

SAC-3P-MR/ 1,5-PUR/CI-1L-Z SCO - Sensor/actuator cable



1435658

<https://www.phoenixcontact.com/us/products/1435658>

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Sensor/actuator cable, 3-position, PUR halogen-free, black-gray RAL 7021, Plug angled M12 SPEEDCON, coding: A, with 1 LED, on Valve connector CI (9.4 mm), with 1 LED, Wiring: Z diode, cable length: 1.5 m

Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Save time, thanks to installation with SPEEDCON fast locking system
- Convenient: increased machine availability thanks to quick and easy diagnostics
- Our standard: robust halogen-free PUR cable

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1435658 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | BF07 |
| Product key | AF1DOA |
| GTIN | 4046356413909 |
| Weight per piece (including packing) | 69.5 g |
| Weight per piece (excluding packing) | 69.5 g |
| Customs tariff number | 85444290 |
| Country of origin | PL |

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Technical data

Product properties

| | |
|----------------------|--|
| Product type | Sensor/actuator cable with valve connector |
| Application | Standard |
| Number of positions | 3 |
| No. of cable outlets | 1 |
| Shielded | no |
| Coding | A |

Insulation characteristics

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

Connection data

Conductor connection

| | |
|-------------------|--------------------------|
| Tightening torque | 0.4 Nm (M12 connector) |
| | 0.6 Nm (Valve connector) |

Material specifications

| | |
|--|------------------------------|
| Flammability rating according to UL 94 | HB |
| Seal material | TPU |
| Material housing valve plug | TPU |
| Material of grip body | TPU |
| Contact material | CuSn |
| Contact surface material | Ni/Au |
| Contact carrier material | TPU GF |
| Contact material | CuSn |
| Valve plug contact insert material | PA 6.6 |
| Contact surface material | Sn |
| Material for screw connection | Zinc die-cast, nickel-plated |

Electrical properties

| | |
|-----------------------|----------------------------|
| Insulation resistance | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage U_N | 24 V AC |
| | 24 V DC |
| Nominal current I_N | 4 A |

Valve connector characteristics

| | |
|------------------|---|
| Fixing screws | M3 x 29 |
| Pulse power | 40 W (at 100 μ s square-wave pulse) |
| Terminal voltage | 70 V (at 2 mA constant current) |
| Reverse voltage | 50 V |

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Mechanical properties

Mechanical data

| | |
|-----------------------------|-----------------------|
| Insertion/withdrawal cycles | ≥ 100 (M12 connector) |
|-----------------------------|-----------------------|

Signaling

| | |
|------------------------|-------|
| Status display | 1 LED |
| Status display present | yes |

Connector

Connection 1

| | |
|---------------------|--------------------------|
| Type | Plug angled M12 SPEEDCON |
| Number of positions | 3 |
| Locking type | SPEEDCON |
| Coding type | A |

Connection 2

| | |
|---------------------|---|
| Type | Valve connector CI (9.4 mm) |
| Number of positions | 3 |
| Material | CuSn (Contact) Sn (Contact surface) PA 6.6 (Contact carrier) TPU (Housing) |
| Protective circuit | Z diode |

Cable/line

| | |
|--------------|-------|
| Cable length | 1.5 m |
|--------------|-------|

PUR halogen-free black [PUR]

| | |
|---------------------------------|--|
| Dimensional drawing |  |
| Cable weight | 30 kg/km |
| UL AWM Style | 20549 |
| Number of positions | 3 |
| Shielded | no |
| Cable type | PUR halogen-free black [PUR] |
| Conductor structure signal line | 28x 0.15 mm |
| AWG signal line | 20 |

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| | |
|---|---|
| Conductor cross-section | 3x 0.5 mm ² |
| Wire diameter incl. insulation | 1.5 mm ±0.05 mm (Signal line) |
| External cable diameter | 4.50 mm ±0.2 mm |
| Outer sheath, material | PUR |
| External sheath, color | black-gray RAL 7021 |
| Conductor material | Bare Cu litz wires |
| Material wire insulation | PP |
| Single wire, color | black 1, black 2, green/yellow |
| Overall twist | 3 wires, twisted |
| Max. conductor resistance | 39 Ω/km (at 20 °C) |
| Insulation resistance | min. 20 MΩ*km |
| Nominal voltage, cable | ≤ 300 V |
| Test voltage | ≥ 1200 V |
| Minimum bending radius, fixed installation | 5 x D |
| Minimum bending radius, flexible installation | 10 x D |
| Smallest bending radius, fixed installation | 22.5 mm |
| Smallest bending radius, movable installation | 45 mm |
| Dynamic load capacity (bending) | Max. bending cycles: 15000000, Bending radius: 50 mm, Traversing path: 0.9 m, Traversing rate: 5 m/s, Acceleration: 30 m/s ² |
| Halogen-free | in accordance with DIN VDE 0472 part 815 |
| Flame resistance | according to DIN VDE 0482 According to DIN EN 50265-2-1 |
| Resistance to oil | in accordance with DIN EN 60811-2-1 |
| Other resistance | largely oil-resistant partly UV-resistant (in accordance with DIN EN ISO 4892-2-A) |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation) -20 °C ... 80 °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 ... 90 °C (Plug / socket) |
| Ambient temperature (operation) (Valve connector) | -20 °C ... 85 °C (Valve connector) |
| Ambient temperature (operation) (Cable, fixed installation) | -40 °C ... 80 °C (cable, fixed installation) |
| Ambient temperature (operation) (Cable, flexible installation) | -15 °C ... 80 °C (Cable, flexible installation) |

Standards and regulations

M12

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

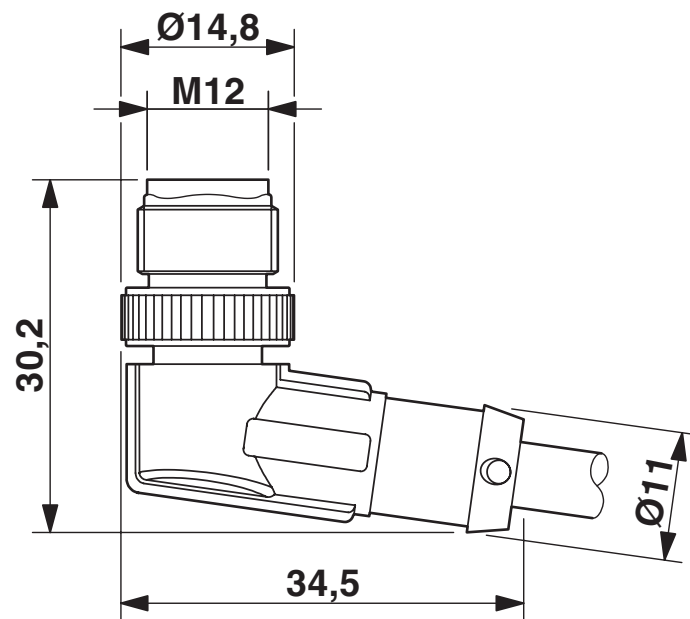
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Drawings

Dimensional drawing



M12 x 1 male plug, angled

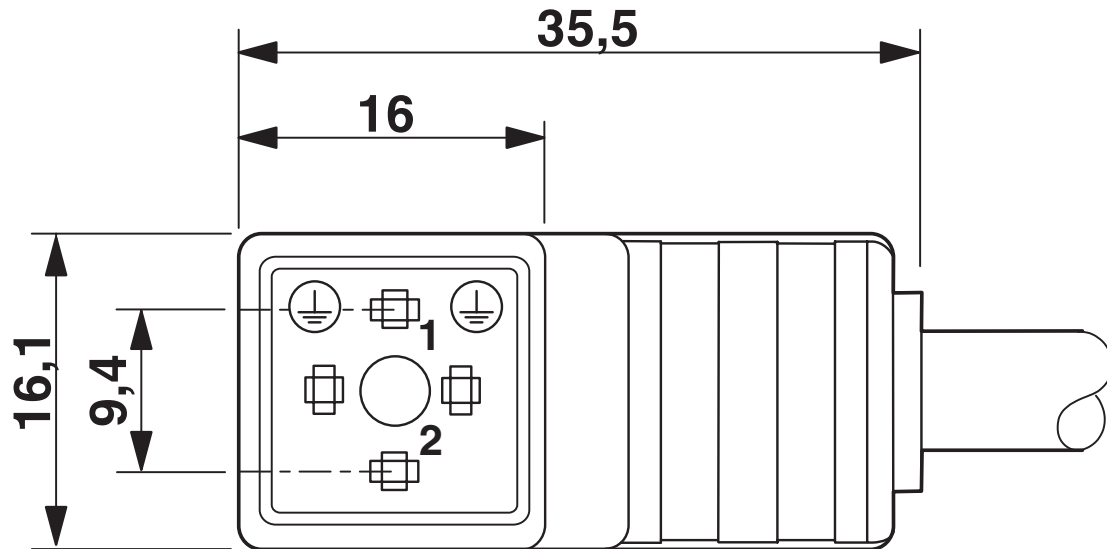
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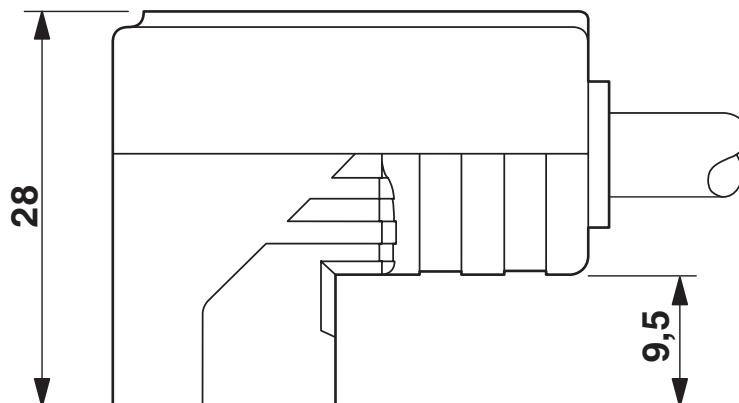
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Dimensional drawing



Valve connector, type CI

Dimensional drawing



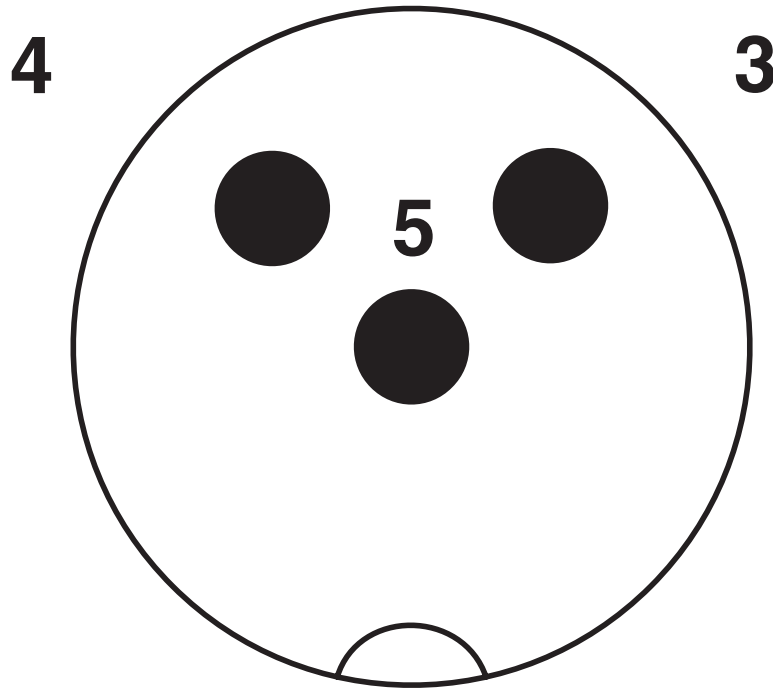
Valve connector, type CI, side view

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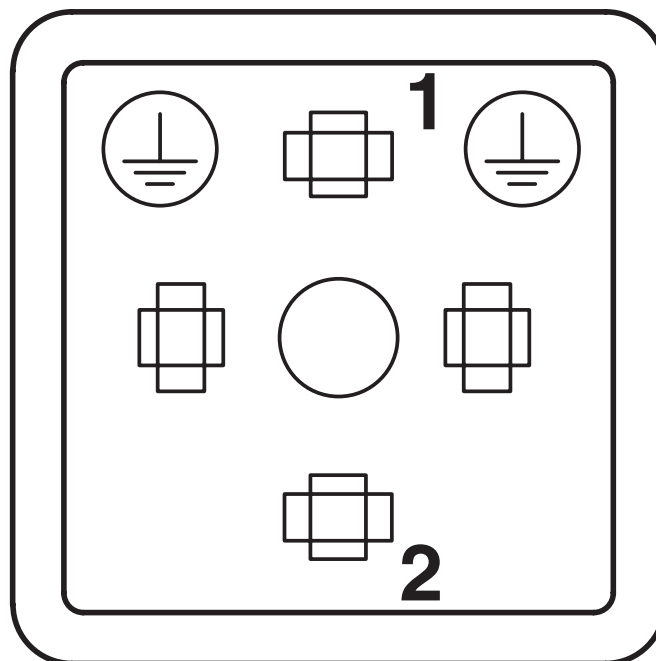
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Schematic diagram



Pin assignment M12 plug, 3-pos., valve connector

Schematic diagram

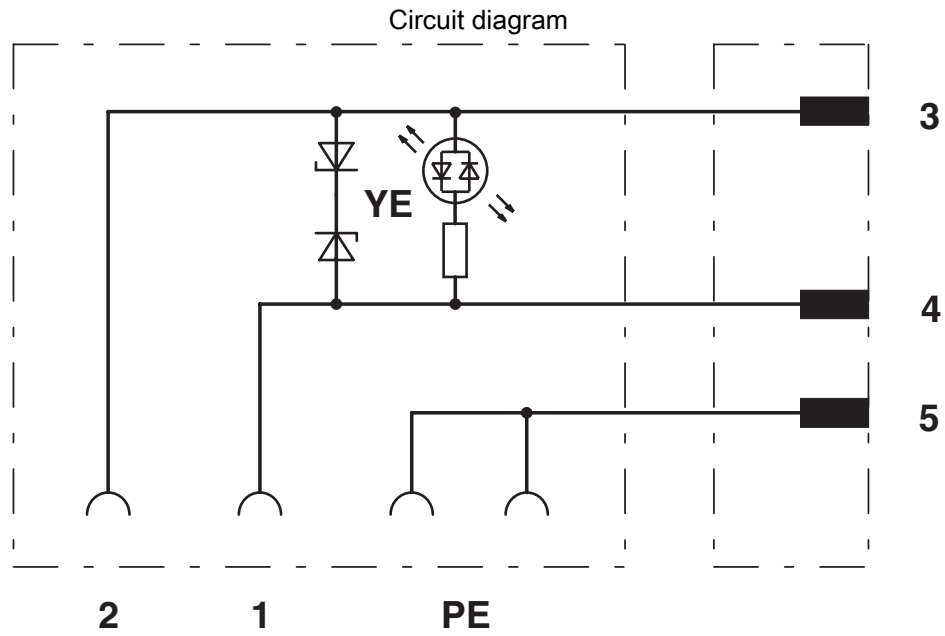


Valve connector connector pin assignment, type CI

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Contact assignment of M12 plug and valve connector

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1435658>



EAC-RoHS

Approval ID: RU D-DE.HB35.B.00387



CSAus

Approval ID: 13631

| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine | | | | |
| | 24 V | 4 A | - | - |

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27060312 |
| ECLASS-15.0 | 27060312 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC001855 |
|-----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 31251500 |
|-------------|----------|

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Environmental product compliance

EU RoHS

| | |
|---|--------|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 7(c)-I |

China RoHS

| | |
|--|---|
| Environment friendly use period (EFUP) | 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. |

EU REACH SVHC

| | |
|-------------------------------------|--|
| REACH candidate substance (CAS No.) | Diboron trioxide(CAS: 1303-86-2) |
| | Lead monoxide (lead oxide)(CAS: 1317-36-8) |

EF3.1 Climate Change

| | |
|---------|--------------|
| CO2e kg | 0.76 kg CO2e |
|---------|--------------|

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