

SAC-5P-20,0-542/M12FR BK - Sensor/actuator cable



1417973

<https://www.phoenixcontact.com/us/products/1417973>

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Sensor/actuator cable, 5-position, PVC, yellow, free cable end, on Socket angled M12, coding: A, cable length: 20 m

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1417973 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | BF13 |
| Product key | AF1ICC |
| GTIN | 4055626211589 |
| Weight per piece (including packing) | 865.5 g |
| Weight per piece (excluding packing) | 22.22 g |
| Customs tariff number | 85444290 |
| Country of origin | US |

Technical data

Product properties

| | |
|----------------------|-----------------------|
| Product type | Sensor/actuator cable |
| Application | Standard, U.S. cables |
| Number of positions | 5 |
| No. of cable outlets | 1 |
| Shielded | no |
| Coding | A |

Insulation characteristics

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

Material specifications

| | |
|--|---|
| 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 | 48 V AC |
| | 60 V DC |
| Nominal current I_N | 4 A |

Mechanical properties

Mechanical data

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

Signaling

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

Connection data

Conductor connection

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

Connector

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Connection 1

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

Connection 2

| | |
|---------------------|-------------------|
| Type | Socket angled M12 |
| Number of positions | 5 |
| Coding type | A |

Cable/line

| | |
|--------------|------|
| Cable length | 20 m |
|--------------|------|

PVC yellow 105 °C [542]

| | |
|---|---|
| Dimensional drawing |  |
| Cable weight | 43 kg/km |
| UL AWM Style | 2517 (105 °C / 300 V) |
| Number of positions | 5 |
| Shielded | no |
| 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 | 5.40 mm ±0.2 mm |
| Outer sheath, material | PVC |
| External sheath, color | yellow |
| Conductor material | Tin-plated Cu litz wires |
| Material, filler | PP |
| Material wire insulation | PVC |
| Single wire, color | brown, blue, black, white, gray |
| Overall twist | 5 wires around filler to the core |
| Max. conductor resistance | max. 50.5 Ω/km (20 °C) |
| Insulation resistance | ≥ (550 M Ohms/m @ 500V) |
| Nominal voltage, cable | 300 V |
| Minimum bending radius, flexible installation | 8 x D |
| Smallest bending radius, movable installation | 44 mm |
| Flame resistance | FT4 |
| Other resistance | UV resistant |
| Special properties | UL standards PLTC and ITC |

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| | |
|---------------------------------|---|
| 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) |

Standards and regulations

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

Drawings

Dimensional drawing



M12 x 1 socket, angled

Schematic diagram



Pin assignment M12 socket, 5-pos., A-coded, socket side view

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Circuit diagram



Contact assignment of the M12 plug and the M12 socket

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Approvals

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|  UL Listed Approval ID: FILE E 221474 | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | | | | |
| | 125 V | 4 A | - | - |

|  cUL Listed Approval ID: FILE E 221474 | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | | | | |
| | 125 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 | 31251501 |
|-------------|----------|

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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% |
|-------------------------------------|----------------------------|

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 7.677 kg CO2e |
|---------|---------------|

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