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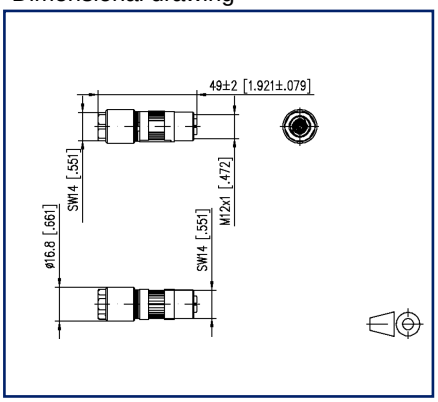
Data sheet

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

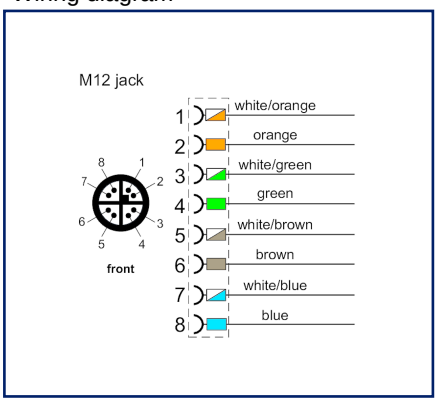
P/N MMF881A315
EAN 4250184171089
2024/08/16
Version: BB

Illustrations

Dimensional drawing



Wiring diagram



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
- 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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Phone +49 7702 533-0 | Fax +49 7702 533-433
Weitere Dokumentation siehe / additional documentation see / documentation supplémentaire voir www.metz-connect.com

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Technical Data

General Data	
Electromagnetic measurement according to MICE	E2
Design	Jack
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
Labeling option	on housing

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 UL94 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
Particulate ingress interface 2	IP6X when plugged in
Liquid ingress/immersion interface 2	IPX5 when plugged in, IPX7 when plugged in
Overvoltage category	III
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

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	
Electronic equipment used on rolling stock	following to DIN EN 50155
Fire protection on railway vehicles	following to DIN EN 45545-2
Contact holder	Thermoplastic HL3 according to R22 EN 45545-2
Stuffer cap	Thermoplastic HL3 according to R22 EN 45545-2
Sealings	Elastomer
Shock and vibration	DIN EN 50155:2018-05, DIN EN 61373:2011-04 Class 1 Category B
Salt spray	DIN EN 50155:2018-05, (DIN EN 60068-2-11:2000-02/ 48h test KA)

Classifications

ETIM 7.0	EC002635
ETIM 8.0	EC002635
ETIM 9.0	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. At METZ CONNECT""s request, the Customer shall submit and make available meaningful evidence (e.g. test and laboratory protocols, certifications, etc.).

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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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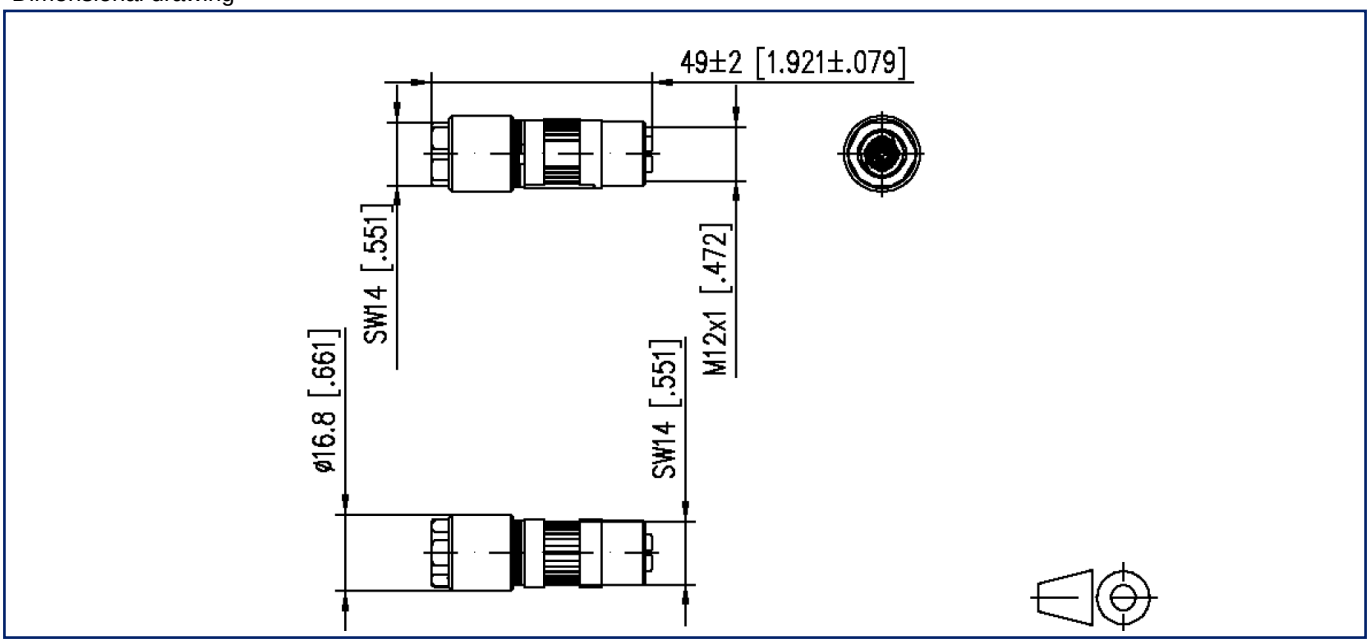

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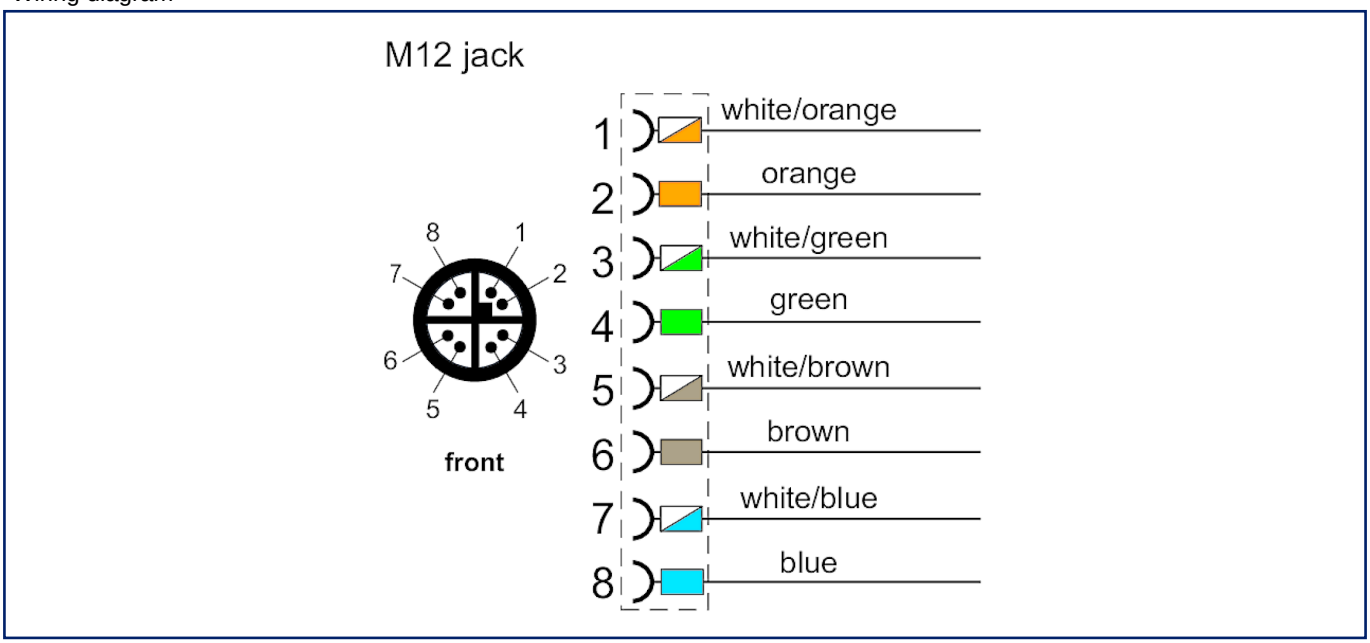

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