

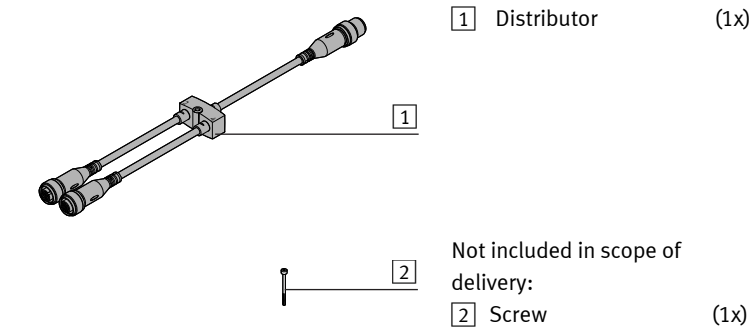
**Distributor
NEDY-...**



Festo AG & Co. KG

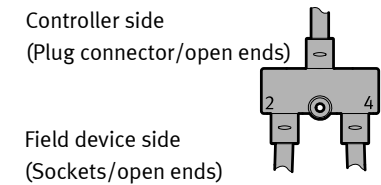
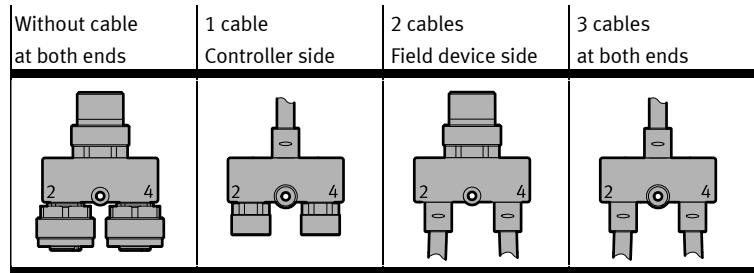
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1. Parts list



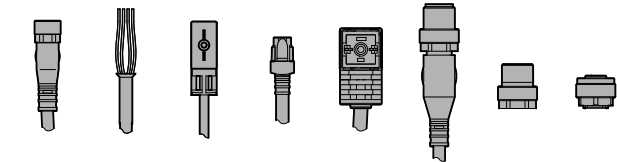
Accessories for NEDY (e.g. mounting NEAU-A-N8)
→ www.festo.com/catalogue

There are four design variants of the distributor 1:



The individual port of the distributor 1 is located on the controller side. The double ports are located on the field device side.

The distributor 1 can be provided with various plug connectors and sockets as well as with open cable ends¹⁾ → section 4.



2. Intended use

Product	Type	Usage
Distributor	NEDY	Collection of signals between field devices (sensors) and double-assigned controller inputs. Distribution of signals between double-assigned controller outputs and field devices (actuators, e.g. valves).

3. Safety instructions and notes on mounting

- Do not connect or disconnect plug connectors when powered.
- Observe the tightening torques → section 7.

4. Pin allocation

4a. Field device side (sockets/open ends)

NEDY-...	
-A1	-B1
-B2	-C1
-E1	-H1
-LE3 ¹⁾	-M8...3
-M8...4	-M12...5
-Z1/Z3/Z4	

4b. Controller side (plug connector/open ends)

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

4c. Circuit diagrams

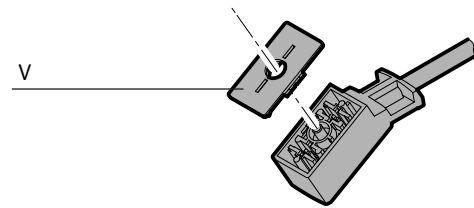
Field device side	Controller side	Information
-LE...3 ¹⁾	-LE4 ¹⁾	<p>To simplify the allocation, the ports on the field device side are labelled with the numbers 2 and 4.</p>
-M8...3	-M8...4	
	-M12...4	
-M12W5P	-LE4 ¹⁾	
	-M8...4	
	-M12...4	
-M12...5	-LE4 ¹⁾	
	-M8...4	
	-M12...4	
-M8...4L ²⁾	-LE3 ¹⁾	
	-M8...4	
	-M12...4	
-M8...4	-LE4 ¹⁾	
	-M8...4	
	-M12...4	
-A1	-LE3 ¹⁾	
-B1/B2	-M8...4	
-C1	-M12...4	
-E1		
-Z1/Z3/Z4		
-H1	-LE3 ¹⁾	
	-M8...4	
	-M12...4	

Continuation on the reverse side!

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

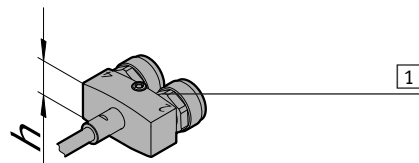
²⁾ Only suitable for connection to valves.

5. Preassembly for NEDY-...-A1/B1/B2/C1/E1/Z1/Z3/Z4



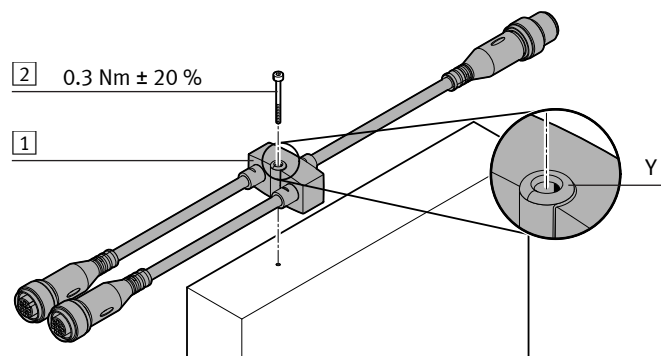
- Check form-fitting seating of the seal (V) and correct, if necessary.

6. Mounting



- Select the appropriate screw (2) according to the height h of the distributor (1) (→ table).

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



Check: Support (Y) for the screw head is on top.

- Secure distributor (1) with screw (2).

7. Tightening torques M_A

NEDY-...	[Nm]
A1	0.6 - 15 %
B1	0.5 - 20 %
B2/C1	0.6 - 15 %
E1	0.35 - 14 %
M8	0.2 ± 50 %
M8R3	0.25 ± 20 %
M12	0.3 ± 65 %
Z1/Z3/Z4	0.25 - 20 %

8. Technical data

→ Note

Incorrect mounting can cause malfunction and material damage.

- If the technical data of the controller side differs from that of the field device side, comply with the worse value/range of values for the entire distributor [1].

→ Note

Malfunction and material damage due to current load that is too high.

- Make sure that the sum of the current flows on the field device side do not exceed the maximum acceptable current load of the controller side.

8a. Technical data (field device side)

NEDY-...	A1/B1/B2/C1/E1	H1	LE	M8	M12	Z1	Z3/Z4
Operating voltage AC	UB [V]	-	-	0 ... 30	-	-	-
Operating voltage DC	UB [V]	20.4 ... 27.6	0 ... 30	-	20.4 ... 26.4	-	-
Without display	UB [V]	-	-	21.6 ... 30.0	0 ... 30	-	-
With display L	UB [V]	-	-	0 ... 30	10 ... 30	-	-
With display P	UB [V]	-	-	0 ... 30	0	-	-
Max. acceptable current load per wire at 40 °C ⁴⁾	[A]	4	3	4	3 (0.5) ⁵⁾	4	1
Wire nominal cross-section	[mm ²]	0.25	0.14	0.25	-	-	0.14
Surge resistance	[kV]	0.8	-	-	-	-	-
Cable diameter	D [mm]	4.5	3.4	4.5	4.5 (3.3) ⁶⁾	4.5	3.4 2.9
Min. cable bending radius	R [mm]	R = D x 10					
With freely movable cable installation	R [mm]	28					
For energy chain	R [mm]	28					
Mounting space	A [mm]	90	-	90	-	-	-
Suitable for energy chains and robots		Yes	No	Yes	Yes (No) ⁷⁾	Yes	No
Degree of protection when mounted ⁴⁾		IP65, IP67	IP40	-	IP65, IP68 ⁸⁾ , IP69K	IP65	-
Degree of contamination		3					
Ambient temperature ⁴⁾	T [°C]	-10 ... +40					
Secured with screw [2]	T [°C]	-10 ... +40					
For fixed cable installation	T [°C]	-20 ... +80	-25 ... +80	-25 ... +80 ⁹⁾	-25 ... +80 ⁹⁾	-10 ... +50	-10 ... +50
With flexible cable installation	T [°C]	-20 ... +80	-5 ... +70	-20 ... +80	-20 ... +80 ¹⁰⁾	-5 ... +50	-5 ... +50
CE marking in accordance with EU EMC directive ¹¹⁾		CE					
RCM certification							

⁴⁾ In case of combinations, the worse value/range of values applies.

⁵⁾ Only for M8R3: 0.5 A

⁶⁾ Only for display L: D = 3.3 mm

⁷⁾ Only for display L: Cable not suitable for energy chains or robots

⁸⁾ IP68 tested (1 m water depth and 24 h)

⁹⁾ For distributor without cable: T = -25 ... +85 °C

¹⁰⁾ For M12/display L: T = -25 ... +85 °C

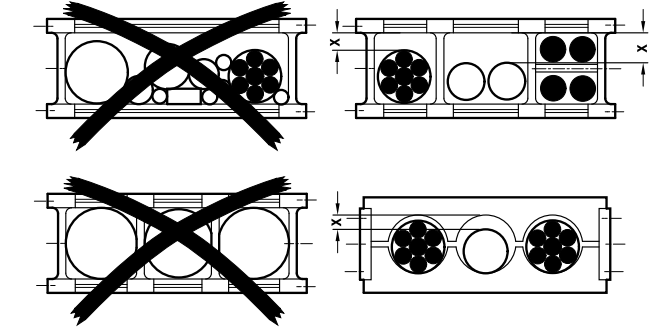
¹¹⁾ Declaration of conformity: → www.festo.com/sp

8b. Technical data (controller side)

NEDY-...	LE	M8	M12	
Max. acceptable current load per wire at 40 °C ⁴⁾	[A]	4	3	4
Wire nominal cross-section	[mm ²]	0.25		
Surge resistance	[kV]	0.8		
Cable diameter	D [mm]	4.5		
Min. cable bending radius	R [mm]	R = D x 10		
With freely movable cable installation	R [mm]	28		
For energy chain	R [mm]	28		
Mounting space	A [mm]	90		
Suitable for energy chains and robots		Yes		
Degree of protection when mounted ⁴⁾		IP65, IP68 ⁸⁾ , IP69K		
Degree of contamination		3		
Ambient temperature ⁴⁾	T [°C]	-10 ... +40		
Secured with screw [2]	T [°C]	-10 ... +40		
For fixed cable installation	T [°C]	-20 ... +80 ⁹⁾		
With flexible cable installation	T [°C]	-20 ... +80		

9. Mounting cables in the energy chain

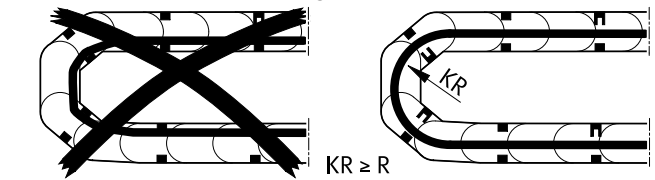
1. Lay the chain out lengthwise.
2. Place the cables in the chain, making sure they are not twisted.
3. Separate cables from each other through separator/drill holes.
4. Do not connect cables together.
5. Comply with space X. X > 10 % of the cable diameter D. With vertically hanging chain, increase the space X.



6. Align chain in the operating position.

Check:

- The bending radius of the cables is at least R
- Cables are freely movable in the bending radius KR of the energy chain
- Cables are not forced through the chain.



7. Mount chain (→ corresponding assembly instructions).

8. Fasten cables:

- For short energy chains, fasten at both ends of the chain (→ Fig. 1)
- For long, sliding energy chains, fasten only at the moment compensator end (→ Fig. 2).

9. Do not move cables up to the fastening point.

Check:

- Maintain mounting space A between the fastening point and the bending movement.

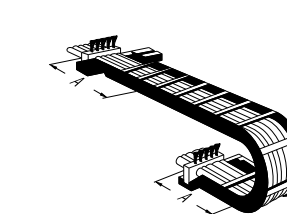


Fig. 1

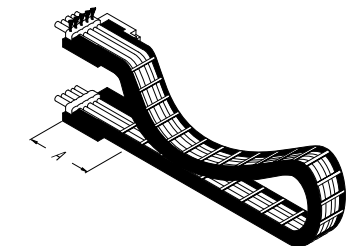


Fig. 2

→ Note

- Chain break.
Damages to cables.
- Replace cables.

→ Note

- Malfunction and material damage due to vertically hanging cables. The cables stretch.
- Regularly check the length of the cables.
 - Readjust the cables if required.

³⁾ Select the screw [2] in accordance with the installation situation (ISO 4762 or ISO 1207)