

# SACC-DSI-MS-5CON-M16/0,5 PP - Device connector, rear mounting



1027697

<https://www.phoenixcontact.com/us/products/1027697>

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Device connector, rear mounting, Universal, 5-position, straight, M12-Push-Pull, coding: A, on free cable end, Rear mounting, M16 x 1.5, Individual wires, cable length: 0.5 m, 0.34 mm<sup>2</sup>, TPE litz wire, Item is lead-free in accordance with RoHS II without Exemption 6c (Pb <0.1%)

## Your advantages

- Established M12 standard for secure transmission of signals, data, and power
- Easy and quick cabling of devices and systems in hard-to-reach areas
- Manufacturer-independent M12 push-pull locking system for maximum availability
- Reliable shield connection even under extreme mechanical strain

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1027697       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | AB24          |
| Product key                          | ABQCCB        |
| GTIN                                 | 4055626534022 |
| Weight per piece (including packing) | 38 g          |
| Weight per piece (excluding packing) | 28.2 g        |
| Customs tariff number                | 85366990      |
| Country of origin                    | DE            |

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## Technical data

### Notes

|         |  |
|---------|--|
| General | The electrical and mechanical data specified assume that the connector pair is correctly locked and mounted. If the connector is unlocked and if there is a danger of contamination, the connector must be sealed using a protective cap > IP54. Influences arising from litz wires, cables or PCB assembly must also be taken into consideration. |
| General | Lock nut is included in the scope of delivery  |

### Safety note

|             |   |
|-------------|---|
| Safety note | <p>WARNING: The connectors may not be plugged in or disconnected under load. Ignoring the warning or improper use may damage persons and/or property.</p> <ul style="list-style-type: none"> <li>• WARNING: Commission properly functioning products only. The products must be regularly inspected for damage. Decommission defective products immediately. Replace damaged products. Repairs are not possible.</li> <li>• WARNING: Only electrically qualified personnel may install and operate the product. They must observe the following safety notes. The qualified personnel must be familiar with the basics of electrical engineering. They must be able to recognize and prevent danger. The relevant symbol on the packaging indicates that only personnel familiar with electrical engineering are allowed to install and operate the product.</li> <li>• The products are suitable for applications in plant, controller, and electrical device engineering.</li> <li>• When operating the connectors in outdoor applications, they must be separately protected against environmental influences.</li> <li>• Assembled products may not be manipulated or improperly opened.</li> <li>• Only use mating connectors that are specified in the technical data of the standards listed (e.g. the ones listed in the product accessories online at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a>).</li> <li>• When using the product in direct connection with third-party manufacturers, the user is responsible.</li> <li>• For operating voltages &gt; 50 V AC, conductive connector housings must be grounded</li> <li>• Ensure that the protective or functional ground has been properly connected.</li> <li>• VDE 0100/1.97 § 411.1.3.2 and DIN EN 60 204/11.98 § 14.1.3 are applicable when combining several circuits in a cable and/or connector</li> <li>• Only use tools recommended by Phoenix Contact</li> <li>• The installation notes/Design In documents online on the download page at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a> must be observed for this product.</li> <li>• Operate the connector only when it is fully plugged in and interlocked.</li> <li>• Ensure that when laying the cable, the tensile load on the</li> </ul> |
|-------------|---|

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|  |  |
|--|--|
|  | connectors does not exceed the upper limit specified in the standards.   |
|  | <ul style="list-style-type: none"><li>• Observe the minimum bending radius of the cable. Lay the cable without twisting it.</li><li>• The connector warms up in normal operation. Depending on the ambient conditions, the surface of the connector can continue to warm up. In this case, the user is responsible for posting warnings (e.g. DIN EN ISO 13732-1:2008-12).</li></ul> |

## Mounting

|                       |                                       |
|-----------------------|---------------------------------------|
| Mounting type         | Rear mounting M16 x 1.5 With flat nut |
| Assembly instructions | With flat nut                         |
| Connection method     | Individual wires                      |

## Product properties

|                      |                                   |
|----------------------|-----------------------------------|
| Product type         | Circular connectors (device side) |
| Sensor type          | Universal                         |
| Number of positions  | 5                                 |
| No. of cable outlets | 1                                 |
| Shielded             | no                                |
| Coding               | A                                 |
| Thread type          | M12                               |

## Insulation characteristics

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

## Material specifications

|  |                          |
|--|--------------------------|
| Flammability rating according to UL 94 | V0                       |
| Seal material                          | NBR                      |
| Contact material                       | CuZn                     |
| Contact surface material               | Au                       |
| Contact carrier material               | PA 6.6                   |
| Material for screw connection          | Brass, nickel-plated     |
| Conductor material                     | Tin-plated Cu litz wires |

## Electrical properties

|                           |                            |
|---------------------------|----------------------------|
| Rated surge voltage       | 1.5 kV                     |
| Contact resistance        | $\leq 3 \text{ m}\Omega$   |
| Insulation resistance     | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage $U_N$     | 60 V (AC)<br>60 V (DC)     |
| Nominal current $I_N$     | 4 A                        |
| Transmission medium       | Copper                     |
| Max. conductor resistance | 57.6 m $\Omega$ /m         |

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## Connection data

### Conductor connection

|                         |                      |
|-------------------------|----------------------|
| Connection method       | Individual wires     |
| Contact connection type | Pin                  |
| Conductor cross section | 0.34 mm <sup>2</sup> |
| Tightening torque       | 3 Nm<br>4 Nm         |

## Mechanical properties

### Mechanical data

|                             |       |
|-----------------------------|-------|
| Insertion/withdrawal cycles | > 100 |
|-----------------------------|-------|

## Connector

### Connection 1

|                   |           |
|-------------------|-----------|
| Head cable outlet | straight  |
| Head thread type  | M12       |
| Head locking type | Push-Pull |
| Coding            | A         |

### Connection 2

|             |                |
|-------------|----------------|
| Head design | free cable end |
|-------------|----------------|

## Cable/line

|                                 |   |
|---------------------------------|---|
| Cable length                    | 0.5 m   |
| Cable type                      | TPE litz wire   |
| Signal type/category            | Universal   |
| Wire diameter incl. insulation  | 1.2 mm ±0.07 mm   |
| Single wire, color              | brown, white, blue, black, gray   |
| Conductor material              | Tin-plated Cu litz wires  |
| Conductor structure signal line | 7x 0.25 mm  |
| AWG signal line                 | 22  |
| Material wire insulation        | TPE   |
| Thickness, insulation           | 0.21 mm (Core insulation)   |
| Nominal voltage, cable          | 300 V   |
| Test voltage, cable             | 3000 V AC   |
| Cable resistance                | ≤ 57.6 mΩ/m   |
| Cable insulation resistance     | ≥ 20 MΩ*km  |
| Ambient temperature (operation) | -40 °C ... 85 °C (cable, fixed installation)<br>-25 °C ... 85 °C (Cable, flexible installation) |

## Environmental and real-life conditions

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## Ambient conditions

|                                 |   |
|---------------------------------|---|
| Degree of protection            | IP67 (When plugged in)                          |
|                                 | IP65 (When plugged in)                          |
|                                 | IP65/IP67                                       |
| Ambient temperature (operation) | -25 °C ... 85 °C (Plug / socket)                |
|                                 | -40 °C ... 85 °C (without mechanical actuation) |
|                                 | -25 °C ... 85 °C (Cable, flexible installation) |
|                                 | -40 °C ... 85 °C (cable, fixed installation)    |

## Standards and regulations

|                          |                 |
|--------------------------|-----------------|
| Standard designation     | M12 connector   |
| Standards/specifications | IEC 61076-2-010 |
| Note                     | Push-pull       |

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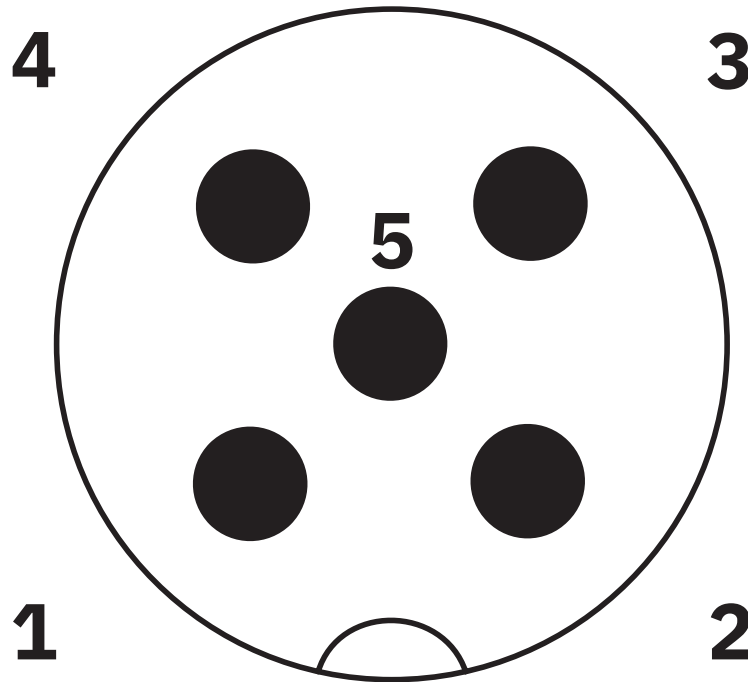


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## Drawings

Schematic diagram



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

Circuit diagram



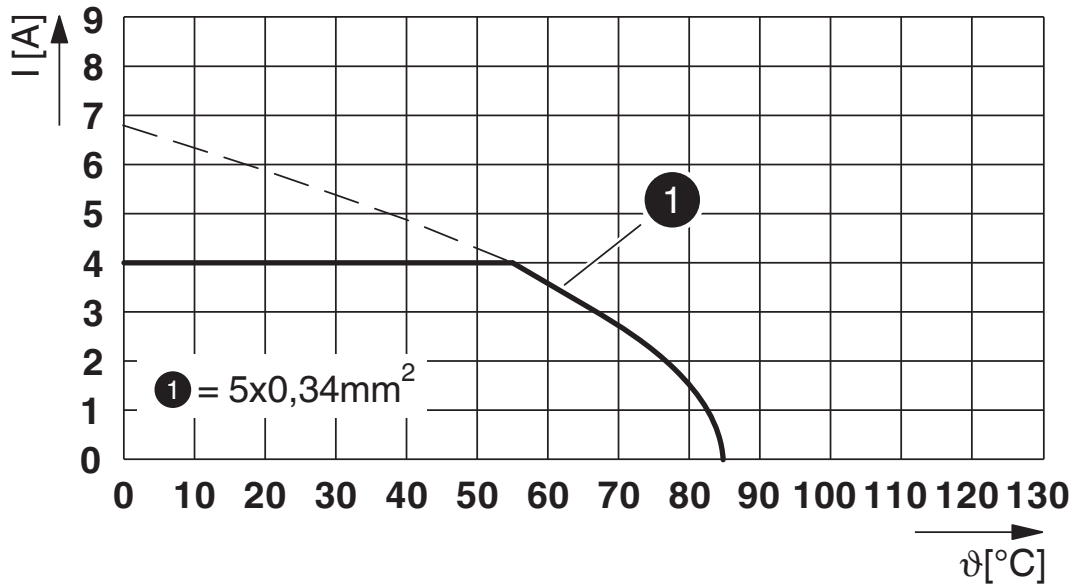
# SACC-DSI-MS-5CON-M16/0,5 PP - Device connector, rear mounting



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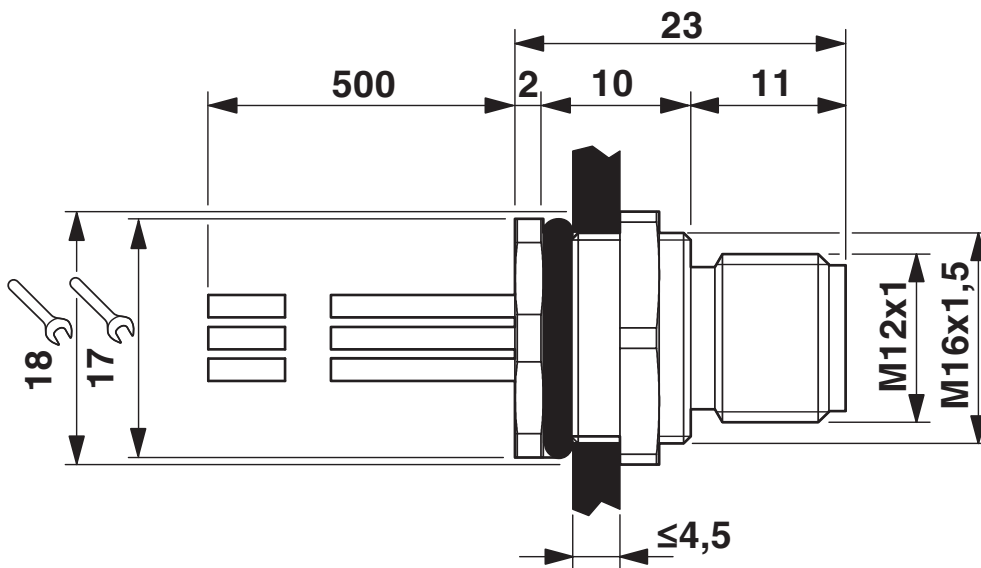
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Diagram



I = current strength, T = ambient temperature

Dimensional drawing



Dimensional drawing

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27440103 |
| ECLASS-12.0 | 27440103 |
| ECLASS-13.0 | 27440103 |

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | EC003570 |
|----------|----------|

### UNSPSC

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



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## Environmental product compliance

China RoHS

Environmentally friendly use period: unlimited = EFUP-e

No hazardous substances above threshold values

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## Accessories

### PROT-M12 FS - Sealing cap

1560251

<https://www.phoenixcontact.com/us/products/1560251>



M12 sealing cap for unoccupied M12 plugs of the sensor/actuator cable, flush-type plugs and I/O devices in the field

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### PROT-M12 FS-M - Sealing cap

1430488

<https://www.phoenixcontact.com/us/products/1430488>



M12 metal sealing cap for unoccupied M12 plugs of the sensor/actuator cable, flush-type plugs and I/O devices in the field

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## SACC-M16-SEAL CLM - Flat gasket

1430394

<https://www.phoenixcontact.com/us/products/1430394>

M16 flat gasket for M12 flush-type connectors with M16 fastening thread



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