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# Sensor/Actuator cable - SAC-5P-M12MS/ 0,6-802/M12FR-3L - 1454464

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Sensor/Actuator cable, 5-position, PUR halogen-free, welding sputter-resistant, highly flexible, gray RAL 7001, Plug straight M12, A-coded, on Socket angled M12, A-coded, with 3 LEDs, Cable length: 0.6 m, for robots and drag chains

## Why buy this product

- Easy and safe: 100% electrically tested plug-in components
- Flexible: cable supports a high degree of torsion and bending
- Reliable solution for the body shop as cable is resistant to welding sparks
- Convenient: increased machine availability thanks to quick and easy diagnostics

## Key Commercial Data

|              |                     |
|--------------|---------------------|
| Packing unit | 1 STK               |
| GTIN         | <br>4 046356 578172 |

## Technical data

### Dimensions

|                 |       |
|-----------------|-------|
| Length of cable | 0.6 m |
|-----------------|-------|

### Ambient conditions

|                                 |                                  |
|---------------------------------|----------------------------------|
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket) |
| Degree of protection            | IP65                             |
|                                 | IP67                             |
|                                 | IP68                             |

### General

|                              |                               |
|------------------------------|-------------------------------|
| Rated current at 40°C        | 4 A                           |
| Rated voltage                | 24 V                          |
| Number of positions          | 5                             |
| Insulation resistance        | ≥ 100 MΩ                      |
| Coding                       | A - standard                  |
| Standards/regulations        | M12 connector IEC 61076-2-101 |
| Status display               | 3 LEDs                        |
| Protective circuit/component | Unwired                       |
| Overvoltage category         | II                            |

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## Technical data

### General

|                             |                        |
|-----------------------------|------------------------|
| Degree of pollution         | 3                      |
| Insertion/withdrawal cycles | ≥ 100                  |
| Torque                      | 0.4 Nm (M12 connector) |

### Material

|                                        |                                             |
|----------------------------------------|---------------------------------------------|
| Flammability rating according to UL 94 | HB                                          |
| Contact material                       | CuSn                                        |
| Contact surface material               | Ni/Au                                       |
| Contact carrier material               | TPU GF                                      |
| Material of grip body                  | TPU, hardly inflammable, self-extinguishing |
| Material, knurls                       | Zinc die-cast, nickel-plated                |
| Sealing material                       | NBR                                         |

### Standards and Regulations

|                                        |                 |
|----------------------------------------|-----------------|
| Standard designation                   | M12 connector   |
| Standards/regulations                  | IEC 61076-2-101 |
| Flammability rating according to UL 94 | HB              |

### Cable

|                                               |                                                                                                  |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------|
| Note                                          | Due to the extremely robust outer sheath, this cable should only be stripped in 5 cm increments. |
| Cable type                                    | PUR, halogen-free, highly stranded, resistant to welding sparks, gray                            |
| Cable type (abbreviation)                     | 802                                                                                              |
| Cable abbreviation                            | Li12Y11Y-HF                                                                                      |
| Conductor cross section                       | 5x 0.34 mm <sup>2</sup> (Signal line)                                                            |
| AWG signal line                               | 22                                                                                               |
| Conductor structure signal line               | 42x 0.10 mm                                                                                      |
| Core diameter including insulation            | 1.3 mm ±0.05 mm (Signal line)                                                                    |
| Wire colors                                   | Black, brown, blue, white, green/yellow                                                          |
| Overall twist                                 | 5 wires around filler to the core                                                                |
| External sheath, color                        | gray RAL 7001                                                                                    |
| External cable diameter D                     | 5.1 mm ±0.2 mm                                                                                   |
| Minimum bending radius, fixed installation    | 5 x D                                                                                            |
| Minimum bending radius, flexible installation | 5 x D                                                                                            |
| Number of bending cycles                      | 15000000                                                                                         |
| Bending radius                                | 50 mm                                                                                            |
| Traversing path                               | 0.9 m                                                                                            |
| Traversing rate                               | 5 m/s                                                                                            |
| Acceleration                                  | 30 m/s <sup>2</sup>                                                                              |
| Torsion force                                 | ± 360 °/m                                                                                        |
| Outer sheath, material                        | PUR                                                                                              |
| Material conductor insulation                 | PES                                                                                              |
| Conductor material                            | Bare Cu litz wires                                                                               |

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## Technical data

### Cable

|                                 |                                                                                                                                    |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Insulation resistance           | ≥ 20 MΩ*km                                                                                                                         |
| Conductor resistance            | approx. 53 Ω/km                                                                                                                    |
| Nominal voltage, cable          | 300 V                                                                                                                              |
| Test voltage, cable             | 1200 V                                                                                                                             |
| Special properties              | Sheath resistant to welding beads, can be recycled, matt, without adhesion, wear-resistant, flame resistant and self-extinguishing |
|                                 | Free from silicone and cadmium                                                                                                     |
|                                 | Free of substances which would hinder coating with paint or varnish                                                                |
| Flame resistance                | DIN VDE 0472 part 804, test type B                                                                                                 |
|                                 | IEC 60332-1                                                                                                                        |
|                                 | in acc. with UL FT-2                                                                                                               |
| Halogen-free                    | The cable is halogen-free                                                                                                          |
| Resistance to oil               | As per VDE 0472 Part 803                                                                                                           |
| Other resistance                | Highly resistant to acids, alkaline solutions and solvents                                                                         |
| Ambient temperature (operation) | -40 °C ... 90 °C (cable, fixed installation)                                                                                       |
|                                 | -30 °C ... 90 °C (cable, flexible installation)                                                                                    |
|                                 | to 120 °C (for 3000 h)                                                                                                             |

## Classifications

### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27060306 |
| eCl@ss 4.1 | 27060306 |
| eCl@ss 5.0 | 27061801 |
| eCl@ss 5.1 | 27061801 |
| eCl@ss 6.0 | 27279218 |
| eCl@ss 7.0 | 27279218 |
| eCl@ss 8.0 | 27279218 |

### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001855 |
| ETIM 4.0 | EC001855 |
| ETIM 5.0 | EC001855 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 31251501 |
| UNSPSC 7.0901 | 31251501 |
| UNSPSC 11     | 31251501 |
| UNSPSC 12.01  | 31251501 |
| UNSPSC 13.2   | 31251501 |

# Sensor/Actuator cable - SAC-5P-M12MS/ 0,6-802/M12FR-3L - 1454464

## Approvals

### Approvals

#### Approvals

UL Listed / cUL Listed / EAC / cULus Listed

#### Ex Approvals

#### Approvals submitted

### Approval details

|                                |      |
|--------------------------------|------|
| UL Listed                      |      |
| Nominal current I <sub>N</sub> | 4 A  |
| Nominal voltage U <sub>N</sub> | 24 V |

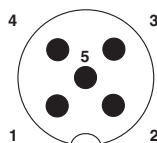
|                                |      |
|--------------------------------|------|
| cUL Listed                     |      |
| Nominal current I <sub>N</sub> | 4 A  |
| Nominal voltage U <sub>N</sub> | 24 V |

|     |
|-----|
| EAC |
|-----|

|              |
|--------------|
| cULus Listed |
|--------------|

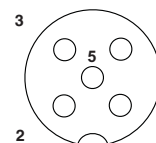
## Drawings

Schematic diagram



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

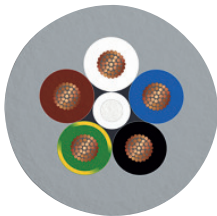
Schematic diagram



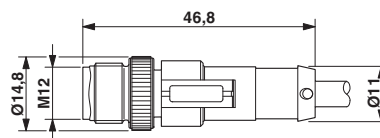
Pin assignment M12 socket, 5-pos., A-coded, socket side view

# Sensor/Actuator cable - SAC-5P-M12MS/ 0,6-802/M12FR-3L - 1454464

Cable cross section



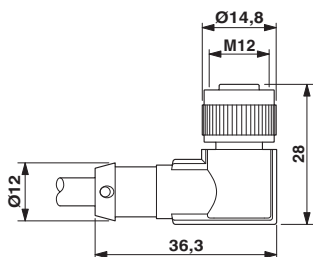
Dimensional drawing



PUR, halogen-free, highly stranded, resistant to welding sparks, gray [802]

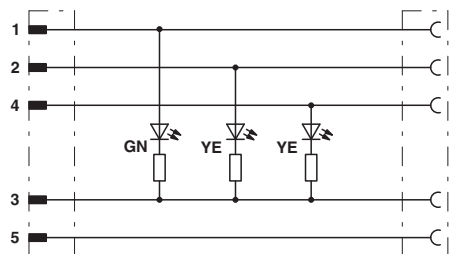
M12 x 1 plug, straight

Dimensional drawing



M12 x 1 socket, angled

Circuit diagram



Contact assignment of M12 plugs / sockets with 3 LEDs

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------------------------------|----------------------------|
| Sensor/Actuator cable, 5-position, PUR halogen-free, welding sputter-resistant, highly flexible, gray RAL 7001, Plug straight M12, A-coded, on Socket angled M12, A-coded, with 3 LEDs, Cable length: 0.6 m, for robots and drag chains | 1454464 | SAC-5P-M12MS/<br>0,6-802/<br>M12FR-3L | <a href="#">Buy on EAN</a> |