

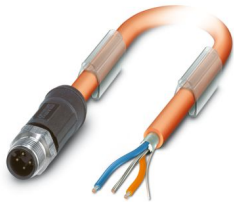
SAC-4P-M12MS/10,0-960 VA - Bus system cable



1431199

<https://www.phoenixcontact.com/us/products/1431199>

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Bus system cable, FOUNDATION Fieldbus (31.25 kbps), 3-position, PVC, orange RAL 2003, shielded, Plug straight M12, coding: A, on free cable end, cable length: 10 m

Commercial data

Item number	1431199
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF04
Product key	AF1CCG
GTIN	4046356431675
Weight per piece (including packing)	689.185 g
Weight per piece (excluding packing)	689.185 g
Customs tariff number	85444290
Country of origin	PL

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Technical data

Notes

General	Further products with variable cable type and variable cable length can be found in the accessories section
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Product properties

Product type	Data cable preassembled
Application	Process technology
Sensor type	FOUNDATION Fieldbus
Number of positions	3
No. of cable outlets	1
Shielded	yes
Coding	A

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Interfaces

Bus system	FOUNDATION Fieldbus
Signal type/category	FOUNDATION Fieldbus, 31.25 kbps

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_N	4 A
Transmission medium	Copper
Transmission speed	31.25 kbps

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100
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Material specifications

Flammability rating according to UL 94	HB
Seal material	NBR

Connection data

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Connection assignment

Contact Color (signal designation) Contact (optional)	1 (Plug) BU (DATA-)
	2 (Plug) OG (DATA+)
	3 (Plug) SR (shield)

Connector

Connection 1

Type	Plug straight M12
Number of positions	3
Coding type	A (Standard)
Material	CuSn (Contact)
	Ni/Au (Contact surface)
	TPU GF (Contact carrier)
	TPU, hardly inflammable, self-extinguishing (Grip body)
	Stainless steel (Screw connection)
Ambient temperature (operation)	-25 °C ... 90 °C

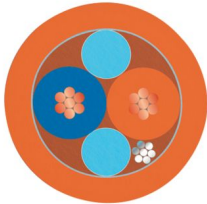
Connection 2

Type	free cable end
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Cable/line

Cable length	10 m
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FOUNDATION Fieldbus orange [960]

Dimensional drawing	
Cable weight	56.552 kg/km
Number of positions	2
Shielded	yes
Cable type	FOUNDATION Fieldbus orange [960]
Conductor structure	2xAWG18/7 + 1xAWG20/7
Signal speed	0.66 c
Conductor structure signal line	7x 0.40 mm
AWG signal line	18
Conductor cross section	2x 0.75 mm ² (Signal line)
	1x 0.5 mm ² (Drain wire)
Wire diameter incl. insulation	2.24 mm ±0.05 mm
External cable diameter	7.50 mm ±0.25 mm

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Outer sheath, material	PVC
External sheath, color	orange RAL 2003
Conductor material	Tin-plated Cu litz wires
Material wire insulation	PO (Signal line)
Single wire, color	blue, orange
Thickness, insulation	0.50 mm
Thickness, outer sheath	1.00 mm
Twisted pairs	2 cores to the pair
Overall twist	One pair with one drain wire and fillers for core
Optical shield covering	100 %
Max. conductor resistance	$\leq 19.35 \Omega/\text{km}$ (Signal line)
	$26 \Omega/\text{km}$ (shield)
Cable capacity	147 pF/m (at 1 kHz, core/shield)
	$\leq 3.94 \text{ pF/m}$ (capacitance unbalance)
Working capacitance	78 nF (at 1 kHz)
Cable impedance	$100 \Omega \pm 20 \%$ (At 31.25 kHz)
Nominal voltage, cable	300 V
Smallest bending radius, fixed installation	75 mm
Tensile strength	260 N
Shield attenuation	3.00 dB/km (at 39 kHz)
Flame resistance	UL 1685 (CSA FT 4)
	UL 1685 (vertical tray)
	UL 1666 (riser)
Special properties	UL standards PLTC-ER and ITC
Ambient temperature (operation)	$-40 \text{ }^{\circ}\text{C} \dots 105 \text{ }^{\circ}\text{C}$ (cable, fixed installation)

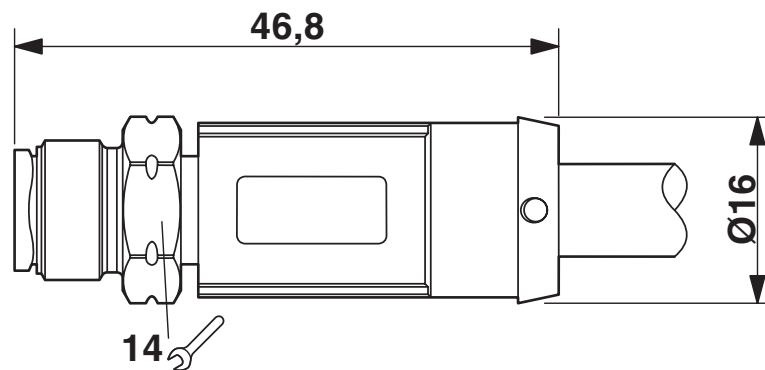
Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65
	IP67
	IP68
	IP69K

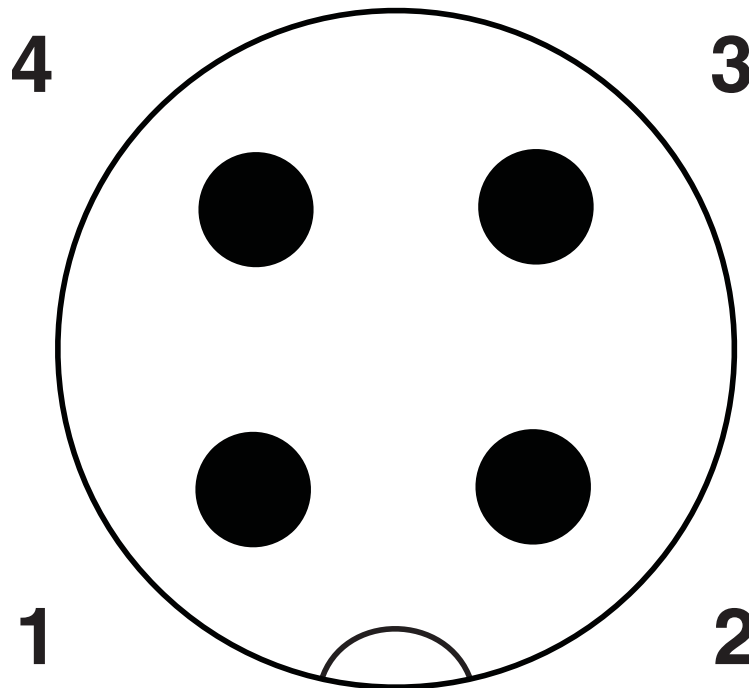
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Schematic diagram



Pin assignment M12 plug, 4-pos., A-coded, view plug side

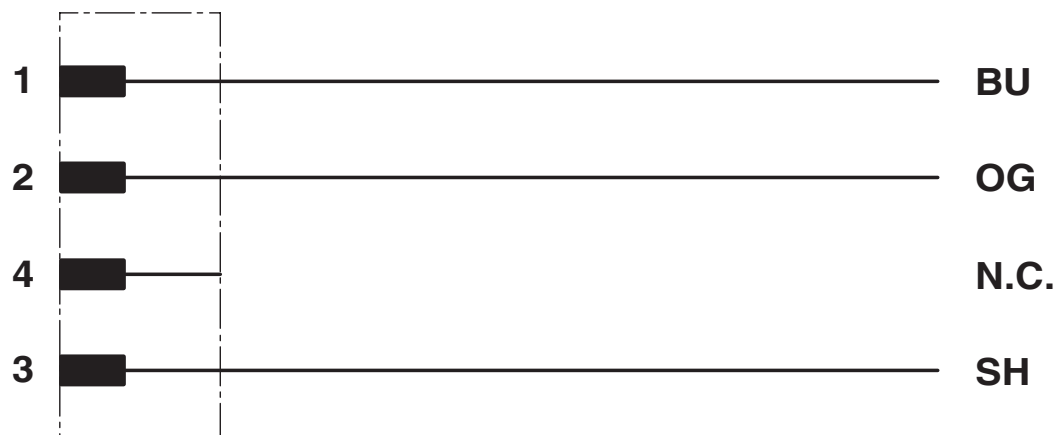
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Circuit diagram



Contact assignment of the M12 plug

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Approvals

📄 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1431199>



EAC-RoHS

Approval ID: RU D-DE.HB35.B.00387



cULus Listed

Approval ID: E221474

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Classifications

ECLASS

ECLASS-13.0	27060307
ECLASS-15.0	27060307

ETIM

ETIM 9.0	EC001855
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UNSPSC

UNSPSC 21.0	26121600
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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