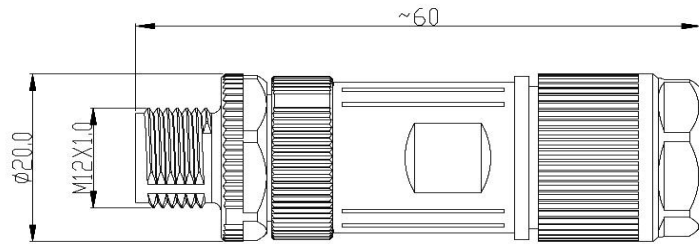


# M12 Series

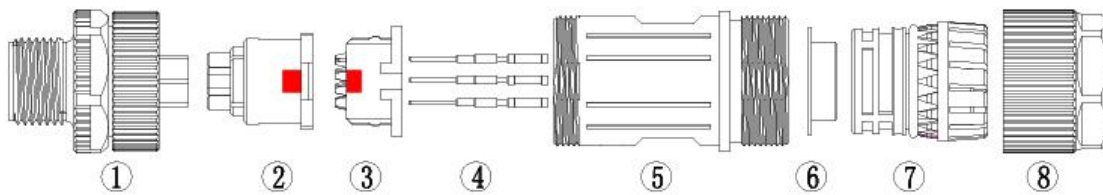


## M12 male assembly connector, straight, shielded

Description: M12 male straight metal shielded crimping assembly connector, X-coded



## Assembly Instruction



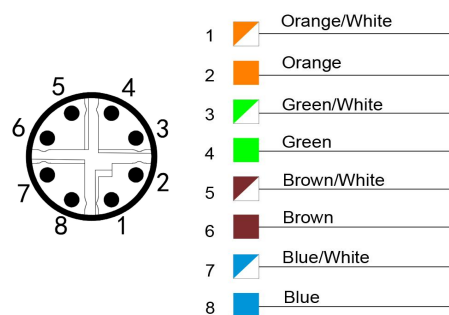
### Assembly Process

1. Wire stripping 20~25mm
2. Thread 5, 6, 7, 8, into the wire in order and in the correct orientation
3. Riveting wire conductor with 4
4. Insert the connected line 4 into 3 according to the line sequence requirements, then push it in place after confirming the line position is correct
5. Assemble 1 and 2 together according to the direction
6. Align 1 and 2, 3 according to the red area and assemble together
7. Turn the braid out from 6 and assemble it with 7
8. Insert 6, 7 into 5, 8 and lock them
9. Push the installed 1, 2, 3, 4 and 5, 6, 7, 8 in the right position and lock it according to the direction

## Product Specification

- M12 Cat.6A 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 for AWG 26/1 - 22/1, AWG 26/7 - 22/7 possible
- Easy assembly-connection without special tools
- Zinc die-cast housing for industrial use
- Suitable for applications in the railway industry according to data sheet

### Wiring definition



## Technical Data

Pin No.	8
Coding:	X
Pin for reference	
<b>Electrical characteristics</b>	
Current carrying capacity	0.5 A
Rated voltage	48V AC/60V DC
Through resistance	$\leq 5 \text{ M}\Omega$

Insulation resistance	≥ 100 MΩ
<b>Mechanical data</b>	
Mounting method	screwable
Insertion and withdrawal force	≤ 30 N
Life - Number of mating cycles	≥ 100
<b>General Data</b>	
Electromagnetic measurement according to MICE	E2
Design	Plug
Shielding	shielded
Transmission technology	Copper
Dimension (L x W x H)	60 mm x 20 mm x 20 mm
Field assembly ability	yes
Labeling option	on housing
<b>Transmission characteristics</b>	
Category (ISO)	6A
Category (TIA)	6A
Transmission rate upto 10 GBit	IEEE 802.3an
<b>Connections/interfaces</b>	
Connector technology interface 1	IDC-connection
Connector technology interface 2	M12-plug
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
Termination data, solid wire (min. - max..)	
Conductor cross section, solid wire	AWG 26/1 - AWG 22/1
Conductor cross section, solid wire	0.128 mm - 0.324 mm <sup>2</sup>
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 mm <sup>2</sup> - 0.355 mm <sup>2</sup>
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	5 mm - 9.70 mm
Cable sheath diameter	0.197 in. - 0.382 in.
Cable access/outlet	Straight M12
<b>Materials and material properties</b>	
Material - Housing	GD-Zn (zinc die-cast)
Material - Contact	CuZnPb (brass)
Material - Contact finish	Ni + Au (nickel-gold)
Material - Shield	CuSn (tin bronze)
Material - Shield finish	Sn (tin)
Material - Stuffer cap	PA UL94-V0
Halogen free	yes
Silicone free	no paint wetting interfering substances (LaBS) in the process chain
Material - Finish	Ni (nickel)
<b>Environmental conditions</b>	
Temperature - Storage °C	-40 °C-85 °C
Temperature - Operating °C	-40 °C-85 °C
Particulate ingress	IP6X when plugged in
Liquid ingress/immersion	IPX7 when plugged in

## Order Information

Part No	Order No.
<b>M12-X-MS-8-SH</b>	<b>RG122020</b>

Remark: Contact us any time if you have custom requirements.