

# NBC-MS/ 3,0-93K/MS SCO - Bus system cable



1410689

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Assembled Sercos III cable, shielded, star quad, 22 AWG stranded (7-wire), RAL 3020 (traffic red), M12 plug, SPEEDCON, 4-pos. to M12 plug, SPEEDCON, length: 3 m

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1410689                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF04                           |
| Product key                          | AF1CJO                         |
| GTIN                                 | 4046356905497                  |
| Weight per piece (including packing) | 237.4 g                        |
| Weight per piece (excluding packing) | 237 g                          |
| Customs tariff number                | 85444290                       |
| Country of origin                    | PL                             |

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## Technical data

### Product properties

|                      |                         |
|----------------------|-------------------------|
| Product type         | Data cable preassembled |
| Number of positions  | 4                       |
| No. of cable outlets | 1                       |
| Shielded             | yes                     |

### Insulation characteristics

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

### Electrical properties

|                       |         |
|-----------------------|---------|
| Nominal voltage $U_N$ | 48 V AC |
|                       | 60 V DC |
| Transmission medium   | Copper  |

### Mechanical properties

#### Mechanical data

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

### Material specifications

|  |    |
|--|----|
| Flammability rating according to UL 94 | V0 |
|--|----|

### Connector

#### Connection 1

|      |                   |
|------|-------------------|
| Type | Plug straight M12 |
|------|-------------------|


#### Connection 2

|      |                   |
|------|-------------------|
| Type | Plug straight M12 |
|------|-------------------|

### Cable/line

|              |     |
|--------------|-----|
| Cable length | 3 m |
|--------------|-----|

#### Sercos III [93K]

|                     |  |
|---------------------|--|
| Dimensional drawing |  |
| Cable weight        | 68 kg/km   |

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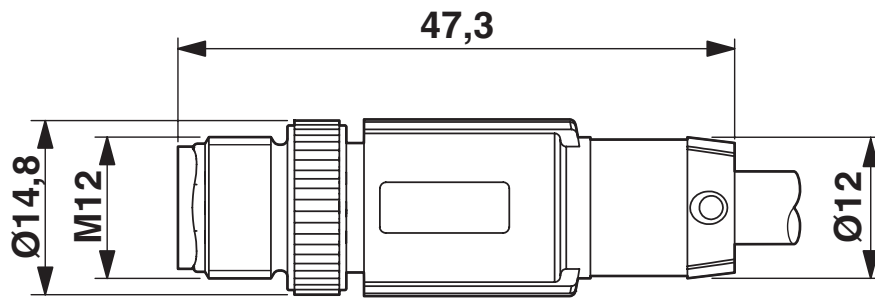
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|   |   |
|---|---|
| UL AWM Style                                  | 21694 (60 °C / 600 V)   |
| Number of positions                           | 4   |
| Shielded                                      | yes   |
| Cable type                                    | Sercos III [93K]  |
| Conductor structure                           | 1x4xAWG22/7, SF/TQ  |
| Signal runtime                                | 5.3 ns/m  |
| Conductor structure signal line               | 7x 0.25 mm  |
| AWG signal line                               | 22  |
| Conductor cross-section                       | 4x 0.34 mm <sup>2</sup>   |
| Wire diameter incl. insulation                | approx. 1.55 mm   |
| External cable diameter                       | 6.50 mm ±0.2 mm   |
| Outer sheath, material                        | PVC   |
| External sheath, color                        | signal red RAL 3020   |
| Conductor material                            | Tin-plated Cu litz wires  |
| Material wire insulation                      | PE  |
| Single wire, color                            | white, yellow, blue, orange   |
| Thickness, outer sheath                       | approx. 0.90 mm   |
| Type of pair shielding                        | Aluminum-lined polyester foil   |
| Overall twist                                 | Star quad   |
| Max. conductor resistance                     | ≤ 120 Ω/km  |
| Insulation resistance                         | ≥ 0.5 GΩ*km   |
| Coupling resistance                           | ≤ 20.00 mΩ/m (at 10 Hz)   |
| Wave impedance                                | 100 Ω ±15 Ω (at 100 MHz)  |
| Nominal voltage, cable                        | 600 V   |
| Test voltage Core/Core                        | 2000 V (50 Hz, 1 min.)  |
| Test voltage Core/Shield                      | 2000.00 V (50 Hz, 1 min.)   |
| Minimum bending radius, fixed installation    | 3 x D   |
| Minimum bending radius, flexible installation | 7 x D   |
| Smallest bending radius, fixed installation   | 20 mm   |
| Smallest bending radius, movable installation | 46 mm   |
| Flame resistance                              | according to UL 1685 (CSA FT 4)   |
| Resistance to oil                             | Resistant to oil to a limited extent  |
| Other resistance                              | UV resistant (according to UL 1581, Section 1200)   |
| Ambient temperature (operation)               | -40 °C ... 70 °C (cable, fixed installation)<br>-40 °C ... 70 °C (Cable, flexible installation) |
| Ambient temperature (installation)            | -20 °C ... 60 °C  |

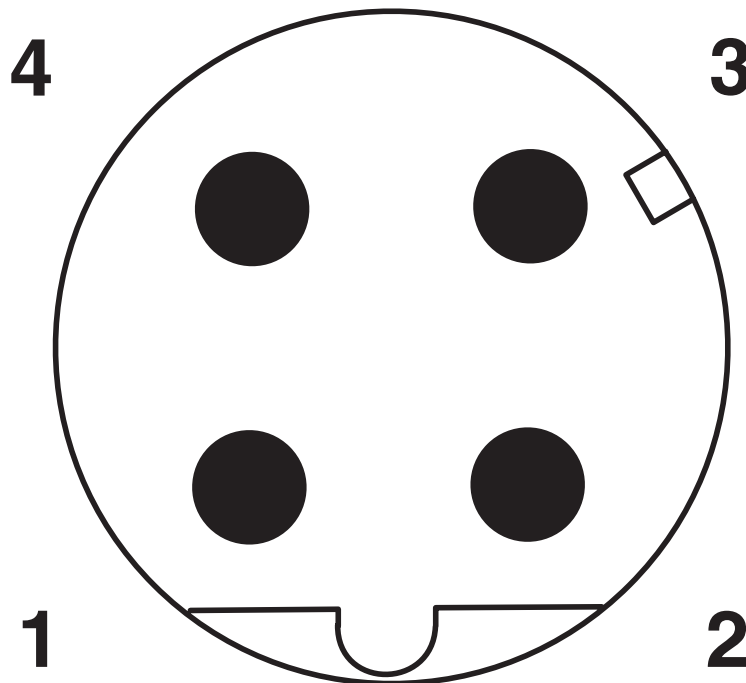
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Schematic diagram



Pin assignment M12 male connector, 4-pos., D-coded, male side

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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% |
|-------------------------------------|----------------------------|

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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)