

VPWS-1/1.5/2.2-...

Proportional directional control valve



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Instructions | Assembly, Installation
8257680
2026-05d
[8257682]

Translation of the original assembly instructions
Keep for reference

1 Other Applicable Documents



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

2 Safety

2.1 Safety Instructions

- Switch off the power supply before carrying out any assembly work.
- Switch off the media supply before carrying out any assembly work.
- Only mount product on components that are in a safe condition.
- Only use the product in its original condition without unauthorised modifications.
- The product must not be used if the product is dirty or damaged as a result of damaged packaging.
- Assembly and installation by qualified personnel only.

2.2 Intended Use

The valves are solenoid valves and are used as intended to release, block or proportionally change the flow rate of a suitable medium.

2.3 Foreseeable misuse

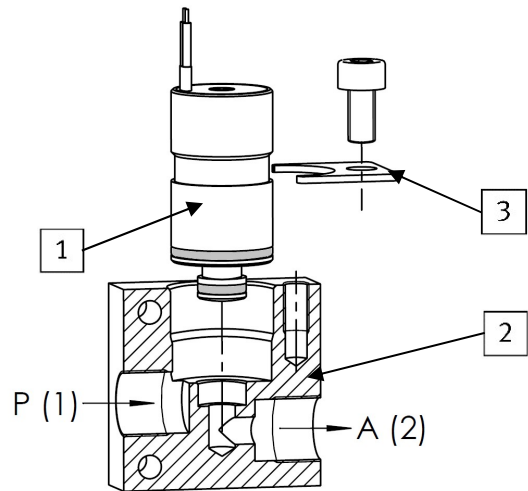
- The product may not be used outside the limits of the product defined by the technical data.
- The product must not be used in a potentially explosive atmosphere.
- Aggressive media such as acids or bases must not be used. Furthermore, only media that are expressly approved may be used.

2.4 Contamination

Contamination with substances that promote corrosion must be avoided at all costs. This applies in particular to sweat, which can cause corrosion damage due to the salts and moisture it contains. Therefore, appropriate hand protection must always be worn during handling, transport, and installation.

- Direct skin contact with metal surfaces must be avoided.
- Contaminated components must be cleaned properly and immediately before further processing.

3 Scope of Delivery



The marking on the valve lists the product variant.

- | | |
|---|--|
| 1 | Proportional directional control valve (1x)
VPWS-1/1.5/2.2-... (included in delivery scope) |
| 2 | Manifold block
VABS-P4-10S-G14 (not included in delivery scope) |
| 3 | Fastening (without M4 screw)
VAME-P4-PC15-P-P10 (not included in delivery scope) |

4 Assembly



WARNING!

Risk of injury due to crushing!

Carefully insert the valve into the device to avoid crushing the skin.

Observe the installation geometry for the valve; this can be requested from the manufacturer. Ensure sufficient strength and media compatibility of the receptacle and sufficient strength of the fixing screw. Only use approved oils or greases as assembly aids. Ensure correct connection of the media-carrying lines (flow direction). Particles entering the valve during assembly or operation may adversely affect the function, service life and leak tightness of the product. Insert a suitable filter unit.

1. Carefully press valve 1 into the provided opening of the manifold block 2 / customer-specific plate.
Observe the maximum axial force of 200 N.
2. Place the fastening 3 flush with the side of the valve 1 and tighten the fastening screw to the specified tightening torque (torque depends on the screw used).
3. Secure the fixing screw against loosening.

5 Electrical Installation



Warning

Risk of injury due to voltage!

- Electrical connection must be established or disconnected only by qualified personnel and in a de-energised state.
- The maximum specified voltage must not be exceeded.
- Damaged or defective connecting cables must not be used.
- Integrate suitable protective circuits to avoid overvoltages caused by inductive switch-off peaks.

6 Commissioning



Warning

Risk of injury due to valve parts being ejected with high kinetic energy.

- Do not exert any forces on the valve other than those permitted for installation.
 - The maximum specified operating pressure must not be exceeded.
- It is recommended to increase the pressure slowly during commissioning. Check the tightness of the connections.



Warning

Risk of burns/fire during continuous operation due to hot device surface!

- Keep the device away from easily flammable substances and media and do not touch it with bare hands.
- After removing the control signal, do not touch the device surface until the valve has cooled down completely.

7 Technical Data

VPWS-1/1.5/2.2-...		
Housing material	Stainless steel	
Seal material	FKM	
Installation position	Any	
Medium	Air, oxygen, inert gases	
Note on medium	Oiled operation not possible Maximum particle size 10 µm	
Degree of protection	IP60	
Note on protection class	In assembled condition IP65 with suitable connector	
Pneumatic connection 1	Cartridge 15 mm	
Pneumatic connection 2	Cartridge 7.2 mm	
Electrical connection	Cable Open end 2-wire	
Operating pressure	VPWS-1 0 – 10 bar VPWS-1.5 0 – 8 bar VPWS-2.2 0 – 3 bar	
Ambient temperature	+5 ... +50 °C	
Medium temperature	+5 ... +50 °C	
Storage temperature	-40 ... +80 °C	
Current driving (recommended)	Air	Oxygen
without flow		
@ 20°C	≤ 190 mA	≤ 190 mA
@ 50°C	≤ 165 mA	≤ 165 mA
with flow (≥ 5 l/min)		
@ 20°C	≤ 200 mA	≤ 200 mA
@ 50°C	≤ 200 mA	≤ 200 mA
Nominal coil resistance	60.5 Ω	
@ 20°C		
Nominal el. power consumption	2.5 W	
@ 20°C		