



# Sensor Actuator Interface

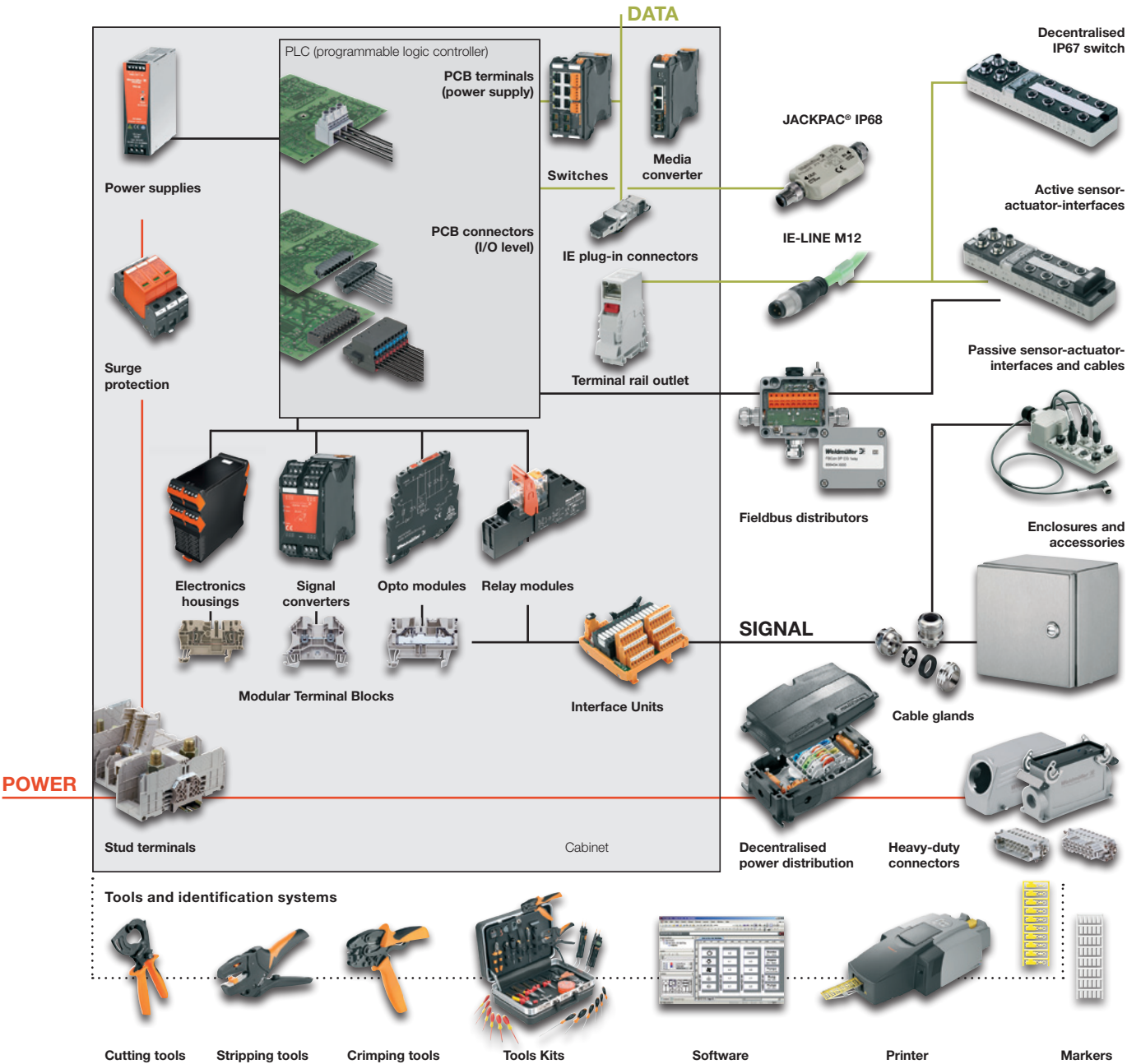
Catalogue

# Product Portfolio



Weidmüller is a leading international provider of solutions for electrical connectivity, transmission and conditioning of power, signal and data in industrial environments. The company with headquarters in Detmold/Germany develops, produces and sells products in the field of electrical connectivity and electronics all over the world.

[www.power-signal-data.com](http://www.power-signal-data.com)



## All the catalogues at a glance

|             |                                                            | Order No.  |
|-------------|------------------------------------------------------------|------------|
| Catalog 1   | Modular Terminal Blocks                                    | 5661400000 |
| Catalog 2   | PCB Terminals, PCB Connectors and Housings for Electronics | 1000310000 |
| Catalog 3   | RockStar® – Heavy Duty Connectors                          | 5664240000 |
| Catalog 4.1 | Electronics – Analogue Signal Conditioning                 | 1203510000 |
| Catalog 4.2 | Electronics – Relays and Optos                             | 1158120000 |
| Catalog 4.3 | Electronics – Power Supplies                               | 1158070000 |
| Catalog 4.4 | Electronics – Surge protection                             | 1220910000 |

|                     |                                                 | Order No.  |
|---------------------|-------------------------------------------------|------------|
| Catalog 4.5         | Electronics – Interface units and PLC solutions | 1102340000 |
| Catalog 5           | Enclosures and Cable Glands                     | 5661920000 |
| Catalog 6           | Tools                                           | 1161520000 |
| Catalog 7           | Identification systems                          | 1125590000 |
| Catalog 8           | Sensor Actuator Interface                       | 1235620000 |
| Catalog 9           | Industrial Ethernet                             | 1067180000 |
| Product information | FieldPower® – decentralised power distribution  | 5661220000 |

## Sensor Actuator Interface

### Introduction

### Sensor and actuator cables

### Fieldbus, data cables and accessories

### Plug in connector and protective caps

### IP67 Remote I/O system SAI Active

### JACKPAC® (IP67)

### Passive distributors

### M23 Connectors and cables

### Tools and markers

A

B

C

D

E

F

G

H

I

## Appendix

### Technical appendix

### Index

Search according to type or order number, Addresses worldwide

W

X

# Sensor and actuator cables

## M12 one end without connector



Page B.11

## M12 one end without connector, shielded



Page B.16

## Twin cabling M12 one end without connector



Page B.17

## M8 one end without connector



Page B.18

## M5 one end without connector



Page B.22

## Connecting cables M12 to M12



Page B.25

## Connecting cables M12 to M12 shielded



Page B.28

## Connecting cables M12 to M8



Page B.29

## Connecting cables M8 to M8



Page B.32

## Twin sensor cables



Page B.37

## M12 one end without connector, B-coded



Page B.41

## Valve cables



Page B.45

## Connecting cables



Page B.51

# Fieldbus, data cables and accessories

## PROFIBUS-DP - cables



Page C.6

## PROFIBUS-DP plug-in connector (M12, SubD)



Page C.10

## PROFIBUS-DP - FBCon T-distributor



Page C.22

## PROFIBUS-PA - cables



Page C.28

## PROFIBUS-PA plug-in connector



Page C.31

## PROFIBUS-PA - FBCon T-distributor



Page C.34

## PROFIBUS-PA - FBCon T-distributor with surge protection



Page C.40

## PROFIBUS-PA - FBCon T-distributor ATEX Ex(ia)



Page C.50

## CANopen & DeviceNet™ - cables (M12, M8)



Page C.58

## CANopen & DeviceNet - connectors



Page C.63

## ASI - Cables



Page C.64

## ASI - T-piece



Page C.65

## Ethernet cables



Page C.66

## Ethernet plug-in connector



Page C.70

## FOUNDATION Fieldbus - connector (7/8")



Page C.72

## Accessories cable glands



Page C.73

## Plug in connector and protective caps

### Customisable connectors M12



Page D.7

### Customisable connectors M8



Page D.17

### Insulation displacement connection M12



Page D.22

### Insulation displacement connection M8



Page D.24

### T distributor



Page D.25

### Twin plugs and wall bushings



Page D.26

### Protective caps



Page D.27

### Built in plugs M12



Page D.29

### Built in plugs M8/M5



Page D.31

### Valve plugs for custom assembly



Page D.32

### Protective sleeve adapter



Page D.34

# IP67 Remote I/O system SAI Active

## SAI-AU for PROFIBUS-DP



Page E.8

## SAI-AU for CANopen



Page E.12

## SAI-AU for DeviceNet™



Page E.16

## SAI-AU for EtherNet/IP™



Page E.20

## SAI-AU for Modbus TCP



Page E.24

## SAI-AU Pro Gateway for PROFIBUS-DP



Page E.30

## SAI-AU Pro Gateway for EtherNet/IP™ and DeviceNet™



Page E.32

## SAI-AU Pro Gateway for Modbus TCP and Modbus ASCII



Page E.34

## SAI-AU Pro subbus modules with digital inputs/outputs



Page E.36

## SAI-AU Pro subbus modules with analogue input/outputs



Page E.37

## SAI-AU Pro subbus module "counter"



Page E.38

## SAI-AU Pro subbus module "thermo"



Page E.39

## SAI-AU Pro subbus module "PT100"



Page E.40

## SAI-AU Wireless for PROFIBUS-DP



Page E.44

# JACKPAC® (IP67)

## JACKPAC®



Page F.3

## JACKPAC® test



Page F.6

## Empty housing SAI JACKPAC®



Page F.8

# Passive distributors

## M12



Page G.8

## M12 Line



Page G.10

## M12 DIP with DIP-switch coding



Page G.13

## M12 ECO



Page G.15

## M12 Push-Pull



Page G.17

## M12 CNOMO



Page G.21

## M12 bayonet joint



Page G.22

## M12 IDC



Page G.26

## M12 VA stainless steel



Page G.28

## M12 metal distributors



Page G.32

## M12 distributors 1:1



Page G.36

## M12 distributors, 8-pole



Page G.37

## M12 for NPN and PNP sensors



Page G.38

## M12 wall bushing



Page G.39

## M12 Pre-assembled hood version



Page G.42

## M8



Page G.48

## M8 Line



Page G.50

## M8 distributor with solder pins



Page G.51

## M5 Line



Page G.56

## M12 Ex Zone 1 and Zone 22



Page G.59

# M23 Connectors and cables

n

## Housings for signal transmission



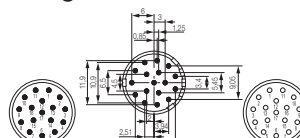
Page H.12

## Built-in connectors for signal transmission



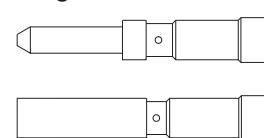
Page H.13

## Inserts for signal transmission



Page H.14

## Contacts for signal transmission



Page H.16

## Housings for power transmission



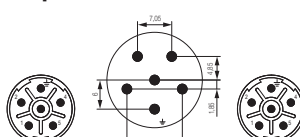
Page H.18

## Built-in connectors for power transmission



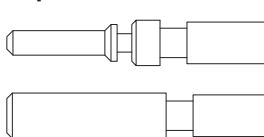
Page H.19

## Inserts for power transmission



Page H.20

## Contacts for power transmission



Page H.21

## Moulded M23 cables



Page H.22

## SAI distributor with M23



Page H.23

# Tools and markers

## Screwty® for M8/M12/M23



Page I.5

## Cutting tools



Page I.7

## Sheathing and insulation stripping tools



Page I.8

## M23 crimping tools



Page I.12

## Identification systems



Page I.14



# Sensor Actuator Interface

|                           |              |     |
|---------------------------|--------------|-----|
| Sensor Actuator Interface | Introduction | A.2 |
|---------------------------|--------------|-----|

# Technology is Priority One

## A

We would like to give some details about the many interesting innovations that have appeared since the release of the last SAI Catalogue. These pages describe solutions that are designed to make your work easier.

### M23 connectors

In addition to the SAI distributors and the moulded cables, Weidmüller now offers a wide line of M23 connectors. A distinction is made between connectors for power and connectors for signals. There are also a variety of housing types such as the plug housing, coupling housing and add-on flange. Crimp versions are typical whereby the individual components can be ordered separately. Sets or inserts with contacts are also available on request.



### M12 with plastic nuts

Plastic nuts are not used as a cost savings measure. The cost that nuts contribute to the entire expense is simply too small to be a factor. Instead, plastic is used because it has better resistance when compared to nickel-plated metals. In certain applications, the standard metal nuts can oxidise and degrade. For such uses, nuts made from plastic can help to increase the lifespan. M8 cables fitted with plastic nuts are also available on request.



### M12 with stainless-steel nut

The stainless steel nuts can be used in cases when the plastic nuts do not meet your mechanical requirements. Weidmüller also offers moulded versions in addition to the customisable M12 connectors. Our stainless steel nuts are made from a special high quality stainless steel. A small selection of these types are shown in our catalogue. Other variations can also be produced on request.



### M8 and M12 lines with yellow cable

In a trend towards machine standardisation, sensor cables with yellow cladding are often routed in machines. Weidmüller also offers these sensor cables in our standard line. Since such cables are typically used in tooling machines, they are designed only as halogen free PUR cables in this colour.



### Profibus Sub-D connector with M12 outlet

Market research indicates that the connection to the Sub-D connector is a common source of error during machine malfunctions. It is also a fairly complex task to install a Sub-D connector on a Profibus cable. We sought to find a solution that would solve both of these problems. So we introduced a Sub-D connector with an M12 outlet. This ensures "Plug & Play" functionality for this connection. The M12 cable only needs to be screwed on. All components are completely tested so that they will deliver a safe, reliable connection.



# Are you already a Weidmüller customer?

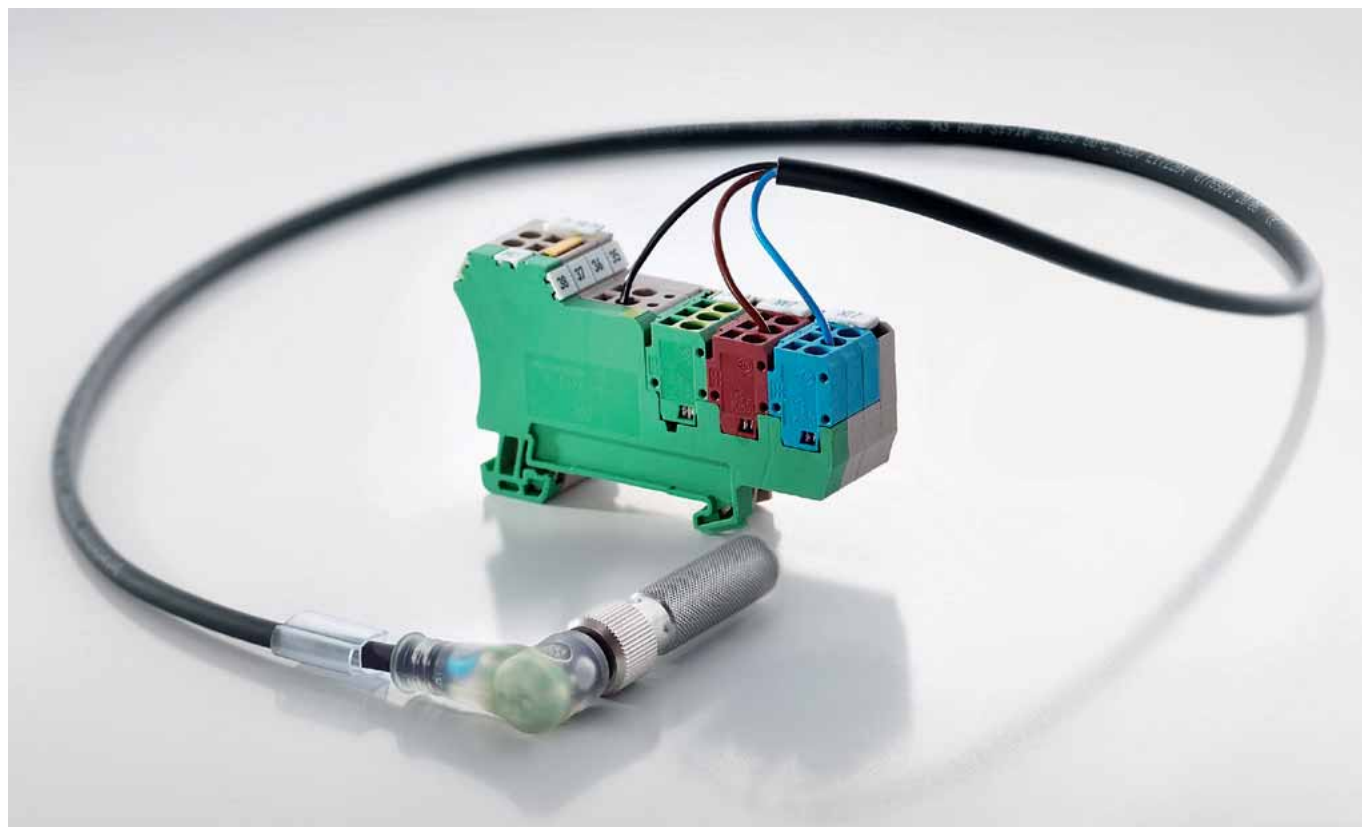
**A****Then why not order your M12 or M8 cables from us!**

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. Please do not hesitate to contact us and ask for an offer or any additional information.



# Sensor and actuator cables

Sensor and actuator cables

|                                               |      |
|-----------------------------------------------|------|
| Introduction                                  | B.2  |
| Overview of sensor cables                     | B.4  |
| Sensor cables                                 | B.10 |
| Power cables                                  | B.40 |
| Valve cables                                  | B.44 |
| Connecting cable for sensors and actuators    | B.51 |
| Connecting cables for Weidmüller distributors | B.52 |

## SAI cable

**B** Weidmüller manufactures its own SAI cable. This ensures optimal versatility. We do not use fully automatic machines which are difficult to adapt. That is why Weidmüller is well known for delivering promptly with quick turnaround times despite our wide variety of available options. We can also develop and produce solutions for specific customer requirements. We regularly produce cables, for example, with customer specific labels and logos.

But naturally it is the cost of this increased flexibility that is the decisive factor. In order to meet your cost requirements, an additional production line has been specially designed for keeping costs down. The line produces top selling products that are marketed for their economical cost factors.



Sensor cables from Weidmüller: shown here with yellow and black cables, together with bus cables



### Easy to identify

The EAN number on each label can be scanned in.



### Resistant to vibration

M8 with vibration resistance



### High quality

Compatible for use with robots;  
recyclable, halogen-free cables



### Versatile

Customised cables



One end without connector



Connecting cables



Valve cables



Connection cables / bus cables

## Overview of sensor cables

|              |          | One end free   |            |            | M8 socket  |                  |            |            |
|--------------|----------|----------------|------------|------------|------------|------------------|------------|------------|
|              |          |                |            |            | straight   |                  |            |            |
|              |          |                |            |            |            |                  |            |            |
| No. of poles |          |                |            |            |            |                  |            |            |
|              |          | Cable material |            |            | 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          | 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     | 90°      | 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 |                  |            |            |

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 |

## 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 |

|     |     |     |
|-----|-----|-----|
| *** | *** | *** |
|-----|-----|-----|

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

|     |     |     |
|-----|-----|-----|
| *** | *** | *** |
|-----|-----|-----|

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

|     |     |     |
|-----|-----|-----|
| *** | *** | *** |
|-----|-----|-----|

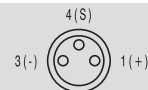
|     |     |     |
|-----|-----|-----|
| *** | *** | *** |
|-----|-----|-----|

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

|     |     |     |
|-----|-----|-----|
| *** | *** | *** |
|-----|-----|-----|

|     |     |     |
|-----|-----|-----|
| *** | *** | *** |
|-----|-----|-----|

## 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 |

|     |     |     |
|-----|-----|-----|
| *** | *** | *** |
|-----|-----|-----|

|            |            |            |
|------------|------------|------------|
| On request | On request | On request |
|------------|------------|------------|

|     |     |     |
|-----|-----|-----|
| *** | *** | *** |
|-----|-----|-----|

|            |     |     |
|------------|-----|-----|
| 9457760150 |     |     |
| 9457760300 |     |     |
| 9457760500 | *** | *** |
| 9457761000 |     |     |
| 9457760000 |     |     |

|     |     |     |
|-----|-----|-----|
| *** | *** | *** |
|-----|-----|-----|

|     |     |     |
|-----|-----|-----|
| *** | *** | *** |
|-----|-----|-----|

|     |     |     |
|-----|-----|-----|
| *** | *** | *** |
|-----|-----|-----|

|     |     |     |
|-----|-----|-----|
| *** | *** | *** |
|-----|-----|-----|

|     |     |     |
|-----|-----|-----|
| *** | *** | *** |
|-----|-----|-----|

B

## Overview of sensor cables

B

|              |                                                                                   |                                                                                     |                                                                                     | M12 socket                                                                         |                                                                                     |  |
|--------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--|
|              |                                                                                   |                                                                                     |                                                                                     | straight                                                                           |                                                                                     |  |
| One end free |  |                                                                                     |                                                                                     |  |  |  |
|              |                                                                                   |                                                                                     |                                                                                     |                                                                                    |                                                                                     |  |
|              |                                                                                   |                                                                                     |                                                                                     |                                                                                    |                                                                                     |  |
|              |                                                                                   |                                                                                     |                                                                                     |                                                                                    |                                                                                     |  |
|              |                                                                                   |                                                                                     |                                                                                     |                                                                                    |                                                                                     |  |
| M8 plug      | straight                                                                          |    |    |                                                                                    |                                                                                     |  |
|              |                                                                                   |    |    |                                                                                    |                                                                                     |  |
|              |                                                                                   |  |  |                                                                                    |                                                                                     |  |
|              |                                                                                   |  |  |                                                                                    |                                                                                     |  |
|              |                                                                                   |                                                                                     |                                                                                     |                                                                                    |                                                                                     |  |
| M8 plug      | 90°                                                                               |  |  |                                                                                    |                                                                                     |  |
|              |                                                                                   |  |  |                                                                                    |                                                                                     |  |
|              |                                                                                   |                                                                                     |                                                                                     |                                                                                    |                                                                                     |  |
|              |                                                                                   |                                                                                     |                                                                                     |                                                                                    |                                                                                     |  |
|              |                                                                                   |                                                                                     |                                                                                     |                                                                                    |                                                                                     |  |
| M12 plug     | straight                                                                          |  |  |                                                                                    |                                                                                     |  |
|              |                                                                                   |  |  |                                                                                    |                                                                                     |  |
|              |                                                                                   |  |  |                                                                                    |                                                                                     |  |
|              |                                                                                   |  |  |                                                                                    |                                                                                     |  |
|              |                                                                                   |  |  |                                                                                    |                                                                                     |  |
| M12 plug     | 90°                                                                               |  |  |                                                                                    |                                                                                     |  |
|              |                                                                                   |  |  |                                                                                    |                                                                                     |  |
|              |                                                                                   |                                                                                     |                                                                                     |                                                                                    |                                                                                     |  |
|              |                                                                                   |                                                                                     |                                                                                     |                                                                                    |                                                                                     |  |
|              |                                                                                   |                                                                                     |                                                                                     |                                                                                    |                                                                                     |  |

## M12 socket

## straight



PUR

PUR  
halogen-free

PVC

|            |            |            |
|------------|------------|------------|
| 9457910150 | 1926780150 | 1925590150 |
| 9457910300 | 1926780300 | 1925590300 |
| 9457910500 | 1926780500 | 1925590500 |
| 9457911000 | 1926781000 | 1925591000 |
| 9457910000 | 1926780000 | 1925590000 |

## 90°



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 |

B

\*\*\*

|            |            |            |
|------------|------------|------------|
| 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 |

\*\*\*

\*\*\*

|            |            |            |
|------------|------------|------------|
| 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 |

\*\*\*

\*\*\*

|            |            |            |
|------------|------------|------------|
| 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 |

\*\*\*

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

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

\*\*\*

|            |            |            |
|------------|------------|------------|
| 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 |

\*\*\*

|            |            |            |
|------------|------------|------------|
| 9456500150 |            |            |
| 9456500300 |            |            |
| 9456500500 | On request | On request |
| 9456501000 |            |            |
| 9456500000 |            |            |

\*\*\*

\*\*\*

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

## Overview of sensor cables

B

|              |                                                                                   |                                                                                     |                                                                                    | M12 socket                                                                          |                |            |                  |            |            |
|--------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------|------------|------------------|------------|------------|
|              |                                                                                   |                                                                                     |                                                                                    | 90° angle with 2 LEDs                                                               |                |            |                  |            |            |
| One end free |  | No. of poles                                                                        |  |  |                |            |                  |            |            |
|              |                                                                                   |                                                                                     |                                                                                    |                                                                                     | Cable material | PUR        | PUR halogen-free | PVC        |            |
| M8 plug      | straight                                                                          |    | 1.5 m                                                                              | 9457800150                                                                          | 1926650150     | 1925460150 | 9456380150       | 1926660150 | 1925470150 |
|              |                                                                                   |                                                                                     | 3.0 m                                                                              | 9457800300                                                                          | 1926650300     | 1925460300 | 9456380300       | 1926660300 | 1925470300 |
|              |                                                                                   |                                                                                     | 5.0 m                                                                              | 9457800500                                                                          | 1926650500     | 1925460500 | 9456380500       | 1926660500 | 1925470500 |
|              |                                                                                   |                                                                                     | 10.0 m                                                                             | 9457801000                                                                          | 1926651000     | 1925461000 | 9456381000       | 1926661000 | 1925471000 |
|              |                                                                                   |                                                                                     | variable                                                                           | 9457800000                                                                          | 1926650000     | 1925460000 | 9456380000       | 1926660000 | 1925470000 |
|              | 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 plug     | straight                                                                          |  | 1.5 m                                                                              | 9457790150                                                                          | 1926600150     | 1925410150 | ***              | ***        | ***        |
|              |                                                                                   |                                                                                     | 3.0 m                                                                              | 9457790300                                                                          | 1926600300     | 1925410300 | ***              | ***        | ***        |
|              |                                                                                   |                                                                                     | 5.0 m                                                                              | 9457790500                                                                          | 1926600500     | 1925410500 | ***              | ***        | ***        |
|              |                                                                                   |                                                                                     | 10.0 m                                                                             | 9457791000                                                                          | 1926601000     | 1925411000 | ***              | ***        | ***        |
|              |                                                                                   |                                                                                     | variable                                                                           | 9457790000                                                                          | 1926600000     | 1925410000 | 1906410150       | 1926610150 | 1925420150 |
|              | 90°                                                                               |  | 3.0 m                                                                              | ***                                                                                 | ***            | ***        | 1906410300       | 1926610300 | 1925420300 |
|              |                                                                                   |                                                                                     | 5.0 m                                                                              | ***                                                                                 | ***            | ***        | 1906410500       | 1926610500 | 1925420500 |
|              |                                                                                   |                                                                                     | 10.0 m                                                                             | ***                                                                                 | ***            | ***        | 1906411000       | 1926611000 | 1925421000 |
|              |                                                                                   |                                                                                     | variable                                                                           | ***                                                                                 | ***            | ***        | 1906410000       | 1926610000 | 1925420000 |
|              |                                                                                   |                                                                                     | 1.5 m                                                                              | ***                                                                                 | ***            | ***        | ***              | ***        | ***        |
|              | 90°                                                                               |  | 3.0 m                                                                              | On request                                                                          | On request     | On request | ***              | ***        | ***        |
|              |                                                                                   |                                                                                     | 5.0 m                                                                              | ***                                                                                 | ***            | ***        | ***              | ***        | ***        |
|              |                                                                                   |                                                                                     | 10.0 m                                                                             | ***                                                                                 | ***            | ***        | ***              | ***        | ***        |
|              |                                                                                   |                                                                                     | variable                                                                           | ***                                                                                 | ***            | ***        | ***              | ***        | ***        |
|              |                                                                                   |                                                                                     | 1.5 m                                                                              | ***                                                                                 | ***            | ***        | ***              | ***        | ***        |
|              | 90°                                                                               |  | 3.0 m                                                                              | ***                                                                                 | ***            | ***        | ***              | ***        | ***        |
|              |                                                                                   |                                                                                     | 5.0 m                                                                              | ***                                                                                 | ***            | ***        | ***              | ***        | ***        |
|              |                                                                                   |                                                                                     | 10.0 m                                                                             | ***                                                                                 | ***            | ***        | ***              | ***        | ***        |
|              |                                                                                   |                                                                                     | variable                                                                           | ***                                                                                 | ***            | ***        | ***              | ***        | ***        |
|              |                                                                                   |                                                                                     | 1.5 m                                                                              | ***                                                                                 | ***            | ***        | ***              | ***        | ***        |



# Sensor cables with plug at one end only

## M12



## M8



## M8 Snap connection



## Twin cabling



## M5



## 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.

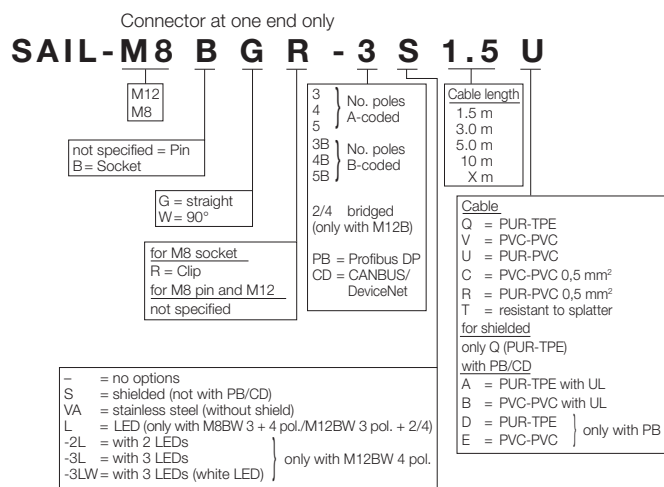
## Sensor cables

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

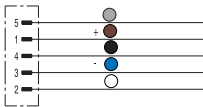
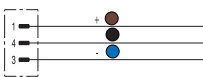
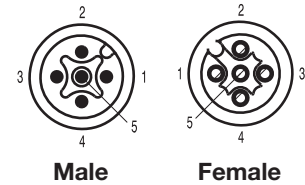
## Typical cable lengths are:

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

## Example of designation



M12 one end without connector  
A-coded



Ordering data

| Male, straight             |       |
|----------------------------|-------|
| PVC                        | 1.5 m |
| PUR                        | 1.5 m |
| PUR halogen-free           | 1.5 m |
| PUR halogen-free yellow    | 1.5 m |
| Resistant to welding beads | 1.5 m |
| Male, angled               |       |
| PVC                        | 1.5 m |
| PUR                        | 1.5 m |
| PUR halogen-free           | 1.5 m |
| PUR halogen-free yellow    | 1.5 m |
| Resistant to welding beads | 1.5 m |
| Female, straight           |       |
| PVC                        | 1.5 m |
| PUR                        | 1.5 m |
| PUR halogen-free           | 1.5 m |
| PUR halogen-free yellow    | 1.5 m |
| Resistant to welding beads | 1.5 m |
| Female, angled             |       |
| PVC                        | 1.5 m |
| PUR                        | 1.5 m |
| PUR halogen-free           | 1.5 m |
| PUR halogen-free yellow    | 1.5 m |
| Resistant to welding beads | 1.5 m |
| Note                       |       |

3-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12G-3-1.5V          | 1925430150 |
| SAIL-M12G-3-1.5U          | 9457810150 |
| SAIL-M12G-3-1.5Q          | 1926620150 |
| SAIL-M12G-3-1.5QGE        | 1092980150 |
| SAIL-M12G-3-1.5T          | 1021750150 |
|                           |            |
| SAIL-M12W-3-1.5V          | 1925510150 |
| SAIL-M12W-3-1.5U          | 9456690150 |
| SAIL-M12W-3-1.5Q          | 1926700150 |
| SAIL-M12W-3-1.5QGE        | 1093160150 |
| SAIL-M12W-3-1.5T          | 1021760150 |
|                           |            |
| SAIL-M12BG-3-1.5V         | 1925570150 |
| SAIL-M12BG-3-1.5U         | 9457820150 |
| SAIL-M12BG-3-1.5Q         | 1926760150 |
| SAIL-M12BG-3-1.5QGE       | 1092910150 |
| SAIL-M12BG-3-1.5T         | 1968590150 |
|                           |            |
| SAIL-M12BW-3-1.5V         | 1925630150 |
| SAIL-M12BW-3-1.5U         | 9457320150 |
| SAIL-M12BW-3-1.5Q         | 1926820150 |
| SAIL-M12BW-3-1.5QGE       | 1092940150 |
| SAIL-M12BW-3-1.5T         | 1968560150 |
| Other versions on request |            |

4-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12G-4-1.5V          | 1925440150 |
| SAIL-M12G-4-1.5U          | 9456100150 |
| SAIL-M12G-4-1.5Q          | 1926630150 |
| SAIL-M12G-4-1.5QGE        | 1077750150 |
| SAIL-M12G-4-1.5T          | 1021770150 |
|                           |            |
| SAIL-M12W-4-1.5V          | 1925520150 |
| SAIL-M12W-4-1.5U          | 1906260150 |
| SAIL-M12W-4-1.5Q          | 1926710150 |
| SAIL-M12W-4-1.5QGE        | 1093170150 |
| SAIL-M12W-4-1.5T          | 1021790150 |
|                           |            |
| SAIL-M12BG-4-1.5V         | 1925580150 |
| SAIL-M12BG-4-1.5U         | 9457730150 |
| SAIL-M12BG-4-1.5Q         | 1926770150 |
| SAIL-M12BG-4-1.5QGE       | 1092920150 |
| SAIL-M12BG-4-1.5T         | 1968580150 |
|                           |            |
| SAIL-M12BW-4-1.5V         | 1925640150 |
| SAIL-M12BW-4-1.5U         | 9457740150 |
| SAIL-M12BW-4-1.5Q         | 1926830150 |
| SAIL-M12BW-4-1.5QGE       | 1092960150 |
| SAIL-M12BW-4-1.5T         | 1968570150 |
| Other versions on request |            |

5-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12G-5-1.5V          | 1925450150 |
| SAIL-M12G-5-1.5U          | 9457610150 |
| SAIL-M12G-5-1.5Q          | 1926640150 |
| SAIL-M12G-5-1.5QGE        | 1092990150 |
| SAIL-M12G-5-1.5T          | 1021650150 |
|                           |            |
| SAIL-M12W-5-1.5V          | 1925530150 |
| SAIL-M12W-5-1.5U          | 9457670150 |
| SAIL-M12W-5-1.5Q          | 1926720150 |
| SAIL-M12W-5-1.5QGE        | 1093180150 |
| SAIL-M12W-5-1.5T          | 1021660150 |
|                           |            |
| SAIL-M12BG-5-1.5V         | 1925590150 |
| SAIL-M12BG-5-1.5U         | 9457910150 |
| SAIL-M12BG-5-1.5Q         | 1926780150 |
| SAIL-M12BG-5-1.5QGE       | 1092930150 |
| SAIL-M12BG-5-1.5T         | 1021670150 |
|                           |            |
| SAIL-M12BW-5-1.5V         | 1925650150 |
| SAIL-M12BW-5-1.5U         | 9457690150 |
| SAIL-M12BW-5-1.5Q         | 1926840150 |
| SAIL-M12BW-5-1.5QGE       | 1092970150 |
| SAIL-M12BW-5-1.5T         | 1021690150 |
| Other versions on request |            |

Standard cable lengths

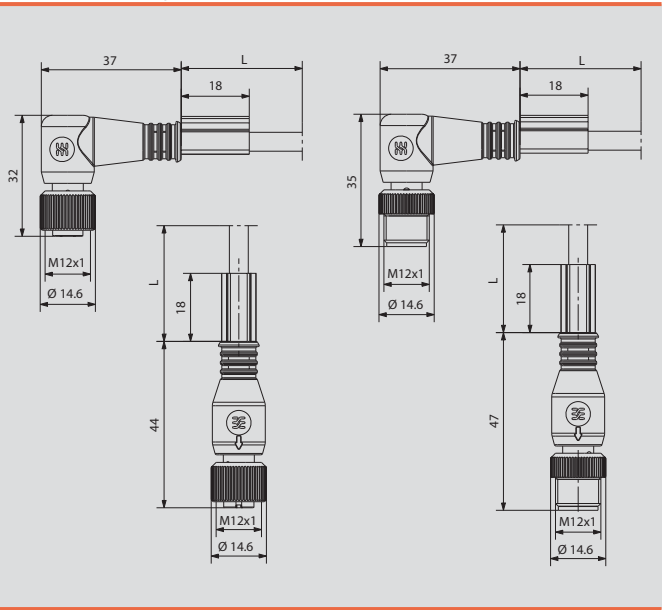
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

Technical data

|                                         |                                        |
|-----------------------------------------|----------------------------------------|
| Rated current                           | 4 A                                    |
| Protection class                        | IP 67                                  |
| Core cross-section                      | 0.34 mm²                               |
| Contact surface                         | gold-plated                            |
| Temperature range of housing            | -25...+85 °C                           |
| Rated voltage                           | 250 V (3- and 4-pole) / 125 V (5-pole) |
| (acc. to VDE standard 0110 ISO group C) |                                        |

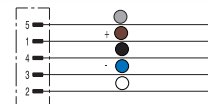
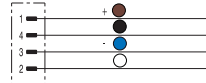
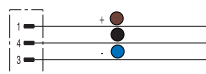
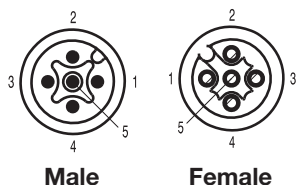
Chapter W includes additional technical specifications for the cable

Dimensioned drawing



## Sensor cables

**M12 one end without connector**  
**A-coded**  
**with plastic threaded ring**



## Ordering data

| Male, straight   |       |  |
|------------------|-------|--|
| PUR              | 1.5 m |  |
| Male, angled     |       |  |
| PUR              | 1.5 m |  |
| Female, straight |       |  |
| PUR              | 1.5 m |  |
| Female, angled   |       |  |
| PUR              | 1.5 m |  |
| Note             |       |  |

## 3-pole

| Type              | Order No.  |
|-------------------|------------|
| SAIP-M12G-3-1.5U  | 1108800150 |
| SAIP-M12W-3-1.5U  | 1108670150 |
| SAIP-M12BG-3-1.5U | 1108730150 |
| SAIP-M12BW-3-1.5U | 1108770150 |

## 4-pole

| Type              | Order No.  |
|-------------------|------------|
| SAIP-M12G-4-1.5U  | 1108810150 |
| SAIP-M12W-4-1.5U  | 1108680150 |
| SAIP-M12BG-4-1.5U | 1108740150 |
| SAIP-M12BW-4-1.5U | 1108780150 |

## 5-pole

| Type              | Order No.  |
|-------------------|------------|
| SAIP-M12G-5-1.5U  | 1108820150 |
| SAIP-M12W-5-1.5U  | 1108690150 |
| SAIP-M12BG-5-1.5U | 1108750150 |
| SAIP-M12BW-5-1.5U | 1108790150 |

## Standard cable lengths

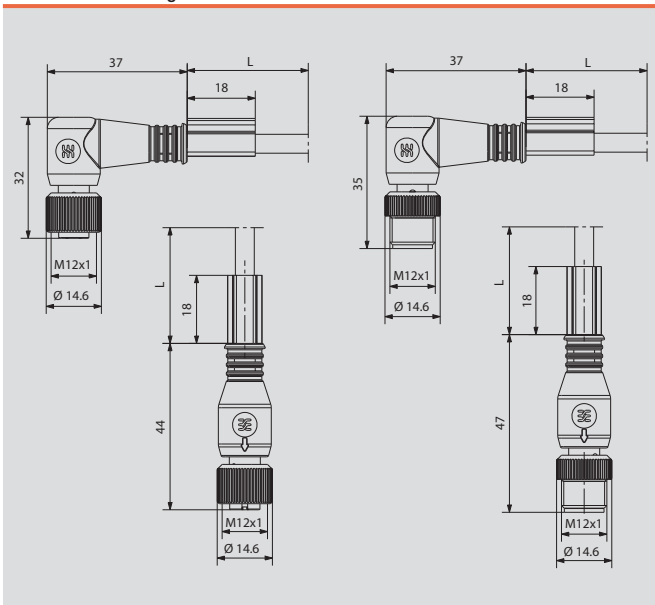
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

## Technical data

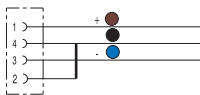
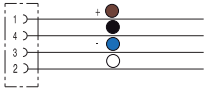
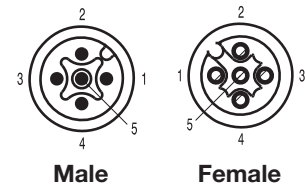
|                                         |                                        |
|-----------------------------------------|----------------------------------------|
| Rated current                           | 4 A                                    |
| Protection class                        | IP 67                                  |
| Core cross-section                      | 0.34 mm <sup>2</sup>                   |
| Contact surface                         | gold-plated                            |
| Temperature range of housing            | -25...+85 °C                           |
| Rated voltage                           | 250 V (3- and 4-pole) / 125 V (5-pole) |
| (acc. to VDE standard 0110 ISO group C) |                                        |

Chapter W includes additional technical specifications for the cable

## Dimensioned drawing



M12 one end without connector  
A-coded  
with stainless-steel threaded ring  
1.4404/316L



Ordering data

| Female, straight |       |
|------------------|-------|
| PUR              | 1.5 m |
| Female, angled   |       |
| PUR              | 1.5 m |
| Note             |       |

4-pole

| Type                 | Order No.  |
|----------------------|------------|
| SAIL-M12BG-VA-4-1,5U | 9457950150 |
| SAIL-M12BW-VA-4-1,5U | 9457960150 |

4-pole

| Type                   | Order No.  |
|------------------------|------------|
| SAIL-M12BG-VA-2/4-1.5U | 1939410150 |
| SAIL-M12BW-VA-2/4-1.5U | 1939370150 |

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |

Standard cable lengths

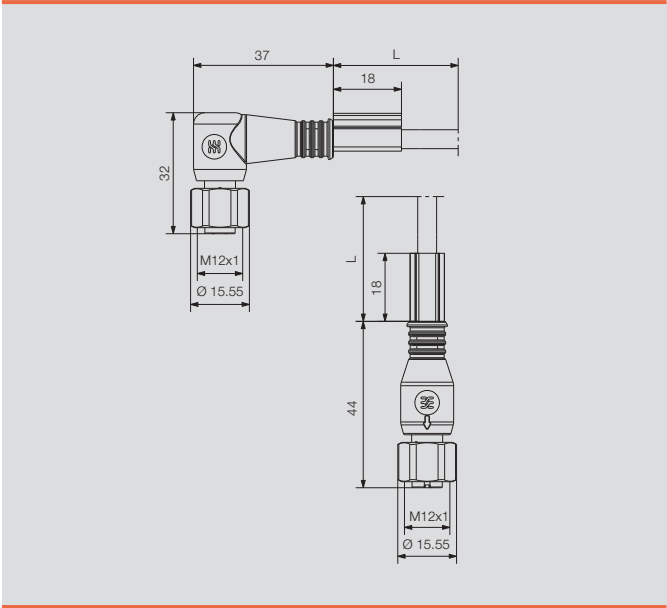
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

Technical data

|                                         |                                        |
|-----------------------------------------|----------------------------------------|
| Rated current                           | 4 A                                    |
| Protection class                        | IP 67                                  |
| Core cross-section                      | 0.34 mm²                               |
| Contact surface                         | gold-plated                            |
| Temperature range of housing            | -25...+85 °C                           |
| Rated voltage                           | 250 V (3- and 4-pole) / 125 V (5-pole) |
| (acc. to VDE standard 0110 ISO group C) |                                        |

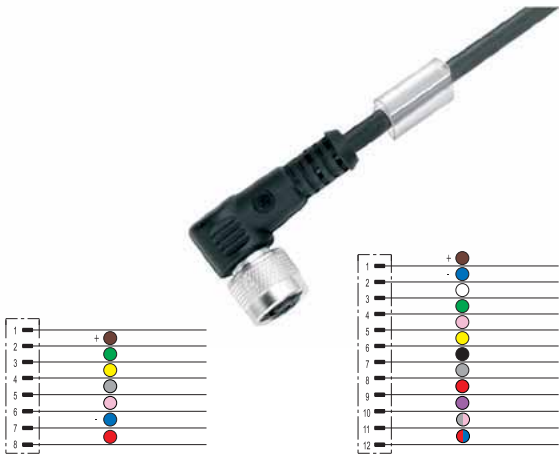
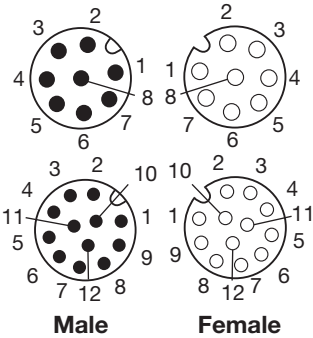
Chapter W includes additional technical specifications for the cable

Dimensioned drawing



Sensor cables

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



Ordering data

| Female, straight, shielded |  |
|----------------------------|--|
| 1.5 m                      |  |
| 3.0 m                      |  |
| 5.0 m                      |  |
| 10.0 m                     |  |
| Female, straight           |  |
| 1.5 m                      |  |
| 3.0 m                      |  |
| 5.0 m                      |  |
| 10.0 m                     |  |
| Female, angled             |  |
| 5.0 m                      |  |
| 10.0 m                     |  |
| Note                       |  |

| 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 |            |

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Standard cable lengths

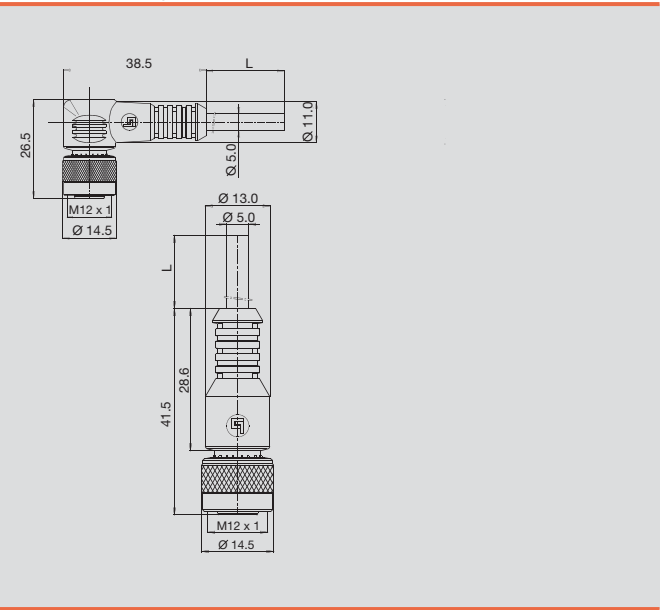
|                                                                                                                                                                  |            |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. |            |  |
| 1.5 m                                                                                                                                                            | xxxxxx0150 |  |
| 3.0 m                                                                                                                                                            | xxxxxx0300 |  |
| 5.0 m                                                                                                                                                            | xxxxxx0500 |  |
| 10.0 m                                                                                                                                                           | xxxxxx1000 |  |

Technical data

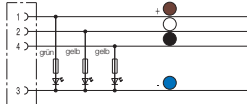
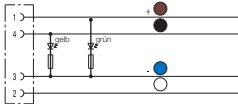
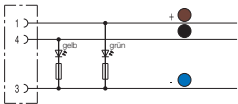
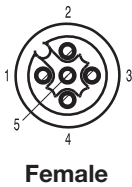
|                                         |              |
|-----------------------------------------|--------------|
| Rated current                           | 1 A          |
| Protection class                        | IP 67        |
| Core cross-section                      | 0.25 mm²     |
| Contact surface                         | gold-plated  |
| Temperature range of housing            | -25...+85 °C |
| Rated voltage                           |              |
| (acc. to VDE standard 0110 ISO group C) |              |

Chapter W includes additional technical specifications for the cable

Dimensioned drawing



M12 one end without connector with LED A-coded female, angled



Ordering data

| Female, angled             |       |
|----------------------------|-------|
| PVC                        | 1.5 m |
| PUR                        | 1.5 m |
| PUR halogen-free           | 1.5 m |
| PUR halogen-free yellow    | 1.5 m |
| Resistant to welding beads | 1.5 m |
| Note                       |       |

2 LEDs

3-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12BW-3L1.5V         | 1925460150 |
| SAIL-M12BW-3L1.5U         | 9457800150 |
| SAIL-M12BW-3L1.5Q         | 1926650150 |
| SAIL-M12BW-3L1.5QGE       | 1114880150 |
| SAIL-M12BW-3L1.5T         | 1004330150 |
| Other versions on request |            |

2 LEDs

4-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12BW-4-2L1.5V       | 1925470150 |
| SAIL-M12BW-4-2L1.5U       | 9456380150 |
| SAIL-M12BW-4-2L1.5Q       | 1926660150 |
| SAIL-M12BW-4-2L1.5QGE     | 1092950150 |
| SAIL-M12BW-4-2L1.5T       | 1007000150 |
| Other versions on request |            |

3 LEDs

4-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12BW-4-3L1.5V       | 1963960150 |
| SAIL-M12BW-4-3L1.5U       | 1963940150 |
| SAIL-M12BW-4-3L1.5Q       | 1963950150 |
| Other versions on request |            |

Standard cable lengths

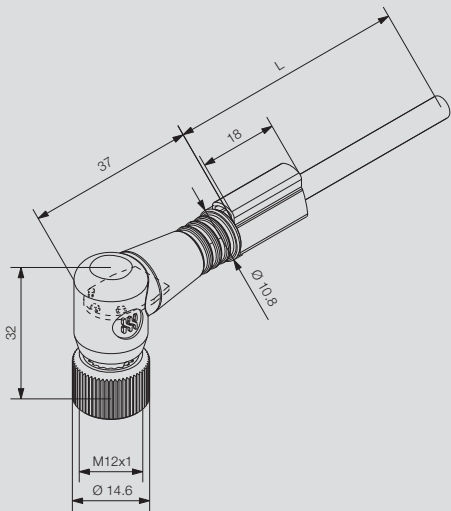
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

Technical data

|                                         |                                        |
|-----------------------------------------|----------------------------------------|
| Rated current                           | 4 A                                    |
| Protection class                        | IP 67                                  |
| Core cross-section                      | 0.34 mm²                               |
| Contact surface                         | gold-plated                            |
| Temperature range of housing            | -25...+85 °C                           |
| Rated voltage                           | 250 V (3- and 4-pole) / 125 V (5-pole) |
| (acc. to VDE standard 0110 ISO group C) |                                        |

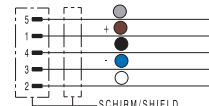
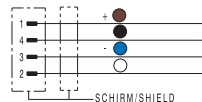
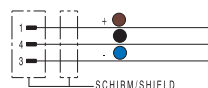
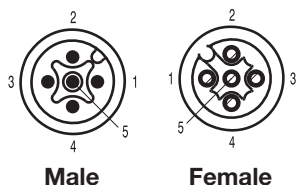
Chapter W includes additional technical specifications for the cable

Dimensioned drawing



## Sensor cables

**M12 one end without connector shielded A-coded**



### Ordering data

| Male, straight            |       |
|---------------------------|-------|
| PUR halogen-free          | 1.5 m |
| Male, angled              |       |
| PUR halogen-free          | 1.5 m |
| Female, straight          |       |
| PUR halogen-free          | 1.5 m |
| Female, angled            |       |
| PUR halogen-free          | 1.5 m |
| Note                      |       |
| Other versions on request |       |

### 3-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12G-3S1.5Q          | 1906470150 |
| SAIL-M12W-3S1.5Q          | 1906500150 |
| SAIL-M12BG-3S1.5Q         | 1867410150 |
| SAIL-M12BW-3S1.5Q         | 1906950150 |
| Other versions on request |            |

### 4-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12G-4S1.5Q          | 1906480150 |
| SAIL-M12W-4S1.5Q          | 1059650150 |
| SAIL-M12BG-4S1.5Q         | 1812540150 |
| SAIL-M12BW-4S1.5Q         | 1808970150 |
| Other versions on request |            |

### 5-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12G-5S1.5Q          | 1926690150 |
| SAIL-M12W-5S1.5Q          | 1906520150 |
| SAIL-M12BG-5S1.5Q         | 9456140150 |
| SAIL-M12BW-5S1.5Q         | 1906540150 |
| Other versions on request |            |

### Standard cable lengths

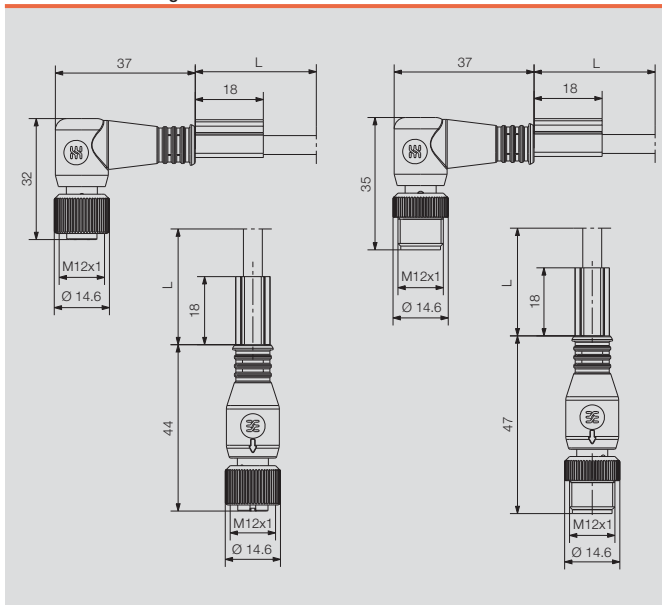
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

### Technical data

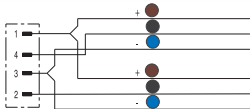
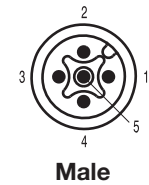
|                                         |                                        |
|-----------------------------------------|----------------------------------------|
| Rated current                           | 4 A                                    |
| Protection class                        | IP 67                                  |
| Core cross-section                      | 0.34 mm <sup>2</sup>                   |
| Contact surface                         | gold-plated                            |
| Temperature range of housing            | -25...+85 °C                           |
| Rated voltage                           | 250 V (3- and 4-pole) / 125 V (5-pole) |
| (acc. to VDE standard 0110 ISO group C) |                                        |

Chapter W includes additional technical specifications for the cable

### Dimensioned drawing



Twin cabling  
M12 one end without  
connector



Ordering data

| Male straight - open ended |       |
|----------------------------|-------|
| PUR                        | 1.5 m |
| Note                       |       |

| 3-pole         |            |
|----------------|------------|
| Type           | Order No.  |
| SAIL-ZW-3-1.5U | 1964310150 |

Standard cable lengths

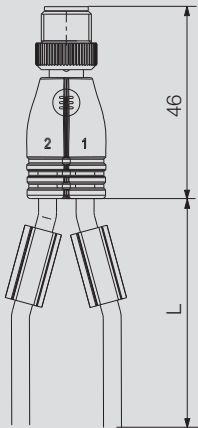
|                                                                                                                                                                  |            |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. |            |  |
| 1.5 m                                                                                                                                                            | xxxxxx0150 |  |
| 3.0 m                                                                                                                                                            | xxxxxx0300 |  |
| 5.0 m                                                                                                                                                            | xxxxxx0500 |  |
| 10.0 m                                                                                                                                                           | xxxxxx1000 |  |

Technical data

|                                         |  |                                        |
|-----------------------------------------|--|----------------------------------------|
| Rated current                           |  | 4 A                                    |
| Protection class                        |  | IP 67                                  |
| Core cross-section                      |  | 0.34 mm²                               |
| Contact surface                         |  | gold-plated                            |
| Temperature range of housing            |  | -25...+85 °C                           |
| Rated voltage                           |  | 250 V (3- and 4-pole) / 125 V (5-pole) |
| (acc. to VDE standard 0110 ISO group C) |  |                                        |

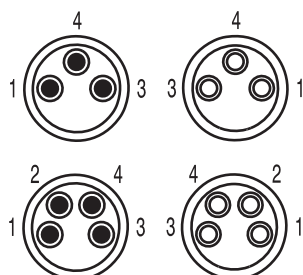
Chapter W includes additional technical specifications for the cable

Dimensioned drawing



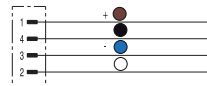
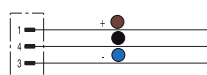
## Sensor cables

## M8 one end without connector



Male

Female



## Ordering data

| Male, straight          |       |  |
|-------------------------|-------|--|
| PVC                     | 1.5 m |  |
| PUR                     | 1.5 m |  |
| PUR halogen-free        | 1.5 m |  |
| Male, angled            |       |  |
| PVC                     | 1.5 m |  |
| PUR                     | 1.5 m |  |
| PUR halogen-free        | 1.5 m |  |
| Female, straight        |       |  |
| PVC                     | 1.5 m |  |
| PUR                     | 1.5 m |  |
| PUR halogen-free        | 1.5 m |  |
| PUR halogen-free yellow | 1.5 m |  |
| Female, angled          |       |  |
| PVC                     | 1.5 m |  |
| PUR                     | 1.5 m |  |
| PUR halogen-free        | 1.5 m |  |
| PUR halogen-free yellow | 1.5 m |  |
| Note                    |       |  |

## 3-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M8G-3-1.5V           | 1927230150 |
| SAIL-M8G-3-1.5U           | 1824590150 |
| SAIL-M8G-3-1.5Q           | 1926970150 |
| SAIL-M8W-3-1.5V           | 1927310150 |
| SAIL-M8W-3-1.5U           | 1857550150 |
| SAIL-M8W-3-1.5Q           | 1927050150 |
| SAIL-M8BG-3-1.5V          | 1927240150 |
| SAIL-M8BG-3-1.5U          | 9457450150 |
| SAIL-M8BG-3-1.5Q          | 1926980150 |
| SAIL-M8BG-3-1.5QGE        | 1093190150 |
| SAIL-M8BW-3-1.5V          | 1927320150 |
| SAIL-M8BW-3-1.5U          | 9457380150 |
| SAIL-M8BW-3-1.5Q          | 1927060150 |
| SAIL-M8BW-3-1.5QGE        | 1093220150 |
| Other versions on request |            |

## 4-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M8G-4-1.5V           | 1927250150 |
| SAIL-M8G-4-1.5U           | 1906270150 |
| SAIL-M8G-4-1.5Q           | 1926990150 |
| SAIL-M8W-4-1.5V           | 1927330150 |
| SAIL-M8W-4-1.5U           | 1857560150 |
| SAIL-M8W-4-1.5Q           | 1927070150 |
| SAIL-M8BG-4-1.5V          | 1927260150 |
| SAIL-M8BG-4-1.5U          | 9457850150 |
| SAIL-M8BG-4-1.5Q          | 1927000150 |
| SAIL-M8BG-4-1.5QGE        | 1093200150 |
| SAIL-M8BW-4-1.5V          | 1927340150 |
| SAIL-M8BW-4-1.5U          | 9456150150 |
| SAIL-M8BW-4-1.5Q          | 1927080150 |
| SAIL-M8BW-4-1.5QGE        | 1093240150 |
| Other versions on request |            |

## Standard cable lengths

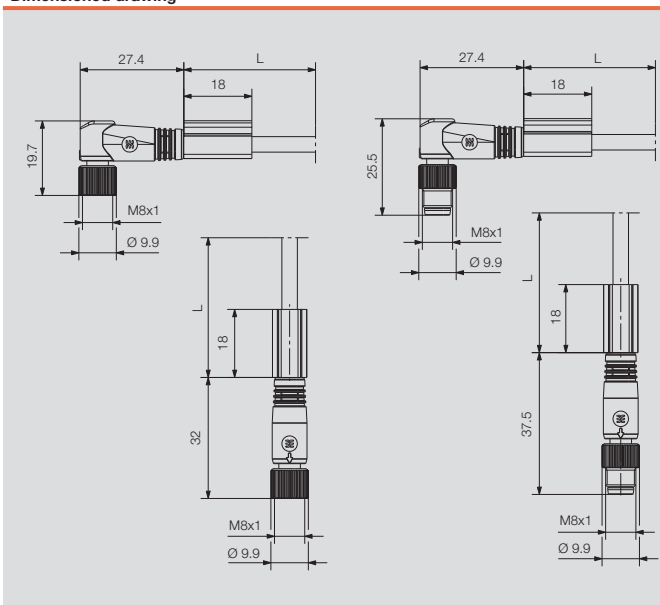
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

## Technical data

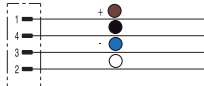
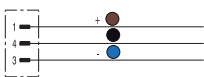
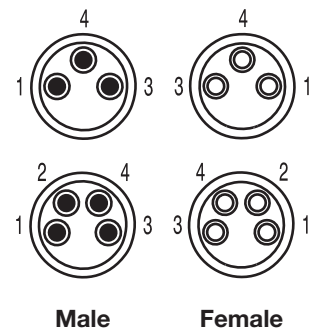
|                                         |                               |
|-----------------------------------------|-------------------------------|
| Rated current                           | 4 A                           |
| Protection class                        | IP 67                         |
| Core cross-section                      | 0.25 mm <sup>2</sup>          |
| Contact surface                         | gold-plated                   |
| Temperature range of housing            | -25...+85 °C                  |
| Rated voltage                           | 60 V (3-pole) / 30 V (4-pole) |
| (acc. to VDE standard 0110 ISO group C) |                               |

Chapter W includes additional technical specifications for the cable

## Dimensioned drawing



M8 one end without connector snap-on connection



Ordering data

| Female, straight |       |
|------------------|-------|
| PVC              | 1.5 m |
| PUR              | 1.5 m |
| PUR halogen-free | 1.5 m |
| Female, angled   |       |
| PVC              | 1.5 m |
| PUR              | 1.5 m |
| PUR halogen-free | 1.5 m |
| Note             |       |

3-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M8BGR-3-1.5V         | 1948710150 |
| SAIL-M8BGR-3-1.5U         | 1827020150 |
| SAIL-M8BGR-3-1.5Q         | 1948610150 |
| Other versions on request |            |

4-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M8BGR-4-1.5V         | 1948730150 |
| SAIL-M8BGR-4-1.5U         | 1948530150 |
| SAIL-M8BGR-4-1.5Q         | 1948630150 |
| Other versions on request |            |

Standard cable lengths

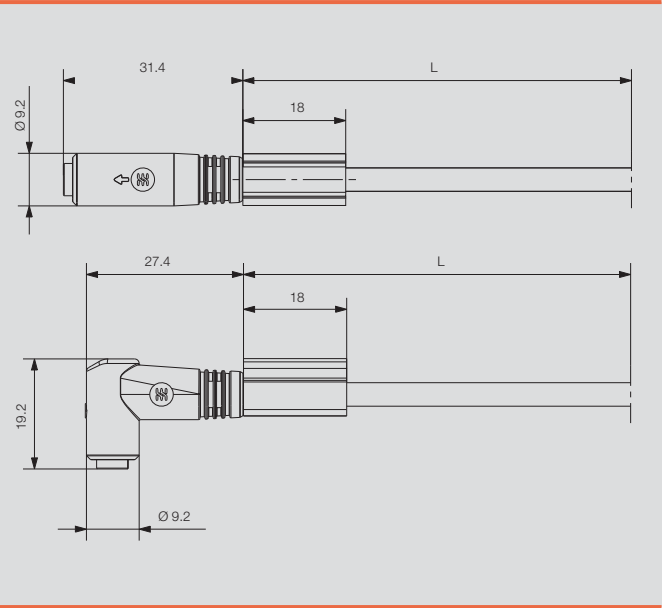
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

Technical data

|                                         |                               |
|-----------------------------------------|-------------------------------|
| Rated current                           | 4 A                           |
| Protection class                        | IP 65                         |
| Core cross-section                      | 0.25 mm²                      |
| Contact surface                         | gold-plated                   |
| Temperature range of housing            | -25...+85 °C                  |
| Rated voltage                           | 60 V (3-pole) / 30 V (4-pole) |
| (acc. to VDE standard 0110 ISO group C) |                               |

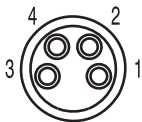
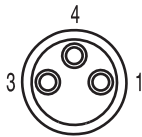
Chapter W includes additional technical specifications for the cable

Dimensioned drawing

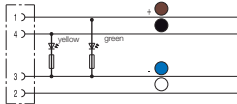
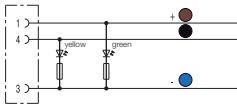


Sensor cables

M8 one end without connector with LED



Female



Ordering data

| Female, angled          |       |
|-------------------------|-------|
| PVC                     | 1.5 m |
| PUR                     | 1.5 m |
| PUR halogen-free        | 1.5 m |
| PUR halogen-free yellow | 1.5 m |
| Note                    |       |

2 LEDs

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M8BW-3L1.5V          | 1927350150 |
| SAIL-M8BW-3L1.5U          | 9457460150 |
| SAIL-M8BW-3L1.5Q          | 1927090150 |
| SAIL-M8BW-3L1.5QGE        | 1093210150 |
| Other versions on request |            |

3-pole

2 LEDs

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M8BW-4L1.5V          | 1927360150 |
| SAIL-M8BW-4L1.5U          | 1906400150 |
| SAIL-M8BW-4L1.5Q          | 1927100150 |
| SAIL-M8BW-4L1.5QGE        | 1093230150 |
| Other versions on request |            |

4-pole

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Standard cable lengths

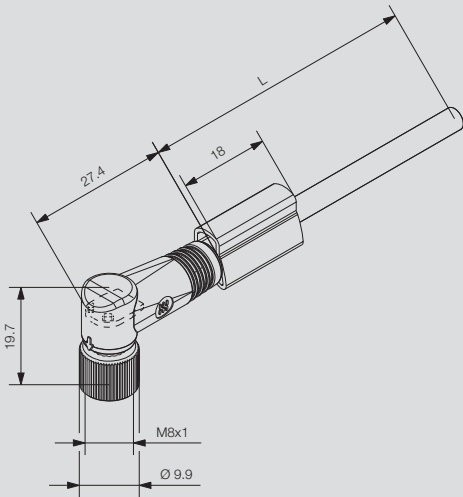
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

Technical data

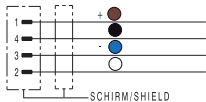
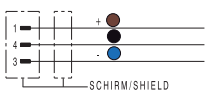
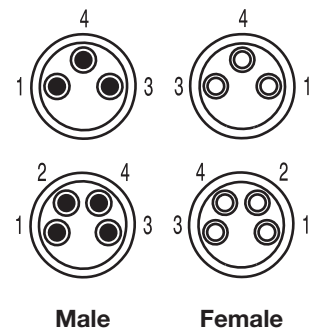
|                                         |                               |
|-----------------------------------------|-------------------------------|
| Rated current                           | 4 A                           |
| Protection class                        | IP 67                         |
| Core cross-section                      | 0.25 mm²                      |
| Contact surface                         | gold-plated                   |
| Temperature range of housing            | -25...+85 °C                  |
| Rated voltage                           | 60 V (3-pole) / 30 V (4-pole) |
| (acc. to VDE standard 0110 ISO group C) |                               |

Chapter W includes additional technical specifications for the cable

Dimensioned drawing



M8 one end without connector shielded



Ordering data

| Male, straight   |       |
|------------------|-------|
| PUR              | 1.5 m |
| Male, angled     |       |
| PUR              | 1.5 m |
| Female, straight |       |
| PUR              | 1.5 m |
| Female, angled   |       |
| PUR              | 1.5 m |
| Note             |       |

3-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M8G-3S1.5U           | 1906560150 |
| SAIL-M8W-3S1.5U           | 1906580150 |
| SAIL-M8BG-3S1.5U          | 1906600150 |
| SAIL-M8BW-3S1.5U          | 1906620150 |
| Other versions on request |            |

4-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M8G-4S1.5U           | 1906570150 |
| SAIL-M8W-4S1.5U           | 1906590150 |
| SAIL-M8BG-4S1.5U          | 1906610150 |
| SAIL-M8BW-4S1.5U          | 1906630150 |
| Other versions on request |            |

Standard cable lengths

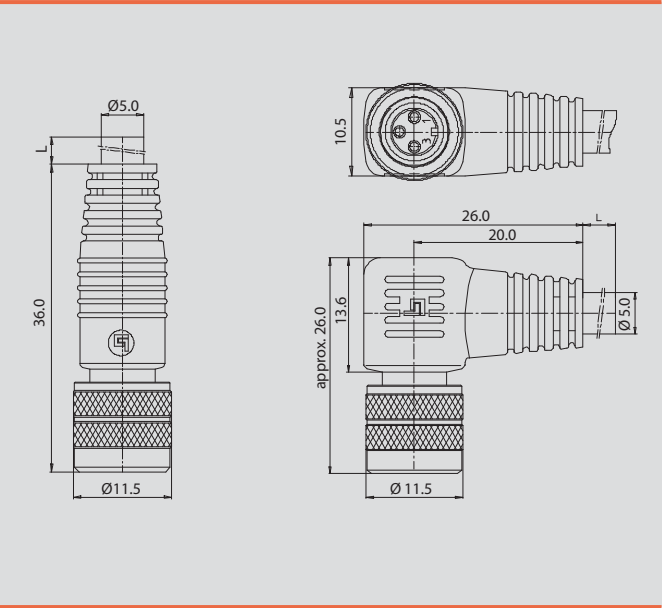
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

Technical data

|                                         |                               |
|-----------------------------------------|-------------------------------|
| Rated current                           | 4 A                           |
| Protection class                        | IP 67                         |
| Core cross-section                      | 0.25 mm²                      |
| Contact surface                         | gold-plated                   |
| Temperature range of housing            | -25...+85 °C                  |
| Rated voltage                           | 60 V (3-pole) / 30 V (4-pole) |
| (acc. to VDE standard 0110 ISO group C) |                               |

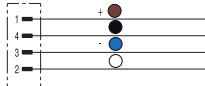
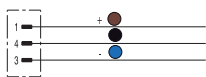
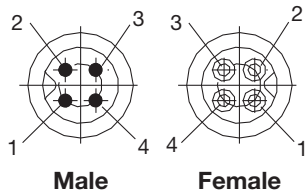
Chapter W includes additional technical specifications for the cable

Dimensioned drawing



Sensor cables

M5 one end without connector



Ordering data

| Male, straight   |       |
|------------------|-------|
| PUR              | 1.5 m |
| Male, angled     |       |
| PUR              | 1.5 m |
| Female, straight |       |
| PUR              | 1.5 m |
| Female, angled   |       |
| PUR              | 1.5 m |
| Note             |       |

3-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M5G-3P-1.5U          | 1854060150 |
| SAIL-M5W-3P-1.5U          | 1873280150 |
| SAIL-M5BG-3P-1.5U         | 1873290150 |
| SAIL-M5BW-3P-1.5U         | 1873260150 |
| Other versions on request |            |

4-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M5G-4P-1.5U          | 1871700150 |
| SAIL-M5W-4P-1.5U          | 1873240150 |
| SAIL-M5BG-4P-1.5U         | 1873250150 |
| SAIL-M5BW-4P-1.5U         | 1873270150 |
| Other versions on request |            |

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Standard cable lengths

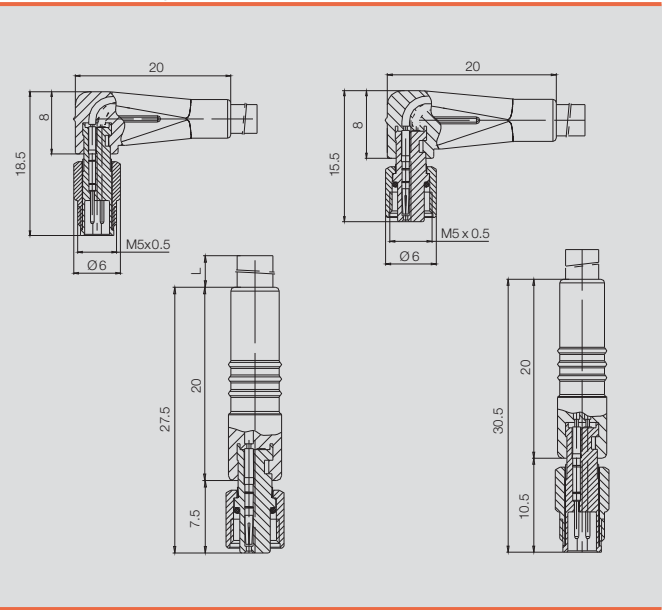
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

Technical data

|                                         |              |
|-----------------------------------------|--------------|
| Rated current                           | 1 A          |
| Protection class                        | IP 67        |
| Core cross-section                      | 0.25 mm²     |
| Contact surface                         | gold-plated  |
| Temperature range of housing            | -25...+85 °C |
| Rated voltage                           | 60 V         |
| (acc. to VDE standard 0110 ISO group C) |              |

Chapter W includes additional technical specifications for the cable

Dimensioned drawing





# Connecting cables

## M12



## M8



## M8 Snap connection



## Twin cabling



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 chapter I.

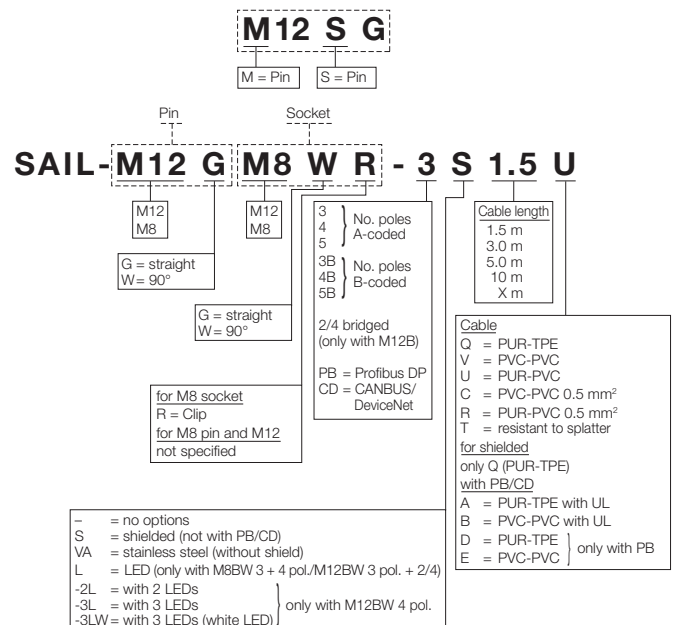
## Sensor cables

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

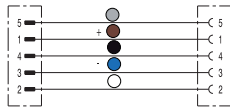
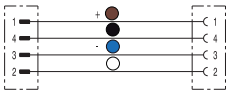
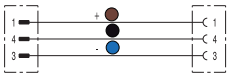
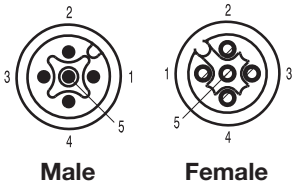
### Typical cable lengths are:

- |         |         |         |          |
|---------|---------|---------|----------|
| • 1.5 m | • 3.0 m | • 5.0 m | • 10.0 m |
|---------|---------|---------|----------|

## Example of designation



Connecting cables  
M12 to M12  
A-coded



Ordering data

| Male, straight - Female, straight |       |
|-----------------------------------|-------|
| PVC                               | 1.5 m |
| PUR                               | 1.5 m |
| PUR halogen-free                  | 1.5 m |
| PUR halogen-free yellow           | 1.5 m |
| Resistant to welding beads        | 1.5 m |
| Male, straight - Female, angled   |       |
| PVC                               | 1.5 m |
| PUR                               | 1.5 m |
| PUR halogen-free                  | 1.5 m |
| PUR halogen-free yellow           | 1.5 m |
| Resistant to welding beads        | 1.5 m |
| Male, angled - Female, angled     |       |
| PVC                               | 1.5 m |
| PUR                               | 1.5 m |
| PUR halogen-free                  | 1.5 m |
| Note                              |       |

| 3-pole                    |            |
|---------------------------|------------|
| Type                      | Order No.  |
| SAIL-M12GM12G-3-1.5V      | 1925300150 |
| SAIL-M12GM12G-3-1.5U      | 9457230150 |
| SAIL-M12GM12G-3-1.5Q      | 1926490150 |
| SAIL-M12GM12G-3-1.5QGE    | 1093010150 |
| SAIL-M12GM12G-3-1.5T      | 1021710150 |
| Other versions on request |            |

| 4-pole                    |            |
|---------------------------|------------|
| Type                      | Order No.  |
| SAIL-M12GM12G-4-1.5V      | 1925310150 |
| SAIL-M12GM12G-4-1.5U      | 1906300150 |
| SAIL-M12GM12G-4-1.5Q      | 1926500150 |
| SAIL-M12GM12G-4-1.5QGE    | 1093020150 |
| SAIL-M12GM12G-4-1.5T      | 1021730150 |
| Other versions on request |            |

| 5-pole                    |            |
|---------------------------|------------|
| Type                      | Order No.  |
| SAIL-M12GM12G-5-1.5V      | 1925320150 |
| SAIL-M12GM12G-5-1.5U      | 9457340150 |
| SAIL-M12GM12G-5-1.5Q      | 1926510150 |
| SAIL-M12GM12G-5-1.5QGE    | 1093030150 |
| SAIL-M12GM12G-5-1.5T      | 1011970150 |
| Other versions on request |            |

Standard cable lengths

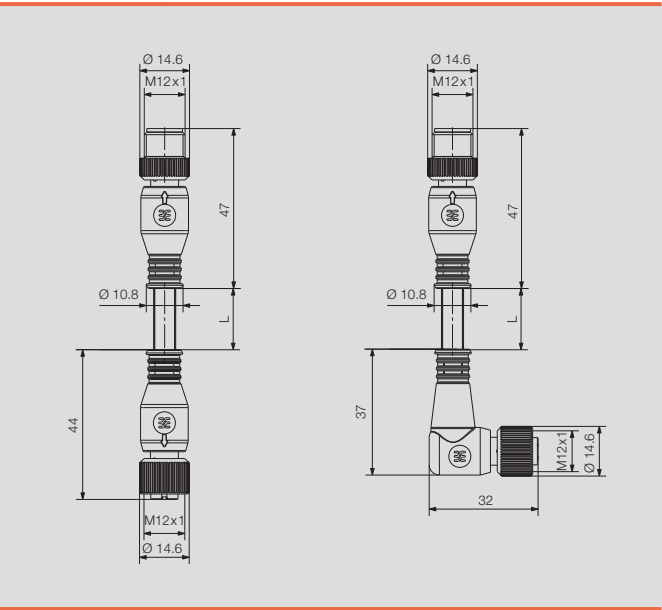
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

Technical data

|                                         |                                        |
|-----------------------------------------|----------------------------------------|
| Rated current                           | 4 A                                    |
| Protection class                        | IP 67                                  |
| Core cross-section                      | 0.34 mm²                               |
| Contact surface                         | gold-plated                            |
| Temperature range of housing            | -25...+85 °C                           |
| Rated voltage                           | 250 V (3- and 4-pole) / 125 V (5-pole) |
| (acc. to VDE standard 0110 ISO group C) |                                        |

Chapter W includes additional technical specifications for the cable

Dimensioned drawing



**Bridged between  
pins 2 and 4**



| Male, straight - Female, straight |       |
|-----------------------------------|-------|
| PVC                               | 1.5 m |
| PUR                               | 1.5 m |
| PUR halogen-free                  | 1.5 m |
| PUR halogen-free yellow           | 1.5 m |
| Male, straight - Female, angled   |       |
| PVC                               | 1.5 m |
| PUR                               | 1.5 m |
| PUR halogen-free                  | 1.5 m |
| PUR halogen-free yellow           | 1.5 m |
| Note                              |       |

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12GM12G-2/4-1.5V    | 1925330150 |
| SAIL-M12GM12G-2/4-1.5U    | 9456990150 |
| SAIL-M12GM12G-2/4-1.5Q    | 1926520150 |
| SAIL-M12GM12G-2/4-1.5QGE  | 1093000150 |
| SAIL-M12GM12W-2/4-1.5V    | 1925370150 |
| SAIL-M12GM12W-2/4-1.5U    | 9457890150 |
| SAIL-M12GM12W-2/4-1.5Q    | 1926560150 |
| SAIL-M12GM12W-2/4-1.5QGE  | 1093040150 |
| Other versions on request |            |

|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

|                                                          |                                        |
|----------------------------------------------------------|----------------------------------------|
| Rated current                                            | 4 A                                    |
| Protection class                                         | IP 67                                  |
| Core cross-section                                       | 0.34 mm²                               |
| Contact surface                                          | gold-plated                            |
| Temperature range of housing                             | -25...+85 °C                           |
| Rated voltage<br>(acc. to VDE standard 0110 ISO group C) | 250 V (3- and 4-pole) / 125 V (5-pole) |

Chapter W includes additional technical specifications for the cable



Technical drawings of the 1000 Series 1/2" components, showing two views: a side view (left) and a front view (right).

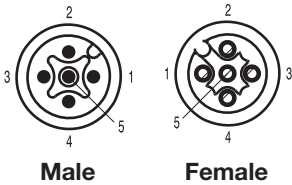
**Side View (Left):**

- Top section:  $\varnothing 14.6$  and M12x1.
- Middle section:  $\varnothing 10.8$  and L.
- Bottom section: 44, M12x1, and  $\varnothing 14.6$ .
- Overall height: 47.

**Front View (Right):**

- Top section:  $\varnothing 14.6$  and M12x1.
- Middle section:  $\varnothing 10.8$  and L.
- Bottom section: 37, 32, M12x1, and  $\varnothing 14.6$ .
- Overall height: 47.

Connecting cables  
M12 to M12, LED  
A-coded  
male, straight -  
female, angled



Ordering data

| Male, straight - Female, angled |       |
|---------------------------------|-------|
| PVC                             | 1.5 m |
| PUR                             | 1.5 m |
| PUR halogen-free                | 1.5 m |
| PUR halogen-free yellow         | 1.5 m |
| Resistant to welding beads      | 1.5 m |
| Note                            |       |

2 LEDs

3-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12GM12W-3L1.5V      | 1925410150 |
| SAIL-M12GM12W-3L1.5U      | 9457790150 |
| SAIL-M12GM12W-3L1.5Q      | 1926600150 |
| SAIL-M12GM12W-3L1.5T      | 1004320150 |
| Other versions on request |            |

2 LEDs

4-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12GM12W-4-2L1.5V    | 1925420150 |
| SAIL-M12GM12W-4-2L1.5U    | 1906410150 |
| SAIL-M12GM12W-4-2L1.5Q    | 1926610150 |
| SAIL-M12GM12W-4-2L1.5T    | 1004310150 |
| Other versions on request |            |

3 LEDs

4-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12GM12W-4-3L1.5V    | 1963930150 |
| SAIL-M12GM12W-4-3L1.5U    | 1963910150 |
| SAIL-M12GM12W-4-3L1.5Q    | 1232810150 |
| SAIL-M12GM12W-4-3LW1.5QGE | 1093060150 |
| SAIL-M12GM12W-4-3LW1.5T   | 1020930150 |
| Other versions on request |            |

Standard cable lengths

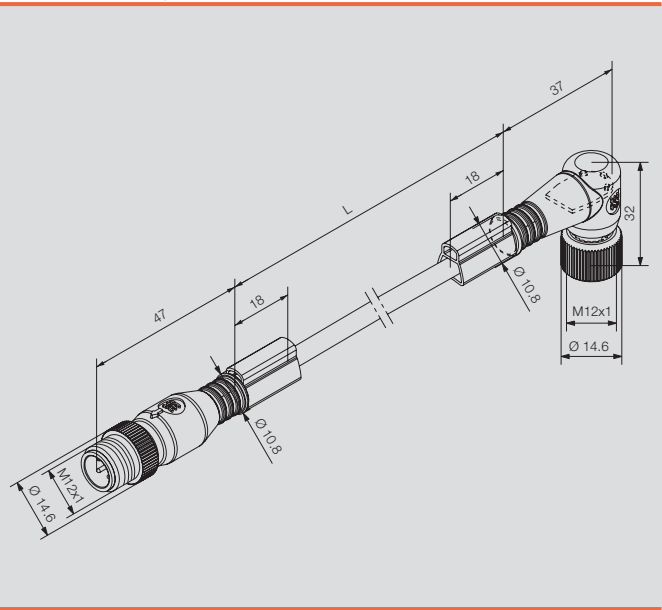
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

Technical data

|                                         |                                        |
|-----------------------------------------|----------------------------------------|
| Rated current                           | 4 A                                    |
| Protection class                        | IP 67                                  |
| Core cross-section                      | 0.34 mm²                               |
| Contact surface                         | gold-plated                            |
| Temperature range of housing            | -25...+85 °C                           |
| Rated voltage                           | 250 V (3- and 4-pole) / 125 V (5-pole) |
| (acc. to VDE standard 0110 ISO group C) |                                        |

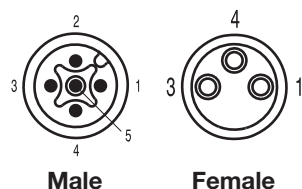
Chapter W includes additional technical specifications for the cable

Dimensioned drawing





### Connecting cables M12 to M8



## Ordering data

| Cracking data                            |       |
|------------------------------------------|-------|
| <b>Male, straight - Female, straight</b> |       |
| PVC                                      | 1.5 m |
| PUR                                      | 1.5 m |
| PUR halogen-free                         | 1.5 m |
| <b>Male, straight - Female, angled</b>   |       |
| PVC                                      | 1.5 m |
| PUR                                      | 1.5 m |
| PUR halogen-free                         | 1.5 m |
| <b>Male, angled - Female, angled</b>     |       |
| PVC                                      | 1.5 m |
| PUR                                      | 1.5 m |
| PUR halogen-free                         | 1.5 m |
| <b>Note</b>                              |       |

### 3-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12GM8G-3-1.5V       | 1938170150 |
| SAIL-M12GM8G-3-1.5U       | 9457770150 |
| SAIL-M12GM8G-3-1.5Q       | 1938040150 |
|                           |            |
| SAIL-M12GM8W-3-1.5V       | 1938180150 |
| SAIL-M12GM8W-3-1.5U       | 9457980150 |
| SAIL-M12GM8W-3-1.5Q       | 1938050150 |
|                           |            |
| SAIL-M12WM8W-3-1.5V       | 1938190150 |
| SAIL-M12WM8W-3-1.5U       | 1963300150 |
| SAIL-M12WM8W-3-1.5Q       | 1938060150 |
| Other versions on request |            |

4-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12GM8G-4-1.5V       | 1938200150 |
| SAIL-M12GM8G-4-1.5U       | 9456660150 |
| SAIL-M12GM8G-4-1.5Q       | 1938070150 |
|                           |            |
| SAIL-M12GM8W-4-1.5V       | 1938210150 |
| SAIL-M12GM8W-4-1.5U       | 9456670150 |
| SAIL-M12GM8W-4-1.5Q       | 1938080150 |
|                           |            |
| SAIL-M12WM8W-4-1.5V       | 1938220150 |
| SAIL-M12WM8W-4-1.5U       | 1906340150 |
| SAIL-M12WM8W-4-1.5Q       | 1938090150 |
| Other versions on request |            |

### Standard cable lengths

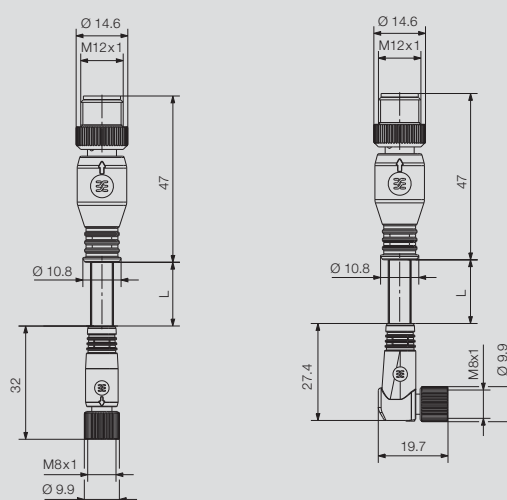
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

## Technical data

|                                                          |                               |
|----------------------------------------------------------|-------------------------------|
| Rated current                                            | 4 A                           |
| Protection class                                         | IP 67                         |
| Core cross-section                                       | 0.25 mm²                      |
| Contact surface                                          | gold-plated                   |
| Temperature range of housing                             | -25...+85 °C                  |
| Rated voltage<br>(acc. to VDE standard 0110 ISO group C) | 60 V (3-pole) / 30 V (4-pole) |

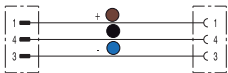
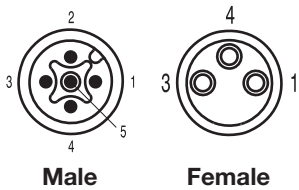
Chapter W includes additional technical specifications for the cable

### Dimensioned drawing



Sensor cables

Connecting cables  
M12 to M8  
snap-on connection



Ordering data

| Male, straight - Female, straight |       |  |
|-----------------------------------|-------|--|
| PUR                               | 1.5 m |  |
| Male, straight - Female, angled   |       |  |
| PUR                               | 1.5 m |  |
| PUR halogen-free yellow           | 1.5 m |  |
| Note                              |       |  |

3-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12GM8GR-3-1.5U      | 1984530150 |
| SAIL-M12GM8WR-3-1.5U      | 9457570150 |
| SAIL-M12GM8WR-3-1.5QGE    | 1093150150 |
| Other versions on request |            |

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Standard cable lengths

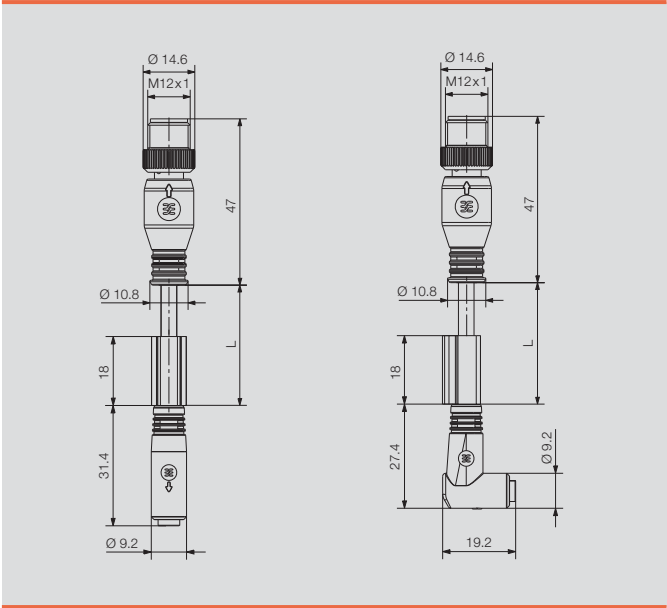
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

Technical data

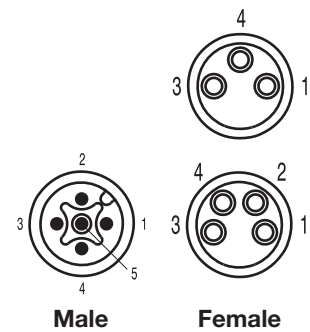
|                                         |                               |
|-----------------------------------------|-------------------------------|
| Rated current                           | 4 A                           |
| Protection class                        | IP 65                         |
| Core cross-section                      | 0.25 mm²                      |
| Contact surface                         | gold-plated                   |
| Temperature range of housing            | -25...+85 °C                  |
| Rated voltage                           | 60 V (3-pole) / 30 V (4-pole) |
| (acc. to VDE standard 0110 ISO group C) |                               |

Chapter W includes additional technical specifications for the cable

Dimensioned drawing



Connecting cables  
M12 to M8 LED



Ordering data

| Male, straight - Female, angled |       |
|---------------------------------|-------|
| PVC                             | 1.5 m |
| PUR                             | 1.5 m |
| PUR halogen-free                | 1.5 m |
| PUR halogen-free yellow         | 1.5 m |
| Note                            |       |

2 LEDs

3-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12GM8W-3L1.5V       | 1962290150 |
| SAIL-M12GM8W-3L1.5U       | 9457760150 |
| SAIL-M12GM8W-3L1.5Q       | 1962270150 |
| SAIL-M12GM8W-3L1.5QGE     | 1093110150 |
| Other versions on request |            |

2 LEDs

4-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12GM8W-4L1.5V       | 1962300150 |
| SAIL-M12GM8W-4L1.5U       | 1906430150 |
| SAIL-M12GM8W-4L1.5Q       | 1962280150 |
| SAIL-M12GM8W-4L1.5QGE     | 1093130150 |
| Other versions on request |            |

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Standard cable lengths

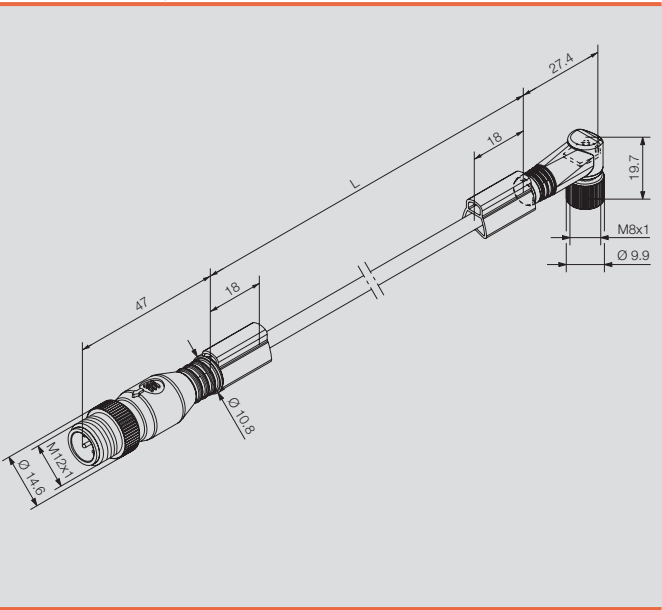
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

Technical data

|                                         |                               |
|-----------------------------------------|-------------------------------|
| Rated current                           | 4 A                           |
| Protection class                        | IP 67                         |
| Core cross-section                      | 0.25 mm²                      |
| Contact surface                         | gold-plated                   |
| Temperature range of housing            | -25...+85 °C                  |
| Rated voltage                           | 60 V (3-pole) / 30 V (4-pole) |
| (acc. to VDE standard 0110 ISO group C) |                               |

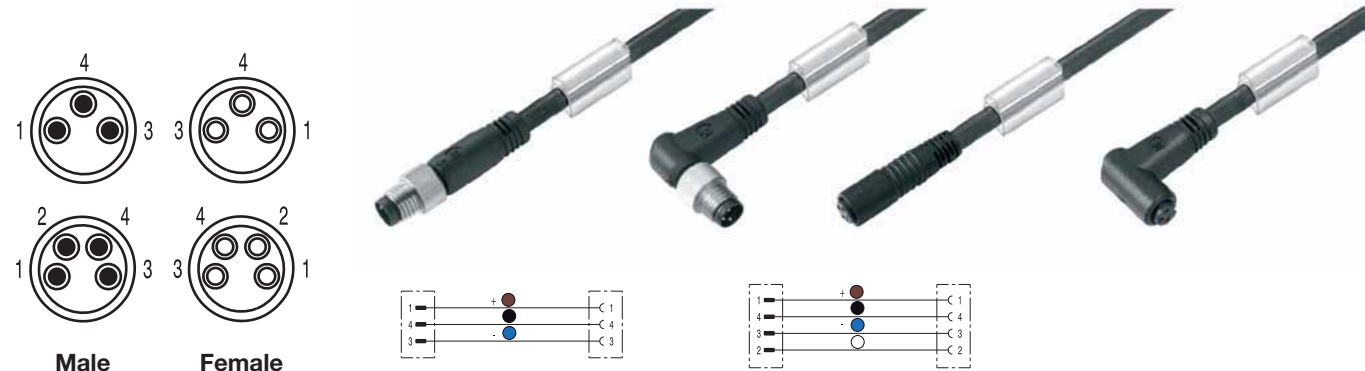
Chapter W includes additional technical specifications for the cable

Dimensioned drawing





Connecting cables  
M8 to M8  
snap-on connection



Ordering data

| Male, straight - Female, straight |       |  |
|-----------------------------------|-------|--|
| PVC                               | 1.5 m |  |
| PUR                               | 1.5 m |  |
| PUR halogen-free                  | 1.5 m |  |
| Male, straight - Female, angled   |       |  |
| PVC                               | 1.5 m |  |
| PUR                               | 1.5 m |  |
| PUR halogen-free                  | 1.5 m |  |
| Male, angled - Female, angled     |       |  |
| PVC                               | 1.5 m |  |
| PUR                               | 1.5 m |  |
| PUR halogen-free                  | 1.5 m |  |
| Note                              |       |  |

| 3-pole                    |            |
|---------------------------|------------|
| Type                      | Order No.  |
| SAIL-M8GM8GR-3-1.5V       | 1948650150 |
| SAIL-M8GM8GR-3-1.5U       | 1948470150 |
| SAIL-M8GM8GR-3-1.5Q       | 1948550150 |
| SAIL-M8GM8WR-3-1.5V       | 1948660150 |
| SAIL-M8GM8WR-3-1.5U       | 1948480150 |
| SAIL-M8GM8WR-3-1.5Q       | 1948560150 |
| SAIL-M8WM8WR-3-1.5V       | 1948670150 |
| SAIL-M8WM8WR-3-1.5U       | 1948490150 |
| SAIL-M8WM8WR-3-1.5Q       | 1948570150 |
| Other versions on request |            |

| 4-pole                    |            |
|---------------------------|------------|
| Type                      | Order No.  |
| SAIL-M8GM8GR-4-1.5V       | 1948680150 |
| SAIL-M8GM8GR-4-1.5U       | 1948500150 |
| SAIL-M8GM8GR-4-1.5Q       | 1948580150 |
| SAIL-M8GM8WR-4-1.5V       | 1948690150 |
| SAIL-M8GM8WR-4-1.5U       | 1948510150 |
| SAIL-M8GM8WR-4-1.5Q       | 1948590150 |
| SAIL-M8WM8WR-4-1.5V       | 1948700150 |
| SAIL-M8WM8WR-4-1.5U       | 1948520150 |
| SAIL-M8WM8WR-4-1.5Q       | 1948600150 |
| Other versions on request |            |

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Standard cable lengths

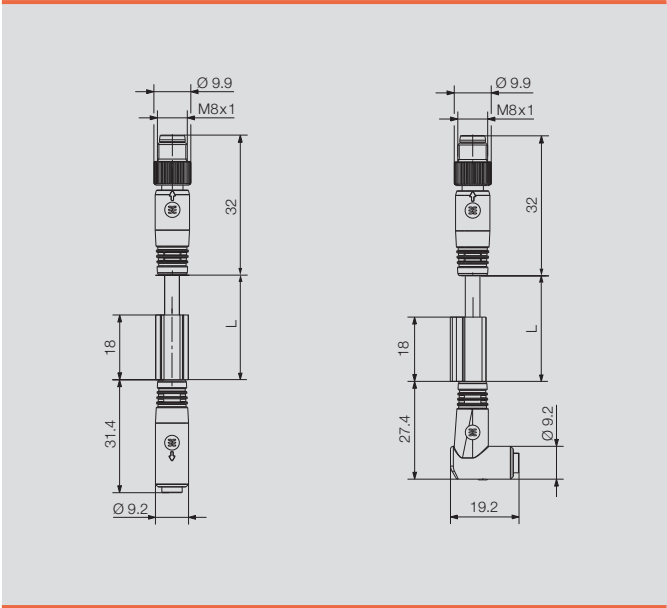
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

Technical data

|                                         |                               |
|-----------------------------------------|-------------------------------|
| Rated current                           | 4 A                           |
| Protection class                        | IP 65                         |
| Core cross-section                      | 0.25 mm²                      |
| Contact surface                         | gold-plated                   |
| Temperature range of housing            | -25...+85 °C                  |
| Rated voltage                           | 60 V (3-pole) / 30 V (4-pole) |
| (acc. to VDE standard 0110 ISO group C) |                               |

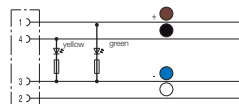
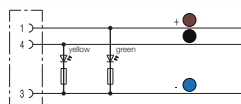
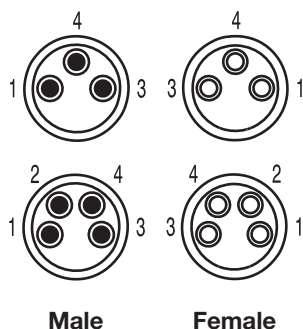
Chapter W includes additional technical specifications for the cable

Dimensioned drawing



## Sensor cables

### Connecting cables M8 to M8 LED



#### Ordering data

| Male, straight - Female, angled |       |
|---------------------------------|-------|
| PVC                             | 1.5 m |
| PUR                             | 1.5 m |
| PUR halogen-free                | 1.5 m |
| Note                            |       |

#### 2 LEDs

#### 3-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M8GM8W-3L1.5V        | 1927190150 |
| SAIL-M8GM8W-3L1.5U        | 1877250150 |
| SAIL-M8GM8W-3L1.5Q        | 1926930150 |
| Other versions on request |            |

#### 2 LEDs

#### 4-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M8GM8W-4L1.5V        | 1927200150 |
| SAIL-M8GM8W-4L1.5U        | 1906450150 |
| SAIL-M8GM8W-4L1.5Q        | 1926940150 |
| Other versions on request |            |

## Standard cable lengths

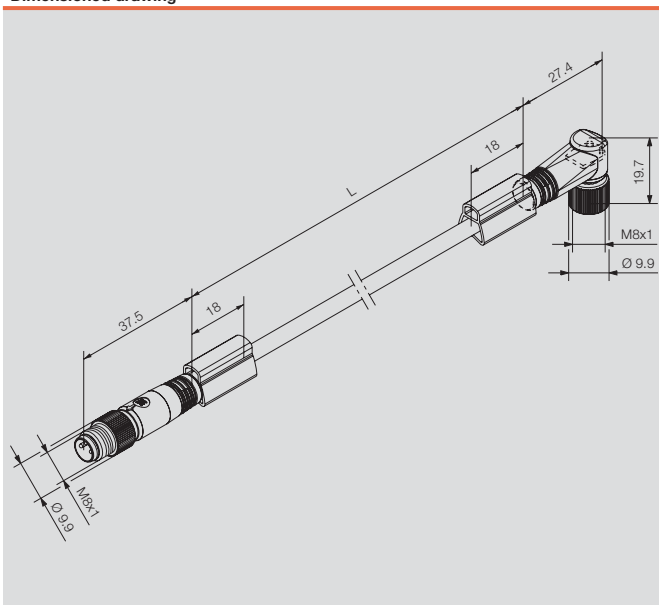
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

## Technical data

|                                         |                               |
|-----------------------------------------|-------------------------------|
| Rated current                           | 4 A                           |
| Protection class                        | IP 67                         |
| Core cross-section                      | 0.25 mm <sup>2</sup>          |
| Contact surface                         | gold-plated                   |
| Temperature range of housing            | -25...+85 °C                  |
| Rated voltage                           | 60 V (3-pole) / 30 V (4-pole) |
| (acc. to VDE standard 0110 ISO group C) |                               |

Chapter W includes additional technical specifications for the cable

## Dimensioned drawing





# Twin sensor cables with three plug-in connectors: M12/M8

## Twin sensor cables



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.

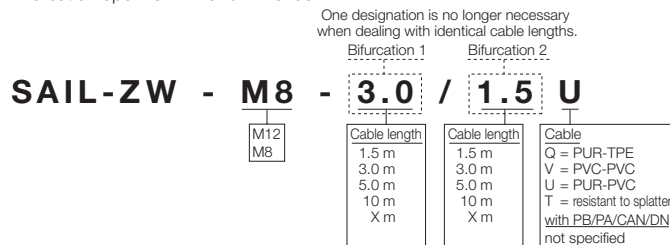
### 4-pole connection

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.

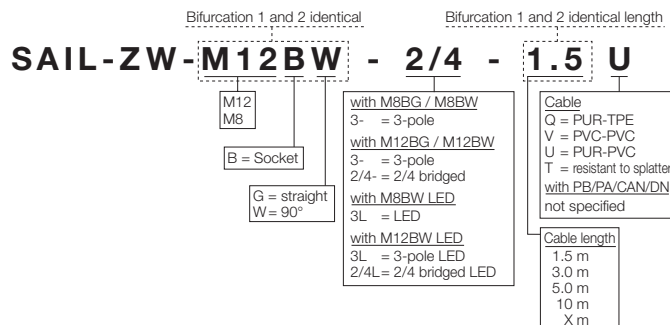
Special care must be taken when wiring combinations of 4-pole plugs and distributors.

### Designation

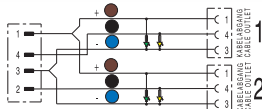
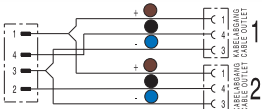
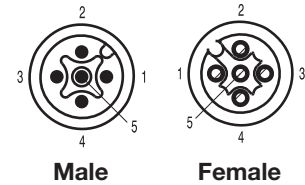
Twin plug  
Bifurcation open for "1" and "2" ends



Twin plug  
Connecting cable



Twin cabling  
M12 to M12



Ordering data

| Male straight - 2 females straight |       |
|------------------------------------|-------|
| PUR                                | 1.5 m |
| Male straight - 2 females angled   |       |
| PUR                                | 1.5 m |
| Note                               |       |

| 3-pole               |            |
|----------------------|------------|
| Type                 | Order No.  |
| SAIL-ZW-M12BG-3-1.5U | 1005460150 |
| SAIL-ZW-M12BW-3-1.5U | 1005270150 |

| 2 LEDs 3-pole        |            |
|----------------------|------------|
| Type                 | Order No.  |
| SAIL-ZW-M12BW-3L1.5U | 1912110150 |



Standard cable lengths

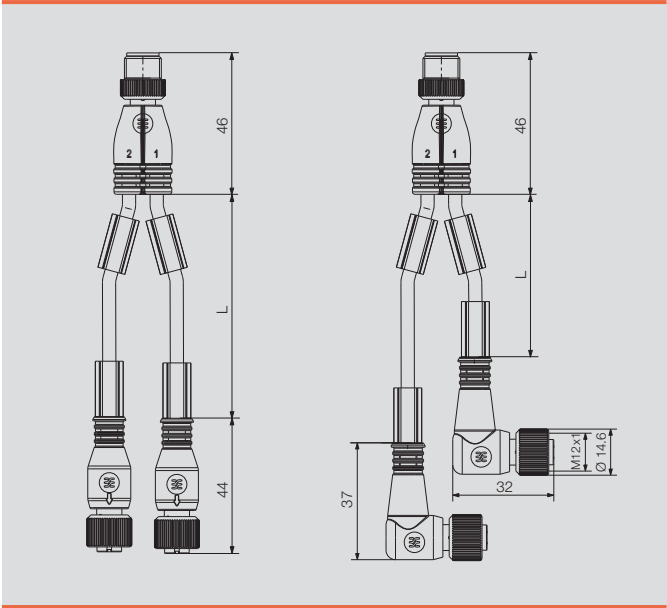
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

Technical data

|                                         |                                        |
|-----------------------------------------|----------------------------------------|
| Rated current                           | 4 A                                    |
| Protection class                        | IP 67                                  |
| Core cross-section                      | 0.34 mm²                               |
| Contact surface                         | gold-plated                            |
| Temperature range of housing            | -25...+85 °C                           |
| Rated voltage                           | 250 V (3- and 4-pole) / 125 V (5-pole) |
| (acc. to VDE standard 0110 ISO group C) |                                        |

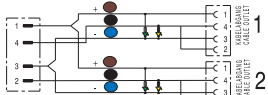
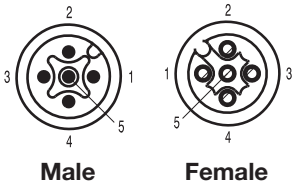
Chapter W includes additional technical specifications for the cable

Dimensioned drawing



Sensor cables

Twin cabling  
M12 to M12  
bridge between  
pins 2 and 4



Ordering data

| Male straight - 2 females straight |       |  |
|------------------------------------|-------|--|
| PUR                                | 1.5 m |  |
| Male straight - 2 females angled   |       |  |
| PUR                                | 1.5 m |  |
| Note                               |       |  |

3-pole

| Type                   | Order No.  |
|------------------------|------------|
| SAIL-ZW-M12BG-2/4-1.5U | 1812550150 |
| SAIL-ZW-M12BW-2/4-1.5U | 1964280150 |

2 LEDs

3-pole

| Type                   | Order No.  |
|------------------------|------------|
| SAIL-ZW-M12BW-2/4L1.5U | 1964290150 |

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |

Standard cable lengths

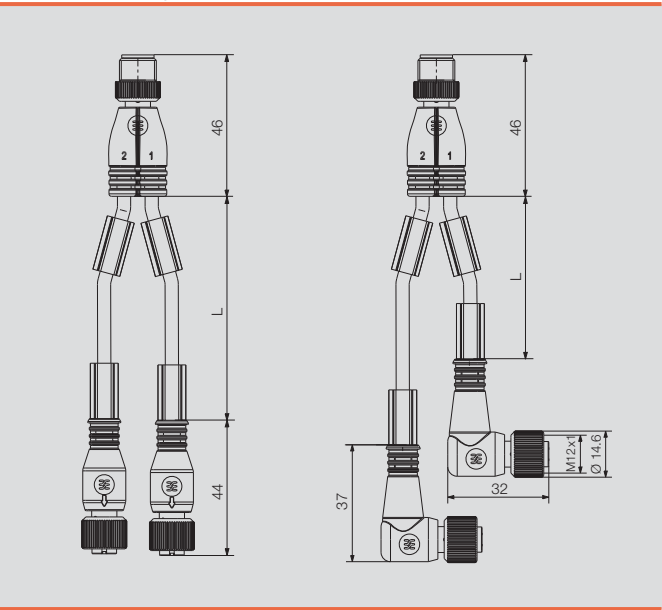
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

Technical data

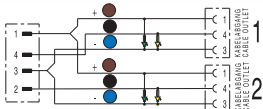
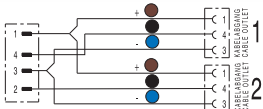
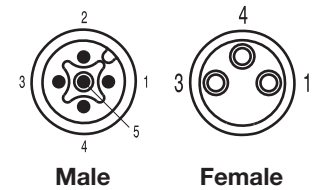
|                                         |                                        |
|-----------------------------------------|----------------------------------------|
| Rated current                           | 4 A                                    |
| Protection class                        | IP 67                                  |
| Core cross-section                      | 0.34 mm <sup>2</sup>                   |
| Contact surface                         | gold-plated                            |
| Temperature range of housing            | -25...+85 °C                           |
| Rated voltage                           | 250 V (3- and 4-pole) / 125 V (5-pole) |
| (acc. to VDE standard 0110 ISO group C) |                                        |

Chapter W includes additional technical specifications for the cable

Dimensioned drawing



Twin cabling  
M12 to M8



Ordering data

| Male straight - 2 females straight |       |
|------------------------------------|-------|
| PUR                                | 1.5 m |
| PUR halogen-free yellow            | 1.5 m |
| Male straight - 2 females angled   |       |
| PUR                                | 1.5 m |
| PUR halogen-free yellow            | 1.5 m |
| Note                               |       |

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-ZW-M8BG-3-1.5U       | 9457490150 |
| SAIL-ZW-M8BG-3-1.5QGE     | 1093250150 |
| Other versions on request |            |

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-ZW-M8BW-3L1.5U       | 9457410150 |
| Other versions on request |            |

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Standard cable lengths

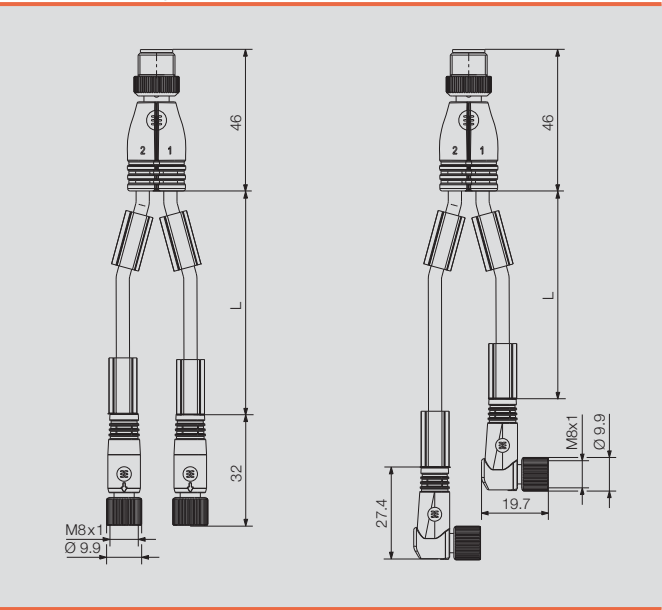
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

Technical data

|                                         |                               |
|-----------------------------------------|-------------------------------|
| Rated current                           | 4 A                           |
| Protection class                        | IP 67                         |
| Core cross-section                      | 0.25 mm <sup>2</sup>          |
| Contact surface                         | gold-plated                   |
| Temperature range of housing            | -25...+85 °C                  |
| Rated voltage                           | 60 V (3-pole) / 30 V (4-pole) |
| (acc. to VDE standard 0110 ISO group C) |                               |

Chapter W includes additional technical specifications for the cable

Dimensioned drawing

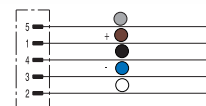
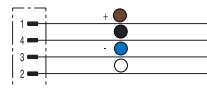
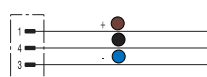
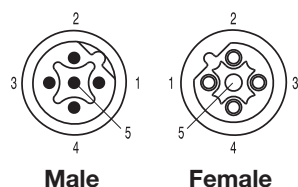


## B-coded M12 cables



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 exceeding 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.

**M12 one end without  
connector  
unshielded  
B-coded**



**Ordering data**

|                         |       |
|-------------------------|-------|
| <b>Male, straight</b>   |       |
| PUR halogen-free        | 1.5 m |
| <b>Male, angled</b>     |       |
| PUR halogen-free        | 1.5 m |
| <b>Female, straight</b> |       |
| PUR halogen-free        | 1.5 m |
| <b>Female, angled</b>   |       |
| PUR halogen-free        | 1.5 m |
| <b>Note</b>             |       |

**3-pole**

| Type               | Order No.  |
|--------------------|------------|
| SAIL-M12G-3B-1.5Q  | 1057770150 |
| SAIL-M12W-3B-1.5Q  | 1057800150 |
| SAIL-M12BG-3B-1.5Q | 1057740150 |
| SAIL-M12BW-3B-1.5Q | 1061890150 |

**4-pole**

| Type               | Order No.  |
|--------------------|------------|
| SAIL-M12G-4B-1.5Q  | 1057780150 |
| SAIL-M12W-4B-1.5Q  | 1057810150 |
| SAIL-M12BG-4B-1.5Q | 1057750150 |
| SAIL-M12BW-4B-1.5Q | 1061900150 |

**5-pole**

| Type               | Order No.  |
|--------------------|------------|
| SAIL-M12G-5B-1.5Q  | 1057790150 |
| SAIL-M12W-5B-1.5Q  | 1057820150 |
| SAIL-M12BG-5B-1.5Q | 1061880150 |
| SAIL-M12BW-5B-1.5Q | 1057760150 |

**Standard cable lengths**

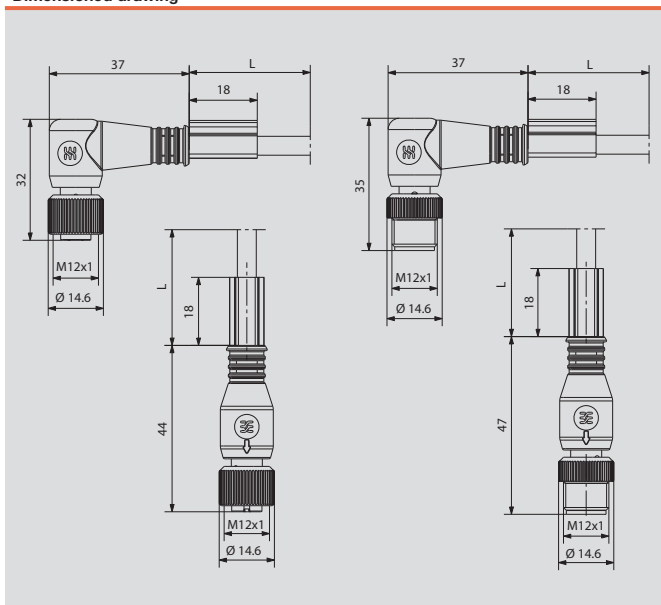
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

**Technical data**

|                                         |                                        |
|-----------------------------------------|----------------------------------------|
| Rated current                           | 4 A                                    |
| Protection class                        | IP 67                                  |
| Core cross-section                      | 0.34 mm <sup>2</sup>                   |
| Contact surface                         | gold-plated                            |
| Temperature range of housing            | -25...+85 °C                           |
| Rated voltage                           | 250 V (3- and 4-pole) / 125 V (5-pole) |
| (acc. to VDE standard 0110 ISO group C) |                                        |

Chapter W includes additional technical specifications for the cable

**Dimensioned drawing**





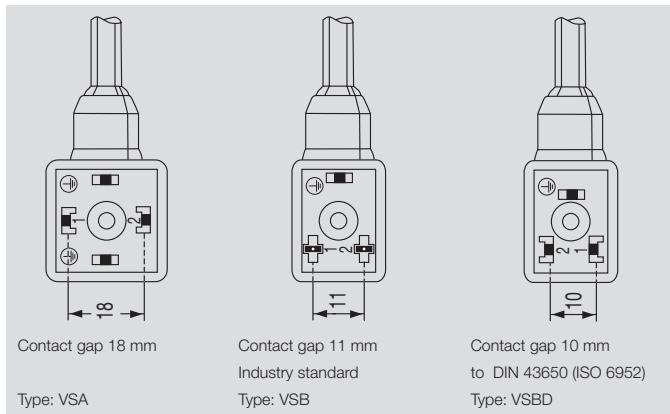


# Valve plug, ISO 4400

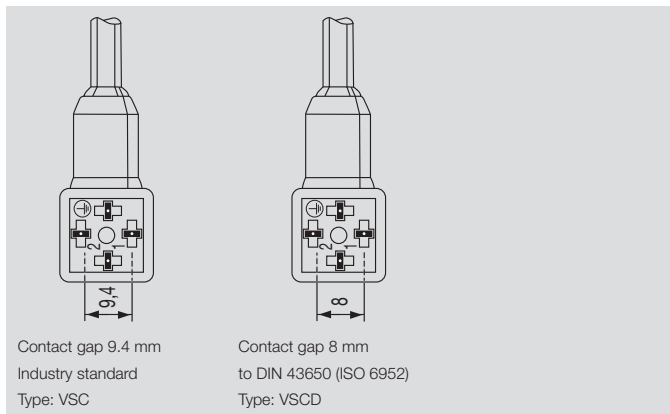


Valve plug  
Type A

Valve plug  
Type B



Valve plug  
Type C



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.

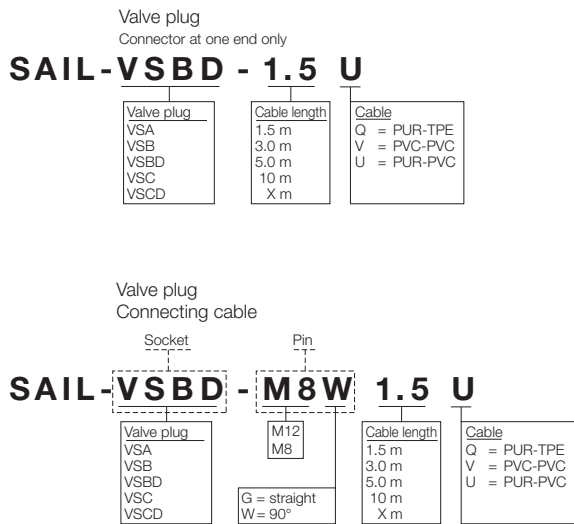
Weidmüller plugs comply with IP67 ingress protection class when plugged in.

The outgoing direction is also crucial. Weidmüller can supply 0° versions, i.e. the outgoing direction of the cable is at the PE contact.

## 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



Design A



B

Ordering data

|                             |       |
|-----------------------------|-------|
| Open cable end - valve plug |       |
| Male straight - valve plug  | 1.5 m |
| Male angled - valve plug    | 1.5 m |
| Note                        |       |

| A                         |            |
|---------------------------|------------|
| Type                      | Order No.  |
| SAIL-VSA-1.5U             | 9457710150 |
| SAIL-VSA-M12G-1.5U        | 9457040000 |
| SAIL-VSA-M12W-1.5U        | 1857690150 |
| Other versions on request |            |

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Standard cable lengths

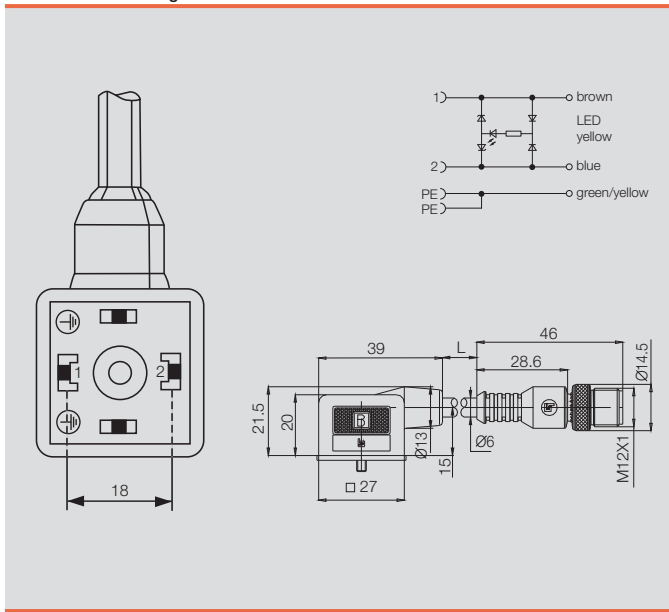
|                                                                                                                                                             |        |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed to order other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                             | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                             | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                             | 10.0 m | xxxxxx1000 |

Technical data

|                                         |              |
|-----------------------------------------|--------------|
| Sheathing colour                        | grey         |
| Sheath material                         | PUR          |
| Rated current                           | 4 A          |
| Protection class                        | IP 67        |
| Core cross-section                      | 0.75 mm²     |
| Contact surface                         | tinned       |
| Temperature range of housing            | -25...+85 °C |
| Rated voltage                           | 24 V         |
| (acc. to VDE standard 0110 ISO group C) |              |

L in the drawing is the cable length

Dimensioned drawing



Valve cables

Design B/BD

B = Industrial standard  
BD = DIN Standard



Ordering data

|                             |       |
|-----------------------------|-------|
| Open cable end - valve plug | 1.5 m |
| Male straight - valve plug  | 1.5 m |
| Male angled - valve plug    | 1.5 m |
| Note                        |       |

B

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-VSB-1.5U             | 9457930150 |
| SAIL-VSB-M12G-1.5U        | 9457680150 |
| SAIL-VSB-M12W-1.5U        | 1857700150 |
| Other versions on request |            |

BD

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-VSBD-1,5U            | 9456070150 |
| SAIL-VSBD-M12G-1.5U       | 9457780150 |
| SAIL-VSBD-M12W-1.5U       | 1857710150 |
| Other versions on request |            |

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Standard cable lengths

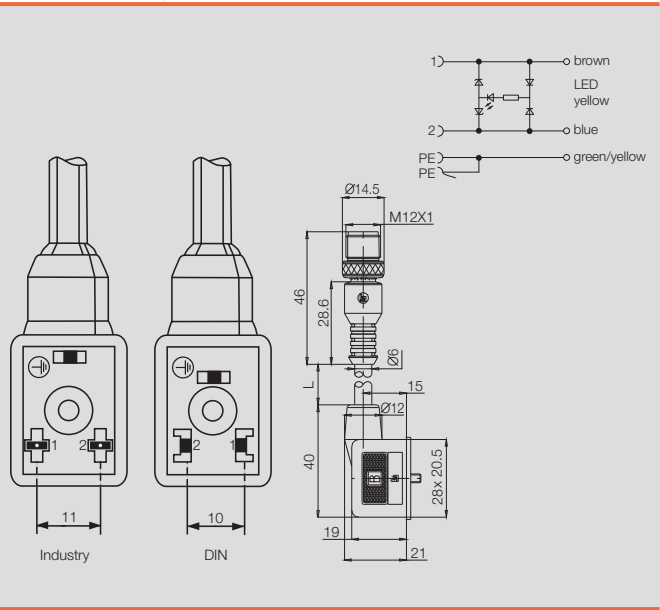
|                                                                                                                                                             |        |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed to order other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                             | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                             | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                             | 10.0 m | xxxxxx1000 |

Technical data

|                                         |              |
|-----------------------------------------|--------------|
| Sheathing colour                        | grey         |
| Sheath material                         | PUR          |
| Rated current                           | 4 A          |
| Protection class                        | IP 67        |
| Core cross-section                      | 0.75 mm²     |
| Contact surface                         | tinned       |
| Temperature range of housing            | -25...+85 °C |
| Rated voltage                           | 24 V         |
| (acc. to VDE standard 0110 ISO group C) |              |

L in the drawing is the cable length

Dimensioned drawing



## Design C/CD

C = Industrial standard  
CD = DIN Standard



### Ordering data

|                             |       |
|-----------------------------|-------|
| Open cable end - valve plug | 1.5 m |
| Male straight - valve plug  | 1.5 m |
| Male angled - valve plug    | 1.5 m |
| Note                        |       |

### C

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-VSC-1.5U             | 9457920150 |
| SAIL-VSC-M12G-1.5U        | 9457400150 |
| SAIL-VSC-M12W-1.5U        | 1857720150 |
| Other versions on request |            |

### CD

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-VSCD-1.5U            | 9456240150 |
| SAIL-VSCD-M12G-1.5U       | 9456170150 |
| SAIL-VSCD-M12W-1.5U       | 1857730150 |
| Other versions on request |            |

### Standard cable lengths

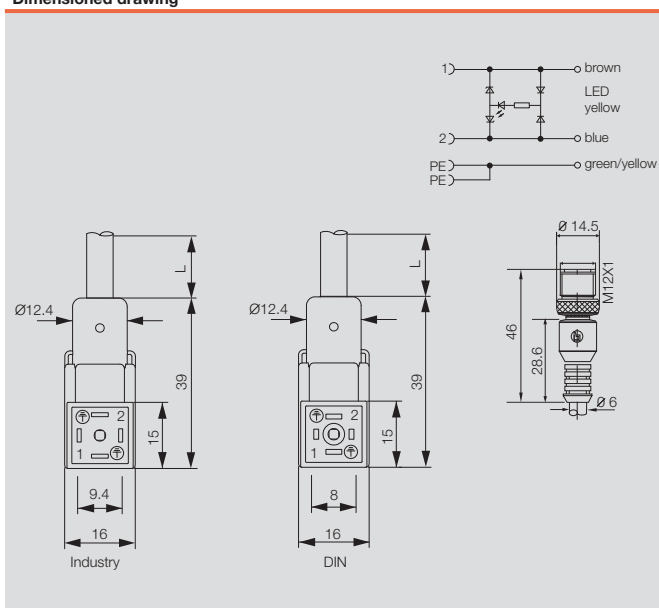
|                                                                                                                                                             |        |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed to order other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                             | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                             | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                             | 10.0 m | xxxxxx1000 |

### Technical data

|                                         |                     |
|-----------------------------------------|---------------------|
| Sheathing colour                        | grey                |
| Sheath material                         | PUR                 |
| Rated current                           | 4 A                 |
| Protection class                        | IP 67               |
| Core cross-section                      | 0.5 mm <sup>2</sup> |
| Contact surface                         | tinned              |
| Temperature range of housing            | -25...+85 °C        |
| Rated voltage                           | 24 V                |
| (acc. to VDE standard 0110 ISO group C) |                     |

L in the drawing is the cable length

### Dimensioned drawing



# 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.

Type B



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 C

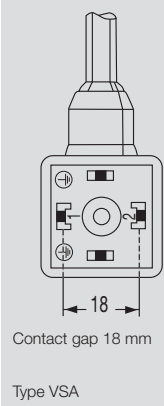


The Weidmüller range includes valve plug forms A, B and C to DIN and industry standards. The plug conforms to ingress protection class IP 67 when plugged in.

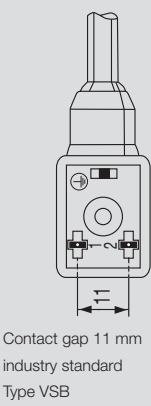
Type

| 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      |

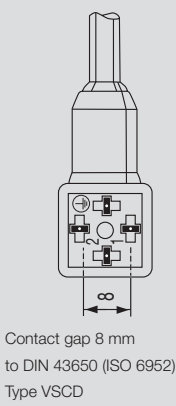
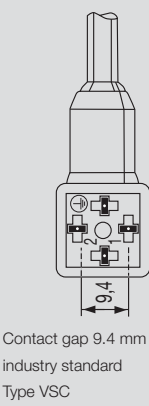
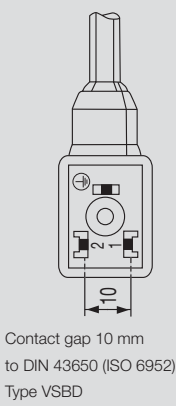
Valve plug  
Type A



Valve plug  
Type B



Valve plug  
Type C



## Design A

Suitable for IDC plug-in connectors and protective hose connection



B

## Ordering data

|                             |       |
|-----------------------------|-------|
| Open cable end - valve plug | 1.5 m |
| Note                        |       |

| A                                |            |
|----------------------------------|------------|
| Type                             | Order No.  |
| SAIL-VSA-1.5U(0.5)               | 1845120150 |
| Supplied without protective hose |            |

## Standard cable lengths

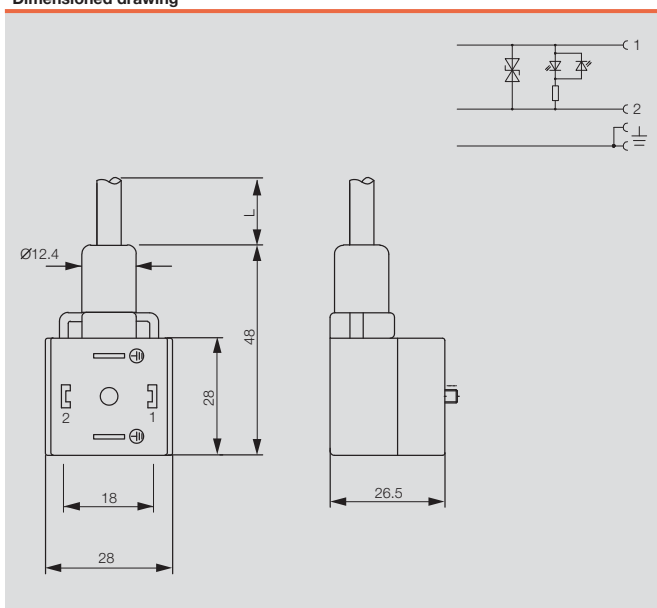
|                                                                                                                                                             |        |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed to order other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                             | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                             | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                             | 10.0 m | xxxxxx1000 |

## Technical data

|                                         |                     |
|-----------------------------------------|---------------------|
| Sheathing colour                        | black               |
| Sheath material                         | PUR                 |
| Rated current                           | 4 A                 |
| Protection class                        | IP 67               |
| Core cross-section                      | 0.5 mm <sup>2</sup> |
| Contact surface                         | tinned              |
| Temperature range of housing            | -25...+85 °C        |
| Rated voltage                           | 24 V                |
| (acc. to VDE standard 0110 ISO group C) |                     |

L in the drawing is the cable length

## Dimensioned drawing



Valve cables

Design 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 |
| Note                        |       |

B

| Type                             | Order No.  |
|----------------------------------|------------|
| SAIL-VSB-1.5U(0.5)               | 1845140150 |
| Supplied without protective hose |            |

BD

| Type                             | Order No.  |
|----------------------------------|------------|
| SAIL-VSBD-1.5U(0.5)              | 1845160150 |
| Supplied without protective hose |            |

Standard cable lengths

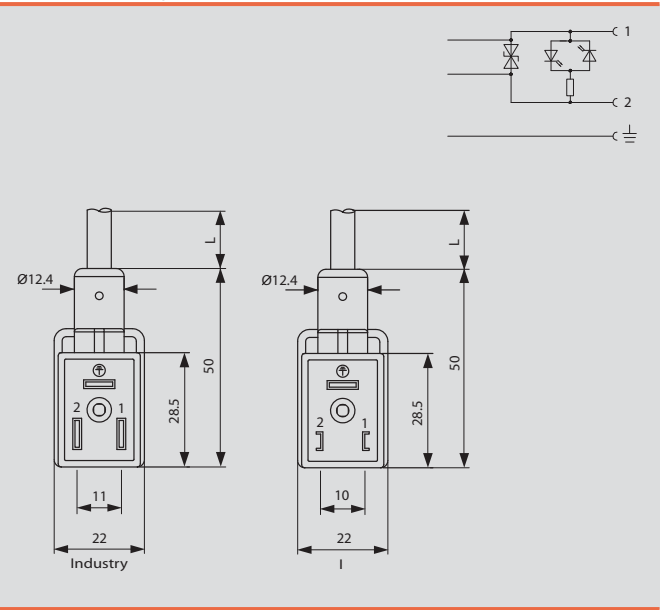
|                                                                                                                                                             |        |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed to order other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                             | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                             | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                             | 10.0 m | xxxxxx1000 |

Technical data

|                                         |              |
|-----------------------------------------|--------------|
| Sheathing colour                        | black        |
| Sheath material                         | PUR          |
| Rated current                           | 4 A          |
| Protection class                        | IP 67        |
| Core cross-section                      | 0.5 mm²      |
| Contact surface                         | tinned       |
| Temperature range of housing            | -25...+85 °C |
| Rated voltage                           | 24 V         |
| (acc. to VDE standard 0110 ISO group C) |              |

L in the drawing is the cable length

Dimensioned drawing



# Cables 3, 4, 5 poles



- 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.

B

## Ordering data

| PUR                                  | Qty.  | Order No.  |
|--------------------------------------|-------|------------|
| SAIH-SLL-3x0.34mm <sup>2</sup> (PUR) | 100 m | 1902110000 |
| SAIH-SLL-4x0.25mm <sup>2</sup> (PUR) | 100 m | 1902120000 |
| SAIH-SLL-4x0.34mm <sup>2</sup> (PUR) | 100 m | 1902130000 |
| SAIH-SLL-3x0.25mm <sup>2</sup> (PUR) | 100 m | 1902140000 |
| SAIH-SLL-5x0.25mm <sup>2</sup> (PUR) | 100 m | 1902100000 |
| PUR halogen-free                     |       |            |
| SAIH-SLL-3x0.34mm <sup>2</sup> (TPE) | 100 m | 1022940000 |
| SAIH-SLL-4x0.34mm <sup>2</sup> (TPE) | 100 m | 1022950000 |
| SAIH-SLL-5x0.34mm <sup>2</sup> (TPE) | 100 m | 1022960000 |
| SAIH-SLL-3x0.25mm <sup>2</sup> (TPE) | 100 m | 1022970000 |
| SAIH-SLL-4x0.25mm <sup>2</sup> (TPE) | 100 m | 1022980000 |
| PVC                                  |       |            |
| SAIH-SLL-3x0.34mm <sup>2</sup> (PVC) | 100 m | 1902160000 |
| SAIH-SLL-4x0.25mm <sup>2</sup> (PVC) | 100 m | 1902170000 |
| SAIH-SLL-4x0.34mm <sup>2</sup> (PVC) | 100 m | 1902180000 |
| SAIH-SLL-3x0.25mm <sup>2</sup> (PVC) | 100 m | 1902190000 |
| SAIH-SLL-5x0.25mm <sup>2</sup> (PVC) | 100 m | 1902150000 |
| Information                          |       |            |

## Technical data

|               |                 |               |
|---------------|-----------------|---------------|
| Colour        |                 | black         |
| Cross-section | mm <sup>2</sup> | 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 |

# Fieldbus, data cables and accessories

## Fieldbus, data cables and accessories

|                                                         |       |
|---------------------------------------------------------|-------|
| Introduction                                            | C.2   |
| Fieldbus distributor - Overview                         | C.4   |
| PROFIBUS-DP - cables                                    | C.6   |
| PROFIBUS-DP - connectors (M12, Sub-D)                   | C. 10 |
| PROFIBUS-DP - FBCon T-distributor                       | C. 22 |
| PROFIBUS-PA - cables                                    | C. 26 |
| PROFIBUS PA - connectors                                | C. 31 |
| PROFIBUS-PA - FBCon T-distributor                       | C. 34 |
| PROFIBUS-PA - FBCon T-distributor with surge protection | C. 40 |
| PROFIBUS-PA - FBCon T-distributor ATEX Ex(ia)           | C. 50 |
| CANopen & DeviceNet™ - cables (M12, M8)                 | C. 58 |
| CANopen & DeviceNet™ - connectors                       | C. 63 |
| ASI - Cables                                            | C. 64 |
| ASI - T-piece                                           | C. 65 |
| Ethernet cables                                         | C. 66 |
| Ethernet plug-in connector                              | C. 70 |
| FOUNDATION Fieldbus - connector (7/8")                  | C. 72 |
| Accessories cable glands                                | C. 73 |

## Bus cables

The bus system lies at the heart of automation engineering. High quality products are essential here if you hope to achieve long term, smooth functionality.

It's not only the slaves and controllers that play a significant role; the type of cables and connection mechanisms in use are also very important. The Weidmüller bus cables are the perfect solution here. The products which we manufacture ourselves (used, for example, in the Profibus, industrial Ethernet and CANopen/DeviceNet sectors) have a 360 degree shielding

within the moulding. This provides effective protection for signal and data transmission.

Delivery times are another decisive factor. Our special production strategy allows us to quickly manufacture parts that are customised to a specific order. We have a dedicated department that is focussed on this strategy and located near the Detmold central warehouse in order to keep delivery times to a minimum.



Bus cables: shown here in the standard colours:

blue (Profibus-PA Ex i), black (CANopen/DeviceNet or Profibus-PA), magenta (Profibus-DP) and green (industrial Ethernet) together with the sensor cables

**Cables****M12 plug-in connector****Sub-D connector****FBCon T-distributor**

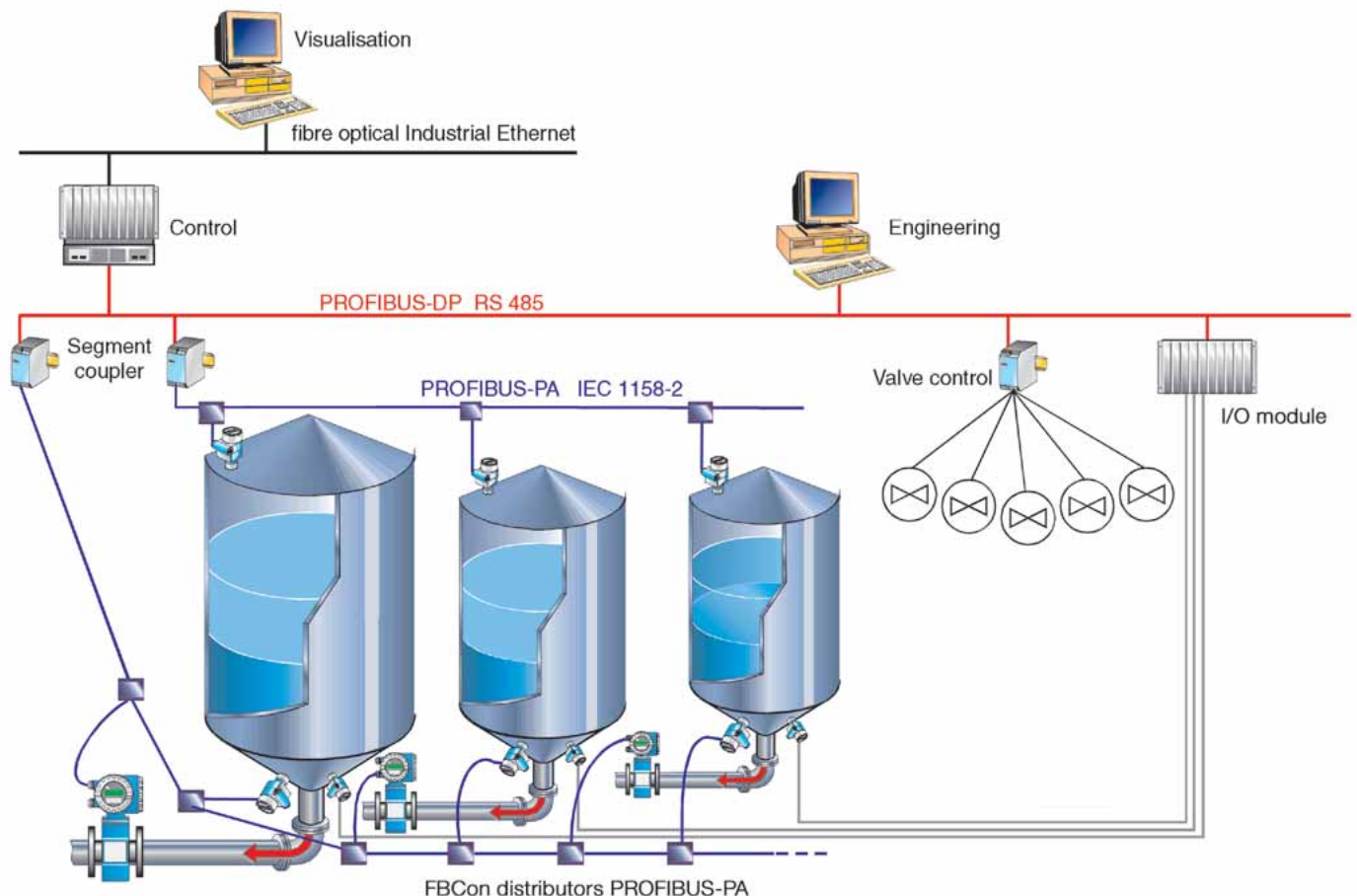
# System description, fieldbus components

FBCon fieldbus distributors are available in industrial and Ex(ia) versions. They are used for coupling 1 - 8 field devices or sensors. The connection is made via spur. The spur is connected by an M12 plug in connector or directly via an EMC cable gland. The communication and device powering is handled by a common 2-core wire.

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 (non EX)
- ⚡ ATEX version
- Pressure equalising element
- IP65, IP66, IP67 Ingress protection class
- Stainless steel versions
- PROFIBUS-PA compatible

## Typical PROFIBUS system layout



# Product coding

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                                                                                             |
| 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                                                   |
| 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 grey. The Ex approved distributors are painted blue.

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.

C



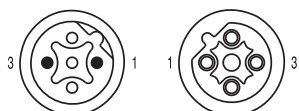
FBCon PA CG/M12 1way Limiter



FBCon SS PCG 1way



FBCon PA CG 1way Ex



**Female**



## 2-pole

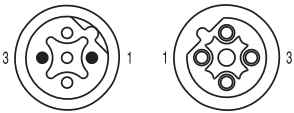
| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12G-PB-1.5D         | 1873300150 |
| SAIL-M12G-PB-1.5E         | 1058530150 |
| SAIL-M12W-PB-1.5D         | 1061970150 |
| SAIL-M12W-PB-1.5E         | 1062340150 |
| SAIL-M12BG-PB-1.5D        | 1873320150 |
| SAIL-M12BG-PB-1.5E        | 1058540150 |
| SAIL-M12BW-PB-1.5D        | 1062300150 |
| SAIL-M12BW-PB-1.5E        | 1062370150 |
| Other versions on request |            |

### Dimensioned drawing

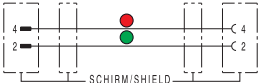
|                              |                      |
|------------------------------|----------------------|
| Sheathing colour             | magenta (RAL 4008)   |
| Protection class             | IP 67                |
| Core cross-section           | 0.34 mm <sup>2</sup> |
| Contact surface              | gold-plated          |
| Temperature range of housing | -25...+85 °C         |

## C.6

PROFIBUS-DP cables  
Connecting cables



Male Female



Ordering data

| Male, straight - Female, straight |       |
|-----------------------------------|-------|
| PUR/TPE                           | 1.5 m |
| PVC/PVC                           | 1.5 m |
| Male, straight - Female, angled   |       |
| PUR/TPE                           | 1.5 m |
| PVC/PVC                           | 1.5 m |
| Male, angled - Female, angled     |       |
| PUR/TPE                           | 1.5 m |
| PVC/PVC                           | 1.5 m |
| Note                              |       |

2-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12GM12G-PB-1.5D     | 1873310150 |
| SAIL-M12GM12G-PB-1.5E     | 1058570150 |
|                           |            |
| SAIL-M12GM12W-PB-1.5D     | 1062310150 |
| SAIL-M12GM12W-PB-1.5E     | 1062380150 |
|                           |            |
| SAIL-M12WM12W-PB-1.5D     | 1062330150 |
| SAIL-M12WM12W-PB-1.5E     | 1062400150 |
| Other versions on request |            |

|  |  |  |
|--|--|--|
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Standard cable lengths

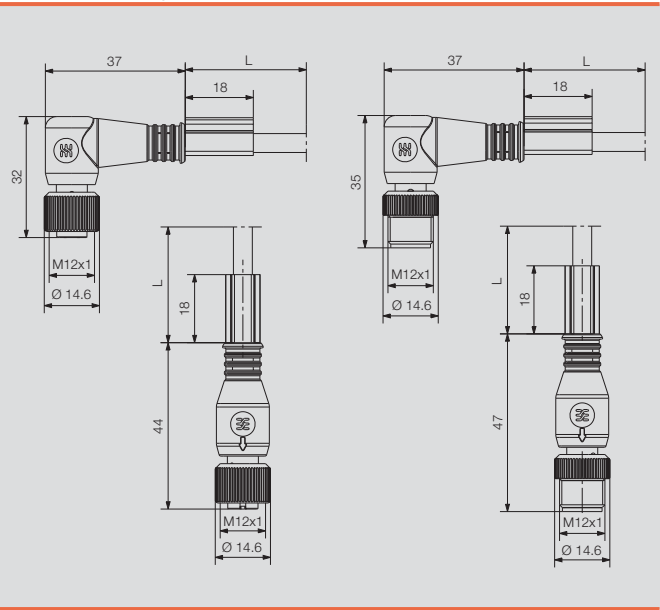
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

Technical data

|                              |                    |
|------------------------------|--------------------|
| Sheathing colour             | magenta (RAL 4008) |
| Protection class             | IP 67              |
| Core cross-section           | 0.34 mm²           |
| Contact surface              | gold-plated        |
| Temperature range of housing | -25...+85 °C       |

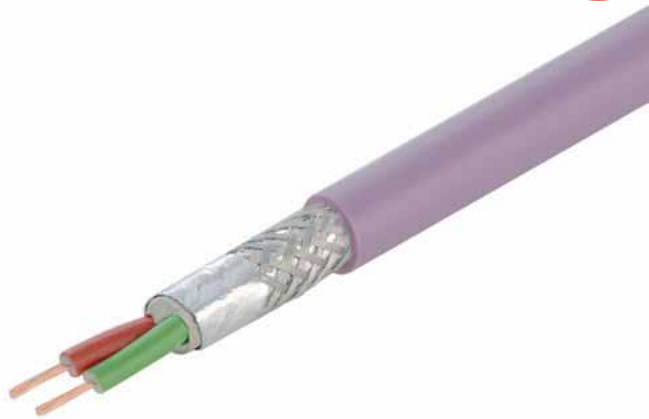
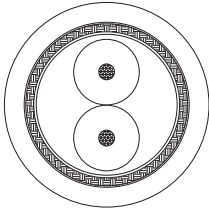
Chapter W includes additional technical specifications for the cable

Dimensioned drawing



PROFIBUS-DP - cables

PROFIBUS-DP bulk lengths



PROFIBUS-DP bulk lengths

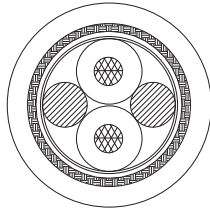
Ordering data

|             | Type               | Order No.  |
|-------------|--------------------|------------|
| Metre goods | SAIH-PB-2X0.24-PUR | 1232620000 |

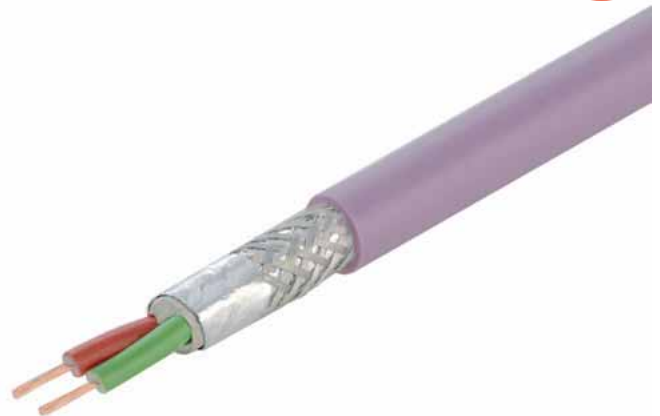
Technical data

| Electrical characteristics at 20 °C               |             | Requirement             | Test specifications  |
|---------------------------------------------------|-------------|-------------------------|----------------------|
| Conductor resistance                              |             |                         | EN 50 289 Parts 1-2  |
| AWG 24                                            |             | ≤ 84.0 Ω/km             |                      |
| Insulation resistance                             |             | ≥ 1 GΩ • km             | EN 50 289 Parts 1-4  |
| Operational capacity                              |             | A/A                     | EN 50 289 Parts 1-5  |
| at 800 Hz                                         |             | ≤ 35 nF/km              |                      |
| Capacitive earth coupling                         |             |                         | EN 50 289 Parts 1-5  |
| at 800 Hz                                         |             | < 1500 pF/km            |                      |
| Characteristic impedance                          |             |                         | EN 50 289 Parts 1-11 |
| at 9.6 kHz                                        |             | 300 Ω (RW)              |                      |
| at 38.4 kHz                                       |             | (185 ± 20) Ω            |                      |
| at 3-20 MHz                                       |             | (150 ± 15) Ω            |                      |
| Conductor attenuation (nominal values)            |             |                         | EN 50 289 Parts 1-8  |
| AWG 24                                            |             |                         |                      |
|                                                   | at 9.6 kHz  | 3 dB/km                 |                      |
|                                                   | at 38.4 kHz | 5 dB/km                 |                      |
|                                                   | at 4 MHz    | 26 dB/km                |                      |
|                                                   | at 16 MHz   | 55 dB/km                |                      |
| Test voltage (U <sub>test</sub> ) (50 Hz, 1 min.) |             |                         | EN 50 289 Parts 1-3  |
| Wire/wire                                         |             | 500 V                   |                      |
| Wire/shield                                       |             | 500 V                   |                      |
| Thermal characteristics                           |             | Requirement             |                      |
| Permitted operating temperature range             |             |                         |                      |
| Static usage:                                     |             |                         |                      |
| TPE-U sheathing                                   |             | -40°C to +70°C          |                      |
| Dynamic usage (routing/installation):             |             |                         |                      |
| TPE-U sheathing                                   |             | -20 °C to +60 °C        |                      |
| Mechanical characteristics                        |             | Requirement             |                      |
| Max. permitted strain load:                       |             |                         |                      |
| Static                                            |             | 50 N/mm²                |                      |
| Dynamic                                           |             | 20 N/mm²                |                      |
| Bending radius *)                                 |             | Stranded Litz conductor |                      |
|                                                   |             | (AWG 24)                |                      |
| simple                                            |             | 7.5 x d                 |                      |
| multiple                                          |             | 15 x d                  |                      |

## PROFIBUS-DP bulk lengths



n



C

## PROFIBUS-DP bulk lengths

### Ordering data

|             | Type                  | Order No.  |
|-------------|-----------------------|------------|
| Metre goods | SAIH-PB-2X0.34-PVC DE | 1933640000 |

### Technical data

| Assembly                                 |                                                                                                                 |                  |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------|
| Wire                                     | Conductor: copper wire, without insulation, AWG 22,<br>0.64 mm Ø nominal Insulation: PE foam, 2.55 mm Ø nominal |                  |
| Pair                                     | 2 wires according to 4.1 (red, green) to pair stranded, 5.1 mm Ø nominal                                        |                  |
| Wrapping                                 | Plastic foil, 5.2 mm Ø nominal                                                                                  |                  |
| Shield                                   | a) AL foil, 5.4 mm Ø nominal<br>b) Braiding tin-plated copper, coverage approx. 60 %, 6.0 mm<br>Ø nominal       |                  |
| Outer cladding                           | PVC YM, 7.8 ±0.2 mm Ø nominal                                                                                   |                  |
| Electrical characteristics at 20 °C      |                                                                                                                 |                  |
| Conductor resistance                     | ≤ 55 Ω/km                                                                                                       |                  |
| Insulation resistance                    | ≥ 1 GΩ • km                                                                                                     |                  |
| Operational capacity                     | 30 pF/m nominal                                                                                                 |                  |
| Characteristic impedance                 | 9.6 KHz (RW)                                                                                                    | 270 Ω            |
|                                          | 38.4 KHz (RW)                                                                                                   | 185 Ω            |
|                                          | 3 – 20 MHz                                                                                                      | 150 ± 15 Ω       |
| Attenuation                              | 9.6 KHz                                                                                                         | 2.2 dB/Km        |
|                                          | 38.4 KHz                                                                                                        | 3.4 dB/Km        |
|                                          | 100 KHz                                                                                                         | 4.5 dB/Km        |
|                                          | 1 MHz                                                                                                           | 11.5 dB/Km       |
|                                          | 3 MHz                                                                                                           | 18.2 dB/Km       |
|                                          | 10 MHz                                                                                                          | 33.2 dB/Km       |
| 20 MHz                                   | 48.0 dB/Km                                                                                                      |                  |
| Test voltage (50 Hz, 1 min.)             | Wire/wire                                                                                                       | 1.5 kVeff        |
|                                          | Wire/shield                                                                                                     | 1.5 kVeff        |
| Mechanical and thermal characteristics   |                                                                                                                 |                  |
| Temperature range                        | Stationary<br>moving                                                                                            | -40 °C to +70 °C |
| Min. permitted bending radius            | Once                                                                                                            | 1.5 kVeff        |
|                                          | Multiple                                                                                                        | 1.5 kVeff        |
| Max. tensile load resistance             | Static                                                                                                          | 1.5 kVeff        |
|                                          | Dynamic                                                                                                         | 1.5 kVeff        |
| Thermal fire load (guideline value) good |                                                                                                                 |                  |

PROFIBUS-DP - connectors (M12, SubD)

Tension clamp connection M12,  
stainless steel  
B-coded



SAIS / SAIB VA  
straight



Ordering data

|        |              |
|--------|--------------|
| Male   | 5-pole, PG 9 |
| Socket | 5-pole, PG 9 |
| Note   |              |

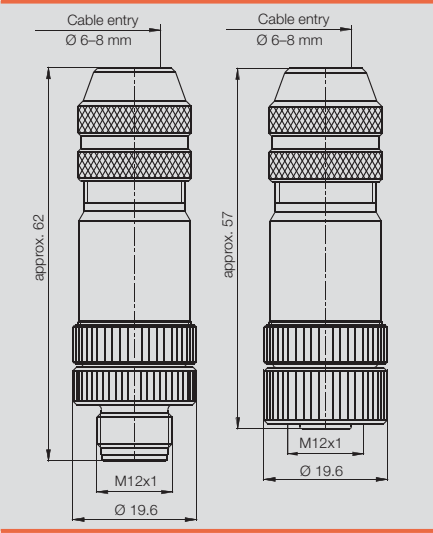
| Type              | Qty. | Order No.  |
|-------------------|------|------------|
| SAIS 5/9-VA-B-COD | 1    | 1920720000 |
| SAIB 5/9-VA-B-COD | 1    | 1920730000 |

Technical data

|                                  |
|----------------------------------|
| Type of connection               |
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| Note                             |

|                          |
|--------------------------|
| Tension clamp connection |
| 1.4404/316L              |
| M12                      |
| 6...8 mm                 |
| 0.25 - 0.5 mm²           |
| 4 A                      |
| 125 V                    |
| -25...+85 °C             |
| IP 69 k                  |
| gold-plated              |
| PB = PROFIBUS (B-COD)    |

Dimensioned drawing



PB = PROFIBUS (B-COD)

Screw connection M12, metal (EMC)  
B-coded



SAISM / SAIBM

straight



SAISW / SAIBW

Angled



Ordering data

|        |              |
|--------|--------------|
| Male   | 5-pole, PG 9 |
| Socket | 5-pole, PG 9 |
| Note   |              |

| Type                    | Qty. | Order No.  |
|-------------------------|------|------------|
| SAISM 5/8S M12 5P B-COD | 1    | 1784790000 |
| SAIBM 5/8S M12 5P B-COD | 1    | 1784780000 |

| Type                  | Qty. | Order No.  |
|-----------------------|------|------------|
| SAISW-M-5/8 M12 B-COD | 1    | 1944570000 |
| SAIBW-M-5/8 M12 B-COD | 1    | 1944580000 |

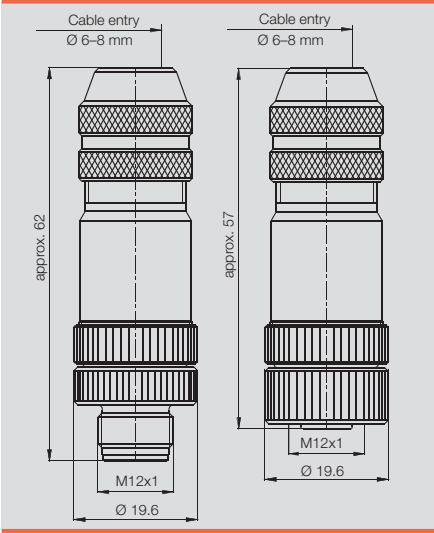
Technical data

|                                  |
|----------------------------------|
| Type of connection               |
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| Note                             |

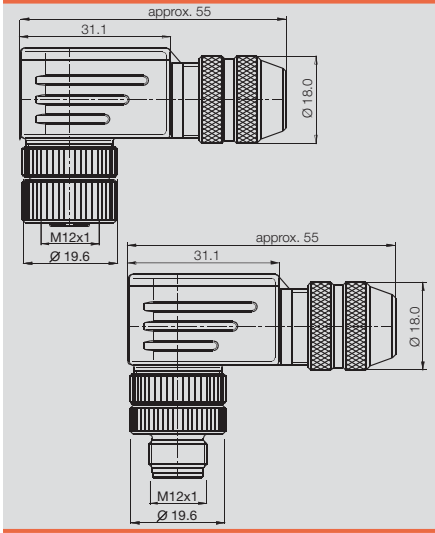
|                  |
|------------------|
| Screw connection |
| CuZn             |
| M12              |
| 6...8 mm (PG9)   |
| 0.14 - 0.75 mm²  |
| 4 A              |
| 125 V            |
| -25...+85 °C     |
| IP 67            |
| gold-plated      |

|                  |
|------------------|
| Screw connection |
| CuZn             |
| M12              |
| 6...8 mm (PG9)   |
| 0.14 - 0.75 mm²  |
| 4 A              |
| 125 V            |
| -25...+85 °C     |
| IP 67            |
| gold-plated      |

Dimensioned drawing



Dimensioned drawing



PROFIBUS-DP - connectors (M12, SubD)

IDC connection  
B-coded



SAIS / SAIB

straight



Ordering data

|        |              |
|--------|--------------|
| Male   | 3-pole, PG 9 |
| Socket | 3-pole, PG 9 |
| Note   |              |

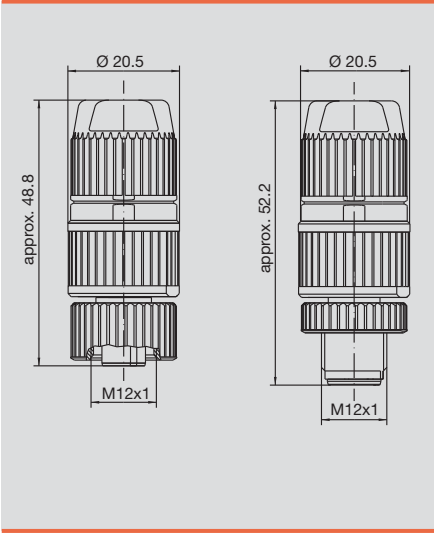
| Type                | Qty. | Order No.  |
|---------------------|------|------------|
| SAIS-3-IDC-M12B-COD | 1    | 1864730000 |
| SAIB-3-IDC-M12B-COD | 1    | 1864740000 |

Technical data

|                                  |
|----------------------------------|
| Type of connection               |
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| Note                             |

|                                                           |
|-----------------------------------------------------------|
| Insulation displacement connection                        |
| CuZn                                                      |
| M12                                                       |
| 7...8.8 mm                                                |
| 0.34 - 0.75 mm²                                           |
| 4 A                                                       |
| 32 V                                                      |
| -25...+85 °C                                              |
| IP 67                                                     |
| tinned                                                    |
| PB = PROFIBUS (B-COD)<br>IE = Industrial Ethernet (D-COD) |

Dimensioned drawing



PB = PROFIBUS (B-COD)  
IE = Industrial Ethernet (D-COD)



# 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:

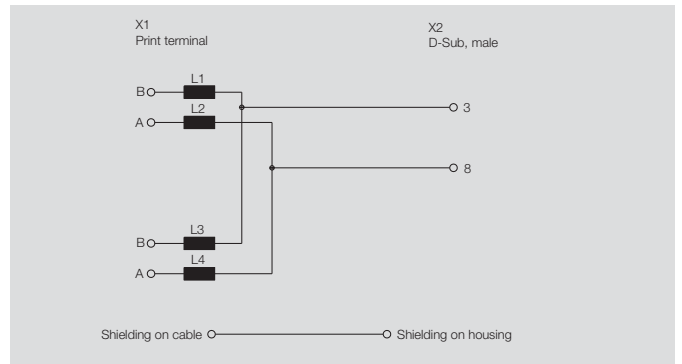
1. without terminating resistor
2. with built in terminating resistor
3. with switch in terminating resistor and connection for programming unit via IDC connection
4. with switch in terminating resistor and connection for programming unit via tension clamp connection.

- 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

## Technical data

|                                |               |                           |
|--------------------------------|---------------|---------------------------|
| 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 | mm²           | rigid max. 1.5            |
|                                |               | flexible max. 1.0         |
| Type of connection             | Screw         | 8395500000 and 8460860000 |
|                                | IDC           | 1916980000                |
|                                | Tension clamp | 1934200000                |
| <b>Note</b>                    |               |                           |

## PB-DP SUB-D



## Ordering data

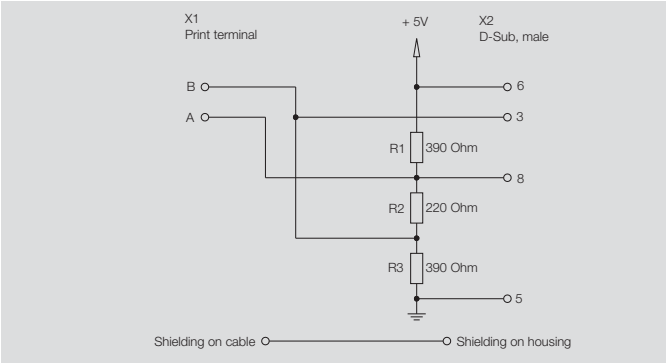
| Type        | Qty. | Order No.  |
|-------------|------|------------|
| PB-DP SUB-D | 1    | 8395500000 |

Sub-D



Fieldbus, data cables  
and accessories

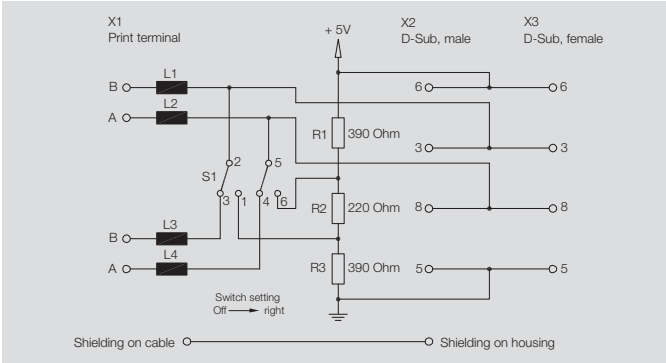
PB-DP SUB-D TERM



Ordering data

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

PB-DP SUB-D IDC/ZF TERM PS



Ordering data

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

C

PROFIBUS-DP - connectors (M12, Sub-D)

PROFIBUS Sub-D connector with M12 (90°)

Weidmüller's new Sub-D product line features fully shielded connector variants that enable direct tapping with M12 cables. This allows you to avoid the types or errors that often occur when installing similar connectors with screw connections. The increased contact reliability of the Sub-D connectors more than compensates for the cost of the extra M12 connectors.

Special features:

- Complete shielded housing
- Compact housing for small places
- Connection without any mistake because of the M12 connector
- 100% certified components

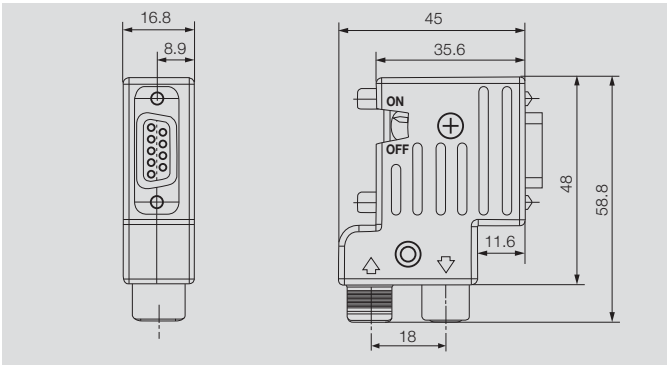
Technical data

|                               |                                                                                                     |
|-------------------------------|-----------------------------------------------------------------------------------------------------|
| Data rate                     | acc. to PROFIBUS Specification, 12Mbit/s                                                            |
| Connector pinning             | acc. to PROFIBUS Specification                                                                      |
| PROFIBUS DP connector         | D-Sub 9-polig, male                                                                                 |
| PROFIBUS DP program connector | D-Sub 9-polig, female                                                                               |
| PROFIBUS cable connector      | M12 B coded, male + female, Pin 2 and 4, connected, Cable output: M12 female, Cable entry: M12 male |
| Mechanical lifetime           | 200 connections                                                                                     |
| Temperature range             | -20 °C to +70 °C                                                                                    |
| Humidity                      | Max. 75 % at +25 °C, non condensing                                                                 |
| Ingress protection class      | IP30                                                                                                |
| Housing material              | ZnAl                                                                                                |
| D-Sub screw connection        | UNC 4-40                                                                                            |

Note

PB-DP SUB-D M12 TERM

PROFIBUS-Connector 90° M12 with switch, without programming connector



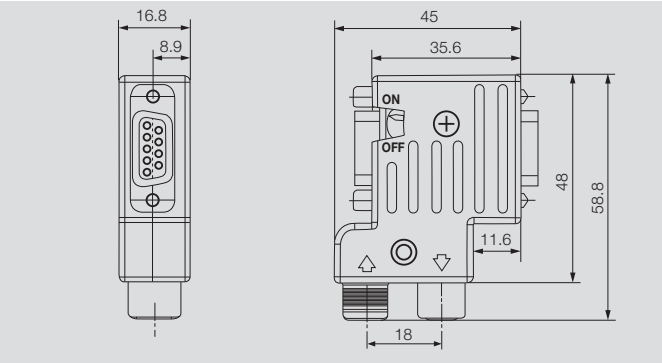
Ordering data

| Type                 | Qty. | Order No.  |
|----------------------|------|------------|
| PB-DP SUB-D M12 TERM | 1    | 1140650000 |

PROFIBUS Sub-D connector with M12 (90°)

PB-DP SUB-D M12 TERM PS

PROFIBUS-Connector 90° M12 with switch, with programming connector



Ordering data

| Type                    | Qty. | Order No.  |
|-------------------------|------|------------|
| PB-DP SUB-D M12 TERM PS | 1    | 1140640000 |

### PROFIBUS Sub-D Connector with tension clamp connection (35°)

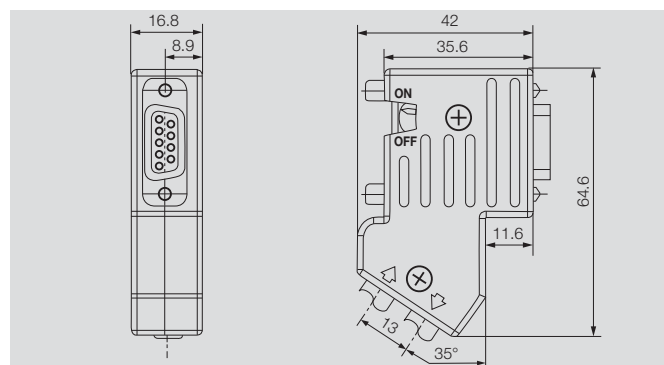
The new Sub-D Family from Weidmüller offers a fully shielded version.

### Special features:

- Completely shielded housing
- Compact design for use in small spaces

**PB-DP SUB-D ZF35TERM**

PROFIBUS-Connector 35° with switch, without programming connector



## Technical data

|                               |                                          |
|-------------------------------|------------------------------------------|
| Data rate                     | acc. to PROFIBUS Specification, 12Mbit/s |
| Connector pinning             | acc. to PROFIBUS Specification           |
| PROFIBUS DP connector         | D-Sub 9-polig, male                      |
| PROFIBUS DP program connector | D-Sub 9-polig, female                    |
| PROFIBUS cable connector      | Tension clamp                            |
| Mechanical lifetime           | 200 mating cycles                        |
| Temperature range             | -20 °C to +70 °C                         |
| Humidity                      | Max. 75 % at +25 °C, non condensing      |
| Ingress protection class      | IP30                                     |
| Housing material              | ZnAl                                     |
| D-Sub screw connection        | UNC 4-40                                 |

### Note

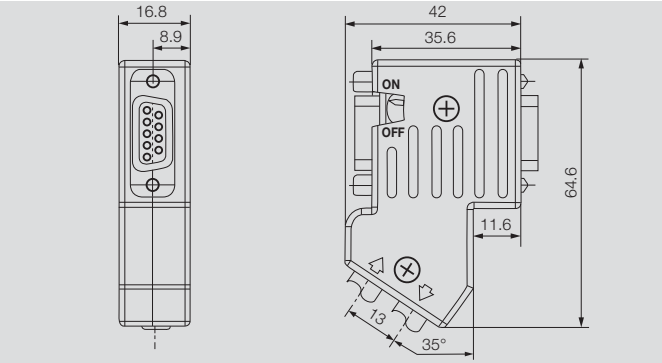
## Ordering data

| Type                 | Qty. | Order No.  |
|----------------------|------|------------|
| PB-DP SUB-D ZF35TERM | 1    | 1173220000 |

PROFIBUS Sub-D Connector with tension clamp connection (35°)

PB-DP SUB-D ZF35TERM PS

PROFIBUS-Connector 35° with switch, with programming connector



Ordering data

| Type                    | Qty. | Order No.  |
|-------------------------|------|------------|
| PB-DP SUB-D ZF35TERM PS | 1    | 1173240000 |

### PROFIBUS Sub-D Connector with tension clamp connection (90°)

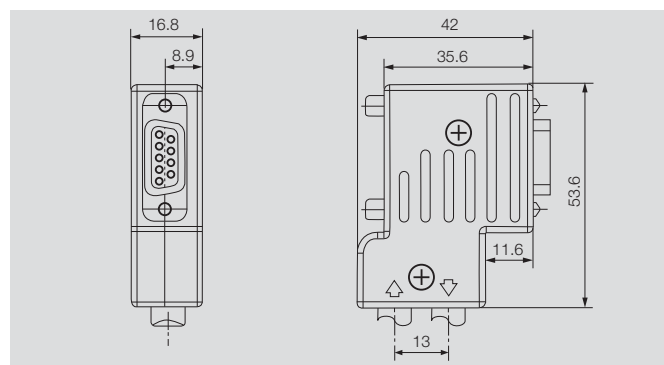
The new Sub-D Family from Weidmüller offers a fully shielded Version.

### Special features:

- Completely shielded housing
- Compact design for use in small spaces

## PB-DP SUB-D ZF

PROFIBUS-Connector 90° without switch, without programming connector



## Technical data

|                               |                                          |
|-------------------------------|------------------------------------------|
| Data rate                     | acc. to PROFIBUS Specification, 12Mbit/s |
| Connector pinning             | acc. to PROFIBUS Specification           |
| PROFIBUS DP connector         | D-Sub 9-polig, male                      |
| PROFIBUS DP program connector | D-Sub 9-polig, female                    |
| PROFIBUS cable connector      | Tension clamp                            |
| Mechanical lifetime           | 200 mating cycles                        |
| Temperature range             | -20 °C to +70 °C                         |
| Humidity                      | Max. 75 % at +25 °C, non condensing      |
| Ingress protection class      | IP30                                     |
| Housing material              | ZnAl                                     |
| D Sub screw connection        | UNC 4-40                                 |

### Note

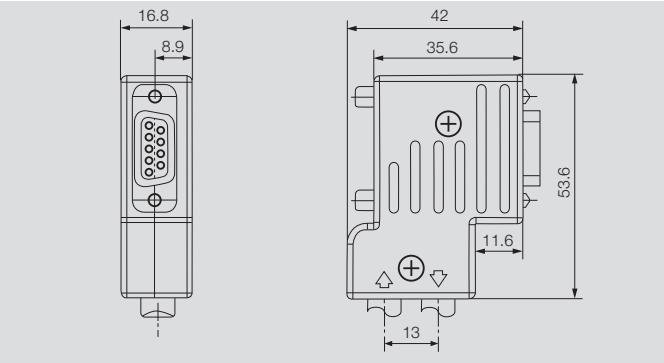
## Ordering data

| Type           | Qty. | Order No.  |
|----------------|------|------------|
| PB-DP SUB-D ZF | 1    | 1161890000 |

PROFIBUS Sub-D Connector with tension clamp connection (90°)

PB-DP SUB-D ZF TERM

PROFIBUS-Connector 90° with switch, without programming connector

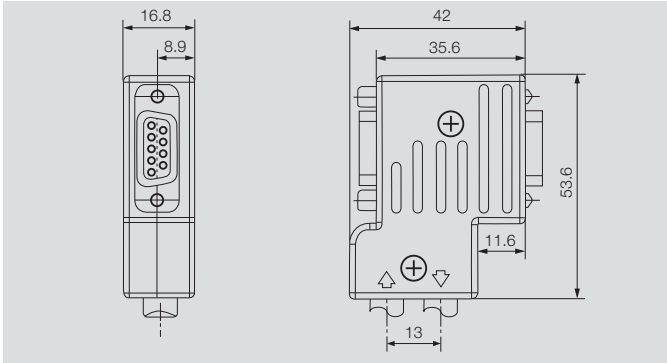


Ordering data

| Type                | Qty. | Order No.  |
|---------------------|------|------------|
| PB-DP SUB-D ZF TERM | 1    | 1161870000 |

PB-DP SUB-D ZF TERM PS

PROFIBUS-Connector 90° with switch, with programming connector



Ordering data

| Type                   | Qty. | Order No.  |
|------------------------|------|------------|
| PB-DP SUB-D ZF TERM PS | 1    | 1161880000 |

# PROFIBUS-DP distributors



## PROFIBUS-DP distributor

The PROFIBUS-DP topology is a line structure. The spur (T-distributor) connects the individual field devices or remote I/Os to the bus cable. The length of the spur cable depends on the transmission rate and should be as short as possible. The total of all spur 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 or stainless steel enclosure where it is connected to a tension clamp terminal. The spur line to the device is connected using a B-coded M12 socket or an EMC cable gland. Terminating resistors must be wired onto the start and end of the PROFIBUS-DP network. The Terminator modules can take care of this task. The electrically isolated 24-VDC power supply for the bus terminator is routed into the cable gland on the right side. The housing features a pressure-compensation mechanism that counters the effects of climatic fluctuations. The guidelines issued by the PROFIBUS user organisation must be observed.

## PROFIBUS-DP

### Technical data

|                             |                                                   |
|-----------------------------|---------------------------------------------------|
| Operating temperature       | -25 °C 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 <sup>2</sup> |
| 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 | Bus terminator 24 VDC +/-10 %                     |
| Trunk cable via cable gland |                                                   |

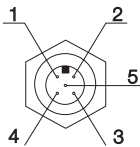
### Installation advice

|                              |              |
|------------------------------|--------------|
| Torques                      |              |
| M16 cable gland at enclosure | 6.0 Nm       |
| Union nut, M16 cable gland   | 4.0 Nm       |
| Enclosure cover              | 1.8 – 2.0 N  |
| External earthing cable      | 1.8 – 2.0 Nm |
| Adaptor/stud cable           | 0.5 Nm       |

### 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



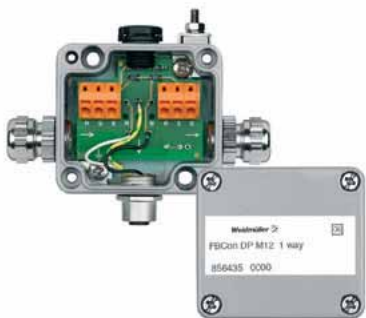
1-channel distributor

Cable gland



1-channel distributor

M12 connection



Ordering data

| Type                             | Type of connection  | Qty. | Order No.  |
|----------------------------------|---------------------|------|------------|
| <b>Aluminium housing</b>         |                     |      |            |
| FBCon DP CG 1way                 | branch line CG      | 1    | 8564340000 |
| <b>Stainless steel enclosure</b> |                     |      |            |
| FBCon SS DP PCG 1way             | all connections PCG | 1    | 8714260000 |

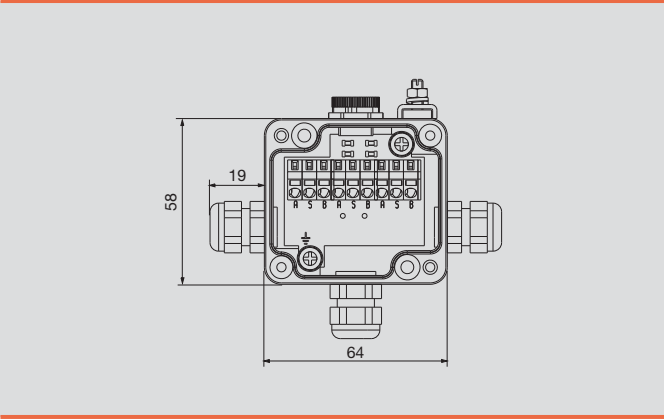
Ordering data

| Type                             | Type of connection | Qty. | Order No.  |
|----------------------------------|--------------------|------|------------|
| <b>Aluminium housing</b>         |                    |      |            |
| FBCon DP M12 1way                | branch line M12    | 1    | 8564350000 |
| <b>Stainless steel enclosure</b> |                    |      |            |
| FBCon SS DP M12 1way             | branch line M12    | 1    | 8714270000 |

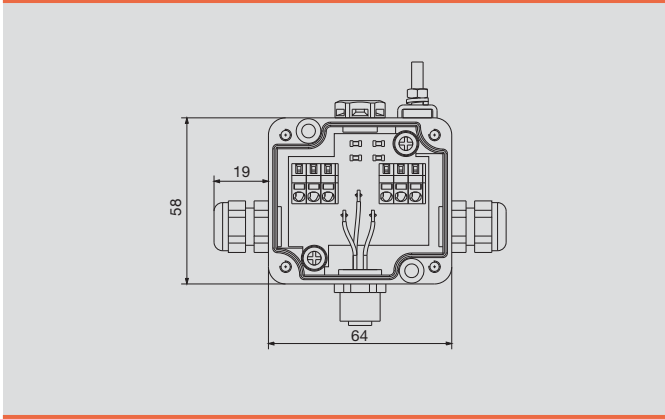
CG = brass cable gland  
PCG = plastic cable gland

CG = brass cable gland  
PCG = plastic cable gland

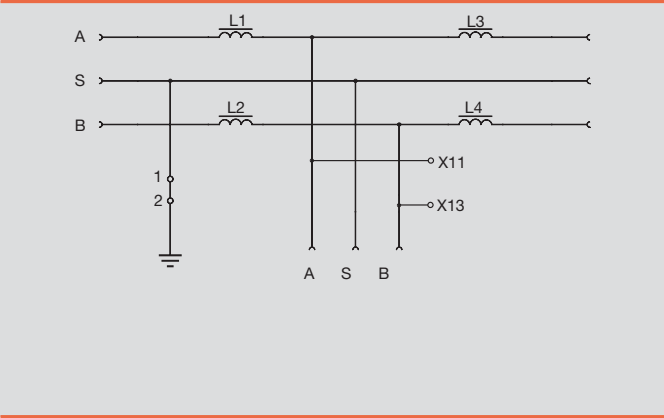
Dimensioned drawing



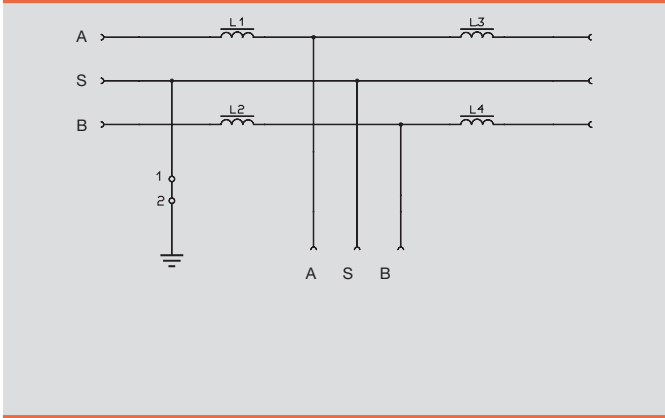
Dimensioned drawing



Wiring diagram



Wiring diagram



PROFIBUS-DP - FBCon T-distributor

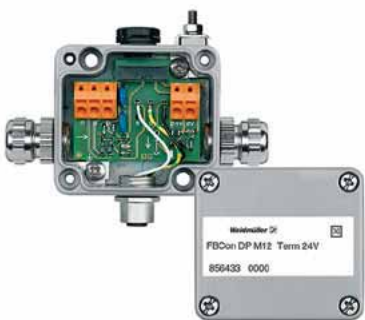
Terminator

Cable gland



Terminator

M12 connection



Ordering data

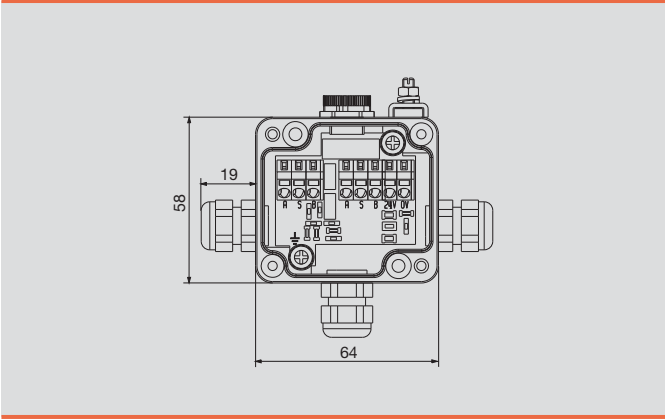
| Type                             | Type of connection  | Qty. | Order No.  |
|----------------------------------|---------------------|------|------------|
| <b>Aluminium housing</b>         |                     |      |            |
| FBCon DP CG Term 24V             | branch line CG      | 1    | 8564290000 |
| <b>Stainless steel enclosure</b> |                     |      |            |
| FBCon SS DP PCG Term 24V         | all connections PCG | 1    | 8714240000 |

Ordering data

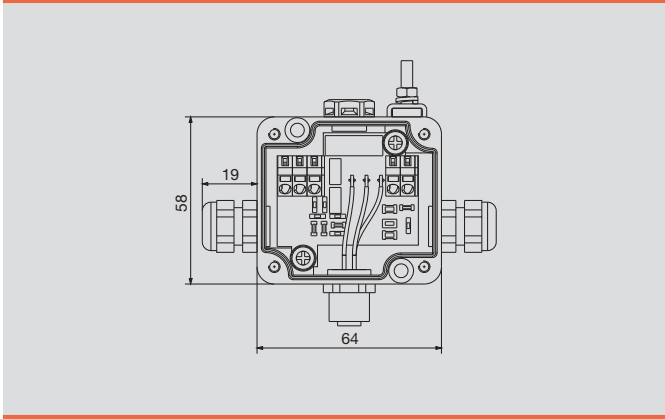
| Type                             | Type of connection | Qty. | Order No.  |
|----------------------------------|--------------------|------|------------|
| <b>Aluminium housing</b>         |                    |      |            |
| FBCon DP M12 Term 24V            | branch line M12    | 1    | 8564330000 |
| FBCon DP M12 Term 5V             | branch line M12    | 1    | 8564320000 |
| <b>Stainless steel enclosure</b> |                    |      |            |
| FBCon SS DP M12 Term 24V         | branch line M12    | 1    | 8714250000 |

CG = brass cable gland  
PCG = plastic cable gland

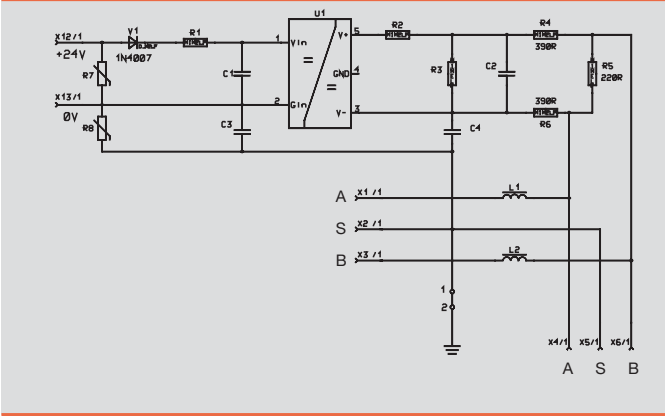
Dimensioned drawing



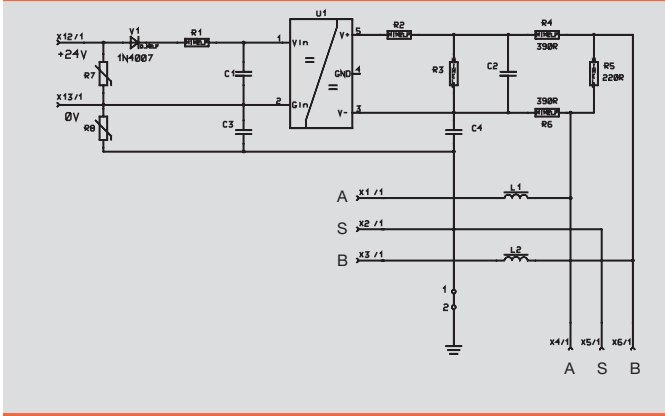
Dimensioned drawing



Wiring diagram



Wiring diagram



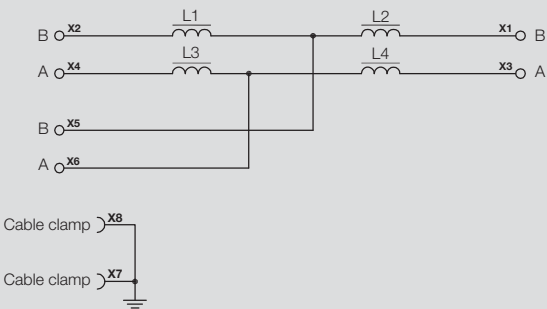
# PROFIBUS-DP IP 20 T-distributor



The distributor for PROFIBUS-DP enables the user to connect it conveniently in the electrical cabinet.  
They can be mounted on TS32/35 rails and used to connect standardised PROFIBUS-DP lines. Spur cables can also be connected. Please note that spur cables should be kept as 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

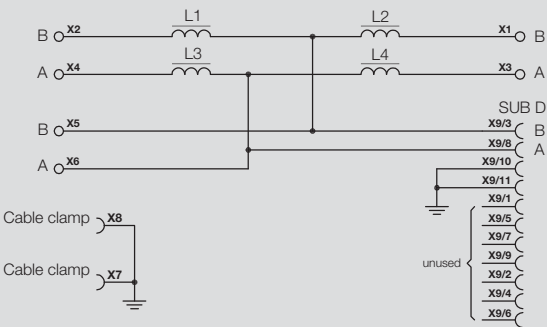
|                                |     |                                                                           |
|--------------------------------|-----|---------------------------------------------------------------------------|
| Data transmission rate         |     | max. 1.5 Mbps (with max. 6.6 m spur line)<br>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 | mm² | 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





### 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.

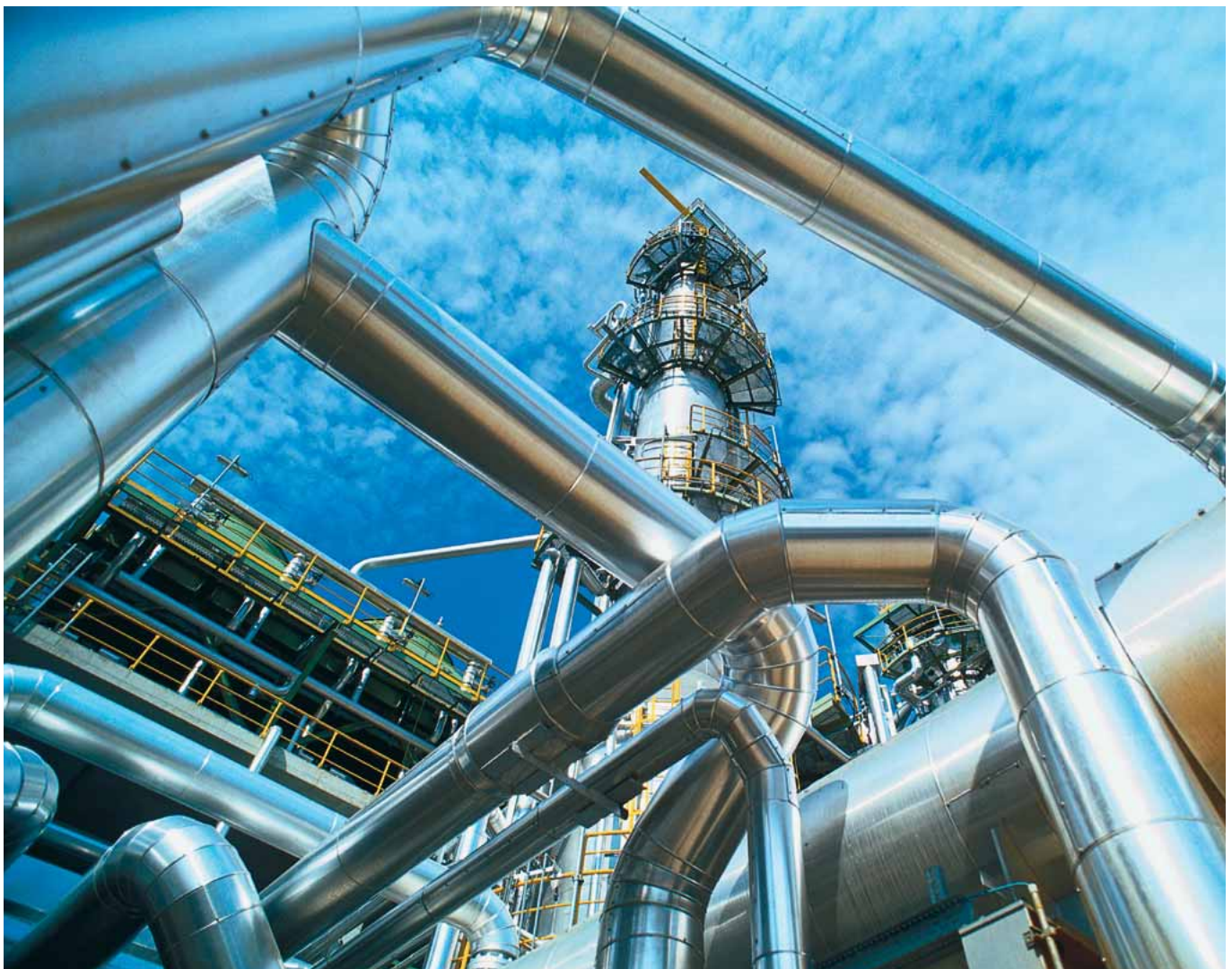
Integration in the PROFIBUS-DP network is done by means of a segment coupler.

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

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.





**PROFIBUS-PA cables**



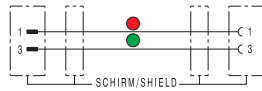
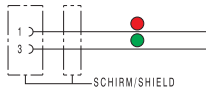
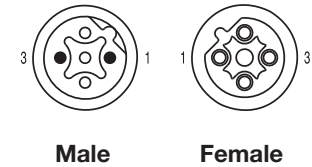
**PROFIBUS-PA connectors**



**Profibus PA distributors**

PROFIBUS-PA - cables

Cables



Ordering data

| Designation                        |      |
|------------------------------------|------|
| Industrial zone                    |      |
| One side without connector, male   |      |
| M12 EMV/black/1M                   | 1 m  |
| M12 EMV/black/2M                   | 2 m  |
| M12 EMV/black/5M                   | 5 m  |
| M12 EMV/black/10M                  | 10 m |
| One side without connector, female |      |
| M12 EMV/black/1M                   | 1 m  |
| M12 EMV/black/2M                   | 2 m  |
| M12 EMV/black/5M                   | 5 m  |
| M12 EMV/black/10M                  | 10 m |
| Connecting cables, male - female   |      |
| M12 EMV/black/1M                   | 1 m  |
| M12 EMV/black/2M                   | 2 m  |
| M12 EMV/black/5M                   | 5 m  |
| M12 EMV/black/10M                  | 10 m |
| Note                               |      |

| Type                               | Order No.  |
|------------------------------------|------------|
| PROFIBUS-PA cable                  |            |
| FBC PA M12 M 1M                    | 1785120100 |
| FBC PA M12 M 2M                    | 1785120200 |
| FBC PA M12 M 5M                    | 1785120500 |
| FBC PA M12 M 10M                   | 1785121000 |
| FBC PA M12 FM 1M                   | 1785110100 |
| FBC PA M12 FM 2M                   | 1785110200 |
| FBC PA M12 FM 5M                   | 1785110500 |
| FBC PA M12 FM 10M                  | 1785111000 |
| FBC PA M12 M-FM 1M                 | 1785100100 |
| FBC PA M12 M-FM 2M                 | 1785100200 |
| FBC PA M12 M-FM 5M                 | 1785100500 |
| FBC PA M12 M-FM 10M                | 1785101000 |
| Other lengths available on request |            |

Wall bushing



Ordering data

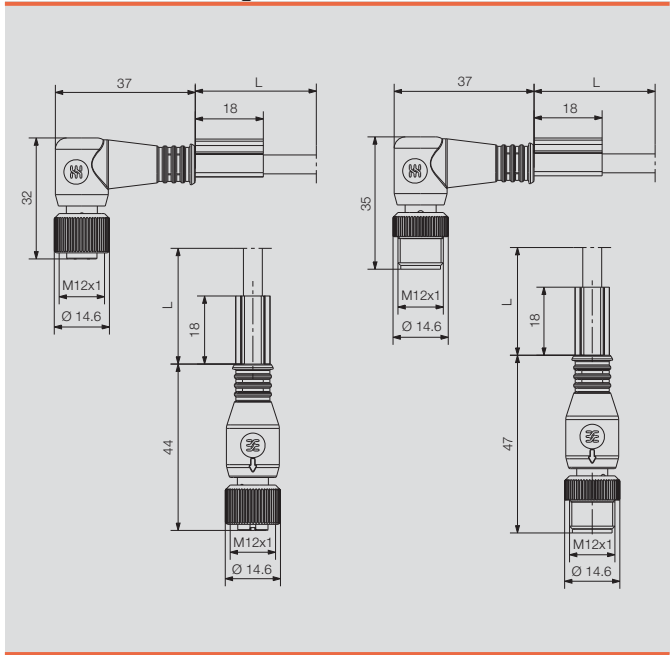
| Type                 | Length | Qty. | Order No.  |
|----------------------|--------|------|------------|
| SAI-WDF-5P M12 60 mm | 60 mm  | 1    | 1819450000 |

Customisable male and female connectors are still required for use with cables that have a connector on only one end.

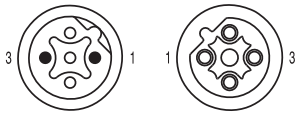
Technical data

| Wire resistance (loop)                | max. $\Omega$ /km        | 44               |
|---------------------------------------|--------------------------|------------------|
| Insulation resistance                 | min. $G\Omega \times km$ | 5                |
| Working capacity at 800 Hz            | nom. nF/km               | 52               |
| Inductance 800 Hz                     | mH/km                    | ca. 0.4          |
| Characteristic impedance at 31.25 kHz | $\Omega$                 | 100 $\pm$ 20 %   |
| at $\geq$ 1 MHz                       | nom. $\Omega$            | 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 dispersion speed               |                          |                  |
|                                       | nom. [%]                 | 79               |
| Coupling resistance up to 30 MHz      |                          |                  |
|                                       | max. mOhm/m              | 250              |
| Operating voltage                     |                          |                  |
| (not for three-phase use)             |                          |                  |
|                                       | Peak value 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                                  |                          |                  |

Dimensioned drawing

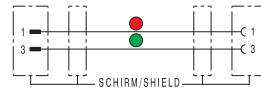
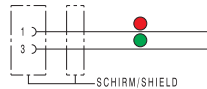


## Ex i-cables



Male

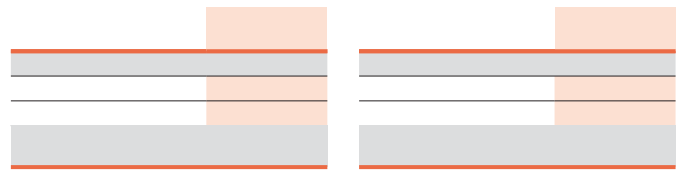
**Female**



## Ordering data

| Designation                               |      |
|-------------------------------------------|------|
| <b>Intrinsically safe zone Exi</b>        |      |
| <b>One side without connector, male</b>   |      |
| M12 EMV/blue/1M                           | 1 m  |
| M12 EMV/blue/2M                           | 2 m  |
| M12 EMV/blue/5M                           | 5 m  |
| M12 EMV/blue/10M                          | 10 m |
| <b>One side without connector, female</b> |      |
| M12 EMV/blue/1M                           | 1 m  |
| M12 EMV/blue/2M                           | 2 m  |
| M12 EMV/blue/5M                           | 5 m  |
| M12 EMV/blue/10M                          | 10 m |
| <b>Connecting cables, male - female</b>   |      |
| M12 EMV/blue/1M                           | 1 m  |
| M12 EMV/blue/2M                           | 2 m  |
| M12 EMV/blue/5M                           | 5 m  |
| M12 EMV/blue/10M                          | 10 m |
| <b>Note</b>                               |      |

| Type                               | Order No.         |
|------------------------------------|-------------------|
| <b>PROFIBUS-PA cable</b>           |                   |
| FBCEX PA M12 M 1M                  | <b>1785150100</b> |
| FBCEX PA M12 M 2M                  | <b>1785150200</b> |
| FBCEX PA M12 M 5M                  | <b>1785150500</b> |
| FBCEX PA M12 M 10M                 | <b>1785151000</b> |
|                                    |                   |
| FBCEX PA M12 FM 1M                 | <b>1785140100</b> |
| FBCEX PA M12 FM 2M                 | <b>1785140200</b> |
| FBCEX PA M12 FM 5M                 | <b>1785140500</b> |
| FBCEX PA M12 FM 10M                | <b>1785141000</b> |
|                                    |                   |
| FBCEX PA M12 M-FM 1M               | <b>1785130100</b> |
| FBCEX PA M12 M-FM 2M               | <b>1785130200</b> |
| FBCEX PA M12 M-FM 5M               | <b>1785130500</b> |
| FBCEX PA M12 M-FM 10M              | <b>1785131000</b> |
| Other lengths available on request |                   |



## Wall bushing



## Ordering data

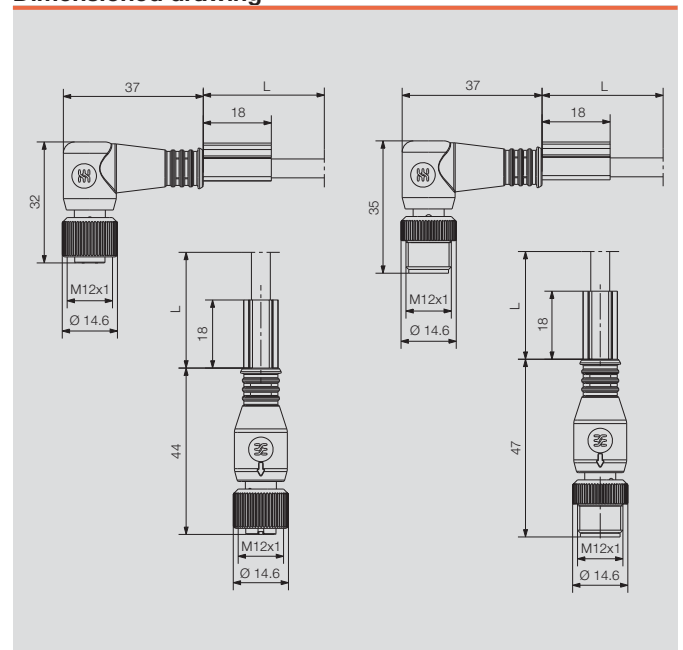
| Type                 | Length | Qty. | Order No.  |
|----------------------|--------|------|------------|
| SAI-WDF-5P M12 60 mm | 60 mm  | 1    | 1819450000 |

Customisable male and female connectors are still required for use with cables that have a connector on only one end.

## Technical data

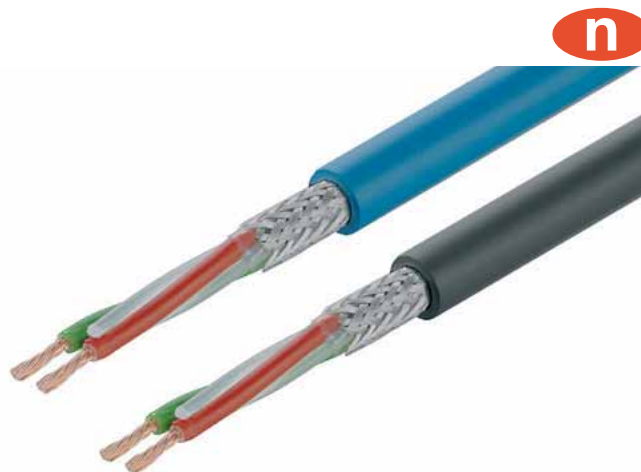
|                                                |                                        |                               |
|------------------------------------------------|----------------------------------------|-------------------------------|
| Wire resistance (loop)                         | max. $\Omega/\text{km}$                | 44                            |
| Insulation resistance                          | min. $\text{G}\Omega \times \text{km}$ | 5                             |
| Working capacity at 800 Hz                     | nom. nF/km                             | 52                            |
| Inductance 800 Hz                              | mH/km                                  | ca. 0.4                       |
| Characteristic impedance at 31.25 kHz          | $\Omega$                               | 100 $\pm$ 20 %                |
| at $\geq 1$ MHz                                | nom. $\Omega$                          | 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 dispersion speed                        |                                        |                               |
|                                                | nom. [%]                               | 79                            |
| Coupling resistance up to 30 MHz               |                                        |                               |
|                                                | max. mOhm/m                            | 250                           |
| Operating voltage<br>(not for three-phase use) |                                        |                               |
|                                                | Peak value V                           | 100                           |
| Test voltage                                   | Wire/wire<br>$U_{\text{eff.}}$ V       | 1500                          |
|                                                | Wire/shield<br>$U_{\text{eff.}}$ V     | 1500                          |
| <b>Mechanical specifications</b>               |                                        |                               |
| Stationary bending radius                      | mm                                     | 65                            |
| Temperature range                              |                                        |                               |
|                                                | Stationary                             | $^{\circ}\text{C}$ -5 ... 60  |
|                                                | moving                                 | $^{\circ}\text{C}$ -30 ... 80 |
| <b>Note</b>                                    |                                        |                               |

## Dimensioned drawing



## PROFIBUS-PA - cables

### PROFIBUS-PA bulk lengths



### PROFIBUS-PA bulk lengths

#### Application:

Fieldbus cable for PROFIBUS-PA field networks in accordance with IEC 1158-2

The cable is suitable for installation in both dry and humid spaces. When used with the black, UV-resistant cladding, it can also be installed outdoors.

#### General characteristics:

None of the materials used for the cables and during their production contain materials which are detrimental to paint adhesion **(they are LBS-free)**.

**LBS** = Materials detrimental to paint adhesion

### Ordering data

| Type                    | Order No.         |
|-------------------------|-------------------|
| SAIH-PB-PA-2X1.0-PVC-BL | <b>1232630000</b> |
| SAIH-PB-PA-2X1.0-PVC-SW | <b>1232640000</b> |

### Technical data

| Assembly                                                       |                     |                                                                          |            |
|----------------------------------------------------------------|---------------------|--------------------------------------------------------------------------|------------|
| Conductor                                                      |                     | Copper wire, without insulation, 1.0 mm <sup>2</sup> , finely stranded   |            |
| Insulating sleeve                                              |                     | Foam skin (O2YS), wire Ø approx. 2.55 mm<br>Wire colours: red and green  |            |
| Stranding                                                      |                     | 2 wires with 2 drain wires approx. 1.0 mm Ø stranded                     |            |
| Wrapping                                                       |                     | 1 layer insulation foil                                                  |            |
| Shield                                                         |                     | Braiding made from tin-plated copper wire,<br>Coverage 85 % ± 5          |            |
| Outer cladding                                                 |                     | PVC, blue RAL 5015 or black<br>Outer diameter: 8.0 mm ± 0.4              |            |
| Electrical characteristics at 20 °C                            |                     |                                                                          |            |
| Wire resistance (loop)                                         | max. Ω/km           | 44                                                                       |            |
| Insulation resistance                                          | min. GΩ x km        | 5                                                                        |            |
| Working capacity                                               |                     |                                                                          |            |
| at 800 Hz                                                      | nom. nF/km          | 52                                                                       |            |
| Inductance                                                     |                     |                                                                          |            |
| at 800                                                         | Hz mH/km            | ca. 0.4                                                                  |            |
| Characteristic 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 dispersion speed                                        |                     |                                                                          |            |
|                                                                | nom. [%]            | 79                                                                       |            |
| Coupling resistance                                            |                     |                                                                          |            |
| at 30 MHz                                                      | max. mOhm/m         | 250                                                                      |            |
| Operating voltage                                              |                     |                                                                          |            |
| (not for three-phase use)                                      | Peak value V        | 100                                                                      |            |
| Test voltage                                                   |                     |                                                                          |            |
| Wire/wire                                                      | U <sub>eff.</sub> V | 1500                                                                     |            |
| Wire/shield                                                    | U <sub>eff.</sub> V | 1500                                                                     |            |
| Mechanical and thermal characteristics                         |                     |                                                                          |            |
| Min. bending radius stationary installed / during installation |                     |                                                                          |            |
|                                                                | mm                  | 65                                                                       |            |
| Temperature range during installation                          |                     | °C                                                                       | -5 to +60  |
| Temperature range stationary installed                         |                     | °C                                                                       | -30 to +80 |
| Flammability                                                   |                     | Flame retardant in accordance with VDE 0482, part 265-2-1 / IEC 60 332-1 |            |

Screw connection M12, metal (EMC)  
A-coded



FBCon / SAIS  
straight



SAISW / SAIBW  
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 |
|                           |      |            |
| FBCon M12 4P FM EMC       | 1    | 8426220000 |
| SAIB-M-5/8S M12 5P A-COD  | 1    | 1784750000 |
| Other versions on request |      |            |

| Type                      | Qty. | Order No.  |
|---------------------------|------|------------|
| SAISW-M-4/8 M12           | 1    | 1803930000 |
| SAISW-M-5/8 M12           | 1    | 1803940000 |
|                           |      |            |
| SAIBW-M-4/8 M12           | 1    | 1803910000 |
| SAIBW-M-5/8 M12           | 1    | 1803920000 |
| Other versions on request |      |            |

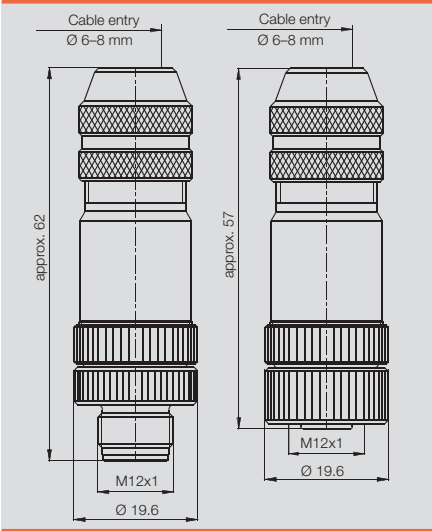
Technical data

|                                  |
|----------------------------------|
| Type of connection               |
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| Note                             |

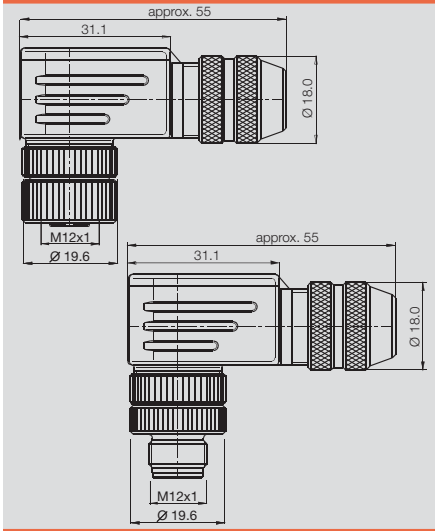
|                  |
|------------------|
| Screw connection |
| CuZn             |
| M12              |
| 6...8 mm (PG9)   |
| 0.14 - 0.75 mm²  |
| 4 A              |
| 125 V            |
| -25...+85 °C     |
| IP 67            |
| gold-plated      |

|                  |
|------------------|
| Screw connection |
| CuZn             |
| M12              |
| 6...8 mm (PG9)   |
| 0.14 - 0.75 mm²  |
| 4 A              |
| 125 V            |
| -25...+85 °C     |
| IP 67            |
| gold-plated      |

Dimensioned drawing



Dimensioned drawing



PROFIBUS-PA - connectors

Tension clamp connection M12,  
stainless steel  
A-coded



SAIS / SAIB VA

straight



Ordering data

|        |              |
|--------|--------------|
| Male   | 5-pole, PG 9 |
| Socket | 5-pole, PG 9 |
| Note   |              |

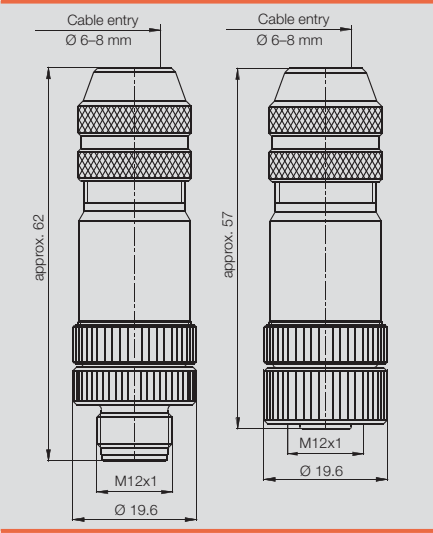
| Type        | Qty. | Order No.  |
|-------------|------|------------|
| SAIS 5/9-VA | 1    | 1920700000 |
| SAIB 5/9-VA | 1    | 1920710000 |

Technical data

|                                  |
|----------------------------------|
| Type of connection               |
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| Note                             |

|                          |
|--------------------------|
| Tension clamp connection |
| 1.4404/316L              |
| M12                      |
| 6...8 mm                 |
| 0.25 - 0.5 mm²           |
| 4 A                      |
| 125 V                    |
| -25...+85 °C             |
| IP 69 k                  |
| gold-plated              |
| PB = PROFIBUS (B-COD)    |

Dimensioned drawing



PB = PROFIBUS (B-COD)

### Positioning plug connector



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

**Note**

| Type                    | Qty. | Order No.  |
|-------------------------|------|------------|
| SAIE-M12S-4-0.5U-AEH-VA | 1    | 1861220001 |
| SAIE-EW-M20/PG9-SW24-VA | 1    | 1950270000 |
|                         |      |            |
|                         |      |            |
|                         |      |            |
|                         |      |            |
|                         |      |            |

|                                                  |                 |
|--------------------------------------------------|-----------------|
| No. of poles                                     |                 |
| Version                                          |                 |
| Temperature range                                | °C              |
| Housing material                                 |                 |
| Connection thread                                |                 |
| Plug thread                                      |                 |
| Strand cross-section                             | mm <sup>2</sup> |
| Housing class of protection to DIN 40050 IEC 529 |                 |
| Strand length (fitted with wire-end ferrules )   | mm              |
| Nominal current per contact                      | A               |
| Rated voltage                                    | V               |
| Contact surface                                  |                 |
| Type of connection                               |                 |
| 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               |

|                      |
|----------------------|
| 4                    |
| pin                  |
| -40 ... 85           |
| stainless steel (VA) |
| PG 9                 |
| M12                  |
| 0.34                 |
| IP 67                |
| 500                  |
| 4                    |
| 250                  |
| gold-plated          |
| screw                |
|                      |
|                      |
|                      |
|                      |

### Note

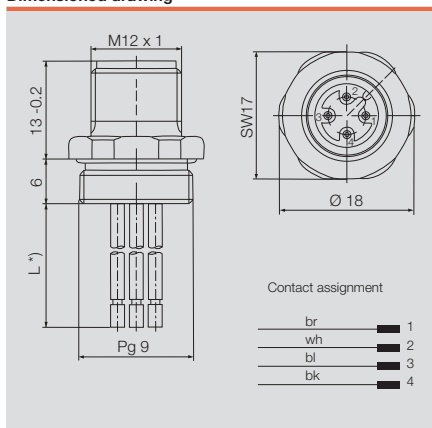
|              | Torque settings |
|--------------|-----------------|
| Set screw    | 1.8 - 2.0 Nm    |
| Knurled ring | hand-tight      |
| Lock-nut     | 6.25 Nm         |

If the device is exposed to vibration, we recommend using a stub cable to isolate the device from the vibration.

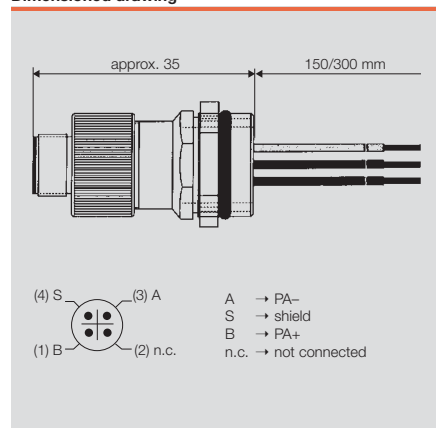
| Type                     | Qty. | Order No.  |
|--------------------------|------|------------|
| POS-4P M12 PG13,5 150mm  | 1    | 9455650000 |
| POS-4P M12 PG13,5 300 mm | 1    | 8425910000 |
| POS-4P M12 M20 150mm     | 1    | 8425930000 |
| POS-4P M12 M20 300mm     | 1    | 8425940000 |
| POS-5P M12/M20 300MM     | 1    | 1795500000 |

|                              |
|------------------------------|
| 4/5                          |
| pin                          |
| -40 ... 85                   |
| Cu Zn nickel surface         |
| PG 13,5 / M 20               |
| M12                          |
| 1.5 (4 poles) 0.34 (5 poles) |
| IP 67                        |
| 150/300                      |
| 3                            |
| CuZnAu                       |
| screw                        |
| V-2                          |
| 125 ~ 150 =                  |
| KC 600                       |
| ≤ 8                          |
| ≥ 10 <sup>1/2</sup>          |

### Dimensioned drawing



### Dimensioned drawing



# 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
- Uninterruptible bus operation for service situations
- Simple handling
- Low installation costs
- External earth stud
- Pressure equalising element
- EMC cable gland



# FBCon Fieldbus distributor

## PROFIBUS-PA Fieldbus distributor: sturdy and well-tested

FBCon fieldbus distributors are available in industrial and Ex(ia) versions. They are used for coupling 1- 8field devices or sensors. The connection is made via spur. The spur is connected by an M12 plug-in connector or directly via an EMC cable gland. The communication and device powering is handled by a common 2-core wire.

The PROFIBUS-PA distributors normally feature a switchable terminating resistor. For the Ex zone, the terminating resistor is made with a separate box. Current limiting variants help to ensure that the facility can operate smoothly.

Weidmüller offers a comprehensive line of accessories including pre-assembled PROFIBUS-PA cables in the standard lengths, and plug in connectors for a wide variety of applications.

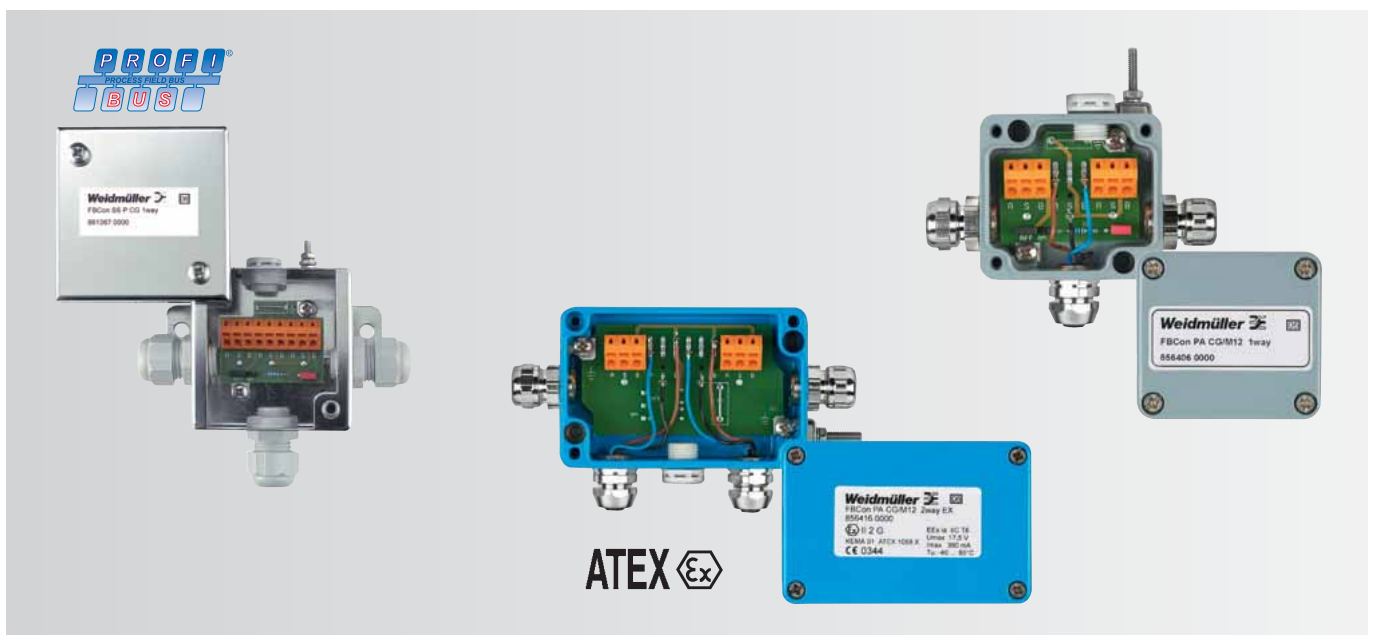
- Fieldbus distributor for PROFIBUS-PA and PROFIBUS-DP
- Standard distributor for use in the safe zone Aluminium housing for connecting from 1 to 8 field devices
- Stainless steel distributor for applications in the food processing industry, for connecting from 1 to 8 field devices
- Intrinsically safe (ia) Ex version in aluminium housing for connecting from 1 to 8 field devices
- EMC cable gland for a secure contact with the shielding

## 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 <sup>2</sup> |
| 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 |



PROFIBUS-PA - FBCon T-distributor

1-channel distributor

Cable gland

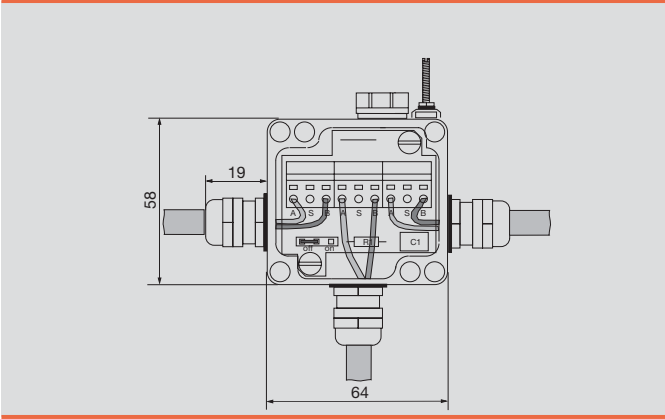


Ordering data

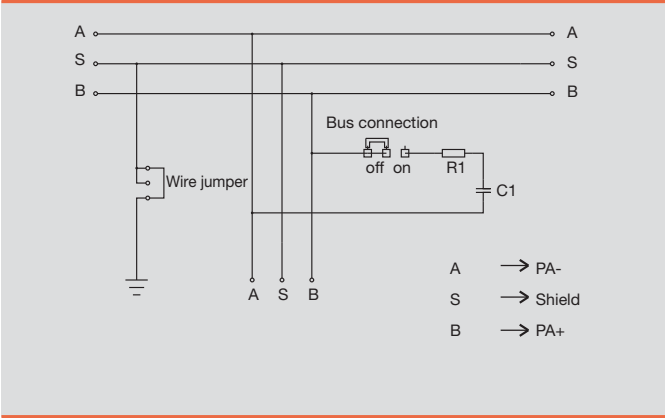
| Type                             | Type of connection  | Qty. | Order No.  |
|----------------------------------|---------------------|------|------------|
| <b>Aluminium housing</b>         |                     |      |            |
| FBCon PA CG 1way                 | branch line CG      | 1    | 8564090000 |
| <b>Stainless steel enclosure</b> |                     |      |            |
| FBCon SS CG 1way                 | branch line CG      | 1    | 8703430000 |
| FBCon SS PCG 1way                | all connections PCG | 1    | 8613670000 |

CG = brass cable gland  
PCG = plastic cable gland

Dimensioned drawing

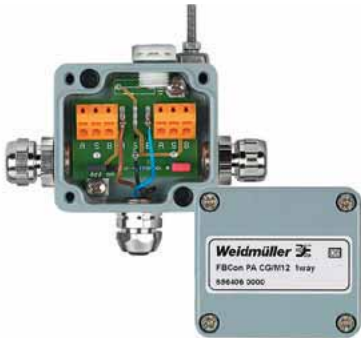


Wiring diagram



1-channel distributor

M12 connection

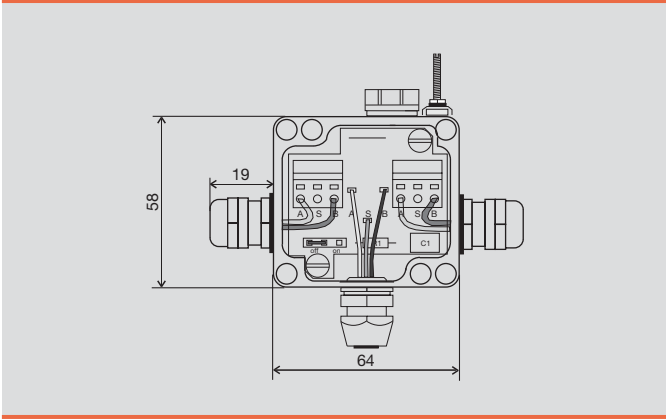


Ordering data

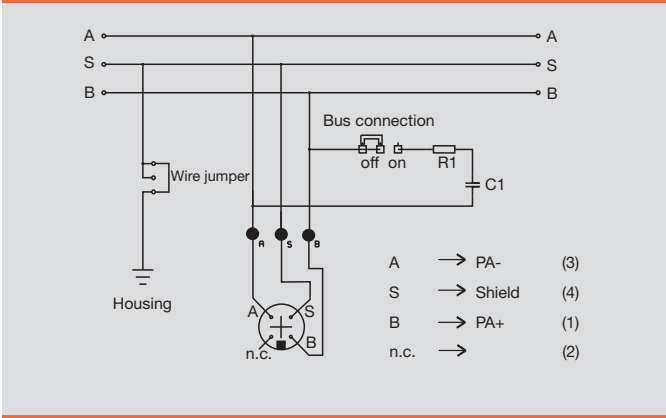
| Type                             | Type of connection | Qty. | Order No.  |
|----------------------------------|--------------------|------|------------|
| <b>Aluminium housing</b>         |                    |      |            |
| FBCon PA CG/M12 1way             | branch line M12    | 1    | 8564060000 |
| <b>Stainless steel enclosure</b> |                    |      |            |
| FBCon SS CG/M12 1way             | branch line M12    | 1    | 8726020000 |

CG = brass cable gland  
PCG = plastic cable gland

Dimensioned drawing



Wiring diagram



2-channel distributor

Cable gland



2-channel distributor

M12 connection



Ordering data

| Type                      | Type of connection | Qty. | Order No.  |
|---------------------------|--------------------|------|------------|
| Aluminium housing         |                    |      |            |
| FBCon PA CG 2way          | branch line CG     | 1    | 8564100000 |
| Stainless steel enclosure |                    |      |            |

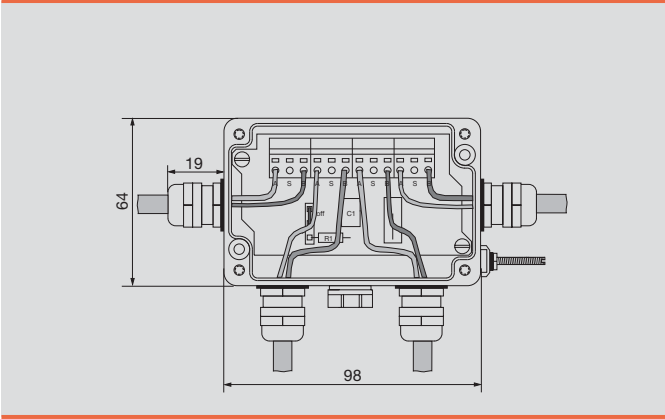
Ordering data

| Type                      | Type of connection | Qty. | Order No.  |
|---------------------------|--------------------|------|------------|
| Aluminium housing         |                    |      |            |
| FBCon PA CG/M12 2way      | branch line M12    | 1    | 8564070000 |
| Stainless steel enclosure |                    |      |            |

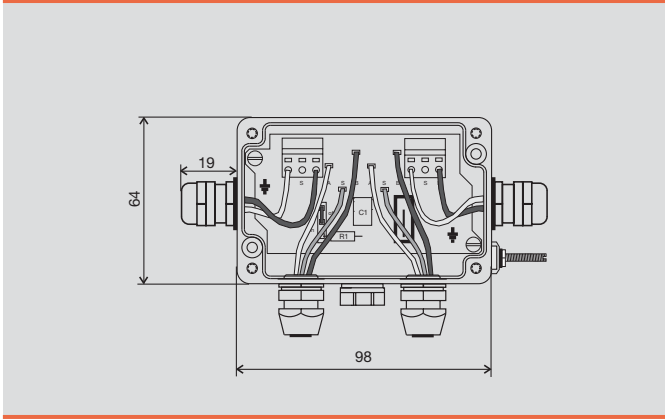
CG = brass cable gland  
PCG = plastic cable gland

CG = brass cable gland  
PCG = plastic cable gland

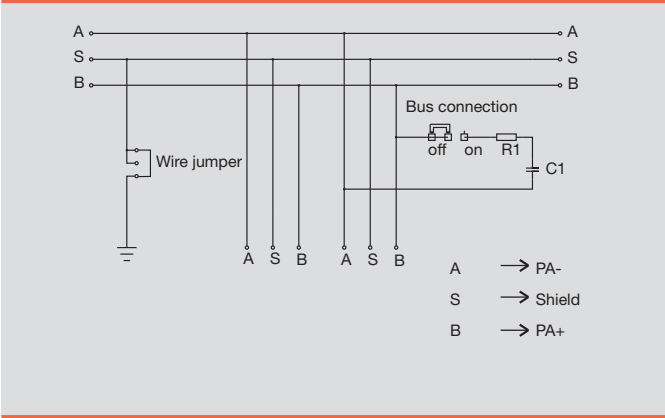
Dimensioned drawing



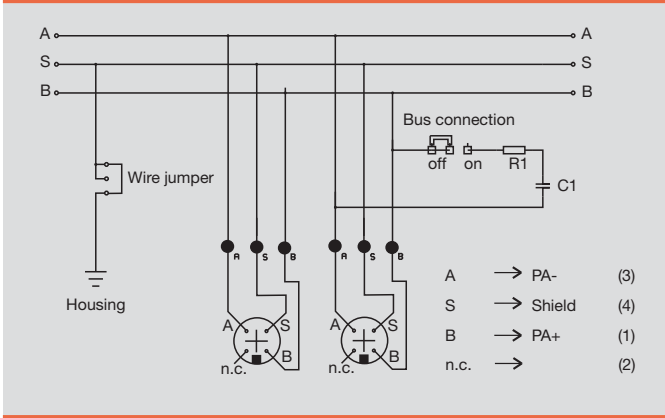
Dimensioned drawing



Wiring diagram



Wiring diagram



PROFIBUS-PA - FBCon T-distributor

4-channel distributor

Cable gland

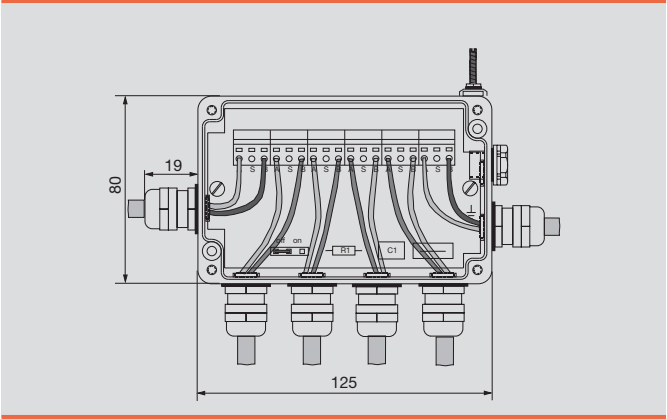


Ordering data

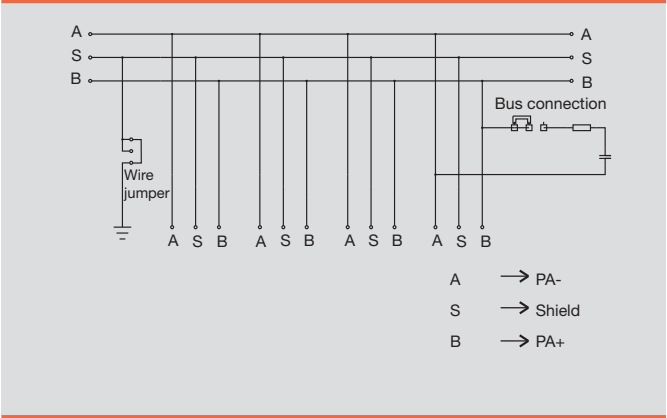
| Type                             | Type of connection  | Qty. | Order No.  |
|----------------------------------|---------------------|------|------------|
| <b>Aluminium housing</b>         |                     |      |            |
| FBCon PA CG 4way                 | branch line CG      | 1    | 8564110000 |
| <b>Stainless steel enclosure</b> |                     |      |            |
| FBCon SS CG 4way                 | branch line CG      | 1    | 8703450000 |
| FBCon SS PCG 4way                | all connections PCG | 1    | 8613680000 |

CG = brass cable gland  
PCG = plastic cable gland

Dimensioned drawing



Wiring diagram



4-channel distributor

M12 connection

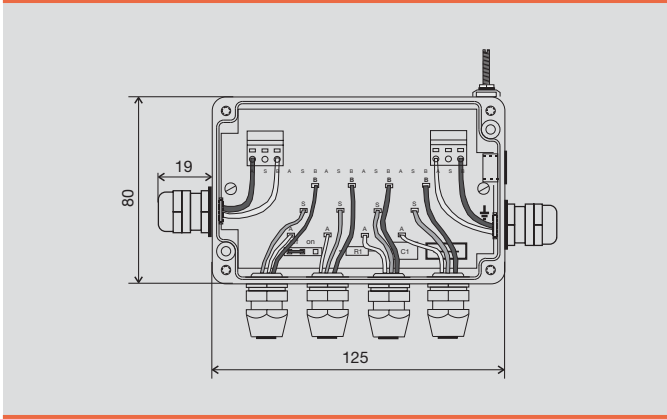


Ordering data

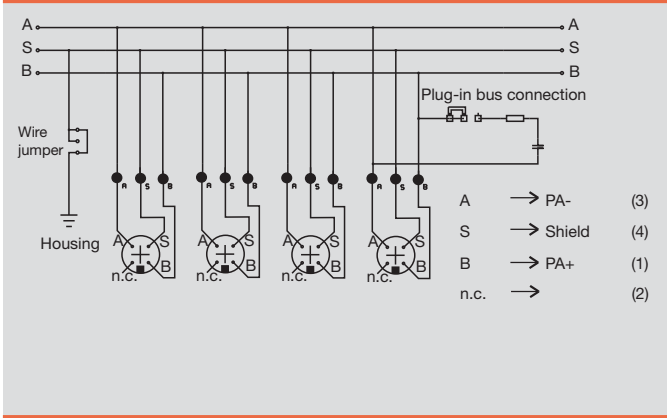
| Type                             | Type of connection | Qty. | Order No.  |
|----------------------------------|--------------------|------|------------|
| <b>Aluminium housing</b>         |                    |      |            |
| FBCon PA CG/M12 4way             | branch line M12    | 1    | 8564080000 |
| <b>Stainless steel enclosure</b> |                    |      |            |
| FBCon SS CG/M12 4way             | branch line M12    | 1    | 8726040000 |

CG = brass cable gland  
PCG = plastic cable gland

Dimensioned drawing



Wiring diagram



## 8-channel distributor

Cable gland



## 8-channel distributor

M12 connection



### Ordering data

| Type                             | Type of connection  | Qty. | Order No.  |
|----------------------------------|---------------------|------|------------|
| <b>Aluminium housing</b>         |                     |      |            |
| FBCon PA CG 8way                 | branch line CG      | 1    | 8564300000 |
| <b>Stainless steel enclosure</b> |                     |      |            |
| FBCon SS CG 8way                 | branch line CG      | 1    | 8703470000 |
| FBCon SS PCG 8way                | all connections PCG | 1    | 8640720000 |

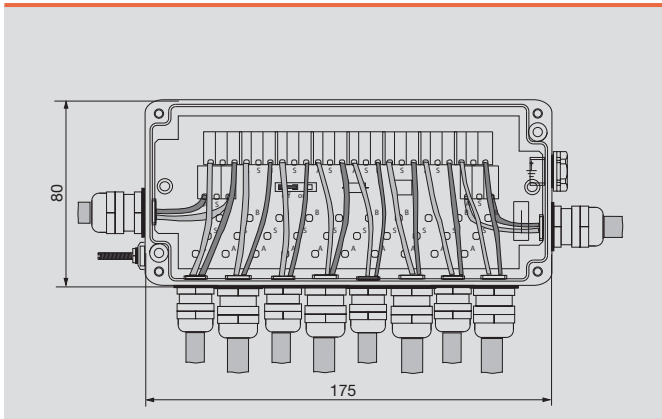
### Ordering data

| Type                             | Type of connection | Qty. | Order No.  |
|----------------------------------|--------------------|------|------------|
| <b>Aluminium housing</b>         |                    |      |            |
| FBCon PA CG/M12 8way             | branch line M12    | 1    | 8564310000 |
| <b>Stainless steel enclosure</b> |                    |      |            |
| FBCon SS CG/M12 8way             | branch line M12    | 1    | 8726050000 |

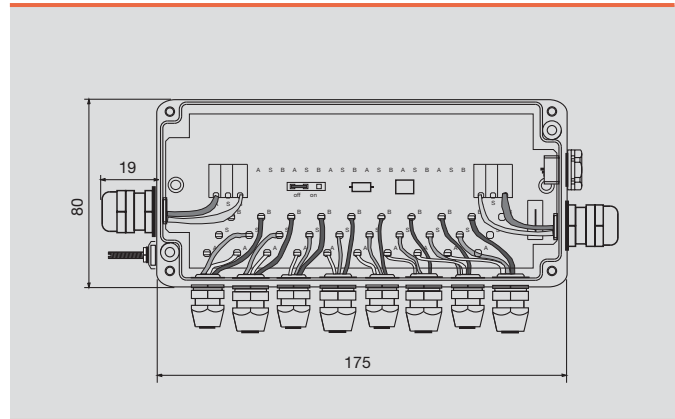
CG = brass cable gland  
PCG = plastic cable gland

CG = brass cable gland  
PCG = plastic cable gland

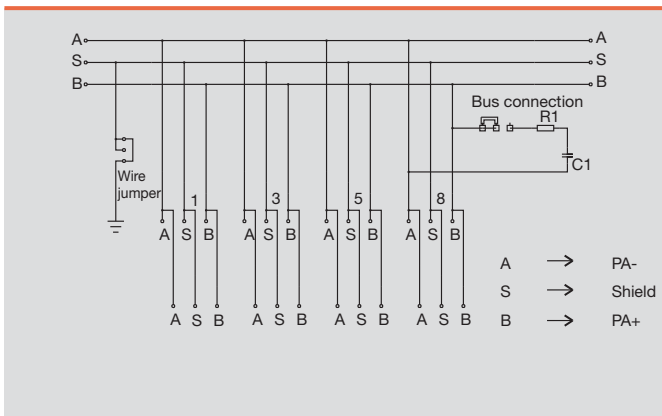
### Dimensioned drawing



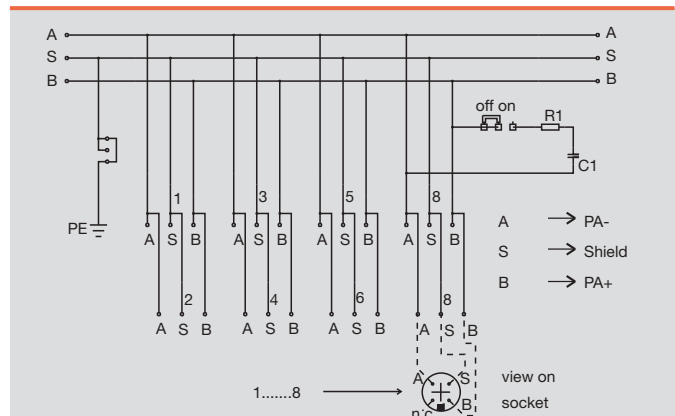
### Dimensioned drawing



### Wiring diagram

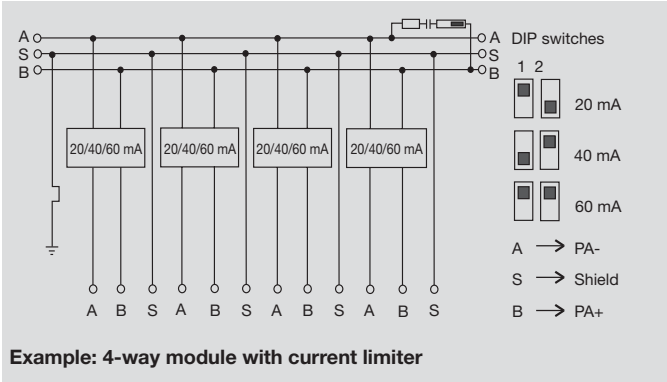
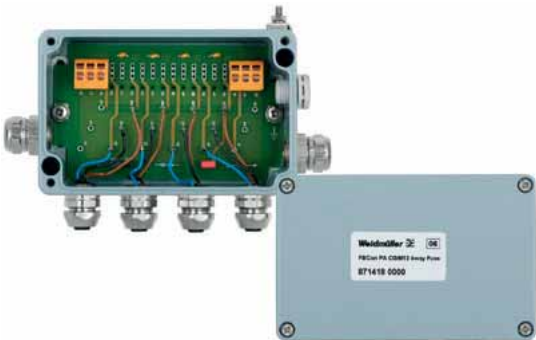


### Wiring diagram



# PROFIBUS-PA - FBCon T-distributor with surge protection

Fieldbus components for industrial applications with surge protection or current limiter



Example: 4-way module with current limiter

## PROFIBUS-PA T-connectors

Fine surge protection or integrated current limiting mechanisms are designed for protecting connected measuring devices, sensors or actuators from surge voltages. Gas-discharge tubes and suppressor diodes are voltage-limiting protection mechanisms. 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. When using the connectors for current limiting, the PROFIBUS-PA network is protected against short circuits with protective circuitry. The current can be set to either 20 mA, 40 mA or 60 mA by means of two DIP switches.

### Surge protection Technical data

|                                         |                                                   |
|-----------------------------------------|---------------------------------------------------|
| Operating temperature                   | –40 °C to 85 °C                                   |
| Ingress protection class                | IP 67                                             |
| Enclosure material                      | High grade aluminium alloy (AL – SI 12)           |
| Finish                                  | Painted RAL 7001                                  |
| PROFIBUS-PA connection                  | Tension clamp terminals 0.5 – 1.5 mm <sup>2</sup> |
| Cable entry                             | Cable gland M16                                   |
| Branch                                  | M12 socket (4-pin)                                |
| Cable gland clamping range              | 5.5 – 9.5 mm                                      |
| Nominal voltage DC/AC                   | U <sub>N</sub> = 24 V DC/18 V AC                  |
| Max. permissible operating voltage      | U <sub>C</sub> = 30 V DC/21 V AC                  |
| Rated current at 30 °C                  | I <sub>N</sub> = 500 mA                           |
| Trip surge voltage (1 kV/μs)            | < 600 V                                           |
| Rated discharge surge current (8/20 μs) | I <sub>SN</sub> = 10 kA (wire-wire, wire-PE)      |
| Output voltage limit (8/20 μs)          | U <sub>p</sub> = 65 V                             |
| PROFIBUS-PA bus terminator              | Via jumper                                        |

### Installation advice

|                              |              |
|------------------------------|--------------|
| <b>Torques</b>               |              |
| 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 °C to 85 °C                                   |
| Ingress protection class             | IP 67                                             |
| Enclosure material                   | High grade aluminium alloy (AL – SI 12)           |
| Finish                               | Painted RAL 7001                                  |
| PROFIBUS-PA connection               | Tension clamp terminals 0.5 – 1.5 mm <sup>2</sup> |
| 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

|                              |              |
|------------------------------|--------------|
| <b>Torques</b>               |              |
| 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 |

## 1-channel distributor (OVP)

Cable gland



## 1-channel distributor (OVP)

M12 connection



### Ordering data

| Type                             | Type of connection  | Qty. | Order No.  |
|----------------------------------|---------------------|------|------------|
| <b>Aluminium housing</b>         |                     |      |            |
| FBCon PA CG 1way OVP             | branch line CG      | 1    | 8714120000 |
| <b>Stainless steel enclosure</b> |                     |      |            |
| FBCon SS PCG 1way OVP            | all connections PCG | 1    | 8715270000 |

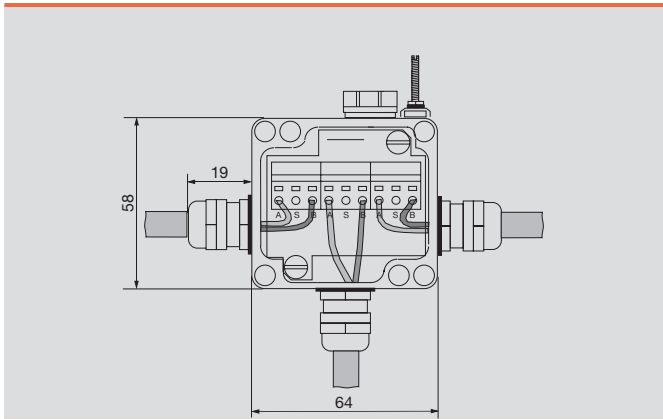
### Ordering data

| Type                             | Type of connection | Qty. | Order No.  |
|----------------------------------|--------------------|------|------------|
| <b>Aluminium housing</b>         |                    |      |            |
| FBCon PA CG/M12 1way OVP         | branch line M12    | 1    | 8714080000 |
| <b>Stainless steel enclosure</b> |                    |      |            |

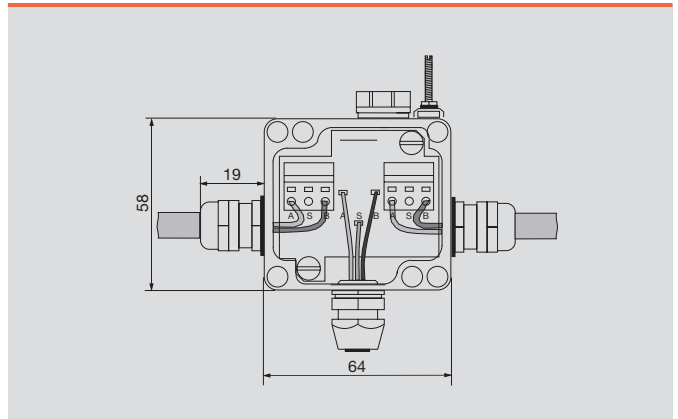
CG = brass cable gland  
PCG = plastic cable gland

CG = brass cable gland  
PCG = plastic cable gland

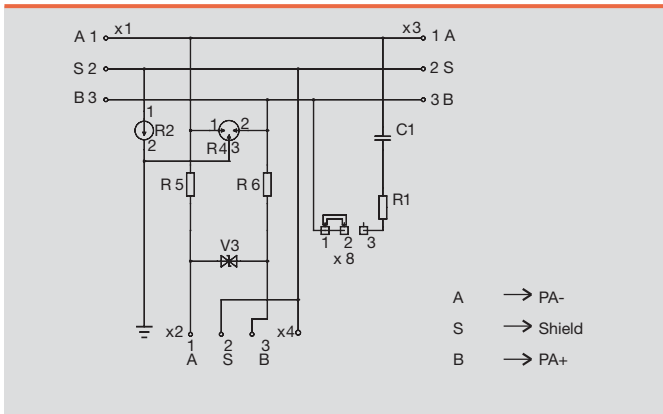
### Dimensioned drawing



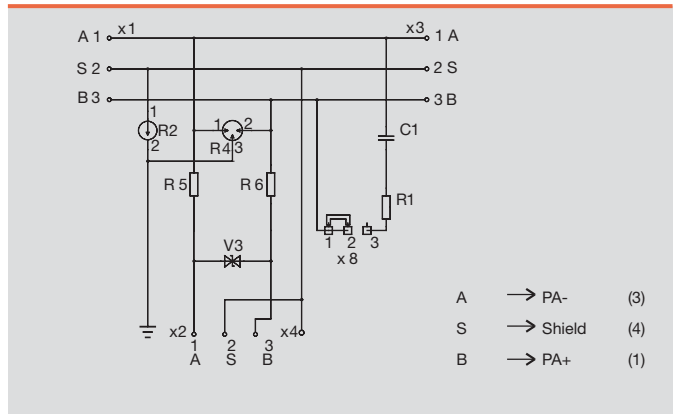
### Dimensioned drawing



### Wiring diagram



### Wiring diagram



PROFIBUS-PA - FBCon T-distributor with surge protection

2-channel distributor (OVP)

Cable gland



2-channel distributor (OVP)

M12 connection



Ordering data

| Type                             | Type of connection | Qty. | Order No.  |
|----------------------------------|--------------------|------|------------|
| <b>Aluminium housing</b>         |                    |      |            |
| FBCon PA CG 2way OVP             | branch line CG     | 1    | 8714130000 |
| <b>Stainless steel enclosure</b> |                    |      |            |

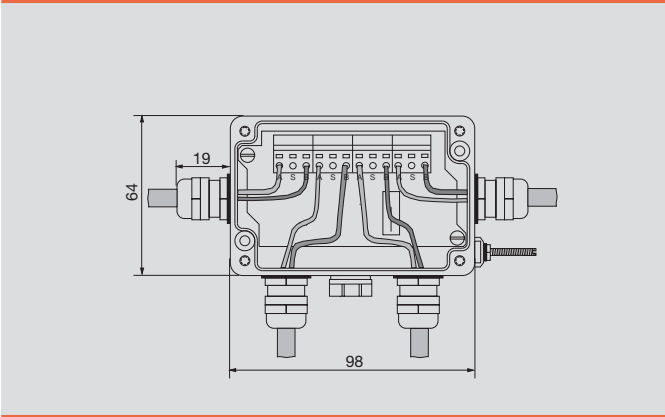
Ordering data

| Type                             | Type of connection | Qty. | Order No.  |
|----------------------------------|--------------------|------|------------|
| <b>Aluminium housing</b>         |                    |      |            |
| FBCon PA CG/M12 2way OVP         | branch line M12    | 1    | 8714090000 |
| <b>Stainless steel enclosure</b> |                    |      |            |

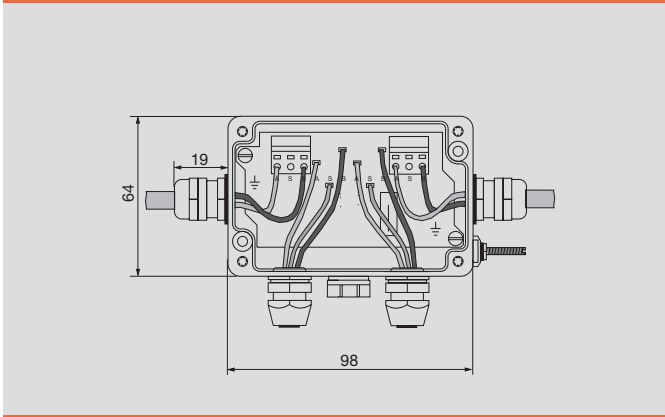
CG = brass cable gland  
PCG = plastic cable gland

CG = brass cable gland  
PCG = plastic cable gland

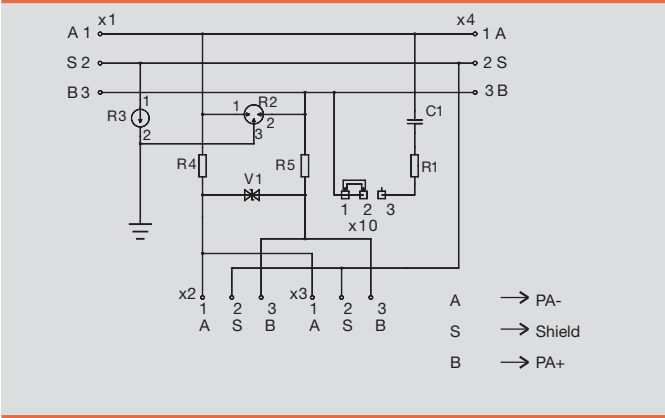
Dimensioned drawing



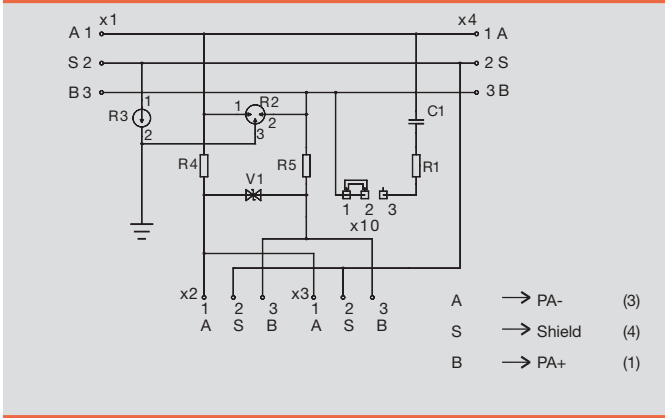
Dimensioned drawing



Wiring diagram



Wiring diagram



4-channel distributor (OVP)

Cable gland



4-channel distributor (OVP)

M12 connection



Ordering data

| Type                             | Type of connection  | Qty. | Order No.  |
|----------------------------------|---------------------|------|------------|
| <b>Aluminium housing</b>         |                     |      |            |
| FBCon PA CG 4way OVP             | branch line CG      | 1    | 8714140000 |
| <b>Stainless steel enclosure</b> |                     |      |            |
| FBCon SS PCG 4way OVP            | all connections PCG | 1    | 8726080000 |

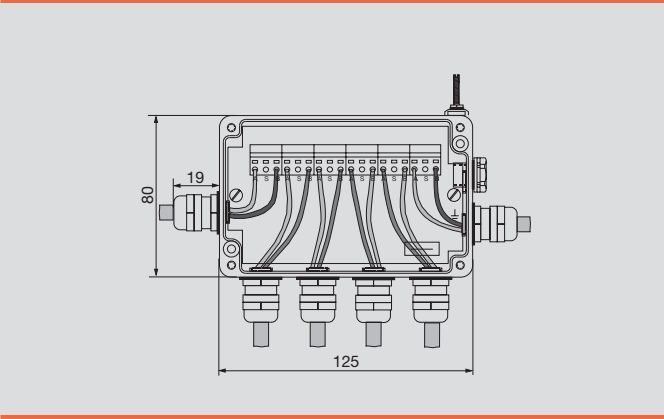
Ordering data

| Type                             | Type of connection | Qty. | Order No.  |
|----------------------------------|--------------------|------|------------|
| <b>Aluminium housing</b>         |                    |      |            |
| FBCon PA CG/M12 4way OVP         | branch line M12    | 1    | 8714100000 |
| <b>Stainless steel enclosure</b> |                    |      |            |

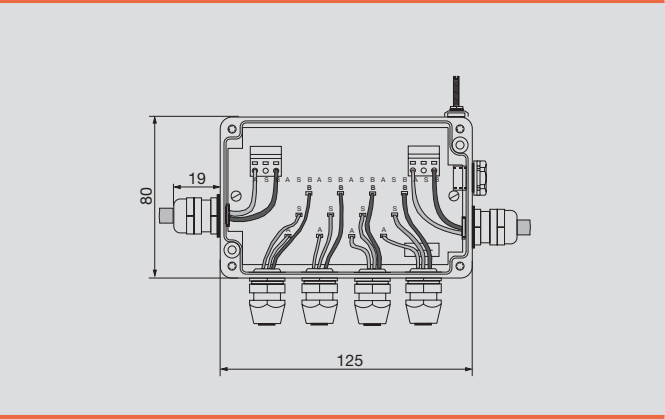
CG = brass cable gland  
PCG = plastic cable gland

CG = brass cable gland  
PCG = plastic cable gland

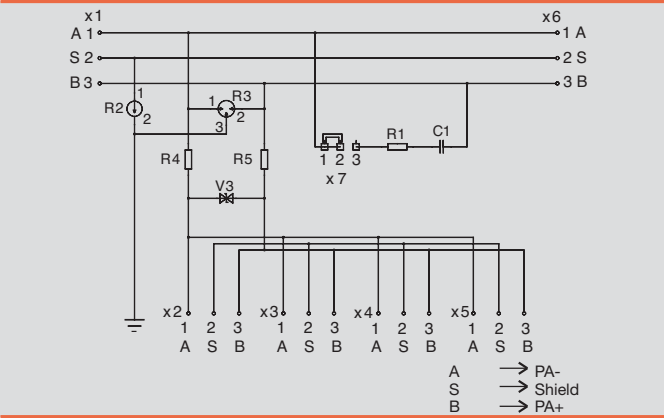
Dimensioned drawing



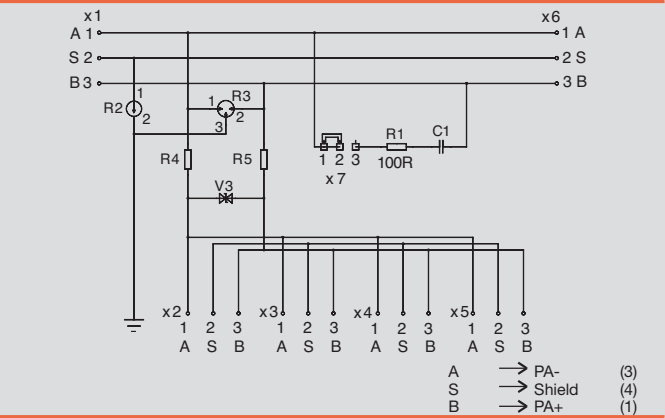
Dimensioned drawing



Wiring diagram



Wiring diagram



PROFIBUS-PA - FBCon T-distributor with surge protection

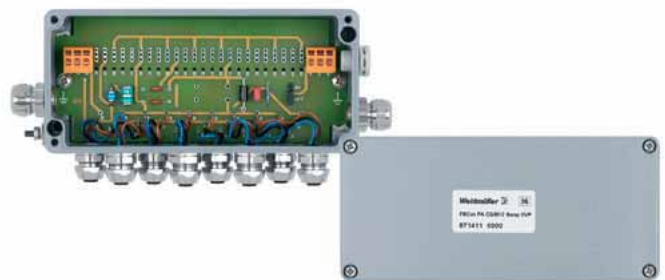
8-channel distributor (OVP)

Cable gland



8-channel distributor (OVP)

M12 connection



Ordering data

| Type                             | Type of connection  | Qty. | Order No.  |
|----------------------------------|---------------------|------|------------|
| <b>Aluminium housing</b>         |                     |      |            |
| FBCon PA CG 8way OVP             | branch line CG      | 1    | 8714150000 |
| <b>Stainless steel enclosure</b> |                     |      |            |
| FBCon SS PCG 8way OVP            | all connections PCG | 1    | 8726090000 |

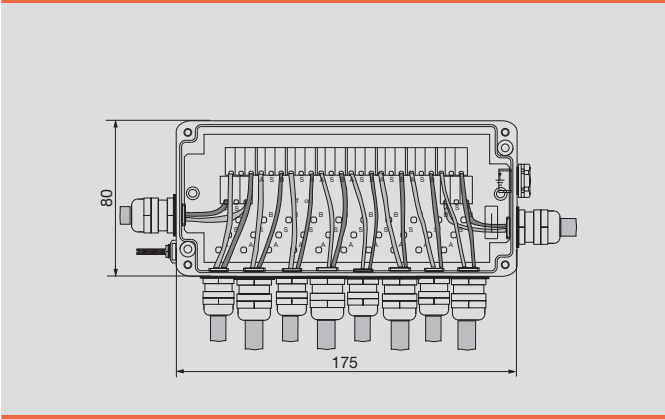
CG = brass cable gland  
PCG = plastic cable gland

Ordering data

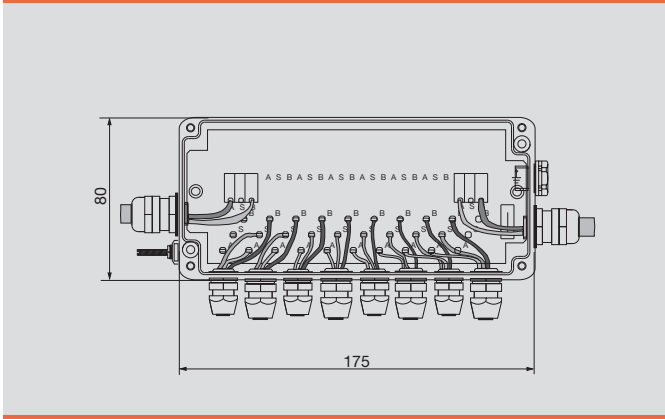
| Type                             | Type of connection | Qty. | Order No.  |
|----------------------------------|--------------------|------|------------|
| <b>Aluminium housing</b>         |                    |      |            |
| FBCon PA CG/M12 8way OVP         | branch line M12    | 1    | 8714110000 |
| <b>Stainless steel enclosure</b> |                    |      |            |

CG = brass cable gland  
PCG = plastic cable gland

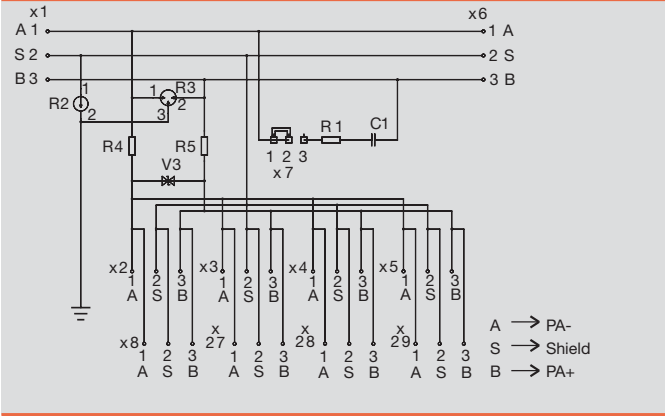
Dimensioned drawing



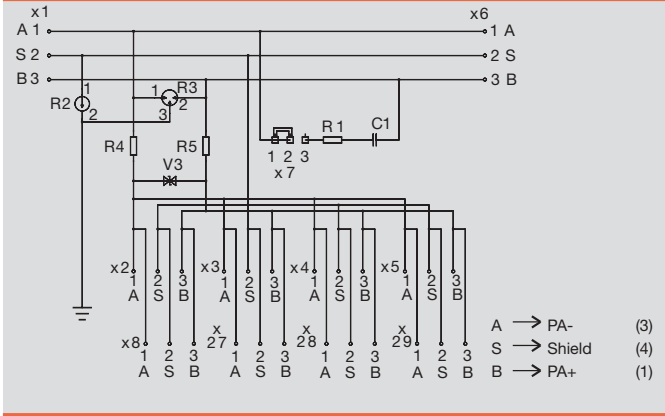
Dimensioned drawing



Wiring diagram



Wiring diagram



## 1-channel distributor (limiter)

Cable gland



## 1-channel distributor (limiter)

M12 connection



### Ordering data

| Type                             | Type of connection  | Qty. | Order No.  |
|----------------------------------|---------------------|------|------------|
| <b>Aluminium housing</b>         |                     |      |            |
| FBCon PA CG 1way Limiter         | branch line CG      | 1    | 8714200000 |
| <b>Stainless steel enclosure</b> |                     |      |            |
| FBCon SS PCG 1way Limiter        | all connections PCG | 1    | 8726110000 |

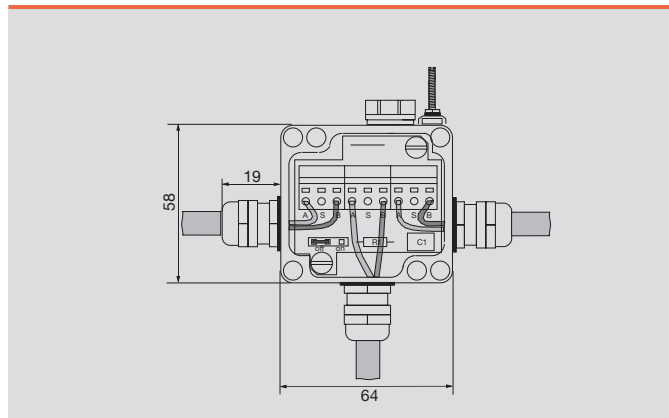
### Ordering data

| Type                             | Type of connection | Qty. | Order No.  |
|----------------------------------|--------------------|------|------------|
| <b>Aluminium housing</b>         |                    |      |            |
| FBCon PA CG/M12 1way Limiter     | branch line M12    | 1    | 8714160000 |
| <b>Stainless steel enclosure</b> |                    |      |            |

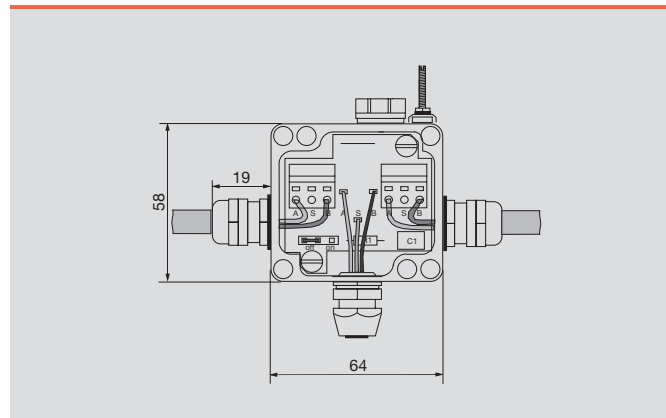
CG = brass cable gland  
PCG = plastic cable gland

CG = brass cable gland  
PCG = plastic cable gland

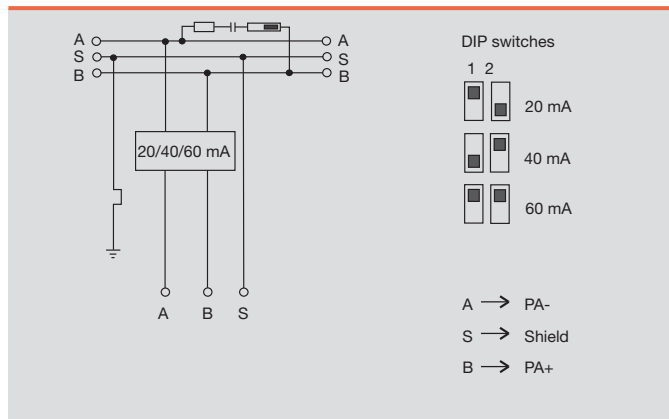
### Dimensioned drawing



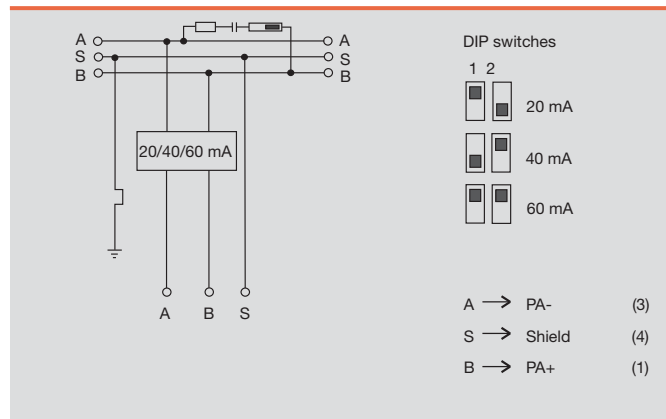
### Dimensioned drawing



### Wiring diagram



### Wiring diagram



PROFIBUS-PA - FBCon T-distributor with surge protection

2-channel distributor (limiter)

Cable gland



2-channel distributor (limiter)

M12 connection



Ordering data

| Type                      | Type of connection | Qty. | Order No.  |
|---------------------------|--------------------|------|------------|
| Aluminium housing         |                    |      |            |
| FBCon PA CG 2way Limiter  | branch line CG     | 1    | 8714210000 |
| Stainless steel enclosure |                    |      |            |

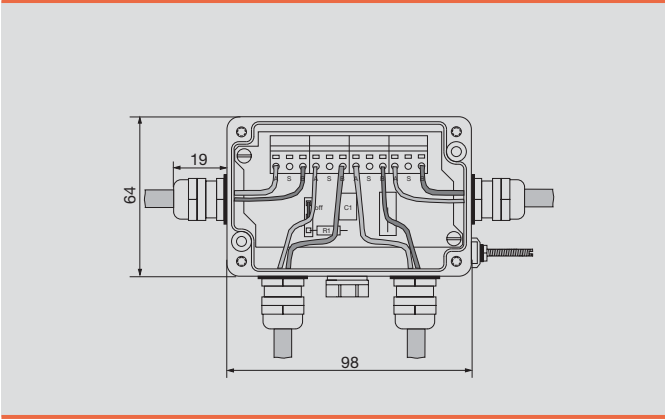
Ordering data

| Type                         | Type of connection | Qty. | Order No.  |
|------------------------------|--------------------|------|------------|
| Aluminium housing            |                    |      |            |
| FBCon PA CG/M12 2way Limiter | branch line M12    | 1    | 8714170000 |
| Stainless steel enclosure    |                    |      |            |

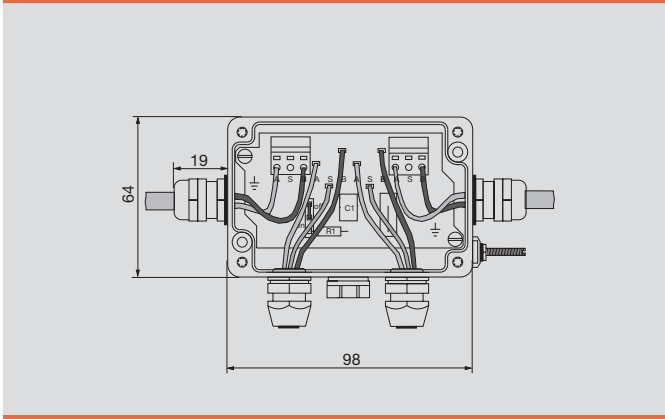
CG = brass cable gland  
PCG = plastic cable gland

CG = brass cable gland  
PCG = plastic cable gland

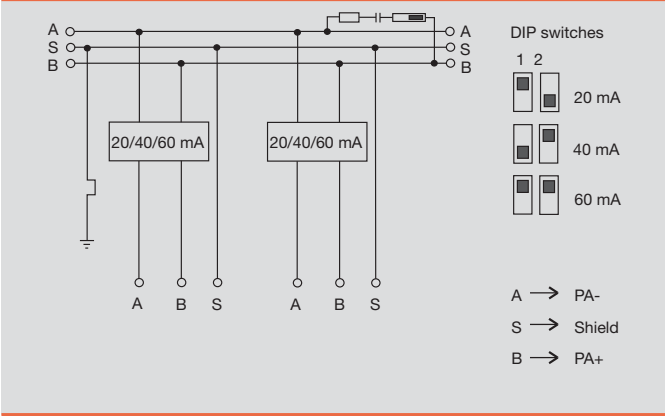
Dimensioned drawing



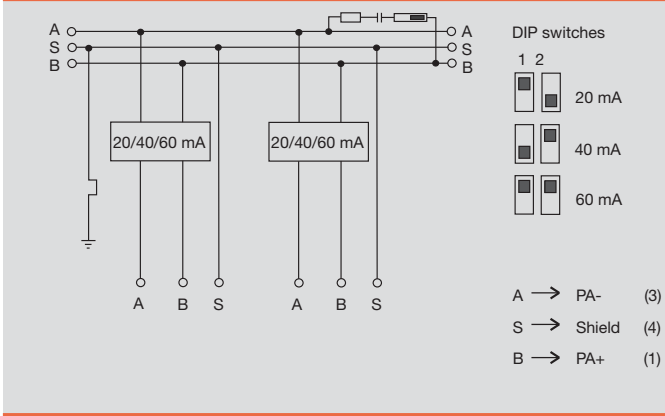
Dimensioned drawing



Wiring diagram



Wiring diagram



## 4-channel distributor (limiter)

Cable gland



## 4-channel distributor (limiter)

M12 connection



### Ordering data

| Type                             | Type of connection  | Qty. | Order No.  |
|----------------------------------|---------------------|------|------------|
| <b>Aluminium housing</b>         |                     |      |            |
| FBCon PA CG 4way Limiter         | branch line CG      | 1    | 8714220000 |
| <b>Stainless steel enclosure</b> |                     |      |            |
| FBCon SS PCG 4way Limiter        | all connections PCG | 1    | 8715260000 |

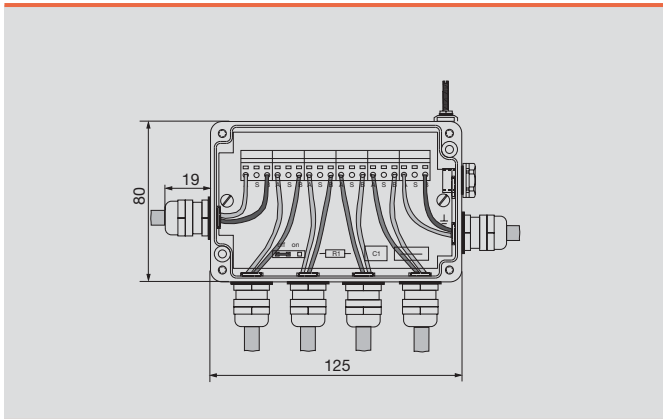
### Ordering data

| Type                             | Type of connection | Qty. | Order No.  |
|----------------------------------|--------------------|------|------------|
| <b>Aluminium housing</b>         |                    |      |            |
| FBCon PA CG/M12 4way Limiter     | branch line M12    | 1    | 8714180000 |
| <b>Stainless steel enclosure</b> |                    |      |            |

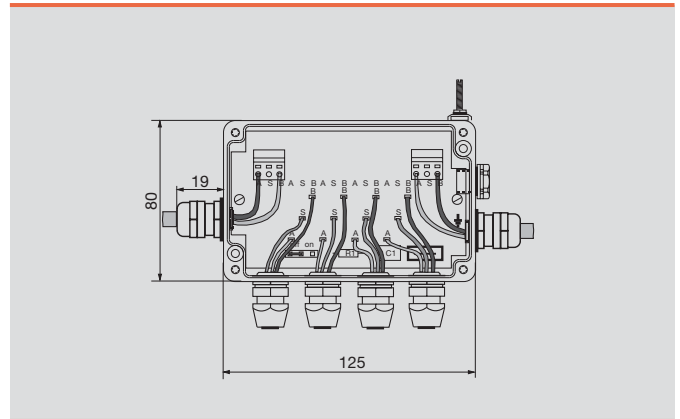
CG = brass cable gland  
PCG = plastic cable gland

CG = brass cable gland  
PCG = plastic cable gland

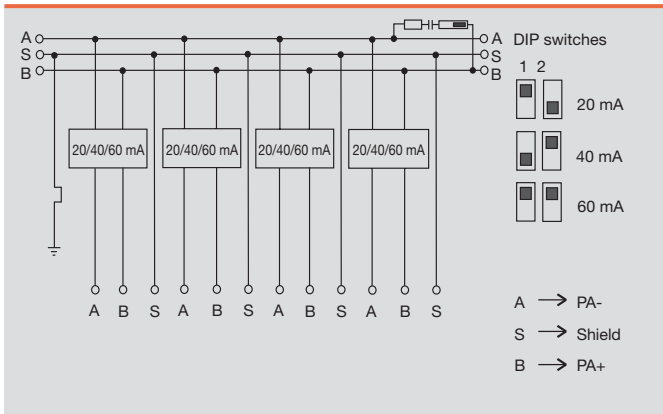
### Dimensioned drawing



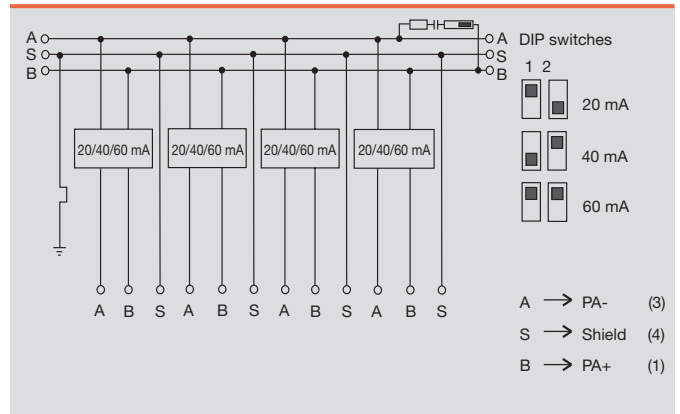
### Dimensioned drawing



### Wiring diagram



### Wiring diagram



PROFIBUS-PA - FBCon T-distributor with surge protection

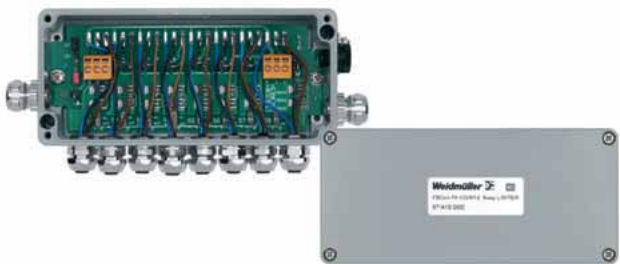
8-channel distributor (limiter)

Cable gland



8-channel distributor (limiter)

M12 connection



Ordering data

| Type                             | Type of connection  | Qty. | Order No.  |
|----------------------------------|---------------------|------|------------|
| <b>Aluminium housing</b>         |                     |      |            |
| FBCon PA CG 8way Limiter         | branch line CG      | 1    | 8714230000 |
| <b>Stainless steel enclosure</b> |                     |      |            |
| FBCon SS PCG 8way Limiter        | all connections PCG | 1    | 8726160000 |

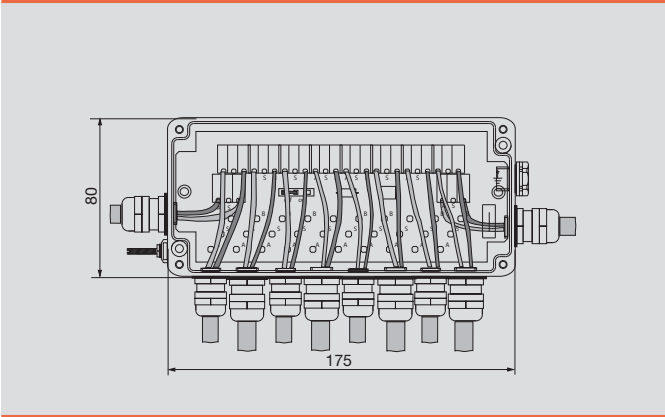
Ordering data

| Type                             | Type of connection | Qty. | Order No.  |
|----------------------------------|--------------------|------|------------|
| <b>Aluminium housing</b>         |                    |      |            |
| FBCon PA CG/M12 8way Limiter     | branch line M12    | 1    | 8714190000 |
| <b>Stainless steel enclosure</b> |                    |      |            |

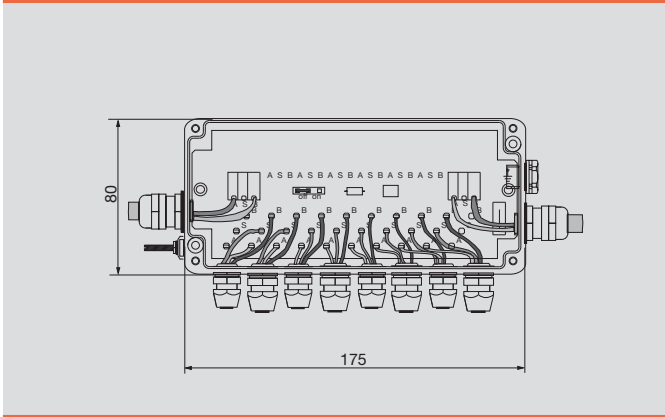
CG = brass cable gland  
PCG = plastic cable gland

CG = brass cable gland  
PCG = plastic cable gland

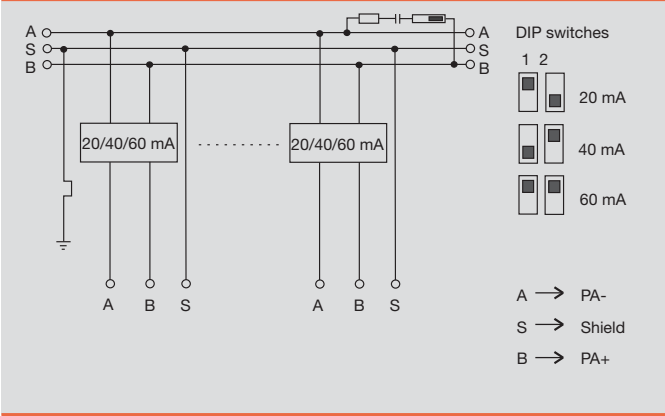
Dimensioned drawing



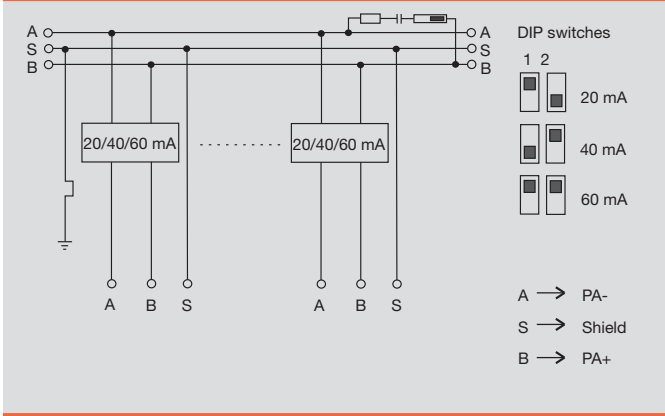
Dimensioned drawing



Wiring diagram



Wiring diagram





## FBCon distributors for Ex areas



### PROFIBUS-PA T-connector

#### • Ex(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

#### - Ex(ia)

- 1-way
- 2-way
- 4-way
- 8-way

The PROFIBUS-PA T connector in Ex(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
- Uninterruptible bus operation
- Simple handling
- External earth terminal
- External bus terminator



## C

Weidmüller

Bus Terminator 8556460000

Datum: 27.11.00, Seite 2/2

Speziell soll der FBCon Bus Terminator 8556460000 für den eigensicheren Bereich EEx ia und den Bereich EEx m eingesetzt werden. Der Bus Terminator darf in Verbindung mit einem für die Zündschutzarten EEx e und EEx d zugelassenen Gefährdungs-Innenblech einer EEx e / EEx d Applikation verwendet werden (EEx d nur im entsprechenden Gehäuse). Bei Anwendung mit / in einem Kurzstoßgehäuse wird der Bus Terminator mit einem zusätzlichen Erdanschluß versehen (Zeichnung 855646 Blatt 7).

#### Anwendungsbeispiel für ein Kommunikationssystem mit Bus Terminator

The diagram illustrates a communication system setup. On the left, a "Control System" consisting of a computer and a terminal is connected to a "PROFIBUS DP-AS" interface. This interface is linked to a power supply unit labeled "Integrated supply 48V DC". The power supply provides "24 V" and "PE GND" connections. A cable labeled "Standard twisted pair cable" runs from the power supply to a central blue box representing the "PS OF BUS" (Power Supply of Bus). Inside this box, it specifies " $R = 120 \Omega$ , max. 2,0 km length". Various components are connected to this bus: three motor units (each with a sun icon), a sensor unit (with a star icon), and another motor unit. Each component has a specific resistance value indicated: 20 k $\Omega$ , 10 k $\Omega$ , 10 k $\Omega$ , 10 k $\Omega$ , and 10 k $\Omega$ . At the far right end of the bus, a "Bus Terminator 8556460000" is connected, which also has a "GND" connection.

Techn. Beschreibg. doc



## AMENDMENT 1

to EC-Type Examination Certificate KEMA 01ATEX1058 X

Manufacturer: **Weidmüller Interface GmbH & Co.**  
 Address: **Klingenbergstraße 16, 32758, Detmold, Germany**

**Description**

In future, the range of Fieldbus Components is extended with a Bus Termination Module with an alternative mechanical construction and with intrinsically safe Fieldbus Distribution Modules Type FBCON PA CG 1 way Ex, 2 way Ex, 4 and 4 way Ex, and Type FBCON PA COM12 1 way Ex, 2 way Ex and 4 way Ex.

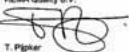
The following non-certified connectors and couplers may be used for the connection of intrinsically safe fieldbus systems:  
 Connectors, male Type 945564 and female Type 842322 and locating plug-in connectors Type 945565, 842391, 842593 and 842594.

The distribution modules, connectors and couplers are passive components, which do not influence the properties of the intrinsically safe fieldbus system.

All other data remain unchanged.

| Test documentation                                        | dated      |
|-----------------------------------------------------------|------------|
| 1. Drawing No. 855045, rev. 2 (sheets 2, 3, 4, 5 and 6) } |            |
| 860018, rev. 0 (sheets 2, 3, 4, 5 and 6) }                |            |
| 860019, rev. 0 (sheets 2, 3, 4, 5 and 6) }                |            |
| 860620, rev. 0 (sheets 2, 3, 4, 5 and 6) }                |            |
| 856415, rev. 0 (sheets 2, 3, 4 and 5) }                   | 17.09.2001 |
| 856416, rev. 0 (sheets 2, 3, 4 and 5) }                   |            |
| 856417, rev. 0 (sheets 2, 3, 4 and 5) }                   |            |
| 856418, rev. 0 (sheets 2, 3, 4 and 5) }                   |            |
| 856419, rev. 0 (sheets 2, 3, 4 and 5) }                   |            |
| 856420, rev. 0 (sheets 2, 3, 4 and 5) }                   |            |
| 4-22884, rev. 1 (sheet 2) }                               |            |
| 945504, rev. 1 (sheets 2 and 3) }                         |            |
| 842322, rev. 1 (sheets 2 and 3) }                         |            |
| 945505, rev. 2 (sheet 2) }                                | 07.06.2001 |
| 945505, rev. 2 (sheet 3) }                                |            |
| 842591, rev. 2 (sheet 2) }                                |            |
| 842591, rev. 1 (sheet 3) }                                |            |
| 945588, rev. 1 (sheet 2) }                                | 23.12.1997 |
| 2. Technical delivery condition No. 5203                  | 23.02.2001 |

Arnhem, 9 October 2001  
 KEMA Quality B.V.



T. Pijper  
 Certification Manager

Code:  I 2.0 Ex is HC TC and Ex in I TC

[0212174]

Page 1/1

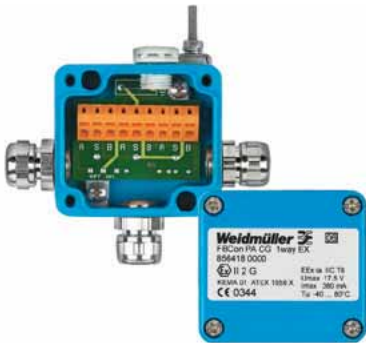
© This Amendment may only be reproduced in its entirety and without any change



PROFIBUS-PA - FBCon T-distributor ATEX Ex(ia)

1-channel distributor Ex

Cable gland

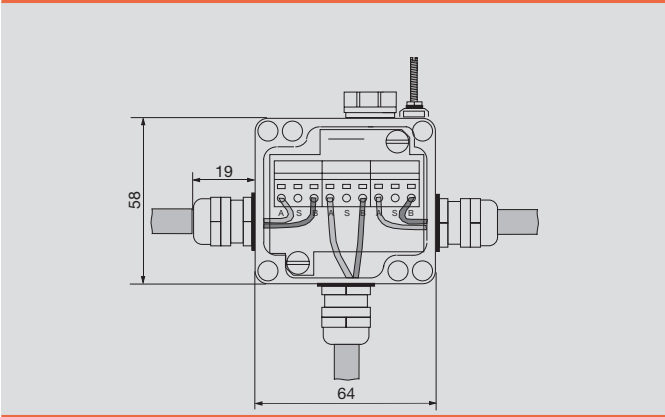


Ordering data

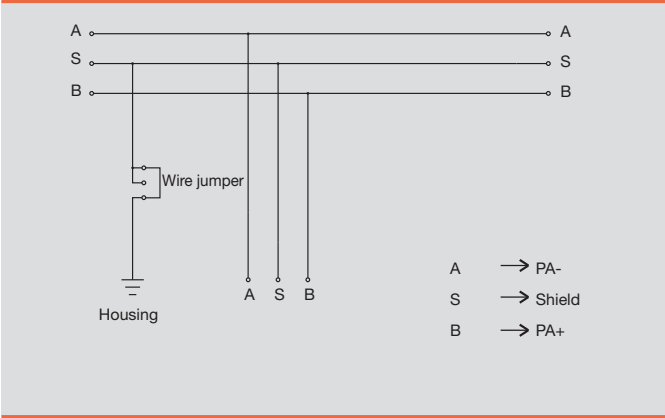
| Type                      | Type of connection | Qty. | Order No.  |
|---------------------------|--------------------|------|------------|
| Aluminium housing         |                    |      |            |
| FBCon PA CG 1way Ex       | branch line CG     | 1    | 8564180000 |
| Stainless steel enclosure |                    |      |            |

CG = brass cable gland  
PCG = plastic cable gland

Dimensioned drawing



Wiring diagram



1-channel distributor Ex

M12 connection

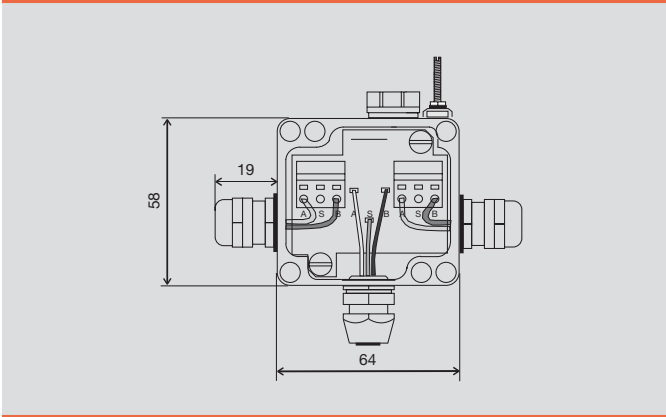


Ordering data

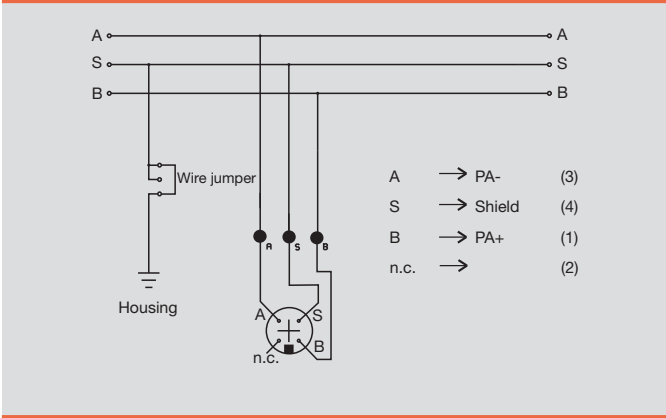
| Type                      | Type of connection | Qty. | Order No.  |
|---------------------------|--------------------|------|------------|
| Aluminium housing         |                    |      |            |
| FBCon PA CG/M12 1way Ex   | branch line M12    | 1    | 8564150000 |
| Stainless steel enclosure |                    |      |            |

CG = brass cable gland  
PCG = plastic cable gland

Dimensioned drawing



Wiring diagram



2-channel distributor Ex

Cable gland

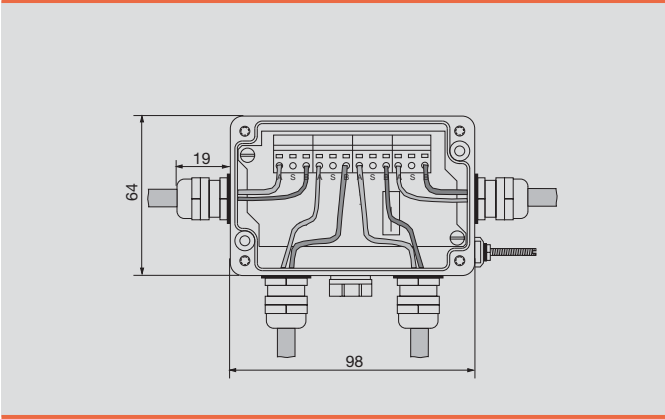


Ordering data

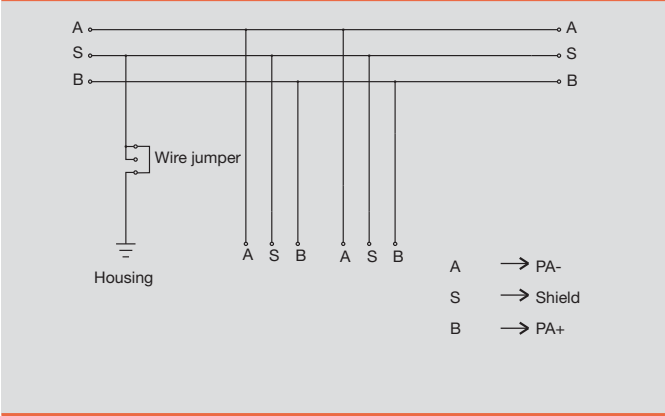
| Type                      | Type of connection | Qty. | Order No.  |
|---------------------------|--------------------|------|------------|
| Aluminium housing         |                    |      |            |
| FBCon PA CG 2way Ex       | branch line CG     | 1    | 8564190000 |
| Stainless steel enclosure |                    |      |            |

CG = brass cable gland  
PCG = plastic cable gland

Dimensioned drawing



Wiring diagram



2-channel distributor Ex

M12 connection

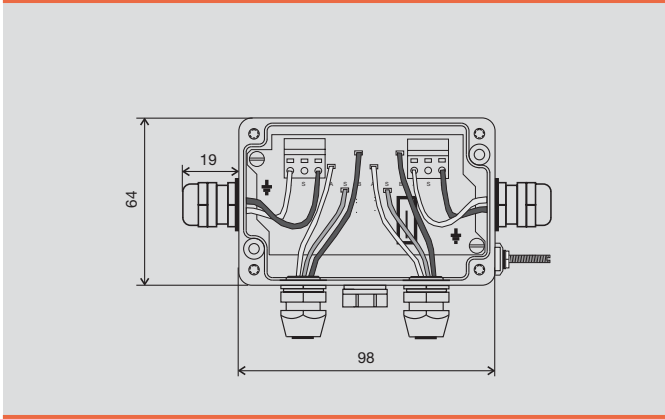


Ordering data

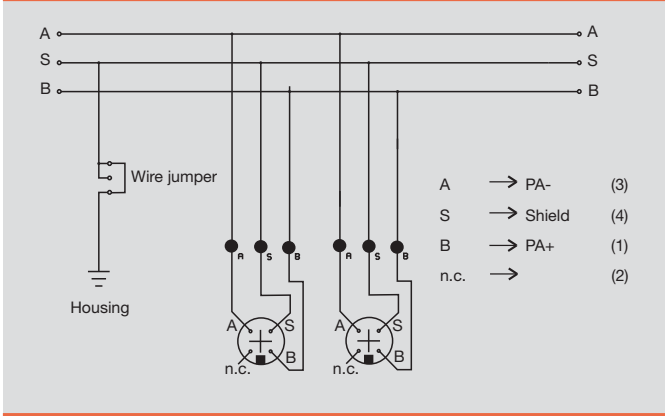
| Type                      | Type of connection | Qty. | Order No.  |
|---------------------------|--------------------|------|------------|
| Aluminium housing         |                    |      |            |
| FBCon PA CG/M12 2way Ex   | branch line M12    | 1    | 8564160000 |
| Stainless steel enclosure |                    |      |            |

CG = brass cable gland  
PCG = plastic cable gland

Dimensioned drawing



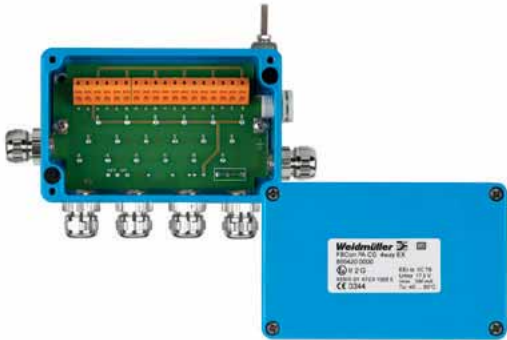
Wiring diagram



PROFIBUS-PA - FBCon T-distributor ATEX Ex(ia)

4-channel distributor Ex

Cable gland

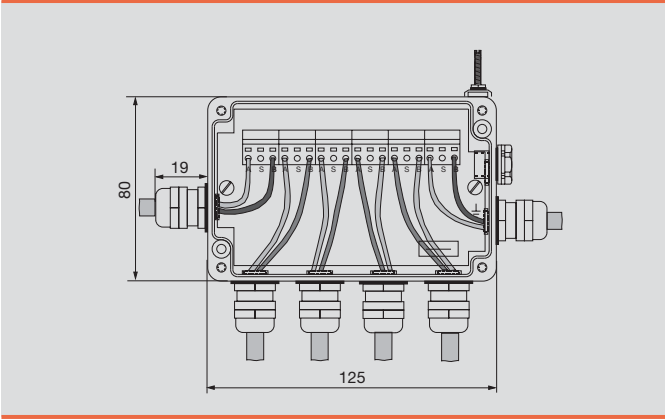


Ordering data

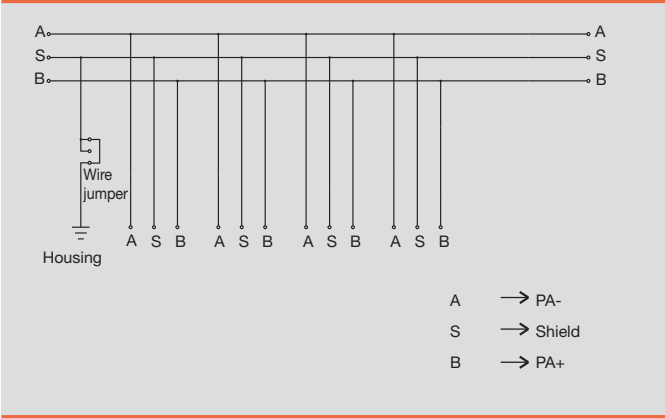
| Type                      | Type of connection | Qty. | Order No.  |
|---------------------------|--------------------|------|------------|
| Aluminium housing         |                    |      |            |
| FBCon PA CG 4way Ex       | branch line CG     | 1    | 8564200000 |
| Stainless steel enclosure |                    |      |            |

CG = brass cable gland  
PCG = plastic cable gland

Dimensioned drawing

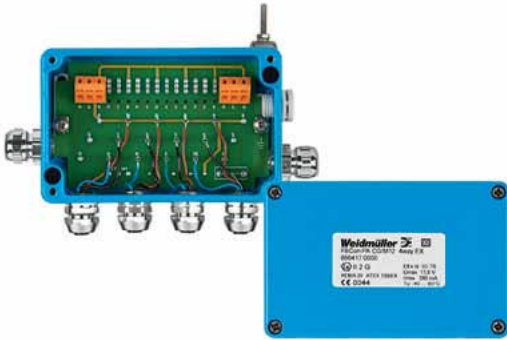


Wiring diagram



4-channel distributor Ex

M12 connection

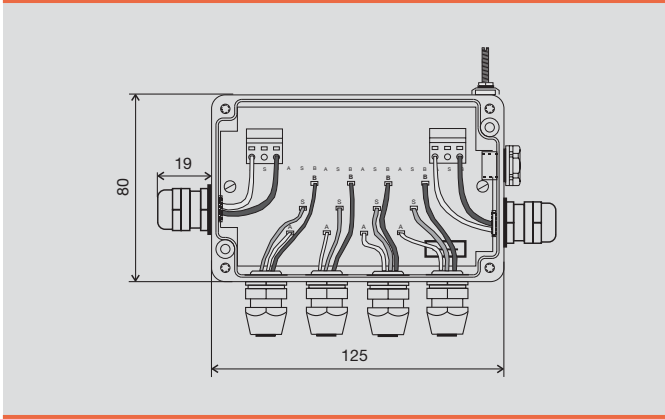


Ordering data

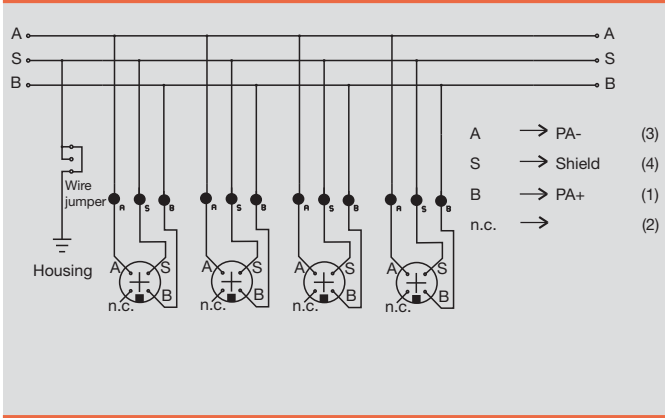
| Type                      | Type of connection | Qty. | Order No.  |
|---------------------------|--------------------|------|------------|
| Aluminium housing         |                    |      |            |
| FBCon PA CG/M12 4way Ex   | branch line M12    | 1    | 8564170000 |
| Stainless steel enclosure |                    |      |            |

CG = brass cable gland  
PCG = plastic cable gland

Dimensioned drawing



Wiring diagram



8-channel distributor Ex

Cable gland

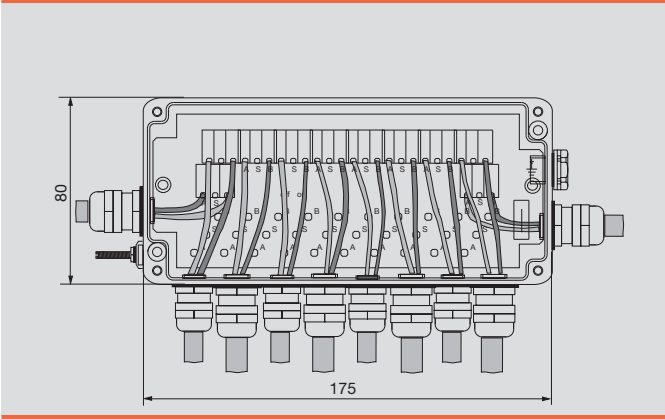


Ordering data

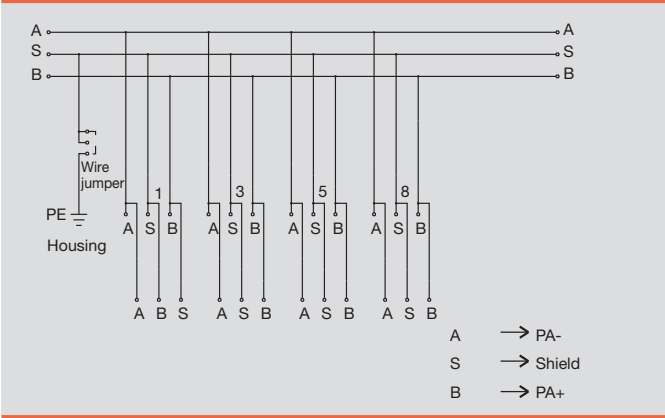
| Type                      | Type of connection | Qty. | Order No.  |
|---------------------------|--------------------|------|------------|
| Aluminium housing         |                    |      |            |
| FBCon PA CG 8way Ex       | branch line CG     | 1    | 8564240000 |
| Stainless steel enclosure |                    |      |            |

CG = brass cable gland  
PCG = plastic cable gland

Dimensioned drawing

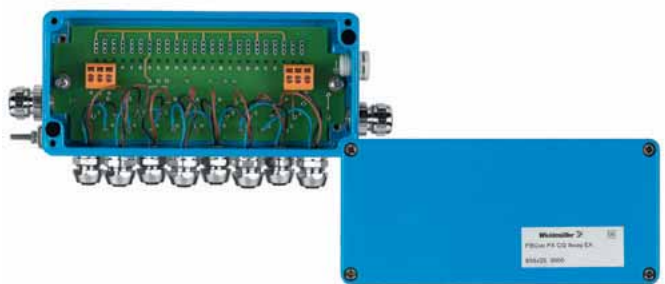


Wiring diagram



8-channel distributor Ex

M12 connection

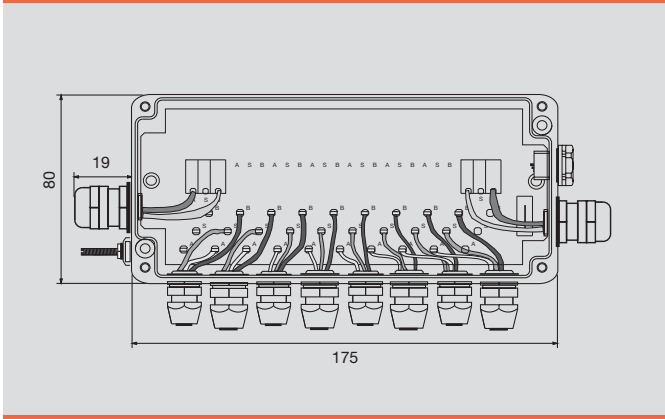


Ordering data

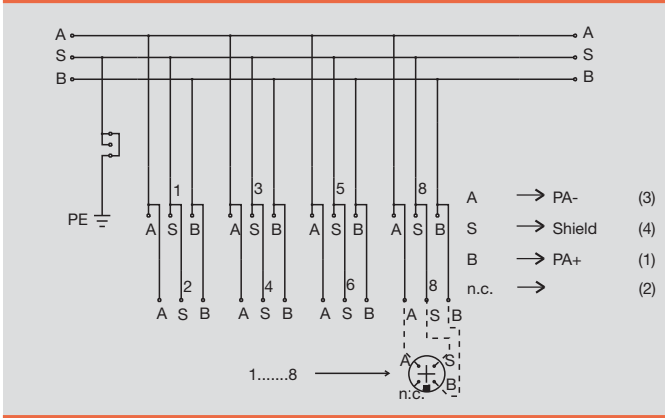
| Type                      | Type of connection | Qty. | Order No.  |
|---------------------------|--------------------|------|------------|
| Aluminium housing         |                    |      |            |
| FBCon PA CG/M12 8way Ex   | branch line M12    | 1    | 8564250000 |
| Stainless steel enclosure |                    |      |            |

CG = brass cable gland  
PCG = plastic cable gland

Dimensioned drawing

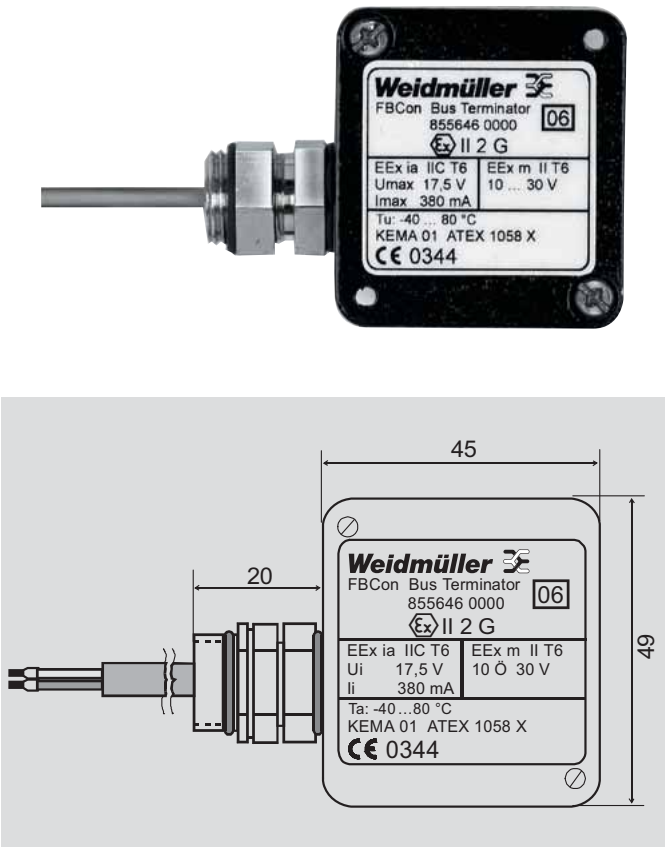


Wiring diagram



PROFIBUS-PA - FBCon T-distributor ATEX Ex(ia)

FBCon bus terminator  
FBCon bus terminator without earth connection



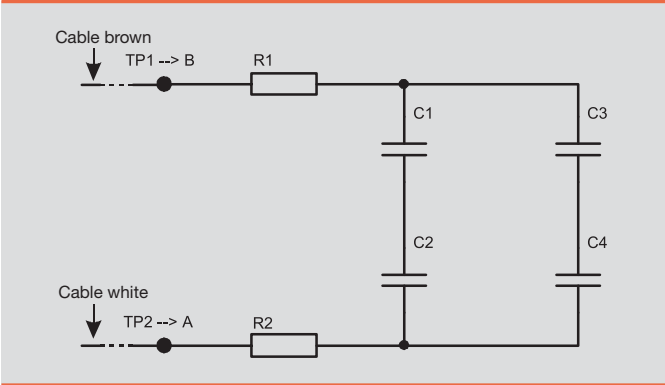
Ordering data

| Typee                                                                   | 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 |

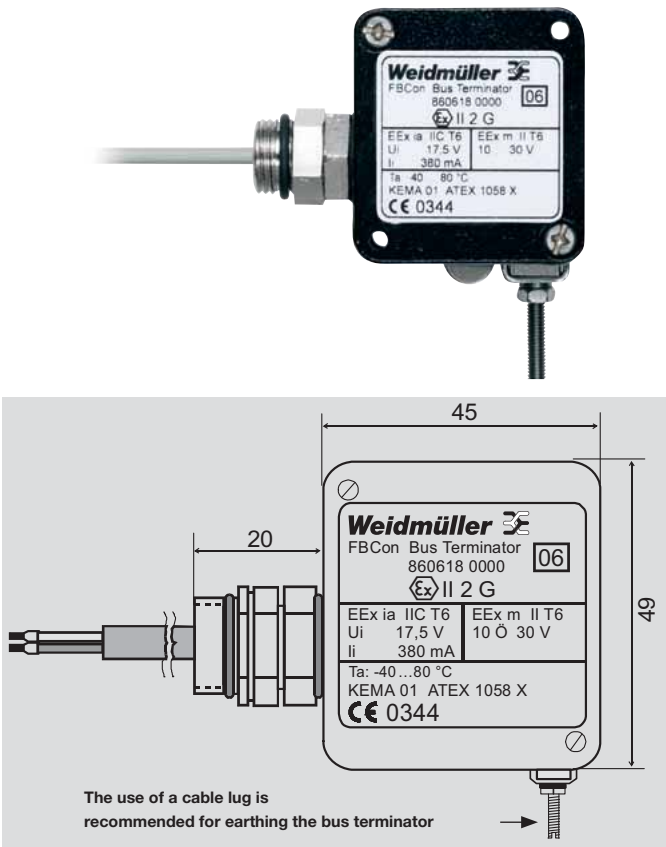
Technical data

|                          |                                         |
|--------------------------|-----------------------------------------|
| Operating temperature    | -40 °C 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 <sup>2</sup>                |
| Cable entry              | Bus adapter M16                         |

Wiring diagram



FBCon Bus Terminator with earth connection



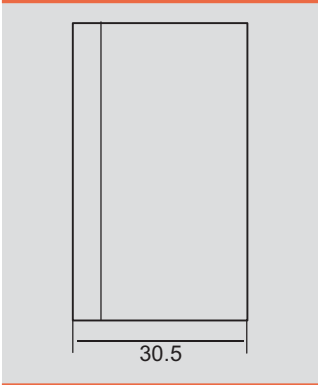
Ordering data

| Typee                                                  | Qty. | Order No.  |
|--------------------------------------------------------|------|------------|
| FBCon Bus Terminator EEx mit Rastfuß + mit Erdschluss  | 1    | 8606180000 |
| FBCon Bus Terminator EEx ohne Rastfuß + mit Erdschluss | 1    | 8606200000 |

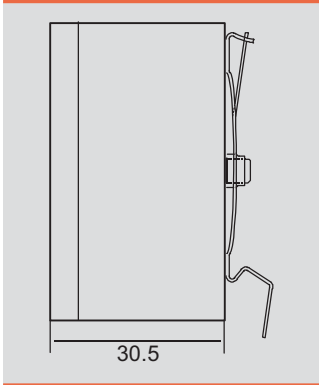
Technical data

|                          |                                         |
|--------------------------|-----------------------------------------|
| Operating temperature    | -40 °C 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 <sup>2</sup>                |
| Cable entry              | Bus adapter M16                         |

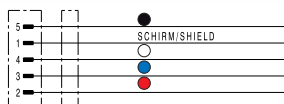
Housing cover  
without clip-on foot



Housing cover  
with clip-on foot







## 5-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12G-CD-1.5A         | 1964700150 |
| SAIL-M12G-CD-1.5B         | 1060110150 |
|                           |            |
| SAIL-M12W-CD-1.5A         | 1062220150 |
| SAIL-M12W-CD-1.5B         | 1062170150 |
|                           |            |
| SAIL-M12BG-CD-1.5A        | 1964690150 |
| SAIL-M12BG-CD-1.5B        | 1060120150 |
|                           |            |
| SAIL-M12BW-CD-1.5A        | 1061980150 |
| SAIL-M12BW-CD-1.5B        | 1062180150 |
| Other versions on request |            |

The diagram consists of two identical vertical stacks of horizontal bars, separated by a vertical line. Each stack begins with a red bar at the top, followed by a grey bar. Below these are several pairs of white and light orange bars, creating a striped pattern. The stacks are of equal height and width.

### Dimensioned drawing

The image contains two sets of technical drawings for cable assemblies, labeled 'a' and 'b'.

**Assembly 'a' (Standard):**

- Side View:** Shows a cable with a length  $L$  and a diameter of  $\varnothing 14.6$ . The cable is connected to a cable gland with a length of 18. The total length of the assembly is 37. The cable gland has a diameter of  $\varnothing 14.6$  and a thread of M12x1.
- Front View:** Shows the cable gland with a diameter of  $\varnothing 14.6$  and a thread of M12x1. The cable has a length  $L$  and a diameter of  $\varnothing 14.6$ . The total length of the assembly is 44.

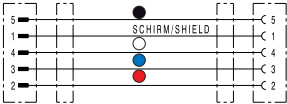
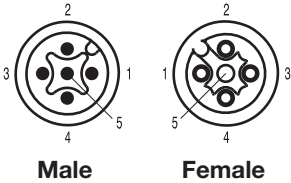
**Assembly 'b' (Cable Gland):**

- Side View:** Shows a cable with a length  $L$  and a diameter of  $\varnothing 14.6$ . The cable is connected to a cable gland with a length of 18. The total length of the assembly is 37. The cable gland has a diameter of  $\varnothing 14.6$  and a thread of M12x1.
- Front View:** Shows the cable gland with a diameter of  $\varnothing 14.6$  and a thread of M12x1. The cable has a length  $L$  and a diameter of  $\varnothing 14.6$ . The total length of the assembly is 47.

|                              |                       |
|------------------------------|-----------------------|
| Sheathing colour             | black                 |
| Protection class             | IP 67                 |
| Core cross-section           | 2x 0.34 + 2x 0.22 mm² |
| Contact surface              | gold-plated           |
| Temperature range of housing | -25...+85 °C          |

Chapter W includes additional technical specifications for the cable

CAN/DeviceNet cables™  
connecting cables



Ordering data

| Male, straight - Female, straight |       |  |
|-----------------------------------|-------|--|
| PUR/TPE                           | 1.5 m |  |
| PVC/PVC                           | 1.5 m |  |
| Male, straight - Female, angled   |       |  |
| PUR/TPE                           | 1.5 m |  |
| PVC/PVC                           | 1.5 m |  |
| Male, angled - Female, angled     |       |  |
| PUR/TPE                           | 1.5 m |  |
| PVC/PVC                           | 1.5 m |  |
| Note                              |       |  |

5-pole

| Type                      | Order No.  |
|---------------------------|------------|
| SAIL-M12GM12G-CD-1.5A     | 1964710150 |
| SAIL-M12GM12G-CD-1.5B     | 1060130150 |
|                           |            |
| SAIL-M12GM12W-CD-1.5A     | 1061990150 |
| SAIL-M12GM12W-CD-1.5B     | 1062190150 |
|                           |            |
| SAIL-M12WM12W-CD-1.5A     | 1062150150 |
| SAIL-M12WM12W-CD-1.5B     | 1062210150 |
| Other versions on request |            |

|  |  |  |
|--|--|--|
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Standard cable lengths

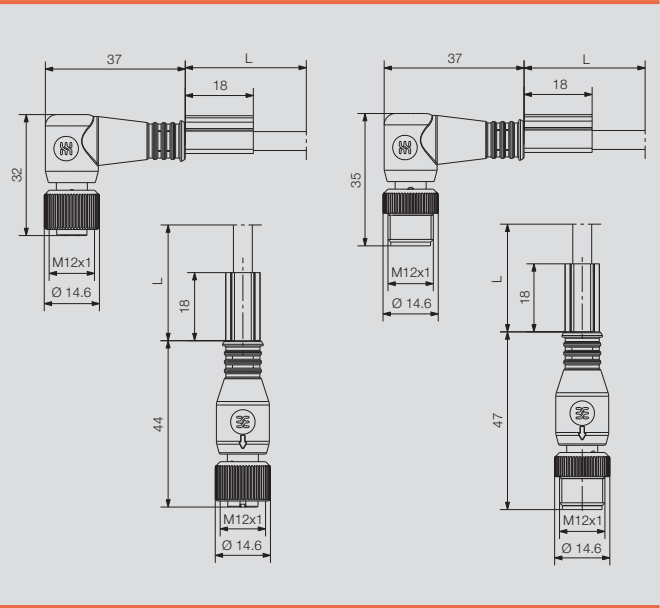
|                                                                                                                                                                  |        |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|
| All cables listed under the ordering data have a length of 1.5 metres. The last four ordering digits must be changed when ordering other standard cable lengths. | 1.5 m  | xxxxxx0150 |
|                                                                                                                                                                  | 3.0 m  | xxxxxx0300 |
|                                                                                                                                                                  | 5.0 m  | xxxxxx0500 |
|                                                                                                                                                                  | 10.0 m | xxxxxx1000 |

Technical data

|                              |                       |
|------------------------------|-----------------------|
| Sheathing colour             | black                 |
| Protection class             | IP 67                 |
| Core cross-section           | 2x 0.34 + 2x 0.22 mm² |
| Contact surface              | gold-plated           |
| Temperature range of housing | -25...+85 °C          |

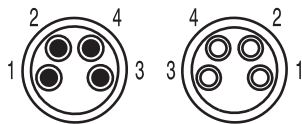
Chapter W includes additional technical specifications for the cable

Dimensioned drawing



CAN/DeviceNet cables™ - cables (M12, M8)

CAN/DeviceNet cables™  
Connecting cables



Male

Female



Ordering data

|        |  | 2-pole                  |            |
|--------|--|-------------------------|------------|
|        |  | Type                    | Order No.  |
| 0.2 m  |  | SAIL-M8GM8G-4S-0.2-CAN  | 1216820020 |
| 0.25 m |  | SAIL-M8GM8G-4S-0.25-CAN | 1216820025 |
| 0.3 m  |  | SAIL-M8GM8G-4S-0.3-CAN  | 1216820030 |
| 0.5 m  |  | SAIL-M8GM8G-4S-0.5-CAN  | 1216820050 |
| 0.8 m  |  | SAIL-M8GM8G-4S-0.8-CAN  | 1216820080 |
| 1.0 m  |  | SAIL-M8GM8G-4S-1.0-CAN  | 1216820100 |
| 1.5 m  |  | SAIL-M8GM8G-4S-1.5-CAN  | 1216820150 |
| 3.0 m  |  | SAIL-M8GM8G-4S-3.0-CAN  | 1216820300 |
| 3.5 m  |  | SAIL-M8GM8G-4S-3.5-CAN  | 1216820350 |
| 5.0 m  |  | SAIL-M8GM8G-4S-5.0-CAN  | 1216820500 |
| 7.0 m  |  | SAIL-M8GM8G-4S-7.0-CAN  | 1216820700 |
| 10.0 m |  | SAIL-M8GM8G-4S-10-CAN   | 1216821000 |

| Type | Order No. |
|------|-----------|
|      |           |
|      |           |
|      |           |
|      |           |
|      |           |
|      |           |
|      |           |
|      |           |
|      |           |
|      |           |
|      |           |

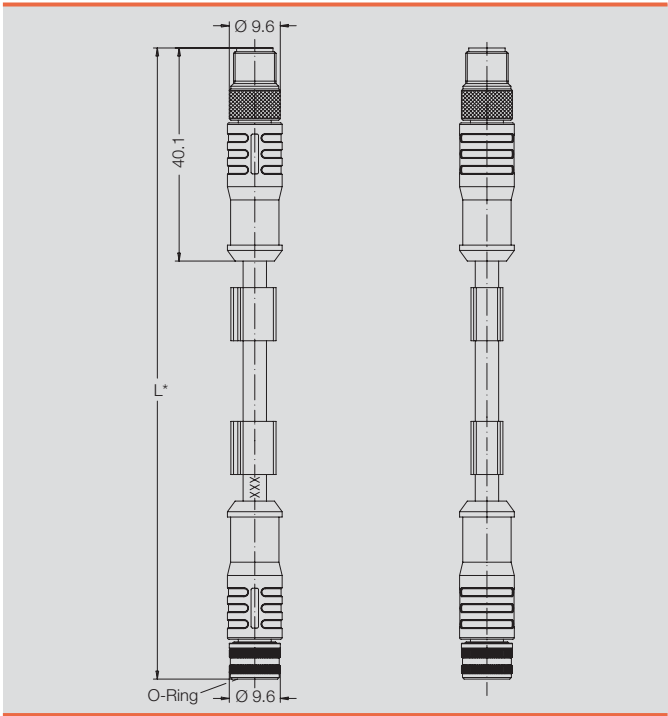
| Type | Order No. |
|------|-----------|
|      |           |
|      |           |
|      |           |
|      |           |
|      |           |
|      |           |
|      |           |
|      |           |
|      |           |
|      |           |
|      |           |

Technical data

|                                        |  |                                                                                 |
|----------------------------------------|--|---------------------------------------------------------------------------------|
| Operating voltage                      |  | Max. 300 V peak                                                                 |
| Wire                                   |  | Conductor: copper wire, without insulation, AWG 24,<br>7-wire Insulation: PE 2Y |
| Quad                                   |  | 4 wires according to 3.1 are stranded in group of four                          |
| Stranding sequence                     |  | Brown, green, white, yellow                                                     |
| Wrapping                               |  | Plastic foil                                                                    |
| Shield                                 |  | Braiding tin-plated copper, opt. Coverage ≥ 85 %                                |
| Outer cladding                         |  | PVC, YM                                                                         |
| Electrical properties                  |  |                                                                                 |
| Conductor resistance (at 20 °C)        |  | ≤ 87 Ω/km                                                                       |
| Insulation resistance                  |  | ≤ 1 GΩ x km                                                                     |
| Dielectric strength (50 Hz 1 min.)     |  | Wire/wire1000 V                                                                 |
| Characteristic impedance 1-1000 KHz    |  | nom. 100-120 Ω                                                                  |
| Operational capacity                   |  | nom. 56 pF/m                                                                    |
| Mechanical characteristics             |  |                                                                                 |
| Min. permitted bending radius          |  | One time: 7.5 x cable diameter<br>Multiple times: 15 x cable diameter           |
| Max. permitted tensile load resistance |  | Static: 50 N/mm²<br>Dynamic: 20 N/mm²                                           |
| Weight                                 |  | Approx. 78 kg/km                                                                |
| Thermal characteristics                |  |                                                                                 |
| moving                                 |  | -20 °C to 70 °C                                                                 |
| Stationary                             |  | -40 °C to 70 °C                                                                 |

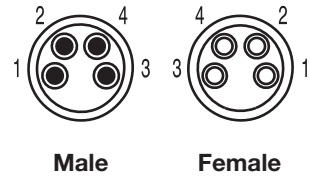
L in the drawing is the cable length

Dimensions



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 mm<sup>2</sup>, 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 <sup>2</sup> |
| 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.  |
|-----------------------------------|--------|---------------------------|------------|------------|
|                                   |        | SAIL-M8GM8G-4S-0.3Q-SB    |            | 1981900030 |
|                                   | 0.3 m  | SAIL-M8GM8G-4S-1.0Q-SB    |            | 1981900100 |
|                                   | 1.0 m  | SAIL-M8GM8G-4S-1.5Q-SB    |            | 1981900150 |
|                                   | 1.5 m  | SAIL-M8GM8G-4S-3.0Q-SB    |            | 1981900300 |
|                                   | 3.0 m  | SAIL-M8GM8G-4S-5.0Q-SB    |            | 1981900500 |
|                                   | 5.0 m  | SAIL-M8GM8G-4S-10Q-SB     |            | 1981901000 |
|                                   | 10.0 m | SAIL-M8GM8G-4S-15Q-SB     |            | 1981901500 |
|                                   | 15.0 m | SAIL-M8GM8G-4S-20Q-SB     |            | 1981902000 |
|                                   | 20.0 m |                           |            |            |
| Female, straight - open end       |        | SAIL-M8BG-4S-1.5Q-SB      |            | 1981910150 |
|                                   | 1.5 m  | SAIL-M8BG-4S-3.0Q-SB      |            | 1981910300 |
|                                   | 3.0 m  | SAIL-M8BG-4S-5.0Q-SB      |            | 1981910500 |
|                                   | 5.0 m  | SAIL-M8BG-4S-10Q-SB       |            | 1981911000 |
|                                   | 10.0 m | Other versions on request |            |            |
| Note                              |        |                           |            |            |

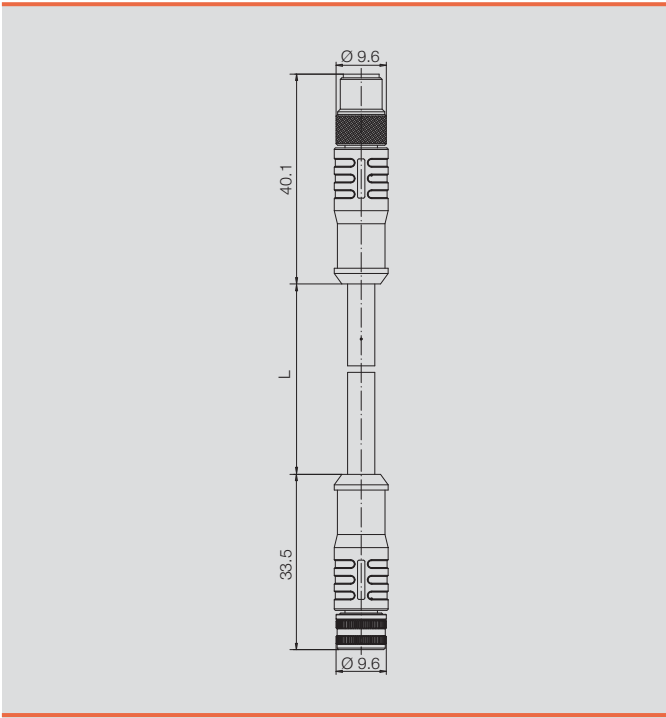
Terminating resistor



Ordering data

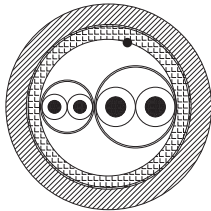
| Type              | Qty. | Order No.  |
|-------------------|------|------------|
| SAI END CAN M8 4P | 1    | 1955340000 |

Dimensions



# CANopen & DeviceNet™ - cables (M12, M8)

## CAN/DeviceNet™ bulk lengths



## CAN/DeviceNet bulk lengths

### Ordering data

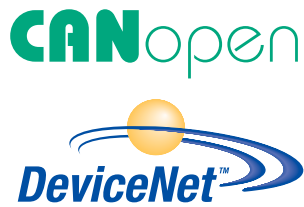
| Male   | Type                       | Order No.  |
|--------|----------------------------|------------|
| 4-pole | SAIH-CD-2x0.34/2x0.22-PURs | 1058630000 |

### Technical data

| Component A (1x2x0.34) ST    |                                                                                                                  |
|------------------------------|------------------------------------------------------------------------------------------------------------------|
| Conductor                    | Tin-plated copper 0.34 mm <sup>2</sup> (19 wires) according to UL 1581 Tab 20.1                                  |
| Insulation                   | Polyolefine mixture according to UL Style 80 °C 30 V colour code: 2 conductor red/black<br>Diameter: 1.6 ±0.1 mm |
| Assembly                     | Two twisted conductors + aluminium-polyester band (Ai exterior)                                                  |
| Element B (1x2x0.22) ST      |                                                                                                                  |
| Conductor                    | Tin-plated copper 0.22 mm <sup>2</sup> (19 wires) according to UL 1581 Tab 20.1                                  |
| Insulation                   | Polyethylene foam skin<br>Colour code: 2 conductors white/blue<br>Diameter: approx. 2.0 mm                       |
| Assembly                     | Two twisted conductors + aluminium-polyester band (Ai exterior)                                                  |
| Complete assembly            | Element A + Element B drilled                                                                                    |
| Drain wire                   | Tin-plated copper 0.34 mm <sup>2</sup> (19 wires) according to UL 1581 Tab 20.1                                  |
| Shield                       | Tin-plated copper braiding, coverage 85 ± 5 %                                                                    |
| Band                         | Fibre band                                                                                                       |
| Outer cladding               | Polyurethane mixture according to UL Style 80 °C 30 V<br>Colour code: black RAL 9005                             |
| Marking                      | Not required                                                                                                     |
| General characteristics:     |                                                                                                                  |
| Nom. impedance 0.3-20 MHz    | (pair 2 x 0.22 mm <sup>2</sup> ) - 120 ±10 % Ω                                                                   |
| Nominal power rating 800 Hz  | (pair 2 x 0.22 mm <sup>2</sup> ) - 39 pF/mt                                                                      |
| Operating voltage            | Low-voltage computer cable                                                                                       |
| Test voltage                 | 1000 V                                                                                                           |
| Conductor resistance         | Conductor A: max. 55 Ω/km at 20 °C<br>Conductor B: max. 90 Ω/km at 20 °C                                         |
| Min. bending radius          | 5 x D (during installation)<br>10 x D (during operations)                                                        |
| Temperature range            | -40 °C...+80 °C (during installation)<br>-10 °C ... +80 °C (during operations)                                   |
| Reference                    | UL 1581                                                                                                          |
| Attenuation (max.)           | 0,5 MHz ... 1,64 db/100mt                                                                                        |
| (pair 0.22 mm <sup>2</sup> ) | 1,0 MHz ... 2,30 db/100mt                                                                                        |
| Max. speed                   | 180 mt/min                                                                                                       |
| Max. acceleration            | 5 mt/s <sup>2</sup>                                                                                              |
| Copper weight                | 33,6 kg/km (ca.)                                                                                                 |
| Total weight                 | 79 kg/km (ca.)                                                                                                   |

### Note

Screw connection M12, metal (EMC)



SAISM / SAIBM

straight



SAISW / SAIBW

Angled



Ordering data

|        |              |
|--------|--------------|
| Male   | 5-pole, PG 9 |
| Socket | 5-pole, PG 9 |
| Note   |              |

| Type                      | Qty. | Order No.  |
|---------------------------|------|------------|
| SAIS-M-5/8S M12 5P A-COD  | 1    | 1784740000 |
| SAIB-M-5/8S M12 5P A-COD  | 1    | 1784750000 |
| Other versions on request |      |            |

| Type                      | Qty. | Order No.  |
|---------------------------|------|------------|
| SAISW-M-5/8 M12           | 1    | 1803940000 |
| SAIBW-M-5/8 M12           | 1    | 1803920000 |
| Other versions on request |      |            |

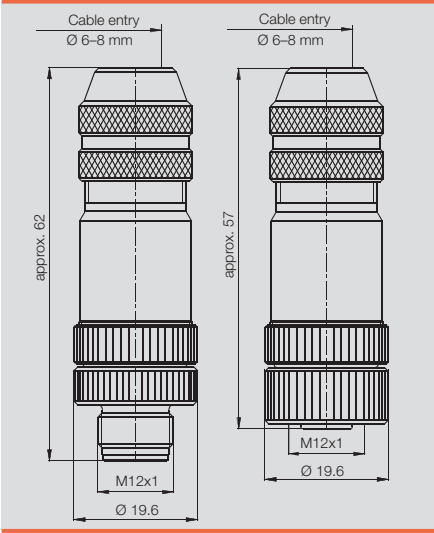
Technical data

|                                  |
|----------------------------------|
| Type of connection               |
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| Note                             |

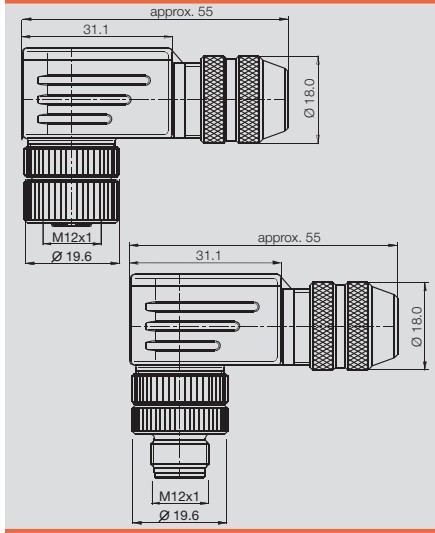
|                  |
|------------------|
| Screw connection |
| CuZn             |
| M12              |
| 6...8 mm (PG9)   |
| 0.14 - 0.75 mm²  |
| 4 A              |
| 125 V            |
| -25...+85 °C     |
| IP 67            |
| gold-plated      |

|                  |
|------------------|
| Screw connection |
| CuZn             |
| M12              |
| 6...8 mm (PG9)   |
| 0.14 - 0.75 mm²  |
| 4 A              |
| 125 V            |
| -25...+85 °C     |
| IP 67            |
| gold-plated      |

Dimensioned drawing



Dimensioned drawing



## C

### Coupling module single from ribbon cable to round cable



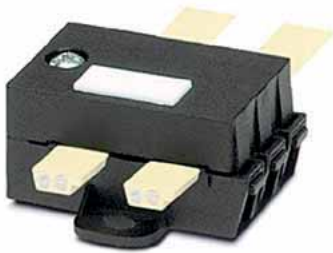
## Technical data

[illegible]

## Ordering data

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

### Bridge module ribbon cable



## Technical data

[illegible]

## 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

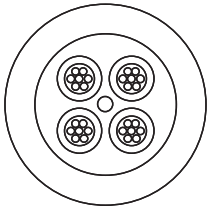
[illegible]

## Ordering data

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

Ethernet cables

Assembled cable - dragline cable M12 straight



Assembled cable - dragline cable M12 straight

Note

**Application:**  
Weidmüller's dragline cable can be used wherever lines are subjected to frequent or constant movement in industrial environments - and not only in dragline applications. They are:

- Sturdy
- Flexible
- Pre-assembled with D-coded M12 connectors

Ordering data

| Cat.5 PROFINET, PUR, M12-M12        |        |
|-------------------------------------|--------|
|                                     | 1.5 m  |
|                                     | 3.0 m  |
|                                     | 5.0 m  |
|                                     | 10.0 m |
| Cat.5 PROFINET, PUR, M12-open       |        |
|                                     | 1.5 m  |
|                                     | 3.0 m  |
|                                     | 5.0 m  |
|                                     | 10.0 m |
| Cat.5 PROFINET, PUR, M12-RJ45       |        |
|                                     | 1.5 m  |
|                                     | 3.0 m  |
|                                     | 5.0 m  |
|                                     | 10.0 m |
| Cat.5 PROFINET, PUR, M12-M12 female |        |
|                                     | 1.5 m  |
|                                     | 3.0 m  |
|                                     | 5.0 m  |
|                                     | 10.0 m |

Note

| Type                   | Order No.  |
|------------------------|------------|
| IE-C5DD4UG0015MCSMCS-E | 1025950015 |
| IE-C5DD4UG0030MCSMCS-E | 1025950030 |
| IE-C5DD4UG0050MCSMCS-E | 1025950050 |
| IE-C5DD4UG0100MCSMCS-E | 1025950100 |
|                        |            |
| IE-C5DD4UG0015MCSXXX-X | 1025940015 |
| IE-C5DD4UG0030MCSXXX-X | 1025940030 |
| IE-C5DD4UG0050MCSXXX-X | 1025940050 |
| IE-C5DD4UG0100MCSXXX-X | 1025940100 |
|                        |            |
| IE-C5DD4UG0015MCSA20-E | 1044470015 |
| IE-C5DD4UG0030MCSA20-E | 1044470030 |
| IE-C5DD4UG0050MCSA20-E | 1044470050 |
| IE-C5DD4UG0100MCSA20-E | 1044470100 |
|                        |            |
| IE-C5DD4UG0015MSSMCS-E | 1059330015 |
| IE-C5DD4UG0030MSSMCS-E | 1059330030 |
| IE-C5DD4UG0050MSSMCS-E | 1059330050 |
| IE-C5DD4UG0100MSSMCS-E | 1059330100 |

Accessories

|                                   |
|-----------------------------------|
| Transparent sleeves, 12-mm length |
| Transparent sleeves, 18-mm length |
| Insertion label, yellow, 12 mm    |
| Insertion label, yellow, 18 mm    |

Note

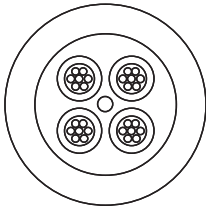
| Type               | Order No.  |
|--------------------|------------|
| TM 4/12 HF/HB      | 1719840000 |
| TM 4/18 HF/HB      | 1719850000 |
| TM-I 12 NEUTRAL GE | 1718411687 |
| TM-I 18 NEUTRAL GE | 1718431687 |

Technical data

|                                   |                                        |
|-----------------------------------|----------------------------------------|
| Category                          | Cat.5 (IEC 11801) / Cat.5e (TIA 568-B) |
| Cross-section                     | 4*AWG 22/7 - 0.36 mm²                  |
| Sheath diameter                   | 6.3-6.7 mm                             |
| Material sheath                   | PUR                                    |
| Sheathing colour                  | green (RAL 6018)                       |
| Insulation cross-section          | 1.5 mm                                 |
| Min. bending radius, repetitive   | 8 x conductor cross-section            |
| Ambient temperature (operational) | -40 °C...+70 °C                        |
| Abrasion resistance               | very good                              |
| Halogen                           | to IEC 60754-2                         |
| Resistance to spread of flame     | acc. to IEC 60332-1                    |
| Resistance to oils                | acc. to IEC 60811-2-1                  |

Note:

Assembled cable - dragline cable  
M12 angled



Assembled cable - dragline cable M12 angled

Note

**Application:**  
Weidmüller's dragline cable can be used wherever lines are subjected to frequent or constant movement in industrial environments - and not only in dragline applications. They are:

- Sturdy
- Flexible
- Pre-assembled with D-coded M12 connectors

Ordering data

| Cat.5 PROFINET, PUR, M12 straight-M12 angled |                        |
|----------------------------------------------|------------------------|
| 1.5 m                                        | IE-C5DD4UG0015MCSMCA-E |
| 3.0 m                                        | IE-C5DD4UG0030MCSMCA-E |
| 5.0 m                                        | IE-C5DD4UG0050MCSMCA-E |
| 10.0 m                                       | IE-C5DD4UG0100MCSMCA-E |
| Cat.5 PROFINET, PUR, M12 angled-M12 angled   |                        |
| 1.5 m                                        | IE-C5DD4UG0015MCAMCA-E |
| 3.0 m                                        | IE-C5DD4UG0030MCAMCA-E |
| 5.0 m                                        | IE-C5DD4UG0050MCAMCA-E |
| 10.0 m                                       | IE-C5DD4UG0100MCAMCA-E |
| Cat.5, PUR, M12 angled-open                  |                        |
| 1.5 m                                        | IE-C5DD4UG0015MCAXXX-X |
| 3.0 m                                        | IE-C5DD4UG0030MCAXXX-X |
| 5.0 m                                        | IE-C5DD4UG0050MCAXXX-X |
| 10.0 m                                       | IE-C5DD4UG0100MCAXXX-X |
| Note                                         |                        |

| Type                   | Order No.  |
|------------------------|------------|
| IE-C5DD4UG0015MCSMCA-E | 1059770015 |
| IE-C5DD4UG0030MCSMCA-E | 1059770030 |
| IE-C5DD4UG0050MCSMCA-E | 1059770050 |
| IE-C5DD4UG0100MCSMCA-E | 1059770100 |
| IE-C5DD4UG0015MCAMCA-E | 1059890015 |
| IE-C5DD4UG0030MCAMCA-E | 1059890030 |
| IE-C5DD4UG0050MCAMCA-E | 1059890050 |
| IE-C5DD4UG0100MCAMCA-E | 1059890100 |
| IE-C5DD4UG0015MCAXXX-X | 1059750015 |
| IE-C5DD4UG0030MCAXXX-X | 1059750030 |
| IE-C5DD4UG0050MCAXXX-X | 1059750050 |
| IE-C5DD4UG0100MCAXXX-X | 1059750100 |

Accessories

|                                   |
|-----------------------------------|
| Transparent sleeves, 12-mm length |
| Transparent sleeves, 18-mm length |
| Insertion label, yellow, 12 mm    |
| Insertion label, yellow, 18 mm    |
| <b>Note</b>                       |

| Type               | Order No.  |
|--------------------|------------|
| TM 4/12 HF/HB      | 1719840000 |
| TM 4/18 HF/HB      | 1719850000 |
| TM-I 12 NEUTRAL GE | 1718411687 |
| TM-I 18 NEUTRAL GE | 1718431687 |

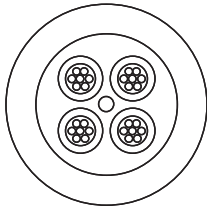
Technical data

|                                   |                                        |
|-----------------------------------|----------------------------------------|
| Category                          | Cat.5 (IEC 11801) / Cat.5e (TIA 568-B) |
| Cross-section                     | 4*AWG 22/7 - 0.36 mm²                  |
| Sheath diameter                   | 6.3-6.7 mm                             |
| Material sheath                   | PUR                                    |
| Sheathing colour                  | green (RAL 6018)                       |
| Insulation cross-section          | 1.5 mm                                 |
| Min. bending radius, repetitive   | 8 x conductor cross-section            |
| Ambient temperature (operational) | -40 °C...+70 °C                        |
| Abrasion resistance               | very good                              |
| Halogen                           | to IEC 60754-2                         |
| Resistance to spread of flame     | acc. to IEC 60332-1                    |
| Resistance to oils                | acc. to IEC 60811-2-1                  |

Note:

## Ethernet cables

### Assembled cable - railway cable M12 straight



### Assembled cable - railway cable M12 straight

| Note                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Description</b></p> <p>Weidmüller's industrial Ethernet rail cables are used on railway vehicles for both interior and exterior installations. They can connect parts which are fixed or which are occasionally in motion. In compliance with EN 50155 specifications.</p> |

### Ordering data

| Cat.5 PUR, M12-M12        | Type                   | Order No.  |
|---------------------------|------------------------|------------|
| 1.5 m                     | IE-C5DB4RE0015MCSMCS-E | 1010850015 |
| 3.0 m                     | IE-C5DB4RE0030MCSMCS-E | 1010850030 |
| 5.0 m                     | IE-C5DB4RE0050MCSMCS-E | 1010850050 |
| 10.0 m                    | IE-C5DB4RE0100MCSMCS-E | 1010850100 |
| Cat.5, PUR, M12-open      |                        |            |
| 1.5 m                     | IE-C5DB4RE0015MCSXXX-X | 1010840015 |
| 3.0 m                     | IE-C5DB4RE0030MCSXXX-X | 1010840030 |
| 5.0 m                     | IE-C5DB4RE0050MCSXXX-X | 1010840050 |
| 10.0 m                    | IE-C5DB4RE0100MCSXXX-X | 1010840100 |
| Cat.5 PUR, M12-M12 female |                        |            |
| 1.5 m                     | IE-C5DB4RE0015MSSMCS-E | 1059340015 |
| 3.0 m                     | IE-C5DB4RE0030MSSMCS-E | 1059340030 |
| 5.0 m                     | IE-C5DB4RE0050MSSMCS-E | 1059340050 |
| 10.0 m                    | IE-C5DB4RE0100MSSMCS-E | 1059340100 |
| Note                      |                        |            |

### Accessories

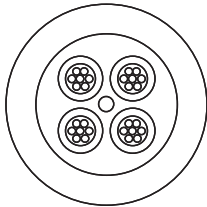
| Type                              | Order No.                     |
|-----------------------------------|-------------------------------|
| Transparent sleeves, 12-mm length | TM 4/12 HF/HB 1719840000      |
| Transparent sleeves, 18-mm length | TM 4/18 HF/HB 1719850000      |
| Insertion label, yellow, 12 mm    | TM-I 12 NEUTRAL GE 1718411687 |
| Insertion label, yellow, 18 mm    | TM-I 18 NEUTRAL GE 1718431687 |
| Note                              |                               |

### Technical data

|                                   |                                        |
|-----------------------------------|----------------------------------------|
| Category                          | Cat.5 (IEC 11801) / Cat.5e (TIA 568-B) |
| Cross-section                     | 2*2*AWG 22/7 - 2*2*0.36 mm²            |
| Sheath diameter                   | 6.95-7.55 mm                           |
| Material sheath                   | Radox GKW S                            |
| Sheathing colour                  | black                                  |
| Insulation cross-section          | 1.95 mm                                |
| Min. bending radius, repetitive   | 6.0 x conductor cross-section          |
| Ambient temperature (operational) | -40 °C...+90 °C                        |
| Abrasion resistance               | very good                              |
| Halogen                           | to IEC 60754-2                         |
| Resistance to spread of flame     | to IEC 60332-1                         |
| Resistance to oils                | acc. EN 50306-3                        |

**Note:**

Assembled cable - rail cable M12, angled



Assembled cable - railway cable M12 angled

**Note**

**Description**  
Weidmüller's industrial Ethernet rail cables are used on railway vehicles for both interior and exterior installations. They can connect parts which are fixed or which are occasionally in motion. In compliance with EN 50155 specifications.

Ordering data

| Cat.5 PUR, M12 straight-M12 angled |        | Type                   | Order No.  |
|------------------------------------|--------|------------------------|------------|
|                                    | 1.5 m  | IE-C5DB4RE0015MCSMCA-E | 1059940015 |
|                                    | 3.0 m  | IE-C5DB4RE0030MCSMCA-E | 1059940030 |
|                                    | 5.0 m  | IE-C5DB4RE0050MCSMCA-E | 1059940050 |
|                                    | 10.0 m | IE-C5DB4RE0100MCSMCA-E | 1059940100 |
| Cat.5, PUR, M12 angled-open        |        |                        |            |
|                                    | 1.5 m  | IE-C5DB4RE0015MCAXXX-X | 1059900015 |
|                                    | 3.0 m  | IE-C5DB4RE0030MCAXXX-X | 1059900030 |
|                                    | 5.0 m  | IE-C5DB4RE0050MCAXXX-X | 1059900050 |
|                                    | 10.0 m | IE-C5DB4RE0100MCAXXX-X | 1059900100 |
| Cat.5 PUR, M12 angled-M12 angled   |        |                        |            |
|                                    | 1.5 m  | IE-C5DB4RE0015MCAMCA-E | 1059970015 |
|                                    | 3.0 m  | IE-C5DB4RE0030MCAMCA-E | 1059970030 |
|                                    | 5.0 m  | IE-C5DB4RE0050MCAMCA-E | 1059970050 |
|                                    | 10.0 m | IE-C5DB4RE0100MCAMCA-E | 1059970100 |
| Note                               |        |                        |            |

Accessories

| Type                              | Order No.                     |
|-----------------------------------|-------------------------------|
| Transparent sleeves, 12-mm length | TM 4/12 HF/HB 1719840000      |
| Transparent sleeves, 18-mm length | TM 4/18 HF/HB 1719850000      |
| Insertion label, yellow, 12 mm    | TM-I 12 NEUTRAL GE 1718411687 |
| Insertion label, yellow, 18 mm    | TM-I 18 NEUTRAL GE 1718431687 |
| Note                              |                               |

Technical data

|                                   |                                        |
|-----------------------------------|----------------------------------------|
| Category                          | Cat.5 (IEC 11801) / Cat.5e (TIA 568-B) |
| Cross-section                     | 2*2*AWG 22/7 - 2*2*0.36 mm²            |
| Sheath diameter                   | 6.95-7.55 mm                           |
| Material sheath                   | Radox GKW S                            |
| Sheathing colour                  | black                                  |
| Insulation cross-section          | 1.95 mm                                |
| Min. bending radius, repetitive   | 6.0 x conductor cross-section          |
| Ambient temperature (operational) | -40 °C...+90 °C                        |
| Abrasion resistance               | very good                              |
| Halogen                           | to IEC 60754-2                         |
| Resistance to spread of flame     | to IEC 60332-1                         |
| Resistance to oils                | acc. EN 50306-3                        |

Note:

Ethernet plug-in connector

Tension clamp connection M12,  
metal (EMC)  
D-coded

Industrial Ethernet

SAISM / SAIBM  
straight



SAISW / SAIBW  
angled



Ordering data

|        |              |
|--------|--------------|
| Male   | 4-pole, PG 9 |
| Socket | 4-pole, PG 9 |
| Note   |              |

| 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.  |
|------------------------|------|------------|
| SAISW-4/8S-M12 4P D-ZF | 1    | 1803930001 |
| SAIBW-4/8S-M12 4P D-ZF | 1    | 1139330000 |

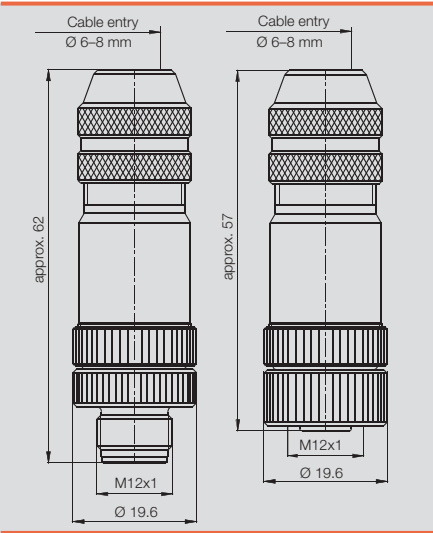
Technical data

|                                  |
|----------------------------------|
| Type of connection               |
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| Note                             |

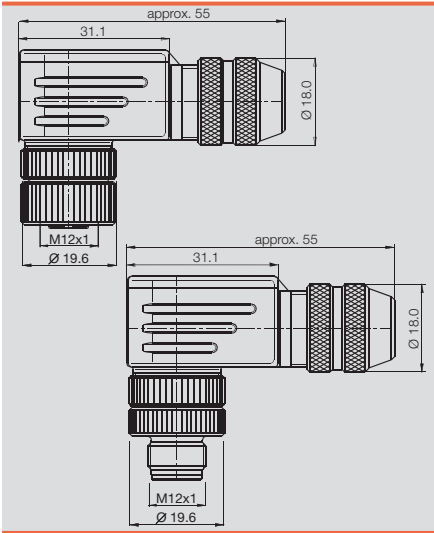
|                  |
|------------------|
| Screw connection |
| CuZn             |
| M12              |
| 6...8 mm (PG9)   |
| 0.14 - 0.75 mm²  |
| 4 A              |
| 250 V            |
| -25...+85 °C     |
| IP 67            |
| gold-plated      |

|                          |
|--------------------------|
| Tension clamp connection |
| PA                       |
| M12                      |
| 4...6 mm                 |
| 0.25 - 0.5 mm²           |
| 4 A                      |
| 250 V                    |
| -25...+85 °C             |
| IP 67                    |
| gold-plated              |

Dimensioned drawing



Dimensioned drawing



Screw connection M12, metal (EMC)  
D-coded

Industrial Ethernet

SAISM / SAIBM  
straight



SAISW  
angled



Ordering data

|        |              |
|--------|--------------|
| Male   | 4-pole, PG 9 |
| Socket | 4-pole, PG 9 |
| Note   |              |

| 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.  |
|-------------------------|------|------------|
| SAISW-4/8S-M12-4P D-COD | 1    | 1160550000 |

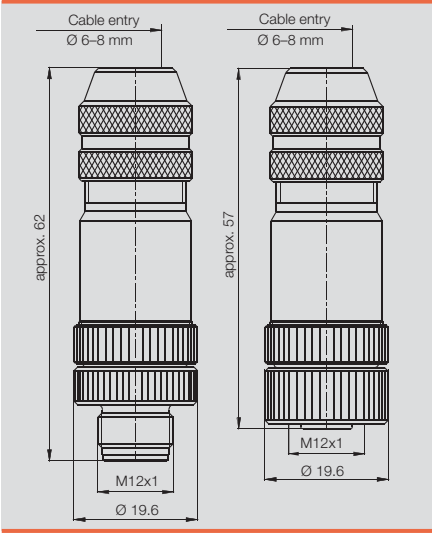
Technical data

|                                  |
|----------------------------------|
| Type of connection               |
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| Note                             |

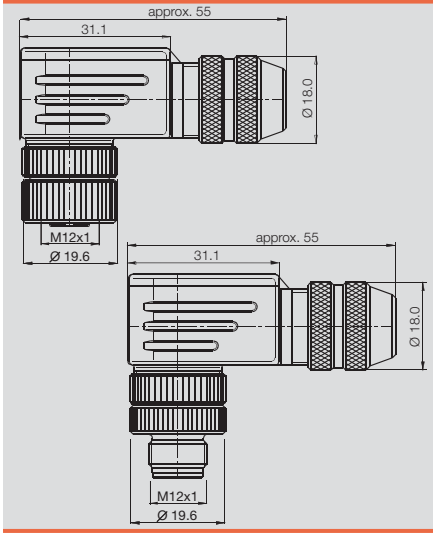
|                  |
|------------------|
| Screw connection |
| CuZn             |
| M12              |
| 6...8 mm (PG9)   |
| 0.14 - 0.75 mm²  |
| 4 A              |
| 250 V            |
| -25...+85 °C     |
| IP 67            |
| gold-plated      |

|                  |
|------------------|
| Screw connection |
| CuZn             |
| M12              |
| 6...8 mm (PG9)   |
| 0.14 - 0.75 mm²  |
| 4 A              |
| 250 V            |
| -25...+85 °C     |
| IP 67            |
| gold-plated      |

Dimensioned drawing



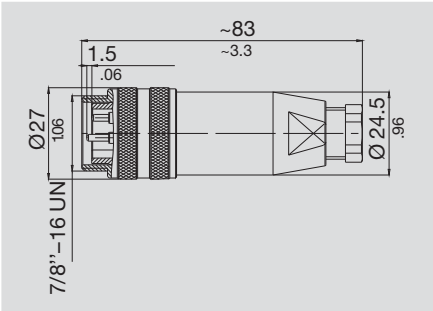
Dimensioned drawing



FOUNDATION Fieldbus - connector (7/8")

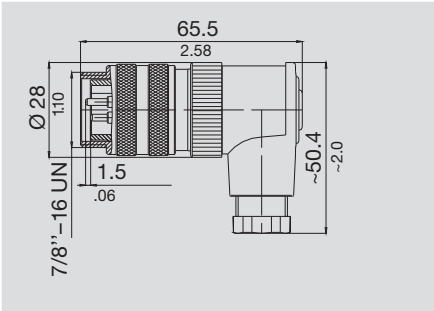
Plug-in connector FBCon 7/8"

Plug-in connector straight (plug)



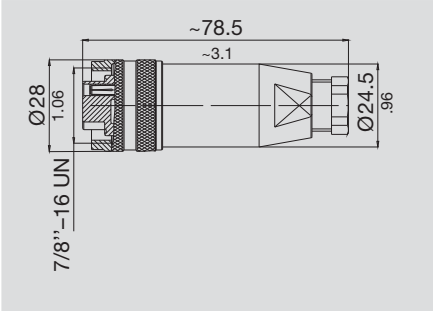
| Ordering data   |      | 4-pole     |
|-----------------|------|------------|
| Type            | Qty. | Order No.  |
| FBCon 7/8" 4P M | 1    | 1808840000 |

Plug-in connector 90° (plug)



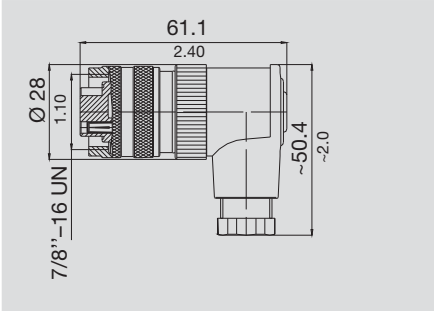
| Ordering data       |      | 4-pole     |
|---------------------|------|------------|
| Type                | Qty. | Order No.  |
| FBCon 7/8" 4P M (A) | 1    | 1808830000 |

Plug-in connector straight (socket)



| Ordering data    |      | 4-pole     |
|------------------|------|------------|
| Type             | Qty. | Order No.  |
| FBCon 7/8" 4P FM | 1    | 1812480000 |

Plug-in connector 90° (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       |
| Cable gland                | PG 9                 |
| Connection                 | Screw                |
| Connection cross-section   | max. 1,5 mm²         |
| 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               |
| Polution 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 <sup>10</sup> 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 |             |

## 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



# Plug in connector and protective caps

|                                       |                                 |      |
|---------------------------------------|---------------------------------|------|
| Plug in connector and protective caps | SAI connectors                  | D.2  |
|                                       | Customisable connectors         | D.4  |
|                                       | Connectors – accessories        | D.25 |
|                                       | Built in plugs                  | D.28 |
|                                       | Valve plugs for custom assembly | D.32 |
|                                       | Protective sleeve adapter       | D.34 |

# SAI connectors

Self assembled M8 and M12 connectors are integral and essential connectivity components. They are available with a wide variety of different wire connection methods. Weidmüller offers all of the secure connection methods, which include screw, tension clamp, IDC or solder connection mechanisms. One highlight in this line are the shielded, D-coded M-12 connectors. They are available in male and female versions also with the tension-clamp connection.

## D

The eight pole screw connection connectors are a special favourite. These are available in shielded or unshielded versions.





### Fast

The M12 connectors also come with the tension clamp conductor connection method, in either shielded or unshielded.



### Versatile

Eight pole M12 connectors, shielded, with screw connection and a cable outer insulation diameter of 8 – 10 mm.



### Proven

M8 connectors with screw connections for the conductor are much easier to assemble compared to connectors which require soldering.



### Safe

M8 connectors with shield connections are in increasing demand as the trend towards miniaturization continues.



### M12 connectors

Screw and tension clamp connection



### M8 connectors

Screw and solder connection



### M8 and M12 connectors

Insulation displacement connection (IDC)



### M8 and M12 connectors

T distributor



### Protective caps for SAI distributors



### M12/M8/M5

Built in connectors



### Customisable valve connectors

# 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.

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.

## D

## M12

## M12 Metal



## 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.

# Overview of SAI connector M12

## Plastic

| Screw connection                | straight                       |                                |            | angled     |            |            |
|---------------------------------|--------------------------------|--------------------------------|------------|------------|------------|------------|
|                                 | 3-pole                         | 4-pole                         | 5-pole     | 3-pole     | 4-pole     | 5-pole     |
| PG7 Male                        | 1871710000                     | 9457550000                     | 9456940000 | 1021280000 | 9457290000 | 9456950000 |
| PG7 Female                      | 1924940000                     | 9457240000                     | 9457250000 | 1021310000 | 9457700000 | 9457260000 |
| <b>Screw connection</b>         |                                |                                |            |            |            |            |
| PG9 Male                        | 1021480000                     | 1807340000                     | 1807350000 |            |            |            |
| PG9 Female                      | 1021510000                     | 1807230000                     | 1807250000 |            |            |            |
| <b>Screw connection</b>         | 8-pole                         | 12-pole<br>(Solder connection) |            |            |            |            |
| PG 9 Male                       | 1836970000                     | 1924950000                     |            |            |            |            |
| PG9 Female                      | 1836960000                     | 1924960000                     |            |            |            |            |
| <b>IDC connection</b>           | (0.14 - 0.34 mm <sup>2</sup> ) | (0.34 - 0.75 mm <sup>2</sup> ) |            |            |            |            |
|                                 | 4-pole                         | 4-pole                         |            |            |            |            |
| Male                            | 1781550001                     | 1852740000                     |            |            |            |            |
| Female                          | 1781540001                     | 1852730000                     |            |            |            |            |
| <b>Tension clamp connection</b> |                                |                                | 5-pole     |            |            |            |
| Male                            |                                |                                | 1906390000 |            |            |            |
| Female                          |                                |                                | 1924970000 |            |            |            |

## Metal

| A-coded                         | straight |            |            | angled |            |            |
|---------------------------------|----------|------------|------------|--------|------------|------------|
|                                 | 3-pole   | 4-pole     | 5-pole     | 3-pole | 4-pole     | 5-pole     |
| <b>Screw connection</b>         |          |            |            |        |            |            |
| PG7 Male                        |          |            | 1191030000 |        |            |            |
| PG7 Female                      |          |            | 1191020000 |        |            |            |
|                                 |          |            |            |        |            |            |
| PG9 Male                        |          | 9455640000 | 1784740000 |        | 1803930000 | 1803940000 |
| PG9 Female                      |          | 8426220000 | 1784750000 |        | 1803910000 | 1803920000 |
| <b>Tension clamp connection</b> |          |            |            |        |            |            |
| PG9 Male                        |          |            |            |        |            |            |
| PG9 Female                      |          | 1784740002 |            |        |            |            |
| <b>B-coded</b>                  |          |            |            |        |            |            |
| <b>Screw connection</b>         |          |            |            |        |            |            |
| PG9 Male                        |          |            | 1784790000 |        |            | 1944570000 |
| PG9 Female                      |          |            | 1784780000 |        |            | 1944580000 |
| <b>D-coded</b>                  |          |            |            |        |            |            |
| <b>Screw connection</b>         |          |            |            |        |            |            |
| PG9 Male                        |          | 1892120000 |            |        |            |            |
| PG9 Female                      |          | 1892130000 |            |        |            |            |
| <b>D-coded</b>                  |          |            |            |        |            |            |
| <b>Tension clamp connection</b> |          |            |            |        |            |            |
| PG9 Male                        |          | 1892120001 |            |        | 1803930001 |            |
| PG9 Female                      |          | 1892130001 |            |        | 1139330000 |            |

# Overview of M8 connectors

## Plastic

| Screw connection         | straight   |            |        | angled     |            |        |
|--------------------------|------------|------------|--------|------------|------------|--------|
|                          | 3-pole     | 4-pole     | 5-pole | 3-pole     | 4-pole     | 5-pole |
| Male Screw connection    | 1803860000 | 1803850000 |        |            |            |        |
| Female Screw connection  | 1803870000 | 1803880000 |        |            |            |        |
|                          |            |            |        |            |            |        |
| Male IDC connection      | 1784040001 | 1784060001 |        |            |            |        |
| Female IDC connection    | 1784030001 | 1784050001 |        |            |            |        |
|                          |            |            |        |            |            |        |
| Male Solder connection   |            |            |        | 1920990000 | 1921000000 |        |
| Female Solder connection |            |            |        | 1920970000 | 1920980000 |        |

## Metal

|                          | straight   |            |        | angled |        |        |
|--------------------------|------------|------------|--------|--------|--------|--------|
|                          | 3-pole     | 4-pole     | 5-pole | 3-pole | 4-pole | 5-pole |
| Male Screw connection    | 1010060000 | 1010070000 |        |        |        |        |
| Female Screw connection  | 1010080000 | 1010090000 |        |        |        |        |
|                          |            |            |        |        |        |        |
| Male Solder connection   | 1921030000 | 1921040000 |        |        |        |        |
| Female Solder connection | 1921010000 | 1921020000 |        |        |        |        |

Screw connection M12, A-coded

SAIS / SAIB

straight



SAISW / SAIBW

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 |      |            |

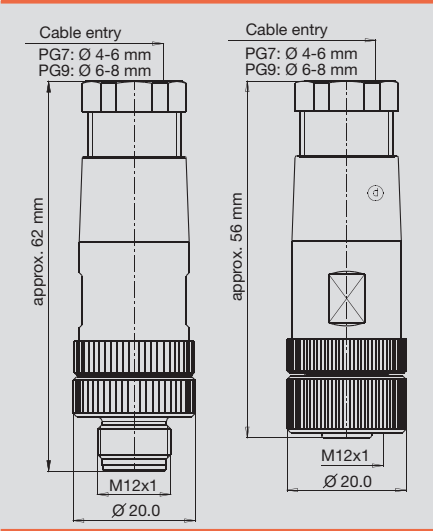
Technical data

|                                  |
|----------------------------------|
| Type of connection               |
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| <b>Note</b>                      |

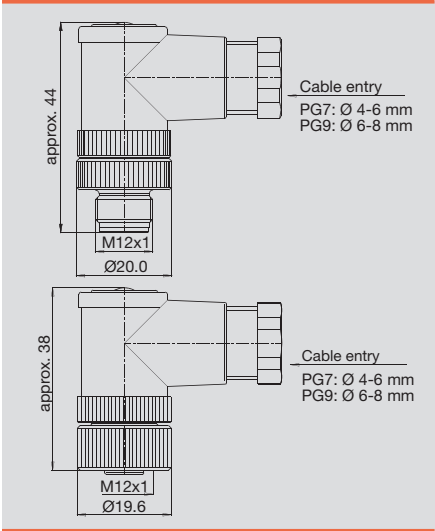
|                                |
|--------------------------------|
| Screw connection               |
| PA                             |
| M12                            |
| 4...6 mm (PG7)/ 6...8 mm (PG9) |
| 0.14 - 0.75 mm²                |
| 4 A                            |
| 250 V                          |
| -25...+85 °C                   |
| IP 67                          |
| CuSnZn                         |

|                                |
|--------------------------------|
| Screw connection               |
| PA                             |
| M12                            |
| 4...6 mm (PG7)/ 6...8 mm (PG9) |
| 0.14 - 0.75 mm²                |
| 4 A                            |
| 250 V                          |
| -25...+85 °C                   |
| IP 67                          |
| CuSnZn                         |

Dimensioned drawing



Dimensioned drawing



Customisable connectors

Screw connection M12, A-coded

SAIS / SAIB

straight



SAISW / SAIBW

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 |      |            |

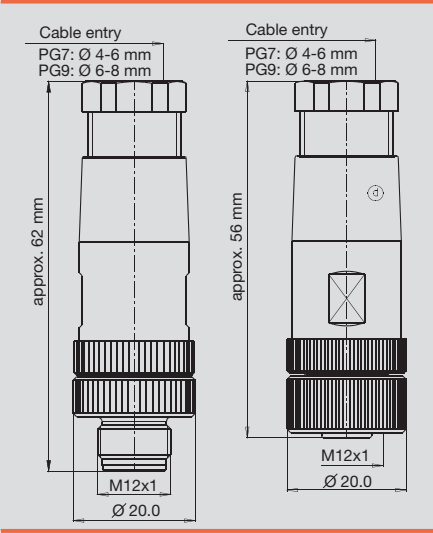
Technical data

| Type of connection               |
|----------------------------------|
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| Note                             |

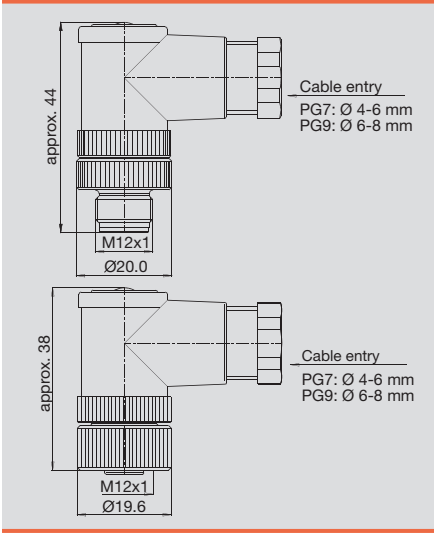
|                                |
|--------------------------------|
| Screw connection               |
| PA                             |
| M12                            |
| 4...6 mm (PG7)/ 6...8 mm (PG9) |
| 0.14 - 0.75 mm²                |
| 4 A                            |
| 125 V                          |
| -25...+85 °C                   |
| IP 67                          |
| CuSnZn                         |

|                                |
|--------------------------------|
| Screw connection               |
| PA                             |
| M12                            |
| 4...6 mm (PG7)/ 6...8 mm (PG9) |
| 0.14 - 0.75 mm²                |
| 4 A                            |
| 125 V                          |
| -25...+85 °C                   |
| IP 67                          |
| CuSnZn                         |

Dimensioned drawing



Dimensioned drawing



Screw connection M12, A-coded

SAIS / SAIB

straight



SAISW / SAIBW

angled



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 |
|                           |      |            |
| SAIB-4/7-(KV)             | 1    | 1921080000 |
| SAIB-5/7-(KV)             | 1    | 1921070000 |
| Other versions on request |      |            |

| Type                      | Qty. | Order No.  |
|---------------------------|------|------------|
| SAISW-4/7-(KV)            | 1    | 1962620000 |
| SAISW-5/7-(KV)            | 1    | 1962610000 |
|                           |      |            |
| SAIBW-4/7-(KV)            | 1    | 1935610000 |
| SAIBW-5/7-(KV)            | 1    | 1962630000 |
| Other versions on request |      |            |

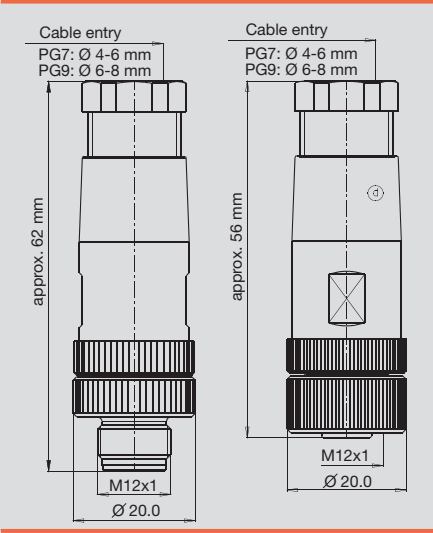
Technical data

| Type of connection               |
|----------------------------------|
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| Note                             |

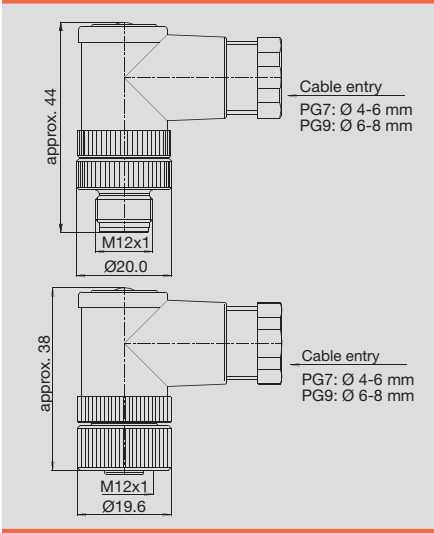
|                                |
|--------------------------------|
| Screw connection               |
| PA                             |
| M12                            |
| 4...6 mm (PG7)/ 6...8 mm (PG9) |
| 0.14 - 0.75 mm²                |
| 4 A                            |
| 250 V                          |
| -25...+85 °C                   |
| IP 67                          |
| CuSnZn                         |
| KV = plastic cable gland       |

|                                |
|--------------------------------|
| Screw connection               |
| PA                             |
| M12                            |
| 4...6 mm (PG7)/ 6...8 mm (PG9) |
| 0.14 - 0.75 mm²                |
| 4 A                            |
| 125 V                          |
| -25...+85 °C                   |
| IP 67                          |
| CuSnZn                         |
| KV = plastic cable gland       |

Dimensioned drawing



Dimensioned drawing



KV = plastic cable gland

Customisable connectors

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

SAIS / SAIB VA  
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 |

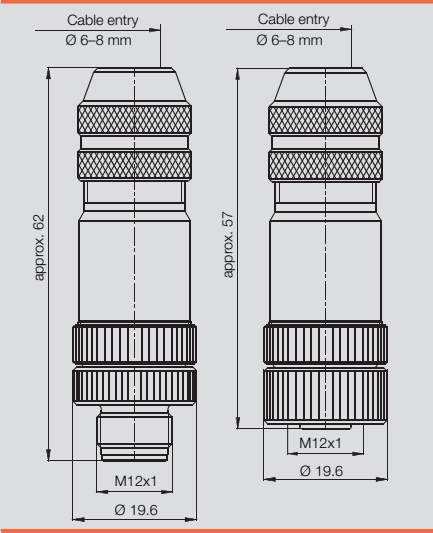
Technical data

| Type of connection               |
|----------------------------------|
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| Note                             |

|                          |
|--------------------------|
| Tension clamp connection |
| 1.4404/316L              |
| M12                      |
| 6...8 mm                 |
| 0.25 - 0.5 mm²           |
| 4 A                      |
| 125 V                    |
| -25...+85 °C             |
| IP 69 k                  |
| gold-plated              |
| PB = PROFIBUS (B-COD)    |

PB = PROFIBUS (B-COD)

Dimensioned drawing



SAI M12 plug  
with shield connection

SAISM / SAISB 8/11  
straight



Ordering data

|        |               |
|--------|---------------|
| Male   | 8-pole, PG 11 |
| Socket | 8-pole, PG 11 |
| Note   |               |

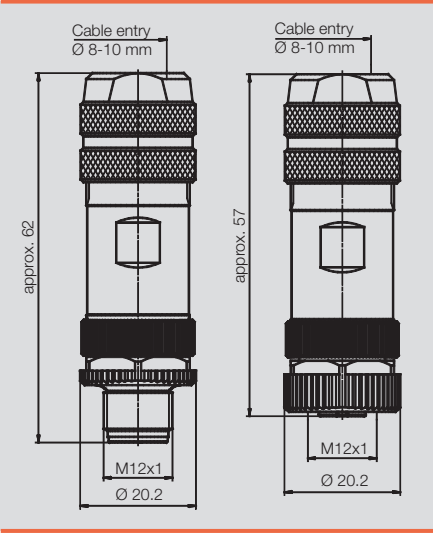
| Type       | Qty. | Order No.  |
|------------|------|------------|
| SAISM-8/11 | 1    | 1118910000 |
| SAIBM-8/11 | 1    | 1118920000 |

Technical data

|                                  |
|----------------------------------|
| Type of connection               |
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| Note                             |

|                            |
|----------------------------|
| Screw connection           |
| CuZn                       |
| M12                        |
| 8...10 mm (PG11)           |
| 0.14 - 0.5 mm <sup>2</sup> |
| 2 A                        |
| 60 V                       |
| -25...+85 °C               |
| IP 67                      |
| gold-plated                |

Dimensioned drawing



Customisable connectors

Screw connection M12, metal (EMC)  
A-coded

FBCon / SAIS  
straight



SAISW / SAIBW  
angled



D

Ordering data

| Male   |              |
|--------|--------------|
|        | 4-pole, PG 9 |
|        | 5-pole, PG 9 |
| Socket |              |
|        | 4-pole, PG 9 |
|        | 5-pole, PG 9 |
| Note   |              |

Technical data

|                                  |
|----------------------------------|
| Type of connection               |
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| <b>Note</b>                      |

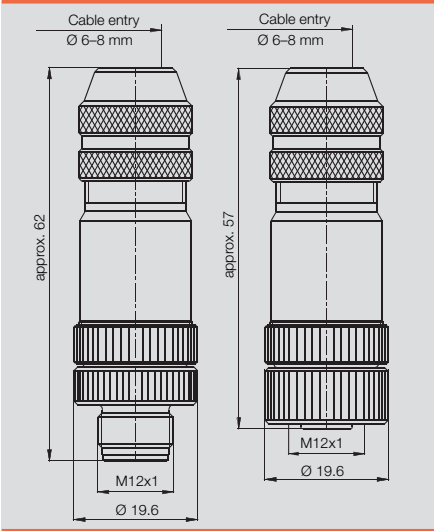
| Type                      | Qty. | Order No.  |
|---------------------------|------|------------|
| FBCon M12 4P M EMC        | 1    | 9455640000 |
| SAIS-M-5/8S M12 5P A-COD  | 1    | 1784740000 |
| FBCon M12 4P FM EMC       | 1    | 8426220000 |
| SAIB-M-5/8S M12 5P A-COD  | 1    | 1784750000 |
| Other versions on request |      |            |

|                  |
|------------------|
| Screw connection |
| CuZn             |
| M12              |
| 6...8 mm (PG9)   |
| 0.14 - 0.75 mm²  |
| 4 A              |
| 250 V            |
| -25...+85 °C     |
| IP 67            |
| CuSnZn           |

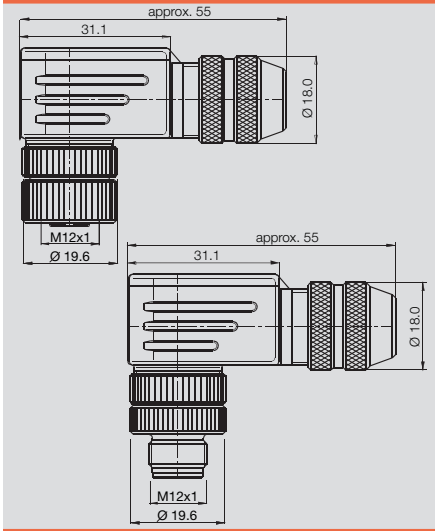
| Type                      | Qty. | Order No.  |
|---------------------------|------|------------|
| SAISW-M-4/8 M12           | 1    | 1803930000 |
| SAISW-M-5/8 M12           | 1    | 1803940000 |
| SAIBW-M-4/8 M12           | 1    | 1803910000 |
| SAIBW-M-5/8 M12           | 1    | 1803920000 |
| Other versions on request |      |            |

|                  |
|------------------|
| Screw connection |
| CuZn             |
| M12              |
| 6...8 mm (PG9)   |
| 0.14 - 0.75 mm²  |
| 4 A              |
| 125 V            |
| -25...+85 °C     |
| IP 67            |
| gold-plated      |

Dimensioned drawing



Dimensioned drawing



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



Industrial Ethernet

Ordering data

| Male   |              |
|--------|--------------|
|        | 3-pole, PG 9 |
|        | 4-pole, PG 9 |
|        | 5-pole, PG 9 |
| Socket |              |
|        | 3-pole, PG 9 |
|        | 4-pole, PG 9 |
|        | 5-pole, PG 9 |
| Note   |              |

Technical data

|                                  |
|----------------------------------|
| Type of connection               |
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| <b>Note</b>                      |

SAISM / SAIBM

straight



| 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 |

|                  |
|------------------|
| Screw connection |
| CuZn             |
| M12              |
| 6...8 mm (PG9)   |
| 0.14 - 0.75 mm²  |
| 4 A              |
| 250 V            |
| -25...+85 °C     |
| IP 67            |
| gold-plated      |

SAIS / SAIB

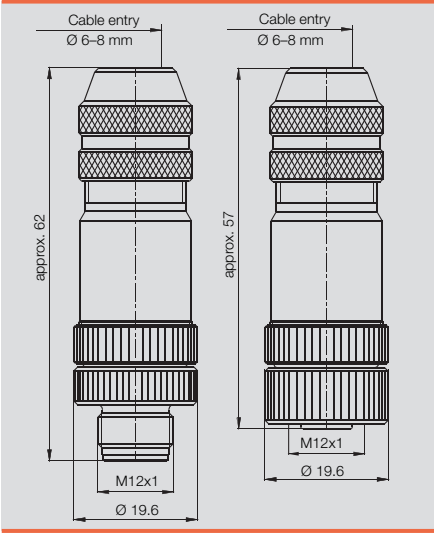
straight



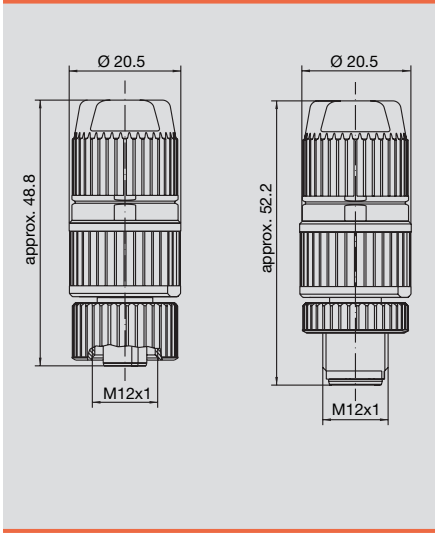
| Type                | Qty. | Order No.  |
|---------------------|------|------------|
| SAIS-3-IDC-M12B-COD | 1    | 1864730000 |
|                     |      |            |
| SAIB-3-IDC-M12B-COD | 1    | 1864740000 |

|                                    |
|------------------------------------|
| Insulation displacement connection |
| CuZn                               |
| M12                                |
| 7...8.8 mm                         |
| 0.34 - 0.75 mm²                    |
| 4 A                                |
| 32 V                               |
| -25...+85 °C                       |
| IP 67                              |
| tinned                             |
| PB = PROFIBUS (B-COD)              |
| IE = Industrial Ethernet (D-COD)   |

Dimensioned drawing



Dimensioned drawing



Customisable connectors

Screw connection M12, metal (EMC)  
B-coded



SAISW / SAIBW

angled



D

Ordering data

|        |              |
|--------|--------------|
| Male   | 5-pole, PG 9 |
| Socket | 5-pole, PG 9 |
| Note   |              |

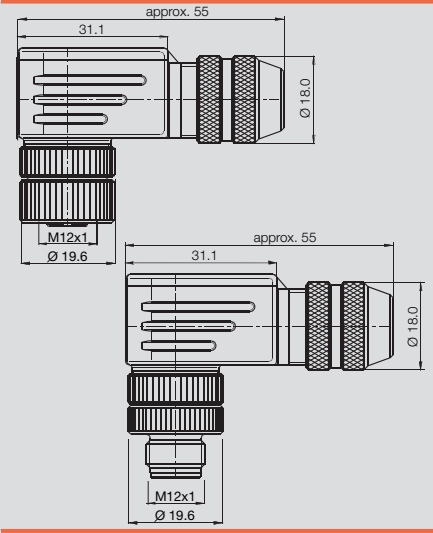
| Type                  | Qty. | Order No.  |
|-----------------------|------|------------|
| SAISW-M-5/8 M12 B-COD | 1    | 1944570000 |
| SAIBW-M-5/8 M12 B-COD | 1    | 1944580000 |

Technical data

|                                  |
|----------------------------------|
| Type of connection               |
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| Note                             |

|                  |
|------------------|
| Screw connection |
| CuZn             |
| M12              |
| 6...8 mm (PG9)   |
| 0.14 - 0.75 mm²  |
| 4 A              |
| 125 V            |
| -25...+85 °C     |
| IP 67            |
| gold-plated      |

Dimensioned drawing



Tension clamp connection, metal  
D-coded

Industrial Ethernet

Ordering data

|        |              |
|--------|--------------|
| Male   | 4-pole, PG 9 |
| Socket |              |
|        | 4-pole, PG 9 |
| Note   |              |

Technical data

|                                  |
|----------------------------------|
| Type of connection               |
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| Note                             |

SAISM / SAIBM

straight



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

|                          |
|--------------------------|
| Tension clamp connection |
| CuZn                     |
| M12                      |
| 6...8 mm (PG9)           |
| 0.25 - 0.5 mm²           |
| 4 A                      |
| 250 V                    |
| -25...+85 °C             |
| IP 67                    |
| gold-plated              |

SAISW / SAIBW

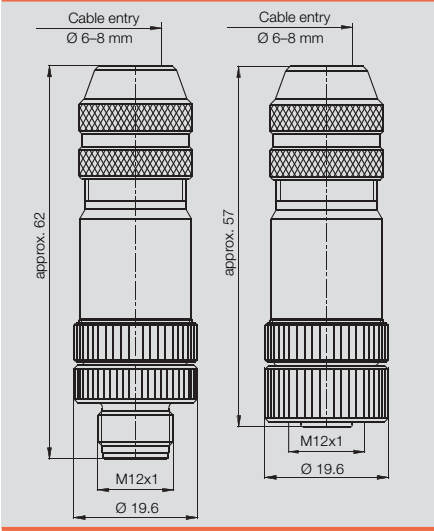
angled



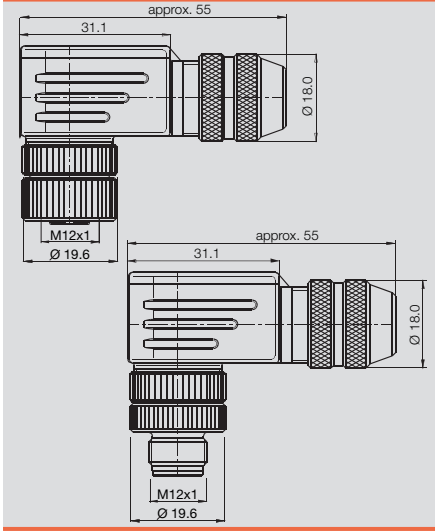
| Type                   | Qty. | Order No.  |
|------------------------|------|------------|
| SAISW-4/8S-M12 4P D-ZF | 1    | 1803930001 |
| SAIBW-4/8S-M12 4P D-ZF | 1    | 1139330000 |

|                          |
|--------------------------|
| Tension clamp connection |
| PA                       |
| M12                      |
| 4...6 mm                 |
| 0.25 - 0.5 mm²           |
| 4 A                      |
| 250 V                    |
| -25...+85 °C             |
| IP 67                    |
| gold-plated              |

Dimensioned drawing



Dimensioned drawing



Customisable connectors

Tension clamp connection M12  
A-coded

SAIS-ZF  
straight



D

Ordering data

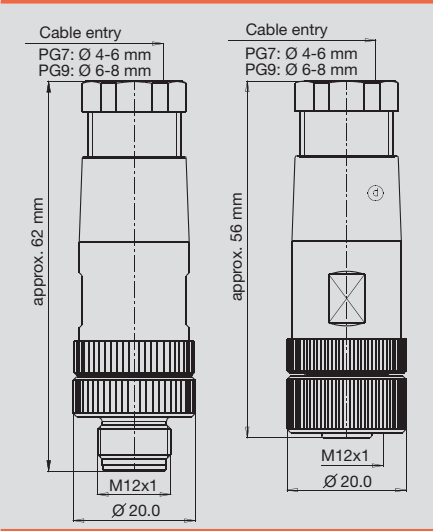
|        |              |
|--------|--------------|
| Male   | 5-pole, PG 7 |
| Socket | 5-pole, PG 7 |
| Note   |              |

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

Technical data

|                                  |                          |
|----------------------------------|--------------------------|
| Type of connection               | Tension clamp connection |
| Housing main material            | PA                       |
| Contact tube diameter            | M12                      |
| Cable diameter                   | 4...6 mm                 |
| Cross-section for connected wire | 0.25 - 0.5 mm²           |
| Rated current                    | 4 A                      |
| Rated voltage                    | 125 V                    |
| Temperature range of housing     | -25...+85 °C             |
| Protection class                 | IP 67                    |
| Contact surface                  | gold-plated              |
| Note                             |                          |

Dimensioned drawing



M8 screw connection

SAIS / SAIB

straight



Ordering data

|        |        |
|--------|--------|
| Male   |        |
|        | 3-pole |
|        | 4-pole |
| Socket |        |
|        | 3-pole |
|        | 4-pole |
| Note   |        |

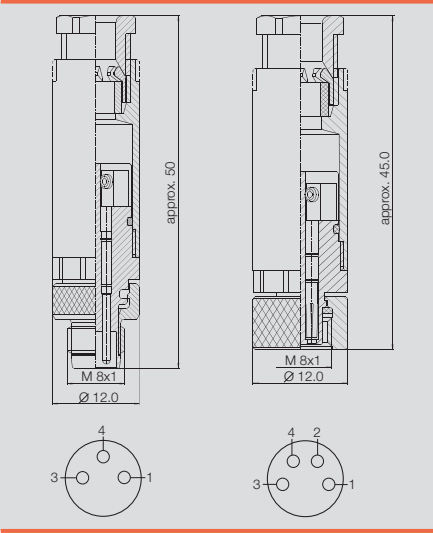
| Type                      | Qty. | Order No.  |
|---------------------------|------|------------|
| SAIS-M8-3P                | 1    | 1803860000 |
| SAIS-M8-4P                | 1    | 1803850000 |
|                           |      |            |
| SAIB-M8-3P                | 1    | 1803870000 |
|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

Technical data

|                                  |
|----------------------------------|
| Type of connection               |
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| Note                             |

|                  |
|------------------|
| Screw connection |
| PA               |
| M8               |
| 3.5...5 mm       |
| 0.14 - 0.5 mm²   |
| 4 A              |
| 30 V             |
| -25...+85 °C     |
| IP 67            |
| gold-plated      |

Dimensioned drawing



Customisable connectors

Solder connection M8, shielded  
screw connection M8, shielded

SAISM / SAIBM  
straight



SAISM / SAIBM  
straight



D

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 |

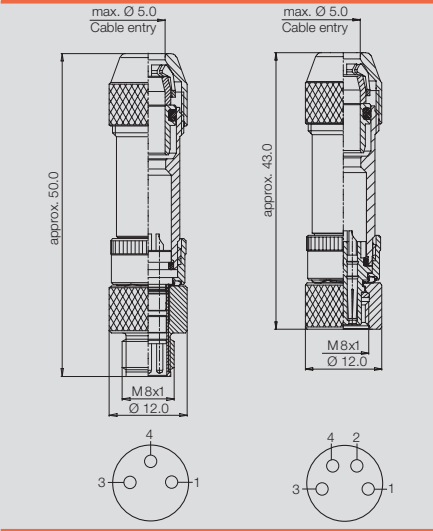
Technical data

|                                  |
|----------------------------------|
| Type of connection               |
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| Note                             |

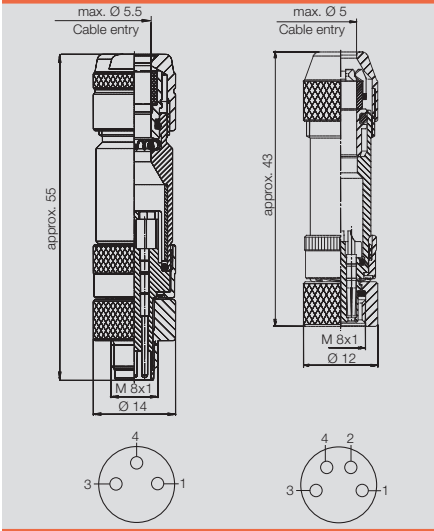
|                   |
|-------------------|
| Solder connection |
| CuZn              |
| M8                |
| 3.5...5.5 mm      |
| 0.25 - 0.25 mm²   |
| 4 A               |
| 30 V              |
| -25...+85 °C      |
| IP 67             |
| gold-plated       |

|                       |
|-----------------------|
| Screw connection      |
| CuZn                  |
| M8                    |
| 3.5...5 mm            |
| 0.14 - 0.5 mm²        |
| 4 A                   |
| 30 V                  |
| -25...+85 °C          |
| IP 67                 |
| gold-plated           |
| IF = Iris-type spring |

Dimensioned drawing



Dimensioned drawing



Solder connection M8

SAISW / SAIBW

angled



Ordering data

|        |        |
|--------|--------|
| Male   |        |
|        | 3-pole |
|        | 4-pole |
| Socket |        |
|        | 3-pole |
|        | 4-pole |
| Note   |        |

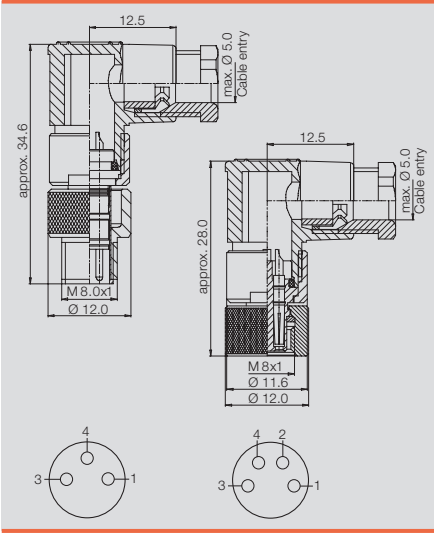
| Type            | Qty. | Order No.  |
|-----------------|------|------------|
| SAISW-M8-3P(TL) | 1    | 1920990000 |
| SAISW-M8-4P(TL) | 1    | 1921000000 |
| SAIBW-M8-3P(TL) | 1    | 1920970000 |
| SAIBW-M8-4P(TL) | 1    | 1920980000 |

Technical data

|                                  |
|----------------------------------|
| Type of connection               |
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| Note                             |

|                   |
|-------------------|
| Solder connection |
| CuZn              |
| M8                |
| 3.5...5.5 mm      |
| 0.25 - 0.25 mm²   |
| 4 A               |
| 30 V              |
| -25...+85 °C      |
| IP 67             |
| gold-plated       |

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.

Customisable connectors

Insulation displacement connection  
M12  
A-coded

SAIS IDC / SAIB IDC

straight



SAISW IDC / SAIBW IDC

angled



D

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 |      |            |

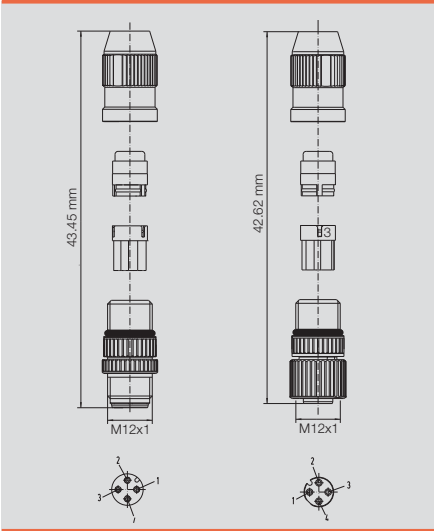
Technical data

|                                  |
|----------------------------------|
| Type of connection               |
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| Note                             |

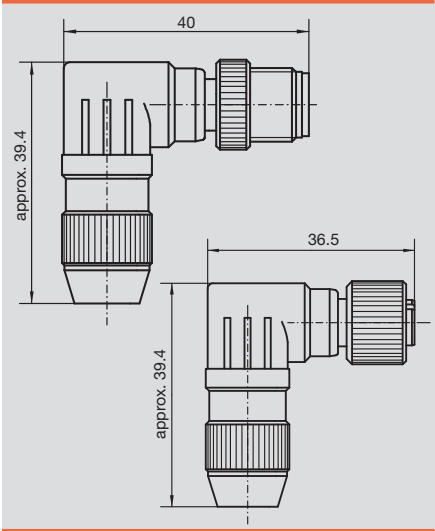
|                                    |
|------------------------------------|
| Insulation displacement connection |
| CuZn                               |
| M12                                |
| 4...5.1 mm                         |
| 0.14 - 0.34 mm²                    |
| 4 A                                |
| 32 V                               |
| -25...+85 °C                       |
| IP 67                              |
| tinned                             |

|                                    |
|------------------------------------|
| Insulation displacement connection |
| CuZn                               |
| M12                                |
| 4...5.1 mm                         |
| 0.25 - 0.5 mm²                     |
| 4 A                                |
| 32 V                               |
| -25...+85 °C                       |
| IP 67                              |
| tinned                             |

Dimensioned drawing



Dimensioned drawing



Insulation displacement connection  
M12 (0.75)  
A-coded

SAIS IDC / SAIB IDC (0.75)

straight



Ordering data

|        |        |
|--------|--------|
| Male   |        |
|        | 3-pole |
|        | 4-pole |
| Socket |        |
|        | 3-pole |
|        | 4-pole |
| Note   |        |

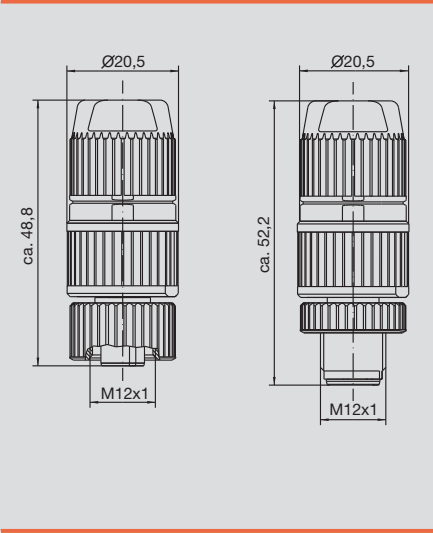
| Type                      | Qty. | Order No.  |
|---------------------------|------|------------|
| SAIS-3-IDC (0,75) M12     | 1    | 1852720000 |
| SAIS-4-IDC (0,75) M12     | 1    | 1852740000 |
|                           |      |            |
| SAIB-3-IDC (0,75) M12     | 1    | 1852730000 |
|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

Technical data

|                                  |
|----------------------------------|
| Type of connection               |
| Housing main material            |
| Contact tube diameter            |
| Cable diameter                   |
| Cross-section for connected wire |
| Rated current                    |
| Rated voltage                    |
| Temperature range of housing     |
| Protection class                 |
| Contact surface                  |
| Note                             |

|                                    |
|------------------------------------|
| Insulation displacement connection |
| CuZn                               |
| M12                                |
| 5.5...8 mm                         |
| 0.34 - 0.75 mm²                    |
| 6 A                                |
| 50 V                               |
| -25...+85 °C                       |
| IP 67                              |
| tinned                             |

Dimensioned drawing



Customisable connectors

Insulation displacement connection  
M8

SAIS IDC / SAIB IDC

straight



D

Ordering data

|        |        |
|--------|--------|
| Male   |        |
|        | 3-pole |
|        | 4-pole |
| Socket |        |
|        | 3-pole |
|        | 4-pole |
| Note   |        |

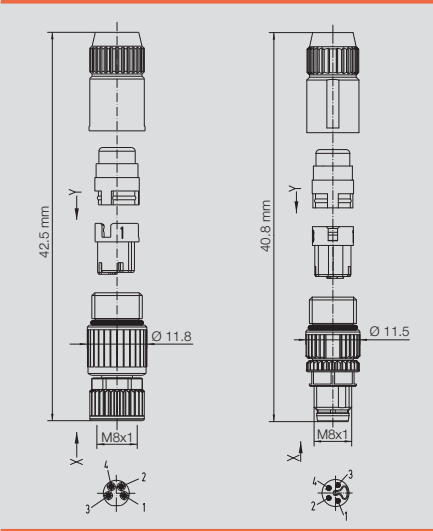
| Type                      | Qty. | Order No.  |
|---------------------------|------|------------|
| SAIS-3-IDC M8 small       | 1    | 1784040001 |
| SAIS-4-IDC M8 small       | 1    | 1784060001 |
| SAIB-3-IDC-M8 small       | 1    | 1784030001 |
| SAIB-4-IDC-M8 small       | 1    | 1784050001 |
|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

Technical data

|                                  |                                    |
|----------------------------------|------------------------------------|
| Type of connection               | Insulation displacement connection |
| Housing main material            | CuZn                               |
| Contact tube diameter            | M8                                 |
| Cable diameter                   | 3.2...5.4 mm                       |
| Cross-section for connected wire | 0.14 - 0.34 mm²                    |
| Rated current                    | 4 A                                |
| Rated voltage                    | 32 V                               |
| Temperature range of housing     | -25...+85 °C                       |
| Protection class                 | IP 67                              |
| Contact surface                  | tinned                             |
| Note                             |                                    |

|                                  |                                    |
|----------------------------------|------------------------------------|
| Type of connection               | Insulation displacement connection |
| Housing main material            | CuZn                               |
| Contact tube diameter            | M8                                 |
| Cable diameter                   | 3.2...5.4 mm                       |
| Cross-section for connected wire | 0.14 - 0.34 mm²                    |
| Rated current                    | 4 A                                |
| Rated voltage                    | 32 V                               |
| Temperature range of housing     | -25...+85 °C                       |
| Protection class                 | IP 67                              |
| Contact surface                  | tinned                             |
| Note                             |                                    |

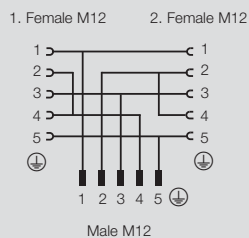
Dimensioned drawing



# T distributor

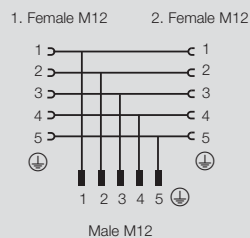
## M12/M12

Mounting screw M3



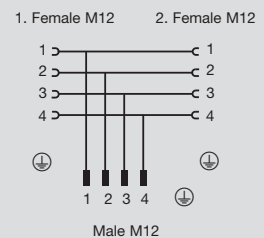
## M12/M12

Mounting screw M3



## 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 |

### Ordering data

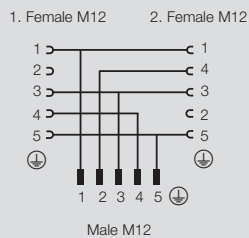
| Type                  | Qty. | Order No.  |
|-----------------------|------|------------|
| Parallel distribution |      |            |
| SAI-Y-5S PARA M12/M12 | 1    | 1783430000 |

### Ordering data

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

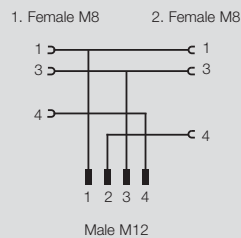
## M12/M12

Mounting screw M3

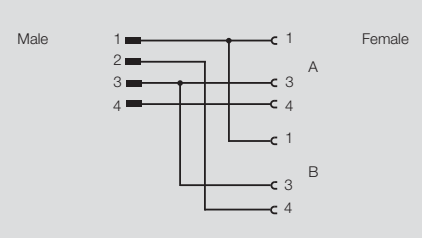


## M12/M8

Mounting screw M3



## M8/M8



### Ordering data

| Type                    | Qty. | Order No.  |
|-------------------------|------|------------|
| Individual distribution |      |            |
| SAI-Y-5S-M12/M12        | 1    | 1826880000 |

### Ordering data

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

### 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.

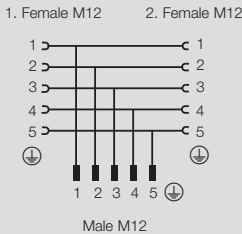
In addition, a bushing for PROFIBUS plug in connectors (PB) is available

### 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 |

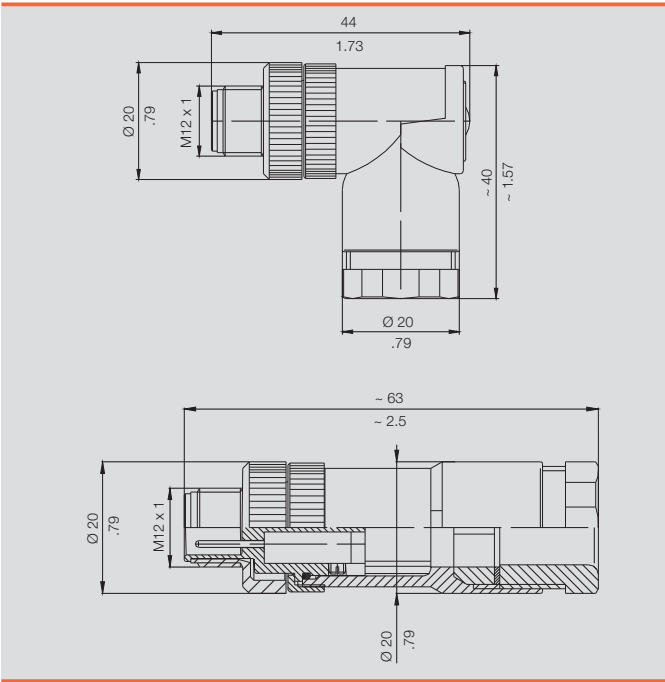
## M12/M12

### 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-M12 | 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. Screwly 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 |



## 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 locknut. 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 locknut 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 locknut. 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)

SAIE-M12 PG



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<br>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    | 1861230000 |
| 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 |
| with PG cable gland  |      |            |

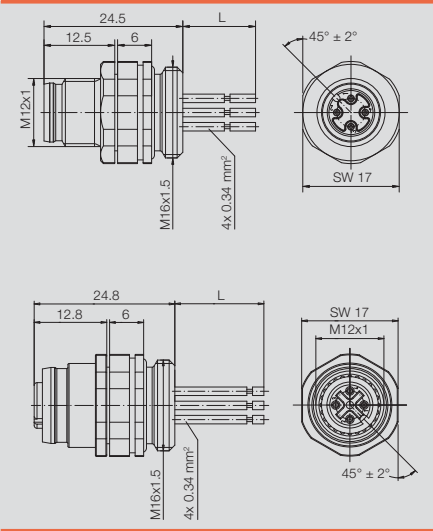
Technical data

| Cable gland                  |
|------------------------------|
| Housing main material        |
| Contact tube diameter        |
| Core cross-section           |
| Rated current                |
| Rated voltage                |
| Temperature range of housing |
| Protection class             |
| Contact surface              |
| Note                         |

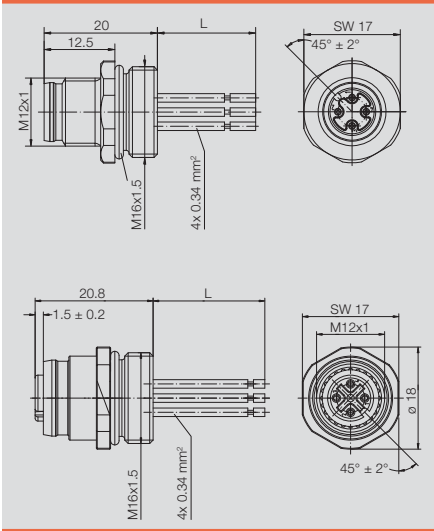
|                      |
|----------------------|
| M16                  |
| CuZn, nickel-plated  |
| M12                  |
| 0.25 mm <sup>2</sup> |
| 4 A                  |
| 30 V                 |
| -30...+90 °C         |
| IP 67                |
| gold-plated          |

|                      |
|----------------------|
| M16                  |
| CuZn, nickel-plated  |
| M12                  |
| 0.34 mm <sup>2</sup> |
| 4 A                  |
| 60 V                 |
| -30...+90 °C         |
| IP 67                |
| gold-plated          |

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   |        |

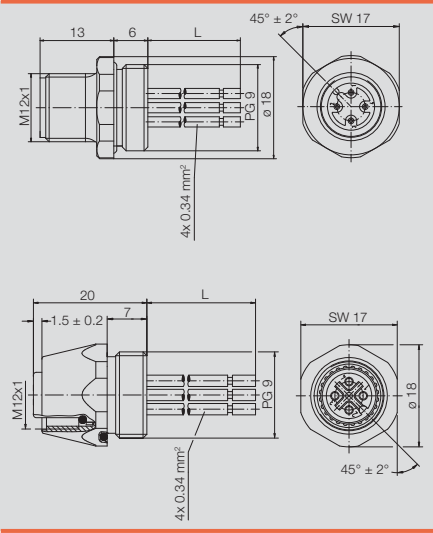
| Type                 | Qty. | Order No.  |
|----------------------|------|------------|
| SAIE-M12S-4-0.5U-PG9 | 1    | 1861220000 |
| SAIE-M12S-5-0.5U-PG9 | 1    | 1856120000 |
| SAIE-M12S-8-0.5U-PG9 | 1    | 1861240000 |
|                      |      |            |
| SAIE-M12B-4-0.5U-PG9 | 1    | 1861250000 |
| SAIE-M12B-5-0.5U-PG9 | 1    | 1814890000 |
| SAIE-M12B-8-0.5U-PG9 | 1    | 1861270000 |
| with PG cable gland  |      |            |

Technical data

| Cable gland                  |
|------------------------------|
| Housing main material        |
| Contact tube diameter        |
| Core cross-section           |
| Rated current                |
| Rated voltage                |
| Temperature range of housing |
| Protection class             |
| Contact surface              |
| Note                         |

|                                      |
|--------------------------------------|
| PG 9                                 |
| CuZn, nickel-plated                  |
| M12                                  |
| 0.34 (4- and 5-pole) / 0.25 (8-pole) |
| 4 A                                  |
| 30 V                                 |
| -30...+90 °C                         |
| IP 67                                |
| gold-plated                          |

Dimensioned drawing



M8

SAIE-M8 FP



M5

SAIE-M5



Ordering data

| Male                       |  |
|----------------------------|--|
| 3-pole                     |  |
| 4-pole                     |  |
| Socket                     |  |
| 3-pole                     |  |
| 4-pole                     |  |
| female - snap-on interlock |  |
| 3-pole                     |  |
| 4-pole                     |  |
| Note                       |  |

| Type                                                      | Qty. | Order No.  |
|-----------------------------------------------------------|------|------------|
| SAIE-M8S-3-0.5U-FP-M8                                     | 1    | 1078730000 |
| SAIE-M8S-4-0.5U-FP-M8                                     | 1    | 1078720000 |
| SAIE-M8B-3-0.5U-FP-M8                                     | 1    | 1856130000 |
| SAIE-M8B-4-0.5U-FP-M8                                     | 1    | 1856140000 |
| SAIE-M8R-3-0.5U-FP-M8                                     | 1    | 1861280000 |
| SAIE-M8R-4-0.5U-FP-M8                                     | 1    | 1861290000 |
| Fixing nut included<br>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 |      |            |

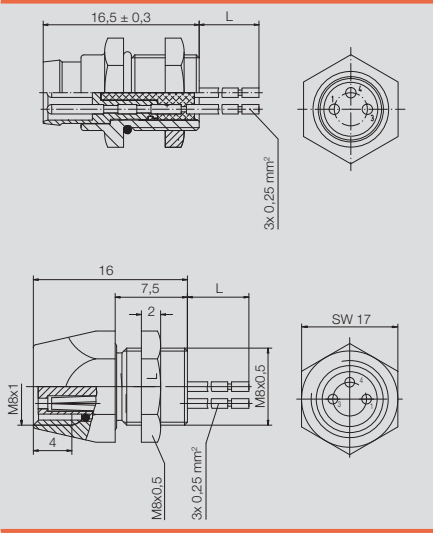
Technical data

| Cable gland                  |
|------------------------------|
| Housing main material        |
| Contact tube diameter        |
| Core cross-section           |
| Rated current                |
| Rated voltage                |
| Temperature range of housing |
| Protection class             |
| Contact surface              |
| Note                         |

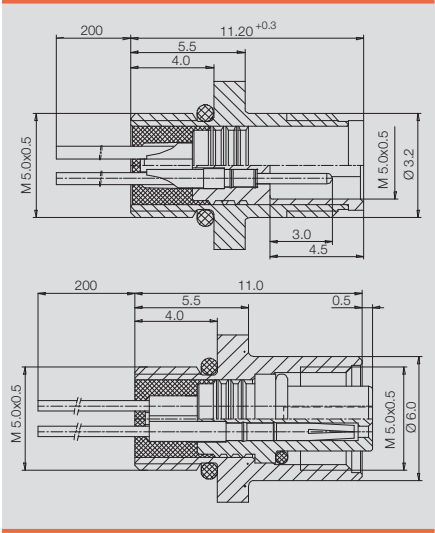
|                     |
|---------------------|
| M 8                 |
| CuZn, nickel-plated |
| M8                  |
| 0.25 mm²            |
| 4 A                 |
| 30 V                |
| -30...+90 °C        |
| IP 67               |
| gold-plated         |

|                     |
|---------------------|
| M 5                 |
| CuZn, nickel-plated |
| M5                  |
| 0.14 mm²            |
| 1 A                 |
| 60 V                |
| -25...+80 °C        |
| IP 67               |
| gold-plated         |

Dimensioned drawing



Dimensioned drawing



# 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

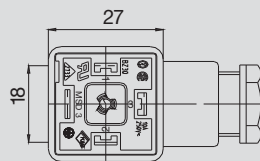
| Type                                   | (Qty.=1) | Order No.  |
|----------------------------------------|----------|------------|
| <b>Type A</b>                          |          |            |
| SAIB-VSA-3P/250/9-OB                   |          | 1873070000 |
| SAIB-VSA-4P/250/9-OB                   |          | 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 |
| <b>Type B</b>                          |          |            |
| SAIB-VSB-3P/250/9-OB                   |          | 1873170000 |
| SAIB-VSB-3P/24/9/LD                    |          | 1873180000 |
| SAIB-VSBD-3P/250/9-OB                  |          | 1873190000 |
| <b>Type C</b>                          |          |            |
| 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

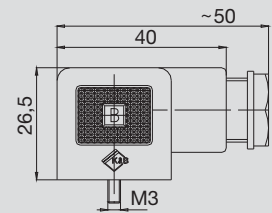
| Designation code |                     |
|------------------|---------------------|
| VS-              | valve plug          |
| OB-              | without cables      |
| 3P, 4P-          | No. of poles        |
| 7, 9, 11-        | cable entry (PG)    |
| H                | high form           |
| T                | Transparent housing |
| 3P               | 2 + PE              |
| 4P               | 3 + PE              |

| 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

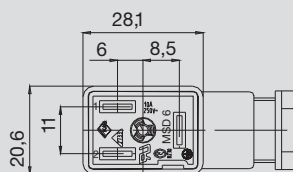


Contact gap: 18 mm

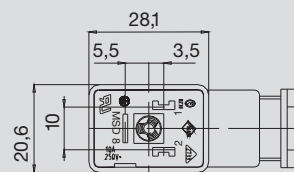


Type VSA

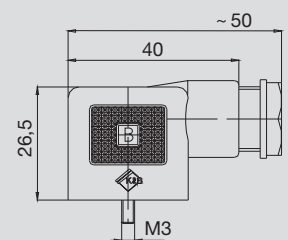
### Plug in connector Type B



Contact gap: 11 mm  
industry standard

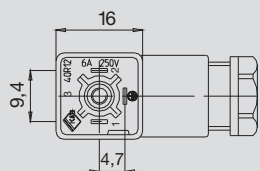


Contact gap: 10 mm  
to DIN 43650 (ISO 6952)

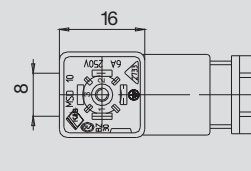


Type VSB/VBSD

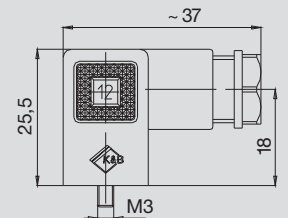
### Plug in connector Type C



Contact gap: 9.4 mm  
industry standard



Contact gap: 8 mm  
to DIN 43650 (ISO 6952)



Type VSC/VSCD

# Protective sleeve adapter



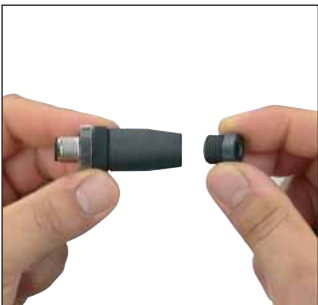
In machine construction, it is very common for cables to be run in the open air. To be able to protect cables from damage through a wide range of causes such as rodents, it is sometimes necessary to protect the cable with a protective sleeve.

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.

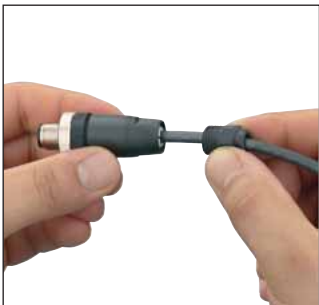
## Ordering data

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

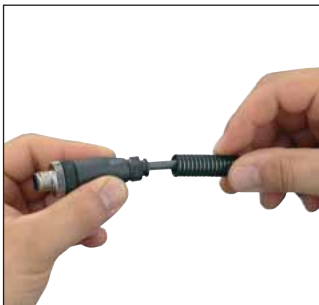
## Fitting a protective sleeve adapter



1. Unscrewing the PG7 cable gland



2. Screwing on the protective sleeve adapter

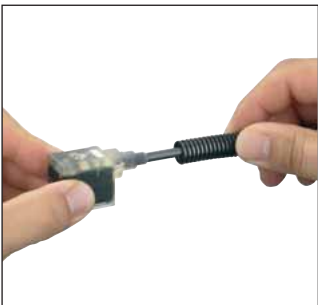


3. Fitting a PG7 protective sleeve



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.

# IP67 Remote I/O system SAI Active

IP67 Remote I/O system SAI Active

|                                          |      |
|------------------------------------------|------|
| Introduction                             | E.2  |
| Quick select – SAI Active                | E.4  |
| SAI Active Universal - Overview          | E.6  |
| SAI Active Universal - PROFIBUS-DP       | E.8  |
| SAI Active Universal - CANopen           | E.12 |
| SAI Active Universal - DeviceNet™        | E.16 |
| SAI Active Universal - EtherNet/IP™      | E.20 |
| SAI Active Universal - Modbus TCP        | E.24 |
| SAI Active Universal Pro - Overview      | E.28 |
| SAI Active Universal Pro                 | E.30 |
| SAI Active Universal Wireless - Overview | E.42 |
| SAI Active Universal Wireless            | E.44 |

# Sensor Actuator Interface (SAI Active)

## Decentralised Remote I/O system with IP67 protection

Industrial automation solutions are becoming more and more decentralised. The Weidmüller sensor-actuator distributor SAI Active provides a fieldbus interface for digital communication. It is capable of merging all types of signals from the field and transmitting them without interference to the central controller unit. The SAI Active Remote I/O system is available in several variants to support different applications. A wide range of products for industrial automation are available to the user: the basic “SAI-AU” version provides a quick and simple, entry level solution for decentralisation; the professional “SAI-AU Pro” version has versatile extension options and functional modules; and the “SAI-AU Wireless” system provides a radio based solution.

The SAI Active Remote I/O system features IP67 protection. It provides users with the opportunity to add input and/or output units to the process in a decentralised manner directly on location. The wiring is uncomplicated with pre-assembled cables and standardised M8 and M12 connectors. This simplifies the installation process and reduces the risk of cabling errors. There is no need for complex parallel wiring of the sensors and actuators. Nor do you need to merge the cables together at a central location or electrical cabinet. The IP67 modules have a sturdy construction and provide excellent reliability under adverse conditions involving dust, moisture, acids, high temperatures or vibrations.



In comparison to traditional passive solutions which require a separate line from the point of measurement to the controller for each signal, the active modules stand out because they need only one line to digitally transmit all the signals of a standard fieldbus system. The measurement signal is transmitted to the controller unit precisely (i.e., with no drift). Thus there is no need for manual calibration.

The SAI Active Remote I/O system is available for industrial fieldbus protocols (PROFIBUS-DP, DeviceNet, CANopen, Modbus ASCII) and Ethernet protocols (Modbus TCP and Ethernet/IP). Standardised device drivers are available. They allow you to carry out a vendor-neutral integration into your engineering system without the use of any proprietary software. The drivers can also be used with a wide range of controller units. The diagnostic capabilities of the SAI Active system (available in part using a web browser) make troubleshooting simple. They also significantly reduce the time required for initial commissioning and maintenance. Each module provides a continual specific diagnostic function for each individual channel. When a sensor, actuator or module error is detected, an easily recognised signal is displayed with an arrow icon on the corresponding module. An alert is simultaneously sent on the fieldbus or directly to the controller unit. This allows the application to react quickly so that prompt system analysis can be carried out.



The SAI Active system offers many benefits including less expensive installation and maintenance. It also makes optimal use of space with its compact modules.

This system includes all purpose compact modules and modular subbus components – providing users with decentralised automation that they can profit from as a long term solution.

Weidmüller offers users a wide line of active and passive sensor-actuator distributors for designing a single vendor system. The distributors are versatile enough to be used for practically all industrial automation applications. Our product line is being constantly improved, expanded and adapted to meet future needs.

Use the following table for quickly finding the proper product. Plenty of documentation and software is available to support you during the project planning and initial commissioning phases. All software programs and corresponding product documentation can be downloaded free of charge from the Weidmüller web site.



Quick select – SAI Active

Selection table

| Order No.                     | Product designation     | Connection system |     |             | Communication |           |                                |            |             |        |          |  |  |
|-------------------------------|-------------------------|-------------------|-----|-------------|---------------|-----------|--------------------------------|------------|-------------|--------|----------|--|--|
|                               |                         | M8                | M12 | PROFIBUS DP | CANopen       | DeviceNet | Modbus ASCII<br>(RS 232 / USB) | Modbus TCP | Ethernet/IP | Subbus | Wireless |  |  |
| SAI Active Universal          |                         |                   |     |             |               |           |                                |            |             |        |          |  |  |
| 1906550000                    | SAI-AU M8 PB 16DI       | X                 |     | X           |               |           |                                |            |             |        |          |  |  |
| 1906640000                    | SAI-AU M8 PB 16DI/8DO   | X                 |     | X           |               |           |                                |            |             |        |          |  |  |
| 1975450000                    | SAI-AU M8 PB 8DI8DO 2A  | X                 |     | X           |               |           |                                |            |             |        |          |  |  |
| 1890020000                    | SAI-AU M12 PB 16DI      |                   | X   | X           |               |           |                                |            |             |        |          |  |  |
| 1890010000                    | SAI-AU M12 PB 16DI/8DO  |                   | X   | X           |               |           |                                |            |             |        |          |  |  |
| 1968220000                    | SAI-AU M12 PB 8DI8DO 2A |                   | X   | X           |               |           |                                |            |             |        |          |  |  |
| 1890000000                    | SAI-AU M12 PB AI/AO/DI  |                   | X   | X           |               |           |                                |            |             |        |          |  |  |
| 1906680000                    | SAI-AU M8 CAN 16DI      | X                 |     |             | X             |           |                                |            |             |        |          |  |  |
| 1906690000                    | SAI-AU M8 CAN 16DI/8DO  | X                 |     |             | X             |           |                                |            |             |        |          |  |  |
| 1906650000                    | SAI-AU M12 CAN 16DI     |                   | X   |             | X             |           |                                |            |             |        |          |  |  |
| 1906660000                    | SAI AU M12 CAN 16DI/8DO |                   | X   |             | X             |           |                                |            |             |        |          |  |  |
| 1906670000                    | SAI-AU M12 CAN AI/AO/DI |                   | X   |             | X             |           |                                |            |             |        |          |  |  |
| 1906730000                    | SAI-AU M8 DN 16DI       | X                 |     |             |               | X         |                                |            |             |        |          |  |  |
| 1906740000                    | SAI AU M8 DN 16DI/8DO   | X                 |     |             |               | X         |                                |            |             |        |          |  |  |
| 1906700000                    | SAI-AU M12 DN 16DI      |                   | X   |             |               | X         |                                |            |             |        |          |  |  |
| 1906710000                    | SAI AU M12 DN 16DI/8DO  |                   | X   |             |               | X         |                                |            |             |        |          |  |  |
| 1906720000                    | SAI-AU M12 DN AI/AO/DI  |                   | X   |             |               | X         |                                |            |             |        |          |  |  |
| 1906880000                    | SAI-AU M8 IE 16DI       | X                 |     |             |               |           |                                | X          |             |        |          |  |  |
| 1906890000                    | SAI-AU M8 IE 16DI/8DO   | X                 |     |             |               |           |                                | X          |             |        |          |  |  |
| 1906850000                    | SAI-AU M12 IE 16DI      |                   | X   |             |               |           |                                | X          |             |        |          |  |  |
| 1906860000                    | SAI-AU M12 IE 16DI/8DO  |                   | X   |             |               |           |                                | X          |             |        |          |  |  |
| 1906870000                    | SAI-AU M12 IE AI/AO/DI  |                   | X   |             |               |           |                                | X          |             |        |          |  |  |
| 1906930000                    | SAI-AU M8 EIP 16DI      | X                 |     |             |               |           |                                |            | X           |        |          |  |  |
| 1906940000                    | SAI-AU M8 EIP 16DI/8DO  | X                 |     |             |               |           |                                |            | X           |        |          |  |  |
| 1906900000                    | SAI-AU M12 EIP 16DI     |                   | X   |             |               |           |                                |            | X           |        |          |  |  |
| 1906910000                    | SAI-AU M12 EIP 16DI/8DO |                   | X   |             |               |           |                                |            | X           |        |          |  |  |
| 1906920000                    | SAI-AU M12 EIP AI/AO/DI |                   | X   |             |               |           |                                |            | X           |        |          |  |  |
| SAI Active Universal Pro      |                         |                   |     |             |               |           |                                |            |             |        |          |  |  |
| 1024310000                    | SAI-AU M8 PB GW 16DI    | X                 |     | X           |               |           |                                |            |             | X      |          |  |  |
| 1938550000                    | SAI-AU M12 PB GW 16DI   |                   | X   | X           |               |           |                                |            |             | X      |          |  |  |
| 1938570000                    | SAI-AU M12 DN GW 16DI   |                   | X   |             |               | X         |                                |            |             | X      |          |  |  |
| 1962240000                    | SAI-AU M12 USB GW 8I8O  |                   | X   |             |               |           | X                              |            |             | X      |          |  |  |
| 1938580000                    | SAI-AU M12 IE GW 16DI   |                   | X   |             |               |           |                                | X          |             | X      |          |  |  |
| 1019490000                    | SAI-AU M12 EIP GW 16DI  |                   | X   |             |               |           |                                |            | X           | X      |          |  |  |
| 1938600000                    | SAI-AU M8 SB 8DI        | X                 |     |             |               |           |                                |            |             | X      |          |  |  |
| 1938660000                    | SAI-AU M8 SB 8DO 2A     | X                 |     |             |               |           |                                |            |             | X      |          |  |  |
| 1938630000                    | SAI-AU M8 SB 8DIO       | X                 |     |             |               |           |                                |            |             | X      |          |  |  |
| 1938610000                    | SAI-AU M12 SB 8DI       |                   | X   |             |               |           |                                |            |             | X      |          |  |  |
| 1938668000                    | SAI-AU M12 SB 8DO 2A    |                   | X   |             |               |           |                                |            |             | X      |          |  |  |
| 1938640000                    | SAI-AU M12 SB 8DIO      |                   | X   |             |               |           |                                |            |             | X      |          |  |  |
| 1938690000                    | SAI-AU M12 SB 4AI       |                   | X   |             |               |           |                                |            |             | X      |          |  |  |
| 1938700000                    | SAI-AU M12 SB 4AO       |                   | X   |             |               |           |                                |            |             | X      |          |  |  |
| 1938730000                    | SAI-AU M12 SB 2Counter  |                   | X   |             |               |           |                                |            |             | X      |          |  |  |
| 1938720000                    | SAI-AU M12 SB 4Thermo   |                   | X   |             |               |           |                                |            |             | X      |          |  |  |
| 1938710000                    | SAI-AU M12 SB 4PT100    |                   | X   |             |               |           |                                |            |             | X      |          |  |  |
| SAI Active Universal Wireless |                         |                   |     |             |               |           |                                |            |             |        |          |  |  |
| 1006980000                    | SAI-AU M12 GW PB/BT 12I |                   | X   | X           |               |           |                                |            |             |        | X        |  |  |
| 1006940000                    | SAI-AU M12 BT 16DI      |                   | X   |             |               |           |                                |            |             |        | X        |  |  |
| 1006930000                    | SAI-AU M12 BT 16DI/8DO  |                   | X   |             |               |           |                                |            |             |        | X        |  |  |
| 1006920000                    | SAI-AU M12 BT4AI2AO2DIO |                   | X   |             |               |           |                                |            |             |        | X        |  |  |

|  | Inputs                                 |          |         |    |     | Outputs                               |                |          |                                                 | Supply voltage<br>feed circuits | Special characteristics                                       | Page |
|--|----------------------------------------|----------|---------|----|-----|---------------------------------------|----------------|----------|-------------------------------------------------|---------------------------------|---------------------------------------------------------------|------|
|  | Digital                                | Analogue | Counter | TC | RTD | Digital                               | Output current | Analogue | Output range                                    |                                 |                                                               |      |
|  | 16                                     |          |         |    |     |                                       |                |          |                                                 | 2                               |                                                               | E.8  |
|  | Max. 16, min. 8<br>(can be configured) |          |         |    |     | Max. 8, min. 0<br>(can be configured) | 0.5 A          |          |                                                 | 4                               | - Max. I/O channels = 16                                      | E.8  |
|  | 8                                      |          |         |    |     | 8                                     | 2 A            |          |                                                 | 4                               | - Max. total current, output = 8 A                            | E.8  |
|  | 16                                     |          |         |    |     |                                       |                |          |                                                 | 2                               |                                                               | E.8  |
|  | Max. 16, min. 8<br>(can be configured) |          |         |    |     | Max. 8, min. 0<br>(can be configured) | 0.5 A          |          |                                                 | 1                               | - Max. I/O channels = 16                                      | E.8  |
|  | 8                                      |          |         |    |     | 8                                     | 2 A            |          |                                                 | 2                               | - Max. total current, output = 8 A                            | E.8  |
|  | 4                                      | 4        |         |    |     |                                       |                | 2        | -10...+10 V, 0...+10 V,<br>0...20 mA, 4...20 mA | 2                               |                                                               | E.9  |
|  | 16                                     |          |         |    |     |                                       |                |          |                                                 | 2                               |                                                               | E.12 |
|  | Max. 16, min. 8<br>(can be configured) |          |         |    |     | Max. 8, min. 0<br>(can be configured) | 0.5 A          |          |                                                 | 4                               | - Max. I/O channels = 16                                      | E.12 |
|  | 16                                     |          |         |    |     |                                       |                |          |                                                 | 2                               |                                                               | E.12 |
|  | Max. 16, min. 8<br>(can be configured) |          |         |    |     | Max. 8, min. 0<br>(can be configured) | 0.5 A          |          |                                                 | 4                               | - Max. I/O channels = 16                                      | E.12 |
|  | 4                                      | 4        |         |    |     |                                       |                | 2        | -10...+10 V, 0...+10 V,<br>0...20 mA, 4...20 mA | 2                               |                                                               | E.13 |
|  | 16                                     |          |         |    |     |                                       |                |          |                                                 | 2                               |                                                               | E.16 |
|  | Max. 16, min. 8<br>(can be configured) |          |         |    |     | Max. 8, min. 0<br>(can be configured) | 0.5 A          |          |                                                 | 4                               | - Max. I/O channels = 16                                      | E.16 |
|  | 16                                     |          |         |    |     |                                       |                |          |                                                 | 2                               |                                                               | E.16 |
|  | Max. 16, min. 8<br>(can be configured) |          |         |    |     | Max. 8, min. 0<br>(can be configured) | 0.5 A          |          |                                                 | 4                               | - Max. I/O channels = 16                                      | E.16 |
|  | 4                                      | 4        |         |    |     |                                       |                | 2        | -10...+10 V, 0...+10 V,<br>0...20 mA, 4...20 mA | 2                               |                                                               | E.17 |
|  | 16                                     |          |         |    |     |                                       |                |          |                                                 | 2                               |                                                               | E.24 |
|  | Max. 16, min. 8<br>(can be configured) |          |         |    |     | Max. 8, min. 0<br>(can be configured) | 0.5 A          |          |                                                 | 4                               | - Max. I/O channels = 16                                      | E.24 |
|  | 16                                     |          |         |    |     |                                       |                |          |                                                 | 2                               |                                                               | E.24 |
|  | Max. 16, min. 8<br>(can be configured) |          |         |    |     | Max. 8, min. 0<br>(can be configured) | 0.5 A          |          |                                                 | 4                               | - Max. I/O channels = 16                                      | E.24 |
|  | 4                                      | 4        |         |    |     |                                       |                | 2        | -10...+10 V, 0...+10 V,<br>0...20 mA, 4...20 mA | 2                               |                                                               | E.25 |
|  | 16                                     |          |         |    |     |                                       |                |          |                                                 | 2                               |                                                               | E.20 |
|  | Max. 16, min. 8<br>(can be configured) |          |         |    |     | Max. 8, min. 0<br>(can be configured) | 0.5 A          |          |                                                 | 4                               | - Max. I/O channels = 16                                      | E.20 |
|  | 16                                     |          |         |    |     |                                       |                |          |                                                 | 2                               |                                                               | E.20 |
|  | Max. 16, min. 8<br>(can be configured) |          |         |    |     | Max. 8, min. 0<br>(can be configured) |                |          |                                                 | 4                               | - Max. I/O channels = 16                                      | E.20 |
|  | 4                                      | 4        |         |    |     |                                       |                | 2        | -10...+10 V, 0...+10 V,<br>0...20 mA, 4...20 mA | 2                               |                                                               | E.21 |
|  | 16                                     |          |         |    |     |                                       |                |          |                                                 | 2                               |                                                               | E.30 |
|  | 16                                     |          |         |    |     |                                       |                |          |                                                 | 2                               |                                                               | E.30 |
|  | 16                                     |          |         |    |     |                                       |                |          |                                                 | 2                               |                                                               | E.32 |
|  | 8                                      |          |         |    |     | 8                                     | 0.5 A          |          |                                                 | 2                               |                                                               | E.34 |
|  | 16                                     |          |         |    |     |                                       |                |          |                                                 | 2                               |                                                               | E.34 |
|  | 16                                     |          |         |    |     |                                       |                |          |                                                 | 2                               |                                                               | E.32 |
|  | 8                                      |          |         |    |     |                                       |                |          |                                                 |                                 |                                                               | E.36 |
|  |                                        |          |         |    |     | 8                                     | 2 A            |          |                                                 | 2                               | - Max. total current, output = 8 A                            | E.36 |
|  | Max. 8, min. 0<br>(can be configured)  |          |         |    |     | Max. 8, min. 0<br>(can be configured) | 0.5 A          |          |                                                 | 2                               | - Max. I/O channels = 8<br>- Max. total current, output = 4 A | E.36 |
|  | 8                                      |          |         |    |     |                                       |                |          |                                                 |                                 |                                                               | E.36 |
|  |                                        |          |         |    |     | 8                                     | 2 A            |          |                                                 | 2                               | - Max. I/O channels = 8<br>- Max. total current, output = 4 A | E.36 |
|  | Max. 8, min. 0<br>(can be configured)  |          |         |    |     | Max. 8, min. 0<br>(can be configured) | 0.5 A          |          |                                                 | 2                               | - Max. I/O channels = 8                                       | E.36 |
|  |                                        | 4        |         |    |     |                                       |                |          |                                                 |                                 |                                                               | E.37 |
|  |                                        |          |         |    |     |                                       |                | 4        | -10...+10 V, 0...+10 V,<br>0...20 mA, 4...20 mA |                                 |                                                               | E.37 |
|  |                                        |          | 2       |    |     |                                       |                |          |                                                 | 2                               |                                                               | E.38 |
|  |                                        |          |         | 4  |     |                                       |                |          |                                                 |                                 |                                                               | E.39 |
|  |                                        |          |         |    | 4   |                                       |                |          |                                                 |                                 |                                                               | E.40 |
|  | 12                                     |          |         |    |     |                                       |                |          |                                                 | 2                               |                                                               | E.44 |
|  | 16                                     |          |         |    |     |                                       |                |          |                                                 | 2                               |                                                               | E.45 |
|  | Max. 16, min. 8<br>(can be configured) |          |         |    |     | Max. 8, min. 0<br>(can be configured) | 0.5 A          |          |                                                 | 4                               | - Max. I/O channels = 16                                      | E.45 |
|  | Max. 4, min. 2<br>(can be configured)  | 4        |         |    |     | Max. 2, min. 0<br>(can be configured) | 0.5 A          | 2        | -10...+10 V, 0...+10 V,<br>0...20 mA, 4...20 mA | 2                               | - Max. I/O channels = 10                                      | E.46 |

# SAI Active Universal

## Compact, basic versions of the Remote I/O system with IP67 protection

The SAI Active Universal consists of basic, compact designed variants that include a variety of modules for digital and analogue inputs and outputs. The housing has a sturdy construction in compliance with strict industrial requirements. It is resistant against aggressive materials, vibration, shock, temperature, water and dust.

The high quality connection system uses conventional, standardised M8 and M12 connectors with standard compliant coding. They ensure a reliable wiring process with less risk of errors. Two M12 connections for the fieldbus allow for a continuous bus installation without any additional T-distributor. The functional earth connection is automatically created when installing on a metallic earthed base.





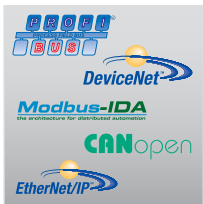
#### 4 independent voltage circuits

The modules can be supplied with up to four different voltage potentials. The module voltage can be simultaneously used for the inputs. In addition, up to three feed points are available for outputs; these can be switched off individually depending on the application requirements. Plug in cross connectors can be used to merge voltage potentials on the module.



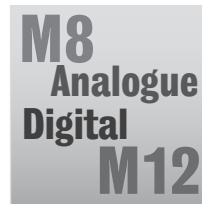
#### Efficient diagnostics and status alerts

The status of the I/Os is shown directly on the module using arrow icons. The arrows point to the label and the plug in position. Up to seven status LEDs are available for displaying additional information about the power supply, fieldbus status and group diagnostics. The information is simultaneously transmitted to the controller unit via the bus system.



#### Freedom of choice

Total compliance with many industrial fieldbus standards: this permits integration with all conventional controllers so that the modules can be used in practically all applications. SAI Active Universal supports PROFIBUS-DP, CANopen, DeviceNet, Modbus TCP and Ethernet/IP communication protocols.



#### A wide variety of variants

All SAI Active modules with digital inputs or digital outputs are optionally available with standard M8 or M12 connection systems. For modules in the 16DI/8DO series, the configuration can be customised to fit the application so that anywhere between 16DI to 8DI/8DO can be used. Output cables with up to 2 A per channel are used to connect almost any load. Analogue modules can be configured flexibly for current or voltage outputs.

# SAI Active Universal - PROFIBUS-DP

## PROFIBUS-DP Remote I/O for digital signal processing



### SAI-AU



### SAI-AU



### Ordering data

| Module variants                              |
|----------------------------------------------|
| 16 Digital In; 16 Digital In / 8 Digital Out |
| 16 Digital In; 16 Digital In / 8 Digital Out |
| 8 Digital In / 8 Digital Out                 |
| 8 Digital In / 8 Digital Out                 |
| Note                                         |

| Type               | Qty. | Order No.  |
|--------------------|------|------------|
| SAI-AU M8 PB 16DI  | 1    | 1906550000 |
| SAI-AU M12 PB 16DI | 1    | 1890020000 |
|                    |      |            |
|                    |      |            |

| Type                    | Qty. | Order No.  |
|-------------------------|------|------------|
| SAI-AU M8 PB 16DI/8DO   | 1    | 1906640000 |
| SAI-AU M12 PB 16DI/8DO  | 1    | 1890010000 |
| SAI-AU M8 PB 8DI8DO 2A  | 1    | 1975450000 |
| SAI-AU M12 PB 8DI8DO 2A | 1    | 1968220000 |
|                         |      |            |

### Technical data

| Connections                                               |
|-----------------------------------------------------------|
| Fieldbus (BUS-IN)                                         |
| Fieldbus (BUS-OUT)                                        |
| Supply voltage (AUX-IN)                                   |
| Supply voltage (AUX-OUT)                                  |
| I/O connections                                           |
| Voltage supply                                            |
| Operating voltage                                         |
| Contact load                                              |
| Max. total current module                                 |
| Digital inputs                                            |
| Permitted input voltage                                   |
| Input voltage, low                                        |
| Input voltage, high                                       |
| Input current, low                                        |
| Input current, high                                       |
| Input filter                                              |
| Digital outputs                                           |
| max. current-carrying capacity per output signal          |
| Switching frequency load (resistive / inductive / inrush) |
| Short-circuit-proof                                       |
| Output voltage, low                                       |
| Output voltage, high                                      |
| Max. total current of outputs                             |
| Fieldbus                                                  |
| Bus system                                                |
| Transmission rate                                         |
| Addressing                                                |
| System integration                                        |
| General data                                              |
| L x W x H                                                 |
| Earth                                                     |
| Protection class                                          |
| operating temperature                                     |
| Storage temperature                                       |
| Housing main material / Flammability class UL 94          |
| Certificate                                               |

|                                                       |
|-------------------------------------------------------|
| 1x M12 plug 5-pole, B-coded                           |
| 1x M12 female 5-pole, B-coded                         |
| 1x M12 plug 5-pole, A-coded                           |
| 1x M12 female 5-pole, A-coded                         |
| 16x M8 female 3-pole / 8 x M12 female 5-pole, A-coded |
| 24 V (18 V DC ... 30 V DC)                            |
| Per PIN max. 4 A                                      |
| 10 A                                                  |
| -30 V to +30 V (protected against polarity reversal)  |
| <5 V in accordance with EN 61131-2 Typ 1              |
| >15 V in accordance with EN 61131-2 Typ 1             |
| < 15 mA in accordance with EN 61131-2 Type 1          |
| 2 mA to 15 mA in accordance with EN 61131-2 Type 1    |
| 3 ms                                                  |
| Profibus-DP                                           |
| Max. 12 Mbit/s (automatic detection)                  |
| Via rotary coding switch (1 – 126)                    |
| GSD file (Device-specific for each module)            |
| 210 mm / 54 mm / 32 mm                                |
| < 400 g                                               |
| IP 67                                                 |
| 0 °C...+60 °C                                         |
| -25 °C...+85 °C                                       |
| Pocan, PBT / V-0                                      |
| CE, cULus                                             |

|                                                       |
|-------------------------------------------------------|
| 1x M12 plug 5-pole, B-coded                           |
| 1x M12 female 5-pole, B-coded                         |
| 2x M12 plug 5-pole, A-coded                           |
| 16x M8 female 3-pole / 8 x M12 female 5-pole, A-coded |
| 24 V (18 V DC ... 30 V DC)                            |
| Per PIN max. 4 A                                      |
| 10 A                                                  |
| -30 V to +30 V (protected against polarity reversal)  |
| < 15 mA in accordance with EN 61131-2 Type 1          |
| 2 mA to 15 mA in accordance with EN 61131-2 Type 1    |
| < 15 mA in accordance with EN 61131-2 Type 1          |
| 2 mA to 15 mA in accordance with EN 61131-2 Type 1    |
| 3 ms                                                  |
| 0.5 A, 2 A                                            |
| max. 100 Hz / max. 1 Hz / max. 8 Hz                   |
| Yes, cut-off for short circuit and error message      |
| 0 V DC                                                |
| Supply voltage less 0.7 V DC                          |
| 7 A, 8 A (1975450000, 1968220000)                     |
| Profibus-DP                                           |
| Max. 12 Mbit/s (automatic detection)                  |
| Via rotary coding switch (1 – 126)                    |
| GSD file (Device-specific for each module)            |
| 210 mm / 54 mm / 32 mm                                |
| < 400 g                                               |
| IP 67                                                 |
| 0 °C...+60 °C                                         |
| -25 °C...+85 °C                                       |
| Pocan, PBT / V-0                                      |
| CE, cULus                                             |

| Note |
|------|
|------|

| Note |
|------|
|------|

| Note |
|------|
|------|

PROFIBUS-DP  
Remote I/O for digital and  
analogue signal processing



SAI-AU



Ordering data

| Module variants                               |
|-----------------------------------------------|
| 4 Analogue In / 2 Analogue Out / 4 Digital In |
| Note                                          |

| Type                   | Qty. | Order No.  |
|------------------------|------|------------|
| SAI-AU M12 PB AI/AO/DI | 1    | 1890000000 |

Technical data

| Connections                                      |
|--------------------------------------------------|
| Fieldbus (BUS-IN)                                |
| Fieldbus (BUS-OUT)                               |
| Supply voltage (AUX-IN)                          |
| Supply voltage (AUX-OUT)                         |
| I/O connections                                  |
| Voltage supply                                   |
| Operating voltage                                |
| Contact load                                     |
| Max. total current module                        |
| Digital inputs                                   |
| Permitted input voltage                          |
| Input voltage, low                               |
| Input voltage, high                              |
| Input current, low                               |
| Input current, high                              |
| Input filter                                     |
| Analogue inputs                                  |
| Measurement range                                |
| Maximum input voltage in relation to GND         |
| Input resistance (load)                          |
| Max. input current (differential)                |
| Short-circuit-proof                              |
| Resolution / Accuracy                            |
| Analogue outputs                                 |
| Measurement range                                |
| Output interval                                  |
| Short-circuit-proof                              |
| Resolution / Accuracy                            |
| Fieldbus                                         |
| Bus system                                       |
| Transmission rate                                |
| Addressing                                       |
| System integration                               |
| General data                                     |
| L x W x H                                        |
| Earth                                            |
| Protection class                                 |
| operating temperature                            |
| Storage temperature                              |
| Housing main material / Flammability class UL 94 |
| Certificate                                      |

|                                                        |
|--------------------------------------------------------|
| 1x M12 plug 5-pole, B-coded                            |
| 1x M12 female 5-pole, B-coded                          |
| 1x M12 plug 5-pole, A-coded                            |
| 1x M12 female 5-pole, A-coded                          |
| 8 x M12 female 5-pole, A-coded                         |
| 24 V (18 V DC ... 30 V DC)                             |
| Per PIN max. 4 A                                       |
| 10 A                                                   |
| -30 V to +30 V (protected against polarity reversal)   |
| <5 V in accordance with EN 61131-2 Typ 1               |
| >15 V in accordance with EN 61131-2 Typ 1              |
| < 15 mA in accordance with EN 61131-2 Type 1           |
| 2 mA to 15 mA in accordance with EN 61131-2 Type 1     |
| 3 ms                                                   |
| -10 V ... +10 V, 0 V ... 10V, 0 ... 20 mA, 4...20 mA   |
| 35 V                                                   |
| <125 Ohm                                               |
| -50 mA to +50 mA (protected against polarity reversal) |
| Yes                                                    |
| 12-bit / < 0.2 %                                       |
| -10 V ... +10 V, 0 V ... 10V, 0 ... 20 mA, 4...20 mA   |
| 5 ms to 250 ms (can be configured)                     |
| Yes                                                    |
| 12-bit / < 0.2 %                                       |
| Profibus-DP                                            |
| Max. 12 Mbit/s (automatic detection)                   |
| Via rotary coding switch (1 – 126)                     |
| GSD file (Device-specific for each module)             |
| 210 mm / 54 mm / 32 mm                                 |
| < 400 g                                                |
| IP 67                                                  |
| 0 °C...+60 °C                                          |
| -25 °C...+85 °C                                        |
| Pocan, PBT / V-0                                       |
| CE, cULus                                              |

| Note |
|------|
|------|

| Note |
|------|
|------|

# Engineering tables for PROFIBUS



When planning the automation of a facility, you must have a wide variety of components available. These engineering tables list all the components required for wiring up the SAI Active modules.

## PROFIBUS modules



## PROFIBUS accessories



## Sensor/actuator accessories



## Markers



## Protective caps



## Ordering data

| Description                                   | Typee                    | Qty. | Order No.  |
|-----------------------------------------------|--------------------------|------|------------|
| <b>PROFIBUS modules</b>                       |                          |      |            |
| 16 Digital In                                 | SAI-AU M12 PB 16DI       | 1    | 1890020000 |
| 16 Digital In / 8 Digital Out                 | SAI-AU M12 PB 16DI/8DO   | 1    | 1890010000 |
| 4 Analogue In / 2 Analogue Out / 4 Digital In | SAI-AU M12 PB AI/AO/DI   | 1    | 1890000000 |
| 8 Digital In / 8 Digital Out                  | SAI-AU M12 PB 8DI/8DO 2A | 1    | 1968220000 |
| 16 Digital In                                 | SAI-AU M8 PB 16DI        | 1    | 1906550000 |
| 16 Digital In / 8 Digital Out                 | SAI-AU M8 PB 16DI/8DO    | 1    | 1906640000 |
| 8 Digital In / 8 Digital Out                  | SAI-AU M8 PB 8DI/8DO 2A  | 1    | 1975450000 |

## PROFIBUS accessories

|                                                      |           |
|------------------------------------------------------|-----------|
| PROFIBUS cables with female plug and male plug       | Chapter C |
| PROFIBUS cables with female plug and other side open | Chapter C |
| PROFIBUS cables with male plug and other side open   | Chapter C |

|                            |           |
|----------------------------|-----------|
| PROFIBUS plug-in connector | Chapter C |
|----------------------------|-----------|

|                               |                        |   |            |
|-------------------------------|------------------------|---|------------|
| PROFIBUS terminating resistor | SAIEND PB M12 5P B-COD | 1 | 1784770000 |
|-------------------------------|------------------------|---|------------|

## Sensor/actuator accessories

|                        |           |
|------------------------|-----------|
| Sensor-actuator cables | Chapter B |
|------------------------|-----------|

|                       |           |
|-----------------------|-----------|
| Sensor-actuator plugs | Chapter D |
|-----------------------|-----------|

## Markers

|                                                |                        |   |            |
|------------------------------------------------|------------------------|---|------------|
| Semi-transparent markers for PrintJet printing | ESG 8/13.5/43.3 SAI AU | 5 | 1912130000 |
|------------------------------------------------|------------------------|---|------------|

## Protective caps

|                                    |                 |    |            |
|------------------------------------|-----------------|----|------------|
| M8 Dust cap (Sensor connections)   | SAI-SK M8       | 50 | 1802760000 |
| M12 Dust cap (Sensor connections)  | SAI-SK          | 30 | 9456050000 |
| M12 Dust cap (Bus-in and power-in) | SAI-SK-M12-UNI  | 20 | 2330260000 |
| M12 Dust cap (Bus-in and power-in) | SAI-SK plug M12 | 50 | 1781520000 |



SAI Active Universal - CANopen

CANopen  
Remote I/O for digital  
signal processing



Ordering data

| Module variants                              |
|----------------------------------------------|
| 16 Digital In; 16 Digital In / 8 Digital Out |
| 16 Digital In; 16 Digital In / 8 Digital Out |
| Note                                         |

Technical data

| Connections                                               |
|-----------------------------------------------------------|
| Fieldbus (BUS-IN)                                         |
| Fieldbus (BUS-OUT)                                        |
| Supply voltage (AUX-IN)                                   |
| Supply voltage (AUX-OUT)                                  |
| I/O connections                                           |
| Voltage supply                                            |
| Operating voltage                                         |
| Contact load                                              |
| Max. total current module                                 |
| Digital inputs                                            |
| Permitted input voltage                                   |
| Input voltage, low                                        |
| Input voltage, high                                       |
| Input current, low                                        |
| Input current, high                                       |
| Input filter                                              |
| Digital outputs                                           |
| max. current-carrying capacity per output signal          |
| Switching frequency load (resistive / inductive / inrush) |
| Short-circuit-proof                                       |
| Output voltage, low                                       |
| Output voltage, high                                      |
| Max. total current outputs                                |
| Fieldbus                                                  |
| Bus system                                                |
| Transmission rate                                         |
| Addressing                                                |
| System integration                                        |
| General data                                              |
| L x W x H                                                 |
| Earth                                                     |
| Protection class                                          |
| operating temperature                                     |
| Storage temperature                                       |
| Housing main material / Flammability class UL 94          |
| Certificate                                               |

SAI-AU



| Type                | Qty. | Order No.  |
|---------------------|------|------------|
| SAI-AU M8 CAN 16DI  | 1    | 1906680000 |
| SAI-AU M12 CAN 16DI | 1    | 1906650000 |

|                                                       |
|-------------------------------------------------------|
| 1x M12 plug 5-pole, A-coded                           |
| 1x M12 female 5-pole, A-coded                         |
| 1x M12 plug 5-pole, A-coded                           |
| 1x M12 female 5-pole, A-coded                         |
| 16x M8 female 3-pole / 8 x M12 female 5-pole, A-coded |
| 24 V (18 V DC ... 30 V DC)                            |
| Per PIN max. 4 A                                      |
| 8 A                                                   |
| -30 V to +30 V (protected against polarity reversal)  |
| <5 V in accordance with EN 61131-2 Typ 1              |
| >15 V in accordance with EN 61131-2 Typ 1             |
| < 15 mA in accordance with EN 61131-2 Type 1          |
| 2 mA to 15 mA in accordance with EN 61131-2 Type 1    |
| 3 ms                                                  |
| CANopen                                               |
| Max. 1 Mbit/s (automatic detection)                   |
| Via rotary coding switch (1 – 127)                    |
| EDS file (Device-specific for each module)            |
| 210 mm / 54 mm / 32 mm                                |
| < 400 g                                               |
| IP 67                                                 |
| 0 °C...+60 °C                                         |
| -25 °C...+85 °C                                       |
| Pocan, PBT / V-0                                      |
| CE, cULus (planned for 4Q/2010)                       |

SAI-AU



| Type                    | Qty. | Order No.  |
|-------------------------|------|------------|
| SAI-AU M8 CAN 16DI/8DO  | 1    | 1906690000 |
| SAI-AU M12 CAN 16DI/8DO | 1    | 1906660000 |

|                                                       |
|-------------------------------------------------------|
| 1x M12 plug 5-pole, A-coded                           |
| 1x M12 female 5-pole, A-coded                         |
| 2x M12 plug 5-pole, A-coded                           |
| 16x M8 female 3-pole / 8 x M12 female 5-pole, A-coded |
| 24 V (18 V DC ... 30 V DC)                            |
| Per PIN max. 4 A                                      |
| 8 A                                                   |
| -30 V to +30 V (protected against polarity reversal)  |
| <5 V in accordance with EN 61131-2 Typ 1              |
| >15 V in accordance with EN 61131-2 Typ 1             |
| < 15 mA in accordance with EN 61131-2 Type 1          |
| 2 mA to 15 mA in accordance with EN 61131-2 Type 1    |
| 3 ms                                                  |
| 0.5 A, 2 A                                            |
| max. 100 Hz / max. 1 Hz / max. 8 Hz                   |
| Yes, cut-off for short circuit and error message      |
| 0 V DC                                                |
| Supply voltage less 0.7 V DC                          |
| 7 A                                                   |
| CANopen                                               |
| Max. 1 Mbit/s (automatic detection)                   |
| Via rotary coding switch (1 – 127)                    |
| EDS file (Device-specific for each module)            |
| 210 mm / 54 mm / 32 mm                                |
| < 400 g                                               |
| IP 67                                                 |
| 0 °C...+60 °C                                         |
| -25 °C...+85 °C                                       |
| Pocan, PBT / V-0                                      |
| CE, cULus (planned for 4Q/2010)                       |

| Note |
|------|
|------|

## CANopen

### Remote I/O for digital and analogue signal processing



## SAI-AU



### Ordering data

| Module variants                               |
|-----------------------------------------------|
| 4 Analogue In / 2 Analogue Out / 4 Digital In |
| Note                                          |

| Type                    | Qty. | Order No.  |
|-------------------------|------|------------|
| SAI-AU M12 CAN AI/AO/DI | 1    | 1906670000 |

### Technical data

| Connections                                      |
|--------------------------------------------------|
| Fieldbus (BUS-IN)                                |
| Fieldbus (BUS-OUT)                               |
| Supply voltage (AUX-IN)                          |
| Supply voltage (AUX-OUT)                         |
| I/O connections                                  |
| Digital inputs                                   |
| Permitted input voltage                          |
| Input voltage, low                               |
| Input voltage, high                              |
| Input current, low                               |
| Input current, high                              |
| Input filter                                     |
| Analogue inputs                                  |
| Measurement range                                |
| Maximum input voltage in relation to GND         |
| Input resistance (load)                          |
| Max. input current (differential)                |
| Short-circuit-proof                              |
| Resolution / Accuracy                            |
| Analogue outputs                                 |
| Measurement range                                |
| Output interval                                  |
| Short-circuit-proof                              |
| Resolution / Accuracy                            |
| Fieldbus                                         |
| Bus system                                       |
| Transmission rate                                |
| Addressing                                       |
| System integration                               |
| General data                                     |
| L x W x H                                        |
| Earth                                            |
| Protection class                                 |
| operating temperature                            |
| Storage temperature                              |
| Housing main material / Flammability class UL 94 |
| Certificate                                      |

|                                                        |
|--------------------------------------------------------|
| 1x M12 plug 5-pole, A-coded                            |
| 1x M12 female 5-pole, A-coded                          |
| 1x M12 plug 5-pole, A-coded                            |
| 1x M12 female 5-pole, A-coded                          |
| 8 x M12 female 5-pole, A-coded                         |
| -30 V to +30 V (protected against polarity reversal)   |
| <5 V in accordance with EN 61131-2 Typ 1               |
| >15 V in accordance with EN 61131-2 Typ 1              |
| < 15 mA in accordance with EN 61131-2 Type 1           |
| 2 mA to 15 mA in accordance with EN 61131-2 Type 1     |
| 3 ms                                                   |
| -10 V ... +10 V, 0 V ... 10V, 0 ... 20 mA, 4...20 mA   |
| 35 V                                                   |
| <125 Ohm                                               |
| -50 mA to +50 mA (protected against polarity reversal) |
| Yes                                                    |
| 12-bit / < 0.2 %                                       |
| -10 V ... +10 V, 0 V ... 10V, 0 ... 20 mA, 4...20 mA   |
| 5 ms to 250 ms (can be configured)                     |
| Yes                                                    |
| 12-bit / < 0.2 %                                       |
| CANopen                                                |
| Max. 1 Mbit/s (automatic detection)                    |
| Via rotary coding switch (1 – 127)                     |
| EDS file (Device-specific for each module)             |
| 210 mm / 54 mm / 32 mm                                 |
| < 400 g                                                |
| IP 67                                                  |
| 0 °C...+60 °C                                          |
| -25 °C...+85 °C                                        |
| Pocan, PBT / V-0                                       |
| CE, cULus (planned for 4Q/2010)                        |

| Note |
|------|
|------|

| Note |
|------|
|------|

# Engineering tables for CANopen



When planning the automation of a facility, you must have a wide variety of components available. These engineering tables list all the components required for wiring up the SAI Active modules.

## CANopen modules



## CANopen accessories



## Sensor/actuator accessories



## Markers



## Protective caps



## Ordering data

| Description                                         | Type                    | Qty. | Order No.  |
|-----------------------------------------------------|-------------------------|------|------------|
| <b>CANopen modules</b>                              |                         |      |            |
| 16 Digital In                                       | SAI-AU M12 CAN 16DI     | 1    | 1906650000 |
| 16 Digital In / 8 Digital Out                       | SAI AU M12 CAN 16DI/8DO | 1    | 1906660000 |
| 4 Analogue In / 2 Analogue Out / 4 Digital In       | SAI-AU M12 CAN AI/AO/DI | 1    | 1906670000 |
| 16 Digital In                                       | SAI-AU M8 CAN 16DI      | 1    | 1906680000 |
| 16 Digital In / 8 Digital Out                       | SAI-AU M8 CAN 16DI/8DO  | 1    | 1906690000 |
| <b>CANopen accessories</b>                          |                         |      |            |
| CANopen cables with female plug and male plug       |                         |      | Chapter C  |
| CANopen cables with female plug and other side open |                         |      | Chapter C  |
| CANopen cables with male plug and other side open   |                         |      | Chapter C  |
| CANopen plug-in connector                           |                         |      | Chapter C  |
| CANopen terminating resistor                        | SAIEND CAN-M12 5P A-COD | 1    | 1784760000 |
| <b>Sensor/actuator accessories</b>                  |                         |      |            |
| Sensor-actuator cables                              |                         |      | Chapter B  |
| Sensor-actuator plugs                               |                         |      | Chapter D  |
| <b>Markers</b>                                      |                         |      |            |
| Semi-transparent markers for PrintJet printing      | ESG 8/13.5/43.3 SAI AU  | 5    | 1912130000 |
| <b>Protective caps</b>                              |                         |      |            |
| M8 Dust cap (Sensor connections)                    | SAI-SK M8               | 50   | 1802760000 |
| M12 Dust cap (Sensor connections)                   | SAI-SK                  | 30   | 9456050000 |
| M12 Dust cap (Bus-in and power-in)                  | SAI-SK-M12-UNI          | 20   | 2330260000 |
| M12 Dust cap (Bus-in and power-in)                  | SAI-SK plug M12         | 50   | 1781520000 |



DeviceNet™  
Remote I/O for digital  
signal processing



SAI-AU



SAI-AU



Ordering data

| Module variants                              |
|----------------------------------------------|
| 16 Digital In; 16 Digital In / 8 Digital Out |
| 16 Digital In; 16 Digital In / 8 Digital Out |
| Note                                         |

| Type               | Qty. | Order No.  |
|--------------------|------|------------|
| SAI-AU M8 DN 16DI  | 1    | 1906730000 |
| SAI-AU M12 DN 16DI | 1    | 1906700000 |

| Type                   | Qty. | Order No.  |
|------------------------|------|------------|
| SAI-AU M8 DN 16DI/8DO  | 1    | 1906740000 |
| SAI-AU M12 DN 16DI/8DO | 1    | 1906710000 |

Technical data

| Connections                                               |
|-----------------------------------------------------------|
| Fieldbus (BUS-IN)                                         |
| Fieldbus (BUS-OUT)                                        |
| Supply voltage (AUX-IN)                                   |
| Supply voltage (AUX-OUT)                                  |
| I/O connections                                           |
| Voltage supply                                            |
| Operating voltage                                         |
| Contact load                                              |
| Max. total current module                                 |
| Digital inputs                                            |
| Permitted input voltage                                   |
| Input voltage, low                                        |
| Input voltage, high                                       |
| Input current, low                                        |
| Input current, high                                       |
| Input filter                                              |
| Digital outputs                                           |
| max. current-carrying capacity per output signal          |
| Switching frequency load (resistive / inductive / inrush) |
| Short-circuit-proof                                       |
| Output voltage, low                                       |
| Output voltage, high                                      |
| Max. total current outputs                                |
| Fieldbus                                                  |
| Bus system                                                |
| Transmission rate                                         |
| Addressing                                                |
| System integration                                        |
| General data                                              |
| L x W x H                                                 |
| Earth                                                     |
| Protection class                                          |
| operating temperature                                     |
| Storage temperature                                       |
| Housing main material / Flammability class UL 94          |
| Certificate                                               |

|                                                       |
|-------------------------------------------------------|
| 1x M12 plug 5-pole, A-coded                           |
| 1x M12 female 5-pole, A-coded                         |
| 1x M12 plug 5-pole, A-coded                           |
| 1x M12 female 5-pole, A-coded                         |
| 16x M8 female 3-pole / 8 x M12 female 5-pole, A-coded |
| 24 V (18 V DC ... 30 V DC)                            |
| Per PIN max. 4 A                                      |
| 8 A                                                   |
| -30 V to +30 V (protected against polarity reversal)  |
| <5 V in accordance with EN 61131-2 Typ 1              |
| >15 V in accordance with EN 61131-2 Typ 1             |
| < 15 mA in accordance with EN 61131-2 Type 1          |
| 2 mA to 15 mA in accordance with EN 61131-2 Type 1    |
| 3 ms                                                  |
| DeviceNet                                             |
| Max. 500 kBit/s (automatic detection)                 |
| Via rotary coding switch (0 – 63)                     |
| EDS file (Device-specific for each module)            |
| 210 mm / 54 mm / 32 mm                                |
| < 400 g                                               |
| IP 67                                                 |
| 0 °C...+60 °C                                         |
| -25 °C...+85 °C                                       |
| Pocan, PBT / V-0                                      |
| CE, cULus (planned for 4Q/2010)                       |

|                                                       |
|-------------------------------------------------------|
| 1x M12 plug 5-pole, A-coded                           |
| 1x M12 female 5-pole, A-coded                         |
| 2x M12 plug 5-pole, A-coded                           |
| 16x M8 female 3-pole / 8 x M12 female 5-pole, A-coded |
| 24 V (18 V DC ... 30 V DC)                            |
| Per PIN max. 4 A                                      |
| 8 A                                                   |
| -30 V to +30 V (protected against polarity reversal)  |
| <5 V in accordance with EN 61131-2 Typ 1              |
| >15 V in accordance with EN 61131-2 Typ 1             |
| < 15 mA in accordance with EN 61131-2 Type 1          |
| 2 mA to 15 mA in accordance with EN 61131-2 Type 1    |
| 3 ms                                                  |
| 0.5 A, 2 A                                            |
| max. 100 Hz / max. 1 Hz / max. 8 Hz                   |
| Yes, cut-off for short circuit and error message      |
| 0 V DC                                                |
| Supply voltage less 0.7 V DC                          |
| 7 A                                                   |
| DeviceNet                                             |
| Max. 500 kBit/s (automatic detection)                 |
| Via rotary coding switch (0 – 63)                     |
| EDS file (Device-specific for each module)            |
| 210 mm / 54 mm / 32 mm                                |
| < 400 g                                               |
| IP 67                                                 |
| 0 °C...+60 °C                                         |
| -25 °C...+85 °C                                       |
| Pocan, PBT / V-0                                      |
| CE, cULus (planned for 4Q/2010)                       |

| Note |
|------|
|------|

| Note |
|------|
|------|

| Note |
|------|
|------|

## DeviceNet™

Remote I/O for digital and  
analogue signal processing



## SAI-AU



## Ordering data

| Module variants                               |
|-----------------------------------------------|
| 4 Analogue In / 2 Analogue Out / 4 Digital In |
| Note                                          |

| Type                   | Qty. | Order No.  |
|------------------------|------|------------|
| SAI-AU M12 DN AI/AO/DI | 1    | 1906720000 |

## Technical data

| Connections                                      |
|--------------------------------------------------|
| Fieldbus (BUS-IN)                                |
| Fieldbus (BUS-OUT)                               |
| Supply voltage (AUX-IN)                          |
| Supply voltage (AUX-OUT)                         |
| I/O connections                                  |
| Voltage supply                                   |
| Operating voltage                                |
| Contact load                                     |
| Max. total current module                        |
| Digital inputs                                   |
| Permitted input voltage                          |
| Input voltage, low                               |
| Input voltage, high                              |
| Input current, low                               |
| Input current, high                              |
| Input filter                                     |
| Analogue inputs                                  |
| Measurement range                                |
| Maximum input voltage in relation to GND         |
| Input resistance (load)                          |
| Max. input current (differential)                |
| Short-circuit-proof                              |
| Resolution / Accuracy                            |
| Analogue outputs                                 |
| Measurement range                                |
| Output interval                                  |
| Short-circuit-proof                              |
| Resolution / Accuracy                            |
| Fieldbus                                         |
| Bus system                                       |
| Transmission rate                                |
| Addressing                                       |
| System integration                               |
| General data                                     |
| L x W x H                                        |
| Earth                                            |
| Protection class                                 |
| operating temperature                            |
| Storage temperature                              |
| Housing main material / Flammability class UL 94 |
| Certificate                                      |

|                                                        |
|--------------------------------------------------------|
| 1x M12 plug 5-pole, A-coded                            |
| 1x M12 female 5-pole, A-coded                          |
| 1x M12 plug 5-pole, A-coded                            |
| 1x M12 female 5-pole, A-coded                          |
| 8 x M12 female 5-pole, A-coded                         |
| 24 V (18 V DC ... 30 V DC)                             |
| Per PIN max. 4 A                                       |
| 8 A                                                    |
| -30 V to +30 V (protected against polarity reversal)   |
| <5 V in accordance with EN 61131-2 Typ 1               |
| >15 V in accordance with EN 61131-2 Typ 1              |
| < 15 mA in accordance with EN 61131-2 Typ 1            |
| 2 mA to 15 mA in accordance with EN 61131-2 Typ 1      |
| 3 ms                                                   |
| -10 V ... +10 V, 0 V ... 10V, 0 ... 20 mA, 4...20 mA   |
| 35 V                                                   |
| <125 Ohm                                               |
| -50 mA to +50 mA (protected against polarity reversal) |
| Yes                                                    |
| 12-bit / < 0.2 %                                       |
| -10 V ... +10 V, 0 V ... 10V, 0 ... 20 mA, 4...20 mA   |
| 5 ms to 250 ms (can be configured)                     |
| Yes                                                    |
| 12-bit / < 0.2 %                                       |
| DeviceNet                                              |
| Max. 500 kBit/s (automatic detection)                  |
| Via rotary coding switch (0 – 63)                      |
| EDS file (Device-specific for each module)             |
| 210 mm / 54 mm / 32 mm                                 |
| < 400 g                                                |
| IP 67                                                  |
| 0 °C...+60 °C                                          |
| -25 °C...+85 °C                                        |
| Pocan, PBT / V-0                                       |
| CE, cULus (planned for 4Q/2010)                        |

| Note |
|------|
|------|

| Note |
|------|
|------|

# Engineering tables for DeviceNet™



When planning the automation of a facility, you must have a wide variety of components available. These engineering tables list all the components required for wiring up the SAI Active modules.

## DeviceNet™ modules



## DeviceNet™ accessories



## Sensor/actuator accessories



## Markers



## Protective caps



## Ordering data

| Description                                            | Type                    | Qty. | Order No.  |
|--------------------------------------------------------|-------------------------|------|------------|
| <b>DeviceNet™ modules</b>                              |                         |      |            |
| 16 Digital In                                          | SAI-AU M12 DN 16DI      | 1    | 1906700000 |
| 16 Digital In / 8 Digital Out                          | SAI-AU M12 DN 16DI/8DO  | 1    | 1906710000 |
| 4 Analogue In / 2 Analogue Out / 4 Digital In          | SAI-AU M12 DN AI/AO/DI  | 1    | 1906720000 |
| 16 Digital In                                          | SAI-AU M8 DN 16DI       | 1    | 1906730000 |
| 16 Digital In / 8 Digital Out                          | SAI-AU M8 DN 16DI/8DO   | 1    | 1906740000 |
| <b>DeviceNet™ accessories</b>                          |                         |      |            |
| DeviceNet™ cables with female plug and male plug       |                         |      | Chapter C  |
| DeviceNet™ cables with female plug and other side open |                         |      | Chapter C  |
| DeviceNet™ cables with male plug and other side open   |                         |      | Chapter C  |
| DeviceNet™ plug-in connector                           |                         |      | Chapter C  |
| DeviceNet™ terminating resistor                        | SAIEND CAN-M12 5P A-COD | 1    | 1784760000 |
| <b>Sensor/actuator accessories</b>                     |                         |      |            |
| Sensor-actuator cables                                 |                         |      | Chapter B  |
| Sensor-actuator plugs                                  |                         |      | Chapter D  |
| <b>Markers</b>                                         |                         |      |            |
| Semi-transparent markers for PrintJet printing         | ESG 8/13.5/43.3 SAI AU  | 5    | 1912130000 |
| <b>Protective caps</b>                                 |                         |      |            |
| M8 Dust cap (Sensor connections)                       | SAI-SK M8               | 50   | 1802760000 |
| M12 Dust cap (Sensor connections)                      | SAI-SK                  | 30   | 9456050000 |
| M12 Dust cap (Bus-in and power-in)                     | SAI-SK-M12-UNI          | 20   | 2330260000 |
| M12 Dust cap (Bus-in and power-in)                     | SAI-SK plug M12         | 50   | 1781520000 |



SAI Active Universal - EtherNet/IP™

EtherNet/IP™  
Remote I/O for digital  
signal processing



Ordering data

| Module variants                              |
|----------------------------------------------|
| 16 Digital In; 16 Digital In / 8 Digital Out |
| 16 Digital In; 16 Digital In / 8 Digital Out |
| Note                                         |

Technical data

| Connections                                               |
|-----------------------------------------------------------|
| Fieldbus (BUS-IN)                                         |
| Supply voltage (AUX-IN)                                   |
| Supply voltage (AUX-OUT)                                  |
| I/O connections                                           |
| Voltage supply                                            |
| Operating voltage                                         |
| Contact load                                              |
| Max. total current module                                 |
| Digital inputs                                            |
| Permitted input voltage                                   |
| Input voltage, low                                        |
| Input voltage, high                                       |
| Input current, low                                        |
| Input current, high                                       |
| Input filter                                              |
| Digital outputs                                           |
| max. current-carrying capacity per output signal          |
| Switching frequency load (resistive / inductive / inrush) |
| Short-circuit-proof                                       |
| Output voltage, low                                       |
| Output voltage, high                                      |
| Max. total current outputs                                |
| Fieldbus                                                  |
| Bus system                                                |
| Transmission rate                                         |
| Addressing                                                |
| System integration                                        |
| General data                                              |
| L x W x H                                                 |
| Earth                                                     |
| Protection class                                          |
| operating temperature                                     |
| Storage temperature                                       |
| Housing main material / Flammability class UL 94          |
| Certificate                                               |

| Note |
|------|
|------|

SAI-AU



| Type                | Qty. | Order No.  |
|---------------------|------|------------|
| SAI-AU M8 EIP 16DI  | 1    | 1906930000 |
| SAI-AU M12 EIP 16DI | 1    | 1906900000 |

|                                                      |
|------------------------------------------------------|
| 1x M12 female 4-pole, D-coded                        |
| 1x M12 plug 5-pole, A-coded                          |
| 1x M12 female 5-pole, A-coded                        |
| 16x M8 female 3-pole                                 |
| 24 V (18 V DC ... 30 V DC)                           |
| Per PIN max. 4 A                                     |
| 8 A                                                  |
| -30 V to +30 V (protected against polarity reversal) |
| <5 V in accordance with EN 61131-2 Typ 1             |
| >15 V in accordance with EN 61131-2 Typ 1            |
| < 15 mA in accordance with EN 61131-2 Type 1         |
| 2 mA to 15 mA in accordance with EN 61131-2 Type 1   |
| 3 ms                                                 |
| EtherNet/IP                                          |
| 10/100 Mbit/s                                        |
| DHCP, BOOTP, Static                                  |
| EDS file, Web server                                 |
| 210 mm / 54 mm / 32 mm                               |
| < 400 g                                              |
| IP 67                                                |
| 0 °C...+60 °C                                        |
| -25 °C...+85 °C                                      |
| Pocan, PBT / V-0                                     |
| CE, cULus (planned for 4Q/2010)                      |

| Note |
|------|
|------|

SAI-AU



| Type                    | Qty. | Order No.  |
|-------------------------|------|------------|
| SAI-AU M8 EIP 16DI/8DO  | 1    | 1906940000 |
| SAI-AU M12 EIP 16DI/8DO | 1    | 1906910000 |

|                                                      |
|------------------------------------------------------|
| 1x M12 female 4-pole, D-coded                        |
| 2x M12 plug 5-pole, A-coded                          |
| 16x M8 female 3-pole                                 |
| 24 V (18 V DC ... 30 V DC)                           |
| Per PIN max. 4 A                                     |
| 8 A                                                  |
| -30 V to +30 V (protected against polarity reversal) |
| <5 V in accordance with EN 61131-2 Typ 1             |
| >15 V in accordance with EN 61131-2 Typ 1            |
| < 15 mA in accordance with EN 61131-2 Type 1         |
| 2 mA to 15 mA in accordance with EN 61131-2 Type 1   |
| 3 ms                                                 |
| 0.5 A, 2 A                                           |
| max. 100 Hz / max. 1 Hz / max. 8 Hz                  |
| Yes, cut-off for short circuit and error message     |
| 0 V DC                                               |
| Supply voltage less 0.7 V DC                         |
| 7 A                                                  |
| EtherNet/IP                                          |
| 10/100 Mbit/s                                        |
| DHCP, BOOTP, Static                                  |
| EDS file, Web server                                 |
| 210 mm / 54 mm / 32 mm                               |
| < 400 g                                              |
| IP 67                                                |
| 0 °C...+60 °C                                        |
| -25 °C...+85 °C                                      |
| Pocan, PBT / V-0                                     |
| CE, cULus (planned for 4Q/2010)                      |

| Note |
|------|
|------|

## EtherNet/IP™

Remote I/O for digital and  
analogue signal processing



## SAI-AU



## Ordering data

| Module variants                               |
|-----------------------------------------------|
| 4 Analogue In / 2 Analogue Out / 4 Digital In |
| Note                                          |

| Type                    | Qty. | Order No.  |
|-------------------------|------|------------|
| SAI-AU M12 EIP AI/AO/DI | 1    | 1906920000 |

## Technical data

| Connections                                      |
|--------------------------------------------------|
| Fieldbus (BUS-IN)                                |
| Supply voltage (AUX-IN)                          |
| Supply voltage (AUX-OUT)                         |
| I/O connections                                  |
| Voltage supply                                   |
| Operating voltage                                |
| Contact load                                     |
| Max. total current module                        |
| Digital inputs                                   |
| Permitted input voltage                          |
| Input voltage, low                               |
| Input voltage, high                              |
| Input current, low                               |
| Input current, high                              |
| Input filter                                     |
| Analogue inputs                                  |
| Measurement range                                |
| Maximum input voltage in relation to GND         |
| Input resistance (load)                          |
| Max. input current (differential)                |
| Short-circuit-proof                              |
| Resolution / Accuracy                            |
| Analogue outputs                                 |
| Measurement range                                |
| Output interval                                  |
| Short-circuit-proof                              |
| Resolution / Accuracy                            |
| Fieldbus                                         |
| Bus system                                       |
| Transmission rate                                |
| Addressing                                       |
| System integration                               |
| General data                                     |
| L x W x H                                        |
| Earth                                            |
| Protection class                                 |
| operating temperature                            |
| Storage temperature                              |
| Housing main material / Flammability class UL 94 |
| Certificate                                      |

|                                                        |
|--------------------------------------------------------|
| 1x M12 female 4-pole, D-coded                          |
| 1x M12 plug 5-pole, A-coded                            |
| 1x M12 female 5-pole, A-coded                          |
| 8 x M12 female 5-pole, A-coded                         |
| 24 V (18 V DC ... 30 V DC)                             |
| Per PIN max. 4 A                                       |
| 8 A                                                    |
| -30 V to +30 V (protected against polarity reversal)   |
| < 15 mA in accordance with EN 61131-2 Type 1           |
| < 5 V in accordance with EN 61131-2 Typ 1              |
| > 15 V in accordance with EN 61131-2 Typ 1             |
| 2 mA to 15 mA in accordance with EN 61131-2 Type 1     |
| 3 ms                                                   |
| -10 V ... +10 V, 0 V ... 10V, 0 ... 20 mA, 4...20 mA   |
| 35 V                                                   |
| < 125 Ohm                                              |
| -50 mA to +50 mA (protected against polarity reversal) |
| Yes                                                    |
| 12-bit / < 0.2 %                                       |
| -10 V ... +10 V, 0 V ... 10V, 0 ... 20 mA, 4...20 mA   |
| 5 ms to 250 ms (can be configured)                     |
| Yes                                                    |
| 12-bit / < 0.2 %                                       |
| EtherNet/IP                                            |
| 10/100 Mbit/s                                          |
| DHCP, BOOTP, Static                                    |
| EDS file, Web server                                   |
| 210 mm / 54 mm / 32 mm                                 |
| < 400 g                                                |
| IP 67                                                  |
| 0 °C...+60 °C                                          |
| -25 °C...+85 °C                                        |
| Pocan, PBT / V-0                                       |
| CE, cULus (planned for 4Q/2010)                        |

| Note |
|------|
|------|

| Note |
|------|
|------|