

SAC-4P-M12MS/ 5,0-990/M12FS - Bus system cable



1558441

<https://www.phoenixcontact.com/us/products/1558441>

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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: 5 m

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 1558441 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | BF04 |
| Product key | BF1CJF |
| Catalog page | Page 401 (PC-2011) |
| GTIN | 4046356293778 |
| Weight per piece (including packing) | 416.8 g |
| Weight per piece (excluding packing) | 416.8 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 | ≥ 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 | 5 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 ² |
| 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) |

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Drawings

Schematic diagram



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

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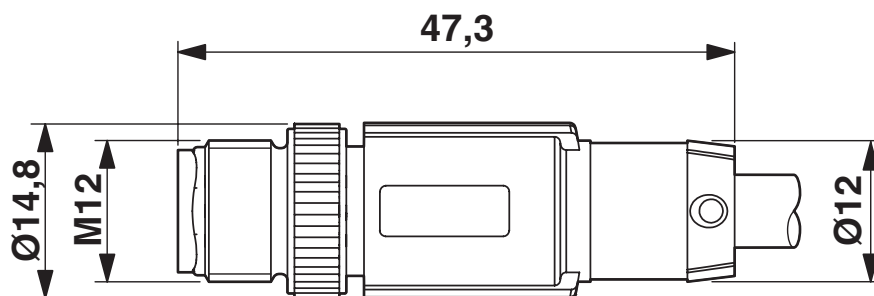
<https://www.phoenixcontact.com/us/products/1558441>

Schematic diagram



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

Dimensional drawing



Plug, M12 x 1, straight, shielded

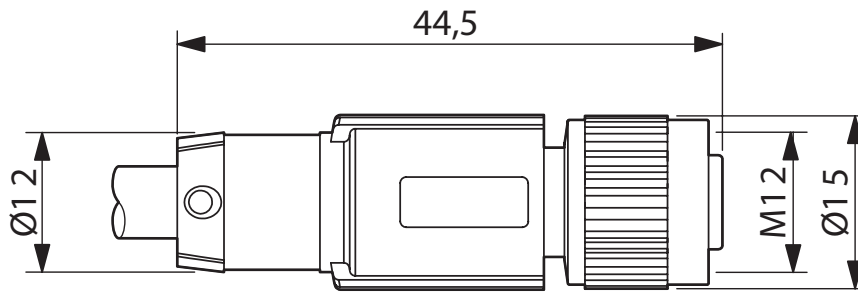
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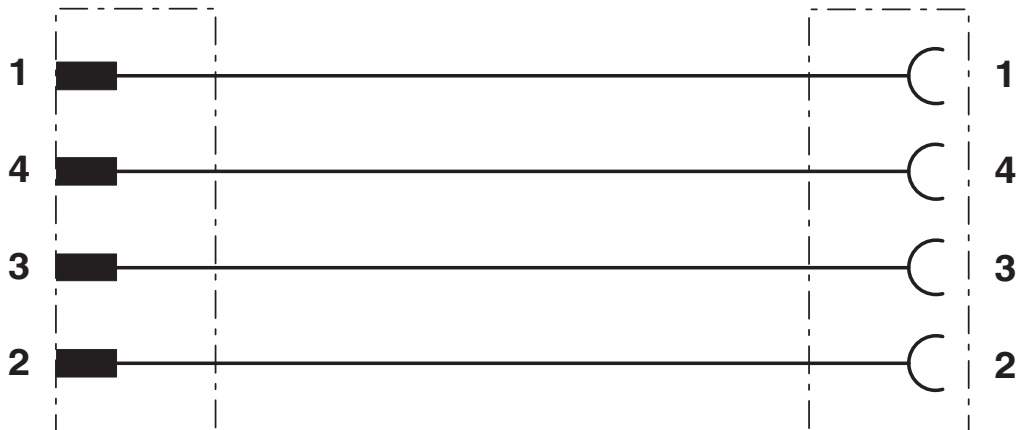
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Dimensional drawing



M12 x 1 socket, straight, shielded

Circuit diagram



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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-11.0 | 27060307 |
| ECLASS-12.0 | 27060307 |
| 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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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com