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Bus system cable - SAC-5P-M12MS/ 1,0-920/M12FS - 1507544

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Bus system cable, CANopen®, DeviceNet™, 5-position, PUR halogen-free, violet RAL 4001, shielded, Plug straight M12, A-coded, on Socket straight M12, A-coded, Cable length: 1 m

DeviceNet CANopen

Key Commercial Data

Packing unit	1 STK
GTIN	 4 017918 900335

Technical data

Dimensions

Length of cable	1 m
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Ambient conditions

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

General

Rated current at 40°C	4 A
Rated voltage	60 V
Number of positions	5
Insulation resistance	≥ 100 MΩ
Coding	A - standard
Signal type/category	CANopen®
	DeviceNet™
Status display	No
Overvoltage category	II
Degree of pollution	3
Insertion/withdrawal cycles	≥ 100
Torque	0.4 Nm (M12 connector)

Material

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Technical data

Material

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

Pin assignment

Position = wire color (signal) = position (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)
	5 (Plug) = BU (CAN_L) = 5 (Socket)

Standards and Regulations

Flammability rating according to UL 94	HB
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Cable

Cable type	CAN Bus/DeviceNet
Cable type (abbreviation)	920
UL AWM style	21198 (80°C/300 V)
Cable structure	2xAWG24/19+2xAWG22/19
Conductor cross section	2x 0.25 mm ² (Data cable)
	2x 0.34 mm ² (Power supply)
	1x 0.34 mm ² (Drain wire)
AWG signal line	24
AWG power supply	22
Conductor structure signal line	19x 0.13 mm
Conductor structure, voltage supply	19x 0.15 mm
Core diameter including insulation	1.95 mm ±0.05 mm (Data cable)
	1.4 mm ±0.05 mm (Power supply)
Wire colors	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
Shielding	Tinned copper braided shield
Optical shield covering	80 %
External sheath, color	violet RAL 4001
External cable diameter D	6.7 mm ±0,3 mm
Minimum bending radius, flexible installation	10 x D
Number of bending cycles	5000000

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Technical data

Cable

Bending radius	70 mm
Traversing path	4.5 m
Traversing rate	3 m/s
Acceleration	3 m/s ²
Outer sheath, material	PUR
Material conductor insulation	Foamed PE (Data cable)
	PE (Power supply)
Conductor material	Tin-plated Cu litz wires
Insulation resistance	≥ 5 GΩ*km (Data cable)
	≥ 5 GΩ*km (Power supply)
Conductor resistance	≤ 90.9 Ω/km (Data cable)
	≤ 57.4 Ω/km (Power supply)
Cable capacity	nom. 40 pF/m (Data cable)
Wave impedance	120 Ω ±10 % (with 1 MHz)
Wave attenuation	≥ 0.0229 dB/m (with 1 MHz)
Nominal voltage, cable	≤ 300 V (Peak value, not for high-power applications)
Test voltage Core/Core	2000 V (50 Hz, 1 min.)
Test voltage Core/Shield	2000 V (50 Hz, 1 min.)
Flame resistance	UL 1581, Sec. 1060 (FT-1)
	IEC 60332-1
	in accordance with ISO 6722-1 5.22 (UN ECE-R 118.01)
Halogen-free	in accordance with DIN VDE 0472 part 815
	According to IEC 60754-1
Other resistance	Low adhesion
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-20 °C ... 80 °C (cable, flexible installation)
	≤ 70 °C (cable, drag chain applications)

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	27279218

ETIM

ETIM 2.0	EC000830
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Classifications

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

Approvals

Approvals

Approvals

EAC

Ex Approvals

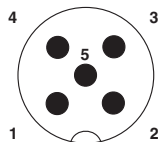
Approvals submitted

Approval details

EAC

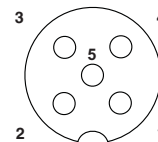
Drawings

Schematic diagram



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

Schematic diagram



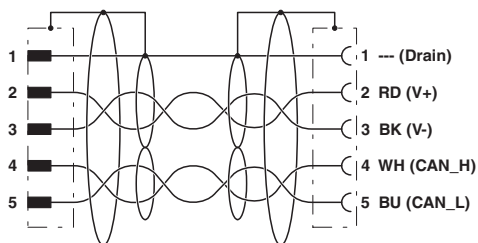
Pin assignment M12 socket, 5-pos., A-coded, socket side view

Bus system cable - SAC-5P-M12MS/ 1,0-920/M12FS - 1507544

Cable cross section



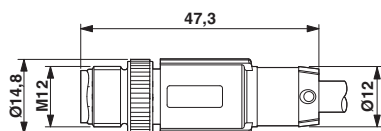
Circuit diagram



CAN Bus/DeviceNet [920]

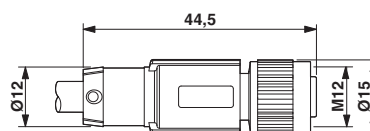
Contact assignment of the M12 connector and the M12 socket

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, straight, shielded

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