

Solenoid valves MDH-M12, ISO 5599-1



Technical data – 5/3-way valves

Flow rate

1,200 ... 4,600 l/min

Voltage

24 V DC



General technical data			
ISO size	1	2	3
Valve function	5/3-way, monostable		
Design	Piston spool		
Sealing principle	Soft		
Actuation type	Electrical		
Type of reset	Mechanical spring		
Type of actuation	Piloted		
Pilot air supply	Internal		
Direction of flow	Non-reversible		
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	4,000 (B), 4,100 (G), 4,600 (E)
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]	580	880	1,120

Operating and environmental conditions	
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]	3 ... 10
Ambient temperature [°C]	-10 ... +50
Temperature of medium [°C]	-10 ... +50

Valve response times							
ISO size	1		2		3		
	On	Off	On	Off	On	Off	
with D solenoid coil with round plug M12x1							
	[ms]	25	55	35	70	36	90

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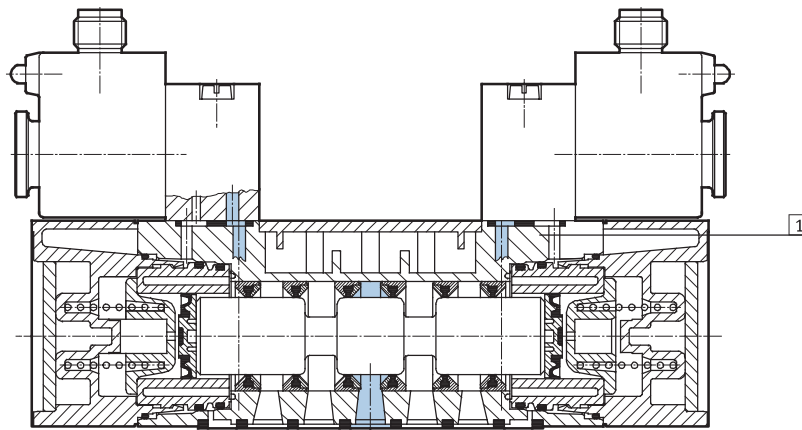
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Electrical data			
D solenoid coil with round plug			
Electrical connection	Type	M12X1	
Coil characteristics	D.C. voltage	[V DC]	21.6...26.4
	Power	[Watt]	2.7
Duty cycle	%	100	
Protection class to EN 60 529	IP65		

Materials

Sectional view



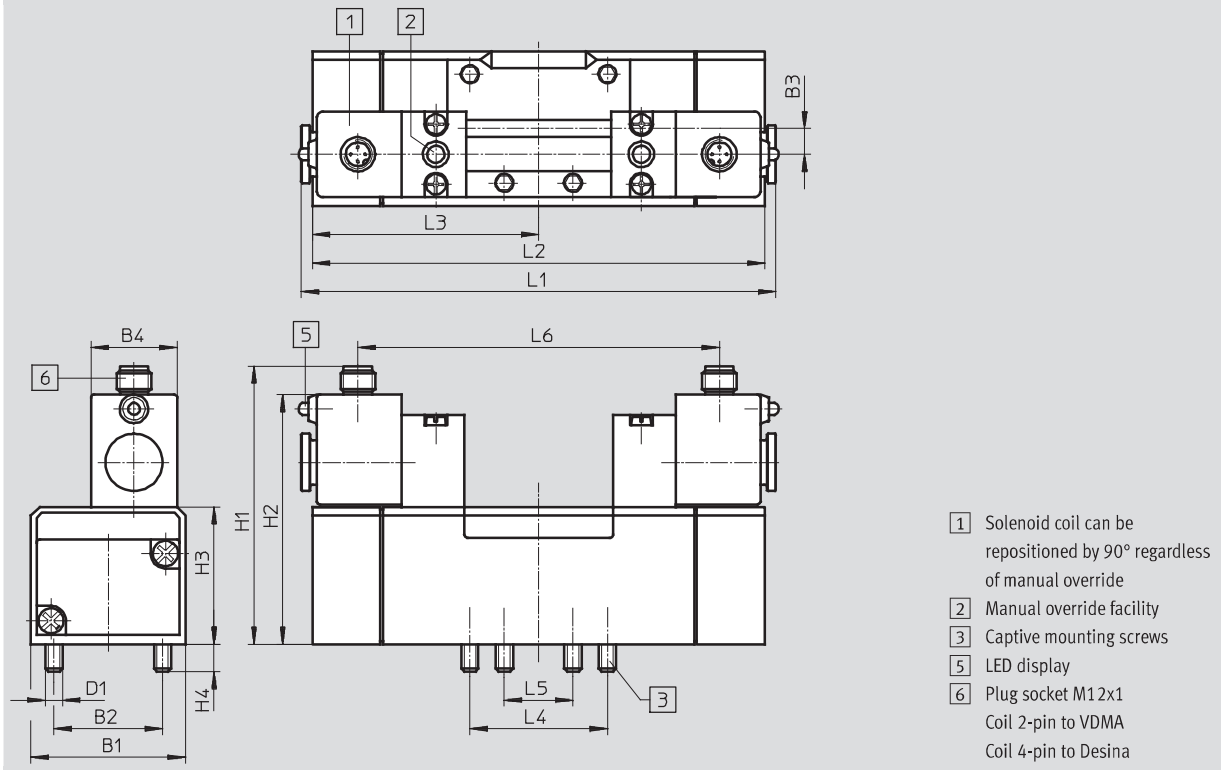
1	Body	Die-cast aluminium, polyacetate
-	Seals	Nitrile rubber

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Dimensions

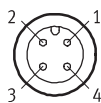
Download CAD Data → www.festo.com/us/cad



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

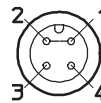
ISO size	B1	B2	B3	B4	D1	H1	H2	H3	H4	L1	L2	L3	L4	L5	L6
1	42	28	6	30	M5	87.2	77.2	38	9	148	108.4	54.3	36	18	108.5
2	54	38	9	30	M6	97.2	87.2	48	9.5	165.8	158	79	48	24	126.3
3	65	48	12	30	M8	104.2	94.2	55	12	186.4	184	92	64	32	146.9

M12 plug – Pin allocation 2-pin to VDMA



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

M12 plug – Pin allocation 4-pin to Desina

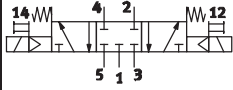
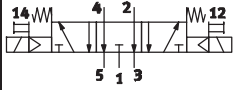
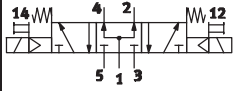


- 1 connected with 2
- 2 connected with 1
- 3 com (-)
- 4 Signal (+)

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Ordering data						
Circuit symbol	Description	ISO size	Part No.	Type		
	Normal position: – closed Pilot air supply: – internal	Coil 2-pin to VDMA	1	525307	MDH-5/3G-D-1-M12-C	
			2	539078	MDH-5/3G-D-2-M12-C	
			3	539080	MDH-5/3G-D-3-M12-C	
			Coil 4-pin to Desina	1	540806	MDH-5/3G-D-1-M12D-C
				2	540815	MDH-5/3G-D-2-M12D-C
				3	540822	MDH-5/3G-D-3-M12D-C
	Normal position: – exhausted Pilot air supply: – internal	Coil 2-pin to VDMA	1	197126	MDH-5/3E-D-1-M12-C	
			2	533016	MDH-5/3E-D-2-M12-C	
			3	533017	MDH-5/3E-D-3-M12-C	
			Coil 4-pin to Desina	1	540805	MDH-5/3E-D-1-M12D-C
				2	540814	MDH-5/3E-D-2-M12D-C
				3	540821	MDH-5/3E-D-3-M12D-C
	Normal position: – pressurised Pilot air supply: – internal	Coil 2-pin to VDMA	1	533005	MDH-5/3B-D-1-M12-C	
			2	533006	MDH-5/3B-D-2-M12-C	
			3	533007	MDH-5/3B-D-3-M12-C	
			Coil 4-pin to Desina	1	540807	MDH-5/3B-D-1-M12D-C
				2	540816	MDH-5/3B-D-2-M12D-C
				3	540823	MDH-5/3B-D-3-M12D-C