

SAC-12P-MS/ 5,0-35T/FS SH SCO - Sensor/actuator cable



1404940

<https://www.phoenixcontact.com/au/products/1404940>

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Sensor/actuator cable, 12-pos., PUR/PVC, RAL 9005 (black), shielded, straight M12 SPEEDCON plug (A-coded) to straight M12 SPEEDCON socket (A-coded), cable length: 5 m

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1404940 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | AF1CNA |
| Product key | AF1CNA |
| GTIN | 4046356728454 |
| Weight per piece (including packing) | 489.5 g |
| Weight per piece (excluding packing) | 477 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 | 5 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 ² (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 |
| Dynamic load capacity (bending) | Max. bending cycles: 2000000, Bending radius: 85 mm, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s ² |
| Flame resistance | According to DIN EN 60332-1-2 According to VW-1 |

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| | |
|---------------------------------|--|
| 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) | -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 ... 85 °C (Plug / socket) |
| | -40 °C ... 80 °C (cable, fixed installation) |
| | -5 °C ... 80 °C (Cable, flexible installation) |

Standards and regulations

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

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Drawings

Dimensional drawing



M12 SPEEDCON plug, straight, shielded

Dimensional drawing



Socket M12-SPEEDCON, straight, shielded

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Schematic diagram



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

Schematic diagram



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

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Circuit diagram



Contact assignment of the M12 plug and the M23 socket

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Approvals

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| | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  UL Listed Approval ID: E221474 | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| | 30 V | 1 A | - | - |

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Classifications

ECLASS

ECLASS-13.0

27060311

ETIM

ETIM 9.0

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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