

Sensor/actuator cable - SAC-8P-M12MS-M12FS SH/.../... - 1523007

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Sensor/actuator cable, 8-position, Variable cable type, shielded, Plug straight M12, A-coded, on Socket straight M12, A-coded, 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
- ✓ Reliable signal transmission – 360° shielding in environments with electromagnetic interference

Key Commercial Data

| | |
|------------------------|-------|
| Packing unit | 1 pc |
| Minimum order quantity | 25 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) |
| Degree of protection | IP65/IP67/IP69K |

General

| | |
|------------------------------|-------------------------------|
| Rated current at 40°C | 2 A |
| Rated voltage | 30 V AC |
| | 30 V DC |
| Number of positions | 8 |
| 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 |

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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 | CuZn |
| 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

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

PUR halogen-free black [PUR]

| | |
|---|--|
| Cable type | PUR halogen-free black |
| Cable type (abbreviation) | PUR |
| Cable abbreviation | LiF9YC11Y |
| UL AWM style | 20549 / 10493 (80°C/300 V) |
| Conductor cross section | 8x 0.25 mm ² (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 | approx. 0.2 mm |
| Wire colors | Brown, white, green, yellow, gray, pink, blue, red |
| Overall twist | 8 wires around filler to the core |
| Shielding | Tinned copper braided shield |
| Optical shield covering | 85 % |
| External sheath, color | black-gray RAL 7021 |
| Outer sheath thickness | approx. 0.5 mm |
| External cable diameter D | 5.9 mm ±0.2 mm |
| Minimum bending radius, fixed installation | 5 x D |
| Minimum bending radius, flexible installation | 10 x D |
| Number of bending cycles | 2000000 |
| Minimum bending radius, drag chain applications | 10 x D |

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Technical data

PUR halogen-free black [PUR]

| | |
|---------------------------------|--|
| Traversing path | 10 m |
| Traversing rate | 3 m/s |
| Acceleration | 10 m/s ² |
| Cable weight | 53 kg/km |
| Outer sheath, material | PUR |
| Material conductor insulation | PP |
| Conductor material | Bare Cu litz wires |
| Insulation resistance | ≥ 1 GΩ*km (at 20 °C) |
| Conductor resistance | ≤ 78 Ω/km (at 20 °C) |
| Nominal voltage, cable | ≤ 300 V AC |
| Test voltage, cable | ≥ 3000 V AC (Spark test) |
| Test voltage Core/Shield | ≥ 2000 V AC (for 60 s) |
| Special properties | Flexible cable conduit capable |
| Flame resistance | in acc. with UL FT-2 |
| | according to UL 758/1581 (horizontal) |
| | in accordance with UL 758/1581 FT2 |
| | According to DIN EN 60332-2-2 (20 s) |
| Halogen-free | in accordance with DIN VDE 0472 part 815 |
| | in accordance with DIN EN 50267-2-1 |
| Other resistance | hydrolysis and microbe resistant |
| | Resistant to salt water |
| | Low adhesion |
| | Low adhesion |
| | partly UV-resistant in accordance with DIN EN ISO 4892-2-A |
| 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 | LiY-FC11Y |
| UL AWM style | 20549 / 10493 (80°C/300 V) |
| Conductor cross section | 8x 0.25 mm ² (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 | approx. 0.2 mm |
| Wire colors | Brown, white, green, yellow, gray, pink, blue, red |
| Overall twist | 8 wires around filler to the core |
| Shielding | Tinned copper braided shield |
| Optical shield covering | 85 % |

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Technical data

PUR halogen-free gray [280]

| | |
|---|---|
| External sheath, color | gray RAL 7001 |
| Outer sheath thickness | approx. 0.5 mm |
| External cable diameter D | 5.9 mm ±0.2 mm |
| Minimum bending radius, fixed installation | 5 x D |
| Minimum bending radius, flexible installation | 10 x D |
| Number of bending cycles | 2000000 |
| Minimum bending radius, drag chain applications | 10 x D |
| Traversing path | 10 m |
| Traversing rate | 3 m/s |
| Acceleration | 10 m/s ² |
| Cable weight | 53 kg/km |
| Outer sheath, material | PUR |
| Material conductor insulation | PP |
| Conductor material | Bare Cu litz wires |
| Insulation resistance | ≥ 1 GΩ*km (at 20 °C) |
| Conductor resistance | ≤ 78 Ω/km (at 20 °C) |
| Nominal voltage, cable | ≤ 300 V AC |
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| Special properties | Flexible cable conduit capable |
| Flame resistance | in acc. with UL FT-2 |
| | according to UL 758/1581 (horizontal) |
| | in accordance with UL 758/1581 FT2 |
| | According to DIN EN 60332-2-2 (20 s) |
| Halogen-free | in accordance with DIN VDE 0472 part 815 |
| | in accordance with DIN EN 50267-2-1 |
| Other resistance | hydrolysis and microbe resistant |
| | Resistant to salt water |
| | Low adhesion |
| | Low adhesion |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation) |
| | -25 °C ... 80 °C (cable, flexible installation) |

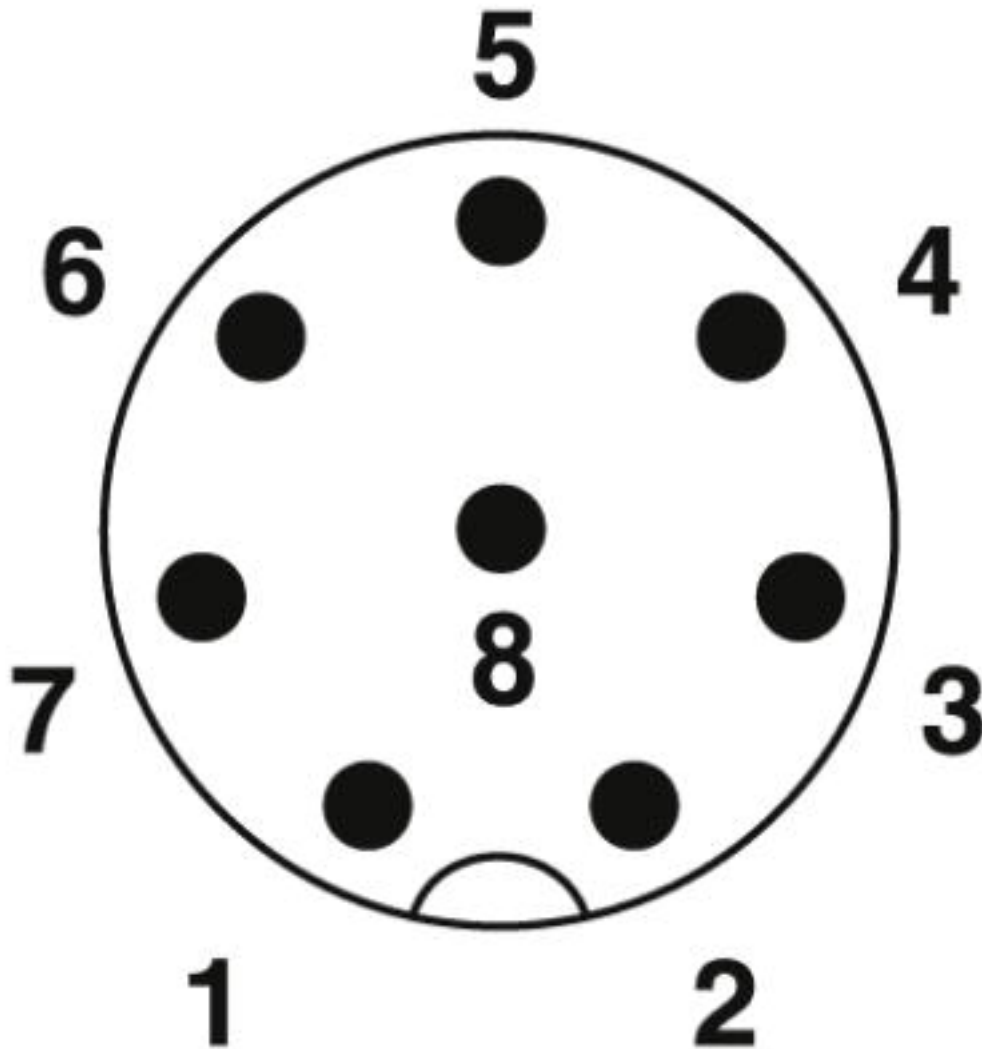
Environmental Product Compliance

| | |
|------------|---|
| REACH SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally Friendly Use Period = 50 |
| | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

Drawings

Sensor/actuator cable - SAC-8P-M12MS-M12FS SH/.../... - 1523007

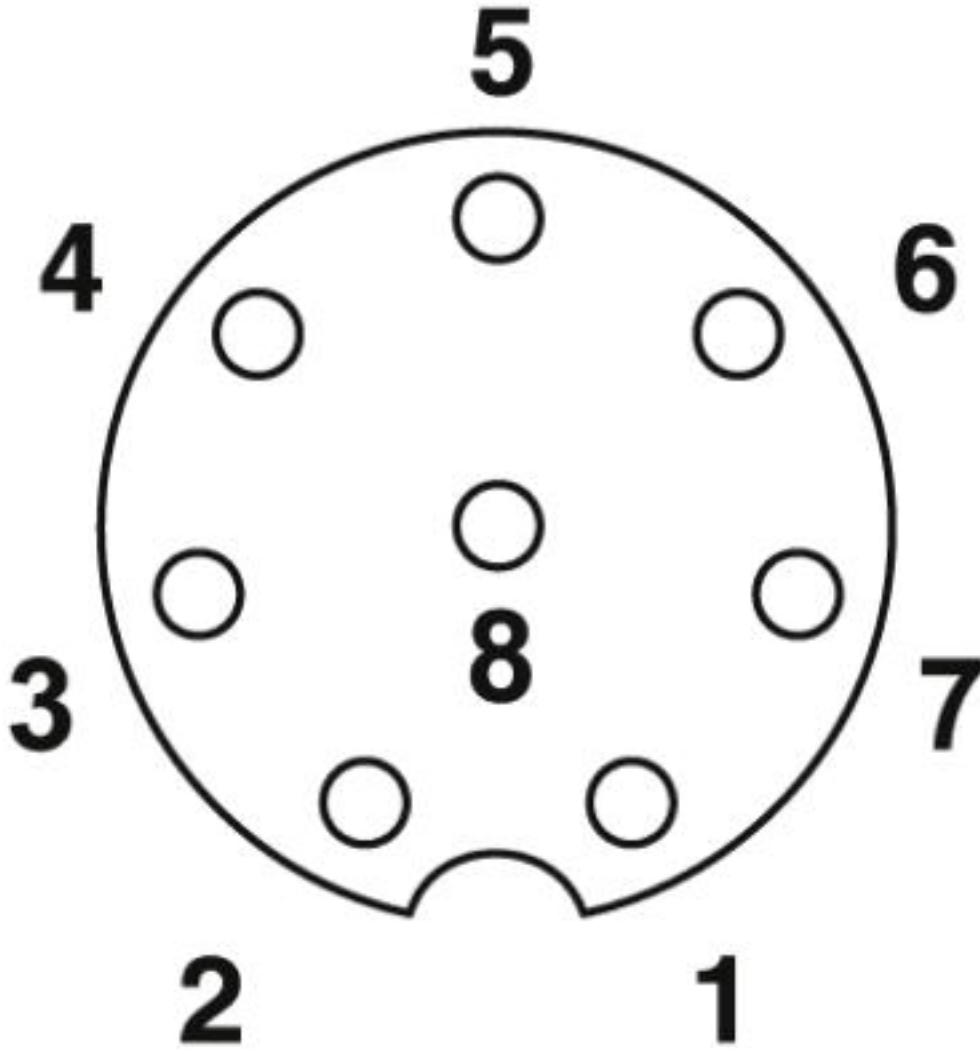
Schematic diagram



Pin assignment M12 plug, 8-pos., view plug side

Sensor/actuator cable - SAC-8P-M12MS-M12FS SH/.../... - 1523007

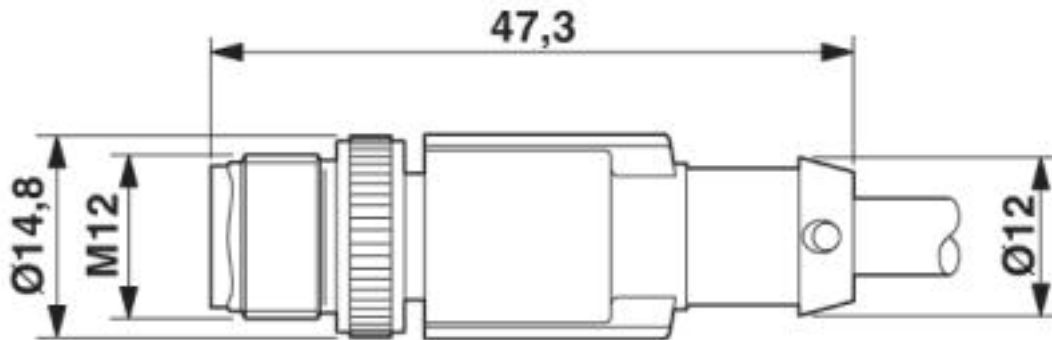
Schematic diagram



Pin assignment M12 socket, 8-pos., A-coded, view female side

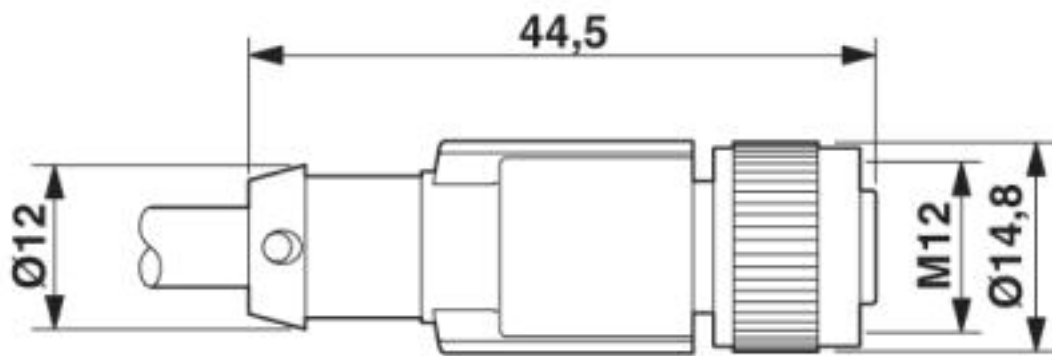
Sensor/actuator cable - SAC-8P-M12MS-M12FS SH/.../... - 1523007

Dimensional drawing



Plug, M12 x 1, straight, shielded

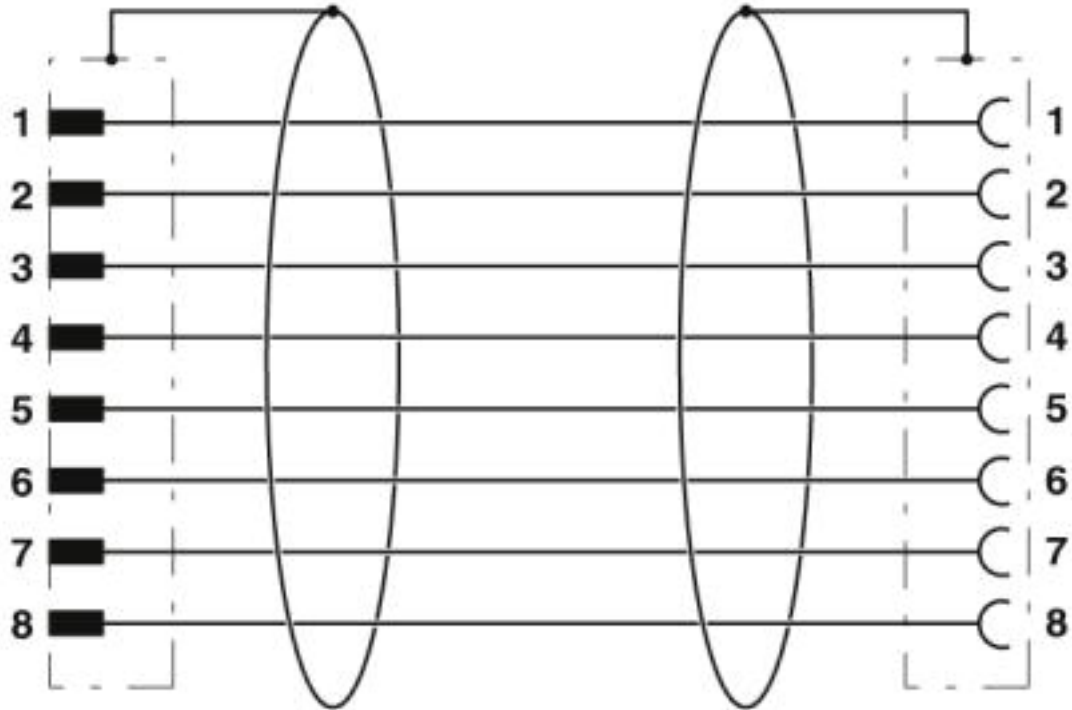
Dimensional drawing



M12 x 1 socket, straight, shielded

Sensor/actuator cable - SAC-8P-M12MS-M12FS SH/.../... - 1523007

Circuit diagram



Contact assignment of the M12 plug and the M12 socket

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Cable cross section



PUR halogen-free black [PUR]

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Cable cross section



PUR halogen-free gray [280]

Approvals

Approvals

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UL Listed / cUL Listed / EAC / cULus Listed


Ex Approvals

Approval details


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Approvals

| | | | |
|--------------------|---|---|---------------|
| UL Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 221474 |
| | | | |
| Nominal voltage UN | | 30 V | |
| Nominal current IN | | 2 A | |

| | | | |
|--------------------|---|---|---------------|
| cUL Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 221474 |
| | | | |
| Nominal voltage UN | | 30 V | |
| Nominal current IN | | 2 A | |

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

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

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