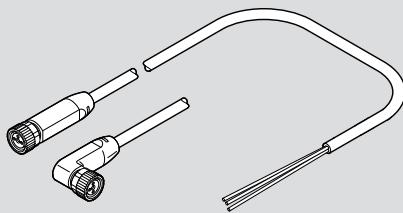


NEBA-M8...3-...-LE3

Connecting cable

**FESTO**

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Assembly instructions

8219039
2024-08a
[8219041]



8219039

Original instructions

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1 Applicable documents

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

2 Safety

2.1 Safety instructions

- Before working on the product: Switch off the power supply, ensure that it is off and secure it against being switched on again.
- The plug connector must not be under power when unplugged.
- Only mount the product on components that are in a condition to be safely operated.

2.2 Intended use

The connecting cable connects field devices (sensors, actuators) with controllers.

2.3 Training of qualified personnel

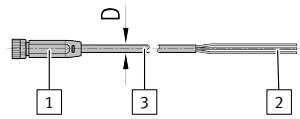
Work on the product may only be carried out by qualified personnel who can evaluate the work and detect dangers. The qualified personnel are trained in electrical engineering.

3 Additional information

- Contact the regional Festo contact if you have technical problems ➔ www.festo.com.
- Accessories ➔ www.festo.com/catalogue.

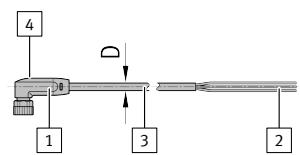
4 Design

4.1 Product design



- 1 M8x1 socket
- 2 Core (3x)
- 3 Cable

Fig. 1: NEBA-M8G3-...-LE3



- 1 M8x1 socket
- 2 Core (3x)
- 3 Cable
- 4 Display (optional)

Fig. 2: NEBA-M8W3-...-LE3

4.2 Contact assignment

Electrical connection 1 Field device side	Core ¹⁾	Electrical connection 2 Controller side
NEBA-M8...3-...-LE3		
4	1 BN	Open end
3	2 BU	
1	4 BK	

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

Tab. 1: Contact assignment

5 Mounting

5.1 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 ± 60%

5.2 Assembly, controller side

1. Strip and assemble the cable sheath and cores as required.
2. Wire the cores in accordance with the contact assignment.

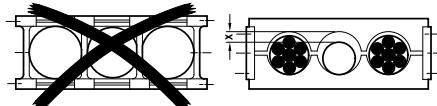
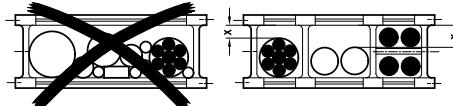
5.3 Wiring

Characteristics	Cable characteristics	Wiring
-U	Suitable for energy chains/ robot applications	Flexible (freely movable, unguided wiring) The cable can be bent dynamically for robot and energy chain

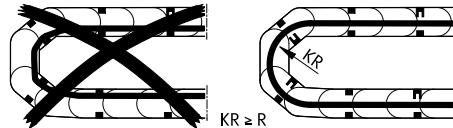
Tab. 2: Wiring

5.4 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.

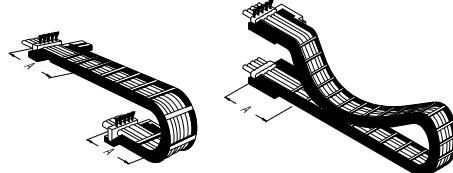


6. Align the energy chain in the working position:
 - Make sure that the radius is greater than the bending radius R of the cables.
 - The cables can move freely in the bending radius KR of the energy chain.



⚠ 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.

6 Technical data

6.1 Technical data

NEBA-M8...3-...-LE3	-M8...3	-M8W3P	-M8W3N
Certificates, declaration of conformity	→ www.festo.com/sp		
Cable composition	[mm ²]	3x0.25	
Cable diameter	D [mm]	3.8	
Mounting space	A [mm]	> 20xD	
Current rating at 40 °C	[A]	4	
Torsional strength	[°/m]	± 270/0.1	
Nominal operating altitude	[m MSL]	≤ 2000	
Max. relative humidity at 40 °C	[%]	93	
Overvoltage category		II	
Display			
Switching status indication	Without	Yellow LED, PNP	Yellow LED, NPN
Status indicator	Without	Green LED	
Operating voltage range			
Operating voltage range AC	U _B [V]	0 ... 48	–
Operating voltage range DC	U _B [V]	0 ... 60	10 ... 30
Operating voltage range AC for UL applications	U _B [V]	0 ... 30	–
Operating voltage range DC for UL applications	U _B [V]	0 ... 30	10 ... 30
Surge resistance			
Operating voltages up to 30 V	[kV]	0.8	
Operating voltages up to 60 V	[kV]	1.5	
Bending radius			
Fixed cable installation	[mm]	≥ 12	
Flexible cable installation	[mm]	≥ 39	
Flexible cable installation in energy chain	R [mm]	≥ 28	
Ambient temperature			
Fixed cable installation	[°C]	-40 ... +85	
Fixed cable installation for UL applications	[°C]	-40 ... +50	
Flexible cable installation	[°C]	-20 ... +85	
Flexible cable installation for UL applications	[°C]	-20 ... +50	
Material			
Cable sheath		TPE-U(PUR)	
Electrical connection 1			
Function		Field device side	
Connection type		Socket	
Connection technology		M8x1 A-coded to EN 61076-2-104	
Type of mounting		Screw-type lock with hexagon  9 and longitudinal knurl	
Degree of protection In assembled state		IP65 IP68 (1 m, 24 h) IP69K	
Pollution degree In assembled state		3	
Electrical connection 2			
Function		Controller side	
Connection type		Cable	
Connection technology		Open end	
Wire ends		Cable unsheathed, wire ends cut off bluntly	

Tab. 3: Technical data