

## Sensor/actuator cable - SAC-3P-M12MR-M 8FR/.../... - 1696905

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Sensor/actuator cable, 3-position, Variable cable type, Plug angled M12, coding: A, on Socket angled M8, cable length: Free input (0.2 ... 40.0 m)

### Your advantages

- ✓ Easy and safe: 100% electrically tested plug-in components
- ✓ Flexible solutions - configurable materials with variable cable types and cable lengths



### Key Commercial Data

|              |      |
|--------------|------|
| Packing unit | 1 pc |
|--------------|------|

### Technical data

#### Dimensions

|                 |                             |
|-----------------|-----------------------------|
| Length of cable | Free input (0.2 ... 40.0 m) |
|-----------------|-----------------------------|

#### Ambient conditions

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

#### General

|                       |                               |
|-----------------------|-------------------------------|
| Rated current at 40°C | 4 A                           |
| Rated voltage         | 48 V AC                       |
|                       | 60 V DC                       |
| Number of positions   | 3                             |
| Insulation resistance | ≥ 100 MΩ                      |
| Coding                | A - standard                  |
| Standards/regulations | M12 connector IEC 61076-2-101 |
|                       | M8 connector IEC 61076-2-104  |
| Status display        | No                            |

# Sensor/actuator cable - SAC-3P-M12MR-M 8FR/.../... - 1696905

## Technical data

### General

|                              |                        |
|------------------------------|------------------------|
| Protective circuit/component | unwired                |
| Overvoltage category         | II                     |
| Degree of pollution          | 3                      |
| Insertion/withdrawal cycles  | ≥ 100                  |
| Torque                       | 0.4 Nm (M12 connector) |
|                              | 0.2 Nm (M8 connectors) |

### 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   |

### Line characteristics

|      |   |
|------|---|
| Note | This item is a sensor/actuator cable with a freely selectable cable type. The technical data for all possible cable types is listed in the table below. |
|------|---|

### Standards and Regulations

|  |                               |
|--|-------------------------------|
| Standards/specifications               | M12 connector IEC 61076-2-101 |
|  | M8 connector IEC 61076-2-104  |
| Flammability rating according to UL 94 | HB                            |

### PUR/PVC gray [100]

|   |                                       |
|---|---------------------------------------|
| Cable type                                    | PUR/PVC gray                          |
| Cable type (abbreviation)                     | 100                                   |
| Cable abbreviation                            | LiYY-11Y                              |
| Conductor cross section                       | 0.25 mm <sup>2</sup>                  |
| AWG signal line                               | 24                                    |
| Conductor structure signal line               | 32x 0.10 mm                           |
| Core diameter including insulation            | 1.32 mm ±0.02 mm                      |
| Thickness, insulation                         | ≥ 0.23 mm (Core insulation)           |
|   | ≥ 0.38 mm (Outer cable sheath)        |
|   | approx. 3.5 mm ±0.1 mm (Inner sheath) |
| Wire colors                                   | brown, blue, black                    |
| Overall twist                                 | 3 wires, twisted                      |
| External sheath, color                        | gray RAL 7001                         |
| External cable diameter D                     | 4.4 mm ±0.2 mm                        |
| Smallest bending radius, fixed installation   | 22 mm                                 |
| Smallest bending radius, movable installation | 44 mm                                 |
| Number of bending cycles                      | 2000000                               |

## Sensor/actuator cable - SAC-3P-M12MR-M 8FR/.../... - 1696905

### Technical data

#### PUR/PVC gray [100]

|                                 |  |
|---------------------------------|--|
| Bending radius                  | 44 mm  |
| Traversing path                 | 5 m  |
| Traversing rate                 | 3 m/s  |
| Cable weight                    | 27 kg/km                                       |
| Outer sheath, material          | PUR  |
| Material, inner sheath          | PVC  |
| Material conductor insulation   | PVC  |
| Conductor material              | Bare Cu litz wires                             |
| Insulation resistance           | ≥ 100 MΩ*km (at 20 °C)                         |
| Conductor resistance            | max. 78 Ω/km (at 20 °C)                        |
| Nominal voltage, cable          | ≤ 300 V  |
| Test voltage, cable             | ≥ 3000 V                                       |
| Flame resistance                | As per UL-Style 2464                           |
| Ambient temperature (operation) | -25 °C ... 80 °C (cable, fixed installation)   |
|                                 | -5 °C ... 80 °C (cable, flexible installation) |

#### PUR halogen-free yellow [240]

|   |                                       |
|---|---------------------------------------|
| Cable type                                      | PUR halogen-free yellow               |
| Cable type (abbreviation)                       | 240                                   |
| Cable abbreviation                              | Li9Y11Y                               |
| UL AWM style                                    | 20549                                 |
| Conductor cross section                         | 3x 0.25 mm <sup>2</sup> (Signal line) |
| AWG signal line                                 | 24                                    |
| Conductor structure signal line                 | 32x 0.10 mm                           |
| Core diameter including insulation              | 1.17 mm ±0.02 mm                      |
| Thickness, insulation                           | ≥ 0.21 mm                             |
| Wire colors                                     | brown, blue, black                    |
| Overall twist                                   | 3 wires, twisted                      |
| Length of twist, overall twist                  | 40 mm                                 |
| External sheath, color                          | yellow                                |
| Outer sheath thickness                          | approx. 0.9 mm                        |
| External cable diameter D                       | 4.4 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                               |
| 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>                   |
| Cable weight                                    | 24 kg/km                              |
| Outer sheath, material                          | PUR                                   |

## Sensor/actuator cable - SAC-3P-M12MR-M 8FR/.../... - 1696905

### Technical data

#### PUR halogen-free yellow [240]

|                                 |   |
|---------------------------------|---|
| Material conductor insulation   | PP  |
| Conductor material              | Bare Cu litz wires                                  |
| Insulation resistance           | $\geq 1 \text{ G}\Omega \cdot \text{km}$ (at 20 °C) |
| Conductor resistance            | 78 $\Omega/\text{km}$ (at 20 °C)                    |
| Nominal voltage, cable          | $\leq 300 \text{ V AC}$                             |
| Test voltage, cable             | $\geq 3000 \text{ V AC}$ (Spark test)               |
| Other resistance                | hydrolysis and microbe resistant                    |
|                                 | Resistant to salt water                             |
|                                 | abrasion-resistant                                  |
|                                 | Low adhesion  |
| Flame resistance                | in accordance with UL 758/1581 FT2                  |
| Halogen-free                    | in accordance with DIN VDE 0472 part 815            |
|                                 | According to EN 50267-2-1                           |
| Resistance to oil               | According to DIN EN 60811-2-1, 168 h at 100°C       |
|                                 | According to UL 758, 168 h at 60°C                  |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation)        |
|                                 | -25 °C ... 80 °C (cable, flexible installation)     |

#### PUR halogen-free orange [180]

|   |  |
|---|--|
| Cable type                                    | PUR halogen-free orange                  |
| Cable type (abbreviation)                     | 180                                      |
| Cable abbreviation                            | Li9Y-11Y                                 |
| UL AWM style                                  | 20549                                    |
| Conductor cross section                       | 3x 0.25 mm <sup>2</sup> (Signal line)    |
| AWG signal line                               | 24                                       |
| Conductor structure signal line               | 32x 0.10 mm                              |
| Core diameter including insulation            | 1.17 mm $\pm$ 0.02 mm (Signal line)      |
| Thickness, insulation                         | $\geq 0.21 \text{ mm}$ (Core insulation) |
|   | approx. 0.9 mm (Outer cable sheath)      |
| Wire colors                                   | brown, blue, black                       |
| Overall twist                                 | 3 wires, twisted                         |
| External sheath, color                        | orange RAL 2003                          |
| External cable diameter D                     | 4.4 mm $\pm$ 0.15 mm                     |
| Smallest bending radius, fixed installation   | 22 mm                                    |
| Smallest bending radius, movable installation | 44 mm                                    |
| Number of bending cycles                      | 4000000                                  |
| Bending radius                                | 44 mm                                    |
| Traversing path                               | 10 m                                     |
| Traversing rate                               | 3 m/s                                    |
| Acceleration                                  | 10 m/s <sup>2</sup>                      |
| Cable weight                                  | 24 kg/km                                 |

# Sensor/actuator cable - SAC-3P-M12MR-M 8FR/.../... - 1696905

## Technical data

### PUR halogen-free orange [180]

|                                 |  |
|---------------------------------|--|
| Outer sheath, material          | PUR  |
| Material conductor insulation   | PP   |
| Conductor material              | Bare Cu litz wires                                   |
| Insulation resistance           | $\geq 10 \text{ G}\Omega \cdot \text{km}$ (at 20 °C) |
| Conductor resistance            | max. 78 $\Omega/\text{km}$ (at 20 °C)                |
| Nominal voltage, cable          | $\leq 300 \text{ V}$                                 |
| Test voltage, cable             | $\geq 3000 \text{ V}$                                |
| Other resistance                | hydrolysis and microbe resistant                     |
|                                 | Resistant to salt water                              |
| Flame resistance                | in accordance with DIN UL-Style 20549                |
|                                 | in accordance with UL 758/1581 FT2                   |
| Halogen-free                    | in accordance with DIN VDE 0472 part 815             |
| Resistance to oil               | in accordance with DIN EN 60811-2-1                  |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation)         |
|                                 | -25 °C ... 80 °C (cable, flexible installation)      |

### PUR halogen-free gray [280]

|   |  |
|---|--|
| Cable type                                    | PUR halogen-free gray                    |
| Cable type (abbreviation)                     | 280                                      |
| Cable abbreviation                            | Li9Y11Y-HF                               |
| UL AWM style                                  | 20549 / 10493 (80°C/300 V)               |
| Conductor cross section                       | 3x 0.25 mm <sup>2</sup>                  |
| AWG signal line                               | 24                                       |
| Conductor structure signal line               | 32x 0.10 mm                              |
| Core diameter including insulation            | 1.17 mm $\pm$ 0.02 mm                    |
| Thickness, insulation                         | $\geq 0.21 \text{ mm}$ (Core insulation) |
| Wire colors                                   | brown, blue, black                       |
| Overall twist                                 | 3 wires, twisted                         |
| Length of twist, overall twist                | 40 mm                                    |
| External sheath, color                        | gray RAL 7001                            |
| Outer sheath thickness                        | approx. 0.5 mm                           |
| External cable diameter D                     | 3.6 mm $\pm$ 0.15 mm                     |
| Smallest bending radius, fixed installation   | 18 mm                                    |
| Smallest bending radius, movable installation | 36 mm                                    |
| Number of bending cycles                      | 10000000                                 |
| Bending radius                                | 44 mm                                    |
| Traversing path                               | 10 m                                     |
| Traversing rate                               | 3 m/s                                    |
| Acceleration                                  | 10 m/s <sup>2</sup>                      |
| Cable weight                                  | 18 kg/km                                 |
| Outer sheath, material                        | PUR                                      |

## Sensor/actuator cable - SAC-3P-M12MR-M 8FR/.../... - 1696905

### Technical data

#### PUR halogen-free gray [280]

|                                 |   |
|---------------------------------|---|
| Material conductor insulation   | PP  |
| Conductor material              | Bare Cu litz wires  |
| Insulation resistance           | $\geq 100 \text{ G}\Omega\cdot\text{km}$ (at 20 °C)                 |
| Conductor resistance            | $\leq 78 \text{ }\Omega/\text{km}$ (at 20 °C)                       |
| Nominal voltage, cable          | $\leq 300 \text{ V}$  |
| Test voltage, cable             | $\geq 3000 \text{ V}$   |
| Special properties              | Flexible cable conduit capable                                      |
|                                 | Silicone-free   |
|                                 | Free of substances which would hinder coating with paint or varnish |
| Other resistance                | hydrolysis and microbe resistant                                    |
|                                 | Highly resistant to acids, alkaline solutions and solvents          |
|                                 | Resistant to salt water   |
|                                 | partly UV-resistant in accordance with DIN EN ISO 4892-2-A          |
| Flame resistance                | in accordance with UL 758/1581 FT2                                  |
|                                 | DIN EN 60332-2-2 (20 s)   |
| Halogen-free                    | in accordance with DIN VDE 0472 part 815                            |
| Resistance to oil               | in accordance with DIN EN 60811-2-1                                 |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation)                        |
|                                 | -25 °C ... 80 °C (cable, flexible installation)                     |

#### PVC gray [500]

|                                    |   |
|------------------------------------|---|
| Cable type                         | PVC gray  |
| Cable type (abbreviation)          | 500   |
| Cable abbreviation                 | LiYY  |
| Conductor cross section            | 0.25 mm <sup>2</sup>                              |
| AWG signal line                    | 24  |
| Conductor structure signal line    | 32x 0.10 mm                                       |
| Core diameter including insulation | 1.25 mm $\pm$ 0.02 mm                             |
| Thickness, insulation              | $\geq 0.23 \text{ mm}$ (Core insulation)          |
|                                    | $\geq 0.76 \text{ mm}$ (Outer cable sheath)       |
| Wire colors                        | brown, blue, black                                |
| Overall twist                      | 3 wires, twisted                                  |
| External sheath, color             | gray RAL 7001                                     |
| External cable diameter D          | 4.4 mm $\pm$ 0.15 mm                              |
| Cable weight                       | 29 kg/km  |
| Outer sheath, material             | PVC   |
| Material conductor insulation      | PVC   |
| Conductor material                 | Bare Cu litz wires                                |
| Insulation resistance              | $\geq 1 \text{ G}\Omega\cdot\text{km}$ (at 20 °C) |
| Conductor resistance               | max. 78 $\Omega/\text{km}$ (at 20 °C)             |
| Nominal voltage, cable             | $\geq 300 \text{ V}$                              |

## Sensor/actuator cable - SAC-3P-M12MR-M 8FR/.../... - 1696905

### Technical data

#### PVC gray [500]

|                                 |  |
|---------------------------------|--|
| Test voltage, cable             | ≤ 3000 V                                       |
| Flame resistance                | As per UL-Style 2464                           |
| Ambient temperature (operation) | -25 °C ... 80 °C (cable, fixed installation)   |
|                                 | -5 °C ... 80 °C (cable, flexible installation) |

#### Gray, highly flexible PUR [800]

|   |  |
|---|--|
| Note  | Due to the extremely robust outer sheath, this cable should only be stripped in 5 cm increments. |
| Cable type                                      | Gray, highly flexible PUR  |
| Cable type (abbreviation)                       | 800  |
| Cable abbreviation                              | LiF9Y11Y   |
| UL AWM style                                    | 20549  |
| Conductor cross section                         | 3x 0.25 mm <sup>2</sup> (Signal line)  |
| AWG signal line                                 | 24   |
| Conductor structure signal line                 | 32x 0.10 mm  |
| Core diameter including insulation              | 1.2 mm ±0.05 mm (Signal line)  |
| Wire colors                                     | brown, blue, black   |
| Overall twist                                   | 3 wires, twisted   |
| External sheath, color                          | gray RAL 7001  |
| External cable diameter D                       | 4.3 mm ±0.2 mm   |
| Minimum bending radius, fixed installation      | 4 x D  |
| Minimum bending radius, flexible installation   | 7.5 x D  |
| Number of bending cycles                        | 10000000   |
| Minimum bending radius, drag chain applications | 7,5 x D  |
| Traversing path                                 | 5 m  |
| Traversing rate                                 | 3.3 m/s  |
| Acceleration                                    | 5 m/s <sup>2</sup>   |
| 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 (1 000 000 torsion cycles)   |
| Cable weight                                    | 24 kg/km   |
| Outer sheath, material                          | PUR  |
| Material conductor insulation                   | PP   |
| Conductor material                              | Bare Cu litz wires   |
| Insulation resistance                           | ≥ 20 MΩ*km   |
| Conductor resistance                            | approx. 76 Ω/km  |
| Nominal voltage, cable                          | 300 V  |
| Test voltage, cable                             | 2000 V   |

## Sensor/actuator cable - SAC-3P-M12MR-M 8FR/.../... - 1696905

### Technical data

#### Gray, highly flexible PUR [800]

|                                 |  |
|---------------------------------|--|
| Special properties              | Cable jacket is welding spark-resistant, recyclable, matt, low-adhesion, abrasion-resistant, flame-retardant, and self-extinguishing |
|                                 | Free from silicone and cadmium   |
|                                 | Free of substances which would hinder coating with paint or varnish  |
| Other resistance                | Highly resistant to acids, alkaline solutions and solvents   |
|                                 | Silicone-free  |
| Flame resistance                | in accordance with UL 758/1581 FT2   |
| Halogen-free                    | in accordance with DIN VDE 0472 part 815   |
| Resistance to oil               | in accordance with DIN EN 60811-2-1  |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation)   |
|                                 | -25 °C ... 80 °C (cable, flexible installation)  |

#### PUR halogen-free black [PUR]

|   |                             |
|---|-----------------------------|
| Cable type                                    | PUR halogen-free black      |
| Cable type (abbreviation)                     | PUR                         |
| Cable abbreviation                            | Li9Y11Y-HF                  |
| UL AWM style                                  | 20549 / 10493 (80°C/300 V)  |
| Conductor cross section                       | 3x 0.25 mm <sup>2</sup>     |
| AWG signal line                               | 24                          |
| Conductor structure signal line               | 32x 0.10 mm                 |
| Core diameter including insulation            | 1.17 mm ±0.02 mm            |
| Thickness, insulation                         | ≥ 0.21 mm (Core insulation) |
| Wire colors                                   | brown, blue, black          |
| Overall twist                                 | 3 wires, twisted            |
| Length of twist, overall twist                | 40 mm                       |
| External sheath, color                        | black-gray RAL 7021         |
| Outer sheath thickness                        | approx. 0.5 mm              |
| External cable diameter D                     | 3.6 mm ±0.15 mm             |
| Smallest bending radius, fixed installation   | 18 mm                       |
| Smallest bending radius, movable installation | 36 mm                       |
| Number of bending cycles                      | 10000000                    |
| Bending radius                                | 44 mm                       |
| Traversing path                               | 10 m                        |
| Traversing rate                               | 3 m/s                       |
| Acceleration                                  | 10 m/s <sup>2</sup>         |
| Cable weight                                  | 18 kg/km                    |
| Outer sheath, material                        | PUR                         |
| Material conductor insulation                 | PP                          |
| Conductor material                            | Bare Cu litz wires          |
| Insulation resistance                         | ≥ 100 GΩ*km (at 20 °C)      |
| Conductor resistance                          | ≤ 78 Ω/km (at 20 °C)        |



## Sensor/actuator cable - SAC-3P-M12MR-M 8FR/.../... - 1696905

### Technical data

#### PUR halogen-free black [PUR]

|                                 |   |
|---------------------------------|---|
| Nominal voltage, cable          | ≤ 300 V   |
| Test voltage, cable             | ≥ 3000 V  |
| Special properties              | Flexible cable conduit capable                                      |
|                                 | Silicone-free   |
|                                 | Free of substances which would hinder coating with paint or varnish |
| Other resistance                | hydrolysis and microbe resistant                                    |
|                                 | Highly resistant to acids, alkaline solutions and solvents          |
|                                 | Resistant to salt water   |
|                                 | partly UV-resistant in accordance with DIN EN ISO 4892-2-A          |
| Flame resistance                | in accordance with UL 758/1581 FT2                                  |
|                                 | DIN EN 60332-2-2 (20 s)   |
| Halogen-free                    | in accordance with DIN VDE 0472 part 815                            |
| Resistance to oil               | in accordance with DIN EN 60811-2-1                                 |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation)                        |
|                                 | -25 °C ... 80 °C (cable, flexible installation)                     |

#### PVC black [PVC]

|                                    |  |
|------------------------------------|--|
| Cable type                         | PVC black                                      |
| Cable type (abbreviation)          | PVC  |
| Cable abbreviation                 | LiYY   |
| Conductor cross section            | 3x 0.25 mm <sup>2</sup> (Signal line)          |
| AWG signal line                    | 24   |
| Conductor structure signal line    | 32x 0.10 mm                                    |
| Core diameter including insulation | 1.25 mm ±0.02 mm                               |
| Thickness, insulation              | ≥ 0.23 mm (Core insulation)                    |
| Wire colors                        | brown, blue, black                             |
| Overall twist                      | 3 wires, twisted                               |
| External sheath, color             | black RAL 9005                                 |
| Outer sheath thickness             | ≥ 0.76 mm                                      |
| External cable diameter D          | 4.4 mm ±0.15 mm                                |
| Cable weight                       | 29 kg/km                                       |
| Outer sheath, material             | PVC  |
| Material conductor insulation      | PVC  |
| Conductor material                 | Bare Cu litz wires                             |
| Insulation resistance              | ≥ 100 MΩ*km (at 20 °C)                         |
| Conductor resistance               | max. 78 Ω/km (at 20 °C)                        |
| Nominal voltage, cable             | ≥ 300 V  |
| Test voltage, cable                | ≤ 3000 V                                       |
| Flame resistance                   | As per UL-Style 2464                           |
| Ambient temperature (operation)    | -25 °C ... 80 °C (cable, fixed installation)   |
|                                    | -5 °C ... 80 °C (cable, flexible installation) |

# Sensor/actuator cable - SAC-3P-M12MR-M 8FR/.../... - 1696905

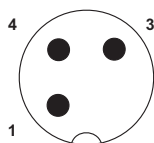
## Technical data

### Environmental Product Compliance

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

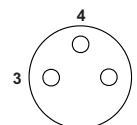
## Drawings

Schematic diagram



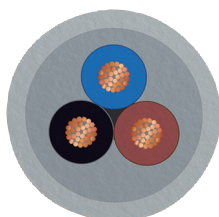
Pin assignment M12 plug, 3-pos., A-coded, view male side

Schematic diagram



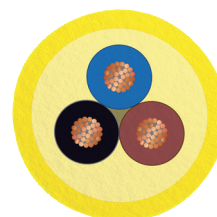
Pin assignment M8 socket, 3-pos., view female side

Cable cross section



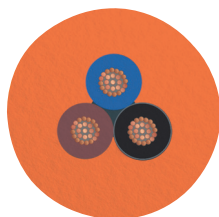
PUR/PVC gray [100]

Cable cross section



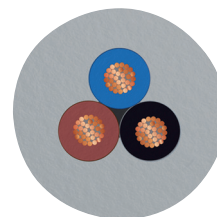
PUR halogen-free yellow [240]

Cable cross section



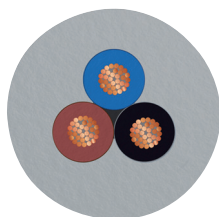
PUR halogen-free orange [180]

Cable cross section



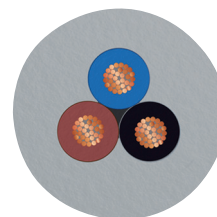
PUR halogen-free gray [280]

Cable cross section



PVC gray [500]

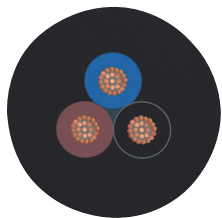
Cable cross section



Gray, highly flexible PUR [800]

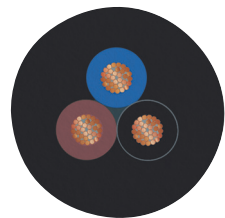
# Sensor/actuator cable - SAC-3P-M12MR-M 8FR/.../... - 1696905

Cable cross section



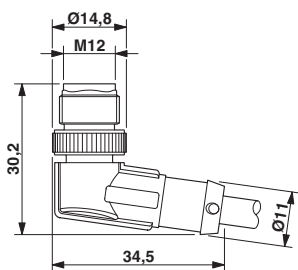
PUR halogen-free black [PUR]

Cable cross section



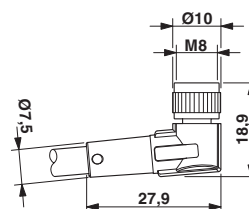
PVC black [PVC]

Dimensional drawing



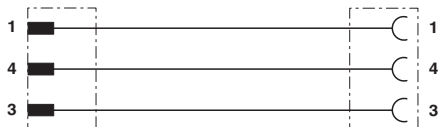
M12 x 1 male plug, angled

Dimensional drawing

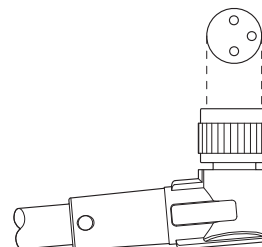


Socket M8 x 1, angled

Circuit diagram



Schematic diagram



Contact assignment of M12 plugs / M8 sockets

Layout of connector pin assignments

## Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27060311 |
| eCl@ss 11.0   | 27060311 |
| eCl@ss 4.0    | 27060300 |
| eCl@ss 4.1    | 27060300 |
| eCl@ss 5.0    | 27061800 |
| eCl@ss 5.1    | 27061800 |
| eCl@ss 6.0    | 27279200 |
| eCl@ss 7.0    | 27279218 |
| eCl@ss 9.0    | 27060311 |

# Sensor/actuator cable - SAC-3P-M12MR-M 8FR/.../... - 1696905

## Classifications

### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC000830 |
| ETIM 3.0 | EC001855 |
| ETIM 4.0 | EC001855 |
| ETIM 6.0 | EC001855 |
| ETIM 7.0 | EC001855 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 31251501 |
| UNSPSC 7.0901 | 31251501 |
| UNSPSC 11     | 31251501 |
| UNSPSC 12.01  | 31251501 |
| UNSPSC 13.2   | 31251501 |
| UNSPSC 19.0   | 31251501 |
| UNSPSC 20.0   | 31251501 |
| UNSPSC 21.0   | 31251501 |

## Approvals

### Approvals

#### Approvals

UL Listed / cUL Listed / EAC-RoHS / EAC / cULus Listed

#### Ex Approvals

### Approval details

|                    |      |   |               |
|--------------------|------|---|---------------|
| UL Listed          |      | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 221474 |
| Nominal voltage UN | 60 V |   |               |
| Nominal current IN | 4 A  |   |               |

|                    |      |   |               |
|--------------------|------|---|---------------|
| cUL Listed         |      | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 221474 |
| Nominal voltage UN | 60 V |   |               |
| Nominal current IN | 4 A  |   |               |

# Sensor/actuator cable - SAC-3P-M12MR-M 8FR/.../... - 1696905

## Approvals

|          |  |                          |
|----------|--|--------------------------|
| EAC-RoHS |  | RU D-<br>DE.HB35.B.00387 |
|----------|--|--------------------------|

|     |  |               |
|-----|--|---------------|
| EAC |  | EAC-Zulassung |
|-----|--|---------------|

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

## Accessories

### Accessories

#### Conductor marking

Insert label - PABA WH/23 - 1013779



Insert label, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: thread on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20

Insert label - PABA YE/23 - 1013782



Insert label, Strip, yellow, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: thread on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20

#### Marker pen

Marker pen - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

#### Plug for cable screw gland

## Sensor/actuator cable - SAC-3P-M12MR-M 8FR/.../... - 1696905

### Accessories

Screw plug - PROT-M 8 MS-PA-CHAIN - 1430860

M8 sealing cap made of plastic with fixing band for sensor cables, for M8 sockets



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### Protective cap

Sealing cap - PROT-M12 FS-PA-CHAIN - 1430873

M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs



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### Safety locking

Locking clip - SAC-M12-EXCLIP-M - 1558988



Locking clip for the pin side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools

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### Screwdriver tools

Tool - SAC BIT M8-D10 - 1208461



Nut for assembling M8 connectors with longitudinal knurl and a knurl diameter of 10 mm, for 4 mm hexagonal drive

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Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

## Sensor/actuator cable - SAC-3P-M12MR-M 8FR/.../... - 1696905

### Accessories

Tool - SAC BIT M12-D15 - 1208432



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive

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### Torque tool

Torque screwdriver - TSD 02 SAC - 1208487



Torque screwdriver, with preset torque of 0.2 Nm and 4 mm hexagonal drive for M8 connectors

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Torque screwdriver - TSD 04 SAC - 1208429



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

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Torque screwdriver - TSD-M 1,2NM - 1212224



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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