



**Automatización Eléctrica**  
Especialistas en Automatización

At the end of this document you will find links to products related to this catalog. You can go directly to our shop by clicking [HERE](#). [HERE](#)

## Sensor/Actuator cable - SAC-3P-M12MS/ 0,6-800/M12FS - 1456789

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's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Sensor/Actuator cable, 3-position, PUR, gray RAL 7001, Plug straight M12, A-coded, on Socket straight M12, A-coded, 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

### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 1 STK                                                                                                   |
| GTIN         | <br>4 046356 593144 |

### 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                | 250 V                         |
| Number of positions          | 3                             |
| Insulation resistance        | ≥ 100 MΩ                      |
| Coding                       | A - standard                  |
| Standards/regulations        | M12 connector IEC 61076-2-101 |
| Status display               | No                            |
| Protective circuit/component | Unwired                       |
| Overvoltage category         | II                            |
| Degree of pollution          | 3                             |

# Sensor/Actuator cable - SAC-3P-M12MS/ 0,6-800/M12FS - 1456789

## Technical data

### General

|                             |                        |
|-----------------------------|------------------------|
| 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                                      | Gray, highly flexible PUR                                                                        |
| Cable type (abbreviation)                       | 800                                                                                              |
| Cable abbreviation                              | Li12Y11Y-HF                                                                                      |
| UL AWM style                                    | 20233                                                                                            |
| Conductor cross section                         | 3x 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                                     | brown, blue, black                                                                               |
| Overall twist                                   | 3 wires, twisted                                                                                 |
| External sheath, color                          | gray RAL 7001                                                                                    |
| External cable diameter D                       | 4.5 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                                                                                            |

## Sensor/Actuator cable - SAC-3P-M12MS/ 0,6-800/M12FS - 1456789

### Technical data

#### Cable

|                                 |                                                                                                                                    |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Acceleration                    | 30 m/s <sup>2</sup>                                                                                                                |
| Torsion force                   | ± 360 °/m (10,000,000 torsion cycles)                                                                                              |
| Cable weight                    | 28.3 kg/km                                                                                                                         |
| Outer sheath, material          | PUR                                                                                                                                |
| Material conductor insulation   | PES                                                                                                                                |
| Conductor material              | Bare Cu litz wires                                                                                                                 |
| Insulation resistance           | ≥ 20 MΩ*km                                                                                                                         |
| Conductor resistance            | approx. 53 Ω/km                                                                                                                    |
| Nominal voltage, cable          | 300 V                                                                                                                              |
| Test voltage, cable             | 2000 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                | According to IEC 60332-1-2                                                                                                         |
|                                 | According to UL 758/1581 VW-1                                                                                                      |
|                                 | According to UL 758/1581 FT1                                                                                                       |
| Halogen-free                    | in accordance with DIN VDE 0472 part 815                                                                                           |
| Resistance to oil               | According to HD 22.10                                                                                                              |
|                                 | in accordance with DIN EN 60811-404 (external sheath)                                                                              |
| Other resistance                | Highly resistant to acids, alkaline solutions and solvents                                                                         |
|                                 | Silicone-free                                                                                                                      |
| 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 | 27061801 |
| eCl@ss 7.0 | 27061801 |
| eCl@ss 8.0 | 27279218 |

#### ETIM

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

# Sensor/Actuator cable - SAC-3P-M12MS/ 0,6-800/M12FS - 1456789

## Classifications

### UNSPSC

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

## Approvals

### Approvals

#### Approvals

UL Listed / cUL Listed / EAC / cULus Listed

#### Ex Approvals

#### Approvals submitted

## Approval details

|                    |       |
|--------------------|-------|
| UL Listed          |       |
| Nominal current IN | 4 A   |
| Nominal voltage UN | 300 V |

|                    |       |
|--------------------|-------|
| cUL Listed         |       |
| Nominal current IN | 4 A   |
| Nominal voltage UN | 300 V |

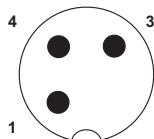
|     |
|-----|
| EAC |
|-----|

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

# Sensor/Actuator cable - SAC-3P-M12MS/ 0,6-800/M12FS - 1456789

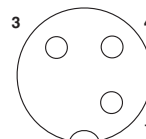
## Drawings

Schematic diagram



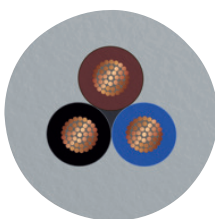
Pin assignment M12 plug, 3-pos., A-coded, view male side

Schematic diagram



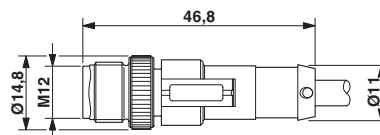
Pin assignment socket M 12

Cable cross section



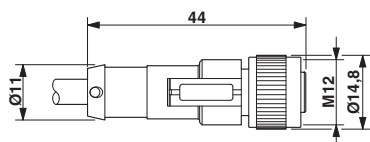
Gray, highly flexible PUR [800]

Dimensional drawing



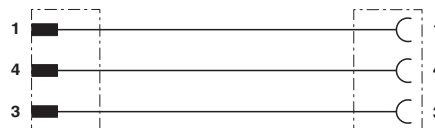
M12 x 1 plug, straight

Dimensional drawing



M12 x 1 socket, straight

Circuit diagram



Contact assignment of the M12 plug and the M12 socket



Below is a list of articles with direct links to our shop Electric Automation Network where you can see:

- Quote per purchase volume in real time.
- Online documentation and datasheets of all products.
- Estimated delivery time enquiry in real time.
- Logistics systems for the shipment of materials almost anywhere in the world.
- Purchasing management, order record and tracking of shipments.

To access the product, [click on the green button.](#)

| Product                                                                                                                                                             | Code    | Reference                      | Product link               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------------------------------|----------------------------|
| Sensor/Actuator cable, 3-position, PUR, gray RAL 7001, Plug straight M12, A-coded, on Socket straight M12, A-coded, Cable length: 0.6 m, for robots and drag chains | 1456789 | SAC-3P-M12MS/<br>0,6-800/M12FS | <a href="#">Buy on EAN</a> |