

# SAC-4P-M12MS/ 0,3-990/M12FS - Bus system cable



1558409

<https://www.phoenixcontact.com/gb/products/1558409>

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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: 0.3 m

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1558409                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | AF1CJF                         |
| Product key                          | AF1CJF                         |
| Catalog page                         | Page 401 (PC-2011)             |
| GTIN                                 | 4046356293730                  |
| Weight per piece (including packing) | 49.3 g                         |
| Weight per piece (excluding packing) | 49.3 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 | $\geq 100 \text{ M}\Omega$ |
| 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

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

#### Pin assignment

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|                                                           |                                     |
|-----------------------------------------------------------|-------------------------------------|
| 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 | 0.3 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)   |
|                                             | -5 °C ... 60 °C (Cable, flexible installation) |

## Environmental and real-life conditions

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## Ambient conditions

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

## Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, straight, shielded

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

 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/1558409>



**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 |
|-------------|----------|

### 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% |
|-------------------------------------|----------------------------|

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