

1698071

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Sensor/actuator cable, 3-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: A, with 2 LEDs, on Socket angled M8, with 2 LEDs, cable length: 5 m

Commercial data

Item number	1698071
Packing unit	5 pc
Minimum order quantity	25 pc
Sales key	AF1CBA
Product key	AF1CBA
GTIN	4017918331658
Weight per piece (including packing)	115.06 g
Weight per piece (excluding packing)	111 g
Customs tariff number	85444290
Country of origin	PL



1698071

https://www.phoenixcontact.com/gb/products/1698071

Technical data

Product properties

Product type	Sensor/actuator cable
Number of positions	3
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	≥ 100 MΩ
Nominal voltage U _N	24 V
	24 V DC
Nominal current I _N	4 A

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100
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Signaling

Status display	2 LEDs
Status display present	yes

Connector

Connection 1

Туре	Plug straight M12
Number of positions	3
Coding type	A

Connection 2	
Туре	Socket angled M8



1698071

https://www.phoenixcontact.com/gb/products/1698071

Number of positions	3	
ble/line		
Cable length	5 m	
PUR halogen-free black [PUR]		
Dimensional drawing		
Cable weight	18 kg/km	
UL AWM Style	20549 / 10493 (80°C/300 V)	
Number of positions	3	
Shielded	no	
Cable type	PUR halogen-free black [PUR]	
Conductor structure signal line	32x 0.10 mm	
AWG signal line	24	
Conductor cross section	3x 0.25 mm² (Signal line)	
Wire diameter incl. insulation	1.17 mm ±0.02 mm 3.60 mm ±0.15 mm	
External cable diameter		
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, blue, black	
Thickness, insulation	≥ 0.21 mm (Core insulation)	
Thickness, outer sheath	approx. 0.50 mm	
Overall twist	3 wires, twisted	
Length of twist, overall twist	40 mm	
Max. conductor resistance	≤ 78 Ω/km (at 20 °C)	
Insulation resistance	≥ 100 GΩ*km (at 20 °C)	
Nominal voltage, cable	≤ 300 V	
Test voltage	≥ 3000 V	
Smallest bending radius, fixed installation	18 mm	
Smallest bending radius, movable installation	36 mm	
Dynamic load capacity (bending)	Max. bending cycles: 10000000, Bending radius: 44 mm, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s²	
Dynamic load capacity (torsion)	Torsion: ±180 °/m, Torsion cycles: ≥2000000, Torsional frequency: 35 cycles/min.	
Halogen-free	in accordance with DIN VDE 0472 part 815	



1698071

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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	hydrolysis and microbe resistant	
	Highly resistant to acids, alkaline solutions and solvents	
	Resistant to salt water	
	partly UV-resistant (in accordance with DIN EN ISO 4892-2-A)	
Special properties	Flexible cable conduit capable	
	Silicone-free	
	Free of substances which would hinder coating with paint or varnish	
Ambient temperature (operation)	-40 °C 80 °C (cable, fixed installation)	
	-25 °C 80 °C (Cable, flexible installation)	

Environmental and real-life conditions

Ambient conditions

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)	

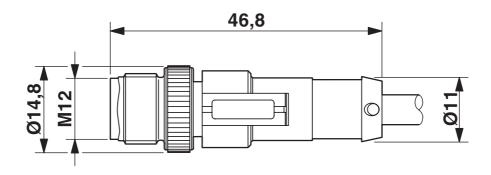


1698071

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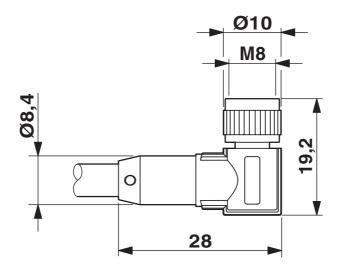
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing

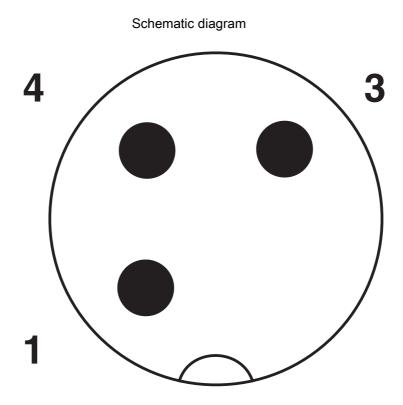


Socket M8 x 1, angled, with LED



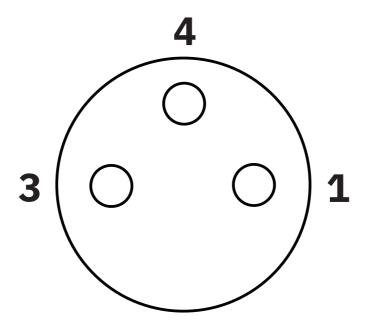
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Pin assignment M12 plug, 3-pos., A-coded, view male side

Schematic diagram

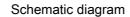


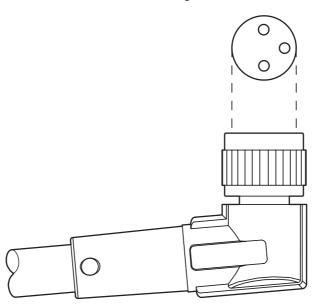
Pin assignment M8 socket, 3-pos., view female side



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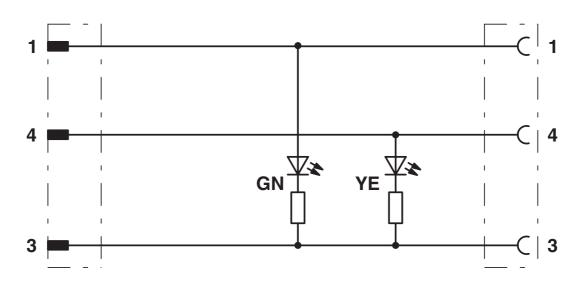
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Layout of connector pin assignments

Circuit diagram



Contact assignment of M12 plugs / M8 sockets



1698071

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Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/gb/products/1698071

D	UL Listed Approval ID: FILE E 221474				
		Nominal voltage U _N	Nominal current I _N	Cross section AWG	Cross section mm ²
		24 V	4 A	-	-

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

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



1698071

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Classifications

ECLASS					
	ECLASS-13.0	27060311			
ETIM					
	ETIM 9.0	EC001855			
UNSPSC					
	UNSPSC 21 0	26121600			



1698071

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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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