

# SAC-4P-M 8MS/20,0-950 - Bus system cable



1543281

<https://www.phoenixcontact.com/us/products/1543281>

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Bus system cable, INTERBUS, 4-position, PUR halogen-free, black RAL 9005, shielded, Plug straight M8, coding: A, on free cable end, cable length: 20 m

## Your advantages

- Power cable for actuator voltage
- System cable for supply voltage and bus signal

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1543281                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF02                           |
| Product key                          | AF1BJB                         |
| GTIN                                 | 4046356097444                  |
| Weight per piece (including packing) | 845.21 g                       |
| Weight per piece (excluding packing) | 812.6 g                        |
| Customs tariff number                | 85444290                       |
| Country of origin                    | PL                             |

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## Technical data

### Product properties

|                      |                         |
|----------------------|-------------------------|
| Product type         | Data cable preassembled |
| Application          | Standard                |
| Sensor type          | INTERBUS                |
| Number of positions  | 4                       |
| No. of cable outlets | 1                       |
| Shielded             | yes                     |
| Coding               | A                       |

### Insulation characteristics

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

### Interfaces

|                      |          |
|----------------------|----------|
| Bus system           | INTERBUS |
| Signal type/category | INTERBUS |

### Signaling

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

### Electrical properties

|                       |          |
|-----------------------|----------|
| Insulation resistance | ≥ 100 MΩ |
| Nominal voltage $U_N$ | 48 V AC  |
|                       | 60 V DC  |
| Nominal current $I_N$ | 4 A      |
| Test voltage          | 800 V    |
| Transmission medium   | Copper   |

### 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                |

### Connection data

#### Connection assignment

|   |                                       |
|---|---------------------------------------|
| Contact   Color (signal designation)   Contact (optional) | 1 (Plug)   RD (0.34 mm <sup>2</sup> ) |
|   | 3 (Plug)   BU (0.34 mm <sup>2</sup> ) |
|   | 2 (Plug)   YE (0.14 mm <sup>2</sup> ) |

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|  |                                       |
|--|---------------------------------------|
|  | 4 (Plug)   GN (0.14 mm <sup>2</sup> ) |
|--|---------------------------------------|

## Connector

### Connection 1

|                     |                  |
|---------------------|------------------|
| Type                | Plug straight M8 |
| Number of positions | 4                |
| Coding type         | A (Standard)     |

### Connection 2

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

## Cable/line

|              |      |
|--------------|------|
| Cable length | 20 m |
|--------------|------|

### INTERBUS [950]

|                                     |   |
|-------------------------------------|---|
| Cable weight                        | 41 kg/km  |
| UL AWM Style                        | 20963 (80°C/30 V)   |
| Number of positions                 | 4   |
| Shielded                            | yes   |
| Cable type                          | INTERBUS [950]  |
| Conductor structure                 | 2xAWG26/19+2xAWG22/19   |
| Conductor structure signal line     | 19x 0.10 mm   |
| AWG signal line                     | 26  |
| Conductor structure, voltage supply | 19x 0.15 mm   |
| AWG power supply                    | 22  |
| Conductor cross-section             | 2x 0.14 mm <sup>2</sup> (Signal line)<br>2x 0.34 mm <sup>2</sup> (Power supply)<br>1x 0.38 mm <sup>2</sup> (Drain wire) |
| Wire diameter incl. insulation      | 0.97 mm (Signal line)<br>1.25 mm (Power supply)   |
| External cable diameter             | 5.20 mm ±0.2 mm   |
| Outer sheath, material              | PUR   |
| External sheath, color              | black RAL 9005  |
| Conductor material                  | Tin-plated Cu litz wires  |
| Material wire insulation            | PP  |
| Single wire, color                  | red-blue, green-yellow  |
| Thickness, insulation               | 0.24 mm (Conductor insulation, signal line)<br>0.25 mm (Conductor insulation, voltage supply)                           |
| Thickness, outer sheath             | approx. 0.75 mm   |
| Twisted pairs                       | 2 cores to the pair   |
| Type of pair shielding              | Aluminum-lined polyester foil   |
| Overall twist                       | 2 pairs around a drain wire in the center to the core   |
| Optical shield covering             | 85 %  |
| Max. conductor resistance           | ≤ 150 Ω/km (Signal line)<br>≤ 58 Ω/km (Power supply)  |

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|   |   |
|---|---|
| Insulation resistance                         | $\geq 20 \text{ M}\Omega \cdot \text{km}$   |
| Wave impedance                                | $75 \Omega \pm 10 \Omega$ (Signal line)   |
|   | $55 \Omega \pm 10 \Omega$ (Power supply)  |
| Nominal voltage, cable                        | $\leq 100 \text{ V}$  |
| Test voltage Core/Core                        | 1000 V (50 Hz, 1 min.)  |
| Test voltage Core/Shield                      | 1000.00 V (50 Hz, 1 min.)   |
| Minimum bending radius, fixed installation    | 5 x D   |
| Minimum bending radius, flexible installation | 7.5 x D   |
| Smallest bending radius, fixed installation   | 26 mm   |
| Smallest bending radius, movable installation | 39 mm   |
| Dynamic load capacity (bending)               | Max. bending cycles: 1000000, Bending radius: 110 mm,<br>Traversing path: 6 m, Traversing rate: 4 m/s, Acceleration: 4 m/s <sup>2</sup> |
| Ambient temperature (operation)               | -40 °C ... 80 °C (cable, fixed installation)  |
|   | -40 °C ... 80 °C (Cable, flexible installation)   |

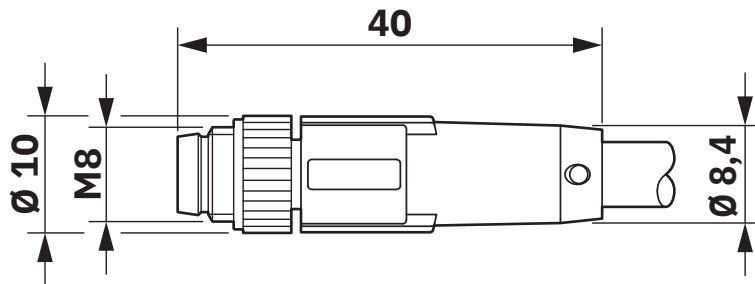
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## Drawings

Dimensional drawing



Plug M8 x 1, straight, shielded

Schematic diagram



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

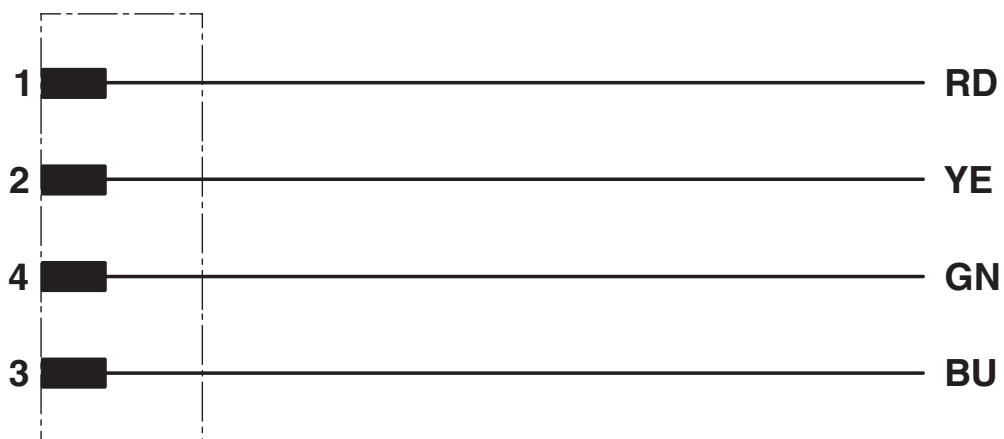
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Circuit diagram



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/1543281>



**EAC-RoHS**

Approval ID: RU D-DE.HB35.B.00387



**cULus Listed**

Approval ID: E221474

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27060307 |
| ECLASS-15.0 | 27060307 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | 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% |
|-------------------------------------|----------------------------|

### EF3.1 Climate Change

|         |                |
|---------|----------------|
| CO2e kg | 20.879 kg CO2e |
|---------|----------------|

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