

# Flush-type connector - SACCBP-MS-5CON-M16/1,0-PUR SCO - 1419409

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Flush-type plug, shielded, 5-pos., M12, A-coded, rear/screw mounting with M16 thread, with 1 m cable, 5 x 0.34 mm<sup>2</sup>

## Your advantages

- Pre-assembled with cables in various standard lengths for immediate use
- Customer-specific assemblies and cable lengths can be supplied
- Sealed on the cable side for optimum tightness of seal
- For high transmission safety: shield connection to the housing with optional EMC nut



## Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 1 pc  |
| GTIN         | <br>4 046356 533287 |
| GTIN         | 4046356533287   |

## Technical data

### Dimensions

|                 |     |
|-----------------|-----|
| Length of cable | 1 m |
|-----------------|-----|

### Ambient conditions

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

### General

|      |  |
|------|--|
| Note | 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. |
|------|--|

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### Technical data

#### General

|                             |  |
|-----------------------------|--|
| Rated current at 40°C       | 4 A (Plug/socket in accordance with IEC 61076-2-101, cable technical data is to be observed) |
| Rated voltage               | 60 V   |
| Rated surge voltage         | 1.5 kV   |
| Number of positions         | 5  |
| Insulation resistance       | ≥ 100 MΩ   |
| Coding                      | A - standard   |
| Standards/regulations       | M12 connector IEC 61076-2-101  |
| Status display              | No   |
| Overvoltage category        | II   |
| Degree of pollution         | 3  |
| Connection method           | Individual wires   |
| Insertion/withdrawal cycles | > 100  |
| Torque                      | 3 Nm ... 4 Nm (Installation-side)  |
| Mounting type               | Rear mounting M16 x 1.5 With flat nut  |

#### Material

|  |                              |
|--|------------------------------|
| Flammability rating according to UL 94 | V0                           |
| Contact material                       | CuZn                         |
| Contact surface material               | Au                           |
| Contact carrier material               | PA 6.6                       |
| Material, knurls                       | Zinc die-cast, nickel-plated |
| Sealing material                       | NBR                          |

#### Standards and Regulations

|  |  |
|--|--|
| Standards/specifications               | M12 connector IEC 61076-2-101  |
| Flammability rating according to UL 94 | V0   |
| 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></ul>  |
|  | <ul style="list-style-type: none"><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></ul> |
|  | <ul style="list-style-type: none"><li>• The products are suitable for applications in plant, controller, and electrical device engineering.</li></ul>  |
|  | <ul style="list-style-type: none"><li>• When operating the connectors in outdoor applications, they must be separately protected against environmental influences.</li></ul>   |
|  | <ul style="list-style-type: none"><li>• Assembled products may not be manipulated or improperly opened.</li></ul>  |

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### Technical data

#### Standards and Regulations

|  |   |
|--|---|
|  | <ul style="list-style-type: none"><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></ul>  |
|  | <ul style="list-style-type: none"><li>When using the product in direct connection with third-party manufacturers, the user is responsible.</li></ul>  |
|  | <ul style="list-style-type: none"><li>For operating voltages &gt; 50 V AC, conductive connector housings must be grounded</li></ul>   |
|  | <ul style="list-style-type: none"><li>Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards.</li></ul>   |
|  | <ul style="list-style-type: none"><li>Observe the corresponding technical data. You will find information:<ul style="list-style-type: none"><li>On the product</li><li>On the packing label</li><li>In the supplied documentation</li><li>Online at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a> under the product</li></ul></li></ul> |
|  | <ul style="list-style-type: none"><li>Only use tools recommended by Phoenix Contact</li></ul>   |
|  | <ul style="list-style-type: none"><li>Use a protective cap to protect connectors that are not in use. The suitable accessories are available online in the accessory section of the product at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a></li></ul>  |
|  | <ul style="list-style-type: none"><li>Ensure that the protective or functional ground has been properly connected.</li></ul>  |
|  | <ul style="list-style-type: none"><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></ul>   |
|  | <ul style="list-style-type: none"><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>  |

#### Cable

|   |                                       |
|---|---------------------------------------|
| Cable type                                    | PUR halogen-free black                |
| Cable type (abbreviation)                     | PUR                                   |
| UL AWM style                                  | 20549 / 10493 (80°C/300 V)            |
| Conductor cross section                       | 5x 0.34 mm <sup>2</sup> (Signal line) |
| AWG signal line                               | 22                                    |
| Conductor structure signal line               | 42x 0.10 mm                           |
| Core diameter including insulation            | 1.27 mm ±0.02 mm (Signal line)        |
| Thickness, insulation                         | ≥ 0.21 mm                             |
| Wire colors                                   | Brown, white, blue, black, gray       |
| Overall twist                                 | 5 wires around filler to the core     |
| Shielding                                     | Tinned copper braided shield          |
| Optical shield covering                       | 80 %                                  |
| External sheath, color                        | black-gray RAL 7021                   |
| Outer sheath thickness                        | approx. 0.5 mm                        |
| External cable diameter D                     | 5.25 mm ±0.2 mm                       |
| Smallest bending radius, fixed installation   | 26 mm                                 |
| Smallest bending radius, movable installation | 52 mm (up to +60°C)                   |

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### Technical data

#### Cable

|                                 |   |
|---------------------------------|---|
| Number of bending cycles        | 10000000  |
| Bending radius                  | 52 mm   |
| Traversing path                 | 10 m  |
| Traversing rate                 | 3 m/s   |
| Acceleration                    | 10 m/s <sup>2</sup>   |
| Cable weight                    | 43 kg/km  |
| Outer sheath, material          | PUR   |
| Material conductor insulation   | PP  |
| Conductor material              | Bare Cu litz wires  |
| Insulation resistance           | 70 GΩ*km (at 20 °C)   |
| Conductor resistance            | max. 57 Ω/km (at 20 °C)   |
| Nominal voltage, cable          | 300 V (at 20 °C)  |
| Test voltage Core/Core          | 3000 V (at 20 °C)   |
| Special properties              | Flexible cable conduit capable                                      |
|                                 | Silicone-free   |
|                                 | Free of substances which would hinder coating with paint or varnish |
|                                 | Low adhesion surface  |
| Flame resistance                | in accordance with UL 758/1581 FT2                                  |
|                                 | DIN EN 60332-2-2 (20 s)   |
| Halogen-free                    | in accordance with DIN VDE 0472 part 815                            |
|                                 | in accordance with DIN EN 50267-2-1                                 |
| Resistance to oil               | in accordance with DIN EN 60811-2-1                                 |
| Other resistance                | Highly resistant to acids, alkaline solutions and solvents          |
|                                 | hydrolysis and microbe resistant                                    |
|                                 | Resistant to salt water   |
|                                 | partly UV-resistant in accordance with DIN EN ISO 4892-2-A          |
|                                 | abrasion-resistant  |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation)                        |
|                                 | -25 °C ... 80 °C (cable, flexible installation)                     |

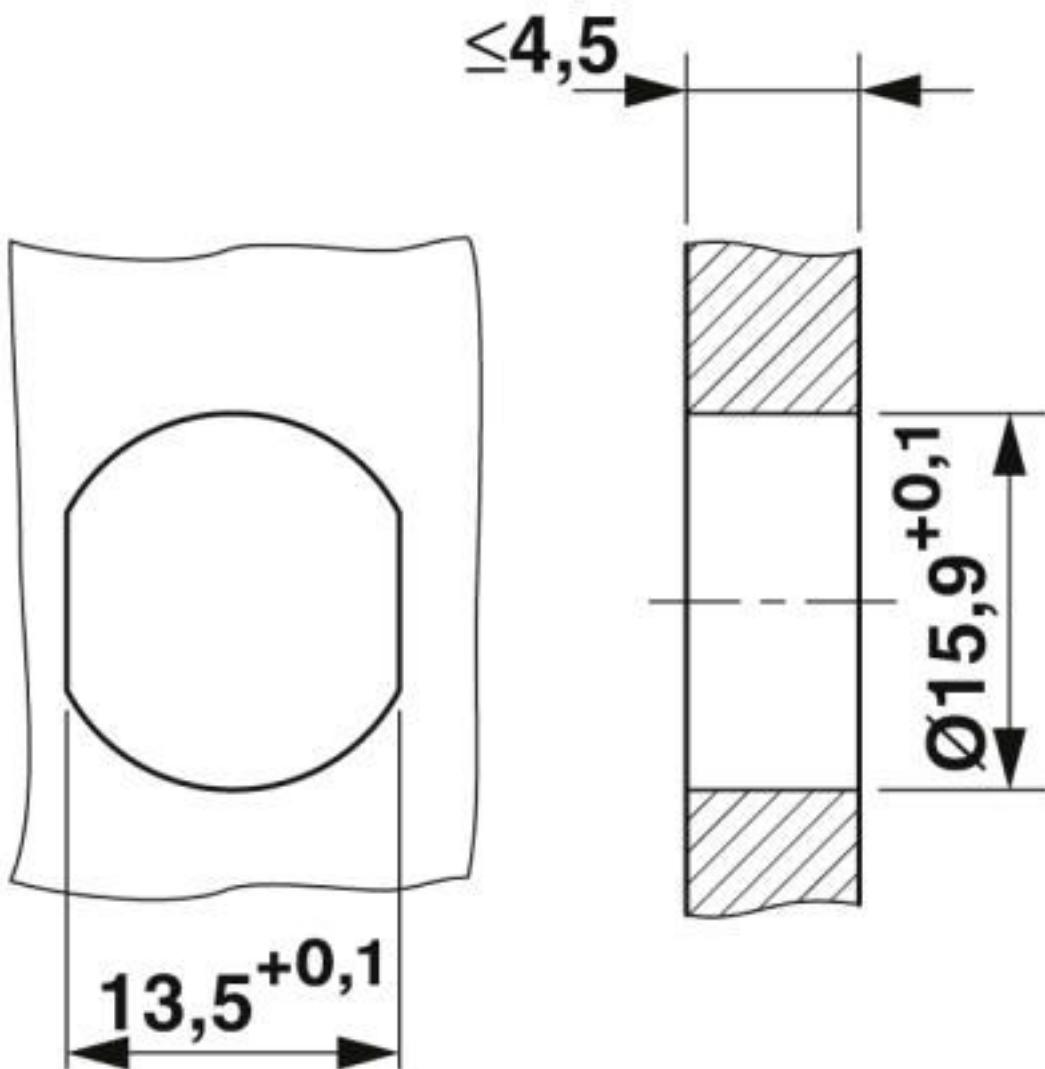
#### Environmental Product Compliance

|            |   |
|------------|---|
| REACH SVHC | Lead 7439-92-1  |
| China RoHS | Environmentally Friendly Use Period = 50 years  |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

#### Drawings

## Flush-type connector - SACCBP-MS-5CON-M16/1,0-PUR SCO - 1419409

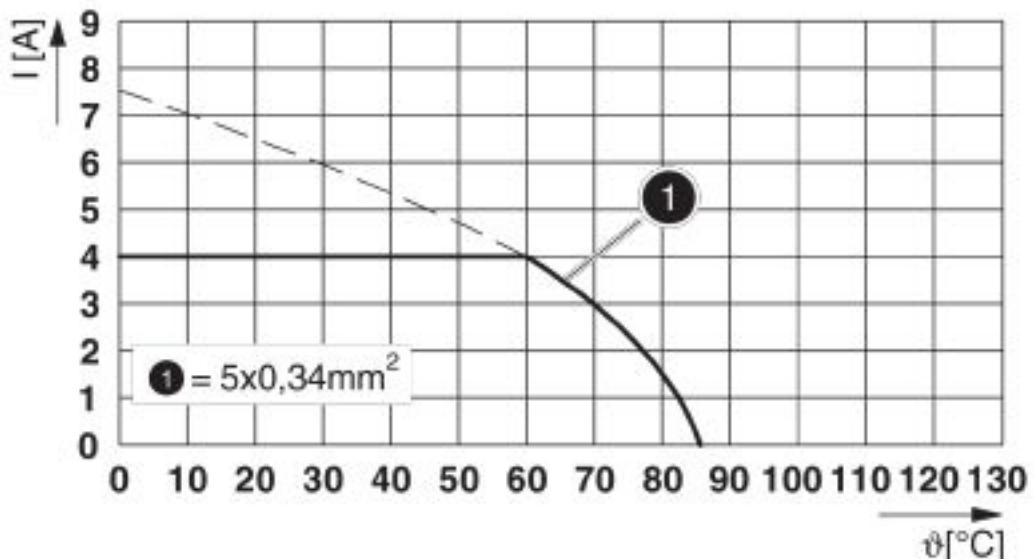
Dimensional drawing



Housing cutout for M16 fastening thread, mounting panel with feed-through hole (alternatively with surface as protection against rotation)

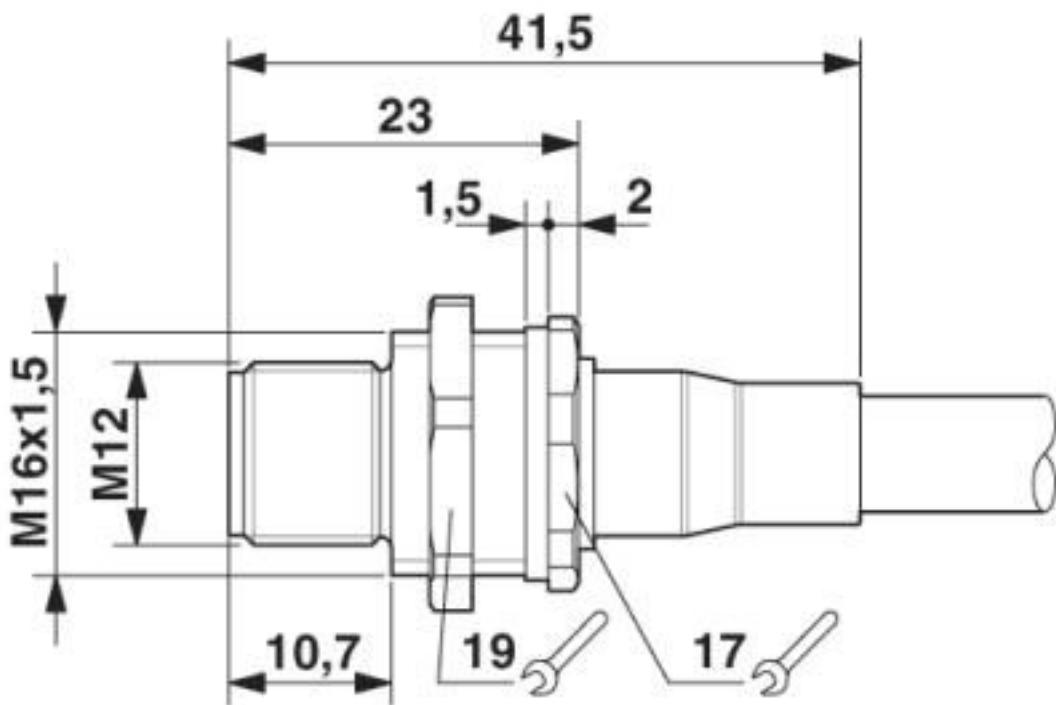
## Flush-type connector - SACCBP-MS-5CON-M16/1,0-PUR SCO - 1419409

Diagram



$I$  = current strength,  $T$  = ambient temperature

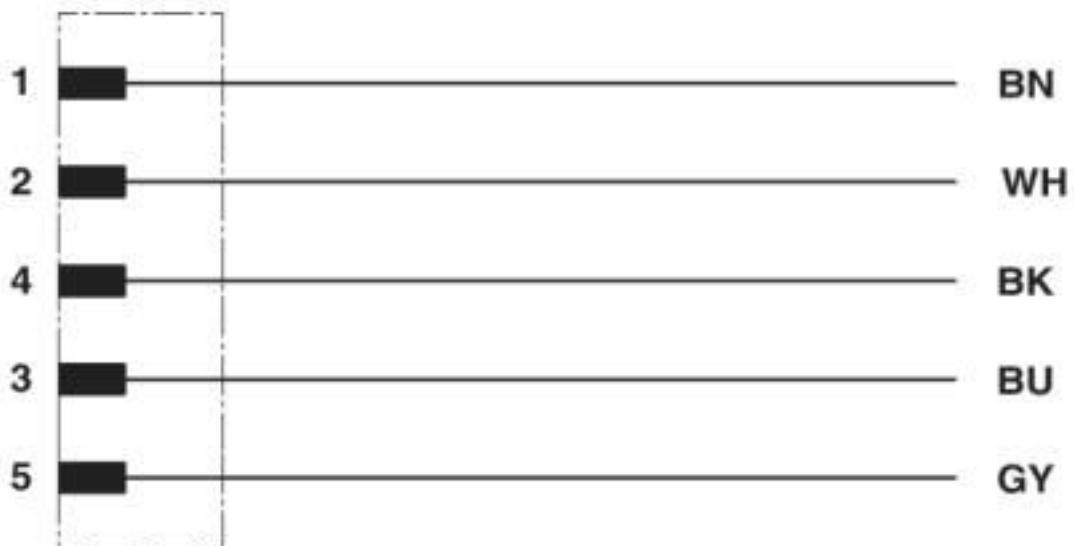
Dimensional drawing



M12 flush-type connector

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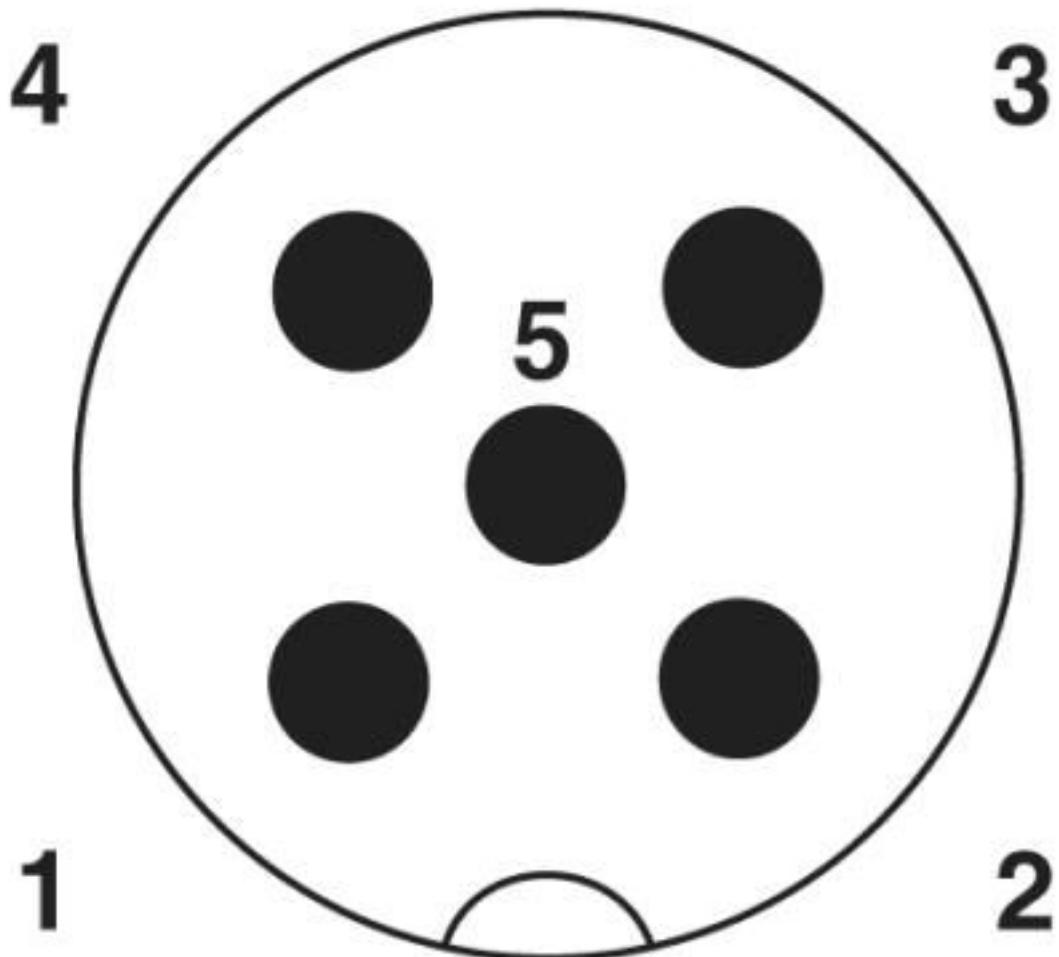
Circuit diagram



Contact assignment of the M12 plugs

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Schematic diagram



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

## Flush-type connector - SACCBP-MS-5CON-M16/1,0-PUR SCO - 1419409

Cable cross section



PUR halogen-free black [PUR]

### Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440102 |
| eCl@ss 4.0    | 27140800 |
| eCl@ss 4.1    | 27140800 |
| eCl@ss 5.0    | 27143400 |
| eCl@ss 5.1    | 27143400 |
| eCl@ss 6.0    | 27279200 |
| eCl@ss 7.0    | 27440103 |
| eCl@ss 8.0    | 27440103 |
| eCl@ss 9.0    | 27440102 |

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## Classifications

### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001297 |
| ETIM 3.0 | EC002061 |
| ETIM 4.0 | EC002061 |
| ETIM 5.0 | EC002061 |
| ETIM 6.0 | EC002061 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 31251501 |
| UNSPSC 7.0901 | 31251501 |
| UNSPSC 11     | 31251501 |
| UNSPSC 12.01  | 31251501 |
| UNSPSC 13.2   | 39121413 |
| UNSPSC 18.0   | 39121413 |
| UNSPSC 19.0   | 39121413 |
| UNSPSC 20.0   | 39121413 |
| UNSPSC 21.0   | 39121413 |

## Approvals

### Approvals

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Approvals

EAC

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Ex Approvals

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Approval details

EAC



B.01687

## Accessories

### Accessories

Plug for cable screw gland

## Flush-type connector - SACC-BP-MS-5CON-M16/1,0-PUR SCO - 1419409

### Accessories

Screw plug - SACC-M16-SEALING PLUG SET - 1453368



M16 screw plug for unused M12 housing cutouts

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### Protective cap

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