

## Power cable - SAC-4P-M12MST/5,5-PUR/M12FST - 1012048

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Power cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: T, on Socket straight M12, coding: T, cable length: 5.5 m, For direct current up to 12 A/63 V

### Your advantages

- ✓ Easy and safe: 100% electrically tested plug-in components
- ✓ High-performance: DC connectors for up to 12 A and 63 V DC
- ✓ Protection against incorrect connection using special T-coding
- ✓ Our standard: robust halogen-free PUR cable



### Key Commercial Data

|                        |                                                                                                         |
|------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit           | 1 pc                                                                                                    |
| Minimum order quantity | 50 pc                                                                                                   |
| GTIN                   | <br>4 055626 486932 |
| GTIN                   | 4055626486932                                                                                           |

### Technical data

#### Dimensions

|                 |       |
|-----------------|-------|
| Length of cable | 5.5 m |
|-----------------|-------|

#### Ambient conditions

|                                 |                                  |
|---------------------------------|----------------------------------|
| Ambient temperature (operation) | -25 °C ... 85 °C (Plug / socket) |
| Degree of protection            | IP65                             |
|                                 | IP67                             |

#### General

|                       |          |
|-----------------------|----------|
| Rated current at 40°C | 12 A     |
| Rated voltage         | 63 V DC  |
| Number of positions   | 4        |
| Insulation resistance | ≥ 100 MΩ |

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## Technical data

### General

|                              |                               |
|------------------------------|-------------------------------|
| Coding                       | T power                       |
| Standards/regulations        | M12 connector IEC 61076-2-111 |
| Status display               | No                            |
| Protective circuit/component | unwired                       |
| Overvoltage category         | III                           |
| Degree of pollution          | 3                             |
| Insertion/withdrawal cycles  | > 100                         |

### Material

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

### Standards and Regulations

|                                        |                               |
|----------------------------------------|-------------------------------|
| Standards/specifications               | M12 connector IEC 61076-2-111 |
| Flammability rating according to UL 94 | V0                            |

### Cable

|                                                 |                            |
|-------------------------------------------------|----------------------------|
| Cable type                                      | PUR halogen-free black     |
| Cable type (abbreviation)                       | PUR                        |
| Cable abbreviation                              | Li9YV1-11Y                 |
| UL AWM style                                    | 20233 / 10493 (80°C/300 V) |
| Conductor cross section                         | 4x 1.5 mm <sup>2</sup>     |
| AWG power supply                                | 16                         |
| Conductor structure, voltage supply             | 78x 0.15 mm                |
| Core diameter including insulation              | 2.35 mm ±0.05 mm           |
| Thickness, insulation                           | ≥ 0.25 mm                  |
| Wire colors                                     | brown, white, blue, black  |
| Overall twist                                   | 4 wires, twisted           |
| Length of twist, overall twist                  | 90 mm                      |
| External sheath, color                          | black-gray RAL 7021        |
| Outer sheath thickness                          | approx. 1.3 mm             |
| External cable diameter D                       | 8.4 mm ±0.25 mm            |
| Minimum bending radius, fixed installation      | 5 x D                      |
| Minimum bending radius, flexible installation   | 10 x D                     |
| Number of bending cycles                        | 4000000                    |
| Minimum bending radius, drag chain applications | 10 x D                     |
| Traversing path                                 | 10 m                       |
| Traversing rate                                 | 3 m/s                      |

## Power cable - SAC-4P-M12MST/5,5-PUR/M12FST - 1012048

### Technical data

#### Cable

|                                 |                                                             |
|---------------------------------|-------------------------------------------------------------|
| Acceleration                    | 10 m/s <sup>2</sup>                                         |
| Cable weight                    | 109 kg/km                                                   |
| Outer sheath, material          | PUR                                                         |
| Material conductor insulation   | PP                                                          |
| Conductor material              | Bare Cu litz wires                                          |
| Insulation resistance           | ≥ 1 GΩ*km (at 20 °C)                                        |
| Conductor resistance            | ≤ 13 Ω/km (at 20 °C)                                        |
| Nominal voltage, cable          | ≤ 300 V AC                                                  |
| Test voltage, cable             | ≥ 3000 V AC (Spark test)                                    |
| Flame resistance                | According to UL 758/1581 (Cable Flame)                      |
|                                 | according to UL 758/1581 FT1                                |
|                                 | According to DIN EN 60332-1-2                               |
| Halogen-free                    | in accordance with DIN VDE 0472 part 815                    |
|                                 | in accordance with DIN EN 50267-2-1                         |
| Resistance to oil               | According to DIN EN 60811-2-1, 168 h at 100°C               |
|                                 | According to UL 758, 168 h at 60°C                          |
| Other resistance                | Hydrolysis and microbe resistant as per VDE 0282 section 10 |
|                                 | Low adhesion                                                |
|                                 | abrasion-resistant                                          |
|                                 | Resistant to salt water                                     |
| Ambient temperature (operation) | -50 °C ... 80 °C (cable, fixed installation)                |
|                                 | -30 °C ... 80 °C (cable, flexible installation)             |

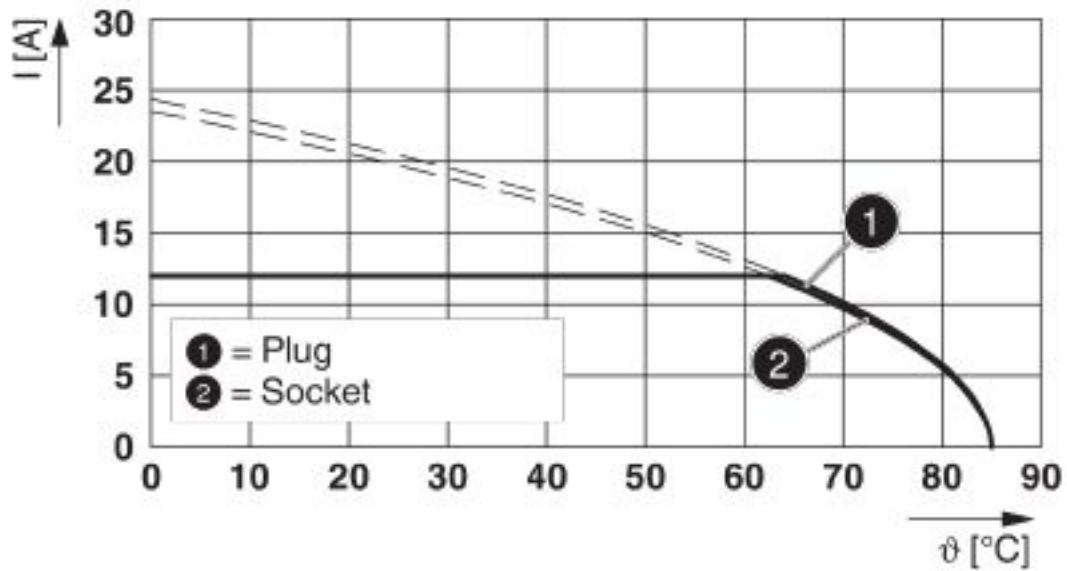
#### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| 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

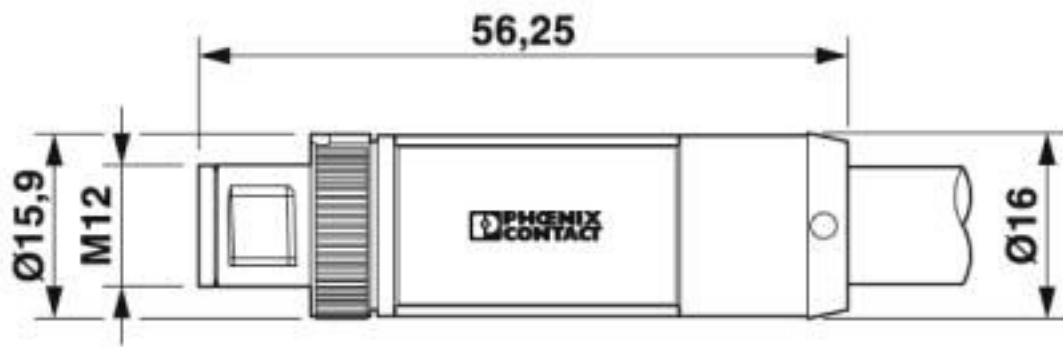
## Power cable - SAC-4P-M12MST/5,5-PUR/M12FST - 1012048

Diagram



Current carrying capacity

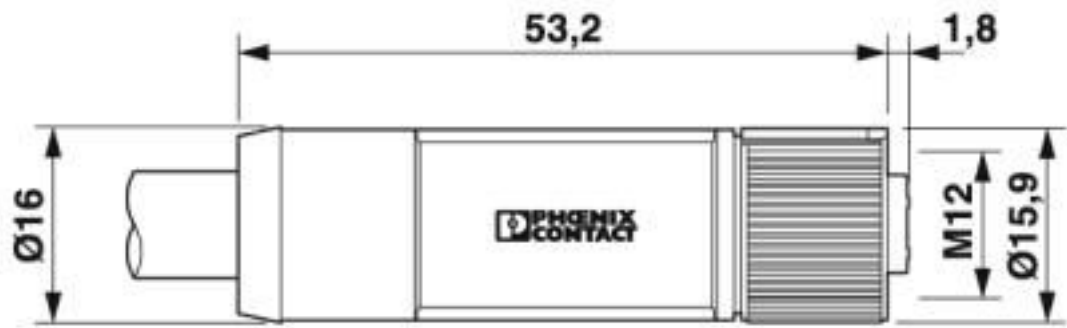
Dimensional drawing



Plug, M12 x 1, straight

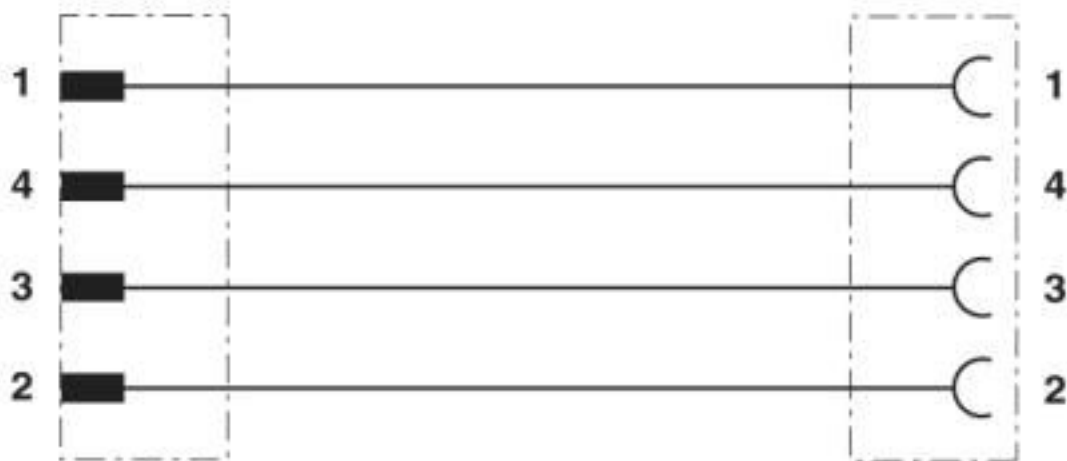
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Dimensional drawing



M12 x 1 socket, straight

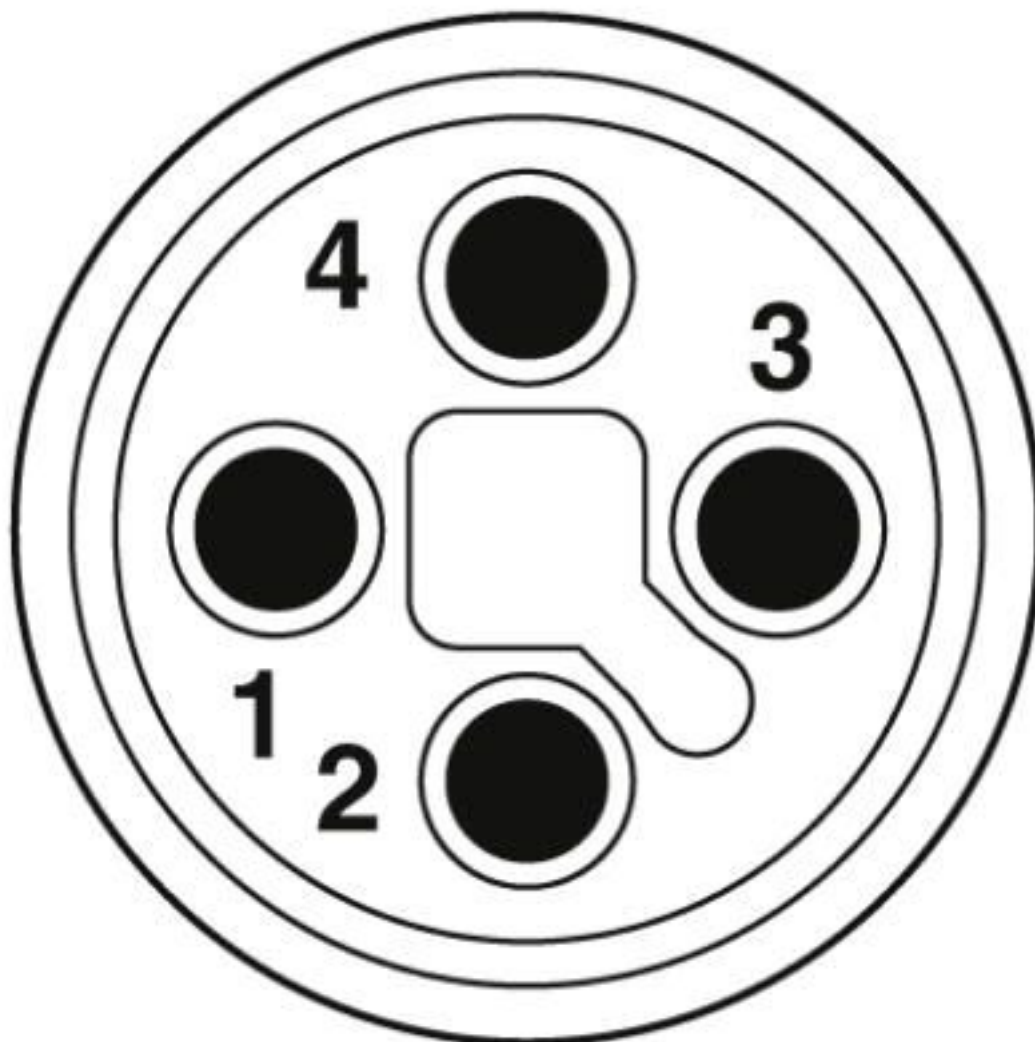
Circuit diagram



Contact assignment of the M12 connector and the M12 socket

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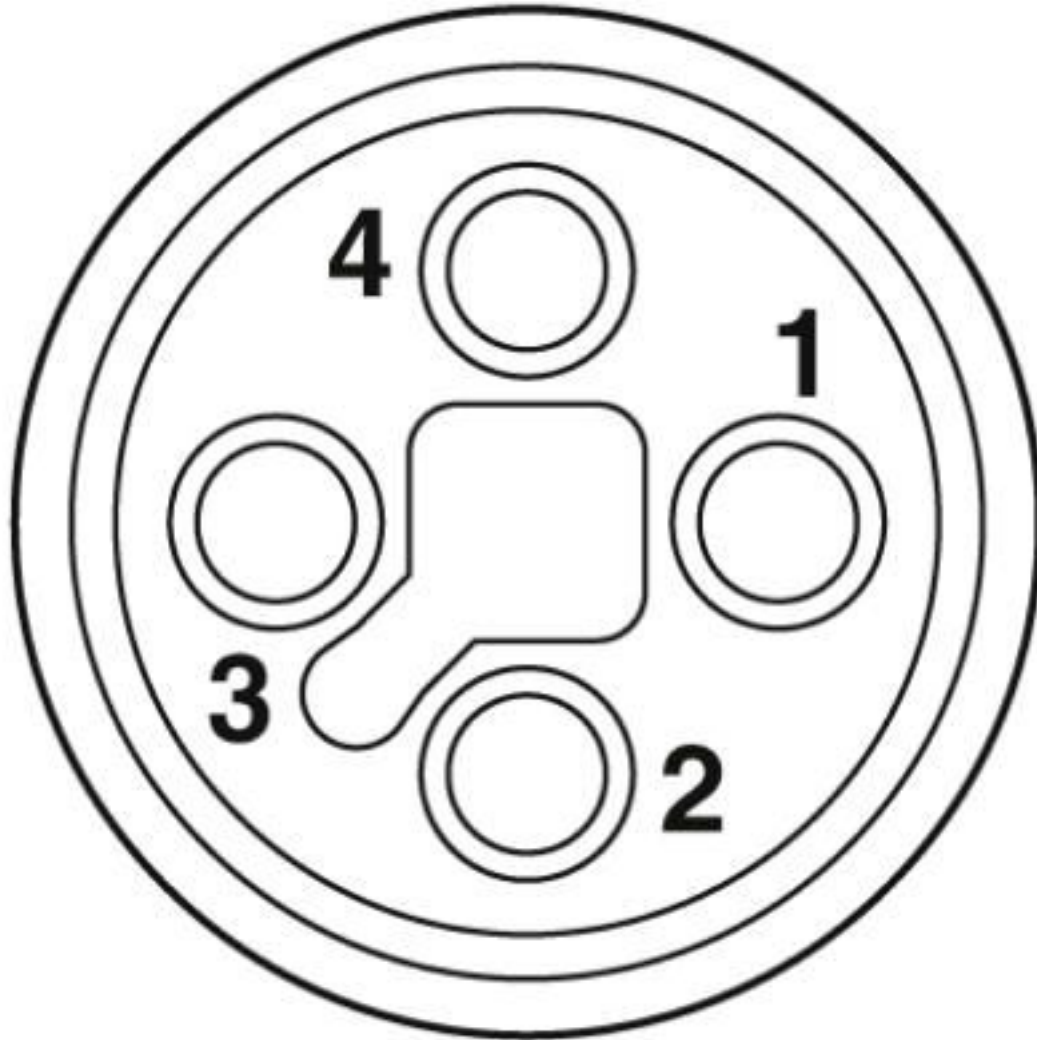
Schematic diagram



Pin assignment for M12 plug, 4-pos., T-coded, view of plug side

## Power cable - SAC-4P-M12MST/5,5-PUR/M12FST - 1012048

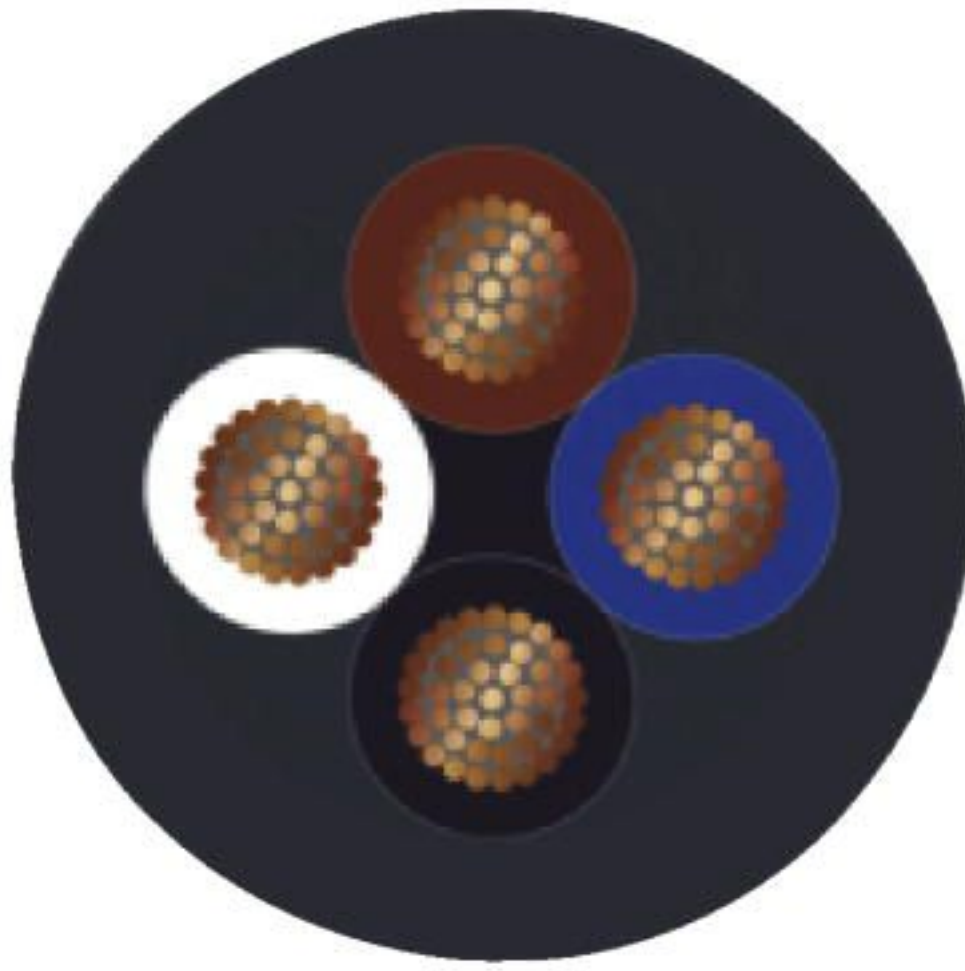
Schematic diagram



Pin assignment of M12 socket, 4-pos., T-coded, socket side view

## Power cable - SAC-4P-M12MST/5,5-PUR/M12FST - 1012048

Cable cross section



PUR halogen-free black [PUR]

### Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27060311 |
| eCl@ss 6.0    | 27279200 |
| eCl@ss 7.0    | 27279218 |
| eCl@ss 8.0    | 27279218 |
| eCl@ss 9.0    | 27060311 |

ETIM

|          |          |
|----------|----------|
| ETIM 5.0 | EC001855 |
| ETIM 6.0 | EC001855 |
| ETIM 7.0 | EC001855 |



## Power cable - SAC-4P-M12MST/5,5-PUR/M12FST - 1012048

### Approvals

#### Approvals

#### Approvals

UL Listed / cUL Listed / cULus Listed

#### Ex Approvals

### Approval details

|                    |                                                                                   |                                                                                                                                                       |         |
|--------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| UL Listed          |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | E468743 |
|                    |                                                                                   |                                                                                                                                                       |         |
| Nominal voltage UN |                                                                                   | 63 V                                                                                                                                                  |         |
| Nominal current IN |                                                                                   | 12 A                                                                                                                                                  |         |
| mm²/AWG/kcmil      |                                                                                   | 16                                                                                                                                                    |         |

|                    |                                                                                     |                                                                                                                                                       |         |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| cUL Listed         |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | E468743 |
|                    |                                                                                     |                                                                                                                                                       |         |
| Nominal voltage UN |                                                                                     | 63 V                                                                                                                                                  |         |
| Nominal current IN |                                                                                     | 12 A                                                                                                                                                  |         |
| mm²/AWG/kcmil      |                                                                                     | 16                                                                                                                                                    |         |

|              |                                                                                     |  |  |
|--------------|-------------------------------------------------------------------------------------|--|--|
| cULus Listed |  |  |  |
|--------------|-------------------------------------------------------------------------------------|--|--|

### Accessories

#### Accessories

#### Screwdriver tools

Tool - SAC BIT M12-D16 - 1200305



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, knurl diameter: 16 mm, for 4 mm hexagonal drive

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PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>

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