

## Sensor/actuator cable - SAC-5P-3,0-600/M12FR-3L FB - 1404094

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Sensor/actuator cable, 5-position, PP-EPDM halogen-free, gray RAL 7035, free cable end, 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
- ✓ Easy to clean, thanks to the special hygienic design
- ✓ Contamination can be detected quickly – thanks to the light color
- ✓ Convenient: increased machine availability thanks to quick and easy diagnostics



### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                                    |
| GTIN         | <br>4 046356 676489 |
| GTIN         | 4046356676489                                                                                           |

### Technical data

#### Dimensions

|                 |     |
|-----------------|-----|
| Length of cable | 3 m |
|-----------------|-----|

#### Ambient conditions

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

#### General

|                       |         |
|-----------------------|---------|
| Rated current at 40°C | 4 A     |
| Rated voltage         | 24 V DC |

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## Technical data

### General

|                              |                                          |
|------------------------------|------------------------------------------|
| Number of positions          | 5                                        |
| Insulation resistance        | ≥ 100 MΩ                                 |
| Coding                       | A - standard                             |
| Standards/regulations        | M12 connector IEC 61076-2-101            |
|                              | Material conformance FDA 21 CFR 177.2600 |
| Status display               | 3 LEDs                                   |
| Protective circuit/component | unwired                                  |
| Overvoltage category         | II                                       |
| Degree of pollution          | 3                                        |
| Insertion/withdrawal cycles  | ≥ 100                                    |
| Torque                       | 0.4 Nm (M12 connector)                   |

### Material

|                          |               |
|--------------------------|---------------|
| Contact material         | CuSn          |
| Contact surface material | Ni/Au         |
| Contact carrier material | PP            |
| Material of grip body    | PP            |
| Material, knurls         | Polypropylene |
| Sealing material         | FKM           |

### Standards and Regulations

|                          |                                          |
|--------------------------|------------------------------------------|
| Standards/specifications | M12 connector IEC 61076-2-101            |
|                          | Material conformance FDA 21 CFR 177.2600 |

### Cable

|                                               |                                 |
|-----------------------------------------------|---------------------------------|
| Cable type                                    | Halogen-free PP gray            |
| Cable type (abbreviation)                     | 600                             |
| Cable abbreviation                            | Li9Y9Y                          |
| Conductor cross section                       | 5x 0.34 mm² (Signal line)       |
| AWG signal line                               | 22                              |
| Conductor structure signal line               | 42x 0.10 mm                     |
| Core diameter including insulation            | 1.27 mm ±0.02 mm (Signal line)  |
| Thickness, insulation                         | ≥ 0.21 mm (Core insulation)     |
| Wire colors                                   | Brown, white, blue, black, gray |
| Overall twist                                 | 5 cores, twisted                |
| Length of twist, overall twist                | 55 mm                           |
| External sheath, color                        | gray RAL 7035                   |
| Outer sheath thickness                        | approx. 0.7 mm                  |
| External cable diameter D                     | 5 mm ±0.15 mm                   |
| Minimum bending radius, fixed installation    | 5 x D                           |
| Minimum bending radius, flexible installation | 10 x D                          |
| Number of bending cycles                      | 4000000                         |

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### Technical data

#### Cable

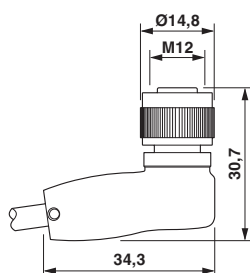
|                                                 |                                                                                   |
|-------------------------------------------------|-----------------------------------------------------------------------------------|
| Minimum bending radius, drag chain applications | 10 x D                                                                            |
| Traversing path                                 | 10 m                                                                              |
| Traversing rate                                 | 3 m/s                                                                             |
| Acceleration                                    | 10 m/s <sup>2</sup>                                                               |
| Torsion force                                   | ± 270 °/m (4,000,000 torsion cycles, max. 25 torsion cycles/min)                  |
| Cable weight                                    | 34 kg/km                                                                          |
| Outer sheath, material                          | PP-EPDM                                                                           |
| Material conductor insulation                   | PP                                                                                |
| Conductor material                              | Bare Cu litz wires                                                                |
| Conductor resistance                            | 58 Ω/km (at 20 °C)                                                                |
| Nominal voltage, cable                          | ≤ 300 V AC                                                                        |
| Test voltage, cable                             | ≥ 3000 V AC                                                                       |
| Special properties                              | FDA compliant according to FDA 21 CFR 177.2600                                    |
|                                                 | highly flexible                                                                   |
|                                                 | Flexible cable conduit capable                                                    |
| Other resistance                                | Resistant to cold bending and cold impacts According to DIN EN 60811-1-4 (-40 °C) |
| Halogen-free                                    | in accordance with DIN VDE 0472 part 815                                          |
| Ambient temperature (operation)                 | -40 °C ... 105 °C (cable, fixed installation)                                     |
|                                                 | -25 °C ... 105 °C (cable, flexible installation)                                  |

#### Environmental Product Compliance

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

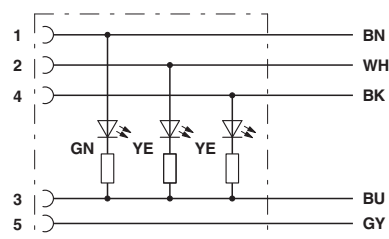
### Drawings

Dimensional drawing



Socket M12 x 1, angled, with LED

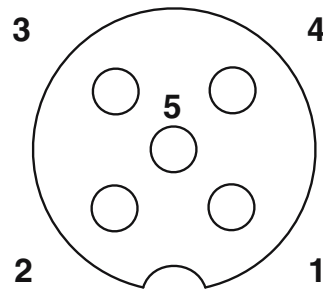
Circuit diagram



Contact assignment of M12 sockets with LED

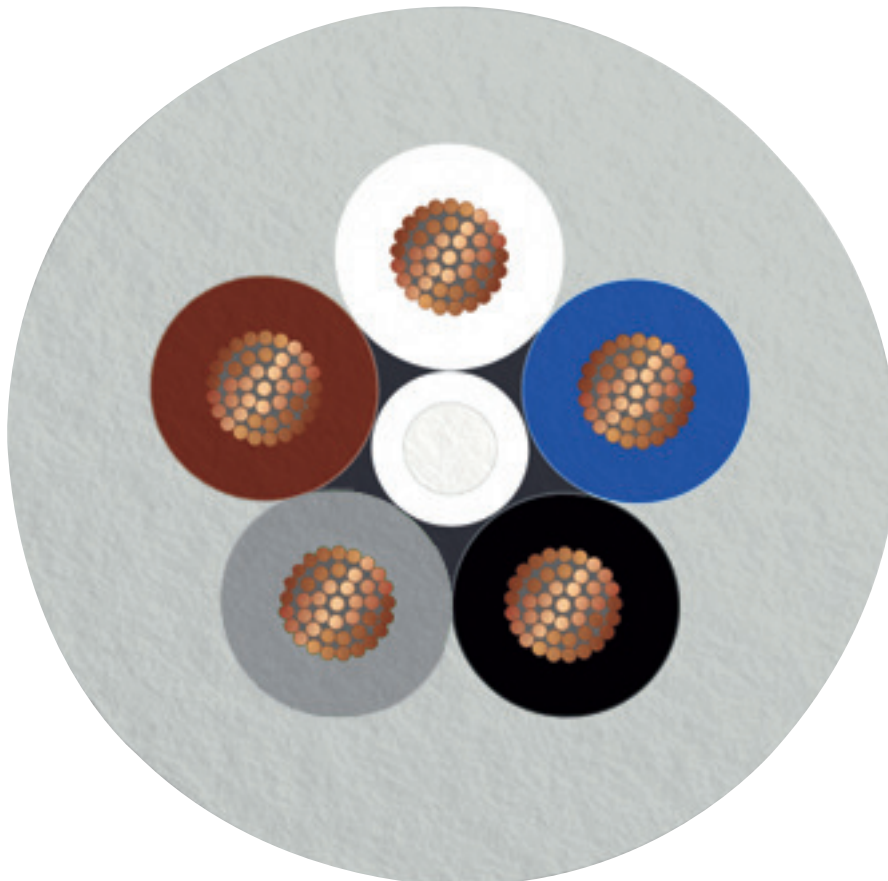
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Schematic diagram



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

Cable cross section



Halogen-free PP gray [600]

### Classifications

eCl@ss

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