

SAC-5P-M 8MSB/ 1,5-115/M 8FSB - Sensor/actuator cable



1404481  
<https://www.phoenixcontact.com/sg/products/1404481>

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Sensor/actuator cable, 5-position, PUR halogen-free, black-gray RAL 7021, Plug straight M8, coding: B, on Socket straight M8, coding: B, cable length: 1.5 m

Your advantages

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

Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1404481             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | *****               |
| Product key                          | BF1BDA              |
| Catalog page                         | Page 200 (C-2-2019) |
| GTIN                                 | 4046356697187       |
| Weight per piece (including packing) | 53.9 g              |
| Weight per piece (excluding packing) | 52.7 g              |
| Customs tariff number                | 85444290            |
| Country of origin                    | PL                  |

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## Technical data

### Product properties

|                      |                       |
|----------------------|-----------------------|
| Product type         | Sensor/actuator cable |
| Application          | Standard              |
| Number of positions  | 5                     |
| No. of cable outlets | 1                     |
| Shielded             | no                    |
| Coding               | B                     |

### 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 $U_N$ | 30 V AC                    |
|                       | 30 V DC                    |
| Nominal current $I_N$ | 3 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 straight M8 |
| Number of positions | 5                |
| Coding type         | B                |

## Connection 2

|                     |                    |
|---------------------|--------------------|
| Type                | Socket straight M8 |
| Number of positions | 5                  |
| Coding type         | B                  |

## Cable/line

|              |       |
|--------------|-------|
| Cable length | 1.5 m |
|--------------|-------|

## PUR, black, 5th conductor gray [115]

|                                               |                                          |
|-----------------------------------------------|------------------------------------------|
| Cable weight                                  | 30 kg/km                                 |
| UL AWM Style                                  | 20549                                    |
| Number of positions                           | 5                                        |
| Shielded                                      | no                                       |
| Cable type                                    | PUR, black, 5th conductor gray [115]     |
| Conductor structure signal line               | 32x 0.10 mm                              |
| AWG signal line                               | 24                                       |
| Conductor cross section                       | 0.25 mm²                                 |
| Wire diameter incl. insulation                | 1.17 mm ±0.02 mm                         |
| External cable diameter                       | 4.70 mm ±0.15 mm                         |
| Outer sheath, material                        | PUR                                      |
| External sheath, color                        | black-gray RAL 7021                      |
| Conductor material                            | Bare Cu litz wires                       |
| Material, filler                              | PP                                       |
| Material wire insulation                      | PP                                       |
| Single wire, color                            | brown, white, blue, black, gray          |
| Thickness, insulation                         | approx. 0.21 mm (Core insulation)        |
|                                               | approx. 0.70 mm (Outer cable sheath)     |
| Overall twist                                 | 5 cores, twisted                         |
| Length of twist, overall twist                | 75 mm                                    |
| Max. conductor resistance                     | ≤ 75 Ω/km                                |
| Insulation resistance                         | ≥ 1 GΩ*km                                |
| Nominal voltage, cable                        | ≤ 300 V (AC)                             |
| Test voltage                                  | ≥ 3000 V (AC)                            |
| Smallest bending radius, fixed installation   | 23.5 mm                                  |
| Smallest bending radius, movable installation | 47 mm                                    |
| Max. bending cycles                           | 4000000                                  |
| Bending radius                                | 47 mm                                    |
| Traversing path                               | 10 m                                     |
| Traversing rate                               | 3 m/s                                    |
| Acceleration                                  | 10 m/s²                                  |
| Halogen-free                                  | in accordance with DIN VDE 0472 part 815 |

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|                                 |                                                 |
|---------------------------------|-------------------------------------------------|
|                                 | in accordance with DIN EN 50267-2-1             |
| Flame resistance                | according to UL 758/1581 (horizontal)           |
|                                 | in accordance with UL 758/1581 FT2              |
| Resistance to oil               | According to DIN EN 60811-2-1, 168 h at 100°C   |
| Other resistance                | hydrolysis and microbe resistant                |
|                                 | Resistant to salt water                         |
|                                 | Low adhesion                                    |
|                                 | abrasion-resistant                              |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation)    |
|                                 | -25 °C ... 80 °C (Cable, flexible installation) |

## Environmental and real-life conditions

### Ambient conditions

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

## Standards and regulations

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

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## Drawings

Dimensional drawing



M8 x 1 male plug, straight version

Circuit diagram

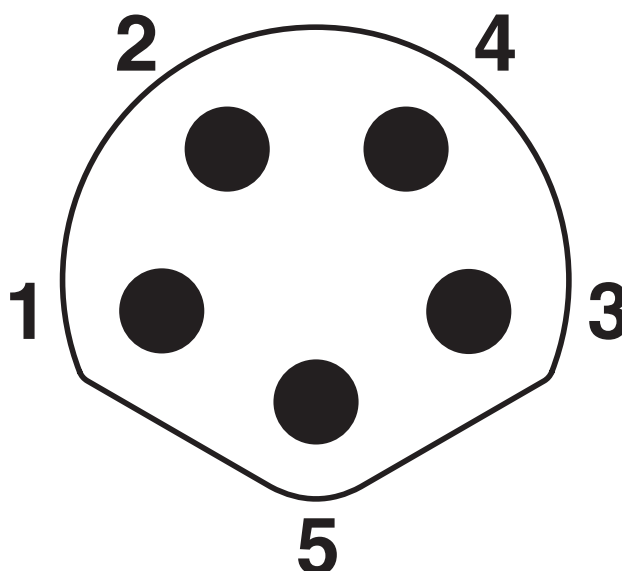


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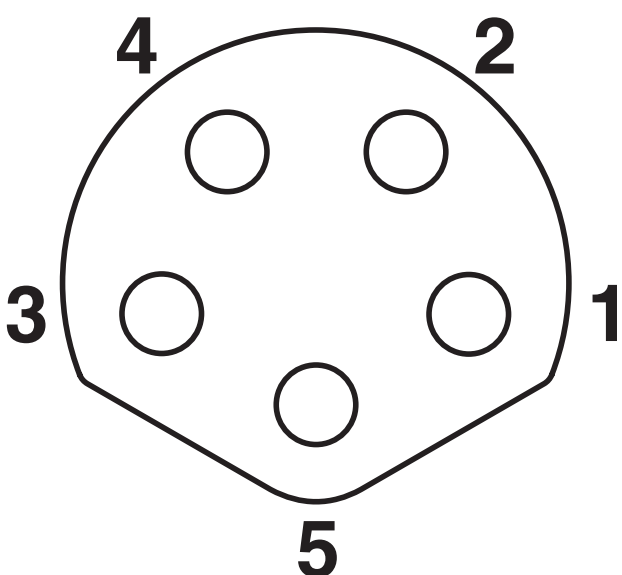
<https://www.phoenixcontact.com/sg/products/1404481>

Schematic diagram



Pin assignment, pin side, M8, 5-pos., B-coded

Schematic diagram



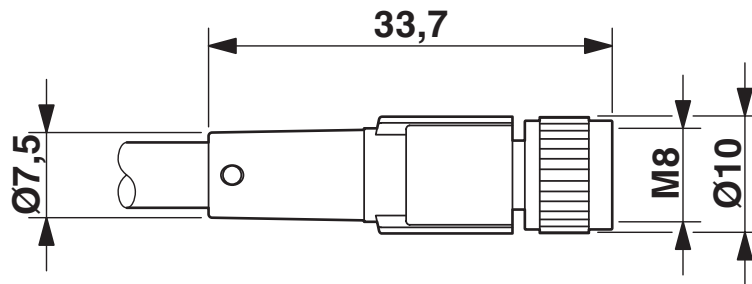
Pin assignment, socket side, M8, 5-pos., B-coded

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Dimensional drawing



Socket M8 x 1, straight

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/sg/products/1404481>

|                                                                                                                                              |                       |                       |                   |                             |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
| <div> <b>UL Listed</b><br/>Approval ID: FILE E 221474</div> |                       |                       |                   |                             |
|                                                                                                                                              | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|                                                                                                                                              | 30 V                  | 3 A                   | -                 | -                           |

|                                                                                                                                               |                       |                       |                   |                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
| <div> <b>cUL Listed</b><br/>Approval ID: FILE E 221474</div> |                       |                       |                   |                             |
|                                                                                                                                               | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|                                                                                                                                               | 30 V                  | 3 A                   | -                 | -                           |

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

|                     |  |  |  |  |
|---------------------|--|--|--|--|
| <b>cULus Listed</b> |  |  |  |  |
|---------------------|--|--|--|--|

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Classifications

ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27060311 |
| ECLASS-12.0 | 27060311 |
| ECLASS-13.0 | 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%               |

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