Data sheet

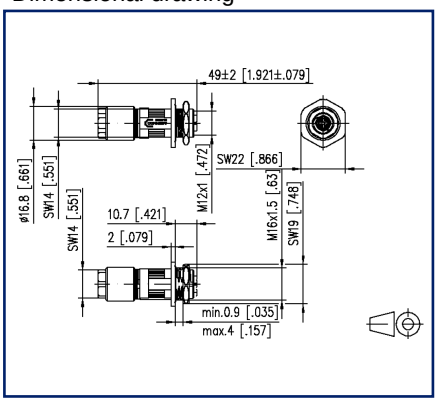
M12 jack, X-coded, IP67, Cat.6$_A$, Ø 6-9.7 mm, field assembly, with flange

P/N
MMF881A315-0001
EAN 4250184171096
2026/08/21
Version: BI

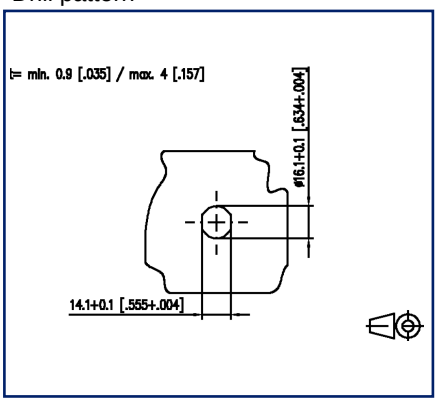
Illustrations



Dimensional drawing



Drill pattern



c UL US LISTED

See enlarged drawings at the end of document

Product specification

- 8-pole M12 jack for field assembly Cat.6$_A$
- per IEC 61076-2-109 with flange
- suitable for 10 GBit as per IEEE 802.3an
- AWG 26/1 - 22/1, AWG 26/7 - 22/7 can be connected
- solid copper wire diameter 0.4 to 0.64 mm
- stranded copper wire diameter 0.48 to 0.76 mm
- wire diameter with isolation up to 1.6 mm
- overall cable diameter from 6.0 to 9.7 mm
- jack consists of only two parts
- easy assembly without special tools
- industry-compatible zinc die-cast housing
- suitable for applications in the railway industry according to data sheet

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Technical Data

General Data	
Electromagnetic measurement according to MICE	E2
Design	Jack
Mounting style	back side
Shielding	shielded
Transmission technology	Copper
Dimensions	
Dimension (L x W x H)	49 mm x 16.8 mm x 16.8 mm
Dimension (L x W x H)	1.929 in. x 0.661 in. x 0.661 in.
Field assembly ability	yes

Transmission characteristics	
Category (ISO)	6_A
Category (TIA)	6A
Remote Powering	yes
PoE	IEEE 802.3af
PoE plus	IEEE 802.3at
UPoE	yes
4PPoE	IEEE 802.3bt
Transmission rate up to 10 GBit	IEEE 802.3an

Connections/interfaces	
Connector technology interface 1	IDC-connection
Connector technology interface 2	M12-jack
Coding interface 2	X-coded
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

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Technical Data

Connections/interfaces	
Termination data, solid wire (min. - max.)	
Conductor cross section, solid wire	AWG 26/1 - AWG 22/1
Conductor cross section, solid wire	0.128 mm² - 0.324 mm²
Conductor diameter, solid wire (bare copper)	0.409 mm - 0.643 mm
Conductor diameter, solid wire (bare copper)	0.016 in. - 0.025 in.
Termination data, stranded wire (min. - max.)	
Conductor cross section, stranded wire	AWG 26/7 - AWG 22/7
Conductor cross section, stranded wire	0.141 mm² - 0.355 mm²
Conductor diameter, stranded wire (bare copper)	0.483 mm - 0.762 mm
Conductor diameter, stranded wire (bare copper)	0.019 in. - 0.03 in.
Aderdurchmesser (min.-max.)	
Core diameter (conductor with insulation)	0.85 mm - 1.6 mm
Core diameter (conductor with insulation)	0.033 in. - 0.063 in.
Cable sheath diameter (min. - max.)	
Cable sheath diameter	6 mm - 9.70
Cable sheath diameter	0.236 in. - 0.382
Cable access/outlet	straight M12
Electrical characteristics	
Current carrying capacity	0.5 A
Rated voltage	50 V AC / 60 V DC
Through resistance	max. 5 mOhm
Insulation resistance	min. 100 MOhm
Mechanical data	
Mounting method	screwable
Insertion and withdrawal force	max. 30 N
Life - Number of mating cycles	min. 100

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Materials and material properties	
Material - Housing	GD-Zn
Material - Contact	CuZnPb (brass)
Material - Contact finish	Ni + Au (nickel-gold)
Material - Contact carriers	PA UL 94 V0
Material - Shield	CuSn
Material - Shield finish	Sn
Material - Stuffer cap	PA UL94-V0
Halogen free	yes
Material - Finish	Ni (nickel)
RoHS	compliant

Environmental conditions	
Temperature (min. - max.)	
Temperature - Storage °C	-40 °C - 85 °C
Temperature - Storage °F	-40 °F - 185 °F
Temperature - Operating °C	-40 °C - 85 °C
Temperature - Operating °F	-40 °F - 185 °F
Protection category	IP65, IP67 when plugged in
Particulate ingress	IP6X when plugged in
Liquid ingress/immersion	IPX5, IPX7 when plugged in
Particulate ingress interface 2	IP6X when plugged in
Liquid ingress/immersion interface 2	IPX5 when plugged in, IPX7 when plugged in
Overvoltage category	II
Degree of pollution	2
Shock	490 m/s²

Approvals		
UL listed (file no.)	c UL us LISTED	DUXR.E178484

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Standards/Regulations

Application-specific communications cabling systems	
Profinet	yes
Connectors for electronic equipment	
circular connector	DIN EN 61076-2-109:2010-08
Connectors for electronic equipment - Tests and measurements	
Test standard for connectors (engaging and separating connectors under electrical load)	DIN-EN 60512-99-001, DIN-EN 60512-99-002
Railway applications	
Contact holder	Thermoplastic HL1-HL3; R22, R23 according to EN 45545-2:2020+A1:2023
Flammable mass (g)	1.2 g
Stuffer cap	Thermoplastic HL1-HL3; R22, R23 according to EN 45545-2:2020+A1:2023
Flammable mass (g)	0.97 g
Sealings	Elastomer
Flammable mass (g)	1.74 g
Shock and vibration	EN 50155:2021, EN 61373:2010 Class 1 Category B
Salt spray	EN 50155:2021, (DIN EN 60068-2-11:2000-02/ 48-hour KA test)

Classifications

ETIM 7.0	EC002635
ETIM 8.0	EC002635
ETIM 9.0	EC002635
ETIM 10.0	EC002635

Packing details

Type of packaging	10 pc(s) / box

Application note

This product is a standard product of METZ CONNECT. METZ CONNECT is not aware of the specific intended use of the goods by the Customer or any customers of the Customer. The Customer guarantees that it has fully and sufficiently tested the use of the goods and any product modifications, product changes or product enhancements with regard to the specific intended use in accordance with the state of the art or in any other way.

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Accessories

P/N	Designation
130670-E	KAPRi plus cable and installation tester
130674-E	KAPRi plus extension set M12 X-coded

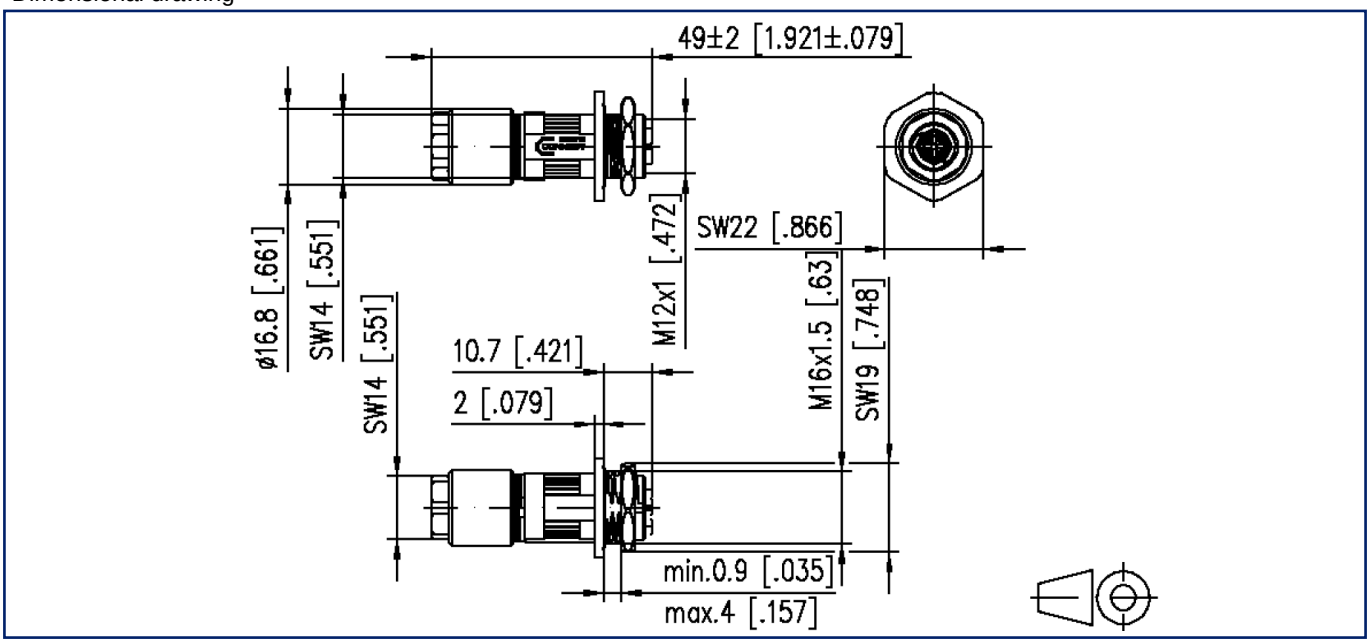
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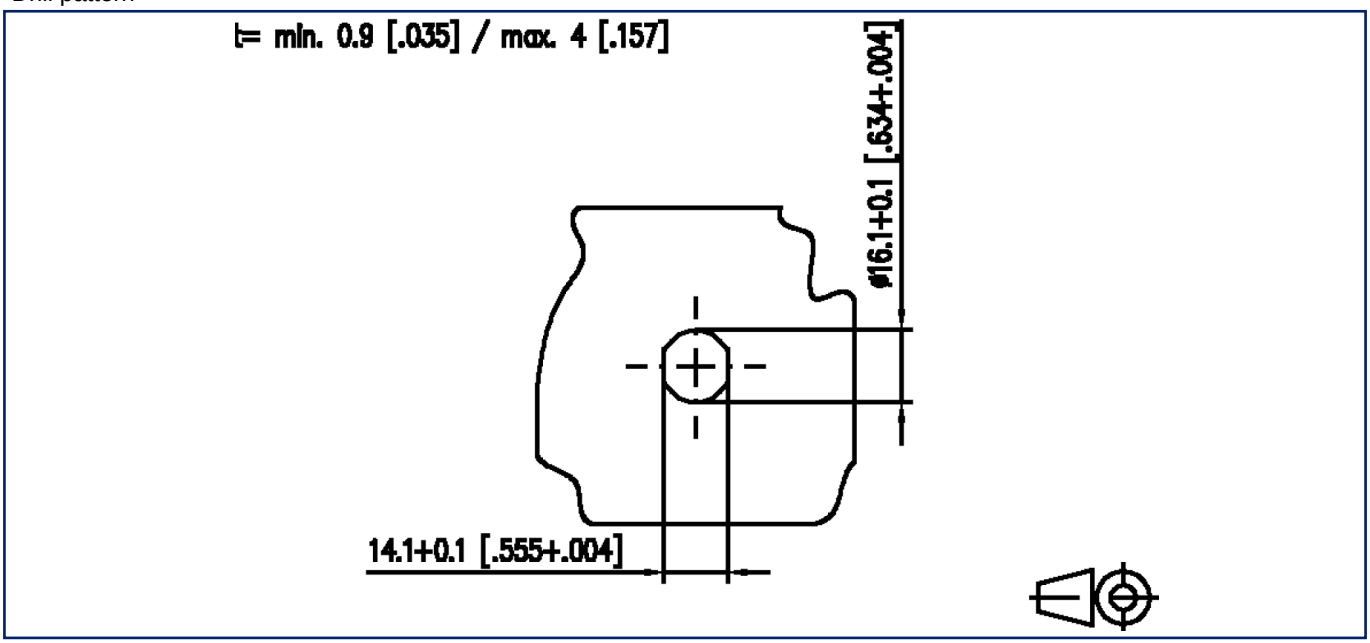
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Dimensional drawing



Drill pattern



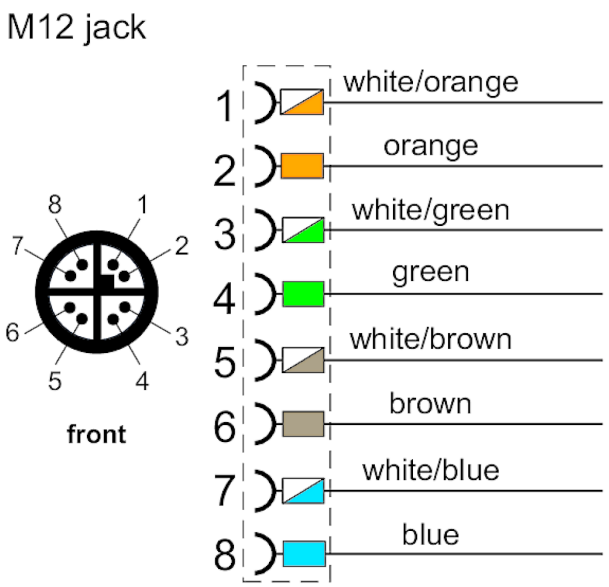
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Wiring diagram



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