

Bus system cable - SAC-5PY-F/2X 5,0-920 - 1436136

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Bus system cable, CANopen[®], DeviceNet[™], 5-position, PUR halogen-free, violet RAL 4001, shielded, Socket straight M12 SPEEDCON, A-coded, on free cable end and free cable end, cable length: 5 m, Connector unshielded, Shield connected to pin 1



Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 432382
GTIN	4046356432382
Weight per Piece (excluding packing)	620.000 g
Custom tariff number	85444290
Country of origin	Poland

Technical data

Dimensions

Length of cable	5 m
Center distance	21 mm

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	48 V AC
	60 V DC

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Technical data

General

Number of positions	5
Color handle area	black
Insulation resistance	≥ 100 MΩ
Coding	A - standard
Standards/regulations	M12 connector IEC 61076-2-101
Signal type/category	CANopen® DeviceNet™
Status display	No
Overvoltage category	II
Degree of pollution	3

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 (Distributor) SR (shield)
	2 (Distributor) RD (V+)
	3 (Distributor) BK (V-)
	4 (Distributor) WH (CAN_H)
	5 (Distributor) BU (CAN_L)

Standards and Regulations

Standard designation	M12 connector
Standards/regulations	IEC 61076-2-101
Flammability rating according to UL 94	HB

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 mm² (Data cable)
	2x 0.34 mm² (Power supply)

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Technical data

Cable

	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
Bending radius	70 mm
Traversing path	4.5 m
Traversing rate	3 m/s
Acceleration	3 m/s ²
Cable weight	90 kg/km
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)
Loop resistance	≤ 181.80 Ω/km (Data cable)
	≤ 114.80 Ω/km (Power supply)
Cable capacity	nom. 40 nF/km (Data cable)
Wave impedance	120 Ω ±10 % (with 1 MHz)
Attenuation	≤ 22.9 dB/km (with 1 MHz)
	≤ 16.4 dB/km (At 500 kHz)
	≤ 9.5 dB/km (At 125 kHz)
Nominal voltage, cable	≤ 300 V (Peak value, not for high-power applications)
Test voltage Core/Core	2000 V (50 Hz, 1 min.)

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Technical data

Cable

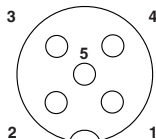
Test voltage Core/Shield	2000 V (50 Hz, 1 min.)
Flame resistance	UL 1581, Sec. 1060 (FT-1)
	IEC 60332-1
	in accordance with ISO 6722-1 5.22 (UN ECE-R 118.01)
Halogen-free	in accordance with DIN VDE 0472 part 815
	According to IEC 60754-1
Other resistance	Low adhesion
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-20 °C ... 80 °C (cable, flexible installation)

Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Schematic diagram



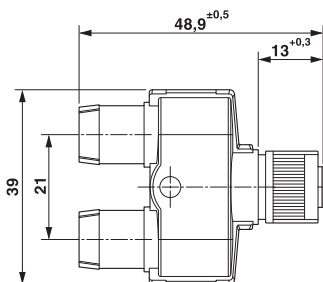
Pin assignment M12 socket, 5-pos., A-coded, socket side view

Cable cross section



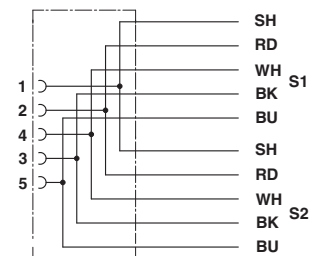
CAN Bus/DeviceNet [920]

Dimensional drawing



M12-SPEEDCON socket, Y-distributor

Circuit diagram



Contact assignment of the M12 socket

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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
eCl@ss 9.0	27060308

ETIM

ETIM 3.0	EC001855
ETIM 4.0	EC001855
ETIM 5.0	EC002599
ETIM 6.0	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

Approval details

EAC		EAC-Zulassung
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Accessories

Accessories

Circular connector (cable-side)

Bus system connector - SACC-M12FS-5PL SH DN - 1424672



Bus system connector, CANopen[®], DeviceNet[™], 5-position, shielded, Socket straight M12, A-coded, Push-in connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

Bus system connector - SACC-M12MS-5PL SH DN - 1424670



Bus system connector, CANopen[®], DeviceNet[™], 5-position, shielded, Plug straight M12, A-coded, Push-in connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

Bus system connector - SACC-M12FR-5PL SH DN - 1424673



Bus system connector, CANopen[®], DeviceNet[™], 5-position, shielded, Socket angled M12, A-coded, Push-in connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

Bus system connector - SACC-M12MR-5PL SH DN - 1424671



Bus system connector, CANopen[®], DeviceNet[™], 5-position, shielded, Plug angled M12, A-coded, Push-in connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

H-distributor

Bus system cable - SAC-5PY-F/2X 5,0-920 - 1436136

Accessories

H distributor - SAC-5PH-M-F/2XF SH1 SCO - 1417414



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

Protective cap

Screw plug - PROT-M12 MS-PA-CHAIN - 1430899

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



Safety locking

Locking clip - SAC-M12-EXCLIP-F - 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

Screwdriver tools

Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600



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

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Accessories

Tool - SAC BIT M12-D15 - 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

T-distributor

T distributor - SAC-5P-M12T/2XM12 VP - 1541186



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

T distributor - SAC-5PT-F/F-M VP - 1424712



T distributor, CANopen[®], DeviceNet[™], 5-position, Socket straight M12, A-coded, on Socket straight M12, A-coded and Plug straight M12, A-coded, Parallel distributor

Terminal resistor

Termination resistor - SAC-5P-M12MS CAN TR - 1507816



Terminating resistor CANopen[®]/DeviceNet[™] M12

Torque tool

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Accessories

Torque screwdriver - TSD 04 SAC - 1208429



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

Torque screwdriver - TSD-M 1,2NM - 1212224



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

Sensor/actuator connector - SACC-FS-5QO SH DN SCO - 1422760



Sensor/actuator connector, CANopen[®], DeviceNet[™], 5-position, halogen-free, shielded, Socket straight M12 SPEEDCON, A-coded, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm

Sensor/actuator connector - SACC-MS-5QO SH DN SCO - 1422759



Sensor/actuator connector, CANopen[®], DeviceNet[™], 5-position, halogen-free, shielded, Plug straight M12 SPEEDCON, A-coded, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm
