

# SAC-4P-M12MS/ 1,0-990/M12FS - Bus system cable



1558425

<https://www.phoenixcontact.com/us/products/1558425>

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Bus system cable, CC link (10 Mbps), 4-position, PVC, red, shielded, Plug straight M12, coding: A, on Socket straight M12, coding: A, cable length: 1 m

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1558425                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF04                           |
| Product key                          | AF1CJF                         |
| GTIN                                 | 4046356293754                  |
| Weight per piece (including packing) | 100.4 g                        |
| Weight per piece (excluding packing) | 109 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          | CC link                 |
| Number of positions  | 4                       |
| No. of cable outlets | 1                       |
| Coding               | A                       |

### Insulation characteristics

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

### Interfaces

|                      |                  |
|----------------------|------------------|
| Signal type/category | CC link, 10 Mbps |
|----------------------|------------------|

### 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    | 10 Mbps  |

### Mechanical properties

#### Mechanical data

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

### Material specifications

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

### Connection data

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## Connection assignment

|   |                                     |
|---|-------------------------------------|
| Contact   Color (signal designation)   Contact (optional) | 1 (Plug)   SR (shield)   1 (Socket) |
|   | 2 (Plug)   WH (DB)   2 (Socket)     |
|   | 3 (Plug)   YE (DG)   3 (Socket)     |
|   | 4 (Plug)   BU (DA)   4 (Socket)     |

## Connector

### Connection 1

|                     |                   |
|---------------------|-------------------|
| Type                | Plug straight M12 |
| Number of positions | 4                 |
| Coding type         | A (Standard)      |

### Connection 2

|                     |                     |
|---------------------|---------------------|
| Type                | Socket straight M12 |
| Number of positions | 4                   |
| Coding type         | A (Standard)        |

## Cable/line

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

### CC-Link [990]

|   |  |
|---|--|
| Cable weight                                | 78.8 kg/km   |
| Number of positions                         | 3  |
| Shielded                                    | yes  |
| Cable type                                  | CC-Link [990]  |
| Conductor structure                         | 3xAWG20/7 + 1xAWG22/19 (filler litz wire)  |
| Conductor structure signal line             | 7x 0.28 mm   |
| AWG signal line                             | 20   |
| Conductor cross-section                     | 0.5 mm <sup>2</sup>  |
| External cable diameter                     | 7.70 mm  |
| Outer sheath, material                      | PVC  |
| External sheath, color                      | red  |
| Conductor material                          | Bare Cu litz wires   |
| Material wire insulation                    | foamed PE, with high density   |
| Single wire, color                          | white, yellow, blue  |
| Thickness, insulation                       | 0.89 mm (Outer cable sheath)   |
| Optical shield covering                     | 78 %   |
| Max. conductor resistance                   | 31.2 Ω/km  |
| Wave impedance                              | 110 Ω  |
| Working capacitance                         | 61 pF  |
| Nominal voltage, cable                      | 300 V  |
| Smallest bending radius, fixed installation | 77 mm  |
| Ambient temperature (operation)             | -30 °C ... 60 °C (cable, fixed installation)<br>-5 °C ... 60 °C (Cable, flexible installation) |

Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing

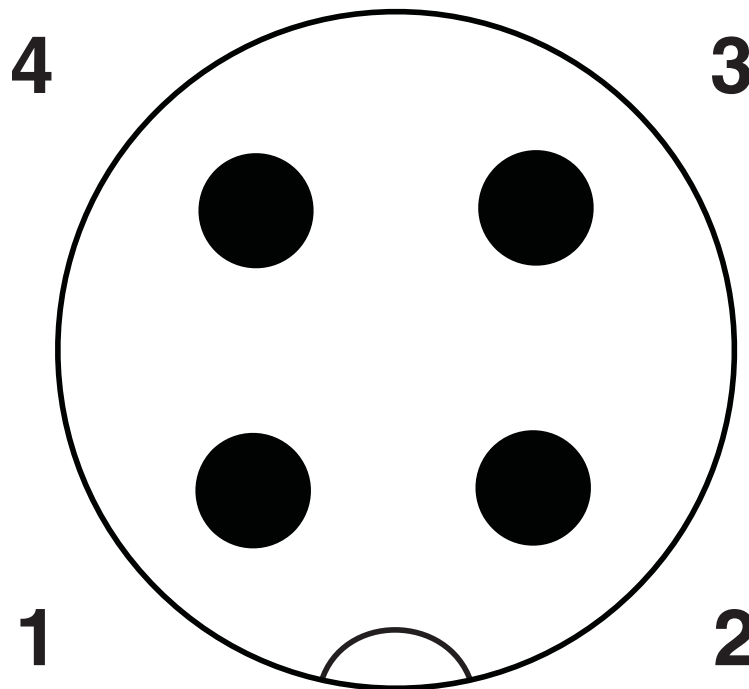


M12 x 1 socket, straight, shielded

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Schematic diagram



Pin assignment M12 plug, 4-pos., A-coded, view plug side

Schematic diagram



Pin assignment M12 socket, 4-pos., A-coded, view female side

Circuit diagram



Contact assignment of the M12 plug and the M12 socket

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## Approvals

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**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 |

### 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 kg CO2e |
|---------|-----------|

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