

# SACC-M12FRD-4Q SH PN - Data connector



1554542

<https://www.phoenixcontact.com/us/products/1554542>

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Data connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Socket angled M12, coding: D, Insulation displacement connection, knurl material: Brass, nickel-plated, external cable diameter 4 mm ... 8 mm

## Your advantages

- Safe use in the field, thanks to a high degree of protection
- Insulation displacement connection: innovative and time-saving assembly without stripping the single wire
- Reliable signal transmission – 360° shielding in environments with electromagnetic interference

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1554542       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BF31          |
| Product key                          | AF2CDN        |
| GTIN                                 | 4046356166232 |
| Weight per piece (including packing) | 50 g          |
| Weight per piece (excluding packing) | 49.7 g        |
| Customs tariff number                | 85366990      |
| Country of origin                    | DE            |

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## Technical data

### Notes

|               |   |
|---------------|---|
| General       | This product corresponds to the PROFINET Cabling and Interconnection Technology Guideline for PROFINET regulations, version 2.00, order no: 2.252, Chapter 8.2 Connectors for Outside Environment (Balanced cabling)                    |
| 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. |

### Mounting

|               |   |
|---------------|---|
| Assembly note | The connector pin assignment can be rotated 45° to the cable outlet |
|---------------|---|

### Product properties

|                      |                                 |
|----------------------|---------------------------------|
| Product type         | Circular connector (cable-side) |
| Application          | Data                            |
| Sensor type          | PROFINET                        |
| Number of positions  | 4                               |
| No. of cable outlets | 1                               |
| Shielded             | yes                             |
| Coding               | D                               |
| Cable outlet         | angled                          |

### Insulation characteristics

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

### Dimensions

#### External dimensions

|                  |               |
|------------------|---------------|
| Outside diameter | 4 mm ... 8 mm |
|------------------|---------------|

### Material specifications

|  |                              |
|--|------------------------------|
| Flammability rating according to UL 94 | V0                           |
| Seal material                          | Neoprene                     |
| Material of grip body                  | Zinc die-cast, nickel-plated |
| Contact material                       | CuSn                         |
| Contact surface material               | Ni/Au                        |
| Contact carrier material               | PA 6                         |
| Material for screw connection          | Brass, nickel-plated         |

### Connection data

#### Conductor connection

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|                              |  |
|------------------------------|--|
| Connection method            | Insulation displacement connection       |
| Connection cross section     | 0.25 mm² ... 0.5 mm² (flexible)          |
|                              | 0.25 mm² ... 0.5 mm² (solid)             |
| Connection cross section AWG | 24 ... 20 (flexible)                     |
|                              | 24 ... 20 (solid)                        |
| Tightening torque            | 0.4 Nm (M12 knurl)                       |
|                              | 0.8 Nm (Connector with coupling sleeve)  |
|                              | 3 Nm (Pressure nut with coupling sleeve) |

## Electrical properties

|                                |          |
|--------------------------------|----------|
| Contact resistance             | ≤ 5 mΩ   |
| Insulation resistance          | ≥ 100 MΩ |
| Nominal voltage U <sub>N</sub> | 48 V AC  |
|                                | 60 V DC  |
| Nominal current I <sub>N</sub> | 1.75 A   |
| Transmission speed             | 100 Mbps |

## Mechanical properties

### Mechanical data

|                             |       |
|-----------------------------|-------|
| Insertion/withdrawal cycles | ≥ 100 |
|-----------------------------|-------|

## Connector

### Connection 1

|                   |        |
|-------------------|--------|
| Head design       | Socket |
| Head cable outlet | angled |
| Head thread type  | M12    |
| Coding            | D      |

## Cable/line

|                      |  |
|----------------------|--|
| Signal type/category | PROFINET CAT5 (based on IEC 11801), 100 Mbps |
|----------------------|--|

## Environmental and real-life conditions

### Ambient conditions

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

## Standards and regulations

### M12

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

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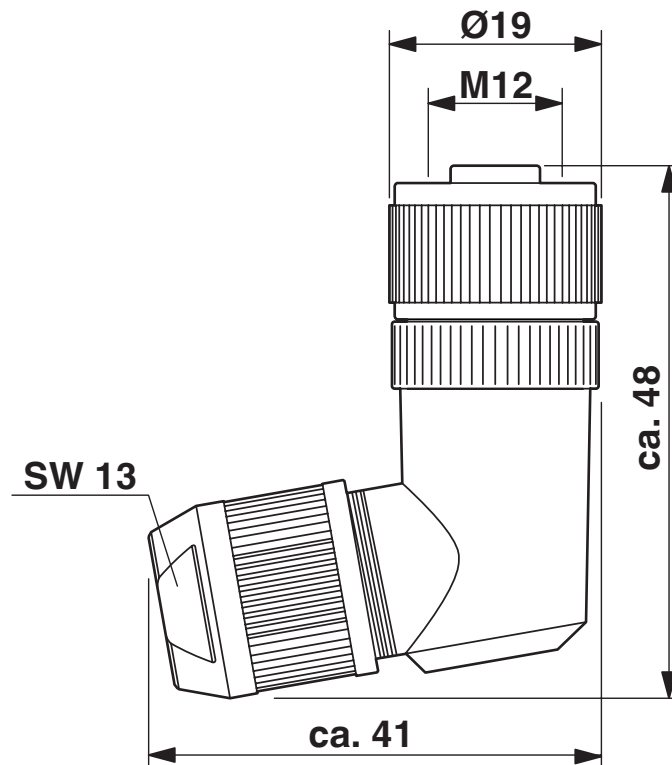
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## Drawings

Dimensional drawing



M12 x 1 socket, angled, shielded

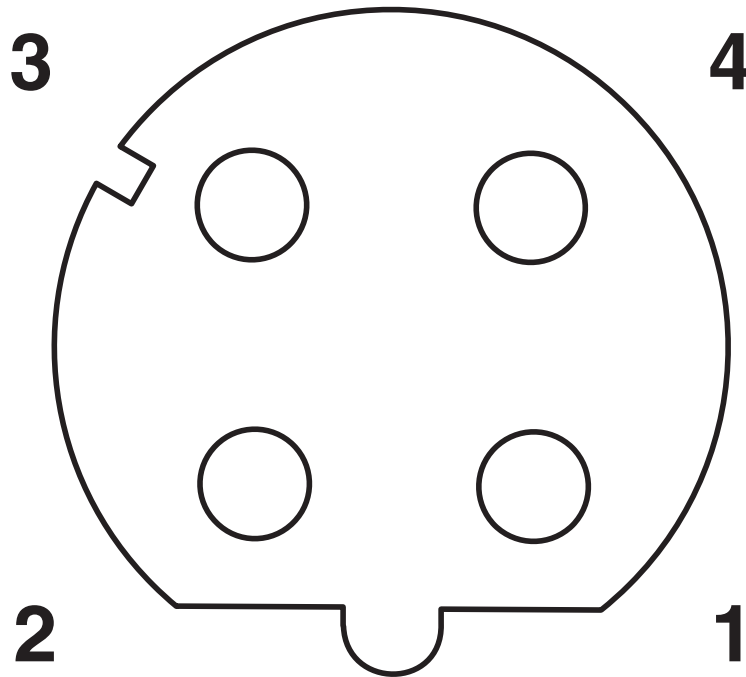
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Schematic diagram



Pin assignment M12 socket, 4-pos., D-coded, female side

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## Classifications

### ECLASS

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

### ETIM

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

### UNSPSC

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

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## Environmental product compliance

### EU RoHS

|   |                    |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

### China RoHS

|  |  |
|--|--|
| Environment friendly use period (EFUP) | EFUP-E                                   |
|  | No hazardous substances above the limits |

### EU REACH SVHC

|                                     |  |
|-------------------------------------|--|
| REACH candidate substance (CAS No.) | 2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329)(CAS: n/a) |
| SCIP                                | 50dcce9b-5f2e-4094-a162-a9035571984c   |

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