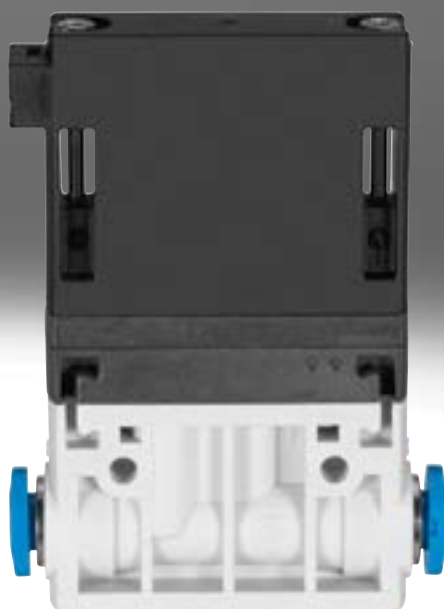
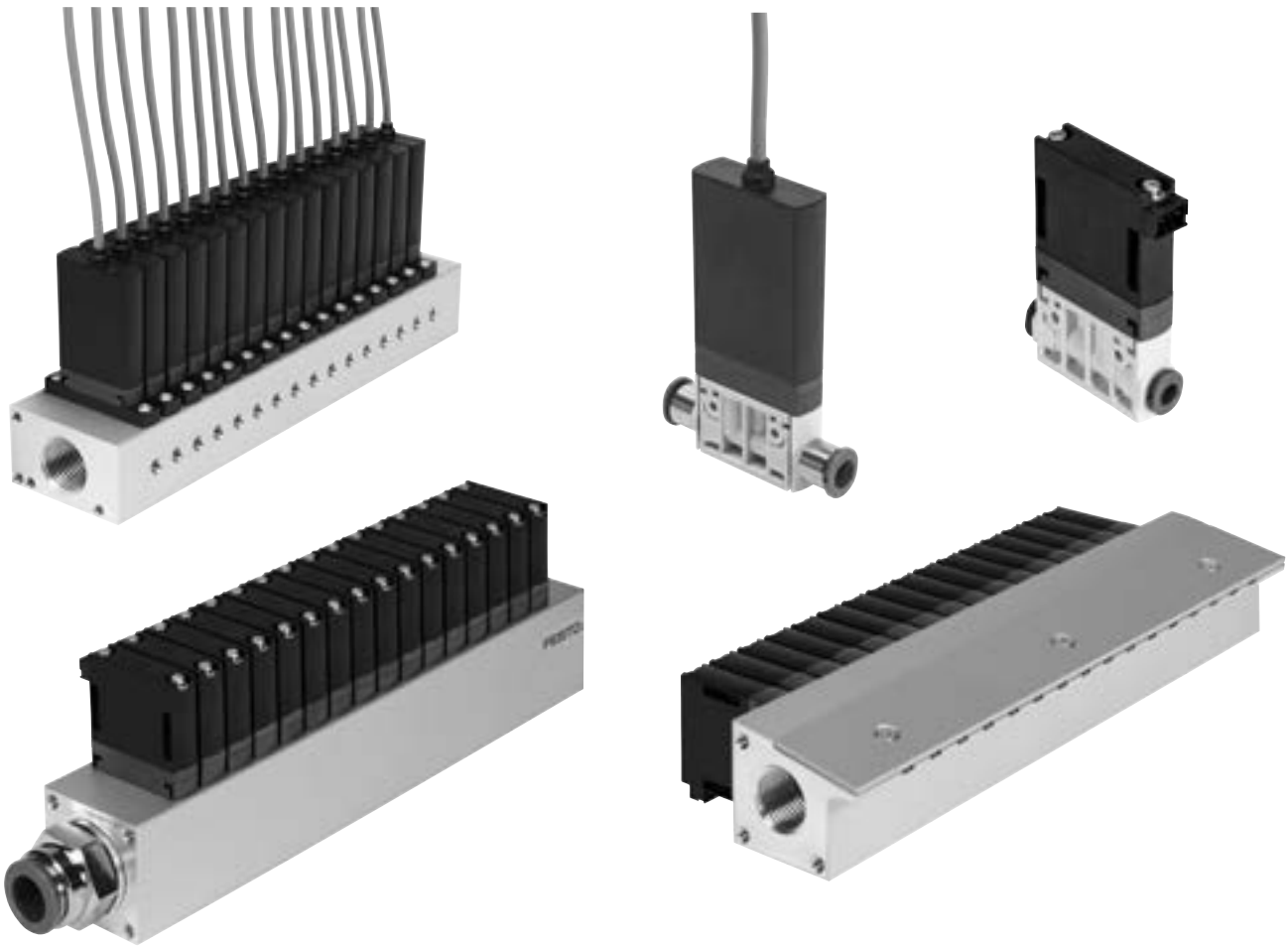


Solenoid valves MHJ, fast-switching valves

FESTO



Key features



Innovative

- Individual electrical connection via connecting cable and square plug sockets with integrated control electronics for MHJ9 or via moulded cable for MHJ10, control electronics are included in the valve
- Manifold rail with air gun nozzle output for MHJ9
- Switching times of less than one millisecond
- Signal control range 3 ... 30 V DC

Versatile

- Modular system offering a range of configuration options
- Identical basic valves for individual valve and manifold assembly
- Flexible air supply with air connection at both ends on the manifold rails
- Actuation of the MHJ9 valves without plug socket with cable MHJ9-KMH subject to consultation with Festo

Reliable

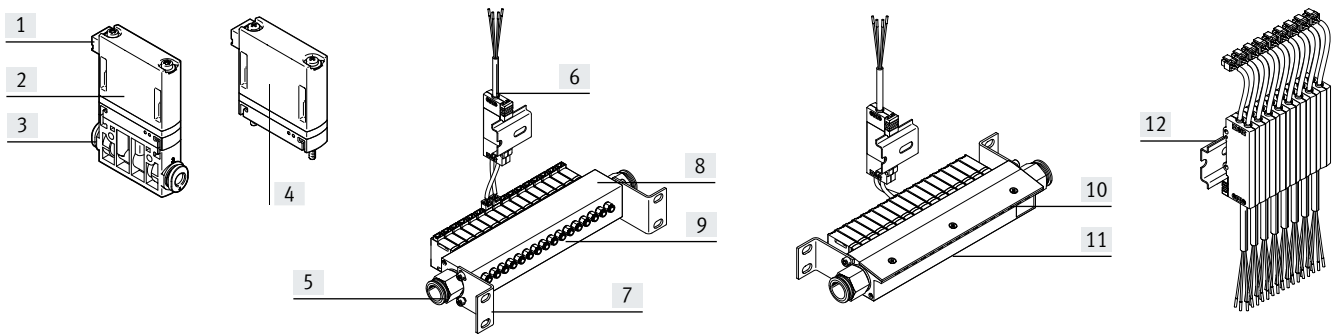
- Reliable servicing thanks to valves that can be replaced quickly and easily
- No electrical plug connectors with MHJ10 thanks to integrated control electronics
- Up to 5 billion switching cycles

Easy to install

- Solid wall mounting or H-rail mounting of the connecting cables with MHJ9
- Manifold rail for MHJ9 with connecting cable block on H-rail can be mounted directly in the application

Key features

MHJ9



- [1] Plug
- [2] In-line valve
- [3] Push-in connector

- [4] Sub-base valve
- [5] Air supply
- [6] Connecting cable with control electronics

- [7] Mounting bracket
- [8] Manifold rail
- [9] Push-in connector

- [10] Air gun nozzle
- [11] Manifold rail
- [12] Block mounting on H-rail

In-line valve

- Integrated push-in connector
- Electrical connection IP40
- Modular design

Valve manifold assembly with individual outputs

- Air supply at both ends
- Attaching the mounting bracket in 4 directions
- Stable manifold rail

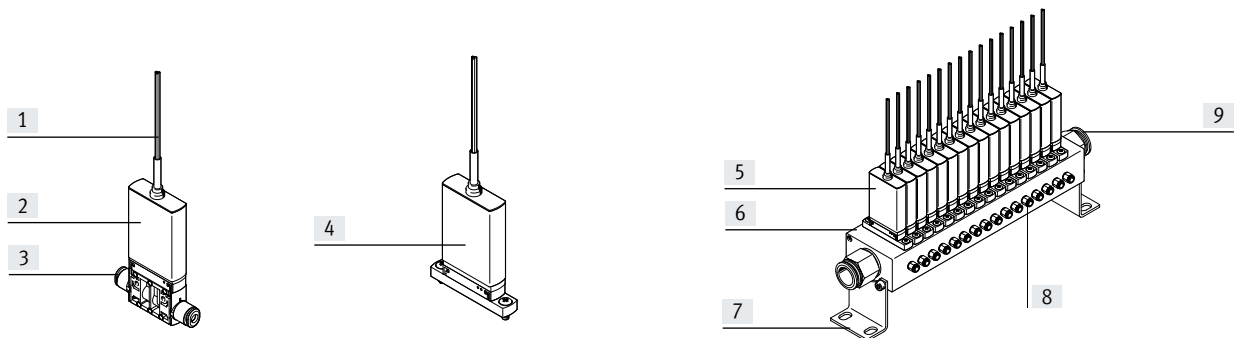
Valve manifold assembly with air gun nozzles

- Air supply at both ends
- Attaching the mounting bracket in 2 directions
- Accessible air ducts

Connecting cable with control electronics for two valves

- Individual mounting or on H-rail

MHJ10



- [1] Connecting cables
- [2] In-line valve

- [3] Push-in connector
- [4] Sub-base valve

- [5] Sub-base valve
- [6] Manifold rail

- [7] Mounting bracket
- [8] Push-in connector
- [9] Air supply

In-line valve

- Integrated push-in connector
- Electrical connection with moulded connecting cable, IP55
- Modular design

Valve manifold assembly with individual outputs

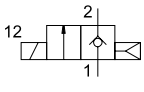
- Air supply at both ends
- Stable manifold rail

- Attaching the mounting bracket in two directions

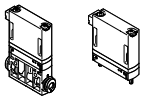
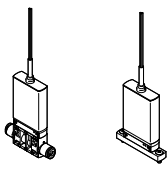
Integrated control electronics

- Compact design
- Quick installation

Product range overview

Function	Design	Operating voltage [V DC]	Type	Electrical connection	Switching time ¹⁾		→ Page/Internet
					Off	On	
2/2-way valve 	LF = Standard nominal flow rate 50 l/min						
	In-line valve	12 ... 53	MHJ9	Plug	0.9	0.7	9
		24	MHJ10	With moulded cable	1	0.8	18
	Sub-base valve	12 ... 53	MHJ9	Plug	0.9	0.7	9
		24	MHJ10	With moulded cable	1	0.8	18
	MF/LP = Standard nominal flow rate 100 l/min						
	In-line valve	12 ... 53	MHJ9	Plug	0.5	0.8	9
	Sub-base valve	12 ... 53	MHJ9	Plug	0.5	0.8	9
	MF = Standard nominal flow rate 100 l/min						
	In-line valve	12 ... 53	MHJ9	Plug	0.4	0.8	9
		24	MHJ10	With moulded cable	0.4	0.8	18
	Sub-base valve	12 ... 53	MHJ9	Plug	0.4	0.8	9
		24	MHJ10	With moulded cable	0.4	0.8	18
	HF/LP = Standard nominal flow rate 160 l/min						
	In-line valve	12 ... 53	MHJ9	Plug	0.4	1	9
		24	MHJ10	With moulded cable	0.5	1	18
	Sub-base valve	12 ... 53	MHJ9	Plug	0.4	1	9
		24	MHJ10	With moulded cable	0.5	1	18
	HF = Standard nominal flow rate 160 l/min						
	In-line valve	12 ... 53	MHJ9	Plug	0.5	1	9
		24	MHJ10	With moulded cable	0.6	1.2	18
	Sub-base valve	12 ... 53	MHJ9	Plug	0.5	1	9
		24	MHJ10	With moulded cable	0.6	1.2	18

1) Switching time at 24 V DC and 0.4 MPa

Mounting options			
Design		In-line valve	Sub-base valve
MHJ9 with plug			
	Direct mounting	■	–
	Manifold assembly	–	■
MHJ10 with moulded-in cable			
	Direct mounting	■	–
	Manifold assembly	–	■

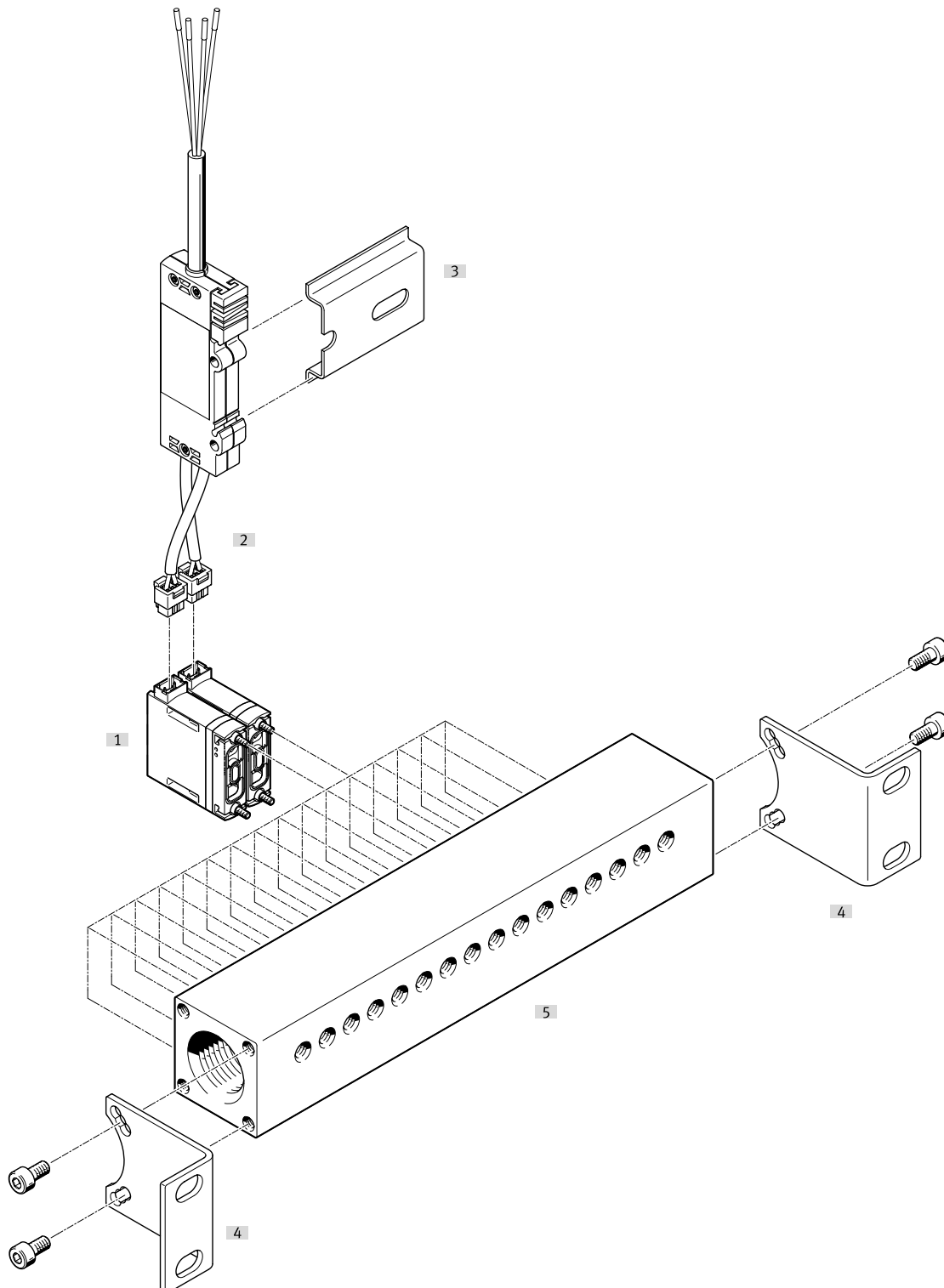
Type codes

001	Series
MHJ9	Solenoid valve
MHJ10	Solenoid valve
002	Control electronics
	Without integrated control electronics (only with MHJ9)
S	With integrated control electronics (only with MHJ10)
003	Cable length
	Without integrated cable
2,5	2.5 m
0,35	0.35 m

004	Pneumatic connection
	Sub-base valves
QS-4	Push-in connector 4 mm
QS-6	Push-in connector 6 mm
QS-1/4	Push-in connector 1/4
005	Flow rate
LF	50 l/min
MF	100 l/min
MF/LP	100 l/min, 0.5 ... 4 bar
HF	160 l/min
HF/LP	160 l/min, 0.5 ... 4 bar
006	Country code
	None
U	Imperial connection

Peripherals overview

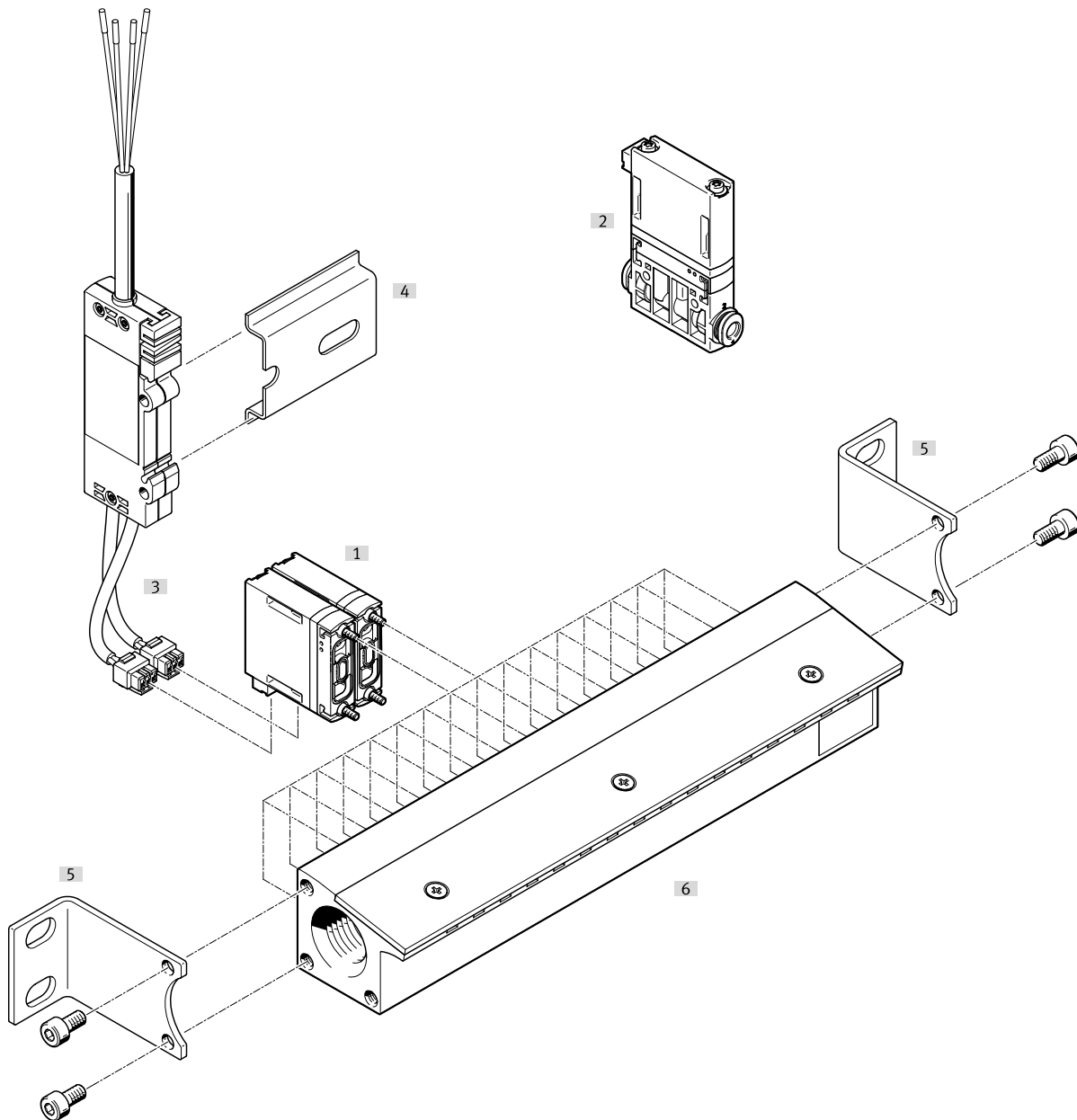
Valve manifold assembly



	Type	Brief description	→ Page/Internet	
[1]	Sub-base valve	MHJ9	2/2-way solenoid valve	24
[2]	Connecting cable	MHJ9-KMH	With control electronics for 2 solenoid valves	25
[3]	H-rail	NRH-35-2000	Length 2 m	24
[4]	Mounting kit	MHJ-HW1	Consisting of 2 mounting brackets and 4 socket head screws	25
[5]	Manifold rail	MHJ9-P16	With 16 valve positions	25

Peripherals overview

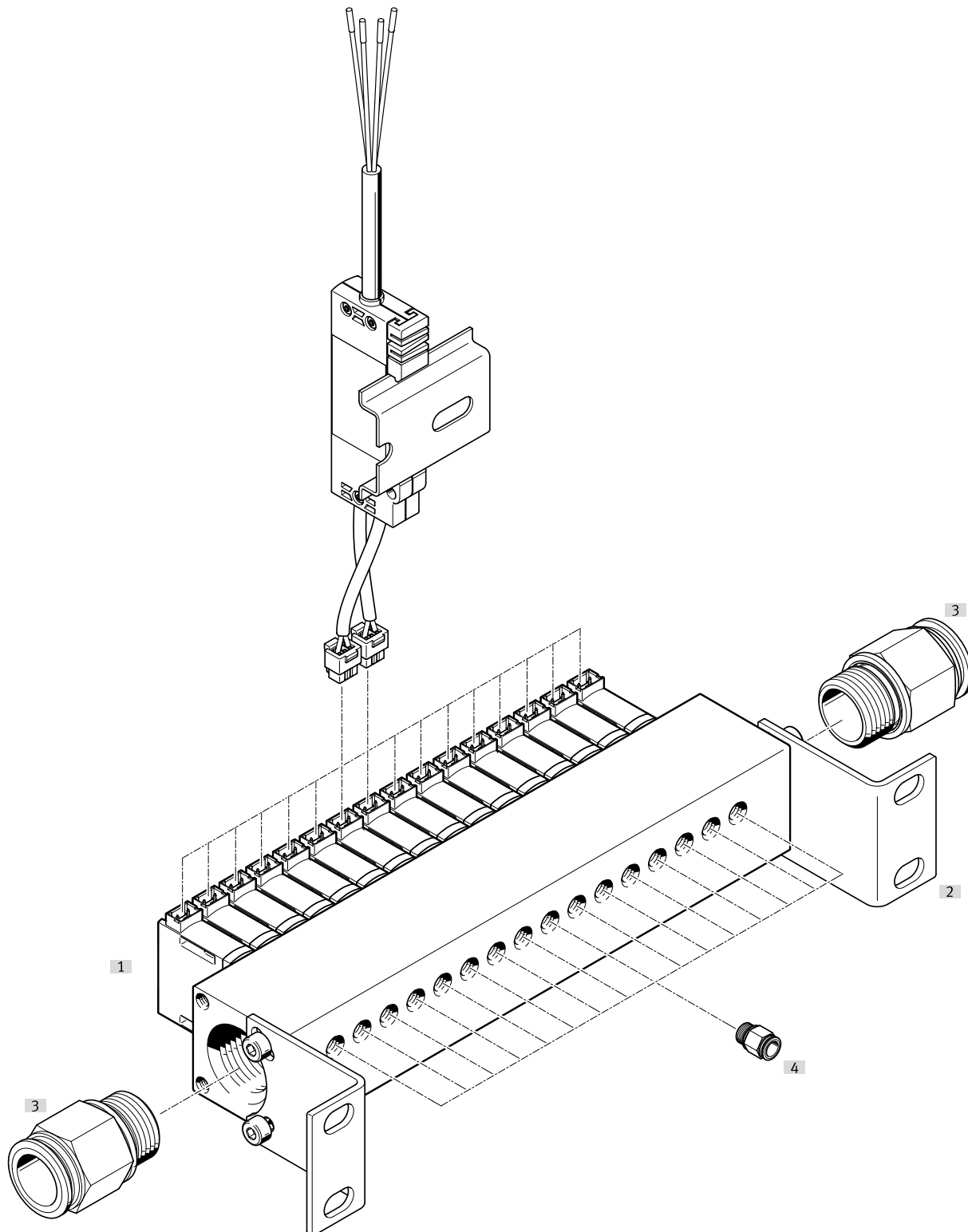
Valve manifold assembly



	Type	Brief description	→ Page/Internet
[1] Sub-base valve	MHJ9	2/2-way solenoid valve	24
[2] In-line valve	MHJ9	2/2-way solenoid valve	24
[3] Connecting cable	MHJ9-KMH	With control electronics for 2 solenoid valves	25
[4] H-rail	NRH-35-2000	Length 2 m	24
[5] Mounting kit	MHJ-HW2	Consisting of 2 mounting brackets and 4 socket head screws	25
[6] Manifold rail	MHJ9-PN16	With 16 valve positions	25

Peripherals overview

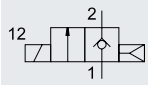
Valve manifold assembly with accessories




	Type	Brief description	→ Page/Internet	
[1]	Sub-base valve	MHJ9	2/2-way solenoid valve	24
[2]	Manifold rail	MHJ9-P16	With mounting kit MHJ-HW1	25
[3]	Push-in fitting	QS	For air supply port 1	25
[4]	Push-in fitting	QS	For valve output 2	25

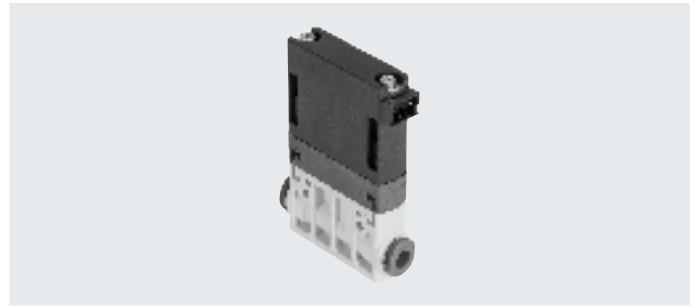
Datasheet

Function



-  - Width
9 mm

-  - Temperature range
-5 ... +60 °C



General technical data

Type	In-line valve MHJ9-QS					Sub-base valve MHJ9				
	LF	MF/LP	MF	HF/LP	HF	LF	MF	MF/LP	HF/LP	HF
Valve function	2/2-way valve, single solenoid, closed									
Design	Poppet valve without mechanical spring return									
Sealing principle	Hard									
Note on operation	Do not operate without flow									
Actuation type	Electrical									
Reset method	Pneumatic spring									
Type of control	Direct									
Flow direction	Not reversible									
Mounting position	Any									
Width [mm]	9 ¹⁾									
Grid dimension [mm]	9.5									
Standard nominal flow rate ²⁾ [l/min]	50	100	100	160	160	50	100	100	160	160
C value [l/sbar]	0.2	0.4	0.4	0.66	0.66	0.2	0.4	0.4	0.66	0.66
b value	0.5	0.38	0.38	0.36	0.36	0.5	0.38	0.38	0.36	0.36
Type of mounting	In-line installation or via through-holes					On sub-base				
Pneumatic connection 1 and 2	QS4	QS4	QS4	QS6	QS6	Sub-base M7				
Product weight [g]	30					25				
Max. tightening torque for valve mounting [Nm]	-					0.28				

1) Min. permitted grid dimension 9.5 mm

2) The specified flow rate refers to the valve without sub-base. The maximum flow rate that can be achieved may deviate from the specified value when the valve is mounted on a sub-base.

Operating and environmental conditions

Type	LF	MF/LP	MF	HF/LP	HF
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]				
Note on the operating/pilot medium	Lubricated operation not possible	Lubricated operation possible	Lubricated operation not possible		
Operating pressure [MPa]	+0.05 ... +0.8	+0.05 ... +0.4	+0.05 ... +0.6	+0.05 ... +0.4	+0.05 ... +0.6
[bar]	+0.5 ... +8	+0.5 ... +4	+0.5 ... +6	+0.5 ... +4	+0.5 ... +6
Ambient temperature [°C]	-5 ... +60				
Temperature of medium [°C]	-5 ... +60				
Restricted ambient temperature and temperature of medium	As a function of the switching frequency (see graph)				
Storage temperature [°C]	-20 ... +50				
Permissible solenoid surface temperature [°C]	+120				
Corrosion resistance class CRC ¹⁾	2				
LABS (PWIS) conformity	VDMA24364-B2-L				
Note on materials	RoHS-compliant				


1) More information: www.festo.com/x/topic/kbk

Datasheet

Electrical data in combination with connecting cable MHJ9-KMH		LF	MF/LP	MF	HF/LP	HF
Type						
Operating voltage range ¹⁾	[V DC]	12 ... 53				
Note on the operating voltage		Operation only with connecting cable MHJ9-KMH				
Coil resistance	[ohm]	2.5				
Duty cycle ²⁾	[%]	100	100	100	100	–
Operating conditions to DIN VDE 0580 ²⁾	With individual valve	–	–	–	–	S3 50% 20 min.
	With block mounting	–	–	–	–	S3 15% 20 min.
Electrical connection		2-pin, plug KMH				
Degree of protection to EN 60529		IP40				


1) Any current limit must be set to at least 1.7 A for LF, MF/LP, MF and HF/LP valves and to at least 1.85 A for HF valves for the switching operation.

2) Air must flow through the valve continuously

 **Note**

The specified values only apply when using the connecting cable MHJ9-KMH.
Ask your technical consultant about other actuation options for the MHJ valves.

Switching times and frequencies		LF	MF/LP	MF	HF/LP	HF	
Type							
Maximum switching frequency	[Hz]	500	1000	1000	500	500	
Tolerance for switching time	On	±15					
	Off	+15/–25					
Switching times for 12 V DC when new							
Pressure 0.4 MPa (4 bar, 58 psi)	Switching time on	[ms]	1	1.1	1.1	1.3	1.4
	Switching time off	[ms]	0.9	0.4	0.4	0.5	0.6
Switching times for 24 V DC when new							
Pressure 0.05 MPa (0.5 bar, 7.25 psi)	Switching time on	[ms]	0.7	0.7	0.7	0.8	0.9
	Switching time off	[ms]	0.9	0.5	0.5	0.5	0.7
Pressure 0.4 MPa (4 bar, 58 psi)	Switching time on	[ms]	0.7	0.8	0.8	1	1
	Switching time off	[ms]	0.9	0.5	0.4	0.4	0.5
Pressure 0.6 MPa (6 bar, 87 psi)	Switching time on	[ms]	0.75	–	0.9	–	1.3
	Switching time off	[ms]	0.9	–	0.4	–	0.5
Pressure 0.8 MPa (8 bar, 116 psi)	Switching time on	[ms]	0.8	–	–	–	–
	Switching time off	[ms]	0.9	–	–	–	–
Switching times for 48 V DC when new							
Pressure 0.4 MPa (4 bar, 58 psi)	Switching time on	[ms]	0.6	0.6	0.6	0.8	0.8
	Switching time off	[ms]	0.8	0.4	0.4	0.4	0.4

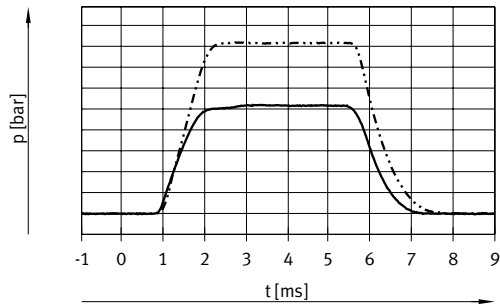
 **Note**

The maximum switching frequency that can be achieved decreases as the temperature of the valve increases or as the operating and ambient temperature increases.
The ambient temperature must therefore be limited accordingly so that the maximum switching frequency can be reached.

Datasheet

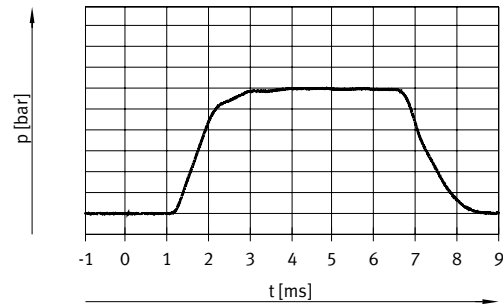
Switching behaviour – Operating pressure

Type LF, MF/LP, MF and HF/LP



— 4 bar
- - - 6 bar

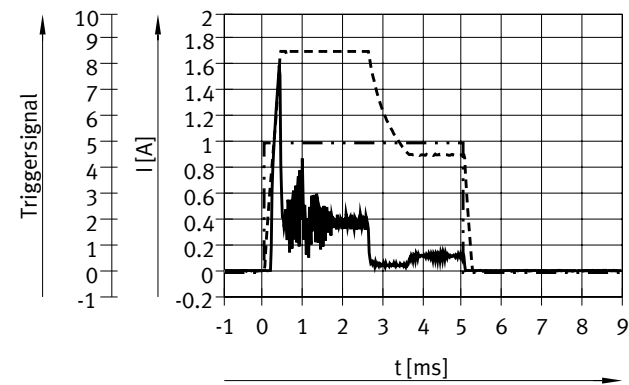
Type HF



— 4 bar

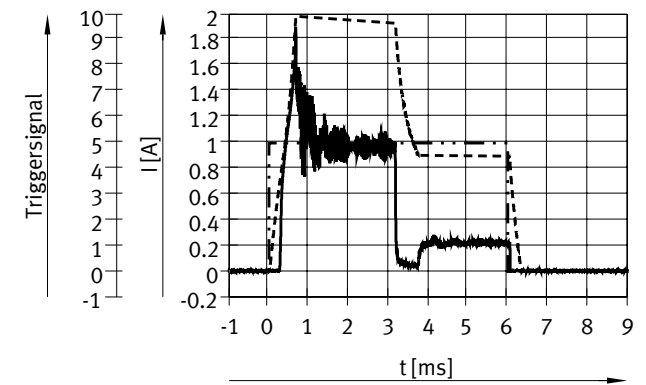
Switching behaviour – Current/voltage curve

Type LF, MF/LP, MF and HF/LP



— Current in the supply line at 24 V
- - - Trigger signal
- · - · Coil current

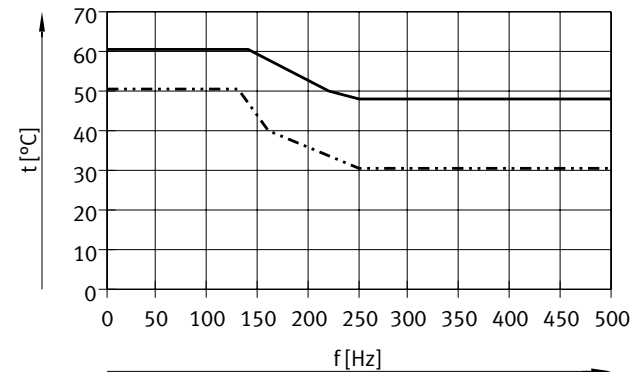
Type HF



— Current in the supply line at 24 V
- - - Trigger signal
- · - · Coil current

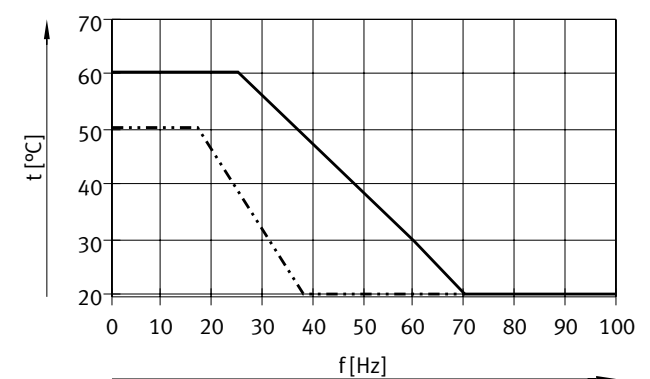
Maximum permissible ambient temperature as a function of switching frequency

Type LF, MF/LP, MF and HF/LP



— Individual valve 0.4 MPa
- - - Block mounting/sub-base valve, 0.4 MPa

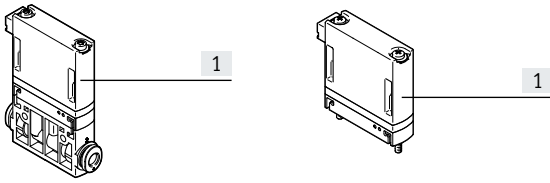
Type HF



— Individual valve 0.4 MPa
- - - Block mounting/sub-base valve, 0.4 MPa

Datasheet

Materials

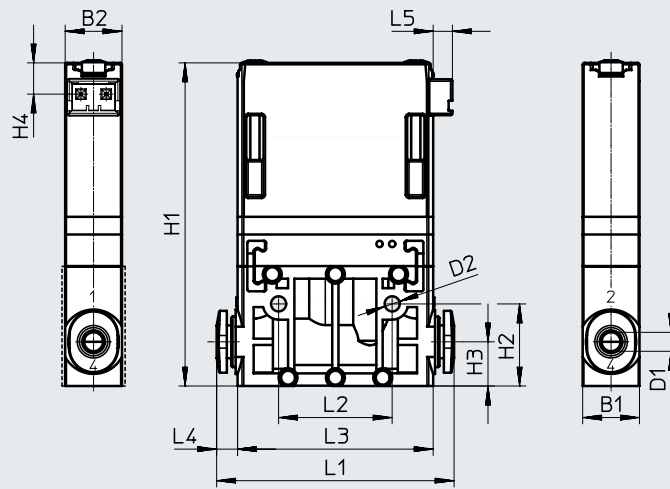


[1]	Housing	Reinforced PA
-	Seals	HNBR
-	Screws	Steel
-	Manifold rail	Anodised wrought aluminium alloy

Dimensions

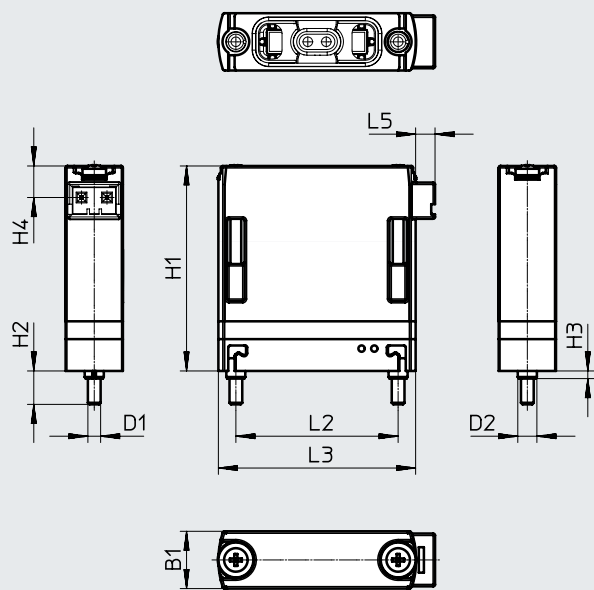
Download CAD data → www.festo.com

Semi-in-line valve



Type	B1	B2	D1	D2	H1	H2	H3	H4	L1	L2	L3	L4	L5
MHJ9-QS-4	9	9	4	2.4	51	13	7	5	38	18	32	3.2	3
MHJ9-QS-6	10	9	6						51			9.5	

Sub-base valve



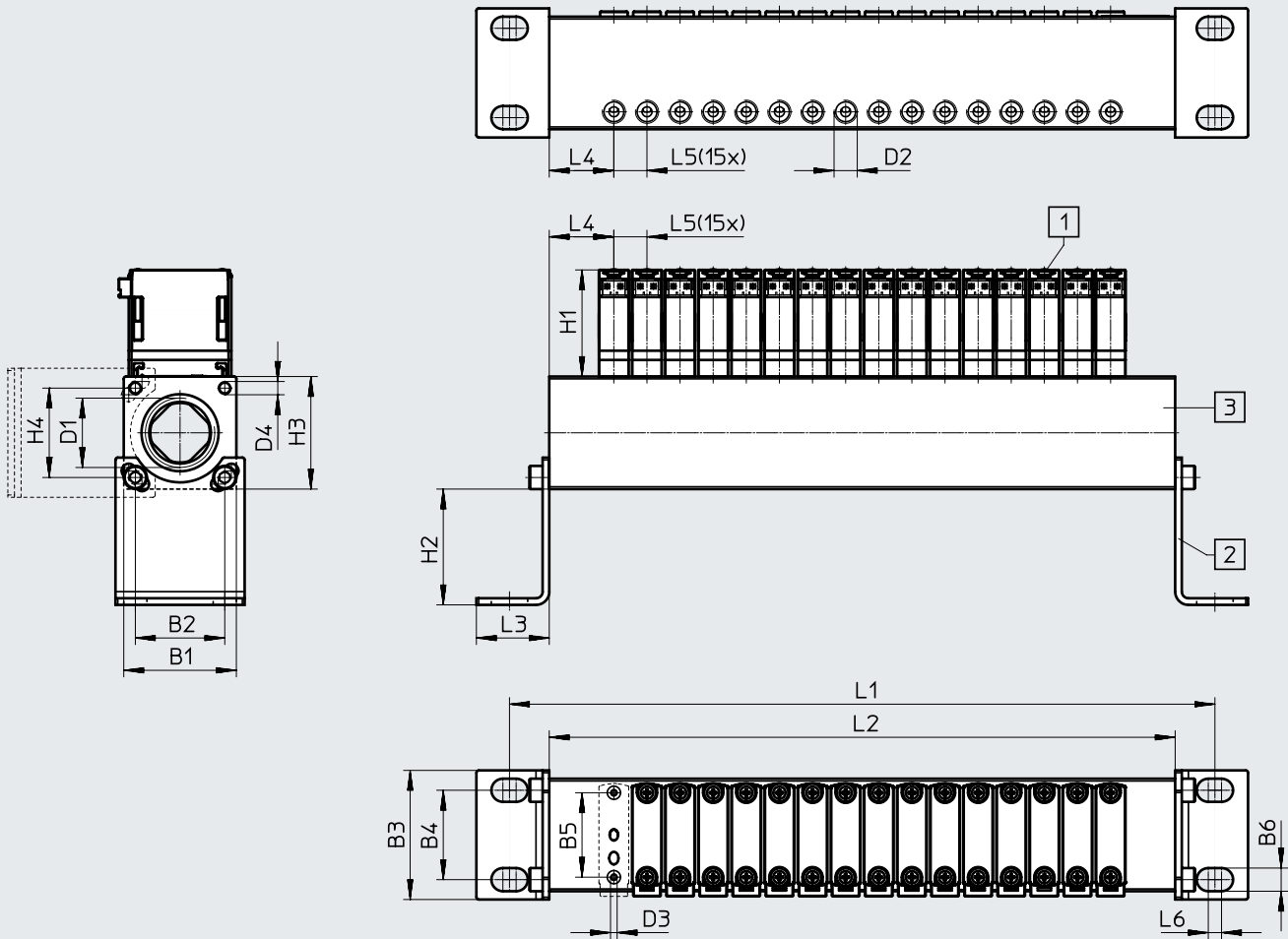
Type	B1	D1	D2	H1	H2	H3	H4	L2	L3	L5
MHJ9	9	M2	3	32	5.3	1.2	5	25.5	31	3

Datasheet

Dimensions

Download CAD data → www.festo.com

Manifold assembly on MHJ9-P16 (with pneumatic connection M7)



[1] Sub-base valve MHJ9

[2] Mounting bracket, rotatable in steps of 90°

[3] Manifold rail MHJ9-P16 with pneumatic connection M7

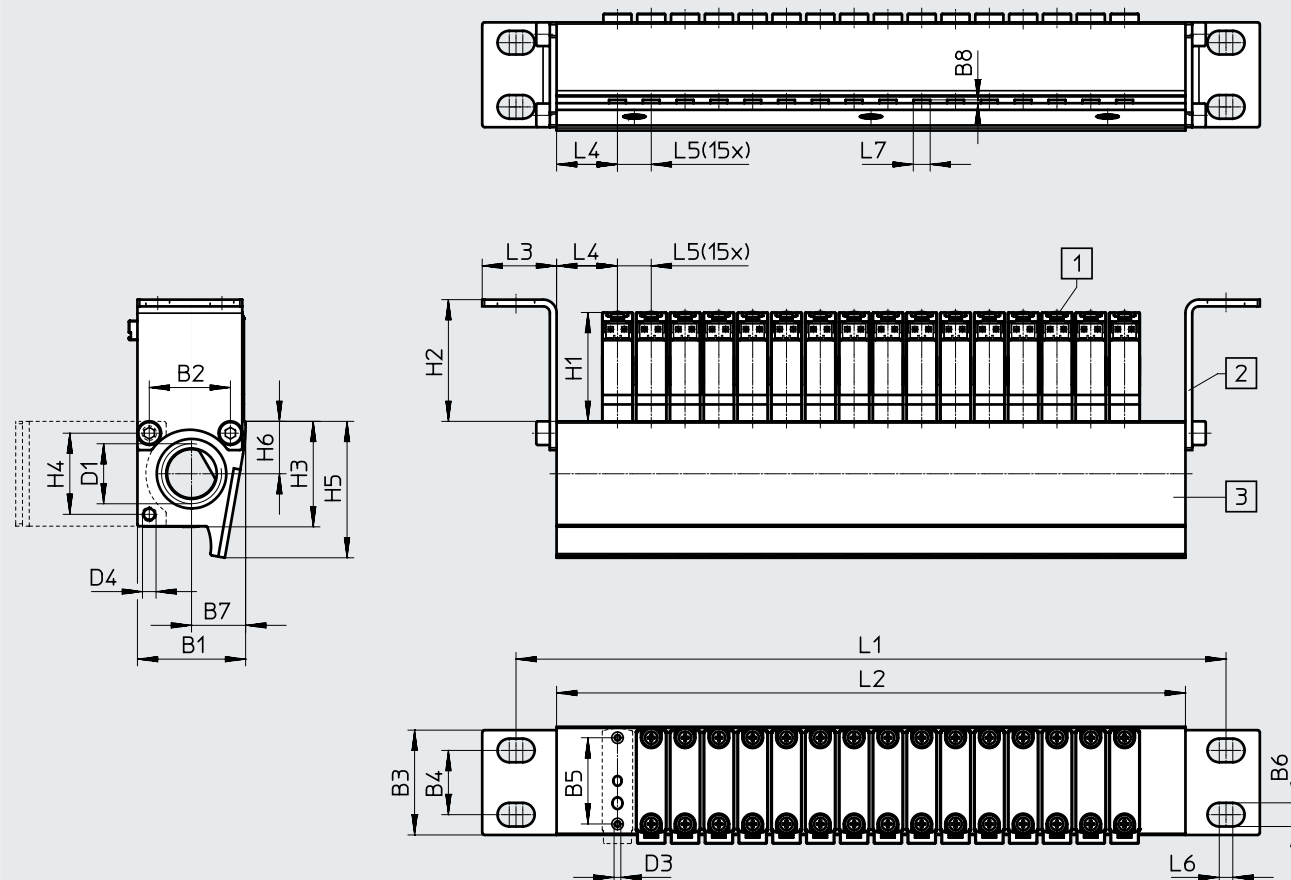
Type	B1	B2	B3	B4	B5	B6	D1	D2	D3	D4	H1	H2	H3	H4	L1	L2	L3	L4	L5	L6
MHJ9-P16	34	27	39	27	26	7	G1/2	M7	M2	M4	32	35	34	27	213	189	22	20	10	4

Datasheet

Dimensions

Download CAD data → www.festo.com

Manifold assembly on MHJ9-PN16 (with air gun nozzles)



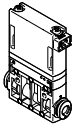
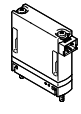
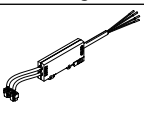
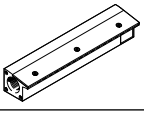
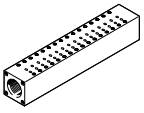
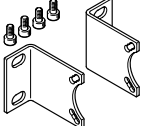
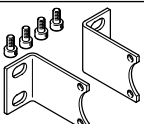
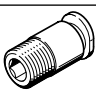

[1] Sub-base valve MHJ9

[2] Mounting bracket, can be fitted in 2 positions

[3] Manifold rail MHJ9-PN16 with air gun nozzles

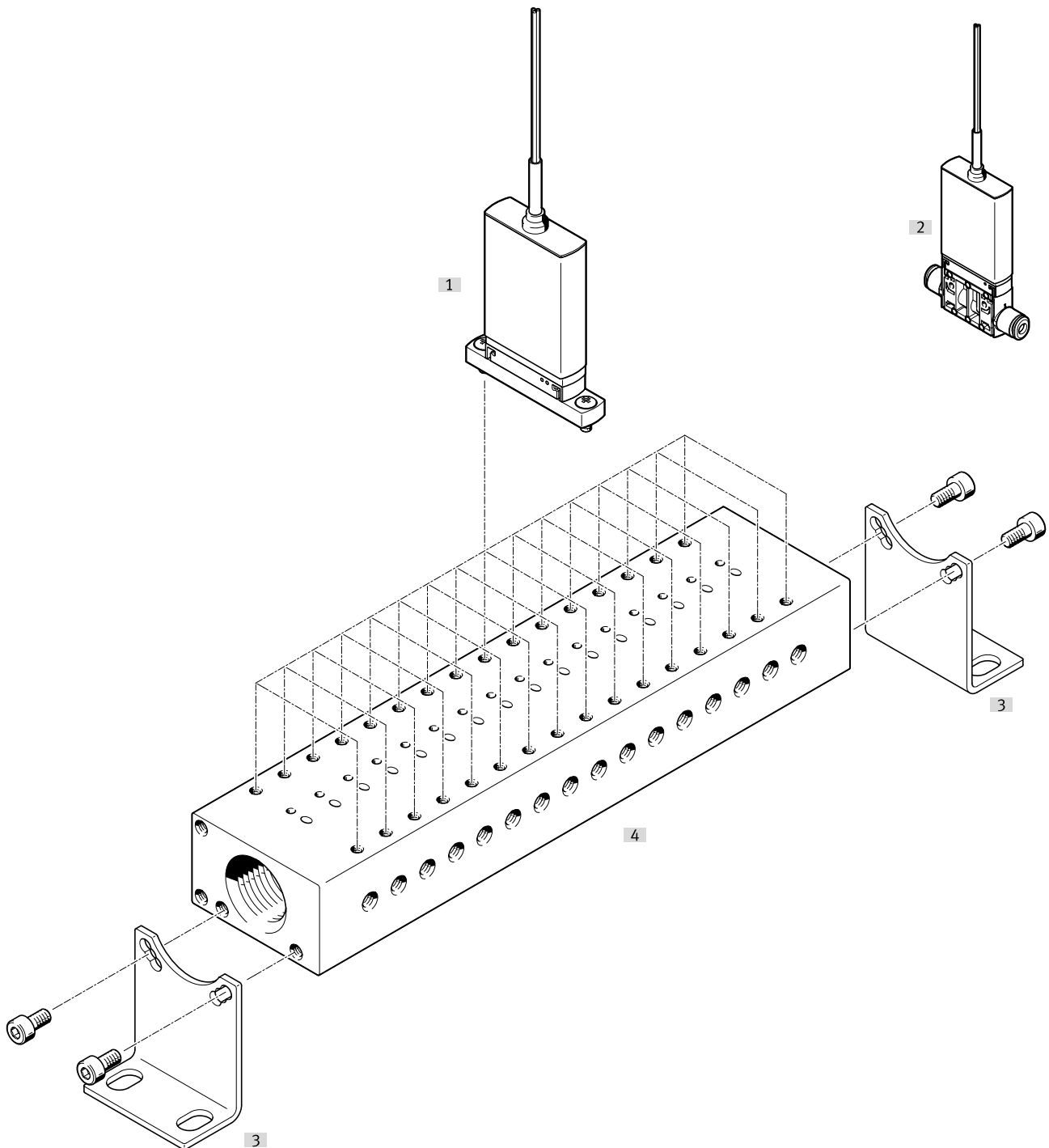
Type	B1	B2	B3	B4	B5	B6	B7	B8	D1	D3	D4	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4	L5	L6	L7
MHJ9-PN16	32	24	31	19	26	7	16	1	G3/8	M2	M4	32	36	31	24	40	16	210	186	22	18	10	4	5

Datasheet

Ordering data					
	Description	Standard nominal flow rate	Operating pressure	Part no.	Type
In-line valve without connecting cable					
	2/2-way solenoid valve	50 l/min	+0.05 ... +0.8 MPa	572079	MHJ9-QS-4-LF
		100 l/min	+0.05 ... +0.4 MPa	8084273	MHJ9-QS-4-MF/LP
			+0.05 ... +0.6 MPa	553118	MHJ9-QS-4-MF
		160 l/min	+0.05 ... +0.4 MPa	567793	MHJ9-QS-6-HF/LP
			+0.05 ... +0.6 MPa	567790	MHJ9-QS-6-HF
Sub-base valve without connecting cable					
	2/2-way solenoid valve	50 l/min	+0.05 ... +0.8 MPa	572078	MHJ9-LF
		100 l/min	+0.05 ... +0.4 MPa	8084233	MHJ9-MF/LP
			+0.05 ... +0.6 MPa	553115	MHJ9-MF
		160 l/min	+0.05 ... +0.4 MPa	567792	MHJ9-HF/LP
			+0.05 ... +0.6 MPa	553117	MHJ9-HF
Ordering data – Accessories					
	Description			Part no.	Type
Connecting cable with control electronics for 2 valves					
	Mounting on H-rail, for static applications	For LF, MF/LP, MF and HF/LP valves	0.5 m	553121	MHJ9-KMH-0.5-MF
			2.5 m	565519	MHJ9-KMH-2.5-MF
		For HF valves	0.5 m	562170	MHJ9-KMH-0.5-HF
			2.5 m	567505	MHJ9-KMH-2.5-HF
Manifold rail					
	For 16 valves MHJ9, without mounting bracket, with air gun nozzles			553123	MHJ9-PN16
	For 16 valves MHJ9, without mounting bracket, with pneumatic connection M7			553125	MHJ9-P16
Mounting kit					
	For manifold rail MHJ9-P16, consisting of 2 mounting brackets and 4 socket head screws M4x8 DIN912			565455	MHJ-HW1
	For manifold rail MHJ9-PN16, consisting of 2 mounting brackets and 4 socket head screws M4x8 DIN912			565456	MHJ-HW2
Push-in fitting for valve output, port 2					
	Connecting thread M7 for tubing O.D.	For manifold rail with LF, MF/LP or MF valves	4 mm (pack of 10)	153319	QSM-M7-4-I
		For manifold rail with HF or HF/ LP valves	6 mm (pack of 10)	153321	QSM-M7-6-I
Push-in fitting for air supply, port 1					
	Connecting thread G1/2 for tubing O.D.		12 mm (pack of 1)	186104	QS-G1/2-12
			16 mm (pack of 1)	186105	QS-G1/2-16
	Connecting thread G3/8 for tubing O.D.		12 mm (pack of 10)	186103	QS-G3/8-12
			16 mm (pack of 10)	186347	QS-G3/8-16

Peripherals overview

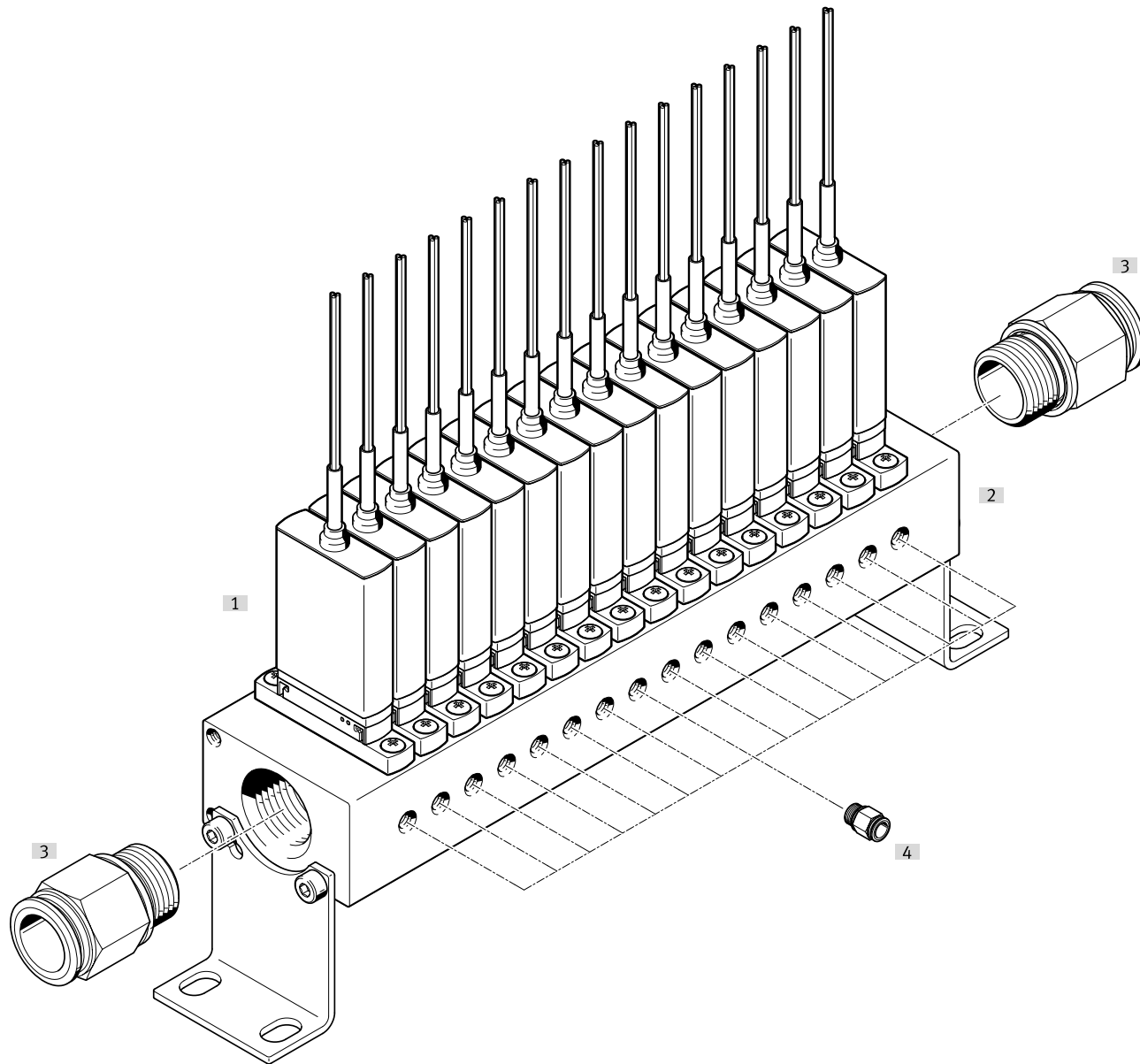
Individual valve, valve manifold assembly



	Type	Brief description	→ Page/Internet
[1]	Sub-base valve	MHJ10 2/2-way solenoid valve	24
[2]	In-line valve	MHJ10 2/2-way solenoid valve	24
[3]	Mounting kit	MHJ-HW1 Consisting of 2 mounting brackets and 4 socket head screws	25
[4]	Manifold rail	MHJ10-P16 With 16 valve positions	25

Peripherals overview

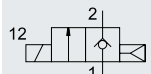
Valve manifold assembly with accessories



	Type	Brief description	→ Page/Internet
[1]	Sub-base valve	MHJ10 2/2-way solenoid valve	24
[2]	Manifold rail	MHJ10-P16 With mounting kit MHJ-HW1	25
[3]	Push-in fitting	QS For air supply port 1	25
[4]	Push-in fitting	QS For valve output 2	25

Datasheet

Function



- - Width
10 mm
- - Flow rate
max. 160 l/min
- - Voltage
24 V DC



General technical data

Type	In-line valve MHJ10-S...QS				Sub-base valve MHJ10-S			
	LF	MF	HF/LP	HF	LF	MF	HF/LP	HF
Valve function	2/2-way valve, single solenoid, closed							
Design	Poppet valve without mechanical spring return							
Sealing principle	Hard							
Note on operation	Do not operate without flow							
Actuation type	Electrical							
Reset method	Pneumatic spring							
Type of control	Direct							
Flow direction	Not reversible							
Mounting position	Any							
Width	[mm] 10 ¹⁾							
Grid dimension	[mm] 10.5							
Standard nominal flow rate	[l/min] 50 100 160 160 50 100 160 160							
C value	[l/sbar] 0.2 0.4 0.66 0.66 0.2 0.4 0.66 0.66							
b value	0.5 0.38 0.36 0.36 0.5 0.38 0.36 0.36							
Type of mounting	In-line installation or via through-holes				On sub-base			
Pneumatic connection 1 and 2	QS4	QS4	QS6	QS6	Sub-base M7			
Max. tightening torque for valve mounting	[Nm] - 0.7							

1) Min. permitted grid dimension 10.5 mm

Operating and environmental conditions

Type	LF	MF	HF/LP	HF
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]			
Note on the operating/pilot medium	Lubricated operation not possible			
Operating pressure	[MPa] +0.05 ... +0.8	+0.05 ... +0.6	+0.05 ... +0.4	+0.05 ... +0.6
	[bar] +0.5 ... +8	+0.5 ... +6	+0.5 ... +4	+0.5 ... +6
Ambient temperature	[°C] -5 ... +60			
With block mounting	Max. +45	Max. +45	Max. +45	-
Temperature of medium	[°C] -5 ... +60			
Restricted ambient temperature and temperature of medium	As a function of the switching frequency (see graph)			
Storage temperature	[°C] -20 ... +50			
Permissible solenoid surface temperature	[°C] +120			
Corrosion resistance class CRC ¹⁾	2			
CE marking (see declaration of conformity) ³⁾	To EU EMC Directive ²⁾ To EU RoHS Directive			
UKCA marking (see declaration of conformity) ³⁾	To UK instructions for EMC To UK RoHS instructions			
Certification	RCM compliance mark			
LABS (PWIS) conformity	VDMA24364-B2-L			
Note on materials	RoHS-compliant			

1) More information: www.festo.com/x/topic/kbk

2) For information about the area of use, see the EC declaration of conformity at: www.festo.com/catalogue/... → Support/Downloads.

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

3) More information: www.festo.com/catalogue/... → Support/Downloads.


Datasheet

Electrical data		LF	MF	HF/LP	HF	
Type						
Operating voltage ¹⁾	[V DC]	24 ±10% = 21.6 ... 26.4				
Trigger signal range	[V DC]	3 ... 30				
Input resistance	[kΩ]	34				
Note on the input current		Linear rise				
		0.09 ... 0.44 mA with a trigger signal of 3 ... 15 V DC				
		0.44 ... 15.44 mA with a trigger signal of 15 ... 30 V DC				
Power	Low-current phase	[W]	2	2	2	3.2
	High-current phase	[W]	7	7	7	14.5
Reverse polarity protection		For operating voltage				
Additional functions		Spark arresting				
		Holding current reduction with energy recovery				
		Safety shut-off				
Degree of protection		IP55				
Duty cycle ²⁾	[%]	100	100	100	–	
Operating conditions to DIN VDE 0580 ²⁾	With individual valve	–	–	–	S3 50% 20 min.	
	With block mounting	–	–	–	S3 15% 20 min.	
Electrical connection		3-core cable				

1) Any current limit must be set to at least 1.7 A for the switching operation.

2) Air must flow through the valve continuously

Switching times and frequencies		LF	MF	HF/LP	HF	
Type						
Maximum switching frequency	[Hz]	500	1000	500	500	
Tolerance for switching time	On	±15				
	Off	+15/–25				
Switching times for 24 V DC when new						
Pressure 0.05 MPa (0.5 bar, 7.25 psi)	Switching time on	[ms]	0.7	0.8	0.8	1
	Switching time off	[ms]	0.9	0.5	0.6	0.8
Pressure 0.4 MPa (4 bar, 58 psi)	Switching time on	[ms]	0.8	0.8	1	1.2
	Switching time off	[ms]	1	0.4	0.5	0.6
Pressure 0.6 MPa (6 bar, 87 psi)	Switching time on	[ms]	0.85	0.9	–	1.3
	Switching time off	[ms]	0.95	0.4	–	0.6
Pressure 0.8 MPa (8 bar, 116 psi)	Switching time on	[ms]	0.9	–	–	–
	Switching time off	[ms]	0.9	–	–	–

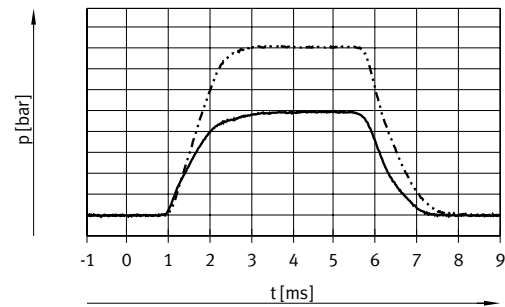
 **Note**

The maximum switching frequency that can be achieved decreases as the temperature of the valve increases or as the operating and ambient temperature increases. The ambient temperature must therefore be limited accordingly so that the maximum switching frequency can be reached.

Datasheet

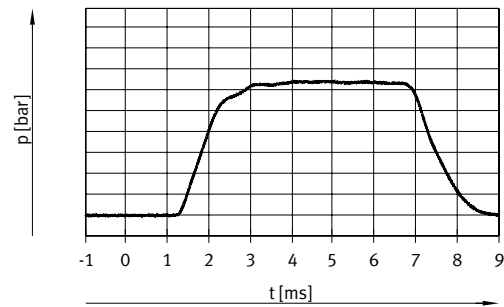
Switching behaviour – Operating pressure

Type LF, MF and HF/LP



— 4 bar
- - - 6 bar

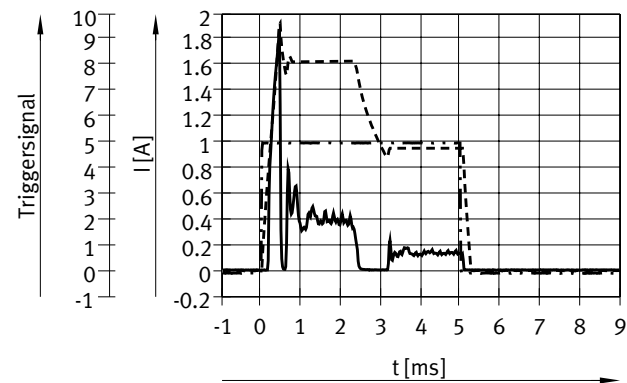
Type HF



— 4 bar

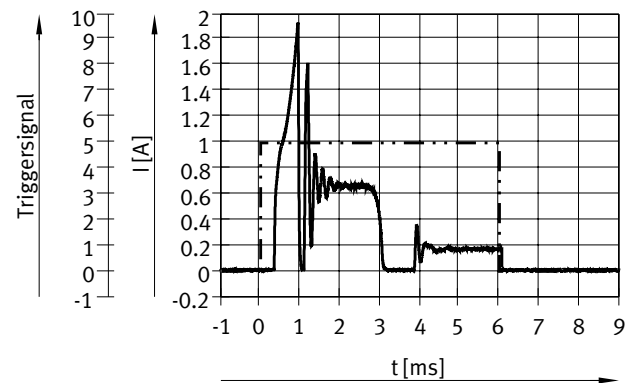
Switching behaviour – Current/voltage curve

Type LF, MF and HF/LP



— Current in the supply line at 24 V
- - - Trigger signal
- · - · Coil current

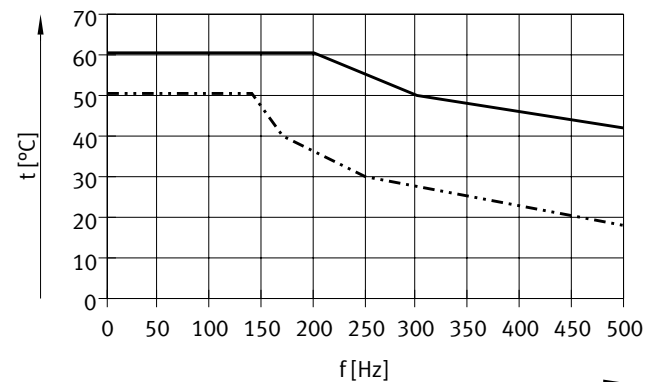
Type HF



— Current in the supply line at 24 V
- - - Trigger signal

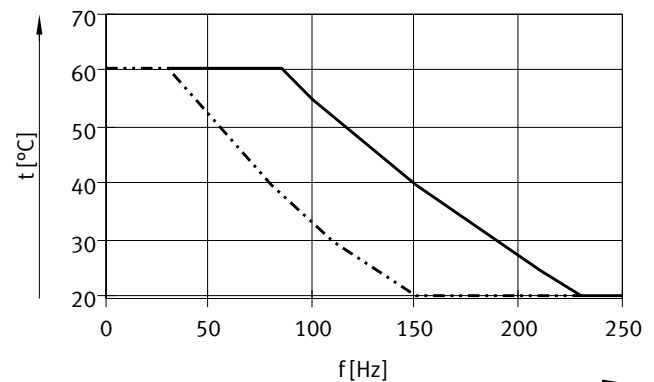
Maximum permissible ambient temperature as a function of switching frequency

Type LF, MF and HF/LP



— Individual valve 0.4 MPa
- - - Block mounting/sub-base valve, 0.4 MPa

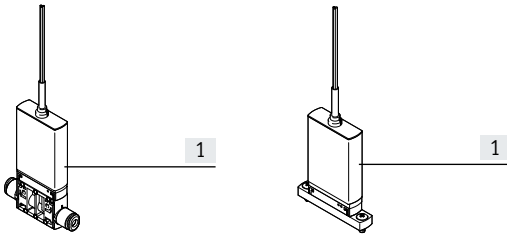
Type HF



— Individual valve 0.4 MPa
- - - Block mounting/sub-base valve, 0.4 MPa

Datasheet

Materials

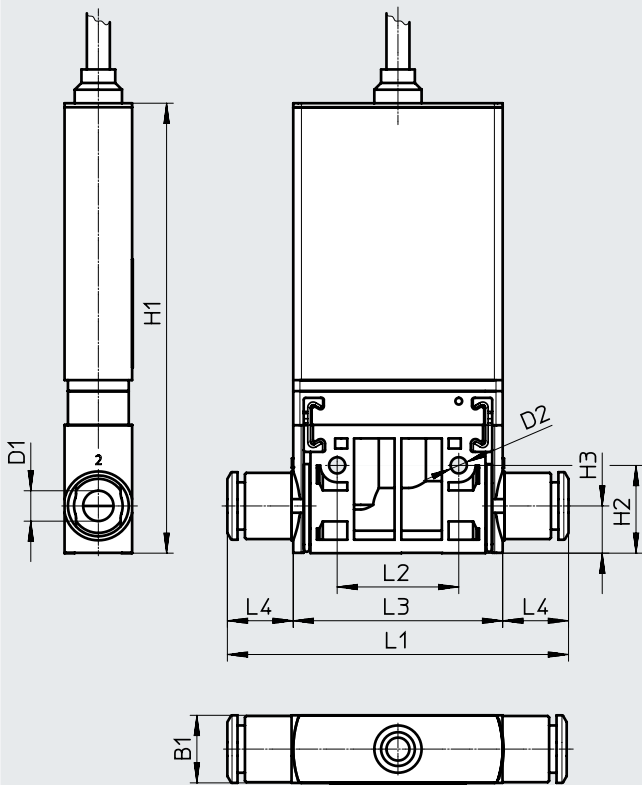


[1]	Housing	Reinforced PA Reinforced PPS
-	Seals	HNBR
-	Screws	Steel
-	Cable sheath	PUR
-	Manifold rail	Anodised wrought aluminium alloy

Dimensions

Download CAD data → www.festo.com

Semi-in-line valve



Wire allocation:

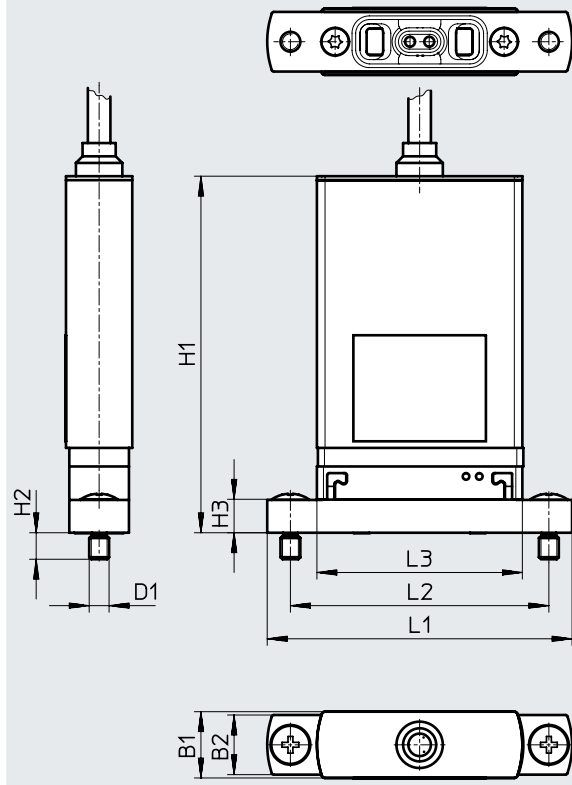
BU = GND

BN = Operating voltage positive

BK = Trigger signal

Type	B1	D1	D2	H1	H2	H3	L1	L2	L3	L4
MHJ10-S...QS4	10	4	2.4	68	13	7	50.5	18	32	9.5
MHJ10-S...QS6		6								

Sub-base valve



Wire allocation:

BU = GND

BN = Operating voltage positive

BK = Trigger signal

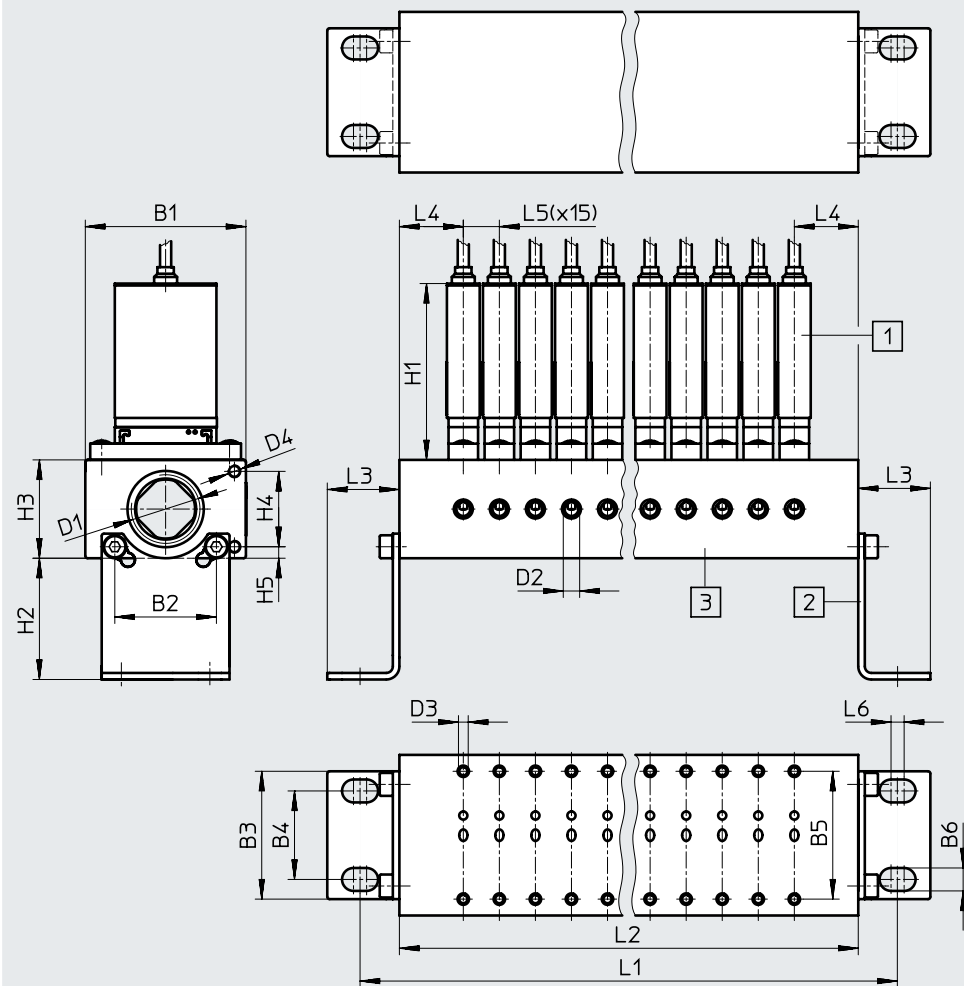
Type	B1	B2	D1	H1	H2	H3	L1	L2	L3
MHJ10-S	10	9	M3	54	4	5	46	39	31

Datasheet

Dimensions

Download CAD data → www.festo.com

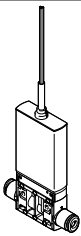
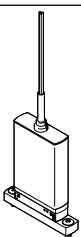
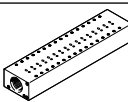
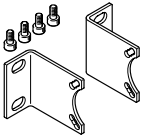
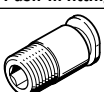

Manifold assembly



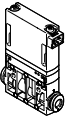
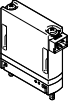
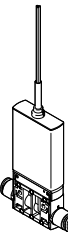
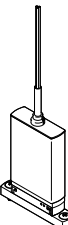
- [1] Sub-base valve MHJ10-S
- [2] Mounting bracket MHJ-HW1
- [3] Manifold rail MHJ10-P16

Type	B1	B2	B3	B4	B5	B6	D1	D2	D3	D4	H1	H2	H3	H4	H5	L1	L2	L3	L4	L5	L6
MHJ10-P16	49	31	39	27	39	7	G1/2	M7	M3	M4	54	37	30	23	3.5	228	204	22	20	11	4

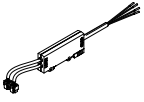
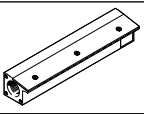
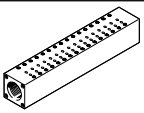
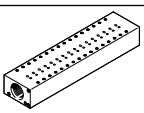
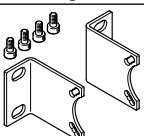
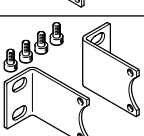


Datasheet

Ordering data							
	Description	Standard nominal flow rate	Cable length	Product weight	Operating pressure	Part no.	Type
In-line valve with connecting cable							
	2/2-way solenoid valve	50 l/min	2.5 m	85 g	+0.05 ... +0.8 MPa	572081	MHJ10-S-2.5-QS-4-LF
		100 l/min	0.35 m	50 g	+0.05 ... +0.6 MPa	557604	MHJ10-S-0.35-QS-4-MF
			2.5 m	85 g	+0.05 ... +0.6 MPa	565515	MHJ10-S-2.5-QS-4-MF
		160 l/min	2.5 m	85 g	+0.05 ... +0.4 MPa	567798	MHJ10-S-2.5-QS-6-HF/LP
					+0.05 ... +0.6 MPa	567503	MHJ10-S-2.5-QS-6-HF
Sub-base valve with connecting cable							
	2/2-way solenoid valve	50 l/min	2.5 m	75 g	+0.05 ... +0.8 MPa	572080	MHJ10-S-2.5-LF
		100 l/min	0.35 m	40 g	+0.05 ... +0.6 MPa	557601	MHJ10-S-0.35-MF
			2.5 m	75 g	+0.05 ... +0.6 MPa	565513	MHJ10-S-2.5-MF
		160 l/min	2.5 m	75 g	+0.05 ... +0.4 MPa	567796	MHJ10-S-2.5-HF/LP
					+0.05 ... +0.6 MPa	567502	MHJ10-S-2.5-HF
Ordering data – Accessories							
	Description				Part no.	Type	
Manifold rail							
	For 16 valves MHJ10, without mounting bracket, with pneumatic connection M7				557608	MHJ10-P16	
Mounting kit							
	For manifold rail MHJ10-P16, consisting of 2 mounting brackets and 4 socket head screws M4x8 DIN912				565455	MHJ-HW1	
Push-in fitting for valve output, port 2							
	Connecting thread M7 for tubing O.D.	For manifold rail with LF or MF valves		4 mm (pack of 10)	153319	QSM-M7-4-I	
		For manifold rail with HF or HF/LP valves		6 mm (pack of 10)	153321	QSM-M7-6-I	
Push-in fitting for air supply, port 1							
	Connecting thread G1/2 for tubing O.D.			12 mm (pack of 1)	186104	QS-G1/2-12	
				16 mm (pack of 1)	186105	QS-G1/2-16	
	Connecting thread G3/8 for tubing O.D.			12 mm (pack of 10)	186103	QS-G3/8-12	
				16 mm (pack of 10)	186347	QS-G3/8-16	

Accessories

Ordering data						
	Description	Standard nominal flow rate	Cable length	Operating pressure	Part no.	Type
In-line valve without connecting cable						
	2/2-way solenoid valve	50 l/min	–	+0.05 ... +0.8 MPa	572079	MHJ9-QS-4-LF
		100 l/min	–	+0.05 ... +0.4 MPa	8084273	MHJ9-QS-4-MF/LP
				+0.05 ... +0.6 MPa	553118	MHJ9-QS-4-MF
		160 l/min	–	+0.05 ... +0.4 MPa	567793	MHJ9-QS-6-HF/LP
				+0.05 ... +0.6 MPa	567790	MHJ9-QS-6-HF
Sub-base valve without connecting cable						
	2/2-way solenoid valve	50 l/min	–	+0.05 ... +0.8 MPa	572078	MHJ9-LF
		100 l/min	–	+0.05 ... +0.4 MPa	8084233	MHJ9-MF/LP
				+0.05 ... +0.6 MPa	553115	MHJ9-MF
		160 l/min	–	+0.05 ... +0.4 MPa	567792	MHJ9-HF/LP
				+0.05 ... +0.6 MPa	553117	MHJ9-HF
In-line valve with connecting cable						
	2/2-way solenoid valve	50 l/min	2.5 m	+0.05 ... +0.8 MPa	572081	MHJ10-S-2.5-QS-4-LF
		100 l/min	0.35 m	+0.05 ... +0.6 MPa	557604	MHJ10-S-0.35-QS-4-MF
			2.5 m	+0.05 ... +0.6 MPa	565515	MHJ10-S-2.5-QS-4-MF
		160 l/min	2.5 m	+0.05 ... +0.4 MPa	567798	MHJ10-S-2.5-QS-6-HF/LP
				+0.05 ... +0.6 MPa	567503	MHJ10-S-2.5-QS-6-HF
Sub-base valve with connecting cable						
	2/2-way solenoid valve	50 l/min	2.5 m	+0.05 ... +0.8 MPa	572080	MHJ10-S-2.5-LF
		100 l/min	0.35 m	+0.05 ... +0.6 MPa	557601	MHJ10-S-0.35-MF
			2.5 m	+0.05 ... +0.6 MPa	565513	MHJ10-S-2.5-MF
		160 l/min	2.5 m	+0.05 ... +0.4 MPa	567796	MHJ10-S-2.5-HF/LP
				+0.05 ... +0.6 MPa	567502	MHJ10-S-2.5-HF

Accessories

Ordering data		Description	Part no.	Type	
Connecting cable					
	With control electronics for 2 valves, mounting on H-rail, for static applications	For LF, MF/LP, MF and HF/LP valves	0.5 m	553121	MHJ9-KMH-0.5-MF
			2.5 m	565519	MHJ9-KMH-2.5-MF
		For HF valves	0.5 m	562170	MHJ9-KMH-0.5-HF
			2.5 m	567505	MHJ9-KMH-2.5-HF
Manifold rail¹⁾					
	For 16 valves MHJ9, without mounting bracket, with air gun nozzles		553123	MHJ9-PN16	
	For 16 valves MHJ9, without mounting bracket, with pneumatic connection M7		553125	MHJ9-P16	
	For 16 valves MHJ10, without mounting bracket, with pneumatic connection M7		557608	MHJ10-P16	
Mounting kit					
	For manifold rail MHJ...-P16, consisting of 2 mounting brackets and 4 socket head screws M4x8 DIN912		565455	MHJ-HW1	
	For manifold rail MHJ9-PN16, consisting of 2 mounting brackets and 4 socket head screws M4x8 DIN912		565456	MHJ-HW2	
Push-in fitting for valve output, port 2					
	Connecting thread M7 for tubing O.D.	4 mm (pack of 10)	For manifold rail with LF, MF/LP or MF valves	153319	QSM-M7-4-I
		6 mm (pack of 10)	For manifold rail with HF or HF/LP valves	153321	QSM-M7-6-I
Push-in fitting for air supply, port 1					
	Connecting thread G1/2 for tubing O.D.	12 mm (pack of 1)		186104	QS-G1/2-12
		16 mm (pack of 1)		186105	QS-G1/2-16
	Connecting thread G3/8 for tubing O.D.	12 mm (pack of 10)		186103	QS-G3/8-12
		16 mm (pack of 10)		186347	QS-G3/8-16

1) Further versions/lengths available on request