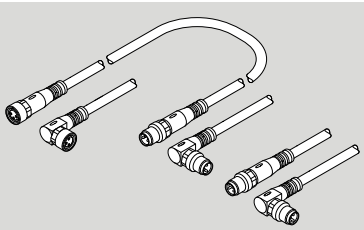
NEBU-M8G3/W3...-M8
Connecting cable



FESTO

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Instructions | Assembly

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2020-03a
[8127714]

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Translation of the original instructions

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1 Other applicable documents

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

2 Safety

2.1 Safety Instructions

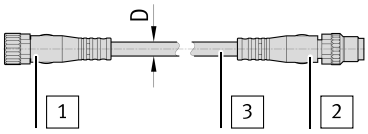
– Do not connect or disconnect plug connector when powered.
– Only mount the product on components that are in a condition to be safely operated.

2.2 Intended use

Connecting cable for connection of field devices (sensors, actuators) to controllers.

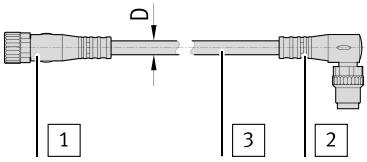
3 Configuration

3.1 Product design



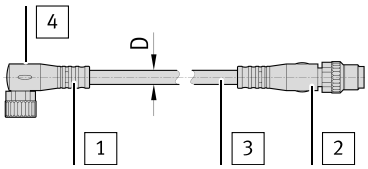
1 Socket M8x1
2 Plug M8x1
3 Cable

Fig. 1 NEBU-M8G3-...-M8G...



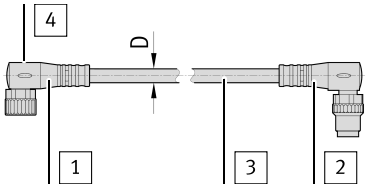
1 Socket M8x1
2 Plug M8x1
3 Cable

Fig. 2 NEBU-M8G3-...-M8W...



1 Socket M8x1
2 Plug M8x1
3 Cable
4 Switching status indication (optional)

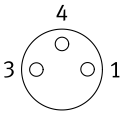
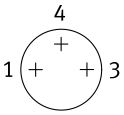
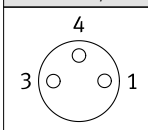
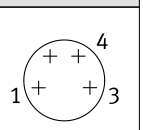
Fig. 3 NEBU-M8W3...-M8G...



1 Socket M8x1
2 Plug M8x1
3 Cable
4 Switching status indication (optional)

Fig. 4 NEBU-M8W3...-M8W...

3.2 Contact assignment

Electrical connection 1 field device side	Pin	Insulated wire[1)]	Pin	Electrical connection 2 controller side
NEBU-M8G3/W3...-M8G3/W3				
	1	BN	1	
	3	BU	3	
	4	BK	4	
NEBU-M8G3/W3...-M8G4/W4				
	1	BN	1	
	3	BU	3	
	4	BK	4	

1) Colour code in accordance with IEC 60757:1983-01

Tab. 1 Contact assignment

4 Assembly

4.1 Assembly, field device side

1. Align socket 1 to match plug.
2. Connect socket 1 to the plug.
3. Tighten the screw-type lock of the socket 1. Tightening torque: 0.2 Nm ± 50 %

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: 0.2 Nm ± 50 %

4.3 Wiring

Characteristic	Cable characteristic	Wiring
-K-	Standard	in energy chain (bending radius 75 mm) or flexible (freely movable, unguided installation) The cable can be bent dynamically, but not for robots.
-E-	Suitable for energy chains	in energy chain or flexible
-R-	Suitable for robot applications	at robots, in energy chain or flexible

Tab. 2 Wiring

4.4 Installation in energy chain

1. Lay the chain out lengthwise.
2. Place the cables on the chain, making sure they are not twisted.
3. Separate cables from each other using separators/drilled holes.
4. Do not connect cables together.

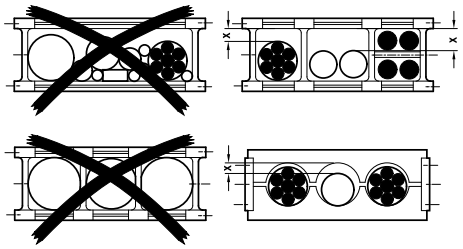


Fig. 5

5. Maintain space X. X > 10% of the cable diameter D.
   If the chain is suspended vertically: increase space X.

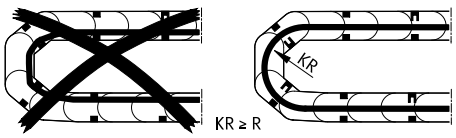


Fig. 6

6. Align chain in the operating position:
   – Make sure that the radius is greater than the bending radius R of the cables.
   – Cables can move freely in the bending radius KR of the energy chain.
   ↳ Cables are not forced through the chain.
7. Mount the energy chain ➔ corresponding instructions.
8. Fasten cables:
   – with short energy chains (length < 1 m) at both ends of the chain
   – with long sliding energy chains (length > 1 m) only at the driver end

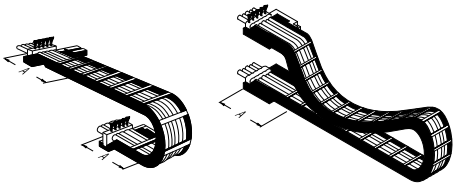


Fig. 7

9. Do not move cables all the way to the fastening point.
   ↳ 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-...			-K-...	-E-...	-R-...
Cable characteristic			Standard	Suitable for energy chains	Suitable for robot applications
Bending radius[1]					
Fixed cable installation	R	[mm]	≥ 12	≥ 12	≥ 12
Flexible cable installation	R	[mm]	≥ 75	≥ 28	≥ 28
Torsion[2]					
Flexible cable installation		[°/0.1 m]	–	–	±135
Ambient temperature					
Fixed cable installation		[°C]	–25 … +70	–25 … +80	–25 … +80
Flexible cable installation		[°C]	–5 … +70	–5 … +80	–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.
2) test conditions: 300000 cycles. Further test conditions on request.

Tab. 3 Technical data NEBU

NEBU-M8G3/W3...			-...	P-...	N-...
Switching status indication			none	PNP N/O contact Yellow LED	NPN N/O contact Yellow LED
Status indicator			none	Green LED	
Surge resistance		[kV]	1.5 (0.8)	0.8	
Current rating at 40 °C		[A]	3		
Operating voltage range					
AC	U_B	[V]	0 … 60 (0 … 30)	–	
DC	U_B	[V]	0 … 60 (0 … 30)	10 … 30	

Tab. 4 Technical data NEBU-M8G3/W3...

NEBU-M8G3/W3...			-M8G3/W3	-M8G4/W4
Cable composition		[mm²]	3x0.25	
Cable diameter	D	[mm]	3.8	
Mounting space	A	[mm]	> 76	
Electrical connection 1				
Function			Field device side	
Connection type			Socket	
Connection technology			M8x1 A-coded to EN 61076-2-104	
Number of pins/wires			3	3
Assigned pins/wires			3	3
Degree of protection			IP65, IP68, IP69K In assembled state	
Electrical connection 2				
Function			Controller side	
Connection type			Plug connector	
Connection technology			M8x1 A-coded to EN 61076-2-104	
Number of pins/wires			3	4
Assigned pins/wires			3	3
Degree of protection			IP65, IP68, IP69K In assembled state	

Tab. 5 Technical data NEBU-M8G3/W3...-M8...