

Solenoid valves VZWP, servo-controlled, NPT



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Key features and overview

Function

The solenoid valve VZWP-L-... is a servo-controlled 2/2-way valve with solenoid coil. The solenoid valve is closed when de-energised. When energised, the differential pressure

from the secondary side of the piston is reduced via the servo hole. The differential pressure lifts the piston away from the valve seat.

General

-  - Connecting thread
NPT $\frac{1}{4}$... NPT1
-  - Flow rate Kv
1.5 ... 11.5 m³/h

Application

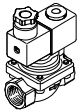
- All applications with a differential pressure of 0.5 bar
- Applications with an open medium circuit

Design

- The valve features a simple, sturdy design. The valve drive only fulfils a pilot control function, which relieves the burden on the main sealing element

Advantages

- High pressures can be controlled with large nominal diameters using small magnets
- The valves can be operated with air, neutral gases and neutral liquids
- The N/C version guarantees that the valve will be closed in the event of a voltage failure

Version	Type	Process valve connection	Nominal size (DN)	Process valve nominal pressure (PN)	→ Page/Internet
	VZWP-L-...	G $\frac{1}{4}$	13	40	4
		G $\frac{3}{8}$	13		
		G $\frac{1}{2}$	13		
		G $\frac{3}{4}$	25		
		G1	25		

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Type codes

VZWP - L - M22C - N1 - 130 - V - 1A - P4 - 40

Type

VZWP	Electrically actuated process valve, servo-controlled
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Valve type

L	In-line valve
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Valve function

M22C	2/2-way valve, normally closed (N/C), mechanical reset
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Process valve connection

N14	NPT 1/4
N38	NPT 3/8
N12	NPT 1/2
N34	NPT 3/4
N1	NPT 1

Nominal size (DN)

130	13 mm
250	25 mm

Sealing material

-	NBR
V	FPM

Nominal voltage

1A	24 V DC
2A	110 V AC
3A	230 V AC

Electrical connection

P4	Plug socket, 3-pin
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Medium pressure

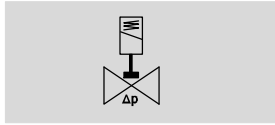
40	Max. 40 bar
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Technical data

Function



Flow rate Kv
1.5 ... 11.5 m³/h

Connecting thread
NPT¹/₄ ... NPT1



General technical data					
Process valve connection	NPT ¹ / ₄	NPT ³ / ₈	NPT ¹ / ₂	NPT ³ / ₄	NPT1
Nominal size (DN)	13	13	13	25	25
Valve function	2/2-way, single solenoid, closed				
Design	Piloted piston poppet valve				
Type of mounting	In-line installation				
Actuation type	Electric				
Type of control	Piloted				
Manual override	None				
Mounting position	Coil preferably on top				
Sealing principle	Soft				
Direction of flow	Non-reversible				
Max. viscosity [mm ² /s]	22				
Protection class	IP65				
Product weight [g]	600	575	550	1500	1400

Operating and environmental conditions					
Process valve connection	NPT ¹ / ₄	NPT ³ / ₈	NPT ¹ / ₂	NPT ³ / ₄	NPT1
Switching time on [ms]	100	100	100	130	130
Switching time off [ms]	250	250	250	300	300
Standard nominal flow rate [l/min]	1600	2100	2650	8750	12250
Flow rate [m ³ /h]	1.5	2	2.5	8.2	11.5
Medium pressure [bar]	0.5 ... 40				
Process valve nominal pressure (PN)	40				
Differential pressure [bar]	0.5				
Medium	Compressed air in accordance with ISO 8573-1:2010 [7:4:4]				
	Neutral liquids				
	Inert gases				
	Further media upon request				
Ambient temperature [°C]	-10 ... +35				
Temperature of medium [°C]	-10 ... +80				
Leak rate to EN 12266-1	A				
Corrosion resistance class CRC ¹⁾	1				

1) Corrosion resistance class 1 according to Festo standard 940 070
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Materials		
Solenoid valves		Material number
Housing	Cast brass	CW617N
Screws	High-alloy stainless steel	1.4301
Seals	NBR, FPM	-
Note on materials	Contains PWIS (paint-wetting impairment substances), RoHS-compliant	-

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Technical data

Electrical data					
		24 V DC	110 V DC	230 V DC	
Electrical connection		Type A	Type A	Type A	
		Plug	Plug	Plug	
		To EN 175301-803	To EN 175301-803	To EN 175301-803	
Coil characteristics					
Direct current DC	[V]	24	–	–	
	[W]	6.8	–	–	
Alternating current AC	[V]	–	110	230	
	[Hz]	–	50, 60	50, 60	
Pick-up power	[VA]	–	10.5	10.5	
Holding power	[VA]	–	8	7.6	
Permissible voltage fluctuations	[%]	±10	±10	±10	
Duty cycle	[%]	100	100	100	
Protection class		IP65	IP65	IP65	
CE marking (see declaration of conformity)		–	To EU Low Voltage Directive	To EU Low Voltage Directive	

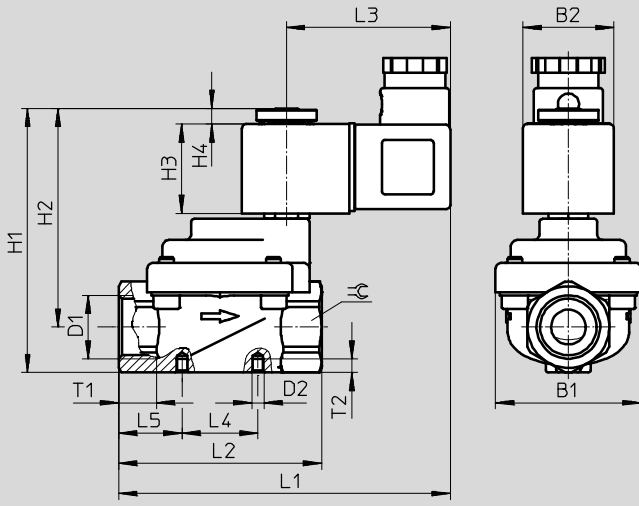
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Technical data

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Dimensions

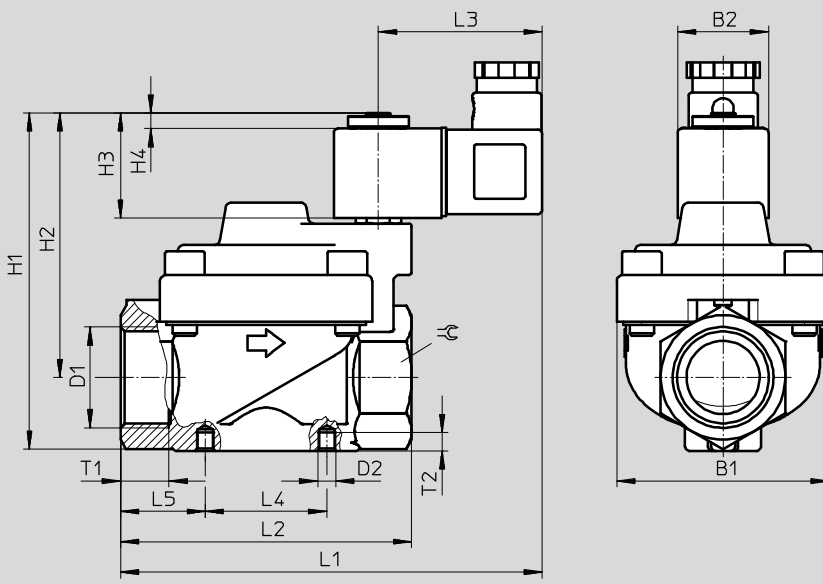
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	B1	B2	D1	D2	H1	H2	H3	H4	L1	L2	L3	L4	L5	T1	T2	⌀
VZWP-L-M22C-N14-130-...	48	30	NPT $\frac{1}{4}$	M4	88	73	30	5	110	67	54	25	21	12.5	4.5	27
VZWP-L-M22C-N38-130-...	48	30	NPT $\frac{3}{8}$	M4	88	73	30	5	110	67	54	25	21	12.5	4.5	27
VZWP-L-M22C-N12-130-...	48	30	NPT $\frac{1}{2}$	M4	88	73	30	5	110	67	54	25	21	12.5	4.5	27

Dimensions

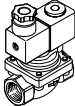
Download CAD data → www.festo.com/en/engineering



	B1	B2	D1	D2	H1	H2	H3	H4	L1	L2	L3	L4	L5	T1	T2	⌀
VZWP-L-M22C-N34-250-...	70	30	NPT $\frac{3}{4}$	M6	112	88	30	5	139	96	54	40	28	16	6	41
VZWP-L-M22C-N1-250-...	70	30	NPT1	M6	112	88	30	5	139	96	54	40	28	16	6	41

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Ordering data		Part No.	Type
	Process valve connection		
	NPT $\frac{1}{4}$	1489970	VZWP-L-M22C-N14-130-1P4-40
		1489980	VZWP-L-M22C-N14-130-2AP4-40
		1489990	VZWP-L-M22C-N14-130-3AP4-40
		1489975	VZWP-L-M22C-N14-130-V-1P4-40
		1489985	VZWP-L-M22C-N14-130-V-2AP4-40
		1489995	VZWP-L-M22C-N14-130-V-3AP4-40
	NPT $\frac{3}{8}$	1489971	VZWP-L-M22C-N38-130-1P4-40
		1489981	VZWP-L-M22C-N38-130-2AP4-40
		1489991	VZWP-L-M22C-N38-130-3AP4-40
		1489976	VZWP-L-M22C-N38-130-V-1P4-40
		1489986	VZWP-L-M22C-N38-130-V-2AP4-40
		1489996	VZWP-L-M22C-N38-130-V-3AP4-40
	NPT $\frac{1}{2}$	1489972	VZWP-L-M22C-N12-130-1P4-40
		1489982	VZWP-L-M22C-N12-130-2AP4-40
		1489992	VZWP-L-M22C-N12-130-3AP4-40
		1489977	VZWP-L-M22C-N12-130-V-1P4-40
		1489987	VZWP-L-M22C-N12-130-V-2AP4-40
		1489997	VZWP-L-M22C-N12-130-V-3AP4-40
	NPT $\frac{3}{4}$	1489973	VZWP-L-M22C-N34-250-1P4-40
		1489983	VZWP-L-M22C-N34-250-2AP4-40
		1489993	VZWP-L-M22C-N34-250-3AP4-40
		1489978	VZWP-L-M22C-N34-250-V-1P4-40
		1489988	VZWP-L-M22C-N34-250-V-2AP4-40
		1489998	VZWP-L-M22C-N34-250-V-3AP4-40
	NPT1	1489974	VZWP-L-M22C-N1-250-1P4-40
		1489984	VZWP-L-M22C-N1-250-2AP4-40
		1489994	VZWP-L-M22C-N1-250-3AP4-40
		1489979	VZWP-L-M22C-N1-250-V-1P4-40
		1489989	VZWP-L-M22C-N1-250-V-2AP4-40
	1489999	VZWP-L-M22C-N1-250-V-3AP4-40	