

Solenoid valves VZWM-L

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Solenoid valves VZWM-L

Key features and type codes

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Brief description

- Indirectly controlled diaphragm valve
- Connection, valve
G $\frac{1}{4}$... G2
- Flow rate
2,600 ... 39,000 l/min
- Available in brass or special steel casting
- Varied range of coils

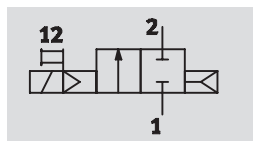
VZWM – L – M22C – G14 – F4 –	
Type	
VZWM	Solenoid valve, process directional control valve
Design	
L	In-line valve
Valve function	
M22C	2/2-way valve, normally closed
Connection, valve	
G14	G $\frac{1}{4}$
G38	G $\frac{3}{8}$
G12	G $\frac{1}{2}$
G34	G $\frac{3}{4}$
G1	G1
G114	G1 $\frac{1}{4}$
G112	G1 $\frac{1}{2}$
G2	G2
Electrical connection	
F4	For solenoid armature tube, system 8
F5	For solenoid armature tube, system 13
Housing material	
R1	Special steel casting
	Brass

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Technical data

Function



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

-  - Voltage
24 V DC
110/230 V AC



General technical data										
Connection, valve			G¼	G⅜	G½	G¾	G1	G1¼	G1½	G2
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			G¼	G¾	G½	G¾	G1	G1¼	G1½	G2
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			G1/4	G3/8	G1/2	G3/4	G1	G1 1/4	G1 1/2	G2
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										
			G1/4	G3/8	G1/2	G3/4	G1	G1 1/4	G1 1/2	G2
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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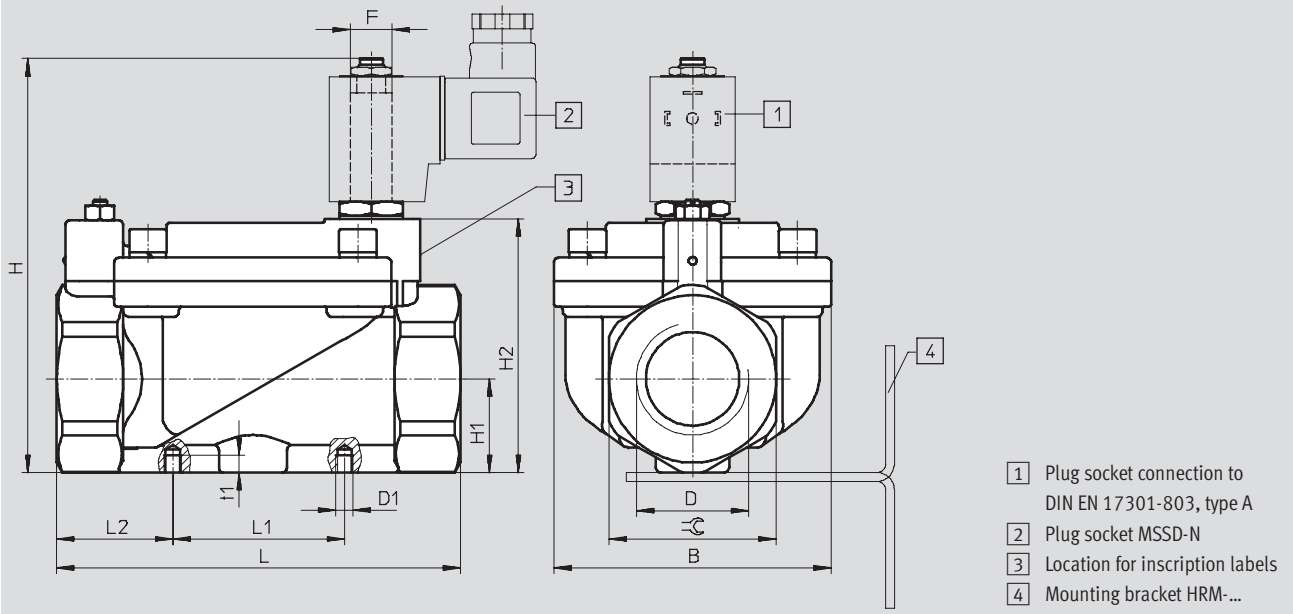
Technical data

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Dimensions

Download CAD data → www.festo.com

2/2-way valve



Type	B ±1.5	D	D1	H ±2	H1 ±1.5	H2 ±1	L ±2	L1 ±1.5	L2	F	t1 ±1.5	∅
VZWM-...-G14-F4	48	G1/4	M4	85.5	15	49	67	25	21	F4	4	27
VZWM-...-G38-F4	48	G3/8	M4	85.5	15	49	67	25	21	F4	4	27
VZWM-...-G12-F4	48	G1/2	M4	85	15	49	67	25	21	F4	4	27
VZWM-...-G34-F4	70	G3/4	M6	107	24.2	70.5	96	40	28	F4	6	41
VZWM-...-G1-F4	70	G1	M6	107	24.2	70.5	96	40	28	F4	6	41
VZWM-...-G114-F5	96	G1 1/4	M6	143.5	32.5	88	140	59.5	40.25	F5	6	58
VZWM-...-G112-F5	96	G1 1/2	M6	143.5	32.5	88	140	59.5	40.25	F5	6	58
VZWM-...-G2-F5	112	G2	M6	159	38.5	103.5	168	59.5	54.25	F5	6	70
VZWM-...-G14-F5-R1	44	G1/4	M4	106	15.6	51	67	25	21	F5	4	27
VZWM-...-G38-F5-R1	44	G3/8	M4	106	15.6	51	67	25	21	F5	4	27
VZWM-...-G12-F5-R1	44	G1/2	M4	106	15.6	51	67	25	21	F5	4	27
VZWM-...-G34-F5-R1	70	G3/4	M6	126	24.2	70	96	40	28	F5	6	41
VZWM-...-G1-F5-R1	70	G1	M6	126	24.2	70	96	40	28	F5	6	41
VZWM-...-G114-F5-R1	96	G1 1/4	M6	145	34	89.5	140	59.5	40.25	F5	6	58
VZWM-...-G112-F5-R1	96	G1 1/2	M6	145	34	89.5	140	59.5	40.25	F5	6	58
VZWM-...-G2-F5-R1	112	G2	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
G1/4	546 146	VZWM-L-M22C-G14-F4	546162	VZWM-L-M22C-G14-F5-R1
G3/8	546 147	VZWM-L-M22C-G38-F4	546163	VZWM-L-M22C-G38-F5-R1
G1/2	546 148	VZWM-L-M22C-G12-F4	546164	VZWM-L-M22C-G12-F5-R1
G3/4	546 149	VZWM-L-M22C-G34-F4	546165	VZWM-L-M22C-G34-F5-R1
G1	546 150	VZWM-L-M22C-G1-F4	546166	VZWM-L-M22C-G1-F5-R1
G1 1/4	546 151	VZWM-L-M22C-G114-F5	546167	VZWM-L-M22C-G114-F5-R1
G1 1/2	546 152	VZWM-L-M22C-G112-F5	546168	VZWM-L-M22C-G112-F5-R1
G2	546 153	VZWM-L-M22C-G2-F5	546169	VZWM-L-M22C-G2-F5-R1

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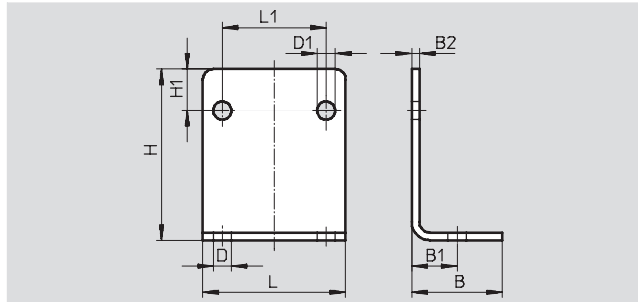
Accessories

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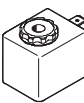
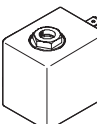
Mounting bracket HRM

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		
	3-pin, square design MSF	550 067	MSSD-N		