

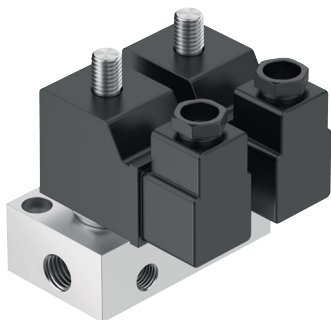
Solenoid valve, supplementary product range

FESTO



Datasheet

General technical data – Solenoid valve manifold



Short type code	BMCH	BMFH
Design	Poppet valve with spring return	
Valve function	2x3/2-way, monostable, closed, 3x3/2-way, monostable, closed	
Sealing principle	Soft	
Type of actuation	Electric	
Type of reset	Mechanical spring	
Type of piloting	Direct	
Nominal size	2.5	1.3
Standard nominal flow rate (standardised to DIN 1343)	160 l/min	50 l/min
Suitability for vacuum	yes	–
Type of mounting	With through-hole	
Max. number of valve positions	2, 3	

Technical data – Electrical, solenoid valve manifold

Short type code	BMCH	BMFH
Electrical connection	Plugs	
Power consumption, pull	30 W	7.5 W
Power consumption, hold	22 W	6 W

Pneumatic connections – Solenoid valve manifold

Short type code	BMCH	BMFH
Pneumatic connection, port 1	G1/4	G1/8
Pneumatic connection, port 2	G1/8	M5
Pneumatic connection, port 3	G1/8	M5

Materials – Solenoid valve manifold

Material housing	Aluminium	
LABS (PWIS) conformity	VDMA24364-B2-L	

Operating and environmental conditions – Solenoid valve manifold

Short type code	BMCH	BMFH
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]	Compressed air to ISO 8573-1:2010 [7:-:-]
Note on operating and pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)	
Operating pressure	-0.095 ... 0.7 MPa	0 ... 0.8 MPa
Operating pressure	-0.95 ... 7 bar	0 ... 8 bar
Ambient temperature	-5 ... 40°C	
Media temperature	-10 ... 60°C	
Degree of protection	IP65	

Datasheet

General technical data – Poppet valves with return spring



Valve function	2/2-way, closed, monostable	3/2-way, closed, monostable	3/2 open, monostable
Design	Poppet valve with spring return		
Sealing principle	Soft		
Type of actuation	Electric		
Type of reset	Mechanical spring		
Type of piloting	Direct		
Manual override	None	Detenting	
Nominal size	4	2.5	
Standard nominal flow rate (standardised to DIN 1343)	300 l/min	160 l/min	70 l/min
Flow direction	Non-reversible		
Type of mounting	With through-hole		

Switching times – Poppet valves with return spring

Valve function	2/2-way, closed, monostable	3/2-way, closed, monostable	3/2 open, monostable
Switching time on	18 ms	12 ms	
Switching time off	20 ms	13 ms	

Technical data – Electric, poppet valves with return spring

Valve function	2/2-way, closed, monostable	3/2-way, closed, monostable	3/2 open, monostable
Characteristic coil data	110 V AC: 50/60 Hz, pick-up power 30.0 VA, holding power 22.0 VA 110 V DC: 12.7 W 120 V AC: 60 Hz, pick-up power 30.0 VA, holding power 22.0 VA 12 V AC: 50 Hz, pick-up power 30.0 VA, holding power 22.0 VA 12 V DC: 11.7 W 220 V AC: 50/60 Hz, pick-up power 30.0 VA, holding power 22.0 VA 220 V DC: 15.0 W 240 V AC: 50 Hz, pick-up power 30.0 VA, holding power 22.0 VA 240 V DC: 17.9 W 24 V AC: 50 Hz, pick-up power 30.0 VA, holding power 22.0 VA 24 V DC: 11.0 W 380 V AC: 50/60 Hz, pick-up power 30.0 VA, holding power 22.0 VA 42 V AC: 50/60 Hz, pick-up power 30.0 VA, holding power 22.0 VA 42 V DC: 12.0 W 48 V AC: 50 Hz, pick-up power 30.0 VA, holding power 22.0 VA 96 V DC: 11.0 W		
Duty cycle	100%		

Pneumatic connections – Poppet valves with return spring

Valve function	2/2-way, closed, monostable	3/2-way, closed, monostable	3/2 open, monostable
Pneumatic connection, port 1	G1/8		
Pneumatic connection, port 2	G1/8		
Pneumatic connection, port 3	–	G1/8	

Materials – Poppet valves with return spring

Note on materials	RoHS-compliant		
LABS (PWIS) conformity	VDMA24364-C1-L		

Datasheet

Operating and environmental conditions – Poppet valves with return spring

Valve function	2/2-way, closed, monostable	3/2-way, closed, monostable	3/2 open, monostable
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]		
Note on operating and pilot medium	–		
Operating pressure	-0.095 ... 0.7 MPa	0 ... 0.7 MPa	
Operating pressure	-0.95 ... 7 bar	0 ... 7 bar	
Ambient temperature	-5 ... 40°C		
Media temperature	-10 ... 60°C		
Storage temperature	-40 ... 100°C		
Degree of protection	IP65		

General technical data – Disc seat valves



Valve function	2/2-way, closed, monostable	3/2-way, closed, monostable	3/2 open, monostable
Design	Poppet seat		
Sealing principle	Soft		
Type of actuation	Electric		
Type of reset	Mechanical spring		
Type of piloting	Direct		
Manual override	Detenting	Non-detenting	Detenting
Nominal size	1.5	1.3	1.5
Standard nominal flow rate (standardised to DIN 1343)	75 l/min	58 l/min	46 l/min
Flow direction	Non-reversible		
Suitability for vacuum	–		
Exhaust-air function	Without flow control option		
Mounting position	optional		
Type of mounting	With through-hole		

Switching times – Disc seat valves

Valve function	2/2-way, closed, monostable	3/2-way, closed, monostable	3/2 open, monostable
Switching time on	6.2 ms	9 ms	12 ms
Switching time off	5 ms	16 ms	8.5 ms

Technical data – Electrical, disc seat valves

Valve function	2/2-way, closed, monostable	3/2-way, closed, monostable	3/2 open, monostable
Electrical connection	–		
Characteristic coil data	–		
Duty cycle	–		

Pneumatic connections – Disc seat valves

Valve function	2/2-way, closed, monostable	3/2-way, closed, monostable	3/2 open, monostable
Pneumatic connection, port 1	M5		
Pneumatic connection, port 2	M5		
Pneumatic connection, port 3	–	M5	

Materials – Disc seat valves

Material housing	–		
Note on materials	–		
LABS (PWIS) conformity	VDMA24364-B2-L		

Datasheet

Operating and environmental conditions – Disc seat valves

Valve function	2/2-way, closed, monostable	3/2-way, closed, monostable	3/2 open, monostable
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]		
Note on operating and pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)		
Operating pressure	0 ... 0.8 MPa		0 ... 0.65 MPa
Operating pressure	0 ... 8 bar		0 ... 6.5 bar
Ambient temperature	-15 ... 40°C		
Media temperature	-15 ... 60°C		
Storage temperature	–		
Degree of protection	–		
Approval	–	c UL us - Recognized (OL)	

General technical data – In-line valves



Series	Solenoid valve, with armature tube for F-solenoid coil, monostable, normally closed
Valve function	3/2-way, closed, monostable
Valve function	3/2-way valve, normally closed
Directional control valve type	In-line valve
Actuation type	Electrical

Pneumatic connections – In-line valves

Pneumatic connection, port 1	G1/8
Pneumatic connection, port 2	G1/8
Pneumatic connection, port 3	G1/8

Materials – In-line valves

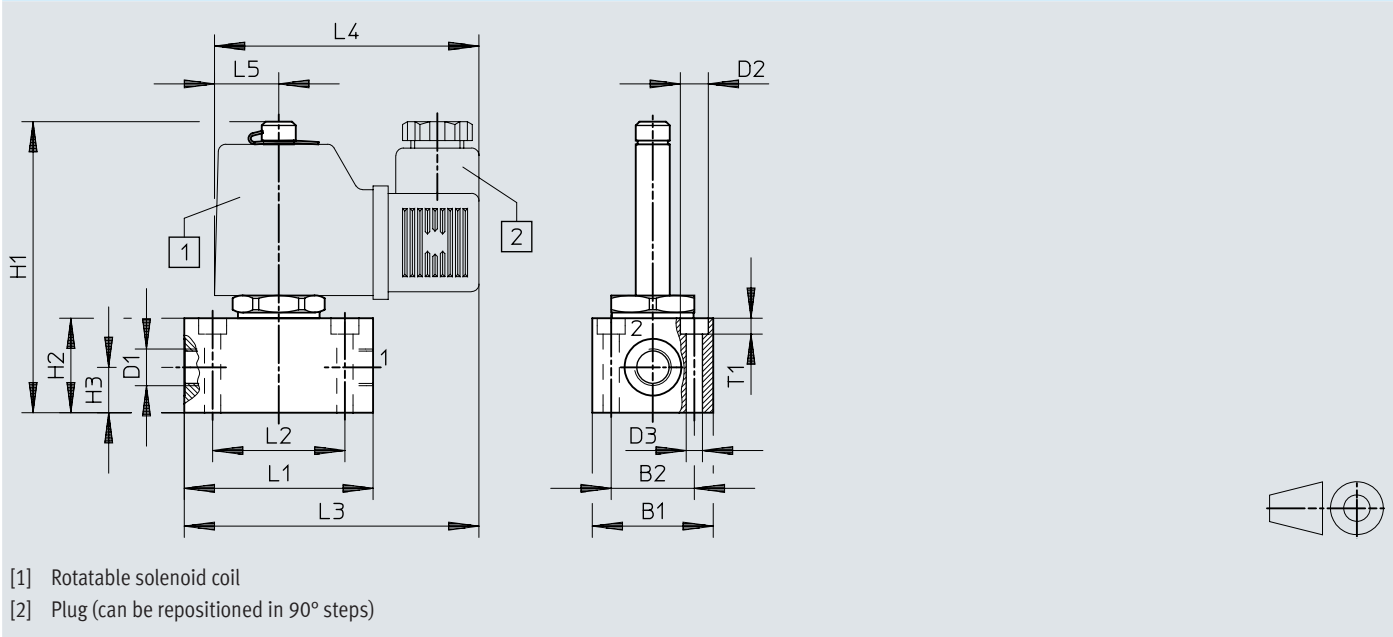
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

Operating and environmental conditions – In-line valves

Operating pressure	0.5 ... 8 bar
Degree of protection	IP65

Dimensions

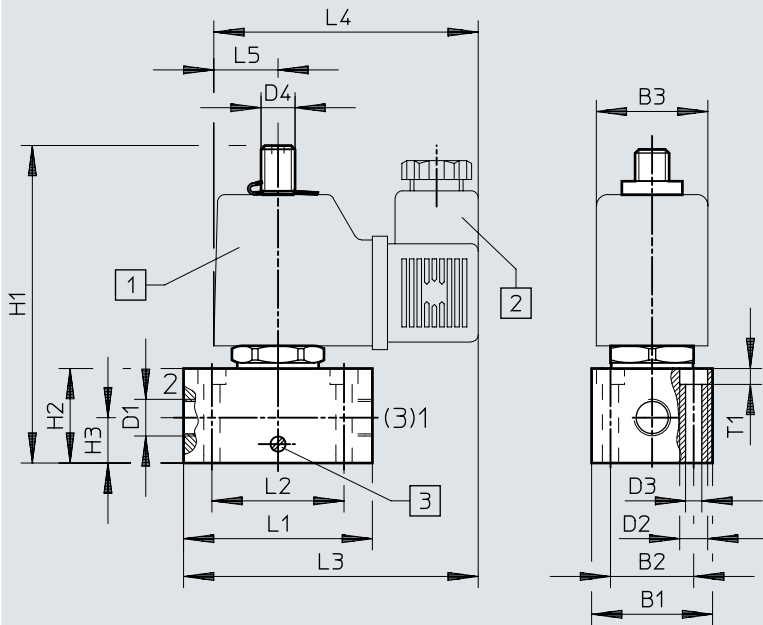
Dimensions – Poppet valves with return spring, 2/2-way solenoid valves Download CAD data www.festo.com



	B1	B2	D1	D2 Ø	D3 Ø	H1	H2	H3	L1	L2	L3	L4	L4	T1
MC-2-1/8	32	22	G1/8	8	4,5	77	25	12	50	35	77	70	18	4,7

Dimensions

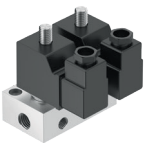
Dimensions – Poppet valves with return spring, 3/2-way solenoid valves

[Download CAD data](#) www.festo.com


- [1] Rotatable solenoid coil
- [2] Plug (can be repositioned in 90° steps)
- [3] Manual override

	B1	B2	B3	D1	D2 ø	D3 ø	D4	H1	H2	H3	L1	L2	L3	L4	L5	T1
MCH-3-1/8	32	22	29,5	G1/8	8	4,5	G1/8	83	25	12	50	35	78	70	17	4,7
MOCH-3-1/8	32	22	29,5	G1/8	8	4,5	G1/8	84	25	12	50	35	78	70	17	4,8

Ordering data

Ordering data – Solenoid valve manifold						
	Short type code	Valve function	Max. number of valve positions	Product weight	Part no.	Type
	BMCH	2x3/2-way, monostable, closed	2	680 g	6686	BMCH-2-3-1/8
		3x3/2-way, monostable, closed	3	1,010 g	6687	BMCH-3-3-1/8
	BMFH	2x3/2-way, monostable, closed	2	245 g	4522	BMFH-2-3-M5
		3x3/2-way, monostable, closed	3	350 g	4523	BMFH-3-3-M5

Ordering data – Poppet valves with return spring					
	Short type code	Valve function	Product weight	Part no.	Type
	MC	2/2-way, closed, monostable		2187	MC-2-1/8
	MCH	3/2-way, closed, monostable		2199	MCH-3-1/8
	MOCH	3/2 open, monostable		2211	MOCH-3-1/8

Ordering data – Disc seat valves					
	Short type code	Valve function	Product weight	Part no.	Type
	MFH	2/2-way, closed, monostable		4573	MFH-2-M5
		3/2-way, closed, monostable		4450	MFH-3-M5
	MOFH	3/2 open, monostable		4543	MOFH-3-M5

Ordering data – In-line valves					
	Short type code	Valve function	Product weight	Part no.	Type
	MFH	3/2-way, closed, monostable		11121	MFH-3-1/8-SEU