

1668742

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Sensor/actuator cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug angled M12, coding: A, on Socket angled M12, coding: A, cable length: 3 m

Your advantages

• Easy and safe: 100 % electrically tested plug-in components

Commercial data

Item number	1668742
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF03
Product key	BF1CCA
Catalog page	Page 194 (C-2-2019)
GTIN	4017918137281
Weight per piece (including packing)	95.15 g
Weight per piece (excluding packing)	95.15 g
Customs tariff number	85444290
Country of origin	DE



1668742

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Technical data

Product properties

Product type	Sensor/actuator cable	
Application	Standard	
Number of positions	4	
No. of cable outlets	1	
Shielded	no	
Coding	A	
Insulation characteristics		
Overvoltage category	II	
Degree of pollution	3	

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

Electrical properties

Insulation resistance	≥ 10 MΩ
Nominal voltage U _N	250 V AC
"	250 V DC
Nominal current I _N	4 A

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100

Signaling

Status display	no
Status display present	No

Connection data

Conductor connection

Tightening torque	0.4 Nm (M12 connector)

Connector

Connection 1



1668742

https://www.phoenixcontact.com/us/products/1668742

Туре	Plug angled M12
Number of positions	4
Coding type	A
Connection 2	Socket angled M12
Connection 2 Type Number of positions	Socket angled M12

Cable/line

Cable length	3 m
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PUR halogen-free black [PUR]

Dimensional drawing



Cable weight	30 kg/km
UL AWM Style	20549 / 10493 (80°C/300 V)
Number of positions	4
Shielded	no
Cable type	PUR halogen-free black [PUR]
Conductor structure signal line	42x 0.10 mm
AWG signal line	22
Conductor cross section	4x 0.34 mm² (Signal line)
Wire diameter incl. insulation	1.27 mm ±0.02 mm
External cable diameter	4.20 mm ±0.15 mm
Outer sheath, material	PUR
External sheath, color	black-gray RAL 7021
Conductor material	Bare Cu litz wires
Material wire insulation	PP
Single wire, color	brown, white, blue, black
Thickness, insulation	≥ 0.21 mm
Thickness, outer sheath	approx. 0.50 mm
Overall twist	4 wires, twisted
Max. conductor resistance	≤ 58 Ω/km
Insulation resistance	≥ 1 GΩ*km
Nominal voltage, cable	≤ 300 V
Test voltage	≥ 3000 V
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D



1668742

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Smallest bending radius, fixed installation	21 mm
Smallest bending radius, movable installation	42 mm
Dynamic load capacity (bending)	Max. bending cycles: 10000000, Bending radius: 10 x D, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s²
Halogen-free	in accordance with DIN VDE 0472 part 815
	in accordance with DIN EN 50267-2-1
Flame resistance	in accordance with UL 758/1581 FT2
	DIN EN 60332-2-2 (20 s)
Resistance to oil	in accordance with DIN EN 60811-2-1
Other resistance	Highly resistant to acids, alkaline solutions and solvents
	hydrolysis and microbe resistant
	partly UV-resistant (in accordance with DIN EN ISO 4892-2-A)
	Low adhesion
	abrasion-resistant
Special properties	Flexible cable conduit capable
	Silicone-free
	Free of substances which would hinder coating with paint or varnish
	flexible
Ambient temperature (operation)	-40 °C 80 °C (cable, fixed installation)
	-25 °C 80 °C (Cable, flexible installation)

Environmental and real-life conditions

Ambient conditions

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Degree of protection	IP65
	IP67
	IP68
Ambient temperature (operation)	-25 °C 90 °C (Plug / socket)
	-40 °C 80 °C (cable, fixed installation)
	-5 °C 80 °C (Cable, flexible installation)

Standards and regulations

Standard designation	M12 connector
Standards/specifications	IEC 61076-2-101

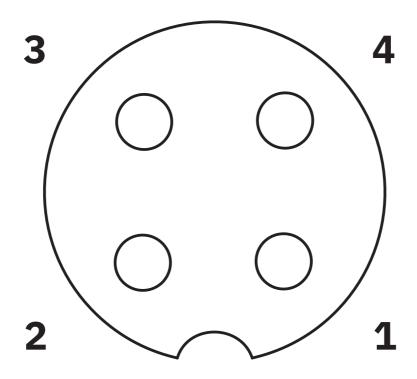


1668742

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Drawings

Schematic diagram



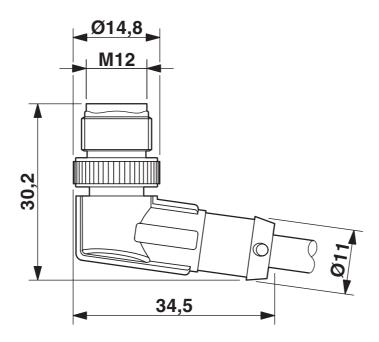
Pin assignment M12 socket, 4-pos., A-coded, view female side



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Dimensional drawing



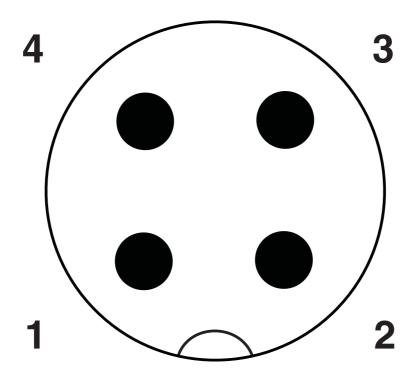
M12 x 1 male plug, angled



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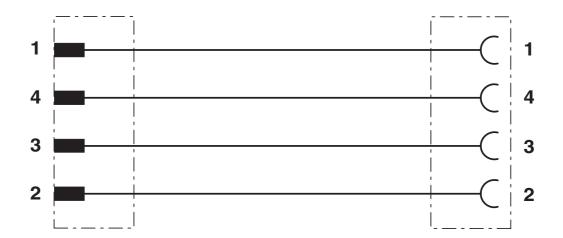
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Schematic diagram



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

Circuit diagram

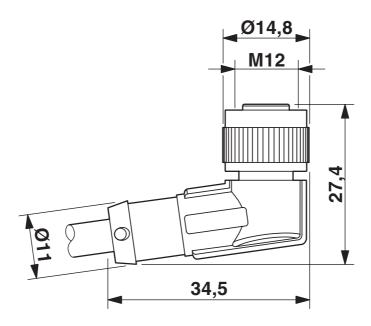




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Dimensional drawing



M12 x 1 socket, angled



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Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1668742

<u> </u>	UL Listed Approval ID: FILE E 221474				
		Nominal voltage U _N	Nominal current I _N	Cross section AWG	Cross section mm ²
		300 V	4 A	-	-

• <u>®</u>	cUL Listed Approval ID: FILE E 221474	ı			
		Nominal voltage U _N	Nominal current I _N	Cross section AWG	Cross section mm ²
		300 V	4 A	-	-

EAC	EAC-RoHS
LIIL	Approval ID: RU D-DE.HB35.B.00387

cULus Listed



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Classifications

UNSPSC 21.0

ECLASS

	ECLASS-11.0	27060311
	ECLASS-12.0	27060311
	ECLASS-13.0	27060311
ETIM		
	ETIM 9.0	EC001855
UN	NSPSC	

26121600



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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-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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