

# Bus system cable - SAC-5P-M12FY/0,5-920/M12MS-FS - 1514579

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Bus system cable, CANopen<sup>®</sup>, DeviceNet<sup>™</sup>, CANopen<sup>®</sup>/DeviceNet<sup>™</sup>, 5-position, PUR halogen-free, Violet, RAL 4001, shielded, Socket straight M12, A-coded, on Plug straight M12, A-coded and Socket straight M12, A-coded, Cable length: 0.5 m



## Key commercial data

package_quantity	1
GTIN	4017918928032

## Technical data

### Dimensions

Length of cable	0.5 m
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### Ambient conditions

Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)
Degree of protection	IP65
Degree of protection	IP67
Degree of protection	IP68

### General

Rated current at 40°C	4 A
Rated voltage	60 V
Number of positions	5
Contact resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Coding	A - standard
Signal type/category	CANopen <sup>®</sup>
Signal type/category	DeviceNet <sup>™</sup>
Status display	No
Surge voltage category	II
Pollution degree	3
Insertion/withdrawal cycles	≥ 100
Torque	0.4 Nm (M12 connector)

### Material

Inflammability class according to UL 94	HB
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### Technical data

#### Material

<b>Contact material</b>	CuSn
<b>Contact surface material</b>	Ni/Au
<b>Contact carrier material</b>	TPU GF
<b>Material of grip body</b>	TPU, hardly inflammable, self-extinguishing
<b>Material, knurls</b>	Nickel-plated brass
<b>Sealing material</b>	NBR

#### Cable

<b>Cable type</b>	CAN Bus/DeviceNet
<b>Conductor cross section</b>	0.25 mm <sup>2</sup> (signal line)
<b>Conductor cross section</b>	0.34 mm <sup>2</sup> (Power supply)
<b>Conductor cross section</b>	0.34 mm <sup>2</sup> (Drain wire)
<b>AWG signal line</b>	24
<b>AWG power supply</b>	22
<b>Conductor structure signal line</b>	19x 0.13 mm
<b>Conductor structure, voltage supply</b>	19x 0.16 mm
<b>Core diameter including insulation</b>	2.05 mm ±0.1 mm (signal line)
<b>Core diameter including insulation</b>	1.4 mm ±0.05 mm (Power supply)
<b>Wire colors</b>	Red-black, blue-white
<b>Twisted pairs</b>	2 cores to the pair
<b>Type of pair shielding</b>	Aluminum-lined polyester foil
<b>Overall twist</b>	2 pairs around a drain wire in the center to the core
<b>Shielding</b>	Tinned copper braided shield
<b>Optical shield covering</b>	70 %
<b>External sheath, color</b>	Violet, RAL 4001
<b>External cable diameter</b>	6.70 mm
<b>Smallest bending radius, fixed installation</b>	67 mm
<b>Smallest bending radius, movable installation</b>	67 mm
<b>Number of bending cycles</b>	5000000
<b>Bending radius</b>	67 mm
<b>Traversing path</b>	10 m
<b>Traversing rate</b>	3 m/s
<b>Acceleration</b>	7 m/s <sup>2</sup>
<b>Outer sheath, material</b>	PUR
<b>Material conductor insulation</b>	PE (Power supply)
<b>Material conductor insulation</b>	Foamed PE (signal line)
<b>Conductor material</b>	Tin-plated Cu litz wires
<b>Insulation resistance</b>	≥ 5 GΩ*km (signal line)
<b>Insulation resistance</b>	≥ 100 MΩ*km (Power supply)
<b>Conductor resistance</b>	≤ 78.4 Ω/km (signal line)
<b>Conductor resistance</b>	≥ 51.6 Ω/km (Power supply)
<b>Working capacitance</b>	39.3 pF (Signal line, Core-Core)

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## Technical data

### Cable

<b>Working capacitance</b>	78.7 pF (Signal line, Core-Shield)
<b>Nominal voltage, cable</b>	300 V (Power supply)
<b>Nominal voltage, cable</b>	30 V (signal line)
<b>Test voltage, cable</b>	1500 V (signal line)
<b>Test voltage, cable</b>	2000 V (Power supply)
<b>Ambient temperature (operation)</b>	-40 °C ... 80 °C (cable, fixed installation)
<b>Ambient temperature (operation)</b>	-20 °C ... 75 °C (cable, flexible installation)

## classifications

### eCl@ss

<b>eCl@ss 4.0</b>	27060306
<b>eCl@ss 4.1</b>	27060306
<b>eCl@ss 5.0</b>	27061801
<b>eCl@ss 5.1</b>	27061801
<b>eCl@ss 6.0</b>	27061801
<b>eCl@ss 7.0</b>	27061801
<b>eCl@ss 8.0</b>	27061801

### ETIM

<b>ETIM 2.0</b>	EC000830
<b>ETIM 3.0</b>	EC001855
<b>ETIM 4.0</b>	EC001855
<b>ETIM 5.0</b>	EC001855

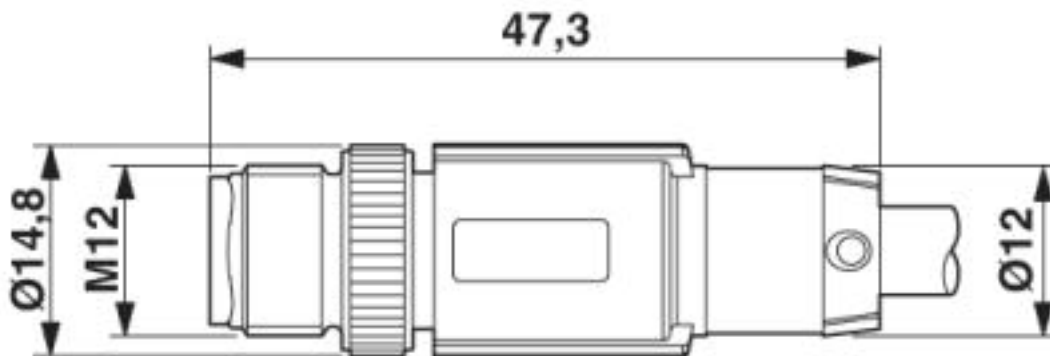
### UNSPSC

<b>UNSPSC 6.01</b>	31251501
<b>UNSPSC 7.0901</b>	31251501
<b>UNSPSC 11</b>	31251501
<b>UNSPSC 12.01</b>	31251501
<b>UNSPSC 13.2</b>	31251501

## Drawings

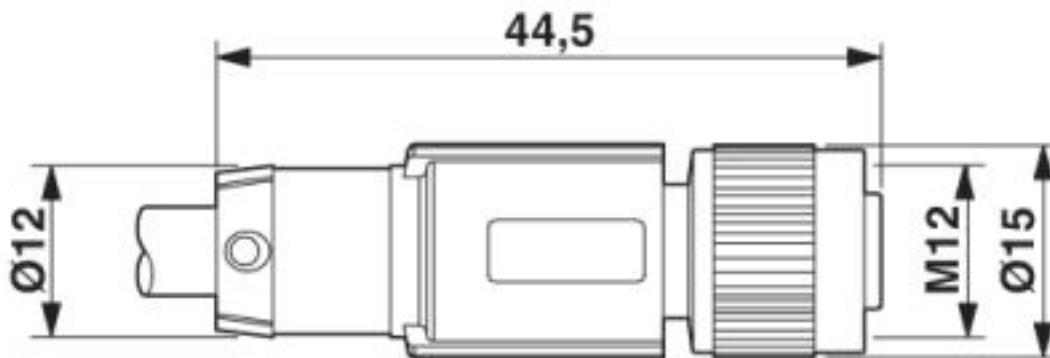
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Dimensioned drawing



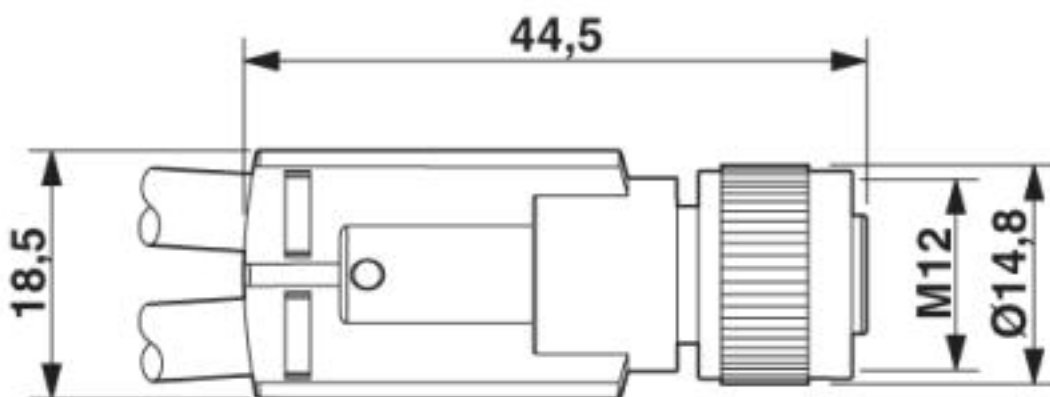
Plug, M12 x 1, straight, shielded

Dimensioned drawing



M12 x 1 socket, straight, shielded

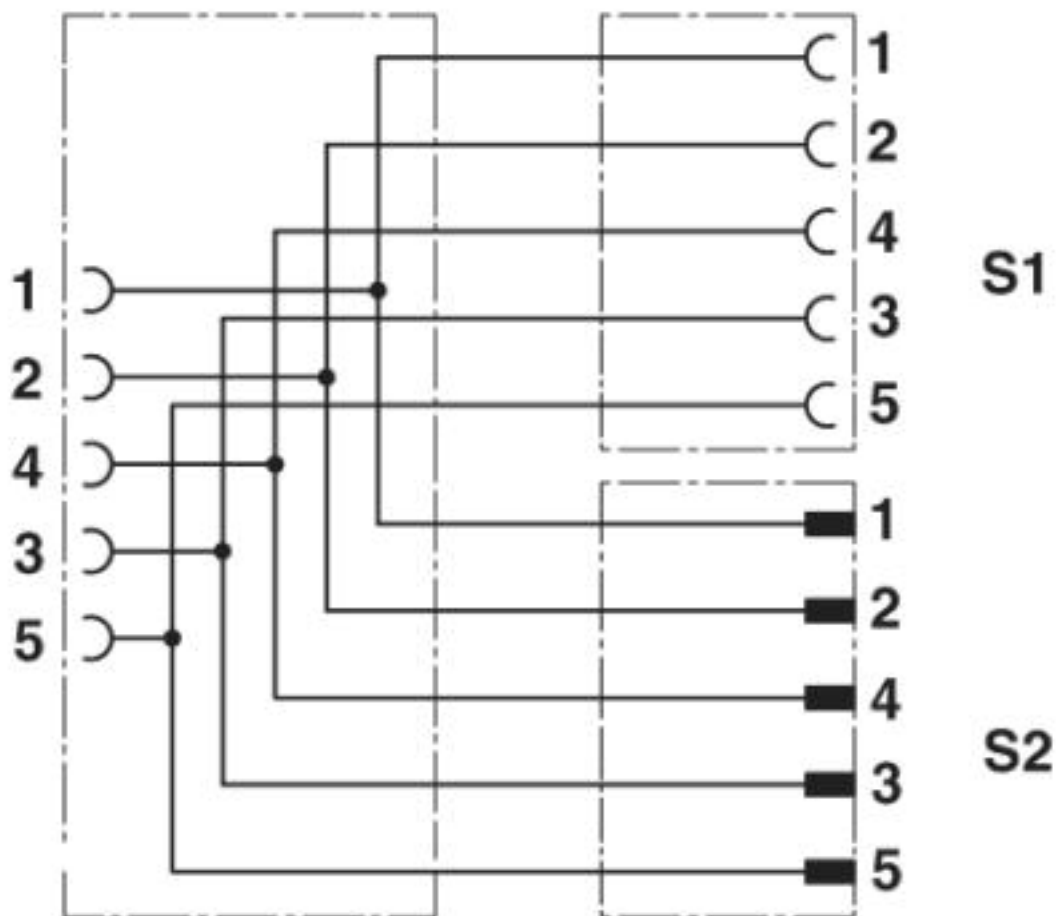
Dimensioned drawing



Socket M12 x 1, Y distributor

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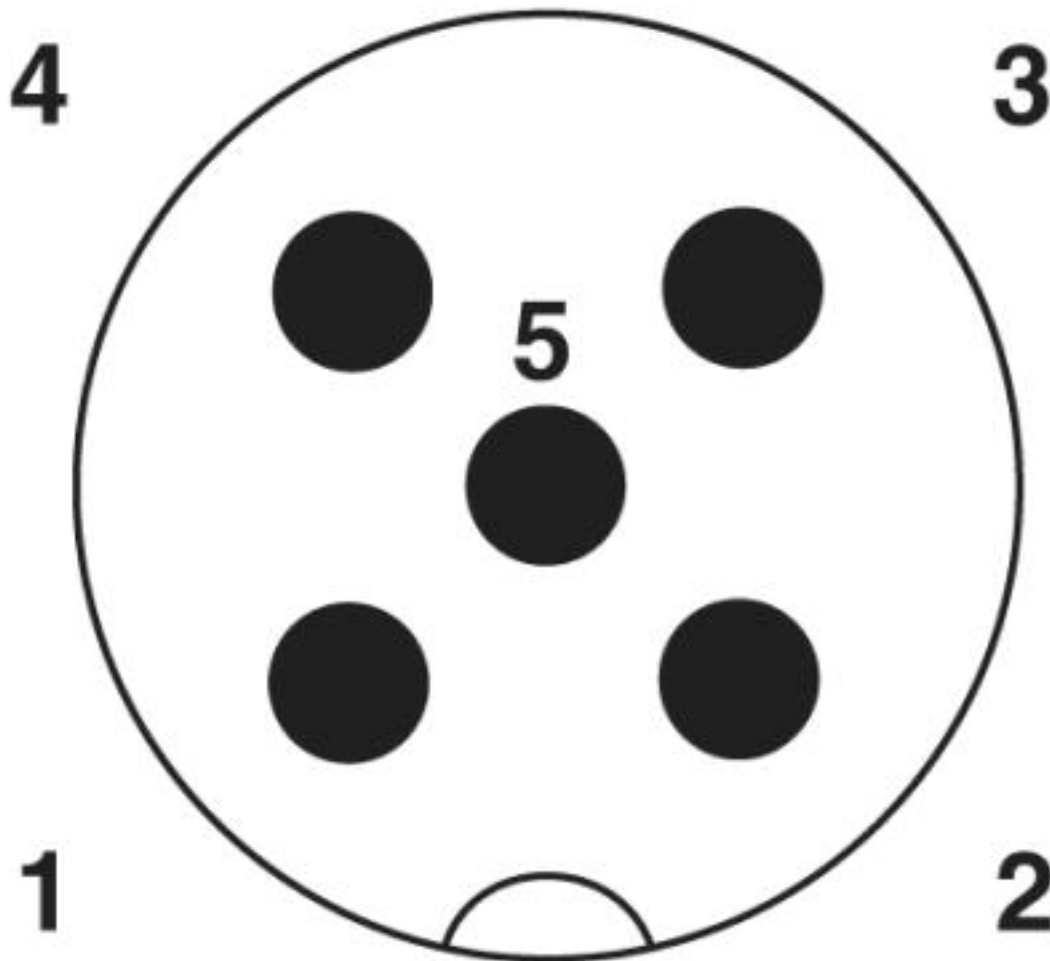
Circuit diagram



Contact assignment of the M12 socket and the M12 plug

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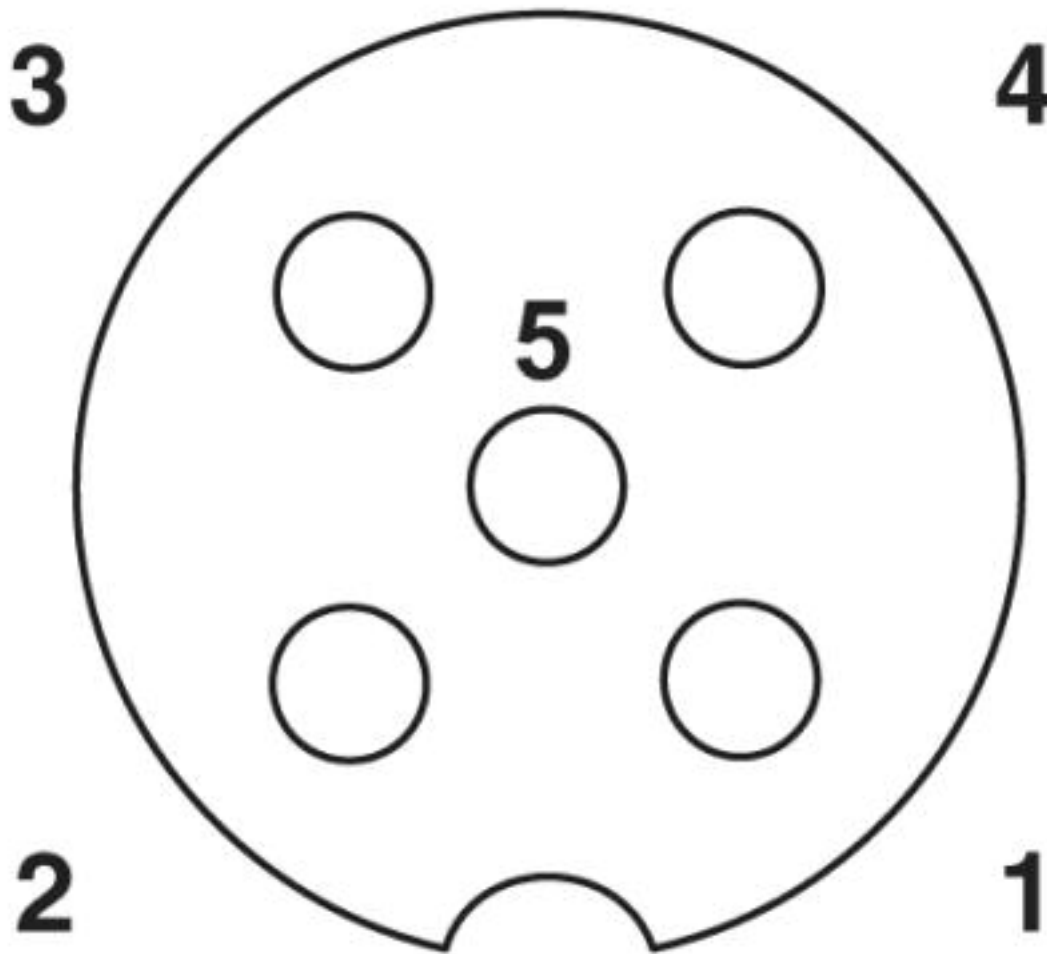
Schematic diagram



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

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Schematic diagram



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

## Bus system cable - SAC-5P-M12FY/0,5-920/M12MS-FS - 1514579

Cable cross section



CAN Bus/DeviceNet [920]

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