

1523489

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Device connector front mounting, Universal, 8-position, Socket, straight, M12-SPEEDCON, coding: A, on free cable end, Front mounting, M16 x 1.5, Individual wires, cable length: 0.5 m, 0. 25 mm<sup>2</sup>, TPE litz wire, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1239880

### Your advantages

- · Preassembled with litz wires for immediate use
- · Customer-specific assemblies and litz wire lengths available
- · Sealed on the litz wire side for optimum leak-tightness
- All standard pin assignments and codings for signal, data, and power transmission with a uniform design-in design
- · For high transmission safety: shield connection to the housing with optional EMC nut
- · SPEEDCON fast locking system reduces cabling times

### Commercial data

| Item number                          | 1523489            |
|--------------------------------------|--------------------|
| Packing unit                         | 1 pc               |
| Minimum order quantity               | 1 pc               |
| Sales key                            | AB24               |
| Product key                          | ABQCFB             |
| Catalog page                         | Page 38 (C-2-2019) |
| GTIN                                 | 4046356021319      |
| Weight per piece (including packing) | 30.1 g             |
| Weight per piece (excluding packing) | 29.9 g             |
| Customs tariff number                | 85444290           |
| 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  |
| General | Contact connection method: Crimp connection  |

## Mounting

| Mounting type         | Front mounting M16 x 1.5 With locking nut |
|-----------------------|---|
| Assembly instructions | With locking nut                          |

### Product properties

| Product type               | Circular connectors (device side) |
|----------------------------|-----------------------------------|
| Sensor type                | Universal                         |
| Number of positions        | 8                                 |
| Application                | Signal                            |
| No. of cable outlets       | 1                                 |
| Shielded                   | no                                |
| Coding                     | A                                 |
| Thread type                | M12                               |
| Insulation characteristics |                                   |
| Overvoltage category       | II                                |

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### Material specifications

Degree of pollution

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

### Electrical properties

| Rated surge voltage   | 0.8 kV   |
|-----------------------|----------|
| Contact resistance    | ≤ 3 mΩ   |
| Insulation resistance | ≥ 100 MΩ |



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| Nominal voltage U <sub>N</sub> | 30 V (AC) |
|--------------------------------|-----------|
|                                | 30 V (DC) |
| Nominal current I <sub>N</sub> | 2 A       |
| Max. conductor resistance      | 80 mΩ/m   |

### Connection data

#### Conductor connection

| Connection method       | Individual wires              |
|-------------------------|-------------------------------|
| Contact connection type | Socket                        |
| Conductor cross section | 0.25 mm <sup>2</sup>          |
| Tightening torque       | 3 Nm 4 Nm (Installation-side) |

### Mechanical properties

#### Mechanical data

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

### Connector

### Connection 1

| Head design       | Socket   |
|-------------------|----------|
| Head cable outlet | straight |
| Head thread type  | M12      |
| Head locking type | SPEEDCON |
| 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  | 1.15 mm ±0.07 mm                                   |
| Single wire, color              | brown, blue, white, gray, pink, green, yellow, red |
| Cable cross section             | 0.25 mm²   |
| Conductor material              | Tin-plated Cu litz wires                           |
| Conductor structure signal line | 14x 0.15 mm  |
| AWG signal line                 | 24   |
| Material wire insulation        | TPE  |
| Thickness, insulation           | 0.21 mm (Core insulation)                          |
| Nominal voltage, cable          | 300 V  |
| Test voltage, cable             | 2000 V AC  |
| Cable resistance                | ≤ 80 mΩ/m  |



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| Cable insulation resistance     | ≥ 20 MΩ*km                                  |
|---------------------------------|---|
| Ambient temperature (operation) | -40 °C 85 °C (cable, fixed installation)    |
|                                 | -25 °C 85 °C (Cable, flexible installation) |

### Environmental and real-life conditions

#### Ambient conditions

| Degree of protection            | IP67  |
|---------------------------------|---|
|                                 | 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

#### M12

| Otendered design of the  | M40             |
|--------------------------|-----------------|
| Standard designation     | M12 connector   |
| Standards/specifications | IEC 61076-2-101 |

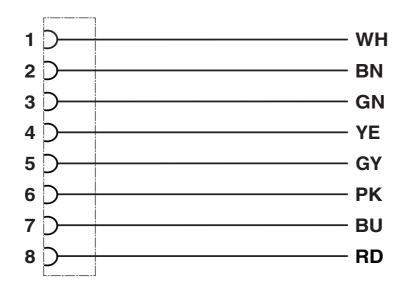


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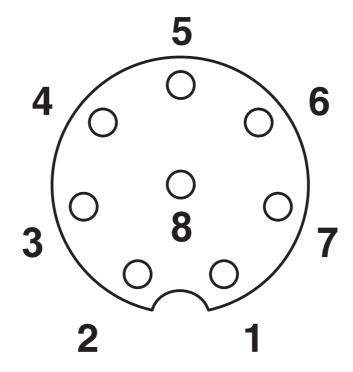
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## Drawings

## Circuit diagram



### Schematic diagram



Pin assignment M12 socket, 8-pos., A-coded, view female side



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## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1523489

| 7/ | UL Recognized Approval ID: E118976-20100522 |                                |                                |                   |                               |
|----|---|--------------------------------|--------------------------------|-------------------|-------------------------------|
|    |   | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
|    |   | 30 V                           | 2 A                            | 24 - 24           | -                             |

| c <b>911</b> us | cULus Recognized Approval ID: E221474-20140616 |                                |                                |                   |                               |
|-----------------|--|--------------------------------|--------------------------------|-------------------|-------------------------------|
|                 |  | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
|                 |  | 30 V                           | 2 A                            | 24 - 22           | -                             |



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## Classifications

### **ECLASS**

|      | ECLASS-11.0 | 27440102 |  |
|------|-------------|----------|--|
|      | ECLASS-12.0 | 27440116 |  |
|      | ECLASS-13.0 | 27440116 |  |
| ETIM |             |          |  |
|      | ETIM 9.0    | EC002635 |  |
|      |             |          |  |

### **UNSPSC**



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## Environmental product compliance

| REACh SVHC | Lead 7439-92-1   |
|------------|--|
|            |  |
| China RoHS | Environmentally Friendly Use Period = 50 years   |
|            | For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads" |

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