

SAC-5P-MR/ 0,5-923/FR CAN SCO - Bus system cable



1419074  
<https://www.phoenixcontact.com/us/products/1419074>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Bus system cable, CANopen®, DeviceNet™, 5-position, PUR halogen-free, silver-grey RAL 7001, shielded (Tinned copper braided shield), Plug angled M12 SPEEDCON, coding: A, on Socket angled M12 SPEEDCON, coding: A, cable length: 0.5 m, Connector unshielded

Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1419074             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | BF04                |
| Product key                          | BF1CDD              |
| Catalog page                         | Page 431 (C-2-2019) |
| GTIN                                 | 4046356543354       |
| Weight per piece (including packing) | 63.9 g              |
| Weight per piece (excluding packing) | 61 g                |
| Customs tariff number                | 85444290            |
| Country of origin                    | PL                  |

# SAC-5P-MR/ 0,5-923/FR CAN SCO - Bus system cable



1419074

<https://www.phoenixcontact.com/us/products/1419074>

## Technical data

### Product properties

|                      |                         |
|----------------------|-------------------------|
| Product type         | Data cable preassembled |
| Application          | Standard                |
| Sensor type          | CANopen <sup>®</sup>    |
| Number of positions  | 5                       |
| No. of cable outlets | 1                       |
| Coding               | A                       |

### Insulation characteristics

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

### Interfaces

|                      |                                              |
|----------------------|----------------------------------------------|
| Bus system           | CANopen <sup>®</sup> /DeviceNet <sup>™</sup> |
| Signal type/category | CANopen <sup>®</sup>                         |
|                      | DeviceNet <sup>™</sup>                       |

### Signaling

|                        |    |
|------------------------|----|
| Status display         | No |
| Status display present | No |

### Electrical properties

|                       |         |
|-----------------------|---------|
| Nominal voltage $U_N$ | 48 V AC |
|                       | 60 V DC |
| Nominal current $I_N$ | 4 A     |
| Transmission medium   | Copper  |

### Material specifications

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

### Connection data

#### Pin assignment

|                                                           |                                     |
|-----------------------------------------------------------|-------------------------------------|
| Contact   Color (signal designation)   Contact (optional) | 1 (Plug)   SR (shield)   1 (Socket) |
|                                                           | 2 (Plug)   RD (V+)   2 (Socket)     |
|                                                           | 3 (Plug)   BK (V-)   3 (Socket)     |
|                                                           | 4 (Plug)   WH (CAN_H)   4 (Socket)  |

# SAC-5P-MR/ 0,5-923/FR CAN SCO - Bus system cable



1419074

<https://www.phoenixcontact.com/us/products/1419074>

5 (Plug) | BU (CAN\_L) | 5 (Socket)

## Connector

### Connection 1

|                                 |                          |
|---------------------------------|--------------------------|
| Type                            | Plug angled M12 SPEEDCON |
| Number of positions             | 5                        |
| Locking type                    | SPEEDCON                 |
| Coding type                     | A (Standard)             |
| Ambient temperature (operation) | -25 °C ... 90 °C         |

### Connection 2

|                                 |                            |
|---------------------------------|----------------------------|
| Type                            | Socket angled M12 SPEEDCON |
| Number of positions             | 5                          |
| Locking type                    | SPEEDCON                   |
| Coding type                     | A (Standard)               |
| Ambient temperature (operation) | -25 °C ... 90 °C           |

## Cable/line

|              |       |
|--------------|-------|
| Cable length | 0.5 m |
|--------------|-------|

### CANopen<sup>®</sup>/DeviceNet<sup>™</sup>, PUR, gray [923]

|                                 |                                                                                                                        |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Dimensional drawing             |                                    |
| Cable weight                    | 90 kg/km                                                                                                               |
| UL AWM Style                    | 21198 (80°C/300 V)                                                                                                     |
| Number of positions             | 4                                                                                                                      |
| Shielded                        | yes                                                                                                                    |
| Cable type                      | CANopen <sup>®</sup> /DeviceNet <sup>™</sup> , PUR, gray [923]                                                         |
| Conductor structure             | 2xAWG24/19+2xAWG22/19                                                                                                  |
| Conductor structure signal line | 19x 0.13 mm                                                                                                            |
| AWG signal line                 | 24                                                                                                                     |
| Conductor cross section         | 2x 0.25 mm <sup>2</sup> (Data cable)<br>2x 0.34 mm <sup>2</sup> (Power supply)<br>1x 0.34 mm <sup>2</sup> (Drain wire) |
| Wire diameter incl. insulation  | 1.95 mm ±0.05 mm (Data cable)<br>1.4 mm ±0.05 mm (Power supply)                                                        |
| External cable diameter         | 6.70 mm ±0.3 mm                                                                                                        |
| Outer sheath, material          | PUR                                                                                                                    |

# SAC-5P-MR/ 0,5-923/FR CAN SCO - Bus system cable



1419074

<https://www.phoenixcontact.com/us/products/1419074>

|                                               |                                                                    |
|-----------------------------------------------|--------------------------------------------------------------------|
| External sheath, color                        | silver-grey RAL 7001                                               |
| Conductor material                            | Tin-plated Cu litz wires                                           |
| Material wire insulation                      | Foamed PE (Data cable)                                             |
|                                               | PE (Power supply)                                                  |
| Single wire, color                            | red-black, blue-white                                              |
| Twisted pairs                                 | 2 cores to the pair                                                |
| Type of pair shielding                        | Plastic-coated aluminum foil, aluminum side outside                |
| Overall twist                                 | 2 pairs around a drain wire in the center to the core              |
| Optical shield covering                       | 80 %                                                               |
| Insulation resistance                         | $\geq 5 \text{ G}\Omega\cdot\text{km}$ (Data cable)                |
|                                               | $\geq 5 \text{ G}\Omega\cdot\text{km}$ (Power supply)              |
| Loop resistance                               | $\leq 181.80 \text{ }\Omega/\text{km}$ (Data cable)                |
|                                               | $\leq 114.80 \text{ }\Omega/\text{km}$ (Power supply)              |
| Wave impedance                                | $120 \text{ }\Omega \pm 10 \text{ %}$ (with 1 MHz)                 |
| Cable capacity                                | nom. 40 nF/km (Data cable)                                         |
| Nominal voltage, cable                        | $\leq 300 \text{ V}$ (Peak value, not for high-power applications) |
| 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    | 5 x D                                                              |
| Minimum bending radius, flexible installation | 10 x D                                                             |
| Smallest bending radius, fixed installation   | 34 mm                                                              |
| Smallest bending radius, movable installation | 67 mm                                                              |
| Max. bending cycles                           | 5000000                                                            |
| Shield attenuation                            | $\leq 22.9 \text{ dB/km}$ (with 1 MHz)                             |
|                                               | $\leq 16.4 \text{ dB/km}$ (At 500 kHz)                             |
|                                               | $\leq 9.5 \text{ dB/km}$ (At 125 kHz)                              |
| Halogen-free                                  | in accordance with DIN VDE 0472 part 815                           |
|                                               | according to IEC 60754-1                                           |
| Flame resistance                              | UL 1581, Sec. 1060 (FT-1)                                          |
|                                               | IEC 60332-1                                                        |
| Other resistance                              | Low adhesion                                                       |
| Ambient temperature (operation)               | -40 °C ... 80 °C (cable, fixed installation)                       |
|                                               | -20 °C ... 80 °C (Cable, flexible installation)                    |
|                                               | $\leq 70 \text{ °C}$ (cable, drag chain applications)              |

## Environmental and real-life conditions

### Ambient conditions

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

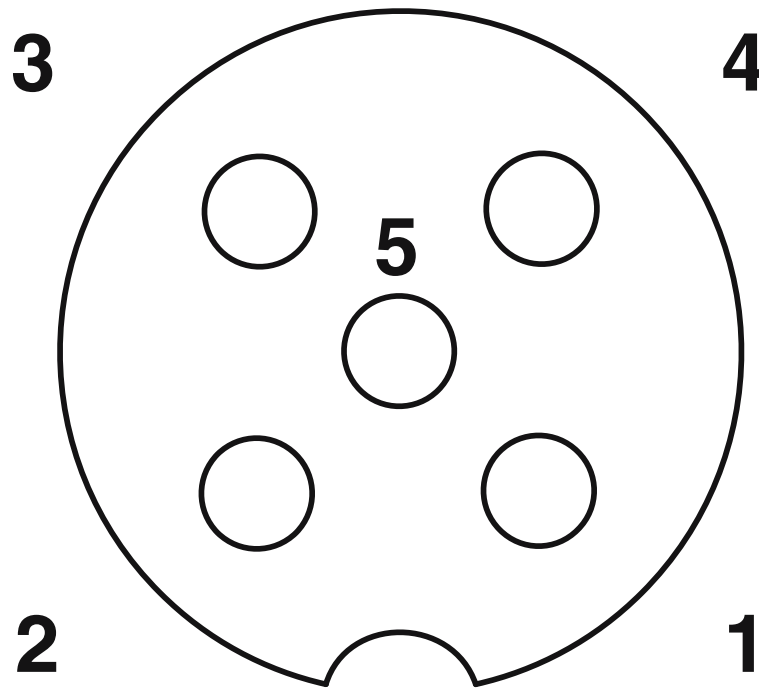
# SAC-5P-MR/ 0,5-923/FR CAN SCO - Bus system cable

1419074

<https://www.phoenixcontact.com/us/products/1419074>

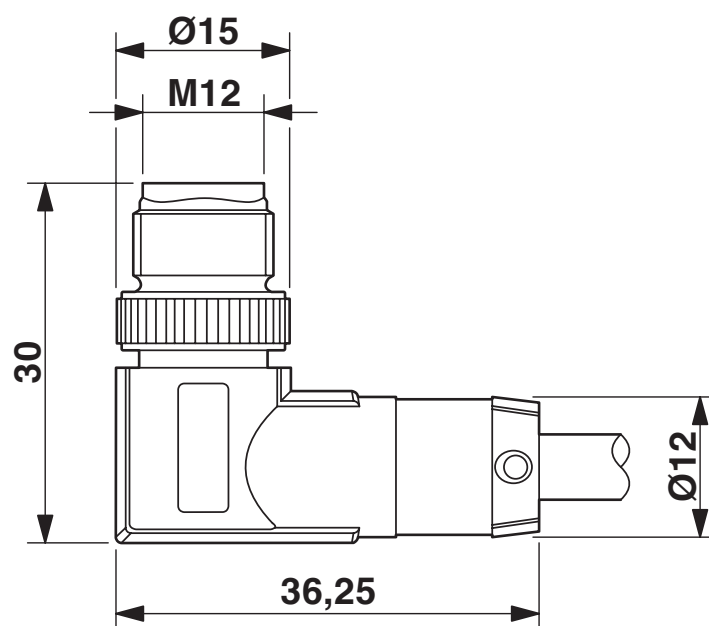
## Drawings

Schematic diagram



Pin assignment M12 socket, 5-pos., A-coded, socket side view

Dimensional drawing



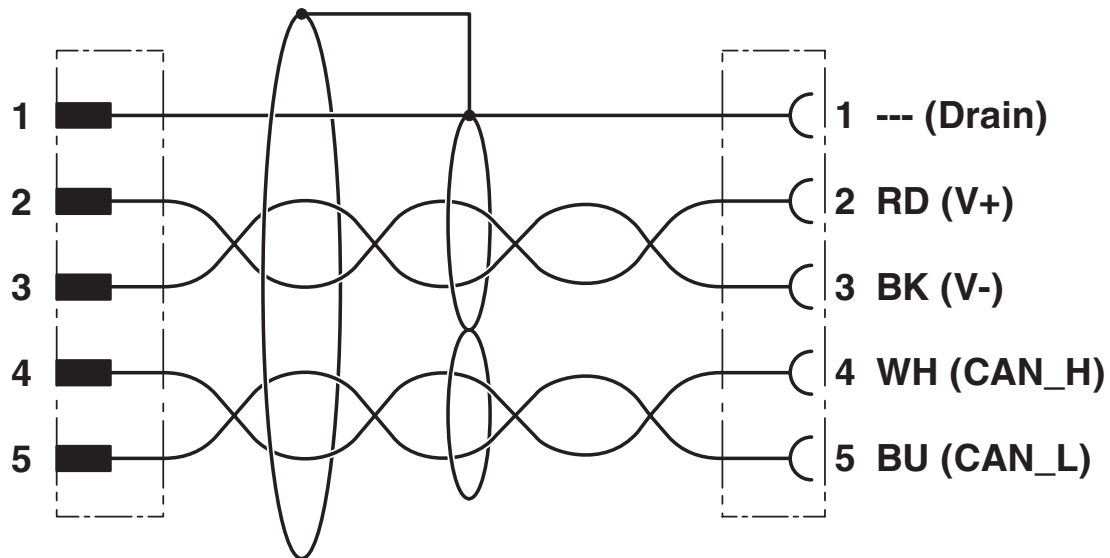
M12 x 1 male plug, angled

# SAC-5P-MR/ 0,5-923/FR CAN SCO - Bus system cable

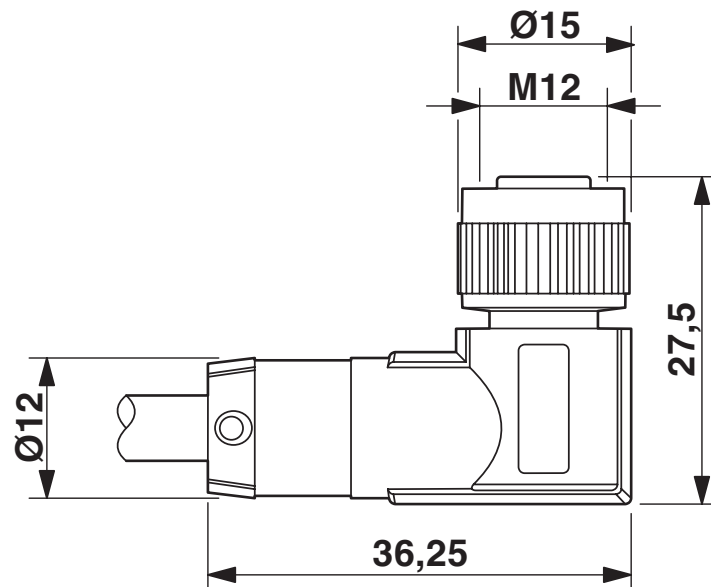
1419074

<https://www.phoenixcontact.com/us/products/1419074>

Circuit diagram



Dimensional drawing



M12 x 1 socket, angled

# SAC-5P-MR/ 0,5-923/FR CAN SCO - Bus system cable

1419074

<https://www.phoenixcontact.com/us/products/1419074>

Schematic diagram



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

# SAC-5P-MR/ 0,5-923/FR CAN SCO - Bus system cable



1419074  
<https://www.phoenixcontact.com/us/products/1419074>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1419074>

|  |                                                |                                |                   |                               |
|--|------------------------------------------------|--------------------------------|-------------------|-------------------------------|
|  | <b>UL Listed</b><br>Approval ID: FILE E 221474 |                                |                   |                               |
|  | Nominal voltage U <sub>N</sub>                 | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
|  | 125 V                                          | 4 A                            | -                 | -                             |

|  |                                                 |                                |                   |                               |
|--|-------------------------------------------------|--------------------------------|-------------------|-------------------------------|
|  | <b>cUL Listed</b><br>Approval ID: FILE E 221474 |                                |                   |                               |
|  | Nominal voltage U <sub>N</sub>                  | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
|  | 125 V                                           | 4 A                            | -                 | -                             |

|  |                                                      |  |  |  |
|--|------------------------------------------------------|--|--|--|
|  | <b>EAC-RoHS</b><br>Approval ID: RU D-DE.HB35.B.00387 |  |  |  |
|  |                                                      |  |  |  |

|                     |  |  |  |  |
|---------------------|--|--|--|--|
| <b>cULus Listed</b> |  |  |  |  |
|---------------------|--|--|--|--|

# SAC-5P-MR/ 0,5-923/FR CAN SCO - Bus system cable



1419074

<https://www.phoenixcontact.com/us/products/1419074>

## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27060307 |
| ECLASS-12.0 | 27060307 |
| ECLASS-13.0 | 27060307 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001855 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 26121600 |
|-------------|----------|

# SAC-5P-MR/ 0,5-923/FR CAN SCO - Bus system cable



1419074  
<https://www.phoenixcontact.com/us/products/1419074>

## 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%               |

# SAC-5P-MR/ 0,5-923/FR CAN SCO - Bus system cable



1419074

<https://www.phoenixcontact.com/us/products/1419074>

## Accessories

### PROT-M12 FS-PA-CHAIN - Sealing cap

1430873

<https://www.phoenixcontact.com/us/products/1430873>

M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs



---

### SAC-M12-EXCLIP-M - Locking clip

1558988

<https://www.phoenixcontact.com/us/products/1558988>

Locking clip for the pin side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools



# SAC-5P-MR/ 0,5-923/FR CAN SCO - Bus system cable



1419074

<https://www.phoenixcontact.com/us/products/1419074>

## PROT-M12 MS-PA-CHAIN - Screw plug

1430899

<https://www.phoenixcontact.com/us/products/1430899>

M12 sealing cap with fixing band, for sensor cables, for free M12 sockets



---

## SAC-M12-EXCLIP-F - Locking clip

1558991

<https://www.phoenixcontact.com/us/products/1558991>

Locking clip for the socket side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools



# SAC-5P-MR/ 0,5-923/FR CAN SCO - Bus system cable



1419074

<https://www.phoenixcontact.com/us/products/1419074>

## SAC-5PH-M-F/2XF SH1 SCO - H distributor

1417414

<https://www.phoenixcontact.com/us/products/1417414>



H distributor, 5-position, Plug straight M12, coding: A, on Socket straight M12, coding: A and Socket straight M12, coding: A, Thread M12 not rotatable, Parallel distributor

---

## SAC-5P-M12T/2XM12 VP - T distributor

1541186

<https://www.phoenixcontact.com/us/products/1541186>



T distributor, 5-position, Plug straight M12, coding: A, on Socket straight M12, coding: A and Socket straight M12, coding: A, Parallel distributor

# SAC-5P-MR/ 0,5-923/FR CAN SCO - Bus system cable



1419074

<https://www.phoenixcontact.com/us/products/1419074>

## SAC-5PT-F/F-M VP - T distributor

1424712

<https://www.phoenixcontact.com/us/products/1424712>



T distributor, CANopen<sup>®</sup>, DeviceNet<sup>™</sup>, 5-position, Socket straight M12, coding: A, on Socket straight M12, coding: A and Plug straight M12, coding: A, Parallel distributor

---

## SAC-5P-M12MS CAN TR - Termination resistor

1507816

<https://www.phoenixcontact.com/us/products/1507816>



Terminating resistor CANopen<sup>®</sup>/DeviceNet<sup>™</sup> M12

# SAC-5P-MR/ 0,5-923/FR CAN SCO - Bus system cable



1419074

<https://www.phoenixcontact.com/us/products/1419074>

## TSD 04 SAC - Torque screwdriver

1208429

<https://www.phoenixcontact.com/us/products/1208429>



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

---

## TSD-M 1,2NM - Torque screwdriver

1212224

<https://www.phoenixcontact.com/us/products/1212224>



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

# SAC-5P-MR/ 0,5-923/FR CAN SCO - Bus system cable



1419074

<https://www.phoenixcontact.com/us/products/1419074>

## TSD-M SAC-BIT ADAPTER - Adapter insert

1212600

<https://www.phoenixcontact.com/us/products/1212600>



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

---

## SAC BIT M12-D15 - Tool

1208432

<https://www.phoenixcontact.com/us/products/1208432>



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive

---

Phoenix Contact 2024 © - all rights reserved  
<https://www.phoenixcontact.com>

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