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Bus system flush-type socket, Ethernet, 4-pos., M12, shielded, D-coded, SPEEDCON, rear/screw mounting with Pg9 thread, can be positioned, with 1.0 m bus cable,  $2 \times 2 \times 0.2 \text{ mm}^2$ 



### **Key Commercial Data**

Packing unit	1 pc
GTIN	4 046356 458436
GTIN	4046356458436

#### Technical data

### Dimensions

Length of cable	1 m

#### Ambient conditions

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

#### General

Rated current at 40°C	4 A (Plug/socket in accordance with IEC 61076-2-101, cable technical data is to be observed)
Rated voltage	60 V
Number of positions	4
Coding	D - data
Signal type/category	Ethernet
Overvoltage category	II
Degree of pollution	3

#### Material

Flammability rating according to UL 94	V0



### Technical data

### Material

Contact material	CuZn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Material, knurls	Nickel-plated brass
Sealing material	NBR

#### Standards and Regulations

Flammability rating according to UL 94	V0
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#### Cable

Cable type	PUR ETHERNET 2x2 FLEX
Cable type (abbreviation)	93E
UL AWM style	20963 (80°C/30 V)
Signal type/category	Ethernet CAT5 (IEC 11801), 100 Mbps
Cable structure	2x2xAWG26/7; SF/UTP
Conductor cross section	2x 2x 0.14 mm²
AWG signal line	26
Conductor structure signal line	7x 0.16 mm
Core diameter including insulation	0.98 mm
Wire colors	white/orange-orange, white/green-green
Twisted pairs	2 cores to the pair
Overall twist	Two pairs with two fillers to the core
Shielding	Aluminum-coated foil, tinned copper braided shield
Optical shield covering	70 %
External sheath, color	water blue RAL 5021
Outer sheath thickness	1.2 mm
External cable diameter D	6.4 mm ±0.2 mm
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	8 x D
Tensile strength GRP	≤ 80 N
Cable weight	42 kg/km
Outer sheath, material	PUR
Material conductor insulation	Foamed PE
Conductor material	Bare Cu litz wires
Standards/specifications	Electrical requirements EN 50288-2-2
Insulation resistance	≥ 500 MΩ*km
Loop resistance	$\leq 290.00~\Omega/\text{km}$
Cable capacity	approx. 45 nF/km (at 1 kHz)
Wave impedance	100 Ω ±5 Ω (at 100 MHz)
Near end crosstalk attenuation (NEXT)	65.3 dB (with 1 MHz)



### Technical data

### Cable

	in acc. to UL VW1
Flame resistance	according to IEC 60332-1-2
Current carrying capacity of cable	2 A (according to DIN VDE 0891-1)
Test voltage Core/Shield	700 V (50 Hz, 1 min.)
Test voltage Core/Core	700 V (50 Hz, 1 min.)
Nominal voltage, cable	≤ 100 V (Peak value, not for high-power applications)
Coupling resistance	≤ 100.00 mΩ/m (at 10 MHz)
Signal runtime	5.3 ns/m
	20.1 dB (at 100 MHz)
	21.5 dB (at 62.5 MHz)
	23.6 dB (at 31.25 MHz)
	25 dB (at 20 MHz)
	25 dB (at 16 MHz)
	25 dB (at 10 MHz)
	24.1 dB (at 8 MHz)
Return loss (RL)	23 dB (at 4 MHz)
	32 dB (at 100 MHz)
	24.8 dB (at 62.5 MHz)
	17.1 dB (at 31.25 MHz)
	13.6 dB (at 20 MHz)
	12.1 dB (at 16 MHz)
	9.5 dB (at 10 MHz)
	6 dB (at 4 MHz)
Attenuation	3.2 dB (with 1 MHz)
	32.3 dB (at 100 MHz)
	35.4 dB (at 62.5 MHz)
	39.9 dB (at 31.25 MHz)
	42.8 dB (at 20 MHz)
	44.2 dB (at 16 MHz)
	47.3 dB (at 10 MHz)
	53.3 dB (at 4 MHz)
Power-summated near end crosstalk attenuation (PSNEXT)	62.3 dB (with 1 MHz)
	35.3 dB (at 100 MHz)
	38.4 dB (at 62.5 MHz)
	42.9 dB (at 31.25 MHz)
	45.8 dB (at 20 MHz)
	47.2 dB (at 16 MHz)
	50.3 dB (at 10 MHz)
	56.3 dB (at 4 MHz)



### Technical data

### Cable

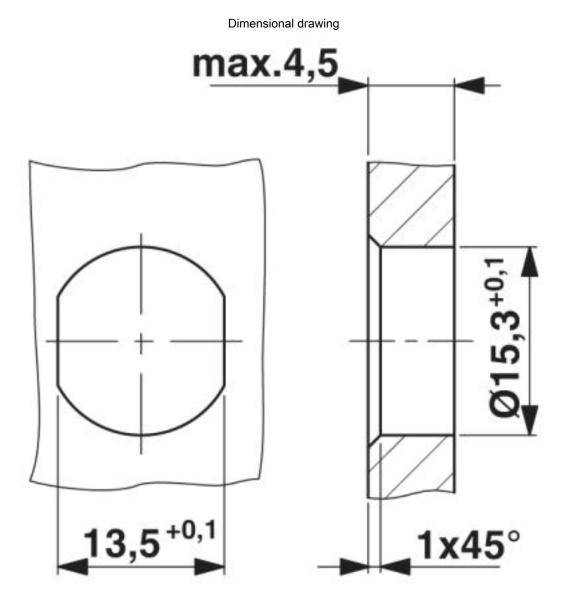
Halogen-free	according to IEC 60754-1
Resistance to oil	according to EN 60811-2-1
Ambient temperature (operation)	-40 °C 80 °C (cable, fixed installation)
	-20 °C 80 °C (cable, flexible installation)
Ambient temperature (installation)	-20 °C 80 °C
Ambient temperature (storage/transport)	-20 °C 80 °C

### **Environmental Product Compliance**

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

## Drawings

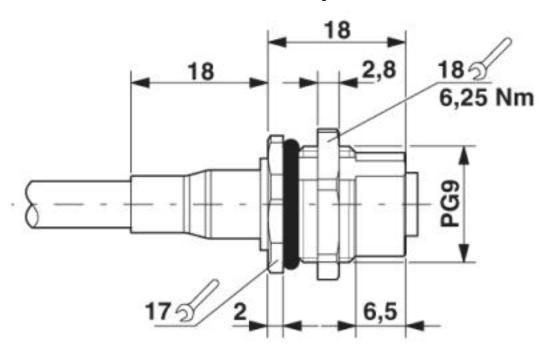




Housing cutout for Pg9 fastening thread, mounting panel with feed-through hole (alternatively with surface as protection against rotation)

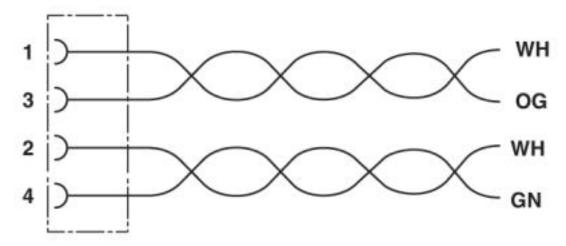


Dimensional drawing



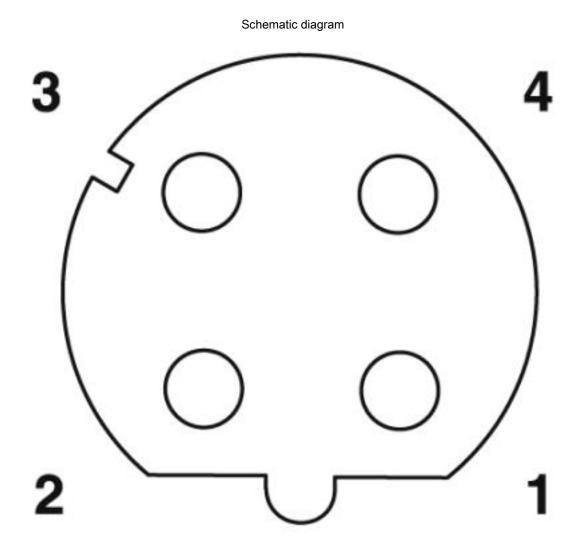
M12 panel feed-through

Circuit diagram



Contact assignment of the M12 socket

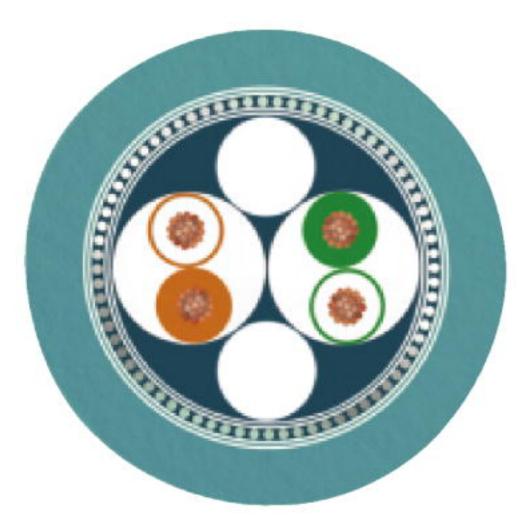




Pin assignment M12 socket, 4-pos., D-coded, female side



Cable cross section



PUR ETHERNET 2x2 FLEX [93E]

### Approvals

Approvals

Approvals

UL Recognized / EAC

Ex Approvals

Approval details



### Approvals

UL Recognized	http://datab	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	
Nominal voltage UN		250 V	
Nominal current IN		4 A	
mm²/AWG/kcmil		22	

EAC EH
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