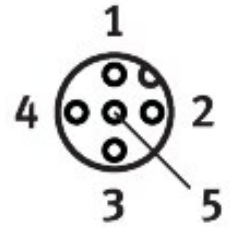


# Connecting cable NEBA-M12W5-U-10-N-LE5

Part number: 8078253

FESTO



## Data sheet

| Feature                                        | Value                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conforms to standard                           | EN 61076-2-101<br>EN 61984                                                                                                                                                                                                                                                                               |
| Certification                                  | c UL us - Listed (OL)                                                                                                                                                                                                                                                                                    |
| Intended use                                   | The connecting cable connects field devices (sensors, actuators) with controllers.                                                                                                                                                                                                                       |
| Explosion prevention and protection            | Observe the information on the certificate<br>Zone 2 (ATEX)<br>Zone 22 (ATEX)                                                                                                                                                                                                                            |
| Certificate issuing authority                  | UL E253748                                                                                                                                                                                                                                                                                               |
| Cable designation                              | Without label holder                                                                                                                                                                                                                                                                                     |
| Contact durability                             | 100                                                                                                                                                                                                                                                                                                      |
| Product weight                                 | 275 g                                                                                                                                                                                                                                                                                                    |
| Application note                               | Meets the requirements of IEC 61010-1 and 61010-2-202, in particular for electrically operated valves from Festo.<br>Only energy-limited circuits with a maximum current of 4 A at a max. open circuit voltage of 30 VDC are permitted to be used for supplying electrically actuated valves from Festo. |
| Electrical connection 1, function              | Field device side                                                                                                                                                                                                                                                                                        |
| Electrical connection 1, design                | Round                                                                                                                                                                                                                                                                                                    |
| Electrical connection 1, connection type       | Socket                                                                                                                                                                                                                                                                                                   |
| Electrical connection 1, cable outlet          | Angled                                                                                                                                                                                                                                                                                                   |
| Electrical connection 1, connection technology | M12x1 A-coded as per EN 61076-2-101                                                                                                                                                                                                                                                                      |
| Electrical connection 1, number of pins/wires  | 5                                                                                                                                                                                                                                                                                                        |
| Electrical connection 1, occupied pins/wires   | 5                                                                                                                                                                                                                                                                                                        |
| Electrical connection 1, type of mounting      | Screw-type lock with hexagon AF13 and vertical knurling<br>Rotatable<br>Compatible with rotatable/non-rotatable screw-type lock                                                                                                                                                                          |
| Electrical connection 1, terminal allocation   | Pin 1 = BN<br>Pin 2 = WH<br>Pin 3 = BU<br>Pin 4 = BK<br>Pin 5 = GY                                                                                                                                                                                                                                       |
| Electrical connection 1, display               | None                                                                                                                                                                                                                                                                                                     |

| Feature                                                      | Value                                                                                                                                                                                               |
|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electrical connection 2, function                            | Control side                                                                                                                                                                                        |
| Electrical connection 2, connection type                     | Cable                                                                                                                                                                                               |
| Electrical connection 2, connection technology               | Open end                                                                                                                                                                                            |
| Electrical connection 2, number of pins/wires                | 5                                                                                                                                                                                                   |
| Electrical connection 2, occupied pins/wires                 | 5                                                                                                                                                                                                   |
| Electrical connection 2, terminal allocation                 | Pin 1 = BN<br>Pin 2 = WH<br>Pin 3 = BU<br>Pin 4 = BK<br>Pin 5 = GY                                                                                                                                  |
| Electrical connection 2, display                             | None                                                                                                                                                                                                |
| DC operating voltage range                                   | 0 V...60 V                                                                                                                                                                                          |
| Operating voltage range AC                                   | 0 V...48 V                                                                                                                                                                                          |
| Current rating at 40° C                                      | 4 A                                                                                                                                                                                                 |
| Surge resistance                                             | 1.5 kV                                                                                                                                                                                              |
| Cable length                                                 | 10 m                                                                                                                                                                                                |
| Cable characteristic                                         | suitable for energy chains/robot applications<br>abrasion-resistant<br>Low adhesion<br>Flame-retardant and self-extinguishing                                                                       |
| Connector cable test conditions                              | Test conditions on request<br>Torsion resistance: > 300,000 cycles, ±270°/0.1 m<br>Flexural strength: > 50000 cycles, bending radius 5 mm<br>Energy chain: > 5 million cycles, bending radius 28 mm |
| Note on connector cable test conditions                      | tested at 23°C                                                                                                                                                                                      |
| Bending radius, fixed cable installation                     | 14 mm                                                                                                                                                                                               |
| Cable diameter                                               | 4.5 mm                                                                                                                                                                                              |
| Cable design                                                 | 5 x 0.25 mm <sup>2</sup>                                                                                                                                                                            |
| Nominal conductor cross section                              | 0.25 mm <sup>2</sup>                                                                                                                                                                                |
| Wire ends                                                    | Stripped<br>Cut off bluntly                                                                                                                                                                         |
| Degree of protection                                         | IP65<br>IP68<br>IP69K                                                                                                                                                                               |
| Special features                                             | UV-resistant<br>Hydrolysis-resistant<br>Cooling lubricant-proof<br>Microbe-resistant<br>Oil-resistant<br>Ozone-resistant                                                                            |
| Use in exterior area                                         | Locations of use with direct outdoor climatic exposure Class D1 based on IEC 60654-1                                                                                                                |
| Ambient temperature                                          | -40 °C...85 °C                                                                                                                                                                                      |
| Note on ambient temperature                                  | -40 ... 50 °C for UL applications                                                                                                                                                                   |
| Ambient temperature with flexible cable installation         | -20 °C...85 °C                                                                                                                                                                                      |
| Note on ambient temperature with flexible cable installation | -20 ... 50 °C for UL applications                                                                                                                                                                   |
| Storage temperature                                          | -25 °C...55 °C                                                                                                                                                                                      |
| Note on storage temperature                                  | short-term for transport in packaging -40 ... 85 °C                                                                                                                                                 |
| Relative air humidity                                        | Max. 93% at 40°C                                                                                                                                                                                    |
| Nominal altitude of use above sea level                      | <= 2000 m NHN                                                                                                                                                                                       |
| Overvoltage category                                         | II                                                                                                                                                                                                  |
| CE marking (see declaration of conformity)                   | As per EU RoHS directive                                                                                                                                                                            |
| UKCA marking (see declaration of conformity)                 | To UK RoHS instructions                                                                                                                                                                             |
| LABS (PWIS) conformity                                       | VDMA24364-B2-L                                                                                                                                                                                      |
| Suitability for the production of Li-ion batteries           | Suitable for battery production with reduced Cu/Zn/Ni values (F1a)                                                                                                                                  |
| Cleanroom suitability, measured according to ISO 14644-14    | Class 4 according to ISO 14644-1                                                                                                                                                                    |
| Note on materials                                            | CFC-free<br>RoHS compliant<br>Cadmium-free                                                                                                                                                          |

| Feature                          | Value                                              |
|----------------------------------|----------------------------------------------------|
|                                  | Halogen-free<br>Contains no phosphoric acid esters |
| Contamination level              | 3                                                  |
| Corrosion resistance class (CRC) | 1 - Low corrosion stress                           |
| Material of cable sheath         | TPE-U(PUR)                                         |
| Color cable sheath               | Gray                                               |
| Housing material                 | TPE-U(PUR)                                         |
| Housing colour                   | Black                                              |
| Material of screw-type lock      | Die-cast zinc, nickel-plated                       |
| Seals material                   | FPM                                                |
| Material of pin contacts         | Gold-plated copper alloy                           |
| Insulating sheath material       | PP                                                 |