

1556294

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Device connector front mounting, Universal, 17-position, Socket, straight, M12-SPEEDCON, Acoding, on free cable end, Individual wires, cable length: 0.5 m, 0.14 mm², TPE litz wire, potted, this item is expected to be lead-free from Q4 2025 in accordance with RoHS II without exception 6c (Pb < 0.1%), a lead-free alternative is possible on request in advance

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 | 1556294 |
|--------------------------------------|---------------|
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | AB24 |
| Product key | ABQCFB |
| GTIN | 4046356176774 |
| Weight per piece (including packing) | 33.5 g |
| Weight per piece (excluding packing) | 32.169 g |
| Customs tariff number | 85444290 |
| Country of origin | DE |



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Technical data

Notes

| Notes on operation | 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 | Contact connection method: Crimp connection |

Mounting

| Mounting type | Front mounting (M16 x 1,5) |
|-------------------|-------------------------------|
| Tightening torque | 3 Nm 4 Nm (Installation-side) |

Product properties

| Product type | Circular connectors (device side) |
|----------------------|-----------------------------------|
| Application | Signal |
| Sensor type | Universal |
| Number of positions | 17 |
| No. of cable outlets | 1 |
| Shielded | no |
| Coding | A |
| Thread type | M12 |

Insulation characteristics

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

Material specifications

| Material Molding compound | PUR (potted) |
|--|------------------------------|
| Flammability rating according to UL 94 | V0 |
| Seal material | FKM |
| Material of grip body | Zinc die-cast, nickel-plated |
| Contact material | CuZn |
| Contact surface material | Ni/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 _N | 30 V (AC) |
|--------------------------------|-----------|
| | 30 V (DC) |
| Nominal current I _N | 1.5 A |
| Max. conductor resistance | 57.6 mΩ/m |

Connection data

Conductor connection

| Connection method | Individual wires |
|-------------------------|-------------------------------|
| Contact connection type | Socket |
| Conductor cross-section | 0.14 mm² |
| Tightening torque | 3 Nm 4 Nm (Installation-side) |

Mechanical properties

Mechanical data

| 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

Cable/line

| Cable length | 0.5 m |
|---------------------------------|--|
| Cable type | TPE litz wire |
| Signal type/category | Universal |
| Wire diameter incl. insulation | 1.1 mm ±0.05 mm |
| Single wire, color | brown, blue, white, green, pink, yellow, black, gray, red, violet, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown, white/gray |
| Cable cross section | 0.14 mm² |
| Conductor material | Tin-plated Cu litz wires |
| Conductor structure signal line | 7x 0.16 mm |
| AWG signal line | 26 |
| Material wire insulation | TPE |
| Thickness, insulation | 0.21 mm (Core insulation) |
| Nominal voltage, cable | 300 V |
| Test voltage, cable | 2000 V AC |



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| Cable resistance | ≤ 57.6 mΩ/m |
|---------------------------------|---|
| 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 | IP65 |
|---|---|
| | IP67 |
| Ambient temperature (operation) (male connector/female connector) | -25 °C 85 °C (Plug / socket) |
| | -40 °C 85 °C (without mechanical actuation) |
| Ambient temperature (operation) (Cable, flexible installation) | -25 °C 85 °C (Cable, flexible installation) |
| Ambient temperature (operation) (Cable, fixed installation) | -40 °C 85 °C (cable, fixed installation) |

Standards and regulations

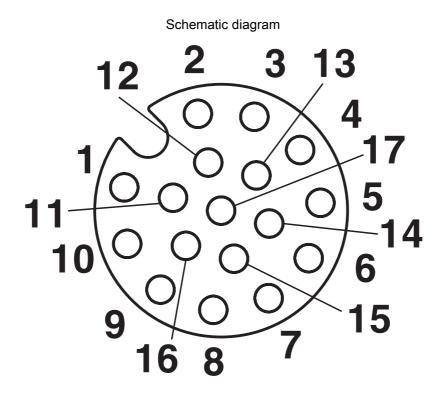
| Standard designation | M12 circular connector |
|--------------------------|------------------------------|
| Standards/specifications | according to IEC 61076-2-101 |



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Drawings



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

Circuit diagram BN BN BU SH CHART SH C

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/1556294

| e 911 us | cULus Recognized Approval ID: E221474-20140616 | | | |
|-----------------|--|--------------------------------|-------------------|-------------------------------|
| | Nominal voltage U_N | Nominal current I _N | Cross section AWG | Cross section mm ² |
| keine | | | | |
| | 30 V | 1.5 A | 26 | - |

| 7/ | UL Recognized Approval ID: E118976-20 | 0100522 | | | |
|-------|---------------------------------------|--------------------------------|--------------------------------|-------------------|-------------------------------|
| | | Nominal voltage U _N | Nominal current I _N | Cross section AWG | Cross section mm ² |
| keine | | | | | |
| | | 30 V | 1.5 A | 26 | - |



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Classifications

ECLASS

| | ECLASS-13.0 | 27440103 | |
|----|-------------|----------|--|
| | ECLASS-15.0 | 27440103 | |
| ΕT | ETIM | | |
| | ETIM 9.0 | EC003570 | |
| UN | ISPSC | | |

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



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Environmental product compliance

EU RoHS

| Yes |
|---|
| 6(c) |
| |
| EFUP-50 |
| An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |
| |
| Lead(CAS: n/a) |
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