

Solenoid valves MDH-M12, ISO 5599-1

FESTO

Technical data – 5/2-way valves

Flow rate

1,200 ... 4,500 l/min

Voltage

24 V DC



General technical data			
ISO size	1	2	3
Valve function	5/2-way, monostable		
Design	Piston slide		
Sealing principle	Soft		
Actuation type	Electrical		
Type of reset	Mechanical or pneumatic spring		
Type of actuation	Piloted		
Pilot air supply	Internal or external		
Direction of flow	Reversible for external pilot air supply		
Exhaust function	Restrictable		
Manual override	Via tool accessory, detenting		
Type of mounting	Via through-holes		
Mounting position	Any		
Nominal size [mm]	8	11	14.5
Standard nominal flow rate [l/min]	1,200	2,300	4,500
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]	420	810	1,000

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

Valve response times							
ISO size	Type of reset	1		2		3	
		pneumatic	mechanical	pneumatic	mechanical	pneumatic	mechanical
D solenoid coil with M12x1 plug							
On [ms]		25	20	45	25	55	30
Off [ms]		36	42	60	60	60	70

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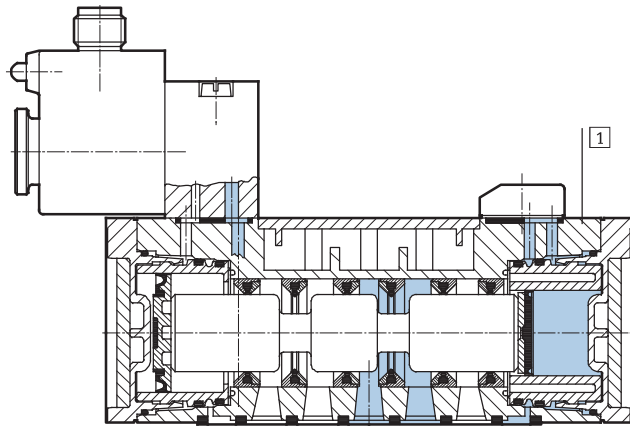
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Electrical data			
D solenoid coil with round plug M12x1			
Electrical connection	Type	M12X1	
Coil characteristics	D.C. voltage	[V DC]	21.6...26.4
	Power	[Watt]	2.7
Duty cycle	%	100	
Protection class to EN 60 529			IP65

Materials

Sectional view



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

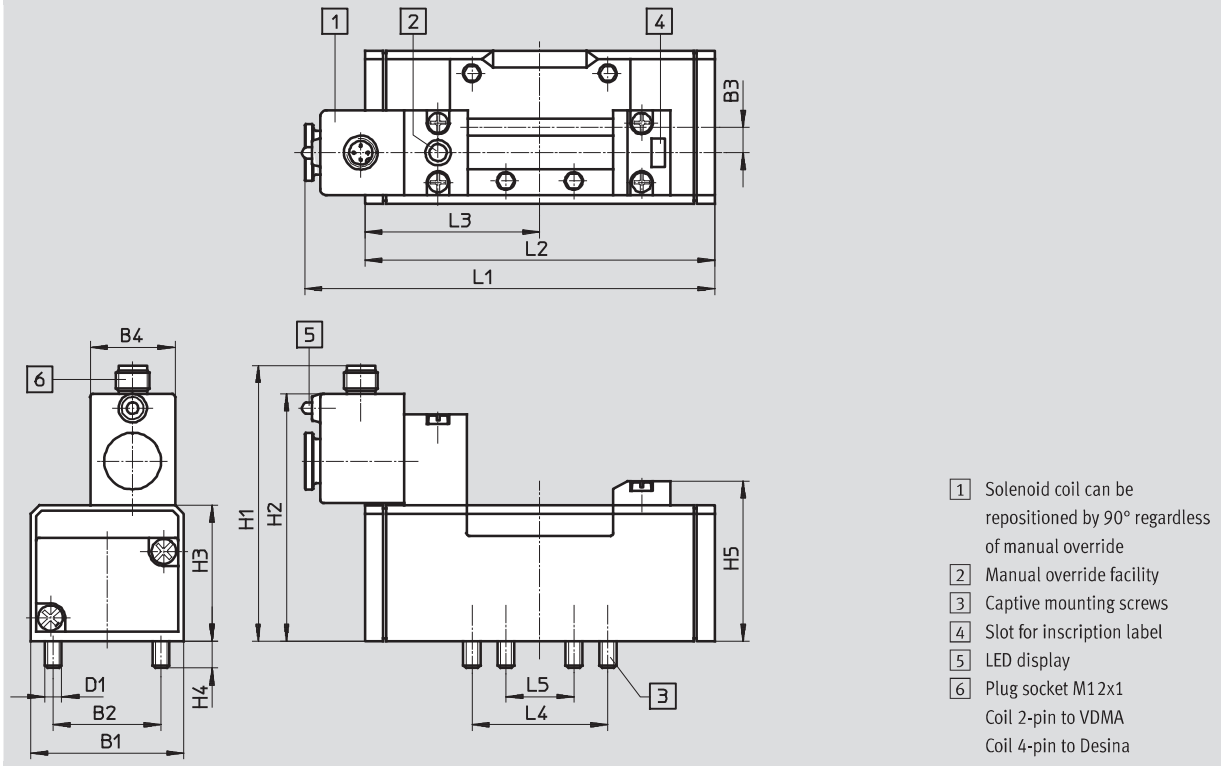
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Dimensions

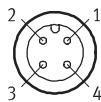
Download CAD Data → www.festo.com/us/cad



- 1 Solenoid coil can be repositioned by 90° regardless of manual override
- 2 Manual override facility
- 3 Captive mounting screws
- 4 Slot for inscription label
- 5 LED display
- 6 Plug socket M12x1
Coil 2-pin to VDMA
Coil 4-pin to Desina

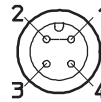
Type	B1	B2	B3	B4	D1	H1	H2	H3	H4	H5	L1	L2	L3	L4	L5
ISO size 1															
MDH-5/2-...	42	28	6	30	M5	87.2	77.3	38	9	46.5	121.8	87.6	43.8	36	18
MDH-5/2-...-FR											132.2	98			
ISO size 2															
MDH-5/2-...	54	38	9	30	M6	97.2	87.2	48	9.5	56.5	144.6	123.4	61.7	48	24
MDH-5/2-...-FR											161.9	140.6			
ISO size 3															
MDH-5/2-...	65	48	12	30	M8	104.2	94.2	55	12	62.7	165.9	145.4	72.7	64	32
MDH-5/2-...-FR											185.2	164.7			

M12 plug – Pin allocation 2-pin to VDMA



- 1 Unused
- 2 Unused
- 3 com (-)
- 4 Signal (+)

M12 plug – Pin allocation 4-pin to Desina



- 1 connected with 2
- 2 connected with 1
- 3 com (-)
- 4 Signal (+)

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Ordering data						
Circuit symbol	Description	ISO size	Part No.	Type		
	Type of reset: – pneumatic Pilot air supply: – internal	Coil 2-pin to VDMA	1	197125	MDH-5/2-D-1-M12-C	
			2	533008	MDH-5/2-D-2-M12-C	
			3	533009	MDH-5/2-D-3-M12-C	
			Coil 4-pin to Desina	1	540803	MDH-5/2-D-1-M12D-C
				2	540812	MDH-5/2-D-2-M12D-C
				3	540819	MDH-5/2-D-3-M12D-C
	Type of reset: – pneumatic Pilot air supply: – external	Coil 2-pin to VDMA	1	533332	MDH-5/2-D-1-S-M12-C	
		Coil 4-pin to Desina	1	540810	MDH-5/2-D-1-S-M12D-C	
	Type of reset: – mechanical Pilot air supply: – internal	Coil 2-pin to VDMA	1	533010	MDH-5/2-D-1-FR-M12-C	
			2	533011	MDH-5/2-D-2-FR-M12-C	
			3	533012	MDH-5/2-D-3-FR-M12-C	
			Coil 4-pin to Desina	1	540804	MDH-5/2-D-1-FR-M12D-C
				2	540813	MDH-5/2-D-2-FR-M12D-C
				3	540820	MDH-5/2-D-3-FR-M12D-C
	Type of reset: – mechanical Pilot air supply: – external	Coil 2-pin to VDMA	1	533761	MDH-5/2-D-1S-FR-M12-C	
		Coil 4-pin to Desina	1	540811	MDH-5/2-D-1S-FR-M12D-C	