

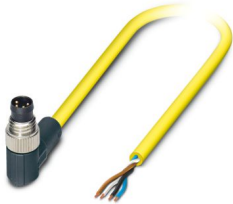
# SAC-4P-M8MR/10,0-542 BK - Sensor/actuator cable



1406212

<https://www.phoenixcontact.com/us/products/1406212>

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Sensor/actuator cable, 4-position, PVC, yellow, Plug angled M8, on free cable end, cable length: 10 m

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1406212                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF13                           |
| Product key                          | AF1IAB                         |
| GTIN                                 | 4046356798389                  |
| Weight per piece (including packing) | 257.7 g                        |
| Weight per piece (excluding packing) | 247.5 g                        |
| Customs tariff number                | 85444290                       |
| Country of origin                    | US                             |

# SAC-4P-M8MR/10,0-542 BK - Sensor/actuator cable



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## Technical data

### Product properties

|                      |                       |
|----------------------|-----------------------|
| Product type         | Sensor/actuator cable |
| Application          | Standard, U.S. cables |
| Number of positions  | 4                     |
| No. of cable outlets | 1                     |
| Shielded             | no                    |
| Coding               | A                     |

### Insulation characteristics

|                      |    |
|----------------------|----|
| Overvoltage category | II |
| Degree of pollution  | 3  |

### Material specifications

|                                        |                                             |
|----------------------------------------|---------------------------------------------|
| Flammability rating according to UL 94 | HB                                          |
| Material of grip body                  | TPU, hardly inflammable, self-extinguishing |
| Contact material                       | CuSn                                        |
| Contact surface material               | Ni/Au                                       |
| Contact carrier material               | TPU GF                                      |
| Material for screw connection          | Zinc die-cast, nickel-plated                |
| Outer sheath, material                 | PVC                                         |

### Electrical properties

|                       |                            |
|-----------------------|----------------------------|
| Insulation resistance | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage $U_N$ | 48 V AC                    |
|                       | 60 V DC                    |
| Nominal current $I_N$ | 4 A                        |

### Mechanical properties

#### Mechanical data

|                             |            |
|-----------------------------|------------|
| Insertion/withdrawal cycles | $\geq 100$ |
|-----------------------------|------------|

### Signaling

|                        |    |
|------------------------|----|
| Status display         | no |
| Status display present | no |

### Connection data

#### Conductor connection

|                   |                        |
|-------------------|------------------------|
| Tightening torque | 0.2 Nm (M8 connectors) |
|-------------------|------------------------|

### Connector

#### Connection 1

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|      |                |
|------|----------------|
| Type | Plug angled M8 |
|------|----------------|

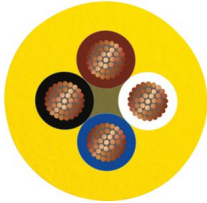
## Connection 2

|      |                |
|------|----------------|
| Type | free cable end |
|------|----------------|

## Cable/line

|              |      |
|--------------|------|
| Cable length | 10 m |
|--------------|------|

PVC yellow 105 °C [542]

|                                               |                                                                                                  |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------|
| Dimensional drawing                           |                |
| Cable weight                                  | 25 kg/km                                                                                         |
| UL AWM Style                                  | 2517 (105 °C / 300 V)                                                                            |
| Number of positions                           | 4                                                                                                |
| Shielded                                      | no                                                                                               |
| Cable type                                    | PVC yellow 105 °C [542]                                                                          |
| Conductor structure signal line               | 7x 0.20 mm                                                                                       |
| AWG signal line                               | 24                                                                                               |
| Wire diameter incl. insulation                | 1.12 mm ±0.03 mm                                                                                 |
| External cable diameter                       | 4.40 mm ±0.2 mm                                                                                  |
| Outer sheath, material                        | PVC                                                                                              |
| External sheath, color                        | yellow                                                                                           |
| Conductor material                            | Tin-plated Cu litz wires                                                                         |
| Material wire insulation                      | PVC                                                                                              |
| Single wire, color                            | brown, blue, black, white                                                                        |
| Overall twist                                 | 4 wires, twisted                                                                                 |
| Max. conductor resistance                     | max. 79.7 Ω/km (20 °C)                                                                           |
| Insulation resistance                         | ≥ (550 M Ohms/m @ 500V)                                                                          |
| Nominal voltage, cable                        | 300 V                                                                                            |
| Minimum bending radius, flexible installation | 8 x D                                                                                            |
| Smallest bending radius, movable installation | 36 mm                                                                                            |
| Flame resistance                              | FT4                                                                                              |
| Other resistance                              | UV resistant                                                                                     |
| Ambient temperature (operation)               | -30 °C ... 105 °C (cable, fixed installation)<br>-5 °C ... 105 °C (Cable, flexible installation) |

## Environmental and real-life conditions

Ambient conditions

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|                                                                   |                                                |
|-------------------------------------------------------------------|------------------------------------------------|
| Degree of protection                                              | IP65                                           |
|                                                                   | IP67                                           |
|                                                                   | IP68                                           |
| Ambient temperature (operation) (male connector/female connector) | -25 °C ... 90 °C (Plug / socket)               |
| Ambient temperature (operation) (Cable, fixed installation)       | -40 °C ... 80 °C (cable, fixed installation)   |
| Ambient temperature (operation) (Cable, flexible installation)    | -5 °C ... 80 °C (Cable, flexible installation) |

## Standards and regulations

### M8

|                          |                 |
|--------------------------|-----------------|
| Standard designation     | M8 connector    |
| Standards/specifications | IEC 61076-2-104 |

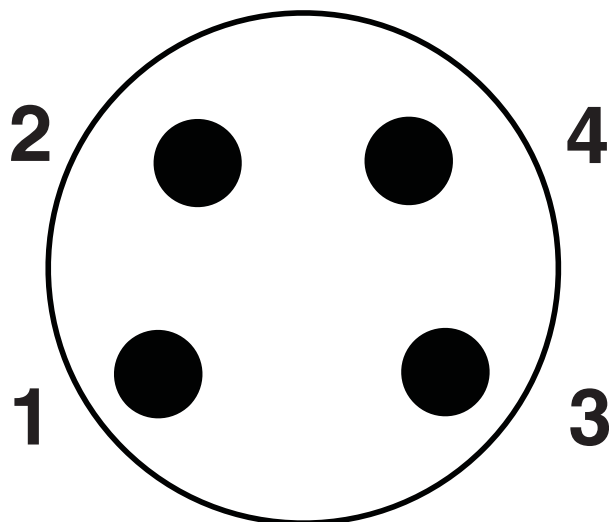
## Drawings

Dimensional drawing



M8 x 1 male plug, angled version

Schematic diagram



Pin assignment M8 plug, 4-pos., view male side

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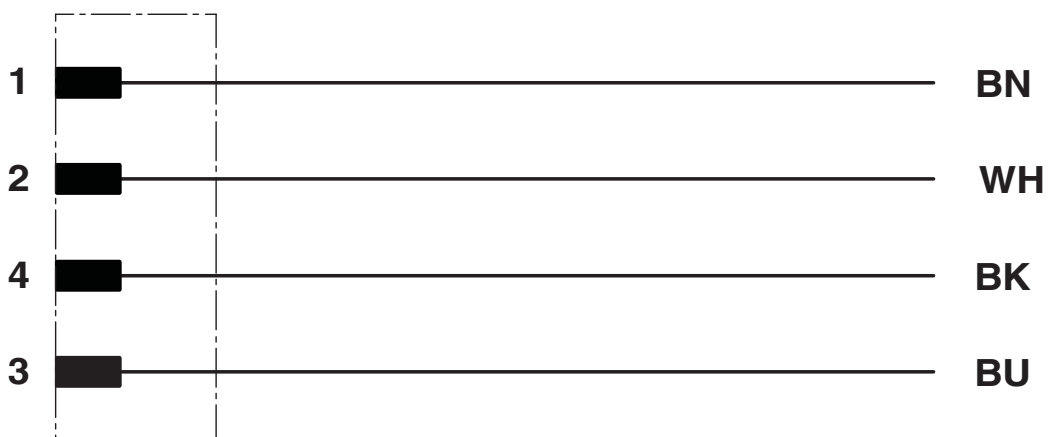
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Schematic diagram



Layout of connector pin assignments

Circuit diagram



Contact assignment of the M8 plug

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1406212>

|                                                                                                                                  |                                |                                |                   |                               |
|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------|-------------------|-------------------------------|
|  <b>UL Listed</b><br>Approval ID: FILE E 221474 |                                |                                |                   |                               |
|                                                                                                                                  | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
| keine                                                                                                                            |                                |                                |                   |                               |
|                                                                                                                                  | 30 V                           | 4 A                            | -                 | -                             |

|                                                                                                                                   |                                |                                |                   |                               |
|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------|-------------------|-------------------------------|
|  <b>cUL Listed</b><br>Approval ID: FILE E 221474 |                                |                                |                   |                               |
|                                                                                                                                   | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
| keine                                                                                                                             |                                |                                |                   |                               |
|                                                                                                                                   | 30 V                           | 4 A                            | -                 | -                             |

|                                                                                                                                          |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|  <b>EAC-RoHS</b><br>Approval ID: RU D-DE.HB35.B.00387 |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27060311 |
| ECLASS-15.0 | 27060311 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001855 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 26121600 |
|-------------|----------|

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## Environmental product compliance

### EU RoHS

|                                         |                    |
|-----------------------------------------|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|-----------------------------------------|--------------------|

### China RoHS

|                                        |                                          |
|----------------------------------------|------------------------------------------|
| Environment friendly use period (EFUP) | EFUP-E                                   |
|                                        | No hazardous substances above the limits |

### EU REACH SVHC

|                                     |                            |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

### EF3.0 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 2.528 kg CO2e |
|---------|---------------|

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