

1405972

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Bus system cable, CANopen®, DeviceNet™, 5-position, PVC, gray, shielded, Plug angled M12, coding: A, on Socket straight M12, coding: A, cable length: 1.5 m, Connector unshielded

### Commercial data

Item number	1405972
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	BF15
Product key	AF1IHE
GTIN	4046356800563
Weight per piece (including packing)	115.1 g
Weight per piece (excluding packing)	64.6 g
Customs tariff number	85444290
Country of origin	US



1405972

https://www.phoenixcontact.com/us/products/1405972

### Technical data

### Product properties

Product type	Data cable preassembled
Application	Standard, U.S. cables
Sensor type	CANopen®
Number of positions	5
No. of cable outlets	1
Shielded	yes
Coding	A

#### Insulation characteristics

Overvoltage category	II.
Degree of pollution	3

#### Interfaces

Bus system	CANopen®/DeviceNet™
Signal type/category	CANopen®
	DeviceNet™

### Signaling

Status display	no
Status display present	no

### Electrical properties

Insulation resistance	≥ 100 MΩ
Nominal voltage $U_N$	48 V AC
	60 V DC
Nominal current I <sub>N</sub>	4 A
Transmission medium	Copper

### Material specifications

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

#### Connector

#### Connection 1

Туре	Plug angled M12
Number of positions	5



1405972

https://www.phoenixcontact.com/us/products/1405972

Coding type	A (Standard)
Connection 2	
Туре	Socket straight M12
Number of positions	5
Coding type	A (Standard)
ble/line	
Cable length	1.5 m
CANopen®/DeviceNet™, PVC, gray [924]	
Dimensional drawing	
Cable weight	64.51 kg/km
UL AWM Style	2464 (80°C/300 V)
Number of positions	4
Shielded	yes
Cable type	CANopen®/DeviceNet™, PVC, gray [924]
Conductor structure	2xAWG22 (Signal) + 2xAWG22 (Power)
Signal runtime	4.46 ns/m
Conductor structure signal line	19x 0.15 mm
AWG signal line	22
Conductor structure, voltage supply	19x 0.15 mm
AWG power supply	22
Conductor cross section	2x 0.34 mm² (Signal line)
00.100000 000000.	2x 0.34 mm² (Power supply)
Wire diameter incl. insulation	1.27 mm ±0.05 mm (Signal line)
THE Gameter met. Insulation	2.24 mm ±0.13 mm (Power supply)
External cable diameter	6.90 mm ±0.13 mm
Outer sheath, material	PVC
External sheath, color	
	gray  Bare Cu litz wires
Conductor material	
Material wire insulation	Foamed PE (Signal line)  PVC (Power supply)
Single wire, color	red-black, blue-white
Twisted pairs	2 cores to the pair
Type of pair shielding	Plastic-coated aluminum foil, aluminum side inside
Overall twist	2 pairs around a drain wire in the center to the core
Insulation resistance	≥ 59.38 Ω*m (Signal line)



1405972

https://www.phoenixcontact.com/us/products/1405972

Wave impedance≥ 57.41 GΩ*km (Power supply)Working capacitancenom. 78.74 pF (per meter)Minimum bending radius, flexible installation15 x DSmallest bending radius, movable installation104 mmShield attenuation0.95 dB (f = 125 kHz)1.64 dB (f = 500 kHz)2.30 dB (f = 1 MHz)Flame resistanceFT4Resistance to oilyesOther resistanceUV resistantSpecial propertiesUL standards PLTC and ITCAmbient temperature (operation)-30 °C 75 °C (cable, fixed installation)			
Working capacitance nom. 78.74 pF (per meter)  Minimum bending radius, flexible installation 15 x D  Smallest bending radius, movable installation 104 mm  Shield attenuation 0.95 dB (f = 125 kHz)  1.64 dB (f = 500 kHz)  2.30 dB (f = 1 MHz)  Flame resistance FT4  Resistance to oil yes  Other resistance UV resistant  Special properties UL standards PLTC and ITC		≥ 57.41 GΩ*km (Power supply)	
Minimum bending radius, flexible installation  Smallest bending radius, movable installation  Shield attenuation  Shield attenuation  104 mm  0.95 dB (f = 125 kHz)  1.64 dB (f = 500 kHz)  2.30 dB (f = 1 MHz)  Flame resistance  FT4  Resistance to oil  yes  Other resistance  UV resistant  Special properties  UL standards PLTC and ITC	Wave impedance	120 Ω ±12 Ω	
Smallest bending radius, movable installation104 mmShield attenuation0.95 dB (f = 125 kHz)1.64 dB (f = 500 kHz)2.30 dB (f = 1 MHz)Flame resistanceFT4Resistance to oilyesOther resistanceUV resistantSpecial propertiesUL standards PLTC and ITC	Working capacitance	nom. 78.74 pF (per meter)	
Shield attenuation         0.95 dB (f = 125 kHz)           1.64 dB (f = 500 kHz)           2.30 dB (f = 1 MHz)           Flame resistance         FT4           Resistance to oil         yes           Other resistance         UV resistant           Special properties         UL standards PLTC and ITC	Minimum bending radius, flexible installation	15 x D	
1.64 dB (f = 500 kHz)         2.30 dB (f = 1 MHz)         Flame resistance       FT4         Resistance to oil       yes         Other resistance       UV resistant         Special properties       UL standards PLTC and ITC	Smallest bending radius, movable installation	104 mm	
2.30 dB (f = 1 MHz)  Flame resistance  FT4  Resistance to oil  Other resistance  UV resistant  Special properties  UL standards PLTC and ITC	Shield attenuation	0.95 dB (f = 125 kHz)	
Flame resistance FT4  Resistance to oil yes  Other resistance UV resistant  Special properties UL standards PLTC and ITC		1.64 dB (f = 500 kHz)	
Resistance to oil yes  Other resistance UV resistant  Special properties UL standards PLTC and ITC		2.30 dB (f = 1 MHz)	
Other resistance UV resistant  Special properties UL standards PLTC and ITC	Flame resistance	FT4	
Special properties UL standards PLTC and ITC	Resistance to oil	yes	
	Other resistance	UV resistant	
Ambient temperature (operation) -30 °C 75 °C (cable, fixed installation)	Special properties	UL standards PLTC and ITC	
	Ambient temperature (operation)	-30 °C 75 °C (cable, fixed installation)	

### Environmental and real-life conditions

#### Ambient conditions

Degree of protection	IP65
	IP67
	IP68
Ambient temperature (operation) (male connector/female connector)	-25 °C 90 °C (Plug / socket)

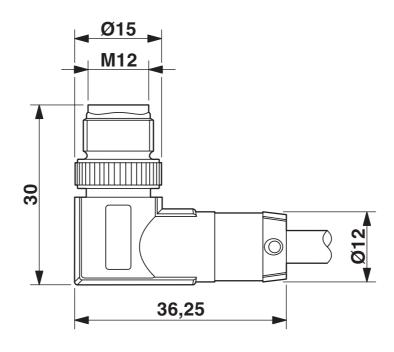


1405972

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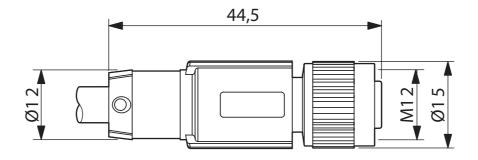
## **Drawings**

### Dimensional drawing



M12 x 1 male plug, angled

Dimensional drawing

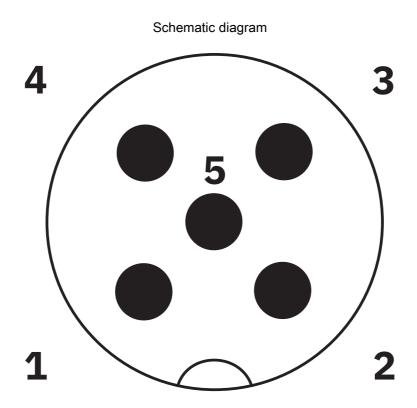


M12 x 1 socket, straight

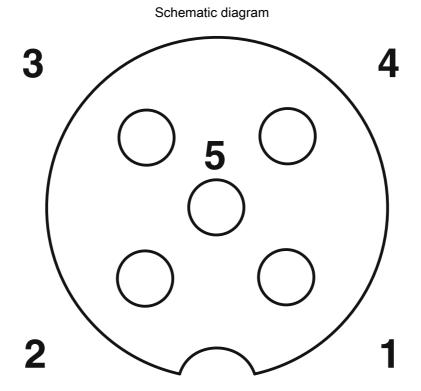


1405972

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

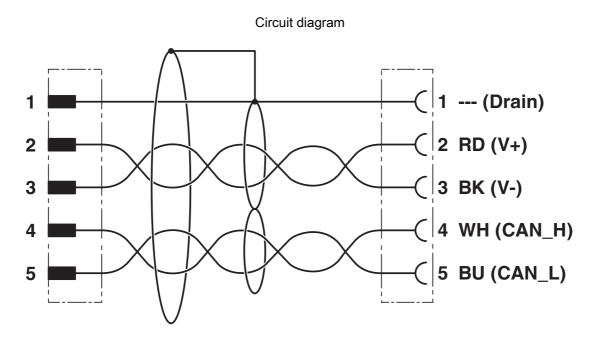


Pin assignment M12 socket, 5-pos., A-coded, socket side view



1405972

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Contact assignment of the M12 plug and the M12 socket



1405972

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### **Approvals**

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<b>D</b>	<b>UL Listed</b> Approval ID: FILE E 221474				
		Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
		125 V	4 A	-	-

• <u>®</u>	<b>cUL Listed</b> Approval ID: FILE E 221474				
		Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
		125 V	4 A	-	-

ERC	EAC-RoHS Approval ID: RU D-DE.HB35.B.00387
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## Classifications

	ECLASS-13.0	27060307		
ETIM				
	ETIM 9.0	EC001855		
UNSPSC				
	UNSPSC 21.0	26121600		



1405972

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## Environmental product compliance

#### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
China RoHS	
Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
U REACH SVHC	
REACH candidate substance (CAS No.)	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) (ADCA)(CAS: 123-77-3)
SCIP	e7e9d947-b60e-4b02-bb7b-1cadc451fb27
F3.0 Climate Change	
CO2e kg	1.466 kg CO2e

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