

1414114

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Sensor/actuator cable, 17-position, PUR/PVC, black RAL 9005, shielded, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A, cable length:  $3\ m$ 

#### Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- · Save time, thanks to installation with SPEEDCON fast locking system
- Save space with high-pos. connectors
- Reliable signal transmission 360° shielding in environments with electromagnetic interference

#### Commercial data

| Item number                          | 1414114       |
|--------------------------------------|---------------|
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 25 pc         |
| Sales key                            | BF03          |
| Product key                          | AF1CNA        |
| GTIN                                 | 4055626192482 |
| Weight per piece (including packing) | 362 g         |
| Weight per piece (excluding packing) | 22.22 g       |
| Customs tariff number                | 85444290      |
| Country of origin                    | DE            |



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#### Technical data

#### Product properties

| Product type               | Sensor/actuator cable |  |  |
|----------------------------|-----------------------|--|--|
| Application                | Standard              |  |  |
| Number of positions        | 17                    |  |  |
| Shielded                   | yes                   |  |  |
| Insulation characteristics |                       |  |  |
| Overvoltage category       | II                    |  |  |
| Degree of pollution        | 3                     |  |  |
|                            |                       |  |  |

#### Material specifications

| Flammability rating according to UL 94 | V0 |
|--|----|
|--|----|

#### Electrical properties

| Nominal voltage U <sub>N</sub> | 30 V AC |
|--------------------------------|---------|
|                                | 30 V DC |
| Nominal current I <sub>N</sub> | 1.5 A   |

#### Signaling

| Status display         | no |
|------------------------|----|
| Status display present | no |

#### Connector

#### Connection 1

| Туре                | Plug straight M12 SPEEDCON |
|---------------------|----------------------------|
| Number of positions | 17                         |
| Locking type        | SPEEDCON                   |
| Coding type         | A                          |

#### Connection 2

| Туре                | Socket straight M12 SPEEDCON |
|---------------------|------------------------------|
| Number of positions | 17                           |
| Locking type        | SPEEDCON                     |
| Coding type         | A                            |

#### Cable/line

| Cable length                     | 3 m |
|----------------------------------|-----|
| Black PUR/PVC twisted pair [35T] |     |



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| Dimensional drawing                           |   |
|---|---|
|   |   |
| Cable weight                                  | 105 kg/km   |
| UL AWM Style                                  | 20233 / 1061 (80°C/300 V)   |
| Number of positions                           | 17  |
| Shielded                                      | yes   |
| Cable type                                    | Black PUR/PVC twisted pair [35T]  |
| Conductor structure signal line               | 18x 0.10 mm   |
| AWG signal line                               | 26  |
| Conductor cross section                       | 17x 0.14 mm² (Signal line)  |
| Wire diameter incl. insulation                | 1 mm ±0.05 mm (Signal line)   |
| External cable diameter                       | 9.20 mm ±0.2 mm   |
| Outer sheath, material                        | PUR   |
| External sheath, color                        | black RAL 9005  |
| Conductor material                            | Tin-plated Cu litz wires  |
| Material wire insulation                      | PVC   |
| Single wire, color                            | white-brown, green-yellow, gray-pink, blue-red, black-violet, gray/pink-red/blue, white/green-brown/green, white/yellow-yellow/brown-white/gray |
| Overall twist                                 | 7 pairs and 1 three-way unit, intertwisted  |
| Optical shield covering                       | 85 %  |
| Max. conductor resistance                     | 142 Ω/km (at 20 °C)   |
| Insulation resistance                         | ≥ 10 MΩ*km (at 20 °C)   |
| Nominal voltage, cable                        | 42 V AC   |
| Test voltage                                  | 1500 V AC   |
| Minimum bending radius, fixed installation    | 5 x D   |
| Minimum bending radius, flexible installation | 10 x D  |
| Smallest bending radius, fixed installation   | 46 mm   |
| Smallest bending radius, movable installation | 92 mm   |
| Dynamic load capacity (bending)               | Max. bending cycles: 4000000, Bending radius: 92 mm, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s²                       |
| Flame resistance                              | According to DIN EN 60332-1-2   |
|   | According to VW-1   |
| Resistance to oil                             | in accordance with DIN EN 60811-2-1   |
| Other resistance                              | hydrolysis and microbe resistant (in accordance with EN 50396)  |
| Special properties                            | Flexible cable conduit capable  |
| Ambient temperature (operation)               | -30 °C 80 °C (cable, fixed installation)  |
|   | -5 °C 80 °C (Cable, flexible installation)  |



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#### Environmental and real-life conditions

#### Ambient conditions

| Degree of protection | IP65 |
|----------------------|------|
|                      | IP68 |

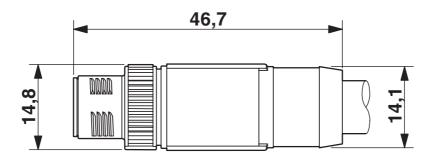


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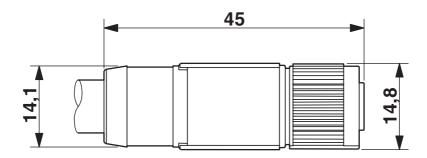
### **Drawings**

#### Dimensional drawing



M12 SPEEDCON plug, straight, shielded

#### Dimensional drawing



Socket M12-SPEEDCON, straight, shielded



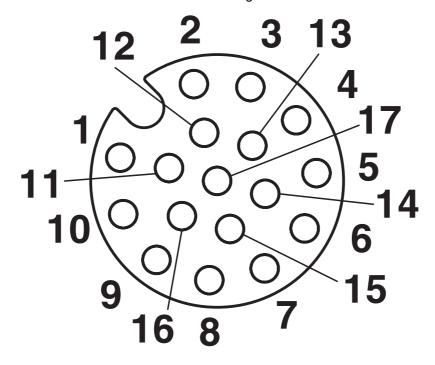
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Pin assignment M12 male connector, 17-pos., male side view

#### Schematic diagram

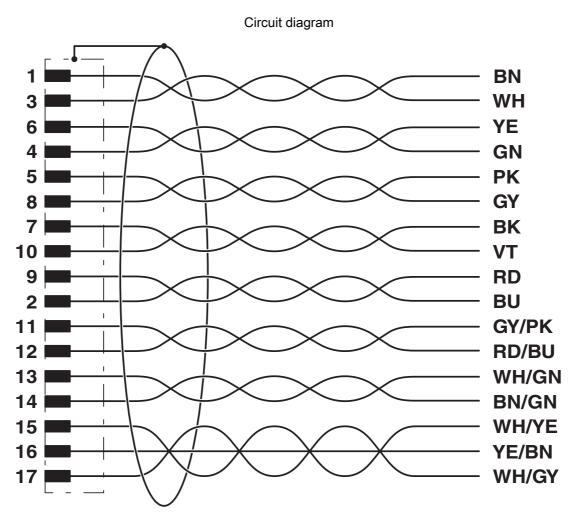


Pin assignment M12, 17-pos., socket side view



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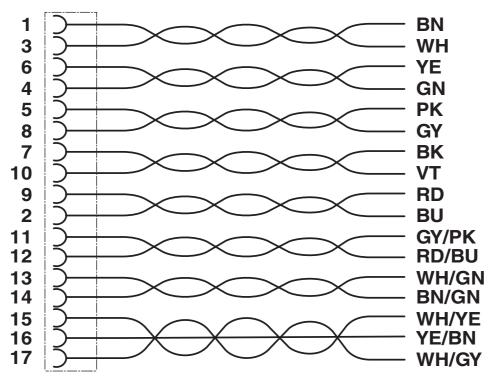
Contact assignment of the M12 plug



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## Circuit diagram



Contact assignment of the M12 socket



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#### **Approvals**

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1414114

| <u>®</u> | <b>UL Listed</b><br>Approval ID: E221474 |                       |                                |                   |                               |
|----------|--|-----------------------|--------------------------------|-------------------|-------------------------------|
|          |  | Nominal voltage $U_N$ | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
|          |  | 30 V                  | 1 A                            | -                 | -                             |



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#### Classifications

#### **ECLASS**

|    | ECLASS-12.0 | 27060311 |
|----|-------------|----------|
|    | ECLASS-13.0 | 27060311 |
|    | LOLASS-13.0 | 27000311 |
| ΕT | TIM         |          |
|    | ETIM 9.0    | EC001855 |
| UN | ISPSC       |          |

UNSPSC 21.0 26121600



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#### Environmental product compliance

#### EU RoHS

| 20 1.01.0                               |  |
|---|--|
| 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.)     | No substance above 0.1 wt%               |

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Phoenix Contact USA 586 Fulling Mill Road Middletown, PA 17057, United States (+717) 944-1300 info@phoenixcon.com