

Sensor/actuator cable - SAC-5P-MS/3,0-600/M12FR-3L FB



1404109

<https://www.phoenixcontact.com/pc/products/1404109>

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, 5-position, PP-EPDM halogen-free, gray RAL 7035, Plug straight M12, coding: A, on Socket angled M12, coding: A, with 3 LEDs, cable length: 3 m, Hygienic design, with plastic knurl

Your advantages

- Easy and safe: 100% electrically tested plug-in components
- Contamination can be detected quickly – thanks to the light color
- Convenient: increased machine availability thanks to quick and easy diagnostics

Commercial Data

| | |
|--------------------------------------|---------------------|
| Item number | 1404109 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Product Key | BF1CDA |
| Catalog Page | Page 145 (C-4-2013) |
| GTIN | 4046356676618 |
| Weight per Piece (including packing) | 111 g |
| Weight per Piece (excluding packing) | 111 g |
| Customs tariff number | 85444290 |
| Country of origin | PL |

Sensor/actuator cable - SAC-5P-MS/3,0-600/M12FR-3L FB



1404109

<https://www.phoenixcontact.com/pc/products/1404109>

Technical Data

Product properties

| | |
|----------------------|--------------------------|
| Product type | Sensor/actuator cable |
| Number of positions | 5 |
| Application | Food processing industry |
| No. of cable outlets | 1 |
| Shielded | no |
| Coding | A - standard |

Insulation characteristics

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

Material specifications

| | |
|-------------------------------|---------------|
| Sealing material | FKM |
| Material of grip body | PP |
| Contact material | CuSn |
| Contact surface material | Ni/Au |
| Contact carrier material | PP |
| Material for screw connection | Polypropylene |

Electrical properties

| | |
|-----------------------|----------------------------|
| Contact resistance | $\leq 5 \text{ m}\Omega$ |
| Insulation resistance | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage U_N | 24 V DC |
| Nominal current I_N | 4 A |
| Protective circuit | unwired |

Mechanical properties

Mechanical data

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

LED signaling

| | |
|------------------------|--------|
| Status display | 3 LEDs |
| Status display present | yes |

Connection data

Conductor connection

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

Connector

Connection 1

Sensor/actuator cable - SAC-5P-MS/3,0-600/M12FR-3L FB

1404109

<https://www.phoenixcontact.com/pc/products/1404109>

| | |
|-------------------|----------|
| Head design | Plug |
| Head cable outlet | straight |
| Head thread type | M12 |
| Coding | A |


Connection 2

| | |
|-----------------------|--------|
| Head design | Socket |
| Head cable outlet | angled |
| Head thread type | M12 |
| Coding | A |
| Status indicator head | 3 LEDs |

Cable / line

| | |
|--------------|-----|
| Cable length | 3 m |
|--------------|-----|

Halogen-free PP gray [600]

| | |
|---------------------------------|--|
| Dimensional drawing |  |
| Cable weight | 34 kg/km |
| Number of positions | 5 |
| Shielded | no |
| Cable type | Halogen-free PP gray [600] |
| Conductor structure signal line | 42x 0.10 mm |
| AWG signal line | 22 |
| Conductor cross section | 5x 0.34 mm ² (Signal line) |
| Wire diameter incl. insulation | 1.27 mm ±0.02 mm (Signal line) |
| External cable diameter | 5 mm ±0.15 mm |
| Outer sheath, material | PP-EPDM |
| External sheath, color | gray RAL 7035 |
| Conductor material | Bare Cu litz wires |
| Material wire insulation | PP |
| Single wire, color | Brown, white, blue, black, gray |
| Thickness, insulation | ≥ 0.21 mm (Core insulation) |
| Thickness, outer sheath | approx. 0.7 mm |
| Overall twist | 5 cores, twisted |
| Length of twist, overall twist | 55 mm |
| Max. conductor resistance | 58 Ω/km (at 20 °C) |
| Nominal voltage, cable | ≤ 300 V AC |
| Test voltage | ≥ 3000 V AC |

Sensor/actuator cable - SAC-5P-MS/3,0-600/M12FR-3L FB



1404109

<https://www.phoenixcontact.com/pc/products/1404109>

| | |
|---|---|
| Minimum bending radius, fixed installation | 5 x D |
| Minimum bending radius, flexible installation | 10 x D |
| Max. bending cycles | 4000000 |
| Torsion force | ± 270 °/m |
| Torsion cycles | ≥ 4000000 |
| Torsional frequency | max. 25 (Torsion cycles/min) |
| Halogen-free | in accordance with DIN VDE 0472 part 815 |
| Other resistance | Resistant to cold bending and cold impacts according to DIN EN 60811-1-4 (-40 °C) |
| Special properties | FDA compliant according to FDA 21 CFR 177.2600 |
| | highly flexible |
| | Flexible cable conduit capable |
| Ambient temperature (operation) | -40 °C ... 105 °C (cable, fixed installation) |
| | -25 °C ... 105 °C (Cable, flexible installation) |

Ambient conditions

| | |
|---------------------------------|-----------------------------------|
| Degree of protection | IP65 |
| | IP67 |
| | IP68 |
| | IP69K |
| Ambient temperature (operation) | -40 °C ... 105 °C (Plug / socket) |

Standards and regulations

| | |
|--------------------------|---------------------|
| Standards/specifications | IEC 61076-2-101 |
| Standards/specifications | FDA 21 CFR 177.2600 |

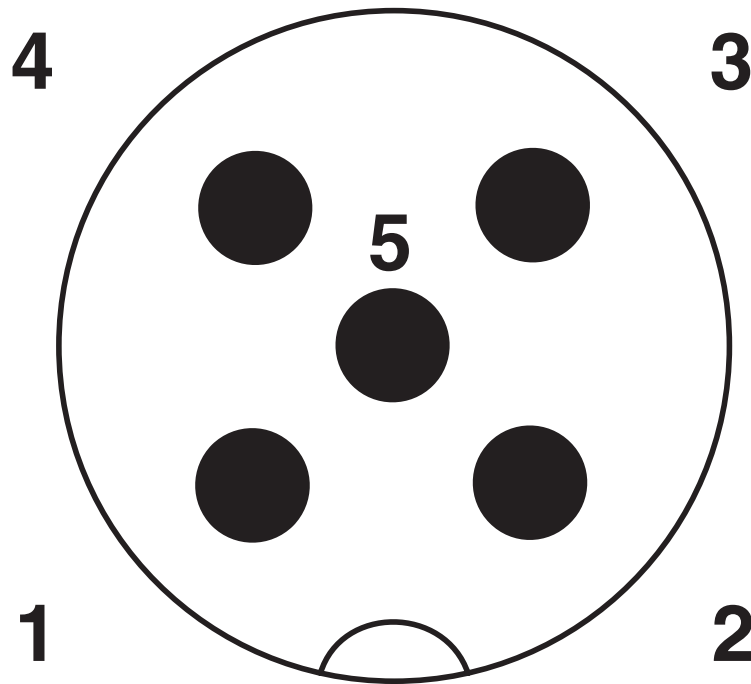
Sensor/actuator cable - SAC-5P-MS/3,0-600/M12FR-3L FB

1404109

<https://www.phoenixcontact.com/pc/products/1404109>

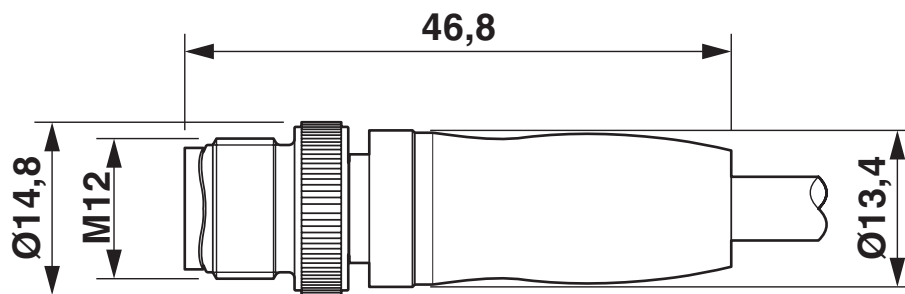
Drawings

Schematic diagram



Pin assignment M12 male connector, 5-pos., A-coded, male side

Dimensional drawing



Plug, M12 x 1, straight, shielded

Sensor/actuator cable - SAC-5P-MS/3,0-600/M12FR-3L FB

1404109

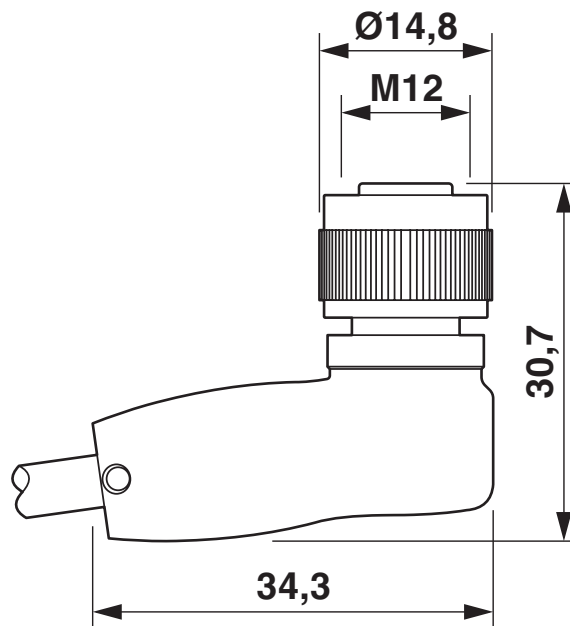
<https://www.phoenixcontact.com/pc/products/1404109>

Schematic diagram



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

Dimensional drawing



Socket M12 x 1, angled, with LED

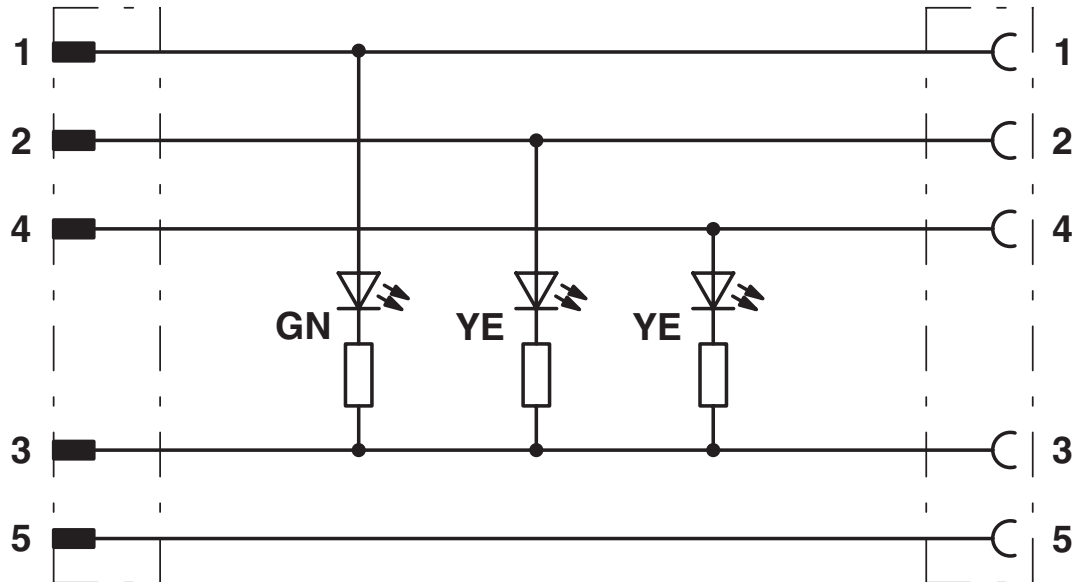
Sensor/actuator cable - SAC-5P-MS/3,0-600/M12FR-3L FB



1404109

<https://www.phoenixcontact.com/pc/products/1404109>

Circuit diagram



Sensor/actuator cable - SAC-5P-MS/3,0-600/M12FR-3L FB



1404109

<https://www.phoenixcontact.com/pc/products/1404109>

Approvals



EAC

Approval ID: RU C-DE.BL08.B.00286



EAC

Approval ID: RU D-DE.HB35.B.00387

Sensor/actuator cable - SAC-5P-MS/3,0-600/M12FR-3L FB



1404109

<https://www.phoenixcontact.com/pc/products/1404109>

Classifications

ECLASS

| | |
|---------------|----------|
| ECLASS-9.0 | 27060311 |
| ECLASS-10.0.1 | 27060311 |
| ECLASS-11.0 | 27060311 |

ETIM

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

UNSPSC

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

Sensor/actuator cable - SAC-5P-MS/3,0-600/M12FR-3L FB



1404109

<https://www.phoenixcontact.com/pc/products/1404109>

Environmental Product Compliance

| | |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

Phoenix Contact 2023 © - all rights reserved
<https://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG
Flachmarktstraße 8
D-32825 Blomberg
+49 (0) 5235-3 00
info@phoenixcontact.com