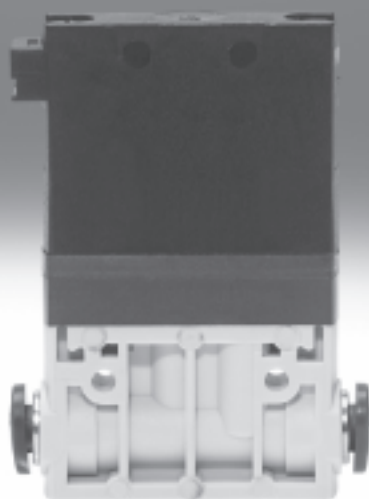


Solenoid valves MHJ, fast-switching valves, NPT

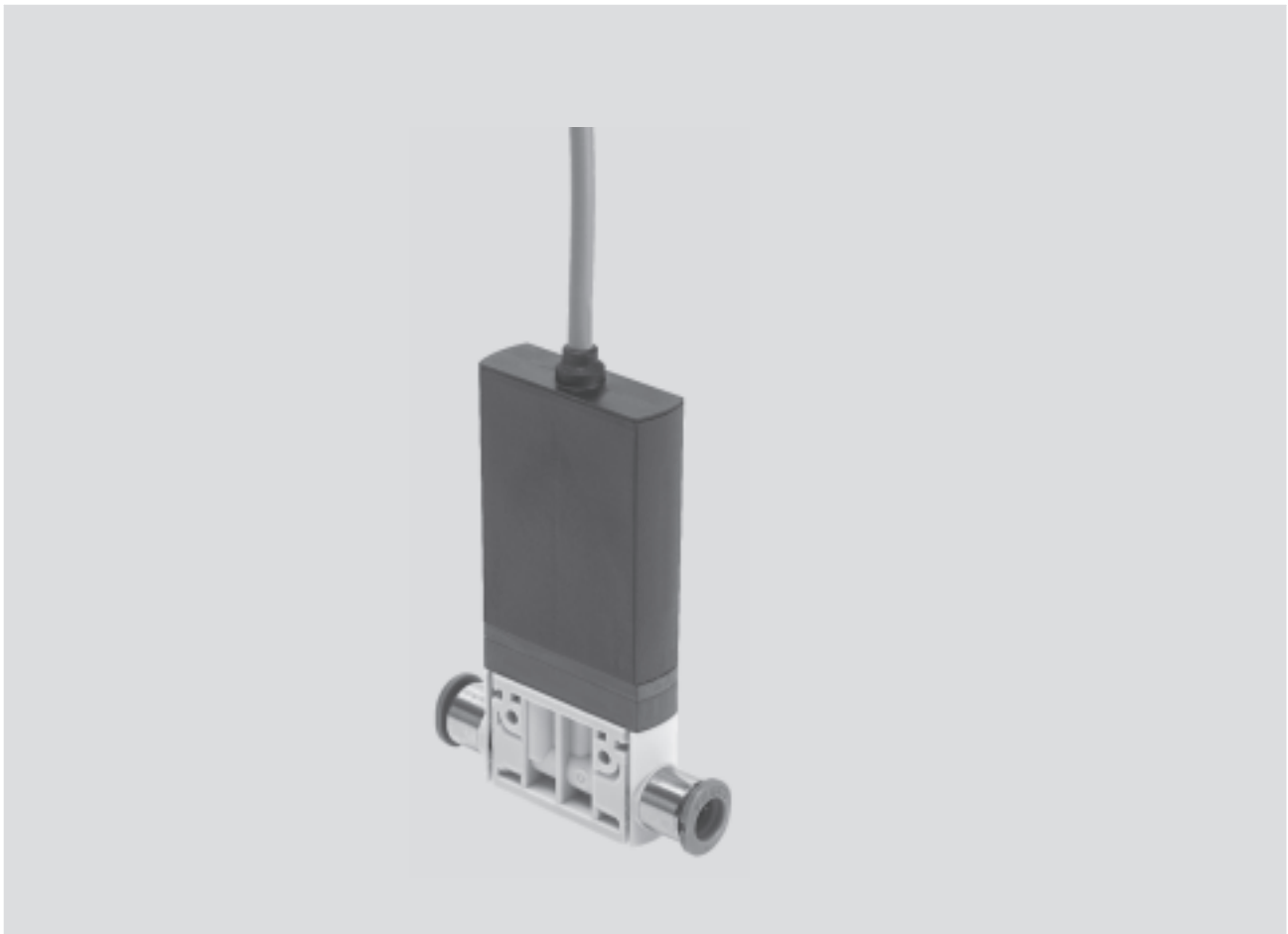
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Solenoid valves MHJ, fast-switching valves, NPT

Key features

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Innovative

- Individual electrical connection via moulded-in connecting cable with switching electronics integrated in the valve
- Response times of less than one millisecond
- Signal control range 3 ... 30 V DC

Reliable

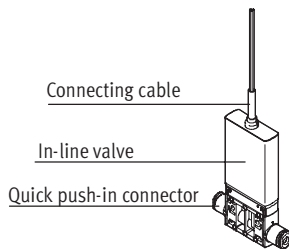
- Reliability of service thanks to valves that can be replaced quickly and easily
- No electrical plug connections thanks to integrated control electronics
- Up to 7 billion switching cycles

Solenoid valves MHJ, fast-switching valves, NPT

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Key features, Product range overview

MHJ

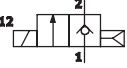


In-line valve

- Integrated quick push-in connector
- Electrical connection via moulded-in connecting cable

Integrated control electronics

- Compact design
- Quick installation

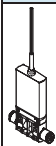
Function	Circuit symbol	Design	Response time ¹⁾		Operating voltage [V DC]	→ Page/Internet
			Off	On		
2/2-way valve	MF = Standard nominal flow rate 100 l/min 	In-line valve	–	–	24	6

1) Response times are dependent on pressure and voltage

Mounting options

Design In-line valve

MHJ with moulded-in connecting cable

	Direct mounting	■
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Solenoid valves MHJ, fast-switching valves, NPT

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Type codes

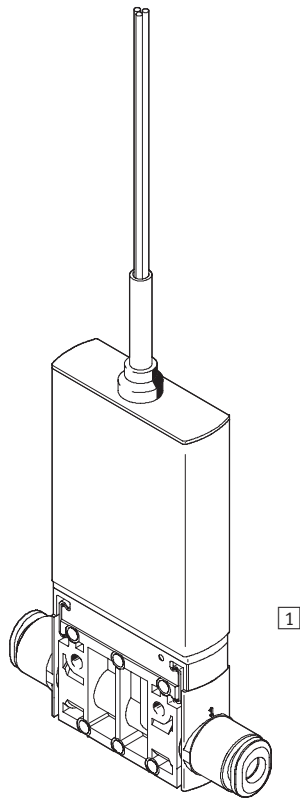
		MHJ	10	-	S	-	2,5	-	QS-1/4	-	MF
Valve series											
MHJ	Fast-switching valves										
Width											
10	10 mm										
Integrated controller											
S	For MHJ10										
Cable length for MHJ10											
0,35	0.35 m										
2,5	2.5 m										
Push-in connector for in-line valves											
QS-1/4	Push-in connector for tubing O.D. 1/4"										
Flow class											
MF	Medium flow										

Solenoid valves MHJ, fast-switching valves, NPT

System overview



Individual valve



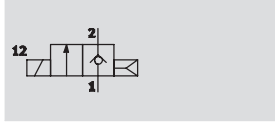
	Type	Brief description	➔ Page/Internet
1 In-line valve	MHJ10-...-U	2/2-way solenoid valve	6

Solenoid valves MHJ, fast-switching valves, NPT

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Technical data – In-line valve, 2/2-way valves

Function



Voltage

24 V DC



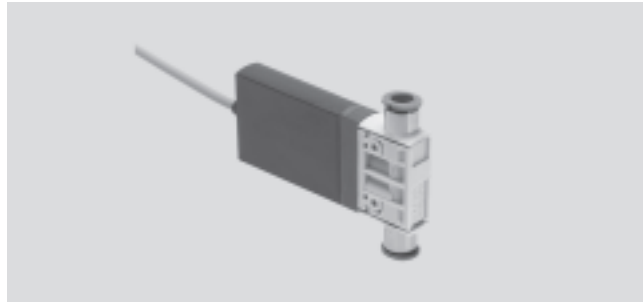
Pressure

+0.5 ... +6 bar

Temperature range

–5 ... +60 °C

2/2-way valve



General technical data		
Valve function		2/2-way, closed, single solenoid
Design		Poppet valve without spring return
Sealing principle		Hard
Service life in billions of switching cycles ¹⁾		5
Actuation type		Electric
Type of control		Direct
Direction of flow		Non-reversible
Mounting position		Any
Width	[mm]	10 ²⁾
Grid dimension	[mm]	10.5
Standard nominal flow rate	[l/min]	100
C value	[l/sbar]	0.4
b value		0.38
Type of mounting		In-line installation or via through-holes
Max. tightening torque for the mounting screws	[Nm]	0.7
Pneumatic connection 1 and 2		QS-1/4
Product weight	[g]	40

1) The long service life of the valves can only be achieved with the "hard" sealing principle, which, however, results in minor leakage when the valve is closed.

2) Min. permitted grid dimension 10.5 mm

Operating and environmental conditions		
Operating medium		Filtered compressed air, unlubricated, grade of filtration 40 µm
Operating pressure	[bar]	+0.5 ... +6
Ambient temperature	[°C]	–5 ... +60
Temperature of medium	[°C]	–5 ... +60
Corrosion resistance class CRC		2 ¹⁾
Certification		RoHS-compliant

1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Solenoid valves MHJ, fast-switching valves, NPT

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Technical data – In-line valve, 2/2-way valves

Electrical data			
Operating voltage	[V DC]	24 ±10% = 21.6 ... 26.4 ¹⁾	
Control signal range	[V DC]	3... 30	
Output	Low-current phase	[W]	2
Output	High-current phase	[W]	7
Protection class to EN 60529			IP65
Duty cycle	[%]	100 ²⁾	
Electrical connection			3-wire cable
CE mark			To EU EMC Directive ³⁾

1) For the switching operation, the current limiter, if available, must be set to at least 1.7 A.

2) Air must flow through the valve continuously.

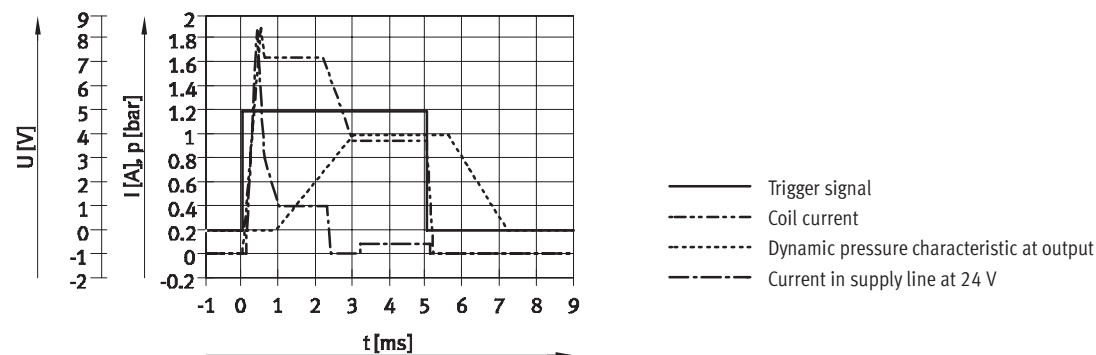
3) Max. permissible cable length 2.5 m.

Response times ¹⁾ and switching frequencies			
Maximum switching frequency		[Hz]	1,000 ²⁾
Response times [ms]			
At 24 V DC and 0.5 bar	On		0.8
	Off		0.5
At 24 V DC and 4 bar	On		0.8
	Off		0.4
At 24 V DC and 6 bar	On		0.9
	Off		0.4

1) Tolerance ±15%

2) The ambient temperature must be limited with frequencies in excess of 200 Hz.

Current path MHJ10

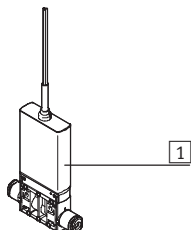


Solenoid valves MHJ, fast-switching valves, NPT

Technical data – In-line valve, 2/2-way valves

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Materials

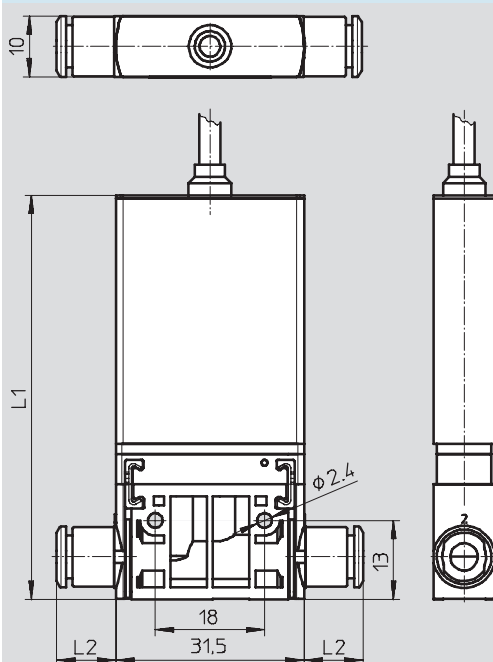


1	Housing	PA-reinforced
–	Seals	HNBR
–	Screws	Steel
–	Cable sheath	PUR

Dimensions

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

In-line valve with moulded-in connecting cable



Wiring allocation:
 BU = GND
 BN = Operating voltage positive
 BK = Trigger signal

L1 = 67.8 mm
 L2 = 9.5 mm

Ordering data

Designation	Part No.	Type
In-line valve with quick plug connector QS-1/4	Cable length 0.35 m	562172 MHJ10-S-0,35-QS-1/4-MF-U
	Cable length 2.5 m	565517 MHJ10-S-2,5-QS-1/4-MF-U

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