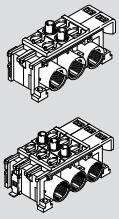
CPE...-PRS
Connection block



FESTO

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Operating instructions

8151076
2021-03g
[8151078]

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Translation of the original instructions

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1 Applicable documents

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

2 Safety

Safety instructions
Only use the product in original status without unauthorised modifications.
Intended use
The manifold blocks CPE...- PRS connect directional control valves to central supply ports and are intended for wall or H-rail mounting.

3 Additional information

– Accessories ➔ www.festo.com/catalogue.

4 Product overview

Structure

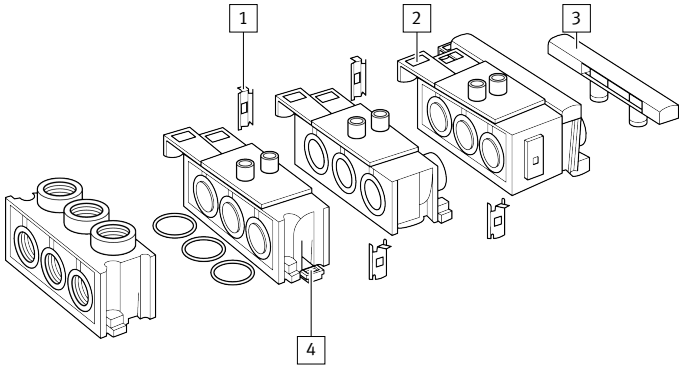


Fig.1

1 Connecting component	3 Blind plate
2 Valve spool	4 Mounting slide

Function
The manifold block CPE...-PRSG-2/-3 (double or triple) connects type CPE 5/2- or 5/3-way valves to central supply ports.
Two additional valves can be supplied with the help of the extension plate CPE...-PRS-2.
The end plate CPE...-PRS-EP can be used to create different pressure zones or a two-sided compressed-air supply.
The maximum configuration level is:

6 valves	12 valves
– with one-sided compressed-air supply or – for every pressure zone	– with two-sided compressed-air supply

Tab. 1

The CPE-...-PRSO-... have the diaphragms removed.

5 Assembly

Preparation

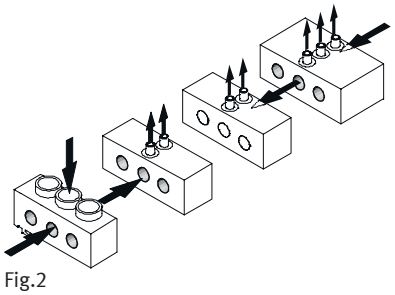


Fig.2

1. Place all manifold blocks in their assembly sequence.
2. Trace the pressure curve, e.g. with a sketch.

When using multiple pressure zones:

NOTICE

- Make sure that the diaphragms at the interface of two pressure zones remain intact.
  Pressed-in diaphragms cannot be closed again. In doing so, consider removing the diaphragms of the compressed air ducts for an unobstructed flow rate.

Removing unused diaphragms:

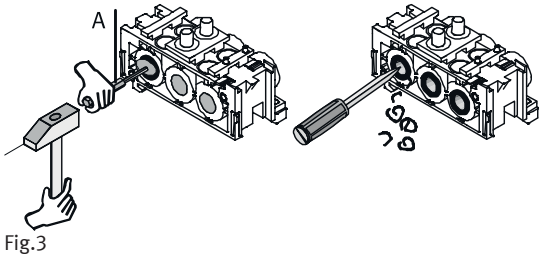


Fig.3

1. Press in the 3 diaphragms of the compressed air ducts on the manifold block from the outside inwards in accordance with the pressure curve sketch using a punch (A)
2. Deburr fracture margins and
3. Remove chips.

This time-saving method of operation results in irregular broken edges compared to precision machining.

Assembly
H-rail mounting:
1. Place all manifold blocks on the H-rail in accordance with the assembly sequence.
2. Press the manifold blocks on the H-rail until the mounting slides 5 engage.

Linking manifold blocks:

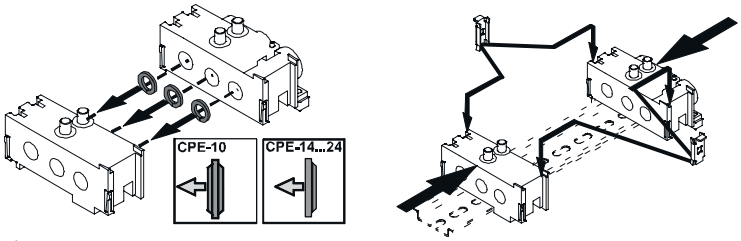


Fig.4

1. Place one sealing ring each between each of the three compressed air ducts and press the manifold blocks together.
2. Push a connecting component 1 onto the rail shown on both sides until it clicks into place.

Mounting the CPE valves:

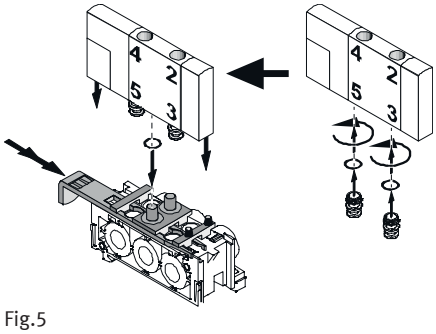


Fig.5

1. Insert all valve spools 2 up to the first detent.
2. Place a seal on every compressed air outlet.

3. Screw the valve connecting fittings with attached sealing ring into ports 3 and 5 of the CPE valve.
4. Place the CPE valves on the manifold block, press in and simultaneously push the valve spool to the 2nd detent. The valve spool and valve are then flush with each another.

⚠ WARNING

Observe the locking procedure!
This is the only way to prevent unsecured valves from being thrown out when the manifold is pressurised.

Procedure
– Ensure that the connected manifold blocks are installed without distortion.
– Make sure there is sufficient space for the required ports.

H-rail mounting

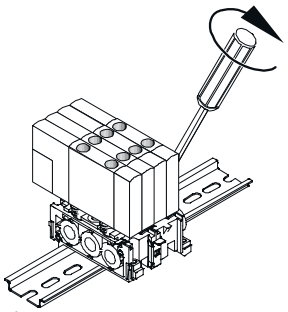


Fig.6

- Tighten the locking screws of the manifold block to the H-rail.

Wall mounting

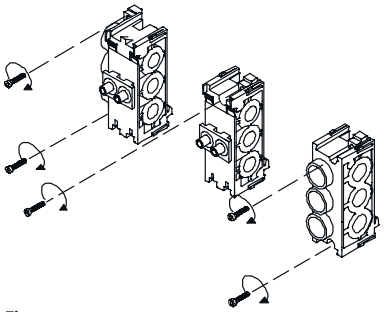


Fig.7

- Screw in the following number of screws for mounting:

Component	Required number of screws
Manifold block	2
Extension plate	1
End plate	2

6 Installation

Pneumatic installation

– Preferably use type QS..-... round push-in fittings with cylindrical connecting thread.
– Connect the tubing for the pneumatic ports as shown in the pressure curve sketch ➔ Fig. 2.
Seal the connecting thread. Observe tightening torques ➔ Technical data.

When using conical QS push-in fittings:
– Turn the fittings with two layers of sealing band as follows:
  – First screw in by hand.
  – Then use a suitable tool to turn further 2 turns, but do not screw in to the block.
– To seal unused valve positions:
  – Use the type CPE...-PRSB blanking plates 3.

7 Malfunctions

Malfunction	Possible cause	Remedy
Pressure loss	Diaphragm pressed in at the interface of two pressure zones	Replace the corresponding manifold block
	Tubing connection fault	Correct tubing connection fault
Audible blowing noise	Seals not in intended position	Check seals
	Valve spool not engaged	Engage the valve spool until the valve spool and valve are flush

Tab. 2

8 Demounting

Removing CPE valves:
1. Exhaust the manifold block.
2. Pull the valve spool 2 one detent outwards.
   Take into account the short distance between the valve spool and the mounting surface of the connecting component 1.

Disassembly of interlinked connection blocks:

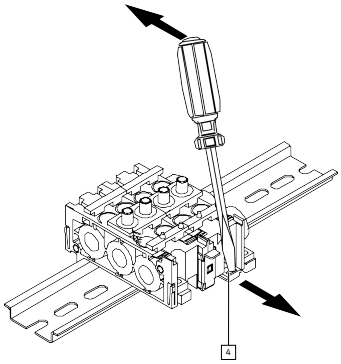


Fig.8

4 Mounting slide

1. Remove CPE valves.
2. Press down the lock 5 and pull the valve spool completely out of the manifold block.
3. Dismantle individual parts in reverse order of assembly.

Dismantling the H-rail:
1. Remove CPE valves.
2. Unscrew locking screw.
3. Demount the interlinked connection blocks.
4. Lever the mounting slides out of the manifold blocks with a screwdriver.

9 Technical data

Type CPE-...	-10-PRS	-14-PRS	-18-PRS	-24-PRS
Medium	Compressed air in accordance with ISO 8573-1:2010 [7:4:4] lubricated operation possible (in which case lubricated operation will always be required)			
Permissible operating pressure	–0.09 MPa ... 1.0 MPa –0.9 bar ... 10 bar –13 psi ... 145 psi			
Max. permissible tightening torque for cylindrical push-in fittings	6 Nm	8 Nm	30 Nm	30 Nm
Mounting position				
H-rail mounting	Horizontal only			
Wall mounting	Any			
Permissible temperature				
Environment, medium	–5 °C ... +50 °C			
Storage	–20 °C ... +40 °C			
Materials				
Housing	Polyamide			
Fittings	Aluminium			
Seals	Nitrile rubber			
Connections	Galvanised steel			

Tab. 3