

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Bus system cable, CANopen®, DeviceNet™, 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: 10 m, Connector, unshielded, Shield connected to pin 1







# Key commercial data

Packing unit	11
Custom tariff number	85444290
Country of origin	Poland

#### Technical data

#### **Dimensions**

Length of cable	10 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
Contact resistance	$\leq 5~\text{m}\Omega$
Insulation resistance	$\geq$ 100 M $\Omega$
Coding	A - standard
Signal type/category	CANopen <sup>®</sup>
	DeviceNet™
Surge voltage category	
Pollution degree	3



# Technical data

#### Material

Inflammability class according to UL 94	НВ
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)

## Cable

Cable type	CAN Bus/DeviceNet
Cable type (abbreviation)	920
Conductor cross section	2x 0.25 mm² (signal line)
	2x 0.34 mm² (Power supply)
	1x 0.34 mm² (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 (signal line)
	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	Aluminum-lined polyester foil
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
Smallest bending radius, fixed installation	67 mm
Smallest bending radius, movable installation	67 mm
Number of bending cycles	2000000
Bending radius	67 mm
Traversing path	4.5 m
Traversing rate	3 m/s
Acceleration	3 m/s²
Outer sheath, material	PUR
Material conductor insulation	Foamed PE (signal line)



# Technical data

## Cable

	PE (Power supply)
Conductor material	Tin-plated Cu litz wires
Insulation resistance	≥ 5 GΩ*km (signal line)
	$\geq 5 \text{ G}\Omega^*\text{km}$ (Power supply)
Working capacitance	nom. 40 nF (signal line)
Wave impedance	120 $\Omega$ ± 12 $\Omega$ (with 1 MHz)
Nominal voltage, cable	max. 300 V
Test voltage, cable	2000 V (50 Hz, 1 min.)
Flame resistance	UL 1581, Sec. 1060 (FT-1)
	IEC 60332-1
Ambient temperature (operation)	-40 °C 80 °C (cable, fixed installation)
	-20 °C 70 °C (cable, flexible installation)

# 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

# Approvals

## Approvals



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## **Drawings**

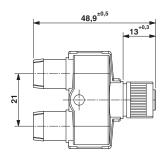
GOST <equation-block>

#### Schematic diagram



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

# Dimensioned drawing



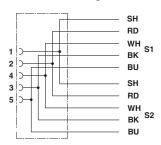
M12-SPEEDCON socket, Y-distributor

#### Cable cross section



CAN Bus/DeviceNet [920]

## Circuit diagram



Contact assignment of the M12 socket



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