

SAC-HZ-3P-M12MS/ 2,0-542 SH BK - Sensor/actuator cable



1409516

<https://www.phoenixcontact.com/us/products/1409516>

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Sensor/actuator cable, 3-position, PVC, yellow, shielded, Plug straight M12, coding: A, on free cable end, cable length: 2 m



Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 1409516 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | BF13 |
| Product key | AF1IGA |
| GTIN | 4055626017709 |
| Weight per piece (including packing) | 125.6 g |
| Weight per piece (excluding packing) | 125.6 g |
| Customs tariff number | 85444290 |
| Country of origin | US |

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Technical data

Notes

| | |
|---------|---|
| General | These cable assemblies are UL/cUL listed for use in Class I, Division 2 (CID2) hazardous locations. |
|---------|---|

Product properties

| | |
|----------------------|---|
| Product type | Sensor/actuator cable |
| Application | U.S. cables for hazardous locations Robots and drag chains |
| Number of positions | 3 |
| No. of cable outlets | 1 |
| Shielded | yes |
| Coding | A |

Insulation characteristics

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

Material specifications

| | |
|--|---|
| Material | TPE-U (Locking clip) |
| Flammability rating according to UL 94 | HB |
| Seal material | NBR |
| Material of grip body | TPU, hardly inflammable, self-extinguishing |
| Contact material | CuSn |
| Contact surface material | Ni/Au |
| Contact carrier material | TPU GF |
| Material for screw connection | Zinc die-cast, nickel-plated |
| Outer sheath, material | PVC |

Electrical properties

| | |
|-----------------------|----------------------------|
| Insulation resistance | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage U_N | 250 V AC 250 V DC |
| Nominal current I_N | 4 A |

Mechanical properties

Mechanical data

| | |
|-----------------------------|------------|
| Insertion/withdrawal cycles | ≥ 100 |
|-----------------------------|------------|

Signaling

| | |
|------------------------|----|
| Status display | no |
| Status display present | no |

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Connection data

Conductor connection

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

Connector

Connection 1

| | |
|-------------|-------------------|
| Type | Plug straight M12 |
| Coding type | A |

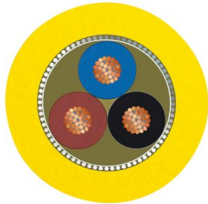
Connection 2

| | |
|------|----------------|
| Type | free cable end |
|------|----------------|

Cable/line

| | |
|--------------|-----|
| Cable length | 2 m |
|--------------|-----|

PVC yellow 105 °C [542]

| | |
|---------------------------------|--|
| Dimensional drawing |  |
| Cable weight | 40 kg/km |
| UL AWM Style | 2517 (105 °C / 300 V) |
| Number of positions | 3 |
| Shielded | yes |
| Cable type | PVC yellow 105 °C [542] |
| Conductor structure signal line | 7x 0.25 mm |
| AWG signal line | 22 |
| Wire diameter incl. insulation | 1.27 mm ±0.03 mm |
| External cable diameter | 5.20 mm ±0.2 mm |
| Outer sheath, material | PVC |
| External sheath, color | yellow |
| Conductor material | Tin-plated Cu litz wires |
| Material wire insulation | PVC |
| Single wire, color | brown, blue, black |
| Overall twist | 3 wires, twisted |
| Optical shield covering | 85 % |
| Max. conductor resistance | max. 50.5 Ω/km (20 °C) |
| Insulation resistance | ≥ (550 M Ohms/m @ 500V) |
| Nominal voltage, cable | 300 V |

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| | |
|---|---|
| Minimum bending radius, flexible installation | 12 x D |
| Smallest bending radius, movable installation | 63 mm |
| Flame resistance | FT4 |
| Other resistance | UV resistant |
| Special properties | UL standards PLTC and ITC |
| Ambient temperature (operation) | -30 °C ... 105 °C (cable, fixed installation) |
| | -5 °C ... 105 °C (Cable, flexible installation) |

Environmental and real-life conditions

Ambient conditions

| | |
|---|----------------------------------|
| Degree of protection | IP65 |
| | IP67 |
| | IP68 |
| Ambient temperature (operation) (male connector/female connector) | -25 °C ... 90 °C (Plug / socket) |
| Ambient temperature (operation) (Locking clip) | -40 °C ... 65 °C (Locking clip) |

Approvals

Conformity/Approvals

| | |
|------------------|------------------------------------|
| UL, USA / Canada | Class I, Div. 2, Groups A, B, C, D |
|------------------|------------------------------------|

Standards and regulations

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

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Drawings

Dimensional drawing



EXCLIP mounted plug

Dimensional drawing



EXCLIP plug

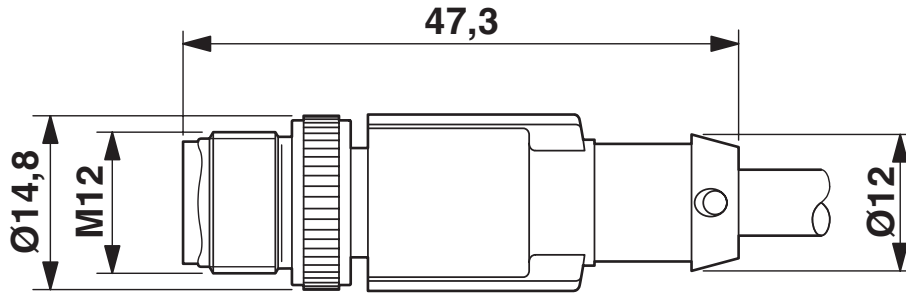
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Dimensional drawing



Plug, M12 x 1, straight, shielded

Schematic diagram



Pin assignment M12 plug, 3-pos., A-coded, view male side

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Circuit diagram



Contact assignment of the M12 plug

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Approvals

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|  cUL Listed Approval ID: FILE E 359524 | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | | | | |
| | 150 V | 4 A | - | - |

|  UL Listed Approval ID: FILE E 359524 | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | | | | |
| | 150 V | 4 A | - | - |

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27060311 |
| ECLASS-15.0 | 27060311 |

ETIM

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