

SAC-4P-M12MS/ 5,0-542 SH BK - Sensor/actuator cable



1406178

<https://www.phoenixcontact.com/us/products/1406178>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Sensor/actuator cable, 4-position, PVC, yellow, shielded, Plug straight M12, coding: A, on free cable end, cable length: 5 m

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1406178 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | BF13 |
| Product key | AF1IDB |
| GTIN | 4046356798723 |
| Weight per piece (including packing) | 270.7 g |
| Weight per piece (excluding packing) | 248.5 g |
| Customs tariff number | 85444290 |
| Country of origin | US |

SAC-4P-M12MS/ 5,0-542 SH BK - Sensor/actuator cable



1406178

<https://www.phoenixcontact.com/us/products/1406178>

Technical data

Product properties

| | |
|----------------------|-----------------------|
| Product type | Sensor/actuator cable |
| Application | Standard, U.S. cables |
| Number of positions | 4 |
| 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 | HB |
| 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

Connection 1

SAC-4P-M12MS/ 5,0-542 SH BK - Sensor/actuator cable



1406178

<https://www.phoenixcontact.com/us/products/1406178>

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

Connection 2

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

Cable/line

| | |
|--------------|-----|
| Cable length | 5 m |
|--------------|-----|

PVC yellow 105 °C [542]

| | |
|---|--|
| Dimensional drawing |  |
| Cable weight | 48 kg/km |
| UL AWM Style | 2517 (105 °C / 300 V) |
| Number of positions | 4 |
| 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 | 5.50 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, white |
| Overall twist | 4 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 |
| Minimum bending radius, flexible installation | 12 x D |
| Smallest bending radius, movable installation | 66 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) |

SAC-4P-M12MS/ 5,0-542 SH BK - Sensor/actuator cable



1406178

<https://www.phoenixcontact.com/us/products/1406178>

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) (Cable, fixed installation) | -40 °C ... 80 °C (cable, fixed installation) |
| Ambient temperature (operation) (Cable, flexible installation) | -5 °C ... 80 °C (Cable, flexible installation) |

Standards and regulations

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

SAC-4P-M12MS/ 5,0-542 SH BK - Sensor/actuator cable

1406178

<https://www.phoenixcontact.com/us/products/1406178>

Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

SAC-4P-M12MS/ 5,0-542 SH BK - Sensor/actuator cable

1406178

<https://www.phoenixcontact.com/us/products/1406178>

Schematic diagram



Pin assignment M12 plug, 4-pos., A-coded, view plug side

Circuit diagram



Contact assignment of the M12 plug

SAC-4P-M12MS/ 5,0-542 SH BK - Sensor/actuator cable



1406178

<https://www.phoenixcontact.com/us/products/1406178>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1406178>

|  UL Listed Approval ID: FILE E 221474 | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | | | | |
| | 300 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 | | | | |
| | 300 V | 4 A | - | - |

SAC-4P-M12MS/ 5,0-542 SH BK - Sensor/actuator cable



1406178

<https://www.phoenixcontact.com/us/products/1406178>

Classifications

ECLASS

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

ETIM

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

UNSPSC

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

SAC-4P-M12MS/ 5,0-542 SH BK - Sensor/actuator cable



1406178

<https://www.phoenixcontact.com/us/products/1406178>

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 | 2.608 kg CO2e |
|---------|---------------|

Phoenix Contact 2026 © - all rights reserved
<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com