

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



1507243

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Bus system cable, PROFIBUS (12 Mbps), 2-position, PUR halogen-free, red lilac RAL 4001, shielded, Plug straight M12, coding: B, on free cable end, cable length: 2 m

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1507243       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BF04          |
| Product key                          | AF1CKC        |
| GTIN                                 | 4017918900083 |
| Weight per piece (including packing) | 142.9 g       |
| Weight per piece (excluding packing) | 142.9 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          | 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, 12 Mbps (max. 100 m) |

### 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                  |
| Transmission medium   | Copper               |
| Transmission speed    | 12 Mbps (max. 100 m) |

### Mechanical properties

#### Mechanical data

|                             |       |
|-----------------------------|-------|
| Insertion/withdrawal cycles | ≥ 100 |
|-----------------------------|-------|

### Material specifications

|                               |   |
|-------------------------------|---|
| 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                |

### Connection data

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## Connection assignment

|   |                         |
|---|-------------------------|
| Contact   Color (signal designation)   Contact (optional) | 2 (Plug)   GN (A cable) |
|   | 4 (Plug)   RD (B cable) |

## Connector

### Connection 1

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


### Connection 2

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

## Cable/line

|              |     |
|--------------|-----|
| Cable length | 2 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.)   |

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|   |   |
|---|---|
| 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, 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

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Schematic diagram



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

Circuit diagram



Contact assignment of the M12 plug

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## Approvals

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|  <b>UL Listed</b><br>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                   | -                 | -                           |

|  <b>cUL Listed</b><br>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                   | -                 | -                           |

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

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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 | 1.466 kg CO2e |
|---------|---------------|

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