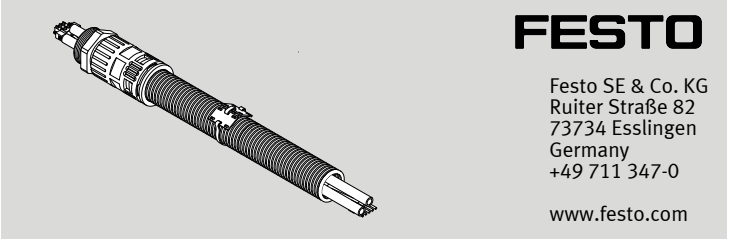


NHSB-A1
Connecting cable



Instructions | Assembly, Installation

8082449
2018-09c
[8082451]



Translation of the original instructions

1 Applicable documents

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

Documents	Name, type	Contents
Instructions	Linear drive, DFPI	Operation

Tab. 1

2 Safety

2.1 Safety instructions

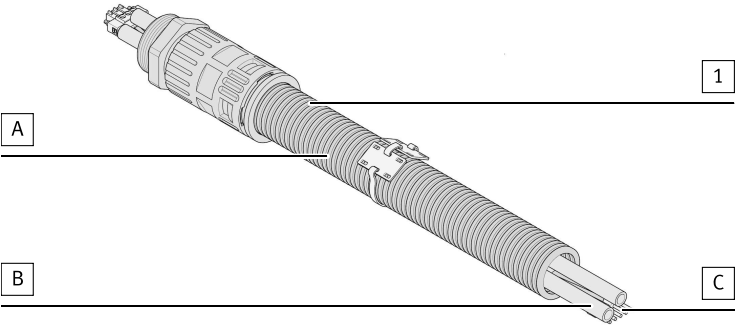
– Only assemble the product on components that are in a condition to be safely operated.

2.2 Intended use

Connection of a linear drive [6]/[7] with a control cabinet.

3 Product range overview

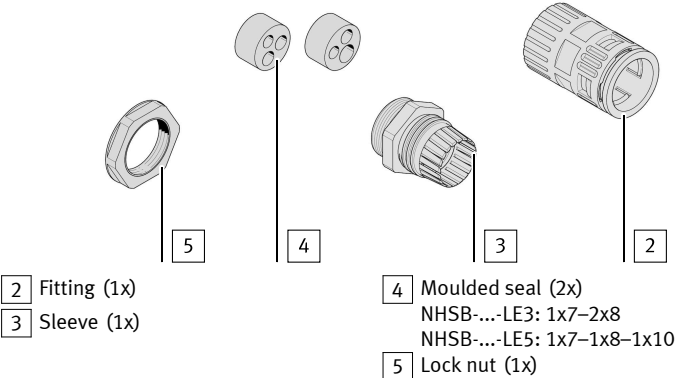
3.1 Scope of delivery



- 1 Connecting cable (1x)
NHSB-A1-...
- A Protective conduit

- B Tube, pneumatic
- C Cable, electrical

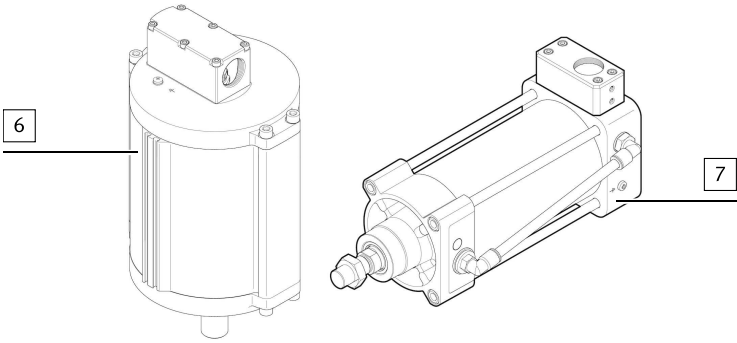
Fig. 1



- 2 Fitting (1x)
- 3 Sleeve (1x)
- 4 Moulded seal (2x)
NHSB-...-LE3: 1x7–2x8
NHSB-...-LE5: 1x7–1x8–1x10
- 5 Lock nut (1x)

Fig. 2

3.2 Not in scope of delivery



- 6 Linear drive (1x)
DFPI-...-C1V-P-A
DFPI-...-E-P-G2

- 7 Linear drive (1x)
DFPI-...-C1V-NB3P
DFPI-...-E-NB3P

Fig. 3

4 Mounting

4.1 Preparation

4.1.1 Shorten connecting cable

If the supplied connecting cable is too long:

1. Shorten the protective conduit [A], the tubes [B] and the cable [C] to the desired length.
⚠ Check: The tubes [B] and the cable [C] are longer than the protective conduit [A] and undamaged.
2. Strip the cable [C].
3. Equip the wires of the cable [C] with cable end sleeves that are not insulated.
Cable end sleeves: 0.75 mm²

In case of NHSB-...-LE3-..., the wires 4 and 5 in the cable [C] are not required.

1. Shorten the wires 4 and 5.
2. Secure the wires 4 and 5 with a shrinkage tube.

4.1.2 Linear drive preparation

Linear drives DFPI-...-C1V-P-A and DFPI-...-E-P-G2

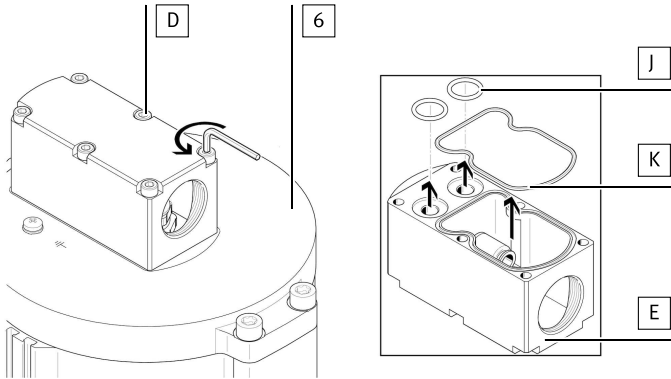


Fig. 4

1. Unscrew the screws [D].
2. Turn the flange type socket [E].
3. Do not lose the seal [K].
4. Do not lose the O-rings [J].

Linear drives DFPI-...-C1V-NB3P and DFPI-...-E-NB3P

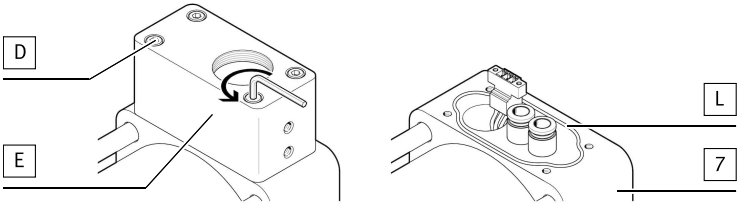


Fig. 5

1. Unscrew the screws [D].
2. Turn the flange type socket [E].
3. Do not lose the seal [L].

4.2 Assembly

4.2.1 Preassembly

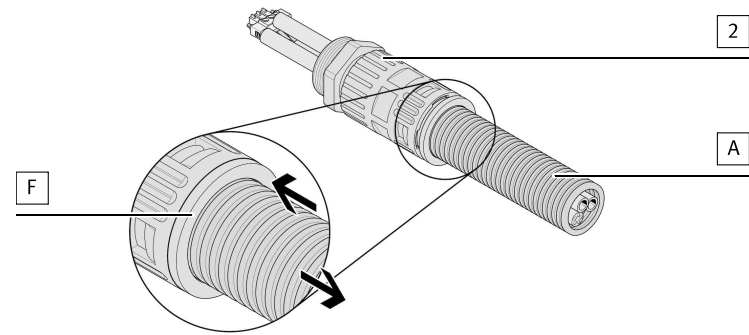


Fig. 6

- Press the unlocking device [F] in the direction of the fitting [2] and pull out the protective conduit [A].

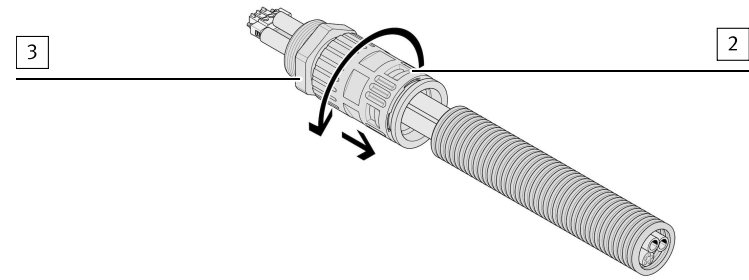


Fig. 7

- Hold the sleeve [3] and unscrew the fitting [2].

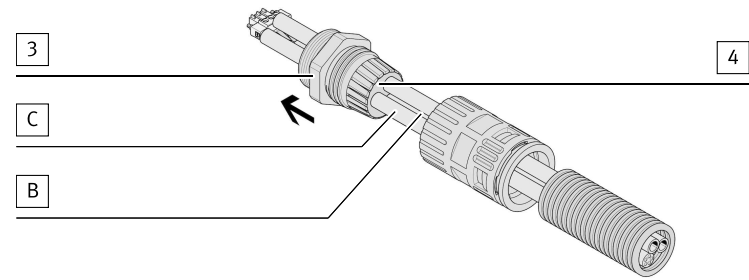


Fig. 8

- Hold the tubes [B] and the cable [C] and pull the sleeve [3] from the seal [4] in the direction of the arrow.
- Unroll the connecting cable [1] completely.

4.2.2 Mounting the linear drive

Linear drives DFPI-...-C1V-P-A and DFPI-...-E-P-G2

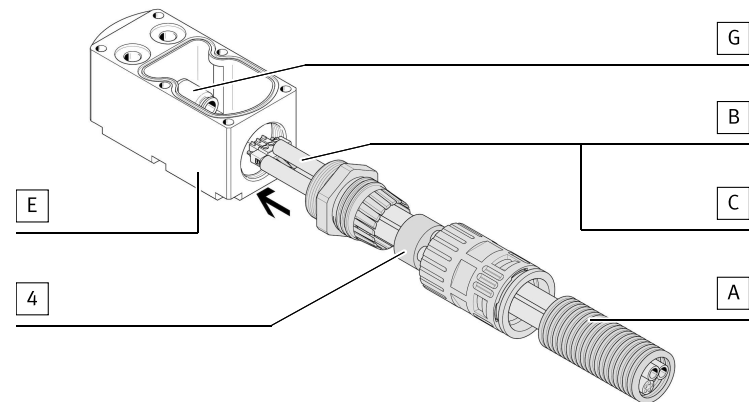


Fig. 9

- Guide the tubes [B] and the cable [C] through the thread of the flange type socket [E].
- Pull the tubes [B] and the cable [C] out sufficiently so they reach into the push-in connectors [G].

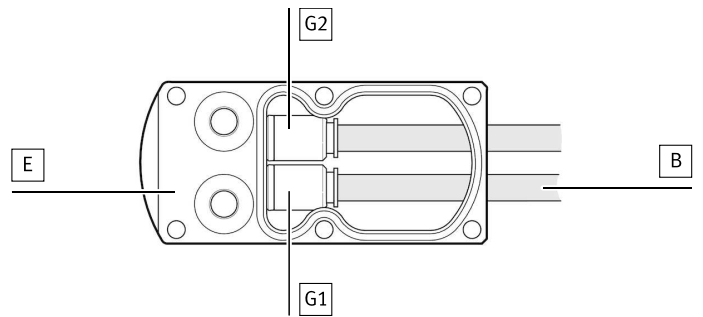


Fig. 10

- Slide the blue tube [B] into the push-in connectors [G1] up to the stop. Slide the black tube [B] into the push-in connectors [G2] up to the stop.

Linear drive	Push-in connector [G1]		Push-in connector [G2]	
DFPI-...-C1V-P-A	Ø 8 mm	Supply air	Ø 10 mm	Exhaust air
DFPI-...-E-P-G2	Ø 8 mm	Supply air or exhaust air	Ø 8 mm	Supply air or exhaust air

Tab. 2

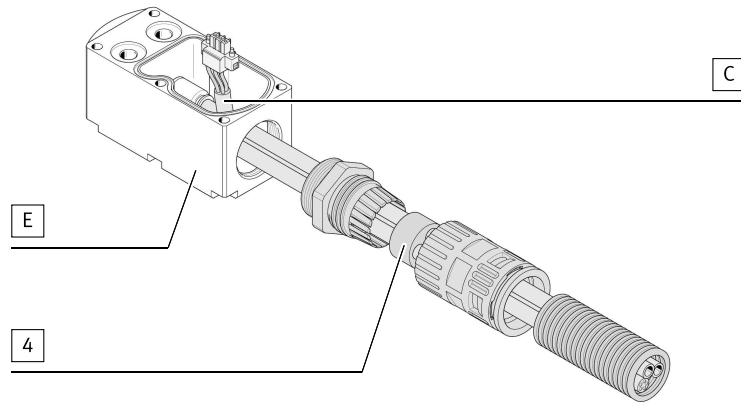


Fig. 11

- Guide the cable [C] from the opening of the flange type socket [E].
 ⚠ Check: The cable sheath of the cable [C] is sufficient to reach the flange type socket [E].

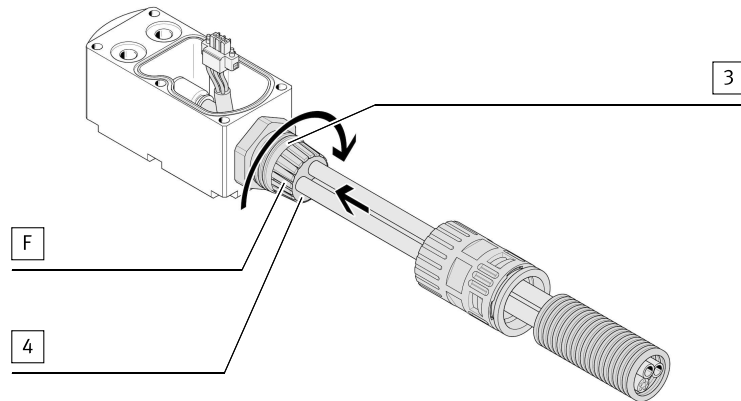


Fig. 12

- Screw the sleeve [3] tightly. Tightening torque: 7.5 Nm ± 10 %
- Slide the moulded seal [4] flush with the retention claws [F] into the sleeve [3].

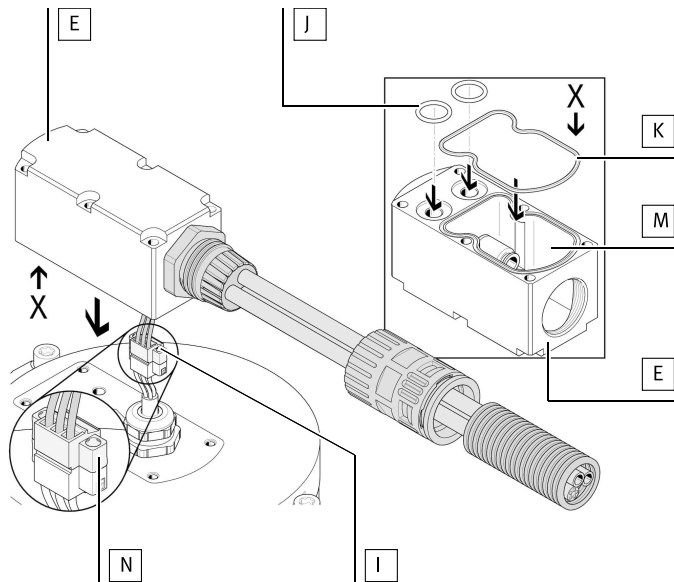


Fig. 13

1. Check that the position of the seal [K] and the O-rings [J] is correct → 4.1 Preparation.
2. Hold the flange type socket [E] with the opening [M] at an angle to the drive.
3. Plug the pin header and the socket strip [N] together.
4. Tighten screws [I]. Tightening torque: $0.3 \text{ Nm} \pm 10 \%$

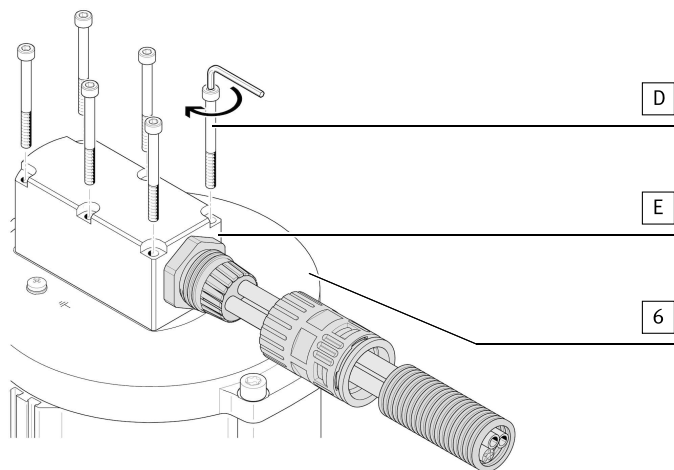


Fig. 14

1. Do not pinch the cables or the tubes.
2. Place flange type socket [E] on the drive.
3. Tighten the screws [D].

Linear drive	Size					
	100	125	160	200	250	300
DFPI-...-C1V-P-A	$2.7 \text{ Nm} \pm 10 \%$					
DFPI-...-E-P-G2	$2.7 \text{ Nm} \pm 10 \%$			$6 \text{ Nm} \pm 10 \%$		

Tab. 3

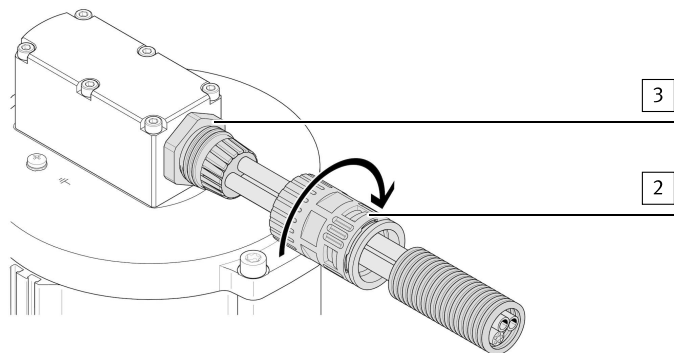


Fig. 15

- Screw the fitting [2] on the sleeve [3]. Tightening torque: $5 \text{ Nm} \pm 10 \%$

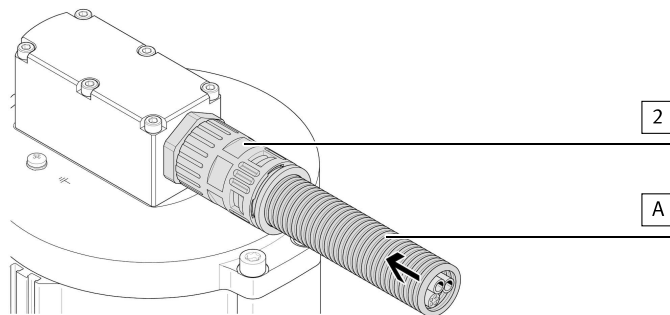


Fig. 16

- Slide the protective conduit [A] into the fitting [2] up to the stop.

Linear drives DFPI-...-C1V-NB3P and DFPI-...-E-NB3P

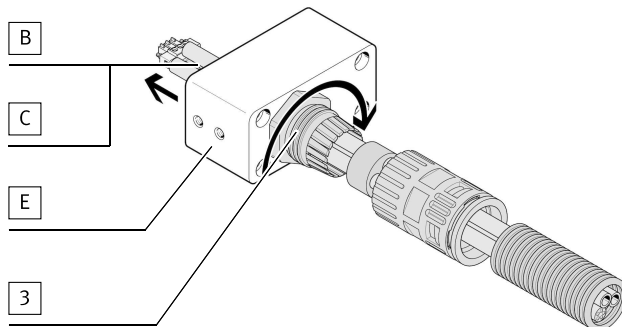


Fig. 17

1. Guide the tubes [B] and the cable [C] through the thread of the flange type socket [E].
2. Screw the sleeve [3] tightly. Tightening torque: $7.5 \text{ Nm} \pm 10 \%$

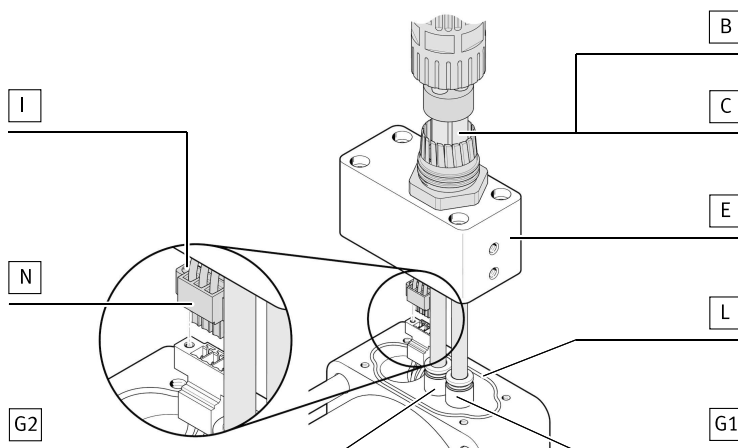


Fig. 18

1. Pull the tubes [B] and the cable [C] out sufficiently so they reach into the push-in connectors [G].
2. Slide the blue tube [B] into the push-in connectors [G1] up to the stop. Slide the black tube [B] into the push-in connectors [G2] up to the stop.

Linear drive	Push-in connector [G1]		Push-in connector [G2]	
DFPI-...-C1V-NB3P	Ø 8 mm	Supply air	Ø 10 mm	Exhaust air
DFPI-...-E-NB3P	Ø 8 mm	Supply air or exhaust air	Ø 8 mm	Supply air or exhaust air

Tab. 4

3. Check that the position of the seal [L] is correct → 4.1 Preparation.
4. Plug the pin header and the socket strip [N] together.
5. Tighten screws [I]. Tightening torque: $0.3 \text{ Nm} \pm 10 \%$

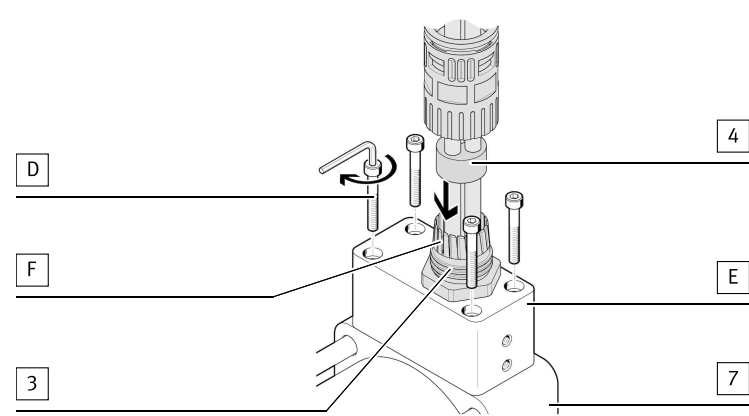


Fig. 19

1. Do not pinch the cables or the tubes.
2. Place flange type socket [E] on the drive.
3. Tighten the screws [D]. Tightening torque: $4.2 \text{ Nm} \pm 10 \%$
4. Slide the moulded seal [4] flush with the retention claws [F] into the sleeve [3].

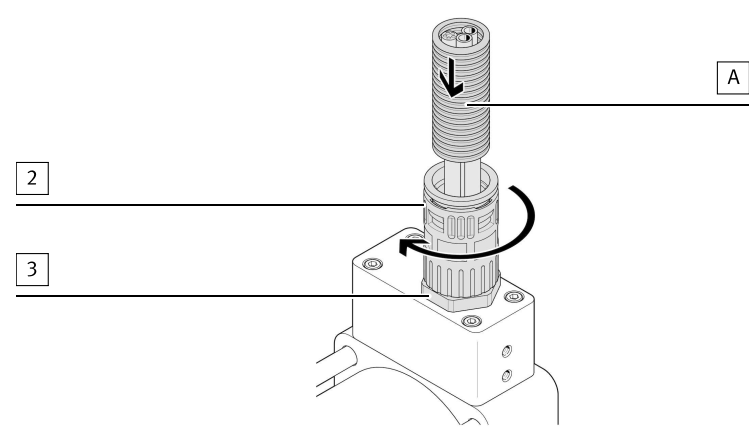


Fig. 20

1. Screw the fitting [2] on the sleeve [3]. Tightening torque: $5 \text{ Nm} \pm 10 \%$
2. Slide the protective conduit [A] into the fitting [2] up to the stop.

4.2.3 Mounting to the control cabinet

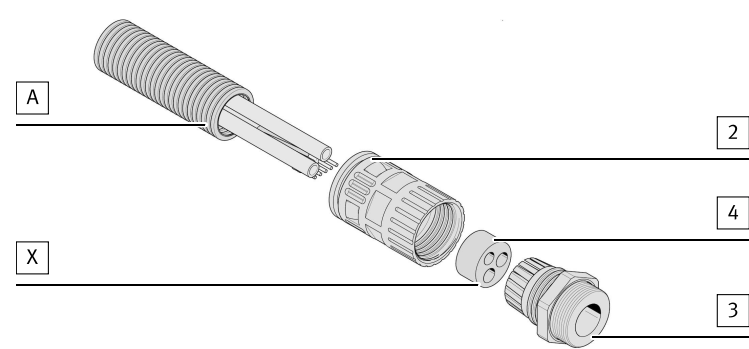


Fig. 21

1. Mount the moulded seal [4] with the chamfer [X] pointing towards the sleeve [3].
2. Mount the fitting [2], the moulded seal [4] and the sleeve [3] in the order shown on the protective conduit [A]. Tightening torque: $5 \text{ Nm} \pm 10 \%$

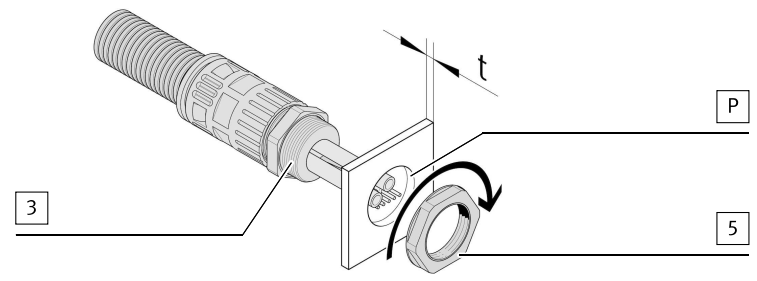


Fig. 22

1. Slide the thread of the sleeve [3] through the drilled hole [P] up to the stop.

Control cabinet	Drilled hole [P]	Wall thickness (t)
Dimensions	$\varnothing 32^{+0.3} \text{ mm}$	$\leq 2.5 \text{ mm}$

Tab. 5

2. Turn the lock nut [5] onto the thread of the sleeve [3]. Tightening torque: $7.5 \text{ Nm} \pm 10 \%$
3. Connect the cable [C] in accordance with the contact assignment → 1 Applicable documents.

5 Technical data

NHSB-A1-...		
General		
Bending radius	[mm]	≥ 100
Ambient temperature	[°C]	−5 ... +60
Medium		
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]	
Note	Operation with oiled compressed air in potentially explosive atmospheres is not permissible.	
Material		
Note	Contains paint-wetting impairment substances ¹⁾	

1) PWIS = paint-wetting impairment substances

Tab. 6