

# SACC-M12MR-5CON-PG9-M - Connector



1681473

<https://www.phoenixcontact.com/us/products/1681473>

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Connector, Universal, 5-position, Plug angled M12, coding: A, Screw connection, knurl material: Zinc die-cast, nickel-plated, cable gland Pg9, external cable diameter 6 mm ... 8 mm



## Your advantages

- Safe use in the field, thanks to a high degree of protection
- Screw connection: proven connection technology for a large selection of different conductors

## Commercial data

|                                      |                    |
|--------------------------------------|--------------------|
| Item number                          | 1681473            |
| Packing unit                         | 1 pc               |
| Minimum order quantity               | 1 pc               |
| Sales key                            | BF30               |
| Product key                          | BF2CAA             |
| Catalog page                         | Page 22 (C-2-2019) |
| GTIN                                 | 4017918157470      |
| Weight per piece (including packing) | 26.18 g            |
| Weight per piece (excluding packing) | 24.6 g             |
| Customs tariff number                | 85366990           |
| Country of origin                    | HU                 |

## Technical data

### Notes

#### General

**NOTE:** Observe the permissible bending radii when laying conductors, since the degree of protection may be put in jeopardy if the bending forces are too high. Alleviate mechanical loads upstream of the connector, e.g. by using cable ties.

### Mounting

#### Assembly instructions

The connector pin assignment can be rotated 90° to the cable outlet

#### Connection method

Screw connection

### Product properties

#### Product type

Circular connector (cable-side)

#### Sensor type

Universal

#### Number of positions

5

#### No. of cable outlets

1

#### Shielded

no

#### Coding

A

#### Cable outlet

angled

#### Pg screw connection

Pg9

### Insulation characteristics

#### Overvoltage category

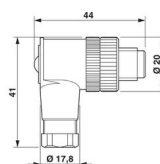
II

#### Degree of pollution

3

### Dimensions

#### Dimensional drawing



#### Length

41 mm

### External dimensions

#### Outside diameter

6 mm ... 8 mm

### Housing

#### Diameter housing

20 mm

### Material specifications

#### Flammability rating according to UL 94

HB

#### Seal material

NBR

#### Material of grip body

PA

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|                               |                              |
|-------------------------------|------------------------------|
| Contact material              | CuZn                         |
| Contact surface material      | CuSnZn                       |
| Contact carrier material      | PA                           |
| Material for screw connection | Zinc die-cast, nickel-plated |

## Connection data

### Conductor connection

|   |   |
|---|---|
| Connection method                       | Screw connection  |
| Connection cross section                | 0.25 mm <sup>2</sup> ... 0.75 mm <sup>2</sup> (without ferrule) |
|   | 0.14 mm <sup>2</sup> ... 0.75 mm <sup>2</sup> (with ferrule)    |
|   | 0.25 mm <sup>2</sup> ... 0.75 mm <sup>2</sup> (solid)           |
| Connection cross section AWG            | 24 ... 18 (without ferrule)                                     |
|   | 26 ... 20 (with ferrule)  |
| Stripping length of the individual wire | 5 mm  |
| Tightening torque                       | 0.4 Nm (M12 knurl)  |
|   | 0.2 Nm (Screw terminal blocks)                                  |
|   | 0.8 Nm ... 1 Nm (Pressure screw with sleeve housing)            |

## Electrical properties

|                                |          |
|--------------------------------|----------|
| Rated surge voltage            | 1.5 kV   |
| Contact resistance             | ≤ 8 mΩ   |
| Insulation resistance          | ≥ 100 MΩ |
| Nominal voltage U <sub>N</sub> | 48 V AC  |
|                                | 60 V DC  |
| Nominal current I <sub>N</sub> | 4 A      |

## Mechanical properties

### Mechanical data

|                             |      |
|-----------------------------|------|
| Insertion/withdrawal cycles | ≥ 50 |
|-----------------------------|------|

## Connector

### Connection 1

|                   |        |
|-------------------|--------|
| Head design       | Plug   |
| Head cable outlet | angled |
| Head thread type  | M12    |
| Coding            | A      |

## Cable/line

|   |           |
|---|-----------|
| Signal type/category                    | Universal |
| Stripping length of the individual wire | 5 mm      |

## Environmental and real-life conditions

### Ambient conditions

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|                                 |                                  |
|---------------------------------|----------------------------------|
| Degree of protection            | IP67                             |
| Ambient temperature (operation) | -40 °C ... 85 °C (Plug / socket) |

## Standards and regulations

|                          |                 |
|--------------------------|-----------------|
| Standard designation     | M12 connector   |
| Standards/specifications | IEC 61076-2-101 |

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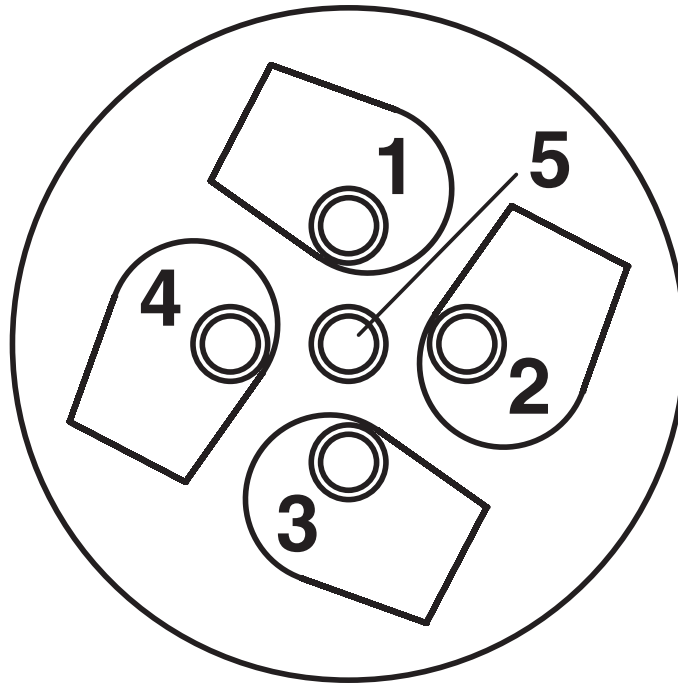
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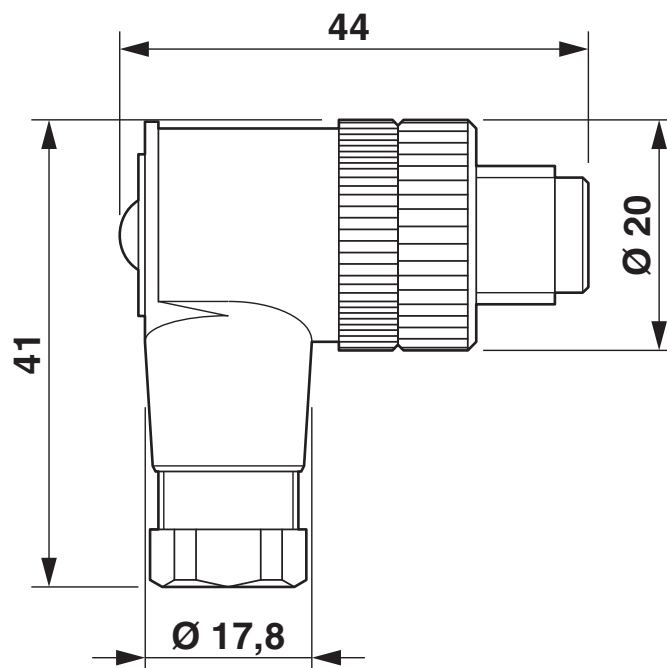
## Drawings

Schematic diagram



Cable connection side M12 (screw connection)

Dimensional drawing



M12 x 1 male plug, angled

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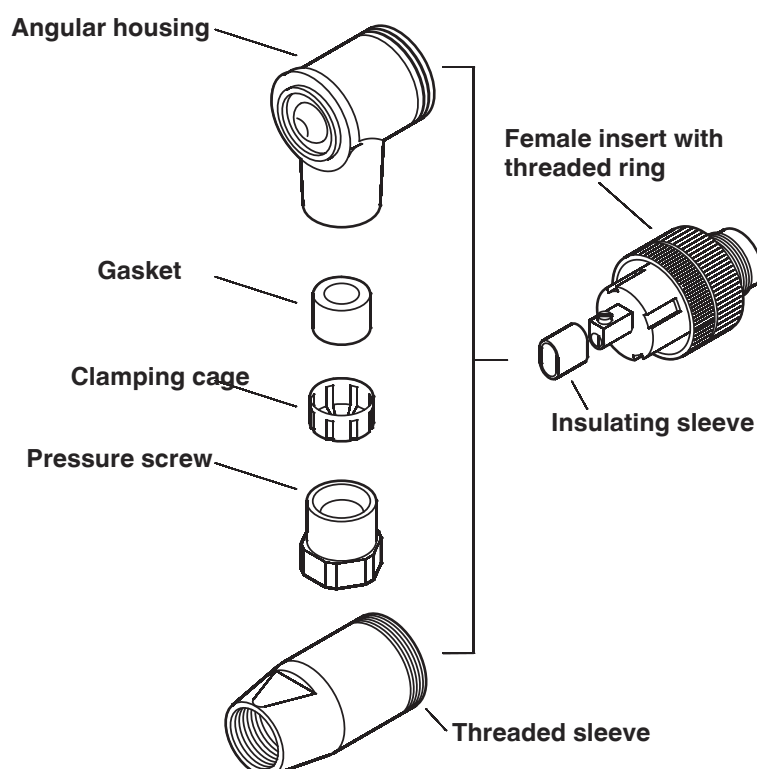
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Schematic diagram



Pin assignment M12 male connector, 5-pos., A-coded, male side

Schematic diagram



Male/Female M12

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1681473>

| cUL Recognized<br>Approval ID: FILE E 221474 |                       |                       |                   |                             |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|  | 60 V                  | 4 A                   | -                 | -                           |

| UL Recognized<br>Approval ID: FILE E 221474 |                       |                       |                   |                             |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|   | 60 V                  | 4 A                   | -                 | -                           |

| cULus Recognized |  |  |  |  |
|------------------|--|--|--|--|
|------------------|--|--|--|--|

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27440102 |
| ECLASS-12.0 | 27440116 |
| ECLASS-13.0 | 27440116 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002635 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|



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## Environmental product compliance

|            |  |
|------------|--|
| REACH SVHC | Lead 7439-92-1   |
| China RoHS | Environmentally Friendly Use Period = 50 years   |
|            | For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads" |

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## Accessories

### PROT-M12 FS-PA-CHAIN - Sealing cap

1430873

<https://www.phoenixcontact.com/us/products/1430873>

M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs



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### SAC-5P-100,0-186/0,75 - Cable reel

1535590

<https://www.phoenixcontact.com/us/products/1535590>

By the meter, Cable reel, PUR, black-gray RAL 7021, 5-wire, color single wire: brown, white, blue, black, gray, cable length: 100 m



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## TSD 04 SAC - Torque screwdriver

1208429

<https://www.phoenixcontact.com/us/products/1208429>



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

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## TSD-M 1,2NM - Torque screwdriver

1212224

<https://www.phoenixcontact.com/us/products/1212224>



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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## TSD-M SAC-BIT ADAPTER - Adapter insert

1212600

<https://www.phoenixcontact.com/us/products/1212600>



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

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## SACC BIT M12-D20 - Tool

1208445

<https://www.phoenixcontact.com/us/products/1208445>



Nut for assembling M12 connectors for assembly with a knurl diameter of 20 mm, for 4 mm hexagonal drive

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## SZF 1-0,6X3,5 - Screwdriver

1204517

<https://www.phoenixcontact.com/us/products/1204517>



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)