

# M12 connection system

## Description

M12 is by far the most widespread connection method for controller systems and field level connections. M12 connections have been used with success in the automation sector for about thirty years. The M12 is trusted by users for its compact and sturdy design. It is also available with IP67 protection in compliance with EN 60529. IE organizations and associations are now leading harmonization efforts regarding IP67 connections in Industrial Ethernet. These organizations agree on the use of the M12 connector with the D-coded mating profile. The Profibus User Organization (Profinet), Ethernet Powerlink Standardization Group (Ethernet Powerlink), Modbus IDA (Modbus) and ODVA (Ethernet/IP) all support the M12, D-coded connection along side the RJ45 connection.

## Application

M12, D-coded plug-in connectors and cables are used for applications in harsh industrial environments – ideal for Ethernet connections in class of protection IP 67 between devices on the machine and in the switching cabinet, or in moving cable carriers.

## Features

- IP 67 class of protection
- 4-core conductor connection
- M12, D-coded pin arrangement to ISO IEC 61076-2-101

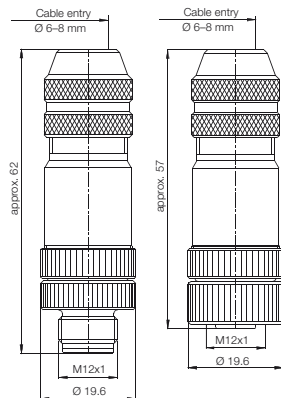
## The benefits for you

- Familiar connection technology for Industrial Ethernet as well
- Compact dimensions



**M12 connector, screw connection**

- Cat.5
- IP 67
- Screw connection

**M12 connector, screw connection 1****Application:**

Weidmüller's field-assembled M12 plug-in connectors can be used for assembling 4-wire Ethernet cables directly on-site:

- on the panel
- without tools
- fast
- simple

**Features:**

- Cat.5
- M12 D-coded
- IP 67
- in male and female versions

**The differences:**

- 1892120000: male version, straight, brass, nickel-plated, screw connection
- 1892130000: female version, straight, brass, nickel-plated, screw connection

**Ordering data**

Male	Type	Order No.
4-pole, PG 9	SAISM-4/8S-M12-4P D-COD	1892120000
Socket		
4-pole, PG 9	SAIBM-4/8S-M12-4P D-COD	1892130000

**Accessories****Note****Technical data**

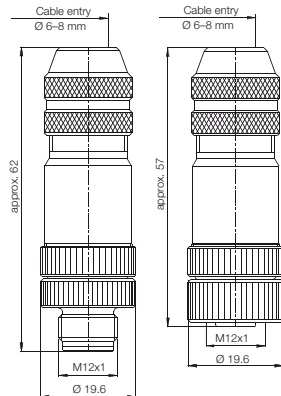
Category	Cat.5
Protection class	IP 67
Connection type	Screw connection
Housing material	Brass
Connecting thread	M12
Cable exit diameter, min. / max.	6 mm / 8 mm
Cross-section	0.14 ... 0.5 mm <sup>2</sup>
Operating temperature, min. / max.	-40 °C / 85 °C

**Note:**

## Weidmüller IE-LINE M12

### M12 connector, tension-clamp connection

- IP 67
- Tension-clamp connection



### M12 connector, tension-clamp connection

#### Application:

Weidmüller's field-assembled M12 plug-in connectors can be used for assembling 4-wire Ethernet cables directly on-site:

- in the field
- without tools
- fast
- simple

#### Features:

- M12 D-coded
- IP 67
- in male and female versions

#### Differences:

- 1892120001: Male straight version, brass, nickel-plated, tension-clamp connection
- 1803930001: Male angled version, brass, nickel-plated, tension-clamp connection
- 1892130001: Female straight version: brass, nickel-plated, tension-clamp connection

### Ordering data

Male	Type	Order No.
Tension-clamp connection, straight	SAISM-4/8S-M12 4P D-ZF	1892120001
Tension-clamp connection, angled	SAISW-4/8S-M12 4P D-ZF	1803930001
Socket		
Tension-clamp connection, straight	SAIBM-4/8S-M12 4P D-ZF	1892130001

### Accessories

#### Note

### Technical data

Protection class	IP 67
Connection type	Tension clamp connection
Housing material	Brass
Connecting thread	M12
Cable exit diameter, min. / max.	6 mm / 8 mm
Cross-section	0.25 ... 0.5 mm <sup>2</sup>
Operating temperature, min. / max.	-40 °C / 85 °C

#### Note:

## M12 adapters and coupling

- Cat.5
- IP 67



## Adaptors and couplings M12

### Application:

Weidmüller's M12 adaptors and couplings should be used whenever you need to bring an M12 cable to the switchgear cabinet, or whenever you need to connect two M12 cables.

### Variations:

- 8901630000: angled adapter from M12 female to RJ45-female; for mounting in wall of switchgear cabinet
- 8901620000: straight adapter from M12-female to RJ45-female; for mounting in wall of switchgear cabinet
- 8901640000: straight adapter from M12-female to M12-female; for surface mounting or exposed

## Ordering data

Adapter	Type	Order No.
Straight	IE-M12-ADAP S	8901620000
	Angled	IE-M12-ADAP A
with Coupling	IE-M12-COUP	8901640000

## Accessories

### Note

## Technical data

Category	Cat.5 (IEC 11801)
Protection class	IP 67
Configuration	M12-female to RJ45-female (adaptor), M12-female to M12-female (coupling)
Housing material	Polyamide, fully shielded metal housing
Shielding	360° shield contact
Operating temperature, min. / max.	-5 °C / 60 °C

### Note:

## Weidmuller IE-LINE M12

### M12 PCB connecting element

- Cat.5
- for device installation



PCBCE

PCBCEpanel

### M12 PCB connection element

Weidmuller PCB connection elements can be used for the equipment you use in the field. These permit the connection of M12 connectors with D-coded pin layout.

#### Variations:

- 8902810000: M12 female connector, for direct mount to PCB
- 8902820000: M12 female connector special, for additional snap-on to PCB

### Ordering data

Connection element	Type	Order No.
THR	IE-M12-PCBCE	8902810000
THT, can be snapped on	IE-M12-PCBCE-PANEL	8902820000

### Accessories

#### Note

### Technical data

Category	Cat.5 (IEC 11801)
Protection class	IP 65 according to DIN EN 60529
Configuration	Reflow compatible
Housing material	Polyamide, CuZn, nickel-plated
Shielding	360° shield contact
Operating temperature, min. / max.	-40 °C / +85 °C

#### Note: