

Solenoid valves MN1H, ISO 5599-1

FESTO

Technical data – 5/3-way valves

Flow rate

1200 ... 4600 l/min

Voltage

24 V DC

110, 230 V AC



General technical data						
ISO size	1		2		3	
Valve function	5/3-way, double solenoid					
Constructional design	Piston spool					
Sealing principle	Soft					
Actuation type	Electrical					
Type of reset	Mechanical spring					
Type of pilot control	Piloted					
Pilot air supply	Internal					
Direction of flow	Non-reversible					
Exhaust function	With flow control					
Manual override	Via accessory, detenting					
Type of mounting	Via through-holes					
Mounting position	Any					
Nominal size	[mm]	8	11	14.5		
Standard nominal flow rate	Closed	[l/min]	1200	2300	4100	
	Exhausted	[l/min]			4600	
	Pressurised	[l/min]			4000	
Grid dimension	[mm]	43	56	71		
Pneumatic connection on sub-base		G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$		
Product weight	[g]	650	940	1170		
Noise level	[dB (A)]	85				
Certification	Germanischer Lloyd					

Operating and environmental conditions			
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:4:4]		
Pilot medium	Compressed air in accordance with ISO 8573-1:2010 [7:4:4]		
Note on operating/pilot medium	Operation with lubricated medium possible (in which case lubricated operation will always be required)		
Operating pressure	Internal pilot air supply	[bar]	3 ... 10
	External pilot air supply	[bar]	-0.9 ... +16
Pilot pressure	[bar]	3 ... 10	
Ambient temperature	[°C]	-10 ... +50	
Temperature of medium	[°C]	-10 ... +50	

Valve response times [ms]						
ISO size	1		2		3	
	On	Off	On	Off	On	Off
With N1 solenoid coil						
Closed	20	44	33	82	33	82
Exhausted	20	46	36	84	36	84
Pressurised	20	46	35	78	35	78

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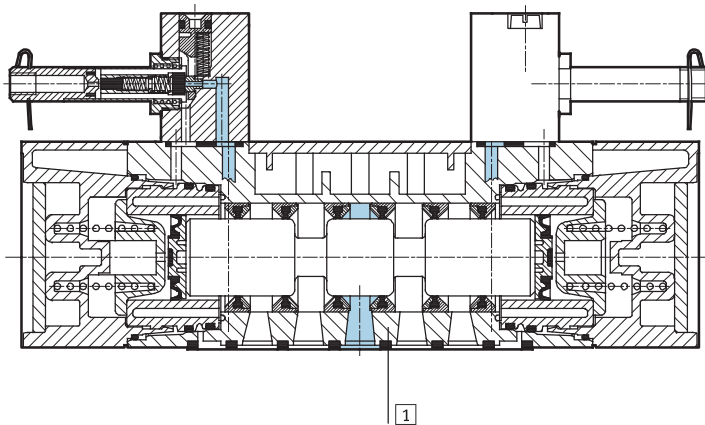


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Electrical data			
N1 solenoid coil			
Electrical connection		Plug, square design to EN 175301-803, type A	
Operating voltage	D.C. voltage	[V DC]	24
	A.C. voltage	[V AC]	110/230 (50 ... 60 Hz)
Coil characteristics	D.C. voltage	[W]	2.5
	A.C. voltage	[VA]	Pull: 7.5 Hold: 5
Protection class to EN 60 529		IP65	

Materials

Sectional view



1	Housing	Die-cast aluminium, polyacetate
-	Seals	Nitrile rubber

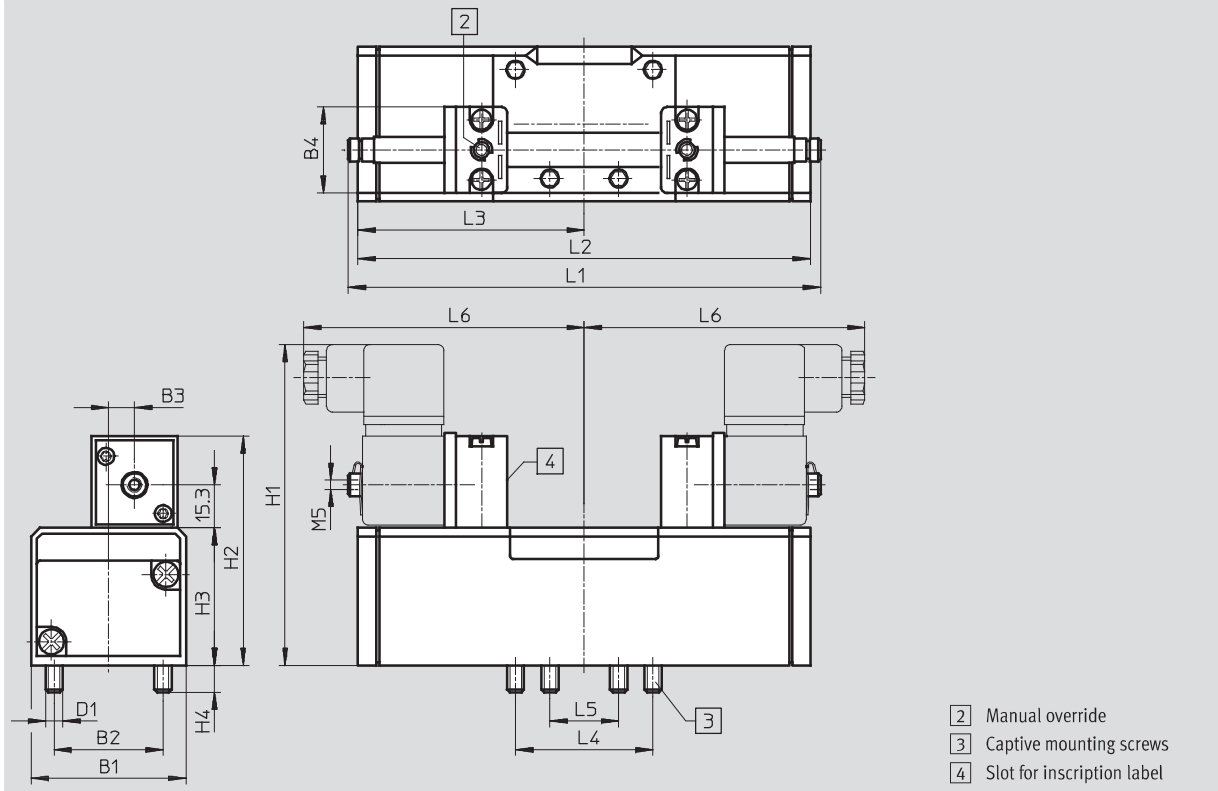
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Dimensions

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



ISO size	B1	B2	B3	B4	D1	H1	H2	H3	H4	L1	L2	L3	L4	L5	L6
1	42	28	6	30	M5	106	74	38	9	147.3	108.4	54.2	36	18	89
2	54	38	9	30	M6	116	84	48	9.5	165	158	79	48	24	98
3	65	48	12	30	M8	123	91	55	12	185.7	184	92	64	32	109

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Ordering data				
Circuit symbol	Description	ISO size	Part No.	Type
	Without N1 solenoid coil ¹⁾ , normally closed, internal pilot air supply	1	159681	MN1H-5/3G-D-1-C
		2	159693	MN1H-5/3G-D-2-C
		3	159705	MN1H-5/3G-D-3-C
	Without N1 solenoid coil ¹⁾ , normally closed, external pilot air supply	1	159680	MN1H-5/3G-D-1-S-C
		2	159692	MN1H-5/3G-D-2-S-C
		3	159704	MN1H-5/3G-D-3-S-C
	Without N1 solenoid coil ¹⁾ , normally exhausted, internal pilot air supply	1	159683	MN1H-5/3E-D-1-C
		2	159695	MN1H-5/3E-D-2-C
		3	159707	MN1H-5/3E-D-3-C
	Without N1 solenoid coil ¹⁾ , normally exhausted, external pilot air supply	1	159682	MN1H-5/3E-D-1-S-C
		2	159694	MN1H-5/3E-D-2-S-C
		3	159706	MN1H-5/3E-D-3-S-C
	Without N1 solenoid coil ¹⁾ , normally pressurised, internal pilot air supply	1	159685	MN1H-5/3B-D-1-C
		2	159697	MN1H-5/3B-D-2-C
		3	159709	MN1H-5/3B-D-3-C
	Without N1 solenoid coil ¹⁾ , normally pressurised, external pilot air supply	1	159684	MN1H-5/3B-D-1-S-C
		2	159696	MN1H-5/3B-D-2-S-C
		3	159708	MN1H-5/3B-D-3-S-C

1) N1 solenoid coils → 102