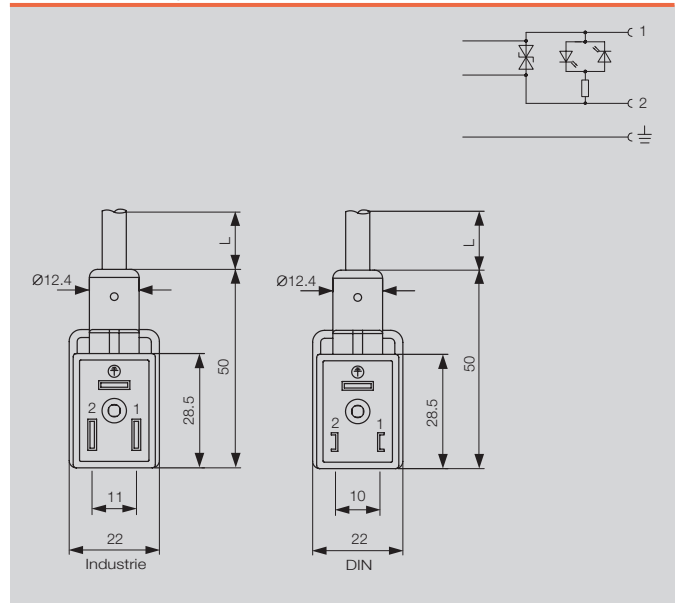
BD

Type	Order No.
SAIL-VSBD-1.5U(0.5)	1845160150
SAIL-VSBD-3.0U(0.5)	1845160300
SAIL-VSBD-5.0U(0.5)	1845160500
SAIL-VSBD-10U(0,5)	1845161000
Supplied without protective hose	

Technical data

Sheathing colour	black
Rated current	4 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.50 mm ²
Contact surface	tinned
Temperature range	-25 ... 80 °C
Rated voltage	24 V
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



Type C/CD

C = industry standard
 CD = DIN standard

Suitable for IDC
 plug-in connectors and protective
 hose connection



Ordering data

Open cable end - valve plug	
1.5 m	
3.0 m	
5.0 m	
10.0 m	
Note	

		C
Type	Order No.	
SAIL-VSC-1.5U(0.5)	1845180150	
SAIL-VSC-3.0U(0.5)	1845180300	
SAIL-VSC-5.0U(0.5)	1845180500	
SAIL-VSC-10U(0.5)	1845181000	
Note		Supplied without protective hose

		CD
Type	Order No.	
SAIL-VSCD-1.5U(0.5)	1845200150	
SAIL-VSCD-3.0U(0.5)	1845200300	
SAIL-VSCD-5.0U(0.5)	1845200500	
SAIL-VSCD-10U(0.5)	1845201000	
Note		Supplied without protective hose

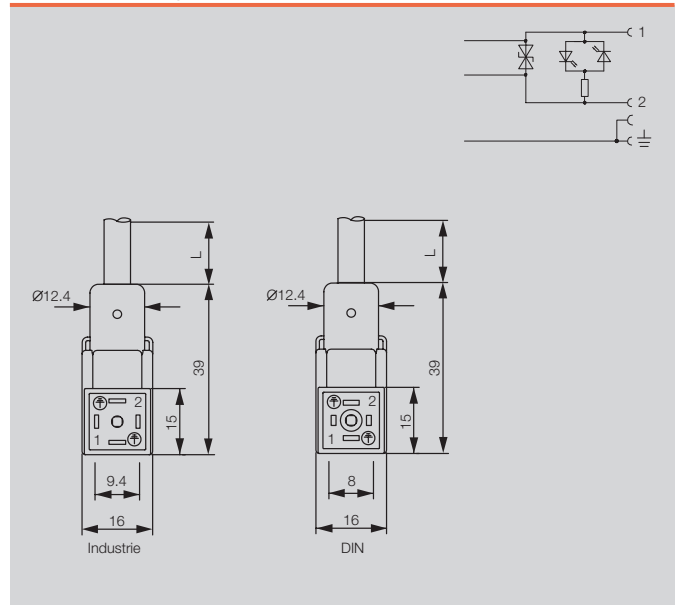
Type	Order No.

D

Technical data

Sheathing colour	black
Rated current	4 A
Material	PUR/PVC
Protection class	IP 67
Core cross-section	0.50 mm ²
Contact surface	tinned
Temperature range	-25 ... 80 °C
Rated voltage	24 V
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



L in the drawing is the cable length

Introduction



Valve plugs for custom cables are often incorporated when designing special machines. Such plugs are used to connect solenoid valves.

Weidmüller valve plugs are available in all customary forms. The range includes form A, form B to industry standards and to DIN, and form C to industry standards and to DIN.

These valve plugs are available without circuitry in 3-pole and 4-pole versions. A flat gasket seal is included which, when screwed on, guarantees IP65 protection.

Ordering data

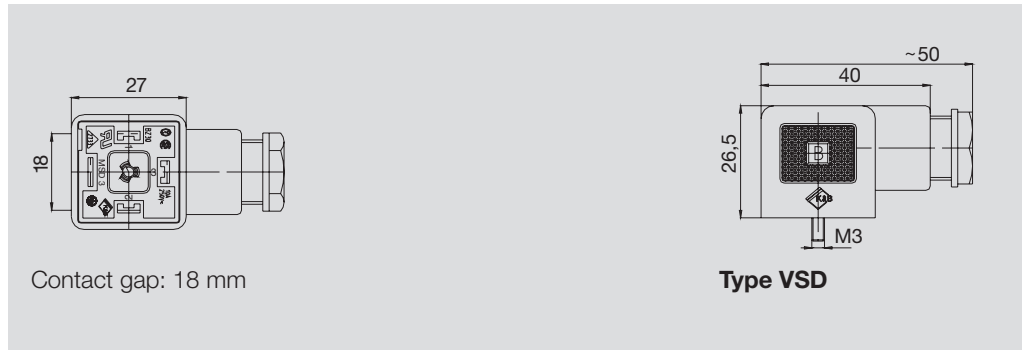
Type	(Qty.=1)	Order No.
Type A		
SAIB-VSA-3P/250/9-OB		1873070000
SAIB-VSA-4P/250/9-OB		1873080000
SAIB-VSA-3P/250/11-OB		1873090000
SAIB-VSA-4P/250/11-OB		1873100000
SAIB-VSA-3P/230/9/LD		1873110000
SAIB-VSA-3P/24/9/LD		1873120000
SAIB-VSA-3P/230/9-H/OB		1873130000
SAIB-VSA-4P/230/9-H/OB		1873140000
SAIB-VSA-3P/230/11-H/OB		1873150000
SAIB-VSA-4P/230/11-H/OB		1873160000
Type B		
SAIB-VSB-3P/250/9-OB		1873170000
SAIB-VSB-3P/24/9/LD		1873180000
SAIB-VSBD-3P/250/9-OB		1873190000
Type C		
SAIB-VSC-3P/250/7-OB		1873200000
SAIB-VSC-4P/250/7-OB		1873210000
SAIB-VSCD-3P/250/7-OB		1873220000
SAIB-VSCD-4P/250/7-OB		1873230000
All types supplied complete with seal.		

Legend

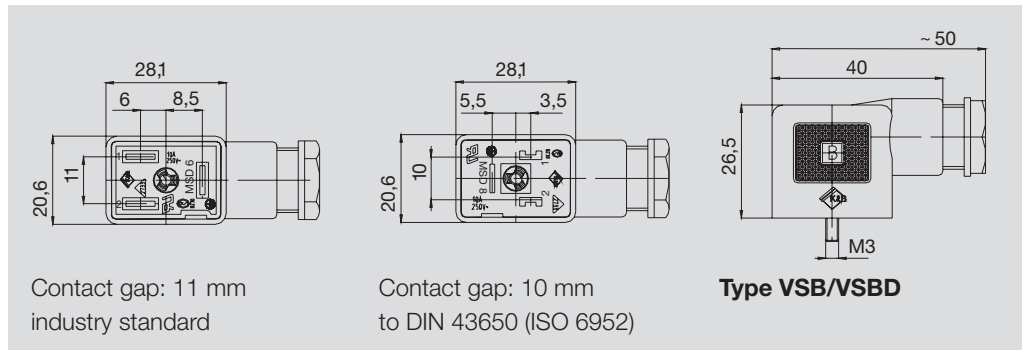
Designation code	
VS-	valve plug
OB-	without cables
3P, 4P-	No. of poles
7, 9, 11-	cable entry (PG)
H	high form
T	Transparent housing

Type of valve plug	Contact gap
A	18.0 mm
B	11.0 mm to industry standard
BD	10.0 mm to DIN
C	9.4 mm to industry standard
CD	8.0 mm to DIN

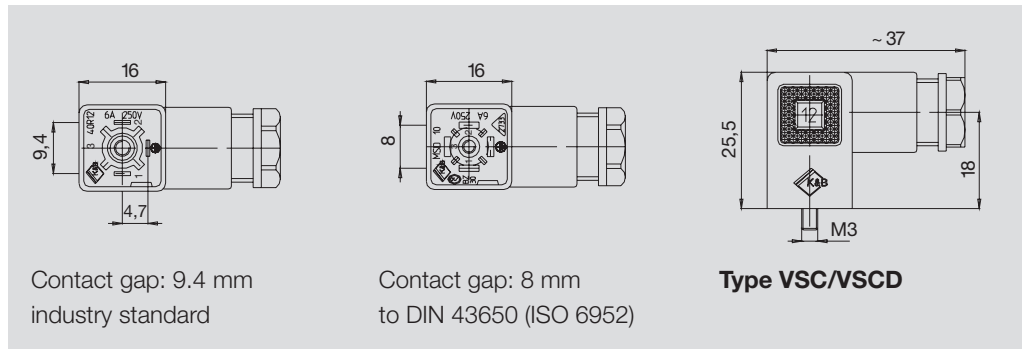
Plug-in connector Type A
to DIN EN 175301-803



Plug-in connector Type B



Plug-in connector Type C



Connecting cables for sensors and actuators



Weidmüller can provide the following types of cables for connecting sensors and actuators:

- The outer sheathing of the cables is made from polyurethane and the inner stranded wires have PVC insulation.
- They are available with 3, 4 and 5 poles.
- In addition, the cables are also available with PVC outer sheathing and PVC insulation internally.

Ordering data

PUR/PVC	Qty.	Order No.
SAIH-SLL-3x0.34mm ² (PUR)	100 m	1902110000
SAIH-SLL-4x0.25mm ² (PUR)	100 m	1902120000
SAIH-SLL-4x0.34mm ² (PUR)	100 m	1902130000
SAIH-SLL-3x0.25mm ² (PUR)	100 m	1902140000
SAIH-SLL-5x0.25mm ² (PUR)	100 m	1902100000
PUR/PUR		
SAIH-SLL-3x0.34mm ² (TPE)	100 m	1022940000
SAIH-SLL-4x0.34mm ² (TPE)	100 m	1022950000
SAIH-SLL-5x0.34mm ² (TPE)	100 m	1022960000
SAIH-SLL-3x0.25mm ² (TPE)	100 m	1022970000
SAIH-SLL-4x0.25mm ² (TPE)	100 m	1022980000
PVC/PVC		
SAIH-SLL-3x0.34mm ² (PVC)	100 m	1902160000
SAIH-SLL-4x0.25mm ² (PVC)	100 m	1902170000
SAIH-SLL-4x0.34mm ² (PVC)	100 m	1902180000
SAIH-SLL-3x0.25mm ² (PVC)	100 m	1902190000
SAIH-SLL-5x0.25mm ² (PVC)	100 m	1902150000
Information		

Technical data

Colour		black
Cross-section	mm ²	0.25 ... 0.34
Qty.		100 Meter

Information

Bus cables



Owing to their easy assembly and adaptability, Weidmüller distributors have become very popular among machine manufacturers. For such applications, Weidmüller can also supply corresponding bus cables for custom assembly.

The bus cables are available in three different versions. All bus cables are suitable for moving cable carriers and are available by the metre. All three trunk cables can be ordered in individual lengths. A typical order quantity is a 500 metre drum. The colour coding of wires conforms to the standard in mechanical engineering.

The connection hoods of the M12 SAI distributors are always fitted with the same terminals so that only one type of cable is required.

Advantages of bus cables supplied by the metre:

- Special lengths for bus cables
- No cable waste
- No storage space required for different cable lengths
- Bulk stock will be cut to desired length.

Ordering data

Type	Qty.	Order No.
SAIH-SLL 3 x 0.75 – 16 x 0.34	1 m	9457560000
SAIH-SLL 5 x 0.75 – 16 x 0.34	1 m	9457970000
SAIH-SLL 3 x 0.75 – 8 x 0.34	1 m	9457420000

Screwty for M8/M12 / M23



The Torque Screwty

- Easier work
- Screw-on circular plug, safety sealed

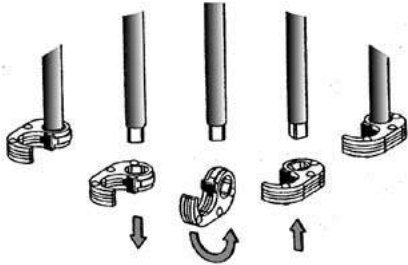
The perfect tool for all situations

Screwty is the ideal, universal tool for tightening and releasing cable glands on all common sensor and actuator cables. The Screwty can also reach those round plugs normally considered inaccessible! No great force is required – simply turn the tool to tighten or release the plug-in connector as required.

The Screwty also fits the majority (more than 90 %) of the cables and plug-in connectors of other suppliers and is therefore a unique tool useful throughout the world. The Screwty consists of a handle with a conventional 1/4" fitting. This means it can be used for all sizes: for M12 and M8 round plugs, and the M12F and M8F types, also for plugs and sockets on custom cables.

The Screwty is suitable for the following round plugs:

Size	M8	M8F	M12	M12F
	10 ±0.3 mm	11.9 ±0.3 mm	14.5 ±0.3 mm	19.8 ±0.3 mm
Thread	M8x1	M8x1	M12x1	M12x1



An adjustable torque fitting is also available for the Screwty – for guaranteeing extra reliability during installation.

The torque can be infinitely adjusted between 0.5 and 1.7 Nm. This accurate setting enables all round plugs to be tightened precisely with a certain torque.

Weidmüller specifies the following torques for its round plugs:

Size	M8	M8F	M12	M12F
Torque	0.5-0.6 Nm	0.5-0.6 Nm	0.8-1.0 Nm	0.8-1.0 Nm
Thread	M8x1	M8x1	M12x1	M12x1

Simply turn the ratchet to tighten or loosen the cable gland.

The Screwty can also be fitted with other blades to create a torque screwdriver. You can find these blades in our catalogue "Tools".



Use of a M12 Screwty

1. Position Screwty,
2. tighten connector,
3. finished!



Use of a M23 Screwty

Screwty standard



Ordering data

Type	Use	Qty.	Order No.
Screwty M12	moulded M12 lines	1	1900000000
Screwty M8	moulded M8 lines	1	1900010000
Screwty M12 F	M12 plugs for custom assembly	1	1900020000
Screwty M8 F	M8 plugs for custom assembly	1	1900030000

Screwty Set



Ordering data

Type	Qty.	Order No.
Screwty Set	1	1910000000

Type	Contents
Screwty Set	1 Screwty standard handle + 1 M12, M8, M12 F, M8 F attachments

Screwty attachments



Screwty M8 attachment **Screwty M8 F attachment** **Screwty M12 attachment** **Screwty M12 F attachment** **Screwty M23 attachment**

Ordering data

Type	Qty.	Order No.
Screwty® M12 KO o. SD	1	1900100000
Screwty® M8 KO o. SD	1	1900110000
Screwty® M12F KO o. SD	1	1900120000
Screwty® M8F KO o. SD	1	1900130000
Screwty® M23 LS	1	1981570000

Legend:

F	for custom assemblies
DM	torque
KO or SD	ratchet only (attachment)
Screwty	screwdriver
Screwty DM	torque screwdriver, interchangeable blade
WK	interchangeable blade
LS	power plug

Screwty with torque fitting

Setting aid for Screwty with torque fitting (included)



Ordering data

Type	Use	Qty.	Order No.
Screwty-M12-DM	moulded M12 lines with torque requirement	1	1900001000
Screwty-M8-DM	moulded M8 lines with torque requirement	1	1900011000
Screwty-M12 F-DM	M12 plugs, custom assembly w. torque requirement	1	1900021000
Screwty-M8 F-DM	M8 plugs, custom assembly with torque requirement	1	1900031000

Fittings	Contents
Screwty-M12-DM	1 interchangeable blade, 1 torque handle, 1 setting aid for Screwty torque, 1 Screwty M12 attachment
Screwty-M8-DM	1 interchangeable blade, 1 torque handle, 1 setting aid for Screwty torque, 1 Screwty M18 attachment
Screwty-M12 F-DM	1 interchangeable blade, 1 torque handle, 1 setting aid for Screwty torque, 1 Screwty M12 F attachment
Screwty-M8 F-DM	1 interchangeable blade, 1 torque handle, 1 setting aid for Screwty torque, 1 Screwty M18 F attachment

Screwty Set-DM



Ordering data

Type	Qty.	Order No.
Screwty Set-DM	1	1920000000

Fittings	Contents
Screwty Set-DM	1 interchangeable blade, 1 torque handle, 1 setting aid for Screwty torque, 1 each of Screwty M12, M8, M12 F, M8 F attachments

Screwty interchangeable handle/interchangeable bit



Ordering data

Type	Use	Qty.	Order No.
1/4" handle		1	4294820000
WK-1/4" (Screwty)		1	1862200000

Tools

Cutting tools

- Cutting formation for different cable sizes increases the quality of the cuts for smaller cross-sections
- Not suitable for steel wires, steel-armoured cables, aluminium alloys and hard-drawn copper conductors!
- Cutting without deformation of the conductor

KT 8



KT 12



-  max. 8 mm
-  max. 16 mm²
-  max. 16 mm²
-  max. 16 mm²

-  max. 12 mm
-  max. 16 mm²
-  max. 25 mm²
-  max. 35 mm²

Technical data

Max. cutting performance, copper cable	
Solid (max. conductor cross-section)	mm ² / -
Stranded (max. conductor cross-section)	mm ² / -
Flexible (max. conductor cross-section)	mm ² / -
Flexible, stranded (max. conductor diameter)	mm
Max. cutting performance, aluminium cable	
Stranded (max. conductor cross-section)	mm ² / -
Stranded (max. conductor diameter)	mm
solid	mm ²
Data / telephone / control cable	
Max. outer diameter	mm
Tool data	
Length / Width / Height	mm
Weight	g
Note	

KT8		
	16 / 6	
	16 / 6	
	16 / 6	
	8	
	16 / 6	
	8	
	16	
	8	
	165 / 65 / 25	
	180	
	Tool closed	

KT12		
	16 / 6	
	25 / 3	
	35 / 2	
	12	
	25 / 6	
	8	
	25	
	12	
	215 / 66 / 28	
	300	
	Tool closed	

Ordering data

Version
Note

Type	Qty	Order No.
KT 8	1	9002650000
Note		

Type	Qty	Order No.
KT 12	1	9002660000
Note		

Special sheathing and insulation stripping tools

- Quick and accurate stripping
- No need to adjust cutting depth
- No damage to inner conductors

Stripper 6-16



AM12

For UTP and STP data cables



Stripper 6-16

The Stripper 6-16 insulation stripping tool is for removing the outer sheath of sensor cables. No damage to inner wires can occur because the blades have a specially ground surface. Adjusting the tool to different cross-sections is unnecessary. The visual scale of 15 to 20 mm enables quick and precise stripping of outer insulation.

- Cutting of UTP and STP data cables and other flexible copper cables with a diameter of up to 4 mm² (~AWG11)
- Stripping of the outer insulation of UTP and STP data cables and other round cables with \varnothing 0.5 ... 12.5 mm
- No damage to the shielding or conductor due to adjustable stripping blade
- Length end stop for repeated cutting or stripping lengths

Technical data

Max. stripping performance	
Cable model	
Conductor cross-section	AWG
Conductor diameter	mm
Depth of cut	
Cutting performance	
UTP und STP data cables, max. diameter	mm
Flexible (max. conductor cross-section)	mm ²
Tool data	
Length	mm
Weight	g
Information	

Stripper 6-16		
suitable for PVC and PUR cables		
Information		

AM12		
UTP and STP data cables		
Information		

Ordering data

Version
Information

Type	Qty.	Order No.
STRIPPER 6-16 RED-LINE	1	9203110000
Information		

Type	Qty.	Order No.
AM 12	1	9030060000
Information		

Accessories

Type	Qty.	Order No.
Information		

Type	Qty.	Order No.
Information		

Type	Qty.	Order No.
Sheathing stripper		
Information		

Tools

SAI tool boxes

SAI-Screwty Box



- Stripping of PVC and PUR sensor/actuator cables
- Screwing of M8 and M12 round connectors with adjustable torque setting

Accessories

Article description	Qty.
Stripping tool Stripper 6-16 for plastic-sheathed cables up to 10 mm outside diameter	1
Torque screwdriver DMS manual for 0.5-1.7 Nm	1
Torque screwdriver DMS manual for 2.0-8.0 Nm	1
Screwty attachment for plug-in connectors* M8	1
Screwty attachment for plug-in connectors* M8F	1
Screwty attachment for plug-in connectors* M12	1
Screwty attachment for plug-in connectors* M12F	1
Transportkoffer	1

*) Screwing attachment for M8/10 mm; M8F/11.9 mm; M12/14.5 mm; M12/19.8 mm;
F...male and female connectors for custom assembly .

Ordering data

Type	Order No.
SAI-SCREWTY BOX	1939180000

SAI-Screwty Tool Box



- Screwing of M8 and M12 round connectors with adjustable torque setting
- Screwing of slot-head and cross-head screws (PZ and PH)

Accessories

Article description	Qty.
Torque screwdriver DMS manual for 0.5-1.7 Nm	1
Torque screwdriver DMS manual for 2.0-8.0 Nm	1
Interchangeable blade 0.4 x 2.5 mm	1
Interchangeable blade 0.5 x 3.0 mm	1
Interchangeable blade 0.6 x 3.5 mm)	1
Interchangeable blade 0.8 x 4.0 mm	1
Interchangeable blade 1.0 x 5.5 mm	1
Interchangeable blade PZ0	1
Interchangeable blade PZ1	1
Interchangeable blade PZ2	1
Interchangeable blade PH=0	1
Interchangeable blade PH1	1
Interchangeable blade PH2	1
Screwty attachment for plug-in connectors* M8	1
Screwty attachment for plug-in connectors* M8F	1
Screwty attachment for plug-in connectors* M12	1
Screwty attachment for plug-in connectors* M12F	1
Carry case	1

*) Screwing attachment for M8/10 mm; M8F/11.9 mm; M12/14.5 mm; M12/19.8 mm;
F...male and female connectors for custom assembly .

Ordering data

Type	Order No.
SAI-SCREWTY TOOL BOX	1939170000

PROFIBUS-DP

Sub-D



This compact connector provides a convenient bus connection for all standardised PROFIBUS-DP devices. A data transmission rate of max. 12 Mbps is possible. An additional Sub-D connector on top of the plug enables analysis/programming devices to be connected without modifying the wiring.

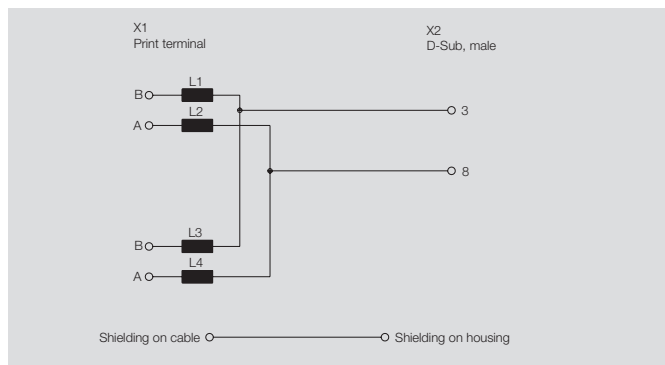
The 9-pin sub-D connector is available in four versions:

1. without terminating resistor
2. with built-in terminating resistor
3. with switch-in terminating resistor and connection for programming unit via IDC connection
4. with switch-in terminating resistor and connection for programming unit via tension clamp connection.

D

- T-piece functions
- Good shield contact
- Ample space for connecting the bus cable
- Cable entry can be closed off with blanking panel
- Fully insulated housing
- Reliable strain relief

PB-DP SUB-D



Technische Daten

Data transmission rate		max. 12 Mbps
ESD		protection to IEC 801-2
Operating temperature	°C	0 ... 60
Storage temperature	°C	-25 ... +80
Ingress protection class		IP 40
Dimensions (LxWxH)	mm	64.6 x 47.5 x 16
Housing material		PC UL 94 V-1
Plug-in connector		sub-D 9-pin
Cable connection		2 No. horizontal
Cable diameter	mm	4.5 ... 8
Single conductor cross-section	mm ²	rigid max. 1.5 flexible max. 1.0
Type of connection	Screw	8395500000 and 8460860000
	IDC	1916980000
	Tension clamp	1934200000
Note		

Ordering data

Type	Qty.	Order No.
PB-DP SUB-D	1	8395500000

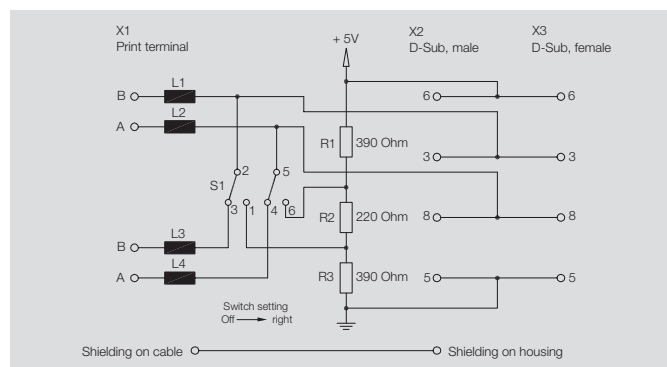
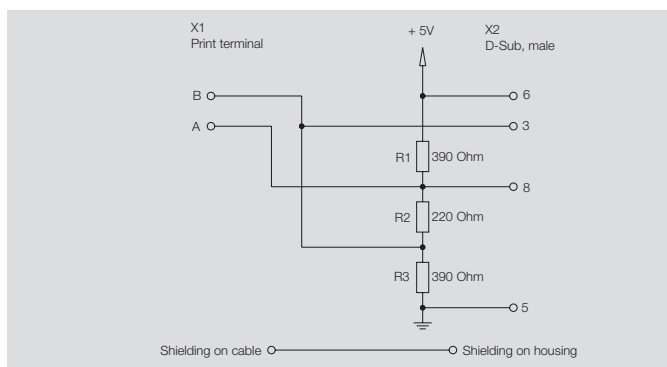
Sub-D



PB-DP SUB-D TERM



PB-DP SUB-D IDC/ZF TERM PS



Ordering data

Type	Qty.	Order No.
PB-DP SUB-D TERM	1	8460860000

Ordering data

Type	Qty.	Order No.
PB-DP SUB-D IDC TERM PS	1	1919680000
PB-DP SUB-D ZF TERM PS	1	1934200000

PROFIBUS-PA



Plug

Socket



D

Ordering data

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Type	Order No.
FBCon M12 4P M EMC	9455640000

Type	Order No.
FBCon M12 4P FM EMC	8426220000

Note

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Technical data

No. of poles
Type of connection
Conductor cross-section
Connection thread
Contact surface
Housing ingress protection class DIN 40050 IEC 529
Housing material
Flammability class to UL-94
Operating temperature
Nominal current per contact
Nominal voltage to VDE standard 0110/ISO Group C
Resistance to creepage
Contact resistance to IEC 512 Part 2
Insulation resistance to IEC 512 Part 2

Plug
4 poles
screw
0.75 mm ²
M 12
CuZnAu
IP 67 with cable dia. 4–9 mm
Cu Zn, nickel surface
V-2
–25 °C ... 85 °C
3 A
125 V ~ 150 V =
KC 600
≤ 8 m Ω
≥ 10 ¹² Ω

Socket
4 poles
screw
0.75 mm ²
M 12
CuZnAu
IP 67 with cable dia. 4–9 mm
Cu Zn, nickel surface
V-2
–25 °C ... 85 °C
3 A
125 V ~ 150 V =
KC 600
≤ 8 m Ω
≥ 10 ¹² Ω

Note

Stainless steel version on page D.8

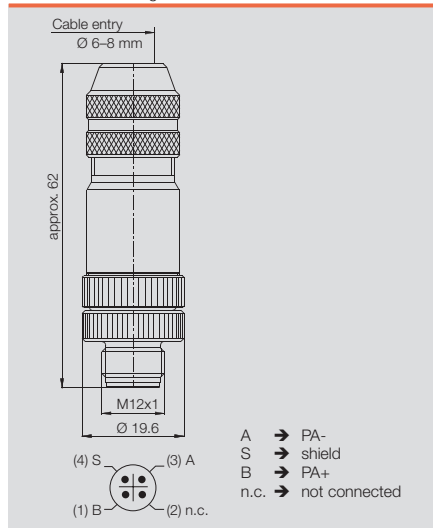
Stainless steel version on page D.8

Fitting information

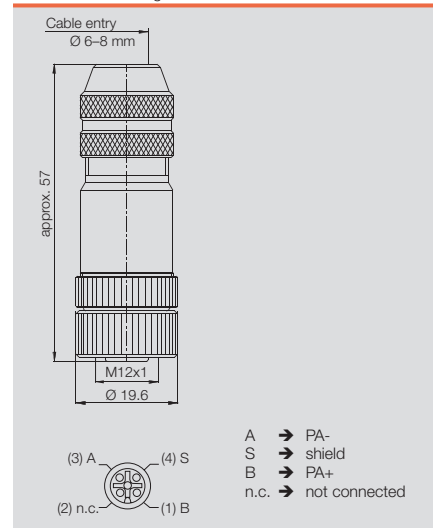
	Torque settings
Screw terminals	0.4 Nm
Union nut PG gland	4.0 Nm
Set screw	
Knurled ring	hand-tight
Lock-nut	6.25 Nm

If the device is exposed to vibration, we recommend using a stub cable to isolate the device from the vibration.

Dimensioned drawing



Dimensioned drawing

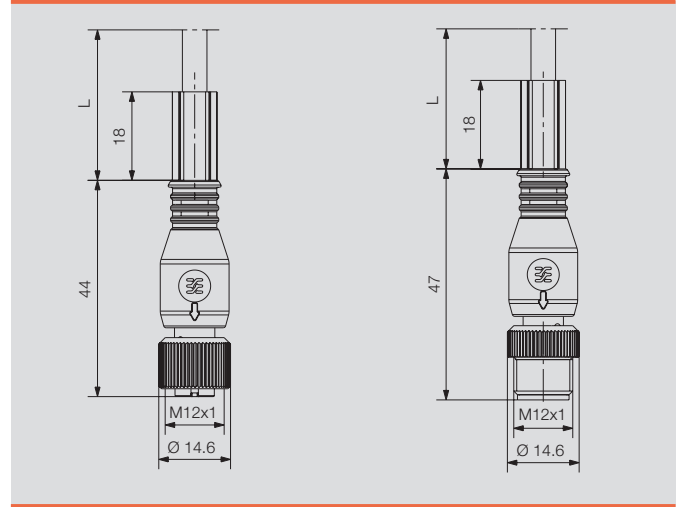


PROFIBUS-PA

Ex i cables



Dimensioned drawing



Technical data

Cable resistance (loop)	max. Ω /km	44
Insulation resistance	min. $G\Omega \times km$	5
Eff. capacitance at 800 Hz	nom. nF/km	52
Inductance 800 Hz	mH/km	approx. 0.4
Wave impedance at 31.25 kHz	Ω	$100 \pm 20 \%$
at ≥ 1 MHz	nom. Ω	80
Wave attenuation		
- at 39 kHz	max. d/B 100 m	0.3
- at 100 kHz	nom. d/B 100 m	0.35
- at 1 MHz	nom. d/B 100 m	1.2
Signal propagation rate	nom. %	79
Transfer impedance up to 30 MHz	max. mOhm/m	250
Operating voltage (not for three-phase use)	peak V	100
Test voltage	wire/wire U_{eff} V	1500
	wire/shield U_{eff} V	1500
Mechanical specifications		
Stationary bending radius	mm	65
Temperature range		
	stationary $^{\circ}C$	-5 ... 60
	moving $^{\circ}C$	-30 ... 80
Note		

Pre-assembled cables with a connector at one end only require suitable plugs and sockets to complete the cable assembly.

The following cables are available:

Ordering data

Designation	Type	Order No.
Intrinsically safe area Exi		
One side without connector, male		
M12 EMV/blue/1M	FBCEX PA M12 M 1M	1785150100
M12 EMV/blue/2M	FBCEX PA M12 M 2M	1785150200
M12 EMV/blue/5M	FBCEX PA M12 M 5M	1785150500
M12 EMV/blue/10M	FBCEX PA M12 M 10M	1785151000
One side without connector, female		
M12 EMV/blue/1M	FBCEX PA M12 FM 1M	1785140100
M12 EMV/blue/2M	FBCEX PA M12 FM 2M	1785140200
M12 EMV/blue/5M	FBCEX PA M12 FM 5M	1785140500
M12 EMV/blue/10M	FBCEX PA M12 FM 10M	1785141000
Connecting cable, male - female		
M12 EMV/blue/1M	FBCEX PA M12 M-FM 1M	1785130100
M12 EMV/blue/2M	FBCEX PA M12 M-FM 2M	1785130200
M12 EMV/blue/5M	FBCEX PA M12 M-FM 5M	1785130500
M12 EMV/blue/10M	FBCEX PA M12 M-FM 10M	1785131000
Note	Other versions on request	

Through Panel bushing



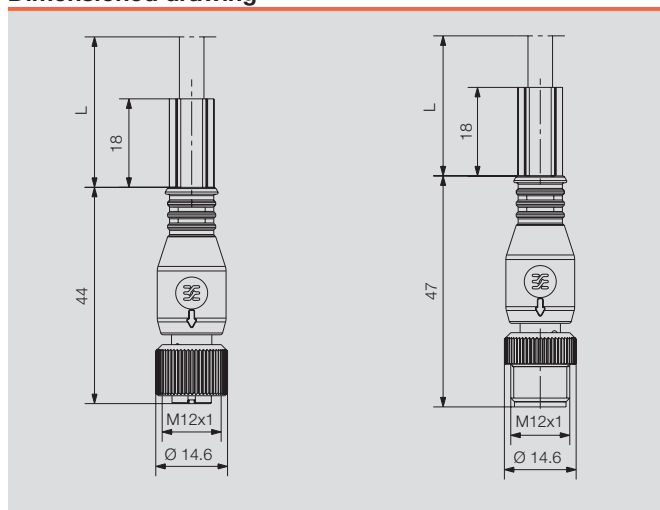
Ordering data

Type	Length	Qty.	Order No.
SAI-WDF-5P M12 60 mm	60 mm	1	1819450000

Cables



Dimensioned drawing



Technical data

Cable resistance (loop)	max. Ω /km	44
Insulation resistance	min. $G\Omega$ x km	5
Eff. capacitance at 800 Hz	nom. nF/km	52
Inductance 800 Hz	mH/km	approx. 0.4
Wave impedance at 31.25 kHz	Ω	100 \pm 20 %
at \geq 1 MHz	nom. Ω	80
Wave attenuation		
- at 39 kHz	max. dB/100 m	0.3
- at 100 kHz	nom. dB/100 m	0.35
- at 1 MHz	nom. dB/100 m	1.2
Signal propagation rate	nom. %	79
Transfer impedance up to 30 MHz	max. mOhm/m	250
Operating voltage (not for three-phase use)	peak V	100
Test voltage wire/wire	U_{eff} V	1500
wire/shield	U_{eff} V	1500
Mechanical specifications		
Stationary bending radius	mm	65
Temperature range		
stationary	$^{\circ}C$	-5 ... 60
moving	$^{\circ}C$	-30 ... 80
Note		

Pre-assembled cables with a connector at one end only require suitable plugs and sockets to complete the cable assembly.

The following cables are available:

Ordering data

Designation	Type	Order No.
Industrial applications		
One side without connector, male		
M12 EMV/black/1M	1 m	FBC PA M12 M 1M
M12 EMV/black/2M	2 m	FBC PA M12 M 2M
M12 EMV/black/5M	5 m	FBC PA M12 M 5M
M12 EMV/black/10M	10 m	FBC PA M12 M 10M
One side without connector, female		
M12 EMV/black/1M	1 m	FBC PA M12 FM 1M
M12 EMV/black/2M	2 m	FBC PA M12 FM 2M
M12 EMV/black/5M	5 m	FBC PA M12 FM 5M
M12 EMV/black/10M	10 m	FBC PA M12 FM 10M
Connecting cable, male - female		
M12 EMV/black/1M	1 m	FBC PA M12 M-FM 1M
M12 EMV/black/2M	2 m	FBC PA M12 M-FM 2M
M12 EMV/black/5M	5 m	FBC PA M12 M-FM 5M
M12 EMV/black/10M	10 m	FBC PA M12 M-FM 10M
Note	Other versions on request	

Through Panel bushing



Ordering data

Type	Length	Qty.	Order No.
SAI-WDF-5P M12 60 mm	60 mm	1	1819450000

PROFIBUS-PA

Accessories for fieldbus distributors

Cable glands – plastic – IP68



Ordering data

Type	Qty.	Order No.
VG M16-1/K68	50	1909860000

Cable glands – brass – IP68



Ordering data

Type	Qty.	Order No.
VG M16-1/MS68	50	1909910000

Cable glands – brass – 1/EMC



Ordering data

Type	Qty.	Order No.
VG M16-MS 1/EMV	50	1909500000

Cable glands – brass – EEx e, IP68



Ordering data

Type	Qty.	Order No.
VG M16-EXE MS	50	1737210000

Sealing rings – 9005



Ordering data

Type	Qty.	Order No.
GWDR M16-NP	50	1736230000

Blanking plugs – brass



Ordering data

Type	Qty.	Order No.
VP M16-MS65	100	1777730000

Blanking plugs – plastic - EEx e



Ordering data

Type	Qty.	Order No.
VG M16-EXE SW	50	1737070000

Pressure compensation element – plastic – DAE



Ordering data

Type	Qty.	Order No.
DAE M12 PA short	10	1868560000

For technical data, refer to Catalogue 5 – Enclosures and Cable Glands

M12 screw connection, metal (EMC)



SAISW / SAIBW

5-pole, straight



SAISW / SAIBW

5-pole, 90°



Ordering data

Male plug	
	5-pole, PG9
Female socket	
	5-pole, PG9

Type	Qty.	Order No.
SAIS-M-5/8S M12 5P A-COD	1	1784740000
SAIB-M-5/8S M12 5P A-COD	1	1784750000

Type	Qty.	Order No.
SAISW-M-5/8 M12	1	1803940000
SAIBW-M-5/8 M12	1	1803920000

Note

Other versions on request

Other versions on request

Technical data

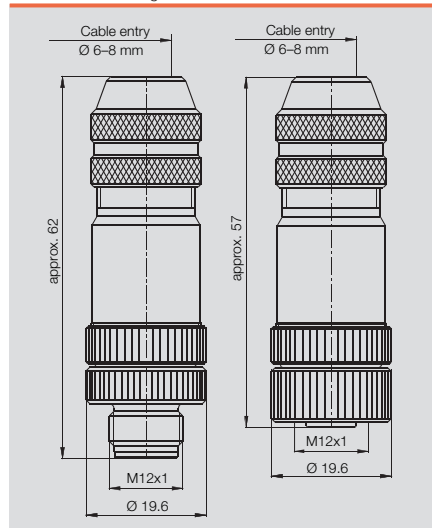
Number of Poles	
Type of connection	screw
Housing material	CuZn, nickel-plated
Connection thread	M12
Cable-connection diameter	mm 6...8 (PG9)
Connection cross-section	mm ² 0.75
Rated current	A 4
Rated voltage	V 250 V (4-pole) / 125 V (5-pole)
Temperature range	°C -40 ... 85
Ingress protection class	IP 67
Contact surface	CuSnZn

Number of Poles	5
Type of connection	screw
Housing material	CuZn, nickel-plated
Connection thread	M12
Cable-connection diameter	mm 6...8 (PG9)
Connection cross-section	mm ² 0.75
Rated current	A 4
Rated voltage	V 250 V (4-pole) / 125 V (5-pole)
Temperature range	°C -40 ... 85
Ingress protection class	IP 67
Contact surface	CuSnZn

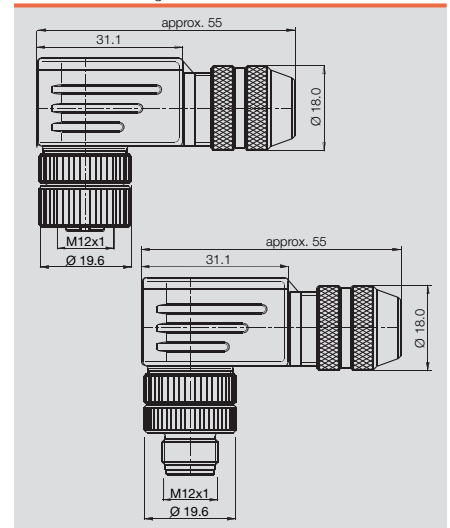
Number of Poles	5
Type of connection	screw
Housing material	CuZn, nickel-plated
Connection thread	M12
Cable-connection diameter	mm 6...8 (PG9)
Connection cross-section	mm ² 0.25...0.75
Rated current	A 4
Rated voltage	V 250 V (4-pole) / 125 V (5-pole)
Temperature range	°C -40 ... 85
Ingress protection class	IP 67
Contact surface	CuSnZn

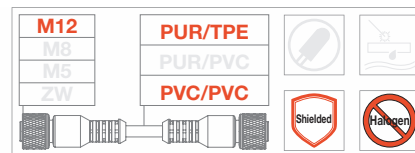
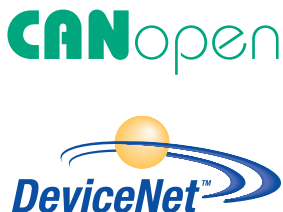
Note

Dimensioned drawing



Dimensioned drawing



CAN/DeviceNet cables
connecting cables

Ordering data

Male, straight - Socket, straight	
	1.5 m
	3.0 m
	5.0 m
	10.0 m
Male, straight - Socket, angled	
	1.5 m
	3.0 m
	5.0 m
	10.0 m
Male, angled - female socket, angled	
	1.5 m
	3.0 m
	5.0 m
	10.0 m
Note	

PUR / TPE

2-pole

Type	Order No.
SAIL-M12GM12G-CD-1.5A	1964710150
SAIL-M12GM12G-CD-3.0A	1964710300
SAIL-M12GM12G-CD-5.0A	1964710500
SAIL-M12GM12G-CD-10A	1964711000
SAIL-M12GM12W-CD-1.5A	1061990150
SAIL-M12GM12W-CD-3.0A	1061990300
SAIL-M12GM12W-CD-5.0A	1061990500
SAIL-M12GM12W-CD-10A	1061991000
SAIL-M12WM12W-CD-1.5A	1062150150
SAIL-M12WM12W-CD-3.0A	1062150300
SAIL-M12WM12W-CD-5.0A	1062150500
SAIL-M12WM12W-CD-10A	1062151000

Other versions on request

PVC / PVC

2-pole

Type	Order No.
SAIL-M12GM12G-CD-1.5B	1060130150
SAIL-M12GM12G-CD-3.0B	1060130300
SAIL-M12GM12G-CD-5.0B	1060130500
SAIL-M12GM12G-CD-10B	1060131000
SAIL-M12GM12W-CD-1.5B	1062190150
SAIL-M12GM12W-CD-3.0B	1062190300
SAIL-M12GM12W-CD-5.0B	1062190500
SAIL-M12GM12W-CD-10B	1062191000
SAIL-M12WM12W-CD-1.5B	1062210150
SAIL-M12WM12W-CD-3.0B	1062210300
SAIL-M12WM12W-CD-5.0B	1062210500
SAIL-M12WM12W-CD-10B	1062211000

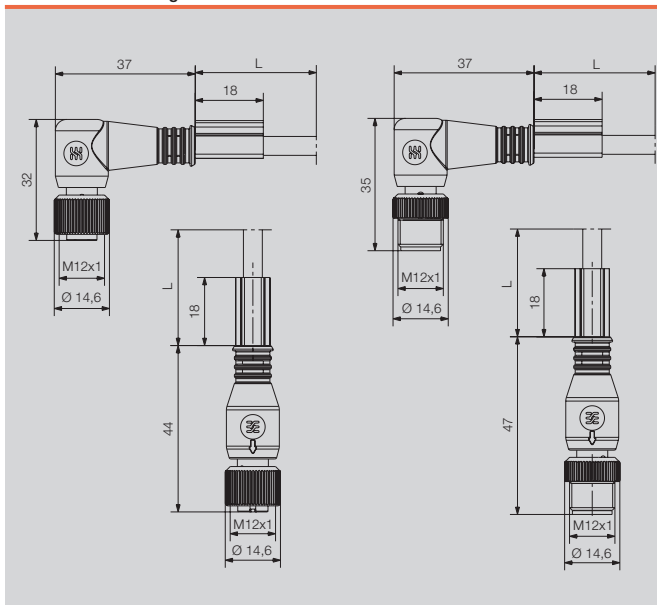
Other versions on request

Type	Order No.

Technical data

Sheathing colour	black
Material	PUR/ TPE
Protection class	IP 67
Core cross-section	2 x 0.34 + 2 x 0.22 mm ²
Contact surface	gold-plated
Temperature range	-10 ... 80 °C
Rated voltage	30 V
(acc. to VDE standard 0110 ISO group C)	

Dimensioned drawing



L in the drawing is the cable length

Universal Pro

Universal Pro cables



The four-pole Standard M8 sensor cables are especially well suited for the Universal Pro system. With their diameter of 0.34 mm², these cables allow a system to be expanded up to 50 meters. The 360° shielding guarantees that signal transmission is error-free.

D

Technical data

Cable construction	
No. of poles	4
Sheathing colour	grey
Material	PUR/PUR
Core cross-section	0.34 mm ²
Contact surface	Gold-plated
Nominal voltage	30 V
Rated current	4 A
Protection class	IP 67
Ambient temperature, min.	-30 °C
Ambient temperature, max.	90 °C

Note

L in the drawing is the cable length

Ordering data

Male, straight - female, straight	Type	(Qty. = 1)	Order No.
0.3 m	SAIL-M8GM8G-4S-0.3Q-SB		1981900030
1.0 m	SAIL-M8GM8G-4S-1.0Q-SB		1981900100
1.5 m	SAIL-M8GM8G-4S-1.5Q-SB		1981900150
3.0 m	SAIL-M8GM8G-4S-3.0Q-SB		1981900300
5.0 m	SAIL-M8GM8G-4S-5.0Q-SB		1981900500
10.0 m	SAIL-M8GM8G-4S-10Q-SB		1981901000
15.0 m	SAIL-M8GM8G-4S-15Q-SB		1981901500
20.0 m	SAIL-M8GM8G-4S-20Q-SB		1981902000
Female, straight - open end			
1.5 m	SAIL-M8BG-4S-1.5Q-SB		1981910150
3.0 m	SAIL-M8BG-4S-3.0Q-SB		1981910300
5.0 m	SAIL-M8BG-4S-5.0Q-SB		1981910500
10.0 m	SAIL-M8BG-4S-10Q-SB		1981911000
Other versions on request			

Note

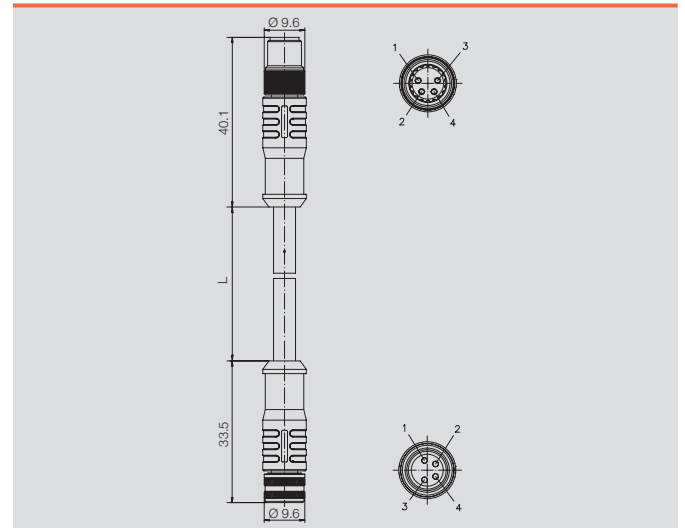
Terminating resistor



Ordering data

Type	Qty.	Order No.
SAI END CAN M8 4P	1	1955340000

Dimensions



M12, metal (EMC), D-coded

SAISM / SAIBM

4-pole, straight (Screw connection)

SAISM / SAIBM

4-pole, straight (Tension clamp connection)

Industrial Ethernet

Ordering data

Male plug	
	4-pole, PG 9
Female socket	
	4-pole, PG 9

Type	Qty.	Order No
SAISM-4/8S-M12-4P D-COD	1	1892120000
SAIBM-4/8S-M12-4P D-COD	1	1892130000

Type	Qty.	Order No
SAISM-4/8S-M12 4P D-ZF	1	1892120001
SAIBM-4/8S-M12 4P D-ZF	1	1892130001

Information

Other versions on request

Other versions on request

Technical data

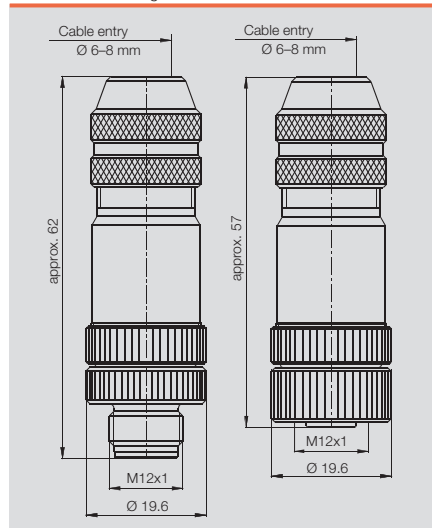
Number of Poles		4
Type of connection		screw
Housing material		CuZn
Connection thread		M12
Cable-connection diameter	mm	6...8 (PG9)
Connection cross-section	mm ²	0.14...0.5 (D-COD)
Rated current	A	4
Rated voltage	V	250 V (4-pole)
Temperature range	°C	-40 ... 85
Ingress protection class		IP 67
Contact surface		CuSnZn (B-COD) / gold-plated (D-COD)

Number of Poles		4
Type of connection		Tension clamp
Housing material		CuZn
Connection thread		M12
Cable-connection diameter	mm	6...8 (PG9)
Connection cross-section	mm ²	0.14...0.5 (D-COD)
Rated current	A	4
Rated voltage	V	250 V (4-pole)
Temperature range	°C	-40 ... 85
Ingress protection class		IP 67
Contact surface		CuSnZn (B-COD) / gold-plated (D-COD)

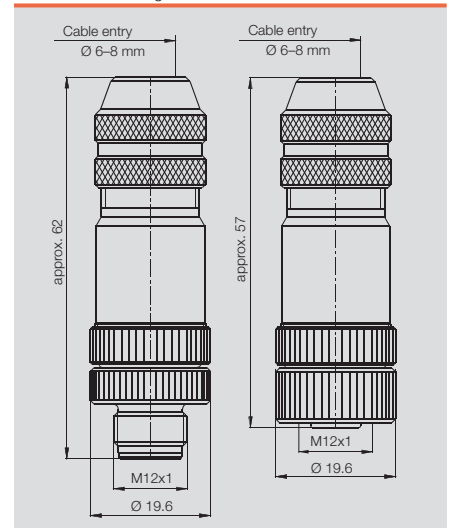
Number of Poles		4
Type of connection		Tension clamp
Housing material		CuZn
Connection thread		M12
Cable-connection diameter	mm	6...8 (PG9)
Connection cross-section	mm ²	0.14...0.5 (D-COD)
Rated current	A	4
Rated voltage	V	250 V (4-pole)
Temperature range	°C	-40 ... 85
Ingress protection class		IP 67
Contact surface		CuSnZn (B-COD) / gold-plated (D-COD)

Information

Dimensioned drawing



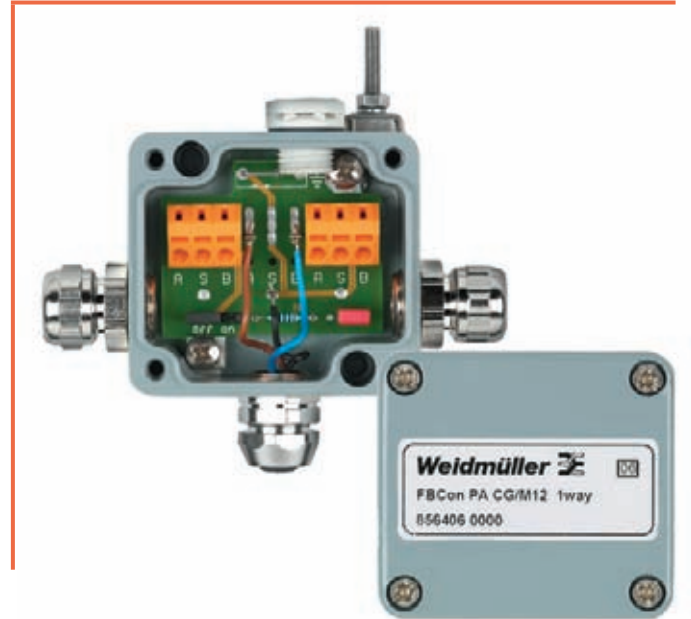
Dimensioned drawing



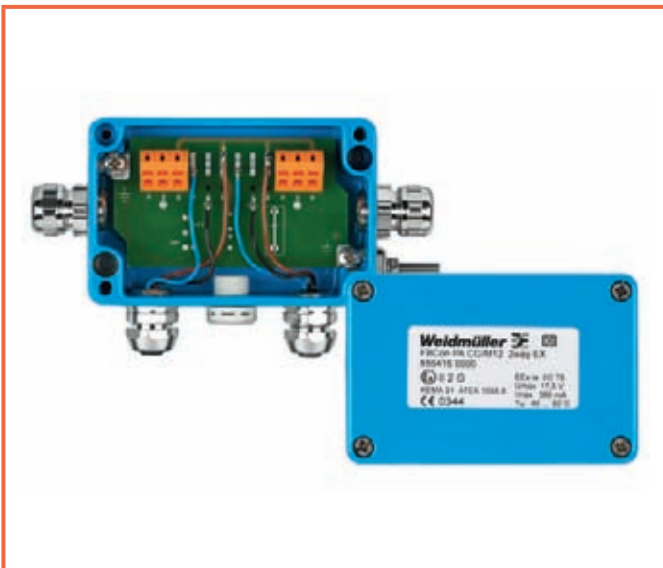
FBCon

FBCon	Introduction	E.2
	PROFIBUS-DP	E.5
	PROFIBUS-PA	E.10
	PROFIBUS-PA ATEX	E.26
	Fieldbus Foundation	E.33
	Accessories	E.36

Overview



ATEX $\text{\textcircled{E}x}$



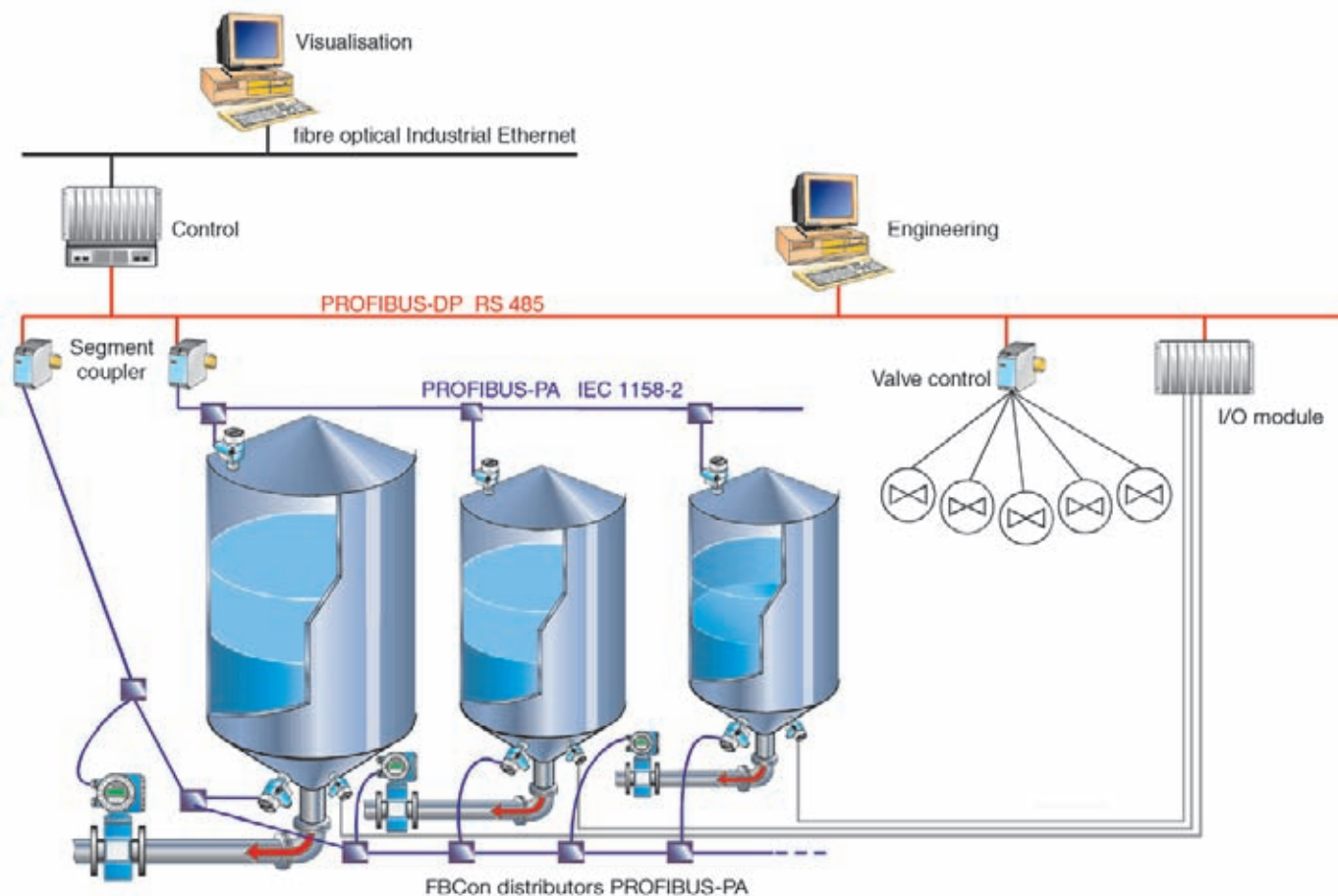
System description, fieldbus components

FBCon fieldbus distributors are available in industrial and EEx (ia) versions. They are used for coupling 1–8 field devices or sensors. The connection is made via stub cables. The stub cable is connected optionally by an M12 or 7/8" plug-in connector or directly via an EMC cable gland. The communication and device powering is handled by a common 2-core wire. This feature is the same for PROFIBUS-PA and Fieldbus Foundation.

The distributors offer the following features irrespective of the version:

- Tension clamp connection technology
- Surge protection for the main line
- Current limiter for each stub line
- EMC cable gland
- M12 plug-in connectors
- External earth stud
- Interruption-free bus operation
- Industrial specification
- Bus termination integrated (not EX)
- ⚠ ATEX explosion-proof version
- Pressure-equalising element
- IP65, IP66, IP67 Ingress protection class
- Stainless steel versions
- PROFIBUS-PA compatible
- Fieldbus Foundation compatible

Typical PROFIBUS system layout



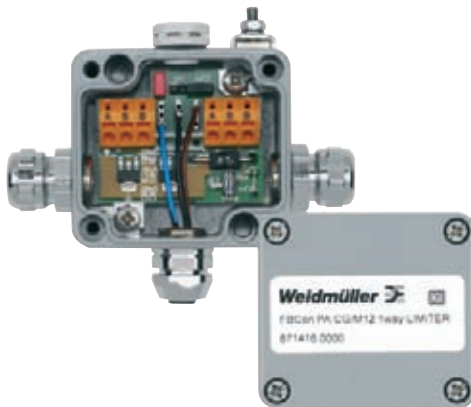
Product breakdown

The FBCon family of distributors includes various forms. The product name indicates the respective features as follows:

FBCon	Field Bus Connection
PA	PROFIBUS-PA Process Automation
DP	PROFIBUS-DP Decentralised Periphery
FF	Fieldbus Foundation
SS	Stainless Steel
CG	Stainless steel cable gland on stainless steel housing. On standard aluminium housings, the cable gland is nickel-plated brass.
PCG	Plastic Cable Gland
CG/M12	M12 plug-in connector for the stub cables and cable gland for the trunk cable
CG-7/8	7/8" connection for the stub cables and cable gland for the trunk cable
1way	Number of outgoing stub lines
Limiter	Current limiter: protects the PROFIBUS-PA network in the event of an overload in the stub line
OVP	Surge protection: protects the system in the event of a voltage surge
EX	Approved for potentially explosive areas
ATEX	For explosive atmospheres

The standard distributors are finished in grey paint, the EX-approved distributors are blue. Fieldbus Foundation distributors are black.

PROFIBUS-PA distributors are generally equipped with a switch-in terminating resistor. In potentially explosive areas, the terminating resistor is manufactured with a separate box. This must be used instead of the right-hand cable gland. In the case of PROFIBUS-DP, an additional external 24 V DC power supply is required. This makes the terminator independent of the last station in the network.



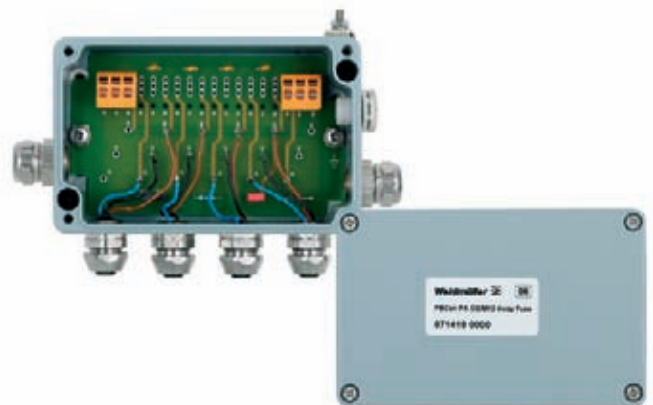
FBCon PA CG/M12 1way Limiter



FBCon SS PCG 1way

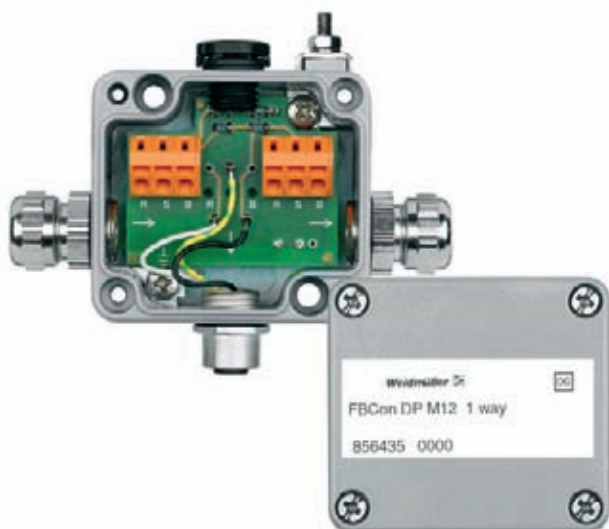


FBCon FF CG-7/8 1way EX



FBCon PA CG 1way Ex

PROFIBUS-DP distributors with 24 V supply



Profibus DP distributor

The Profibus topology is a line structure. The branches (T-pieces) connect the individual field devices or remote I/Os to the bus cable. The length of the branch cable depends on the transmission rate and should be as short as possible. The total of all branch lengths for transmission rates up to 1.5 MBaud may not exceed max. 6.6 m.

The trunk cable passes through an EMC cable gland into an aluminium enclosure where it is connected to a tension clamp terminal. The branch cable from the device is connected to a coded M12 socket.

The enclosure has a pressure compensation element to counteract the effects of climatic cycles.

The guidelines issued by the Profibus user organisation must be observed.

PROFIBUS-DP

Technical data

Operating temperature	-25 to +55 °C
Ingress protection class	IP 66
Enclosure material	High grade aluminium alloy (Al-Si 12)
Finish	Painted RAL 7001
Profibus DP connection	Tension clamp terminals 0.5 – 1.5 mm ²
Cable entry	Cable gland M16
Cable gland clamping range	5.5 – 9.5 mm
Contact surface	M12 plug/socket CuZnAu
Transmission rate	Max. 1.5 MBaud
Power supply bus connection	24 V DC ±10%
Trunk cable via cable gland	

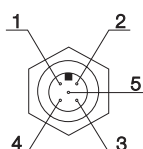
Installation advice

Torques	
M16 cable gland at enclosure	6.0 Nm
Union nut, M16 cable gland	4.0 Nm
Enclosure cover	1.8 – 2.0 Nm
External earthing cable	1.8 – 2.0 Nm
Adaptor/stud cable	hand-tight

Pin assignment

Pin no.	Connection	Wire colour
Pin 1	unassigned	
Pin 2	RxDx/TxD-N / A-wire	green
Pin 3	unassigned	
Pin 4	RxDx/TxD-N / B-wire	red
Pin 5	shield	
Cable gland	shield	

Socket B-coded



Standard distributor without bus termination

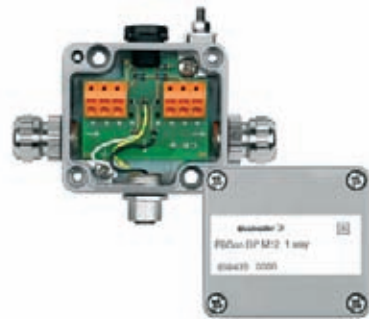
1-way distributor

CG connecting line



1-way distributor

M12 connecting cable



Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon DP CG 1way	branch line CG	1	8564340000
Stainless steel housing			
FBCon SS DP PCG 1way	all connections PCG	1	8714260000

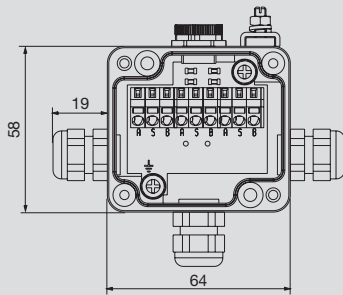
Trunk line via cable gland

Ordering data

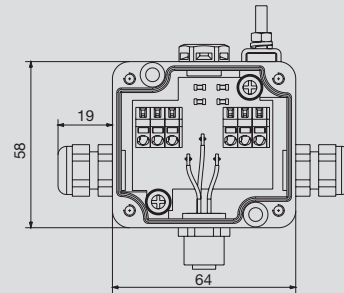
Aluminium housing	Type of connection	Qty.	Order No.
FBCon DP M12 1way	branch line M12	1	8564350000
Stainless steel housing			
FBCon SS DP M12 1way	branch line M12	1	8714270000

Trunk line via cable gland

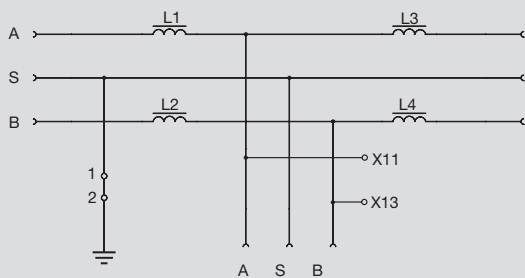
Dimensioned drawing



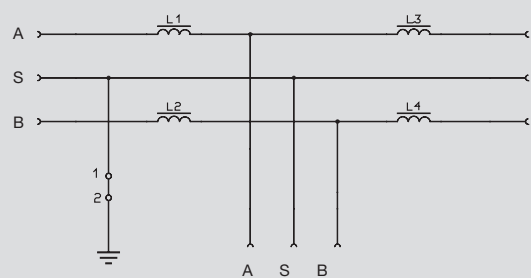
Dimensioned drawing



Wiring diagram



Wiring diagram



Standard distributor with active bus termination

Terminator

CG connecting line



Terminator

CG connecting line



Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon DP CG Term 24V	branch line CG	1	8564290000

Stainless steel housing	Type of connection	Qty.	Order No.
FBCon SS DP PCG Term 24V	all connections PCG	1	8714240000

Trunk line via cable gland

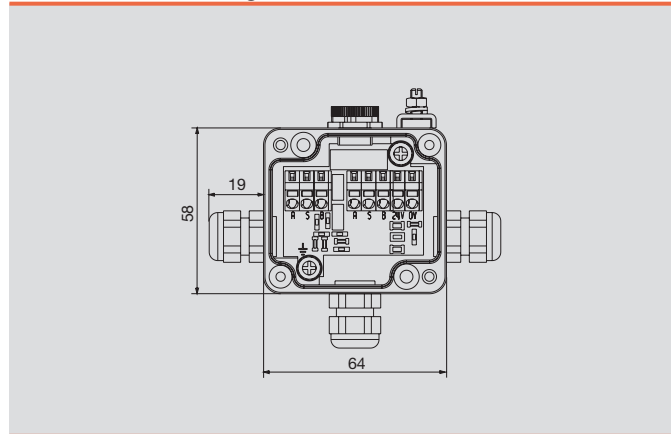
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon DP M12 Term 24V	branch line M12	1	8564330000
FBCon DP M12 Term 5V	branch line M12	1	8564320000

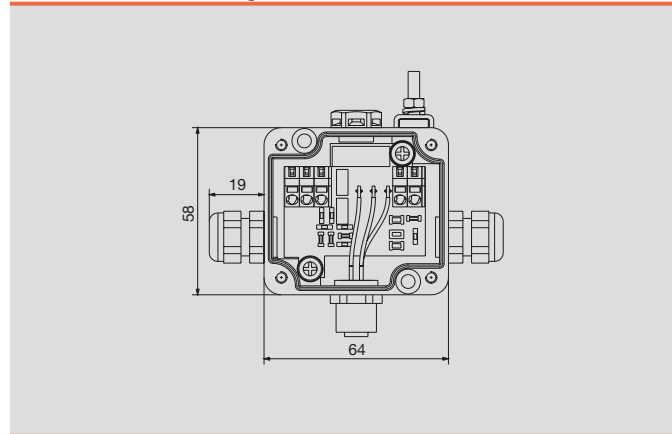
Stainless steel housing	Type of connection	Qty.	Order No.
FBCon SS DP M12 Term 24V	branch line M12	1	8714250000

Trunk line via cable gland

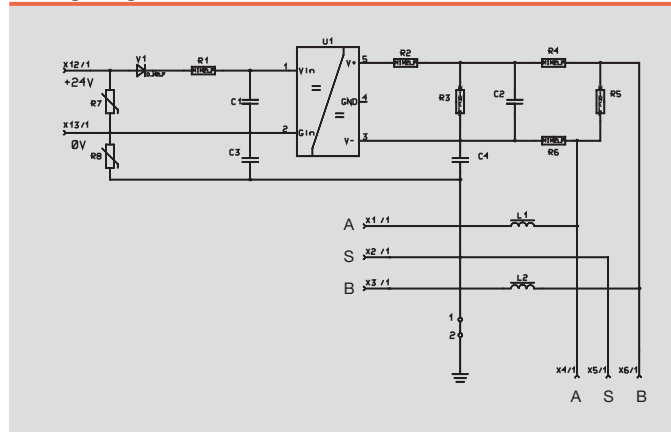
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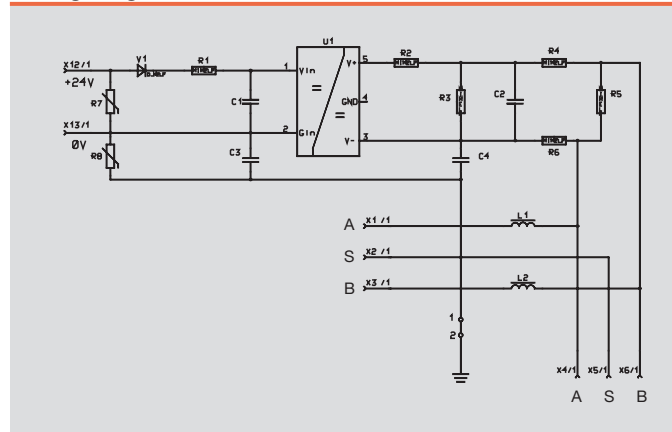
Dimensioned drawing



Wiring diagram



Wiring diagram



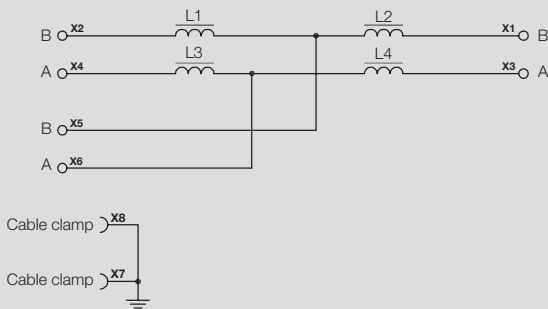
PROFIBUS-DP IP 20 T-piece



This interface unit for PROFIBUS-DP provides users with a convenient connection in the control cabinet. The modules can be mounted on TS 32/35 terminal rails and provide connections for standardised PROFIBUS-DP cables. Spur cables can also be connected. Please note that spur cables should be kept short as possible. Part No. 8788580000 has a 9-pin sub-D socket for connecting analysis/programming devices.

- T-piece functions
- Good shield contact
- Ample space for connecting the bus cable
- TS 32/35 terminal rail mounting
- Standardised sub-D connection for PROFIBUS-DP

RS PB-DP T



Technical data

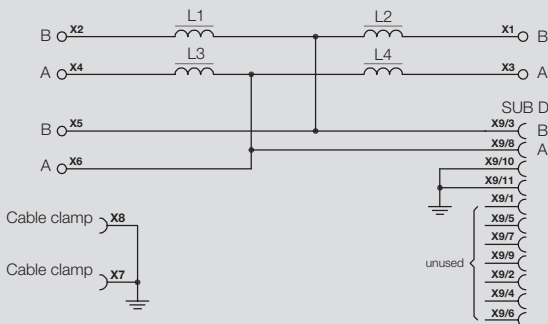
Data transmission rate		max. 1.5 Mbps (with max. 6.6 m spur line) max. 12 Mbps (no spur lines)
Operating temperature	°C	0 ... 55
Storage temperature	°C	-25 ... +70
Ingress protection class		IP 20
Dimensions (LxWxH)	mm	70 x 45 x 42
Plug-in connector		sub-D 9-pin
Cable diameter	mm	4.5 ... 8
Single conductor cross-section	mm ²	0.5 ... 2.5
Type of connection		screw

Information

Ordering data

Type	Qty.	Order No.
RS PB-DP T	1	8800040000
RS PB-DP T SUB-D	1	8788580000

RS PB-DP T SUB-D



FBCon distributors for the industrial segment



PROFIBUS-PA T-connector

- for industrial applications
- standard

The **PROFIBUS-PA** installation products are increasingly used in the:

- food and beverage industry
- Process industries and
- chemical industry.

The product range offers a wide choice of customer solutions also for use in harsh conditions. This includes standard and EX versions of single and multi-way design with M12 plug-in connection or cable gland. Weidmüller offers a solution for almost every application. If you cannot find your solution here, please contact the branch / sales office responsible for you.

PROFIBUS-PA T-connector standard

- 1, 2, 4, 8-way with EMC cable gland Industrial + EX / ATEX
- Surge protection optional

The **PROFIBUS-PA T-connector** is intended for direct coupling of measuring devices, sensors, actuators, etc.

- IP 66 Ingress protection class
- Modular design
- Interruption-free bus operation for service situations
- Simple handling
- Low installation costs
- External earth stud
- Pressure equalising element
- EMC cable gland



The PROFIBUS-PA

is an open fieldbus standard (EN 50170, IEC 1158-2, DIN 19245). It was specifically designed for the requirements of process engineering, such as remote powering and intrinsic safety. The PROFIBUS-PA enables operation of several PA sensors and actuators on one bus line.

The devices are powered using twin cable technology, and the transmission of process data is digital.

Integration in the PROFIBUS-DP network is done by means of a segment coupler.

Specific advantages of PROFIBUS-PA:

- Low wiring costs
- Minimal planning costs for the process control system
- Remote interrogation or programming of the field device
- Further development and support by the PROFIBUS User Organisation

Weidmüller offers the PROFIBUS-PA FB connectors. Whether for servicing or system modification, the PROFIBUS-PA FB connectors from Weidmüller enable connection or replacement of field devices without interrupting the bus system.

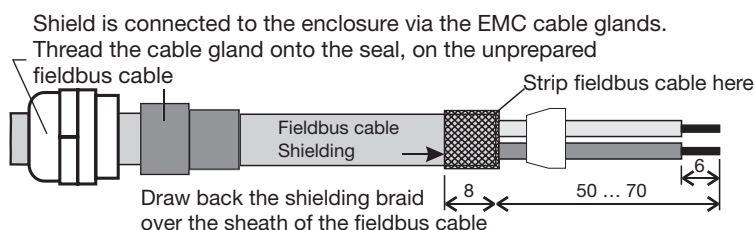
An extensive range of accessories such as pre-assembled cables and plug connectors rounds off the programme.

Technical data for PROFIBUS-PA standard distributors

Temperature range	
Operating temperature	from -40 °C to 85 °C
Ingress protection class	IP 66
Housing material	High-quality aluminium alloy (AL-Si 12)
Surface	Stove-enamelled RAL 7001
PROFIBUS-PA connection	Tension clamp connection 0.5 - 1.5 mm ²
Cable entry	Cable gland M16
Clamping range	5.5 - 9.5 mm
Measuring device connector M12 x 14-pin	Contacts MS, surface CUZnAu
Information	

Handling information

Torques	
M16 gland to housing	6.25 Nm
M16 union nut on cable gland	4.5 Nm
Housing cover	1.8 - 2.0 Nm
External earth stud	1.8 - 2.0 Nm



Standard distributor

1-way distributor

CG connecting line



1-way distributor

M12 connecting cable



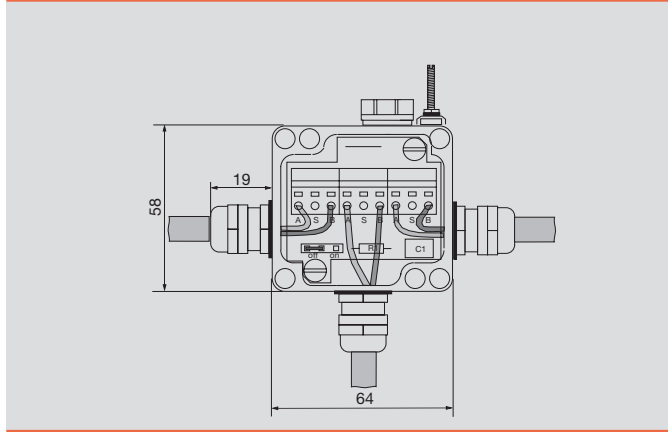
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG 1way	branch line CG	1	8564090000
Stainless steel housing			
FBCon SS CG 1way	branch line CG	1	8703430000
FBCon SS PCG 1way	all connections PCG	1	8613670000
Trunk line via cable gland			

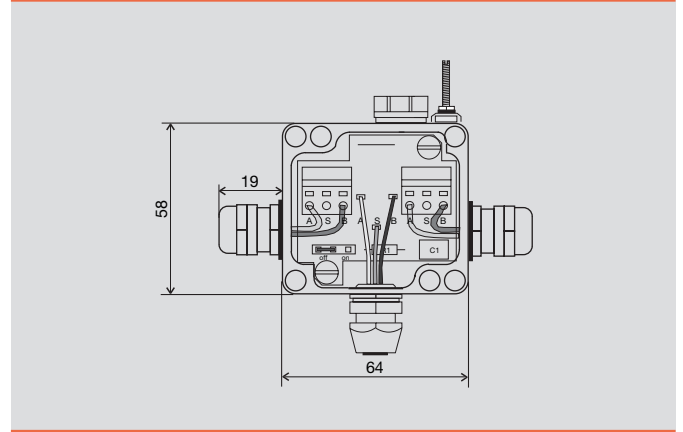
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG/M12 1way	branch line M12	1	8564060000
Stainless steel housing			
FBCon SS CG/M12 1way	branch line M12	1	8726020000
Trunk line via cable gland			

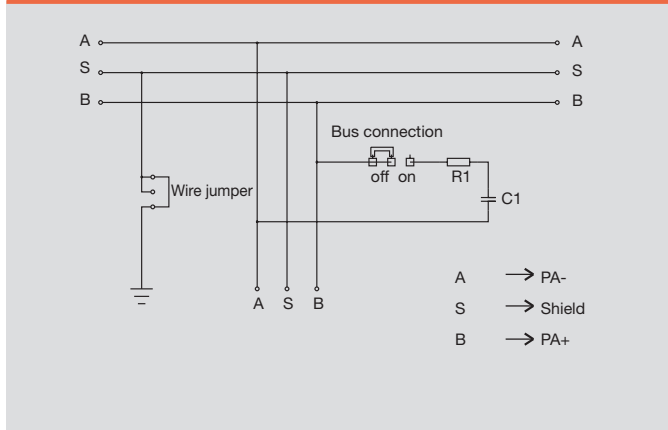
Dimensioned drawing



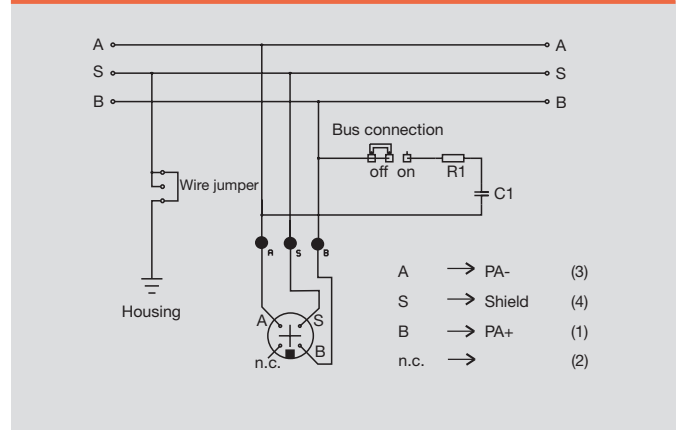
Dimensioned drawing



Wiring diagram



Wiring diagram



Standard distributor

2-way distributor
CG connecting line



2-way distributor
M12 connecting cable



Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG 2way	branch line CG	1	8564100000

Stainless steel housing

Trunk line via cable gland

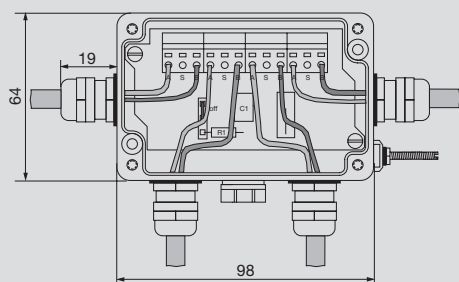
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG/M12 2way	branch line M12	1	8564070000

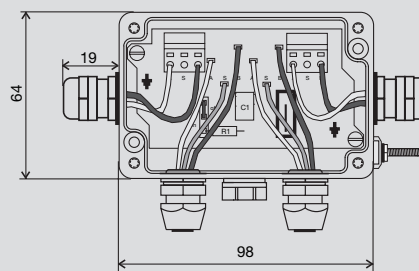
Stainless steel housing

Trunk line via cable gland

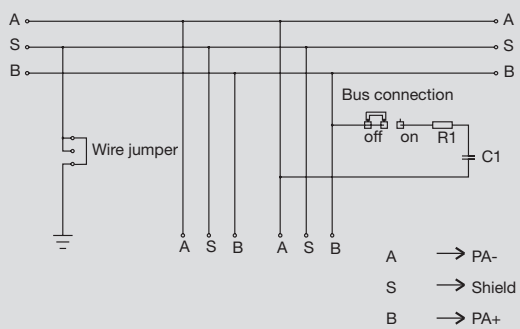
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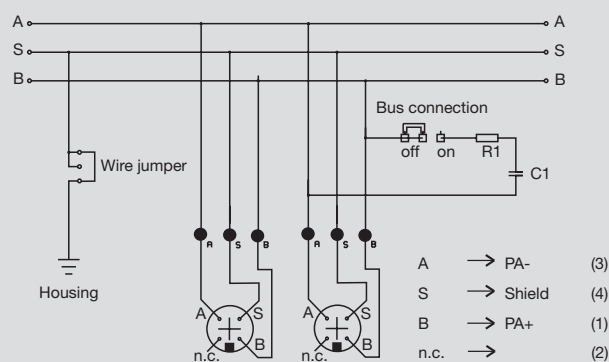
Dimensioned drawing



Wiring diagram



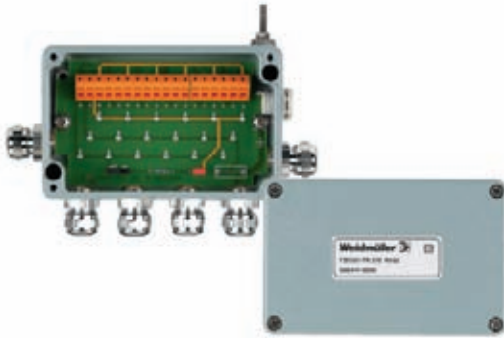
Wiring diagram



Standard distributor

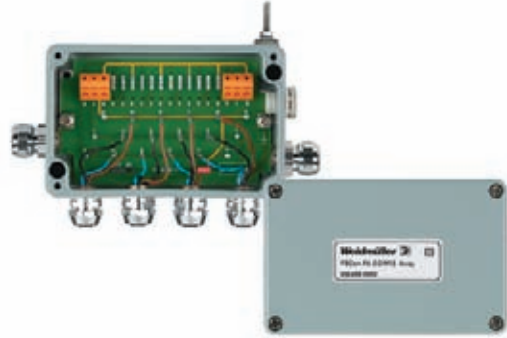
4-way distributor

CG connecting line



4-way distributor

M12 connecting cable



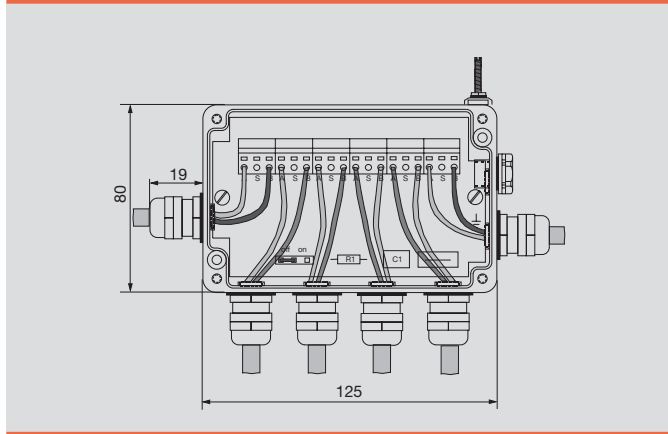
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG 4way	branch line CG	1	8564110000
Stainless steel housing			
FBCon SS CG 4way	branch line CG	1	8703450000
FBCon SS PCG 4way	all connections PCG	1	8613680000
Trunk line via cable gland			

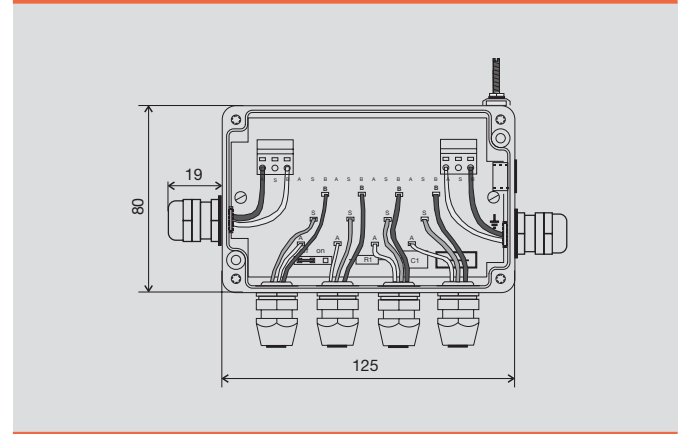
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG/M12 4way	branch line M12	1	8564080000
Stainless steel housing			
FBCon SS CG/M12 4way	branch line M12	1	8726040000
Trunk line via cable gland			

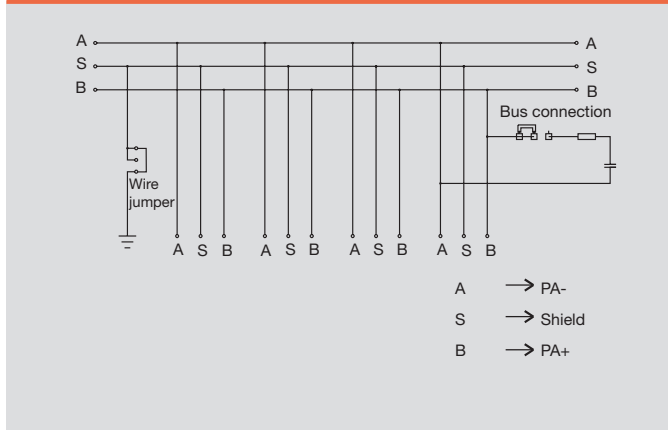
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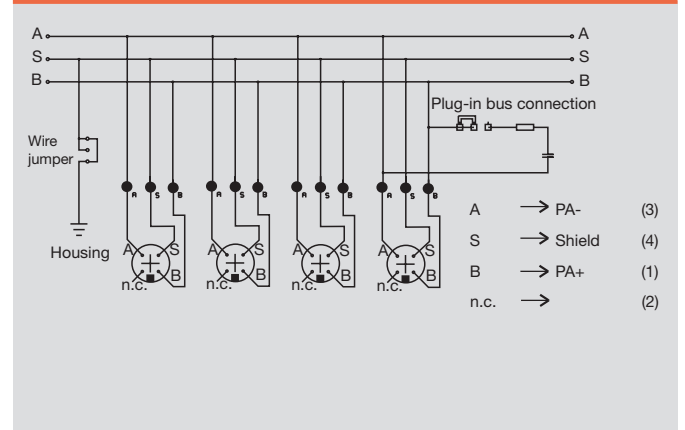
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Wiring diagram

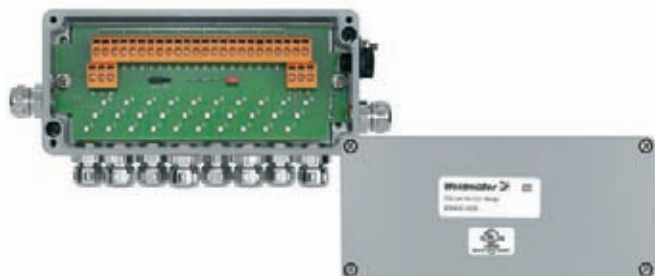


Wiring diagram

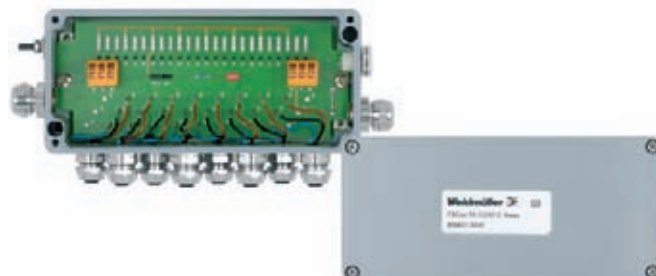


Standard distributor

8-way distributor
CG connecting line



8-way distributor
M12 connecting cable



Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG 8way	branch line CG	1	8564300000

Stainless steel housing			
FBCon SS CG 8way	branch line CG	1	8703470000
FBCon SS PCG 8way	all connections PCG	1	8640720000

Trunk line via cable gland

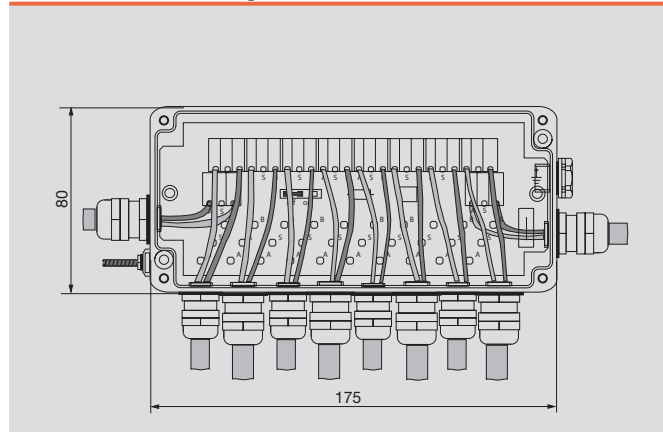
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG/M12 8way	branch line M12	1	8564310000

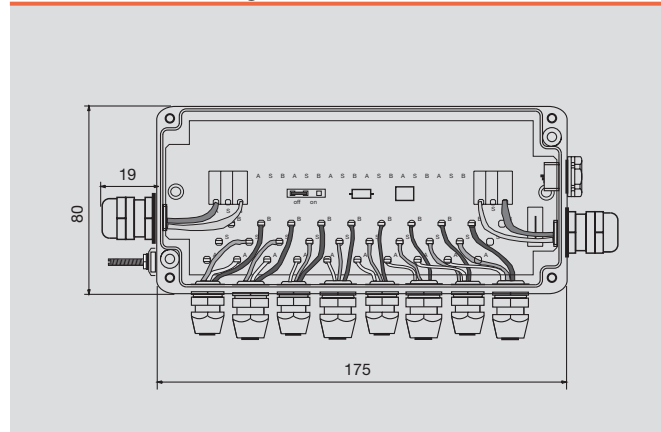
Stainless steel housing			
FBCon SS CG/M12 8way	branch line M12	1	8726050000

Trunk line via cable gland

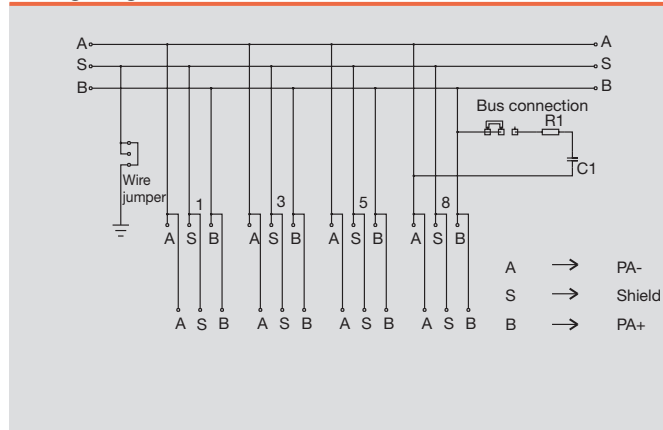
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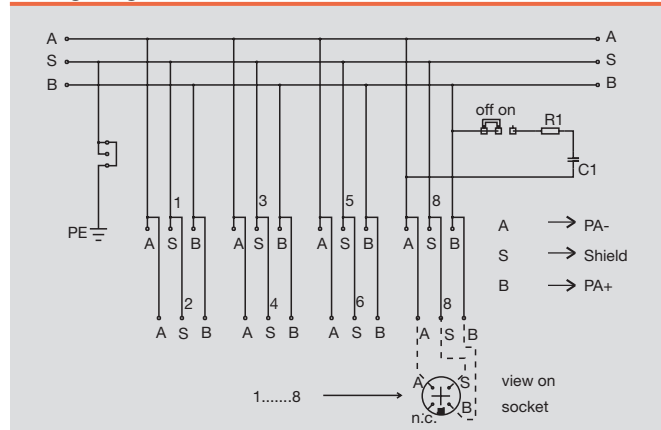
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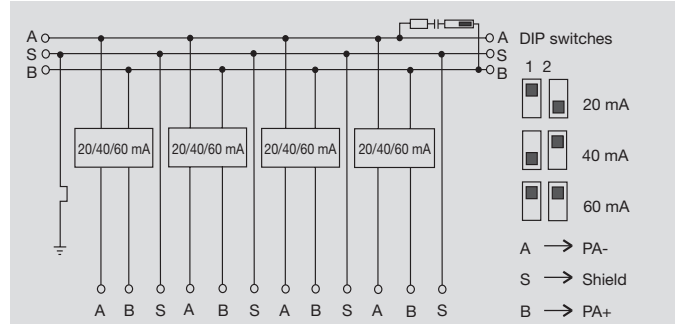
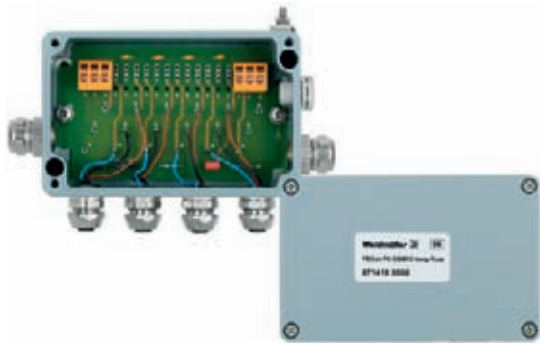
Wiring diagram



Wiring diagram



Fieldbus components for industrial applications with surge protection or current limiter



Example: 4-way module with current limiter

PROFIBUS-PA T-connectors

are now available also with fine surge protection or integrated current limiter to protect connected measuring devices, sensors or actuators from voltage surges or short circuits that might arise. As voltage-limiting protection elements are used gas discharge tubes and suppressor diodes, while a limiter protects the bus stations from short circuit.

If a rapidly rising voltage pulse reaches the input of a T-connector with surge protection, the gas discharge tube ignites and discharges a high current.

The residual pulse is limited by a suppressor diode. In the case of a slow rise in voltage, the pulse is processed by the diode

alone. The housing is connected to the protective earth via an external earth stud.

Where the connectors with current limiter are used, the bus station is protected from short circuit by a protection circuit. The current can be set to either 20 mA, 40 mA or 60 mA by means of two DIP switches.

Besides the additional functions of surge and short circuit protection, the advantages of the standard distributors are, of course, also provided.

Surge protection
Technical data

Operating temperature	-40 to +85 °C
Ingress protection class	IP 67
Enclosure material (Al-Si 12)	High grade aluminium alloy (AL - Si 12)
Finish	Painted RAL 7001
Profibus PA connection	Tension clamp terminals 0.5 - 1.5 mm ²
Cable entry	Cable gland M16
Branch	M12 socket (4-pin)
Cable gland clamping range	5.5 - 9.5 mm
Nominal voltage DC/AC	U _N = 24 V DC / 18 V AC
Max. permissible operating voltage	U _C = 30 V DC / 21 V AC
Rated current at 30 °C	I _N = 500 mA
Trip surge voltage (1 kV/μs)	< 600 V
Rated discharge surge current (8/20 μs)	I _{dis} = 10 kA (wire-wire, wire-PE)
Output voltage limit (8/20 μ)	U _p = 65 V
PROFIBUS-PA bus terminator	Via jumper

Installation advice

Torques	
Screw terminals	0.4 Nm
M16 cable gland at enclosure	6.0 Nm
Union nut M16 cable gland	4.0 Nm
Enclosure cover	1.8 - 2.0 Nm
External earthing cable	1.8 - 2.0 Nm

Limiter
Technical data

Operating temperature	-40 to 85 °C
Ingress protection class	IP 67
Enclosure material (Al-Si 12)	High grade aluminium alloy (AL - Si 12)
Finish	Painted RAL 7001
Profibus PA connection	Tension clamp terminals 0.5 - 1.5 mm ²
Cable entry	Cable gland M16
Branch	M12 socket (4-pin)
Cable gland clamping range	5.5 - 9.5 mm
Short-circuit protection per station	20, 40, 60 mA settings
PROFIBUS-PA bus terminator	Via jumper

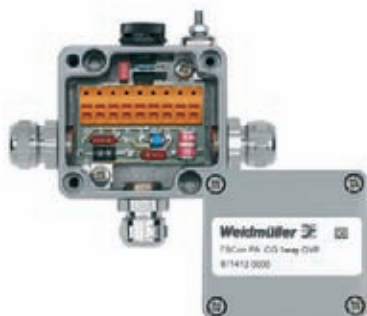
Installation advice

Torques	
Screw terminals	0.4 Nm
M16 cable gland at enclosure	6.0 Nm
Union nut M16 cable gland	4.0 Nm
Enclosure cover	1.8 - 2.0 Nm
External earthing cable	1.8 - 2.0 Nm

Standard distributor with surge protection (OVP)

1-way distributor (OVP)

CG connecting line



Ordering data

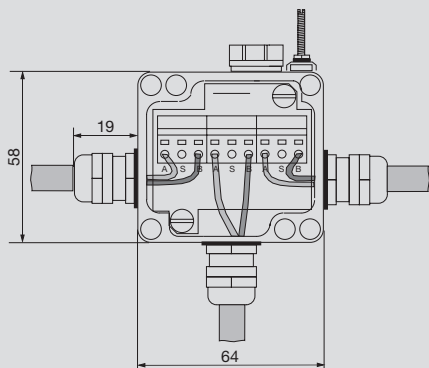
Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG 1way OVP	branch line CG	1	8714120000

Stainless steel housing

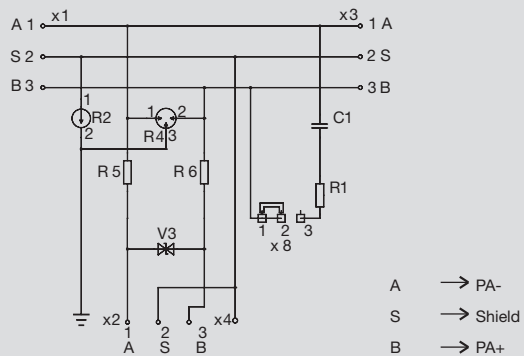
FBCon SS PCG 1way OVP	all connections PCG	1	8715270000
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Trunk line via cable gland

Dimensioned drawing



Wiring diagram



1-way distributor (OVP)

M12 connecting cable



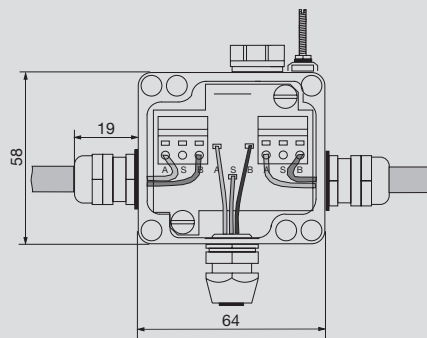
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG/M12 1way OVP	branch line M12	1	8714080000

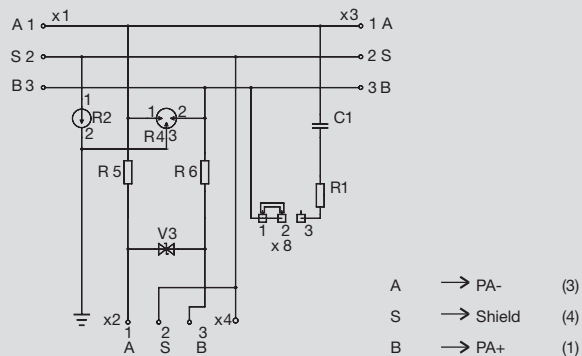
Stainless steel housing

Trunk line via cable gland

Dimensioned drawing



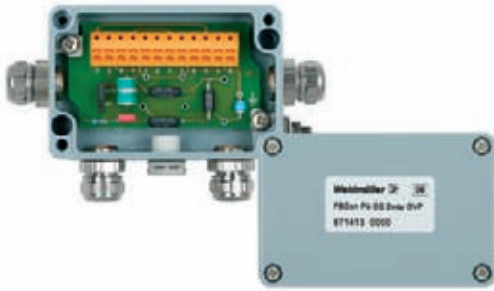
Wiring diagram



Standard distributor with surge protection (OVP)

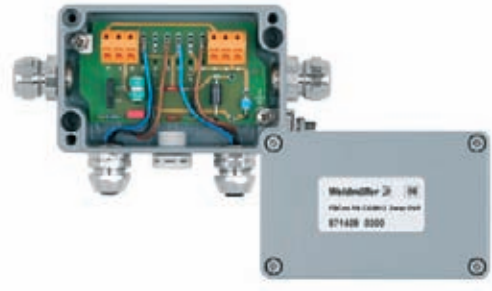
2-way distributor (OVP)

CG connecting line



2-way distributor (OVP)

M12 connecting cable



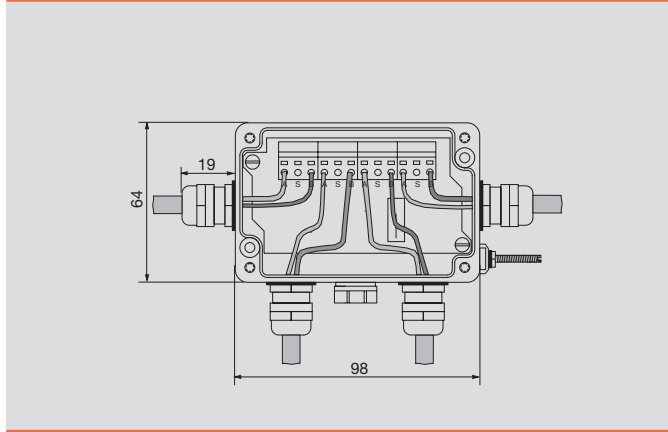
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG 2way OVP	branch line CG	1	8714130000
Stainless steel housing			
Trunk line via cable gland			

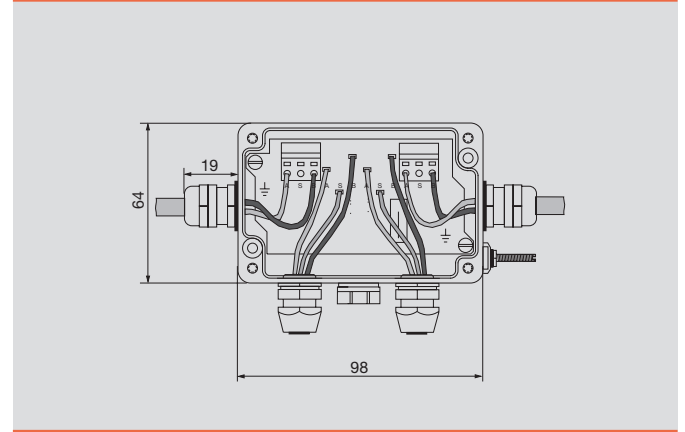
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG/M12 2way OVP	branch line M12	1	8714090000
Stainless steel housing			
Trunk line via cable gland			

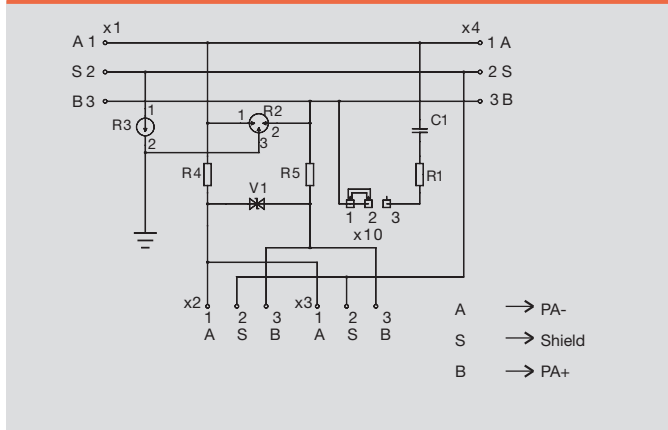
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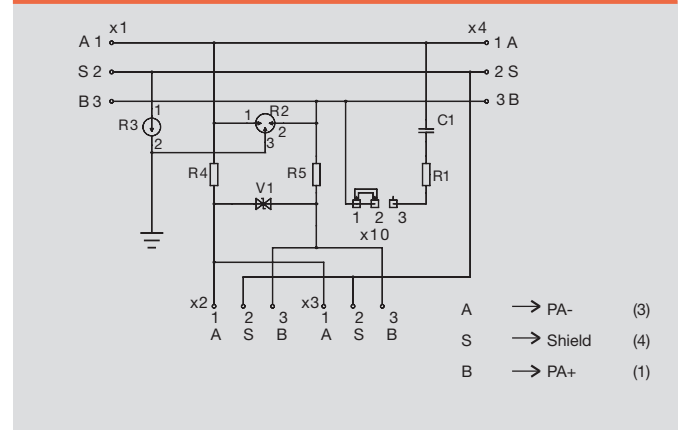
Dimensioned drawing



Wiring diagram



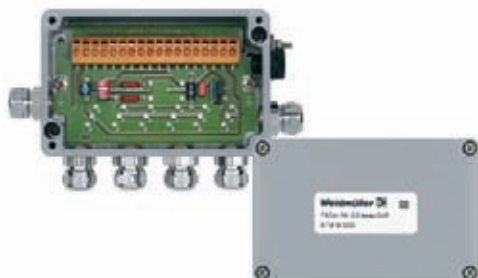
Wiring diagram



Standard distributor with surge protection (OVP)

4-way distributor (OVP)

CG connecting line



4-way distributor (OVP)

M12 connecting cable



Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG 4way OVP	branch line CG	1	8714140000

Stainless steel housing	Type of connection	Qty.	Order No.
FBCon SS PCG 4way OVP	all connections PCG	1	8726080000

Trunk line via cable gland

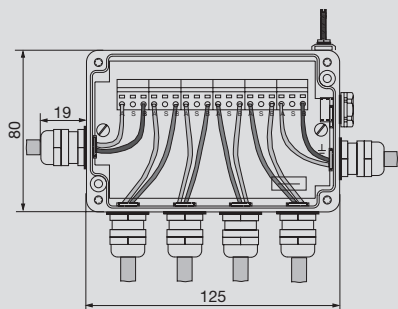
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG/M12 4way OVP	branch line M12	1	8714100000

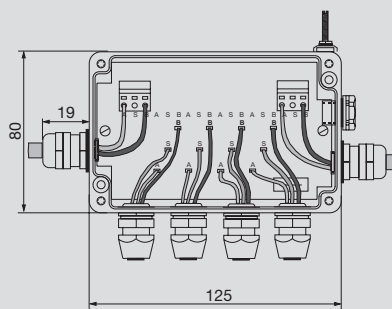
Stainless steel housing	Type of connection	Qty.	Order No.

Trunk line via cable gland

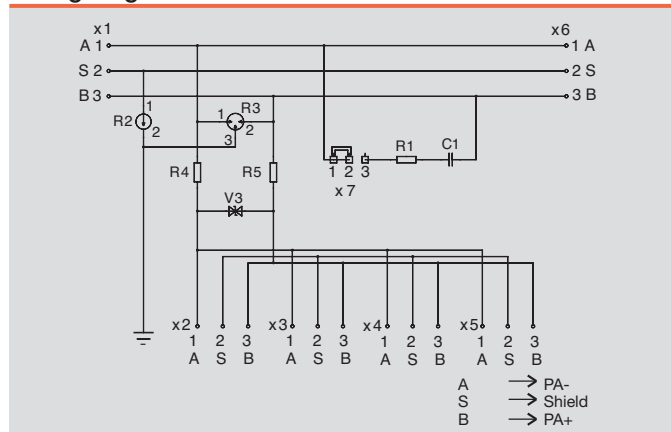
Dimensioned drawing



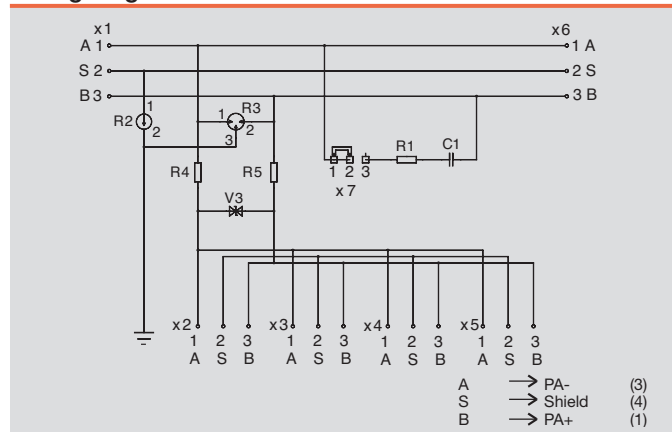
Dimensioned drawing



Wiring diagram



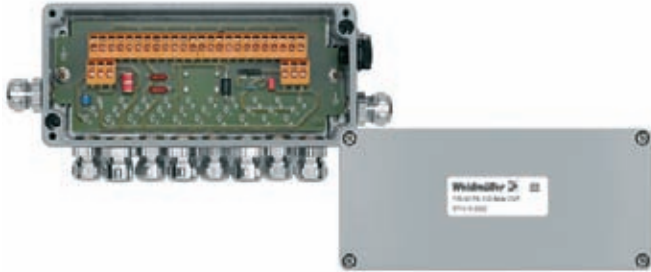
Wiring diagram



Standard distributor with surge protection (OVP)

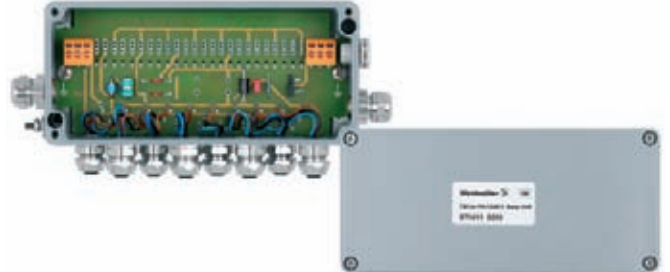
8-way distributor (OVP)

CG connecting line



8-way distributor (OVP)

M12 connecting cable



Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG 8way OVP	branch line CG	1	8714150000
Stainless steel housing			
FBCon SS PCG 8way OVP	all connections PCG	1	8726090000

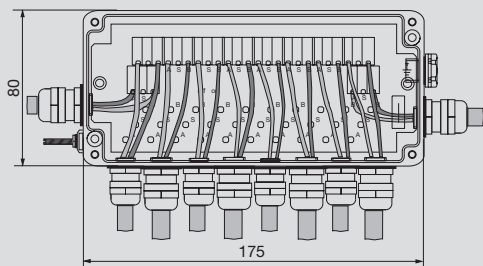
Trunk line via cable gland

Ordering data

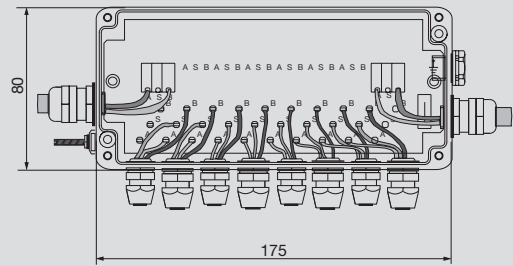
Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG/M12 8way OVP	branch line M12	1	8714110000
Stainless steel housing			

Trunk line via cable gland

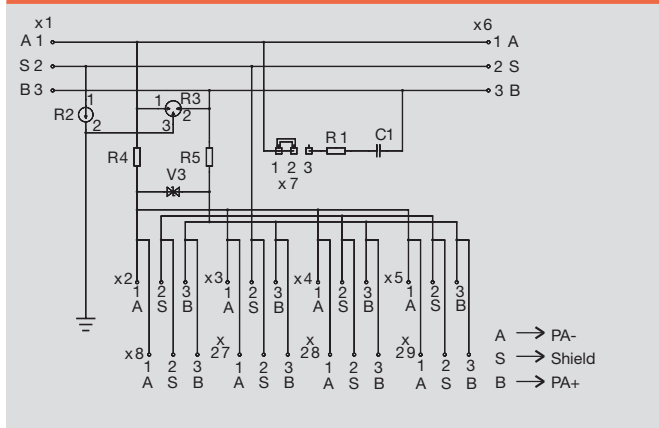
Dimensioned drawing



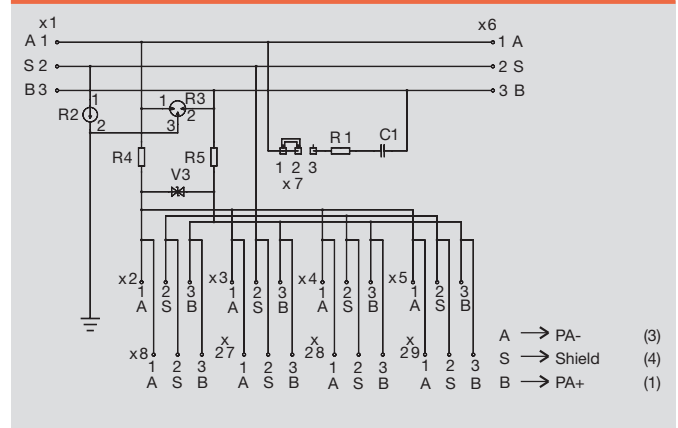
Dimensioned drawing



Wiring diagram



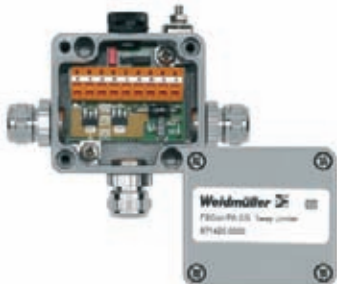
Wiring diagram



Standard distributor with current limiter

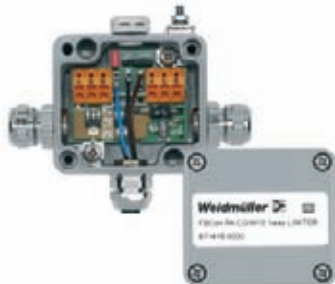
1-way distributor (Limiter)

CG connecting line



1-way distributor (Limiter)

M12 connecting cable



Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG 1way Limiter	branch line CG	1	8714200000

Stainless steel housing

FBCon SS PCG 1way Limiter	all connections PCG	1	8726110000
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Trunk line via cable gland

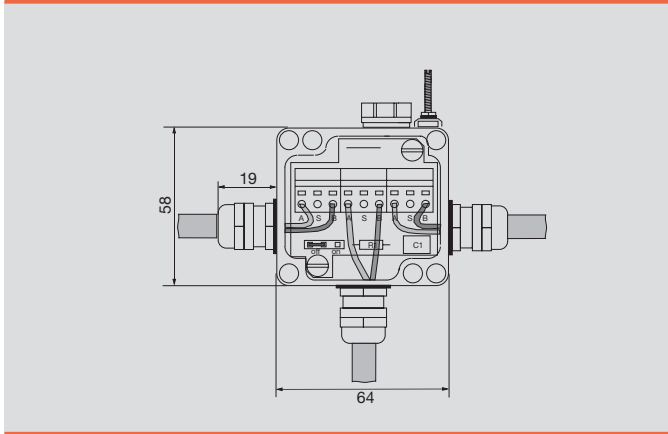
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG/M12 1way Limiter	branch line M12	1	8714160000

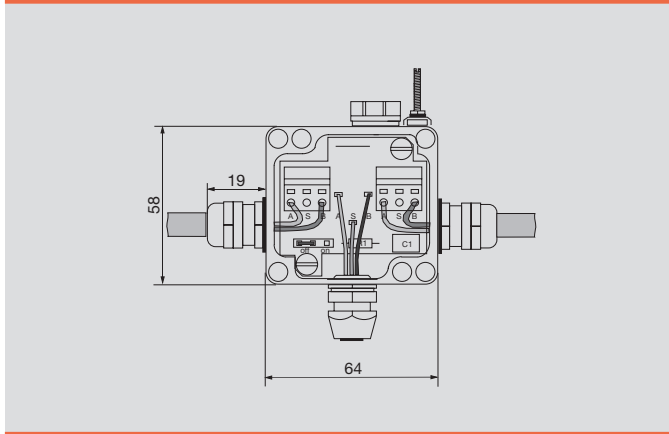
Stainless steel housing

Trunk line via cable gland

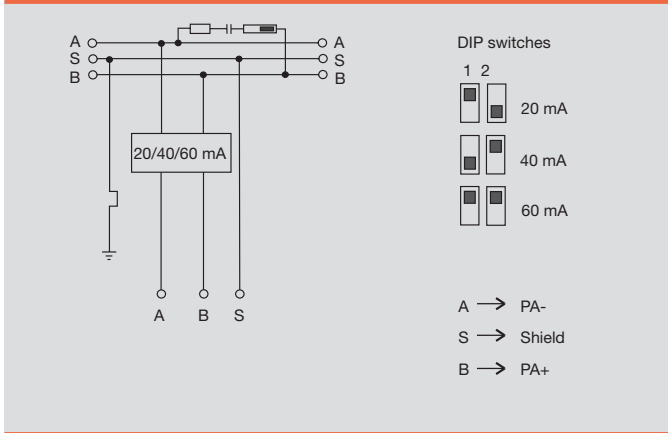
Dimensioned drawing



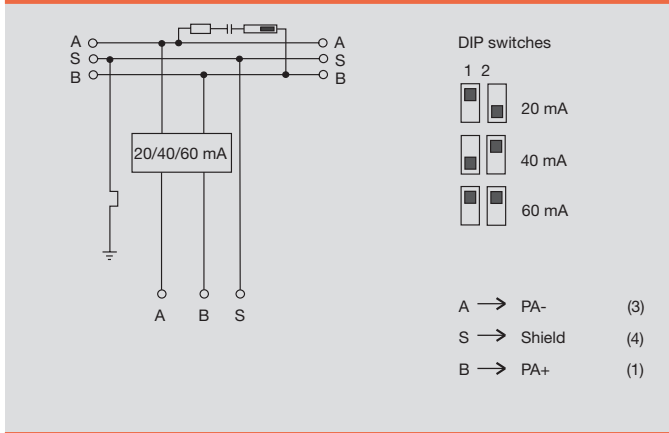
Dimensioned drawing



Wiring diagram



Wiring diagram



Standard distributor with current limiter

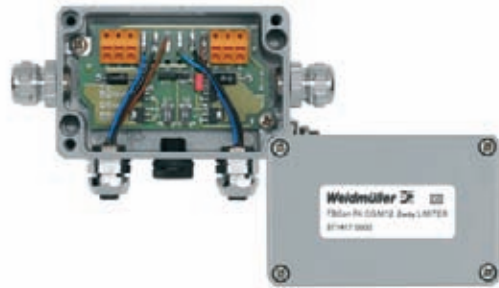
2-way distributor (Limiter)

CG connecting line



2-way distributor (Limiter)

M12 connecting cable



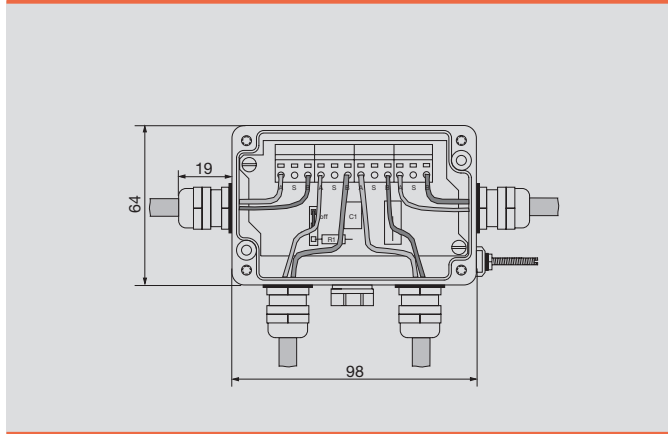
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG 2way Limiter	branch line CG	1	8714210000
Stainless steel housing			
Trunk line via cable gland			

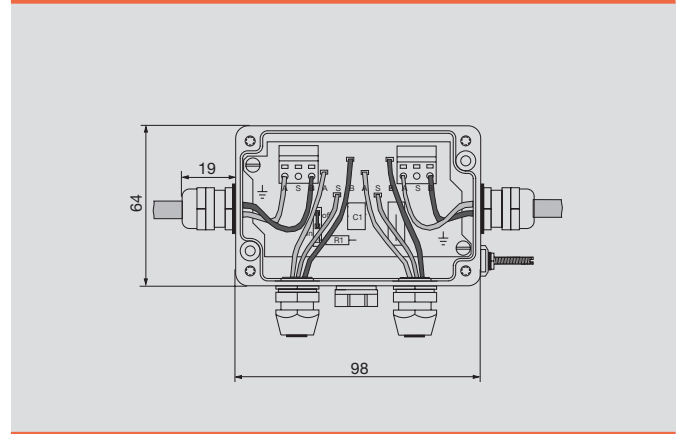
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG/M12 2way Limiter	branch line M12	1	8714170000
Stainless steel housing			
Trunk line via cable gland			

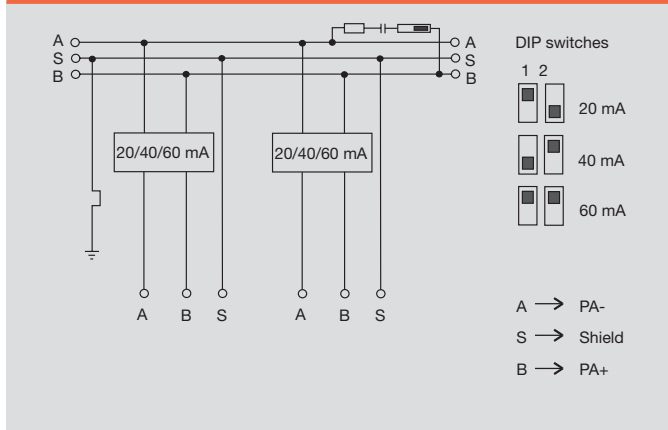
Dimensioned drawing



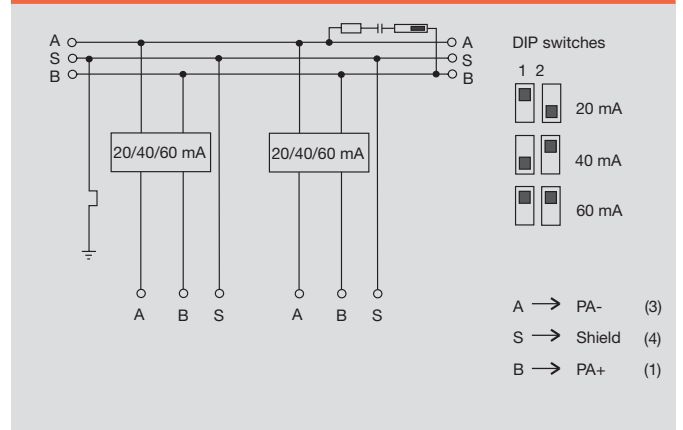
Dimensioned drawing



Wiring diagram



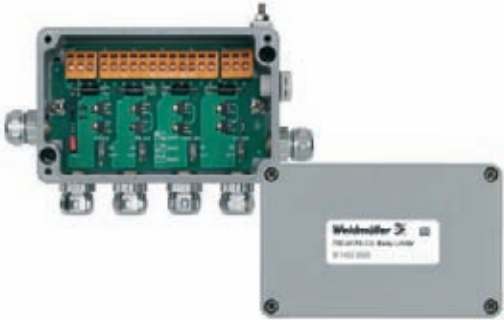
Wiring diagram



Standard distributor with current limiter

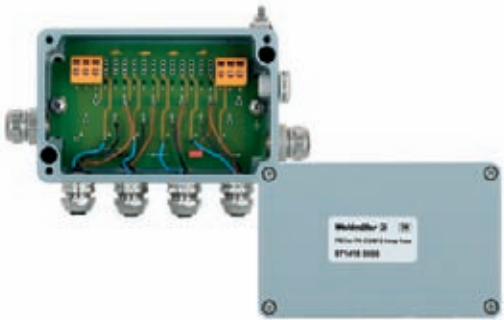
4-way distributor (Limiter)

CG connecting line



4-way distributor (Limiter)

M12 connecting cable



Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG 4way Limiter	branch line CG	1	8714220000
Stainless steel housing			
FBCon SS PCG 4way Limiter	all connections PCG	1	8715260000

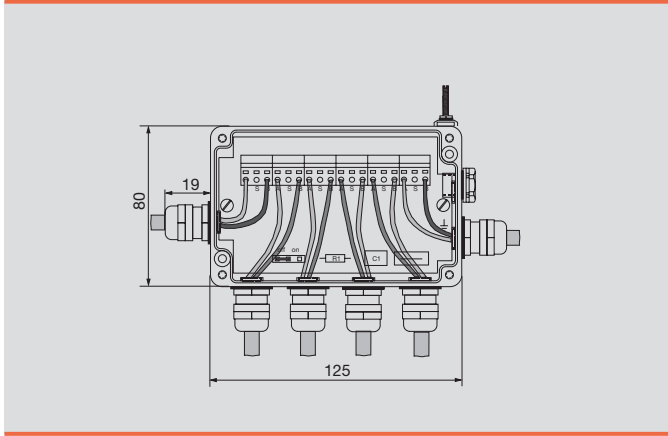
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG/M12 4way Limiter	branch line M12	1	8714180000
Stainless steel housing			

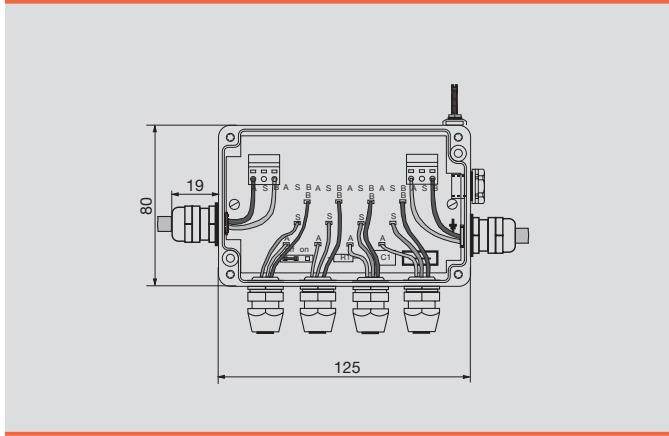
Trunk line via cable gland

Trunk line via cable gland

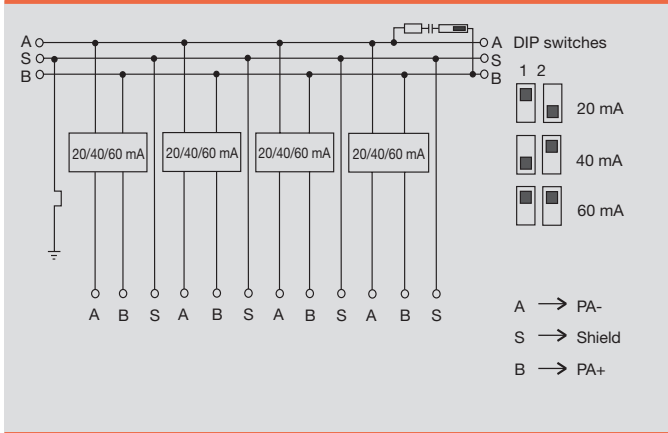
Dimensioned drawing



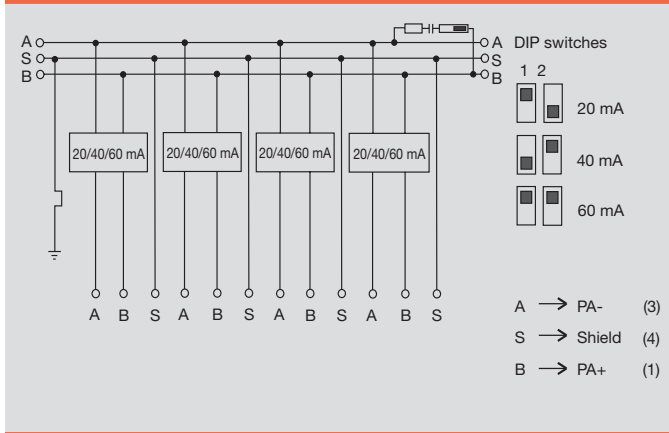
Dimensioned drawing



Wiring diagram



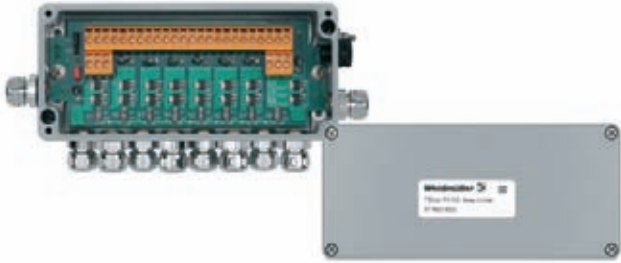
Wiring diagram



Standard distributor with current limiter

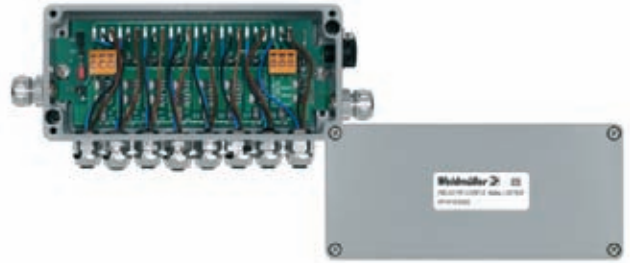
8-way distributor (Limiter)

CG connecting line



8-way distributor (Limiter)

M12 connecting cable



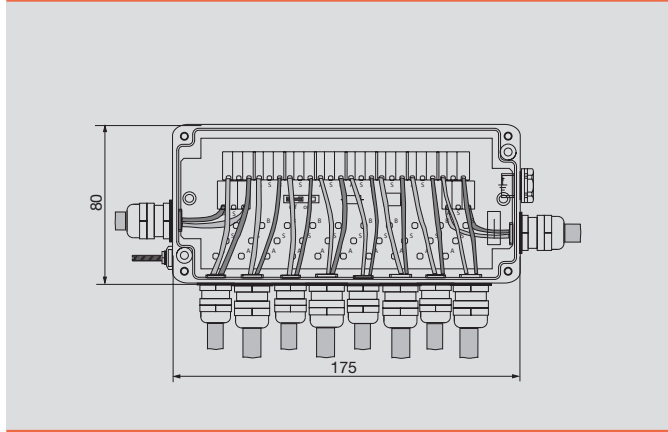
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG 8way Limiter	branch line CG	1	8714230000
Stainless steel housing			
FBCon SS PCG 8way Limiter	all connections PCG	1	8726160000
Trunk line via cable gland			

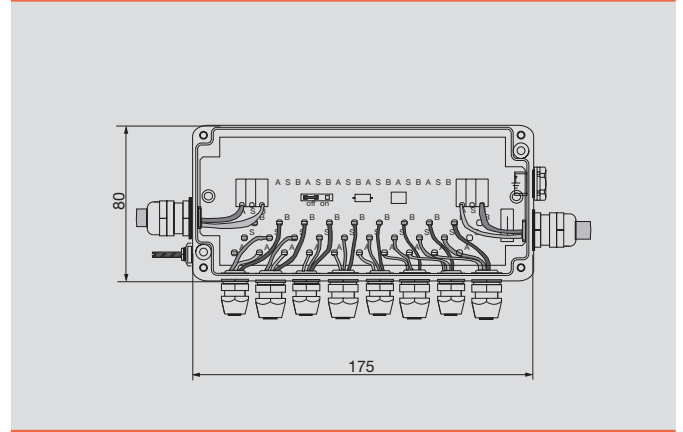
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG/M12 8way Limiter	branch line M12	1	8714190000
Stainless steel housing			
Trunk line via cable gland			

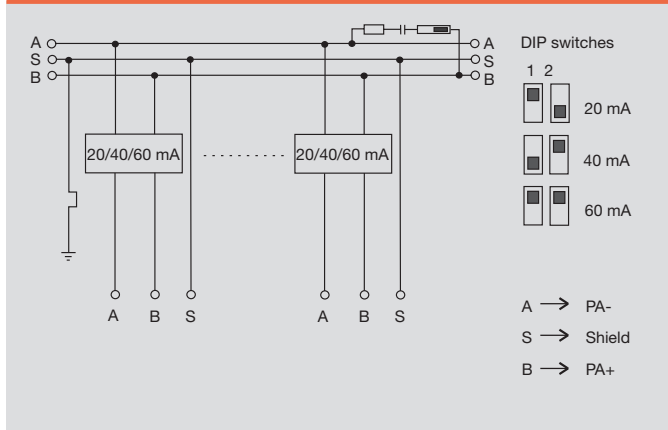
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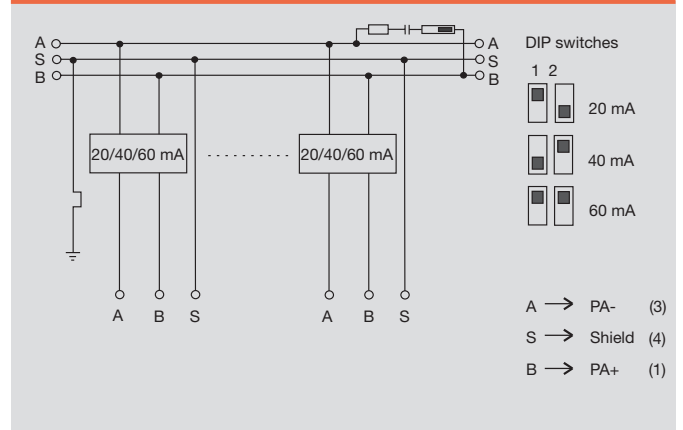
Dimensioned drawing



Wiring diagram



Wiring diagram



FBCon distributors for Ex areas



PROFIBUS-PA T-connector

- EEx (ia)

The PROFIBUS-PA installation products are increasingly used in

- food industry
- basic industries and
- chemical industry.

The product range offers a wide choice of customer solutions also for use in harsh conditions. This includes standard and EX versions of single and multi-way design with M12 plug-in connection or cable gland. Weidmüller offers a solution for almost every application. If you cannot find your solution here, please contact the branch / sales office responsible for you.

PROFIBUS-PA T-connector

- EEx (ia)
- 1-way
- 2-way
- 4-way
- 8-way

The PROFIBUS-PA T-connector in EEx (ia) specification is intended for direct coupling of measuring devices, sensors, actuators, etc. in potentially explosive areas.

- Approval for intrinsically safe use ATEX approval
- IP 66 Ingress Protection Class
- Modular design
- Interruption-free bus operation
- Simple handling
- External earth terminal
- External bus terminator

Approvals

FBCon

E

Weidmüller Bus Terminator 8556460000 Datum: 27.11.00 Seite 12

Technische Beschreibung / Einsatzgebiete:

Busschaltkreislösungen sind zum Beispiel der Bus Terminator 8556460000 werden in Profibus-Systemen eingesetzt. Die Profibus-Systeme spricht man von Leitbahn, Automaten-Systeme und Feldbus, wobei der Bus Terminator die Automaten-Systeme verbindet ist.

Mögliche Einsatzgebiete können FOUNDATION Fieldbus (FF) oder PROFIBUS sein.

PROFIBUS-PA ist ein Kommunikationssystem, um den Anforderungen in der Prozessindustrie (Chemie, Petrochemie) zu begegnen. Die Kommunikation im Feldbus wird durch die Verfügbarkeit von mehrstufigen Ring- und Bus-Strukturen ermöglicht, um komplexe Systeme wie Druckbehälter, Temperatursensoren, etc. als auch komplexe Geräte wie Steuerklappen bedienbar zu machen. Die Durchdringung von Profibus PA bis zu 100m ist bei 300kbps gewährleistet. Die Details sind im Profibus PA-Handbuch (DIN 19245) zu finden.

Die Datenübertragung und die Energieversorgung der Feldbusse erfolgt über das gleiche Kabel. Jedes Feldgerät nimmt bei Busspannung von Feldgeräten einen Strom von 10 mA auf. Die Signale werden durch Feldbusse eines Strahls von 1 bis 100 m übertragen.

Die wesentlichen Aufgaben eines Bus-Systems in explosionsgefährdeten Bereichen sind:

- die wesentliche Datenübertragung sicherzustellen.
- eine schnelle und sichere Fehlersuche über ein Feldbus-System zu geben und
- die Anpassung der Prozesslogik während des Prozesses zu gewährleisten.




Techn. Beschreib. 000

Weidmüller Bus Terminator 8556460000 Datum: 27.11.00 Seite 12

Spezial mit der FBCon Bus Terminator 8556460000 für den eingesetzten Bereich EEx ia und der Bereich EEx ia sind geeignet. Der Bus Terminator darf in Verbindung mit einem Ex ia Bus-System verwendet werden (EEx ia ist in entsprechenden Geräten). Bei Anwendung mit FBCon Bus Terminator wird der Bus Terminator mit einem zusätzlichen Erdverdrahtungssystem (Zeichnung 855646-001) zu sein.

Anwendungsbereich für ein Kommunikationssystem mit Bus Terminator



Techn. Beschreib. 000




EC-TYPE EXAMINATION CERTIFICATE

Equipment or protection system intended for use in potentially explosive atmospheres - Division 1/2002

EC Type Examination Certificate Number: KEMA 1412/2001 X

Equipment or protection system: Bus Terminator Module Type Terminator 2x

Manufacturer: Weidmüller Interface GmbH & Co.

Address: Hiltbergstraße 16, 32718 Delmeid, Germany

This equipment or protection system and any associated calculation models is specified in the schedule to this certificate and the documents therein referred to.

KEMA, notified body number 2001 in accordance with Article 4 of the Council Directive 90/269/EEC of 23 June 1990 certifies that the equipment or protection system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protection systems intended for use in potentially explosive atmospheres (Annex I to the TSE).

The construction and test results are contained in confidential report no. 1412/01 X

Compliance with the Essential Health and Safety Requirements has been attested by inspection on:

EN 50518-1:1997 EN 50518-2:1997 EN 50518-3:1997

If the item 'T' is issued after the certificate number, it indicates that the equipment or protection system is subject to special conditions for safe use specified in the schedule to this certificate.

This EC Type Examination Certificate relates only to the design, construction and tests in the approved equipment or protection system in accordance to the technical details. Further requirements of the Directive apply to the manufacturing process and supply of the equipment or protection system. These are not covered by this certificate.

The validity of this approval is limited to the equipment under test only.


1412/01 X 006-0001-1412 and 006-0001-1412

Delmeid, 26 April 2001
by order of the Board of Directors of KEMA

U. M. B. Reuter
E. M. Reuter
Chairman of the Board

KEMA Notified Body No. 2001
110, Hiltbergstraße, 32718 Delmeid, Germany
Telephone: +49 52 93 27-100 Fax: +49 52 93 27-101
Website: www.kema.de

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AMENDMENT 1

to EC-Type Examination Certificate KEMA 1412/01 X

Manufacturer: Weidmüller Interface GmbH & Co.

Address: Hiltbergstraße 16, 32718 Delmeid, Germany

Description

In future, the range of Fieldbus Components is extended with a Bus Terminator Module with an alternative mechanical construction and with the necessary safe Fieldbus Distribution Module Type FBCon-PA-COM-1 way Ex, 2 way Ex, and 4 way Ex, and Type FBCon-PA-COM-2 way Ex, 2 way Ex and 4 way Ex.

The following non-certified connectors and adapters may be used for the connection of intrinsically safe fieldbus systems:
Connectors, male: Type 845564 and female Type 842522 and locking plug-in connectors Type 845565, 842521, 842520 and 842526.

The visualization modules, converters and copiers are passive components, which do not influence the properties of the intrinsically safe fieldbus system.

All other data remain unchanged.

Test documentation

Test documentation	Date	
1. Drawing No. 855646 rev. 2 (sheets 2, 3, 4, 5 and 6)	17.06.2001	
845564 rev. 0 (sheets 2, 3, 4, 5 and 6)		
845565 rev. 0 (sheets 2, 3, 4, 5 and 6)		
842520 rev. 0 (sheets 2, 3, 4, 5 and 6)		
842521 rev. 0 (sheets 2, 3, 4 and 5)		
842522 rev. 0 (sheets 2, 3, 4 and 5)		
842526 rev. 0 (sheets 2, 3, 4 and 5)		
845564 rev. 1 (sheet 2)		07.06.2001
845564 rev. 1 (sheets 2 and 3)		
842520 rev. 2 (sheet 2)		
842521 rev. 2 (sheet 2)		
842521 rev. 1 (sheet 2)		23.12.1997
842521 rev. 1 (sheet 2)		
2. Technical delivery condition No. 6201	23.02.2001	

Amendment 1 October 2001
KEMA Quality S.V.

U. M. B. Reuter
T. Pipper
Certification manager

Code: 0 2 0 0 006-0001-1412 and 006-0001-1412

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0012114
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Standard distributor for Ex applications EEx(ia)

FBCon

1-way distributor EEx

CG connecting line



1-way distributor EEx

M12 connecting cable



E

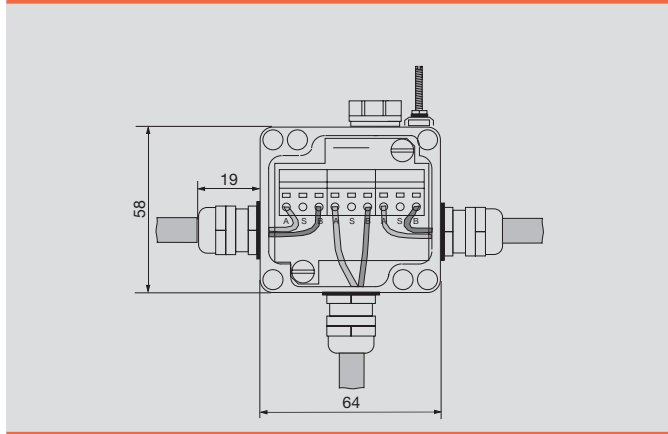
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG 1way Ex	branch line CG	1	8564180000
Stainless steel housing			
Trunk line via cable gland			

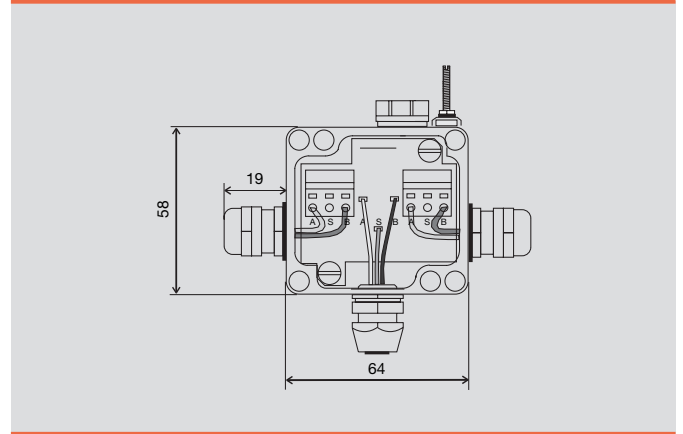
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG/M12 1way Ex	branch line M12	1	8564150000
Stainless steel housing			
Trunk line via cable gland			

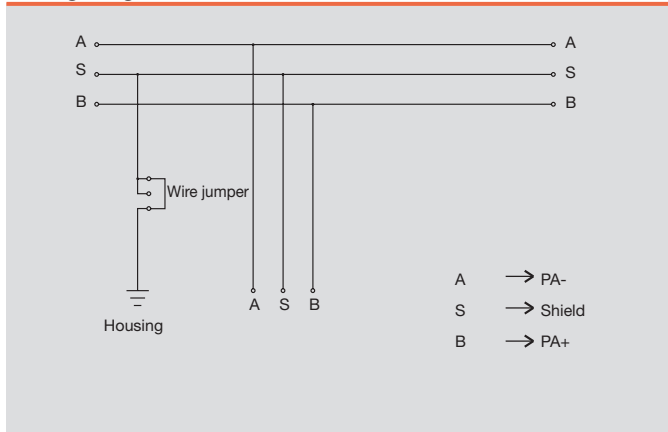
Dimensioned drawing



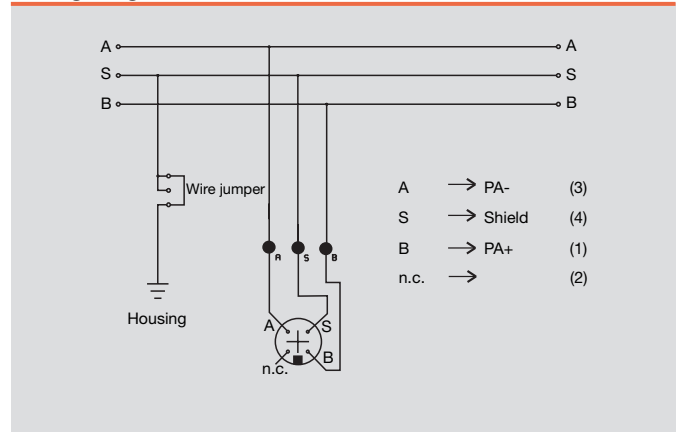
Dimensioned drawing



Wiring diagram



Wiring diagram



Standard distributor for Ex applications EEx(ia)

2-way distributor EEx

CG connecting line



2-way distributor EEx

M12 connecting cable



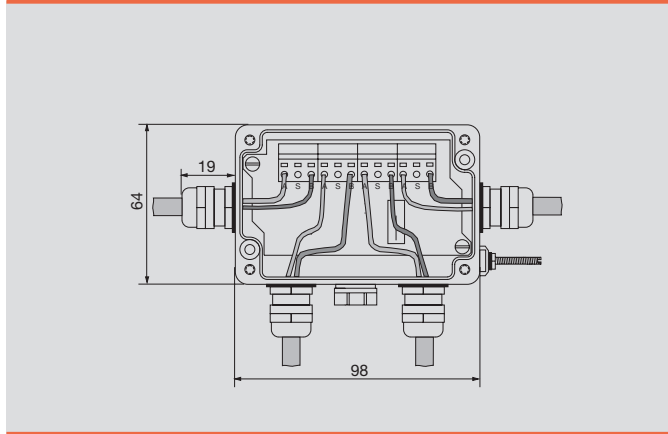
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG 2way Ex	branch line CG	1	8564190000
Stainless steel housing			
Trunk line via cable gland			

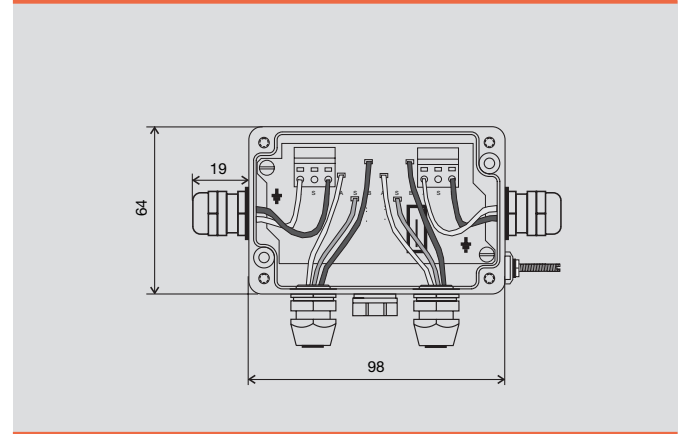
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG/M12 2way Ex	branch line M12	1	8564160000
Stainless steel housing			
Trunk line via cable gland			

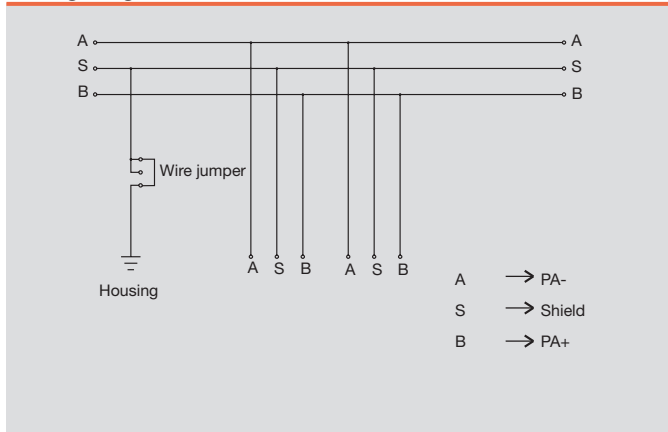
Dimensioned drawing



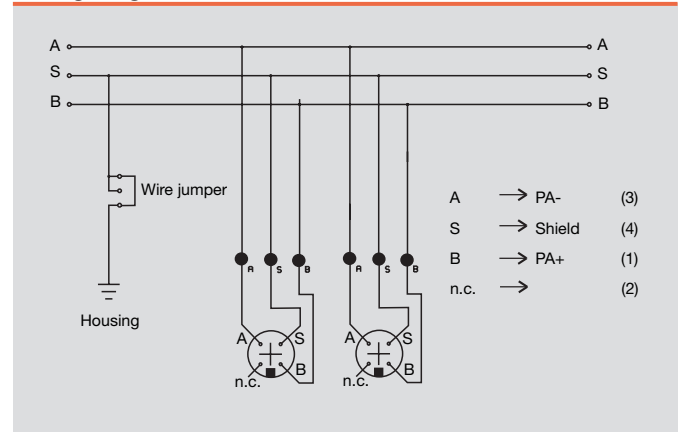
Dimensioned drawing



Wiring diagram



Wiring diagram

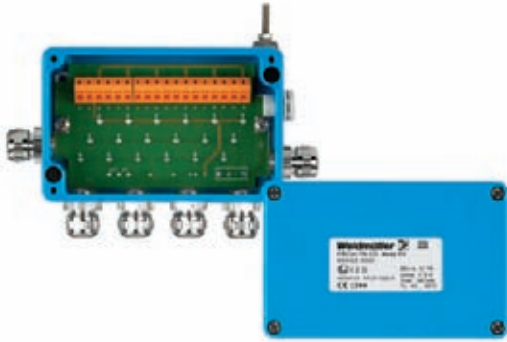


Standard distributor for Ex applications EEx(ia)

FBCon

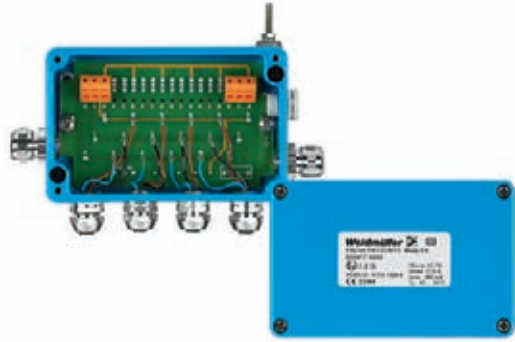
4-way distributor EEx

CG connecting line



4-way distributor EEx

M12 connecting cable



E

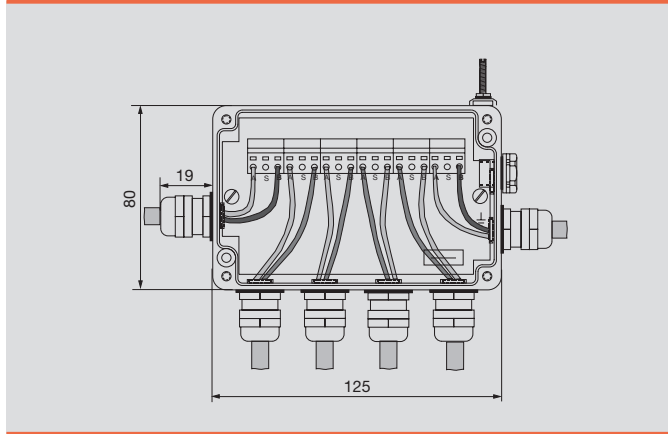
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG 4way Ex	branch line CG	1	8564200000
Stainless steel housing			
Trunk line via cable gland			

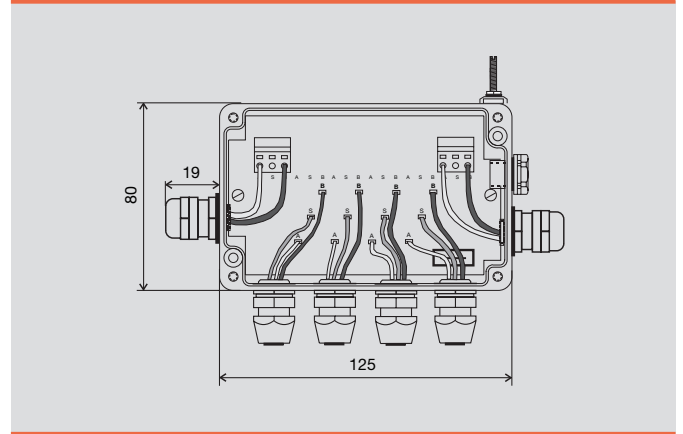
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG/M12 4way Ex	branch line M12	1	8564170000
Stainless steel housing			
Trunk line via cable gland			

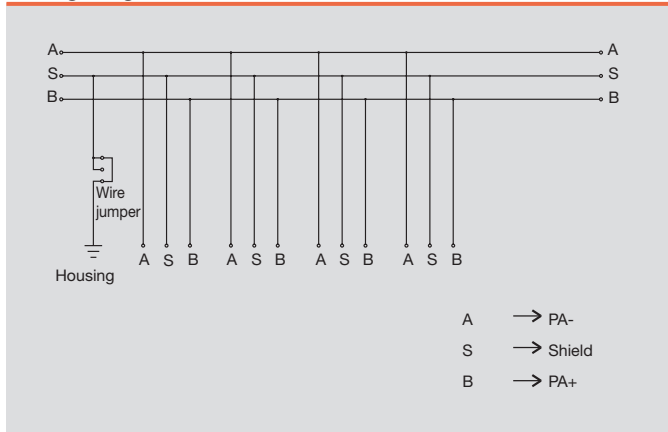
Dimensioned drawing



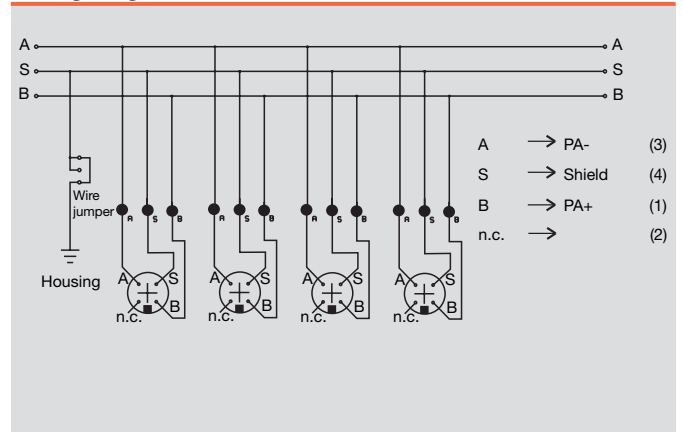
Dimensioned drawing



Wiring diagram



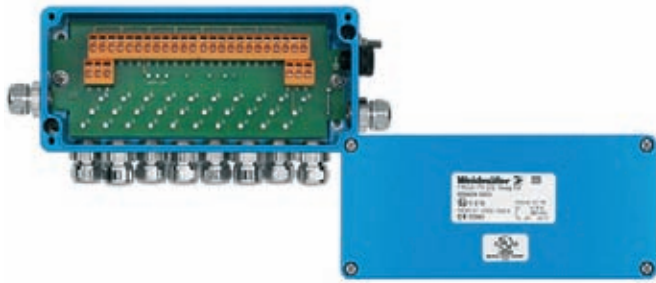
Wiring diagram



Standard distributor for Ex applications EEx(ia)

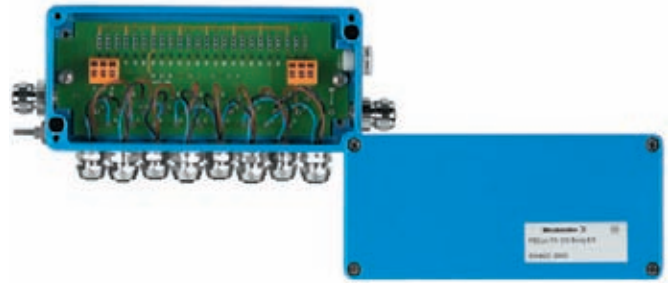
8-way distributor EEx

CG connecting line



8-way distributor EEx

M12 connecting cable



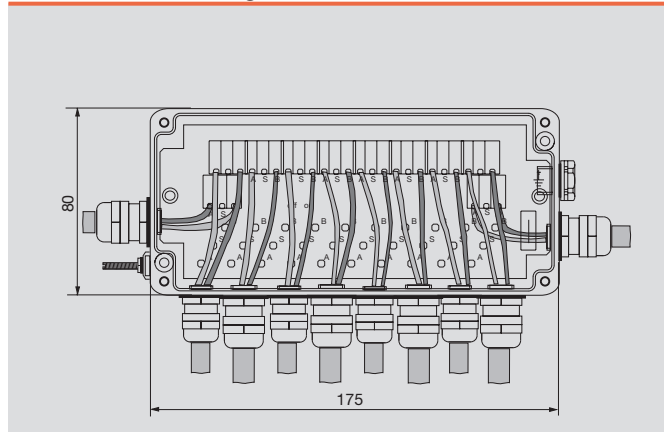
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG 8way Ex	branch line CG	1	8564240000
Stainless steel housing			
Trunk line via cable gland			

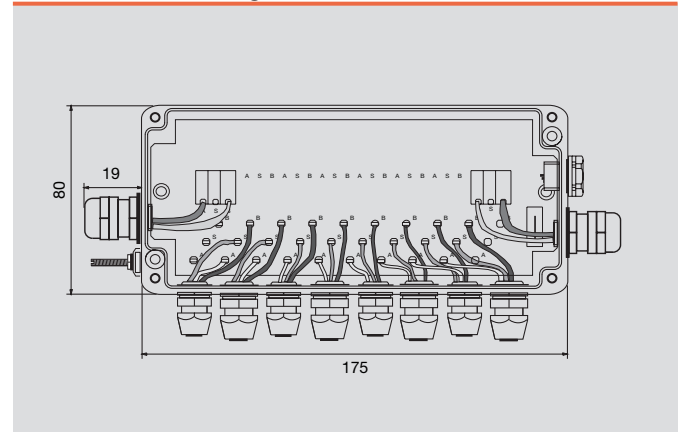
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon PA CG/M12 8way Ex	branch line M12	1	8564250000
Stainless steel housing			
Trunk line via cable gland			

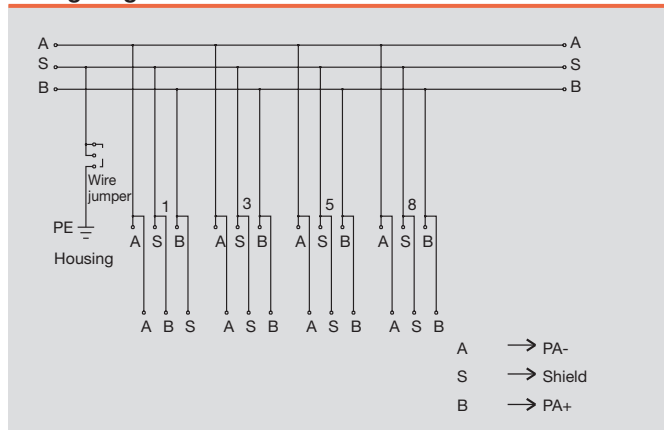
Dimensioned drawing



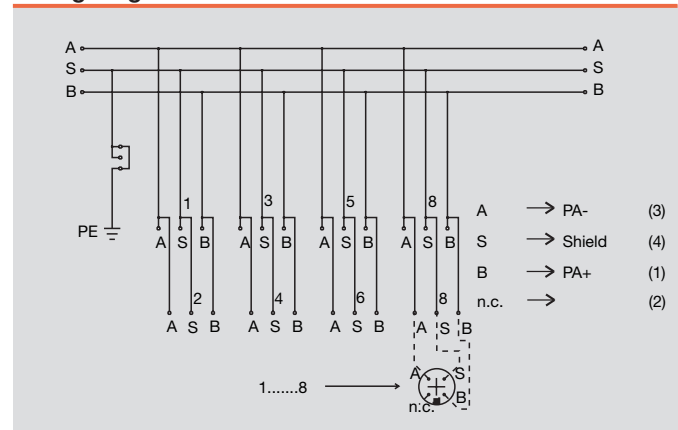
Dimensioned drawing



Wiring diagram



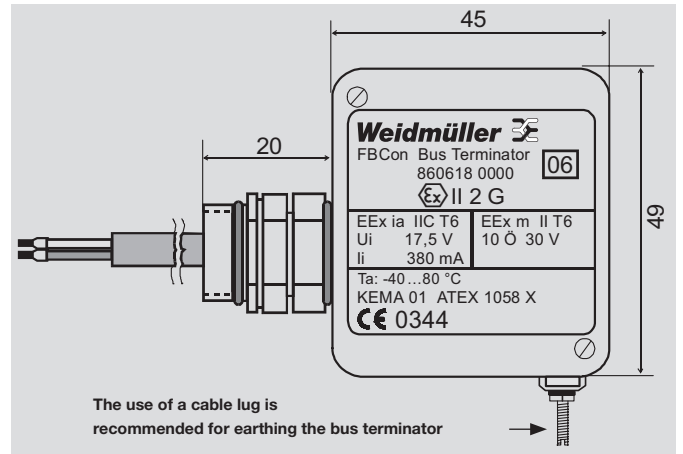
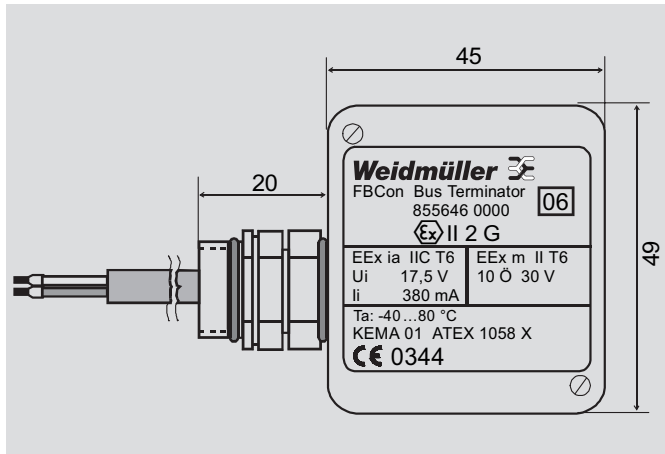
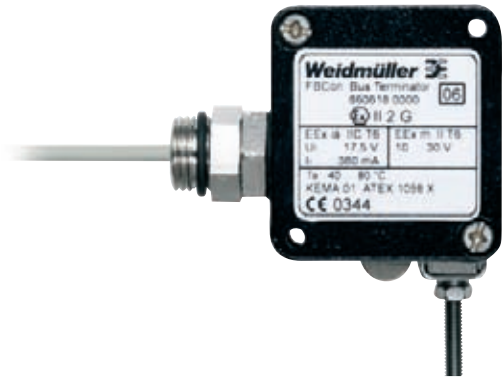
Wiring diagram



FBCon bus terminator
FBCon bus terminator without earth connection



FBCon Bus Terminator with earth connection



Ordering data

Type	Qty.	Order No.
FBCon bus terminator EEx with locking clip, without earth connection	1	8556460000
FBCon bus terminator EEx without locking clip, without earth connection	1	8606190000

Ordering data

Type	Qty.	Order No.
FBCon bus terminator EEx with locking clip, with earth connection	1	8606180000
FBCon bus terminator EEx without locking clip, with earth connection	1	8606200000

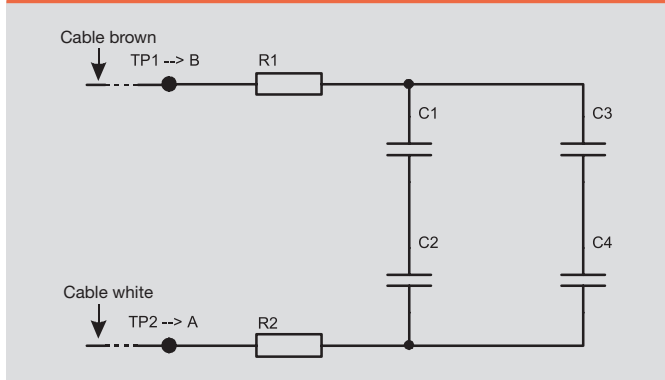
Technical data

Operating temperature	-40 to +80 °C
Ingress protection class	IP 66
Enclosure material	High grade aluminium alloy (Al - Si 12)
Finish	Black powder-coated
Connection lead	2 x 0.14 mm ²
Cable entry	Bus adapter M16

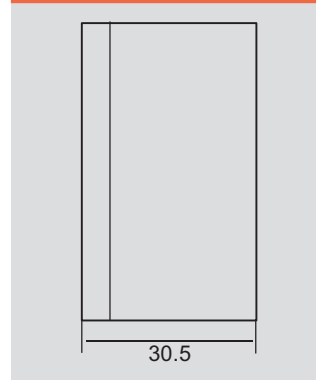
Installation advice

Torques	
M16 adapter on enclosure	6.0 Nm
External earthing cable (if required)	1.8 - 2.0 Nm

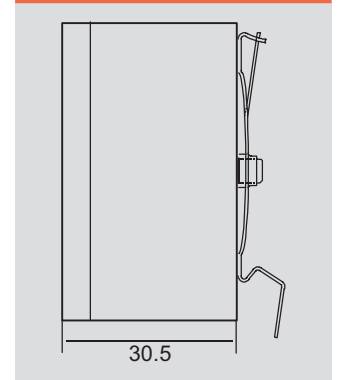
Wiring diagram



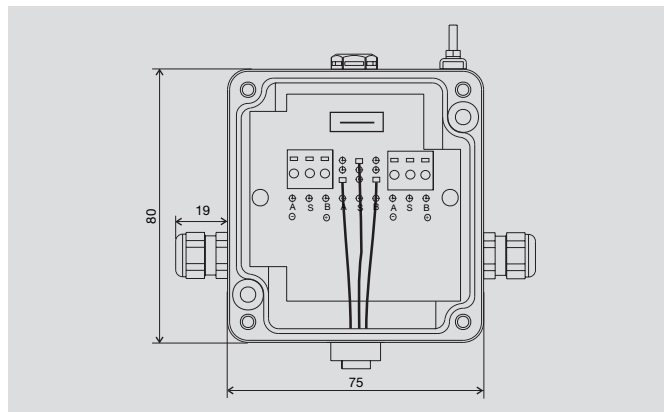
Gehäusedeckel ohne Rastfuß



Gehäusedeckel mit Rastfuß



FF distributor, 1-way/type FBCon FF CG – 7/8“ 1-way EEx (ia)



The Fieldbus Foundation is an open fieldbus standard.
It was specially developed for the requirements of process industry technology, including remote supply and intrinsic safety.

Fieldbus Foundation enables users to operate several sensors and actuators on one bus cable. Power supply to the devices is via a twin cable system with digital transmission of the process data. 32 devices can be operated in one segment. Repeaters can extend the maximum number to 126 stations with a maximum bus length of 10 km. For a transmission rate of 31.25 kbps, the bus length can reach up to 1900 m without repeaters, or up to 1000 m in explosion-risk areas. The bus can be wired as line, tree or star. Integration in the Fieldbus Foundation network is achieved by means of a segment coupler.

Specific advantages

- Low wiring costs
- Minimum design costs for the process control system
- Remote interrogation and programming of the field devices
- Intrinsically safe design for use in hazardous areas

Weidmüller can supply Fieldbus Foundation connectors. When servicing work is required or modifications are to be made to the system, Weidmüller Fieldbus Foundation connectors allow for field devices to be connected up or replaced without interrupting the bus system.

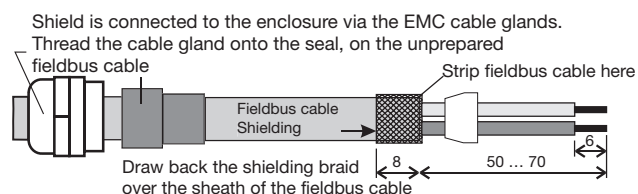
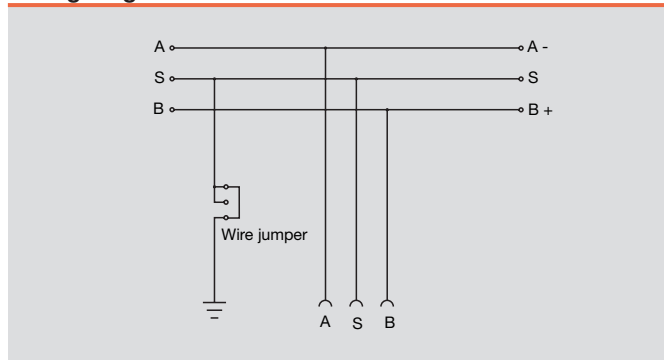
Technical data

Operating temperature	From -40 to +85 °C
Ingress protection class	IP 66
Enclosure material	High grade aluminium alloy (Al-Si 12)
Finish	Enamelled RAL 9005
Fieldbus connection	Tension-clamp terminals 0.5 – 1.5 mm ²
Cable entry	Cable gland M16
Clamping range	5.5 – 9.5 mm

Installation advice

Torques	
M16 cable gland at enclosure	6.25 Nm
Union nut, M16 cable gland	4.5 Nm
Enclosure cover	1.8 – 2.0 Nm
External earthing cable	1.8 – 2.0 Nm

Wiring diagram



Standard distributor for Ex applications EEx(ia)

FBCon

1-way distributor

branch line 7/8 inch



2-way distributor

branch line 7/8 inch



E

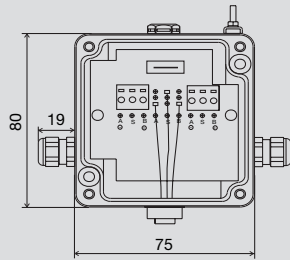
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon FF CG-7/8 1way EX	branch line 7/8 Zoll	1	8564260000
Stainless steel housing			
Trunk line via cable gland			

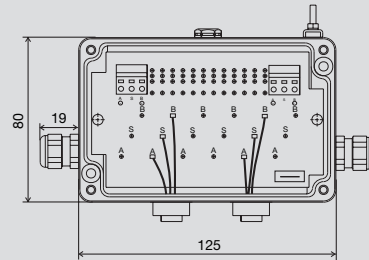
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon FF CG-7/8 2way EX	branch line 7/8 Zoll	1	8564270000
Stainless steel housing			
Trunk line via cable gland			

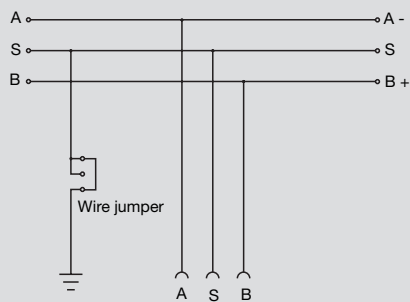
Dimensioned drawing



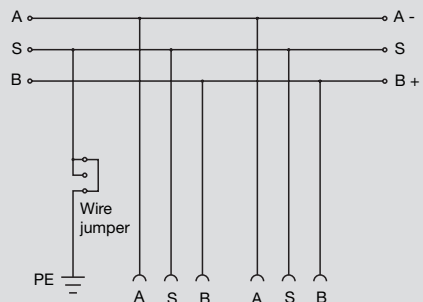
Dimensioned drawing



Wiring diagram



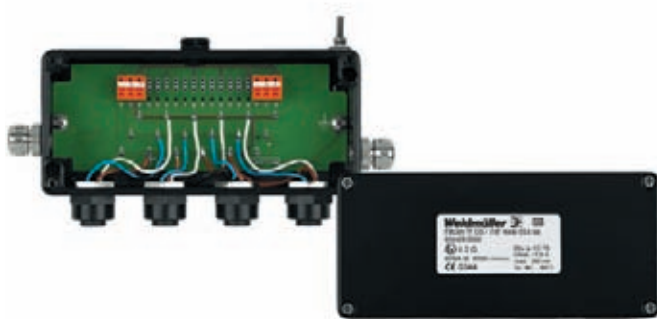
Wiring diagram



Standard distributor for Ex applications EEx(ia)

4-way distributor

branch line 7/8 inch



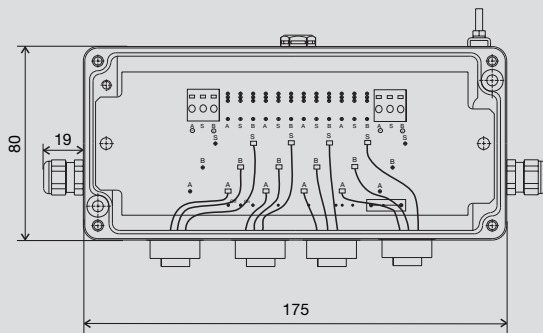
Ordering data

Aluminium housing	Type of connection	Qty.	Order No.
FBCon FF CG-7/8 4way EX	branch line 7/8 Zoll	1	8564280000

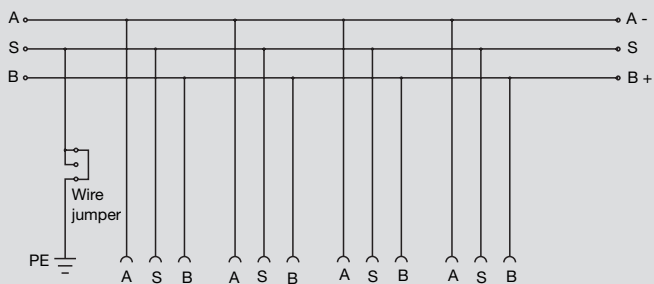
Stainless steel housing

Trunk line via cable gland

Dimensioned drawing



Wiring diagram



Screw connection M12, metal (shielded) – A-coded

Tension clamp connection M12, stainless steel – A-coded

SAIS / SAIB

4- and 5-pole, straight



Ordering data

Plug	
	Standard, 4-pole, PG 9
	Standard, 5-pole, PG 9
	Stainless steel, 5-pole, PG 9

Socket	
	Standard, 4-pole, PG 9
	Standard, 5-pole, PG 9
	Stainless steel, 5-pole, PG 9

Information

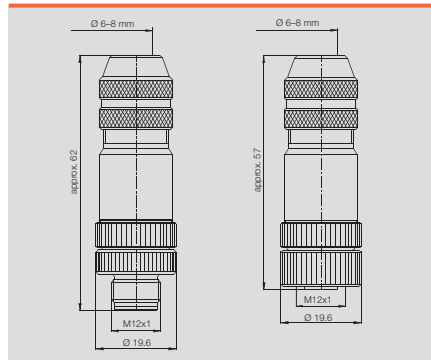
Type	Qty.	Order No.
FBCon M12 4P M EMC	1	9455640000
SAIS-M-5/8S M12 5P A-COD	1	1784740000
SAIS 5/9-VA	1	1920700000
Other versions on request		

Technical data

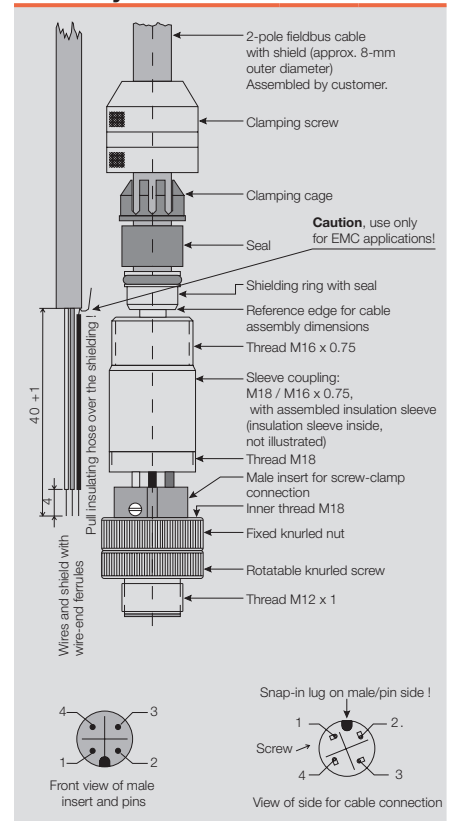
	Standard	Stainless steel (VA)
No. of poles	4/5	5
Type of connection	screw	tension clamp connection
Housing material	CuZn, nickel-plated	14V32
Connection thread	M12	M12
Cable connection diameter	6...8 mm	6...8 mm
Connection cross-section	0.25...0.75 mm ²	0.25...0.5 mm ²
Nominal current	4 A	4 A
Nominal voltage	250 (4-pole)/ 125 (5-pole) V	125 V
Temperature range	-40 ... 85 °C	-40 ... 85 °C
Ingress protection class	IP 67	IP 69 k
Contact surface	CuSnZn	Au

Information

Dimensioned drawing



Assembly instructions



Socket	Wire-colour	Bus	Reference
1	brown	PA+	B
2	unassigned	n.c.	n.c.
3	blue	PA+	A
4	black	shield	S

Reference to other Weidmüller PROFIBUS PA products or order numbers:
9455650000, 8425910000, 8425930000, 8425940000

- Assembly steps:**
- As shown in the illustration, put the clamping screw, clamping cage, seal and shielding ring (with seal) onto the fieldbus cable.
 - Caution:** use only for EMC applications! Strip the fieldbus cable here. Widen the shield and place over the shielding ring. Cut off the remaining shielding braid. As illustrated, the shield can also be connected to connection S. Prepare the cable as shown.
 - Pull the prepared cable end through the sleeve coupling, together with the shield and insulation tube when necessary. Push the shielding ring with seal and shielding braid into the sleeve coupling. Tighten the clamping ring.
 - Screw the cable end tightly into the male insert. Screw together the sleeve coupling and the male insert. Tighten clamping screw.

Screw connection M12, metal (shielded) – A-coded

SAISW / SAIBW

4- and 5-pole, angled



Ordering data

Plug	
	Standard, 4-pole, PG 9
	Standard, 5-pole, PG 9
Socket	
	Standard, 4-pole, PG 9
	Standard, 5-pole, PG 9
Information	
	Other versions on request

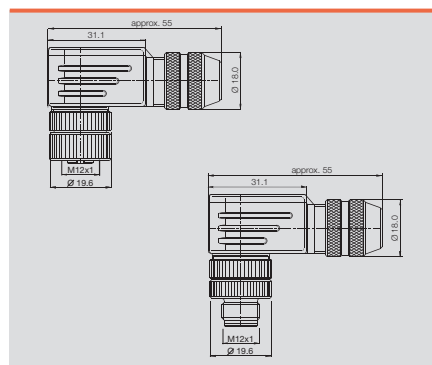
Type	Qty.	Order No.
SAISW-M-4/8 M12	1	1803930000
SAISW-M-5/8 M12	1	1803940000
Other versions on request		

Technical data

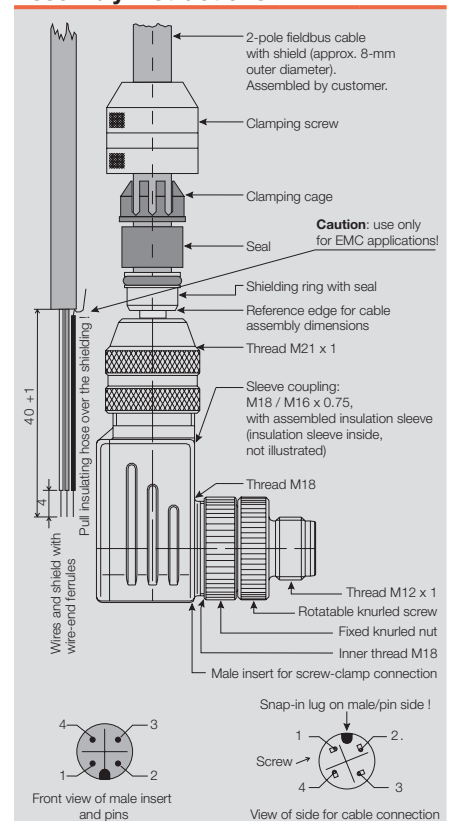
No. of poles	4/5
Type of connection	screw
Housing material	CuZn, nickel-plated
Connection thread	M12
Cable connection diameter	mm 6...8
Connection cross-section	mm ² 0.25...0.75
Nominal current	A 4
Nominal voltage	V 250 (4-pole)/ 125 (5-pole)
Temperature range	°C -40 ... 85
Ingress protection class	IP 67
Contact surface	CuSnZn

Information

Dimensioned drawing



Assembly instructions



Socket	Wire-colour	Bus	Reference
1	brown	PA+	B
2	unassigned	n.c.	n.c.
3	blue	PA+	A
4	black	shield	S

Reference to other Weidmüller PROFIBUS PA products or order numbers:
9455650000, 8425910000, 8425930000, 8425940000

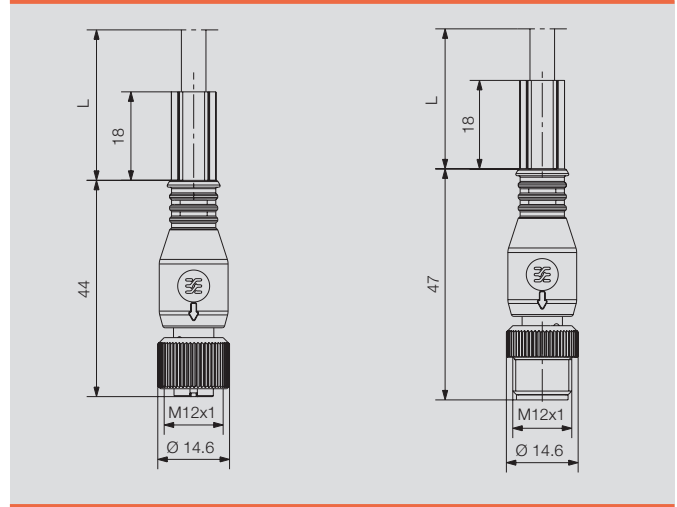
Assembly steps:

- As shown in the illustration, put the clamping screw, clamping cage, seal and shielding ring (with seal) onto the fieldbus cable.
- Caution:** use only for EMC applications!
Strip the fieldbus cable here. Widen the shield and place over the shielding ring. Cut off the remaining shielding braid. As illustrated, the shield can also be connected to connection S. Prepare the cable as shown.
- Pull the prepared cable end through the sleeve coupling, together with the shield and insulation tube when necessary. Push the shielding ring with seal and shielding braid into the sleeve coupling. Push the seal, clamping cage and clamping screw to the shielding ring. Tighten the clamping ring.
- Screw the cable end tightly into the male insert. Screw together the sleeve coupling and the male insert. Tighten clamping screw.

Ex i cables



Dimensioned drawing



Technical data

Cable resistance (loop)	max. Ω/km	44
Insulation resistance	min. GΩ x km	5
Eff. capacitance at 800 Hz	nom. nF/km	52
Inductance 800 Hz	mH/km	approx. 0.4
Wave impedance at 31.25 kHz	Ω	100 ± 20 %
at ≥ 1 MHz	nom. Ω	80
Wave attenuation		
- at 39 kHz	max. dB/100 m	0.3
- at 100 kHz	nom. dB/100 m	0.35
- at 1 MHz	nom. dB/100 m	1.2
Signal propagation rate	nom. %	79
Transfer impedance up to 30 MHz	max. mOhm/m	250
Operating voltage (not for three-phase use)	peak V	100
Test voltage wire/wire	U _{eff} V	1500
wire/shield	U _{eff} V	1500
Mechanical specifications		
Stationary bending radius	mm	65
Temperature range		
stationary	°C	-5 ... 60
moving	°C	-30 ... 80
Note		

Pre-assembled cables with a connector at one end only require suitable plugs and sockets to complete the cable assembly.

The following cables are available:

Ordering data

Designation	Type	Order No.
Intrinsically safe area Exi		
One side without connector, male		
M12 EMV/blue/1M	FBCEX PA M12 M 1M	1785150100
M12 EMV/blue/2M	FBCEX PA M12 M 2M	1785150200
M12 EMV/blue/5M	FBCEX PA M12 M 5M	1785150500
M12 EMV/blue/10M	FBCEX PA M12 M 10M	1785151000
One side without connector, female		
M12 EMV/blue/1M	FBCEX PA M12 FM 1M	1785140100
M12 EMV/blue/2M	FBCEX PA M12 FM 2M	1785140200
M12 EMV/blue/5M	FBCEX PA M12 FM 5M	1785140500
M12 EMV/blue/10M	FBCEX PA M12 FM 10M	1785141000
Connecting cable, male - female		
M12 EMV/blue/1M	FBCEX PA M12 M-FM 1M	1785130100
M12 EMV/blue/2M	FBCEX PA M12 M-FM 2M	1785130200
M12 EMV/blue/5M	FBCEX PA M12 M-FM 5M	1785130500
M12 EMV/blue/10M	FBCEX PA M12 M-FM 10M	1785131000
Note	Other versions on request	

Through Panel bushing



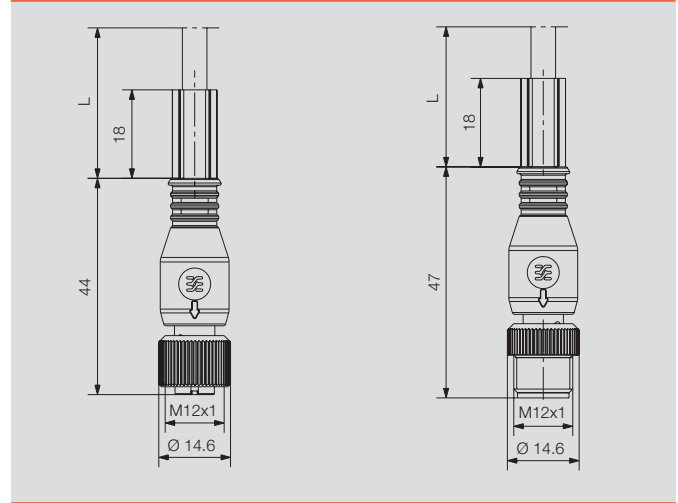
Ordering data

Type	Length	Qty.	Order No.
SAI-WDF-5P M12 60 mm	60 mm	1	1819450000

Cables



Dimensioned drawing



Technical data

Cable resistance (loop)	max. Ω /km	44
Insulation resistance	min. $G\Omega \times km$	5
Eff. capacitance at 800 Hz	nom. nF/km	52
Inductance 800 Hz	mH/km	approx. 0.4
Wave impedance at 31.25 kHz	Ω	100 \pm 20 %
at \geq 1 MHz	nom. Ω	80
Wave attenuation		
- at 39 kHz	max. d/B 100 m	0.3
- at 100 kHz	nom. d/B 100 m	0.35
- at 1 MHz	nom. d/B 100 m	1.2
Signal propagation rate		
	nom. %	79
Transfer impedance up to 30 MHz		
	max. mOhm/m	250
Operating voltage (not for three-phase use)		
	peak V	100
Test voltage	wire/wire U_{eff} V	1500
	wire/shield U_{eff} V	1500
Mechanical specifications		
Stationary bending radius	mm	65
Temperature range		
	stationary $^{\circ}C$	-5 ... 60
	moving $^{\circ}C$	-30 ... 80
Note		

Pre-assembled cables with a connector at one end only require suitable plugs and sockets to complete the cable assembly.

The following cables are available:

Ordering data

Designation	Type	Order No.
Industrial applications		
One side without connector, male		
M12 EMV/black/1M	FBC PA M12 M 1M	1785120100
M12 EMV/black/2M	FBC PA M12 M 2M	1785120200
M12 EMV/black/5M	FBC PA M12 M 5M	1785120500
M12 EMV/black/10M	FBC PA M12 M 10M	1785121000
One side without connector, female		
M12 EMV/black/1M	FBC PA M12 FM 1M	1785110100
M12 EMV/black/2M	FBC PA M12 FM 2M	1785110200
M12 EMV/black/5M	FBC PA M12 FM 5M	1785110500
M12 EMV/black/10M	FBC PA M12 FM 10M	1785111000
Connecting cable, male - female		
M12 EMV/black/1M	FBC PA M12 M-FM 1M	1785100100
M12 EMV/black/2M	FBC PA M12 M-FM 2M	1785100200
M12 EMV/black/5M	FBC PA M12 M-FM 5M	1785100500
M12 EMV/black/10M	FBC PA M12 M-FM 10M	1785101000
Note	Other versions on request	

Through Panel bushing



Ordering data

Type	Length	Qty.	Order No.
SAI-WDF-5P M12 60 mm	60 mm	1	1819450000

Positioning plug connector



Positioning plug connector



Ordering data

Positioning plug connector PG9 500 mm	Adapter PG9 / M20
Positioning plug connector PG 13.5 150 mm	Positioning plug connector PG 13.5 300 mm
Positioning plug connector M 20 150 mm	Positioning plug connector M 20 300 mm
Positioning plug connector M 20 300 mm	Positioning plug connector M 20 300 mm

Note

Type	Qty.	Order No.
SAIE-M12S-4-0.5U-AEH-VA	1	1861220001
SAIE-EW-M20/PG9-SW24-VA	1	1950270000

Technical data

No. of poles	4
Version	pin
Temperature range	-40 ... 85 °C
Housing material	stainless steel (VA)
Connection thread	PG 9
Plug thread	M12
Strand cross-section	0.34 mm ²
Housing class of protection to DIN 40050 IEC 529	IP 67
Strand length (fitted with wire-end ferrules)	500 mm
Nominal current per contact	4 A
Rated voltage	250 V
Contact surface	gold-plated
Type of connection	screw
Flammability class to UL-94	
Nominal voltage to VDE standard 0110/ISO Group C	V
Resistance to creepage	
Contact resistance to IEC 512 Part 2	m Ω
Insulation resistance to IEC 512 Part 2	Ω

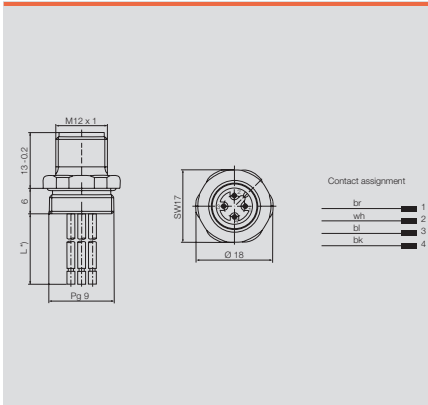
Note

Fitting information

	Torque settings
Set screw	1.8 - 2.0 Nm
Knurled ring	hand-tight
Lock-nut	6.25 Nm

If the device is exposed to vibration, we recommend using a stub cable to isolate the device from the vibration.

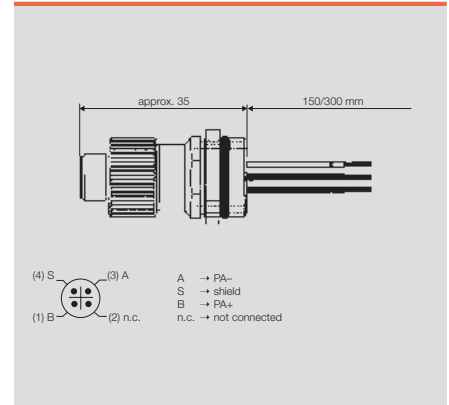
Dimensioned drawing



Positioning plug connector for field device connection

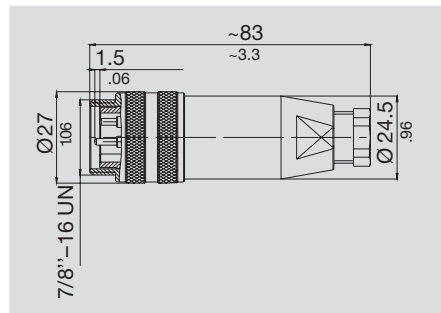
4/5	pin
-40 ... 85	Cu Zn nickel surface
PG 13.5 / M 20	PG 13.5 / M 20
M12	M12
1.5 (4 poles) 0.34 (5 poles)	1.5 (4 poles) 0.34 (5 poles)
IP 67	IP 67
150/300	150/300
3	3
	CuZnAu
	screw
	V-2
	125 ~ 150 =
	KC 600
	≤ 8
	≥ 10 ¹²

Dimensioned drawing



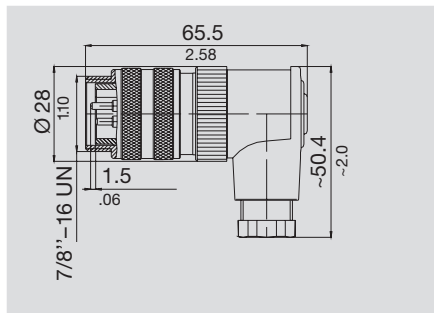
Plug-in connector FBCon 7/8"

Plug-in connector straight (plug)



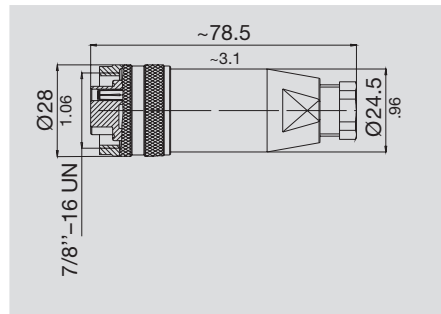
Ordering data		4-pole
Type	Qty.	Order No.
FBCon 7/8" 4P M	1	1808840000

Plug-in connector 90o (plug)



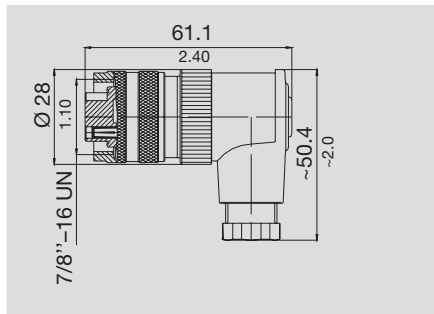
Ordering data		4-pole
Type	Qty.	Order No.
FBCon 7/8" 4P M (A)	1	1808830000

Plug-in connector straight (socket)



Ordering data		4-pole
Type	Qty.	Order No.
FBCon 7/8" 4P FM	1	1812480000

Plug-in connector 90o (socket)



Ordering data		4-pole
Type	Qty.	Order No.
FBCon 7/8" 4P FM (A)	1	1812470000

Technical data	
No. of poles	4
Lock	Screw 7/8" UNF
Connection	Screw
Connection cross-section	max. 1,5 mm ²
Connection cross-section	16 AWG
Enclosure protection class	IP 67
Mechanical service life	>500 plugging cycles
Upper limit temperature	+ 85 °C
Lower limit temperature	- 40 °C

Electrical data	
Rated voltage	250 V
Rated surge voltage	4000 V
Pollution severity	3
Surge category	II
Insulation material group	III
Test surge voltage	4800 V
Rated current	9 A (40°)
Volume resistivity	≤ 5 mΩ
Insulation resistance	> 10 ¹⁰ Ω

Materials		
Contact pins	CuZn	(brass)
Contact surface	Au	(gold)
Socket body	PUR/PA	(UL 94 HB)
Enclosure cable plug	PBT	(UL 94 V-0)
Threaded ring	Anodised aluminium	

Cable gland M16



Ordering data

Type	Order No.
Cable gland M16	1772210000

Cable gland M16 EEx



Ordering data

Type	Order No.
Cable gland M16 EEx	1737210000

Screw cap brass M16



Ordering data

Type	Order No.
Screw cap brass M16	1777790000

Screw cap brass M16 EEx



Ordering data

Type	Order No.
Screw cap brass M16 EEx	1781240000

Protective cap M12 metal



Ordering data

Type	Order No.
Protective cap SAI-SK-M12-M1	1802750000

Protective cap socket



Ordering data

Type	Order No.
Protective cap socket (black)	9456050000

Protective cap plug



Ordering data

Type	Order No.
Protective cap plug (yellow)	1781520000

Thread sealing ring



Ordering data

Type	Order No.
Thread sealing ring	1719550000

**Profibus-DP
Ordering data**

Designation	Type	Qty.	Order No.
M12 DP coded B plug	SAI SM 5/8S M12 5P B-COD	1	1784790000
M12 DP coded B socket	SAI BM 5/8S M12 5P B-COD	1	1784780000
Pre-assembled cable with plug	SAI L-M12G-PB-DP-0.3	1	1810520030
Locating plug-in connector	POS-5P M12/M20 300 MM	1	1795500000

Bestellschlüssel:

CG:	Connection of master line with cable gland
M12:	Connection of measuring devices with M12 plug-in connection
PCG:	Plastic cable gland M16 metric thread
7/8":	Connection of measuring devices with 7/8" plug-in connection

JACKPAC® (IP67) signal converter

JACKPAC® (IP67) signal converter	Introduction	F.2
	JACKPAC® relay	F.3
	JACKPAC® timer	F.4
	JACKPAC® ovp	F.5
	JACKPAC® analogue	F.8
	JACKPAC® test	F.12
	JACKPAC® signal inverter	F.13
	JACKPAC® – General Data and Accessories	F.14

The Concept

The IP20 Solution

Until now, all signal conditioning tasks were carried out by modules designed to IP20. For their own protection, these need to be installed in central switchgear cabinets.

However, decentralised solutions that do not require large switchgear cabinets are increasingly being sought for use in modern-day industrial automation technology.

It is true that shielded signals can be fed to the machinery via powerful fieldbus systems; but in each case, however, there remains an interconnecting cable between the subdistribution boards and the sensors/actuators that is susceptible to interference from surrounding operations.

F As has always been the case, signals are still influenced by over-voltages and earth loops; interference pulses are superimposed on sensor signals and malfunctions can be initiated.

The result is that signal conditioning modules sealed to IP20 require terminal boxes, such as switchgear cabinets, or even cost-intensive special solutions (for example, sensor-actuator distributors with integrated signal-conditioning functions providing as many functionalities as possible, even when these are surplus to requirements).

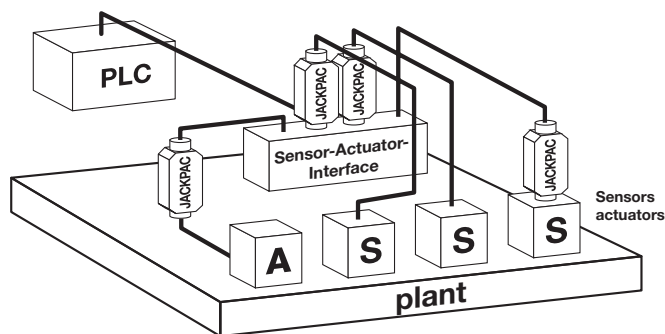
The JACKPAC® Solution

By introducing **JACKPAC®**, the new M12 Signal Box with the high IP67 ingress protection. Weidmüller can now provide a modular and versatile concept that makes it possible to condition signals in an industrial environment. Requiring no additional enclosure, these modules can be installed directly on the machine, in the production plant, conveyor system or within a process.

The M12 connector, which is standardised all over the world, makes it possible to integrate the **JACKPAC®** at any point in the sensor-actuator cabling. The fixed pin assignment means it is easy to install and is protected against polarity reversal.

This versatility really comes into its own when an installation needs to be altered or modernised, simply because no additional enclosures or cabling are required.

By providing this high degree of protection and versatility, **JACKPAC®** renders possible innovative automation concepts based on decentralised applications – without large control cabinets or small distribution boards – for consistent, transparent, efficient and cost-efficient installations.



- Easy 'Plug and Play' installation
- Universal and versatile usage
- No additional enclosure required
- Saves time and costs
- Ideal for decentralised concepts and plant modernisation (retrofitting)

Switching amplifier

The switching amplifiers are simply integrated into the control line of the actuator.

It is therefore possible to, for example, amplify switched outputs with 24 V DC/0.5 A to 24 V DC/2 A.

The switching amplifier with electrical isolation simultaneously isolates the input and output circuits. This prevents feedback from the actuator to the sensitive switched output of the I/O module. The switching voltage at the output is fed via a T-distributor.

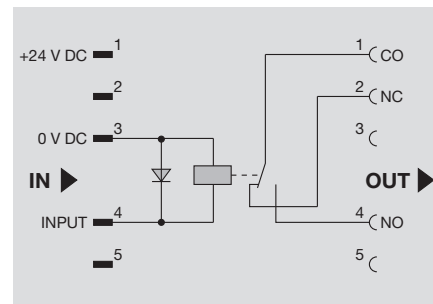
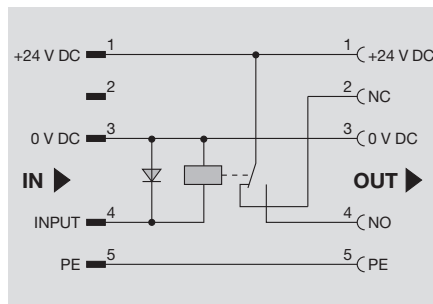
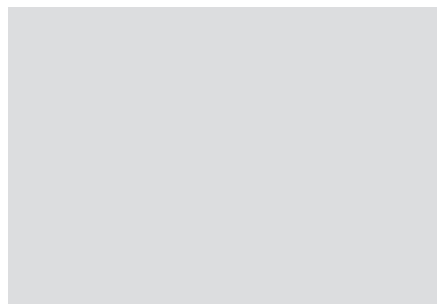
JPR 24 V DC 1CO M12

without isolation



JPR 24 V DC ISO 1CO M12

with electrical isolation



Technical data

Input	
Rated voltage	24 V DC ±20 %
Rated current DC	8 mA
Power rating	200 mW
DC Response/dropout Volt	16.8 V / 1.2 V
Pick-up/drop-out current, DC coil	5 mA / 1 mA
Free-wheel diode	Yes
Output	
max. switching power	24 V / 2 A
min. switching power	12 V / 10 mA
Contact base material	AgSnO
Mechanical endurance	10 ⁷ ·10 ⁶ switching cycles
max. switching frequency at rated load	0.1 Hz
Response time / Drop-out time	approx. 5 ms
Insulation coordination	
Rated voltage	300 V
Surge category	III
Pollution severity	2
Protective separation to VDE 0106 part 101	no
General data	
Operating temperature	-25 °C...+70 °C
Storage temperature	-25 °C...+70 °C
Connection system	M12 - plug/socket, A-coded
Approvals	CE, cULus
Dimensions	
Clamping range (rating- / min. / max.)	mm ²
Length x width x height	mm
Note	

Rated voltage	24 V DC ±20 %
Rated current DC	8 mA
Power rating	200 mW
DC Response/dropout Volt	16.8 V / 1.2 V
Pick-up/drop-out current, DC coil	5 mA / 1 mA
Free-wheel diode	Yes
max. switching power	24 V / 2 A
min. switching power	12 V / 10 mA
Contact base material	AgSnO
Mechanical endurance	10 ⁷ ·10 ⁶ switching cycles
max. switching frequency at rated load	0.1 Hz
Response time / Drop-out time	approx. 5 ms
Rated voltage	300 V
Surge category	III
Pollution severity	2
Protective separation to VDE 0106 part 101	no
Operating temperature	-25 °C...+70 °C
Storage temperature	-25 °C...+70 °C
Connection system	M12 - plug/socket, A-coded
Approvals	CE, cULus
Clamping range (rating- / min. / max.)	mm ²
Length x width x height	mm
Note	

Rated voltage	24 V DC ±20 %
Rated current DC	8 mA
Power rating	200 mW
DC Response/dropout Volt	16.8 V / 1.2 V
Pick-up/drop-out current, DC coil	5 mA / 1 mA
Free-wheel diode	Yes
max. switching power	24 V / 2 A
min. switching power	12 V / 10 mA
Contact base material	AgSnO
Mechanical endurance	10 ⁷ ·10 ⁶ switching cycles
max. switching frequency at rated load	0.1 Hz
Response time / Drop-out time	approx. 5 ms
Rated voltage	300 V
Surge category	III
Pollution severity	2
Protective separation to VDE 0106 part 101	yes
Operating temperature	-25 °C...+70 °C
Storage temperature	-25 °C...+70 °C
Connection system	M12 - plug/socket, A-coded
Approvals	CE, cULus
Clamping range (rating- / min. / max.)	mm ²
Length x width x height	mm
Note	

Ordering data

Type	Qty.	Order No.
JPR 24VDC 1CO M12	1	8771420000

Type	Qty.	Order No.
JPR 24VDC ISO 1CO M12	1	8771430000

Note

Note

Accessories

Note

Retaining clip
JP CLIP M: 8778490000

Retaining clip
JP CLIP M: 8778490000

JACKPAC® timer

Timing relay

Malfunctions in automated systems are becoming ever more common because the ever higher clock rates mean that the sensors are no longer damped for a sufficient time in order to supply pulses that can be processed reliably by the control modules. Pulse stretchers are simply included in the lines between sensors and input modules and lengthen pulses from min. 1 ms to 50 or 100 ms. This enables even short sensor signals to be detected and evaluated reliably by the control.

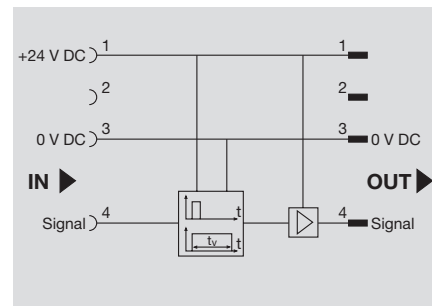
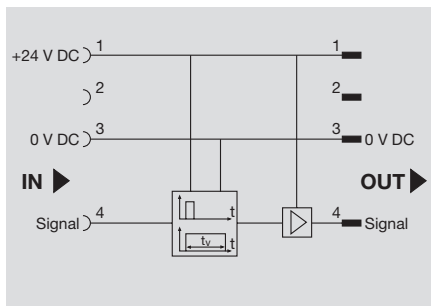
JPTA 50 ms 24 V DC PNP M12

Pulse stretching, 50 ms



JPTA 100 ms 24 V DC PNP M12

Pulse stretching, 100 ms



Technical data

Input	
Rated voltage	18...24...30 V DC
Rated current DC	3.5...7.0...10.0 mA
Switch-off delay	50 ms
Output	
max. switching voltage DC	30 V
max. switching current	400 mA
Insulation coordination (EN 50178)	
Rated voltage	32 V
Impulse withstand voltage	330 V
Surge category	1
Pollution severity	2
General data	
Operating temperature	0 °C...+60 °C
Storage temperature	-20 °C...+85 °C
Connection system	M12 - plug/socket, A-coded
Approvals	CE, cULus

Input	
Rated voltage	18...24...30 V DC
Rated current DC	3.5...7.0...10.0 mA
Switch-off delay	100 ms
Output	
max. switching voltage DC	30 V
max. switching current	400 mA
Insulation coordination (EN 50178)	
Rated voltage	32 V
Impulse withstand voltage	330 V
Surge category	1
Pollution severity	2
General data	
Operating temperature	0 °C...+60 °C
Storage temperature	-20 °C...+85 °C
Connection system	M12 - plug/socket, A-coded
Approvals	CE, cULus

Input	
Rated voltage	18...24...30 V DC
Rated current DC	3.5...7.0...10.0 mA
Switch-off delay	100 ms
Output	
max. switching voltage DC	30 V
max. switching current	400 mA
Insulation coordination (EN 50178)	
Rated voltage	32 V
Impulse withstand voltage	330 V
Surge category	1
Pollution severity	2
General data	
Operating temperature	0 °C...+60 °C
Storage temperature	-20 °C...+85 °C
Connection system	M12 - plug/socket, A-coded
Approvals	CE, cULus

Dimensions

Clamping range (rating- / min. / max.)	mm ²
Length x width x height	mm

Clamping range (rating- / min. / max.)	mm ²
Length x width x height	83 x 36 x 14.4

Clamping range (rating- / min. / max.)	mm ²
Length x width x height	83 x 36 x 14.4

Ordering data

Type	Qty.	Order No.
JPTA 50MS 24VDC PNP M12	1	8771440000

Type	Qty.	Order No.
JPTA100MS 24VDC PNP M12	1	8836630000

Note

Accessories

Note

Retaining clip JP CLIP M: 8778490000

Retaining clip JP CLIP M: 8778490000

1-stage surge protection

The surge protection is plugged in to protect the sensitive electronics in the signalling circuit.

The suppression circuit with varistor suppresses the induced voltage in solenoid valves.

The PE connection leaves the housing via a separate line. The green/yellow earthing cable must be connected to the system east to ensure reliable discharge of interference pulses.

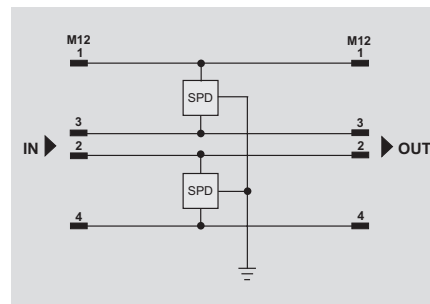
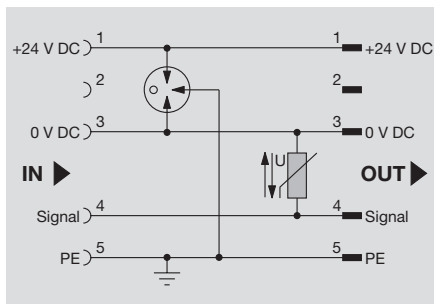
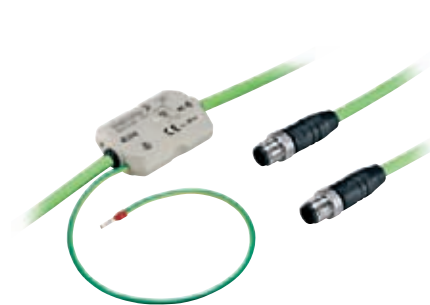
JPOVP 24 V DC MOV M12

Suppression circuit with diode



JPOVP Cat.5 M12

Ethernet Cat.5



Technical data

Technical data	
Rated voltage	24 V DC
Operating voltage (DC), max.	28 V
Rated discharge current per path (8/20 µs)	5 kA
Total discharge current, max. (8/20 µs)	10 kA
DC response voltage	90 V
Attenuation	-
Response time	≤ 25 ns
Rated current	2 A
Protection level, signal line, wire to wire/PE	230 V/230 V
Protection level, supply, wire to wire/PE	85 V/85 V
Leakage current at Un	1 µA
General data	
Operating temperature	-25 ... 60°C
Surge category	II
Pollution severity	2
Type of connection	M12 - plug/socket, A-coded
Approvals	CE

Rated voltage	24 V DC
Operating voltage (DC), max.	28 V
Rated discharge current per path (8/20 µs)	5 kA
Total discharge current, max. (8/20 µs)	10 kA
DC response voltage	90 V
Attenuation	-
Response time	≤ 25 ns
Rated current	2 A
Protection level, signal line, wire to wire/PE	230 V/230 V
Protection level, supply, wire to wire/PE	85 V/85 V
Leakage current at Un	1 µA
Operating temperature	-25 ... 60°C
Surge category	II
Pollution severity	2
Type of connection	M12 - plug/socket, A-coded
Approvals	CE

Rated voltage	30 V AC/DC
Operating voltage (DC), max.	30 V
Rated discharge current per path (8/20 µs)	5 kA
Total discharge current, max. (8/20 µs)	10 kA
DC response voltage	230 V
Attenuation	< 0.3 dB at 250 Hz
Response time	≤ 5 ns
Rated current	0.2 A
Protection level, signal line, wire to wire/PE	130 V/600 V
Protection level, supply, wire to wire/PE	80 V/300 V
Operating temperature	-25 ... 60°C
Surge category	III
Pollution severity	2
Type of connection	to IEC 61076-2-101-A1; M12 - plug/plug, D-coded
Approvals	CE

Dimensions

Clamping range (rating- / min. / max.)	mm ²
Length x width x height	mm

Clamping range (rating- / min. / max.)	mm ²
Length x width x height	83 x 36 x 14.4

Clamping range (rating- / min. / max.)	mm ²
Length x width x height	57 x 36 x 14.4
Note	Each cable 1.5 m long

Ordering data

Type	Qty.	Order No.
JPOVP 24VDC MOV M12	1	8760960000

Type	Qty.	Order No.
JPOVP 24VDC MOV M12	1	8760960000

Type	Qty.	Order No.
JPOVP M12 D-coded Cat5	1	8805570000

Note

Note

Note

Accessories

Note

Retaining clip
JP CLIP M: 8778490000

Retaining clip
JP CLIP M: 8778490000

JACKPAC® ovp

1-stage surge protection

Jackpac OVP terminal equipment against the overvoltages that can occur as a result of atmospheric discharges or storms. This type of protection in the form of an adapter is available in IP20 and IP67 versions and complies with the requirements of class III to IEC 61643-21.

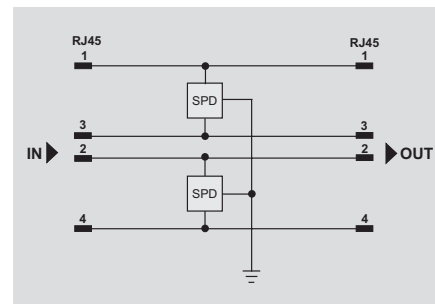
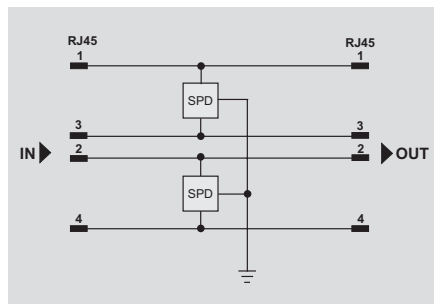
JPOVP Cat.6 IP20

Ethernet Cat.6



JPOVP Cat.6 IP67

Ethernet Cat.6



Technical data

Technical data

Rated voltage
 Operating voltage (DC), max.
 Rated discharge current per path (8/20 µs)
 Total discharge current, max. (8/20 µs)
 DC response voltage
 Attenuation
 Response time
 Rated current
 Protection level, signal line, wire to wire/PE
 Protection level, supply, wire to wire/PE
 Leakage current at Un

34 V AC / 48 V DC
 48 V
 5 kA
 10 kA
 230 V
 < 0.3 dB at 250 Hz
 ≤ 5 ns
 0.2 A
 130 V/600 V
 80 V/300 V

34 V AC / 48 V DC
 48 V
 5 kA
 10 kA
 230 V
 < 0.3 dB at 250 Hz
 ≤ 5 ns
 0.2 A
 130 V/600 V
 80 V/300 V

General data

Operating temperature
 Surge category
 Pollution severity
 Type of connection
 Approvals

-25 ... 60°C
 III
 2
 RJ45 plug;IP 20
 CE

-25 ... 60°C
 III
 2
 RJ45 plug;IP 67
 CE

Dimensions

Clamping range (rating- / min. / max.) mm²
 Length x width x height mm

Note

53 x 36 x 14.4
 each with 1.5 m cable

53 x 36 x 14.4
 each with 1 m cable and IP67 cable gland

Ordering data

Type	Qty.	Order No.
JPOVP RJ45 Cat6 IP20	1	8805550000

Type	Qty.	Order No.
JPOVP RJ45 Cat6 IP67	1	8805560000

Note

Accessories

Note

Retaining clip
 JP CLIP M: 8778490000

Retaining clip
 JP CLIP M: 8778490000

3-stage surge protection

With gas discharge tube, varistor and suppression diode.

For protecting binary switching signals up to 24 V, or for analogue measuring circuits with 0...20 mA or 0...10 V.

The PE connection leaves the housing via a separate line. The green/yellow cable must be securely connected to the systems earth to ensure reliable discharging of interference pulses.

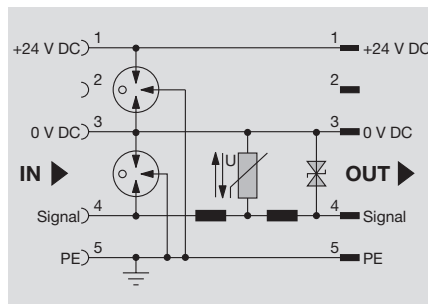
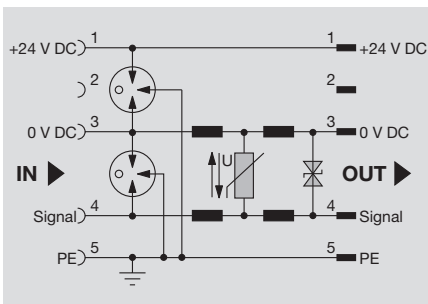
JPOVP 24 V DC ANA M12

for analogue signals



JPOVP 24 V DC BIN M12

for digital signals



Technical data

Technical data	
Rated voltage	24 V DC
Operating voltage (DC), max.	28 V
Rated discharge current per path (8/20 µs)	5 kA
Total discharge current, max. (8/20 µs)	10 kA
DC response voltage	90 V
Varistor	30 V
Suppression diodes	yes
Response time	≤ 100 ps
Rated current	2 A
Protection level, signal line, wire to wire/PE	45 V/65 V
Protection level, supply, wire to wire/PE	85 V/85 V
Leakage current at Un	1 µA

Rated voltage	24 V DC
Operating voltage (DC), max.	28 V
Rated discharge current per path (8/20 µs)	5 kA
Total discharge current, max. (8/20 µs)	10 kA
DC response voltage	90 V
Varistor	30 V
Suppression diodes	yes
Response time	≤ 100 ps
Rated current	2 A
Protection level, signal line, wire to wire/PE	45 V/65 V
Protection level, supply, wire to wire/PE	85 V/85 V
Leakage current at Un	1 µA

Rated voltage	24 V DC
Operating voltage (DC), max.	28 V
Rated discharge current per path (8/20 µs)	5 kA
Total discharge current, max. (8/20 µs)	10 kA
DC response voltage	90 V
Varistor	30 V
Suppression diodes	yes
Response time	≤ 100 ps
Rated current	2 A
Protection level, signal line, wire to wire/PE	45 V/65 V
Protection level, supply, wire to wire/PE	85 V/85 V
Leakage current at Un	1 µA

General data	
Operating temperature	-25 ... 60°C
Surge category	II
Pollution severity	2
Type of connection	M12 - plug/socket, A-coded
Approvals	CE

Operating temperature	-25 ... 60°C
Surge category	II
Pollution severity	2
Type of connection	M12 - plug/socket, A-coded
Approvals	CE

Operating temperature	-25 ... 60°C
Surge category	II
Pollution severity	2
Type of connection	M12 - plug/socket, A-coded
Approvals	CE

Dimensions	
Clamping range (rating- / min. / max.)	mm ²
Length x width x height	mm
Note	

Clamping range (rating- / min. / max.)	mm ²
Length x width x height	83 x 36 x 14
Note	

Clamping range (rating- / min. / max.)	mm ²
Length x width x height	83 x 36 x 14
Note	

Ordering data

Type	Qty.	Order No.
JPOVP 24VDC ANA M12	1	8760970000

Type	Qty.	Order No.
JPOVP 24VDC ANA M12	1	8760970000

Type	Qty.	Order No.
JPOVP 24VDC BIN M12	1	8760980000

Note	
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Note	
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Note	
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Accessories

Note	
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Retaining clip JP CLIP M: 8778490000	
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Retaining clip JP CLIP M: 8778490000	
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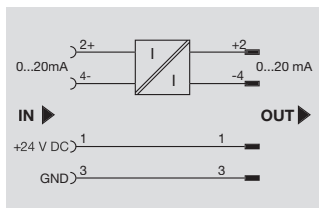
JACKPAC® analogue

DC/DC passive signal isolators

2-way separation

Passive isolators are used for the electrical isolation of standard signals 0(4)...20 mA / 0(4)...20 mA. The modules fed from the input side draw the energy they need for signal transmission and power supply from the active input circuit. A stable current signal for control purposes is available on the output side.

0(4)...20 mA / 0(4)...20 mA



Technical data

Input

Input capacitance
Input voltage
Input current
Input resistance, voltage
Input resistance, current

approx. 1 nF
-
0(4)...20 mA
-
≤ 0.1 V at 20 mA (with open current output or mains failure approx. 350 mV)
< 100 mA

Overload protection

Output

Output current
Output voltage
Chopper frequency
Accuracy

Cut-off frequency (-3dB)
Load impedance, voltage
Load impedance, current
Offset current/Offset voltage
Residual ripple
Temperature coefficient

0(4)...20 mA (max. 12 V)
-
approx. 100 kHz
< 0.1 % of upper limit and < 0.02 % of measured value/100 Ω load
≥ 100 Hz
-
≤ 600 Ω
< 20 μA/
< 10 mV_{eff}
≤ 100 ppm/K of final value

Insulation coordination

EMC standards
Test voltage
Ingress protection class
Pollution severity
Surge category

DIN EN 61326
510 V @ 50 Hz
IP 68
3
II

General data

Supply voltage
Type of connection
Operating temperature
Storage temperature
Approvals

24 V DC ± 15 %
M12 - plug/socket, A-coded
-10 °C...+70 °C
-40 °C...+85 °C
CE, cURus

Dimensions

Clamping range (rating- / min. / max.) mm²
Length x width x height mm

83 x 36 x 14.4

Note

Ordering data

Type	(Qty. = 1)	Order No.
JPA CCC LP M12		8778790000

Note

Accessories

Note

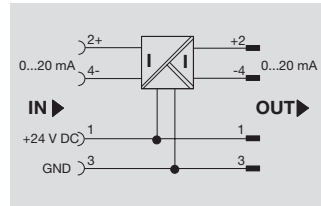
Retaining clip
JP CLIP M: 8778490000

DC/DC active signal isolators

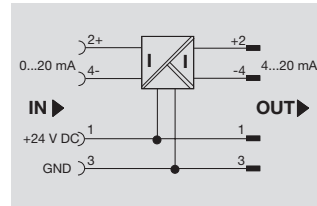
3-way separation

The new active signal isolator/converter for electrical isolation of standard signals 0/4...20 mA, bzw. 0...10 V is used for opening earth loops and for eliminating interference variables from the input side. Input and output are supplied with the necessary auxiliary power via the electrically isolated auxiliary voltage supply.

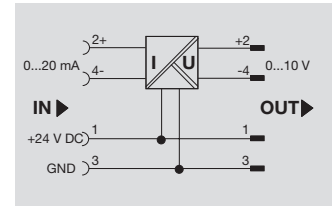
0-20 mA / 0-20 mA



0-20 mA / 4-20 mA



0-20 mA / 0-10 V



Technical data

Input	0-20 mA / 0-20 mA	0-20 mA / 4-20 mA	0-20 mA / 0-10 V
Input capacitance	approx. 1 nF	approx. 1 nF	approx. 1 nF
Input voltage	-	-	-
Input current	0...20 mA	0...20 mA	0...20 mA
Input resistance, voltage	-	-	-
Input resistance, current	≤ 0.1 V at 20 mA (with open current output or mains failure approx. 350 mV)	≤ 0.1 V at 20 mA (with open current output or mains failure approx. 350 mV)	≤ 0.1 V at 20 mA (with open current output or mains failure approx. 350 mV)
Overload protection	< 100 mA	< 100 mA	< 100 mA
Output			
Output current	0...20 mA	4...20 mA	-
Output voltage	-	-	0...10 V
Chopper frequency	approx. 100 kHz	approx. 100 kHz	approx. 100 kHz
Accuracy	< 0.2 % of measuring range	< 0.2 % of measuring range	< 0.3 % of measuring range
Cut-off frequency (-3dB)	≥ 100 Hz	≥ 100 Hz	≥ 100 Hz
Load impedance, voltage	-	-	≥ 10 kΩ @ 10 V
Load impedance, current	≤ 500 Ω @ 20 mA	≤ 500 Ω @ 20 mA	-
Offset current/Offset voltage	< 20 μA/	< 20 μA/	< 10 mV
Residual ripple	< 10 mV _{eff}	< 10 mV _{eff}	< 10 mV _{eff}
Temperature coefficient	≤ 100 ppm/K of final value	≤ 100 ppm/K of final value	≤ 100 ppm/K of final value
Insulation coordination			
EMC standards	DIN EN 61326	DIN EN 61326	DIN EN 61326
Test voltage	510 V @ 50 Hz	510 V @ 50 Hz	510 V @ 50 Hz
Ingress protection class	IP 68	IP 68	IP 68
Pollution severity	3	3	3
Surge category	II	II	II
General data			
Supply voltage	24 V DC ± 15 % / 0.6 W	24 V DC ± 15 % / 0.6 W	24 V DC ± 15 % / 0.6 W
Type of connection	M12 - plug/socket, A-coded	M12 - plug/socket, A-coded	M12 - plug/socket, A-coded
Operating temperature	-10 °C...+70 °C	-10 °C...+70 °C	-10 °C...+70 °C
Storage temperature	-40 °C...+85 °C	-40 °C...+85 °C	-40 °C...+85 °C
Approvals	CE, cURus	CE, cURus	CE, cURus
Dimensions			
Clamping range (rating- / min. / max.)	mm ²		
Length x width x height	mm	83 x 36 x 14.4	83 x 36 x 14.4
Note			

Ordering data

Type	(Qty. = 1)	Order No.	Type	(Qty. = 1)	Order No.	Type	(Qty. = 1)	Order No.
JPA CCC DC 0-20/0-20MA		8828960000	JPA CCC DC 0-20/4-20MA		8833440000	JPA CVC DC 0-20MA/0-10V		8833380000

Note

Accessories

Note	Retaining clip	JP CLIP M: 8778490000	Retaining clip	JP CLIP M: 8778490000	Retaining clip	JP CLIP M: 8778490000

JACKPAC® analogue

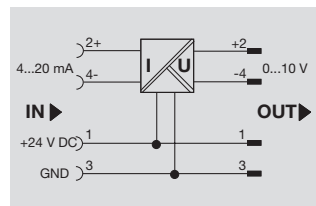
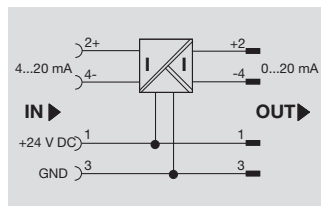
DC/DC active signal isolators

3-way separation

The new active signal isolator/converter for electrical isolation of standard signals 0/4...20 mA, bzw. 0...10 V is used for opening earth loops and for eliminating interference variables from the input side. Input and output are supplied with the necessary auxiliary power via the electrically isolated auxiliary voltage supply.

4-20 mA / 0-20 mA

4-20 mA / 0-10 V



Technical data

Input

Input capacitance
Input voltage
Input current
Input resistance, voltage
Input resistance, current

approx. 1 nF
-
4...20 mA
-
≤ 0.1 V at 20 mA (with open current output or mains failure approx. 350 mV)
< 100 mA

approx. 1 nF
-
4...20 mA
-
≤ 0.1 V at 20 mA (with open current output or mains failure approx. 350 mV)
< 100 mA

Overload protection

Output

Output current
Output voltage
Chopper frequency
Accuracy
Cut-off frequency (-3dB)
Load impedance, voltage
Load impedance, current
Offset current/Offset voltage
Residual ripple
Temperature coefficient

0...20 mA
-
approx. 100 kHz
< 0.2% of measuring range
≥ 100 Hz
-
≤ 500 Ω @ 20 mA
< 20 µA/
< 10 mV_{eff}
≤ 100 ppm/K of final value

-
0...10 V
approx. 100 kHz
< 0.3% of measuring range
≥ 100 Hz
≥ 10 kΩ @ 10 V
-
< 10 mV
< 10 mV_{eff}
≤ 100 ppm/K of final value

Insulation coordination

EMC standards
Test voltage
Ingress protection class
Pollution severity
Surge category

DIN EN 61326
510 V @ 50 Hz
IP 68
3
II

DIN EN 61326
510 V @ 50 Hz
IP 68
3
II

General data

Supply voltage
Type of connection
Operating temperature
Storage temperature
Approvals

24 V DC ± 15% / 0.6 W
M12 - plug/socket, A-coded
-10 °C...+70 °C
-40 °C...+85 °C
CE, cURus

24 V DC ± 15% / 0.6 W
M12 - plug/socket, A-coded
-10 °C...+70 °C
-40 °C...+85 °C
CE, cURus

Dimensions

Clamping range (rating- / min. / max.) mm²
Length x width x height mm

83 x 36 x 14.4

83 x 36 x 14.4

Note

Ordering data

Type	(Qty. = 1)	Order No.
JPA CCC DC 4-20/0-20MA		8833390000

Type	(Qty. = 1)	Order No.
JPA CVC DC 4-20MA/0-10V		8833400000

Note

Accessories

Note

Retaining clip
JP Clip M 8778490000

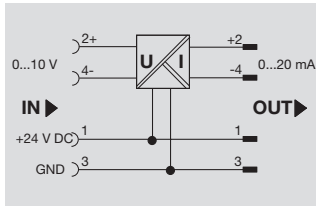
Retaining clip
JP Clip M 8778490000

DC/DC active signal isolators

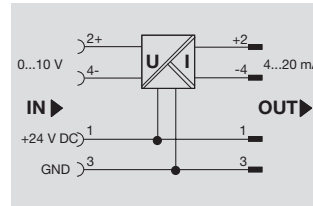
3-way separation

The new active signal isolator/converter for electrical isolation of standard signals 0/4...20 mA, bzw. 0...10 V is used for opening earth loops and for eliminating interference variables from the input side. Input and output are supplied with the necessary auxiliary power via the electrically isolated auxiliary voltage supply.

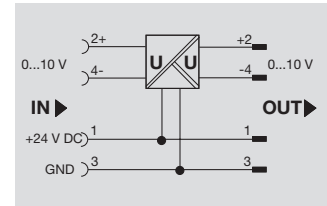
0-10 V / 0-20 mA



0-10 V / 4-20 mA



0-10 V / 0-10 V



Technical data

Input	
Input capacitance	approx. 1 nF
Input voltage	0...10 V
Input current	-
Input resistance, voltage	100 kΩ
Input resistance, current	-
Overload protection	Suppression diodes
Output	
Output current	0...20 mA
Output voltage	-
Chopper frequency	approx. 100 kHz
Accuracy	< 0.3 % of measuring range
Cut-off frequency (-3dB)	≥ 100 Hz
Load impedance, voltage	-
Load impedance, current	≤ 500 Ω @ 20 mA
Offset current/Offset voltage	< 20 μA/
Residual ripple	< 10 mV _{eff}
Temperature coefficient	≤ 100 ppm/K of final value
Insulation coordination	
EMC standards	DIN EN 61326
Test voltage	510 V @ 50 Hz
Ingress protection class	IP 68
Pollution severity	3
Surge category	II
General data	
Supply voltage	24 V DC ± 15 % / 0.6 W
Type of connection	M12 - plug/socket, A-coded
Operating temperature	-10 °C...+70 °C
Storage temperature	-40 °C...+85 °C
Approvals	CE, cURus
Dimensions	
Clamping range (rating- / min. / max.)	mm ²
Length x width x height	mm
Note	

Input capacitance	approx. 1 nF
Input voltage	0...10 V
Input current	-
Input resistance, voltage	100 kΩ
Input resistance, current	-
Overload protection	Suppression diodes
Output current	0...20 mA
Output voltage	-
Chopper frequency	approx. 100 kHz
Accuracy	< 0.3 % of measuring range
Cut-off frequency (-3dB)	≥ 100 Hz
Load impedance, voltage	-
Load impedance, current	≤ 500 Ω @ 20 mA
Offset current/Offset voltage	< 20 μA/
Residual ripple	< 10 mV _{eff}
Temperature coefficient	≤ 100 ppm/K of final value
EMC standards	DIN EN 61326
Test voltage	510 V @ 50 Hz
Ingress protection class	IP 68
Pollution severity	3
Surge category	II
Supply voltage	24 V DC ± 15 % / 0.6 W
Type of connection	M12 - plug/socket, A-coded
Operating temperature	-10 °C...+70 °C
Storage temperature	-40 °C...+85 °C
Approvals	CE, cURus
Clamping range (rating- / min. / max.)	mm ²
Length x width x height	mm

Input capacitance	approx. 1 nF
Input voltage	0...10 V
Input current	-
Input resistance, voltage	100 kΩ
Input resistance, current	-
Overload protection	Suppression diodes
Output current	4...20 mA
Output voltage	-
Chopper frequency	approx. 100 kHz
Accuracy	< 0.3 % of measuring range
Cut-off frequency (-3dB)	≥ 100 Hz
Load impedance, voltage	-
Load impedance, current	≤ 500 Ω @ 20 mA
Offset current/Offset voltage	< 20 μA/
Residual ripple	< 10 mV _{eff}
Temperature coefficient	≤ 100 ppm/K of final value
EMC standards	DIN EN 61326
Test voltage	510 V @ 50 Hz
Ingress protection class	IP 68
Pollution severity	3
Surge category	II
Supply voltage	24 V DC ± 15 % / 0.6 W
Type of connection	M12 - plug/socket, A-coded
Operating temperature	-10 °C...+70 °C
Storage temperature	-40 °C...+85 °C
Approvals	CE, cURus
Clamping range (rating- / min. / max.)	mm ²
Length x width x height	mm

Input capacitance	approx. 1 nF
Input voltage	0...10 V
Input current	-
Input resistance, voltage	100 kΩ
Input resistance, current	-
Overload protection	Suppression diodes
Output current	-
Output voltage	0...10 V
Chopper frequency	approx. 100 kHz
Accuracy	< 0.3 % of measuring range
Cut-off frequency (-3dB)	≥ 100 Hz
Load impedance, voltage	≥ 10 kΩ @ 10 V
Load impedance, current	-
Offset current/Offset voltage	< 10 mV
Residual ripple	< 10 mV _{eff}
Temperature coefficient	≤ 100 ppm/K of final value
EMC standards	DIN EN 61326
Test voltage	510 V @ 50 Hz
Ingress protection class	IP 68
Pollution severity	3
Surge category	II
Supply voltage	24 V DC ± 15 % / 0.6 W
Type of connection	M12 - plug/socket, A-coded
Operating temperature	-10 °C...+70 °C
Storage temperature	-40 °C...+85 °C
Approvals	CE, cURus
Clamping range (rating- / min. / max.)	mm ²
Length x width x height	mm

Ordering data

Type	(Qty. = 1)	Order No.
JPA VCC DC 0-10V/0-20MA		8833410000
Note		
Accessories		
Note		

Type	(Qty. = 1)	Order No.
JPA VCC DC 0-10V/4-20MA		8833420000
Note		
Accessories		
Note		

Type	(Qty. = 1)	Order No.
JPA VCC DC 0-10V/4-20MA		8833420000
Note		
Accessories		
Note		

Type	(Qty. = 1)	Order No.
JPA VCC DC 0-10/0-10V		8833430000
Note		
Accessories		
Note		

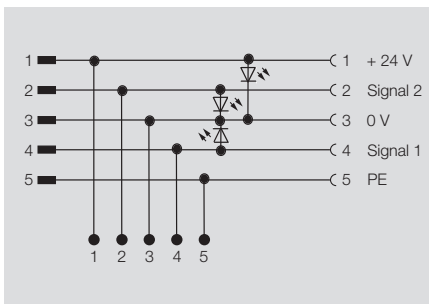
JACKPAC® test

Test adapter

The new JACKPAC® test adapter now provides a simple way of intervening in the M12 network. It can be integrated at any point and enables quick and easy connection of a testing device via the 5 push-in connections. Status indicators show the status of the 2 signal channels as well as the 24 V DC auxiliary voltage.

JP Test

with status indication



Technical data

Input	
Rated voltage	18...24...30 V DC
Rated current DC	2.2 mA (LED)
Status indicator	green LED
Output	
Continuous current	2 A
Power	2.2 mA at 24 V
General data	
Operating temperature	0 °C...+55 °C
Storage temperature	-25 °C...+70 °C
Connection system	M12 - plug/socket, A-coded
Dimensions	
Clamping range (rating- / min. / max.)	mm²
Length x width x height	mm
83 x 36 x 14.4	
Note	

Ordering data

Type	Qty.	Order No.
JP TEST	1	8794120000
Note		

Accessories

Note	Retaining clip JP CLIP M: 8778490000
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F

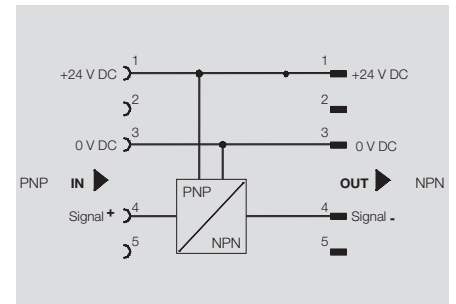
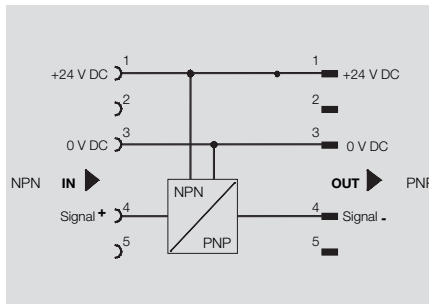
Signal inverter

The signal inverters convert sensor signals from PNP to NPN, or from NPN to PNP. This helps to reduce the costly efforts required to adapt the currently available switching circuit and to make optimum use of the available inputs on the I/O cards - a solution which may be particularly interesting for the Asian and North American market.

JPP NPN PNP 24 V DC



JPP PNP NPN 24 V DC



Technical data

Input	
Sensor	2-/ 3-Conductor Sensor NPN-Type
Rated voltage	18...24...30 V DC
Input current for sensor	< 200 mA
Type of contact	NO contact
Output	
Type	Solid State Relay
Output voltage	18...30 V DC
Output current (max.)	400 mA
Voltage drop at max. load	≤ 1 V
Insulation coordination (EN 50 178)	
Rated voltage	32 V
Impulse withstand voltage	330 V
Surge category	I
Pollution severity	2
General data	
Operating temperature	0 °C...+60 °C
Storage temperature	-20 °C...+85 °C
Connection system	M12 - plug/socket, A-coded
Approvals	CE
Dimensions	
Clamping range (rating- / min. / max.)	mm ²
Length x width x height	mm
Note	

Technical data		
Type	Qty.	Order No.
JPP NPN PNP 24VDC	1	8852350000
Dimensions		
Clamping range (rating- / min. / max.)	mm ²	
Length x width x height	mm	83 x 36 x 14.4
Note		

Technical data		
Type	Qty.	Order No.
JPP PNP NPN 24VDC	1	8857030000
Dimensions		
Clamping range (rating- / min. / max.)	mm ²	
Length x width x height	mm	83 x 36 x 14.4
Note		

Ordering data

Ordering data	
Note	

Ordering data		
Type	Qty.	Order No.
JPP NPN PNP 24VDC	1	8852350000
Note		

Ordering data		
Type	Qty.	Order No.
JPP PNP NPN 24VDC	1	8857030000
Note		

Accessories

Accessories	
Note	

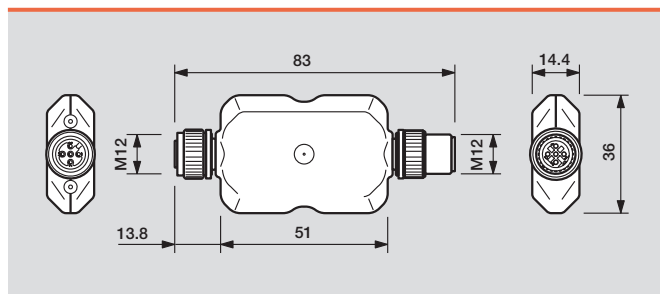
Accessories		
Note		
Retaining clip	JP CLIP M: 8778490000	

Accessories		
Note		
Retaining clip	JP CLIP M: 8778490000	

JACKPAC® – General Data and Accessories

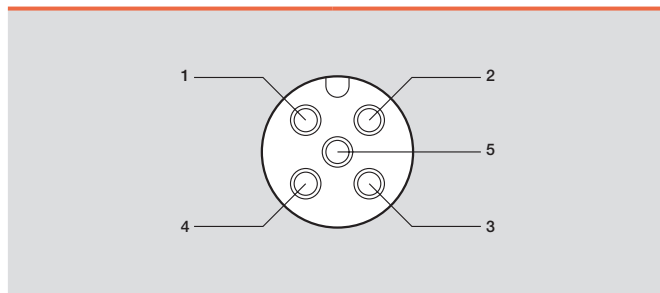
General data

Ingress protection class	IP67
Housing material	PBT, RAL 7032 (grey)
Flammability class	V0 to UL94
Screw socket	M12, CuZn, nickel plated, A-coded
Rated torque	0.8 ... 1 Nm



Contact assignment (socket)

Pole	Assignment
1	+24 V DC
2	Input / output 2
3	0 V DC
4	Input / output 1
5	PE / Earth



F

Accessories

Retaining clip



Type	Qty.	Order No.
Stainless steel JP CLIP M	1	8778490000

Twin plug



Type	Qty.	Order No.
5-pole SAI-Y-5S PARA M12/M12	1	1783430000

Screwty M12



Type	Qty.	Order No.
With torque SCREWTY M12 DM	1	1900001000

Sensor cables



Type	Qty.	Order No.
4-pole, length 0.3 m SAIL-M12G-M12G-4-0.3U	1	9457150000
4-pole, length 0.6 m SAIL-M12G-M12G-4-0.6U	1	9457160000
4-pole, length 1.5 m SAIL-M12G-M12G-4-1.5U	1	9457170000
5-pole, length 0.3 m SAIL-M12G-M12G-5-0.3U	1	9457340030
5-pole, length 0.6 m SAIL-M12G-M12G-5-0.6U	1	9457340060
5-pole, length 1.5 m SAIL-M12G-M12G-5-1.5U	1	9457340150

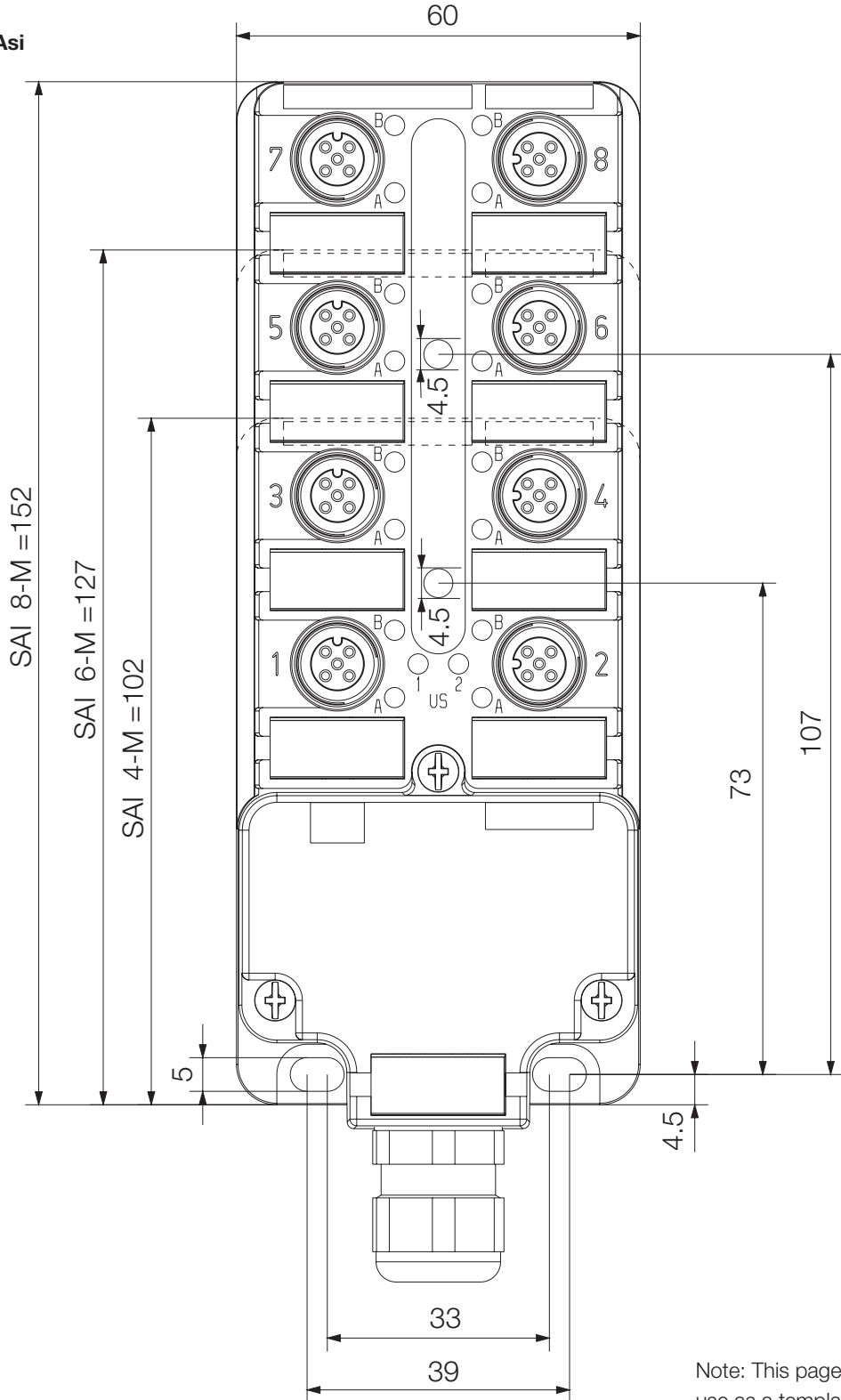
Additional accessories can be found in Chapter D.

Technical appendix

Drilling templates	SAI M12 and M12 Push-Pull (hood / M23 / M16 / fixed cable / IDC / Asi)	W.2
	SAI stainless steel	W.3
	SAI wall bushing	W.4
	SAI M8 standard	W.5
	SAI M8 line	W.6
	SAI M5	W.7
	SAI Active modular	W.8
	SAI Active Line / SAI Active Universal	W.9
	SAI Active Universal Pro	W.10
	SAI ASI Line	W.12
	Resistances table	Chemical resistance of nickel
Chemical resistance of Pocan® (PBT)		W.15

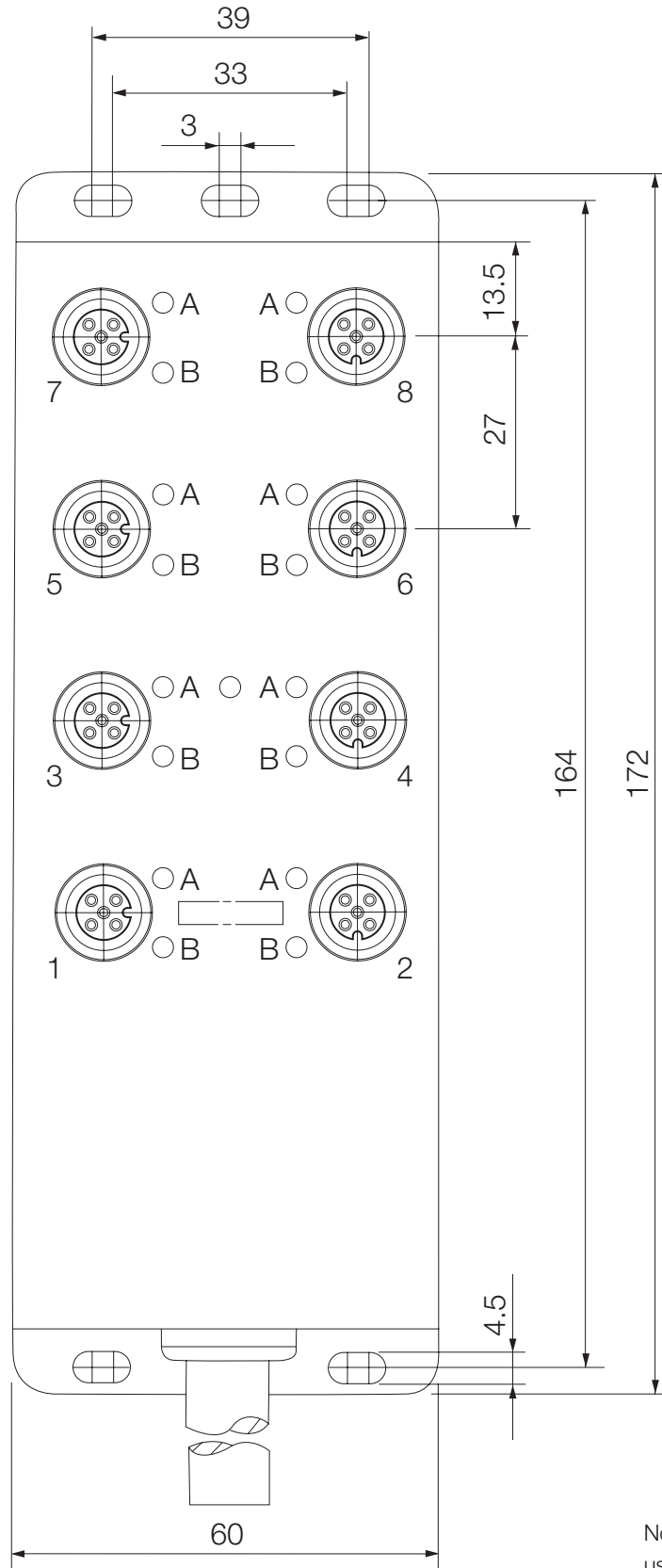
Drilling templates

SAI M12 and M12 Push-Pull:
hood / M23 / M16 /
fixed cable / IDC / Asi



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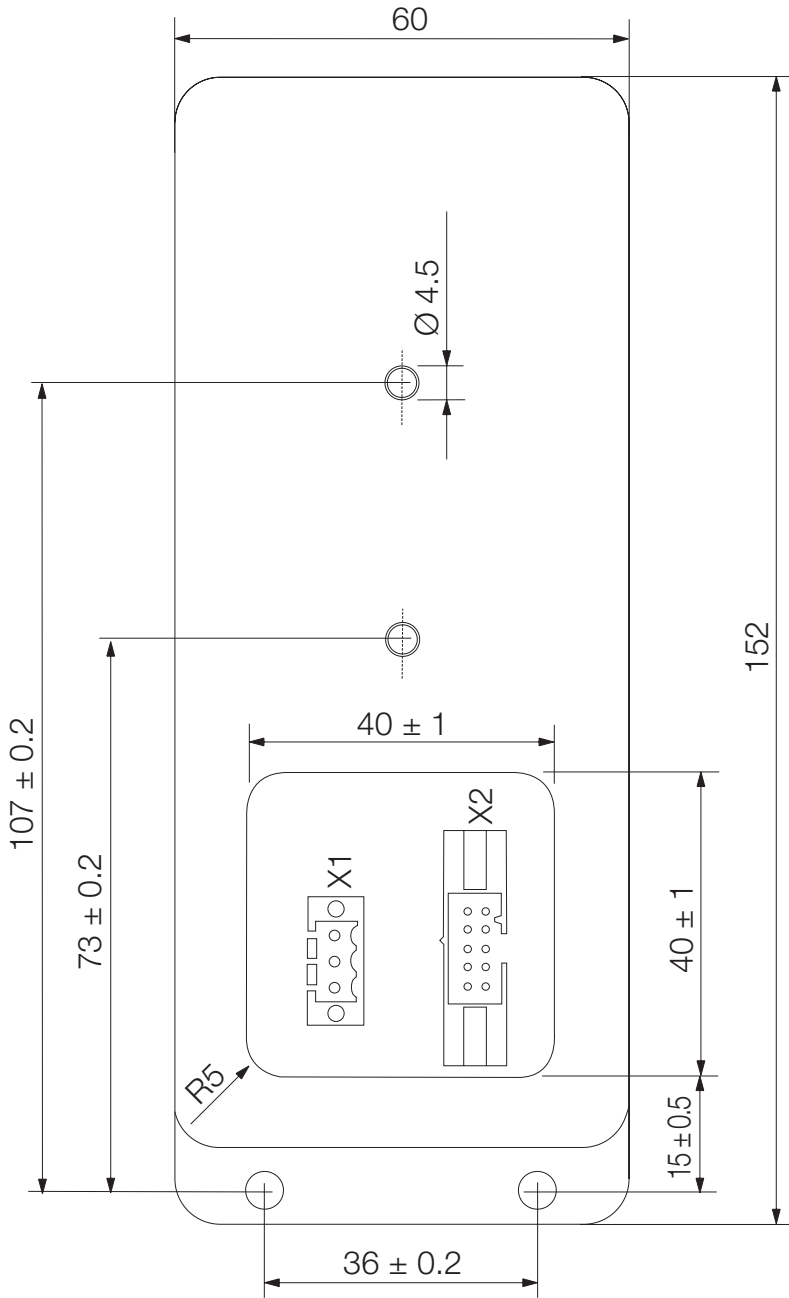
SAI stainless steel



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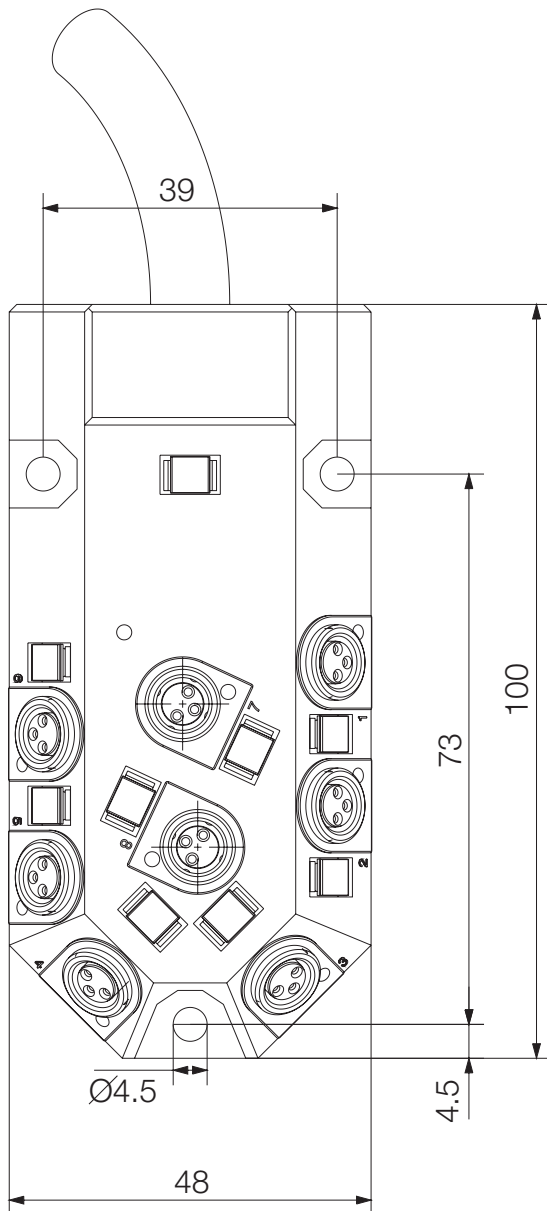
Drilling templates

SAI wall bushing



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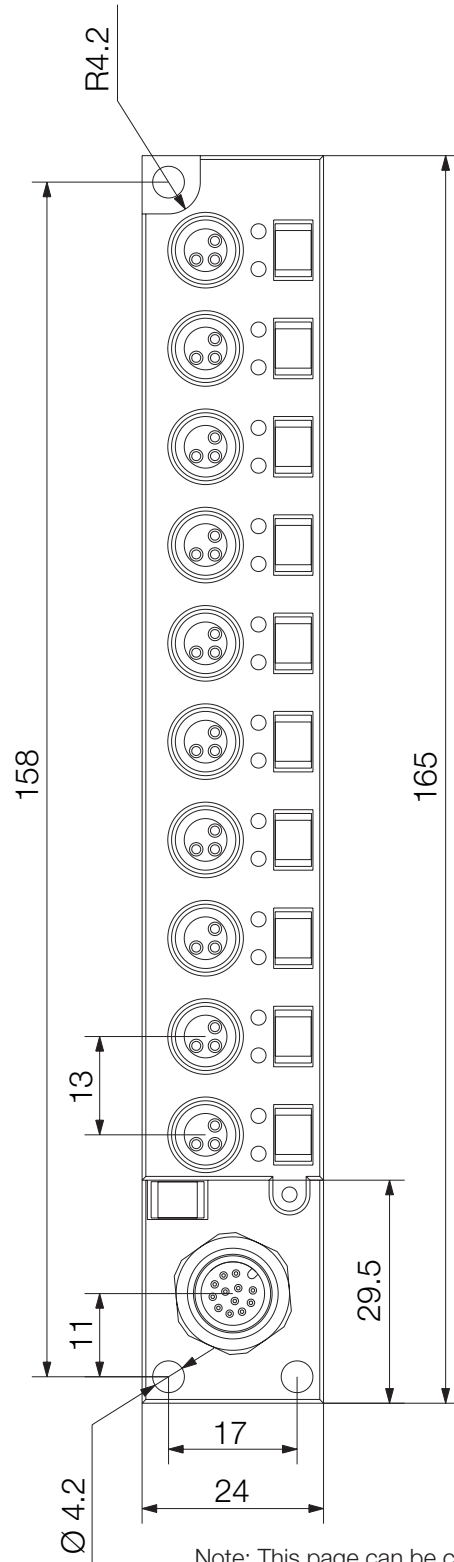
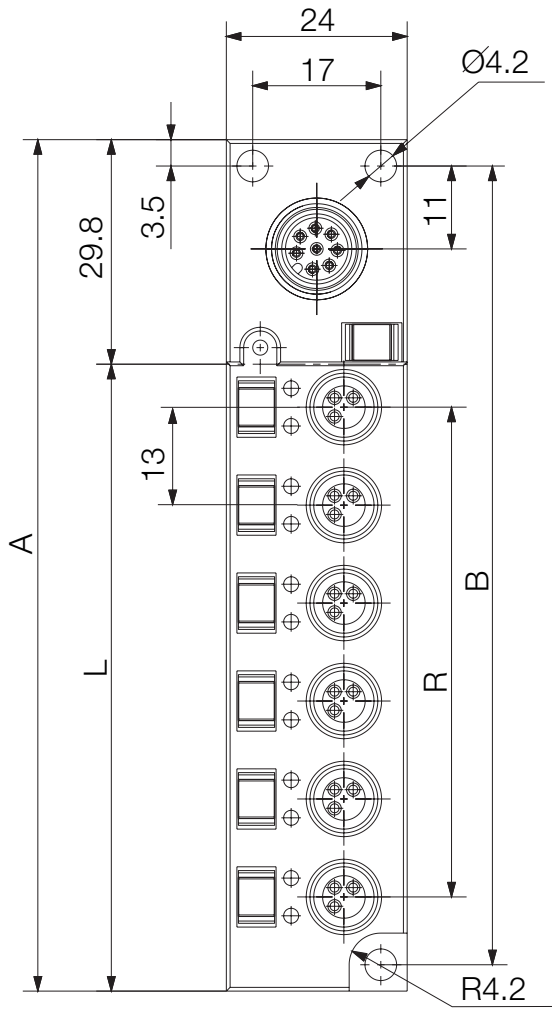
SAI M8 standard



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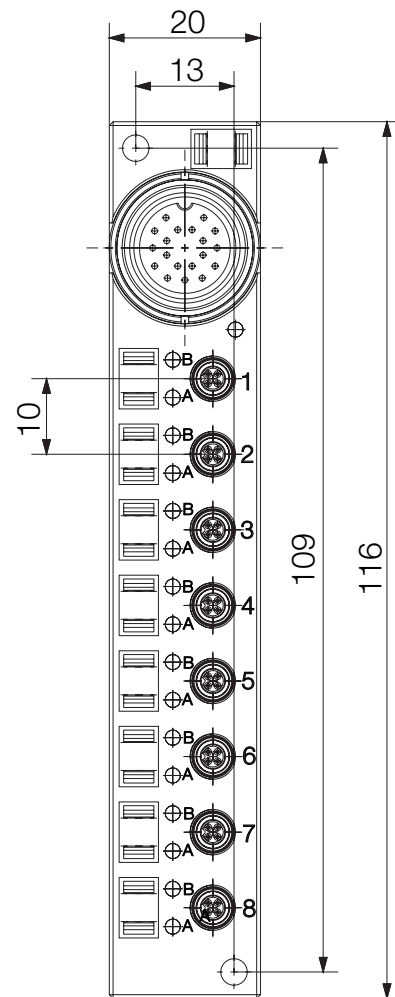
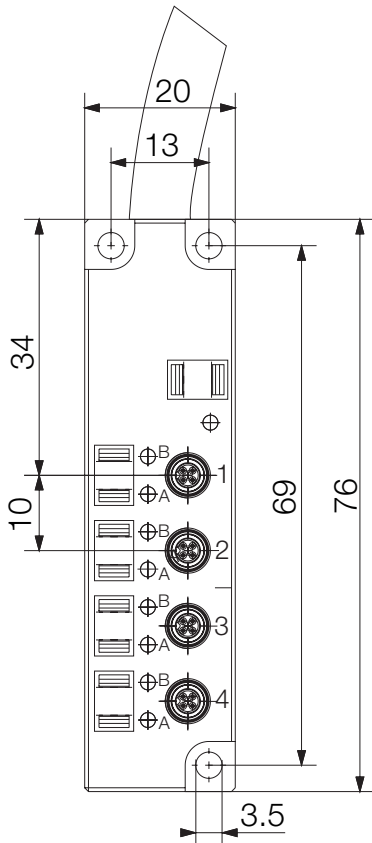
Drilling templates

SAI M8 line



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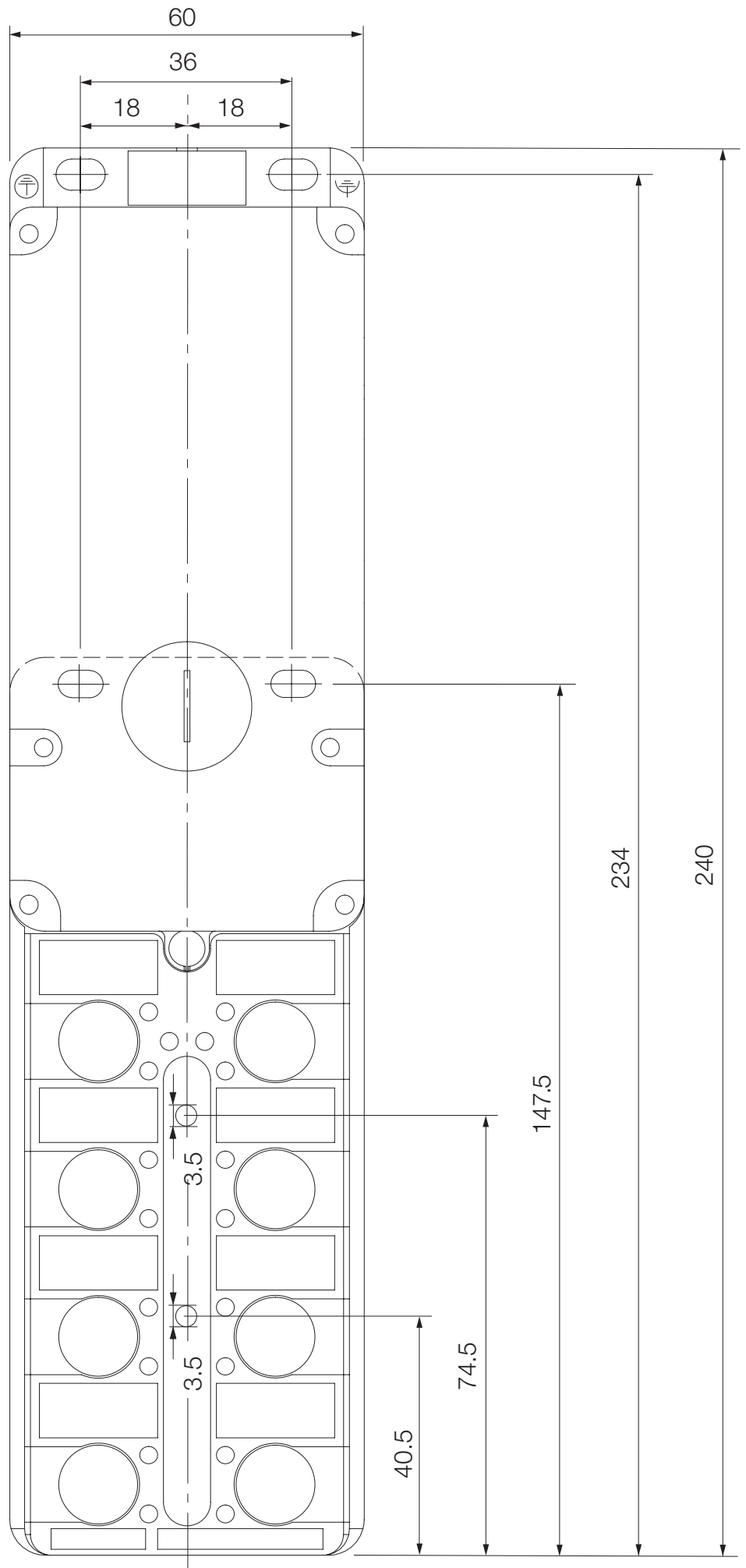
SAI M5



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Drilling templates

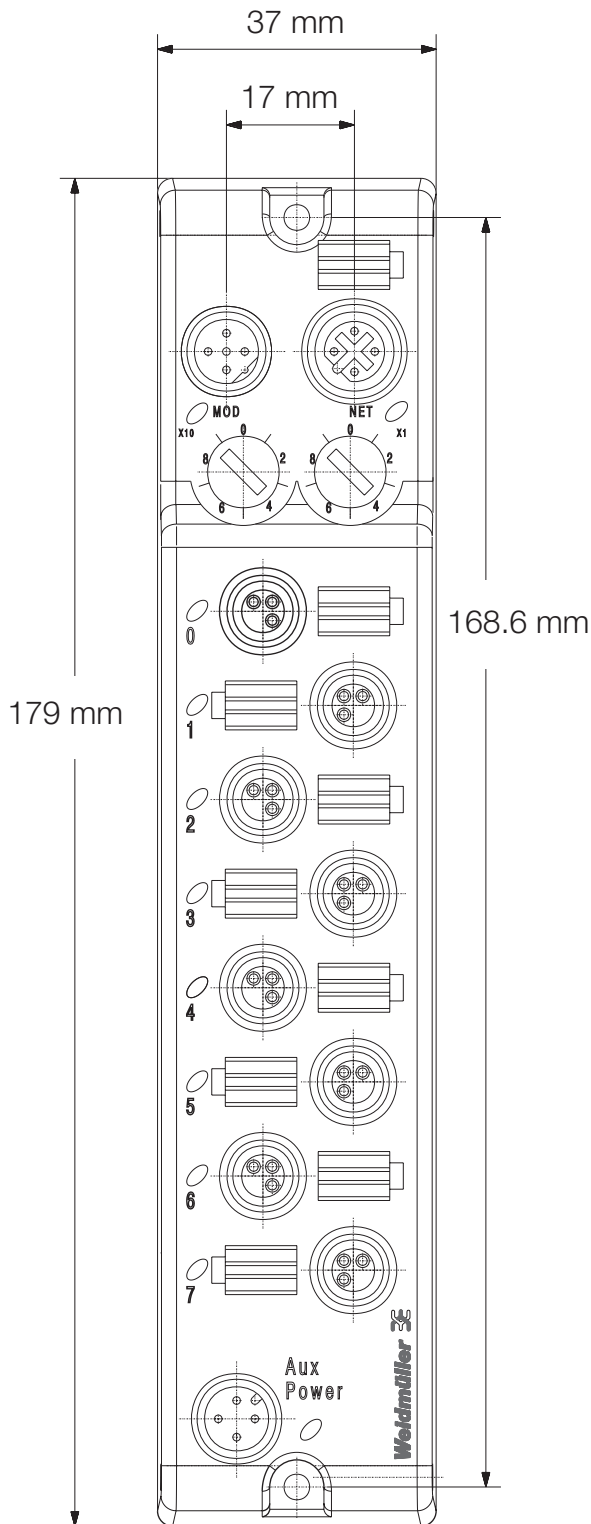
SAI Active modular



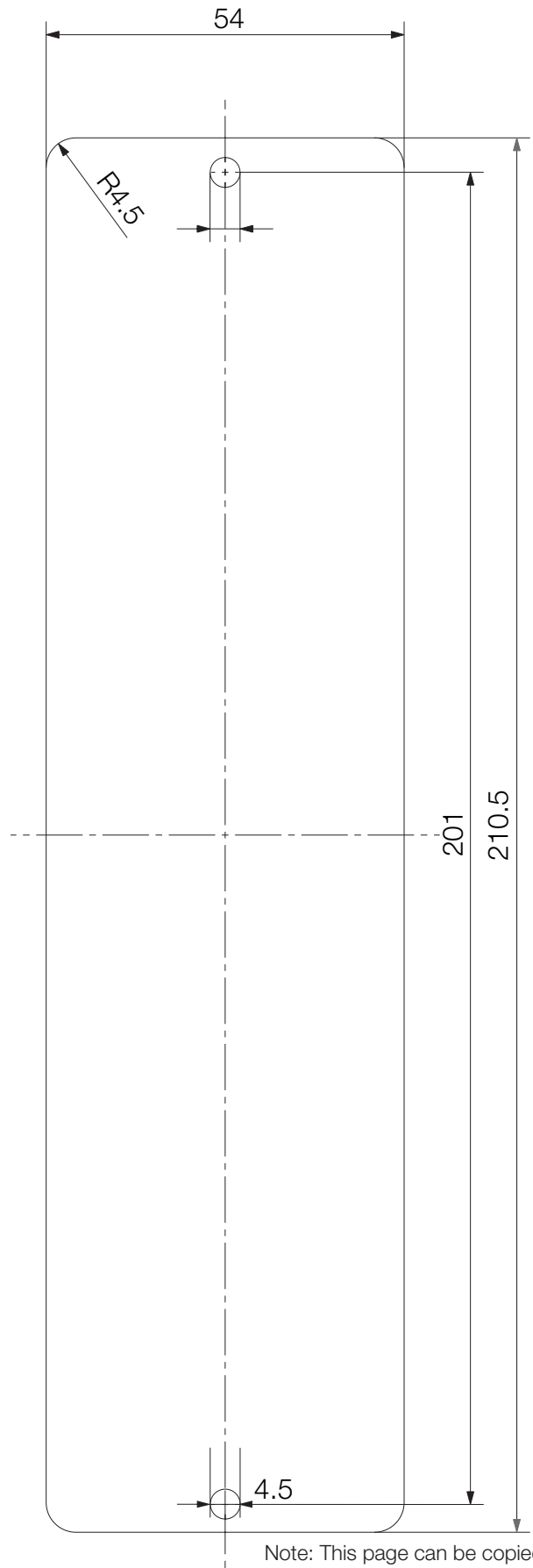
W

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SAI Active Line



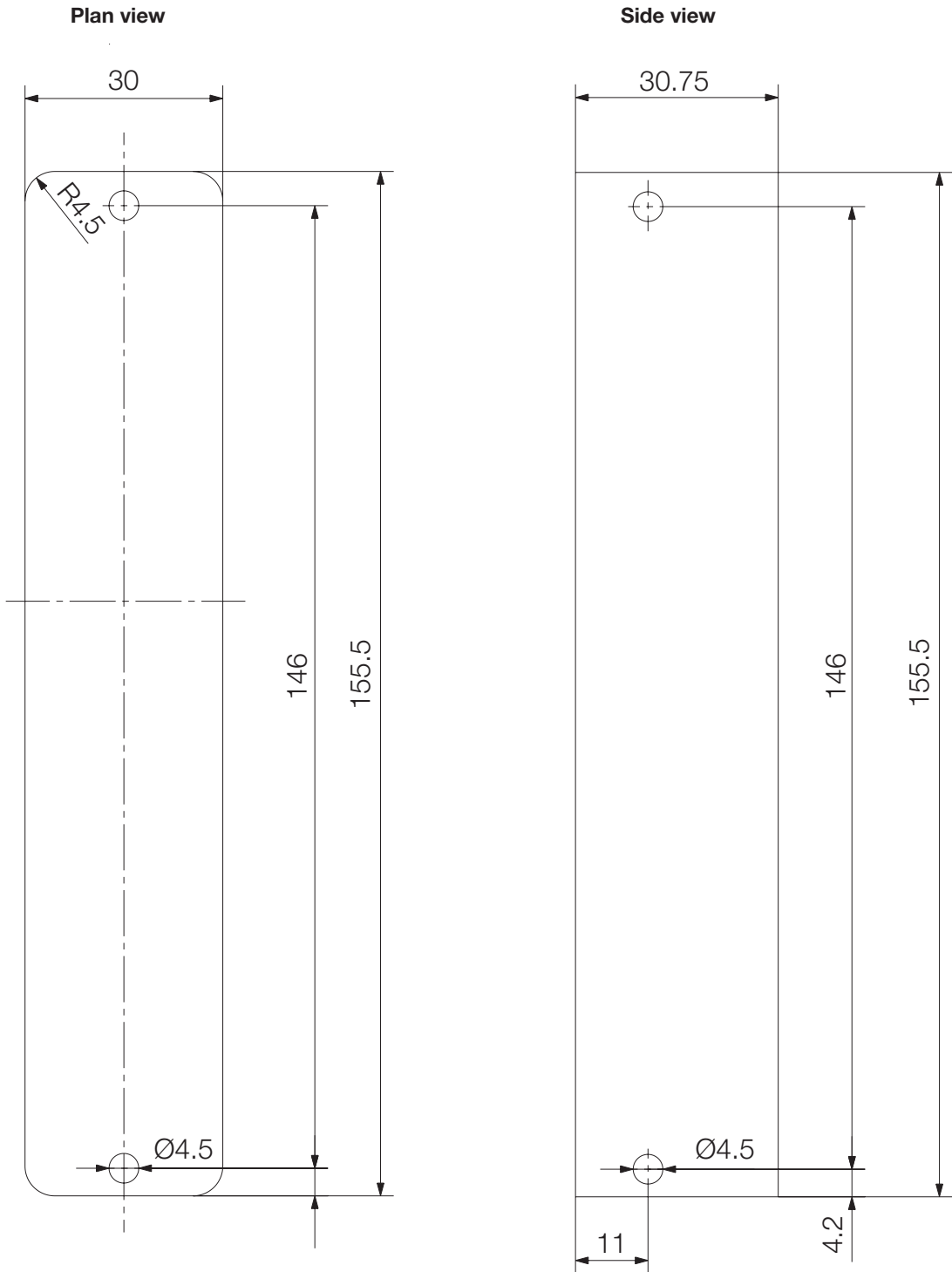
SAI Active Universal



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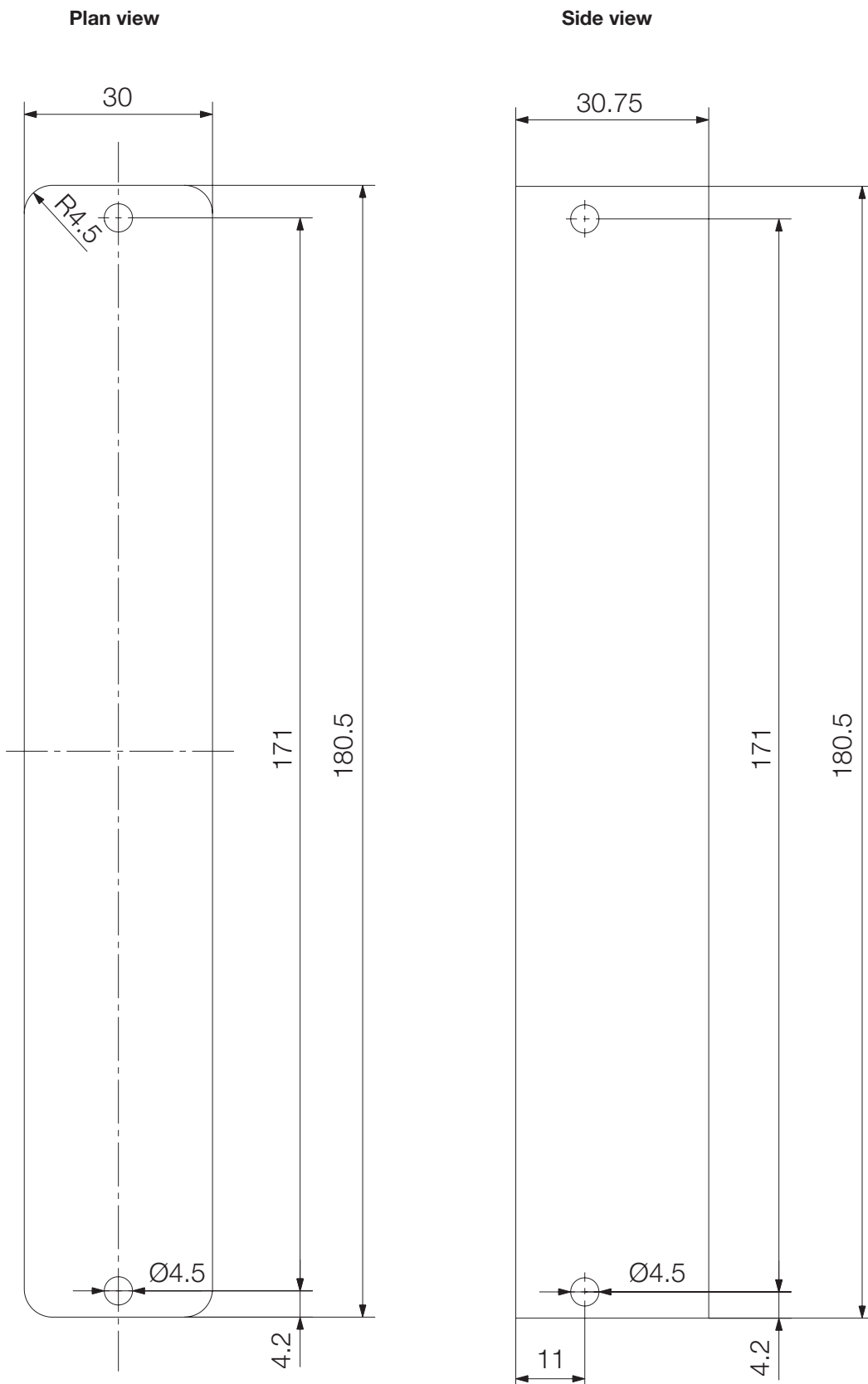
Drilling templates

SAI Active Universal Pro:
Extension IO with digital outputs



Note: This page can be copied to use as a template.

SAI Active Universal Pro:
Extension IO without digital outputs

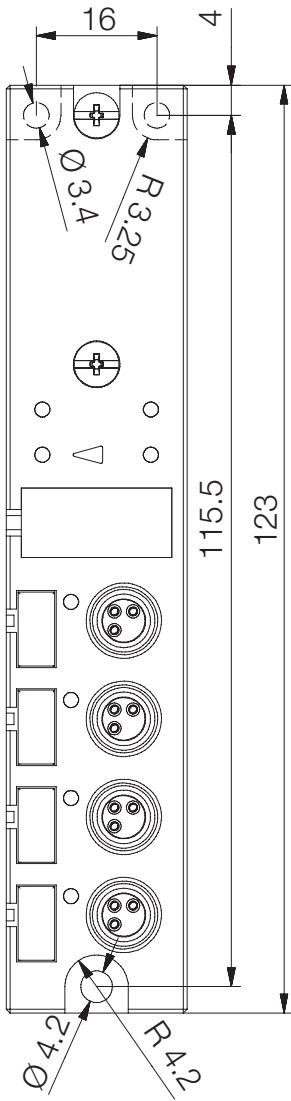


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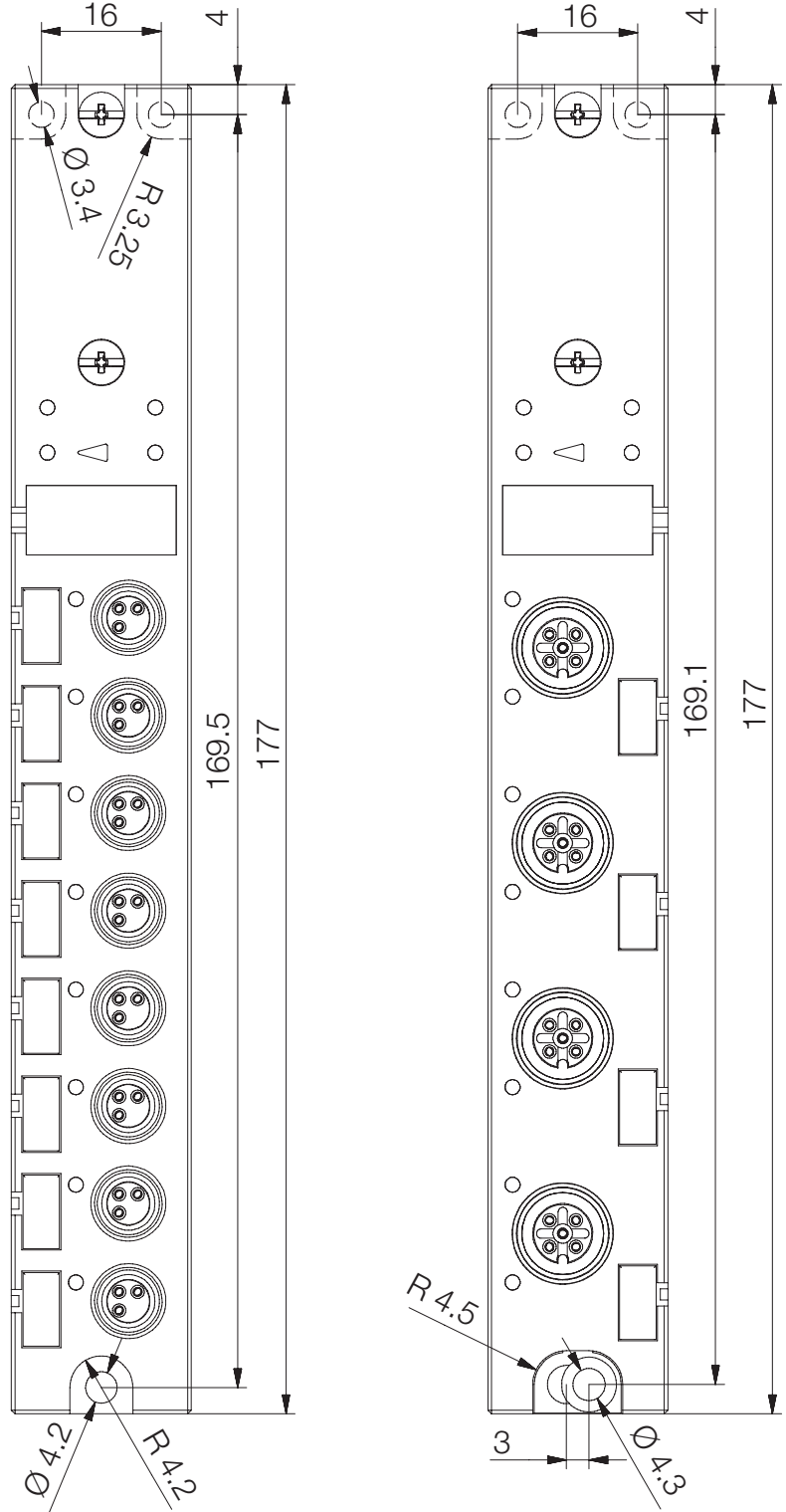
Drilling templates

SAI ASI Line

4 x M8



8 x M8 and 4 x M12



Note: This page can be copied to use as a template.

Chemical resistance of nickel

The statements on the resistance of nickel to chemicals only apply when the coating is undamaged and is not subject to any mechanical loads. These statements are based on a review of the literature available and it should be noted that pure nickel is not considered in the literature – only alloyed nickel steels.

The statements on page W.15 are based on research, and once again please note that pure nickel has not been included in the testing. The findings in the research are based on undamaged alloyed nickel steels that have not been subject to any mechanical loads.

The six materials in question are:

Chlorobenzene	1
Chloroform	1
Chromic acid hydride	1
Acetic acid	1
Hydrofluoric acid	2
Concentrated hydrochloric acid	2

The findings for the two materials above marked with a “2” could have a critical impact on applications. The findings for the four materials marked with a “1” should be taken into account but would not be considered critical for applications.

A further advantage of nickel is its thermal stability. The resistance does not change up to a temperature of 120 °C.

Pure nickel:

Corrosion properties are determined by the resistance of the passive layer.

Good resistance in:

- water containing oxygen
- flowing seawater
- alkalis (very good resistance) even at high temperatures and high concentrations
- neutral and alkaline salt solutions (carbonates, phosphates, sulphates, chlorides and nitrates) even at high concentrations and temperatures

Known problems:

- corrosion attack in heavily oxidising acids and solutions containing chlorides
- in inorganic and organic acids only resistant in diluted solutions and at low temperatures
- coating is not toxic (formation of deposits by micro-organisms can lead to destruction of the passive coating)

Chemical resistance of Pocan® (PBT)

Pocan offers good resistance to chemicals. Organic solvents, such as aliphatic hydrocarbons, alcohols, ether, long-chain ester as well as fats, oils and perchlorinated hydrocarbons do not corrode Pocan.

This is also true for water and aqueous solutions, neutral and acid salts, as well as diluted acids.

On the other hand, it is susceptible to alkalis, oxidising acids, ketones and phenols.

Susceptibility to universal alcohols, aromatics and ketones increases as the ambient temperature rises above 60 °C.

In the presence of water and aqueous solutions, hydrolytic degradation at higher temperatures increasingly leads to a decline in stability.

Substances like motor and transformer oils, petrol and brake fluids do not corrode Pocan, even at higher temperatures.

Medium	23 °C	60 °C
Acetic acid 10%	±	±
Acetone	+	-
Ammonia 10%	+	-
Ammonia, concentrated	±	-
Benzene	+	-
Brake fluid	+	+
Butane	+	+
Butanol	+	±
Butyl acetate	+	+
Calcium chloride 10%	+	±
Carbon disulphide	+	±
Carbon tetrachloride	+	±
Chlorobenzene	-	-
Chloroform	-	-
Chromic acid hydride 10%	+	+
Citric acid 10%	+	±
Cresol	-	-
Curd soap	+	+
Dibutyl phthalate	+	±
Diesel oil	+	+
Diethyl ether	+	±
Dioxan	+	-
Ethanol	+	+
Ethyl acetate	±	-
Ethyl dichloride	-	-
Ethylene glycol	+	±
Formic acid 10%	+	±
Freon 11	+	+
Frigen 113	+	+
Glacial acetic acid 10%	-	-
Glycerine	+	+
Heptane	+	+
Hexane	+	+
Hydraulic oil	+	+
Hydrochloric acid 10%	+	-
Hydrochloric acid, concentrated	-	-
Hydrofluoric acid 10%	+	+
Hydrogen peroxide 20%	+	±
Isopropyl alcohol	+	±
Kerosene	+	+

Medium	23 °C	60 °C
Linseed oil	+	+
Lubricating greases	+	+
Methanol	+	±
Methyl ethyl ketone	+	±
Methylene chloride	-	-
Mineral oils	+	+
Motor oils	+	+
Nitric acid 10%	+	±
Nitric acid, concentrated	-	-
Octane	+	+
Olive oil	+	+
Paraffin oil	+	+
Perchloroethylene	±	-
Petrol, normal and lead-free	+	+
Petrol, super	+	+
Petrol/methanol 85/15	+	+
Petroleum	+	+
Phenol 10%	-	-
Phosphoric acid 20%	+	±
Potassium chloride 10%	+	+
Potassium dichromate 10%	+	+
Potassium hydroxide 10%	-	-
Potassium permanganate 10%	+	±
Soap suds 10%	+	±
Sodium bisulphite 10%	+	+
Sodium carbonate 10%	+	+
Sodium chloride 10%	+	+
Sodium hydroxide 10%	-	-
Sulphuric acid 10%	+	±
Sulphuric acid, concentrated	-	-
Tetrahydrofuran	-	-
Toluene	±	-
Transformer oil	+	+
Trichlorethene/chloroform 1/1	±	-
Turpentine oil	+	+
Vegetable oils	+	+
Washing liquid	+	+
Washing powder, synthetic	+	+
Water	+	+
Xylol	±	-

The above values are for guidance only. A definite statement can only be made when based on the respective case in question.

+ = resistant
- = not resistant
± = partly resistant

Index

Index	Index Type / Index Order No.	X.2
	Addresses worldwide	X.20

Type	Order No.	Page
1-9		
1/4" Handgriff	4294820000	D.101
A		
AM 12	9030060000	D.103
AS-KG-GE	9455110000	C.54
AS-KG-SW	9455120000	C.54
D		
DAE M12 PA short	1868560000	D.114
DEK 5/5 MC BEDRUCKT	1609810000	D.26
DEK 5/5 MC-10 NEUT. WS	1609801044	D.26
E		
ESG 8/13.5/43.3 SAI AU	1912130000	C.17
ESG 8/13.5/43.3 SAI AU	1912130000	C.19
ESG 8/13.5/43.3 SAI AU	1912130000	C.23
ESG 8/13.5/43.3 SAI AU	1912130000	C.25
ESG 8/13.5/43.3 SAI AU	1912130000	C.27
ESG 8/13.5/43.3 SAI AU	1912130000	C.30
ESG 8/13.5/43.3 SAI AU	1912130000	C.31
ESG 8/13.5/43.3 SAI AU	1912130000	C.36
ESG 8/13.5/43.3 SAI AU	1912130000	C.37
ESG 8/13.5/43.3 SAI AU	1912130000	C.38
ESG 8/13.5/43.3 SAI AU	1912130000	C.39
ESG 8/13.5/43.3 SAI AU	1912130000	C.40
ESG 8/13.5/43.3 SAI AU	1912130000	C.41
ESG 8/13.5/43.3 SAI AU	1912130000	C.46
ESG 8/13.5/43.3 SAI AU	1912130000	C.47
ESG 8/13.5/43.3 SAI AU	1912130000	C.9
ESG 8/13.5/43.3 SAI AU	1912130000	D.26
ESG 9/20 MC NEUTRAL WS	1609940000	D.26
F		
FBC PA M12 FM 10M	1785111000	D.113
FBC PA M12 FM 10M	1785111000	E.39
FBC PA M12 FM 1M	1785110100	D.113
FBC PA M12 FM 1M	1785110100	E.39
FBC PA M12 FM 2M	1785110200	D.113
FBC PA M12 FM 2M	1785110200	E.39
FBC PA M12 FM 5M	1785110500	D.113
FBC PA M12 FM 5M	1785110500	E.39
FBC PA M12 M 10M	1785121000	D.113
FBC PA M12 M 10M	1785121000	E.39
FBC PA M12 M 1M	1785120100	D.113
FBC PA M12 M 1M	1785120100	E.39
FBC PA M12 M 2M	1785120200	D.113
FBC PA M12 M 2M	1785120200	E.39
FBC PA M12 M 5M	1785120500	D.113
FBC PA M12 M 5M	1785120500	E.39
FBC PA M12 M-FM 10M	1785101000	D.113
FBC PA M12 M-FM 10M	1785101000	E.39
FBC PA M12 M-FM 1M	1785100100	D.113
FBC PA M12 M-FM 1M	1785100100	E.39
FBC PA M12 M-FM 2M	1785100200	D.113
FBC PA M12 M-FM 2M	1785100200	E.39
FBC PA M12 M-FM 5M	1785100500	D.113
FBC PA M12 M-FM 5M	1785100500	E.39
FBC EX PA M12 FM 10M	1785141000	D.112
FBC EX PA M12 FM 10M	1785141000	E.38
FBC EX PA M12 FM 1M	1785140100	D.112
FBC EX PA M12 FM 1M	1785140100	E.38
FBC EX PA M12 FM 2M	1785140200	D.112
FBC EX PA M12 FM 2M	1785140200	E.38
FBC EX PA M12 FM 5M	1785140500	D.112
FBC EX PA M12 FM 5M	1785140500	E.38
FBC EX PA M12 M 10M	1785151000	D.112
FBC EX PA M12 M 10M	1785151000	E.38
FBC EX PA M12 M 1M	1785150100	D.112
FBC EX PA M12 M 1M	1785150100	E.38
FBC EX PA M12 M 2M	1785150200	D.112
FBC EX PA M12 M 2M	1785150200	E.38
FBC EX PA M12 M 5M	1785150500	D.112
FBC EX PA M12 M 5M	1785150500	E.38
FBC EX PA M12 M-FM 10M	1785131000	D.112
FBC EX PA M12 M-FM 10M	1785131000	E.38
FBC EX PA M12 M-FM 1M	1785130100	D.112
FBC EX PA M12 M-FM 1M	1785130100	E.38
FBC EX PA M12 M-FM 2M	1785130200	D.112
FBC EX PA M12 M-FM 2M	1785130200	E.38
FBC EX PA M12 M-FM 5M	1785130500	D.112
FBC EX PA M12 M-FM 5M	1785130500	E.38
FBC EX PA M12 M-FM 10M	1785130500	E.38
FBCON 7/8" 4P M	1812480000	E.41
FBCON 7/8" 4P FM (A)	1812470000	E.41
FBCON 7/8" 4P M	1808940000	E.41
FBCON 7/8" 4P M (A)	1808830000	E.41
FBCON DP CG 1way	8564340000	E.6
FBCON DP CG Term 24V	8564290000	E.7
FBCON DP M12 1way	8564350000	E.6
FBCON DP M12 Term 24V	8564330000	E.7
FBCON DP M12 Term 5V	8564320000	E.7
FBCON FF CG-7/8" 1way EX	8564260000	E.34
FBCON FF CG-7/8" 2way EX	8564270000	E.34
FBCON FF CG-7/8" 4way EX	8564280000	E.35
FBCON M12 4P FM EMC	8426220000	D.110

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FBCON M12 4P FM EMC	8426220000	D.9
FBCON M12 4P FM EMC	8426220000	E.36
FBCON M12 4P M EMC	9455640000	D.110
FBCON M12 4P M EMC	9455640000	D.9
FBCON M12 4P M EMC	9455640000	E.36
FBCON PA CG 1way	8564090000	E.12
FBCON PA CG 1way Ex	8564180000	E.28
FBCON PA CG 1way Limiter	8714200000	E.21
FBCON PA CG 1way OVP	8714120000	E.17
FBCON PA CG 2way	8564100000	E.13
FBCON PA CG 2way Ex	8564190000	E.29
FBCON PA CG 2way Limiter	8714210000	E.22
FBCON PA CG 2way OVP	8714130000	E.18
FBCON PA CG 4way	8564110000	E.14
FBCON PA CG 4way Ex	8564200000	E.30
FBCON PA CG 4way Limiter	8714220000	E.23
FBCON PA CG 4way OVP	8714140000	E.19
FBCON PA CG 8way	8564300000	E.15
FBCON PA CG 8way Ex	8564240000	E.31
FBCON PA CG 8way Limiter	8714230000	E.24
FBCON PA CG 8way OVP	8714150000	E.20
FBCON PA CG/M12 1way	8564060000	E.12
FBCON PA CG/M12 1way Ex	8564150000	E.28
FBCON PA CG/M12 1way Limiter	8714160000	E.21
FBCON PA CG/M12 1way OVP	8714080000	E.17
FBCON PA CG/M12 2way	8564070000	E.13
FBCON PA CG/M12 2way Ex	8564160000	E.29
FBCON PA CG/M12 2way Limiter	8714170000	E.22
FBCON PA CG/M12 2way OVP	8714090000	E.18
FBCON PA CG/M12 4way	8564080000	E.14
FBCON PA CG/M12 4way Ex	8564170000	E.30
FBCON PA CG/M12 4way Limiter	8714180000	E.23
FBCON PA CG/M12 4way OVP	8714100000	E.19
FBCON PA CG/M12 8way	8564310000	E.15
FBCON PA CG/M12 8way Ex	8564250000	E.31
FBCON PA CG/M12 8way Limiter	8714190000	E.24
FBCON PA CG/M12 8way OVP	8714110000	E.20
FBCON SS CG 1way	8703430000	E.12
FBCON SS CG 4way	8703450000	E.14
FBCON SS CG 8way	8703470000	E.15
FBCON SS CG/M12 1way	8726020000	E.12
FBCON SS CG/M12 4way	8726040000	E.14
FBCON SS CG/M12 8way	8726050000	E.15
FBCON SS DP M12 1way	8714270000	E.6
FBCON SS DP M12 Term 24V	8714250000	E.7
FBCON SS DP PCG 1way	8714260000	E.6
FBCON SS DP PCG Term 24V	8714240000	E.7
FBCON SS PCG 1way	8613670000	E.12
FBCON SS PCG 1way Limiter	86136710000	E.21
FBCON SS PCG 1way OVP	8715270000	E.17
FBCON SS PCG 4way	8613680000	E.17
FBCON SS PCG 4way Limiter	8715260000	E.14
FBCON SS PCG 4way OVP	8726080000	E.19
FBCON SS PCG 8way	8640720000	E.15
FBCON SS PCG 8way Limiter	8726160000	E.24
FBCON SS PCG 8way OVP	8726090000	E.20
FBCON Term.D Ex	8606190000	E.32
FBCON Term.D Ex FM	8556460000	E.32
FBCON Term.D Ex FM/PEAN	8606180000	E.33
FBCON Term.D Ex PEAN	8606200000	E.33
G		
Gateway AS-I PBPD 3.0	1004040000	C.53
GWDR M16-NP	1736230000	D.114
GWDR PG9-NP	1719550000	E.42
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IE-C-RS232-M12	8874290000	C.31
IE-SW8-IP67	8877190000	C.30
IE-SW8-M-IP67	8877200000	C.31
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JP CLIP M	8778490000	F.14
JP TEST	8794120000	F.12
JPA CCC DC 0-20/0-20MA	8828960000	F.9
JPA CCC DC 0-20/4-20MA	8833440000	F.9
JPA CCC DC 4-20/0-20MA	8833390000	F.10
JPA CCC LP M12	8778790000	F.8
JPA CVC DC 0-20MA/0-10V	8833380000	F.9
JPA CVC DC 4-20MA/0-10V	8833400000	F.10
JPA VCC DC 0-10V/0-20MA	8833410000	F.11
JPA VCC DC 0-10V/4-20MA	8833420000	F.11
JPA VVC DC 0-10/0-10V	8833430000	F.11
JPOVP 24VDC MOV M12	8760960000	F.7
JPOVP 24VDC ANA M12	8760970000	F.7
JPOVP 24VDC BIN M12	8760980000	F.7
JPOVP M12 D-coded Cat5	8805550000	F.6
JPOVP RJ45 Cat6 IP20	8805560000	F.6
JPOVP RJ45 Cat6 IP67	8805570000	F.6
JPP NPN PNP 24VDC	8852350000	F.13
JPP PNP NPN 24VDC	8857030000	F.13
JPR 24VDC 1CO M12	8771420000	F.3
JPR 24VDC ISO 1CO M12	8771430000	F.3
JPTA 50MS 24VDC PNP M12	8771440000	F.4
JPTA100MS 24VDC PNP M12	8836630000	F.4

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KT 12	9002660000	D.102
KT 8	9002650000	D.102
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MAN SAI active universal DE	5651720000	C.3
P		
PB SUB-D IDC TERM PS	1919680000	C.13
PB SUB-D IDC TERM PS	1919680000	D.107
PB SUB-D ZF TERM PS	1934200000	C.13
PB SUB-D ZF TERM PS	1934200000	D.107
PB-DP SUB-D	8395500000	C.12
PB-DP SUB-D	8395500000	D.106
PB-DP SUB-D TERM	8460860000	C.13
PB-DP SUB-D TERM	8460860000	D.107
PJ PRO TNTK FL	1027080000	D.25
PJ PRO TNTK INK C	1027050000	D.25
PJ PRO TNTK INK K	1027040000	D.25
PJ PRO TNTK INK M	1027060000	D.25
PJ PRO TNTK INK SET BK	1027090000	D.25
PJ PRO TNTK INK Y	1027070000	D.25
PJ-PRO TNTK INK SET COL	1027110000	D.25
POS-4P M12 M20 150mm	8425930000	D.111
POS-4P M12 M20 150mm	8425930000	E.40
POS-4P M12 M20 300mm	8425940000	D.111
POS-4P M12 M20 300mm	8425940000	E.40
POS-4P M12 PG13,5 150mm	9455650000	D.111
POS-4P M12 PG13,5 150mm	9455650000	E.40
POS-4P M12 PG13,5 300 mm	8425910000	D.111
POS-4P M12 PG13,5 300 mm	8425910000	E.40
POS-5P M12/M20 300MM	1795500000	D.111
POS-5P M12/M20 300MM	1795500000	E.40
POS-5P M12/M20 300MM	1795500000	E.42
PRINTJET PRO 115V	1024050000	D.25
PRINTJET PRO 230V	1001180001	D.25
R		
RS PB-DP T	8800040000	E.8
RS PB-DP T SUB-D	8788580000	E.8
S		
SAI HS DP 8DI/8DO VA	1889760000	C.10
SAI Y-4S M8-M8	1805660000	D.22
SAI-10-F 3P M8 L 10M	1828650000	B.52
SAI-10-F 3P M8 L 5M	1828660000	B.52
SAI-10-S12 3P M8 L	1877950000	B.50
SAI-12-F 3P M8 L 10M	1828630000	B.52
SAI-12-F 3P M8 L 5M	1828640000	B.52
SAI-4 M 4P M12 UT	1705921000	B.10
SAI-4 M 4P M12 UT	1705921000	B.44
SAI-4-F 3P IDC PUR 10M	1766730000	B.29
SAI-4-F 3P IDC PUR 5M	1766720000	B.29
SAI-4-F 3P M5 L5M	1845820000	B.56
SAI-4-F 3P M5 L5M	1851740000	B.56
SAI-4-F 3P M8 L 10M	1828710000	B.52
SAI-4-F 3P M8 L 5M	1828720000	B.52
SAI-4-F 3P M8 PUR 10M	1784630000	B.48
SAI-4-F 3P M8 PUR 5M	1784640000	B.48
SAI-4-F 4P FC 10M	1848050000	B.19
SAI-4-F 4P FC 20M	1848080000	B.19
SAI-4-F 4P FC 5M	1848060000	B.19
SAI-4-F 4P IDC PUR 10M	1766670000	B.29
SAI-4-F 4P IDC PUR 5M	1766660000	B.29
SAI-4-F 4P M12 L 10M	1707060000	B.12
SAI-4-F 4P M12 L 5M	1707050000	B.12
SAI-4-F 4P M5 L10M	1845800000	B.56
SAI-4-F 4P M5 L5M	1851770000	B.56
SAI-4-F 4P M8 L 10M	1849690000	B.52
SAI-4-F 4P M8 L 5M	1849680000	B.52
SAI-4-F 4P M8 PUR 10M	1784590000	B.48
SAI-4-F 4P M8 PUR 5M	1784600000	B.48
SAI-4-F 4P PUR 10M	9456200000	B.11
SAI-4-F 4P PUR 15M	9456210000	B.11
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SAI-6-F 5P PUR 15M	9456630000	B.11	SAI-8-M 5P M12 UT	1701251000	B.44	SAI-AU M12 SB 4AI	1938690000	C.38	SAIB 5/9-VA-B-COD	1920730000	B.31
SAI-6-F 5P PUR 20M	9456650000	B.11	SAI-8-M 5P M12 ZF III	1767880000	B.10	SAI-AU M12 SB 4AI	1938690000	C.4	SAIB 5/9-VA-B-COD	1920730000	C.10
SAI-6-F 5P PUR 30M	9456660000	B.11	SAI-8-M 4P M12 DIP	1059430000	B.15	SAI-AU M12 SB 4AO	1938700000	C.38	SAIB 5/9-VA-B-COD	1920730000	D.8
SAI-6-M 3P IDC	1760050000	B.28	SAI-8-M16 3P M8	1795900000	B.49	SAI-AU M12 SB 4AO	1938700000	C.4	SAIB-3-IDC (0.75) M12	1852730000	D.20
SAI-6-M 3P IDC UT	1760051000	B.28	SAI-8-M16 4P M12	1831020000	B.14	SAI-AU M12 SB 4PT100	1938710000	C.4	SAIB-3-IDC-M8 small	1784030000	D.21
SAI-6-M 4P IDC	1766790000	B.28	SAI-8-M23 4P M8	1784650000	B.49	SAI-AU M12 SB 4PT100	1938710000	C.41	SAIB-3/7	1021510000	D.5
SAI-6-M 4P IDC UT	1766791000	B.28	SAI-8-MF 4P PUR 10M M12	1789190000	B.44	SAI-AU M12 SB 4Thermo	1938720000	C.4	SAIB-3/9	1021510000	D.5
SAI-6-M 4P M12	1705930000	B.10	SAI-8-MF 4P PUR 5M M12	1799960000	B.44	SAI-AU M12 SB 4Thermo	1938720000	C.40	SAIB-4-IDC (0.75) M12	1852750000	D.20
SAI-6-M 4P M12 UT	1705931000	B.10	SAI-8-MF 5P PUR 10m	9457430000	B.44	SAI-AU M12 SB 8DI	1938610000	C.37	SAIB-4-IDC-M12 small	1781540001	D.19
SAI-6-M 5P Ex2 Z22	1861840000	B.60	SAI-8-MF 5P PUR 5M	1804590000	B.44	SAI-AU M12 SB 8DI	1938610000	C.4	SAIB-4-IDC-M12B-COD	1864740000	D.10
SAI-6-M 5P M12	1701240000	B.10	SAI-8-MF 5P PUR 5M OL	9457350000	B.44	SAI-AU M12 SB 8DIO	1938640000	C.37	SAIB-4-IDC-M8 small	1784050001	D.21
SAI-6-M 5P M12 ECO	1892090000	B.17	SAI-8-MH-4P M12	1705942000	B.33	SAI-AU M12 SB 8DIO	1938640000	C.4	SAIB-4/7	9457240000	D.5
SAI-6-M 5P M12 ECO UT	1892091000	B.17	SAI-8-MH-4P M12	1705942000	B.36	SAI-AU M12 SB 8DO 2A	1938680000	C.37	SAIB-4/7-(KV)	1921080000	D.7
SAI-6-M 5P M12 Ex ia	1896070000	B.59	SAI-8-MH-5P M12	1701252000	B.33	SAI-AU M12 SB 8DO 2A	1938680000	C.4	SAIB-4/9	1807230000	D.5
SAI-6-M 5P M12 UT	1701241000	B.10	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-AU M12 USB GW 8I80	1962240000	C.36	SAIB-5/7	9457250000	D.6
SAI-6-MH-4P M12	1705932000	B.33	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-AU M12PN4/2AIO4DIOM	1019290000	C.27	SAIB-5/7-(KV)	1921070000	D.7
SAI-6-MH-4P M12 ECO	1892091000	B.17	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-AU M8 CAN 16DI	1906680000	C.19	SAIB-5/7-ZF	1924970000	D.13
SAI-6-MH-5P M12	1705933000	B.33	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-AU M8 CAN 16DI/8DO	1906690000	C.19	SAIB-5/9	1807250000	D.6
SAI-6-MH-5P M12 ECO	1892091000	B.17	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-AU M8 DN 16DI	1906730000	C.17	SAIB-8/9	1836960000	D.6
SAI-6-MH-5P M12 UT	1705933000	B.33	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-AU M8 DN 16DI/8DO	1906740000	C.17	SAIB-M-5/8S M12 5P A-COD	1784750000	C.17
SAI-6-MHD-4P M12	1705933000	B.33	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-AU M8 EIP 16DI	1906930000	C.25	SAIB-M-5/8S M12 5P A-COD	1784750000	C.19
SAI-6-MHD-4P M12 ECO	1892091000	B.17	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-AU M8 EIP 16DI/8DO	1906940000	C.25	SAIB-M-5/8S M12 5P A-COD	1784750000	C.46
SAI-6-MHD-5P M12	1705933000	B.33	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-AU M8 IE 16DI	1906880000	C.23	SAIB-M-5/8S M12 5P A-COD	1784750000	D.115
SAI-6-MHD-5P M12 ECO	1892091000	B.17	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-AU M8 IE 16DI/8DO	1906890000	C.23	SAIB-M-5/8S M12 5P A-COD	1784750000	D.9
SAI-6-MHD-5P M12 UT	1705933000	B.33	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-AU M8 PB 16DI	1906550000	C.9	SAIB-M-5/8S M12 5P A-COD	1784750000	E.36
SAI-6-MHD-5P M12 ECO	1892091000	B.17	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-AU M8 PB 16DI/8DO	1906640000	C.9	SAIB-M23-12P-AN-1,0M	1877440100	D.57
SAI-6-MHD-5P M12 UT	1705933000	B.33	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-AU M8 PB 8DI/8DO 2A	1975450000	C.9	SAIB-M23-12P-AN-10M	1877441000	D.57
SAI-6-MHD-5P M12 ECO UT	1892091000	B.17	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-AU M8 PB GW 16DI	1024310000	C.36	SAIB-M23-12P-AN-3,0M	1877440300	D.57
SAI-6-S 3P M8 L	1828730000	B.50	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-AU M8 PN 16DI/8DOM	1019320000	C.27	SAIB-M23-12P-AN-5,0M	1877440500	D.57
SAI-6-S 3P M8 L COL	1932380000	B.50	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-AU M8 PN 16DI	1019310000	C.27	SAIB-M23-12P-ST-1,0M	1886440100	D.57
SAI-6-S 3P M8 L LSL	1057720000	B.51	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-AU M8 SB 8DI	1938600000	C.37	SAIB-M23-12P-ST-10M	1886441000	D.57
SAI-6-S 4P M12	9456010000	B.13	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-AU M8 SB 8DIO	1938630000	C.37	SAIB-M23-12P-ST-3,0M	1886440300	D.57
SAI-6-S 5P M12	9456010001	B.13	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-AU M8 SB 8DO 2A	1938660000	C.37	SAIB-M23-12P-ST-5,0M	1886440500	D.57
SAI-6-S 5P M12 F10	1812170000	B.43	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 4P M12	9456020000	B.13	SAIB-M23-19P-AN-1,0M	1818140100	D.57
SAI-6-S 5P M12 SL	1847560000	B.43	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 4P M12	9456020000	B.13	SAIB-M23-19P-AN-10M	1818141000	D.57
SAI-6-S 5P M12 ECO	1892091000	B.17	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 5P CNOMO	1861580000	B.23	SAIB-M23-19P-AN-1,0M	1818141000	D.57
SAI-6-S 5P M12 UT	1705933000	B.33	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 5P FC	1848040000	B.20	SAIB-M23-19P-AN-10M	1818141000	D.57
SAI-6-S 5P M12 ECO UT	1892091000	B.17	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 5P M12	1795470000	B.13	SAIB-M23-19P-AN-3,0M	1818140300	D.57
SAI-6-S 3P M8 L OL	1932380000	B.50	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 5P M12	1795470000	B.13	SAIB-M23-19P-AN-5,0M	1818140500	D.57
SAI-6-S 3P M8 L LSL	1057720000	B.51	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 12 3P M8 L	1851760000	B.56	SAIB-M23-19P-ST-1,0M	1818180100	D.57
SAI-6-S 4P M12	9456010000	B.13	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 12 3P M8 L	1851760000	B.56	SAIB-M23-19P-ST-10M	1818180100	D.57
SAI-6-S 5P M12	9456010001	B.13	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-M23-19P-ST-3,0M	1818181000	D.57
SAI-6-S 5P M12 F10	1812170000	B.43	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-M23-19P-ST-5,0M	1818181000	D.57
SAI-6-S 5P M12 SL	1847560000	B.43	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-M23-19P-ST-10M	1818181000	D.57
SAI-6-F 3P IDC PUR 10M	1766770000	B.29	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-M23-19P-ST-3,0M	1818180300	D.57
SAI-6-F 3P IDC PUR 5M	1766770000	B.29	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-M23-19P-ST-5,0M	1818180500	D.57
SAI-6-F 3P M5 L10M	1845830000	B.56	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-M8-3P	1803870000	D.14
SAI-6-F 3P M5 L5M	1851760000	B.56	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-M8-4P	1803880000	D.14
SAI-6-F 3P M8 L 10M	1828670000	B.52	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-VSA-3P/230/11-H/OB	1873150000	D.96
SAI-6-F 3P M8 L 5M	1828680000	B.52	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-VSA-3P/230/9-H/OB	1873130000	D.96
SAI-6-F 3P M8 PUR 10M	1784610000	B.48	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-VSA-3P/230/9/LD	1873110000	D.96
SAI-6-F 3P M8 PUR 5M	1784620000	B.48	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-VSA-3P/24/9/LD	1873210000	D.96
SAI-6-F 4P FC 10M	1847980000	B.19	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-VSA-3P/250/11-H/OB	1873090000	D.96
SAI-6-F 4P FC 2M	1847980000	B.19	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-VSA-3P/250/9-H/OB	1873070000	D.96
SAI-6-F 4P FC 5M	1848000000	B.19	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-VSA-4P/230/11-H/OB	1873160000	D.96
SAI-6-F 4P FC PUR 10M	1766710000	B.29	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-VSA-4P/230/9-H/OB	1873140000	D.96
SAI-6-F 4P FC PUR 5M	1766710000	B.29	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-VSA-4P/250/11-H/OB	1873100000	D.96
SAI-6-F 4P M5 L10M	1845810000	B.56	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-VSA-4P/250/9-H/OB	1873080000	D.96
SAI-6-F 4P M5 L5M	1851750000	B.56	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-VSB-3P/24/9/LD	1873180000	D.96
SAI-6-F 4P M8 L 10M	1828610000	B.52	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-VSB-3P/250/9-H/OB	1873170000	D.96
SAI-6-F 4P M8 L 5M	1828620000	B.52	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-VSB-3P/250/9-H/OB	1873190000	D.96
SAI-6-F 4P M8 PUR 10M	1784570000	B.48	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-VSC-3P/250/7-H/OB	1873200000	D.96
SAI-6-F 4P M8 PUR 5M	1784580000	B.48	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIB-VSC-4P/250/7-H/OB	1873230000	D.96
SAI-6-F 4P PUR 10M	9456760000	B.11	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIBM 5/8S M12 5P B-COD	1784780000	C.4
SAI-6-F 4P PUR 15M	9456770000	B.11	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIBM 5/8S M12 5P B-COD	1784780000	C.9
SAI-6-F 4P PUR 20M	9456790000	B.11	SAI-8-MH-5P M12 ZF III	1782760000	B.36	SAI-8-S 16 3P M5	1845880000	B.57	SAIBM 5/8S M12 5P B-COD	1784780000	D.10
SAI-6-F 4P PUR 30M	9456740000	B.11	SAI-8-MH-5P M12 ZF III								

Type	Order No.	Page	Type	Order No.	Page	Type	Order No.	Page	Type	Order No.	Page
SAIE-M12B-5-0.5U-PP-M16	1856110000	D.85	SAIL-M12BG-4-10U	9457731000	D.36	SAIL-M12BG-PB-3.0D	1873320300	C.4	SAIL-M12BW-4-2L10V	1925471000	D.38
SAIE-M12B-5-0.5U-M16	1836910000	D.85	SAIL-M12BG-4-10U	9457731000	D.41	SAIL-M12BG-PB-3.0D	1873320300	D.108	SAIL-M12BW-4-2L10V	1925471000	D.46
SAIE-M12B-5-0.5U-PG9	1814890000	D.86	SAIL-M12BG-4-10V	1925581000	D.36	SAIL-M12BG-PB-3.0E	1058540300	C.14	SAIL-M12BW-4-2L3.0Q	1926660300	D.38
SAIE-M12B-8-0.5U-M16	1861140000	D.85	SAIL-M12BG-4-10V	1925581000	D.43	SAIL-M12BG-PB-3.0E	1058540300	D.108	SAIL-M12BW-4-2L3.0Q	1926660300	D.46
SAIE-M12B-8-0.5U-PP-M16	1861210000	D.85	SAIL-M12BG-4-3.0Q	1926770300	D.36	SAIL-M12BG-PB-5.0D	1873320500	C.14	SAIL-M12BW-4-2L3.0T	1007000300	D.46
SAIE-M12B-8-0.5U-PG9	1861270000	D.86	SAIL-M12BG-4-3.0Q	1926770300	D.42	SAIL-M12BG-PB-5.0D	1873320500	C.108	SAIL-M12BW-4-2L5.0T	9456380300	D.38
SAIE-M12S-4-0.5U-AEH-VA	1861220001	D.111	SAIL-M12BG-4-3.0T	1968580300	D.44	SAIL-M12BG-PB-5.0E	1058540500	C.14	SAIL-M12BW-4-2L3.0U	9456380300	D.46
SAIE-M12S-4-0.5U-AEH-VA	1861220001	E.40	SAIL-M12BG-4-3.0T	9457730300	D.36	SAIL-M12BG-PB-5.0E	1058540500	D.108	SAIL-M12BW-4-2L3.0U	1925470300	D.38
SAIE-M12S-4-0.5U-PP-M16	1861160000	D.85	SAIL-M12BG-4-3.0U	9457730300	D.41	SAIL-M12BG-PB-12-10U	1898241000	D.45	SAIL-M12BW-4-2L3.0V	1925470300	D.46
SAIE-M12S-4-0.5U-M16	1861090000	D.85	SAIL-M12BG-4-3.0V	1925580300	D.36	SAIL-M12BW-12-5.0U	1898240500	D.45	SAIL-M12BW-4-2L5.0Q	1926660500	D.38
SAIE-M12S-4-0.5U-PG9	1861220000	D.86	SAIL-M12BG-4-3.0V	1925580300	D.43	SAIL-M12BW-12-5.0U	1926820150	D.47	SAIL-M12BW-4-2L5.0Q	1926660500	D.46
SAIE-M12S-5-0.5U-PP-M16	1861170000	D.85	SAIL-M12BG-4-5.0Q	1926770500	D.36	SAIL-M12BW-3-1.5Q	1926820150	D.42	SAIL-M12BW-4-2L5.0T	1007000500	D.46
SAIE-M12S-5-0.5U-M16	1861100000	D.85	SAIL-M12BG-4-5.0Q	1926770500	D.42	SAIL-M12BW-3-1.5T	1968560150	D.44	SAIL-M12BW-4-2L5.0U	9456380500	D.38
SAIE-M12S-5-0.5U-PG9	1861200000	D.86	SAIL-M12BG-4-5.0T	1968580500	D.44	SAIL-M12BW-3-1.5U	9457320150	D.37	SAIL-M12BW-4-2L5.0U	9456380500	D.46
SAIE-M12S-8-0.5U-PP-M16	1861110000	D.85	SAIL-M12BG-4-5.0U	9457730500	D.36	SAIL-M12BW-3-1.5U	9457320150	D.41	SAIL-M12BW-4-2L5.0V	1925470500	D.38
SAIE-M12S-8-0.5U-PP-M16	1861180000	D.85	SAIL-M12BG-4-5.0U	9457730500	D.41	SAIL-M12BW-3-1.5V	1925630150	D.37	SAIL-M12BW-4-2L5.0V	1925470500	D.46
SAIE-M12S-8-0.5U-PG9	1861240000	D.86	SAIL-M12BG-4-5.0V	1925580500	D.36	SAIL-M12BW-3-1.5V	1925630150	D.43	SAIL-M12BW-4-3.0Q	1926830300	D.37
SAIE-M5B-3-0.2U	1873060000	D.87	SAIL-M12BG-4-5.0V	1925580500	D.43	SAIL-M12BW-3-1.0Q	1926821000	D.47	SAIL-M12BW-4-3.0Q	1926830300	D.42
SAIE-M5B-4-0.2U	1873040000	D.87	SAIL-M12BG-4B-1.5Q	1057750150	D.82	SAIL-M12BW-3-1.0Q	1926821000	D.42	SAIL-M12BW-4-3.0T	1968570300	D.44
SAIE-M5S-3-0.2U	1873050000	D.87	SAIL-M12BG-4B-10Q	1057751000	D.82	SAIL-M12BW-3-1.0T	1968561000	D.44	SAIL-M12BW-4-3.0T	9457740300	D.37
SAIE-M5S-4-0.2U	1873030000	D.87	SAIL-M12BG-4B-3.0Q	1057750300	D.82	SAIL-M12BW-3-1.0U	9457321000	D.37	SAIL-M12BW-4-3.0U	9457740300	D.41
SAIE-M5B-3-0.5U-PP-M8	1856130000	D.87	SAIL-M12BG-4B-5.0Q	1057750500	D.82	SAIL-M12BW-3-1.0U	9457321000	D.41	SAIL-M12BW-4-3.0V	1925640300	D.37
SAIE-M5B-4-0.5U-PP-M8	1856140000	D.87	SAIL-M12BG-4S1.5Q	1812540150	D.48	SAIL-M12BW-3-1.0V	1925631000	D.47	SAIL-M12BW-4-3L0.0V	1925640300	D.43
SAIE-M5S-3-0.5U-PP-M8	1861280000	D.87	SAIL-M12BG-4S10Q	1812541000	D.48	SAIL-M12BW-3-1.0V	1925631000	D.43	SAIL-M12BW-4-3L1.5Q	1963950150	D.47
SAIE-M5S-4-0.5U-PP-M8	1861290000	D.87	SAIL-M12BG-4S3.0Q	1812540300	D.48	SAIL-M12BW-3-3.0Q	1926820300	D.47	SAIL-M12BW-4-3L1.5Q	1963940150	D.47
SAIEND CAN M8 4P	1955340000	C.4	SAIL-M12BG-4S5.0Q	1812540500	D.48	SAIL-M12BW-3-3.0Q	1926820300	D.42	SAIL-M12BW-4-3L1.5V	1963960150	D.47
SAIEND CAN M8 4P	1955340000	C.42	SAIL-M12BG-5-1.5Q	1926780150	D.37	SAIL-M12BW-3-3.0Q	1968560300	D.44	SAIL-M12BW-4-3L1.0U	1963951000	D.47
SAIEND CAN M8 4P	1955340000	D.118	SAIL-M12BG-5-1.5Q	1926780150	D.42	SAIL-M12BW-3-3.0T	9457320300	D.47	SAIL-M12BW-4-3L1.0U	1963941000	D.47
SAIEND CAN-M12 5P A-COD	1784760000	C.17	SAIL-M12BG-5-1.5T	1021670150	D.44	SAIL-M12BW-3-3.0U	9457320300	D.41	SAIL-M12BW-4-3L1.0U	1963961000	D.47
SAIEND CAN-M12 5P A-COD	1784760000	C.19	SAIL-M12BG-5-1.5U	9457910150	D.37	SAIL-M12BW-3-3.0U	1925630300	D.47	SAIL-M12BW-4-3L3.0Q	1963950300	D.47
SAIEND CAN-M12 5P A-COD	1784760000	C.46	SAIL-M12BG-5-1.5U	9457910150	D.41	SAIL-M12BW-3-3.0V	1925630300	D.47	SAIL-M12BW-4-3L3.0Q	1963940300	D.47
SAIEND PB M12 5P B-COD	1784770000	C.4	SAIL-M12BG-5-1.5V	1925590150	D.37	SAIL-M12BW-3-5.0Q	1926820500	D.43	SAIL-M12BW-4-3L3.0V	1963960300	D.47
SAIEND PB M12 5P B-COD	1784770000	C.46	SAIL-M12BG-5-10Q	1925590150	D.43	SAIL-M12BW-3-5.0Q	1926820500	D.42	SAIL-M12BW-4-3L3.0V	1963950500	D.47
SAIEND PB M12 5P B-COD	1784770000	C.9	SAIL-M12BG-5-10Q	1926781000	D.37	SAIL-M12BW-3-5.0T	1968560500	D.44	SAIL-M12BW-4-3L5.0V	1963940500	D.47
SAIHL-SLL-3x0,25mm(PUR)	1902140000	D.98	SAIL-M12BG-5-10Q	1926781000	D.42	SAIL-M12BW-3-5.0U	9457320500	D.37	SAIL-M12BW-4-3L5.0V	1963960500	D.47
SAIHL-SLL-3x0,25mm(PVC)	1902190000	D.98	SAIL-M12BG-5-10T	1021671000	D.44	SAIL-M12BW-3-5.0U	9457320500	D.47	SAIL-M12BW-4-3LW1.5T	1022930150	D.47
SAIHL-SLL-3x0,25mm(TPE)	1022970000	D.98	SAIL-M12BG-5-10U	9457911000	D.37	SAIL-M12BW-3-5.0V	1925630500	D.41	SAIL-M12BW-4-3LW10T	1022931000	D.47
SAIHL-SLL-3x0,34mm(PUR)	1902110000	D.98	SAIL-M12BG-5-10U	9457911000	D.41	SAIL-M12BW-3-5.0V	1925630500	D.43	SAIL-M12BW-4-3LW3.0T	1022930300	D.47
SAIHL-SLL-3x0,34mm(PVC)	1902160000	D.98	SAIL-M12BG-5-10V	1925591000	D.37	SAIL-M12BW-3B-1.5Q	1061890150	D.82	SAIL-M12BW-4-3LW5.0T	1022930500	D.47
SAIHL-SLL-3x0,34mm(TPE)	1022940000	D.98	SAIL-M12BG-5-10V	1925591000	D.43	SAIL-M12BW-3B-10Q	1061890150	D.82	SAIL-M12BW-4-3LW10T	1926830500	D.37
SAIHL-SLL-3x0,75-8x0,34	9457420000	D.99	SAIL-M12BG-5-3.0Q	1926780300	D.37	SAIL-M12BW-3B-3.0Q	1061890300	D.82	SAIL-M12BW-4-5.0Q	1926830500	D.42
SAIHL-SLL-3x0,75-16x0,34	9457560000	D.99	SAIL-M12BG-5-3.0Q	1926780300	D.42	SAIL-M12BW-3B-5.0Q	1061890500	D.82	SAIL-M12BW-4-5.0T	1968570500	D.44
SAIHL-SLL-4x0,25mm(PUR)	1902120000	D.98	SAIL-M12BG-5-3.0T	1021670300	D.44	SAIL-M12BW-3L1.5Q	1926650150	D.38	SAIL-M12BW-4-5.0U	9457740500	D.37
SAIHL-SLL-4x0,25mm(PVC)	1902170000	D.98	SAIL-M12BG-5-3.0U	9457910300	D.37	SAIL-M12BW-3L1.5Q	1926650150	D.46	SAIL-M12BW-4-5.0U	9457740500	D.41
SAIHL-SLL-4x0,25mm(TPE)	1022980000	D.98	SAIL-M12BG-5-3.0U	9457910300	D.41	SAIL-M12BW-3L1.5T	1004330150	D.46	SAIL-M12BW-4-5.0U	1925640500	D.37
SAIHL-SLL-4x0,34mm(PUR)	1902130000	D.98	SAIL-M12BG-5-3.0V	1925590300	D.37	SAIL-M12BW-3L1.5T	9457800150	D.38	SAIL-M12BW-4-5.0V	1925640500	D.43
SAIHL-SLL-4x0,34mm(PVC)	1902180000	D.98	SAIL-M12BG-5-3.0V	1925590300	D.43	SAIL-M12BW-3L1.5U	9457800150	D.46	SAIL-M12BW-4B-1.5Q	1061900150	D.82
SAIHL-SLL-4x0,34mm(TPE)	1022950000	D.98	SAIL-M12BG-5-5.0Q	1926780500	D.37	SAIL-M12BW-3L1.5U	1925460150	D.38	SAIL-M12BW-4B-10Q	1061901000	D.82
SAIHL-SLL-5x0,25mm(PUR)	1902100000	D.98	SAIL-M12BG-5-5.0Q	1926780500	D.42	SAIL-M12BW-3L1.5V	1925460150	D.46	SAIL-M12BW-4B-10Q	1061900300	D.82
SAIHL-SLL-5x0,25mm(PVC)	1902150000	D.98	SAIL-M12BG-5-5.0Q	1021670500	D.44	SAIL-M12BW-3L1.0Q	1926651000	D.38	SAIL-M12BW-4B-5.0Q	1061900500	D.82
SAIHL-SLL-5x0,25mm(TPE)	1022960000	D.98	SAIL-M12BG-5-5.0T	9457910500	D.37	SAIL-M12BW-3L1.0Q	1926651000	D.46	SAIL-M12BW-4B-5.0Q	1061900500	D.47
SAIHL-SLL-5x0,75-16x0,34	9457970000	D.99	SAIL-M12BG-5-5.0U	9457910500	D.41	SAIL-M12BW-3L1.0T	1004331000	D.46	SAIL-M12BW-4S1.0Q	1808970000	D.48
SAIL-M12BG-12-10U	1879711000	D.45	SAIL-M12BG-5-5.0V	1925590500	D.37	SAIL-M12BW-3L1.0T	9457801000	D.38	SAIL-M12BW-4S3.0Q	1808970300	D.48
SAIL-M12BG-12-5.0U	1879710500	D.45	SAIL-M12BG-5-5.0V	1925590500	D.43	SAIL-M12BW-3L1.0U	9457801000	D.46	SAIL-M12BW-4S5.0Q	1808970500	D.48
SAIL-M12BG-3-1.5Q	1926760150	D.36	SAIL-M12BG-5B-1.5Q	1061880150	D.82	SAIL-M12BW-3L1.0U	1925461000	D.38	SAIL-M12BW-5-1.5Q	1926840150	D.37
SAIL-M12BG-3-1.5Q	1926760150	D.42	SAIL-M12BG-5B-10Q	1061881000	D.82	SAIL-M12BW-3L1.0V	1925461000	D.46	SAIL-M12BW-5-1.5Q	1926840150	D.42
SAIL-M12BG-3-1.5T	1968590150	D.44	SAIL-M12BG-5B-3.0Q	1061880300	D.82	SAIL-M12BW-3L3.0Q	1926650300	D.38	SAIL-M12BW-5-1.5T	1021690150	D.44
SAIL-M12BG-3-1.5U	9457820150	D.36	SAIL-M12BG-5B-5.0Q	1061880500	D.82	SAIL-M12BW-3L3.0Q	1926650300	D.46	SAIL-M12BW-5-1.5U	9457690150	D.37
SAIL-M12BG-3-1.5U	9457820150	D.41	SAIL-M12BG-5S1.5Q	9456140150	D.48	SAIL-M12BW-3L3.0T	1004330300	D.46	SAIL-M12BW-5-1.5U	9457690150	D.41
SAIL-M12BG-3-1.5V	1925570150	D.36	SAIL-M12BG-5S10Q	9456141000	D.48	SAIL-M12BW-3L3.0T	9457800300	D.38	SAIL-M12BW-5-1.5V	1925650150	D.37
SAIL-M12BG-3-1.5V	1925701500	D.43	SAIL-M12BG-5S3.0Q	9456140300	D.48	SAIL-M12BW-3L3.0U	9457800300	D.46	SAIL-M12BW-5-1.5V	1925650150	D.43
SAIL-M12BG-3-10Q	1926761000	D.36	SAIL-M12BG-5S5.0Q	9456140500	D.48	SAIL-M12BW-3L3.0U	1925460300	D.38	SAIL-M12BW-5-10Q	1926841000	D.37
SAIL-M12BG-3-10Q	1926761000	D.42	SAIL-M12BG-8-(S)-1.5U	1890520150	D.45	SAIL-M12BW-3L3.0V	1925460300	D.46	SAIL-M12BW-5-10Q	1926841000	D.42
SAIL-M12BG-3-10T	1968591000	D.44	SAIL-M12BG-8-(S)-10U	1890521000	D.45	SAIL-M12BW-3L3.0V	1926650500	D.38	SAIL-M12BW-5-10T	1021691000	D.44
SAIL-M12BG-3-10U	9457821000	D.36	SAIL-M12BG-8-(S)-3.0U	1890520300	D.45	SAIL-M12BW-3L5.0Q	1926650500	D.46	SAIL-M12BW-5-10U	9457691000	D.37
SAIL-M12BG-3-10U	9457821000	D.41	SAIL-M12BG-8-(S)-5.0U	1890520500	D.45	SAIL-M12BW-3L5.0T	1004330500	D.46	SAIL-M12BW-5-10U	9457691000	D.41
SAIL-M12BG-3-10V	1925571000	D.36	SAIL-M12BG-8-1.5U	1865870150	D.45	SAIL-M12BW-3L5.0T	9457800500	D.38	SAIL-M12BW-5-10U	1925651000	D.37
SAIL-M12BG-3-10V	1925571000	D.43	SAIL-M12BG-8-10U	1865871000	D.45	SAIL-M12BW-3L5.0U	9457800500	D.46	SAIL-M12BW-5-10V	1925651000	D.43
SAIL-M12BG-3-3.0Q	1926760300	D.36	SAIL-M12BG-8-3.0U	1865870300	D.45	SAIL-M12BW-3L5.0U	1925460500	D.38	SAIL-M12BW-5-10V	1925651000	D.37
SAIL-M12BG-3-3.0Q	1926760300	D.42	SAIL-M12BG-8-5.0U	1865870500	D.45	SAIL-M12BW-3L5.0V	1925460500	D.46	SAIL-M12BW-5-3.0Q	1926840300	D.42
SAIL-M12BG-3-3.0T	1968590300	D.44	SAIL-M12BG-CD-1.5A	1964690150	C.20	SAIL-M12BW-3L5.0V	1906950150	D.48	SAIL-M12BW-5-3.0Q	1021693000	D.44
SAIL-M12BG-3-3.0U	9457820300	D.36	SAIL-M12BG-CD-1.5A	1964690150	C.116	SAIL-M12BW-3L5.0V	1906951000	D.48	SAIL-M12BW-5-3.0Q	9457690300	D.37
SAIL-M12BG-3-3.0U	9457820300	D.41	SAIL-M12BG-CD-1.5B	1060120150	C.20	SAIL-M12BW-3L5.0V	190				

Type	Order No.	Page	Type	Order No.	Page	Type	Order No.	Page	Type	Order No.	Page
SAIL-M12BW-CD-10B	1062181000	C.20	SAIL-M12G-5-1.5T	1021650150	D.44	SAIL-M12GM12G-3-3.0Q	1926490300	D.36	SAIL-M12GM12G-CD-1.5A	1964710150	C.21
SAIL-M12BW-CD-10B	1062181000	D.116	SAIL-M12G-5-1.5U	9457610150	D.34	SAIL-M12GM12G-3-3.0Q	1926490300	D.60	SAIL-M12GM12G-CD-1.5A	1964710150	D.117
SAIL-M12BW-CD-3.0A	1061980300	C.20	SAIL-M12G-5-1.5U	9457610150	D.34	SAIL-M12GM12G-3-3.0T	1021710300	D.62	SAIL-M12GM12G-CD-1.5B	1060130150	C.21
SAIL-M12BW-CD-3.0A	1061980300	D.116	SAIL-M12G-5-1.5V	1925450150	D.41	SAIL-M12GM12G-3-3.0U	9457230300	D.36	SAIL-M12GM12G-CD-1.5B	1060130150	D.117
SAIL-M12BW-CD-3.0B	1062180300	C.20	SAIL-M12G-5-1.5V	1925450150	D.43	SAIL-M12GM12G-3-3.0U	9457230300	D.59	SAIL-M12GM12G-CD-10A	1964711000	C.21
SAIL-M12BW-CD-3.0B	1062180300	D.116	SAIL-M12G-5-10Q	1926641000	D.34	SAIL-M12GM12G-3-3.0V	1925300300	D.36	SAIL-M12GM12G-CD-10A	1964711000	D.117
SAIL-M12BW-CD-5.0A	1061980500	C.20	SAIL-M12G-5-10Q	1926641000	D.42	SAIL-M12GM12G-3-3.0V	1925300300	D.61	SAIL-M12GM12G-CD-10B	1060131000	C.21
SAIL-M12BW-CD-5.0A	1061980500	D.116	SAIL-M12G-5-10T	1021651000	D.44	SAIL-M12GM12G-3-5.0Q	1926490500	D.36	SAIL-M12GM12G-CD-10B	1060131000	D.117
SAIL-M12BW-CD-5.0B	1062180500	C.20	SAIL-M12G-5-10U	9457611000	D.34	SAIL-M12GM12G-3-5.0Q	1926490500	D.60	SAIL-M12GM12G-CD-3.0A	1964710300	C.21
SAIL-M12BW-CD-5.0B	1062180500	D.116	SAIL-M12G-5-10U	9457611000	D.41	SAIL-M12GM12G-3-5.0T	1021710500	D.62	SAIL-M12GM12G-CD-3.0A	1964710300	D.117
SAIL-M12BW-PB-1.5D	1062300150	C.14	SAIL-M12G-5-10V	1925451000	D.34	SAIL-M12GM12G-3-5.0U	9457230500	D.36	SAIL-M12GM12G-CD-3.0B	1060130300	C.21
SAIL-M12BW-PB-1.5D	1062300150	D.108	SAIL-M12G-5-10V	1925451000	D.43	SAIL-M12GM12G-3-5.0U	9457230500	D.59	SAIL-M12GM12G-CD-3.0B	1060130300	D.117
SAIL-M12BW-PB-1.5E	1062370150	C.18	SAIL-M12G-5-3.0Q	1926640300	D.34	SAIL-M12GM12G-3-5.0V	1925300500	D.36	SAIL-M12GM12G-CD-3.0B	1964710500	C.21
SAIL-M12BW-PB-1.5E	1062370150	D.108	SAIL-M12G-5-3.0Q	1926640300	D.42	SAIL-M12GM12G-3-5.0V	1925300500	D.61	SAIL-M12GM12G-CD-3.0B	1964710500	D.117
SAIL-M12BW-PB-10D	1062301000	C.14	SAIL-M12G-5-3.0T	1021650300	D.44	SAIL-M12GM12G-3B-1.5Q	1057830150	D.83	SAIL-M12GM12G-CD-5.0B	1060130500	C.21
SAIL-M12BW-PB-10D	1062301000	D.108	SAIL-M12G-5-3.0U	9457610300	D.34	SAIL-M12GM12G-3B-10Q	1057831000	D.83	SAIL-M12GM12G-CD-5.0B	1060130500	D.117
SAIL-M12BW-PB-10E	1062371000	C.18	SAIL-M12G-5-3.0U	9457610300	D.41	SAIL-M12GM12G-3B-3.0Q	1057830300	D.83	SAIL-M12GM12G-PB-0.3D	1873310030	C.15
SAIL-M12BW-PB-10E	1062371000	D.108	SAIL-M12G-5-3.0V	1925450300	D.34	SAIL-M12GM12G-3B-5.0Q	1057830500	D.83	SAIL-M12GM12G-PB-0.3D	1873310030	C.4
SAIL-M12BW-PB-3.0D	1062300300	C.14	SAIL-M12G-5-3.0V	1925450300	D.43	SAIL-M12GM12G-3S1-5Q	1058490150	D.65	SAIL-M12GM12G-PB-0.3D	1873310030	D.109
SAIL-M12BW-PB-3.0D	1062300300	D.108	SAIL-M12G-5-5.0Q	1926640500	D.34	SAIL-M12GM12G-3S10Q	1058491000	D.65	SAIL-M12GM12G-PB-1.5D	1873310150	C.15
SAIL-M12BW-PB-3.0E	1062370300	C.14	SAIL-M12G-5-5.0Q	1926640500	D.42	SAIL-M12GM12G-3S3-0Q	1058490300	D.65	SAIL-M12GM12G-PB-1.5D	1873310150	C.4
SAIL-M12BW-PB-3.0E	1062370300	D.108	SAIL-M12G-5-5.0T	1021650500	D.44	SAIL-M12GM12G-3S5-0Q	1058490500	D.65	SAIL-M12GM12G-PB-1.5D	1873310150	D.109
SAIL-M12BW-PB-5.0D	1062300500	C.18	SAIL-M12G-5-5.0U	9457610500	D.34	SAIL-M12GM12G-4-0.3U	9457150000	F.14	SAIL-M12GM12G-PB-1.5E	1058570150	C.15
SAIL-M12BW-PB-5.0D	1062300500	D.108	SAIL-M12G-5-5.0U	9457610500	D.41	SAIL-M12GM12G-4-0.6U	9457160000	F.14	SAIL-M12GM12G-PB-1.5E	1058570150	D.109
SAIL-M12BW-PB-5.0E	1062370500	C.18	SAIL-M12G-5-5.0V	1925450500	D.34	SAIL-M12GM12G-4-0.9U	9457170000	F.14	SAIL-M12GM12G-PB-10D	1873311000	C.4
SAIL-M12BW-PB-5.0E	1062370500	D.108	SAIL-M12G-5-5.0V	1925450500	D.43	SAIL-M12GM12G-4-1.5Q	1926500150	D.36	SAIL-M12GM12G-PB-10D	1873311000	C.4
SAIL-M12G-3-1.5Q	1926620150	D.34	SAIL-M12G-5B-1.5Q	1057790150	D.82	SAIL-M12GM12G-4-1.5Q	1926500150	D.60	SAIL-M12GM12G-PB-10D	1873311000	D.109
SAIL-M12G-3-1.5Q	1926620150	D.42	SAIL-M12G-5B-1.5Q	1057791000	D.82	SAIL-M12GM12G-4-1.5T	1021730150	D.62	SAIL-M12GM12G-PB-10E	1058571000	C.15
SAIL-M12G-3-1.5T	1021750150	D.44	SAIL-M12G-5B-3.0Q	1057790300	D.82	SAIL-M12GM12G-4-1.5U	9457190000	D.36	SAIL-M12GM12G-PB-10E	1058571000	D.109
SAIL-M12G-3-1.5U	9457810150	D.34	SAIL-M12G-5B-5.0Q	1057790500	D.82	SAIL-M12GM12G-4-1.5U	9457190000	D.59	SAIL-M12GM12G-PB-15D	1873311500	C.4
SAIL-M12G-3-1.5U	9457810150	D.41	SAIL-M12G-5S1-5Q	1926690150	D.48	SAIL-M12GM12G-4-1.5V	1925310150	D.36	SAIL-M12GM12G-PB-25D	1873312500	C.4
SAIL-M12G-3-1.5V	1925430150	D.34	SAIL-M12G-5S10Q	1926691000	D.48	SAIL-M12GM12G-4-1.5V	1925310150	D.61	SAIL-M12GM12G-PB-3.0D	1873310300	C.4
SAIL-M12G-3-1.5V	1925430150	D.43	SAIL-M12G-5S3-0Q	1926690300	D.48	SAIL-M12GM12G-4-10Q	1926501000	D.36	SAIL-M12GM12G-PB-3.0E	1058570300	C.15
SAIL-M12G-3-10Q	1926621000	D.34	SAIL-M12G-5S5-0Q	1926690500	D.48	SAIL-M12GM12G-4-10Q	1926501000	D.60	SAIL-M12GM12G-PB-3.0E	1058570300	D.109
SAIL-M12G-3-10Q	1926621000	D.42	SAIL-M12G-CD-1.5A	1964700150	C.20	SAIL-M12GM12G-4-10T	1021731000	D.62	SAIL-M12GM12G-PB-30D	1873313000	C.4
SAIL-M12G-3-10T	1021751000	D.44	SAIL-M12G-CD-1.5A	1964700150	D.116	SAIL-M12GM12G-4-10U	9457110000	D.36	SAIL-M12GM12G-PB-40D	1873314000	C.4
SAIL-M12G-3-10U	9457811000	D.34	SAIL-M12G-CD-1.5B	1060110150	C.20	SAIL-M12GM12G-4-10U	9457110000	D.59	SAIL-M12GM12G-PB-5.0D	1873310500	C.15
SAIL-M12G-3-10U	9457811000	D.41	SAIL-M12G-CD-1.5B	1060110150	D.116	SAIL-M12GM12G-4-10V	1925311000	D.36	SAIL-M12GM12G-PB-5.0D	1873310500	C.4
SAIL-M12G-3-10V	1925431000	D.34	SAIL-M12G-CD-10A	1964701000	C.20	SAIL-M12GM12G-4-10V	1925311000	D.61	SAIL-M12GM12G-PB-5.0D	1873310500	D.109
SAIL-M12G-3-10V	1925431000	D.43	SAIL-M12G-CD-10A	1964701000	D.116	SAIL-M12GM12G-4-3.0Q	1926500300	D.36	SAIL-M12GM12G-PB-5.0E	1058570500	C.15
SAIL-M12G-3-3.0Q	1926620300	D.34	SAIL-M12G-CD-10B	1060111000	C.20	SAIL-M12GM12G-4-3.0Q	1926500300	D.60	SAIL-M12GM12G-PB-5.0E	1058570500	D.109
SAIL-M12G-3-3.0Q	1926620300	D.42	SAIL-M12G-CD-10B	1060111000	D.116	SAIL-M12GM12G-4-3.0T	1021730300	D.62	SAIL-M12GM12W-2/4-1.5Q	1926560150	D.60
SAIL-M12G-3-3.0T	1021750300	D.44	SAIL-M12G-CD-3.0A	1964700300	C.20	SAIL-M12GM12G-4-3.0U	1906300300	D.36	SAIL-M12GM12W-2/4-1.5Q	9457890150	D.59
SAIL-M12G-3-3.0U	9457810300	D.34	SAIL-M12G-CD-3.0A	1964700300	D.116	SAIL-M12GM12G-4-3.0U	1906300300	D.59	SAIL-M12GM12W-2/4-1.5V	1925370150	D.61
SAIL-M12G-3-3.0U	9457810300	D.41	SAIL-M12G-CD-3.0B	1060110300	C.20	SAIL-M12GM12G-4-3.0V	1925310300	D.36	SAIL-M12GM12W-2/4-1.5V	1925370150	D.60
SAIL-M12G-3-3.0V	1925430300	D.34	SAIL-M12G-CD-3.0B	1060110300	D.116	SAIL-M12GM12G-4-3.0V	1925310300	D.61	SAIL-M12GM12W-2/4-10Q	9457891000	D.59
SAIL-M12G-3-3.0V	1925430300	D.43	SAIL-M12G-CD-5.0A	1964700500	C.20	SAIL-M12GM12G-4-4.5Q	1926500500	D.36	SAIL-M12GM12W-2/4-10V	1925371000	D.61
SAIL-M12G-3-5.0Q	1926620500	D.34	SAIL-M12G-CD-5.0A	1964700500	D.116	SAIL-M12GM12G-4-4.5Q	1926500500	D.60	SAIL-M12GM12W-2/4-3.0Q	1926560300	D.60
SAIL-M12G-3-5.0Q	1926620500	D.42	SAIL-M12G-CD-5.0B	1060110500	C.20	SAIL-M12GM12G-4-4.5T	1021730500	D.62	SAIL-M12GM12W-2/4-3.0Q	9457890300	D.59
SAIL-M12G-3-5.0T	1021750500	D.44	SAIL-M12G-CD-5.0B	1060110500	D.116	SAIL-M12GM12G-4-4.5U	9457100000	D.36	SAIL-M12GM12W-2/4-3.0Q	1925370300	D.61
SAIL-M12G-3-5.0U	9457810500	D.34	SAIL-M12G-PB-0.5D	1873300050	C.4	SAIL-M12GM12G-4-5.0U	9457100000	D.59	SAIL-M12GM12W-2/4-5.0Q	1926560500	D.60
SAIL-M12G-3-5.0U	9457810500	D.41	SAIL-M12G-PB-1.5D	1873300150	C.14	SAIL-M12GM12G-4-5.0V	1925310500	D.36	SAIL-M12GM12W-2/4-5.0U	9457890500	D.59
SAIL-M12G-3-5.0V	1925430500	D.34	SAIL-M12G-PB-1.5D	1873300150	C.4	SAIL-M12GM12G-4-5.0V	1925310500	D.61	SAIL-M12GM12W-2/4-5.0V	1925370500	D.61
SAIL-M12G-3-5.0V	1925430500	D.43	SAIL-M12G-PB-1.5D	1873300150	D.108	SAIL-M12GM12G-4-5.0T	1057840150	D.83	SAIL-M12GM12W-3-1.5Q	1926530150	D.37
SAIL-M12G-3B-1.5Q	1057770150	D.82	SAIL-M12G-PB-1.5E	1058530150	C.14	SAIL-M12GM12G-4B-10Q	1057841000	D.83	SAIL-M12GM12W-3-1.5Q	1926530150	D.60
SAIL-M12G-3B-1.5Q	1057770150	D.82	SAIL-M12G-PB-1.5E	1058530150	D.108	SAIL-M12GM12G-4B-3.0Q	1057840300	D.83	SAIL-M12GM12W-3-1.5T	1021720150	D.62
SAIL-M12G-3B-3.0Q	1057770300	D.82	SAIL-M12G-PB-10D	1873301000	C.14	SAIL-M12GM12G-4B-5.0Q	1057840500	D.83	SAIL-M12GM12W-3-1.5U	9457390150	D.37
SAIL-M12G-3B-5.0Q	1057770500	D.82	SAIL-M12G-PB-10D	1873301000	C.4	SAIL-M12GM12G-4S1-5Q	1058500150	D.65	SAIL-M12GM12W-3-1.5U	9457390150	D.59
SAIL-M12G-3S1-5Q	1906470150	D.48	SAIL-M12G-PB-10E	1873301000	D.108	SAIL-M12GM12G-4S10Q	1058501000	D.65	SAIL-M12GM12W-3-1.5V	1925340150	D.37
SAIL-M12G-3S10Q	1906471000	D.48	SAIL-M12G-PB-10E	1058531000	C.14	SAIL-M12GM12G-4S3-0Q	1058500300	D.65	SAIL-M12GM12W-3-1.5V	1925340150	D.61
SAIL-M12G-3S3-0Q	1906470300	D.48	SAIL-M12G-PB-10E	1058531000	D.108	SAIL-M12GM12G-4S5-0Q	1058500500	D.65	SAIL-M12GM12W-3-1.5V	1925340150	D.37
SAIL-M12G-3S5-0Q	1906470500	D.48	SAIL-M12G-PB-15D	1873301500	C.4	SAIL-M12GM12G-5-0.3U	9457340030	F.14	SAIL-M12GM12W-3-10Q	1926531000	D.60
SAIL-M12G-4-1.5Q	1926630150	D.34	SAIL-M12G-PB-20D	1873302000	C.4	SAIL-M12GM12G-5-0.6U	9457340060	F.14	SAIL-M12GM12W-3-10T	1021721000	D.62
SAIL-M12G-4-1.5Q	1926630150	D.42	SAIL-M12G-PB-3.0D	1873300300	C.14	SAIL-M12GM12G-5-1.5Q	1926510150	D.37	SAIL-M12GM12W-3-10U	9457391000	D.37
SAIL-M12G-4-1.5T	1021770150	D.44	SAIL-M12G-PB-3.0D	1873300300	C.4	SAIL-M12GM12G-5-1.5Q	1926510150	D.60	SAIL-M12GM12W-3-10U	9457391000	D.59
SAIL-M12G-4-1.5U	9456100150	D.34	SAIL-M12G-PB-3.0D	1873300300	D.108	SAIL-M12GM12G-5-1.5T	1011970150	D.62	SAIL-M12GM12W-3-10V	1925341000	D.37
SAIL-M12G-4-1.5U	9456100150	D.41	SAIL-M12G-PB-3.0E	1058530300	C.14	SAIL-M12GM12G-5-1.5U	9457340150	D.37	SAIL-M12GM12W-3-10V	1925341000	D.61
SAIL-M12G-4-1.5V	1925440150	D.34	SAIL-M12G-PB-3.0E	1058530300	D.108	SAIL-M12GM12G-5-1.5U	9457340150	D.59	SAIL-M12GM12W-3-3.0Q	1926530300	D.37
SAIL-M12G-4-1.5V	1925440150	D.43	SAIL-M12G-PB-5.0D	1873300500	C.14	SAIL-M12GM12G-5-1.5U	9457340150	F.14	SAIL-M12GM12W-3-3.0Q	1926530300	D.60
SAIL-M12G-4-10Q	1926631000	D.34	SAIL-M12G-PB-5.0D	1873300500	C.4	SAIL-M12GM12G-5-1.5V	1925320150	D.37	SAIL-M12GM12W-3-3.0T	1021720300	D.62
SAIL-M12G-4-10Q	1926631000	D.42	SAIL-M12G-PB-5.0D	1873300500	D.108	SAIL-M12GM12G-5-1.5V	1925320150	D.61	SAIL-M12GM12W-3-3.0U	9457390300	D.37
SAIL-M12G-4-10T	1021771000	D.44	SAIL-M12G-PB-5.0E	1058530500	C.14	SAIL					

Type	Order No.	Page	Type	Order No.	Page	Type	Order No.	Page	Type	Order No.	Page
SAIL-M12GM12W-3L3.0Q	1926600300	D.63	SAIL-M12GM12W-5-1.5U	9457270150	D.37	SAIL-M12GM8G-4-5.0V	1938200500	D.68	SAIL-M12W-3-3.0Q	1926700300	D.42
SAIL-M12GM12W-3L3.0T	1004320300	D.63	SAIL-M12GM12W-5-1.5U	9457270150	D.59	SAIL-M12GM8GR-3-1.5U	1984530150	D.69	SAIL-M12W-3-3.0T	1021760300	D.44
SAIL-M12GM12W-3L3.0U	9457790300	D.38	SAIL-M12GM12W-5-1.5U	1925360150	D.37	SAIL-M12GM8GR-3-10U	1984531000	D.69	SAIL-M12W-3-3.0U	9456690300	D.34
SAIL-M12GM12W-3L3.0V	9457790300	D.38	SAIL-M12GM12W-5-1.5V	1925360150	D.61	SAIL-M12GM8GR-3-3.0U	1984530300	D.69	SAIL-M12W-3-3.0U	9456690300	D.34
SAIL-M12GM12W-3L3.0V	1925410300	D.38	SAIL-M12GM12W-5-10Q	1926551000	D.37	SAIL-M12GM8GR-3-5.0U	1984530500	D.69	SAIL-M12W-3-3.0V	1925510300	D.43
SAIL-M12GM12W-3L3.0V	1925410300	D.63	SAIL-M12GM12W-5-10Q	1926551000	D.60	SAIL-M12GM8W-3-1.5Q	1938050150	D.35	SAIL-M12W-3-3.0V	1925510300	D.43
SAIL-M12GM12W-3L5.0Q	1926600500	D.38	SAIL-M12GM12W-5-10T	1011991000	D.62	SAIL-M12GM8W-3-1.5Q	1938050150	D.67	SAIL-M12W-3-5.0Q	1926700500	D.34
SAIL-M12GM12W-3L5.0Q	1926600500	D.63	SAIL-M12GM12W-5-10U	9457271000	D.37	SAIL-M12GM8W-3-1.5U	9457980150	D.35	SAIL-M12W-3-5.0Q	1926700500	D.42
SAIL-M12GM12W-3L5.0T	1004320500	D.63	SAIL-M12GM12W-5-10U	9457271000	D.59	SAIL-M12GM8W-3-1.5U	9457980150	D.66	SAIL-M12W-3-5.0T	1021760500	D.44
SAIL-M12GM12W-3L5.0U	9457790500	D.38	SAIL-M12GM12W-5-10V	1925361000	D.37	SAIL-M12GM8W-3-1.5V	1938180150	D.35	SAIL-M12W-3-5.0U	9456690500	D.34
SAIL-M12GM12W-3L5.0U	9457790500	D.63	SAIL-M12GM12W-5-10V	1925361000	D.61	SAIL-M12GM8W-3-1.5V	1938180150	D.68	SAIL-M12W-3-5.0U	9456690500	D.43
SAIL-M12GM12W-3L5.0V	1925410500	D.38	SAIL-M12GM12W-5-3.0Q	1926550300	D.37	SAIL-M12GM8W-3-10Q	1938051000	D.35	SAIL-M12W-3-5.0V	1925510500	D.34
SAIL-M12GM12W-3L5.0V	1925410500	D.63	SAIL-M12GM12W-5-3.0Q	1926550300	D.60	SAIL-M12GM8W-3-10Q	1938051000	D.67	SAIL-M12W-3-5.0V	1925510500	D.43
SAIL-M12GM12W-3S1.5Q	1059470150	D.65	SAIL-M12GM12W-5-3.0T	1011990300	D.62	SAIL-M12GM8W-3-10U	9457981000	D.35	SAIL-M12W-3B-1.5Q	1057800150	D.82
SAIL-M12GM12W-3S10Q	1059471000	D.65	SAIL-M12GM12W-5-3.0T	9457270300	D.37	SAIL-M12GM8W-3-10U	9457981000	D.66	SAIL-M12W-3B-1.5Q	1057800150	D.82
SAIL-M12GM12W-3S10Q	1059470300	D.65	SAIL-M12GM12W-5-3.0U	9457270300	D.59	SAIL-M12GM8W-3-10U	938181000	D.35	SAIL-M12W-3B-3.0Q	1057800300	D.82
SAIL-M12GM12W-3S5.0Q	1059470500	D.65	SAIL-M12GM12W-5-3.0U	1925360300	D.37	SAIL-M12GM8W-3-10V	1938181000	D.38	SAIL-M12W-3B-5.0Q	1057800500	D.82
SAIL-M12GM12W-4-1.5Q	1926540150	D.67	SAIL-M12GM12W-5-3.0V	1925360300	D.61	SAIL-M12GM8W-3-10V	1938050300	D.65	SAIL-M12W-3B-5.0Q	1906500150	D.48
SAIL-M12GM12W-4-1.5Q	1926540150	D.60	SAIL-M12GM12W-5-5.0Q	1926550500	D.37	SAIL-M12GM8W-3-3.0Q	1938050300	D.67	SAIL-M12W-3B-5.0Q	1906500150	D.48
SAIL-M12GM12W-4-1.5T	1021740150	D.62	SAIL-M12GM12W-5-5.0Q	1926550500	D.60	SAIL-M12GM8W-3-3.0Q	9457980300	D.35	SAIL-M12W-3S3.0Q	1906500300	D.48
SAIL-M12GM12W-4-1.5U	9457310150	D.37	SAIL-M12GM12W-5-5.0T	1011990500	D.62	SAIL-M12GM8W-3-3.0U	9457980300	D.66	SAIL-M12W-3S5.0Q	1906500500	D.48
SAIL-M12GM12W-4-1.5U	9457310150	D.59	SAIL-M12GM12W-5-5.0U	9457270500	D.37	SAIL-M12GM8W-3-3.0V	1938180300	D.35	SAIL-M12W-4-1.5Q	1926710150	D.34
SAIL-M12GM12W-4-1.5V	1925350150	D.38	SAIL-M12GM12W-5-5.0U	9457270500	D.59	SAIL-M12GM8W-3-3.0V	1938180300	D.68	SAIL-M12W-4-1.5Q	1926710150	D.42
SAIL-M12GM12W-4-1.5V	1925350150	D.61	SAIL-M12GM12W-5-5.0V	1925360500	D.37	SAIL-M12GM8W-3-3.0V	1938050500	D.35	SAIL-M12W-4-1.5T	1021790150	D.44
SAIL-M12GM12W-4-1.5V	1925350150	D.63	SAIL-M12GM12W-5-5.0V	1925360500	D.61	SAIL-M12GM8W-3-5.0Q	1938050500	D.67	SAIL-M12W-4-1.5U	1906260150	D.34
SAIL-M12GM12W-4-1.5V	1925350150	D.63	SAIL-M12GM12W-5-5.0V	1925360500	D.63	SAIL-M12GM8W-3-5.0Q	9457980500	D.35	SAIL-M12W-4-1.5U	1906260150	D.41
SAIL-M12GM12W-4-1.5V	1925350150	D.63	SAIL-M12GM12W-5-5.0V	1925360500	D.63	SAIL-M12GM8W-3-5.0Q	9457980500	D.66	SAIL-M12W-4-1.5V	1925520150	D.34
SAIL-M12GM12W-4-1.5V	1925350150	D.63	SAIL-M12GM12W-5B-1.5Q	1057920150	D.83	SAIL-M12GM8W-3-5.0U	9457980500	D.66	SAIL-M12W-4-1.5V	1925520150	D.43
SAIL-M12GM12W-4-1.5V	1925350150	D.63	SAIL-M12GM12W-5B-1.5Q	1057920150	D.83	SAIL-M12GM8W-3-5.0U	9457980500	D.66	SAIL-M12W-4-1.5V	1925520150	D.43
SAIL-M12GM12W-4-1.5V	1925350150	D.63	SAIL-M12GM12W-5B-3.0Q	1057920300	D.83	SAIL-M12GM8W-3-5.0U	1938180500	D.35	SAIL-M12W-4-1.5V	1925520150	D.43
SAIL-M12GM12W-4-1.5V	1925350150	D.63	SAIL-M12GM12W-5B-5.0Q	1057920500	D.83	SAIL-M12GM8W-3-5.0U	1938180500	D.68	SAIL-M12W-4-1.5V	1925520150	D.43
SAIL-M12GM12W-4-1.5V	1925350150	D.63	SAIL-M12GM12W-5S1.5Q	1059540150	D.65	SAIL-M12GM8W-3-5.0U	1926270150	D.70	SAIL-M12W-4-1.5V	1926711000	D.34
SAIL-M12GM12W-4-1.5V	1925351000	D.61	SAIL-M12GM12W-5S10Q	1059541000	D.65	SAIL-M12GM8W-3L1.5U	9457760150	D.35	SAIL-M12W-4-1.5V	1021791000	D.44
SAIL-M12GM12W-4-1.5V	1925351000	D.61	SAIL-M12GM12W-5S10Q	1059541000	D.65	SAIL-M12GM8W-3L1.5U	9457760150	D.70	SAIL-M12W-4-1.5V	1906260150	D.48
SAIL-M12GM12W-4-2L1.5Q	1926610150	D.38	SAIL-M12GM12W-5S3.0Q	1059540300	D.65	SAIL-M12GM8W-3L1.5U	9457760150	D.70	SAIL-M12W-4-1.5V	1906260150	D.41
SAIL-M12GM12W-4-2L1.5Q	1926610150	D.63	SAIL-M12GM12W-5S5.0Q	1059540500	D.65	SAIL-M12GM8W-3L1.5V	1962290150	D.70	SAIL-M12W-4-1.5V	1906260150	D.41
SAIL-M12GM12W-4-2L1.5Q	1004310150	D.63	SAIL-M12GM12W-CD-1.5A	1061990150	D.21	SAIL-M12GM8W-3L10U	1962271000	D.70	SAIL-M12W-4-1.5V	1925521000	D.34
SAIL-M12GM12W-4-2L1.5U	1906410150	D.38	SAIL-M12GM12W-CD-1.5A	1061990150	D.117	SAIL-M12GM8W-3L10U	9457761000	D.35	SAIL-M12W-4-1.5V	1925521000	D.43
SAIL-M12GM12W-4-2L1.5U	1906410150	D.63	SAIL-M12GM12W-CD-1.5A	1061990150	D.21	SAIL-M12GM8W-3L10U	9457761000	D.70	SAIL-M12W-4-1.5V	1925521000	D.43
SAIL-M12GM12W-4-2L1.5U	1925420150	D.38	SAIL-M12GM12W-CD-1.5B	1062190150	D.117	SAIL-M12GM8W-3L10U	1962291000	D.70	SAIL-M12W-4-1.5V	1926710300	D.34
SAIL-M12GM12W-4-2L1.5U	1925420150	D.63	SAIL-M12GM12W-CD-1.5B	1062190150	D.21	SAIL-M12GM8W-3L10U	1962291000	D.70	SAIL-M12W-4-1.5V	1926710300	D.42
SAIL-M12GM12W-4-2L1.5U	1925420150	D.63	SAIL-M12GM12W-CD-10A	1061991000	C.21	SAIL-M12GM8W-3L3.0Q	1962270300	D.70	SAIL-M12W-4-1.5V	1021790300	D.44
SAIL-M12GM12W-4-2L1.5U	1925420150	D.63	SAIL-M12GM12W-CD-10A	1061991000	D.117	SAIL-M12GM8W-3L3.0Q	9457760300	D.35	SAIL-M12W-4-1.5V	1906260300	D.34
SAIL-M12GM12W-4-2L1.5U	1925420150	D.63	SAIL-M12GM12W-CD-10B	1062191000	C.21	SAIL-M12GM8W-3L3.0U	9457760300	D.70	SAIL-M12W-4-1.5V	1906260300	D.41
SAIL-M12GM12W-4-2L1.5U	1925420150	D.63	SAIL-M12GM12W-CD-10B	1062191000	D.117	SAIL-M12GM8W-3L3.0U	9457760300	D.70	SAIL-M12W-4-1.5V	1906260300	D.41
SAIL-M12GM12W-4-2L1.5U	1925420150	D.63	SAIL-M12GM12W-CD-3.0A	1062191000	C.21	SAIL-M12GM8W-3L3.0U	1962290300	D.70	SAIL-M12W-4-1.5V	1925520300	D.34
SAIL-M12GM12W-4-2L1.5U	1925420150	D.63	SAIL-M12GM12W-CD-3.0A	1062191000	D.117	SAIL-M12GM8W-3L3.0U	1962270500	D.70	SAIL-M12W-4-1.5V	1925520300	D.43
SAIL-M12GM12W-4-2L1.5U	1925420150	D.63	SAIL-M12GM12W-CD-3.0A	1062191000	D.117	SAIL-M12GM8W-3L5.0Q	9457760500	D.35	SAIL-M12W-4-1.5V	1926710500	D.34
SAIL-M12GM12W-4-2L1.5U	1925420150	D.63	SAIL-M12GM12W-CD-3.0B	1062190300	C.11	SAIL-M12GM8W-3L5.0Q	9457760500	D.70	SAIL-M12W-4-1.5V	1926710500	D.42
SAIL-M12GM12W-4-2L1.5U	1925420150	D.63	SAIL-M12GM12W-CD-3.0B	1062190300	D.117	SAIL-M12GM8W-3L5.0Q	9457760500	D.70	SAIL-M12W-4-1.5V	1926710500	D.42
SAIL-M12GM12W-4-2L1.5U	1925420150	D.63	SAIL-M12GM12W-CD-5.0A	1061990500	C.21	SAIL-M12GM8W-3L5.0V	1962290500	D.70	SAIL-M12W-4-1.5V	1021790500	D.44
SAIL-M12GM12W-4-2L1.5U	1925420150	D.63	SAIL-M12GM12W-CD-5.0A	1061990500	D.117	SAIL-M12GM8W-4-1.5Q	1938080150	D.35	SAIL-M12W-4-1.5V	1906260500	D.34
SAIL-M12GM12W-4-2L1.5U	1925420150	D.63	SAIL-M12GM12W-CD-5.0A	1061990500	D.21	SAIL-M12GM8W-4-1.5Q	1938080150	D.67	SAIL-M12W-4-1.5V	1906260500	D.41
SAIL-M12GM12W-4-2L1.5U	1925420150	D.63	SAIL-M12GM12W-CD-5.0B	1062190500	C.11	SAIL-M12GM8W-4-1.5Q	9456670150	D.35	SAIL-M12W-4-1.5V	1925520500	D.34
SAIL-M12GM12W-4-2L1.5U	1925420150	D.63	SAIL-M12GM12W-CD-5.0B	1062190500	D.21	SAIL-M12GM8W-4-1.5U	9456670150	D.66	SAIL-M12W-4-1.5V	1925520500	D.43
SAIL-M12GM12W-4-2L1.5U	1925420150	D.63	SAIL-M12GM12W-CD-5.0B	1062190500	C.15	SAIL-M12GM8W-4-1.5U	1938210150	D.35	SAIL-M12W-4-1.5V	1057810150	D.82
SAIL-M12GM12W-4-2L1.5U	1925420300	D.38	SAIL-M12GM12W-PB-1.5D	1062310150	D.109	SAIL-M12GM8W-4-1.5U	1938210150	D.68	SAIL-M12W-4B-1.5Q	1057810150	D.82
SAIL-M12GM12W-4-2L1.5U	1925420300	D.63	SAIL-M12GM12W-PB-1.5E	1062380150	C.15	SAIL-M12GM8W-4-1.5U	1938210150	D.68	SAIL-M12W-4B-1.5Q	1057810150	D.82
SAIL-M12GM12W-4-2L1.5U	1925420300	D.63	SAIL-M12GM12W-PB-1.5E	1062380150	D.109	SAIL-M12GM8W-4-1.5U	1938081000	D.35	SAIL-M12W-4B-3.0Q	1057810300	D.82
SAIL-M12GM12W-4-2L1.5U	1925420300	D.63	SAIL-M12GM12W-PB-1.5E	1062380150	D.109	SAIL-M12GM8W-4-1.5U	1938081000	D.67	SAIL-M12W-4B-5.0Q	1057810500	D.82
SAIL-M12GM12W-4-2L1.5U	1926610500	D.38	SAIL-M12GM12W-PB-1.5E	1062311000	C.15	SAIL-M12GM8W-4-1.5U	9456671000	D.35	SAIL-M12W-4B-5.0Q	1059650150	D.48
SAIL-M12GM12W-4-2L1.5U	1926610500	D.63	SAIL-M12GM12W-PB-1.5E	1062311000	D.109	SAIL-M12GM8W-4-1.5U	9456671000	D.66	SAIL-M12W-4B-5.0Q	1059650150	D.48
SAIL-M12GM12W-4-2L1.5U	1926610500	D.63	SAIL-M12GM12W-PB-1.5E	1062311000	D.109	SAIL-M12GM8W-4-1.5U	9456671000	D.66	SAIL-M12W-4B-5.0Q	1059650150	D.48
SAIL-M12GM12W-4-2L1.5U	1926610500	D.63	SAIL-M12GM12W-PB-1.5E	1062311000	D.109	SAIL-M12GM8W-4-1.5U	9456671000	D.66	SAIL-M12W-4B-5.0Q	1059650150	D.48
SAIL-M12GM12W-4-2L1.5U	1926610500	D.63	SAIL-M12GM12W-PB-1.5E	1062311000	D.109	SAIL-M12GM8W-4-1.5U	9456671000	D.66	SAIL-M12W-4B-5.0Q	1059650150	D.48
SAIL-M12GM12W-4-2L1.5U	1926610500	D.63	SAIL-M12GM12W-PB-1.5E	1062311000	D.109	SAIL-M12GM8W-4-1.5U	9456671000	D.66	SAIL-M12W-4B-5.0Q	1059650150	D.48
SAIL-M12GM12W-4-2L1.5U	1926610500	D.63	SAIL-M12GM12W-PB-1.5E	1062311000	D.109	SAIL-M12GM8W-4-1.5U	9456671000	D.66	SAIL-M12W-4B-5.0Q	1059650150	D.48
SAIL-M12GM12W-4-2L1.5U	1926610500	D.63	SAIL-M12GM12W-PB-1.5E	1062311000	D.109	SAIL-M12GM8W-4-1.5U	9456671000	D.66	SAIL-M12W-4B-5.0Q	1059650150	D.48
SAIL-M12GM12W-4-2L1.5U	1926610500	D.63	SAIL-M12GM12W-PB-1.5E	1062311000	D.109	SAIL-M12GM8W-4-1.5U	9456671000	D.66	SAIL-M12W-4B-5.0Q	1059650150	D.48
SAIL-M12GM12W-4-2L1.5U	1926610500	D.63	SAIL-M12GM12W-PB-1.5E	1062311000	D.109	SAIL-M12GM8W-4-1.5U	9456671000	D.66	SAIL-M12W-4B-5.0Q	1059650150	D.48
SAIL-M12GM12W-4-2L1.5U	1926610										

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SAIL-M12W-CD-10B	1062171000	D.116	SAIL-M12WM12W-4S5.0Q	1059730500	D.65	SAIL-M12WM8W-4-3.0U	1906340300	D.66	SAIL-M8BG-4S-5.0Q-SB	1981910500	D.118
SAIL-M12W-CD-3.0A	1062220300	C.20	SAIL-M12WM12W-5-1.5Q	1926590150	D.37	SAIL-M12WM8W-4-3.0V	1938220300	D.35	SAIL-M8BG-4S1.5U	1906610150	D.55
SAIL-M12W-CD-3.0B	1062220300	D.116	SAIL-M12WM12W-5-1.5Q	1926590150	D.37	SAIL-M12WM8W-4-3.0V	1938220300	D.35	SAIL-M8BG-4S10U	1906611000	D.55
SAIL-M12W-CD-3.0A	1062170300	C.20	SAIL-M12WM12W-5-1.5U	9457900150	D.60	SAIL-M12WM8W-4-5.0Q	1938090500	D.68	SAIL-M8BG-4S3.0U	1906610300	D.55
SAIL-M12W-CD-3.0B	1062170300	D.116	SAIL-M12WM12W-5-1.5U	9457900150	D.59	SAIL-M12WM8W-4-5.0Q	1938090500	D.67	SAIL-M8BG-4S5.0U	1906610500	D.55
SAIL-M12W-CD-5.0A	1062220500	C.20	SAIL-M12WM12W-5-1.5V	1925400150	D.37	SAIL-M12WM8W-4-5.0U	1906340500	D.65	SAIL-M8BGR-3-1.5Q	1948610150	D.52
SAIL-M12W-CD-5.0A	1062220500	D.116	SAIL-M12WM12W-5-1.5V	1925400150	D.61	SAIL-M12WM8W-4-5.0U	1906340500	D.66	SAIL-M8BGR-3-1.5U	1827020150	D.52
SAIL-M12W-CD-5.0B	1062170500	C.20	SAIL-M12WM12W-5-10Q	1926591000	D.37	SAIL-M12WM8W-4-5.0V	1938220500	D.35	SAIL-M8BGR-3-1.5V	1948710150	D.52
SAIL-M12W-CD-5.0B	1062170500	D.116	SAIL-M12WM12W-5-10Q	1926591000	D.60	SAIL-M12WM8W-4-5.0V	1938220500	D.68	SAIL-M8BGR-3-10Q	1948611000	D.52
SAIL-M12W-PB-1.5D	1061970150	C.14	SAIL-M12WM12W-5-10U	9457901000	D.37	SAIL-M5BG-3P-1.5U	1873290150	D.56	SAIL-M8BGR-3-10U	1827021000	D.52
SAIL-M12W-PB-1.5D	1061970150	D.108	SAIL-M12WM12W-5-10U	9457901000	D.59	SAIL-M5BG-3P-1.5U	1873290150	D.56	SAIL-M8BGR-3-10V	1948711000	D.52
SAIL-M12W-PB-1.5E	1062340150	C.14	SAIL-M12WM12W-5-10V	1925401000	D.37	SAIL-M5BG-3P-3.0U	1873290300	D.56	SAIL-M8BGR-3-3.0Q	1948610300	D.52
SAIL-M12W-PB-1.5E	1062340150	D.108	SAIL-M12WM12W-5-10V	1925401000	D.61	SAIL-M5BG-3P-5.0U	1873290500	D.56	SAIL-M8BGR-3-3.0Q	1927203000	D.52
SAIL-M12W-PB-10D	1061971000	C.14	SAIL-M12WM12W-5-3.0Q	1926590300	D.37	SAIL-M5BG-4P-1.5U	1873250150	D.56	SAIL-M8BGR-3-3.0V	1948710300	D.52
SAIL-M12W-PB-10D	1061971000	D.108	SAIL-M12WM12W-5-3.0Q	1926590300	D.60	SAIL-M5BG-4P-1.5U	1873250150	D.56	SAIL-M8BGR-3-3.0V	1948610500	D.52
SAIL-M12W-PB-10E	1062341000	C.14	SAIL-M12WM12W-5-3.0Q	9457900300	D.37	SAIL-M5BG-4P-3.0U	1873250300	D.56	SAIL-M8BGR-3-5.0U	1927302050	D.52
SAIL-M12W-PB-10E	1062341000	D.108	SAIL-M12WM12W-5-3.0Q	9457900300	D.59	SAIL-M5BG-4P-3.0U	1873250500	D.56	SAIL-M8BGR-3-5.0U	1948710500	D.52
SAIL-M12W-PB-10E	1062340150	C.14	SAIL-M12WM12W-5-3.0Q	1925400300	D.37	SAIL-M5BW-3P-1.5U	1873260150	D.56	SAIL-M8BGR-4-1.5Q	1948630150	D.52
SAIL-M12W-PB-10E	1062340150	D.108	SAIL-M12WM12W-5-3.0Q	1925400300	D.61	SAIL-M5BW-3P-1.5U	1873260150	D.56	SAIL-M8BGR-4-1.5U	1948530150	D.52
SAIL-M12W-PB-3.0D	1061970300	C.14	SAIL-M12WM12W-5-5.0Q	1926590500	D.37	SAIL-M5BW-3P-3.0U	1873260300	D.56	SAIL-M8BGR-4-1.5V	1948730150	D.52
SAIL-M12W-PB-3.0D	1061970300	D.108	SAIL-M12WM12W-5-5.0Q	1926590500	D.60	SAIL-M5BW-3P-5.0U	1873260500	D.56	SAIL-M8BGR-4-10Q	1948631000	D.52
SAIL-M12W-PB-3.0D	1061970300	C.14	SAIL-M12WM12W-5-5.0Q	9457900500	D.37	SAIL-M5BW-4P-1.5U	1873270150	D.56	SAIL-M8BGR-4-10U	1948531000	D.52
SAIL-M12W-PB-3.0D	1061970300	D.108	SAIL-M12WM12W-5-5.0Q	9457900500	D.59	SAIL-M5BW-4P-1.5U	1873270150	D.56	SAIL-M8BGR-4-10V	1948731000	D.52
SAIL-M12W-PB-5.0D	1062340500	C.14	SAIL-M12WM12W-5-5.0V	1925400500	D.37	SAIL-M5BW-4P-3.0U	1873270300	D.56	SAIL-M8BGR-4-3.0Q	1948630300	D.52
SAIL-M12W-PB-5.0D	1062340500	D.108	SAIL-M12WM12W-5-5.0V	1925400500	D.61	SAIL-M5BW-4P-5.0U	1873270500	D.56	SAIL-M8BGR-4-3.0Q	1948530300	D.52
SAIL-M12W-PB-5.0E	1062340500	C.14	SAIL-M12WM12W-5S1.5Q	1059740150	D.65	SAIL-M5G-3P-1.5U	1854060150	D.56	SAIL-M8BGR-4-3.0V	1948730300	D.52
SAIL-M12W-PB-5.0E	1062340500	D.108	SAIL-M12WM12W-5S1.5Q	1059740150	D.65	SAIL-M5G-3P-1.5U	1854060150	D.56	SAIL-M8BGR-4-5.0Q	1948630500	D.52
SAIL-M12WM12G-3-1.5U	1821050150	D.36	SAIL-M12WM12W-5S3.0Q	1059740300	D.65	SAIL-M5G-3P-3.0U	1854060300	D.56	SAIL-M8BGR-4-5.0Q	1948530500	D.52
SAIL-M12WM12G-3-10U	1821050150	D.36	SAIL-M12WM12W-5S3.0Q	1059740300	D.65	SAIL-M5G-3P-5.0U	1854060500	D.56	SAIL-M8BGR-4-5.0V	1948730500	D.52
SAIL-M12WM12G-3-3.0U	1821050300	D.36	SAIL-M12WM12W-CD-1.5A	1062150150	D.65	SAIL-M5G-4P-1.5U	1871700150	D.56	SAIL-M8BW-3-1.5Q	1927060150	D.55
SAIL-M12WM12G-3-5.0U	1821050500	D.36	SAIL-M12WM12W-CD-1.5A	1062150150	D.117	SAIL-M5G-4P-10U	1871701000	D.56	SAIL-M8BW-3-1.5Q	1927060150	D.55
SAIL-M12WM12G-3B-1.5Q	1057870150	D.83	SAIL-M12WM12W-CD-1.5A	1062150150	D.117	SAIL-M5G-4P-3.0U	1871700300	D.56	SAIL-M8BW-3-1.5U	9457380150	D.30
SAIL-M12WM12G-3B-1.5Q	1057870150	D.83	SAIL-M12WM12W-CD-1.5A	1062150150	D.117	SAIL-M5G-4P-5.0U	1871700500	D.56	SAIL-M8BW-3-1.5U	1927380150	D.49
SAIL-M12WM12G-3B-10Q	1057870300	D.83	SAIL-M12WM12W-CD-1.5B	1062210150	D.117	SAIL-M5W-3P-1.5U	1873280150	D.56	SAIL-M8BW-3-1.5V	1927320150	D.35
SAIL-M12WM12G-3B-3.0Q	1057870500	D.83	SAIL-M12WM12W-CD-10A	1062151000	C.21	SAIL-M5W-3P-1.5U	1873280150	D.56	SAIL-M8BW-3-1.5V	1927320150	D.35
SAIL-M12WM12G-4B-1.5Q	1057880150	D.83	SAIL-M12WM12W-CD-10A	1062151000	D.117	SAIL-M5W-3P-10U	1873280300	D.56	SAIL-M8BW-3-1.5V	1927061000	D.35
SAIL-M12WM12G-4B-1.5Q	1057880150	D.83	SAIL-M12WM12W-CD-10B	1062211000	C.21	SAIL-M5W-3P-3.0U	1873280500	D.56	SAIL-M8BW-3-10Q	1927061000	D.35
SAIL-M12WM12G-4B-3.0Q	1057880300	D.83	SAIL-M12WM12W-CD-10B	1062211000	C.117	SAIL-M5W-3P-5.0U	1873280500	D.56	SAIL-M8BW-3-10Q	9457380150	D.35
SAIL-M12WM12G-4B-5.0Q	1057880500	D.83	SAIL-M12WM12W-CD-10E	1062211000	D.117	SAIL-M5W-4P-1.5U	1873240150	D.56	SAIL-M8BW-3-10U	9457381000	D.35
SAIL-M12WM12G-5-1.5U	9456500150	D.37	SAIL-M12WM12W-CD-10E	1062211000	D.117	SAIL-M5W-4P-10U	1873241000	D.56	SAIL-M8BW-3-10U	9457381000	D.35
SAIL-M12WM12G-5-1.5U	9456500150	D.37	SAIL-M12WM12W-CD-3.0A	1062150300	C.21	SAIL-M5W-4P-10U	1873241000	D.56	SAIL-M8BW-3-10U	9457381000	D.35
SAIL-M12WM12G-5-3.0U	9456500300	D.37	SAIL-M12WM12W-CD-3.0B	1062210300	D.117	SAIL-M5W-4P-3.0U	1873240300	D.56	SAIL-M8BW-3-10U	1927321000	D.35
SAIL-M12WM12G-5-5.0U	9456500500	D.37	SAIL-M12WM12W-CD-5.0A	1062103000	D.117	SAIL-M5W-4P-5.0U	1873240500	D.56	SAIL-M8BW-3-10V	1927321000	D.35
SAIL-M12WM12G-5B-1.5Q	1057890150	D.83	SAIL-M12WM12W-CD-5.0A	1062150500	C.21	SAIL-M8BG-3-1.5Q	1926980150	D.34	SAIL-M8BW-3-3.0Q	1927060300	D.51
SAIL-M12WM12G-5B-1.5Q	1057890150	D.83	SAIL-M12WM12W-CD-5.0A	1062150500	C.117	SAIL-M8BG-3-1.5Q	1926980150	D.34	SAIL-M8BW-3-3.0Q	1927060300	D.51
SAIL-M12WM12G-5B-10Q	1057890300	D.83	SAIL-M12WM12W-CD-5.0B	1062210500	D.117	SAIL-M8BG-3-1.5U	9457450150	D.50	SAIL-M8BW-3-3.0Q	1927060300	D.50
SAIL-M12WM12G-5B-3.0Q	1057890500	D.83	SAIL-M12WM12W-CD-5.0B	1062210500	D.117	SAIL-M8BG-3-1.5U	9457450150	D.49	SAIL-M8BW-3-3.0U	9457380300	D.49
SAIL-M12WM12G-5B-5.0Q	1057890500	D.83	SAIL-M12WM12W-PB-1.5D	1062330150	C.15	SAIL-M8BG-3-1.5V	1927240150	D.34	SAIL-M8BW-3-3.0U	1927320300	D.35
SAIL-M12WM12W-3-1.5Q	1926570150	D.37	SAIL-M12WM12W-PB-1.5D	1062330150	D.109	SAIL-M8BG-3-1.5V	1927240150	D.51	SAIL-M8BW-3-3.0U	1927320300	D.35
SAIL-M12WM12W-3-1.5Q	1926570150	D.37	SAIL-M12WM12W-PB-1.5E	1062400150	C.15	SAIL-M8BG-3-10Q	1926981000	D.34	SAIL-M8BW-3-5.0Q	1927060500	D.35
SAIL-M12WM12W-3-1.5U	1815670150	D.59	SAIL-M12WM12W-PB-1.5E	1062400150	C.109	SAIL-M8BG-3-10Q	1926981000	D.50	SAIL-M8BW-3-5.0Q	1927060500	D.35
SAIL-M12WM12W-3-1.5U	1815670150	D.59	SAIL-M12WM12W-PB-10D	1062331000	C.15	SAIL-M8BG-3-10U	9457451000	D.34	SAIL-M8BW-3-5.0Q	9457380500	D.35
SAIL-M12WM12W-3-1.5V	1925380150	D.37	SAIL-M12WM12W-PB-10D	1062331000	C.109	SAIL-M8BG-3-10U	9457451000	D.49	SAIL-M8BW-3-5.0U	9457380500	D.35
SAIL-M12WM12W-3-1.5V	1925380150	D.37	SAIL-M12WM12W-PB-10E	1062401000	C.15	SAIL-M8BG-3-10V	1927241000	D.34	SAIL-M8BW-3-5.0V	1927320500	D.35
SAIL-M12WM12W-3-10Q	1926571000	D.37	SAIL-M12WM12W-PB-10E	1062401000	C.109	SAIL-M8BG-3-10V	1927241000	D.51	SAIL-M8BW-3-5.0V	1927320500	D.35
SAIL-M12WM12W-3-10Q	1926571000	D.37	SAIL-M12WM12W-PB-3.0D	1062330300	C.109	SAIL-M8BG-3-3.0Q	1926980300	D.34	SAIL-M8BW-3L1.5Q	1927090150	D.51
SAIL-M12WM12W-3-10U	1815671000	D.59	SAIL-M12WM12W-PB-3.0D	1062330300	C.109	SAIL-M8BG-3-3.0Q	1926980300	D.50	SAIL-M8BW-3L1.5Q	1927090150	D.51
SAIL-M12WM12W-3-10U	1815671000	D.59	SAIL-M12WM12W-PB-3.0E	1062400300	D.109	SAIL-M8BG-3-3.0U	9457450300	D.34	SAIL-M8BW-3L1.5U	9457460150	D.54
SAIL-M12WM12W-3-10V	1925381000	D.37	SAIL-M12WM12W-PB-3.0E	1062400300	D.109	SAIL-M8BG-3-3.0U	9457450300	D.49	SAIL-M8BW-3L1.5U	9457460150	D.54
SAIL-M12WM12W-3-10V	1925381000	D.37	SAIL-M12WM12W-PB-5.0D	1062330500	C.15	SAIL-M8BG-3-3.0V	1927240300	D.34	SAIL-M8BW-3L1.5U	1927350150	D.35
SAIL-M12WM12W-3-3.0Q	1926570300	D.37	SAIL-M12WM12W-PB-5.0D	1062330500	D.109	SAIL-M8BG-3-3.0V	1927240300	D.51	SAIL-M8BW-3L1.5U	1927350150	D.35
SAIL-M12WM12W-3-3.0Q	1926570300	D.37	SAIL-M12WM12W-PB-5.0E	1062400500	C.15	SAIL-M8BG-3-5.0Q	1926980500	D.34	SAIL-M8BW-3L10Q	1927091000	D.35
SAIL-M12WM12W-3-3.0Q	1926570300	D.37	SAIL-M12WM12W-PB-5.0E	1062400500	C.109	SAIL-M8BG-3-5.0Q	1926980500	D.50	SAIL-M8BW-3L10Q	1927091000	D.35
SAIL-M12WM12W-3-3.0U	1815670300	D.59	SAIL-M12WM8W-3-1.5Q	1938060150	D.35	SAIL-M8BG-3-5.0U	9457450500	D.34	SAIL-M8BW-3L10U	9457461000	D.54
SAIL-M12WM12W-3-3.0U	1815670300	D.59	SAIL-M12WM8W-3-1.5Q	1938060150	D.35	SAIL-M8BG-3-5.0U	9457450500	D.49	SAIL-M8BW-3L10U	9457461000	D.54
SAIL-M12WM12W-3-3.0U	1815670300	D.59	SAIL-M12WM8W-3-1.5U	1906330150	D.36	SAIL-M8BG-3-5.0V	1927240500	D.34	SAIL-M8BW-3L10U	1927350150	D.35
SAIL-M12WM12W-3-3.0U	1815670300	D.59	SAIL-M12WM8W-3-1.5U	1906330150	D.36	SAIL-M8BG-3-5.0V	1927240500	D.51	SAIL-M8BW-		

Type	Order No.	Page	Type	Order No.	Page	Type	Order No.	Page	Type	Order No.	Page
SAIL-M8BW-4-5.0Q	1927080500	D.50	SAIL-M8G-4S5.0U	1906570500	D.55	SAIL-M8GM8G-4S-1.0Q-SB	1981900100	C.4	SAIL-M8GM8W-4-10Q	1926921000	D.72
SAIL-M8BW-4-5.0U	9456150500	D.35	SAIL-M8GM12G-3-1.5Q	1938100150	D.36	SAIL-M8GM8G-4S-1.0Q-SB	1981900100	C.42	SAIL-M8GM8W-4-10U	1857661000	D.35
SAIL-M8BW-4-5.0V	9456150500	D.49	SAIL-M8GM12G-3-1.5U	1937950150	D.36	SAIL-M8GM8G-4S-1.0Q-SB	1981900100	D.118	SAIL-M8GM8W-4-10U	1857661000	D.35
SAIL-M8BW-4-5.0V	1927340500	D.35	SAIL-M8GM12G-3-1.5V	1938230150	D.36	SAIL-M8GM8G-4S-1.5Q-SB	1981900150	C.4	SAIL-M8GM8W-4-10V	1927181000	D.71
SAIL-M8BW-4-5.0V	1927340500	D.51	SAIL-M8GM12G-3-1.0Q	1938101000	D.36	SAIL-M8GM8G-4S-1.5Q-SB	1981900150	C.42	SAIL-M8GM8W-4-10V	1927181000	D.73
SAIL-M8BW-4L1.5Q	1927100150	D.54	SAIL-M8GM12G-3-1.0U	1937951000	D.36	SAIL-M8GM8G-4S-1.5Q-SB	1981900150	D.118	SAIL-M8GM8W-4-3.0Q	1926920300	D.35
SAIL-M8BW-4L1.5V	1906400150	D.54	SAIL-M8GM12G-3-1.0V	1938231000	D.36	SAIL-M8GM8G-4S-1.0Q-SB	1981901000	C.4	SAIL-M8GM8W-4-3.0Q	1926920300	D.72
SAIL-M8BW-4L1.5V	1927360150	D.54	SAIL-M8GM12G-3-3.0Q	1938100300	D.36	SAIL-M8GM8G-4S-1.0Q-SB	1981901000	C.42	SAIL-M8GM8W-4-3.0U	1857660300	D.35
SAIL-M8BW-4L1.0Q	19271101000	D.54	SAIL-M8GM12G-3-3.0U	1937950300	D.36	SAIL-M8GM8G-4S-1.0Q-SB	1981901000	D.118	SAIL-M8GM8W-4-3.0U	1857660300	D.71
SAIL-M8BW-4L1.0V	1906401000	D.54	SAIL-M8GM12G-3-3.0V	1938230300	D.36	SAIL-M8GM8G-4S-1.5Q-SB	1981901500	C.4	SAIL-M8GM8W-4-3.0V	1927180300	D.35
SAIL-M8BW-4L1.0V	1927361000	D.54	SAIL-M8GM12G-3-5.0Q	1938100500	D.36	SAIL-M8GM8G-4S-1.5Q-SB	1981901500	C.42	SAIL-M8GM8W-4-3.0V	1927180300	D.73
SAIL-M8BW-4L3.0Q	1927100300	D.54	SAIL-M8GM12G-3-5.0U	1937950500	D.36	SAIL-M8GM8G-4S-1.5Q-SB	1981901500	D.118	SAIL-M8GM8W-4-5.0Q	1926920500	D.35
SAIL-M8BW-4L3.0V	1906400300	D.54	SAIL-M8GM12G-3-5.0V	1938230500	D.36	SAIL-M8GM8G-4S-20Q-SB	1981902000	C.4	SAIL-M8GM8W-4-5.0Q	1926920500	D.72
SAIL-M8BW-4L3.0V	1927360300	D.54	SAIL-M8GM12G-4-1.5Q	1938130150	D.36	SAIL-M8GM8G-4S-20Q-SB	1981902000	C.42	SAIL-M8GM8W-4-5.0U	1857660500	D.35
SAIL-M8BW-4L5.0Q	1927100500	D.54	SAIL-M8GM12G-4-1.5U	1937980150	D.36	SAIL-M8GM8G-4S-20Q-SB	1981902000	D.118	SAIL-M8GM8W-4-5.0U	1857660500	D.71
SAIL-M8BW-4L5.0V	1906400500	D.54	SAIL-M8GM12G-4-1.5V	1938260150	D.36	SAIL-M8GM8G-4S-3.0Q-SB	1981903000	C.4	SAIL-M8GM8W-4-5.0V	1927180500	D.35
SAIL-M8BW-4L5.0V	1927360500	D.54	SAIL-M8GM12G-4-1.0Q	1938131000	D.36	SAIL-M8GM8G-4S-3.0Q-SB	1981903000	C.42	SAIL-M8GM8W-4-5.0V	1927180500	D.73
SAIL-M8BW-4S1.5U	1906630150	D.55	SAIL-M8GM12G-4-1.0U	1937981000	D.36	SAIL-M8GM8G-4S-3.0Q-SB	1981903000	D.118	SAIL-M8GM8W-4L1.5Q	1926940150	D.77
SAIL-M8BW-4S10U	1906631000	D.55	SAIL-M8GM12G-4-1.0V	1938261000	D.36	SAIL-M8GM8G-4S-5.0Q-SB	1981900500	C.4	SAIL-M8GM8W-4L1.5U	1906450150	D.77
SAIL-M8BW-4S3.0U	1906630300	D.55	SAIL-M8GM12G-4-3.0Q	1938130300	D.36	SAIL-M8GM8G-4S-5.0Q-SB	1981900500	C.42	SAIL-M8GM8W-4L1.5V	1927200150	D.77
SAIL-M8BW-4S5.0U	1906630500	D.55	SAIL-M8GM12G-4-3.0U	1937980300	D.36	SAIL-M8GM8G-4S-5.0Q-SB	1981900500	D.118	SAIL-M8GM8W-4L1.0Q	1926941000	D.77
SAIL-M8BWR-3-1.5Q	1948620150	D.53	SAIL-M8GM12G-4-3.0V	1938260300	D.36	SAIL-M8GM8GR-3-1.5Q	1948550150	D.75	SAIL-M8GM8W-4L1.0U	1906451000	D.77
SAIL-M8BWR-3-1.5U	1827010150	D.53	SAIL-M8GM12G-4-5.0Q	1938130500	D.36	SAIL-M8GM8GR-3-1.5U	1948470150	D.74	SAIL-M8GM8W-4L10V	1927201000	D.77
SAIL-M8BWR-3-1.5V	1948720150	D.53	SAIL-M8GM12G-4-5.0U	1937980500	D.36	SAIL-M8GM8GR-3-1.5V	1948650150	D.75	SAIL-M8GM8W-4L3.0Q	1926940300	D.77
SAIL-M8BWR-3-1.0Q	1948621000	D.53	SAIL-M8GM12G-4-5.0V	1938260500	D.36	SAIL-M8GM8GR-3-1.0Q	1948551000	D.76	SAIL-M8GM8W-4L3.0U	1906450300	D.77
SAIL-M8BWR-3-1.0U	1827011000	D.53	SAIL-M8GM12W-3-1.5Q	1938110150	D.37	SAIL-M8GM8GR-3-1.0U	1948471000	D.74	SAIL-M8GM8W-4L3.0V	1927200300	D.77
SAIL-M8BWR-3-1.0V	1948721000	D.53	SAIL-M8GM12W-3-1.5U	1937980150	D.37	SAIL-M8GM8GR-3-1.0U	1948651000	D.76	SAIL-M8GM8W-4L5.0U	1926940500	D.77
SAIL-M8BWR-3-3.0Q	1948620300	D.53	SAIL-M8GM12W-3-1.5V	1938240150	D.37	SAIL-M8GM8GR-3-3.0Q	1948550300	D.75	SAIL-M8GM8W-4L5.0U	1906450500	D.77
SAIL-M8BWR-3-3.0U	1827010300	D.53	SAIL-M8GM12W-3-1.0Q	1938111000	D.37	SAIL-M8GM8GR-3-3.0U	1948470300	D.74	SAIL-M8GM8W-4L5.0U	1927200500	D.77
SAIL-M8BWR-3-3.0V	1948720300	D.53	SAIL-M8GM12W-3-1.0U	1937981000	D.37	SAIL-M8GM8GR-3-3.0U	1948650300	D.76	SAIL-M8GM8W-3-1.5Q	1948560150	D.75
SAIL-M8BWR-3-5.0Q	1948620500	D.53	SAIL-M8GM12W-3-1.0V	1938241000	D.37	SAIL-M8GM8GR-3-5.0Q	1948550500	D.75	SAIL-M8GM8WR-3-1.5U	1948480150	D.74
SAIL-M8BWR-3-5.0U	1827010500	D.53	SAIL-M8GM12W-3-3.0Q	1938110300	D.37	SAIL-M8GM8GR-3-5.0U	1948470500	D.74	SAIL-M8GM8WR-3-1.5V	1948660150	D.76
SAIL-M8BWR-3-5.0V	1948720500	D.53	SAIL-M8GM12W-3-3.0U	1937980300	D.37	SAIL-M8GM8GR-3-5.0V	1948650500	D.76	SAIL-M8GM8WR-3-1.0Q	1948561000	D.75
SAIL-M8BWR-4-1.5Q	1948640150	D.53	SAIL-M8GM12W-3-3.0V	1938240300	D.37	SAIL-M8GM8GR-4-1.5U	1948580150	D.75	SAIL-M8GM8WR-3-1.0U	1948481000	D.74
SAIL-M8BWR-4-1.5U	1948540150	D.53	SAIL-M8GM12W-3-5.0Q	1938110500	D.37	SAIL-M8GM8GR-4-1.5U	1948500150	D.74	SAIL-M8GM8WR-3-10V	1948661000	D.76
SAIL-M8BWR-4-1.5V	1948740150	D.53	SAIL-M8GM12W-3-5.0U	1937980500	D.37	SAIL-M8GM8GR-4-1.5V	1948680150	D.75	SAIL-M8GM8WR-3-3.0Q	1948560300	D.75
SAIL-M8BWR-4-1.0Q	1948641000	D.53	SAIL-M8GM12W-3-5.0V	1938240500	D.37	SAIL-M8GM8GR-4-1.0Q	1948581000	D.76	SAIL-M8GM8WR-3-3.0U	1948480300	D.74
SAIL-M8BWR-4-1.0U	1948541000	D.53	SAIL-M8GM12W-4-1.5Q	1938140150	D.37	SAIL-M8GM8GR-4-1.0U	1948501000	D.74	SAIL-M8GM8WR-3-3.0V	1948660300	D.76
SAIL-M8BWR-4-1.0V	1948741000	D.53	SAIL-M8GM12W-4-1.5U	1937990150	D.37	SAIL-M8GM8GR-4-1.0U	1948681000	D.76	SAIL-M8GM8WR-3-5.0Q	1948560500	D.75
SAIL-M8BWR-4-3.0Q	1948640300	D.53	SAIL-M8GM12W-4-1.5V	1938240150	D.37	SAIL-M8GM8GR-4-3.0Q	1948580300	D.75	SAIL-M8GM8WR-3-5.0U	1948480500	D.74
SAIL-M8BWR-4-3.0U	1948540300	D.53	SAIL-M8GM12W-4-1.0Q	1938141000	D.37	SAIL-M8GM8GR-4-3.0U	1948500300	D.74	SAIL-M8GM8WR-3-5.0V	1948660500	D.76
SAIL-M8BWR-4-3.0V	1948740300	D.53	SAIL-M8GM12W-4-1.0U	1937991000	D.37	SAIL-M8GM8GR-4-3.0U	1948680300	D.76	SAIL-M8GM8WR-4-1.5Q	1948590150	D.75
SAIL-M8BWR-4-5.0Q	1948640500	D.53	SAIL-M8GM12W-4-1.0V	1938241000	D.37	SAIL-M8GM8GR-4-5.0Q	1948580500	D.75	SAIL-M8GM8WR-4-1.5U	1948510150	D.74
SAIL-M8BWR-4-5.0U	1948540500	D.53	SAIL-M8GM12W-4-3.0Q	1938140300	D.37	SAIL-M8GM8GR-4-5.0U	1948500500	D.74	SAIL-M8GM8WR-4-1.5V	1948590150	D.76
SAIL-M8BWR-4-5.0V	1948740500	D.53	SAIL-M8GM12W-4-3.0U	1937990300	D.37	SAIL-M8GM8GR-4-5.0V	1948680500	D.76	SAIL-M8GM8WR-4-1.0Q	1948591000	D.75
SAIL-M8G-3-1.5Q	1926970150	D.34	SAIL-M8GM12W-4-3.0V	1938270300	D.37	SAIL-M8GM8WR-3-1.5Q	1926910150	D.35	SAIL-M8GM8WR-4-1.0U	1948511000	D.74
SAIL-M8G-3-1.5U	1926970150	D.50	SAIL-M8GM12W-4-5.0Q	1938140500	D.37	SAIL-M8GM8WR-3-1.5U	1926910150	D.72	SAIL-M8GM8WR-4-10V	1948691000	D.76
SAIL-M8G-3-1.5V	1824590150	D.34	SAIL-M8GM12W-4-5.0U	1937990500	D.37	SAIL-M8GM8WR-3-1.5V	1824580150	D.35	SAIL-M8GM8WR-4-10V	1948590300	D.75
SAIL-M8G-3-1.5U	1824590150	D.49	SAIL-M8GM12W-4-5.0V	1938270500	D.37	SAIL-M8GM8WR-3-1.5U	1824580150	D.71	SAIL-M8GM8WR-4-3.0Q	1948510300	D.74
SAIL-M8G-3-1.5V	1927230150	D.34	SAIL-M8GM8G-3-1.5Q	1926890150	D.34	SAIL-M8GM8WR-3-1.5V	1927170150	D.35	SAIL-M8GM8WR-4-3.0U	1948690300	D.76
SAIL-M8G-3-1.5V	1927230150	D.51	SAIL-M8GM8G-3-1.5U	1926890150	D.72	SAIL-M8GM8WR-3-1.5V	1927170150	D.73	SAIL-M8GM8WR-4-5.0Q	1948590500	D.75
SAIL-M8G-3-1.0Q	1926971000	D.34	SAIL-M8GM8G-3-1.5U	1824570150	D.34	SAIL-M8GM8WR-3-1.0Q	1926911000	D.35	SAIL-M8GM8WR-4-5.0U	1948510500	D.74
SAIL-M8G-3-1.0Q	1926971000	D.50	SAIL-M8GM8G-3-1.5V	1824570150	D.71	SAIL-M8GM8WR-3-1.0Q	1926911000	D.72	SAIL-M8GM8WR-4-5.0V	1948690500	D.76
SAIL-M8G-3-1.0U	1824591000	D.34	SAIL-M8GM8G-3-1.5V	1927150150	D.34	SAIL-M8GM8WR-3-1.5Q	1824581000	D.35	SAIL-M8GM8WR-4-10V	1927050150	D.34
SAIL-M8G-3-1.0U	1824591000	D.49	SAIL-M8GM8G-3-1.5V	1927150150	D.73	SAIL-M8GM8WR-3-1.5U	1824581000	D.71	SAIL-M8GM8WR-4-1.5Q	1927050150	D.75
SAIL-M8G-3-1.0V	1927231000	D.34	SAIL-M8GM8G-3-1.5V	1926891000	D.34	SAIL-M8GM8WR-3-1.5U	1824581000	D.35	SAIL-M8GM8WR-4-1.5U	1948510150	D.74
SAIL-M8G-3-1.0V	1927231000	D.51	SAIL-M8GM8G-3-1.0Q	1926891000	D.72	SAIL-M8GM8WR-3-1.5V	1927170150	D.35	SAIL-M8GM8WR-4-1.5V	1948590150	D.76
SAIL-M8G-3-3.0Q	1926970300	D.34	SAIL-M8GM8G-3-1.0Q	1824571000	D.34	SAIL-M8GM8WR-3-1.5V	1927170150	D.73	SAIL-M8GM8WR-4-1.5V	1948591000	D.75
SAIL-M8G-3-3.0Q	1926970300	D.50	SAIL-M8GM8G-3-1.0U	1824571000	D.71	SAIL-M8GM8WR-3-3.0Q	1926910300	D.35	SAIL-M8GM8WR-4-10U	1948511000	D.74
SAIL-M8G-3-3.0U	1824590300	D.34	SAIL-M8GM8G-3-1.0V	1927151000	D.34	SAIL-M8GM8WR-3-3.0Q	1824580300	D.35	SAIL-M8GM8WR-4-10U	1948691000	D.76
SAIL-M8G-3-3.0U	1824590300	D.49	SAIL-M8GM8G-3-1.0V	1927151000	D.73	SAIL-M8GM8WR-3-3.0U	1824580300	D.71	SAIL-M8GM8WR-4-3.0Q	1948590300	D.75
SAIL-M8G-3-3.0V	1927230300	D.34	SAIL-M8GM8G-3-3.0Q	1926890300	D.34	SAIL-M8GM8WR-3-3.0U	1824580300	D.35	SAIL-M8GM8WR-4-3.0U	1948510300	D.74
SAIL-M8G-3-3.0V	1927230300	D.51	SAIL-M8GM8G-3-3.0Q	1926890300	D.72	SAIL-M8GM8WR-3-3.0U	1927170300	D.35	SAIL-M8GM8WR-4-3.0V	1948690300	D.76
SAIL-M8G-3-5.0Q	1926970500	D.34	SAIL-M8GM8G-3-3.0U	1926890300	D.34	SAIL-M8GM8WR-3-3.0V	1927170300	D.73	SAIL-M8GM8WR-4-5.0Q	1948590500	D.75
SAIL-M8G-3-5.0Q	1926970500	D.50	SAIL-M8GM8G-3-3.0U	1824570300	D.34	SAIL-M8GM8WR-3-5.0Q	1926910500	D.35	SAIL-M8GM8WR-4-5.0U	1948510500	D.74
SAIL-M8G-3-5.0U	1824590500	D.34	SAIL-M8GM8G-3-3.0V	1824570300	D.71	SAIL-M8GM8WR-3-5.0Q	1926910500	D.72	SAIL-M8GM8WR-4-5.0V	1948690500	D.76
SAIL-M8G-3-5.0U	1824590500	D.49	SAIL-M8GM8G-3-3.0V	1927150300	D.34	SAIL-M8GM8WR-3-5.0U	1824580500	D.35	SAIL-M8GM8WR-4-10U	1927050150	D.34
SAIL-M8G-3-5.0V	1927230500	D.34	SAIL-M8GM8G-3-5.0Q	1926890500	D.73	SAIL-M8GM8WR-3-5.0U	1824580500	D.71	SAIL-M8GM8WR-4-10U	1927050150	D.50
SAIL-M8G-3-5.0V	1927230500	D.51	SAIL-M8GM8G-3-5.0Q	1926890500	D.72	SAIL-M8GM8WR-3-5.0V	1927170500	D.35	SAIL-M8GM8WR-4-10U	1857550150	D.34
SAIL-M8G-3S1.5U	1906560150	D.55	SAIL-M8GM8G-3-5.0U	1824570500	D.34	SAIL-M8GM8WR-3-5.0V	1926910500	D.35	SAIL-M8GM8WR-4-10U	1948511000	D.74
SAIL-M8G-3S10U	1906561000	D.55	SAIL-M8GM8G-3-5.0U	1824570500	D.71	SAIL-M8GM8WR-3-5.0Q	1926910500	D.72	SAIL-M8GM8WR-4-10U	1948691000	D.76
SAIL-M8G-3S3.0U	1906560300	D.55	SAIL-M8GM8G-3-5.0U	1927150500	D.34	SAIL-M8GM8WR-3L1.5Q	1877250150	D.35	SAIL-M8GM8WR-4-3.0Q	1948590300	D.75
SAIL-M8G-3S5.0U	1906560500	D.55	SAIL-M8GM8G-3-5.0V	1927150500	D.73	SAIL-M8GM8WR-3L1					

Type	Order No.	Page	Type	Order No.	Page	Type	Order No.	Page	Type	Order No.	Page
SAIL-M8W-4-5.0Q	1927070500	D.50	SAIL-M8WM8WR-4-3.0U	1948520300	D.74	SAIL-ZW-M12BW-2/4L1.5U	1964290150	D.80	SAISW-M-5/8 M12	1803940000	D.9
SAIL-M8W-4-5.0U	1857560500	D.34	SAIL-M8WM8WR-4-3.0V	1948700300	D.76	SAIL-ZW-M12BW-2/4L10U	1964291000	D.80	SAISW-M-5/8 M12	1803940000	E.37
SAIL-M8W-4-5.0U	1857560500	D.49	SAIL-M8WM8WR-4-5.0Q	1948600500	D.75	SAIL-ZW-M12BW-2/4L3.0U	1964293000	D.80	SAISW-M-5/8 M12 B-COD	1944570000	D.11
SAIL-M8W-4-5.0V	1927330500	D.39	SAIL-M8WM8WR-4-5.0U	1948520500	D.74	SAIL-ZW-M12BW-2/4L5.0U	1964290500	D.80	SAILW-M8-3P(TL)	1920990000	D.16
SAIL-M8W-4-5.0V	1927330500	D.51	SAIL-M8WM8WR-4-5.0V	1948700500	D.76	SAIL-ZW-M12BW-3-1.5U	1005270150	D.80	SAISW-M8-4P(TL)	1921000000	D.16
SAIL-M8W-4S1.5U	1906590150	D.55	SAIL-VSA-1.5U	94577110150	D.89	SAIL-ZW-M12BW-3-10U	1005271000	D.80	Screwly M12 KO o. SD	1900100000	D.101
SAIL-M8W-4S10U	1906591000	D.55	SAIL-VSA-1.5U(0.5)	1845120150	D.93	SAIL-ZW-M12BW-3-3.0U	1005270300	D.80	Screwly M12f KO o. SD	1900120000	D.101
SAIL-M8W-4S3.0U	1906593000	D.55	SAIL-VSA-10U	9457711000	D.89	SAIL-ZW-M12BW-3-5.0U	1005270500	D.80	Screwly M23 LS	1981570000	D.101
SAIL-M8W-4S5.0U	1906590500	D.55	SAIL-VSA-10U(0.5)	1845121000	D.93	SAIL-ZW-M8BG-3-1.5U	9457490150	D.79	Screwly M8 KO o. SD	1900110000	D.101
SAIL-M8WM12W-3-1.5Q	1938120150	D.37	SAIL-VSA-3.0U	9457710300	D.89	SAIL-ZW-M8BG-3-10U	9457491000	D.79	Screwly M8F KO o. SD	1900130000	D.101
SAIL-M8WM12W-3-1.5U	1937970150	D.37	SAIL-VSA-3.0U(0.5)	1845120300	D.93	SAIL-ZW-M8BG-3-5.0U	9457490300	D.79	Screwly Set	1910000000	D.101
SAIL-M8WM12W-3-1.5V	1938250150	D.37	SAIL-VSA-5.0U	9457710500	D.89	SAIL-ZW-M8BG-3-5.0U	9457490500	D.79	Screwly Set -DM	1920000000	D.101
SAIL-M8WM12W-3-10Q	1938121000	D.37	SAIL-VSA-5.0U(0.5)	1845120500	D.93	SAIL-ZW-M8BW-3-1.5U	1964300150	D.79	Screwly- M12	1900000000	D.101
SAIL-M8WM12W-3-10U	1937971000	D.37	SAIL-VSA-M12G-1.5U	9457040000	D.89	SAIL-ZW-M8BW-3-10U	1964301000	D.79	Screwly- M12 F	1900020000	D.101
SAIL-M8WM12W-3-10V	1938251000	D.37	SAIL-VSA-M12G-10U	9457131000	D.89	SAIL-ZW-M8BW-3-3.0U	1964300300	D.79	Screwly- M8	1900010000	D.101
SAIL-M8WM12W-3-3.0Q	1938120300	D.37	SAIL-VSA-M12G-3.0U	9457830000	D.89	SAIL-ZW-M8BW-3-5.0U	1964300500	D.79	Screwly- M8 F	1900030000	D.101
SAIL-M8WM12W-3-3.0U	1937970300	D.37	SAIL-VSA-M12G-5.0U	9457130000	D.89	SAIL-ZW-M8BW-3L1.5U	9457410150	D.79	Screwly-M12 F-DM	1900021000	D.101
SAIL-M8WM12W-3-3.0V	1938250300	D.37	SAIL-VSA-M12W-1.5U	1857690150	D.89	SAIL-ZW-M8BW-3L10U	9457411000	D.79	Screwly-M12 DM	1900001000	B.27
SAIL-M8WM12W-3-5.0Q	1938120500	D.37	SAIL-VSA-M12W-3.0U	1857690300	D.89	SAIL-ZW-M8BW-3L3.0U	9457410300	D.79	Screwly-M12-DM	1900001000	D.101
SAIL-M8WM12W-3-5.0U	1937970500	D.37	SAIL-VSA-M12W-5.0U	1857690500	D.89	SAIL-ZW-M8BW-3L5.0U	9457410500	D.79	Screwly-M12-DM	1900001000	F.14
SAIL-M8WM12W-3-5.0V	1938250500	D.37	SAIL-VSB-1.5U	9457930150	D.90	SAIS 5/9-VA	1920700000	B.30	Screwly-M8 F-DM	1900031000	D.101
SAIL-M8WM12W-4-1.5Q	1938150150	D.37	SAIL-VSB-1.5U(0.5)	1845140150	D.94	SAIS 5/9-VA	1920700000	B.31	Screwly-M8-DM	1900011000	D.101
SAIL-M8WM12W-4-1.5U	1938000150	D.37	SAIL-VSB-10U(0.5)	1845141000	D.94	SAIS 5/9-VA	1920700000	C.10	SFC 0/12 NEUTRAL BL	1813170000	D.27
SAIL-M8WM12W-4-1.5V	1938280150	D.37	SAIL-VSB-3.0U	9457930300	D.90	SAIS 5/9-VA	1920700000	D.8	SFC 0/12 NEUTRAL GE	1813160000	D.27
SAIL-M8WM12W-4-10Q	1938151000	D.37	SAIL-VSB-3.0U(0.5)	1845140300	D.94	SAIS 5/9-VA-B-COD	1920700000	E.36	SFC 0/12 NEUTRAL RT	1813150000	D.27
SAIL-M8WM12W-4-10U	1938001000	D.37	SAIL-VSB-5.0U	9457930500	D.90	SAIS 5/9-VA-B-COD	1920720000	B.31	SFC 0/12 NEUTRAL WS	1813130000	D.27
SAIL-M8WM12W-4-10V	1938281000	D.37	SAIL-VSB-5.0U(0.5)	1845140500	D.94	SAIS 5/9-VA-B-COD	1920720000	C.10	SFC 0/21 NEUTRAL BL	1813220000	D.27
SAIL-M8WM12W-3-1.5Q	1938150300	D.37	SAIL-VSB-M12G-1.5U	9457680150	D.90	SAIS 5/9-VA-B-COD	1920720000	D.8	SFC 0/21 NEUTRAL GE	1813210000	D.27
SAIL-M8WM12W-3-1.5U	1938000300	D.37	SAIL-VSB-M12G-10U	9457681000	D.90	SAIS-3-IDC (0.75) M12	1852720000	D.20	SFC 0/21 NEUTRAL RT	1813200000	D.27
SAIL-M8WM12W-3-1.5V	1938280300	D.37	SAIL-VSB-M12G-3.0U	9457681000	D.90	SAIS-3-IDC M8 small	1784040001	D.21	SFC 0/21 NEUTRAL WS	1813190000	D.27
SAIL-M8WM12W-3-3.0Q	1938150500	D.37	SAIL-VSB-M12G-5.0U	9457680300	D.90	SAIS-3-IDC M8 small	1021470000	D.5	SFC 0/30 NEUTRAL BL	1813270000	D.27
SAIL-M8WM12W-3-3.0U	1938000500	D.37	SAIL-VSB-M12W-1.5U	1857680500	D.90	SAIS-3/9	1021480000	D.5	SFC 0/30 NEUTRAL GE	1813260000	D.27
SAIL-M8WM12W-3-3.0V	1938280500	D.37	SAIL-VSB-M12W-10U	1857700150	D.90	SAIS-4-IDC (0.75) M12	1852740000	D.20	SFC 0/30 NEUTRAL RT	1813250000	D.27
SAIL-M8WM8W-3-1.5Q	1926950150	D.35	SAIL-VSB-M12W-3.0U	1857700300	D.90	SAIS-4-IDC M12 small	1781550001	D.19	SFC 0/30 NEUTRAL WS	1813240000	D.27
SAIL-M8WM8W-3-1.5U	1857670150	D.35	SAIL-VSB-M12W-5.0U	1857700500	D.90	SAIS-4-IDC M8 small	1784060001	D.21	SFC 1/12 NEUTRAL BL	1747320002	D.27
SAIL-M8WM8W-3-1.5V	1857670150	D.35	SAIL-VSBD-1.5U	945670150	D.90	SAIS-4-IDC-M12B-COD	1864730000	D.10	SFC 1/12 NEUTRAL GE	1747320004	D.27
SAIL-M8WM8W-3-1.5V	1927210150	D.35	SAIL-VSBD-1.5U(0.5)	1845160150	D.94	SAIS-4/7	9457550000	D.5	SFC 1/12 NEUTRAL RT	1747320003	D.27
SAIL-M8WM8W-3-1.5V	1927210150	D.73	SAIL-VSBD-10U	9456701000	D.90	SAIS-4/7-(KV)	1921060000	D.7	SFC 1/12 NEUTRAL WS	1747320001	D.27
SAIL-M8WM8W-3-10Q	1926951000	D.35	SAIL-VSBD-10U(0.5)	1845161000	D.94	SAIS-4/9	1807340000	D.5	SFC 1/21 NEUTRAL BL	1779080002	D.27
SAIL-M8WM8W-3-10Q	1926951000	D.72	SAIL-VSBD-3.0U	9456703000	D.90	SAIS-5/7	9456940000	D.6	SFC 1/21 NEUTRAL GE	1779080004	D.27
SAIL-M8WM8W-3-10U	1857671000	D.35	SAIL-VSBD-3.0U(0.5)	1845160300	D.94	SAIS-5/7-(KV)	1921050000	D.7	SFC 1/21 NEUTRAL RT	1779080003	D.27
SAIL-M8WM8W-3-10U	1857671000	D.71	SAIL-VSBD-5.0U	9456707000	D.90	SAIS-5/7-ZF	1906390000	D.13	SFC 1/21 NEUTRAL WS	1779080001	D.27
SAIL-M8WM8W-3-10V	1927211000	D.35	SAIL-VSBD-5.0U(0.5)	1845160500	D.94	SAIS-5/9	1807350000	D.6	SFC 1/30 NEUTRAL BL	1805720000	D.27
SAIL-M8WM8W-3-10V	1927211000	D.73	SAIL-VSBD-M12G-1.5U	9457780150	D.90	SAIS-8/9	1836970000	D.6	SFC 1/30 NEUTRAL GE	1805730000	D.27
SAIL-M8WM8W-3-3.0Q	1926950300	D.35	SAIL-VSBD-M12G-10U	9457781000	D.90	SAIS-M-5/8S M12 5P A-COD	1784740000	C.17	SFC 1/30 NEUTRAL RT	1805740000	D.27
SAIL-M8WM8W-3-3.0Q	1926950300	D.72	SAIL-VSBD-M12G-3.0U	9457780300	D.90	SAIS-M-5/8S M12 5P A-COD	1784740000	C.19	SFC 1/30 NEUTRAL WS	1805760000	D.27
SAIL-M8WM8W-3-3.0U	1857670300	D.35	SAIL-VSBD-M12G-5.0U	9457780500	D.90	SAIS-M-5/8S M12 5P A-COD	1784740000	C.46	SFC 2/5,12 MC NE BL	1062030000	D.27
SAIL-M8WM8W-3-3.0U	1857670300	D.71	SAIL-VSBD-M12W-1.5U	1857710150	D.90	SAIS-M-5/8S M12 5P A-COD	1784740000	D.115	SFC 2/5,12 MC NE GE	1062010000	D.27
SAIL-M8WM8W-3-3.0U	1927210300	D.35	SAIL-VSBD-M12W-10U	1857711000	D.90	SAIS-M-5/8S M12 5P A-COD	1784740000	D.99	SFC 2/5,12 MC NE RT	1062020000	D.27
SAIL-M8WM8W-3-3.0V	1927210300	D.73	SAIL-VSBD-M12W-3.0U	1857710300	D.90	SAIS-M-5/8S M12 5P A-COD	1784740000	E.36	SFC 2/5,12 MC NE WS	1062000000	D.27
SAIL-M8WM8W-3-5.0Q	1926950500	D.35	SAIL-VSBD-M12W-5.0U	1857710500	D.90	SAIS-M23-12P-AN-1,0M	1906290100	D.57	SFC 2/5,12 MC SDR	1062040000	D.27
SAIL-M8WM8W-3-5.0Q	1926950500	D.72	SAIL-VSC-1.5U	9457920150	D.91	SAIS-M23-12P-AN-10M	1906291000	D.57	SFC 2/5,12 MC NE BL	1062090000	D.27
SAIL-M8WM8W-3-5.0U	1857670500	D.35	SAIL-VSC-1.5U(0.5)	1845180150	D.95	SAIS-M23-12P-AN-3,0M	1906290300	D.57	SFC 2/5,12 MC NE GE	1062070000	D.27
SAIL-M8WM8W-3-5.0U	1857670500	D.71	SAIL-VSC-10U	9457921000	D.91	SAIS-M23-12P-AN-5,0M	1906290500	D.57	SFC 2/5,12 MC NE RT	1062080000	D.27
SAIL-M8WM8W-3-5.0V	1927210500	D.35	SAIL-VSC-10U(0.5)	1845181000	D.95	SAIS-M23-12P-ST-1,0M	1906280100	D.57	SFC 2/5,12 MC NE WS	1062050000	D.27
SAIL-M8WM8W-3-5.0V	1927210500	D.73	SAIL-VSC-3.0U	9457920300	D.91	SAIS-M23-12P-ST-10M	1906281000	D.57	SFC 2/5,12 MC NE SDR	1062110000	D.27
SAIL-M8WM8W-4-1.5Q	1926960150	D.35	SAIL-VSC-3.0U(0.5)	1845180300	D.95	SAIS-M23-12P-ST-3,0M	1906280300	D.57	SFC 2/12 NEUTRAL BL	1758320002	D.27
SAIL-M8WM8W-4-1.5U	1926960150	D.72	SAIL-VSC-5.0U	9457920500	D.91	SAIS-M23-12P-ST-5,0M	1906280500	D.57	SFC 2/12 NEUTRAL GE	1758320004	D.27
SAIL-M8WM8W-4-1.5U	1857680150	D.35	SAIL-VSC-5.0U(0.5)	1845180500	D.95	SAIS-M23-19P-AN-1,0M	1818091000	D.57	SFC 2/12 NEUTRAL RT	1758320003	D.27
SAIL-M8WM8W-4-1.5U	1857680150	D.71	SAIL-VSC-M12G-1.5U	9457400150	D.91	SAIS-M23-19P-AN-10M	1818091000	D.57	SFC 2/12 NEUTRAL WS	1758320001	D.27
SAIL-M8WM8W-4-1.5V	1927220150	D.35	SAIL-VSC-M12G-10U	9457401000	D.91	SAIS-M23-19P-AN-3,0M	1818090300	D.57	SFC 2/21 NEUTRAL BL	1805770000	D.27
SAIL-M8WM8W-4-1.5V	1927220150	D.73	SAIL-VSC-M12G-3.0U	9457400300	D.91	SAIS-M23-19P-AN-5,0M	1818090500	D.57	SFC 2/21 NEUTRAL GE	1805780000	D.27
SAIL-M8WM8W-4-10Q	1926961000	D.35	SAIL-VSC-M12G-5.0U	9457400500	D.91	SAIS-M23-19P-ST-1,0M	1818160100	D.57	SFC 2/21 NEUTRAL RT	1805790000	D.27
SAIL-M8WM8W-4-10Q	1926961000	D.72	SAIL-VSC-M12W-1.5U	1857720150	D.91	SAIS-M23-19P-ST-10M	1818161000	D.57	SFC 2/21 NEUTRAL WS	1805810000	D.27
SAIL-M8WM8W-4-10U	1857681000	D.35	SAIL-VSC-M12W-10U	1857721000	D.91	SAIS-M23-19P-ST-3,0M	1818160300	D.57	SFC 2/30 NEUTRAL BL	1805820000	D.27
SAIL-M8WM8W-4-10U	1857681000	D.71	SAIL-VSC-M12W-3.0U	1857720300	D.91	SAIS-M23-19P-ST-5,0M	1818160500	D.57	SFC 2/30 NEUTRAL GE	1805830000	D.27
SAIL-M8WM8W-4-10V	1927221000	D.35	SAIL-VSC-M12W-5.0U	1857720500	D.91	SAIS-M8-3P	1803860000	D.14	SFC 2/30 NEUTRAL RT	1805850000	D.27
SAIL-M8WM8W-4-10V	1927221000	D.73	SAIL-VSCD-1.5U	9456240150	D.91	SAIS-M8-4P	1803850000	D.14	SFC 2/30 NEUTRAL WS	1805870000	D.27
SAIL-M8WM8W-4-3.0Q	1926960300	D.35	SAIL-VSCD-1.5U(0.5)	1845200150	D.95	SAIS-ZW-5	9457540000	D.23	STRIPPER 6-16 RED-LINE	9203110000	D.103
SAIL-M8WM8W-4-3.0Q	1926960300	D.72	SAIL-VSCD-10U	9456241000	D.91	SAIS-ZWW	1837560000	D.23			
SAIL-M8WM8W-4-3.0U	1857680300	D.35	SAIL-VSCD-10U(0.5)	1845201000	D.95	SAISM 5/8S M12 5P B-COD	1784790000	C.4			
SAIL-M8WM8W-4-3.0U	1857680300	D.71	SAIL-VSCD-3.0U	9456240300	D.91	SAISM 5/8S M12 5P B-COD	1784790000	C.96	TM 203/18 V0	1798480000	D.25
SAIL-M8WM8W-4-3.0V	1927220300	D.35	SAIL-VSCD-3.0U(0.5)	1845200300	D.95	SAISM 5/8S M12 5P B-COD	1784790000	D.10	TM-1 18 NEUTRAL GE	1718431687	D.25
SAIL-M8WM8W-4-3.0V	1927220300	D.73	SAIL-VSCD-5.0U	9456240500	D.91	SAISM 5/8S M12 5P B-COD	1784790000	E.42	TM-1 18 NEUTRAL WS	1718431044	D.25
SAIL-M8WM8W-4-5.0Q	1926960500	D.35	SAIL-VSCD-5.0U(0.5)	1845200500	D.95	SAISM 4/8S-M12 4P D-ZF	1892120001	C.32			
SAIL-M8WM8W-4-5.0Q	1926960500	D.72	SAIL-VSCD-M12G-1.5U	9456170150	D.91	SAISM 4/8S-M12 4P D					

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100000000		
1001180001	PRINTJET PRO 230V	D.25
1002830000	SAI-ASI PJ 4A	C.53
1004040000	Gateway AS-I PBDP 3.0	C.53
1004310150	SAIL-M12GM12W-4-2L1.5T	D.63
1004310300	SAIL-M12GM12W-4-2L3.0T	D.63
1004310500	SAIL-M12GM12W-4-2L5.0T	D.63
1004311000	SAIL-M12GM12W-4-2L10T	D.63
1004320100	SAIL-M12GM12W-3L1.5T	D.63
1004320300	SAIL-M12GM12W-3L3.0T	D.63
1004320500	SAIL-M12GM12W-3L5.0T	D.63
1004321000	SAIL-M12GM12W-3L10T	D.63
1004330150	SAIL-M12BW-3L1.5T	D.46
1004330300	SAIL-M12BW-3L3.0T	D.46
1004330500	SAIL-M12BW-3L5.0T	D.46
1004331000	SAIL-M12BW-3L10T	D.46
1005270150	SAIL-ZW-M12BW-3-1.5U	D.80
1005270300	SAIL-ZW-M12BW-3-3.0U	D.80
1005270500	SAIL-ZW-M12BW-3-5.0U	D.80
1005271000	SAIL-ZW-M12BW-3-10U	D.80
1005460150	SAIL-ZW-M12BG-3-1.5U	D.80
1005460300	SAIL-ZW-M12BG-3-3.0U	D.80
1005460500	SAIL-ZW-M12BG-3-5.0U	D.80
1005461000	SAIL-ZW-M12BG-3-10U	D.80
1006920000	SAI-AU M12 BT4A2AO2DIO	C.47
1006930000	SAI-AU M12 BT 16DI/8DO	C.47
1006940000	SAI-AU M12 BT 16DI	C.47
1006980000	SAI-AU M12 GW PB/BT 12I	C.46
1007000150	SAIL-M12BW-4-2L1.5T	D.46
1007000300	SAIL-M12BW-4-2L3.0T	D.46
1007000500	SAIL-M12BW-4-2L5.0T	D.46
1007001000	SAIL-M12BW-4-2L10T	D.46

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101000000		
1010060000	SAISM-M8-3P-(IF)	D.15
1010070000	SAISM-M8-4P-(IF)	D.15
1010080000	SAIBM-M8-3P-(IF)	D.15
1010090000	SAIBM-M8-4P-(IF)	D.15
1011970150	SAIL-M12GM12G-5-1.5T	D.62
1011970300	SAIL-M12GM12G-5-3.0T	D.62
1011970500	SAIL-M12GM12G-5-5.0T	D.62
1011971000	SAIL-M12GM12G-5-10T	D.62
1011990150	SAIL-M12GM12W-5-1.5T	D.62
1011990300	SAIL-M12GM12W-5-3.0T	D.62
1011990500	SAIL-M12GM12W-5-5.0T	D.62
1011991000	SAIL-M12GM12W-5-10T	D.62
1019270000	SAI-AU M12 PN 16DIM	C.27
1019280000	SAI-AU M12 PN 16DI/8DOM	C.27
1019290000	SAI-AU M12PN4/2AI04DIO	C.27
1019310000	SAI-AU M8 PN 16DIM	C.27
1019320000	SAI-AU M8 PN 16DI/8DOM	C.27
1019480000	SAI-AU M12 PN GW 16DIM	C.36
1019490000	SAI-AU M12 EIP GW 16DI	C.36

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1020930150	SAIL-M12GM12W-4-3LW1.5T	D.64
1020930300	SAIL-M12GM12W-4-3LW3.0T	D.64
1020930500	SAIL-M12GM12W-4-3LW5.0T	D.64
1020931000	SAIL-M12GM12W-4-3LW10T	D.64
1021280000	SAISW-3/7	D.5
1021290000	SAISW-3/9	D.5
1021310000	SAIBW-3/7	D.5
1021320000	SAIBW-3/9	D.5
1021470000	SAIS-3/7	D.5
1021480000	SAIS-3/9	D.5
1021490000	SAIB-3/7	D.5
1021510000	SAIB-3/9	D.5
1021650150	SAIL-M12G-5-1.5T	D.44
1021650300	SAIL-M12G-5-3.0T	D.44
1021650500	SAIL-M12G-5-5.0T	D.44
1021651000	SAIL-M12G-5-10T	D.44
1021660150	SAIL-M12W-5-1.5T	D.44
1021660300	SAIL-M12W-5-3.0T	D.44
1021660500	SAIL-M12W-5-5.0T	D.44
1021661000	SAIL-M12W-5-10T	D.44
1021670150	SAIL-M12BG-5-1.5T	D.44
1021670300	SAIL-M12BG-5-3.0T	D.44
1021670500	SAIL-M12BG-5-5.0T	D.44
1021671000	SAIL-M12BG-5-10T	D.44
1021690150	SAIL-M12BW-5-1.5T	D.44
1021690300	SAIL-M12BW-5-3.0T	D.44
1021690500	SAIL-M12BW-5-5.0T	D.44
1021691000	SAIL-M12BW-5-10T	D.44
1021710150	SAIL-M12GM12G-3-1.5T	D.62
1021710300	SAIL-M12GM12G-3-3.0T	D.62
1021710500	SAIL-M12GM12G-3-5.0T	D.62
1021711000	SAIL-M12GM12G-3-10T	D.62
1021720150	SAIL-M12GM12W-3-1.5T	D.62
1021720300	SAIL-M12GM12W-3-3.0T	D.62
1021720500	SAIL-M12GM12W-3-5.0T	D.62
1021721000	SAIL-M12GM12W-3-10T	D.62
1021730150	SAIL-M12GM12G-4-1.5T	D.62
1021730300	SAIL-M12GM12G-4-3.0T	D.62
1021730500	SAIL-M12GM12G-4-5.0T	D.62
1021731000	SAIL-M12GM12G-4-10T	D.62
1021740150	SAIL-M12GM12W-4-1.5T	D.62
1021740300	SAIL-M12GM12W-4-3.0T	D.62

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1021741000	SAIL-M12GM12W-4-10T	D.62
1021750150	SAIL-M12G-3-1.5T	D.44
1021750300	SAIL-M12G-3-3.0T	D.44
1021750500	SAIL-M12G-3-5.0T	D.44
1021751000	SAIL-M12G-3-10T	D.44
1021760150	SAIL-M12W-3-1.5T	D.44
1021760300	SAIL-M12W-3-3.0T	D.44
1021760500	SAIL-M12W-3-5.0T	D.44
1021761000	SAIL-M12W-3-10T	D.44
1021770150	SAIL-M12G-4-1.5T	D.44
1021770300	SAIL-M12G-4-3.0T	D.44
1021770500	SAIL-M12G-4-5.0T	D.44
1021771000	SAIL-M12G-4-10T	D.44
1021790150	SAIL-M12W-4-1.5T	D.44
1021790300	SAIL-M12W-4-3.0T	D.44
1021790500	SAIL-M12W-4-5.0T	D.44
1021791000	SAIL-M12W-4-10T	D.44
1022930150	SAIL-M12BW-4-3LW1.5T	D.47
1022930300	SAIL-M12BW-4-3LW3.0T	D.47
1022930500	SAIL-M12BW-4-3LW5.0T	D.47
1022931000	SAIL-M12BW-4-3LW10T	D.47
1022940000	SAIH-SLL-3x0,34mm_(TPE)	D.98
1022950000	SAIH-SLL-4x0,34mm_(TPE)	D.98
1022960000	SAIH-SLL-5x0,34mm_(TPE)	D.98
1022970000	SAIH-SLL-3x0,25mm_(TPE)	D.98
1022980000	SAIH-SLL-4x0,25mm_(TPE)	D.98
1024050000	PRINTJET PRO 115v	D.25
1024310000	SAI-AU M8 PB GW 16DI	C.36
1026090000	SAI-ASI T FF small	C.55
1027040000	PJ PRO TNTR INK K	D.25
1027050000	PJ PRO TNTR INK C	D.25
1027060000	PJ PRO TNTR INK M	D.25
1027070000	PJ PRO TNTR INK Y	D.25
1027080000	PJ PRO TNTR FL	D.25
1027090000	PJ PRO TNTR INK SET BK	D.25
1027110000	PJ-PRO TNTR INK SET COL	D.25

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105000000		
1057720000	SAI-6-S 3P M8 L SL	B.51
1057740150	SAIL-M12BG-3B-1.5Q	D.82
1057740300	SAIL-M12BG-3B-3.0Q	D.82
1057740500	SAIL-M12BG-3B-5.0Q	D.82
1057741000	SAIL-M12BG-3B-10Q	D.82
1057750150	SAIL-M12BG-4B-1.5Q	D.82
1057750300	SAIL-M12BG-4B-3.0Q	D.82
1057750500	SAIL-M12BG-4B-5.0Q	D.82
1057751000	SAIL-M12BG-4B-10Q	D.82
1057760150	SAIL-M12BW-5B-1.5Q	D.82
1057760300	SAIL-M12BW-5B-3.0Q	D.82
1057760500	SAIL-M12BW-5B-5.0Q	D.82
1057761000	SAIL-M12BW-5B-10Q	D.82
1057770150	SAIL-M12G-3B-1.5Q	D.82
1057770300	SAIL-M12G-3B-3.0Q	D.82
1057770500	SAIL-M12G-3B-5.0Q	D.82
1057771000	SAIL-M12G-3B-10Q	D.82
1057780150	SAIL-M12G-4B-1.5Q	D.82
1057780300	SAIL-M12G-4B-3.0Q	D.82
1057780500	SAIL-M12G-4B-5.0Q	D.82
1057781000	SAIL-M12G-4B-10Q	D.82
1057790150	SAIL-M12G-5B-1.5Q	D.82
1057790300	SAIL-M12G-5B-3.0Q	D.82
1057790500	SAIL-M12G-5B-5.0Q	D.82
1057791000	SAIL-M12G-5B-10Q	D.82
1057800150	SAIL-M12W-3B-1.5Q	D.82
1057800300	SAIL-M12W-3B-3.0Q	D.82
1057800500	SAIL-M12W-3B-5.0Q	D.82
1057801000	SAIL-M12W-3B-10Q	D.82
1057810150	SAIL-M12W-4B-1.5Q	D.82
1057810300	SAIL-M12W-4B-3.0Q	D.82
1057810500	SAIL-M12W-4B-5.0Q	D.82
1057811000	SAIL-M12W-4B-10Q	D.82
1057820150	SAIL-M12W-5B-1.5Q	D.82
1057820300	SAIL-M12W-5B-3.0Q	D.82
1057820500	SAIL-M12W-5B-5.0Q	D.82
1057821000	SAIL-M12W-5B-10Q	D.82
1057830150	SAIL-M12GM12G-3B-1.5Q	D.83
1057830300	SAIL-M12GM12G-3B-3.0Q	D.83
1057830500	SAIL-M12GM12G-3B-5.0Q	D.83
1057831000	SAIL-M12GM12G-3B-10Q	D.83
1057840150	SAIL-M12GM12G-4B-1.5Q	D.83
1057840300	SAIL-M12GM12G-4B-3.0Q	D.83
1057840500	SAIL-M12GM12G-4B-5.0Q	D.83
1057841000	SAIL-M12GM12G-4B-10Q	D.83
1057850150	SAIL-M12GM12G-5B-1.5Q	D.83
1057850300	SAIL-M12GM12G-5B-3.0Q	D.83
1057850500	SAIL-M12GM12G-5B-5.0Q	D.83
1057851000	SAIL-M12GM12G-5B-10Q	D.83
1057870150	SAIL-M12WM12G-3B-1.5Q	D.83
1057870300	SAIL-M12WM12G-3B-3.0Q	D.83
1057870500	SAIL-M12WM12G-3B-5.0Q	D.83
1057871000	SAIL-M12WM12G-3B-10Q	D.83
1057880150	SAIL-M12WM12G-4B-1.5Q	D.83
1057880300	SAIL-M12WM12G-4B-3.0Q	D.83
1057880500	SAIL-M12WM12G-4B-5.0Q	D.83
1057881000	SAIL-M12WM12G-4B-10Q	D.83
1057890150	SAIL-M12WM12G-5B-1.5Q	D.83
1057890300	SAIL-M12WM12G-5B-3.0Q	D.83
1057890500	SAIL-M12WM12G-5B-5.0Q	D.83
1057891000	SAIL-M12WM12G-5B-10Q	D.83

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1057891000	SAIL-M12WM12G-5B-10Q	D.83
1057900150	SAIL-M12GM12W-3B-1.5Q	D.83
1057900300	SAIL-M12GM12W-3B-3.0Q	D.83
1057900500	SAIL-M12GM12W-3B-5.0Q	D.83
1057901000	SAIL-M12GM12W-3B-10Q	D.83
1057910150	SAIL-M12GM12W-4B-1.5Q	D.83
1057910300	SAIL-M12GM12W-4B-3.0Q	D.83
1057910500	SAIL-M12GM12W-4B-5.0Q	D.83
1057911000	SAIL-M12GM12W-4B-10Q	D.83
1057920150	SAIL-M12GM12W-5B-1.5Q	D.83
1057920300	SAIL-M12GM12W-5B-3.0Q	D.83
1057920500	SAIL-M12GM12W-5B-5.0Q	D.83
1057921000	SAIL-M12GM12W-5B-10Q	D.83
1058490150	SAIL-M12GM12G-3S1.5Q	D.65
1058490300	SAIL-M12GM12G-3S3.0Q	D.65
1058490500	SAIL-M12GM12G-3S5.0Q	D.65
1058491000	SAIL-M12GM12G-3S10Q	D.65
1058500150	SAIL-M12GM12G-4S1.5Q	D.65
1058500300	SAIL-M12GM12G-4S3.0Q	D.65
1058500500	SAIL-M12GM12G-4S5.0Q	D.65
1058501000	SAIL-M12GM12G-4S10Q	D.65
1058510150	SAIL-M12GM12G-5S1.5Q	D.65
1058510300	SAIL-M12GM12G-5S3.0Q	D.65
1058510500	SAIL-M12GM12G-5S5.0Q	D.65
1058511000	SAIL-M12GM12G-5S10Q	D.65
1058530150	SAIL-M12G-PB-1.5E	C.14
1058530300	SAIL-M12G-PB-1.5E	D.108
1058530500	SAIL-M12G-PB-3.0E	C.14
1058530700	SAIL-M12G-PB-3.0E	D.108
1058530900	SAIL-M12G-PB-5.0E	C.14
1058531000	SAIL-M12G-PB-5.0E	D.108
1058540000	SAIL-M12G-PB-10E	C.14
1058540150	SAIL-M12BG-PB-1.5E	D.108
1058540300	SAIL-M12BG-PB-3.0E	C.14
1058540500	SAIL-M12BG-PB-5.0E	D.108
1058540700	SAIL-M12BG-PB-10E	C.14
1058541000	SAIL-M12BG-PB-10E	D.108
1058541000	SAIL-M12BG-PB-10E	C.15
1058541000	SAIL-M12BG-PB-10E	D.108
1058541000	SAIL-M12GM12G-PB-1.5E	C.

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1062221000	SAIL-M12W-CD-10A	D.116	1701253000	SAI-8-MHD-5P M12	B.37	1766810000	SAI-SA-4-IDC	D.17	1785110100	FBC PA M12 FM 1M	E.39
1062300150	SAIL-M12BW-PB-1.5D	C.14	1705920000	SAI-4-M 4P M12	B.10	1767880000	SAI-8-M 5P M12 ZF III	B.10	1785110200	FBC PA M12 FM 2M	D.113
1062300150	SAIL-M12BW-PB-1.5D	D.108	1705921000	SAI-4-M 4P M12 UT	B.10				1785110500	FBC PA M12 FM 2M	D.113
1062300300	SAIL-M12BW-PB-3.0D	C.14	1705922000	SAI-4-MH-4P M12	B.44				1785110500	FBC PA M12 FM 5M	E.39
1062300300	SAIL-M12BW-PB-3.0D	D.108	1705922000	SAI-4-MH-4P M12	B.36				1785111000	FBC PA M12 FM 10M	D.113
1062300500	SAIL-M12BW-PB-5.0D	C.14	1705923000	SAI-4-MHD-4P M12	B.33	1772210000	VG M16 - MS 68	E.42	1785111000	FBC PA M12 FM 10M	D.113
1062300500	SAIL-M12BW-PB-5.0D	D.108	1705923000	SAI-4-MHD-4P M12	B.37	1777730000	VP M63-MS65	D.114	1785111000	FBC PA M12 FM 10M	E.39
1062301000	SAIL-M12BW-PB-10D	C.14	1705930000	SAI-6-M 4P M12	B.10	1777790000	VP M63-MS65	E.42	1785120100	FBC PA M12 M 1M	D.113
1062301000	SAIL-M12BW-PB-10D	D.108	1705930000	SAI-6-M 4P M12	B.10	1779080001	SFC 1/21 NEUTRAL WS	D.27	1785120100	FBC PA M12 M 1M	E.39
1062310150	SAIL-M12GM12W-PB-1.5D	C.15	1705931000	SAI-6-M 4P M12 UT	B.10	1779080002	SFC 1/21 NEUTRAL BL	D.27	1785120200	FBC PA M12 M 2M	D.113
1062310150	SAIL-M12GM12W-PB-1.5D	D.109	1705931000	SAI-6-M 4P M12 UT	B.44	1779080003	SFC 1/21 NEUTRAL RT	D.27	1785120200	FBC PA M12 M 2M	E.39
1062310300	SAIL-M12GM12W-PB-3.0D	C.15	1705932000	SAI-6-MH-4P M12	B.33	1779080004	SFC 1/21 NEUTRAL GE	D.27	1785120500	FBC PA M12 M 5M	D.113
1062310300	SAIL-M12GM12W-PB-3.0D	D.109	1705932000	SAI-6-MH-4P M12	B.36				1785120500	FBC PA M12 M 5M	E.39
1062310500	SAIL-M12GM12W-PB-5.0D	C.15	1705933000	SAI-6-MHD-4P M12	B.33				1785121000	FBC PA M12 M 10M	D.113
1062310500	SAIL-M12GM12W-PB-5.0D	D.109	1705933000	SAI-6-MHD-4P M12	B.37				1785121000	FBC PA M12 M 10M	E.39
1062311000	SAIL-M12GM12W-PB-10D	C.15	1705940000	SAI-8-M 4P M12	B.10	1781060000	SAI-8-M 5P M12 NPN	B.10	1785130100	FBCEX PA M12 M-FM 1M	D.112
1062311000	SAIL-M12GM12W-PB-10D	D.109	1705940000	SAI-8-M 4P M12	B.10	1781520000	SAI-SK Stecker M12	D.24	1785130100	FBCEX PA M12 M-FM 1M	E.38
1062310150	SAIL-M12GM12W-PB-1.5D	C.15	1705941000	SAI-8-M 4P M12 UT	B.44	1781520000	SAI-SK Stecker M12	E.42	1785130200	FBCEX PA M12 M-FM 2M	D.112
1062310150	SAIL-M12GM12W-PB-1.5D	D.109	1705942000	SAI-8-MH-4P M12	B.33	1781540001	SAIB-4-IDC-M12 small	D.19	1785130200	FBCEX PA M12 M-FM 2M	E.38
1062330300	SAIL-M12WM12W-PB-3.0D	C.15	1705942000	SAI-8-MH-4P M12	B.36	1781550001	SAIS-4-IDC M12 small	D.19	1785130500	FBCEX PA M12 M-FM 5M	D.112
1062330300	SAIL-M12WM12W-PB-3.0D	D.109	1705943000	SAI-8-MHD-4P M12	B.33	1782740000	SAI-8-MMH 5P M12 ZF	B.33	1785130500	FBCEX PA M12 M-FM 5M	E.38
1062330500	SAIL-M12WM12W-PB-5.0D	C.15	1705943000	SAI-8-MHD-4P M12	B.37	1782740000	SAI-8-MMH 5P M12 ZF	B.35	1785131000	FBCEX PA M12 M-FM 10M	D.112
1062330500	SAIL-M12WM12W-PB-5.0D	D.109	1705943000	SAI-8-MHD-4P M12	B.37	1782750000	SAI-4/6/8 MH MH BLZF3,5	B.33	1785131000	FBCEX PA M12 M-FM 10M	E.38
1062331000	SAIL-M12WM12W-PB-10D	C.15				1782750000	SAI-4/6/8 MH MH BLZF3,5	B.36	1785140100	FBCEX PA M12 FM 1M	D.112
1062331000	SAIL-M12WM12W-PB-10D	D.109				1782760000	SAI-8-MH-5P M12 ZF III	B.33	1785140100	FBCEX PA M12 FM 1M	E.38
1062340150	SAIL-M12W-PB-1.5E	C.14	1718431044	TM-1 18 NEUTRAL WS	D.25	1782760000	SAI-8-MH-5P M12 ZF III	B.36	1785140200	FBCEX PA M12 FM 2M	D.112
1062340150	SAIL-M12W-PB-1.5E	D.108	1718431687	TM-1 18 NEUTRAL GE	D.25	1783410000	SAI-Y-5S B2-4 2M12	D.22	1785140200	FBCEX PA M12 FM 2M	E.38
1062340300	SAIL-M12W-PB-3.0E	C.14	1719550000	GWDR PG9-NP	E.42	1783420000	SAI-Y-4-4/2-4 M12/8	D.22	1785140500	FBCEX PA M12 FM 5M	D.112
1062340300	SAIL-M12W-PB-3.0E	D.108				1783430000	SAI-Y-5S PARA 2M12	D.22	1785140500	FBCEX PA M12 FM 5M	E.38
1062340500	SAIL-M12W-PB-5.0E	C.14				1783430000	SAI-Y-5S PARA 2M12	F.14	1785141000	FBCEX PA M12 FM 10M	D.112
1062340500	SAIL-M12W-PB-5.0E	D.108				1783490000	SAI-8-MM 5P M12	B.33	1785141000	FBCEX PA M12 FM 10M	E.38
1062341000	SAIL-M12W-PB-10E	C.14	1724750000	SAI-4/6/8-MH BL3.5	B.10	1783490000	SAI-8-MM 5P M12	B.35	1785150100	FBCEX PA M12 M 1M	D.112
1062341000	SAIL-M12W-PB-10E	D.108	1724750000	SAI-4/6/8-MH BL3.5	B.28	1783491000	SAI-8-MM 5P M12 UT	B.35	1785150100	FBCEX PA M12 M 1M	E.38
1062370150	SAIL-M12BW-PB-1.5E	C.14	1724750000	SAI-4/6/8-MH BL3.5 SV	B.39	1783500000	SAI-4-MM 5P M12	B.33	1785150200	FBCEX PA M12 M 2M	D.112
1062370150	SAIL-M12BW-PB-1.5E	D.108	1724750050	SAI-4/6/8-MH BL3.5 SV	B.10	1783500000	SAI-4-MM 5P M12	B.35	1785150200	FBCEX PA M12 M 2M	E.38
1062370300	SAIL-M12BW-PB-3.0E	C.14	1724750050	SAI-4/6/8-MH BL3.5 SV	B.17	1783510000	SAI-8-MMS 5P M12	B.33	1785150500	FBCEX PA M12 M 5M	D.112
1062370300	SAIL-M12BW-PB-3.0E	D.108	1724750050	SAI-4/6/8-MH BL3.5 SV	B.28	1783510000	SAI-8-MMS 5P M12	B.35	1785150500	FBCEX PA M12 M 5M	E.38
1062370500	SAIL-M12BW-PB-5.0E	C.14	1724752000	SAI-4/6/8 MH-MH BL 3.5	B.33	1783520000	SAI-4-MMS 5P M12	B.33	1785151000	FBCEX PA M12 M 10M	D.112
1062370500	SAIL-M12BW-PB-5.0E	D.108	1724752000	SAI-4/6/8 MH-MH BL 3.5	B.36	1783520000	SAI-4-MMS 5P M12	B.35	1785151000	FBCEX PA M12 M 10M	E.38
1062371000	SAIL-M12BW-PB-10E	C.14	1724753000	SAI-4/6/8 MH-MHD BL 3.5	B.33	1783530000	SAI-8-MMS 4P M12	B.33	1789190000	SAI-8-MF 4P PUR 10M M12	B.44
1062371000	SAIL-M12BW-PB-10E	D.108	1724753000	SAI-4/6/8 MH-MHD BL 3.5	B.37	1783530000	SAI-8-MMS 4P M12	B.35			
1062380150	SAIL-M12GM12W-PB-1.5E	C.15	1724754000	SAI-4/6/8 MH-MH BL 3.5	B.35	1783540000	SAI-4-MMS 4P M12	B.33			
1062380150	SAIL-M12GM12W-PB-1.5E	D.109				1783540000	SAI-4-MMS 4P M12	B.35			
1062380300	SAIL-M12GM12W-PB-3.0E	C.15				1784030001	SAIB-3-IDC-M8 small	D.21	1791450400	SAI-4/6/8-MHF 4P PUR 4M	B.44
1062380300	SAIL-M12GM12W-PB-3.0E	D.109				1784040001	SAIS-3-IDC M8 small	D.21	1791450600	SAI-4/6/8-MHF 4P PUR 6M	B.44
1062380500	SAIL-M12GM12W-PB-5.0E	C.15	1736230000	GWDR M16-NP	D.114	1784050001	SAIB-4-IDC-M8 small	D.21	1791450900	SAI-4/6/8-MHF 4P PUR 9M	B.44
1062380500	SAIL-M12GM12W-PB-5.0E	D.109	1737070000	VP M16-EXE SW	D.114	1784060001	SAIS-4-IDC M8 small	D.21	1791451400	SAI-4/6/8-MHF 4P PUR14M	B.44
1062381000	SAIL-M12GM12W-PB-10E	C.15	1737140000	VP M16-EXE MS	E.42	1784500000	SAI-8-F 5P 20M 0.5/1.0U	B.11	1791452000	SAI-4/6/8-MHF 4P PUR20M	B.44
1062381000	SAIL-M12GM12W-PB-10E	D.109	1737210000	VG M16-EXE MS	D.114	1784510000	SAI-8-F 5P 15M 0.5/1.0U	B.11	1791452800	SAI-4/6/8-MHF 4P PUR28M	B.44
1062400150	SAIL-M12WM12W-PB-1.5E	C.15	1737210000	VG M16-EXE MS	E.42	1784570000	SAI-8-F 4P M8 PUR 10M	B.48	1791453400	SAI-4/6/8-MHF 4P PUR34M	B.44
1062400150	SAIL-M12WM12W-PB-1.5E	D.109				1784580000	SAI-8-F 4P M8 PUR 5M	B.48	1791460400	SAI-4/6/8-MHF 5P PUR 4M	B.44
1062400300	SAIL-M12WM12W-PB-3.0E	C.15				1784590000	SAI-4-F 4P M8 PUR 10M	B.48	1791460600	SAI-4/6/8-MHF 5P PUR 6M	B.44
1062400300	SAIL-M12WM12W-PB-3.0E	D.109				1784600000	SAI-4-F 4P M8 PUR 5M	B.48	1791460900	SAI-4/6/8-MHF 5P PUR 9M	B.44
1062400500	SAIL-M12WM12W-PB-5.0E	C.15	1740191000	SAI-8-M 5P M12 OL UT	B.10	1784610000	SAI-8-F 3P M8 PUR 10M	B.48	1791461400	SAI-4/6/8-MHF 5P PUR14M	B.44
1062400500	SAIL-M12WM12W-PB-5.0E	D.109	1747320001	SFC 1/12 NEUTRAL WS	D.27	1784620000	SAI-8-F 3P M8 PUR 5M	B.48	1791461600	SAI-4/6/8-MHF 5P PUR16M	B.44
1062401000	SAIL-M12WM12W-PB-10E	C.15	1747320002	SFC 1/12 NEUTRAL BL	D.27	1784630000	SAI-4-F 3P M8 PUR 10M	B.48	1791462000	SAI-4/6/8-MHF 5P PUR20M	B.44
1062401000	SAIL-M12WM12W-PB-10E	D.109	1747320003	SFC 1/12 NEUTRAL RT	D.27	1784640000	SAI-4-F 3P M8 PUR 5M	B.48	1791462800	SAI-4/6/8-MHF 5P PUR28M	B.44
			1747320004	SFC 1/12 NEUTRAL GE	D.27	1784650000	SAI-8-M23 4P M8	B.49	1791463400	SAI-4/6/8-MHF 5P PUR34M	B.44
						1784660000	SAI-4-M23 4P M8	B.49	1791464000	SAI-4/6/8-MHF 5P PUR40M	B.44
						1784670000	SAI-8-M 3P M8	B.48	1791465000	SAI-4/6/8-MHF 5P PUR50M	B.44
						1784680000	SAI-4-M 3P M8	B.48	1791465500	SAI-4/6/8-MHF 5P PUR55M	B.44
						1784690000	SAI-8-M 4P M8	B.48	1794850000	SAI-SK-M12 IDC	B.27
						1784700000	SAI-4-M 4P M8	B.48	1794850000	SAI-SK-M12 IDC	D.24
						1784740000	SAIS-M-5/8S M12 5P A-COD	C.17	1795020000	SAI-IDC-TOOL	B.27
						1784740000	SAIS-M-5/8S M12 5P A-COD	C.19	1795470000	SAI-S-8 S P M12	B.13
						1784740000	SAIS-M-5/8S M12 5P A-COD	C.46	1795500000	POS-5P M12/M20 300MM	D.111
						1784740000	SAIS-M-5/8S M12 5P A-COD	D.27	1795500000	POS-5P M12/M20 300MM	E.40
						1784740000	SAIS-M-5/8S M12 5P A-COD	D.27	1795500000	POS-5P M12/M20 300MM	E.42
						1784740000	SAIS-M-5/8S M12 5P A-COD	D.27	1795900000	SAI-8-M16 3P M8	B.49
						1784750000	SAIB-M-5/8S M12 5P A-COD	C.17	1798480000	TM 203/18 V0	D.25
						1784750000	SAIB-M-5/8S M12 5P A-COD	C.19	1799270000	SAI-ASI-S H 4A	C.49
						1784750000	SAIB-M-5/8S M12 5P A-COD	C.46	1799280000	SAI-ASI-S H 2E/2A	C.49
						1784750000	SAIB-M-5/8S M12 5P A-COD	D.115	1799960000	SAI-8-MF 4P PUR 5M M12	B.44
						1784750000	SAIB-M-5/8S M12 5P A-COD	D.9			
						1784750000	SAIB-M-5/8S M12 5P A-COD	E.36			
						1784760000	SAIEND CAN-M12 5P A-COD	C.17			
						1784760000	SAIEND CAN-M12 5P A-COD	C.19			
						1784760000	SAIEND CAN-M12 5P A-COD	C.46			
						1784770000	SAIEND PB M12 5P B-COD	C.4			
						1784770000	SAIEND PB M12 5P B-COD	C.46			
						1784770000	SAIEND PB M12 5P B-COD	C.9			
						1784780000	SAIBM 5/8S M12 5P B-COD	C.4			
						1784780000	SAIBM 5/8S M12 5P B-COD	C.46			
						1784780000	SAIBM 5/8S M12 5P B-COD	C.19			
						1784780000	SAIBM 5/8S M12 5P B-COD	D.9			
						1784780000	SAIBM 5/8S M12 5P B-COD	E.42			
						1784790000	SAISM 5/8S M12 5P B-COD	C.4			
						1784790000	SAISM 5/8S M12 5P B-COD	C.46			
						1784790000	SAISM 5/8S M12 5P B-COD	C.9			

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1803920000	SAIBW-M-5/8 M12	E.37	1819450000	SAI-WDF 5P M12 60mm	D.23	1847920000	SAI-8-S 4P FC	B.20	1857730500	SAIL-VSCD-M12W-5.0U	D.91
1803930000	SAISW-M-4/8 M12	D.9	1819450000	SAI-WDF 5P M12 60mm	E.38	1847930000	SAI-4-F 5P FC 10M	B.19	1857731000	SAIL-VSCD-M12W-10U	D.91
1803930000	SAISW-M-4/8 M12	E.37	1819450000	SAI-WDF 5P M12 60mm	E.39	1847940000	SAI-4-F 5P FC 2M	B.19	1859110000	SAI-4-SH 4P FC	B.21
1803940000	SAISW-M-5/8 M12	D.115				1847950000	SAI-4-F 5P FC 5M	B.19	1859120000	SAI-8-SH 4P FC	B.21
1803940000	SAISW-M-5/8 M12	D.9				1847960000	SAI-4-S 4P FC	B.20	1859130000	SAI-4-SH 5P FC	B.21
1803940000	SAISW-M-5/8 M12	E.37				1847970000	SAI-4-S 5P FC	B.20	1859140000	SAI-8-SH 5P FC	B.21
1804500000	SAI-AS1 IR-Adapter	C.52	1820690000	SAI-WDF 5P B M12 60mm	D.23	1847980000	SAI-8-F 4P FC 10M	B.19			
1804580000	SAI-4-MF 5P PUR 10M	B.44	1821050150	SAIL-M12WM12G-3-1.5U	D.36	1847990000	SAI-8-F 4P FC 2M	B.19			
1804590000	SAI-8-MF 5P PUR 5M	B.44	1821050300	SAIL-M12WM12G-3-3.0U	D.36	1848000000	SAI-8-F 4P FC 5M	B.19			
1804600000	SAI-4-MF 5P PUR 5M	B.44	1821050500	SAIL-M12WM12G-3-5.0U	D.36	1848010000	SAI-8-F 5P FC 10M	B.19	1861090000	SAIE-M12S-4-0.5U-M16	D.85
1805410000	SAI-ASI-Handheld	C.52	1821051000	SAIL-M12WM12G-3-10U	D.36	1848020000	SAI-8-F 5P FC 2M	B.19	1861100000	SAIE-M12S-5-0.5U-M16	D.85
1805660000	SAI Y-4S M8-M8	D.22	1824570150	SAIL-M8GM8G-3-1.5U	D.34	1848030000	SAI-8-F 5P FC 5M	B.19	1861110000	SAIE-M12S-8-0.5U-M16	D.85
1805720000	SFC 1/30 NEUTRAL BL	D.27	1824570150	SAIL-M8GM8G-3-1.5U	D.71	1848040000	SAI-8-S 5P FC	B.20	1861120000	SAIE-M12B-4-0.5U-M16	D.85
1805730000	SFC 1/30 NEUTRAL GE	D.27	1824570300	SAIL-M8GM8G-3-3.0U	D.34	1848050000	SAI-4-F 4P FC 10M	B.19	1861140000	SAIE-M12B-8-0.5U-M16	D.85
1805740000	SFC 1/30 NEUTRAL RT	D.27	1824570300	SAIL-M8GM8G-3-3.0U	D.71	1848060000	SAI-4-F 4P FC 5M	B.19	1861160000	SAIE-M12S-4-0.5U-FP-M16	D.85
1805760000	SFC 1/30 NEUTRAL WS	D.27	1824570500	SAIL-M8GM8G-3-5.0U	D.34	1848070000	SAI-8-M 5P FC	B.22	1861170000	SAIE-M12S-5-0.5U-FP-M16	D.85
1805770000	SFC 2/21 NEUTRAL BL	D.27	1824570500	SAIL-M8GM8G-3-5.0U	D.71	1848080000	SAI-4-F 4P FC 2M	B.19	1861180000	SAIE-M12S-8-0.5U-FP-M16	D.85
1805780000	SFC 2/21 NEUTRAL GE	D.27	1824571000	SAIL-M8GM8G-3-10U	D.34	1848440000	SAI-ASI-S H AB 2E	C.49	1861190000	SAIE-M12B-4-0.5U-FP-M16	D.85
1805790000	SFC 2/21 NEUTRAL RT	D.27	1824571000	SAIL-M8GM8G-3-10U	D.71	1849670000	SAI-6-F 4P M8 L 10M	B.52	1861210000	SAIE-M12B-8-0.5U-FP-M16	D.85
1805810000	SFC 2/21 NEUTRAL WS	D.27	1824580150	SAIL-M8GM8W-3-1.5U	D.35	1849680000	SAI-4-F 4P M8 L 5M	B.52	1861220000	SAIE-M12S-4-0.5U-PG9	D.86
1805820000	SFC 2/30 NEUTRAL BL	D.27	1824580150	SAIL-M8GM8W-3-1.5U	D.71	1849690000	SAI-4-F 4P M8 L 10M	B.52	1861220001	SAIE-M12S-4-0.5U-AEH-VA	D.111
1805830000	SFC 2/30 NEUTRAL GE	D.27	1824580300	SAIL-M8GM8W-3-3.0U	D.35	1849700000	SAI-6-F 4P M8 L 5M	B.52	1861220001	SAIE-M12S-4-0.5U-AEH-VA	E.40
1805850000	SFC 2/30 NEUTRAL RT	D.27	1824580300	SAIL-M8GM8W-3-3.0U	D.71				1861240000	SAIE-M12S-8-0.5U-PG9	D.86
1805870000	SFC 2/30 NEUTRAL WS	D.27	1824580500	SAIL-M8GM8W-3-5.0U	D.35				1861250000	SAIE-M12B-4-0.5U-PG9	D.86
1806010000	SAI-4-M 5P M12 1:1	B.38	1824580500	SAIL-M8GM8W-3-5.0U	D.71				1861270000	SAIE-M12B-8-0.5U-PG9	D.86
1806011000	SAI-4-M 5P M12 M1:1 UT	B.38	1824581000	SAIL-M8GM8W-3-10U	D.35	1851740000	SAI-4-F 3P M5 L5M	B.56	1861280000	SAIE-M8S-3-0.5U-FP-M8	D.87
1807230000	SAIB-4/9	D.5	1824581000	SAIL-M8GM8W-3-10U	D.71	1851750000	SAI-8-F 4P M5 L5M	B.56	1861290000	SAIE-M8S-4-0.5U-FP-M8	D.87
1807240000	SAIBW-4/9	D.5	1824590150	SAIL-M8G-3-1.5U	D.34	1851760000	SAI-8-F 3P M5 L5M	B.56	1861530000	SAI-8-M 5P Ex Z22	B.30
1807250000	SAIB-5/9	D.6	1824590150	SAIL-M8G-3-1.5U	D.49	1851770000	SAI-4-F 4P M5 L5M	B.56	1861540000	SAI-4-S 5P CNOMO	B.23
1807330000	SAIBW-5/9	D.6	1824590300	SAIL-M8G-3-3.0U	D.34	1852720000	SAIS-3-IDC (0.75) M12	D.20	1861550000	SAI-8-F 5P CNOMO 5M	B.23
1807340000	SAIS-4/9	D.5	1824590300	SAIL-M8G-3-3.0U	D.49	1852730000	SAIB-3-IDC (0.75) M12	D.20	1861560000	SAI-4-F 5P CNOMO 10M	B.23
1807350000	SAIS-5/9	D.6	1824590500	SAIL-M8G-3-5.0U	D.34	1852740000	SAIS-4-IDC (0.75) M12	D.20	1861570000	SAI-4-F 5P CNOMO 5M	B.23
1807360000	SAISW-4/9	D.5	1824590500	SAIL-M8G-3-5.0U	D.49	1852750000	SAIB-4-IDC (0.75) M12	D.20	1861580000	SAI-8-S 5P CNOMO	B.23
1807370000	SAISW- 5/9	D.6	1824591000	SAIL-M8G-3-10U	D.34	1854000000	SAI-4-M 5P M12 2F	D.34	1861590000	SAI-8-F 5P CNOMO 10M	B.23
1807640000	SAI-4-M 8P M12	B.39	1824591000	SAIL-M8G-3-10U	D.49	1854060150	SAIL-M5G-3P-1.5U	D.56	1861840000	SAI-6-M 5P Ex Z22	B.60
1807641000	SAI-4-M 8P M12 UT	B.39	1826880000	SAI-Y-5S- M12/M12	D.22	1854060300	SAIL-M5G-3P-3.0U	D.56	1861850000	SAI-4-M 5P Ex Z22	B.60
1808830000	FBCON 7/8" 4P M (A)	E.41	1827010150	SAIL-M8BWR-3-1.5U	D.53	1854060500	SAIL-M5G-3P-5.0U	D.56	1862220000	WK-1/4"(Screwty)	D.101
1808840000	FBCON 7/8" 4P M	E.41	1827010300	SAIL-M8BWR-3-3.0U	D.53	1854061000	SAIL-M5G-3P-10U	D.56	1864730000	SAIS-4-IDC-M12B-COD	D.10
1808970000	SAIL-M12BW-4S10Q	D.48	1827010500	SAIL-M8BWR-3-5.0U	D.53	1855310000	SAI-SK M5	D.24	1864740000	SAIB-4-IDC-M12B-COD	D.10
1808970150	SAIL-M12BW-4S1.5Q	D.48	1827011000	SAIL-M8BWR-3-10U	D.53	1856110000	SAIE-M12B-5-0.5U-FP-M16	D.85	1865310000	SAI-8-F 5P M12 5M VA	B.30
1808970300	SAIL-M12BW-4S3.0Q	D.48	1827020300	SAIL-M8BGR-3-1.5U	D.52	1856120000	SAIE-M12S-5-0.5U-PG9	D.86	1865420500	SAIL-M12BW-7-(S)-5.0U	D.45
1808970500	SAIL-M12BW-4S5.0Q	D.48	1827020300	SAIL-M8BGR-3-3.0U	D.52	1856130000	SAIE-M8B-3-0.5U-FP-M8	D.87	1865421000	SAIL-M12BW-7-(S)-10U	D.45
			1827020500	SAIL-M8BGR-3-5.0U	D.52	1856140000	SAIE-M8B-4-0.5U-FP-M8	D.87	1865870150	SAIL-M12BG-8-1.5U	D.45
			1827021000	SAIL-M8BGR-3-10U	D.52	1857550150	SAIL-M8W-3-1.5U	D.34	1865870300	SAIL-M12BG-8-3.0U	D.45
			1828610000	SAI-8-F 4P M8 L 10M	B.52	1857550150	SAIL-M8W-3-1.5U	D.49	1865870500	SAIL-M12BG-8-5.0U	D.45
			1828620000	SAI-8-F 4P M8 L 5M	B.52	1857550300	SAIL-M8W-3-3.0U	D.34	1865871000	SAIL-M12BG-8-10U	D.45
			1828630000	SAI-12-F 3P M8 L 10M	B.52	1857550300	SAIL-M8W-3-3.0U	D.49	1867410150	SAIL-M12BG-3S1.5Q	D.48
			1828640000	SAI-12-F 3P M8 L 5M	B.52	1857550500	SAIL-M8W-3-5.0U	D.34	1867410300	SAIL-M12BG-3S3.0Q	D.48
			1828650000	SAI-10-F 3P M8 L 10M	B.52	1857550500	SAIL-M8W-3-5.0U	D.49	1867410500	SAIL-M12BG-3S5.0Q	D.48
			1828660000	SAI-10-F 3P M8 L 5M	B.52	1857551000	SAIL-M8W-3-10U	D.34	1867411000	SAIL-M12BG-3S10Q	D.48
			1828670000	SAI-8-F 3P M8 L 10M	B.52	1857551000	SAIL-M8W-3-10U	D.49	1868350000	SAI-4-M 4P Exi Zi OL	B.59
			1828680000	SAI-8-F 3P M8 L 5M	B.52	1857560150	SAIL-M8W-4-1.5U	D.34	1868360000	SAI-4-M 4P Exi Zi IL	B.59
			1828690000	SAI-6-F 3P M8 L 10M	B.52	1857560150	SAIL-M8W-4-1.5U	D.49	1868370000	SAI-8-M 4P Exi Zi IL	B.59
			1828700000	SAI-6-F 3P M8 L 5M	B.52	1857560300	SAIL-M8W-4-3.0U	D.34	1868560000	DAE M12 Ph short	D.114
			1828710000	SAI-4-F 3P M8 L 10M	B.52	1857560300	SAIL-M8W-4-3.0U	D.49			
			1828720000	SAI-4-F 3P M8 L 5M	B.52	1857560500	SAIL-M8W-4-5.0U	D.34			
			1828730000	SAI-6-S 3P M8 L	B.50	1857560500	SAIL-M8W-4-5.0U	D.49			
			1828740000	SAI-4-S 3P M8 L	B.50	1857561000	SAIL-M8W-4-10U	D.34			
						1857561000	SAIL-M8W-4-10U	D.49			
						1857660150	SAIL-M8GM8W-4-1.5U	D.35			
						1857660150	SAIL-M8GM8W-4-1.5U	D.71			
						1857660300	SAIL-M8GM8W-4-3.0U	D.35			
						1857660300	SAIL-M8GM8W-4-3.0U	D.71			
						1857660500	SAIL-M8GM8W-4-5.0U	D.35			
						1857660500	SAIL-M8GM8W-4-5.0U	D.71			
						1857661000	SAIL-M8GM8W-4-10U	D.35			
						1857661000	SAIL-M8GM8W-4-10U	D.71			
						1857670150	SAIL-M8WM8W-3-1.5U	D.35			
						1857670150	SAIL-M8WM8W-3-1.5U	D.71			
						1857670300	SAIL-M8WM8W-3-3.0U	D.35			
						1857670300	SAIL-M8WM8W-3-3.0U	D.71			
						1857670500	SAIL-M8WM8W-3-5.0U	D.35			
						1857670500	SAIL-M8WM8W-3-5.0U	D.71			
						1857671000	SAIL-M8WM8W-3-10U	D.35			
						1857671000	SAIL-M8WM8W-3-10U	D.71			
						1857680150	SAIL-M8WM8W-4-1.5U	D.35			
						1857680150	SAIL-M8WM8W-4-1.5U	D.71			
						1857680300	SAIL-M8WM8W-4-3.0U	D.35			
						1857680300	SAIL-M8WM8W-4-3.0U	D.71			
						1857680500	SAIL-M8WM8W-4-5.0U	D.35			
						1857680500	SAIL-M8WM8W-4-5.0U	D.71			
						1857680500	SAIL-M8WM8W-4-5.0U	D.35			
						1857680500	SAIL-M8WM8W-4-5.0U	D.71			
						1857681000	SAIL-M8WM8W-4-10U	D.35			
						1857681000	SAIL-M8WM8W-4-10U	D.71			
						1857690150	SAIL-VSA-M12W-1.5U	D.89			
						1857690300	SAIL-VSA-M12W-3.0U	D.89			
						1857690500	SAIL-VSA-M12W-5.0U	D.89			
						1857690500	SAIL-VSA-M12W-5.0U	D.90			
						1857700150	SAIL-VSB-M12W-1.5U	D.90			
						1857700300	SAIL-VSB-M12W-3.0U	D.90			
						1857700500	SAIL-VSB-M12W-5.0U	D.90			
						1857710100	SAIL-VSB-M12W-1.5U	D.90			
						1857710150	SAIL-VSB-M12W-3.0U	D.90			
						1857710300	SAIL-VSB-M12W-5.0U	D.90			
						1857710500	SAIL-VSB-M12W-5.0U	D.90			
						1857711000	SAIL-VSB-M12W-1.5U	D.91			
						1857720150	SAIL-VSC-M12W-1.5U	D.91			
						1857720300	SAIL-VSC-M12W-3.0U	D.91			
						1857720500	SAIL-VSC-M12W-5.0U	D.91			

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1873271000	SAIL-M5BW-4P-10U	D.56	1890520500	SAIL-M12BG-8-(S)-5.0U	D.45	1906330300	SAIL-M12WM8W-3-3.0U	D.66	1906870000	SAI-AU M12 IE AI/AO/DI	C.23
1873280150	SAIL-M5W-3P-1.5U	D.56	1890521000	SAIL-M12BG-8-(S)-10U	D.45	1906330500	SAIL-M12WM8W-3-5.0U	D.35	1906880000	SAI-AU M8 IE 16DI	C.23
1873280300	SAIL-M5W-3P-3.0U	D.56	1892080000	SAI-8-M 5P M12 ECO	B.17	1906330500	SAIL-M12WM8W-3-5.0U	D.66	1906890000	SAI-AU M8 IE 16DI/8DO	C.23
1873280500	SAIL-M5W-3P-5.0U	D.56	1892080005	SAI-8-M 5P M12 NPN ECO	B.17	1906331000	SAIL-M12WM8W-3-10U	D.35	1906900000	SAI-AU M12 EIP 16DI	C.25
1873281000	SAIL-M5W-3P-10U	D.56	1892081000	SAI-8-M 5P M12 ECO UT	B.17	1906331000	SAIL-M12WM8W-3-10U	D.66	1906910000	SAI-AU M12 EIP 16DI/8DO	C.25
1873290150	SAIL-M5BG-3P-1.5U	D.56	1892090000	SAI-6-M 5P M12 ECO	B.17	1906340150	SAIL-M12WM8W-4-1.5U	D.35	1906920000	SAI-AU M12 EIP AI/AO/DI	C.25
1873290300	SAIL-M5BG-3P-3.0U	D.56	1892091000	SAI-6-M 5P M12 ECO UT	B.17	1906340150	SAIL-M12WM8W-4-1.5U	D.66	1906930000	SAI-AU M8 EIP 16DI	C.25
1873290500	SAIL-M5BG-3P-5.0U	D.56	1892100000	SAI-4-M 5P M12 ECO	B.17	1906340300	SAIL-M12WM8W-4-3.0U	D.35	1906940000	SAI-AU M8 EIP 16DI/8DO	C.25
1873291000	SAIL-M5BG-3P-10U	D.56	1892100005	SAI-4-M 5P M12 NPN ECO	B.17	1906340300	SAIL-M12WM8W-4-3.0U	D.66	1906950150	SAIL-M12BW-3S1.5Q	D.48
1873300050	SAIL-M12G-PB-0.5D	C.4	1892101000	SAI-4-M 5P M12 ECO UT	B.17	1906340500	SAIL-M12WM8W-4-5.0U	D.35	1906950300	SAIL-M12BW-3S3.0Q	D.48
1873300150	SAIL-M12G-PB-1.5D	C.14	1892120000	SAISM-4/8S-M12-4P D-COD	C.23	1906340500	SAIL-M12WM8W-4-5.0U	D.66	1906950500	SAIL-M12BW-3S5.0Q	D.48
1873300150	SAIL-M12G-PB-1.5D	C.4	1892120000	SAISM-4/8S-M12-4P D-COD	C.25	1906341000	SAIL-M12WM8W-4-10U	D.35	1906951000	SAIL-M12BW-3S10Q	D.48
1873300150	SAIL-M12G-PB-1.5D	D.108	1892120000	SAISM-4/8S-M12-4P D-COD	C.27	1906341000	SAIL-M12WM8W-4-10U	D.66	1909500000	VG M16 - MS 1/EMV	D.114
1873300300	SAIL-M12G-PB-3.0D	C.14	1892120000	SAISM-4/8S-M12-4P D-COD	C.32	1906390000	SAIS-5/7-ZF	D.13	1909860000	VG M16-1/K68	D.114
1873300300	SAIL-M12G-PB-3.0D	C.4	1892120000	SAISM-4/8S-M12-4P D-COD	D.10	1906400150	SAIL-M8BW-4L1.5U	D.54	1909910000	VG M16-1/MS88	D.114
1873300300	SAIL-M12G-PB-3.0D	D.108	1892120000	SAISM-4/8S-M12-4P D-COD	D.119	1906400300	SAIL-M8BW-4L3.0U	D.54			
1873300500	SAIL-M12G-PB-5.0D	C.14	1892120001	SAISM-4/8S-M12 4P D-ZF	C.32	1906400500	SAIL-M8BW-4L5.0U	D.54			
1873300500	SAIL-M12G-PB-5.0D	C.4	1892120001	SAISM-4/8S-M12 4P D-ZF	D.119	1906401000	SAIL-M8BW-4L10U	D.54			
1873300500	SAIL-M12G-PB-5.0D	D.108	1892120001	SAISM-4/8S-M12 4P D-ZF	D.12	1906410150	SAIL-M12GM12W-4-2L1.5U	D.38	1910000000	Screwty Set	D.101
1873301000	SAIL-M12G-PB-10D	C.14	1892130000	SAIBM-4/8S-M12-4P D-COD	C.23	1906410150	SAIL-M12GM12W-4-2L1.5U	D.63	1912130000	ESG 8/13.5/43.3 SAI AU	C.17
1873301000	SAIL-M12G-PB-10D	C.4	1892130000	SAIBM-4/8S-M12-4P D-COD	C.25	1906410300	SAIL-M12GM12W-4-2L3.0U	D.38	1912130000	ESG 8/13.5/43.3 SAI AU	C.19
1873301000	SAIL-M12G-PB-10D	D.108	1892130000	SAIBM-4/8S-M12-4P D-COD	D.108	1906410300	SAIL-M12GM12W-4-2L3.0U	D.63	1912130000	ESG 8/13.5/43.3 SAI AU	C.23
1873301500	SAIL-M12G-PB-15D	C.4	1892130000	SAIBM-4/8S-M12-4P D-COD	C.27	1906410500	SAIL-M12GM12W-4-2L5.0U	D.38	1912130000	ESG 8/13.5/43.3 SAI AU	C.25
1873302000	SAIL-M12G-PB-20D	C.4	1892130000	SAIBM-4/8S-M12-4P D-COD	D.10	1906410500	SAIL-M12GM12W-4-2L5.0U	D.63	1912130000	ESG 8/13.5/43.3 SAI AU	C.27
1873310030	SAIL-M12GM12G-PB-0.3D	C.15	1892130000	SAIBM-4/8S-M12-4P D-COD	D.119	1906411000	SAIL-M12GM12W-4-2L10U	D.38	1912130000	ESG 8/13.5/43.3 SAI AU	C.30
1873310030	SAIL-M12GM12G-PB-0.3D	C.4	1892130001	SAIBM-4/8S-M12 4P D-ZF	C.32	1906411000	SAIL-M12GM12W-4-2L10U	D.63	1912130000	ESG 8/13.5/43.3 SAI AU	C.31
1873310030	SAIL-M12GM12G-PB-0.3D	D.109	1892130001	SAIBM-4/8S-M12 4P D-ZF	D.119	1906430150	SAIL-M12GM8W-4L1.5U	D.70	1912130000	ESG 8/13.5/43.3 SAI AU	C.36
1873310150	SAIL-M12GM12G-PB-1.5D	C.15	1892130001	SAIBM-4/8S-M12 4P D-ZF	D.12	1906430300	SAIL-M12GM8W-4L3.0U	D.70	1912130000	ESG 8/13.5/43.3 SAI AU	C.37
1873310150	SAIL-M12GM12G-PB-1.5D	C.4	1894380000	SAI-8-M 4P Exi Z1 OL	B.59	1906430500	SAIL-M12GM8W-4L5.0U	D.70	1912130000	ESG 8/13.5/43.3 SAI AU	C.38
1873310150	SAIL-M12GM12G-PB-1.5D	D.109	1896050000	SAI-4-M 5P M12 Exia	B.59	1906431000	SAIL-M12GM8W-4L10U	D.70	1912130000	ESG 8/13.5/43.3 SAI AU	C.39
1873310300	SAIL-M12GM12G-PB-3.0D	C.4	1896070000	SAI-6-M 5P M12 Exia	B.59	1906450150	SAIL-M8GM8W-4L1.5U	D.77	1912130000	ESG 8/13.5/43.3 SAI AU	C.40
1873310500	SAIL-M12GM12G-PB-5.0D	C.15	1896090000	SAI-8-M 5P M12 Exia	B.59	1906450300	SAIL-M8GM8W-4L3.0U	D.77	1912130000	ESG 8/13.5/43.3 SAI AU	C.41
1873310500	SAIL-M12GM12G-PB-5.0D	C.4	1896740000	SAI-SA-3-IDC (1Se)	D.17	1906450500	SAIL-M8GM8W-4L5.0U	D.77	1912130000	ESG 8/13.5/43.3 SAI AU	C.46
1873310500	SAIL-M12GM12G-PB-5.0D	D.109	1897680000	SAI-4-MMS 5P M12 1:1	B.38	1906451000	SAIL-M8GM8W-4L10U	D.77	1912130000	ESG 8/13.5/43.3 SAI AU	C.47
1873311000	SAIL-M12GM12G-PB-10D	C.15	1898240500	SAIL-M12BW-12-5.0U	D.45	1906470150	SAIL-M12G-3S1.5Q	D.48	1912130000	ESG 8/13.5/43.3 SAI AU	C.49
1873311000	SAIL-M12GM12G-PB-10D	C.4	1898241000	SAIL-M12BW-12-10U	D.45	1906470300	SAIL-M12G-3S3.0Q	D.48	1912130000	ESG 8/13.5/43.3 SAI AU	D.26
1873311000	SAIL-M12GM12G-PB-10D	D.109				1906470500	SAIL-M12G-3S5.0Q	D.48	1917360000	SAI-AS8 IDC BOTTOM	C.49
1873311500	SAIL-M12GM12G-PB-15D	C.4				1906471000	SAIL-M12G-3S10Q	D.48	1917370000	SAI-AS4 IDC BOTTOM	C.49
1873312500	SAIL-M12GM12G-PB-25D	C.4				1906480150	SAIL-M12G-4S1.5Q	D.48	1919680000	PS SUB-D IDC TERM PS	C.13
1873313000	SAIL-M12GM12G-PB-30D	C.4				1906480300	SAIL-M12G-4S3.0Q	D.48	1919680000	PS SUB-D IDC TERM PS	D.107
1873314000	SAIL-M12GM12G-PB-40D	C.4				1906480500	SAIL-M12G-4S5.0Q	D.48			
1873320050	SAIL-M12BG-PB-0.5D	C.4				1906481000	SAIL-M12G-4S10Q	D.48			
1873320150	SAIL-M12BG-PB-1.5D	C.14				1906500150	SAIL-M12W-3S1.5Q	D.48			
1873320150	SAIL-M12BG-PB-1.5D	C.4				1906500300	SAIL-M12W-3S3.0Q	D.48			
1873320150	SAIL-M12BG-PB-1.5D	D.108				1906500500	SAIL-M12W-3S5.0Q	D.48			
1873320300	SAIL-M12BG-PB-3.0D	C.14				1906501000	SAIL-M12W-3S10Q	D.48			
1873320300	SAIL-M12BG-PB-3.0D	C.4				1906520150	SAIL-M12W-5S1.5Q	D.48			
1873320300	SAIL-M12BG-PB-3.0D	D.108				1906520300	SAIL-M12W-5S3.0Q	D.48			
1873320500	SAIL-M12BG-PB-5.0D	C.14				1906520500	SAIL-M12W-5S5.0Q	D.48			
1873320500	SAIL-M12BG-PB-5.0D	D.108				1906521000	SAIL-M12W-5S10Q	D.48			
1873321000	SAIL-M12BG-PB-10D	C.14				1906540150	SAIL-M12BW-5S1.5Q	D.48			
1873321000	SAIL-M12BG-PB-10D	C.4				1906540300	SAIL-M12BW-5S3.0Q	D.48			
1873321000	SAIL-M12BG-PB-10D	D.108				1906540500	SAIL-M12BW-5S5.0Q	D.48			
1873321500	SAIL-M12BG-PB-15D	C.14				1906541000	SAIL-M12BW-5S10Q	D.48			
1873322000	SAIL-M12BG-PB-20D	C.4				1906550000	SAI-AU M8 PB 16DI	C.9			
1877250150	SAIL-M8GM8W-3L1.5U	D.35				1906560150	SAIL-M8G-3S1.5U	D.55			
1877250150	SAIL-M8GM8W-3L1.5U	D.77				1906560300	SAIL-M8G-3S3.0U	D.55			
1877250300	SAIL-M8GM8W-3L3.0U	D.35				1906560500	SAIL-M8G-3S5.0U	D.55			
1877250300	SAIL-M8GM8W-3L3.0U	D.77				1906561000	SAIL-M8G-3S10U	D.55			
1877250500	SAIL-M8GM8W-3L5.0U	D.35				1906570150	SAIL-M8G-4S1.5U	D.55			
1877250500	SAIL-M8GM8W-3L5.0U	D.77				1906570300	SAIL-M8G-4S3.0U	D.55			
1877251000	SAIL-M8GM8W-3L10U	D.35				1906570500	SAIL-M8G-4S5.0U	D.55			
1877251000	SAIL-M8GM8W-3L10U	D.77				1906571000	SAIL-M8G-4S10U	D.55			
1877440100	SAIB-M23-12P-AN-1.0M	D.57				1906580150	SAIL-M8W-3S1.5U	D.55			
1877440300	SAIB-M23-12P-AN-3.0M	D.57				1906580300	SAIL-M8W-3S3.0U	D.55			
1877440500	SAIB-M23-12P-AN-5.0M	D.57				1906580500	SAIL-M8W-3S5.0U	D.55			
1877441000	SAIB-M23-12P-AN-10M	D.57				1906581000	SAIL-M8W-3S10U	D.55			
1877950000	SAI-10-S12 3P M8 L	B.50				1906590150	SAIL-M8W-4S1.5U	D.55			
1879710500	SAIL-M12BG-12-5.0U	D.45				1906590300	SAIL-M8W-4S3.0U	D.55			
1879711000	SAIL-M12BG-12-10U	D.45				1906590500	SAIL-M8W-4S5.0U	D.55			

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1925330500	SAIL-M12GM12G-2/4-5.0V	D.61	1925461000	SAIL-M12BW-3L10V	D.38	1926510300	SAIL-M12GM12G-5-3.0Q	D.37	1926641000	SAIL-M12G-5-10Q	D.34
1925331000	SAIL-M12GM12G-2/4-10V	D.61	1925461000	SAIL-M12BW-3L10V	D.46	1926510300	SAIL-M12GM12G-5-3.0Q	D.60	1926641000	SAIL-M12G-5-10Q	D.42
1925340150	SAIL-M12GM12W-3-1.5V	D.37	1925470150	SAIL-M12BW-4-2L1.5V	D.38	1926510500	SAIL-M12GM12G-5-5.0Q	D.37	1926650150	SAIL-M12BW-3L1.5Q	D.38
1925340150	SAIL-M12GM12W-3-1.5V	D.61	1925470150	SAIL-M12BW-4-2L1.5V	D.46	1926510500	SAIL-M12GM12G-5-5.0Q	D.60	1926650150	SAIL-M12BW-3L1.5Q	D.46
1925340300	SAIL-M12GM12W-3-3.0V	D.37	1925470300	SAIL-M12BW-4-2L3.0V	D.38	1926511000	SAIL-M12GM12G-5-10Q	D.37	1926650300	SAIL-M12BW-3L3.0Q	D.38
1925340300	SAIL-M12GM12W-3-3.0V	D.61	1925470300	SAIL-M12BW-4-2L3.0V	D.46	1926511000	SAIL-M12GM12G-5-10Q	D.60	1926650300	SAIL-M12BW-3L3.0Q	D.46
1925340500	SAIL-M12GM12W-3-5.0V	D.37	1925470500	SAIL-M12BW-4-2L5.0V	D.38	1926520150	SAIL-M12GM12G-2/4-1.5Q	D.60	1926650500	SAIL-M12BW-3L5.0Q	D.38
1925340500	SAIL-M12GM12W-3-5.0V	D.61	1925470500	SAIL-M12BW-4-2L5.0V	D.46	1926520300	SAIL-M12GM12G-2/4-3.0Q	D.60	1926650500	SAIL-M12BW-3L5.0Q	D.46
1925341000	SAIL-M12GM12W-3-10V	D.37	1925471000	SAIL-M12BW-4-2L10V	D.38	1926520500	SAIL-M12GM12G-2/4-5.0Q	D.60	1926651000	SAIL-M12BW-3L10Q	D.38
1925341000	SAIL-M12GM12W-3-10V	D.61	1925471000	SAIL-M12BW-4-2L10V	D.46	1926521000	SAIL-M12GM12G-2/4-10Q	D.60	1926651000	SAIL-M12BW-3L10Q	D.46
1925350150	SAIL-M12GM12W-4-1.5V	D.37	1925510150	SAIL-M12W-3-1.5V	D.34	1926530150	SAIL-M12GM12W-3-1.5Q	D.37	1926660150	SAIL-M12BW-4-2L1.5Q	D.38
1925350150	SAIL-M12GM12W-4-1.5V	D.61	1925510150	SAIL-M12W-3-1.5V	D.43	1926530150	SAIL-M12GM12W-3-1.5Q	D.60	1926660150	SAIL-M12BW-4-2L1.5Q	D.46
1925350300	SAIL-M12GM12W-4-3.0V	D.37	1925510300	SAIL-M12W-3-3.0V	D.34	1926530300	SAIL-M12GM12W-3-3.0Q	D.37	1926660300	SAIL-M12BW-4-2L3.0Q	D.38
1925350300	SAIL-M12GM12W-4-3.0V	D.61	1925510300	SAIL-M12W-3-3.0V	D.43	1926530300	SAIL-M12GM12W-3-3.0Q	D.60	1926660300	SAIL-M12BW-4-2L3.0Q	D.46
1925350500	SAIL-M12GM12W-4-5.0V	D.37	1925510500	SAIL-M12W-3-5.0V	D.34	1926530500	SAIL-M12GM12W-3-5.0Q	D.37	1926660500	SAIL-M12BW-4-2L5.0Q	D.38
1925350500	SAIL-M12GM12W-4-5.0V	D.61	1925510500	SAIL-M12W-3-5.0V	D.43	1926530500	SAIL-M12GM12W-3-5.0Q	D.60	1926660500	SAIL-M12BW-4-2L5.0Q	D.46
1925351000	SAIL-M12GM12W-4-10V	D.37	1925511000	SAIL-M12W-3-10V	D.34	1926531000	SAIL-M12GM12W-3-10Q	D.37	1926661000	SAIL-M12BW-4-2L10Q	D.38
1925351000	SAIL-M12GM12W-4-10V	D.61	1925511000	SAIL-M12W-3-10V	D.43	1926531000	SAIL-M12GM12W-3-10Q	D.60	1926661000	SAIL-M12BW-4-2L10Q	D.46
1925360150	SAIL-M12GM12W-5-1.5V	D.37	1925520150	SAIL-M12W-4-1.5V	D.34	1926540150	SAIL-M12GM12W-4-1.5Q	D.37	1926690150	SAIL-M12G-5S1.5Q	D.48
1925360150	SAIL-M12GM12W-5-1.5V	D.61	1925520150	SAIL-M12W-4-1.5V	D.43	1926540150	SAIL-M12GM12W-4-1.5Q	D.60	1926690150	SAIL-M12G-5S1.5Q	D.48
1925360300	SAIL-M12GM12W-5-3.0V	D.37	1925520300	SAIL-M12W-4-3.0V	D.34	1926540300	SAIL-M12GM12W-4-3.0Q	D.37	1926690500	SAIL-M12G-5S3.0Q	D.48
1925360300	SAIL-M12GM12W-5-3.0V	D.61	1925520300	SAIL-M12W-4-3.0V	D.43	1926540300	SAIL-M12GM12W-4-3.0Q	D.60	1926690500	SAIL-M12G-5S3.0Q	D.48
1925360500	SAIL-M12GM12W-5-5.0V	D.37	1925520500	SAIL-M12W-4-5.0V	D.34	1926540500	SAIL-M12GM12W-4-5.0Q	D.37	1926700150	SAIL-M12W-3-1.5Q	D.34
1925360500	SAIL-M12GM12W-5-5.0V	D.61	1925520500	SAIL-M12W-4-5.0V	D.43	1926540500	SAIL-M12GM12W-4-5.0Q	D.60	1926700150	SAIL-M12W-3-1.5Q	D.42
1925361000	SAIL-M12GM12W-5-10V	D.37	1925521000	SAIL-M12W-4-10V	D.34	1926541000	SAIL-M12GM12W-4-10Q	D.37	1926700300	SAIL-M12W-3-3.0Q	D.34
1925361000	SAIL-M12GM12W-5-10V	D.61	1925521000	SAIL-M12W-4-10V	D.43	1926541000	SAIL-M12GM12W-4-10Q	D.60	1926700300	SAIL-M12W-3-3.0Q	D.42
1925370150	SAIL-M12GM12W-2/4-1.5V	D.61	1925530150	SAIL-M12W-5-1.5V	D.34	1926550150	SAIL-M12GM12W-5-1.5Q	D.37	1926700500	SAIL-M12W-3-5.0Q	D.34
1925370300	SAIL-M12GM12W-2/4-3.0V	D.61	1925530150	SAIL-M12W-5-1.5V	D.43	1926550150	SAIL-M12GM12W-5-1.5Q	D.60	1926700500	SAIL-M12W-3-5.0Q	D.42
1925370500	SAIL-M12GM12W-2/4-5.0V	D.61	1925530300	SAIL-M12W-5-3.0V	D.34	1926550300	SAIL-M12GM12W-5-3.0Q	D.37	1926701000	SAIL-M12W-3-10Q	D.34
1925371000	SAIL-M12GM12W-2/4-10V	D.61	1925530300	SAIL-M12W-5-3.0V	D.43	1926550300	SAIL-M12GM12W-5-3.0Q	D.60	1926701000	SAIL-M12W-3-10Q	D.42
1925380150	SAIL-M12WM12W-3-1.5V	D.37	1925530500	SAIL-M12W-5-5.0V	D.34	1926550500	SAIL-M12GM12W-5-5.0Q	D.37	1926710150	SAIL-M12W-4-1.5Q	D.34
1925380150	SAIL-M12WM12W-3-1.5V	D.61	1925530500	SAIL-M12W-5-5.0V	D.43	1926550500	SAIL-M12GM12W-5-5.0Q	D.60	1926710150	SAIL-M12W-4-1.5Q	D.42
1925380300	SAIL-M12WM12W-3-3.0V	D.37	1925531000	SAIL-M12W-5-10V	D.34	1926551000	SAIL-M12GM12W-5-10Q	D.37	1926710300	SAIL-M12W-4-3.0Q	D.34
1925380300	SAIL-M12WM12W-3-3.0V	D.61	1925531000	SAIL-M12W-5-10V	D.43	1926551000	SAIL-M12GM12W-5-10Q	D.60	1926710300	SAIL-M12W-4-3.0Q	D.42
1925380500	SAIL-M12WM12W-3-5.0V	D.37	1925570150	SAIL-M12BG-3-1.5V	D.36	1926560150	SAIL-M12GM12W-2/4-1.5Q	D.60	1926710500	SAIL-M12W-4-5.0Q	D.34
1925380500	SAIL-M12WM12W-3-5.0V	D.61	1925570150	SAIL-M12BG-3-1.5V	D.43	1926560300	SAIL-M12GM12W-2/4-3.0Q	D.60	1926710500	SAIL-M12W-4-5.0Q	D.42
1925381000	SAIL-M12WM12W-3-10V	D.37	1925570300	SAIL-M12BG-3-3.0V	D.36	1926560500	SAIL-M12GM12W-2/4-5.0Q	D.60	1926711000	SAIL-M12W-4-10Q	D.34
1925381000	SAIL-M12WM12W-3-10V	D.61	1925570300	SAIL-M12BG-3-3.0V	D.43	1926561000	SAIL-M12GM12W-2/4-10Q	D.60	1926711000	SAIL-M12W-4-10Q	D.42
1925390150	SAIL-M12WM12W-4-1.5V	D.37	1925570500	SAIL-M12BG-3-5.0V	D.36	1926570150	SAIL-M12WM12W-3-1.5Q	D.37	1926720150	SAIL-M12W-5-1.5Q	D.34
1925390150	SAIL-M12WM12W-4-1.5V	D.61	1925570500	SAIL-M12BG-3-5.0V	D.43	1926570150	SAIL-M12WM12W-3-1.5Q	D.60	1926720150	SAIL-M12W-5-1.5Q	D.42
1925390300	SAIL-M12WM12W-4-3.0V	D.37	1925571000	SAIL-M12BG-3-10V	D.36	1926570300	SAIL-M12WM12W-3-3.0Q	D.37	1926720300	SAIL-M12W-5-3.0Q	D.34
1925390300	SAIL-M12WM12W-4-3.0V	D.61	1925571000	SAIL-M12BG-3-10V	D.43	1926570300	SAIL-M12WM12W-3-3.0Q	D.60	1926720300	SAIL-M12W-5-3.0Q	D.42
1925390500	SAIL-M12WM12W-4-5.0V	D.37	1925580150	SAIL-M12BG-4-1.5V	D.36	1926570500	SAIL-M12WM12W-3-5.0Q	D.37	1926720500	SAIL-M12W-5-5.0Q	D.34
1925390500	SAIL-M12WM12W-4-5.0V	D.61	1925580150	SAIL-M12BG-4-1.5V	D.43	1926570500	SAIL-M12WM12W-3-5.0Q	D.60	1926720500	SAIL-M12W-5-5.0Q	D.42
1925391000	SAIL-M12WM12W-4-10V	D.37	1925580300	SAIL-M12BG-4-3.0V	D.36	1926571000	SAIL-M12WM12W-3-10Q	D.37	1926721000	SAIL-M12W-5-10Q	D.34
1925391000	SAIL-M12WM12W-4-10V	D.61	1925580300	SAIL-M12BG-4-3.0V	D.43	1926571000	SAIL-M12WM12W-3-10Q	D.60	1926721000	SAIL-M12W-5-10Q	D.42
1925400150	SAIL-M12WM12W-5-1.5V	D.37	1925580500	SAIL-M12BG-4-5.0V	D.36	1926580150	SAIL-M12WM12W-4-1.5Q	D.60	1926760150	SAIL-M12BG-3-1.5Q	D.34
1925400150	SAIL-M12WM12W-5-1.5V	D.61	1925580500	SAIL-M12BG-4-5.0V	D.43	1926580150	SAIL-M12WM12W-4-1.5Q	D.60	1926760150	SAIL-M12BG-3-1.5Q	D.42
1925400300	SAIL-M12WM12W-5-3.0V	D.37	1925581000	SAIL-M12BG-4-10V	D.36	1926580300	SAIL-M12WM12W-4-3.0Q	D.60	1926760300	SAIL-M12BG-3-3.0Q	D.34
1925400300	SAIL-M12WM12W-5-3.0V	D.61	1925581000	SAIL-M12BG-4-10V	D.43	1926580300	SAIL-M12WM12W-4-3.0Q	D.60	1926760300	SAIL-M12BG-3-3.0Q	D.42
1925400500	SAIL-M12WM12W-5-5.0V	D.37	1925590150	SAIL-M12BG-5-1.5V	D.36	1926580500	SAIL-M12WM12W-4-5.0Q	D.60	1926760500	SAIL-M12BG-3-5.0Q	D.34
1925400500	SAIL-M12WM12W-5-5.0V	D.61	1925590150	SAIL-M12BG-5-1.5V	D.43	1926580500	SAIL-M12WM12W-4-5.0Q	D.60	1926760500	SAIL-M12BG-3-5.0Q	D.42
1925401000	SAIL-M12WM12W-5-10V	D.37	1925590300	SAIL-M12BG-5-3.0V	D.36	1926581000	SAIL-M12WM12W-4-10Q	D.60	1926761000	SAIL-M12BG-3-10Q	D.34
1925401000	SAIL-M12WM12W-5-10V	D.61	1925590300	SAIL-M12BG-5-3.0V	D.43	1926581000	SAIL-M12WM12W-4-10Q	D.60	1926761000	SAIL-M12BG-3-10Q	D.42
1925410150	SAIL-M12GM12W-3L1.5V	D.38	1925590500	SAIL-M12BG-5-5.0V	D.36	1926590150	SAIL-M12WM12W-5-1.5Q	D.37	1926770150	SAIL-M12BG-4-1.5Q	D.36
1925410150	SAIL-M12GM12W-3L1.5V	D.63	1925590500	SAIL-M12BG-5-5.0V	D.43	1926590150	SAIL-M12WM12W-5-1.5Q	D.60	1926770150	SAIL-M12BG-4-1.5Q	D.42
1925410300	SAIL-M12GM12W-3L3.0V	D.38	1925591000	SAIL-M12BG-5-10V	D.37	1926590300	SAIL-M12WM12W-5-3.0Q	D.37	1926770300	SAIL-M12BG-4-3.0Q	D.36
1925410300	SAIL-M12GM12W-3L3.0V	D.63	1925591000	SAIL-M12BG-5-10V	D.43	1926590300	SAIL-M12WM12W-5-3.0Q	D.60	1926770300	SAIL-M12BG-4-3.0Q	D.42
1925410500	SAIL-M12GM12W-3L5.0V	D.38	1925630150	SAIL-M12BW-3-1.5V	D.36	1926590500	SAIL-M12WM12W-5-5.0Q	D.60	1926770500	SAIL-M12BG-4-5.0Q	D.34
1925410500	SAIL-M12GM12W-3L5.0V	D.63	1925630150	SAIL-M12BW-3-1.5V	D.43	1926590500	SAIL-M12WM12W-5-5.0Q	D.60	1926770500	SAIL-M12BG-4-5.0Q	D.42
1925411000	SAIL-M12GM12W-3L10V	D.38	1925630300	SAIL-M12BW-3-3.0V	D.36	1926591000	SAIL-M12WM12W-5-10Q	D.60	1926771000	SAIL-M12BG-4-10Q	D.36
1925411000	SAIL-M12GM12W-3L10V	D.63	1925630300	SAIL-M12BW-3-3.0V	D.43	1926591000	SAIL-M12WM12W-5-10Q	D.60	1926771000	SAIL-M12BG-4-10Q	D.42
1925420150	SAIL-M12GM12W-4-2L1.5V	D.38	1925630500	SAIL-M12BW-3-5.0V	D.37	1926600150	SAIL-M12GM12W-3L1.5Q	D.38	1926780150	SAIL-M12BG-5-1.5Q	D.37
1925420150	SAIL-M12GM12W-4-2L1.5V	D.63	1925630500	SAIL-M12BW-3-5.0V	D.43	1926600150	SAIL-M12GM12W-3L1.5Q	D.63	1926780150	SAIL-M12BG-5-1.5Q	D.42
1925420300	SAIL-M12GM12W-4-2L3.0V	D.38	1925631000	SAIL-M12BW-3-10V	D.36	1926600300	SAIL-M12GM12W-3L3.0Q	D.38	1926780300	SAIL-M12BG-5-3.0Q	D.37
1925420300	SAIL-M12GM12W-4-2L3.0V	D.63	1925631000	SAIL-M12BW-3-10V	D.43	1926600300	SAIL-M12GM12W-3L3.0Q	D.63	1926780300	SAIL-M12BG-5-3.0Q	D.42
1925420500	SAIL-M12GM12W-4-2L5.0V	D.38	1925640150	SAIL-M12BW-4-1.5V	D.36	1926600500	SAIL-M12GM12W-3L5.0Q	D.38	1926780500	SAIL-M12BG-5-5.0Q	D.37
1925420500	SAIL-M12GM12W-4-2L5.0V	D.63	1925640150	SAIL-M12BW-4-1.5V	D.43	1926600500	SAIL-M12GM12W-3L5.0Q	D.63	1926780500	SAIL-M12BG-5-5.0Q	D.42
1925421000	SAIL-M12GM12W-4-2L10V	D.38	1925640300	SAIL-M12BW-4-3.0V	D.37	1926601000	SAIL-M12GM12W-3L10Q	D.38	1926781000	SAIL-M12BG-5-10Q	D.37
1925421000	SAIL-M12GM12W-4-2L10V	D.63	1925640300	SAIL-M12BW-4-3.0V	D.43	1926601000	SAIL-M12GM12W-3L10Q	D.63	1926781000	SAIL-M12BG-5-10Q	D.42
1925430150	SAIL-M12G-3-1.5V	D.34	1925640500	SAIL-M12BW-4-5.0V	D.37	1926610150	SAIL-M12GM12W-4-2L1.5Q	D.38	1926820150	SAIL-M12BW-3-1.5Q	D.37
1925430150	SAIL-M12G-3-1.5V	D.43	1925640500	SAIL-M12BW-4-5.0V							

Order No.	Type	Page	Order No.	Type	Page	Order No.	Type	Page	Order No.	Type	Page
1926891000	SAIL-M8GM8G-3-10Q	D.34	1927061000	SAIL-M8BW-3-10Q	D.35	1927240300	SAIL-M8BG-3-3.0V	D.34	1938041000	SAIL-M12GM8G-3-10Q	D.67
1926891000	SAIL-M8GM8G-3-10Q	D.72	1927061000	SAIL-M8BW-3-10Q	D.50	1927240300	SAIL-M8BG-3-3.0V	D.51	1938050150	SAIL-M12GM8W-3-1.5Q	D.35
1926900150	SAIL-M8GM8G-4-1.5Q	D.35	1927070150	SAIL-M8W-4-1.5Q	D.34	1927240500	SAIL-M8BG-3-5.0V	D.34	1938050150	SAIL-M12GM8W-3-1.5Q	D.67
1926900150	SAIL-M8GM8G-4-1.5Q	D.72	1927070150	SAIL-M8W-4-1.5Q	D.50	1927240500	SAIL-M8BG-3-5.0V	D.51	1938050300	SAIL-M12GM8W-3-3.0Q	D.35
1926900300	SAIL-M8GM8G-4-3.0Q	D.35	1927070300	SAIL-M8W-4-3.0Q	D.34	1927241000	SAIL-M8BG-3-10V	D.34	1938050300	SAIL-M12GM8W-3-3.0Q	D.67
1926900300	SAIL-M8GM8G-4-3.0Q	D.72	1927070300	SAIL-M8W-4-3.0Q	D.50	1927241000	SAIL-M8BG-3-10V	D.51	1938050500	SAIL-M12GM8G-4-1.5Q	D.35
1926900500	SAIL-M8GM8G-4-5.0Q	D.35	1927070500	SAIL-M8W-4-5.0Q	D.34	1927250150	SAIL-M8G-4-1.5V	D.34	1938050500	SAIL-M12GM8W-3-5.0Q	D.67
1926900500	SAIL-M8GM8G-4-5.0Q	D.72	1927070500	SAIL-M8W-4-5.0Q	D.50	1927250150	SAIL-M8G-4-1.5V	D.51	1938051000	SAIL-M12GM8W-3-10Q	D.35
1926901000	SAIL-M8GM8G-4-10Q	D.35	1927071000	SAIL-M8W-4-10Q	D.34	1927250300	SAIL-M8G-4-3.0V	D.34	1938051000	SAIL-M12GM8W-3-10Q	D.67
1926901000	SAIL-M8GM8G-4-10Q	D.72	1927071000	SAIL-M8W-4-10Q	D.50	1927250300	SAIL-M8G-4-3.0V	D.51	1938060150	SAIL-M12WM8W-3-1.5Q	D.35
1926910150	SAIL-M8GM8W-3-1.5Q	D.35	1927080150	SAIL-M8BW-4-1.5Q	D.35	1927250500	SAIL-M8G-4-5.0V	D.34	1938060150	SAIL-M12WM8W-3-1.5Q	D.67
1926910150	SAIL-M8GM8W-3-1.5Q	D.72	1927080150	SAIL-M8BW-4-1.5Q	D.50	1927250500	SAIL-M8G-4-5.0V	D.51	1938060300	SAIL-M12WM8W-3-3.0Q	D.35
1926910300	SAIL-M8GM8W-3-3.0Q	D.35	1927080300	SAIL-M8BW-4-3.0Q	D.35	1927251000	SAIL-M8G-4-10V	D.34	1938060300	SAIL-M12WM8W-3-3.0Q	D.67
1926910300	SAIL-M8GM8W-3-3.0Q	D.72	1927080300	SAIL-M8BW-4-3.0Q	D.50	1927251000	SAIL-M8G-4-10V	D.51	1938060500	SAIL-M12WM8W-3-5.0Q	D.35
1926910500	SAIL-M8GM8W-3-5.0Q	D.35	1927080500	SAIL-M8BW-4-5.0Q	D.35	1927260150	SAIL-M8BG-4-1.5V	D.35	1938060500	SAIL-M12WM8W-3-5.0Q	D.67
1926910500	SAIL-M8GM8W-3-5.0Q	D.72	1927080500	SAIL-M8BW-4-5.0Q	D.50	1927260150	SAIL-M8BG-4-1.5V	D.51	1938061000	SAIL-M12WM8W-3-10Q	D.35
1926911000	SAIL-M8GM8W-3-10Q	D.35	1927081000	SAIL-M8BW-4-10Q	D.35	1927260300	SAIL-M8BG-4-3.0V	D.35	1938061000	SAIL-M12WM8W-3-10Q	D.67
1926911000	SAIL-M8GM8W-3-10Q	D.72	1927081000	SAIL-M8BW-4-10Q	D.50	1927260300	SAIL-M8BG-4-3.0V	D.51	1938070150	SAIL-M12GM8G-4-1.5Q	D.35
1926920150	SAIL-M8GM8W-4-1.5Q	D.35	1927090150	SAIL-M8BW-3L1.5Q	D.35	1927260500	SAIL-M8BG-4-5.0V	D.35	1938070150	SAIL-M12GM8G-4-1.5Q	D.67
1926920150	SAIL-M8GM8W-4-1.5Q	D.72	1927090150	SAIL-M8BW-3L1.5Q	D.54	1927260500	SAIL-M8BG-4-5.0V	D.51	1938070300	SAIL-M12GM8G-4-3.0Q	D.35
1926920300	SAIL-M8GM8W-4-3.0Q	D.35	1927090300	SAIL-M8BW-3L3.0Q	D.35	1927261000	SAIL-M8BG-4-10V	D.35	1938070300	SAIL-M12GM8G-4-3.0Q	D.67
1926920300	SAIL-M8GM8W-4-3.0Q	D.72	1927090300	SAIL-M8BW-3L3.0Q	D.50	1927261000	SAIL-M8BG-4-10V	D.51	1938070500	SAIL-M12GM8G-4-5.0Q	D.35
1926920500	SAIL-M8GM8W-4-5.0Q	D.35	1927090500	SAIL-M8BW-3L5.0Q	D.35	1927261000	SAIL-M8BG-4-10V	D.34	1938070500	SAIL-M12GM8G-4-5.0Q	D.67
1926920500	SAIL-M8GM8W-4-5.0Q	D.72	1927090500	SAIL-M8BW-3L5.0Q	D.54	1927310150	SAIL-M8W-3-1.5V	D.51	1938071000	SAIL-M12GM8G-4-10Q	D.35
1926921000	SAIL-M8GM8W-4-10Q	D.35	1927091000	SAIL-M8BW-3L10Q	D.35	1927310300	SAIL-M8W-3-3.0V	D.34	1938071000	SAIL-M12GM8G-4-10Q	D.67
1926921000	SAIL-M8GM8W-4-10Q	D.72	1927091000	SAIL-M8BW-3L10Q	D.54	1927310300	SAIL-M8W-3-3.0V	D.51	1938080150	SAIL-M12GM8W-4-1.5Q	D.35
1926930150	SAIL-M8GM8W-3L1.5Q	D.35	1927100150	SAIL-M8BW-4L1.5Q	D.35	1927310500	SAIL-M8W-3-5.0V	D.34	1938080150	SAIL-M12GM8W-4-1.5Q	D.67
1926930150	SAIL-M8GM8W-3L1.5Q	D.72	1927100300	SAIL-M8BW-4L3.0Q	D.54	1927310500	SAIL-M8W-3-5.0V	D.51	1938080300	SAIL-M12GM8W-4-3.0Q	D.35
1926930300	SAIL-M8GM8W-3L3.0Q	D.35	1927100500	SAIL-M8BW-4L5.0Q	D.35	1927311000	SAIL-M8W-3-10V	D.34	1938080300	SAIL-M12GM8W-4-3.0Q	D.67
1926930300	SAIL-M8GM8W-3L3.0Q	D.72	1927101000	SAIL-M8BW-4L10Q	D.54	1927311000	SAIL-M8W-3-10V	D.51	1938080500	SAIL-M12GM8W-4-5.0Q	D.35
1926930500	SAIL-M8GM8W-3L5.0Q	D.35	1927150150	SAIL-M8GM8G-3-1.5V	D.34	1927320150	SAIL-M8BW-3-1.5V	D.35	1938080500	SAIL-M12GM8W-4-5.0Q	D.67
1926930500	SAIL-M8GM8W-3L5.0Q	D.72	1927150150	SAIL-M8GM8G-3-1.5V	D.73	1927320150	SAIL-M8BW-3-1.5V	D.51	1938081000	SAIL-M12GM8W-4-10Q	D.35
1926931000	SAIL-M8GM8W-3L10Q	D.35	1927150300	SAIL-M8GM8G-3-3.0V	D.34	1927320300	SAIL-M8BW-3-3.0V	D.35	1938081000	SAIL-M12GM8W-4-10Q	D.67
1926931000	SAIL-M8GM8W-3L10Q	D.72	1927150300	SAIL-M8GM8G-3-3.0V	D.73	1927320300	SAIL-M8BW-3-3.0V	D.51	1938090150	SAIL-M12WM8W-4-1.5Q	D.35
1926940150	SAIL-M8GM8W-4L1.5Q	D.35	1927150500	SAIL-M8GM8G-3-5.0V	D.34	1927320500	SAIL-M8BW-3-5.0V	D.35	1938090150	SAIL-M12WM8W-4-1.5Q	D.67
1926940150	SAIL-M8GM8W-4L1.5Q	D.72	1927150500	SAIL-M8GM8G-3-5.0V	D.73	1927320500	SAIL-M8BW-3-5.0V	D.51	1938090300	SAIL-M12WM8W-4-3.0Q	D.35
1926940300	SAIL-M8GM8W-4L3.0Q	D.35	1927151000	SAIL-M8GM8G-3-10V	D.34	1927321000	SAIL-M8BW-3-10V	D.35	1938090300	SAIL-M12WM8W-4-3.0Q	D.67
1926940300	SAIL-M8GM8W-4L3.0Q	D.72	1927151000	SAIL-M8GM8G-3-10V	D.73	1927321000	SAIL-M8BW-3-10V	D.51	1938090500	SAIL-M12WM8W-4-5.0Q	D.35
1926940500	SAIL-M8GM8W-4L5.0Q	D.35	1927160150	SAIL-M8GM8G-4-1.5V	D.35	1927330150	SAIL-M8W-4-1.5V	D.34	1938090500	SAIL-M12WM8W-4-5.0Q	D.67
1926940500	SAIL-M8GM8W-4L5.0Q	D.72	1927160150	SAIL-M8GM8G-4-1.5V	D.73	1927330150	SAIL-M8W-4-1.5V	D.51	1938091000	SAIL-M12WM8W-4-10Q	D.35
1926941000	SAIL-M8GM8W-4L10Q	D.35	1927160300	SAIL-M8GM8G-4-3.0V	D.35	1927330300	SAIL-M8W-4-3.0V	D.34	1938091000	SAIL-M12WM8W-4-10Q	D.67
1926941000	SAIL-M8GM8W-4L10Q	D.72	1927160300	SAIL-M8GM8G-4-3.0V	D.73	1927330300	SAIL-M8W-4-3.0V	D.51	1938100150	SAIL-M12GM8G-4-1.5Q	D.35
1926950150	SAIL-M8W8M8W-3-1.5Q	D.35	1927160300	SAIL-M8GM8G-4-3.0V	D.35	1927330500	SAIL-M8W-4-5.0V	D.34	1938100300	SAIL-M8GM12G-3-3.0Q	D.36
1926950150	SAIL-M8W8M8W-3-1.5Q	D.72	1927160500	SAIL-M8GM8G-4-5.0V	D.35	1927330500	SAIL-M8W-4-5.0V	D.51	1938100500	SAIL-M8GM12G-3-5.0Q	D.36
1926950300	SAIL-M8W8M8W-3-3.0Q	D.35	1927160500	SAIL-M8GM8G-4-5.0V	D.73	1927330500	SAIL-M8W-4-5.0V	D.34	1938101000	SAIL-M8GM12G-3-10Q	D.36
1926950300	SAIL-M8W8M8W-3-3.0Q	D.72	1927161000	SAIL-M8GM8G-4-10V	D.35	1927331000	SAIL-M8W-4-10V	D.35	1938101000	SAIL-M8GM12G-3-10Q	D.37
1926950500	SAIL-M8W8M8W-3-5.0Q	D.35	1927161000	SAIL-M8GM8G-4-10V	D.73	1927331000	SAIL-M8W-4-10V	D.51	1938110150	SAIL-M8GM12W-3-1.5Q	D.37
1926950500	SAIL-M8W8M8W-3-5.0Q	D.72	1927161000	SAIL-M8GM8G-4-10V	D.35	1927331000	SAIL-M8W-4-10V	D.35	1938110300	SAIL-M8GM12W-3-3.0Q	D.37
1926951000	SAIL-M8W8M8W-3-10Q	D.35	1927170150	SAIL-M8GM8W-3-1.5V	D.73	1927340150	SAIL-M8BW-4-1.5V	D.35	1938110500	SAIL-M8GM12W-3-5.0Q	D.37
1926951000	SAIL-M8W8M8W-3-10Q	D.72	1927170150	SAIL-M8GM8W-3-1.5V	D.35	1927340150	SAIL-M8BW-4-1.5V	D.51	1938111000	SAIL-M8GM12W-3-10Q	D.37
1926960150	SAIL-M8W8M8W-4-1.5Q	D.35	1927170300	SAIL-M8GM8W-3-3.0V	D.73	1927340300	SAIL-M8BW-4-3.0V	D.35	1938120150	SAIL-M8W12W-3-1.5Q	D.37
1926960150	SAIL-M8W8M8W-4-1.5Q	D.72	1927170300	SAIL-M8GM8W-3-3.0V	D.35	1927340300	SAIL-M8BW-4-3.0V	D.51	1938120300	SAIL-M8W12W-3-3.0Q	D.37
1926960300	SAIL-M8W8M8W-4-3.0Q	D.35	1927170500	SAIL-M8GM8W-3-5.0V	D.73	1927340500	SAIL-M8BW-4-5.0V	D.35	1938120500	SAIL-M8W12W-3-5.0Q	D.37
1926960300	SAIL-M8W8M8W-4-3.0Q	D.72	1927170500	SAIL-M8GM8W-3-5.0V	D.35	1927341000	SAIL-M8BW-4-10V	D.35	1938121000	SAIL-M8W12W-3-10Q	D.37
1926960500	SAIL-M8W8M8W-4-5.0Q	D.35	1927171000	SAIL-M8GM8W-3-10V	D.73	1927341000	SAIL-M8BW-4-10V	D.51	1938130150	SAIL-M8GM12G-4-1.5Q	D.36
1926960500	SAIL-M8W8M8W-4-5.0Q	D.72	1927171000	SAIL-M8GM8W-3-10V	D.35	1927341000	SAIL-M8BW-4-10V	D.35	1938130300	SAIL-M8GM12G-4-3.0Q	D.36
1926961000	SAIL-M8W8M8W-4-10Q	D.35	1927180150	SAIL-M8GM8W-4-1.5V	D.35	1927350150	SAIL-M8BW-3L1.5V	D.54	1938130500	SAIL-M8GM12G-4-5.0Q	D.36
1926961000	SAIL-M8W8M8W-4-10Q	D.72	1927180150	SAIL-M8GM8W-4-1.5V	D.73	1927350150	SAIL-M8BW-3L1.5V	D.35	1938131000	SAIL-M8GM12G-4-10Q	D.36
1926970150	SAIL-M8G-3-1.5Q	D.34	1927180300	SAIL-M8GM8W-4-3.0V	D.35	1927350300	SAIL-M8BW-3L3.0V	D.54	1938140150	SAIL-M8GM12W-4-1.5Q	D.37
1926970150	SAIL-M8G-3-1.5Q	D.50	1927180300	SAIL-M8GM8W-4-3.0V	D.73	1927350300	SAIL-M8BW-3L3.0V	D.35	1938140300	SAIL-M8GM12W-3-3.0Q	D.37
1926970300	SAIL-M8G-3-3.0Q	D.34	1927180500	SAIL-M8GM8W-4-5.0V	D.35	1927350500	SAIL-M8BW-3L5.0V	D.54	1938140500	SAIL-M8GM12W-4-5.0Q	D.37
1926970300	SAIL-M8G-3-3.0Q	D.50	1927180500	SAIL-M8GM8W-4-5.0V	D.73	1927350500	SAIL-M8BW-3L5.0V	D.35	1938141000	SAIL-M8GM12W-4-10Q	D.37
1926970500	SAIL-M8G-3-5.0Q	D.34	1927181000	SAIL-M8GM8W-4-10V	D.35	1927351000	SAIL-M8BW-3L10V	D.54	1938150150	SAIL-M8W12W-4-1.5Q	D.37
1926970500	SAIL-M8G-3-5.0Q	D.50	1927181000	SAIL-M8GM8W-4-10V	D.73	1927351000	SAIL-M8BW-3L10V	D.35	1938150300	SAIL-M8W12W-4-3.0Q	D.37
1926971000	SAIL-M8G-3-10Q	D.34	1927190150	SAIL-M8GM8W-3L1.5V	D.35	1927360150	SAIL-M8BW-4L1.5V	D.54	1938150500	SAIL-M8W12W-4-5.0Q	D.37
1926971000	SAIL-M8G-3-10Q	D.50	1927190150	SAIL-M8GM8W-3L1.5V	D.72	1927360300	SAIL-M8BW-4L3.0V	D.54	1938151000	SAIL-M8W12W-4-10Q	D.37
1926980150	SAIL-M8BG-3-1.5Q	D.35	1927190300	SAIL-M8GM8W-3L3.0Q	D.35	1927360500	SAIL-M8BW-4L5.0V	D.34	1938170150	SAIL-M12GM8G-3-1.5V	D.68
1926980150	SAIL-M8BG-3-1.5Q	D.72	1927190300	SAIL-M8GM8W-3L3.0Q	D.73	1927361000	SAIL-M8BW-4L10V	D.54	1938170300	SAIL-M12GM8G-3-3.0V	D.68
1926980300	SAIL-M8BG-3-3.0Q	D.34	1927190500	SAIL-M8GM8W-3L5.0Q	D.35	1932380000	SAIL-6-S 3P M8 L OL	B.50	1938170500	SAIL-M12GM8G-3-5.0V	D.68
1926980300	SAIL-M8BG-3-3.0Q	D.50	1927190500	SAIL-M8GM8W-3L5.0Q	D.73	1934200000	PB SUB-D 2F TERM PS	C.13	1938171000	SAIL-M12GM8G-3-10V	D.68
1926980500	SAIL-M8BG-3-5.0Q	D.34	1927191000	SAIL-M8GM8W-3L10V	D.35	1934200000	PB SUB-D 2F TERM PS	D.107	1938180150	SAIL-M12GM8W-3-1.5V	D.35
1926980500	SAIL-M8BG-3-5.0Q	D.50	1927191000	SAIL-M8GM8W-3L10V	D.72	1935610000	SAILBW-4/7-JKV	D.7	1938180300	SAIL-M12GM8W-3-3.0V	D.68
1926981000	SAIL-M8BG-3-10Q	D.34	1927200150	SAIL-M8GM8W-4L1.5V	D.35	1937950150	SAIL-M8GM12G-3-1.5V	D.36	1938180500	SAIL-M12GM8W-3-5.0V	D.35
1926981000	SAIL-M8BG-3-10Q	D.50	1927200150	SAIL-M8GM8W-4L1.5V	D.77	193795					

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1938211000	SAIL-M12GM8W-4-10V	D.68	1948560150	SAIL-M8GM8WR-3-1.5Q	D.75	1962300150	SAIL-M12GM8W-4L1.5V	D.70	1980000000		
1938220150	SAIL-M12WM8W-4-1.5V	D.35	1948560300	SAIL-M8GM8WR-3-3.0Q	D.75	1962300300	SAIL-M12GM8W-4L3.0V	D.70	1981570000	Screwy M23 LS	D.101
1938220150	SAIL-M12WM8W-4-1.5V	D.68	1948560500	SAIL-M8GM8WR-3-5.0Q	D.75	1962300500	SAIL-M12GM8W-4L5.0V	D.70	1981900030	SAIL-M8GM8G-4S-0.3Q-SB	C.4
1938220300	SAIL-M12WM8W-4-3.0V	D.35	1948561000	SAIL-M8GM8WR-3-10Q	D.75	1962301000	SAIL-M12GM8W-4L10V	D.70	1981900030	SAIL-M8GM8G-4S-0.3Q-SB	C.42
1938220500	SAIL-M12WM8W-4-3.0V	D.68	1948570150	SAIL-M8WM8WR-3-1.5Q	D.75	1962610000	SAISW-5/7-(KV)	D.7	1981900030	SAIL-M8GM8G-4S-0.3Q-SB	D.118
1938220500	SAIL-M12WM8W-4-3.0V	D.35	1948570300	SAIL-M8WM8WR-3-3.0Q	D.75	1962620000	SAISW-4/7-(KV)	D.7	1981900100	SAIL-M8GM8G-4S-1.0Q-SB	C.4
1938221000	SAIL-M12WM8W-4-5.0V	D.68	1948570500	SAIL-M8WM8WR-3-5.0Q	D.75	1962630000	SAIBW-5/7-(KV)	D.7	1981900100	SAIL-M8GM8G-4S-1.0Q-SB	C.42
1938221000	SAIL-M12WM8W-4-10V	D.35	1948571000	SAIL-M8WM8WR-3-10Q	D.75	1962640000	SAI-ASH-L-M8-4I V3	C.51	1981900100	SAIL-M8GM8G-4S-1.0Q-SB	D.118
1938221000	SAIL-M12WM8W-4-10V	D.68	1948580150	SAIL-M8GM8GR-4-1.5Q	D.75	1962650000	SAI-ASH-L-M8-8I V3	C.51	1981900100	SAIL-M8GM8G-4S-1.5Q-SB	C.4
1938230150	SAIL-M8GM12G-3-1.5V	D.36	1948580300	SAIL-M8GM8GR-4-3.0Q	D.75	1962660000	SAI-ASH-L-M8-40 V3	C.51	1981900150	SAIL-M8GM8G-4S-1.5Q-SB	C.42
1938230300	SAIL-M8GM12G-3-3.0V	D.36	1948580500	SAIL-M8GM8GR-4-5.0Q	D.75	1962670000	SAI-ASH-L-M8-4I/40 V3	C.51	1981900150	SAIL-M8GM8G-4S-1.5Q-SB	C.42
1938230500	SAIL-M8GM12G-3-5.0V	D.36	1948581000	SAIL-M8GM8GR-4-10Q	D.75	1962680000	SAI-ASH-L-M12-4I V3	C.51	1981900150	SAIL-M8GM8G-4S-1.5Q-SB	D.118
1938231000	SAIL-M8GM12G-3-10V	D.36	1948590150	SAIL-M8GM8WR-4-1.5Q	D.75	1962690000	SAI-ASH-L-M12-8I V3	C.51	1981900300	SAIL-M8GM8G-4S-3.0Q-SB	C.4
1938240150	SAIL-M8GM12W-3-1.5V	D.37	1948590300	SAIL-M8GM8WR-4-3.0Q	D.75	1962700000	SAI-ASH-L-M12-40 V3	C.51	1981900300	SAIL-M8GM8G-4S-3.0Q-SB	C.42
1938240300	SAIL-M8GM12W-3-3.0V	D.37	1948590500	SAIL-M8GM8WR-4-5.0Q	D.75	1962710000	SAI-ASH-L-M12-4I/40 V3	C.51	1981900300	SAIL-M8GM8G-4S-3.0Q-SB	D.118
1938240500	SAIL-M8GM12W-3-5.0V	D.37	1948591000	SAIL-M8GM8WR-4-10Q	D.75	1962720000	SAIL-M12GM12W-4-3L1.5U	D.64	1981900500	SAIL-M8GM8G-4S-5.0Q-SB	C.4
1938241000	SAIL-M8GM12W-3-10V	D.37	1948600150	SAIL-M8WM8WR-4-1.5Q	D.75	1962910300	SAIL-M12GM12W-4-3L3.0U	D.64	1981900500	SAIL-M8GM8G-4S-5.0Q-SB	C.42
1938250150	SAIL-M8WM12W-3-1.5V	D.37	1948600300	SAIL-M8WM8WR-4-3.0Q	D.75	1962910500	SAIL-M12GM12W-4-3L5.0U	D.64	1981900500	SAIL-M8GM8G-4S-5.0Q-SB	D.118
1938250300	SAIL-M8WM12W-3-3.0V	D.37	1948600500	SAIL-M8WM8WR-4-5.0Q	D.75	1962911000	SAIL-M12GM12W-4-3L10U	D.64	1981901000	SAIL-M8GM8G-4S-10Q-SB	C.4
1938250500	SAIL-M8WM12W-3-5.0V	D.37	1948601000	SAIL-M8WM8WR-4-10Q	D.37	1963920150	SAIL-M12GM12W-4-3L1.5Q	D.64	1981901000	SAIL-M8GM8G-4S-10Q-SB	C.42
1938251000	SAIL-M8WM12W-3-10V	D.37	1948610150	SAIL-M8BGR-3-1.5Q	D.52	1963920300	SAIL-M12GM12W-4-3L3.0Q	D.64	1981901000	SAIL-M8GM8G-4S-15Q-SB	D.118
1938260150	SAIL-M8GM12G-4-1.5V	D.36	1948610300	SAIL-M8BGR-3-3.0Q	D.52	1963920500	SAIL-M12GM12W-4-3L5.0Q	D.64	1981901500	SAIL-M8GM8G-4S-15Q-SB	C.4
1938260300	SAIL-M8GM12G-4-3.0V	D.36	1948610500	SAIL-M8BGR-3-5.0Q	D.52	1963921000	SAIL-M12GM12W-4-3L10Q	D.64	1981901500	SAIL-M8GM8G-4S-15Q-SB	C.42
1938260500	SAIL-M8GM12G-4-5.0V	D.36	1948611000	SAIL-M8BGR-3-10Q	D.52	1963930150	SAIL-M12GM12W-4-3L1.5V	D.64	1981901500	SAIL-M8GM8G-4S-15Q-SB	D.118
1938261000	SAIL-M8GM12G-4-10V	D.36	1948620150	SAIL-M8BWR-3-1.5Q	D.53	1963930300	SAIL-M12GM12W-4-3L3.0V	D.64	1981902000	SAIL-M8GM8G-4S-20Q-SB	C.4
1938270150	SAIL-M8GM12W-4-1.5V	D.37	1948620300	SAIL-M8BWR-3-3.0Q	D.53	1963930500	SAIL-M12GM12W-4-3L5.0V	D.64	1981902000	SAIL-M8GM8G-4S-20Q-SB	C.42
1938270300	SAIL-M8GM12W-4-3.0V	D.37	1948620500	SAIL-M8BWR-3-5.0Q	D.53	1963931000	SAIL-M12GM12W-4-3L10V	D.64	1981902000	SAIL-M8GM8G-4S-20Q-SB	D.118
1938270500	SAIL-M8GM12W-4-5.0V	D.37	1948621000	SAIL-M8BWR-3-10Q	D.53	1963940150	SAIL-M12BW-4-3L1.5U	D.47	1981901050	SAIL-M8BG-4S-1.5Q-SB	C.42
1938271000	SAIL-M8GM12W-4-10V	D.37	1948630150	SAIL-M8BGR-4-1.5Q	D.52	1963940300	SAIL-M12BW-4-3L3.0U	D.47	1981910150	SAIL-M8BG-4S-1.5Q-SB	D.118
1938280150	SAIL-M8WM12W-4-1.5V	D.37	1948630300	SAIL-M8BGR-4-3.0Q	D.52	1963940500	SAIL-M12BW-4-3L5.0U	D.47	1981910300	SAIL-M8BG-4S-3.0Q-SB	C.42
1938280300	SAIL-M8WM12W-4-3.0V	D.37	1948630500	SAIL-M8BGR-4-5.0Q	D.52	1963941000	SAIL-M12BW-4-3L10U	D.47	1981910300	SAIL-M8BG-4S-3.0Q-SB	D.118
1938280500	SAIL-M8WM12W-4-5.0V	D.37	1948631000	SAIL-M8BGR-4-10Q	D.52	1963950150	SAIL-M12BW-4-3L1.5Q	D.47	1981910500	SAIL-M8BG-4S-5.0Q-SB	C.42
1938281000	SAIL-M8WM12W-4-10V	D.37	1948640150	SAIL-M8BWR-4-1.5Q	D.53	1963950300	SAIL-M12BW-4-3L3.0Q	D.47	1981910500	SAIL-M8BG-4S-5.0Q-SB	D.118
1939000000	SAI-SSA-PG7	D.28	1948640300	SAIL-M8BWR-4-3.0Q	D.53	1963950500	SAIL-M12BW-4-3L5.0Q	D.47	1981911000	SAIL-M8BG-4S-10Q-SB	C.42
1938550000	SAI-AU M12 PB GW 16DI	C.36	1948640500	SAIL-M8BWR-4-5.0Q	D.53	1963951000	SAIL-M12BW-4-3L10Q	D.47	1981911000	SAIL-M8BG-4S-10Q-SB	D.118
1938550000	SAI-AU M12 PB GW 16DI	C.4	1948641000	SAIL-M8BWR-4-10Q	D.53	1963960150	SAIL-M12BW-4-3L1.5V	D.47	1984530150	SAIL-M12GM8GR-3-1.5U	D.69
1938570000	SAI-AU M12 DN GW 16DI	C.36	1948650150	SAIL-M8GM8GR-3-1.5V	D.76	1963960300	SAIL-M12BW-4-3L3.0V	D.47	1984530300	SAIL-M12GM8GR-3-3.0U	D.69
1938580000	SAI-AU M12 IE GW 16DI	C.36	1948650300	SAIL-M8GM8GR-3-3.0V	D.76	1963960500	SAIL-M12BW-4-3L5.0V	D.47	1984530500	SAIL-M12GM8GR-3-5.0U	D.69
1938600000	SAI-AU M8 SB 8DI	C.37	1948650500	SAIL-M8GM8GR-3-5.0V	D.76	1963961000	SAIL-M12BW-4-3L10V	D.47	1984531000	SAIL-M12GM8GR-3-10U	D.69
1938610000	SAI-AU M12 SB 8DI	C.37	1948651000	SAIL-M8GM8GR-3-10V	D.76	1964280150	SAIL-M12BW-2/4-1.5U	D.80			
1938610000	SAI-AU M12 SB 8DI	C.4	1948660150	SAIL-M8GM8WR-3-1.5V	D.76	1964280300	SAIL-ZW-M12BW-2/4-3.0U	D.80			
1938630000	SAI-AU M8 SB 8DIO	C.37	1948660300	SAIL-M8GM8WR-3-3.0V	D.76	1964280500	SAIL-ZW-M12BW-2/4-5.0U	D.80			
1938640000	SAI-AU M12 SB 8DIO	C.37	1948660500	SAIL-M8GM8WR-3-5.0V	D.76	1964281000	SAIL-ZW-M12BW-2/4-10U	D.80			
1938640000	SAI-AU M12 SB 8DIO	C.4	1948661000	SAIL-M8GM8WR-3-10V	D.76	1964290150	SAIL-ZW-M12BW-2/4L1.5U	D.80			
1938660000	SAI-AU M8 SB 8DO 2A	C.37	1948670150	SAIL-M8WM8WR-3-1.5V	D.76	1964290300	SAIL-ZW-M12BW-2/4L3.0U	D.80			
1938680000	SAI-AU M12 SB 8DO 2A	C.37	1948670300	SAIL-M8WM8WR-3-3.0V	D.76	1964290500	SAIL-ZW-M12BW-2/4L5.0U	D.80			
1938680000	SAI-AU M12 SB 8DO 2A	C.4	1948670500	SAIL-M8WM8WR-3-5.0V	D.76	1964291000	SAIL-ZW-M12BW-2/4L10U	D.80			
1938690000	SAI-AU M12 SB 4AI	C.38	1948671000	SAIL-M8WM8WR-3-10V	D.76	1964300150	SAIL-ZW-M8BW-3-1.5U	D.79			
1938690000	SAI-AU M12 SB 4AI	C.4	1948680150	SAIL-M8GM8GR-4-1.5V	D.76	1964300300	SAIL-ZW-M8BW-3-3.0U	D.79			
1938700000	SAI-AU M12 SB 4AO	C.38	1948680300	SAIL-M8GM8GR-4-3.0V	D.76	1964300500	SAIL-ZW-M8BW-3-5.0U	D.79			
1938700000	SAI-AU M12 SB 4AO	C.4	1948680500	SAIL-M8GM8GR-4-5.0V	D.76	1964301000	SAIL-ZW-M8BW-3-10U	D.79			
1938710000	SAI-AU M12 SB 4PT100	C.4	1948681000	SAIL-M8GM8GR-4-10V	D.76	1964310150	SAIL-ZW-M12-3-1.5U	D.79			
1938710000	SAI-AU M12 SB 4PT100	C.41	1948690150	SAIL-M8GM8WR-4-1.5V	D.76	1964310300	SAIL-ZW-M12-3-3.0U	D.79			
1938720000	SAI-AU M12 SB 4Thermo	C.4	1948690300	SAIL-M8GM8WR-4-3.0V	D.76	1964310500	SAIL-ZW-M12-3-5.0U	D.79			
1938720000	SAI-AU M12 SB 4Thermo	C.40	1948690500	SAIL-M8GM8WR-4-5.0V	D.76	1964311000	SAIL-ZW-M12-3-10U	D.79			
1938730000	SAI-AU M12 SB 2Counter	C.39	1948691000	SAIL-M8GM8WR-4-10V	D.76	1964690150	SAIL-M12BG-CD-1.5A	C.20			
1938730000	SAI-AU M12 SB 2Counter	C.4	1948700150	SAIL-M8WM8WR-4-1.5V	D.76	1964690150	SAIL-M12BG-CD-1.5A	D.116			
1939170000	SAI-SCREWTY TOOL BOX	D.104	1948700300	SAIL-M8WM8WR-4-3.0V	D.76	1964690300	SAIL-M12BG-CD-3.0A	C.20			
1939180000	SAI-SCREWTY BOX	D.104	1948700500	SAIL-M8WM8WR-4-5.0V	D.76	1964690300	SAIL-M12BG-CD-3.0A	D.116			
			1948701000	SAIL-M8WM8WR-4-10V	D.76	1964690500	SAIL-M12BG-CD-5.0A	C.20			
			1948710150	SAIL-M8BGR-3-1.5V	D.52	1964690500	SAIL-M12BG-CD-5.0A	D.116			
			1948710300	SAIL-M8BGR-3-3.0V	D.52	1964691000	SAIL-M12BG-CD-10A	C.20			
			1948710500	SAIL-M8BGR-3-5.0V	D.52	1964691000	SAIL-M12BG-CD-10A	D.116			
			1948711000	SAIL-M8BGR-3-10V	D.52	1964700150	SAIL-M12G-CD-1.5A	C.20			
			1948720150	SAIL-M8BWR-3-1.5V	D.53	1964700150	SAIL-M12G-CD-1.5A	D.116			
			1948720300	SAIL-M8BWR-3-3.0V	D.53	1964700300	SAIL-M12G-CD-3.0A	C.20			
			1948720500	SAIL-M8BWR-3-5.0V	D.53	1964700300	SAIL-M12G-CD-3.0A	D.116			
			1948721000	SAIL-M8BWR-3-10V	D.53	1964700500	SAIL-M12G-CD-5.0A	C.20			
			1948730150	SAIL-M8BGR-4-1.5V	D.52	1964700500	SAIL-M12G-CD-5.0A	D.116			
			1948730300	SAIL-M8BGR-4-3.0V	D.52	1964701000	SAIL-M12G-CD-10A	C.20			
			1948730500	SAIL-M8BGR-4-5.0V	D.52	1964701000	SAIL-M12G-CD-10A	D.116			
			1948731000	SAIL-M8BGR-4-10V	D.52	1964710150	SAIL-M12GM12G-CD-1.5A	C.21			
			1948740150	SAIL-M8BWR-4-1.5V	D.53	1964710150	SAIL-M12GM12G-CD-1.5A	D.117			
			1948740300	SAIL-M8BWR-4-3.0V	D.53	1964710300	SAIL-M12GM12G-CD-3.0A	C.21			
			1948740500	SAIL-M8BWR-4-5.0V	D.53	1964710300	SAIL-M12GM12G-CD-3.0A	D.117			
			1948741000	SAIL-M8BWR-4-10V	D.53	1964710500	SAIL-M12GM12G-CD-5.0A	C.21			
						1964710500	SAIL-M12GM12G-CD-5.0A	D.117			
						1964711000	SAIL-M12GM12G-CD-10A	C.21			
						1964711000	SAIL-M12GM12G-CD-10A	D.117			
						1968220000	SAI-AU M12 PB 8DI8DO 2A	C.9			
						1968560150	SAIL-M12BW-3-1.5T	D.44			
						1968560300	SAIL-M12BW-3-3.0T	D.44			
						1968560500	SAIL-M12BW-3-5.0T	D.44			
						1968561000	SAIL-M12BW-3-10T	D.44			
						1968570150	SAIL-M12BW-4-1.5T	D.44			
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8564350000	FBCon DP M12 1way	E.6

8600000000

8606180000	FBCon Term.D Ex FM/PEAN	E.32
8606190000	FBCon Term.D Ex	E.32
8606200000	FBCon Term.D Ex PEAN	E.32

8610000000

8613670000	FBCon SS PCG 1way	E.12
8613680000	FBCon SS PCG 4way	E.14

8640000000

8640720000	FBCon SS PCG 8way	E.15
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8700000000

8703430000	FBCon SS CG 1way	E.12
8703450000	FBCon SS CG 4way	E.14
8703470000	FBCon SS CG 8way	E.15

8710000000

8714080000	FBCon PA CG/M12 1way OVP	E.17
8714090000	FBCon PA CG/M12 2way OVP	E.18
8714100000	FBCon PA CG/M12 4way OVP	E.19
8714110000	FBCon PA CG/M12 8way OVP	E.20
8714120000	FBCon PA CG 1way OVP	E.17
8714130000	FBCon PA CG 2way OVP	E.18
8714140000	FBCon PA CG 4way OVP	E.19
8714150000	FBCon PA CG 8way OVP	E.20
8714160000	FBCon PA CG/M12 1way Limiter	E.21
8714170000	FBCon PA CG/M12 2way Limiter	E.22
8714180000	FBCon PA CG/M12 4way Limiter	E.23
8714190000	FBCon PA CG/M12 8way Limiter	E.24
8714200000	FBCon PA CG 1way Limiter	E.21
8714210000	FBCon PA CG 2way Limiter	E.22
8714220000	FBCon PA CG 4way Limiter	E.23
8714230000	FBCon PA CG 8way Limiter	E.24
8714240000	FBCon SS DP PCG Term 24V	E.7
8714250000	FBCon SS DP M12 Term 24V	E.7
8714260000	FBCon SS DP PCG 1way	E.6
8714270000	FBCon SS DP M12 1way	E.6
8715260000	FBCon SS PCG 4way Limiter	E.23
8715270000	FBCon SS PCG 1way OVP	E.17

8720000000

8726020000	FBCon SS CG/M12 1way	E.12
8726040000	FBCon SS CG/M12 4way	E.14
8726050000	FBCon SS CG/M12 8way	E.15
8726080000	FBCon SS PCG 4way OVP	E.19
8726090000	FBCon SS PCG 8way OVP	E.20
8726110000	FBCon SS PCG 1way Limiter	E.21
8726160000	FBCon SS PCG 8way Limiter	E.24

8760000000

8760960000	JPOVP 24VDC MOV M12	F.5
8760970000	JPOVP 24VDC ANA M12	F.7
8760980000	JPOVP 24VDC BIN M12	F.7

8770000000

8771420000	JPR 24VDC 1CO M12	F.3
8771430000	JPR 24VDC ISO 1CO M12	F.3
8771440000	JPTA 50MS 24VDC PNP M12	F.4
8778490000	JP CLIP M	F.14
8778790000	JPA CCC LP M12	F.8

8780000000

8788580000	RS PB-DP T SUB-D	E.8
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8790000000

8794120000	JP TEST	F.12
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8800000000

8800040000	RS PB-DP T	E.8
8805550000	JPOVP RJ45 Cat6 IP20	F.6
8805560000	JPOVP RJ45 Cat6 IP67	F.6
8805570000	JPOVP M12 D-coded Cat5	F.5

8820000000

8828960000	JPA CCC DC 0-20/0-20MA	F.9
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8830000000

8833380000	JPA CVC DC 0-20MA/0-10V	F.9
8833390000	JPA CCC DC 0-10W/4-20MA	F.10
8833400000	JPA CVC DC 4-20MA/0-10V	F.10
8833410000	JPA VCC DC 0-10W/4-20MA	F.11
8833420000	JPA VCC DC 0-10W/4-20MA	F.11
8833430000	JPA VCC DC 0-10W/4-20MA	F.11
8833440000	JPA CCC DC 0-10/4-20MA	F.9
8836630000	JPTA100MS 24VDC PNP M12	F.4

8850000000

8852350000	JPP NPN PNP 24VDC	F.13
8857030000	JPP PNP NPN 24VDC	F.13

8870000000

8874290000	IE-C-RS232-M12	C.31
8877190000	IE-SW8-IP67	C.30
8877200000	IE-SW8-M-IP67	C.31

9000000000

9002650000	KT 8	D.102
9002660000	KT 12	D.102

9030000000

9030060000	AM 12	D.103
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9200000000

9203110000	STRIPPER 6-16 RED-LINE	D.103
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9450000000

9455110000	AS-KG-GE	C.54
9455120000	AS-KG-SW	C.54
9455640000	FBCon M12 4P M EMC	D.110
9455640000	FBCon M12 4P M EMC	D.9
9455640000	FBCon M12 4P M EMC	E.36
9455650000	POS-4P M12 PG13,5 150mm	D.111
9455650000	POS-4P M12 PG13,5 150mm	E.40
9456000000	SAI-4-S 4P M12	B.13
9456000000	SAI-4-S 5P M12	B.13
9456010000	SAI-6-S 4P M12	E.24
9456010000	SAI-6-S 5P M12	B.13
9456020000	SAI-8-S 4P M12	B.13
9456050000	SAI-SK-M12	C.51
9456050000	SAI-SK-M12	E.24
9456050000	SAI-SK-M12	E.24
9456070150	SAIL-VSBD-1.5U	D.90
9456070300	SAIL-VSBD-3.0U	D.90
9456070500	SAIL-VSBD-5.0U	D.90
9456071000	SAIL-VSBD-10U	D.90
9456100150	SAIL-M12G-4-1.5U	D.34
9456100150	SAIL-M12G-4-1.5U	D.41
9456100300	SAIL-M12G-3-3.0U	D.34
9456100500	SAIL-M12G-4-5.0U	D.34
9456100500	SAIL-M12G-4-5.0U	D.34
9456101000	SAIL-M12G-4-10U	D.34
9456101000	SAIL-M12G-4-10U	D.41
9456140150	SAIL-M12BG-5S1.5O	D.48
9456140300	SAIL-M12BG-5S3.0O	D.48
9456140500	SAIL-M12BG-5S5.0O	D.48
9456141000	SAIL-M12BG-5S10Q	D.48
9456150150	SAIL-M8BW-4-1.5U	D.35
9456150150	SAIL-M8BW-4-1.5U	D.49
9456150300	SAIL-M8BW-4-3.0U	D.35
9456150300	SAIL-M8BW-4-3.0U	D.49
9456150500	SAIL-M8BW-4-5.0U	D.35
9456150500	SAIL-M8BW-4-5.0U	D.49
9456151000	SAIL-M8BW-4-10U	D.35
9456151000	SAIL-M8BW-4-10U	D.49
9456170150	SAIL-VSCD-M12G-1.5U	D.91
9456170300	SAIL-VSCD-M12G-3.0U	D.91
9456170500	SAIL-VSCD-M12G-5.0U	D.91
9456171000	SAIL-VSCD-M12G-10U	D.91
9456180000	SAI-4-F 4P PUR 3M	B.11

9456190000	SAI-4-F 4P PUR 5M	B.11
9456190000	SAI-4-FMM-4P M12 5M	B.33
9456190000	SAI-4-FMM-4P M12 5M	B.34
9456200000	SAI-4-F 4P PUR 10M	B.11
9456200000	SAI-4-FMM-4P M12 10M	B.33
9456200000	SAI-4-FMM-4P M12 10M	B.34
9456210000	SAI-4-F 4P PUR 15M	B.11
9456230000	SAI-4-F 4P PUR 20M	B.11
9456240150	SAIL-VSCD-1.5U	D.91
9456240300	SAIL-VSCD-3.0U	D.91
9456240500	SAIL-VSCD-5.0U	D.91
9456241000	SAIL-VSCD-10U	D.91
9456320000	SAI-4-F 5P PUR 3M	B.11
9456330000	SAI-4-F 5P PUR 5M	B.11
9456340000	SAI-4-F 5P PUR 10M	B.11
9456350000	SAI-4-F 5P PUR 15M	B.11
9456370000	SAI-4-F 5P PUR 20M	B.11
9456380150	SAIL-M12BW-4-2L1.5U	D.38
9456380150	SAIL-M12BW-4-2L1.5U	D.46
9456380300	SAIL-M12BW-4-2L3.0U	D.38
9456380300	SAIL-M12BW-4-2L3.0U	D.46
9456380500	SAIL-M12BW-4-2L5.0U	D.38
9456380500	SAIL-M12BW-4-2L5.0U	D.46
9456381000	SAIL-M12BW-4-2L10U	D.38
9456381000	SAIL-M12BW-4-2L10U	D.46
9456460000	SAI-6-F 4P PUR 3M	B.11
9456470000	SAI-6-F 4P PUR 5M	B.11
9456480000	SAI-6-F 4P PUR 10M	B.11
9456490000	SAI-6-F 4P PUR 15M	B.11
9456500150	SAIL-M12WM12G-5-1.5U	D.37
9456500300	SAIL-M12WM12G-5-3.0U	D.37
9456500500	SAIL-M12WM12G-5-5.0U	D.37
9456501000	SAIL-M12WM12G-5-10U	D.37
9456510000	SAI-6-F 4P PUR 20M	B.11
9456600000	SAI-6-F 5P PUR 3M	B.11
9456610000	SAI-6-F 5P PUR 5M	B.11
9456620000	SAI-6-F 5P PUR 10M	B.11
9456630000	SAI-6-F 5P PUR 15M	B.11
9456650000	SAI-6-F 5P PUR 20M	B.11
9456660150	SAIL-M12GM8G-4-1.5U	D.35
9456660150	SAIL-M12GM8G-4-1.5U	D.66
9456660300	SAIL-M12GM8G-4-3.0U	D.35
9456660300	SAIL-M12GM8G-4-3.0U	D.66
9456660500	SAIL-M12GM8G-4-5.0U	D.35
9456660500	SAIL-M12GM8G-4-5.0U	D.66
9456661000	SAIL-M12GM8G-4-10U	D.35
9456661000	SAIL-M12GM8G-4-10U	D.66
9456670150	SAIL-M12GM8W-4-1.5U	D.35
9456670150	SAIL-M12GM8W-4-1.5U	D.66
9456670300	SAIL-M12GM8W-4-3.0U	D.35
9456670300	SAIL-M12GM8W-4-3.0U	D.66
9456670500	SAIL-M12GM8W-4-5.0U	D.35
9456670500	SAIL-M12GM8W-4-5.0U	D.66
9456671000	SAIL-M12GM8W-4-10U	D.35
9456671000	SAIL-M12GM8W-4-10U	D.66
9456690150	SAIL-M12W-3-1.5U	D.34
9456690150	SAIL-M12W-3-1.5U	D.41
9456690300	SAIL-M12W-3-3.0U	D.34
9456690300	SAIL-M12W-3-3.0U	D.41
9456690500	SAIL-M12W-3-5.0U	D.34
9456690500	SAIL-M12W-3-5.0U	D.41
9456691000	SAIL-M12W-3-10U	D.34
9456691000	SAIL-M12W-3-10U	D.41
9456740000	SAI-8-F 4P PUR 3M	B.11
9456750000	SAI-8-F 4P PUR 5M	B.11
9456750002	SAI-8-FMM-4P M12 5M	B.33
9456750002	SAI-8-FMM-4P M12 5M	B.34
9456760000	SAI-8-F 4P PUR 10M	B.11
9456760002	SAI-8-FMM-4P M12 10M	B.33
9456760002	SAI-8-FMM-4P M12 10M	B.34
9456790000	SAI-8-F 4P PUR 20M	B.11
9456880000	SAI-8-F 5P PUR 3M	B.11
9456890000	SAI-8-F 5P PUR 5M	B.11
9456900000	SAI-8-F 5P PUR 10M	B.11
9456910000	SAI-8-F 5P PUR 15M	B.11
9456930000	SAI-8-F 5P PUR 20M	B.11
9456940000	SAIS-5/7	D.6
9456950000	SAISW-5/7	D.6
9456990000	SAIL-M12GM12G-2/4-1.5U	D.59
9456990300	SAIL-M12GM12G-2/4-3.0U	D.59
9457040000	SAIL-VSA-M12G-1.5U	D.89
9457070000	SAIL-M12GM12G-2/4-5.0U	D.59
9457080000	SAIL-M12GM12G-2/4-10U	D.59
9457100000	SAIL-M12GM12G-4-5.0U	D.36
9457100000	SAIL-M12GM12G-4-5.0U	D.59
9457110000	SAIL-M12GM12G-4-10U	D.36
9457110000	SAIL-M12GM12G-4-10U	D.59
9457130000	SAIL-VSA-M12G-5.0U	D.89
9457131000	SAIL-VSA-M12G-10U	D.89
9457150000	SAIL-M12GM12G-4-0.3U	F.14
9457160000	SAIL-M12GM12G-4-0.6U	F.14
9457170000	SAIL-M12GM12G-4-0.9U	F.14
9457190000	SAIL-M12GM12G-4-1.5	

Order No.	Type	Page	Order No.	Type	Page
9457610300	SAIL-M12G-5-3.0U	D.34	9457850300	SAIL-M8BG-4-3.0U	D.35
9457610300	SAIL-M12G-5-3.0U	D.41	9457850300	SAIL-M8BG-4-3.0U	D.49
9457610500	SAIL-M12G-5-5.0U	D.34	9457850500	SAIL-M8BG-4-5.0U	D.35
9457610500	SAIL-M12G-5-5.0U	D.41	9457850500	SAIL-M8BG-4-5.0U	D.49
9457611000	SAIL-M12G-5-10U	D.34	9457851000	SAIL-M8BG-4-10U	D.35
9457611000	SAIL-M12G-5-10U	D.41	9457851000	SAIL-M8BG-4-10U	D.49
9457670150	SAIL-M12W-5-1.5U	D.34	9457890150	SAIL-M12GM12W-2/4-1.5U	D.59
9457670150	SAIL-M12W-5-1.5U	D.41	9457890300	SAIL-M12GM12W-2/4-3.0U	D.59
9457670300	SAIL-M12W-5-3.0U	D.34	9457890500	SAIL-M12GM12W-2/4-5.0U	D.59
9457670300	SAIL-M12W-5-3.0U	D.41	9457891000	SAIL-M12GM12W-2/4-10U	D.59
9457670500	SAIL-M12W-5-5.0U	D.34	9457900150	SAIL-M12WM12W-5-1.5U	D.37
9457670500	SAIL-M12W-5-5.0U	D.41	9457900150	SAIL-M12WM12W-5-1.5U	D.59
9457671000	SAIL-M12W-5-10U	D.34	9457900300	SAIL-M12WM12W-5-3.0U	D.37
9457671000	SAIL-M12W-5-10U	D.41	9457900300	SAIL-M12WM12W-5-3.0U	D.59
9457680150	SAIL-VSB-M12G-1.5U	D.90	9457900500	SAIL-M12WM12W-5-5.0U	D.37
9457680300	SAIL-VSB-M12G-3.0U	D.90	9457900500	SAIL-M12WM12W-5-5.0U	D.59
9457680500	SAIL-VSB-M12G-5.0U	D.90	9457901000	SAIL-M12WM12W-5-10U	D.37
9457681000	SAIL-VSB-M12G-10U	D.90	9457901000	SAIL-M12WM12W-5-10U	D.59
9457690150	SAIL-M12BW-5-1.5U	D.37	9457910150	SAIL-M12BG-5-1.5U	D.37
9457690150	SAIL-M12BW-5-1.5U	D.41	9457910150	SAIL-M12BG-5-1.5U	D.41
9457690300	SAIL-M12BW-5-3.0U	D.37	9457910300	SAIL-M12BG-5-3.0U	D.37
9457690300	SAIL-M12BW-5-3.0U	D.41	9457910300	SAIL-M12BG-5-3.0U	D.41
9457690500	SAIL-M12BW-5-5.0U	D.37	9457910500	SAIL-M12BG-5-5.0U	D.37
9457690500	SAIL-M12BW-5-5.0U	D.41	9457910500	SAIL-M12BG-5-5.0U	D.41
9457691000	SAIL-M12BW-5-10U	D.37	9457911000	SAIL-M12BG-5-10U	D.37
9457691000	SAIL-M12BW-5-10U	D.41	9457911000	SAIL-M12BG-5-10U	D.41
9457700000	SAIBW-4/7	D.5	9457920150	SAIL-VSC-1.5U	D.91
9457710150	SAIL-VSA-1.5U	D.89	9457920300	SAIL-VSC-3.0U	D.91
9457710300	SAIL-VSA-3.0U	D.89	9457920500	SAIL-VSC-5.0U	D.91
9457710500	SAIL-VSA-5.0U	D.89	9457921000	SAIL-VSC-10U	D.91
9457711000	SAIL-VSA-10U	D.89	9457930150	SAIL-VSB-1.5U	D.90
9457720000	SAI-SA-3-IDC	B.26	9457930300	SAIL-VSB-3.0U	D.90
9457720000	SAI-SA-3-IDC	D.17	9457930500	SAIL-VSB-5.0U	D.90
9457730150	SAIL-M12BG-4-1.5U	D.36	9457931000	SAIL-VSB-10U	D.90
9457730150	SAIL-M12BG-4-1.5U	D.41	9457970000	SAIH-SLL-5X0,75-16X0,34	D.99
9457730300	SAIL-M12BG-4-3.0U	D.36	9457980150	SAIL-M12GM8W-3-1.5U	D.35
9457730300	SAIL-M12BG-4-3.0U	D.41	9457980150	SAIL-M12GM8W-3-1.5U	D.66
9457730500	SAIL-M12BG-4-5.0U	D.36	9457980300	SAIL-M12GM8W-3-3.0U	D.35
9457730500	SAIL-M12BG-4-5.0U	D.41	9457980300	SAIL-M12GM8W-3-3.0U	D.66
9457731000	SAIL-M12BG-4-10U	D.36	9457980500	SAIL-M12GM8W-3-5.0U	D.35
9457731000	SAIL-M12BG-4-10U	D.41	9457980500	SAIL-M12GM8W-3-5.0U	D.66
9457740150	SAIL-M12BW-4-1.5U	D.37	9457981000	SAIL-M12GM8W-3-10U	D.35
9457740150	SAIL-M12BW-4-1.5U	D.41	9457981000	SAIL-M12GM8W-3-10U	D.66
9457740300	SAIL-M12BW-4-3.0U	D.37			
9457740300	SAIL-M12BW-4-3.0U	D.41			
9457740500	SAIL-M12BW-4-5.0U	D.37			
9457740500	SAIL-M12BW-4-5.0U	D.41			
9457741000	SAIL-M12BW-4-10U	D.37			
9457741000	SAIL-M12BW-4-10U	D.41			
9457760150	SAIL-M12GM8W-3L1.5U	D.35			
9457760150	SAIL-M12GM8W-3L1.5U	D.70			
9457760300	SAIL-M12GM8W-3L3.0U	D.35			
9457760300	SAIL-M12GM8W-3L3.0U	D.70			
9457760500	SAIL-M12GM8W-3L5.0U	D.35			
9457760500	SAIL-M12GM8W-3L5.0U	D.70			
9457761000	SAIL-M12GM8W-3L10U	D.35			
9457761000	SAIL-M12GM8W-3L10U	D.70			
9457770150	SAIL-M12GM8G-3-1.5U	D.66			
9457770300	SAIL-M12GM8G-3-3.0U	D.66			
9457770500	SAIL-M12GM8G-3-5.0U	D.66			
9457771000	SAIL-M12GM8G-3-10U	D.66			
9457780150	SAIL-VSBD-M12G-1.5U	D.90			
9457780300	SAIL-VSBD-M12G-3.0U	D.90			
9457780500	SAIL-VSBD-M12G-5.0U	D.90			
9457781000	SAIL-VSBD-M12G-10U	D.90			
9457790150	SAIL-M12GM12W-3L1.5U	D.38			
9457790150	SAIL-M12GM12W-3L1.5U	D.63			
9457790300	SAIL-M12GM12W-3L3.0U	D.38			
9457790300	SAIL-M12GM12W-3L3.0U	D.63			
9457790500	SAIL-M12GM12W-3L5.0U	D.38			
9457790500	SAIL-M12GM12W-3L5.0U	D.63			
9457791000	SAIL-M12GM12W-3L10U	D.38			
9457791000	SAIL-M12GM12W-3L10U	D.63			
9457800150	SAIL-M12BW-3L1.5U	D.38			
9457800150	SAIL-M12BW-3L1.5U	D.46			
9457800300	SAIL-M12BW-3L3.0U	D.38			
9457800300	SAIL-M12BW-3L3.0U	D.46			
9457800500	SAIL-M12BW-3L5.0U	D.38			
9457800500	SAIL-M12BW-3L5.0U	D.46			
9457801000	SAIL-M12BW-3L10U	D.38			
9457801000	SAIL-M12BW-3L10U	D.46			
9457810150	SAIL-M12G-3-1.5U	D.34			
9457810150	SAIL-M12G-3-1.5U	D.41			
9457810300	SAIL-M12G-3-3.0U	D.34			
9457810300	SAIL-M12G-3-3.0U	D.41			
9457810500	SAIL-M12G-3-5.0U	D.34			
9457810500	SAIL-M12G-3-5.0U	D.41			
9457811000	SAIL-M12G-3-10U	D.34			
9457811000	SAIL-M12G-3-10U	D.41			
9457820150	SAIL-M12BG-3-1.5U	D.36			
9457820150	SAIL-M12BG-3-1.5U	D.41			
9457820300	SAIL-M12BG-3-3.0U	D.36			
9457820300	SAIL-M12BG-3-3.0U	D.41			
9457820500	SAIL-M12BG-3-5.0U	D.36			
9457820500	SAIL-M12BG-3-5.0U	D.41			
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