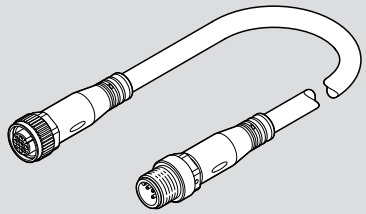
NEBU-M12...5...-Q8...-M12
Connecting cable



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Assembly instructions

8175764
2022-07
[8175766]

8175764

Translation of the original instructions

1 Other applicable documents

All available documents for the product ➔ www.festo.com/sp.

2 Safety

2.1 Safety instructions

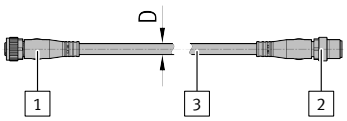
- Do not connect or disconnect the push-in connector while the voltage is live.
- Only mount the product on components that are in a condition to be safely operated.

2.2 Intended use

The connecting cable connects devices in low-voltage applications. The product is particularly suitable for applications where a conductor resistance of ≤ 19.5 Ω/km is required.

3 Structure

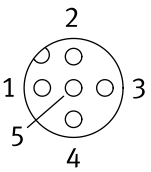
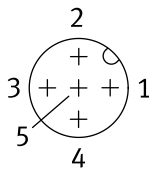
3.1 Product design



1 Socket M12x1
2 Plug connector M12x1
3 Cable

Fig.1

3.2 Contact assignment

Electrical connection 1 Field device side	Pin	Insulated wire[1]	Pin	Electrical connection 2 Controller side
NEBU-M12...5...-Q8...-M12				
	1	BN	1	
	2	WH	2	
	3	BU	3	
	4	BK	4	
	5	GY	5	

1) Colour code in accordance with IEC 60757:2021-06

Tab. 1: Contact assignment

4 Assembly

4.1 Assembly, field device side

1. Align the socket 1 to fit the plug.
2. Connect the socket 1 to the plug.
3. Tighten the screw-type lock of the socket 1. Tightening torque: 0.3 Nm ± 67%

4.2 Assembly, controller side

1. Align the plug 2 to match the socket.
2. Insert the plug 2 into the socket.
3. Tighten the screw-type lock of the plug 2. Tightening torque: 0.3 Nm ± 67%

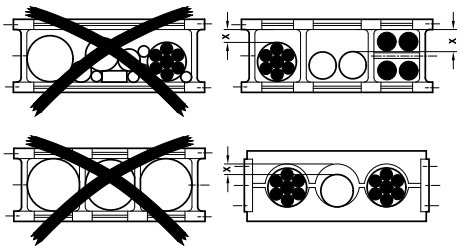
4.3 Wiring

Feature	Cable characteristic	Wiring
-E	Suitable for energy chains	In energy chain or flexible

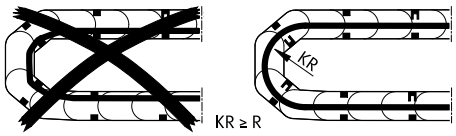
Tab. 2: Wiring

4.4 Installation in energy chain

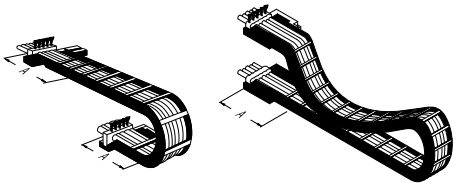
1. Lay out the energy chain lengthways.
2. Place the cables in the energy chain without twisting them.
3. Separate cables from each other using separators/drilled holes.
4. Do not bind cables in bundles.
5. Maintain space X. X > 10% of the cable diameter D.
   With the energy chain hanging vertically: increase the space X.



6. Align the energy chain in the working position:
   - Make sure that the radius is greater than the bending radius R of the cables.
   - The cables can move freely in the bending radius KR of the energy chain.



   ↳ The cable movement is not forced by the energy chain.
7. Mount the energy chain ➔ corresponding instruction manual.
8. Fasten the cables:
   - for short energy chains with a length < 1 m at both ends of the energy chain
   - for long sliding energy chains with a length > 1 m at the driver end only
9. Do not move cables all the way to the fastening point.



   ↳ The mounting space A between the fastening point and bending movement is maintained.

NOTICE

Damage to cables if the chain breaks.
- Replace cables after a chain break.

NOTICE

Malfunction and material damage due to vertically suspended cables.
The cables stretch.
- Regularly check the length of the cables.
- Readjust the cables if required.

5 Technical data

NEBU-...			-E-...
Cable characteristic			Suitable for energy chains
Bending radius[1]			
Fixed cable installation	R	[mm]	≥ 21
Flexible cable installation	R	[mm]	≥ 71
Ambient temperature			
Fixed cable installation		[°C]	–25 ... +80
Flexible cable installation		[°C]	–5 ... +80
Material			
Cable sheath			TPE-U(PUR)
Insulating sheath			PP

1) Cable test conditions: cable chain; 5 million cycles. Further test conditions on request.

Tab. 3: Technical data NEBU

NEBU-M12...5...-Q8...			
Surge resistance		[kV]	1.5
Current rating at 40 °C		[A]	4
Operating voltage range			
AC	U_B	[V]	0 ... 60
DC	U_B	[V]	0 ... 60

Tab. 4: Technical data NEBU-M12...5...-Q8...

NEBU-M12...5...-Q8...-M12			
Cable composition		[mm²]	5x1
Cable diameter	D	[mm]	7
Mounting space	A	[mm]	> 140
Electrical connection 1			
Function			Field device side
Connection type			Socket
Connection technology			M12x1 A-coded to EN 61076-2-101
Number of pins/wires			5
Assigned pins/wires			3
Degree of protection			IP65, IP68, IP69K In assembled state
Electrical connection 2			
Function			Controller side
Connection type			Plug connector
Connection technology			M12x1 A-coded to EN 61076-2-101
Number of pins/wires			3
Assigned pins/wires			3
Degree of protection			IP65, IP68, IP69K In assembled state

Tab. 5: Technical data NEBU-M12...5...-Q8...-M12