

# SAC-2P-M12MSB/ 1,0-910/M12FSB - Bus system cable



1507366

<https://www.phoenixcontact.com/au/products/1507366>

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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 Socket straight M12, coding: B, cable length: 1 m

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1507366             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | AF1CKC              |
| Product key                          | AF1CKC              |
| Catalog page                         | Page 429 (C-2-2019) |
| GTIN                                 | 4017918900182       |
| Weight per piece (including packing) | 95.53 g             |
| Weight per piece (excluding packing) | 95 g                |
| Customs tariff number                | 85444290            |
| Country of origin                    | PL                  |

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## Technical data

### Notes

|         |                                                                                      |
|---------|--------------------------------------------------------------------------------------|
| General | Further products with variable cable lengths can be found in the accessories section |
|---------|--------------------------------------------------------------------------------------|

### 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 | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage $U_N$ | 48 V AC                    |
|                       | 60 V DC                    |
| Nominal current $I_N$ | 4 A                        |
| Transmission medium   | Copper                     |

### Mechanical properties

#### Mechanical data

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

### Material specifications

|                          |                                             |
|--------------------------|---------------------------------------------|
| 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 (plug), TPU GF (socket)              |

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|                               |                              |
|-------------------------------|------------------------------|
| Material for screw connection | Zinc die-cast, nickel-plated |
|-------------------------------|------------------------------|

## Connection data

### Pin assignment

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

## Connector

### Connection 1

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

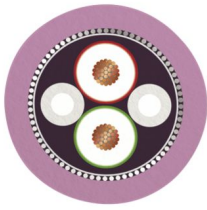
### Connection 2

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

## Cable/line

|              |     |
|--------------|-----|
| Cable length | 1 m |
|--------------|-----|

### PROFIBUS [910]

|                                 |                                                                                      |
|---------------------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing             |  |
| Cable weight                    | 90 kg/km                                                                             |
| UL AWM Style                    | 21198 (80°C/300 V)                                                                   |
| Number of positions             | 2                                                                                    |
| Shielded                        | yes                                                                                  |
| Cable type                      | PROFIBUS [910]                                                                       |
| Conductor structure             | 1x2xAWG24/19                                                                         |
| Conductor structure signal line | 19x 0.13 mm                                                                          |
| AWG signal line                 | 24                                                                                   |
| Conductor cross section         | 2x 0.25 mm <sup>2</sup> (Signal line)                                                |
| Wire diameter incl. insulation  | 2.55 mm ±0.07 mm                                                                     |
| External cable diameter         | 7.80 mm ±0.2 mm                                                                      |
| Outer sheath, material          | PUR                                                                                  |
| External sheath, color          | red lilac RAL 4001                                                                   |
| Conductor material              | Tin-plated Cu litz wires                                                             |

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|                                               |                                                                                                                                                                               |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Material, filler                              | PP                                                                                                                                                                            |
| Material wire insulation                      | Foam-Skin PP                                                                                                                                                                  |
| Single wire, color                            | red, green                                                                                                                                                                    |
| Overall twist                                 | 2 cores with 2 fillers to the core                                                                                                                                            |
| Optical shield covering                       | 85 %                                                                                                                                                                          |
| Max. conductor resistance                     | $\leq 78.6 \Omega/\text{km}$                                                                                                                                                  |
| Insulation resistance                         | $\geq 5 \text{ G}\Omega \cdot \text{km}$                                                                                                                                      |
| Wave impedance                                | $150 \Omega \pm 10 \%$ (3 MHz ... 20 MHz)                                                                                                                                     |
| Cable capacity                                | nom. 30 pF/m                                                                                                                                                                  |
| Nominal voltage, cable                        | 300 V                                                                                                                                                                         |
| Test voltage Core/Core                        | 1500 V (50 Hz, 1 min.)                                                                                                                                                        |
| Test voltage Core/Shield                      | 1500.00 V (50 Hz, 1 min.)                                                                                                                                                     |
| Smallest bending radius, fixed installation   | 40 mm                                                                                                                                                                         |
| Smallest bending radius, movable installation | 65 mm                                                                                                                                                                         |
| Dynamic load capacity (bending)               | Max. bending cycles: 4000000, Bending radius: 65 mm, Traversing path: 4.5 m, Traversing rate: 3 m/s, Acceleration: 3 m/s <sup>2</sup> , Ambient temperature: -20 °C ... 60 °C |
|                                               | Max. bending cycles: 5000000, Bending radius: 80 mm, Traversing path: 4.5 m, Traversing rate: 3 m/s, Acceleration: 3 m/s <sup>2</sup> , Ambient temperature: -20 °C ... 60 °C |
| Shield attenuation                            | $\leq 0.049 \text{ dB/m}$ (at 16 MHz)                                                                                                                                         |
| 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                                                                                                                                                                 |
| Other resistance                              | Low adhesion                                                                                                                                                                  |
| 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)                                                                                                                             |

## Environmental and real-life conditions

### Ambient conditions

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

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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



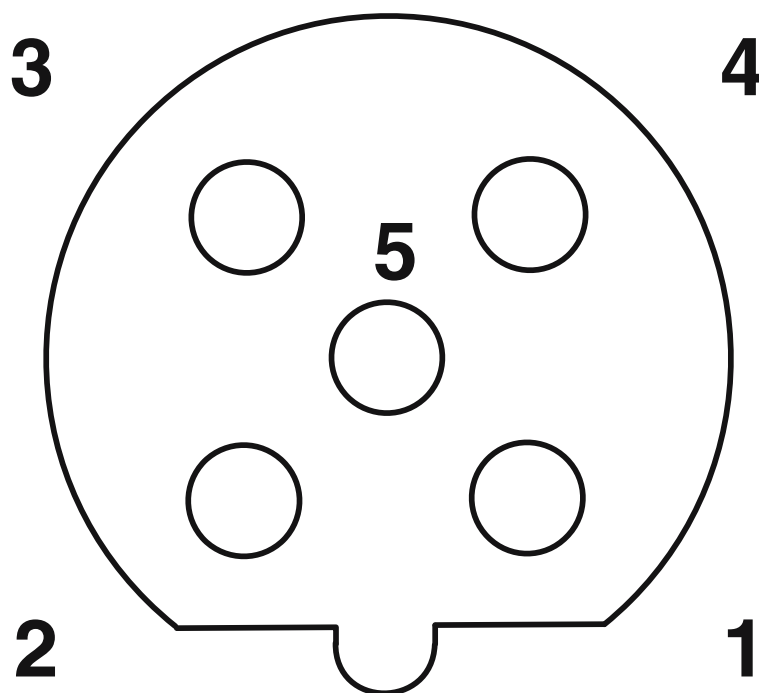
Pin assignment M12 male connector, 5-pos., B-coded, male side

# SAC-2P-M12MSB/ 1,0-910/M12FSB - Bus system cable

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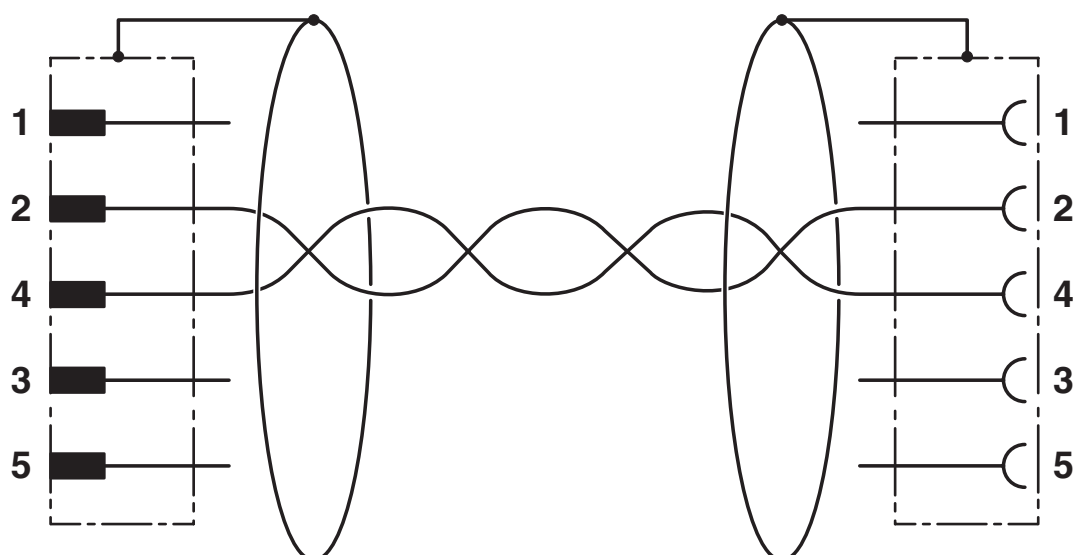
<https://www.phoenixcontact.com/au/products/1507366>

Schematic diagram



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

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/au/products/1507366>



### UL Listed

Approval ID: FILE E 221474

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



### cUL Listed

Approval ID: FILE E 221474

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



### EAC-RoHS

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

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## Classifications

### ECLASS

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

### 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                                 | 0.991 kg CO2e                            |

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