

# SACC-M12MSB-5CON-PG9 SH XL PB - Data connector



1401096

<https://www.phoenixcontact.com/us/products/1401096>

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Data connector, PROFIBUS, INTERBUS, 5-position, shielded, Plug straight M12, coding: B, Screw connection, knurl material: Zinc die-cast, nickel-plated, cable gland Pg11, external cable diameter 8 mm ... 10 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
- Reliable signal transmission – 360° shielding in environments with electromagnetic interference

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1401096       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BF30          |
| Product key                          | AF2CBA        |
| GTIN                                 | 4046356523349 |
| Weight per piece (including packing) | 54 g          |
| Weight per piece (excluding packing) | 55.01 g       |
| Customs tariff number                | 85366990      |
| Country of origin                    | HU            |

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## Technical data

### Notes

|               |   |
|---------------|---|
| Assembly note | <b>NOTE:</b> Observe the permissible bending radii when routing cables, since the degree of protection may be at risk if the bending forces are too high. Reduce mechanical loads upstream of the connector, e.g., by using cable ties. |
|---------------|---|

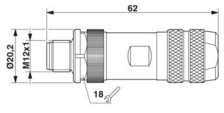
### Product properties

|                      |                                 |
|----------------------|---------------------------------|
| Product type         | Circular connector (cable-side) |
| Application          | Data                            |
| Sensor type          | PROFIBUS                        |
| Number of positions  | 5                               |
| No. of cable outlets | 1                               |
| Shielded             | yes                             |
| Coding               | B                               |
| Cable outlet         | straight                        |
| Pg screw connection  | Pg11                            |

### Insulation characteristics

|                      |    |
|----------------------|----|
| Overvoltage category | II |
| Degree of pollution  | 3  |

### Dimensions

|                        |  |
|------------------------|--|
| Dimensional drawing    |  |
| Length                 | 62 mm  |
| Wrench size, union nut | 16 mm  |

### External dimensions

|                  |                |
|------------------|----------------|
| Outside diameter | 8 mm ... 10 mm |
|------------------|----------------|

### Housing

|                  |         |
|------------------|---------|
| Diameter housing | 20.2 mm |
|------------------|---------|

### Material specifications

|  |                              |
|--|------------------------------|
| Flammability rating according to UL 94 | V0                           |
| Seal material                          | NBR                          |
| Material of grip body                  | Zinc die-cast, nickel-plated |
| Contact material                       | CuZn                         |
| Contact surface material               | Au                           |
| Contact carrier material               | PA                           |

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|                               |                              |
|-------------------------------|------------------------------|
| 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)   |
|   | 1 Nm ... 1.4 Nm (Pressure nut with 8 mm ... 12 mm external cable diameter) |

## Electrical properties

|                                |          |
|--------------------------------|----------|
| Rated surge voltage            | 1.5 kV   |
| Contact resistance             | ≤ 3 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 | ≥ 100 |
|-----------------------------|-------|

## Connector

### Connection 1

|                   |          |
|-------------------|----------|
| Head design       | Plug     |
| Head cable outlet | straight |
| Head thread type  | M12      |
| Coding            | B        |

## Cable/line

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

## Environmental and real-life conditions

### Ambient conditions

|                      |      |
|----------------------|------|
| Degree of protection | IP67 |
|----------------------|------|

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|   |                                  |
|---|----------------------------------|
| Ambient temperature (operation) (male connector/female connector) | -40 °C ... 85 °C (Plug / socket) |
|---|----------------------------------|

## Standards and regulations

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

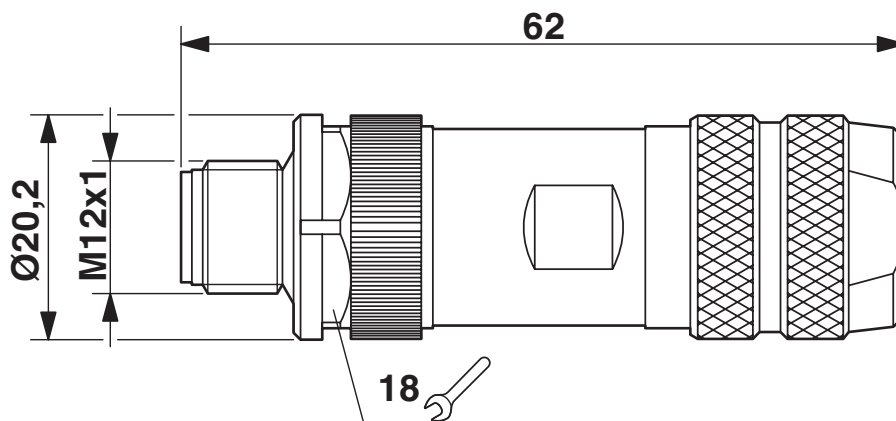
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## Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

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Functional drawing

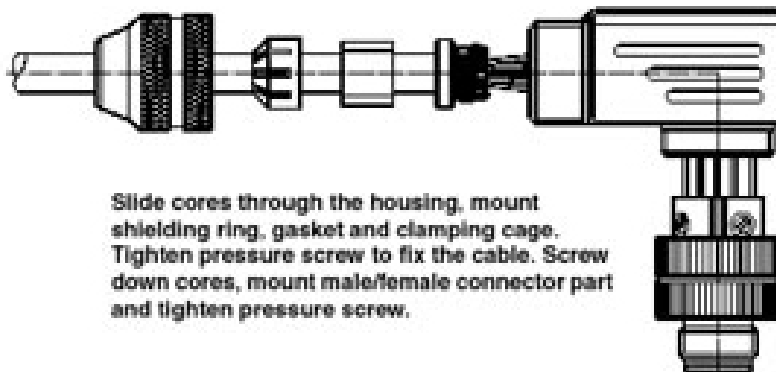
## Assembly steps for M 12 male/female connector and conductor



Slide parts onto the conductor



Strip conductor, widen shield and lay around the shielding ring, cut off projecting mesh.



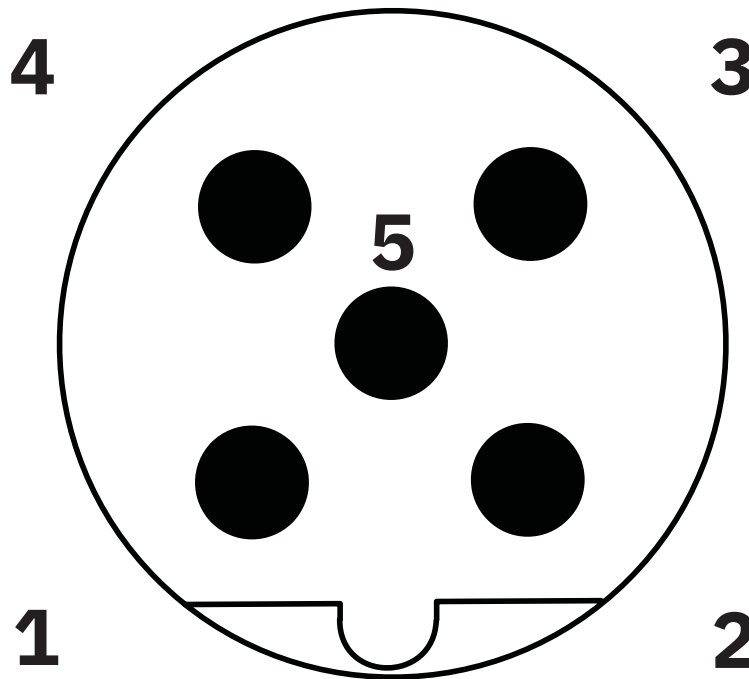
Slide cores through the housing, mount shielding ring, gasket and clamping cage. Tighten pressure screw to fix the cable. Screw down cores, mount male/female connector part and tighten pressure screw.

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Schematic diagram



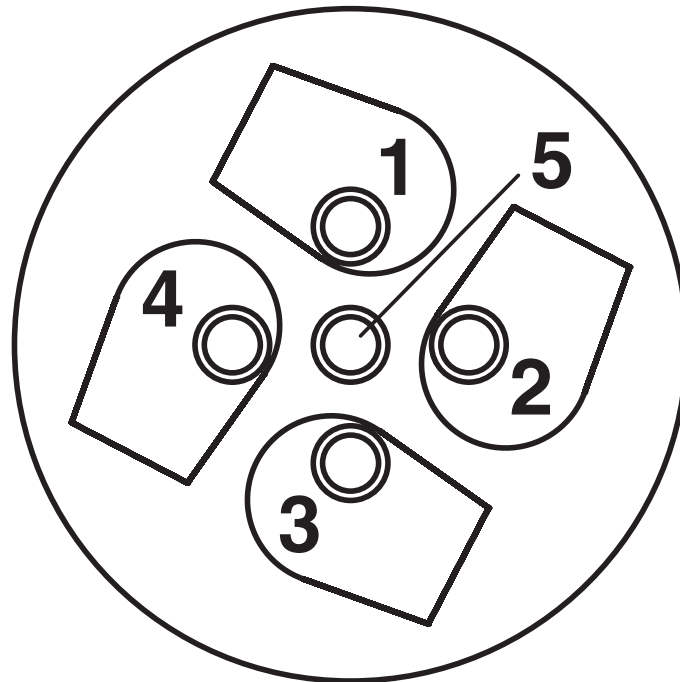
Pin assignment M12 male connector, 5-pos., B-coded, male side

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Schematic diagram



Cable connection side M12 (screw connection)

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1401096>

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

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

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27440116 |
| ECLASS-15.0 | 27440116 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC002635 |
|-----------|----------|

### UNSPSC

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

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## Environmental product compliance

### EU RoHS

|   |      |
|---|------|
| Fulfills EU RoHS substance requirements | Yes  |
| Exemption                               | 6(c) |

### China RoHS

|  |   |
|--|---|
| Environment friendly use period (EFUP) | EFUP-50   |
|  | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

### EU REACH SVHC

|                                     |                                      |
|-------------------------------------|--------------------------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1)                 |
| SCIP                                | ffec5ff1-6478-4a76-8c92-a26898204c51 |

### EF3.1 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 1.976 kg CO2e |
|---------|---------------|

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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)