

# Data sheet

## M12 field plug X-coded, straight

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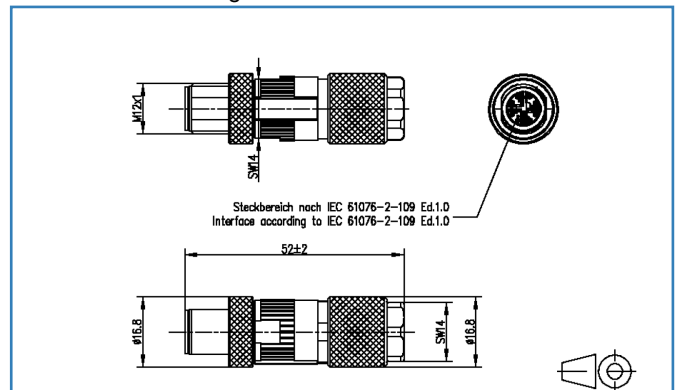
P/N  
 MNF881A315-0001  
 EAN 4250184151166

2016-02-02

### Illustrations



Dimensional drawing



See enlarged drawings at the end of document

### Product specification

- M12 Cat.6<sub>A</sub> X-coded plug based on IEC PAS 61076-2-109 and suitable for field assembly
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- for a 8-wire M12 plug for AWG 22
- connection of AWG 26/1 - 22/1; AWG 26/7 - 22/7 possible
- solid copper wire diameter from 0.4 to 0.64 mm
- stranded copper wire diameter from 0.48 to 0.76 mm
- core diameter up to 1.6 mm
- cable jacket from 5.0 to 9.7 mm
- consists of only 2 parts
- easy assembly - connection without special tools
- zinc die-cast housing for industrial use

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**Technical Data**

**General Data**

Design	Plugs
Shielding	shielded
Transmission technology	Copper
Dimensions	
Dimension (L x W x H)	52.00 x 16.80 x 16.80 mm
Dimension (L x W x H)	2.05 x 0.66 x 0.66 in.
Field assembly ability	yes
Labeling option	on housing

**Transmission characteristics**

Category (ISO)	6 <sub>A</sub>
Category (TIA)	6A
Remote Powering	yes
PoE	IEEE 802.3af
PoE plus	IEEE 802.3at
UPoE	yes
HDBaseT	yes
Transmission rate up to 10 GBit	IEEE 802.3an

**Connections/interfaces**

Connector technology interface 1	IDC-connection
Connector technology interface 2	M12-plug
Number of ports interface 2	1
Number of ports interface 2 equipped	1
Number of positions/contacts interface 1	8
Number of positions/contacts interface 2	8
Termination data, solid wire (min. - max.)	
Conductor cross section, solid wire	AWG 26/1 - 22/1
Conductor cross section, solid wire	0.128 - 0.324 mm <sup>2</sup>
Conductor diameter, solid wire (bare copper)	0.409 - 0.643 mm
Conductor diameter, solid wire (bare copper)	0.016 - 0.025 in.

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<b>Connections/interfaces</b>	
Termination data, stranded wire (min. - max.)	
Conductor cross section, stranded wire	AWG 26/7 - 22/7
Conductor cross section, stranded wire	0.141 - 0.355 mm <sup>2</sup>
Conductor diameter, stranded wire (bare copper)	0.483 - 0.762 mm
Conductor diameter, stranded wire (bare copper)	0.019 - 0.030 in.
Core diameter (min. - max.)	
Core diameter (conductor with insulation)	0.85 - 1.60 mm
Core diameter (conductor with insulation)	0.033 - 0.06 in.
Cable sheath diameter (min. - max.)	
Cable sheath diameter	5.00 - 9.70 mm
Cable sheath diameter	0.20 - 0.38 in.
Cable access/outlet	straight M12
<b>Electrical characteristics</b>	
Current carrying capacity	0.5 A
Rated voltage	60 V
Through resistance	max. 5 mOhm
Insulation resistance	min. 100 MOhm
Dielectric strength conductor-conductor (primarily)	500 V DC
<b>Mechanical characteristics</b>	
Mounting method	screwable
Insertion and withdrawal force	max.30 N
Life - Number of mating cycles	min. 100
<b>Materials and material properties</b>	
Material - Housing	GD-Zn (zinc die-cast)
Material - Contact	CuZn (brass)
Material - Contact finish	Ni + Au (nickel-gold)
Material - Shield	CuSn (tin bronze)
Material - Shield finish	Sn (tin)
Material - Stuffer cap	PA UL94-V0

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**Environmental conditions**

Temperature (min. - max.)	
Temperature - Storage °C	-40 - 85 °C
Temperature - Storage °F	-40 - 185 °F
Temperature - Operating °C	-40 - 85 °C
Temperature - Operating °F	-40 - 185 °F
Particulate ingress	IP6X when plugged in
Liquid ingress/immersion	IPX7 when plugged in
Damp heat	25 °C / +40 °C / 93% RH // 5 cycles
Overvoltage category	III
Pollution degree	2
Electromagnetic measurement	E <sub>2</sub>
Shock	490 m/s <sup>2</sup>

**Approvals**

RoHS	compliant
UL listed (file no.)	DUXR.E178484

**The product meets the following standards**

Application-specific communications cabling systems	
Profinet	yes
Connectors for electronic equipment	
Round plug connectors	DIN EN 61076-2-109:2010-08

**Classifications**

ETIM 5.0	EC001121
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**Packing details**

Type of packaging	10 pc(s) / box
Packaging unit - Weight (gram)	345.00 g
Packaging unit - Weight (pound)	0.76 lb
Packaging dimension (W x H x D)	247.00 x 161.00 x 58.00 mm
Packaging dimension (W x H x D)	9.72 x 6.34 x 2.28 in.

## Accessories

P/N	Designation
130670-E	KAPRi plus cable and installation tester
130674-E	KAPRi plus extension set M12 X-coded
700669	M12 plug protection cap IP54



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