

# SAC-2P-M12MSB/ 3,0-910/M12FSB - Bus system cable



1525445

<https://www.phoenixcontact.com/us/products/1525445>

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Bus system cable, PROFIBUS, 2-position, PUR halogen-free, red lilac RAL 4001, shielded, Plug straight M12, coding: B, on Socket straight M12, coding: B, cable length: 3 m

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1525445       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BF04          |
| Product key                          | AF1CKC        |
| GTIN                                 | 4017918950040 |
| Weight per piece (including packing) | 211.2 g       |
| Weight per piece (excluding packing) | 208 g         |
| Customs tariff number                | 85444290      |
| Country of origin                    | PL            |

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## Technical data

### Product properties

|                      |                         |
|----------------------|-------------------------|
| Product type         | Data cable preassembled |
| Sensor type          | PROFIBUS                |
| Number of positions  | 2                       |
| No. of cable outlets | 1                       |
| Shielded             | yes                     |
| Coding               | B                       |

### Insulation characteristics

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

### Interfaces

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

### Signaling

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

### Electrical properties

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

### Mechanical properties

#### Mechanical data

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

### Material specifications

|  |   |
|--|---|
| Flammability rating according to UL 94 | V0  |
| Seal material                          | NBR   |
| Material of grip body                  | TPU, hardly inflammable, self-extinguishing |
| Contact material                       | CuSn  |
| Contact surface material               | Ni/Au                                       |
| Contact carrier material               | PA 6.6                                      |
| Material for screw connection          | Zinc die-cast, nickel-plated                |

### Connector

Connection 1

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|                     |                   |
|---------------------|-------------------|
| Type                | Plug straight M12 |
| Number of positions | 2                 |
| Coding type         | B (inverse)       |

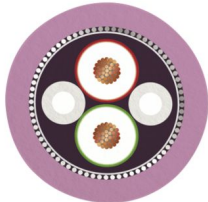
## Connection 2

|                     |                     |
|---------------------|---------------------|
| Type                | Socket straight M12 |
| Number of positions | 2                   |
| Coding type         | B                   |

## Cable/line

|              |     |
|--------------|-----|
| Cable length | 3 m |
|--------------|-----|

## PROFIBUS [910]

|   |  |
|---|--|
| Dimensional drawing                           |   |
| UL AWM Style                                  | 21198 (80°C/300 V)   |
| Number of positions                           | 2  |
| Shielded                                      | yes  |
| Cable type                                    | PROFIBUS [910]   |
| Conductor structure                           | 1x2xAWG24/19   |
| AWG signal line                               | 24   |
| Conductor cross-section                       | 2x 0.25 mm <sup>2</sup> (Signal line)  |
| Wire diameter incl. insulation                | 2.55 mm ±0.05 mm   |
| External cable diameter                       | 7.70 mm ±0.02 mm   |
| Outer sheath, material                        | PUR  |
| External sheath, color                        | red lilac RAL 4001   |
| Conductor material                            | Tin-plated Cu litz wires   |
| Single wire, color                            | red, green   |
| Overall twist                                 | 2 cores with 2 fillers to the core   |
| Optical shield covering                       | 80 %   |
| Insulation resistance                         | ≥ 5 GΩ*km  |
| Wave impedance                                | 150 Ω ±10 % (3 MHz ... 20 MHz)   |
| Nominal voltage, cable                        | ≤ 125 V  |
| Test voltage Core/Core                        | 2000 V (50 Hz, 1 min.)   |
| Test voltage Core/Shield                      | 2000.00 V (50 Hz, 1 min.)  |
| Minimum bending radius, fixed installation    | 4 x D  |
| Minimum bending radius, flexible installation | 8 x D  |
| Dynamic load capacity (bending)               | Max. bending cycles: 4000000, Bending radius: 65 mm, Bending radius: 15 x D, Traversing path: 4.5 m, Traversing rate: 3 m/s, |

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|                                 |  |
|---------------------------------|--|
|                                 | Acceleration: 3 m/s <sup>2</sup>                         |
| Shield attenuation              | ≤ 4.9 dB (at 16 MHz)                                     |
|                                 | ≤ 4.9 dB (at 4 MHz)                                      |
|                                 | ≤ 0.5 dB (at 38.4 kHz)                                   |
|                                 | ≤ 0.3 dB (at 9.6 kHz)                                    |
| Halogen-free                    | in accordance with DIN VDE 0472 part 815                 |
|                                 | according to IEC 60754-1                                 |
| Flame resistance                | UL 1581, Section 1060 and UL 2556, Section 9.3 (FT1)     |
|                                 | UL 1581, Section 1100 and UL 2556, Section 9.1 (HFT/FT2) |
|                                 | IEC 60332-1-2  |
| Resistance to oil               | in accordance with DIN EN 60811-404                      |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation)             |
|                                 | -30 °C ... 70 °C (Cable, flexible installation)          |
|                                 | -20 °C ... 60 °C (for installation)                      |
|                                 | -20 °C ... 60 °C (cable, drag chain applications)        |

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## Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, straight, shielded

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Schematic diagram



Pin assignment M12 male connector, 5-pos., B-coded, male side

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Schematic diagram



Pin assignment M12 socket, 5-pos., B-coded, female side

Circuit diagram



Contact assignment of the M12 connector and the M12 socket

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1525445>



### EAC-RoHS

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



### UL Listed

Approval ID: FILE E 221474

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 300 V                 | 4 A                   | -                 | -                           |



### cUL Listed

Approval ID: FILE E 221474

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 300 V                 | 4 A                   | -                 | -                           |

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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 | 2.136 kg CO2e |
|---------|---------------|

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