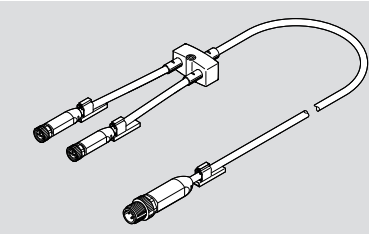


NEDY-L2R1-V1-...

Distributor



FESTO

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8238551

Assembly instructions
8238551
2025-06d
[8238553]

Original instructions

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1 Applicable documents

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

Document	Product
User document	Field device (e.g. sensors, valves, actuators)
User document	Controller

Tab. 1

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 product compiles digital sensor signals and sends them to dual-allocated controller inputs.
The product distributes signals from dual-allocated controller outputs to field devices, such as valves.

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 Product overview

4.1 Product Range Overview

4.1.1 Scope of delivery

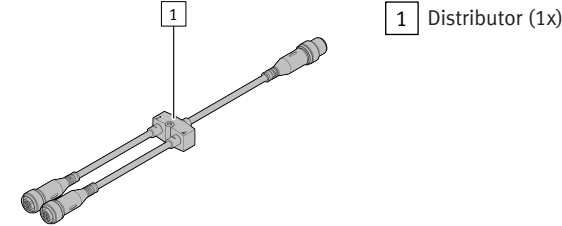


Fig. 1

Optional inscription label holders are supplied loose.

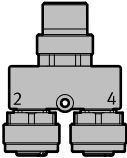
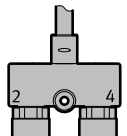
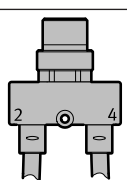
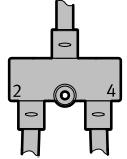
4.1.2 Not in scope of delivery



Fig. 2

4.2 Design

4.2.1 Product design

Design variants	
Without cable Both sides	
1 cables Controller side	
2 cables Field device side	
3 cables Both sides	

Tab. 2: Design variants

Connections of the distributor ¹:

- 2 connections (2/4) = field device side
- 1 connection = controller side

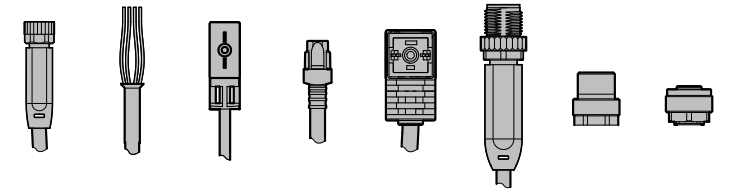
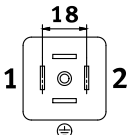
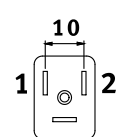
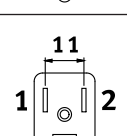
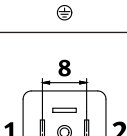
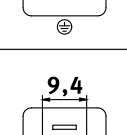
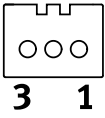
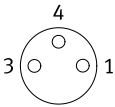
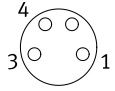
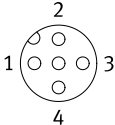
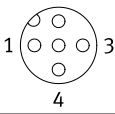
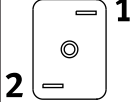
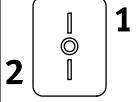
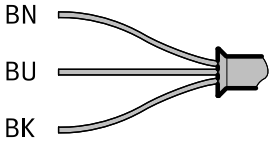


Fig. 3: Examples of possible connection types

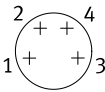
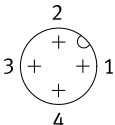
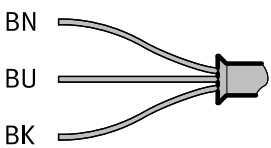
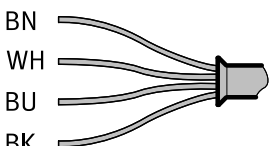
4.2.2 Field device side (sockets/open ends)

NEDY-...	
-A1	
-B1	
-B2	
-C1	
-E1	

NEDY-...	
-H1	
-M8...3	
-M8...4	
-M12...5	
-M12...5P	
-Z1	
-Z3/Z4	
-LE3 ¹⁾	

1) Colour code in accordance with IEC 60757:2021-06
 Tab. 3: Field device side (sockets/open ends)

4.2.3 Controller side (plug/open ends)

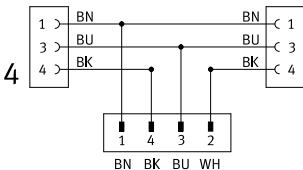
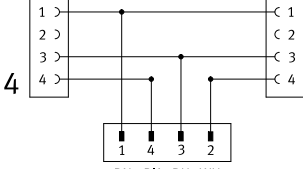
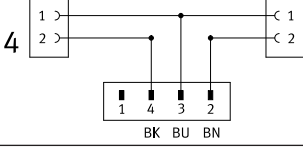
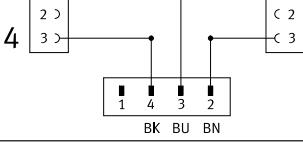
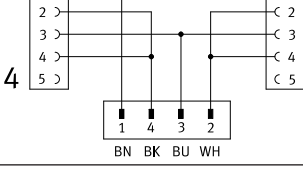
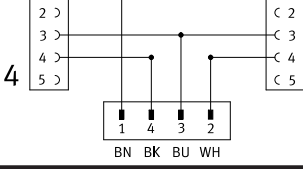
NEDY-...	
-M8...4	
-M12...4	
-LE3 ¹⁾	
-LE4 ¹⁾	

1) Colour code in accordance with IEC 60757:2021-06
 Tab. 4: Controller side (plug/open ends)

4.2.4 Circuit diagrams

①

The connections on the field device side are labelled on the distributor ① with the numbers 2 and 4.

Field device side	Controller side	Circuit diagram
-LE3 ¹⁾ -M8...3	-LE4 ¹⁾ -M8...4 -M12...4	
-M8...4	-LE4 ¹⁾ -M8...4 -M12...4	
-A1 -B1/-B2 -C1 -E1 -Z1/-Z3/-Z4	-LE3 ¹⁾ -M8...4 -M12...4	
-H1	-LE3 ¹⁾ -M8...4 -M12...4	
-M12...5	-LE4 ¹⁾ -M8...4 -M12...4	
-M12...5P	-LE4 ¹⁾ -M8...4 -M12...4	

1) Colour code in accordance with IEC 60757:2021-06
 Tab. 5: Circuit diagrams

5 Mounting

5.1 Preassembly with NEDY-...-A1/-B1/-B2/-C1/-E1

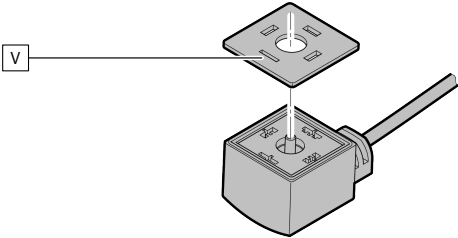


Fig. 4

- Check positive-locking fitting of the seal [V] and correct it, if necessary.

5.2 Mounting distributor

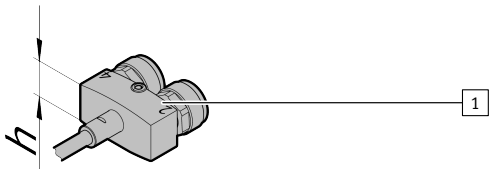


Fig. 5

h [mm]	Screw [2]	Minimum length of screw [2] [mm]
12.0	M2	16
16.2	M2	20

Tab. 6: Screw Sizes

- Select screw [2] according to the installation situation (ISO 4762 / ISO 1207) and corresponding to the height h of the distributor.

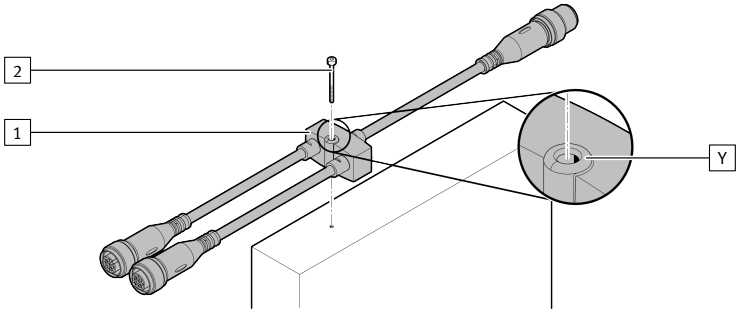


Fig. 6

- Align the distributor [1] with the support [Y] for the screw head at the top.
- Mount the distributor [1] with screw [2]. Tightening torque: 0.35 Nm ± 15 %

5.3 Tightening torques of the connecting elements

NEDY-...	Tightening torque [Nm]
-A1	0.56 ± 10 %
-B1	0.45 ± 10 %
-B2	0.56 ± 10 %
-C1	0.56 ± 10 %
-E1	0.33 ± 10 %
-M8	0.30 ± 60 %
-M12	0.50 ± 35 %
-Z1	0.23 ± 10 %
-Z3/-Z4	0.28 ± 10 %

Tab. 7: Tightening torques

5.4 Wiring

Character-istics	Cable characteristics	Wiring
–	without cable	–
-U	Suitable for energy chains/ robot applications	Flexible (freely movable, unguided wiring) The cable can be bent dynamically for robot and energy chain

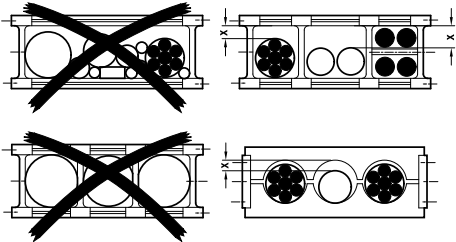
Tab. 8: Wiring

5.5 Strain relief

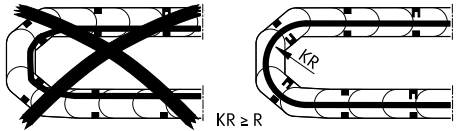
- Secure the cable sheath in the area in front of the connections.
The insulated wires must not be subjected to force.

5.6 Mounting in energy chain

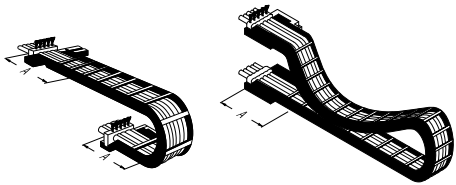
- Lay out the energy chain lengthways.
- Place the cables in the energy chain without twisting them.
- Separate cables from each other using separators/drilled holes.
- Do not bind cables in bundles.
- Maintain space X. $X > 10\%$ of the cable diameter D.
With the energy chain hanging vertically: increase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



- 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.
- Mount the energy chain → corresponding instruction manual.
 - 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
 - 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, general

- If the technical data of the field device side differ from those of the controller side, the least favourable value/value range applies for the entire distributor.
- The sum of the currents on the field device side must not exceed the maximum current rating of the controller side.

6.2 Technical data (field device side)

NEDY-...		-A1 /-B1 /-B2 /-C1 /-E1	-H1	-LE3	-M12	-M8	-Z1	-Z3 /-Z4
Cable characteristic		Suitability for energy chains, Suitable for robot applications ¹⁾						
Cable composition	[mm ²]	3x0.25	2x0.14	3x0.25	4x0.25 3x0.25 ²⁾	3x0.25	2x0.25	2x0.14
Cable diameter	D [mm]	3.8	3.4	3.8	4.5 3.8 ²⁾	3.8	3.4	2.9
Mounting space	A [mm]	≥ 90	–	≥ 90				≥ 90
Current rating at 40 °C per contact	[A]	4	3	4	4	3	1	1
Surge resistance	[kV]	0.8						
Degree of protection		IP65, IP67	IP40	IP65, IP68, IP69K			IP65	
Operating voltage range								
AC	U _B [V]	–	–	0 ... 30	0 ... 30 – ²⁾	0 ... 30	–	–
DC	U _B [V]	20.4 ... 27.6	0 ... 30	0 ... 30	0 ... 30 10 ... 30 ²⁾	0 ... 30 10 ... 30 ³⁾	20.4 ... 26.4	20.4 ... 26.4
Bending radius								
Fixed cable installation	R [mm]	≥ 12	≥ 11	≥ 12	≥ 14 ≥ 12 ²⁾	≥ 12	≥ 11	≥ 9
Flexible cable installation	R [mm]	≥ 39	≥ 35	≥ 39	≥ 46 ≥ 39 ²⁾	≥ 39	≥ 35	≥ 30
Ambient temperature								
Distributor without cable	[°C]	–25 ... +85						
Fixed cable installation	[°C]	–20 ... +80		–25 ... +80			–10 ... +50	
Flexible cable installation	[°C]	–20 ... +80	–5 ... +70	–20 ... +80			–5 ... +50	
Note on ambient temperature	[°C]	–10 ... +40 With mounting via through-hole with screw 2						
Material								
Cable sheath		TPE-U(PUR)						
Insulating sheath		PP	PVC	PP			PVC	PP

1) Exception: the cable characteristic U on the left only applies to the controller side with connection technology H1, Z1.
2) Valid for M12W5P
3) Valid for M8W3P

Tab. 9: Technical data

6.3 Technical data (controller side)

NEDY-...		-LE3	-LE4	-M8	-M12
Cable characteristic		Suitability for energy chains, Suitable for robot applications			
Cable composition	[mm²]	3x0.25	4x0.25	3x0.25 ¹⁾ 4x0.25 ²⁾	
Cable diameter	D [mm]	3.8	4.5	3.8 ¹⁾ 4.5 ²⁾	
Mounting space	A [mm]	≥ 90			
Current rating at 40 °C per contact	[A]	4		3	4
Surge resistance	[kV]	0.8			
Operating voltage range AC/DC	U _B [V]	0 ... 30			
Degree of protection		–		IP65, IP68, IP69K	
Bending radius					
Fixed cable installation	R [mm]	≥ 12	≥ 14	≥ 12 ¹⁾ ≥ 14 ²⁾	
Flexible cable installation	R [mm]	≥ 39	≥ 46	≥ 39 ¹⁾ ≥ 46 ²⁾	
Ambient temperature					
Distributor without cable	[°C]	–25 ... +85			
Fixed cable installation	[°C]	–25 ... +80			
Flexible cable installation	[°C]	–20 ... +80			
Note on ambient temperature	[°C]	–10 ... +40 With mounting via through-hole with screw 2			
Material					
Cable sheath		TPE-U(PUR)			
Insulating sheath		PP			

1) With connection technology on field device side A1, B1, B2, C1, E1, Z1, Z3, Z4, H1
2) with connection technology on field device side M8, M12

Tab. 10: Technical data