

SAC-12P-MS/ 1,0-35T/MS SH SCO - Sensor/actuator cable



1446728  
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Sensor/actuator cable, 12-position, PUR/PVC, black RAL 9005, shielded, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A, cable length: 1 m

Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1446728                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF1CNA                         |
| Product key                          | BF1CNA                         |
| GTIN                                 | 4046356640282                  |
| Weight per piece (including packing) | 128 g                          |
| Weight per piece (excluding packing) | 128 g                          |
| Customs tariff number                | 85444290                       |
| Country of origin                    | DE                             |

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## Technical data

### Product properties

|                      |                       |
|----------------------|-----------------------|
| Product type         | Sensor/actuator cable |
| Number of positions  | 12                    |
| No. of cable outlets | 1                     |
| Shielded             | yes                   |
| Coding               | A                     |

### Insulation characteristics

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

### Material specifications

|                                        |                                             |
|----------------------------------------|---------------------------------------------|
| Flammability rating according to UL 94 | V0                                          |
| Seal material                          | NBR                                         |
| Material of grip body                  | TPU, hardly inflammable, self-extinguishing |
| Contact material                       | CuZn                                        |
| Contact surface material               | Ni/Au                                       |
| Contact carrier material               | PA 6.6                                      |
| Material for screw connection          | Zinc die-cast, nickel-plated                |

### Electrical properties

|                       |                            |
|-----------------------|----------------------------|
| Insulation resistance | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage $U_N$ | 30 V AC                    |
|                       | 30 V DC                    |
| Nominal current $I_N$ | 1.5 A                      |

### Signaling

|                        |    |
|------------------------|----|
| Status display         | No |
| Status display present | No |

### Connector

#### Connection 1

|                     |                            |
|---------------------|----------------------------|
| Type                | Plug straight M12 SPEEDCON |
| Number of positions | 12                         |
| Locking type        | SPEEDCON                   |
| Coding type         | A                          |

#### Connection 2

|                     |                              |
|---------------------|------------------------------|
| Type                | Socket straight M12 SPEEDCON |
| Number of positions | 12                           |
| Locking type        | SPEEDCON                     |
| Coding type         | A                            |

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## Cable/line

|                                               |                                                                                    |
|-----------------------------------------------|------------------------------------------------------------------------------------|
| Cable length                                  | 1 m                                                                                |
| Black PUR/PVC twisted pair [35T]              |                                                                                    |
| Dimensional drawing                           |  |
| Cable weight                                  | 87 kg/km                                                                           |
| UL AWM Style                                  | 20233 / 1061 (80°C/300 V)                                                          |
| Number of positions                           | 12                                                                                 |
| 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                       | 12x 0.14 mm <sup>2</sup> (Signal line)                                             |
| Wire diameter incl. insulation                | 1 mm ±0.05 mm (Signal line)                                                        |
| External cable diameter                       | 8.50 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   |
| Twisted pairs                                 | 2 cores to the pair                                                                |
| Overall twist                                 | Six pairs around the filler to the core                                            |
| 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   | 43 mm                                                                              |
| Smallest bending radius, movable installation | 85 mm                                                                              |
| Max. bending cycles                           | 2000000                                                                            |
| Flame resistance                              | According to DIN EN 60332-1-2<br>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)                     |

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|                                 |                                                |
|---------------------------------|------------------------------------------------|
| Special properties              | Flexible cable conduit capable                 |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation)   |
|                                 | -5 °C ... 80 °C (Cable, flexible installation) |

## Environmental and real-life conditions

|                                 |                                                |
|---------------------------------|------------------------------------------------|
| Ambient conditions              |                                                |
| Degree of protection            | IP65                                           |
|                                 | IP67                                           |
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket)               |
|                                 | -40 °C ... 80 °C (cable, fixed installation)   |
|                                 | -5 °C ... 80 °C (Cable, flexible installation) |

# SAC-12P-MS/ 1,0-35T/MS SH SCO - Sensor/actuator cable

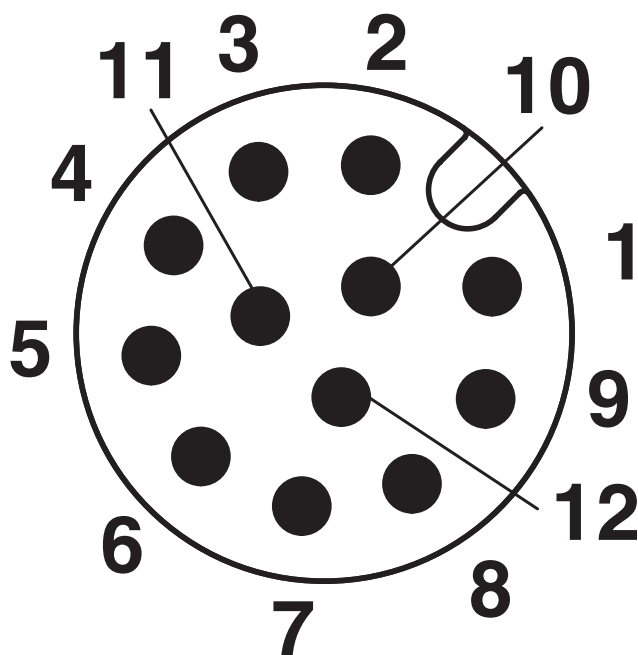


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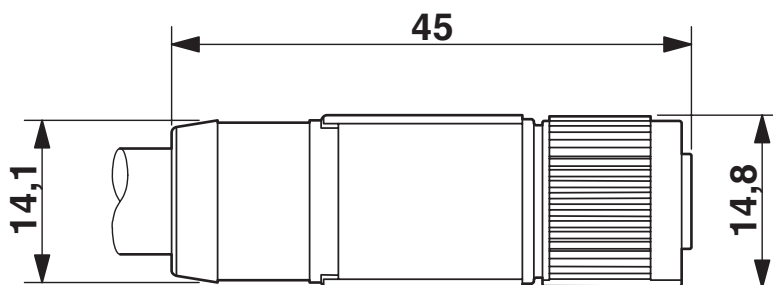
## Drawings

Schematic diagram



Pin assignment M12 male connector, 12-pos., male side view

Dimensional drawing



Socket M12-SPEEDCON, straight, shielded

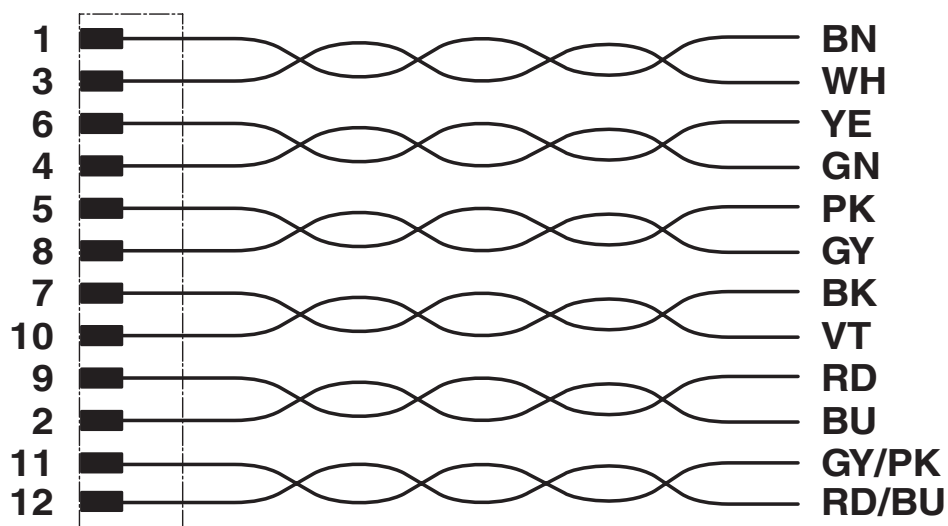
# SAC-12P-MS/ 1,0-35T/MS SH SCO - Sensor/actuator cable



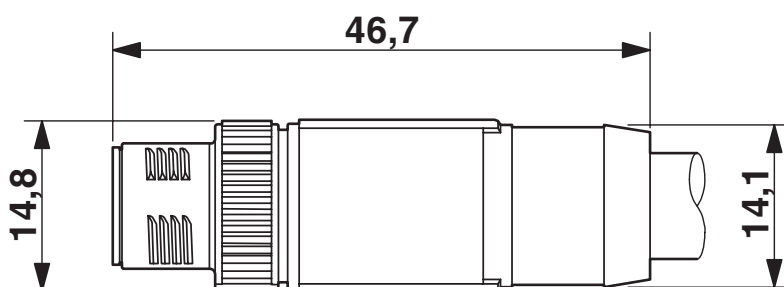
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Circuit diagram



Dimensional drawing



M12 SPEEDCON plug, straight, shielded

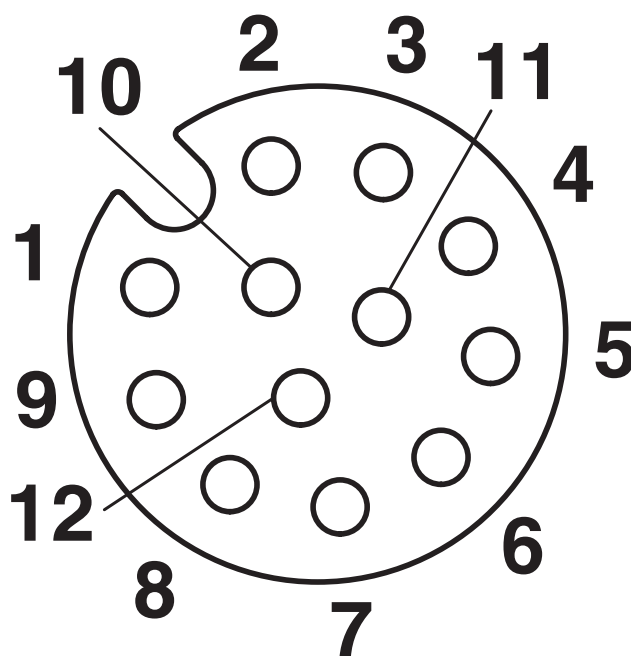
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Schematic diagram



Pin assignment M12, 12-pos., female side view

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## Approvals

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|  <b>UL Listed</b><br>Approval ID: FILE E 221474 | Nominal voltage U <sub>N</sub> | 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-11.0 | 27060311 |
| ECLASS-12.0 | 27060311 |
| ECLASS-13.0 | 27060311 |

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | EC001855 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 26121600 |
|-------------|----------|

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## Environmental product compliance

|                                         |                                          |
|-----------------------------------------|------------------------------------------|
| EU RoHS                                 |                                          |
| 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 Ltd  
Halesfield 13, Telford  
Shropshire, TF7 4PG  
01952 681700  
[info@phoenixcontact.co.uk](mailto:info@phoenixcontact.co.uk)