

# Solenoid valves MN1H, ISO 5599-1

FESTO

Technical data – 5/2-way valves

Flow rate

1200 ... 4500 l/min

Voltage

24 V DC

110, 230 V AC



General technical data			
ISO size	1	2	3
Valve function	5/2-way, single solenoid		
Constructional design	Piston spool		
Sealing principle	Soft		
Actuation type	Electrical		
Type of reset	Mechanical or pneumatic spring		
Type of pilot control	Piloted		
Pilot air supply	Internal or external		
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 [l/min]	1200	2300	4500
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]	450	710	1000
Noise level [dB (A)]	85		
Certification	Germanischer Lloyd		

Operating and environmental conditions			Pneumatic	Mechanical
Type of reset			Pneumatic	Mechanical
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]		2 ... 10	3 ... 10
	External pilot air supply [bar]		-0.9 ... +16	-0.9 ... +16
Pilot pressure [bar]			2 ... 10	3 ... 10
Ambient temperature [°C]	-10 ... +50			
Temperature of medium [°C]	-10 ... +50			

Valve response times [ms]						
ISO size	1		2		3	
	Pneumatic	Mechanical	Pneumatic	Mechanical	Pneumatic	Mechanical
On	23	17	46	24	49	33
Off	32	39	69	62	71	74

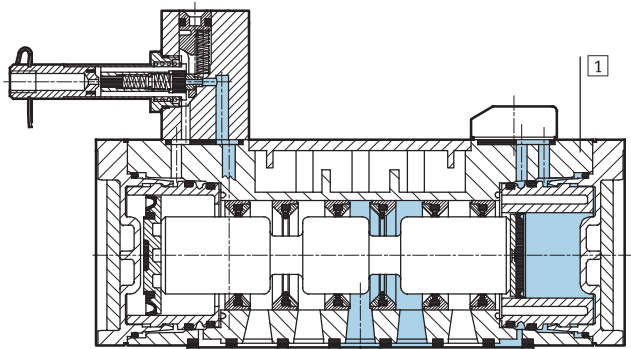
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Electrical data			
N1 solenoid coil			
Electrical connection		Plug, square design to EN 175301-803, type A	
Operating voltage	D.C. voltage	[V DC]	24
	A.C. voltage	[V AC]	110/230 (50 ... 60 Hz)
Coil characteristics	D.C. voltage	[W]	2.5
	A.C. voltage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

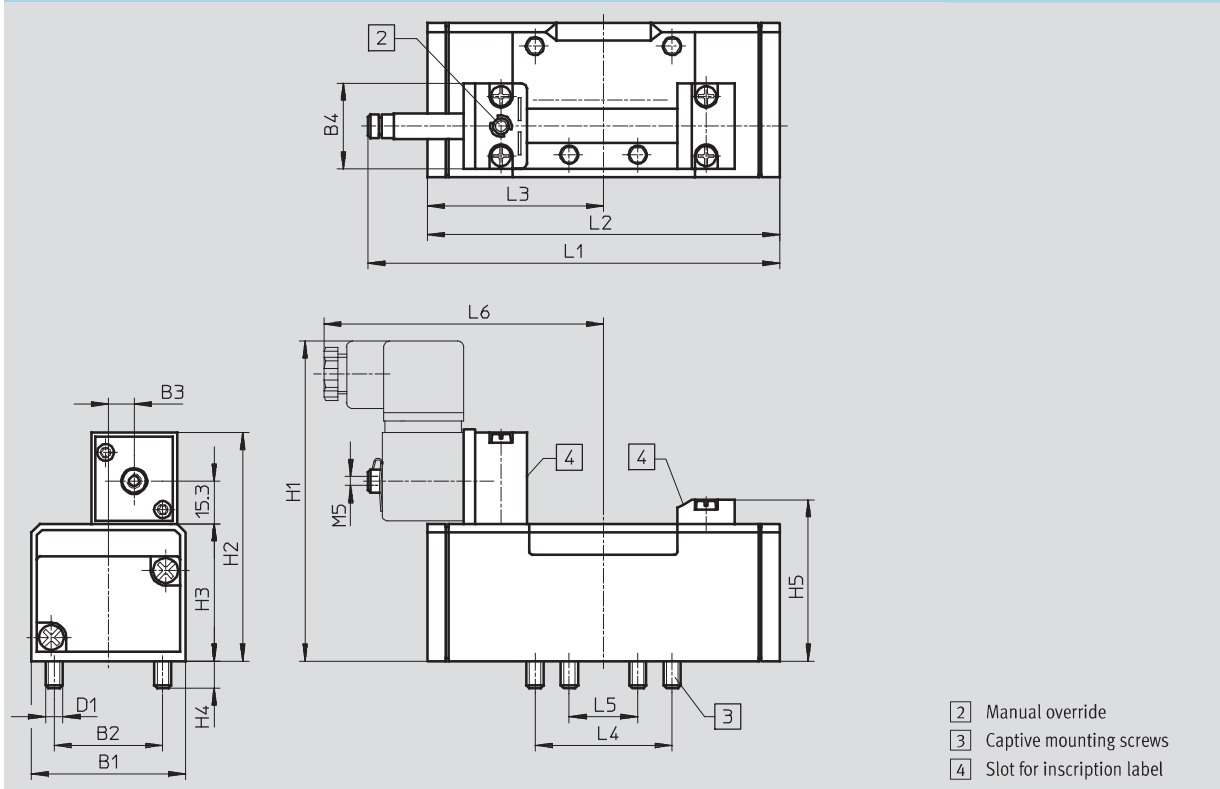
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## Dimensions

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)



Type	B1	B2	B3	B4	D1	H1	H2	H3	H4	H5	L1	L2	L3	L4	L5	L6
ISO size 1																
MN1H-5/2-...	42	28	6	30	M5	106	74	38	9	46.5	117.5	87.6	43.8	36	18	89
MN1H-5/2-...-FR											128	98				
ISO size 2																
MN1H-5/2-...	54	38	9	30	M6	116	84	48	9.5	56.5	147.6	123.4	61.7	48	24	98
MN1H-5/2-...-FR											161.5	140.7				
ISO size 3																
MN1H-5/2-...	65	48	12	30	M8	123	91	55	12	63.5	169	145.4	72.7	64	32	109
MN1H-5/2-...-FR											184.8	164.7				

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Ordering data				
Circuit symbol	Description	ISO size	Part No.	Type
	Without N1 solenoid coil <sup>1)</sup> , internal pilot air supply, pneumatic reset	1	159688	MN1H-5/2-D-1-C
		2	159700	MN1H-5/2-D-2-C
		3	159712	MN1H-5/2-D-3-C
	Without N1 solenoid coil <sup>1)</sup> , external pilot air supply, pneumatic reset	1	159686	MN1H-5/2-D-1-S-C
		2	159698	MN1H-5/2-D-2-S-C
		3	159710	MN1H-5/2-D-3-S-C
	Without N1 solenoid coil <sup>1)</sup> , internal pilot air supply, mechanical reset	1	159687	MN1H-5/2-D-1-FR-C
		2	159699	MN1H-5/2-D-2-FR-C
		3	159711	MN1H-5/2-D-3-FR-C
	Without N1 solenoid coil <sup>1)</sup> , external pilot air supply, mechanical reset	1	159716	MN1H-5/2-D-1-FR-S-C
		2	159718	MN1H-5/2-D-2-FR-S-C
		3	160896	MN1H-5/2-D-3-FR-S-C

1) N1 solenoid coils → 102