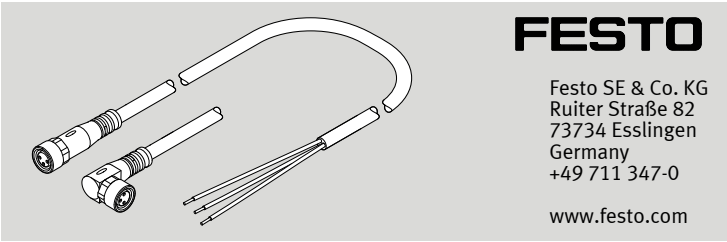


NEBU-M8G3/W3...-LE
Connecting cable



Instructions | Assembly

8127703
2020-03b
[8127705]



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.
- Assembly and installation should only be carried out by qualified personnel. These personnel have electrical training or a relevant qualification.

2.2 Intended use

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

3 Configuration

3.1 Product design

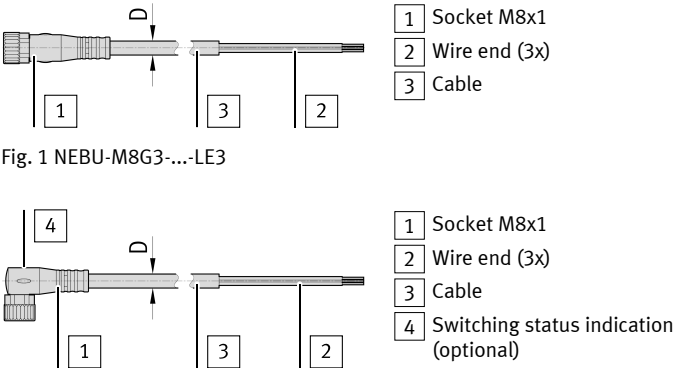


Fig. 2 NEBU-M8W3...-LE3

3.2 Contact assignment

| Electrical connection 1 field device side | Pin | Insulated wire <sup>1)</sup> | Electrical connection 2 controller side |
|-------------------------------------------|-----|------------------------------|-----------------------------------------|
| NEBU-M8G3/W3...-LE3                       |     |                              |                                         |
|                                           | 1   | BN                           | Open end                                |
|                                           | 3   | BU                           |                                         |
|                                           | 4   | BK                           |                                         |

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. Shorten and pre-assemble cable sheath and wire ends as needed.
2. Connect the wires in accordance with the contact assignment.

4.3 Wiring

| Characteristic | Cable characteristic            | Wiring                                                                                                                                               |
|----------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| -K-            | Standard                        | in energy chain (bending radius 75 mm) or flexible (freely movable, unguided installation)<br>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.

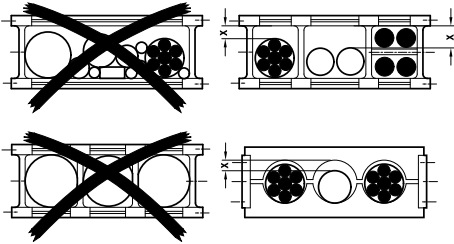


Fig. 3

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

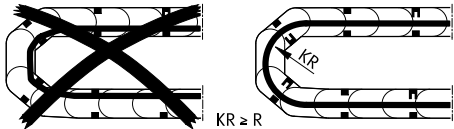


Fig. 4

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

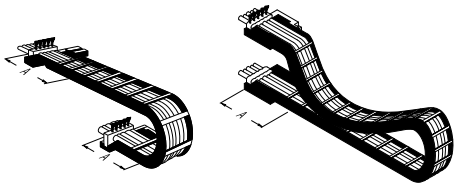


Fig. 5

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 <sup>1)</sup> |           |             |                            |                                 |
| Fixed cable installation     | R [mm]    | ≥ 12        | ≥ 12                       | ≥ 12                            |
| Flexible cable installation  | R [mm]    | ≥ 75        | ≥ 28                       | ≥ 28                            |
| Torsion <sup>2)</sup>        |           |             |                            |                                 |
| 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<br>Yellow LED | NPN N/O contact<br>Yellow LED |
| Status indicator            |                    | none     | Green LED                     |                               |
| Surge resistance            | [kV]               | 1.5      | 0.8                           |                               |
| Current rating at 40 °C     | [A]                | 3        |                               |                               |
| Operating voltage range     |                    |          |                               |                               |
| AC                          | U <sub>B</sub> [V] | 0 ... 60 | –                             |                               |
| DC                          | U <sub>B</sub> [V] | 0 ... 60 | 10 ... 30                     |                               |

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

| NEBU-M8G3/W3...         |                                      | -LE3   |
|-------------------------|--------------------------------------|--------|
| 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                                    |        |
| Assigned pins/wires     | 3                                    |        |
| Degree of protection    | IP65, IP68, IP69K In assembled state |        |
| Electrical connection 2 |                                      |        |
| Function                | Controller side                      |        |
| Connection type         | Cable                                |        |
| Connection technology   | Open end                             |        |
| Number of pins/wires    | 3                                    |        |

Tab. 5 Technical data NEBU-M8G3/W3...-LE3