

Solenoid valves VZWM-L – Inch Series

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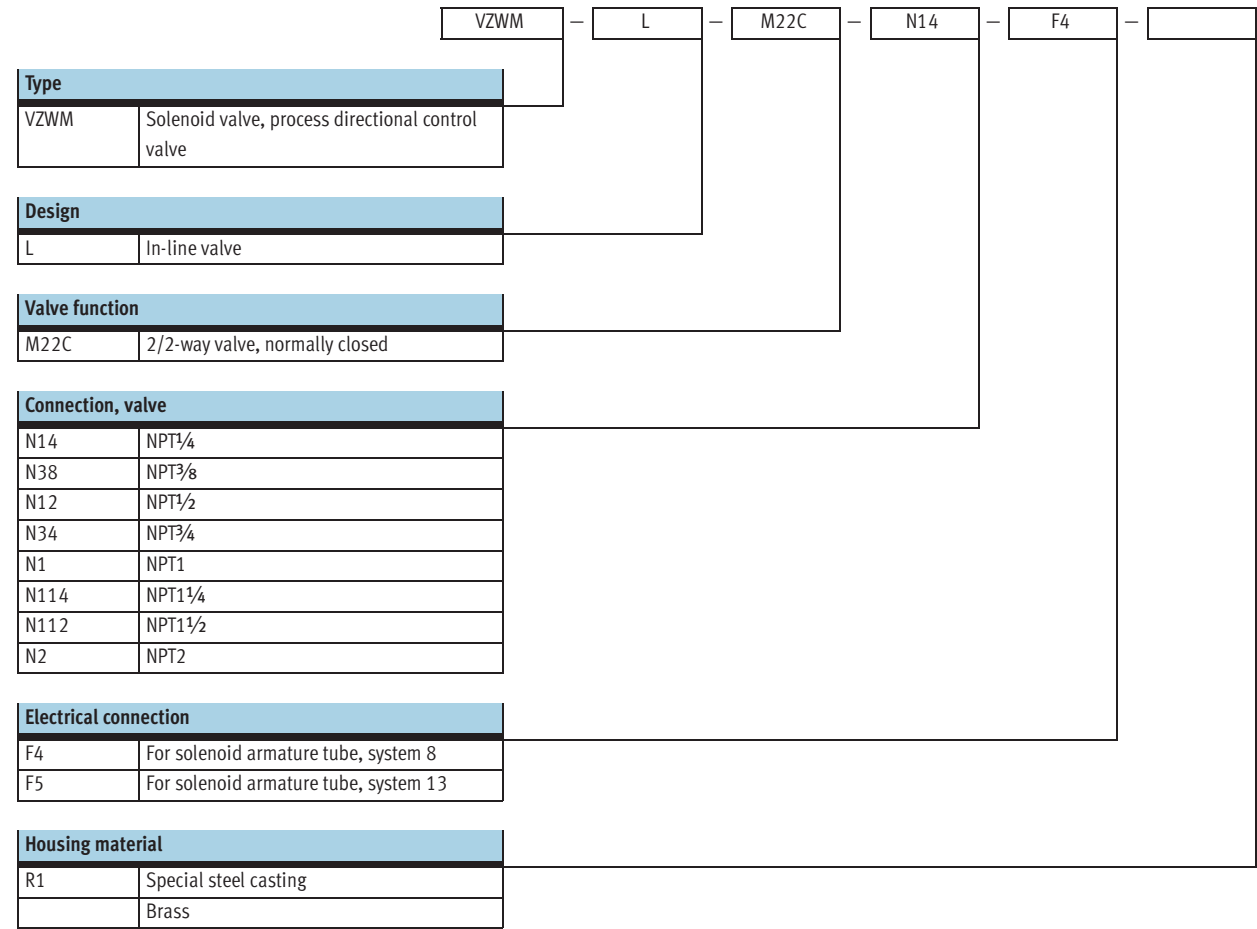


Solenoid valves VZWM-L – Inch Series

Key features and type codes

Brief description

- Indirectly controlled diaphragm valve
- Connection, valve
NPT $\frac{1}{4}$... NPT2
- Flow rate
2,600 ... 39,000 l/min
- Available in brass or special steel casting
- Varied range of coils

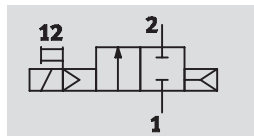


Solenoid valves VZWM-L – Inch Series

Technical data

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Function



Flow rate
1,400 ... 31,000 l/min

Voltage
24 V DC
110/230 V AC



General technical data									
Connection, valve		NPT1/4	NPT3/8	NPT1/2	NPT3/4	NPT1	NPT1 1/4	NPT1 1/2	NPT2
Valve function		2/2, single solenoid							
Constructional design		Diaphragm valve							
Sealing principle		Soft							
Actuation type		Electrical							
Reset method		Pneumatic spring							
Control type		Piloted							
Direction of flow		Non-reversible							
Exhaust function		No flow control							
Manual override		None							
Type of mounting		In-line installation							
Mounting position		Preferably vertical							
Standard nominal flow rate	[l/min]	1,400	2,100	2,400	10,000	11,700	24,000	26,400	31,000
Flow rate Kv	[m³/h]	1.6	2	2.4	8.5	10.7	21.3	27.4	39
C value	[l/sbar]	6	8.8	9.8	39	41	75	82	110
b value		0.3	0.35	0.37	0.5	0.57	0.6	0.67	0.68
Differential pressure	[bar]	0.5	0.5	0.5	0.5	0.7	0.7	0.7	0.7
Product weight	Brass housing [g]	500	480	450	1,270	1,200	2,850	2,570	3,800
	Special steel casting housing [g]	400	400	330	1,200	1,100	2,650	2,400	3,660
Materials	Housing	Brass or special steel casting							
	Diaphragm	Nitrile rubber							
	Plunger tube	High-alloy steel							
Note on materials		Contains paint wetting impairment substances							
Max. tightening torque	Connecting thread [Nm]	35	60	105	200	350	450	540	620
	Cover screw [Nm]	20	20	20	30	30	30	30	30
	Coil mounting [Nm]	0.5	0.5	0.5	0.5	0.5	2	2	2

Operating and environmental conditions										
Connection, valve			NPT1/4	NPT3/8	NPT1/2	NPT3/4	NPT1	NPT11/4	NPT11/2	NPT2
Operating medium			Filtered compressed air, lubricated, grade of filtration 50 µm, neutral gases, water, neutral fluids							
Operating pressure, valve	Gases	[bar]	0.5 ... 10					0.7 ... 10		
	Fluids	[bar]	0.5 ... 6					0.7 ... 10		
Ambient temperature		[°C]	−10 ... +60							
Temperature of medium	Gases	[°C]	−10 ... +60							
	Fluids	[°C]	5 ... 50							
Max. viscosity		[mm²/s]	22							

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Valve response times										
Connection, valve			NPT1/4	NPT3/8	NPT1/2	NPT3/4	NPT1	NPT11/4	NPT11/2	NPT2
Gases										
Response time	off	[ms]	10	10	10	12	12	20	20	21
	on	[ms]	8	8	8	15	15	26	26	62
Fluids										
Response time	off	[ms]	200	210	220	930	930	1,900	2,000	2,800
	on	[ms]	100	110	110	400	400	1,400	1,400	2,100

Electrical data										
Connection, valve			NPT1/4	NPT3/8	NPT1/2	NPT3/4	NPT1	NPT11/4	NPT11/2	NPT2
Electrical connection			Solenoid armature tube, system 8 (order separately)					Solenoid armature tube, system 13 (order separately)		
Operating voltage	DC voltage	[V DC]	24							
	AC voltage	[V AC]	110/230 (50 ... 60 Hz)							
Coil characteristics	DC voltage	[W]	6.8					7.6		
	AC voltage	[VA]	Pull: 14.5 Hold: 10.5					14		
Protection class to EN 60529			IP65 (with plug socket)							

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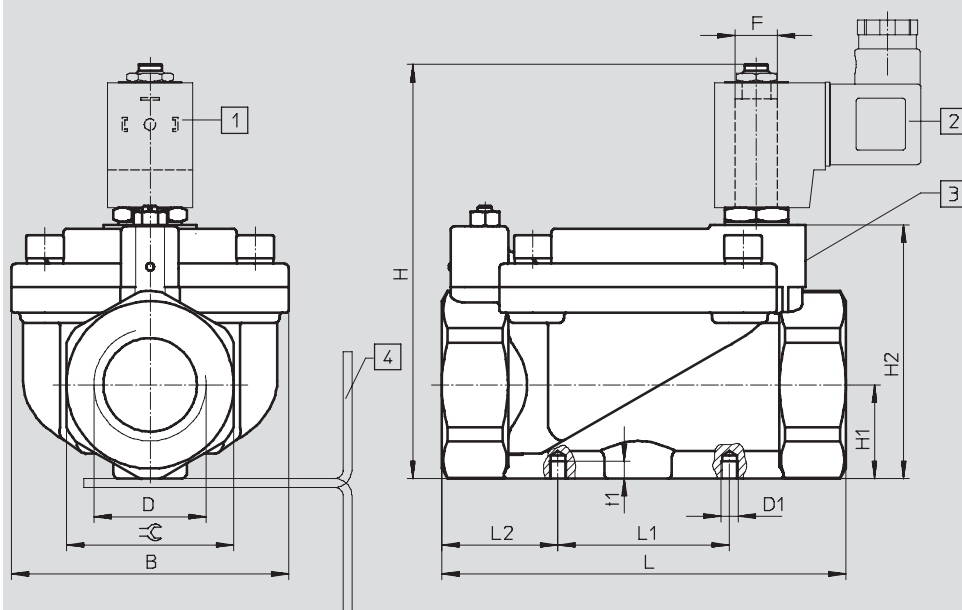
Technical data

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Dimensions

Download CAD Data → www.festo.com/us/cad

2/2-way valve



- 1 Plug socket connection to DIN EN 17301-803, type A
- 2 Plug socket MSSD-N
- 3 Location for inscription labels
- 4 Mounting bracket HRM-...

Type	B ±1.5	D	D1	H ±2	H1 ±1.5	H2 ±1	L ±2	L1 ±1.5	L2	F	t1 ±1.5	⌀
VZWM-...-N14-F4	48	NPT1/4	M4	85.5	15	49	67	25	21	F4	4	27
VZWM-...-N38-F4	48	NPT3/8	M4	85.5	15	49	67	25	21	F4	4	27
VZWM-...-N12-F4	48	NPT1/2	M4	85	15	49	67	25	21	F4	4	27
VZWM-...-N34-F4	70	NPT3/4	M6	107	24.2	70.5	96	40	28	F4	6	41
VZWM-...-N1-F4	70	NPT1	M6	107	24.2	70.5	96	40	28	F4	6	41
VZWM-...-N114-F5	96	NPT1 1/4	M6	143.5	32.5	88	140	59.5	40.25	F5	6	58
VZWM-...-N112-F5	96	NPT1 1/2	M6	143.5	32.5	88	140	59.5	40.25	F5	6	58
VZWM-...-N2-F5	112	NPT2	M6	159	38.5	103.5	168	59.5	54.25	F5	6	70
VZWM-...-N14-F5-R1	44	NPT1/4	M4	106	15.6	51	67	25	21	F5	4	27
VZWM-...-N38-F5-R1	44	NPT3/8	M4	106	15.6	51	67	25	21	F5	4	27
VZWM-...-N12-F5-R1	44	NPT1/2	M4	106	15.6	51	67	25	21	F5	4	27
VZWM-...-N34-F5-R1	70	NPT3/4	M6	126	24.2	70	96	40	28	F5	6	41
VZWM-...-N1-F5-R1	70	NPT1	M6	126	24.2	70	96	40	28	F5	6	41
VZWM-...-N114-F5-R1	96	NPT1 1/4	M6	145	34	89.5	140	59.5	40.25	F5	6	58
VZWM-...-N112-F5-R1	96	NPT1 1/2	M6	145	34	89.5	140	59.5	40.25	F5	6	58
VZWM-...-N2-F5-R1	112	NPT2	M6	159	38.5	104	168	59.5	54.25	F5	6	70

Ordering data

Connection, valve	Brass housing		Special steel casting housing	
	Part No.	Type	Part No.	Type
NPT1/4	546154	VZWM-L-M22C-N14-F4	546170	VZWM-L-M22C-N14-F5-R1
NPT3/8	546155	VZWM-L-M22C-N38-F4	546171	VZWM-L-M22C-N38-F5-R1
NPT1/2	546156	VZWM-L-M22C-N12-F4	546172	VZWM-L-M22C-N12-F5-R1
NPT3/4	546157	VZWM-L-M22C-N34-F4	546173	VZWM-L-M22C-N34-F5-R1
NPT1	546158	VZWM-L-M22C-N1-F4	546174	VZWM-L-M22C-N1-F5-R1
NPT1 1/4	546159	VZWM-L-M22C-N114-F5	546175	VZWM-L-M22C-N114-F5-R1
NPT1 1/2	546160	VZWM-L-M22C-N112-F5	546176	VZWM-L-M22C-N112-F5-R1
NPT2	546161	VZWM-L-M22C-N2-F5	546177	VZWM-L-M22C-N2-F5-R1

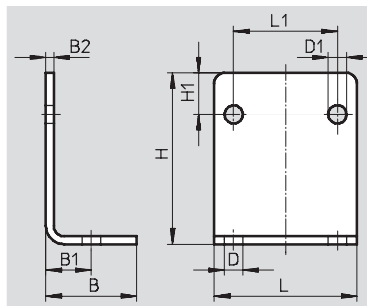
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Accessories

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Mounting bracket HRM

Material:
Galvanised steel



Dimensions and ordering data

B	B1	B2	D Ø	D1 Ø	H	H1	L	L1	Weight [g]	Part No.	Type
25	12.5	2	6	5	37	10	40	25	39	9 769	HRM-1
35	17.5	3	7	7	66	16	55	40	130	9 770	HRM-2
47	23.5	3	9	7	87	23	75	59.5	246	9 771	HRM-3

Ordering data – Solenoid coils

Technical data → Internet: md, mh

	Voltage	Part No.	Type
MD			
	24 V DC	549 903	MD-2-24VDC-PA
	110 V AC, 50 ... 60 Hz	549 904	MD-2-110VAC-PA
	230 V AC, 50 ... 60 Hz	549 905	MD-2-230VAC-PA
MH			
	24 V DC	549 906	MH-2-24VDC-PA
	110 V AC, 50 ... 60 Hz	549 907	MH-2-110VAC-PA
	230 V AC, 50 ... 60 Hz	549 908	MH-2-230VAC-PA

Ordering data – Plug socket

Technical data → Internet: mssd

	Part No.	Type
	550 067	MSSD-N
3-pin, square design MSF		

Product Range and Company Overview

A Complete Suite of Automation Services

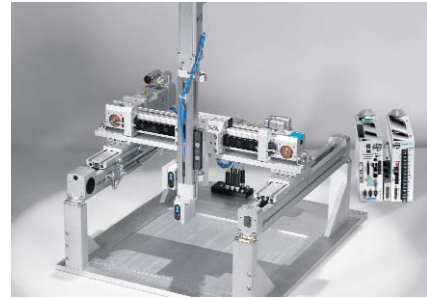
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