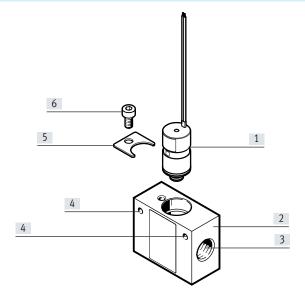


Characteristics

General information

The VPWS solenoid valves are proportional directional control valves. This means that the flow rate of suitable media can be controlled proportionally. Approved operating media include air, oxygen and inert gases.

Overview of valve with manifold block



The VPWS solenoid valve is designed to be installed in machines and devices and automated technical systems. It should only be operated within the limits defined in the technical data. The specific on-site operating conditions are to be observed.

- [1] VPWS solenoid valve
- [2] Manifold block
- [3] Pneumatic connection
- [4] Mounting hole for M3 screws
- [5] Mounting
- [6] Socket head screw M4

- 🕴 - Note

The product has no redundancy and no error detection. Where required, malfunctions must be detected by measures in the customer product.

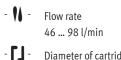
Type codes

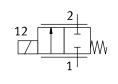
001	Series
VPWS	Proportional directional control valve
002	Nominal width [mm]
1.5	1.5
2.2	2.2
003	Directional control valve type
В	Sub-base valve
004	Valve function
6	2/2-way valve, normally closed

005	Pneumatic connection
PC15	Cartridge 15 mm
006	Pressure range [bar]
3	03
8	0 - 8
007	Sealant
V	FPM

NEW

Data sheet





Diameter of cartridge

- **└** - Voltage ≤19 V DC



General technical data

Nominal width DN		1.5 mm	2.2 mm			
Valve function		2/2 proportional directional control valve, closed				
Reset method		Mechanical spring				
Design		Directly actuated poppet valve				
Sealing principle		Soft				
Actuation type		Electrical				
Type of control		Direct				
Flow direction		Non-reversible				
Mounting position		Any				
Type of mounting		On sub-base				
		Plug-in				
		With accessories				
Pneumatic connection 1		Cartridge 15 mm				
Pneumatic connection 2		Cartridge 7.2 mm				
Flow rate q	[l/min]	82 98	46 56			
Product weight	[g]	23				
Degree of protection to EN 60529		IP60				
Note on degree of protection		In assembled state				
		IP65 with suitable plug				

Operating and environmental conditions

Nominal width DN		1.5 mm	2.2 mm	
Medium		Air		
		Oxygen		
		Inert gases		
Note on the medium		Operation with lubricated	medium not possible	
Note on the medium, maximum particle size	[µm]	10		
Operating pressure	[bar]	0 8	0 3	
Nominal operating pressure	[bar]	8	3	
Ambient temperature	[°C]	+5 +50		
Temperature of medium	[°C]	+5 +50		
Storage temperature	[°C]	-40 +80		
Corrosion resistance CRC ¹⁾		1		

1) Corrosion resistance class CRC 1 to Festo standard FN 940070 $\,$

Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

1

Data sheet

Electrical data		
Continuous operating voltage at 20 °C without inflow	[V DC]	≤ 16.5
Continuous operating voltage at 50 °C without inflow	[V DC]	≤ 14.5
Typical continuous operating voltage at 50 °C with inflow	[V DC]	≤ 19.0
Max. switching frequency	[Hz]	18
Hysteresis	[mA]	16
Coil resistance	[Ω]	60.5
Max. electrical power consumption	[W]	2.5
Current regulating range	[mA]	0 200
Duty cycle (at operating current < 155 mA)	[%]	100

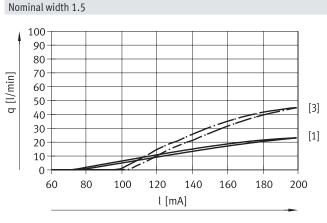
Electrical connection

Electrical connection	Connection technology	Open end
	Number of pins/wires	2
	Connection type	Cable
Cable length	[mm]	70 80

Materials				
Housing	High-alloy steel			
Seals	FPM			
Note on materials	RoHS-compliant			
	Contains paint-wetting impairment substances			

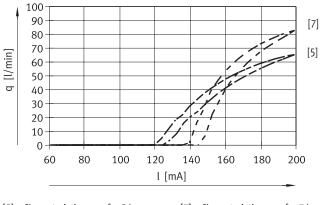
Data sheet

Flow rate/current characteristic curves



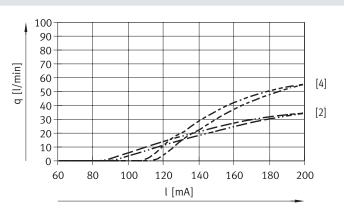


[3] Characteristic curve for 3 bar



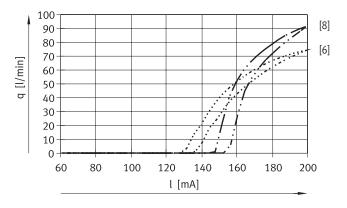
[5] Characteristic curve for 5 bar [7] Cha

[7] Characteristic curve for 7 bar



[2] Characteristic curve for 2 bar

[4] Characteristic curve for 4 bar



[6] Characteristic curve for 6 bar [8] Characteristic curve for 8 bar

- Note

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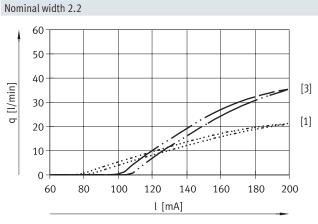
Resonance may occur during operation at a low frequency and this may affect the flow rate. Operation at very low flow rates may generate noise. No resonance occurs during operation at a frequency of 0.3 Hz or higher.

Subject to change - 2020/10

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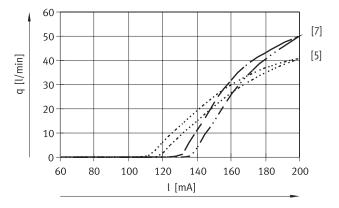
Flow rate/current characteristic curves

Data sheet



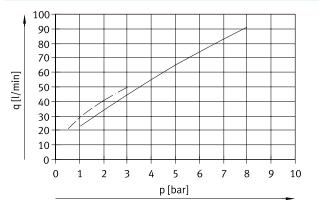
[1] Characteristic curve for 0.5 bar

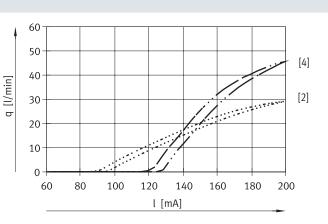
[3] Characteristic curve for 1.5 bar



[5] Characteristic curve for 2.0 bar [7] Characteristic curve for 3.0 bar

Flow rate/pressure characteristic curve at 200 mA





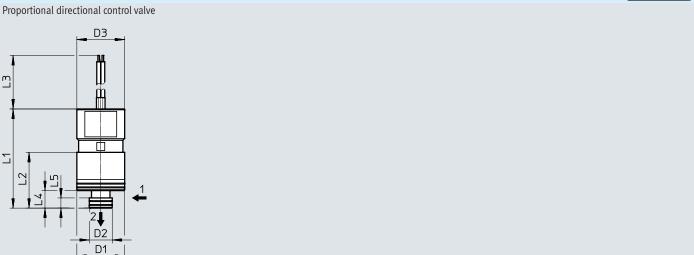
[2] Characteristic curve for 1.0 bar [4] Characteristic curve for 2.5 bar

VPWS-DN 1.5

VPWS-DN 2.2

Data sheet

Dimensions



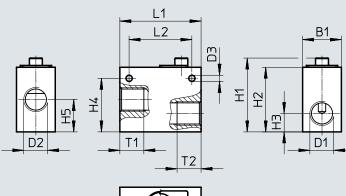
[1] Pneumatic connection 1

[2] Pneumatic connection 2

Туре	D1 Ø	D2 Ø	D3 Ø	L1	L2	L3	L4	L5
VPWS	15	7.2	15	31	17.5	70 80	5.5	3.2

Dimensions

Manifold block





[1] Socket head screw M4X8

Туре	B1	D1	D2	D3 Ø	H1	H2	H3	H4	H5	L1	L2	T1	T2
VABS-P4-10S-G14	21	G1/4	G1/4	3.4	40	35	10	29	17.5	44	34	13	13

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Download CAD data → <u>www.festo.com</u>

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Data sheet

Dimensions Mounting I Socket head screw M4X8

Туре	B1	D1	H1	L1
VAME-P4-PC15-P-P10	17	4.5	1	15.2

Ordering data					
			Part no.	Туре	PE ¹⁾
Proportional direction	nal control valve				
M	2/2 proportional directional control valve,	Nominal width 1.5 mm	8074075	VPWS-1.5-B-6-PC15-8-V	1
	closed	Nominal width 2.2 mm	8074074	VPWS-2.2-B-6-PC15-3-V	1
D					
Manifold block					
	Suitable for proportional directional control	Suitable for proportional directional control valves with nominal width 1.5 and 2.2 mm			1
(CONTO	Set for 2/2 proportional directional control	valve VPWS, comprising:			
0	 Manifold block VABS-P4-10S-G14 				
	 1 mounting component from set VAME-P4 	4-PC15-P-P10			
	Socket head screw M4x8				
Mounting					
1	For 2/2 proportional directional control valv	ve VPWS in manifold block VABS (set	8087347	VAME-P4-PC15-P-P10	1
\checkmark	comprises 10 mountings for 10 proportiona	al directional control valves VPWS)			

1) Packaging unit quantity.

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