

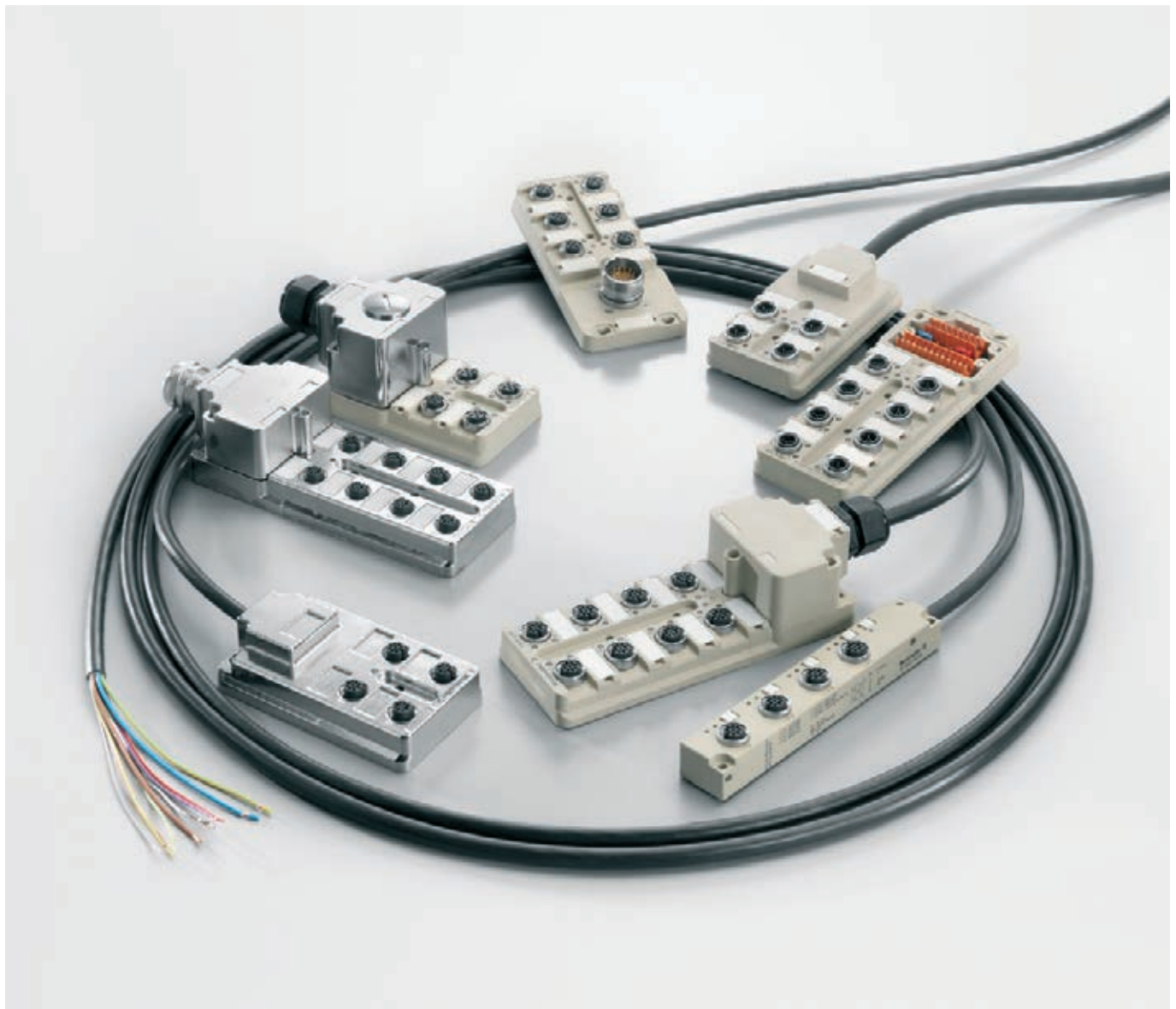
Passive distributors

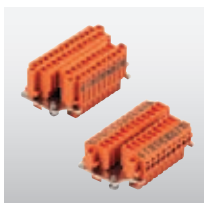
Passive distributors	Introduction	I.2
	M12 distributors	I.4
	ECO modules	I.16
	M12 Push-Pull	I.18
	M12 IDC	I.26
	M12 VA stainless steel	I.30
	M12 metal distributors	I.32
	M12 distributors 1:1 Passive	I.38
	M12 Combi distributor	I.39
	M12 distributor for NPN and PNP sensors	I.40
	M12 wall bushing	I.41
	Solutions to customer specification	I.44
	M12 distributors accessories	I.45
	M8 distributors	I.46
	M5 distributors	I.56
	M12 Ex i distributors	I.60

SAI Passive

SAI Passive products are built with premium materials using the highest quality production methods. The fully encapsulated distributors are designed to meet harsh industrial requirements. Naturally they have also been designed so that they are easy to handle. The self assembled connectors in the hooded version, for example, are joined into a single part so that the entire block is available for the connection. This is a unique solution for distributors that has no equal anywhere. Nothing can break off, get mixed up or wired up incorrectly.

The distributors are equipped by default with threaded metal rings. This ensures a very reliable screw-on connection. The nut is completely threaded without any interruptions. This eliminates the possibility of it getting stuck or jammed. The IDC versions are especially noteworthy. Sensor cables of the proper lengths can be connected directly here.





Compact

The connection block is a single piece.



Small

Extremely small M12 distributor



Fast

Insulation displacement connection can be used to directly connect the sensor cables



Robust

Threaded metal ring without cut outs for reliable, safe handling



M12 distributor standard



**M12 distributor with
DIP switch coding**



**M12 distributor with
stainless steel housing**



**M12 distributor
for Zone 1**

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 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 lengths 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 SAls. 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 are some applications, however, that call 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 be made from plastic. Such modules can now be supplied on request.

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

Overview of SAI

M12 Plastic

	Hood	M23	5 m	10 m	15 m	20 m
4-way, 4-pole	1705920000	9456000000	9456190000	9456200000	9456210000	9456230000
4-way, 5-pole	1701230000	9456000001	9456330000	9456340000	9456350000	9456370000
6-way, 4-pole	1705930000	9456010000	9456470000	9456480000	9456490000	9456510000
6-way, 5-pole	1701240000	9456010001	9456610000	9456620000	9456630000	9456650000
8-way, 4-pole	1705940000	9456020000	9456750000	9456760000	9456770000	9456790000
8-way, 5-pole	1701250000	1795470000	9456890000	9456900000	9456910000	9456930000

M12 Metal

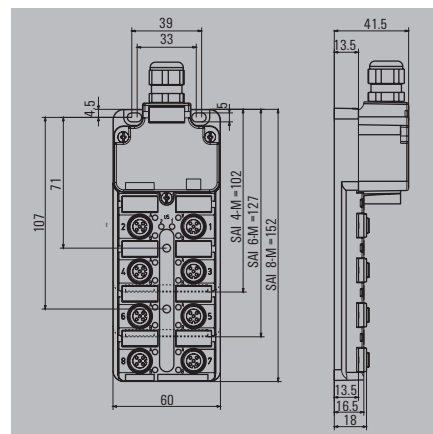
	Hood without shield connection	Hood with shield connection	5 m	10 m		
4-way, 4-pole		1783540000	9456190002	9456200002		
4-way, 5-pole	1783500000	1783520000				
8-way, 4-pole		1783530000	9456750002	9456760002		
8-way, 5-pole	1783490000	1783510000				

M12 Line

	M12 group outlet		5 m	10 m		
4-way, 4-pole	1267330000		1070650000	1070660000		
4-way, 5-pole			1070630000	1070640000		
6-way, 4-pole	1265940000		1265920000	1265930000		

M8 Line

	M12 group outlet	Solder version for PCB	5 m	10 m		
4-way, 3-pole	1828740000		1828720000	1828710000		
4-way, 4-pole			1849680000	1849690000		
6-way, 3-pole	1828730000	1057720000	1828700000	1828690000		
6-way, 4-pole			1849700000	1849670000		
8-way, 3-pole	1871680000		1828680000	1828670000		
8-way, 4-pole			1828620000	1828610000		
10-way, 3-pole	1877950000		1828660000	1828650000		
12-way, 3-pole			1828640000	1828630000		



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	8 channel
Mounting hood	
	Tension-clamp connection
	Tension clamp connection
	Screw connection
	Screw connection
	Empty
Complete modules, NPN-switched	
	8 channel
Note	

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		

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-4/6/8-MH LEER	1	1783460000
SAI-8-M 5P M12 NPN	1	1781060000
Other versions on request		

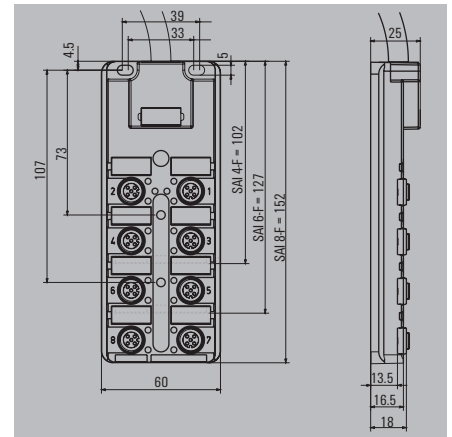
Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	3 A
Total current	10 A
Pollution severity	3
Protection degree	IP 68
Ambient temperature range	-20...+90 °C
Housing main material	Pocan
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickeled, gold-plated
screw socket	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	0.08...1.5 mm²
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

[illegible]

M12 distributors

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

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
4-pole		
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
5-pole		
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		

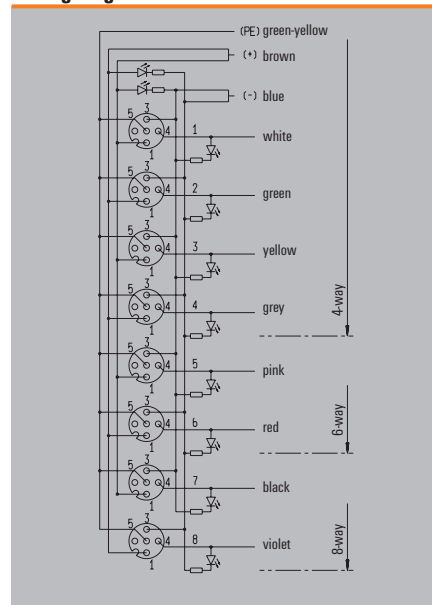
SAI-4/6/8-F

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
5-pole		
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
5-pole		
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		

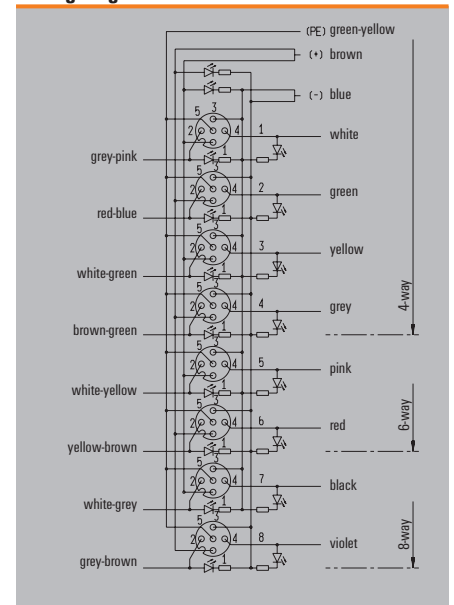
Technical data

Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	3 A
Total current	9 A
Pollution severity	3
Protection degree	IP 68
Ambient temperature range	-20...+80 °C
Housing main material	Pocan
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel-plated, gold-plated
screw socket	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



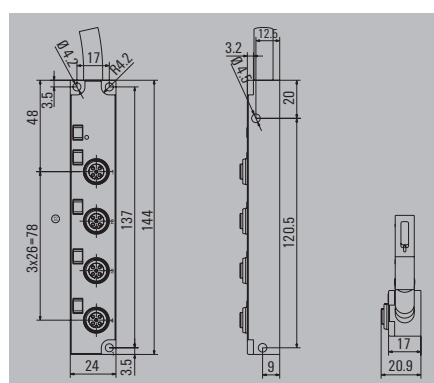
Wiring diagram



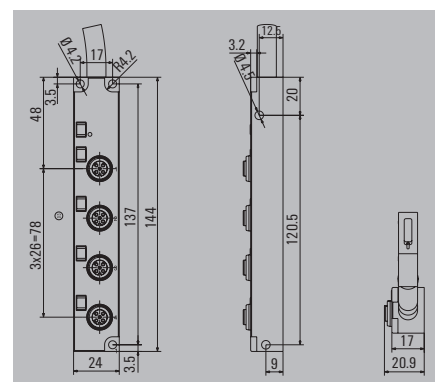
Fixed cable version

Thin design

SAI-4-F M12 L



SAI-4-F M12 L



Ordering data

4 channel	
	Cable length 5 m
	Cable length 10 m
Note	

SAI-4-F M12 L

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		

4-pole

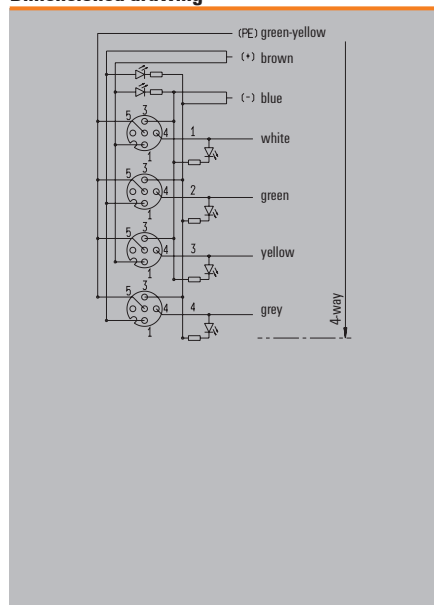
Type	QTY	Order No.
SAI-4-F 5P M12 L 5M	1	1070630000
SAI-4-F 5P M12 L 10M	1	1070640000
Other versions on request		

5-pole

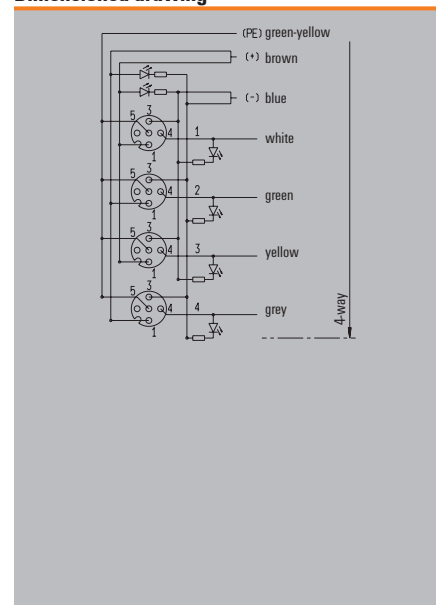
Technical data

Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	3 A
Total current	9 A
Pollution severity	3
Protection degree	IP 68
Ambient temperature range	-20...+80 °C
Housing main material	PA 6 GF
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel-plated, gold-plated
screw socket	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

Dimensioned drawing



Dimensioned drawing

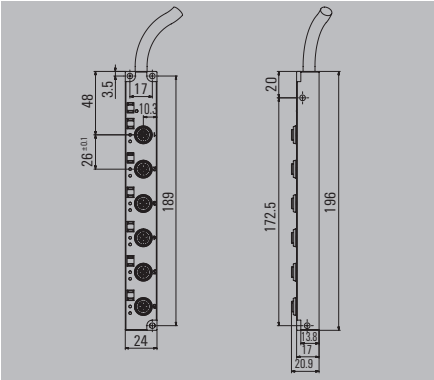


M12 distributors

Fixed cable version

Thin design

SAI-6-F M12 L



Ordering data

4 channel	
	Cable length 5 m
	Cable length 10 m
Note	

SAI-6-F M12 L

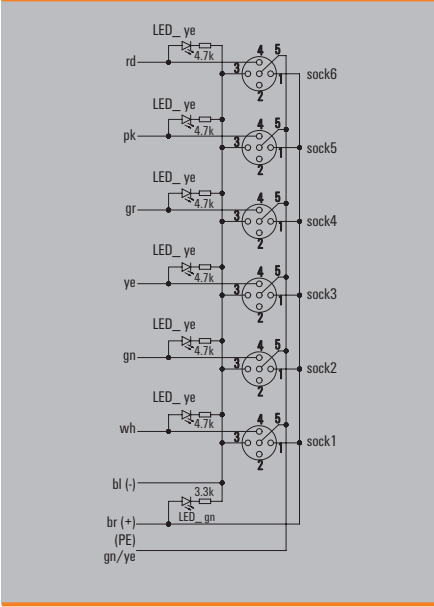
4-pole

Type	QTY	Order No.
SAI-6-F 4P M12 L 5M	1	1265920000
SAI-6-F 4P M12 L 10M	1	1265930000

Technical data

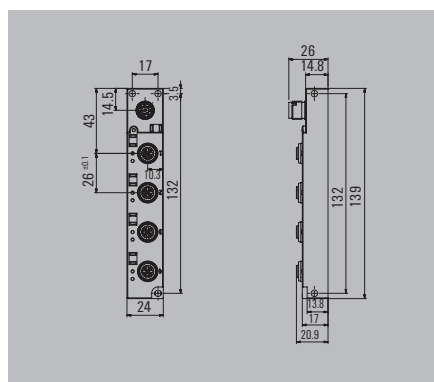
Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	3 A
Total current	9 A
Pollution severity	3
Protection degree	IP 68
Ambient temperature range	-20...+80 °C
Housing main material	PA 6 GF
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickeled, gold-plated
screw socket	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

Dimensioned drawing

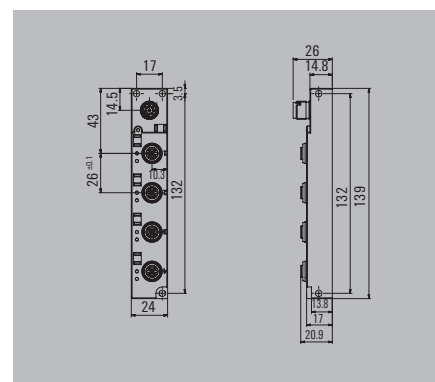


Line

SAI-4-S



SAI-6-S



Ordering data

3-pole	4 channel
Note	

SAI-4-S

Type	QTY	M12 Order No.
SAI-4-S8 4P M12 L	1	1267330000

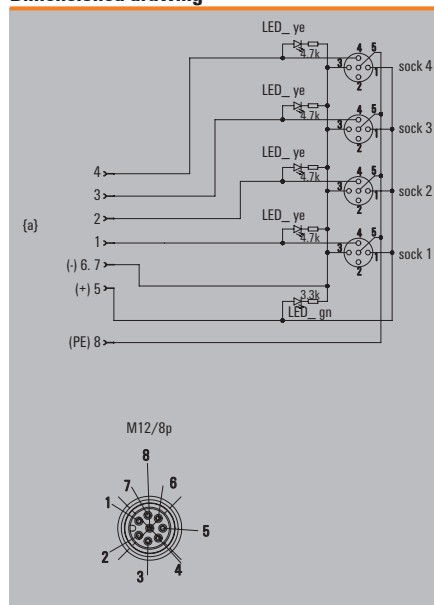
M12

Type	QTY	M12 Order No.
SAI-6-S12 4P M12 L	1	1265940000

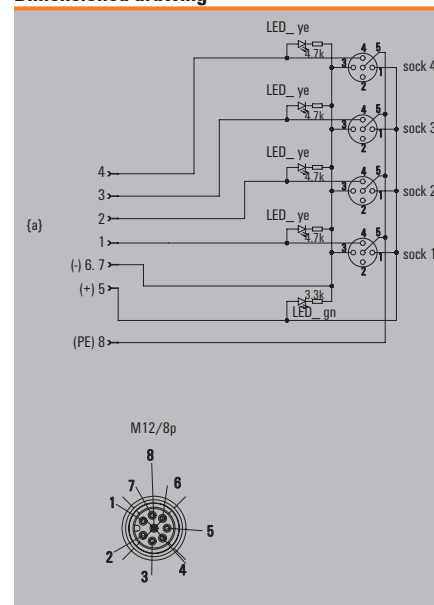
Technical data

Operating voltage	10...30 V
Current of continuous busbars	1 A
max. current-carrying capacity per slot	2 A
Total current	6 A
Pollution severity	3
Protection degree	IP 68
Ambient temperature range	-20 ... +80 °C
Housing main material	Pocan
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel- gold-plated
screw socket	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)	

Dimensioned drawing

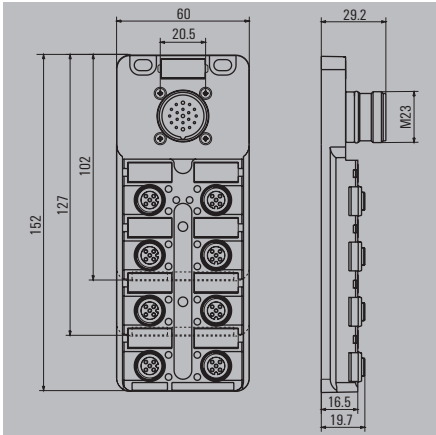


Dimensioned drawing



M12 distributors

with M23 outlet



Ordering data

Complete modules	
	4 channel
	6 channel
	8 channel
Note	

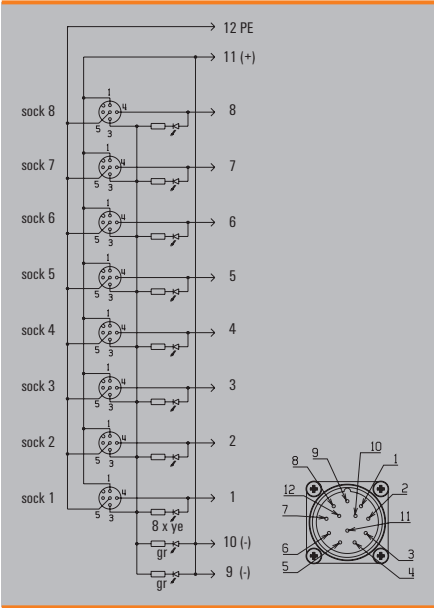
SAI-4/6/8-S		4-pole
Type	QTY	Order No.
SAI-4-S 4P M12	1	9456000000
SAI-6-S 4P M12	1	9456010000
SAI-8-S 4P M12	1	9456020000
Other versions on request		

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		

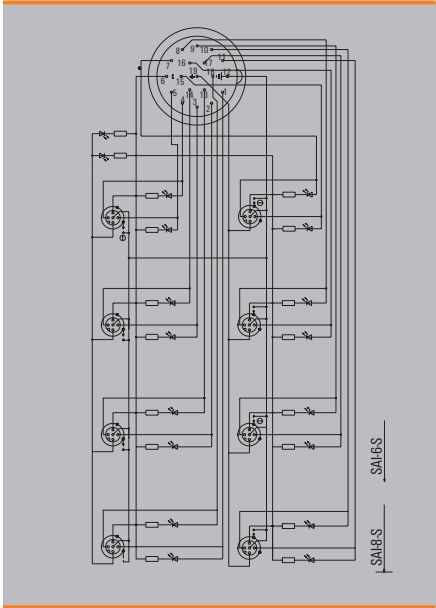
Technical data

Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	3 A
Total current	10 A
Pollution severity	3
Protection degree	IP 68
Ambient temperature range	-20...+90 °C
Housing main material	Pocan
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel-, gold-plated
screw socket	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

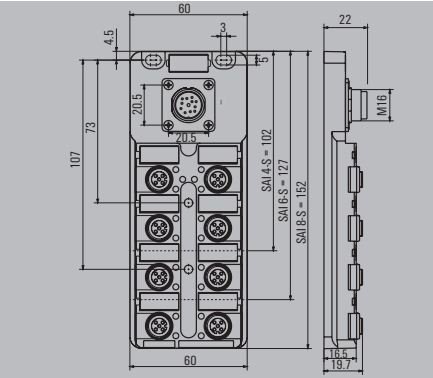


Wiring diagram



with M16 outlet

SAI-8-M16



Ordering data

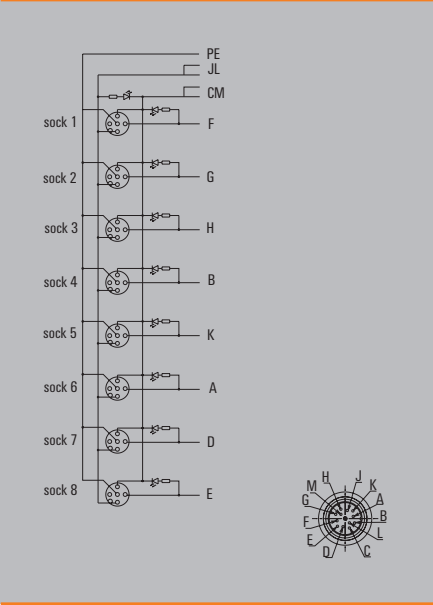
Complete modules	8 channel
Note	

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

Technical data

Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	3 A
Total current	6 A
Pollution severity	3
Protection degree	IP 67
Ambient temperature range	-20...+90 °C
Housing main material	Pocan
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel- gold-plated
screw socket	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)	

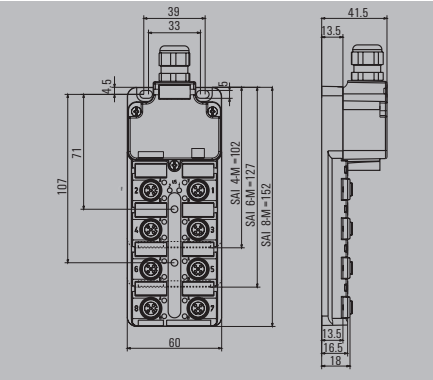
Dimensioned drawing



M12 distributors

Hood version
with DIP-switch coding

SAI-8-M M12 DIP



Ordering data

Complete modules	
8 channel	
Note	

SAI-8-M M12 DIP

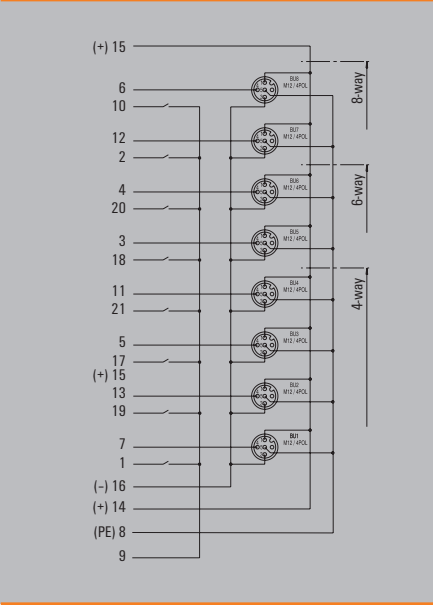
4-pole

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

Technical data

Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	3 A
Total current	8 A
Pollution severity	3
Protection degree	IP 68
Ambient temperature range	-20...+90 °C
Housing main material	Pocan
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel- gold-plated
screw socket	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	0.08...1.5 mm²
Suitable for dragline cable (fixed cable connection)	

Dimensioned drawing



SAI ECO

SAI ECO – the cost-effective alternative

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

Why plastic threaded rings?

There are some applications, however, that call 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 be made from plastic. Such modules can now be supplied on request.

The use of plastic rings 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 initially 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:

- **Markers:** Markers clipped onto the module can no longer be printed with a identification system. It is easier to simply order the markers with the required printing from us. The markers in the proven MultiCard format are printed with our PrintJetPro Printer.
- **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

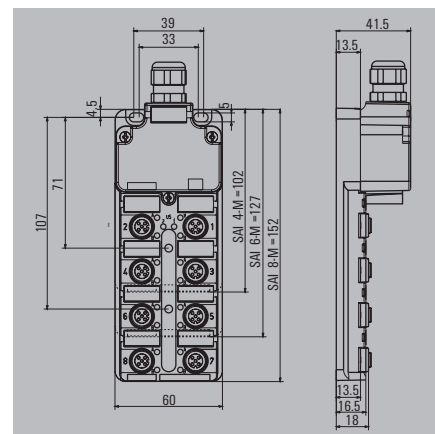
Plastic threaded rings are nothing new. However, the problem in the past was that the threaded rings formed part of the housing and were therefore made from the same plastic.

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

Hood version



Ordering data

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

SAI-4/6/8-M

Type	QTY	Order No.
SAI-4-M 5P M12 ECO	1	1892100000
SAI-6-M 5P M12 ECO	1	1892090000
SAI-8-M 5P M12 ECO	1	1892080000
SAI-4-M 5P M12 NPN ECO	1	1892100005
SAI-8-M 5P M12 NPN ECO	1	1892080005
SAI-4-M 5P M12 ECO UT	2	1892101000
SAI-6-M 5P M12 ECO UT	2	1892091000
SAI-8-M 5P M12 ECO UT	2	1892081000
SAI-4/6/8-MH BLZF3.5 SV	50	1752080050
SAI-4/6/8-MH BL3.5 SV	50	1724750050

These distributors are supplied without protective caps and markers.

[illegible]

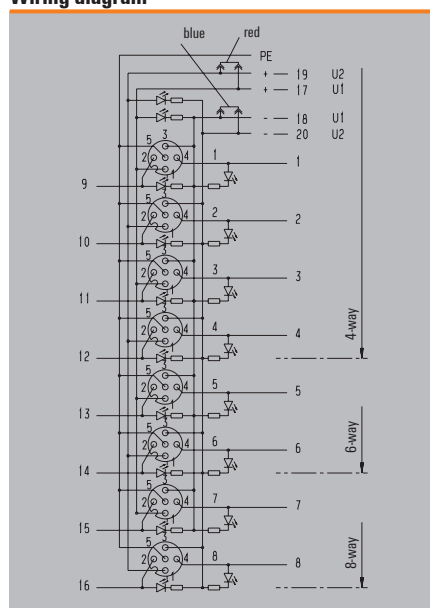
Technical data

Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	3 A
Total current	10 A
Pollution severity	3
Protection degree	IP 68
Ambient temperature range	-20...+90 °C
Housing main material	Pocan
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel- gold-plated
screw socket	Pocan
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



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

SAI distributors with M12 Push-Pull plug

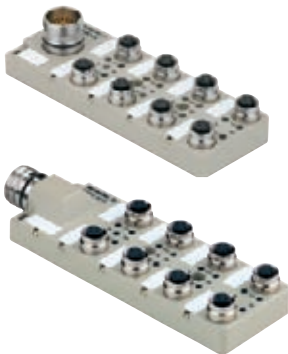


Whereas the standard M12 system requires the sleeves to be laboriously screwed on and that operation is hindered by the vibration guard, M12 Push-Pull works with one click, just like those well-known garden hose systems. The audible locking function guarantees a safe and reliable connection as well as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

M12 Push-Pull M23 versions



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.

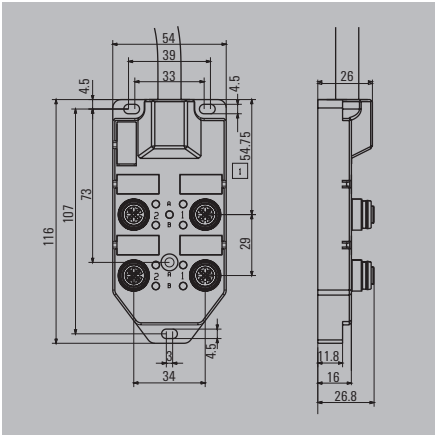
M12 Push-Pull hood version



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	

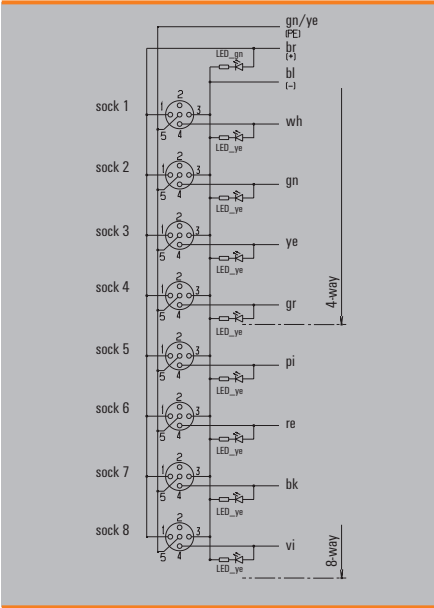
SAI-4/8-F		4-pole
Type	QTY	Order No.
SAI-4-F 4P FC 2M	1	1848080000
SAI-4-F 4P FC 5M	1	1848060000
SAI-4-F 4P FC 10M	1	1848050000
SAI-8-F 4P FC 2M	1	1847990000
SAI-8-F 4P FC 5M	1	1848000000
SAI-8-F 4P FC 10M	1	1847980000
Other versions on request		

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
SAI-8-F 5P FC 2M	1	1848020000
SAI-8-F 5P FC 5M	1	1848030000
SAI-8-F 5P FC 10M	1	1848010000
Other versions on request		

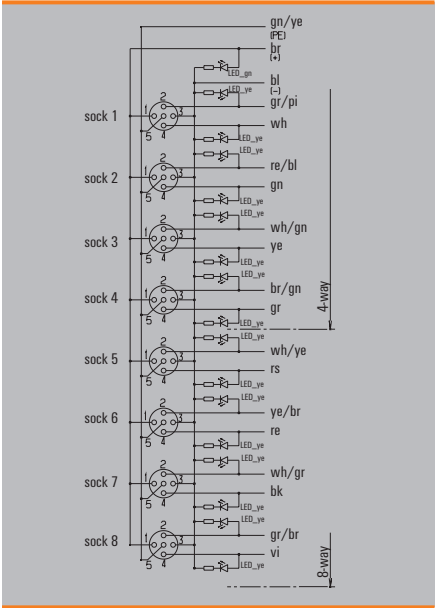
Technical data

Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	4 A
Total current	10 A
Pollution severity	3
Protection degree	IP 67
Ambient temperature range	-25...+80 °C
Housing main material	PA 6 GF
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel- gold-plated
screw socket	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 3x1mm² x n x 0.34mm²; Hallogen	

Wiring diagram

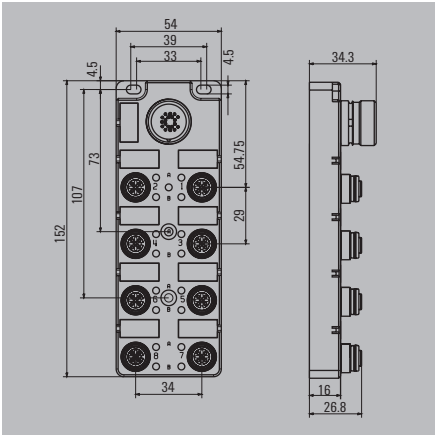


Wiring diagram



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

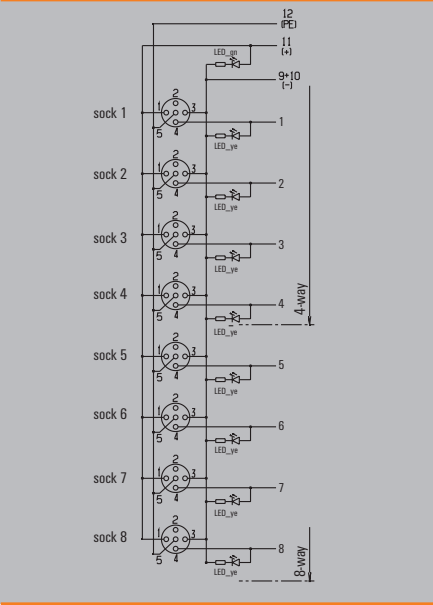
5-pole

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

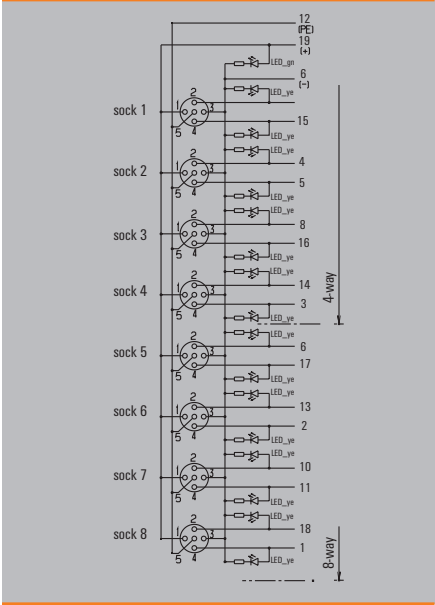
Technical data

Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	4 A
Total current	9 A
Pollution severity	3
Protection degree	IP 67
Ambient temperature range	-25...+80 °C
Housing main material	PA 6 GF
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel- gold-plated
screw socket	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)	

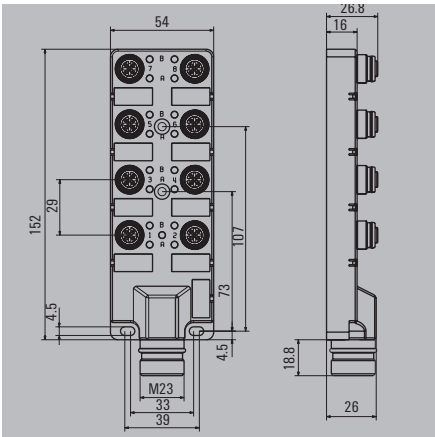
Wiring diagram



Wiring diagram



with M23 outlet on front



Ordering data

Complete modules	
	4 channel
	8 channel
Note	

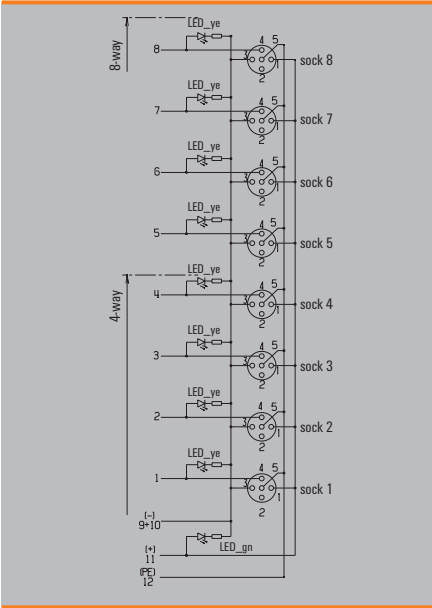
SAI-4/8-SH		4-pole
Type	QTY	Order No.
SAI-4-SH 4P FC	1	1859110000
SAI-8-SH 4P FC	1	1859120000

SAI-4/8-SH		5-pole
Type	QTY	Order No.
SAI-4-SH 5P FC	1	1859130000
SAI-8-SH 5P FC	1	1859140000

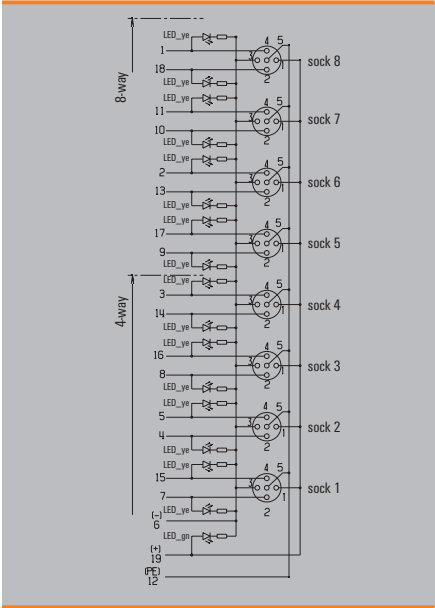
Technical data

Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	4 A
Total current	9 A
Pollution severity	3
Protection degree	IP 67
Ambient temperature range	-25...+80 °C
Housing main material	PA 6 GF
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel- gold-plated
screw socket	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



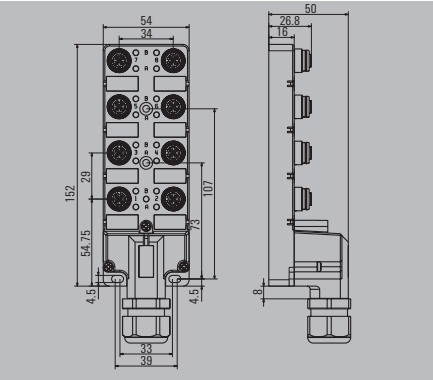
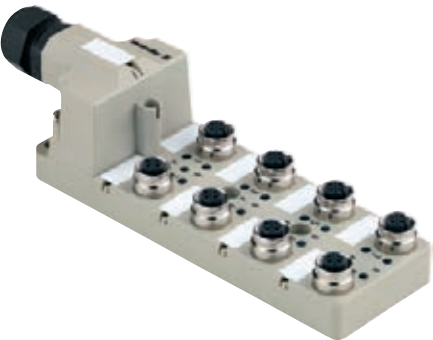
Wiring diagram



M12 Push-Pull

Hood version

SAI-8-M



Ordering data

Complete modules	
	8 channel
Note	

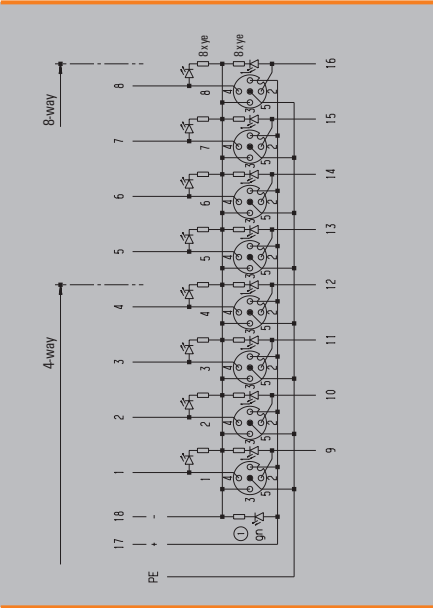
SAI-8-M		5-pole
Type	QTY	Order No.
SAI-8-M 5P FC	1	1848070000
Other versions on request		

Technical data

Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	4 A
Total current	
Pollution severity	3
Protection degree	IP 67
Ambient temperature range	-25...+80 °C
Housing main material	PA 6 GF
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel- gold-plated
screw socket	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

Dimensioned drawing

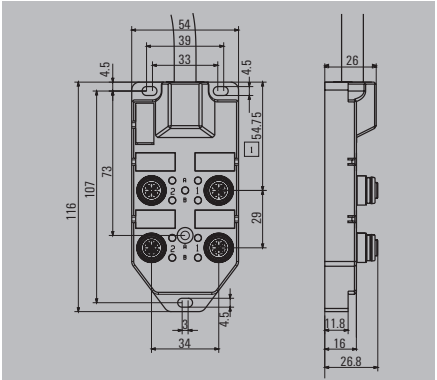
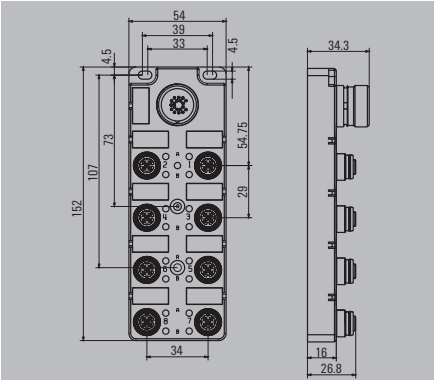


Terminal	Slot/M12	Contact	Colour
1	1	4	white
2	2	4	green
3	3	4	yellow
4	4	4	grey
5	5	4	pink
6	6	4	red
7	7	4	black
8	8	4	violet
9	1	2	grey/pink
10	2	2	red/blue
11	3	2	white/green
12	4	2	brown/green
13	5	2	white/yellow
14	6	2	yellow/brown
15	7	2	white/grey
16	8	2	grey/brown
17	1-8	1	brown (+)
18	1-8	1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

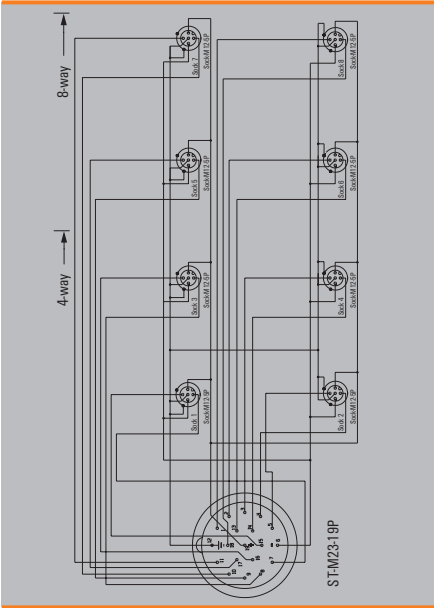
SAI-4/8-F		5-pole
Type	QTY	Order No.
SAI-4-F 5P CNOMO 5M	1	1861570000
SAI-4-F 5P CNOMO 10M	1	1861560000
SAI-8-F 5P CNOMO 5M	1	1861550000
SAI-8-F 5P CNOMO 10M	1	1861590000

Technical data

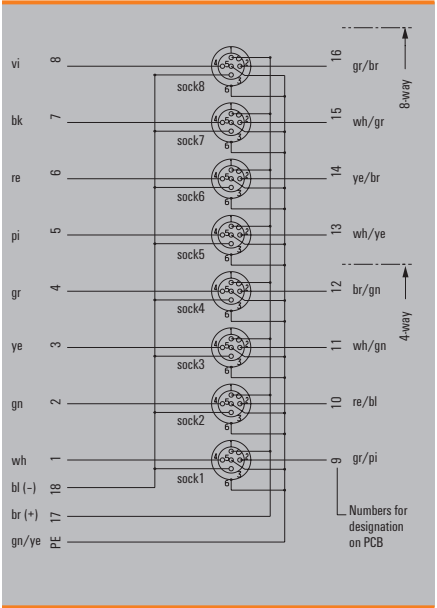
Operating voltage	10...50 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	4 A
Total current	8 A
Pollution severity	3
Protection degree	IP 67
Ambient temperature range	-25...+80 °C
Housing main material	PA 6 GF
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel- gold-plated
screw socket	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

Dimensioned drawing



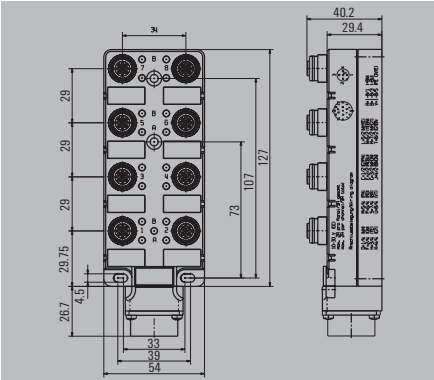
Dimensioned drawing



M12 Push-Pull

Bayonet joint

SAI-8-SHB



Ordering data

Complete modules	8 channel
Note	

SAI-8-SHB

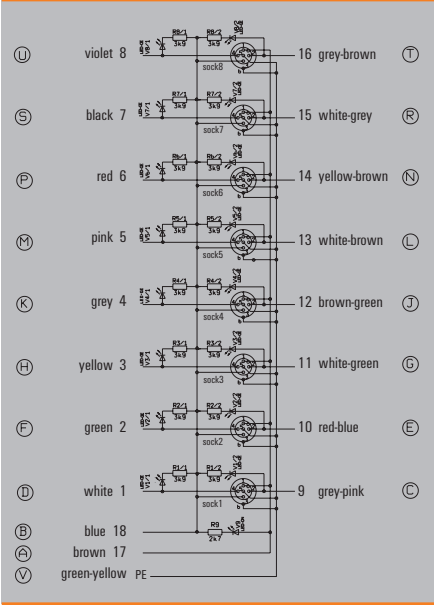
5-pole

Type	QTY	Order No.
SAI-8-SHB 5P FC	1	1872440000
Other versions on request		

Technical data

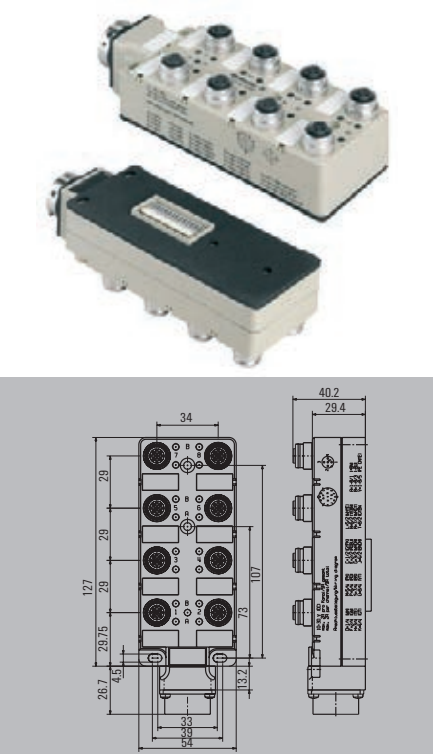
Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	4 A
Total current	9 A
Pollution severity	3
Protection degree	IP 67
Ambient temperature range	-25...+80 °C
Housing main material	PA 6 GF
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickeled, gold-plated
screw socket	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)	

Dimensioned drawing



Bayonet joint with socket connector on reverse

SAI-8-SHB



Ordering data

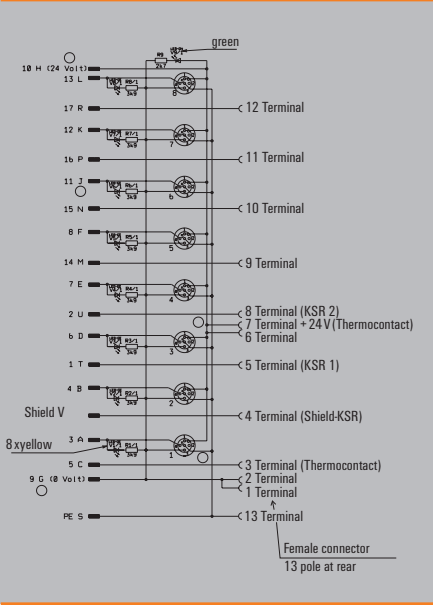
Complete modules	8 channel
Note	

Type	QTY	Order No.
SAI-8-SHB 5P F13 FC	1	1872460000
Other versions on request		

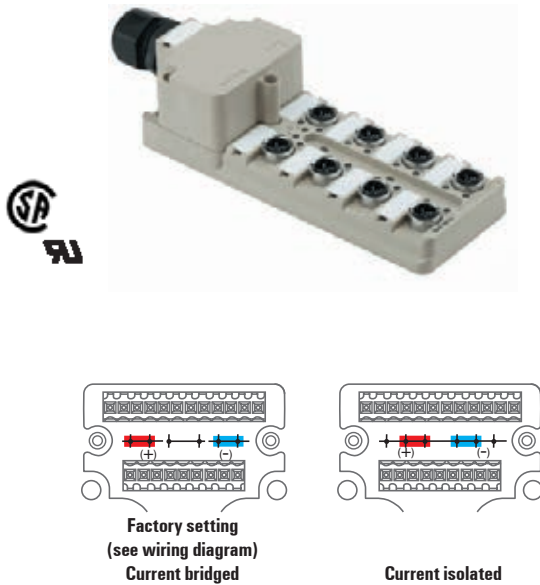
Technical data

Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	4 A
Total current	9 A
Pollution severity	3
Protection degree	IP 67
Ambient temperature range	-25...+80 °C
Housing main material	PA 6 GF
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel- gold-plated
screw socket	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)	

Dimensioned drawing



IDC – the quick connection



Hood version

- Compact IDC connection cuts production, commissioning and maintenance work
- Robust, knurled metal nut, 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 usually be readily tightened by hand.

IDC-Tool



Ordering data

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

Screwty®

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



Ordering data

Type	Qty.	Order No.
Screwty®-M12-DM	1	1900001000

Protective cap M12 for IDCw

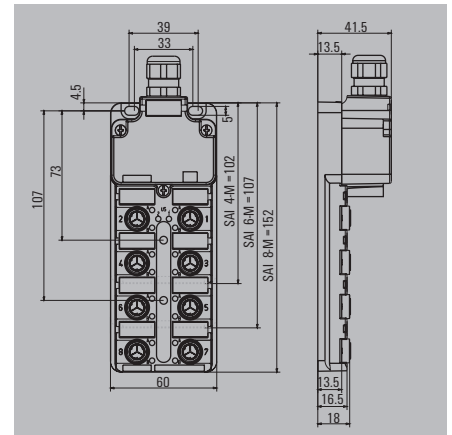


Ordering data

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

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		

3-pole

SAI-4/6/8-M IDC

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
Other versions on request		

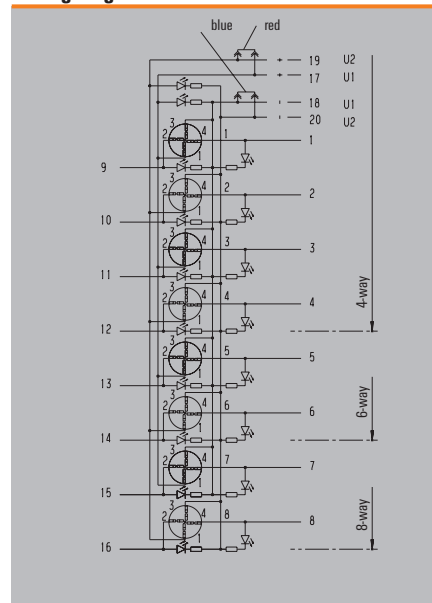
4-pole

Technical data

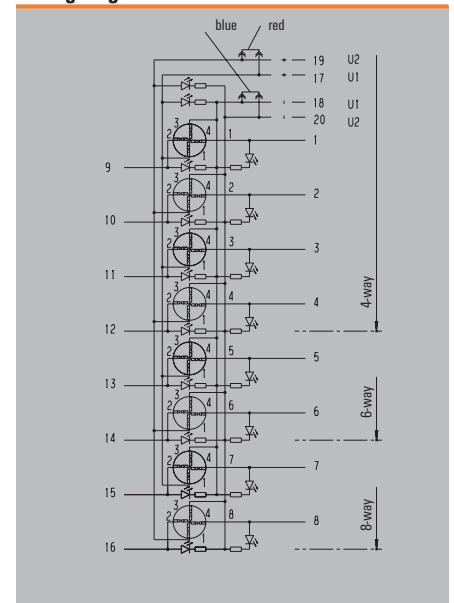
Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	3 A
Total current	10 A
Pollution severity	2
Protection degree	IP 67
Ambient temperature range	-20...+90 °C
Housing main material	Pocan
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	
screw socket	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	0.08...1.5 mm²
Suitable for dragline cable (fixed cable connection)	

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

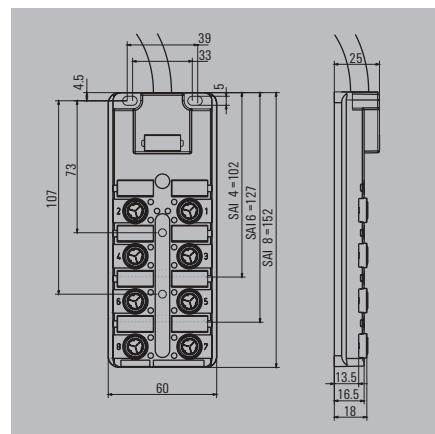
Wiring diagram



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

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		

3-pole

SAI-4/6/8-F IDC

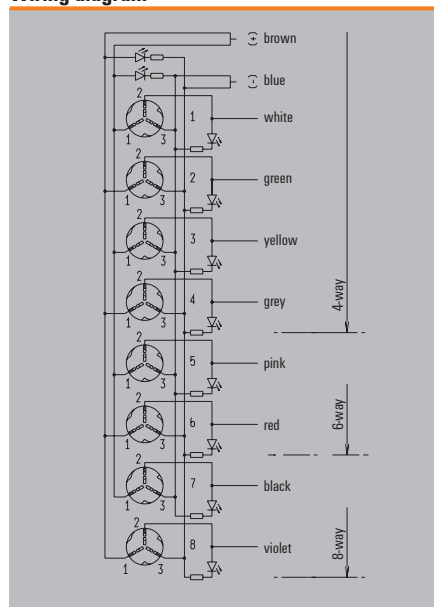
Type	QTY	Order No.
SAI-4-F 4P IDC PUR 5M	1	1766660000
SAI-4-F 4P IDC PUR 10M	1	1766670000
SAI-6-F 4P IDC PUR 5M	1	1766680000
SAI-6-F 4P IDC PUR 10M	1	1766690000
SAI-8-F 4P IDC PUR 5M	1	1766700000
SAI-8-F 4P IDC PUR 10M	1	1766710000
Other versions on request		

4-pole

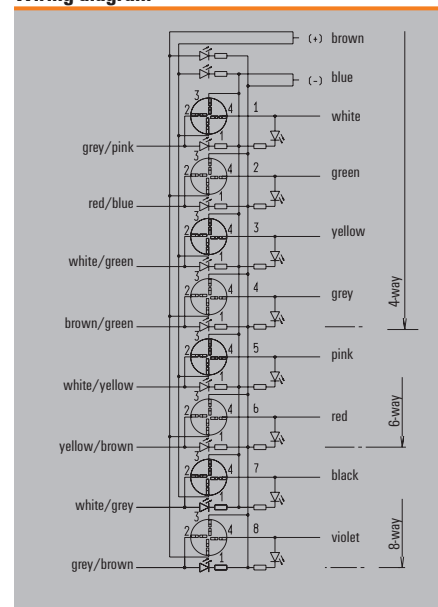
Technical data

Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	3 A
Total current	9 A
Pollution severity	2
Protection degree	IP 67
Ambient temperature range	-20...+80 °C
Housing main material	Pocan
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	
screw socket	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



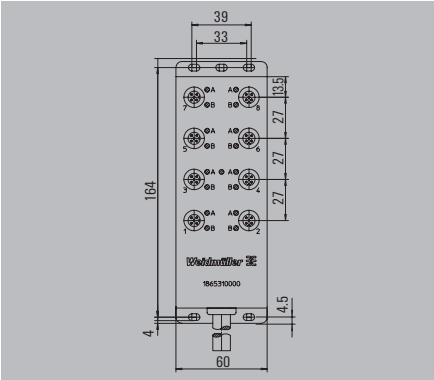
Wiring diagram



M12 VA stainless steel

Fixed cable version,
specifically designed for use
in food processing equipment

SAI-8-F 5P M12 5M VA



Ordering data

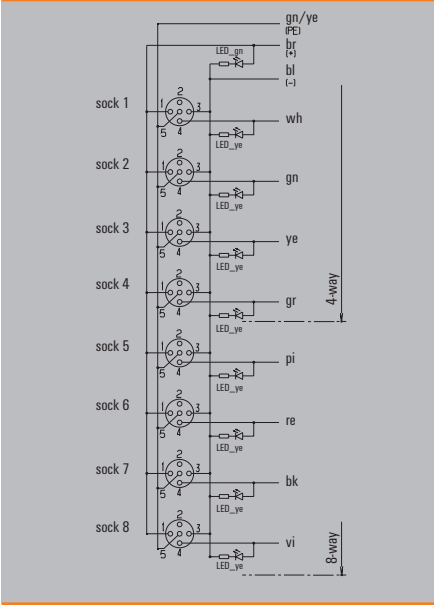
8 channel	Cable length 5 m
Note	

SAI-8-F 5P M12 5M VA		5-pole
Type	QTY	Order No.
SAI-8-F 5P M12 5M VA	1	1865310000

Technical data

Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	4 A
Total current	12 A
Pollution severity	3
Protection degree	IP 69K
Ambient temperature range	-25...+70 °C
Housing main material	Stainless steel
Contact carrier material	
Base material of contacts	CuZn, pre-nickeled, gold-plated
screw socket	stainless steel
Housing colour	Silver
Fire behaviour	V-0
Clamping range of hood-version	
Suitable for dragline cable (fixed cable connection)	Yes
Accessories include 4 protective covers for unused slots	

Dimensioned drawing



Tension-clamp connection M12, stainless steel

SAIS / SAIB VA

straight



Ordering data

Male	
	5-pole. PG 9
	5-pole. PG 9
Socket	
	5-pole. PG 9
	5-pole. PG 9
Note	

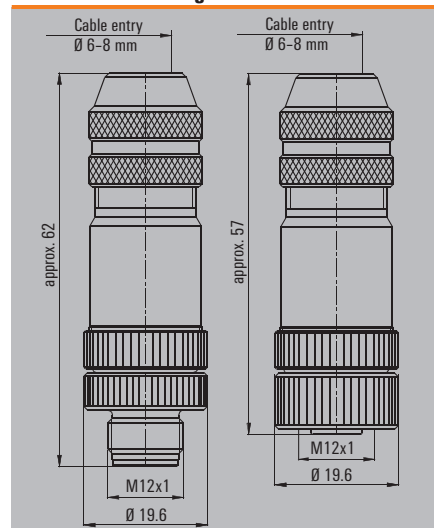
Type	QTY	Order No.
SAIS 5/9-VA	1	1920700000
SAIS 5/9-VA-B-COD	1	1920720000
SAIB 5/9-VA	1	1920710000
SAIB 5/9-VA-B-COD	1	1920730000

Technical data

Note	
------	--

Note	
Type of connection	Tension clamp connection
Housing main material	1.4404/316L
Contact tube diameter	M12
Cable diameter	6...8 mm (PG9)
Wire cross-section, min. / max.	0.25...0.5 mm ²
Rated current	4 A
Rated voltage	125 V
Temperature range of housing	-25...+85 °C
Protection degree	IP 69K
Contact surface	Gold-plated
PB = PROFIBUS (B-COD) Torque, see E.12	

Dimensioned drawing



PB = PROFIBUS (B-COD) Torque, see E.12

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

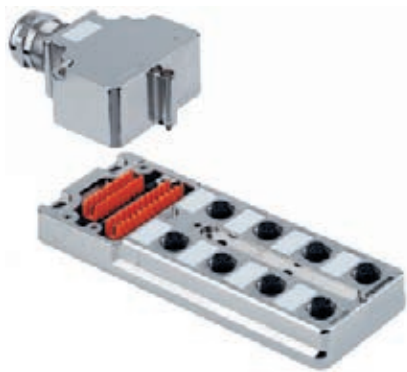
Weidmüller metal distributors have proved their worth in many situations. They are available as 4 and 8 channel M12 versions with cable lengths of 5 or 10 m. Metal distributors are also necessary when ESD requirements must be complied with. The conductive metal surface provides low surface resistance.

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

For 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 to 16 x 0.50 mm²
- 8 x 0.75 mm² to 15 x 0.75 mm²
- 8 x 1.00 mm² to 10 x 1.00 mm²
- 5 x 1.50 mm² to 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 to 21 x 0.75 mm²
- 14 x 1.00 mm² to 20 x 1.00 mm²
- 8 x 1.50 mm² to 16 x 1.50 mm²

Overview of metal distributors

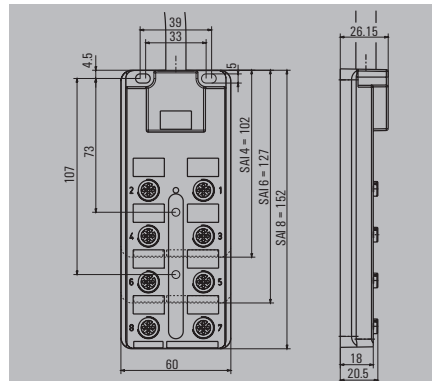
Type	SAI-UT	Sockets	M12	Poles-Hood	Form	Cable gland	Cable gland	Length	Order No.
SAI-4-MH-4P M12	PBT	4	4	Zn-G	high	M20	plastic		1705922000
SAI-6-MH-4P M12	PBT	6	4	Zn-G	high	M20	plastic		1705932000
SAI-8-MH-4P M12	PBT	8	4	Zn-G	high	M20	plastic		1705942000
SAI-4-MH-5P M12	PBT	4	5	Zn-G	high	M20	plastic		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

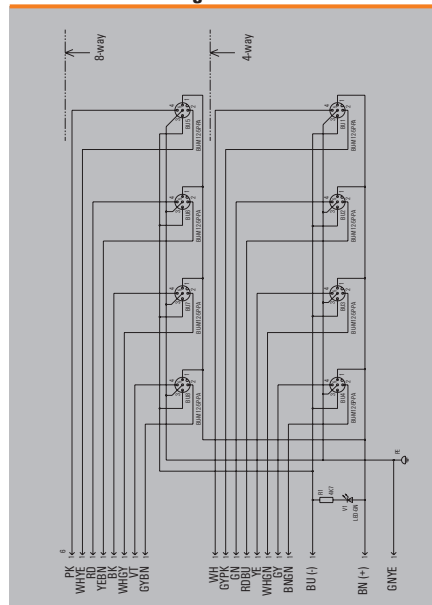
4-pole

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
Additional variants on request Bus cable is not shielded		

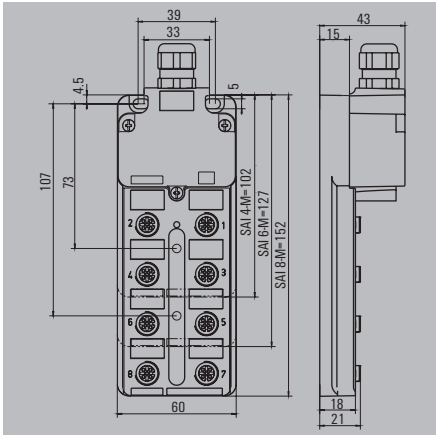
Technical data

Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	3 A
Total current	9 A
Pollution severity	3
Protection degree	IP 68
Ambient temperature range	-20...+90 °C
Housing main material	CuZn, nickel-plated
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel-coated, gold-plated
screw socket	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

Dimensioned drawing



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

M12

Type	QTY	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

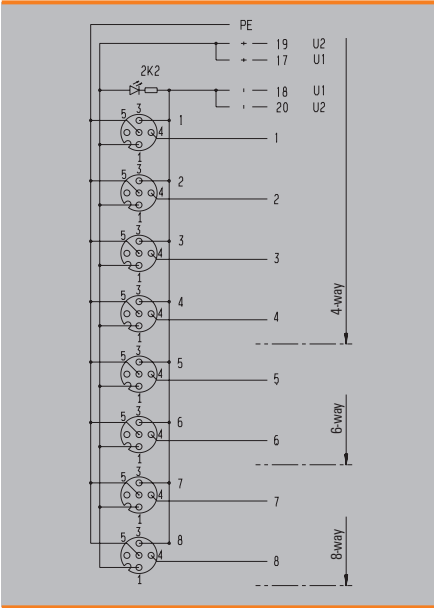
M12

Type	QTY	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		

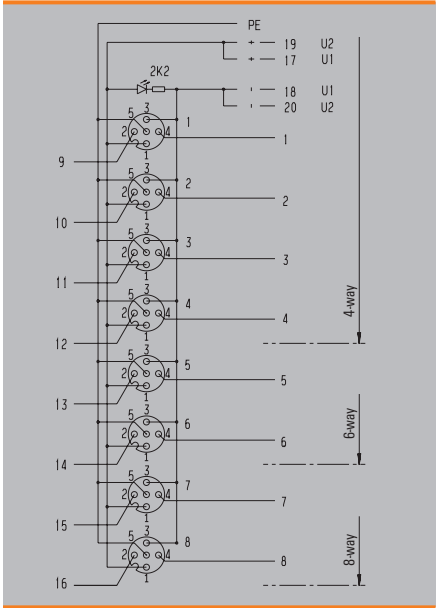
Technical data

Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	3 A
Total current	10 A
Pollution severity	3
Protection degree	IP 68
Ambient temperature range	-20...+90 °C
Housing main material	CuZn, nickel-plated
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel- gold-plated
screw socket	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)	
Complete shielding transmission via the housing	

Wiring diagram



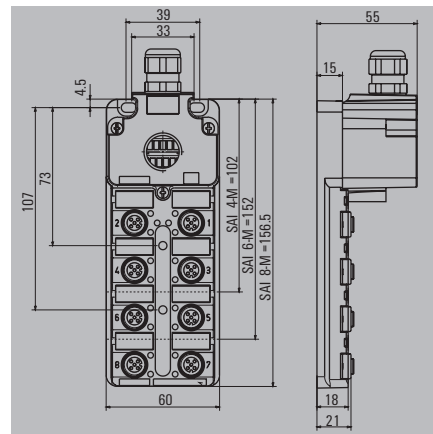
Wiring diagram



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
Other versions on request		

SAI-4/6/8-MH

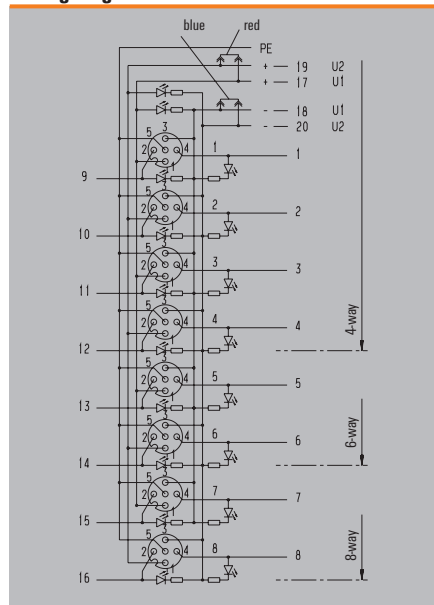
5-pole

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
Other versions on request		

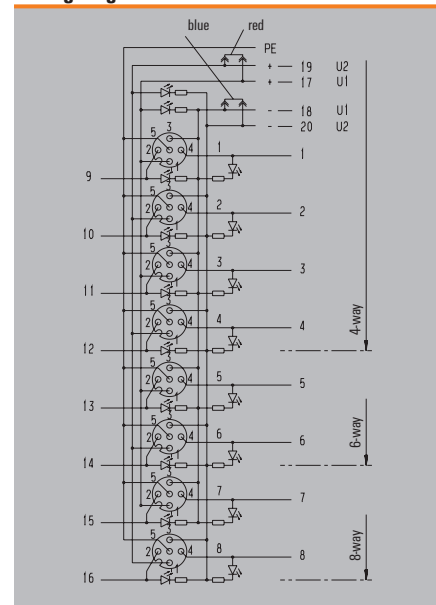
Technical data

Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	3 A
Total current	10 A
Pollution severity	3
Protection degree	IP 68
Ambient temperature range	-20...+90 °C
Housing main material	CuZn, nickel-plated
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel-coated, gold-plated
screw socket	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 = 16 A total current	
Clamping range up to 2.5 mm ² with screw connection	

Wiring diagram

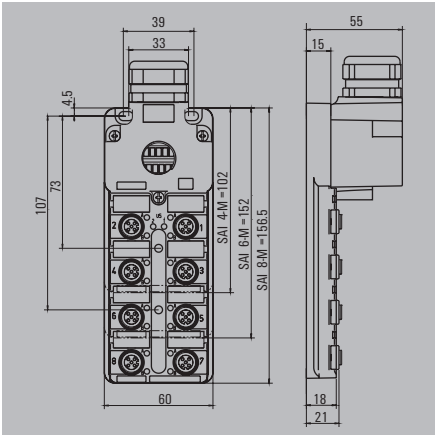


Wiring diagram



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		1724753000
Other versions on request		

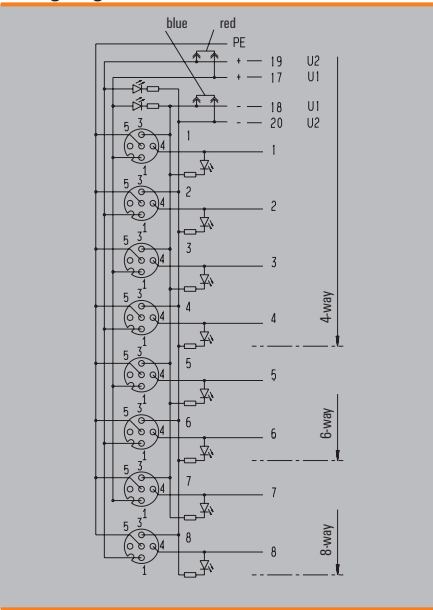
SAI-4/6/8-MHD		5-pole
Type	QTY	Order No.
SAI-4-MHD-5P M12	1	1701233000
SAI-6-MHD-5P M12	1	1701243000
SAI-8-MHD-5P M12	1	1701253000
SAI-4/6/8 MH-MHD BL 3.5		1724753000
Other versions on request		

Technical data

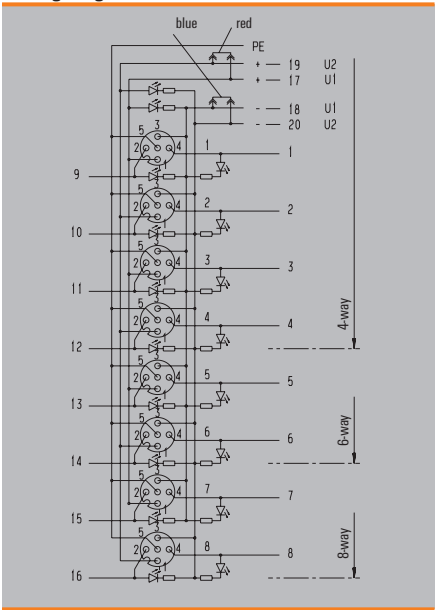
Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	3 A
Total current	10 A
Pollution severity	3
Protection degree	IP 68
Ambient temperature range	-20...+90 °C
Housing main material	CuZn, nickel-plated
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel- gold-plated
screw socket	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 = 16 A 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.

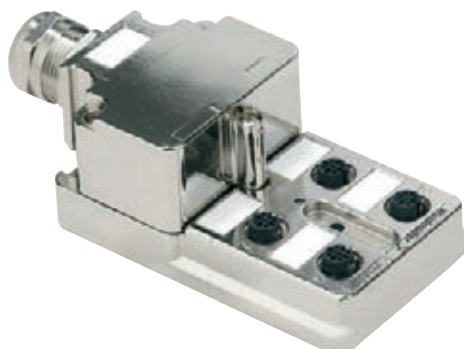
When connecting PT100 3- and 4-conductor initiators, we recommend the new shielded metal version. If you need other circuit configurations, simply contact us.

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

base element



metal



Wiring diagram

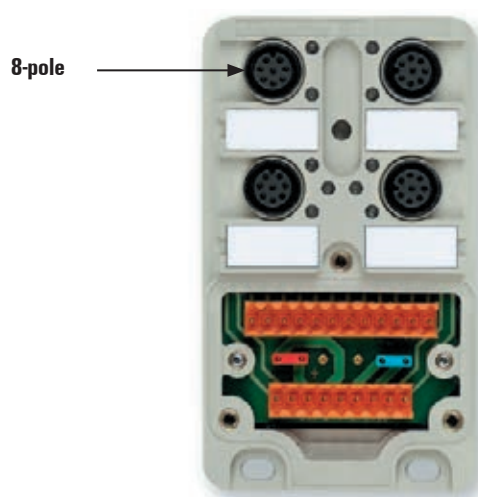
Socket	Contact	BL 3.5 contact
1	1	1
1	2	2
1	3	3
1	4	4
1	5	5
2	1	6
2	2	7
2	3	8
2	4	9
2	5	10
3	1	11
3	2	12
3	3	13
3	4	14
3	5	15
4	1	16
4	2	17
4	3	18
4	4	19
4	5	20
-	-	21

Technical data

Current per channel	2 A
Total current	8 A
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

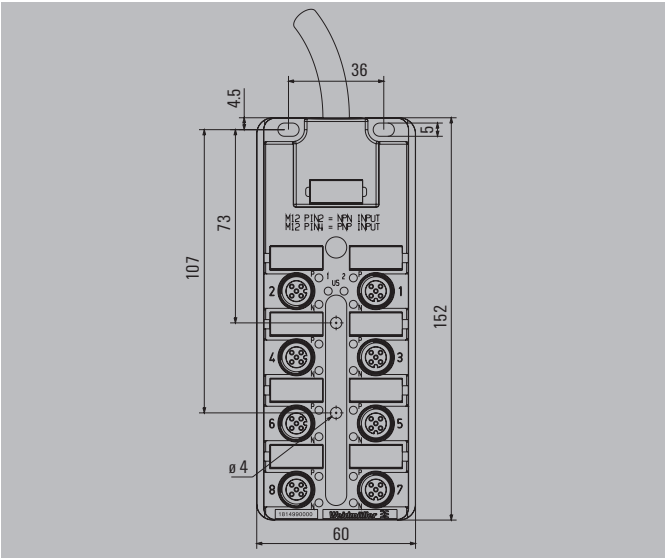
Ordering data

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

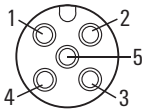
Fixed cable version

Fixed cable version

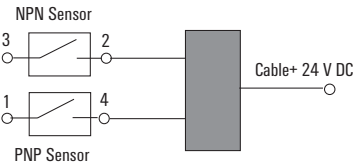


M12 sockets

- 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

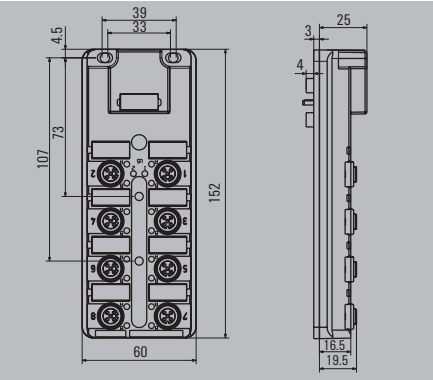
Operating voltage	24 V DC ±20 %
Operation temperature	0...80 °C
Storage temperature	-25...80 °C
Ingress protection class	IP 68
PUR cable	5 m
Max. no-load current for 2-wire NPN sensors	2 mA DC

Ordering data

Type	Qty.	Order No.
SAL8-F 5P NPN-PNP 5M	1	1814990000

Panel feed-through

SAI-8-B 5P M12 SL



Ordering data

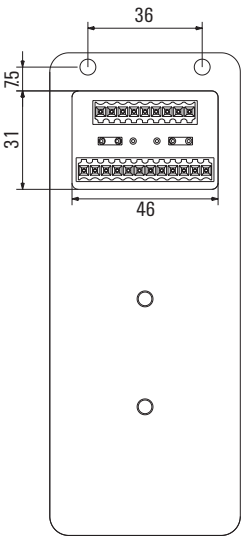
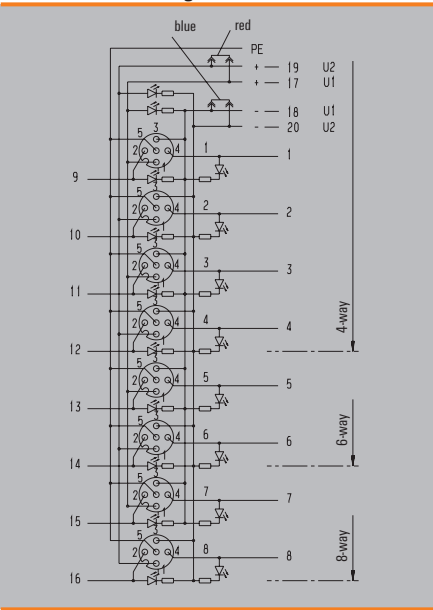
Note

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

Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	3 A
Total current	10 A
Pollution severity	3
Protection degree	IP 65
Ambient temperature range	-20...+90 °C
Housing main material	Pocan
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel-coated, gold-plated
screw socket	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	0.08...1.5 mm²
Suitable for dragline cable (fixed cable connection)	

Dimensioned drawing



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.

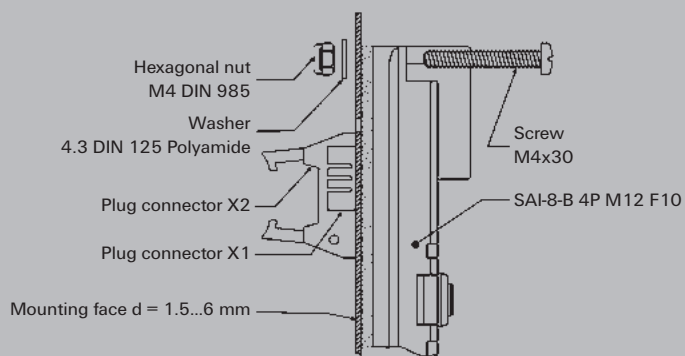
Weidmüller now offers two simple solutions

- 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.

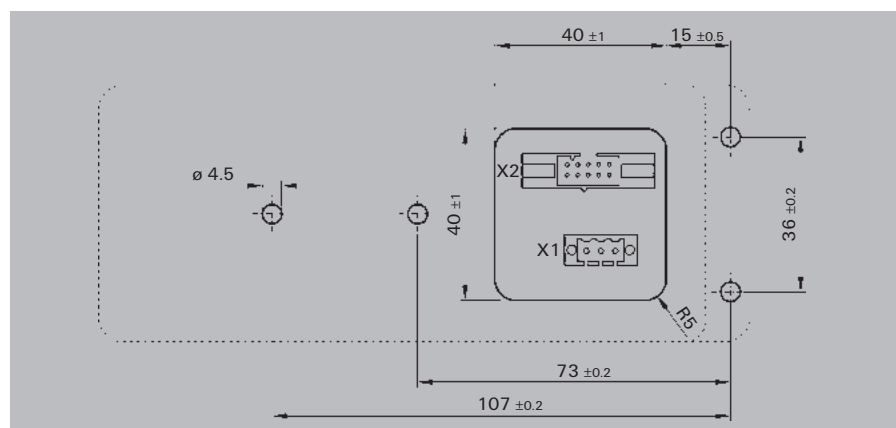


Advantages

- 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 trouble-shooting 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

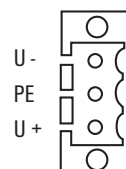
- Additional I/O modules available
- Cable length options
- Easy replacement of I/O interfaces provides flexibility

Contact assignment

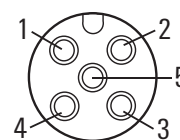
Male connector X1

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

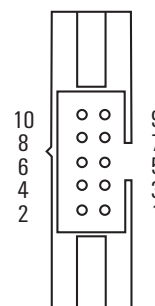


Contact assignment

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



Note:

You will find further products for Interface units and PLC solutions in the Electronic catalogue 4.5.

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

IP 67/IP 68 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

Distributor
Male connector X1

Type	Qty.	Order No.
SAI-8-B 4P M12 F10	1	1812170000
BL 3.5Q/07/180 SN DKGN BX	50	1606530000

Pre-assembled hood version

In some cases, it can be advantageous to receive the hoods in pre-assembled form.

Here MF means: basic modules are supplied along with assembled hoods.

Here MHF are the assembled hoods only.

The wire cross-sections are 3 x 1 mm² and n x 0.34 mm². The quality of conduction is identical to that of fixed cable distributors.

Technical data can be found on pages W.2 and W.9



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

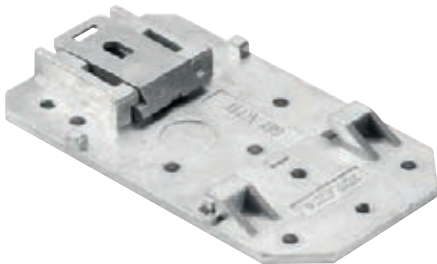
Type	Qty.	Order No.
SAI-4-M-5PM12UT	1	1701231000
SAI-6-M-5PM12UT	1	1701241000
SAI-8-M-5PM12UT	1	1701251000

Protective cap for hooded distributor, empty,
Terminal rail foot for distributor

SAI-4/6/8-MH LEER



SAI-TS35 MF



Ordering data

Mounting hood	Empty
Note	

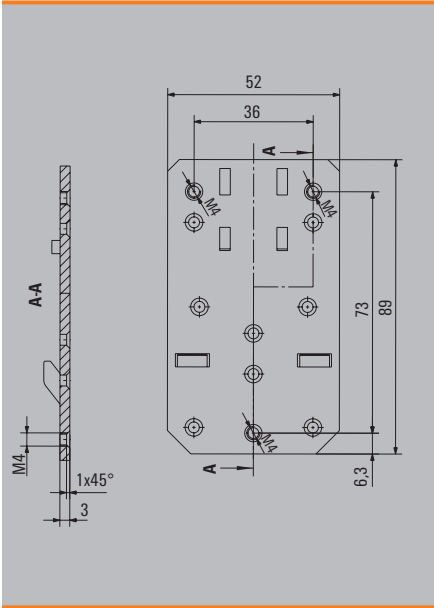
SAI-4/6/8-MH LEER

4-pole

Type	QTY	Order No.
SAI-4/6/8-MH LEER	1	1783460000

Type	QTY	Order No.
SAI-TS35 MF	1	1917400000

Dimensioned drawing



SAI-M8

Weidmüller offers two different series for the M8 range. Both of these series offer key advantages: while one is optimised for size, the other has a patented shape and protected design that make it easy to handle. The SAI M8 product line is available with up to 12 plug-in slots (as a fixed-cable version) and with up to 10 plug-in slots (as a pluggable version). The housings can be screwed on from the side or from the top which makes them more versatile. They are durable and well-sealed with a sturdy, fully encapsulated construction.

These single row distributors are easy to handle; their compact shape makes them one of the smallest product solutions available on the market. The hooded distributor is a favourite from the line of ergonomic distributors (also nicknamed the hedgehog distributor). The cable outlet is customisable and can exit from the top or from the back. These distributors are also fully encapsulated.



**Easily accessible**

The side-mounted M8 connector ensures very convenient handling

**Directly on the PCB**

Custom versions are also available.
This is the PCB connection module.

**Space-saving**

The line version has a very small size.

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



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 a decisive factor for applications and 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, 10 and 12 channel distributors with fixed cable connection, the 4 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 have to be introduced. The modules can also be mounted sideways and are completely encapsulated.

Consequently, Weidmüller SAI distributors represent stability, robustness, flexibility and compactness - all in a single unit.

PCB version of a complete SAI distributor

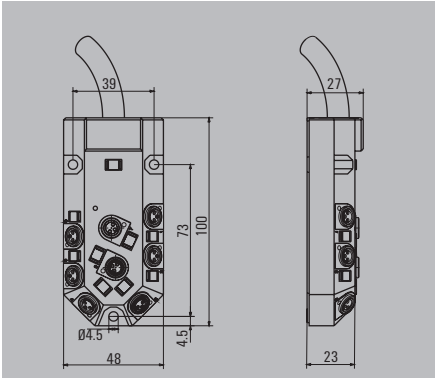
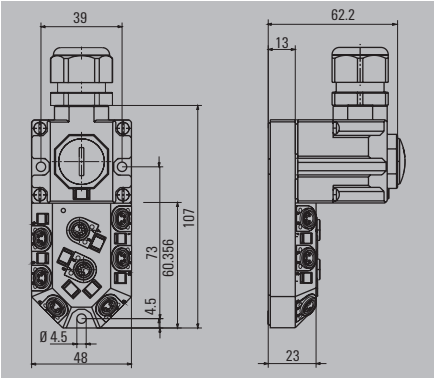
During the design of PCBs, it is often necessary to plug in different external data lines. There are a variety of connectors available for this purpose. For machine construction, the M8 and M12 connectors have become established as the standard solutions for sensor and actuator wiring. When attempting 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		

Technical data

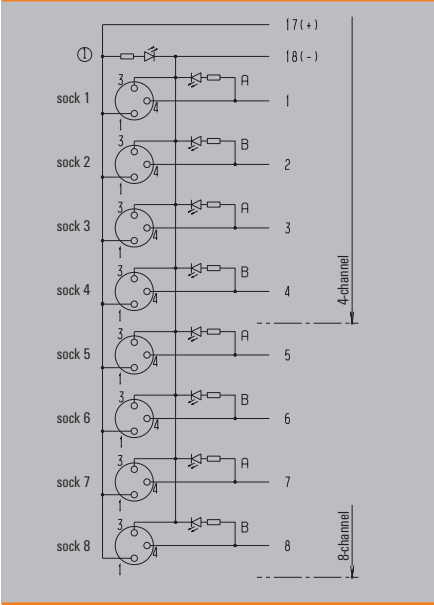
Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	2 A
Total current	8 A
Pollution severity	3
Protection degree	IP 68
Ambient temperature range	-20...+80 °C
Housing main material	Pocan
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel- gold-plated
screw socket	CuZn, nickel-plated
Housing colour	grey, RAL 7032
Flammability class UL 94	V-0
Clamping range of hood-version	0.08...1 mm²
Suitable for dragline cable (fixed cable connection)	Yes

SAI-4/8-M

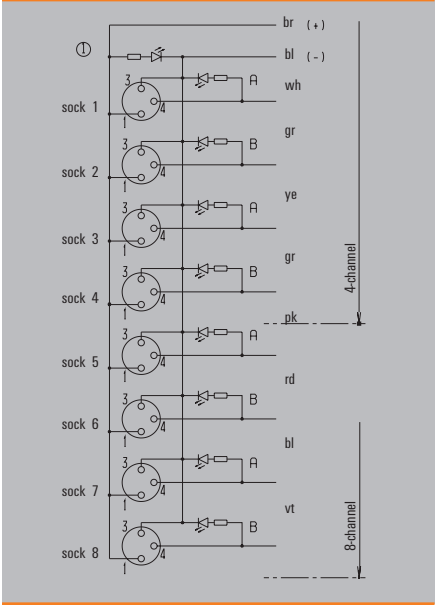
Type	QTY	M8 Order No.
SAI-4-M 3P M8	1	1784680000
SAI-8-M 3P M8	1	1784670000
SAI-4-M 4P M8	1	1784700000
SAI-8-M 4P M8	1	1784690000
Other versions on request		

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
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		

Dimensioned drawing



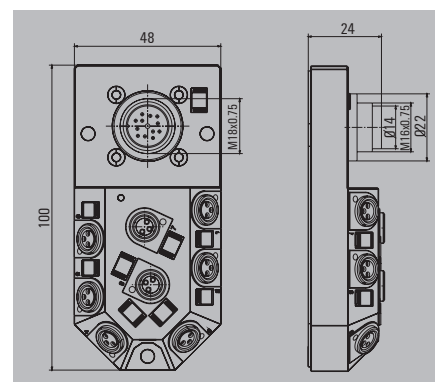
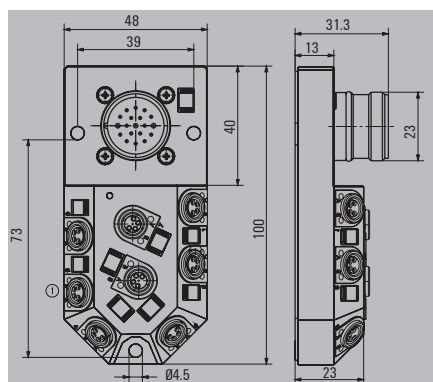
Dimensioned drawing



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		

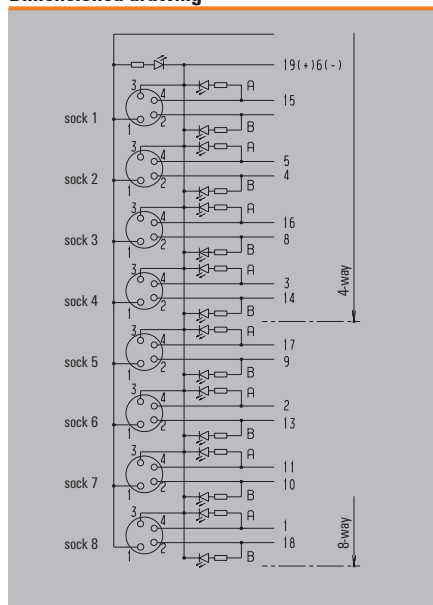
M16

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

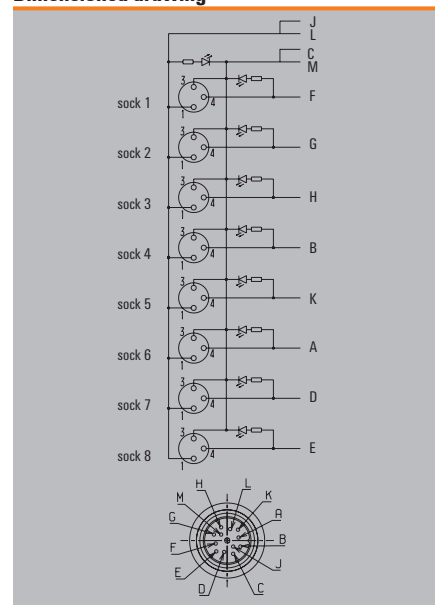
Technical data

Operating voltage	10...30 V
Current of continuous busbars	2 A
max. current-carrying capacity per slot	2 A
Total current	8 A
Pollution severity	3
Protection degree	IP 68
Ambient temperature range	-20...+90 °C
Housing main material	Pocan
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel- gold-plated
screw socket	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)	

Dimensioned drawing



Dimensioned drawing

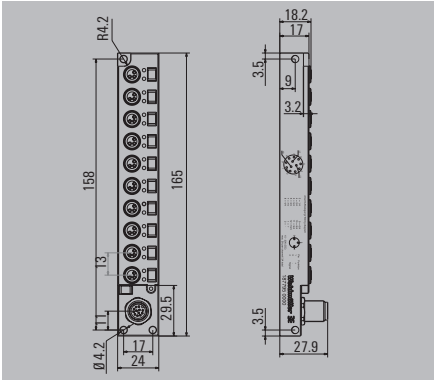
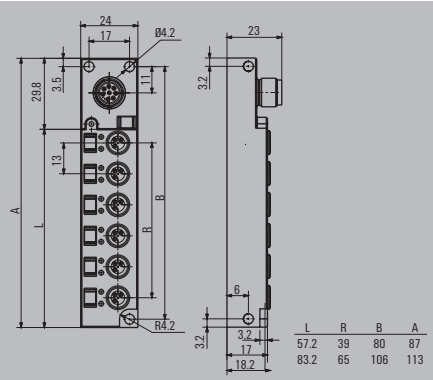


M8 distributors

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	
	4 channel
	6 channel
Note	

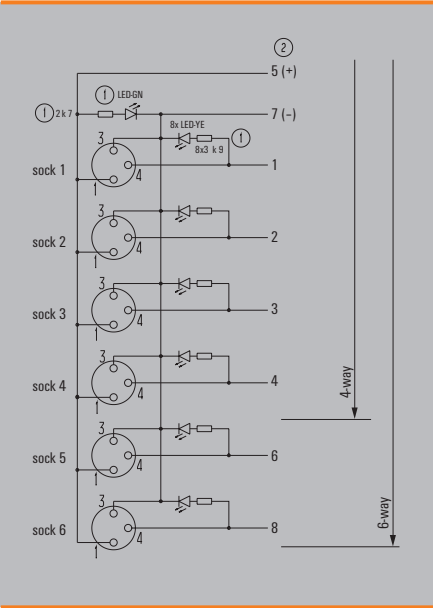
SAI-4/6-S		M12
Type	QTY	Order No.
SAI-4-S 3P M8 L	1	1828740000
SAI-6-S 3P M8 L	1	1828730000
SAI-4-S 3P M8 L OL	1	1051760000
SAI-6-S 3P M8 L OL	1	1932380000
Other versions on request		

		M12
Type	QTY	Order No.
SAI-8-S12 3P M8 L	1	1871680000
SAI-10-S12 3P M8 L	1	1877950000

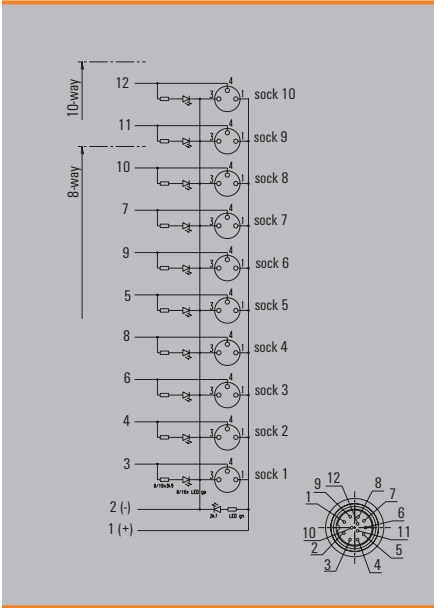
Technical data

Operating voltage	10...30 V
Current of continuous busbars	1 A
max. current-carrying capacity per slot	2 A
Total current	6 A
Pollution severity	3
Protection degree	IP 68
Ambient temperature range	-25...+80 °C
Housing main material	Pocan
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel- gold-plated
screw socket	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

Dimensioned drawing

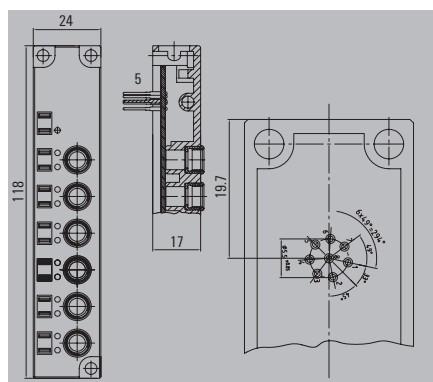


Dimensioned drawing



Line PCB version

SAI-6-S M8 L SL



Ordering data

3-pole	
	6 channel
Note	

SAI-6-S M8 L SL

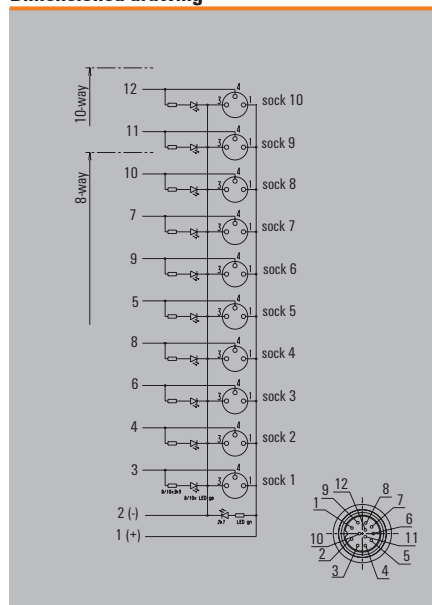
3-pole

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

Technical data

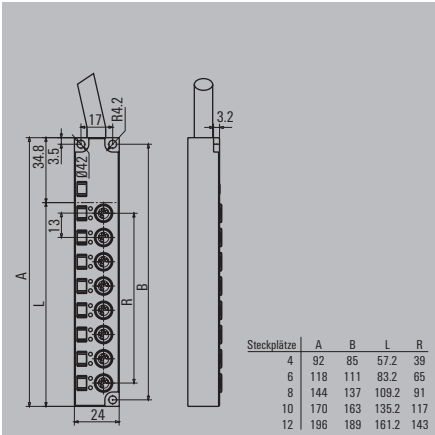
Operating voltage	10...30 V
Current of continuous busbars	1 A
max. current-carrying capacity per slot	2 A
Total current	6 A
Pollution severity	3
Protection degree	IP 68
Ambient temperature range	-25...+80 °C
Housing main material	Pocan
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel- gold-plated
screw socket	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

Dimensioned drawing



M8 distributors

Line / Fixed cable version



Ordering data

Cable length 5 m (with fixed cable version)	
4 channel	
6 channel	
8 channel	
10 channel	
12 channel	
Cable length 10 m (with fixed cable version)	
4 channel	
6 channel	
8 channel	
10 channel	
12 channel	
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

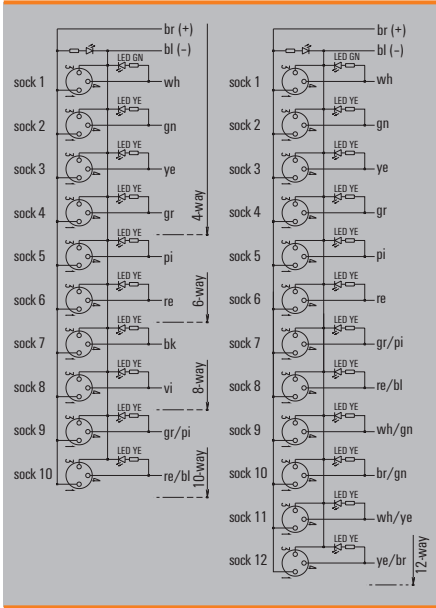
4-pole

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

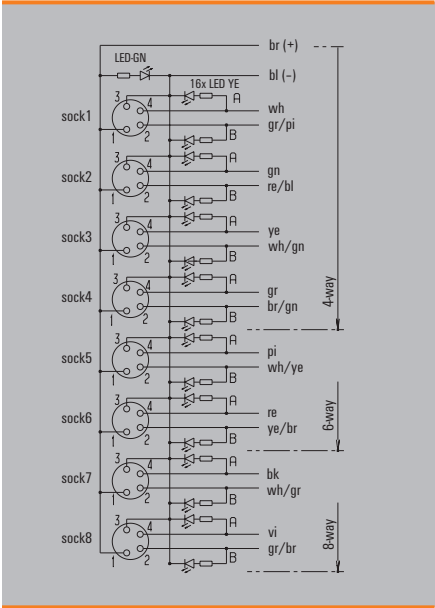
Technical data

Operating voltage	10...30 V
Current of continuous busbars	1 A
max. current-carrying capacity per slot	2 A
Total current	6 A
Pollution severity	3
Protection degree	IP 68
Ambient temperature range	-25...+80 °C
Housing main material	Pocan
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel- gold-plated
screw socket	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



Fixed cable version



M5-Line with M16 outlet



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

Whether it is mobile phones or computers, as functionality increases, so the size of components decreases. Today, machine designers face the same problem. Space is at a premium, 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.

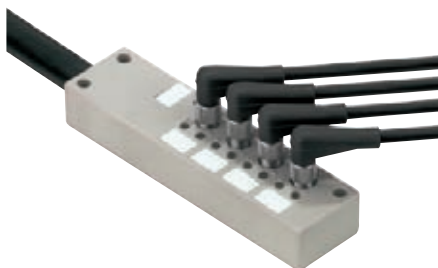
However, unlike the M8 plug in connectors, the different M5 pole numbers are compatible with each other. The advantage is obvious: 4 pole units which are required, for example, for antivalent sensors can now be plugged into one and the same distributor with standard NOC applications. In the M8 system special adapters are required. In addition to size, the module weight is also critical in some applications. For example, the speed of a handling machine is influenced by the weight of the moving parts. The M5 system offers outstanding benefits with its unrivalled small size and light weight.

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 connections can be integrated in the module as an option, so that the SAI M5 can be used as a combined SAI system. A Y-configuration is possible in conjunction with the M16 splitter.

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.

MM5 distributors



Quality comes in little packages...

This is the motto applied by Weidmüller when developing its M5 plug in connectors. The outstanding feature of these connectors is their tiny 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

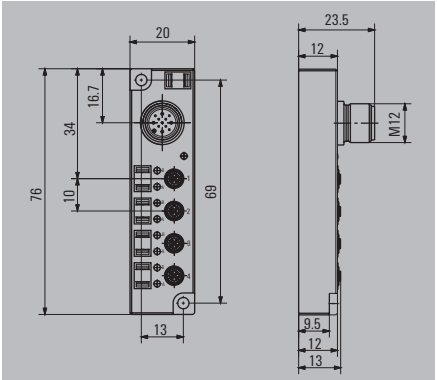
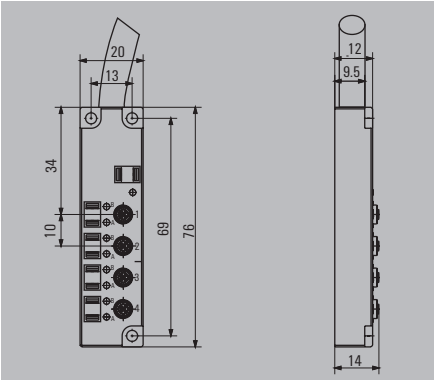
Each channel is marked with the channel number. Each initiator LED can be exactly allocated with the letters A and B. In addition, the distributor and every channel can be marked.

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		

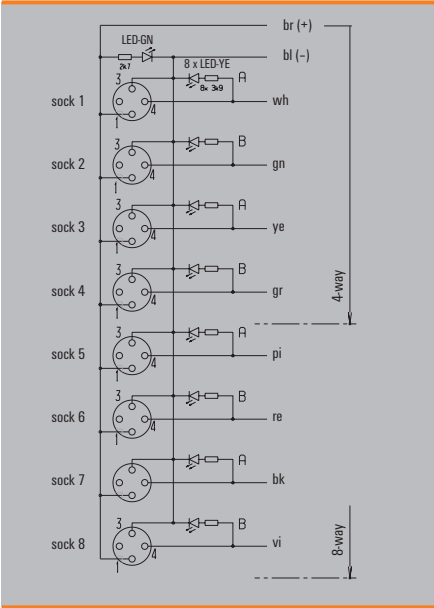
SAI-4/8-F		M5
Type	QTY	Order No.
SAI-4-F 3P M5 L5M	1	1851740000
SAI-8-F 3P M5 L5M	1	1851760000
SAI-4-F 3P M5 L10M	1	1845820000
SAI-8-F 3P M5 L10M	1	1845830000
SAI-4-F 4P M5 L5M	1	1851770000
SAI-8-F 4P M5 L5M	1	1851750000
SAI-4-F 4P M5 L10M	1	1845800000
SAI-8-F 4P M5 L10M	1	1845810000
Other versions on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

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

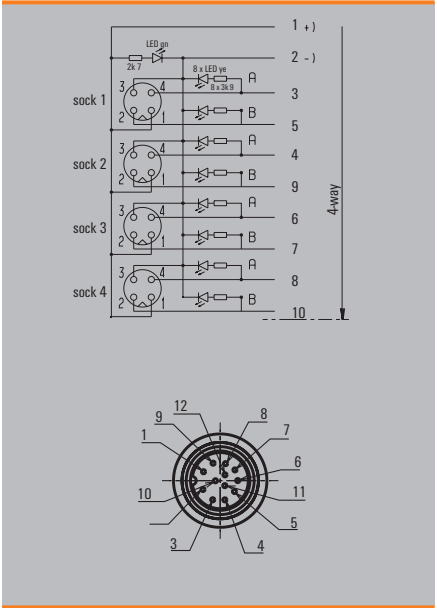
Technical data

Operating voltage	10...30 V
Current of continuous busbars	1 A
max. current-carrying capacity per slot	3 A
Total current	3 A
Pollution severity	3
Protection degree	IP 67
Ambient temperature range	-25...+80 °C
Housing main material	PA 6 GF
Contact carrier material	Nickel-plated CuZn
Base material of contacts	Au (Gold)
screw socket	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

Dimensioned drawing

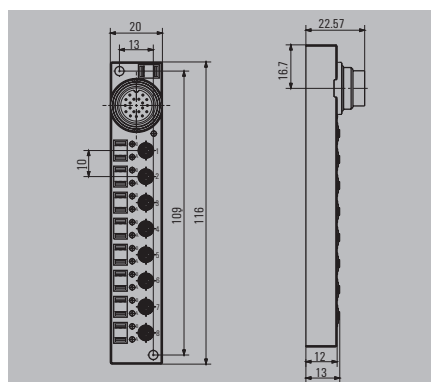


Dimensioned drawing



Line

SAI-4/8-S16



Ordering data

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

SAI-4/8-S16

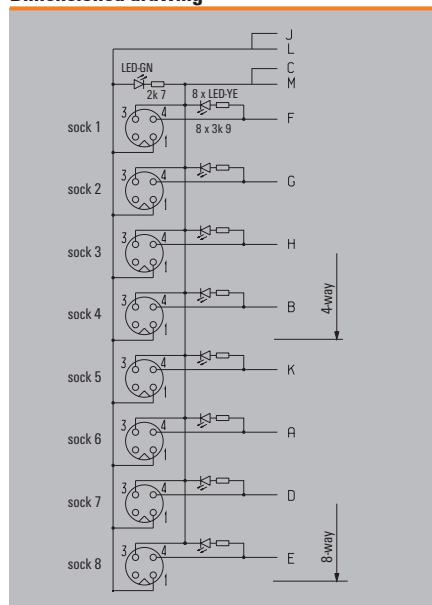
M5

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

Operating voltage	10...30 V
Current of continuous busbars	1 A
max. current-carrying capacity per slot	3 A
Total current	3 A
Pollution severity	3
Protection degree	IP 67
Ambient temperature range	-25...+80 °C
Housing main material	PA 6 GF
Contact carrier material	Nickel-plated CuZn
Base material of contacts	Au (Gold)
screw socket	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)	

Dimensioned drawing



SAI Ex i distributor for Ex i zone 1

Hooded version with 4 plug-in slots



Hooded version with 8 plug-in slots



SAI 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.

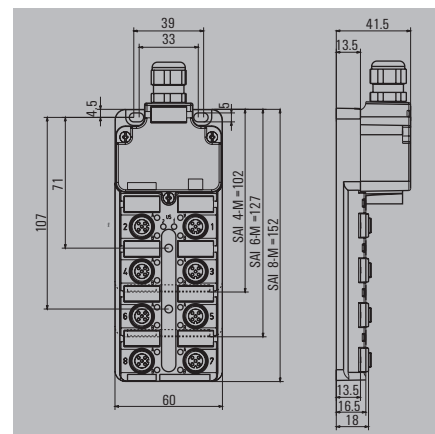
The SAI Ex i distributor is certified for zone 1 of potentially explosive areas, even for G and D zones.

SAI Ex i distributors are available with four or eight connections for simple connection of NAMUR sensors. This makes distribution boxes with certification 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.

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

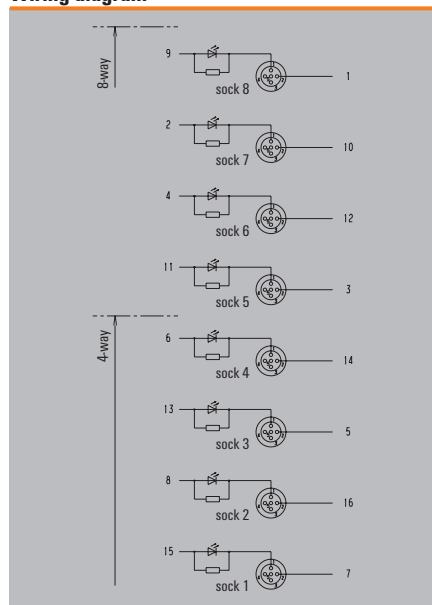
5-pole

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

Operating voltage	10...30 V
Current of continuous busbars	100 mA
max. current-carrying capacity per slot	100 mA
Total current	2.3 A
Pollution severity	3
Protection degree	IP 68
Ambient temperature range	-20...+40 °C
Housing main material	Pocan
Contact carrier material	PBT (UL 94 V0)
Base material of contacts	CuZn, pre-nickel- gold-plated
screw socket	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)	

Wiring diagram



Wiring diagram

