

# SAC-3P-M 8MS/ 0,3-PVC/M 8FS - Sensor/actuator cable



1415877

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Sensor/actuator cable, 3-position, PVC, black RAL 9005, Plug straight M8, coding: A, on Socket straight M8, coding: A, cable length: 0.3 m

## Your advantages

- Easy and safe: 100 % electrically tested plug-in components

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1415877       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BF01          |
| Product key                          | AF1BBA        |
| GTIN                                 | 4055626054483 |
| Weight per piece (including packing) | 17.4 g        |
| Weight per piece (excluding packing) | 15.143 g      |
| Customs tariff number                | 85444290      |
| Country of origin                    | DE            |

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## Technical data

### Product properties

|                      |                       |
|----------------------|-----------------------|
| Product type         | Sensor/actuator cable |
| Application          | Standard              |
| Number of positions  | 3                     |
| 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                                          |
| Seal material                          | NBR                                         |
| 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                |

### 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 |

### Connector

#### Connection 1

|                     |                  |
|---------------------|------------------|
| Type                | Plug straight M8 |
| Number of positions | 3                |
| Coding type         | A                |

#### Connection 2

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|                     |                    |
|---------------------|--------------------|
| Type                | Socket straight M8 |
| Number of positions | 3                  |
| Coding type         | A                  |

## Cable/line

|              |       |
|--------------|-------|
| Cable length | 0.3 m |
|--------------|-------|

## PVC black [PVC]

|                                             |                                                                                                 |
|---------------------------------------------|-------------------------------------------------------------------------------------------------|
| Dimensional drawing                         |               |
| Cable weight                                | 29 kg/km                                                                                        |
| Number of positions                         | 3                                                                                               |
| Shielded                                    | no                                                                                              |
| Cable type                                  | PVC black [PVC]                                                                                 |
| Conductor structure signal line             | 14x 0.15 mm                                                                                     |
| AWG signal line                             | 24                                                                                              |
| Conductor cross section                     | 3x 0.25 mm² (Signal line)                                                                       |
| Wire diameter incl. insulation              | 1.17 mm ±0.05 mm                                                                                |
| External cable diameter                     | 4.20 mm ±0.15 mm                                                                                |
| Outer sheath, material                      | PVC                                                                                             |
| External sheath, color                      | black RAL 9005                                                                                  |
| Conductor material                          | Bare Cu litz wires                                                                              |
| Material wire insulation                    | PVC                                                                                             |
| Single wire, color                          | brown, blue, black                                                                              |
| Thickness, insulation                       | ≥ 0.23 mm (Core insulation)                                                                     |
| Thickness, outer sheath                     | ≥ 0.76 mm                                                                                       |
| Overall twist                               | 3 wires, twisted                                                                                |
| Max. conductor resistance                   | max. 79 Ω/km (at 20 °C)                                                                         |
| Insulation resistance                       | ≥ 100 MΩ*km (at 20 °C)                                                                          |
| Nominal voltage, cable                      | ≥ 300 V                                                                                         |
| Test voltage                                | ≤ 3000 V                                                                                        |
| Smallest bending radius, fixed installation | 13 mm                                                                                           |
| Flame resistance                            | As per UL-Style 2464                                                                            |
| Resistance to oil                           | EN 60811-2-1                                                                                    |
| Ambient temperature (operation)             | -25 °C ... 80 °C (cable, fixed installation)<br>-10 °C ... 80 °C (Cable, flexible installation) |

## Environmental and real-life conditions

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## Ambient conditions

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

## Standards and regulations

### M8

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

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## Drawings

Dimensional drawing



M8 x 1 male plug, straight version

Dimensional drawing



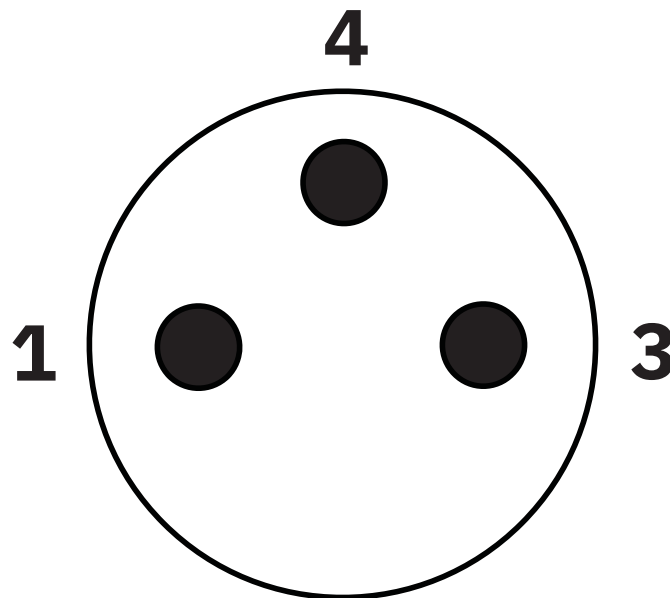
Socket M8 x 1, straight

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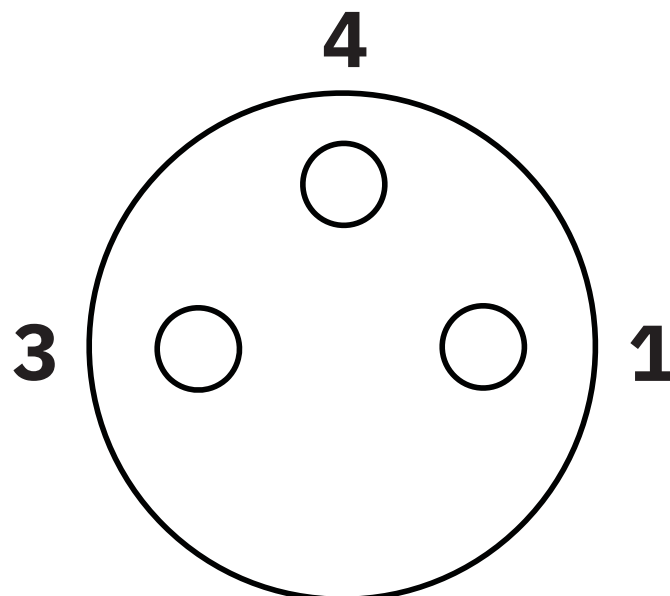
<https://www.phoenixcontact.com/us/products/1415877>

Schematic diagram



Pin assignment M8 plug, 3-pos., view male side

Schematic diagram



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

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Circuit diagram



Contact assignment of M8 plugs/sockets

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## Approvals

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|  <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                                                                                                                            |                                |                                |                   |                               |
|                                                                                                                                  | 60 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                                                                                                                             |                                |                                |                   |                               |
|                                                                                                                                   | 60 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                                 | 0.153 kg CO2e                            |

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