

NBC-M12MSD/ 2,0-93B/M12FSD CMC - Network cable



1553938

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Network cable, PROFINET CAT5 (100 Mbps), EtherCAT® CAT5 (100 Mbps), 4-position, PVC/PVC, green RAL 6018, shielded (Advanced Shielding Technology), Plug straight M12, coding: D / IP67, on Socket straight M12, coding: D / IP67, cable length: 2 m

Commercial data

Item number	1553938
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	AF1CJN
Product key	AF1CJN
GTIN	4046356161787
Weight per piece (including packing)	171 g
Weight per piece (excluding packing)	171 g
Customs tariff number	85444290
Country of origin	PL

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1553938

<https://www.phoenixcontact.com/au/products/1553938>

Technical data

Notes

General	This product corresponds to the PROFINET Cabling and Interconnection Technology Guideline for PROFINET regulations, version 2.00, order no: 2.252, Chapter 10.1 Cord Sets for Balanced Cabling
General	Further products with variable cable type and variable cable length can be found in the accessories section
General	CMC - Conductor marker carrier - PATG

Product properties

Product type	Data cable preassembled
Application	Standard
Sensor type	PROFINET
Number of positions	4
Shielded	yes

Interfaces

Signal type/category	PROFINET CAT5 (IEC 11801), 100 Mbps
	EtherCAT® CAT5 (IEC 11801), 100 Mbps

Electrical properties

Nominal voltage U_N	48 V AC
	60 V DC
Nominal current I_N	4 A
Transmission medium	Copper

Connector

Connection 1

Dimensional drawing	 Pin assignment M12 male connector, 4-pos., D-coded, male side
Type	M12 Plug, straight, 4-position, shielded (Advanced Shielding Technology), Keying: D
Number of positions	4
Shielded	yes
Shielding	Advanced Shielding Technology
Signal type/category	EtherCAT® CAT5 (IEC 11801), 100 Mbps
	PROFINET CAT5 (IEC 11801)
Insertion/withdrawal cycles	≥ 100

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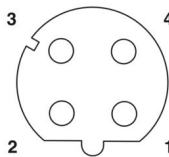


1553938

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Insulation resistance	≥ 100 MΩ
Overvoltage category	II
Degree of pollution	3
Tightening torque	0.4 Nm
Material Contact	CuSn
Material Contact surface	Ni/Au
Material Contact carrier	PA 6.6
Material Screw connection	Die-cast zinc, nickel-plated
Material Grip body	TPU, hardly inflammable, self-extinguishing
Material Seal	FKM
Flammability rating according to UL 94	V0
Degree of protection	IP65
	IP67
Ambient temperature (operation)	-25 °C ... 85 °C
Standard designation	M12 connector
Standards/regulations	IEC 61076-2-101

Connection 2

Dimensional drawing	 Pin assignment M12 socket, 4-pos., D-coded, female side
Type	M12 Socket, straight, 4-position, shielded (Advanced Shielding Technology), Keying: D
Number of positions	4
Shielded	yes
Shielding	Advanced Shielding Technology
Signal type/category	EtherCAT® CAT5 (IEC 11801), 100 Mbps PROFINET CAT5 (IEC 11801)
Insertion/withdrawal cycles	≥ 100
Insulation resistance	≥ 100 MΩ
Overvoltage category	II
Degree of pollution	3
Tightening torque	0.4 Nm
Material Contact	CuSn
Material Contact surface	Ni/Au
Material Contact carrier	PA 6.6
Material Screw connection	Die-cast zinc, nickel-plated
Material Grip body	TPU, hardly inflammable, self-extinguishing
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Flammability rating according to UL 94	V0
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1553938

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	IP67
Ambient temperature (operation)	-25 °C ... 85 °C
Standard designation	M12 connector
Standards/regulations	IEC 61076-2-101

Cable/line

Cable length	2 m
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PROFINET PVC stranded CAT5 [93B]

Dimensional drawing		
UL AWM Style	21695 (80 °C / 600 V)	
Number of positions	4	
Shielded	yes	
Cable type	PROFINET PVC stranded CAT5 [93B]	
Conductor structure	1x4xAWG22/7, SF/TQ	
AWG signal line	22	
Conductor cross section	4x 0.34 mm ²	
Wire diameter incl. insulation	1.5 mm ±0.1 mm	
External cable diameter	6.50 mm ±0.2 mm	
Outer sheath, material	PVC	
External sheath, color	green RAL 6018	
Conductor material	Tin-plated Cu litz wires	
Material wire insulation	PE	
Single wire, color	white, yellow, blue, orange	
Overall twist	Star quad	
Optical shield covering	85 %	
Insulation resistance	≥ 5 GΩ*km	
Loop resistance	≤ 120.00 Ω/km	
Wave impedance	100 Ω ±5 Ω (at 100 MHz)	
Nominal voltage, cable	≤ 600 V	
Test voltage Core/Core	2000 V ((50 Hz/1 min))	
Test voltage Core/Shield	2000.00 V ((50 Hz/1 min))	
Minimum bending radius, fixed installation	4 x D	
Minimum bending radius, flexible installation	8 x D	
Flame resistance	UL 1581, Section 1060 and UL 2556, Section 9.3 (FT1)	
	UL 1685 (CSA FT 4)	
	UL 1581, Section 1100 and UL 2556, Section 9.1 (HFT/FT2)	

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1553938

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Resistance to oil	OIL RES I according to UL 2256
Other resistance	UV resistant (according to UL 1581, Section 1200)
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-10 °C ... 70 °C (Cable, flexible installation)

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1553938

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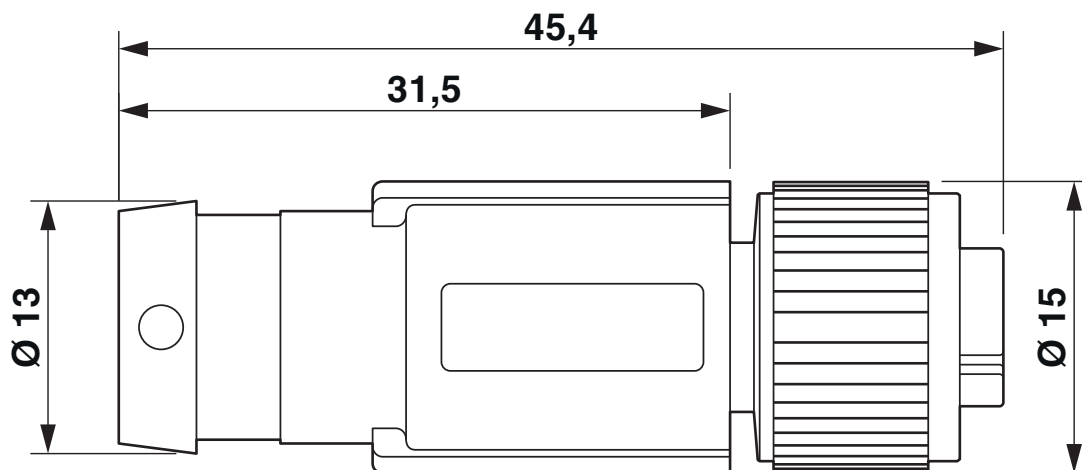
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



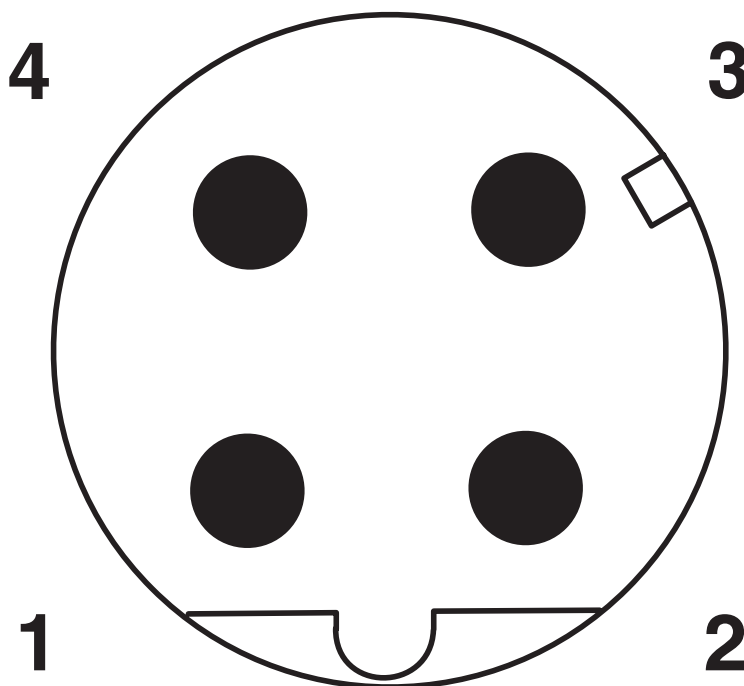
M12 x 1 socket, straight, shielded

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1553938

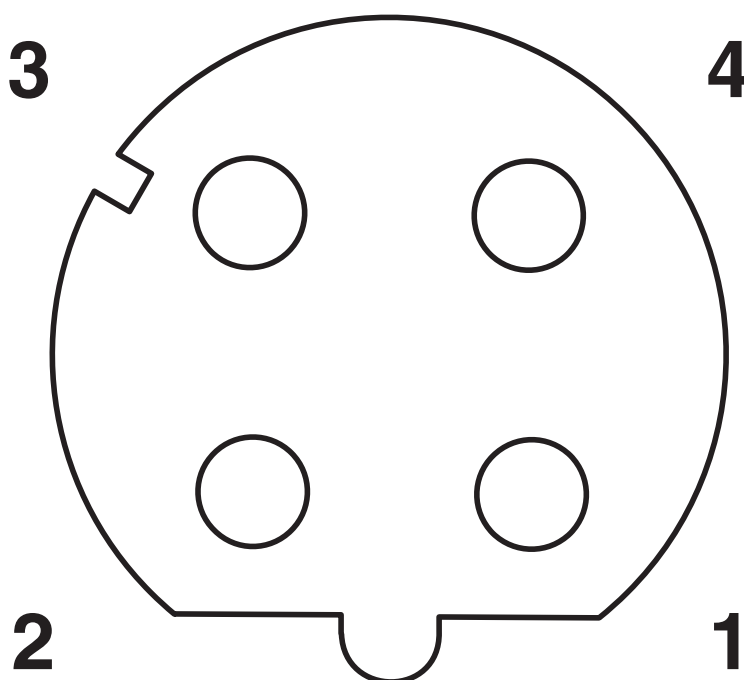
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Schematic diagram



Pin assignment M12 male connector, 4-pos., D-coded, male side

Schematic diagram



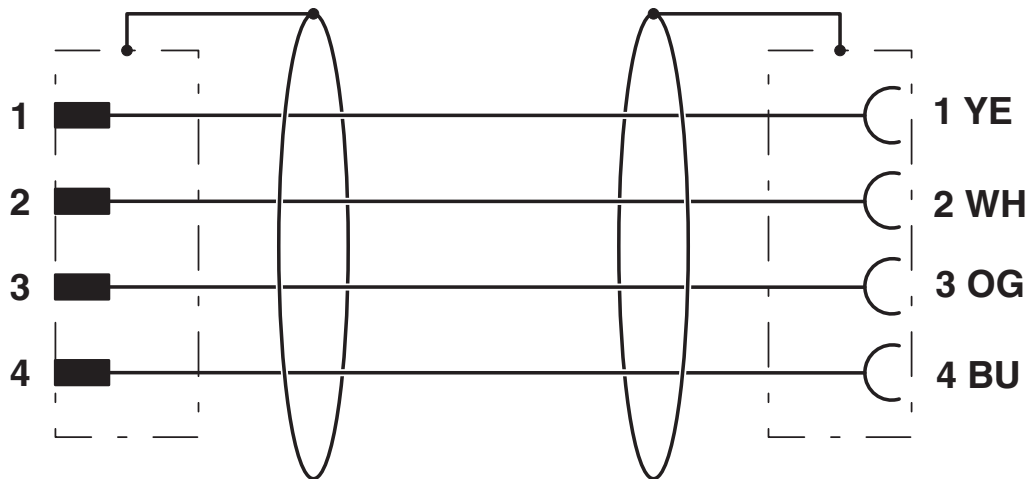
Pin assignment M12 socket, 4-pos., D-coded, female side

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Circuit diagram



Contact assignment of the M12 connector and the M12 socket

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1553938

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Approvals

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EAC-RoHS

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

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Classifications

ECLASS

ECLASS-13.0	27060307
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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
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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