

# Bus system cable - SAC-5P-M12MS/ 1,5-920/M12FS - 1539512

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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, Plug straight M12, A-coded, on Socket straight M12, A-coded, Cable length: 1.5 m



## Key commercial data

package_quantity	1
GTIN	4046356080835

## Technical data

### Dimensions

Length of cable	1.5 m
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### Ambient conditions

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

### Material

Inflammability class according to UL 94	HB
Contact material	CuSn
Contact surface material	Ni/Au

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## Technical data

### Material

<b>Contact carrier material</b>	TPU GF
<b>Material of grip body</b>	TPU, hardly inflammable, self-extinguishing
<b>Material, knurls</b>	Zinc die-cast, nickel-plated
<b>Sealing material</b>	NBR

### Cable

<b>Cable type</b>	CAN Bus/DeviceNet
<b>Conductor cross section</b>	0.2 mm <sup>2</sup> (signal line)
<b>Conductor cross section</b>	0.32 mm <sup>2</sup> (Power supply)
<b>Conductor cross section</b>	0.32 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 0.12 mm
<b>Conductor structure, voltage supply</b>	19x 0.15 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)
<b>Working capacitance</b>	78.7 pF (Signal line, Core-Shield)
<b>Nominal voltage, cable</b>	300 V (Power supply)

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## Technical data

### Cable

Nominal voltage, cable	30 V (signal line)
Test voltage, cable	1500 V (signal line)
Test voltage, cable	2000 V (Power supply)

## classifications

### eCl@ss

eCl@ss 4.0	27060306
eCl@ss 4.1	27060306
eCl@ss 5.0	27061801
eCl@ss 5.1	27061801
eCl@ss 6.0	27061801
eCl@ss 7.0	27061801
eCl@ss 8.0	27061801

### ETIM

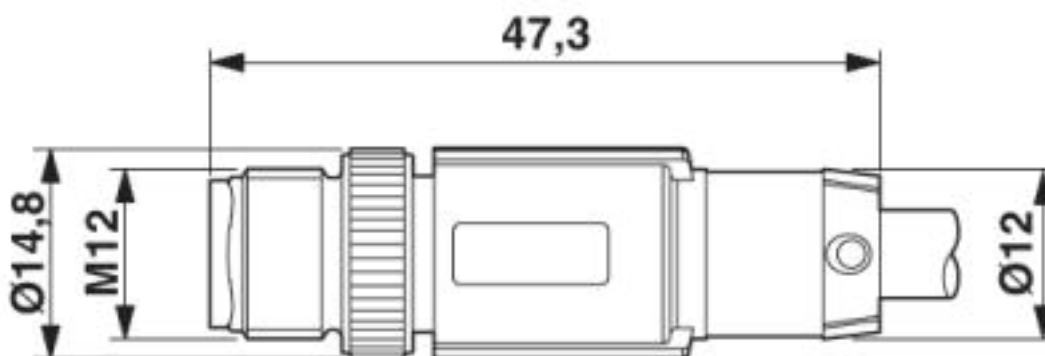
ETIM 3.0	EC001855
ETIM 4.0	EC001855
ETIM 5.0	EC001855

### UNSPSC

UNSPSC 6.01	31251501
UNSPSC 7.0901	31251501
UNSPSC 11	31251501
UNSPSC 12.01	31251501
UNSPSC 13.2	31251501

## Drawings

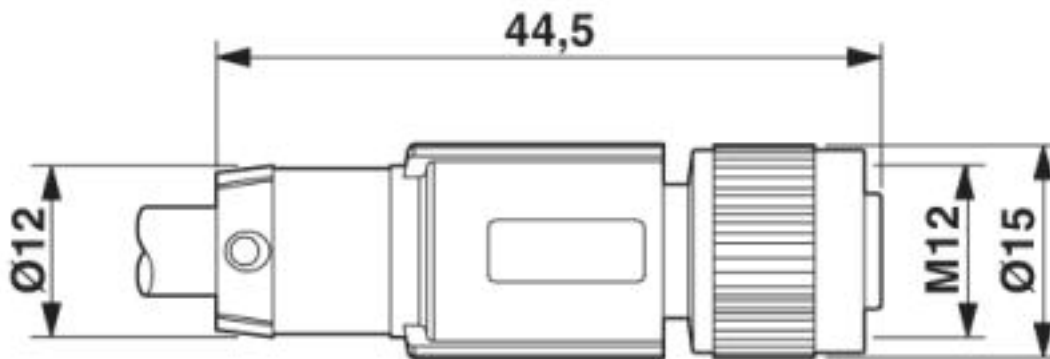
### Dimensioned drawing



Plug, M12 x 1, straight, shielded

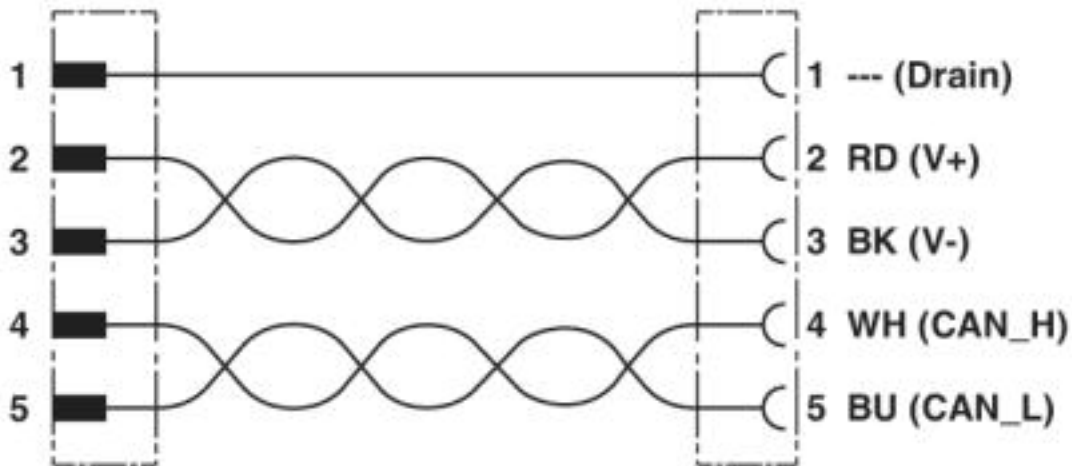
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Dimensioned drawing



M12 x 1 socket, straight, shielded

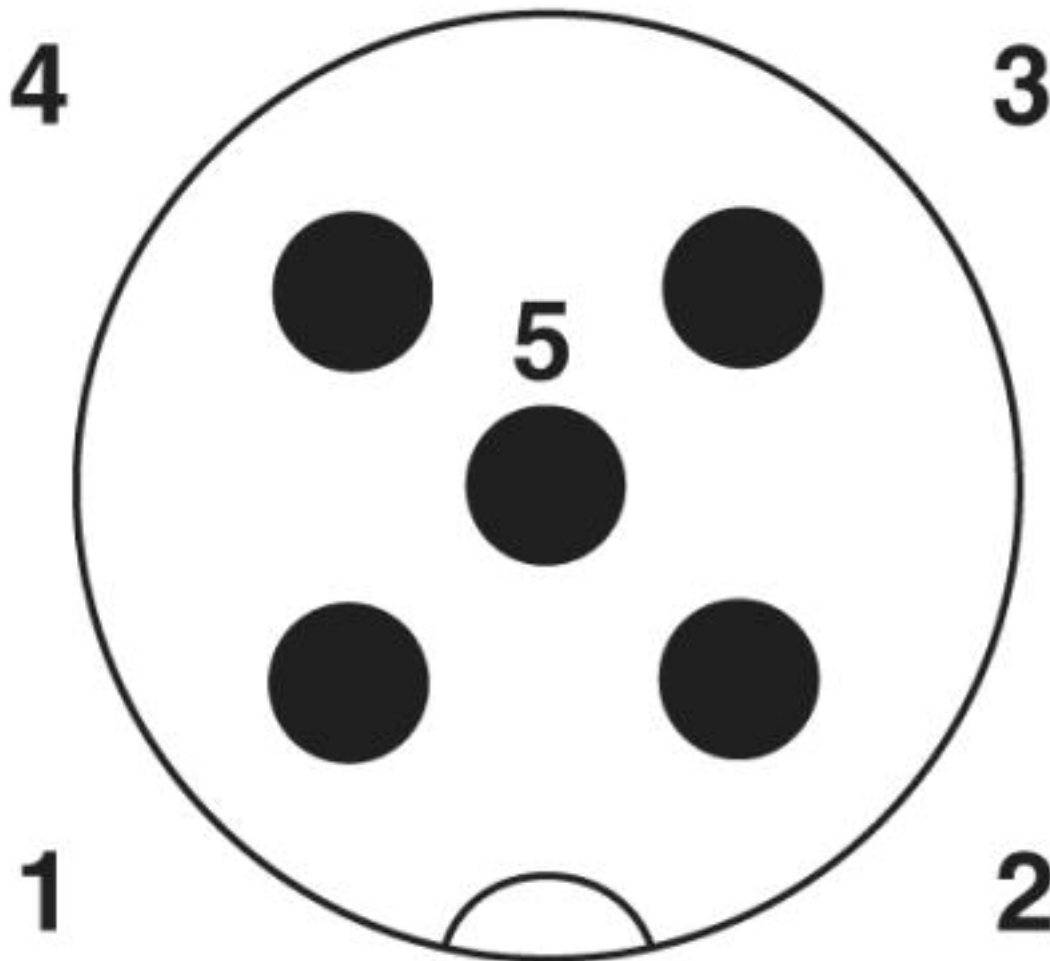
Circuit diagram



Contact assignment of the M12 connector and the M12 socket

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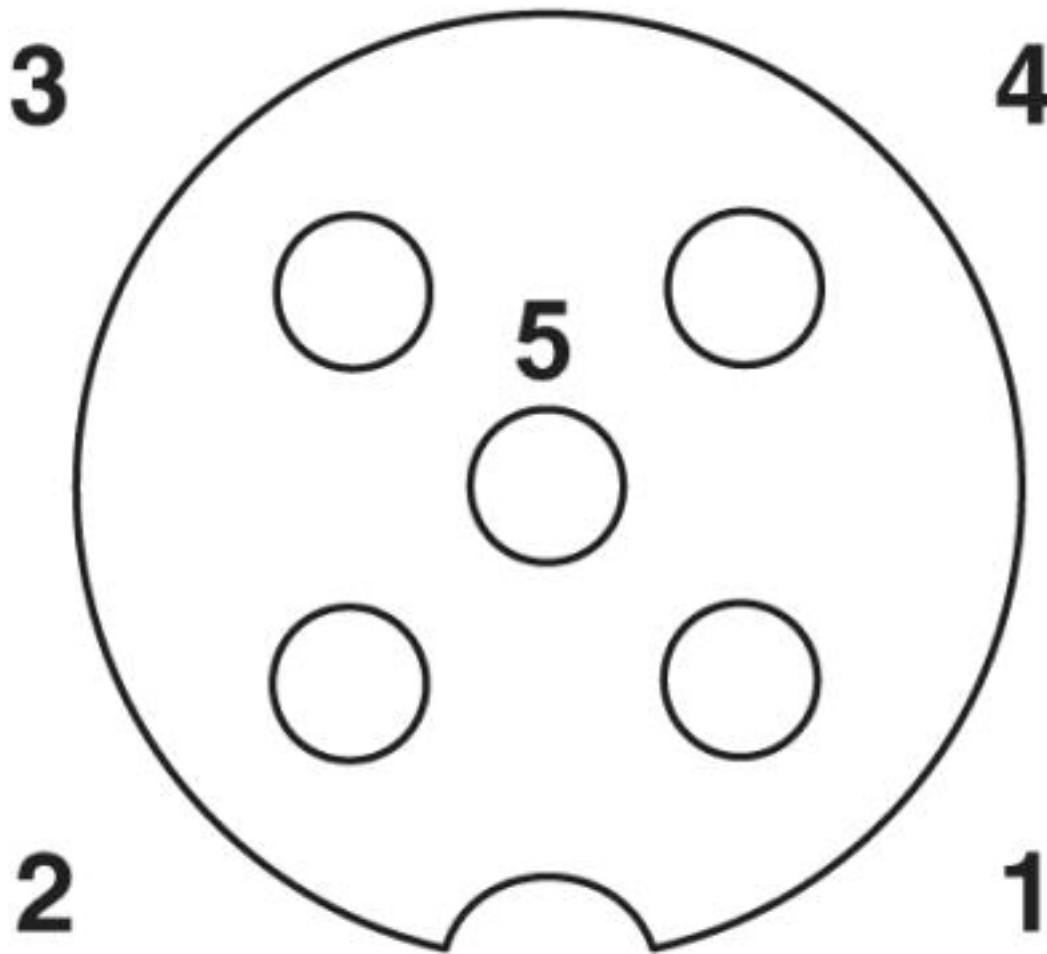
Schematic diagram



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-M12MS/ 1,5-920/M12FS - 1539512

Cable cross section



CAN Bus/DeviceNet [920]

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