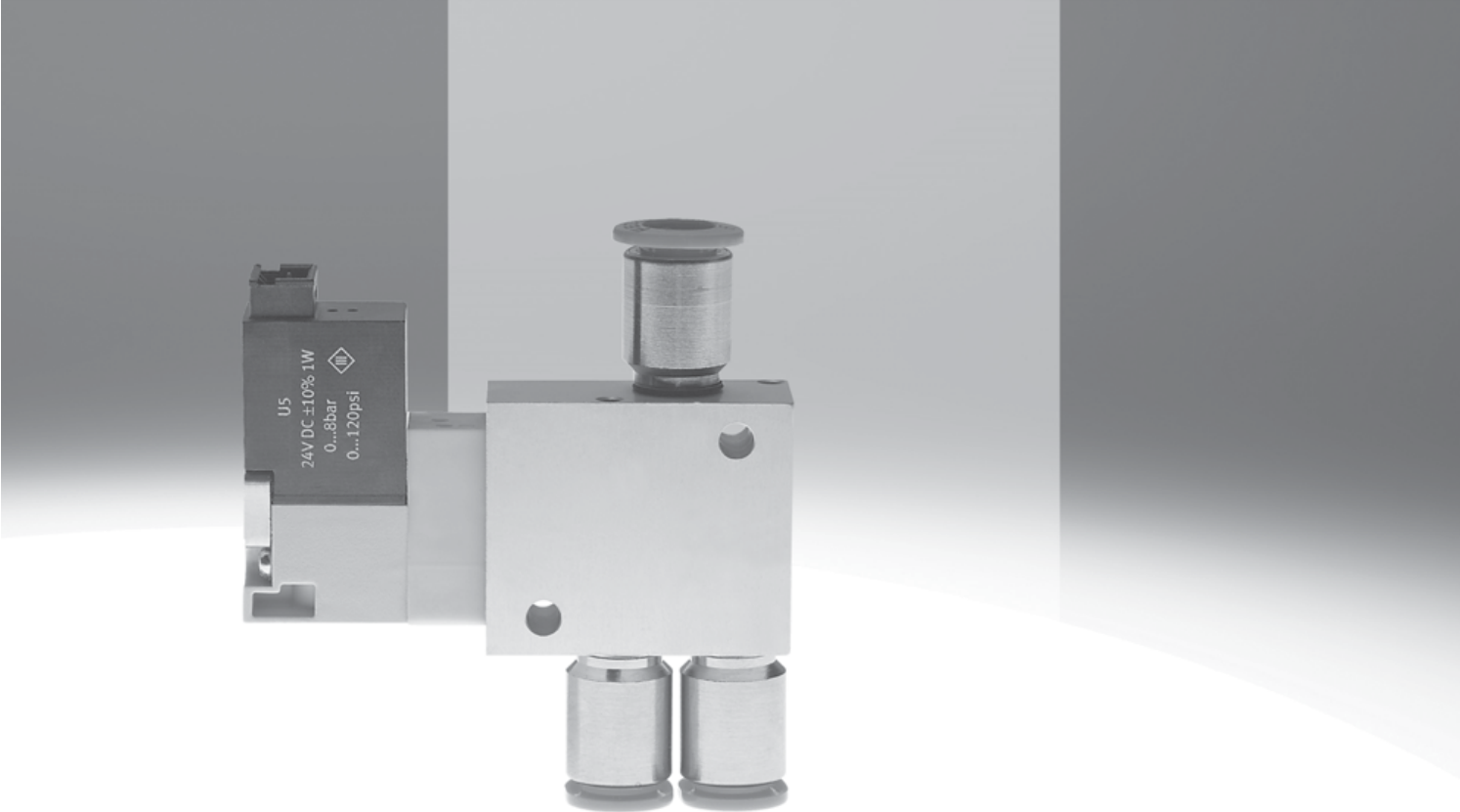


Valve series VOVG



Solenoid valves VOVG

Product range overview



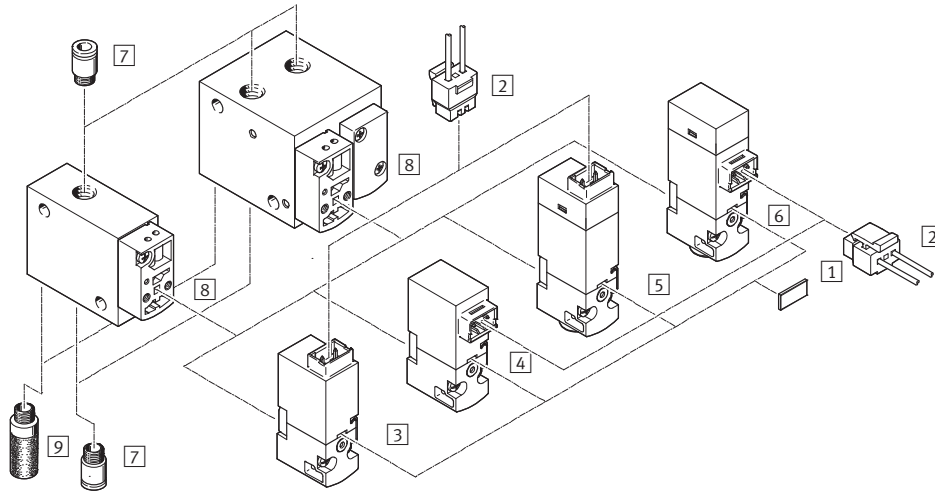
Function	Symbol	Version	Normally		Voltage [V DC]			→ Page/ Internet
			open	closed	5	12	24	
3/2-way valve		In-line valve	■	■	■	■	■	8/vovg
		Semi in-line valve	■	■	■	■	■	
		Sub-base valve	■	■	■	■	■	
5/2-way valve		In-line valve	-	-	■	■	■	
		Semi in-line valve	-	-	■	■	■	
		Sub-base valve	-	-	■	■	■	

Mounting options					
Voltage [V DC]		5	12	24	
Signal status display		None	None	None	Via LED
Horizontal plug connection (H2)					
	Direct mounting	■	■	■	■
	Manifold assembly	■	■	■	■
Vertical plug connection (H3)					
	Direct mounting	■	■	■	■
	Manifold assembly	■	■	■	■

Solenoid valves VOVG

Peripherals overview

In-line valve



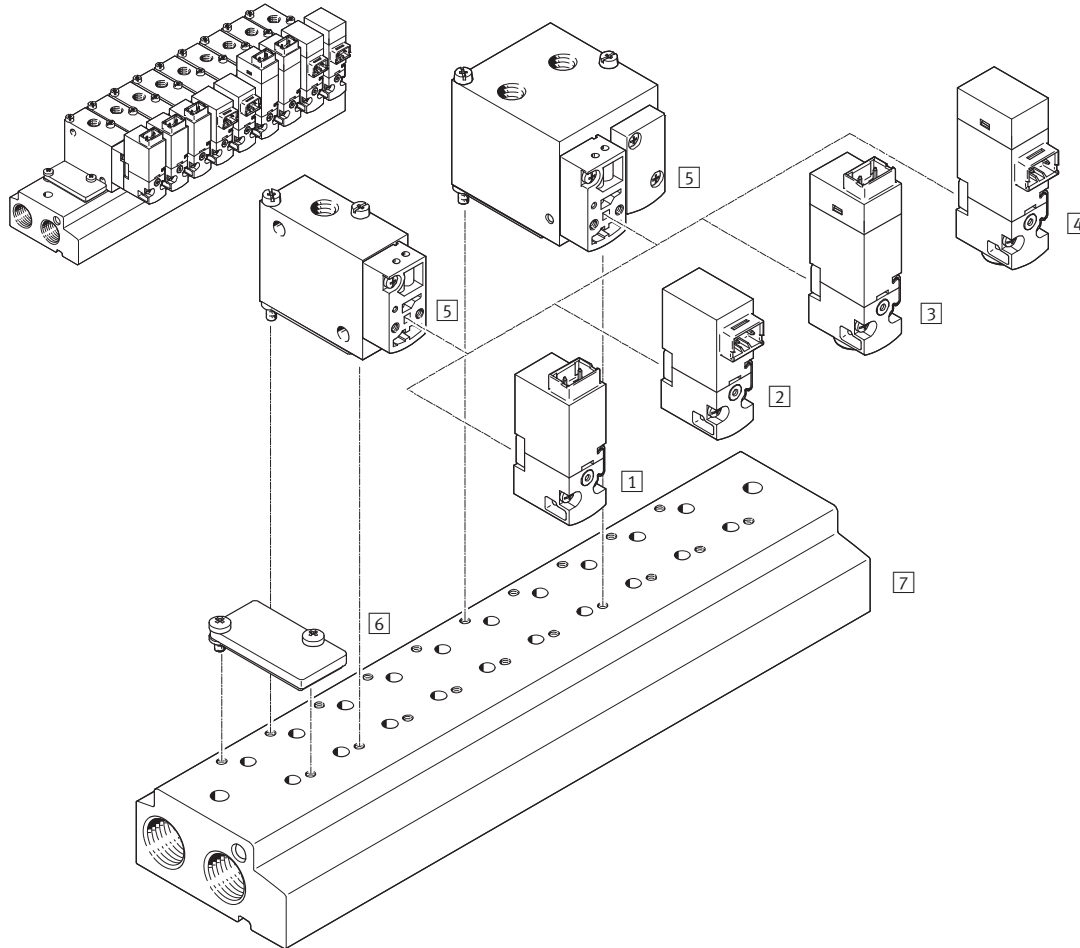
Component parts				
	Type	Brief description	→ Page/ Internet	
1	Inscription label	MH-BZ-80X	For identifying the solenoid valves	19
2	Plug socket with cable	NEBV	For solenoid coils	19
3	Pilot valve	-	Sub-assembly of the solenoid valve VOVG with vertical plug connection	8
4	Pilot valve	-	Sub-assembly of the solenoid valve VOVG with horizontal plug connection	
5	Pilot valve	-	Sub-assembly of the solenoid valve VOVG with vertical plug connection and LED	
6	Pilot valve	-	Sub-assembly of the solenoid valve VOVG with horizontal plug connection and LED	
7	Push-in fitting	QS/QSM	For standard O.D. tubing	18
8	Basic valves	-	Sub-assemblies of the solenoid valves VOVG	8
9	Silencer	U	For fitting on exhaust ports	18

Solenoid valves VOVG

System overview

FESTO

Manifold assembly – Semi in-line valves

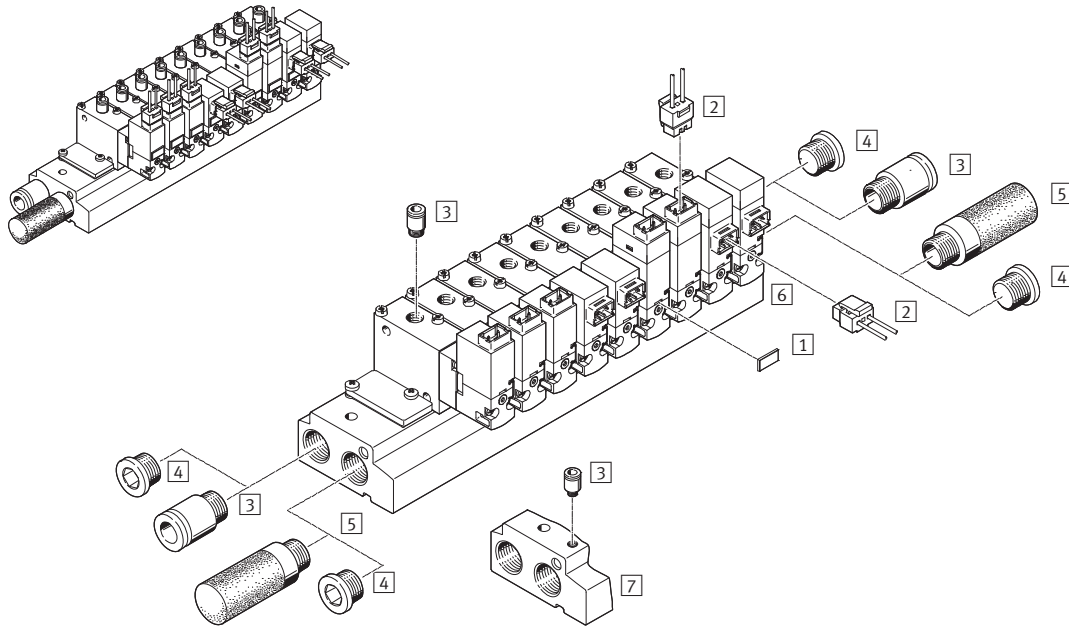


Component parts				
	Type	Brief description	→ Page/ Internet	
1	Pilot valve	–	Sub-assembly of the solenoid valve VOVG with vertical plug connection	8
2	Pilot valve	–	Sub-assembly of the solenoid valve VOVG with horizontal plug connection	
3	Pilot valve with LED	–	Sub-assembly of the solenoid valve VOVG with vertical plug connection and LED	
4	Pilot valve with LED	–	Sub-assembly of the solenoid valve VOVG with horizontal plug connection and LED	
5	Basic valves	–	Sub-assemblies of the solenoid valves VOVG	
6	Blanking plate	VABB-C7-12-W	For vacant positions	18
7	Manifold rail	VABM-C7-...	For semi in-line valves	16

Solenoid valves VOVG

Peripherals overview

Manifold assembly – Semi in-line valves with accessories



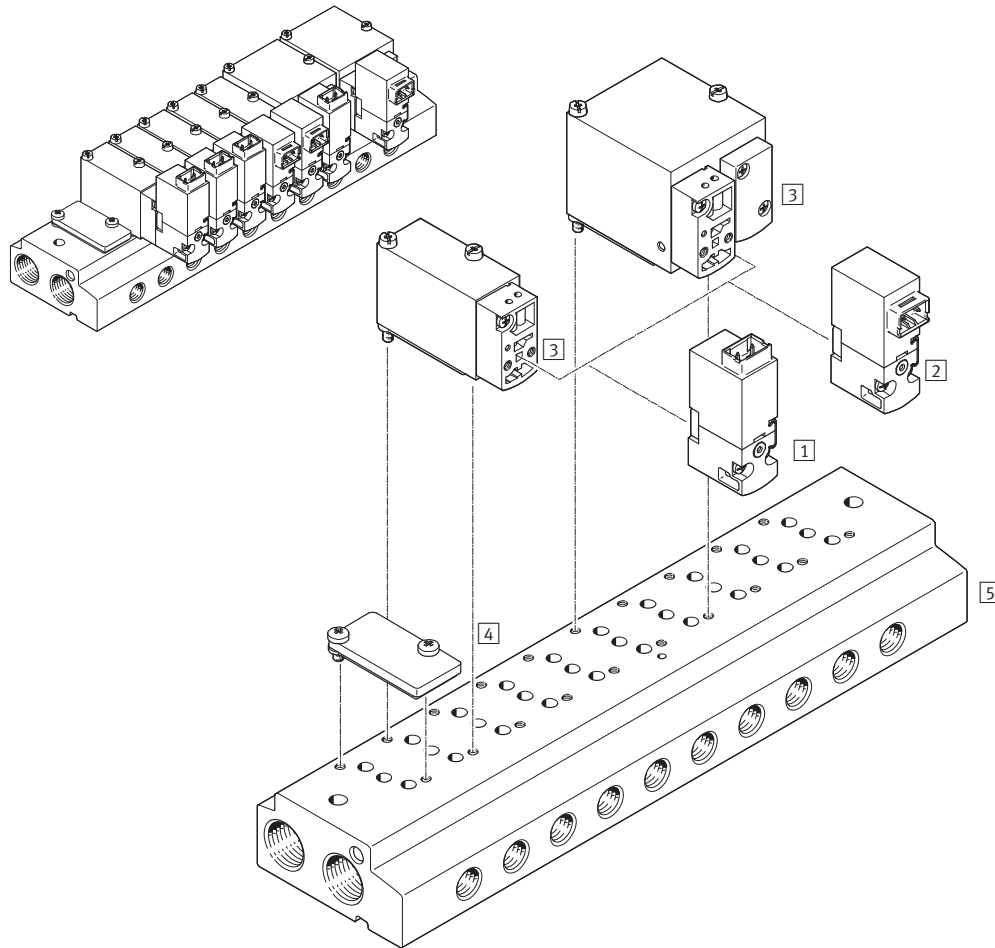
Component parts				
	Type	Brief description	→ Page/ Internet	
1	Inscription label	MH-BZ-80X	For identifying the solenoid valves	19
2	Plug socket with cable	NEBV	For solenoid coils	19
3	Push-in fitting	QS/QSM	For standard O.D. tubing	18
4	Blanking plug	B	For sealing unused ports	18
5	Silencer	U	For fitting on exhaust ports	18
6	Manifold rail	VABM-...-P...	Without port for external pilot air for valves with internal pilot air supply	16
7	Manifold rail	VABM-...-G...	With port for external pilot air	16

Solenoid valves VOVG

System overview

FESTO

Manifold assembly – Sub-base valves

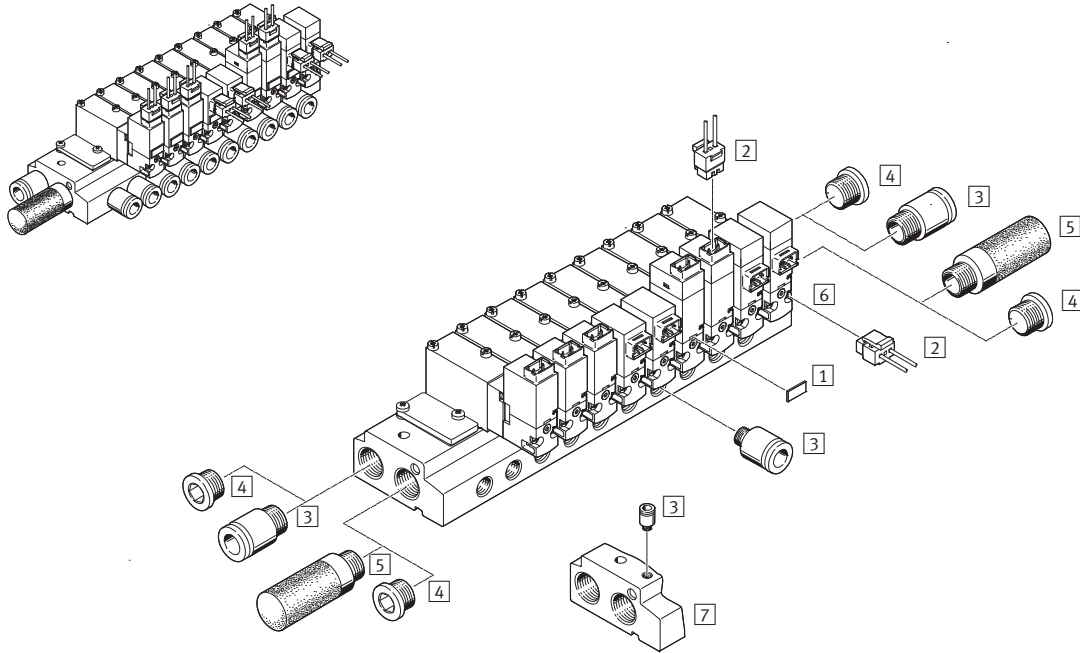


Component parts			
	Type	Brief description	→ Page/ Internet
1	–	Sub-assembly of the solenoid valve VOVG with vertical plug connection	8
2	–	Sub-assembly of the solenoid valve VOVG with horizontal plug connection	
3	–	Sub-assemblies of the solenoid valves VOVG	
4	VABB-C7-12-W	For vacant positions	18
5	VABM-C7-...	For sub-base valves	17

Solenoid valves VOVG

Peripherals overview

Manifold assembly – Sub-base valves with accessories



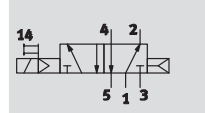
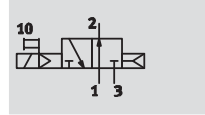
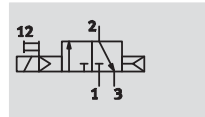
Component parts				
	Type	Brief description	→ Page/ Internet	
1	Inscription label	MH-BZ-80X	For identifying the solenoid valves	19
2	Plug socket with cable	NEBV	For solenoid coils	19
3	Push-in fitting	QS/QSM	For standard O.D. tubing	18
4	Blanking plug	B	For sealing unused ports	18
5	Silencer	U	For fitting on exhaust ports	18
6	Manifold rail	VABM-...-M...	Without port for external pilot air for valves with internal pilot air supply	17
7	Manifold rail	VABM-...-W...	With port for external pilot air	17

Solenoid valves VOVG

FESTO

Technical data

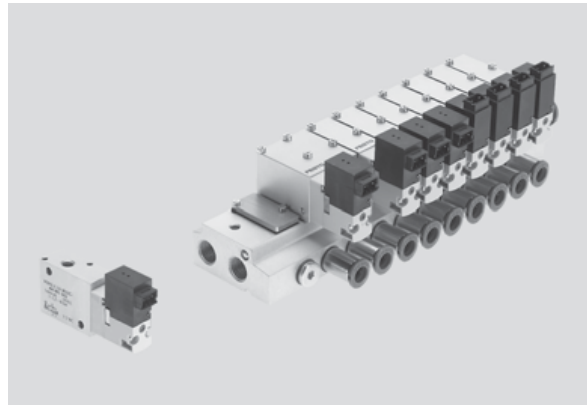
Function



Voltage
5, 12, 24 V DC

Pressure
-0.9 ... +8 bar

Temperature range
-5 ... +50 °C



General technical data							
Design	In-line valve		Semi in-line valve		Sub-base valve		
Valve function	3/2	5/2	3/2	5/2	3/2	5/2	
Memory stability	Single						
Constructional design	Piston spool						
Sealing principle	Soft						
Actuation type	Electrical						
Reset method	Pneumatic spring						
Type of control	Piloted						
Direction of flow	Non-reversible						
Exhaust function	Flow control						
Manual override	Non-detenting/detenting			Non-detenting			
Type of mounting	Via through-holes			On sub-base or manifold, via through-holes			
Mounting position	Any						
Nominal size	[mm]	2.1					
Standard nominal flow rate	[l/min]	200	180	180			
Width	[mm]	10/12	25	12	25	12	25
Switching time on/off	[ms]	12/10	15/18	12/10	15/18	12/10	15/18
Pneumatic connection	M5		Sub-base				

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 with internal pilot air supply	[bar] 2 ... 8
Operating pressure with external pilot air supply	[bar] -0.9 ... 8
Pilot pressure ¹⁾	[bar] 3 ... 8
Ambient temperature	[°C] -5 ... +50
Temperature of medium	[°C] -5 ... +50

1) The minimum pilot pressure (at port 12) is 4 bar with vacuum (at port 3) and ejector pulse (at port 1).

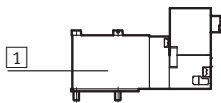
Solenoid valves VOVG



Technical data

Electrical data		
Operating voltage	[V DC]	5 ±10%, 12 ±10% or 24 ±10%
Type of connection		Plug connection
Power consumption	[W]	1
Duty cycle	[%]	100
Protection class to EN 60529		
With plug socket with cable NEBV		IP40

Materials



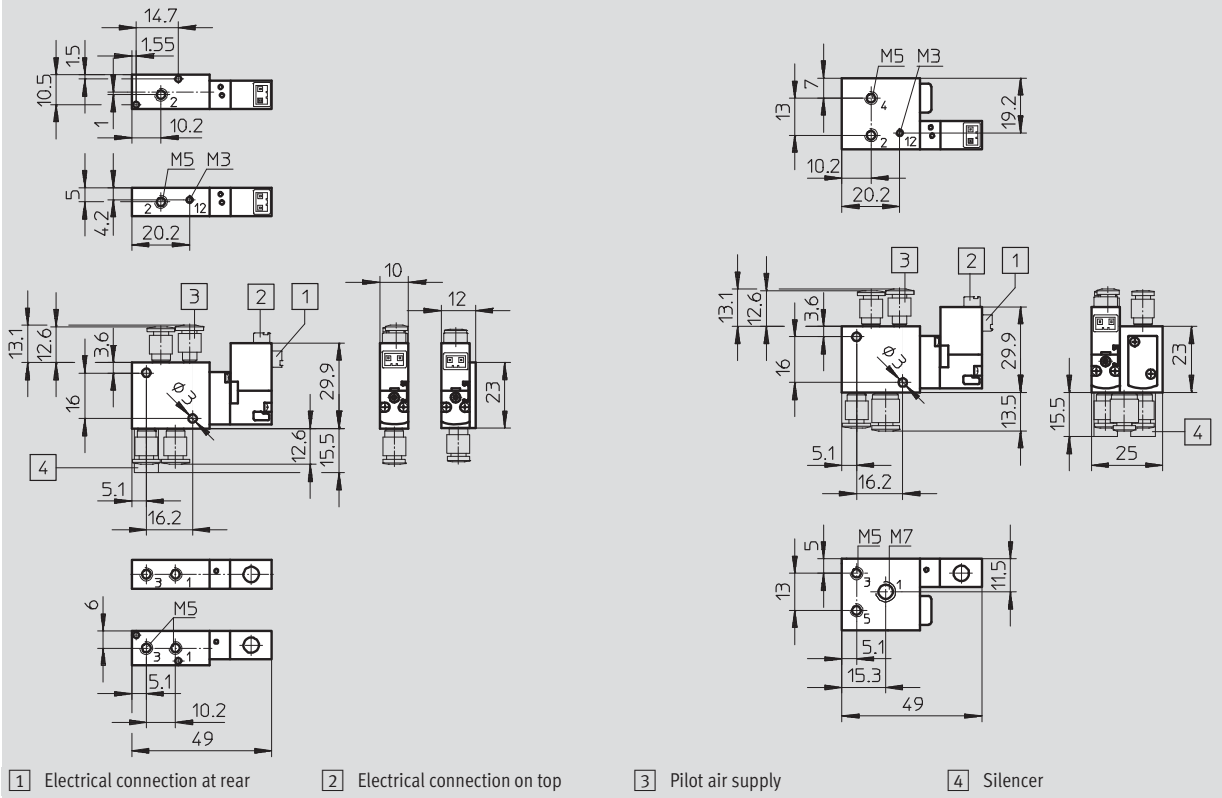
1	Housing	Aluminium
-	Seals	FPM, NBR, HNBR
-	Note on materials	RoHS-compliant

Dimensions – Valve

Download CAD data → www.festo.com

3/2-way in-line valve

5/2-way in-line valve



Solenoid valves VOVG

Technical data

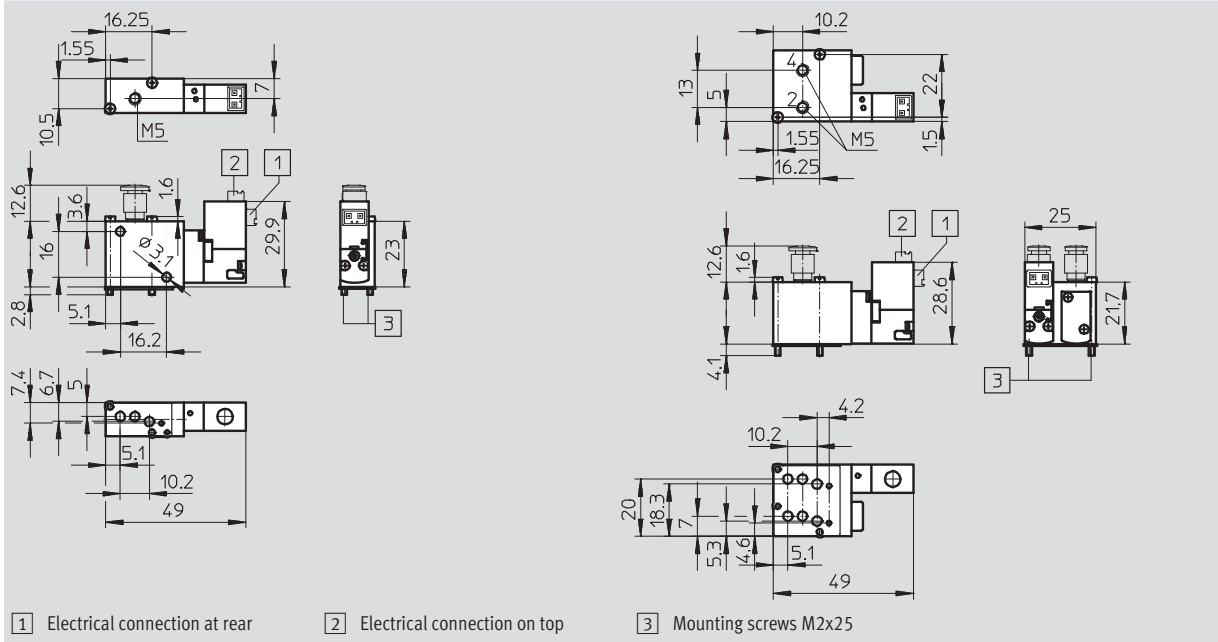
FESTO

Dimensions – Valve

Download CAD data → www.festo.com

3/2-way semi in-line valve

5/2-way semi in-line valve

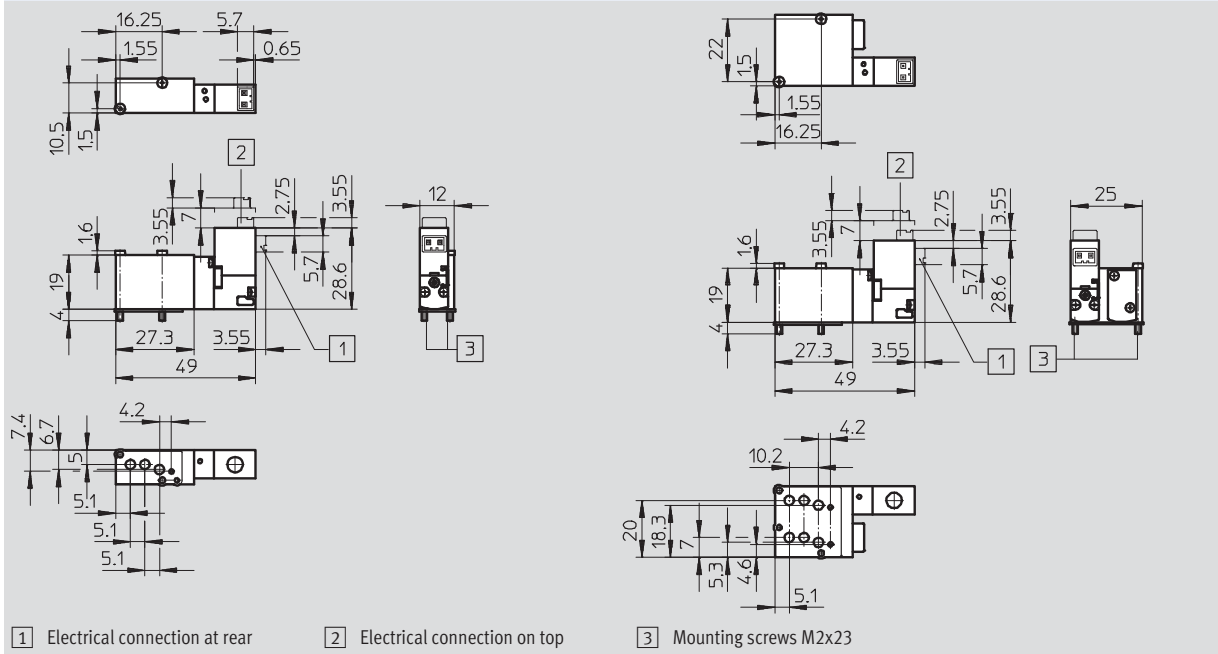


Dimensions – Valve

Download CAD data → www.festo.com

3/2-way sub-base valve

5/2-way sub-base valve



Solenoid valves VOVG

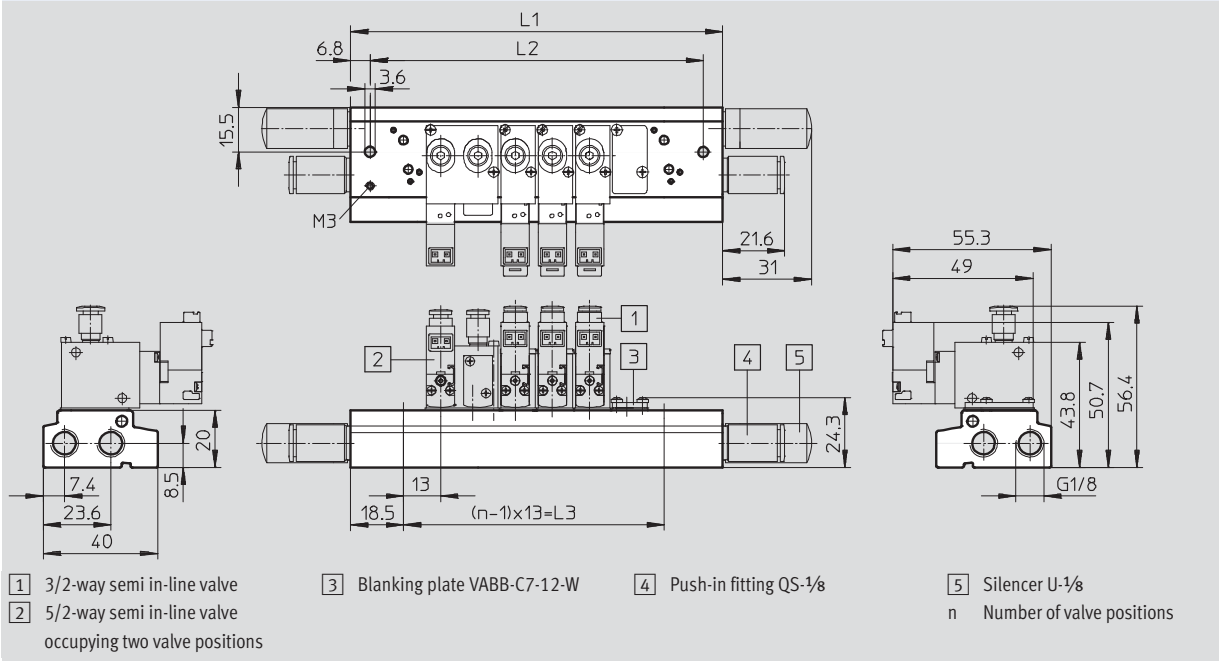
Technical data

FESTO

Dimensions – Manifold assembly

Download CAD data → www.festo.com

Semi in-line valve



Number of valve positions n	L1	L2 (-0/+0.4)	L3
2	52	38.4	13
3	65	51.4	26
4	78	64.4	39
5	91	77.4	52
6	104	90.4	65
7	117	103.4	78
8	130	116.4	91
9	143	129.4	104
10	156	142.4	117

Solenoid valves VOVG

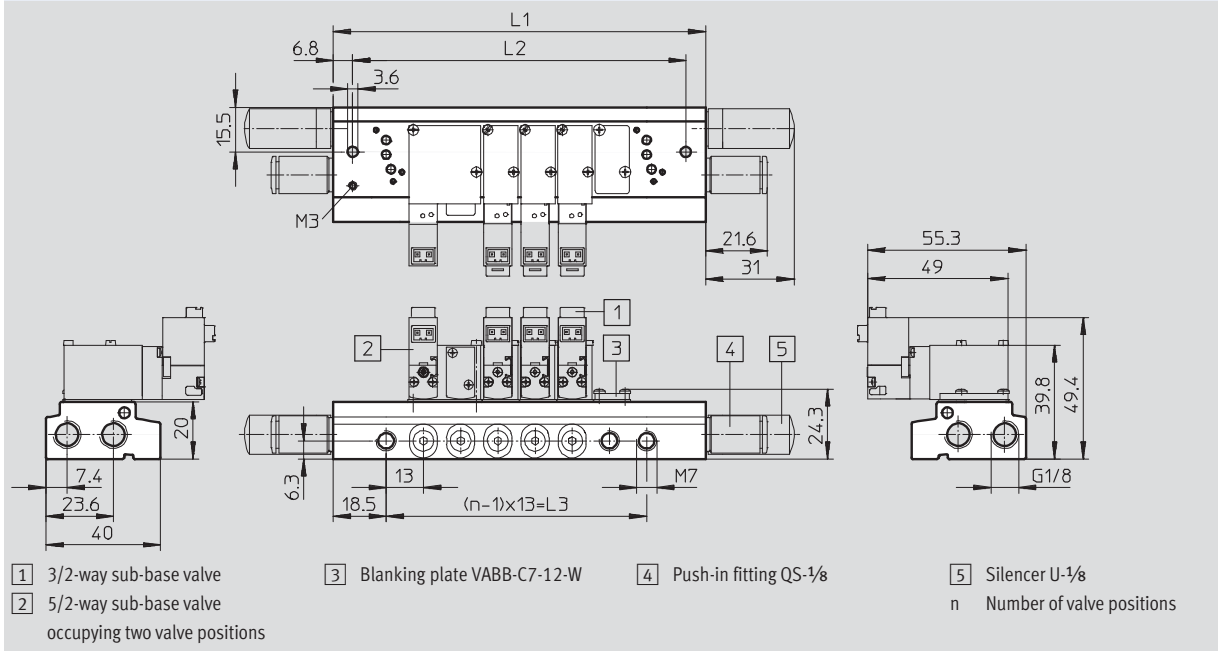
Technical data

FESTO

Dimensions – Manifold assembly

Download CAD data → www.festo.com

Sub-base valve



Number of valve positions n	L1	L2 (-0/+0.4)	L3
2	52	38.4	13
3	65	51.4	26
4	78	64.4	39
5	91	77.4	52
6	104	90.4	65
7	117	103.4	78
8	130	116.4	91
9	143	129.4	104
10	156	142.4	117

Solenoid valves VOVG

Ordering data

Ordering data							
Circuit symbol	Function	Normal position	Plug direction	Pilot air supply	Voltage ¹⁾	Part No.	Type
In-line valve							
	3/2-way, single solenoid	Closed	Horizontal	Internal	24 V DC	560 697	VOVG-L10-M32C-AH-M5-1H2
			Vertical			560 698	VOVG-L10-M32C-AH-M5-1H3
	3/2-way, single solenoid	Open	Horizontal	Internal	24 V DC	560 699	VOVG-L10-M32U-AH-M5-1H2
			Vertical			560 700	VOVG-L10-M32U-AH-M5-1H3
	5/2-way, single solenoid	–	Horizontal	Internal	24 V DC	560 701	VOVG-L12-M52Q-AH-M5-1H2
			Vertical			560 702	VOVG-L12-M52Q-AH-M5-1H3
Semi in-line valve							
	3/2-way, single solenoid	Closed	Horizontal	Internal	24 V DC	560 703	VOVG-S12-M32C-AH-M5-1H2
			Vertical			560 704	VOVG-S12-M32C-AH-M5-1H3
	3/2-way, single solenoid	Open	Horizontal	Internal	24 V DC	560 705	VOVG-S12-M32U-AH-M5-1H2
			Vertical			560 706	VOVG-S12-M32U-AH-M5-1H3
	5/2-way, single solenoid	–	Horizontal	Internal	24 V DC	560 707	VOVG-S12-M52Q-AH-M5-1H2
			Vertical			560 708	VOVG-L12-M52Q-AH-M5-1H3
Sub-base valve							
	3/2-way, single solenoid	Closed	Horizontal	Internal	24 V DC	560 709	VOVG-B12-M32C-AH-F-1H2
			Vertical			560 710	VOVG-B12-M32C-AH-F-1H3
	3/2-way, single solenoid	Open	Horizontal	Internal	24 V DC	560 711	VOVG-B12-M32U-AH-F-1H2
			Vertical			560 712	VOVG-B12-M32U-AH-F-1H3
	5/2-way, single solenoid	–	Horizontal	Internal	24 V DC	560 713	VOVG-B12-M52Q-AH-F-1H2
			Vertical			560 714	VOVG-B12-M52Q-AH-F-1H3

1) See modular system for other voltages

Solenoid valves VOVG

Ordering data – Modular products



Mandatory data Options →

Module No.	Valve	Valve type	Size	Valve function	Reset method	Pilot air supply
549438	VOVG	B S L	10 12	M32C M32U M52Q	A	- Z
Order example						
549438	VOVG	- S	12	- M32U	- A	

Ordering table		Condi- tions	Code	Enter code
<input checked="" type="checkbox"/> Module No.	549438			
Valve	Solenoid valve		VOVG	VOVG
Valve type	Sub-base valve		-B	
	Semi in-line valve		-S	
	In-line valve		-L	
Size	10 (200 l/min)	<input type="checkbox"/> 1	10	
	12 (200 l/min)		12	
Valve function	3/2-way valve, single solenoid, normally closed		-M32C	
	3/2-way valve, single solenoid, normally open		-M32U	
	5/2-way valve, single solenoid, 2 valve positions	<input type="checkbox"/> 8	-M52Q	
Reset method	Pneumatic spring		-A	-A
<input type="checkbox"/> Pilot air supply	Internal pilot air supply			
	External pilot air supply	<input type="checkbox"/> 9	Z	

10, D, U Not with valve type B, S

8 Z Not in combination with size 10

9 Z Not in combination with valve type L and size 12

Transfer order code

549 438 VOVG - - - A

Solenoid valves VOVG

Ordering data – Modular products



Options				Mandatory data			
Manual override	Pneumatic connection	Exhaust	Pilot exhaust	Nominal operating voltage	Electrical connection	Display	Electrical accessories
H D	F M5 Q3 Q4 Q6	- U	-	1 4 5	H2 H3	- L	W1, W2, W3, W4
H	- Q3	U	-	4	H3		+ W1

Ordering table		Condi- tions	Code	Enter code
M	Manual override	Pushing		H
		Pushing/detenting	1 2	D
	Pneumatic connection	Flange/sub-base	3	-F
		Metric thread M5	4	-M5
		Push-in connectors 3 mm	4	-Q3
		Push-in connectors 4 mm	4	-Q4
		Push-in connectors 6 mm	4	-Q6
O	Exhaust	Ducted		
		Silencer	1 5	U
	Pilot exhaust	Unducted		
M	Nominal operating voltage [V DC]	24		-1
		5		-4
		12		-5
	Electrical connection	Horizontal plug		H2
Vertical plug			H3	
O	Display	None		
		LED signal display	7	L
	Electrical accessories			+
	Connecting cable	Without sheath, 0.5 m		W1
		Without sheath, 1 m		W2
		Without sheath, 2.5 m		W3
		Without sheath, 5 m		W4

- 1 10, D, U Not with valve type B, S
- 2 D Not with nominal operating voltage 5 V DC, 12 V DC
- 3 F Not with valve type L, S

- 4 M5, Q3, Q4, Q6 Not with valve type B
- 5 U Not with pneumatic connection F, M5
- 7 L Not with nominal operating voltage 5 V DC, 12 V DC

Transfer order code

	-		-		+	
--	---	--	---	--	---	--

Solenoid valves VOVG

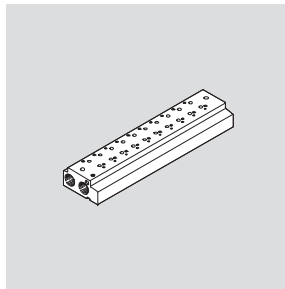
Technical data – Manifold rail



Manifold rail VABM-C7 for semi in-line valves

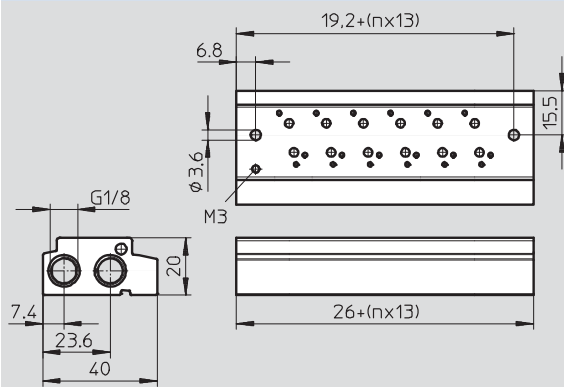
Material:
Wrought aluminium alloy

Note on materials
RoHS-compliant



Dimensions – Manifold rails for semi in-line valves

Download CAD data → www.festo.com



n Number of valve positions

Ordering data – Manifold rails for semi in-line valves

Valve positions n	Weight [g]	CRC	Part No.	Type
For valves with internal pilot air				
2	84	2 ¹⁾	552652	VABM-C7-12P-G18-2
3	105		552653	VABM-C7-12P-G18-3
4	126		552654	VABM-C7-12P-G18-4
5	147		552655	VABM-C7-12P-G18-5
6	168		552656	VABM-C7-12P-G18-6
7	189		552657	VABM-C7-12P-G18-7
8	210		552658	VABM-C7-12P-G18-8
9	231		552659	VABM-C7-12P-G18-9
10	252		552660	VABM-C7-12P-G18-10
For valves with external pilot air				
2	84	2 ¹⁾	552661	VABM-C7-12G-G18-2
3	105		552662	VABM-C7-12G-G18-3
4	126		552663	VABM-C7-12G-G18-4
5	147		552664	VABM-C7-12G-G18-5
6	168		552665	VABM-C7-12G-G18-6
7	189		552666	VABM-C7-12G-G18-7
8	210		552667	VABM-C7-12G-G18-8
9	231		552668	VABM-C7-12G-G18-9
10	252		552669	VABM-C7-12G-G18-10

1) Corrosion resistance class 2 as per 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 VOVG

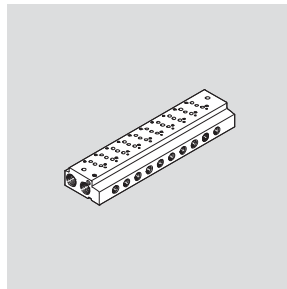
Technical data – Manifold rail



Manifold rail VABM-C7 for sub-base valves

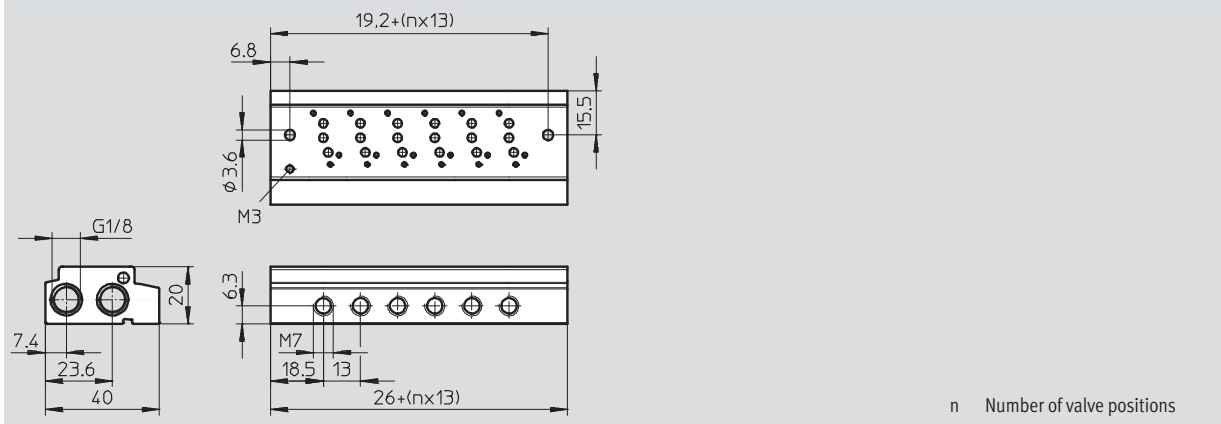
Material:
Wrought aluminium alloy

Note on materials
RoHS-compliant



Dimensions – Manifold rails for sub-base valves

Download CAD data → www.festo.com



Ordering data – Manifold rails for sub-base valves

Valve positions	Weight [g]	CRC	Part No.	Type
For valves with internal pilot air				
2	82	2 ¹⁾	549639	VABM-C7-12M-G18-2
3	102		549640	VABM-C7-12M-G18-3
4	122		549641	VABM-C7-12M-G18-4
5	142		549642	VABM-C7-12M-G18-5
6	162		549643	VABM-C7-12M-G18-6
7	182		549644	VABM-C7-12M-G18-7
8	202		549645	VABM-C7-12M-G18-8
9	222		549646	VABM-C7-12M-G18-9
10	242		549647	VABM-C7-12M-G18-10
For valves with external pilot air				
2	82	2 ¹⁾	549648	VABM-C7-12W-G18-2
3	102		549649	VABM-C7-12W-G18-3
4	122		549650	VABM-C7-12W-G18-4
5	142		549651	VABM-C7-12W-G18-5
6	162		549652	VABM-C7-12W-G18-6
7	182		549653	VABM-C7-12W-G18-7
8	202		549654	VABM-C7-12W-G18-8
9	222		549655	VABM-C7-12W-G18-9
10	242		549656	VABM-C7-12W-G18-10

1) Corrosion resistance class 2 as per 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 VOVG

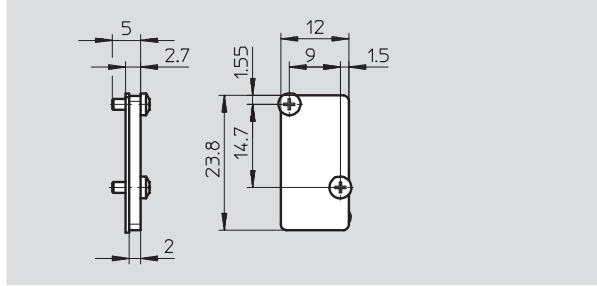
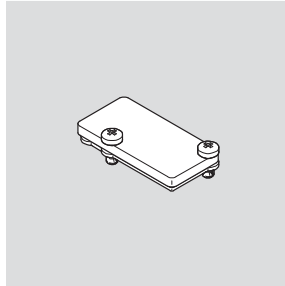
Accessories

FESTO

Blanking plate VABB-C7

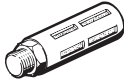

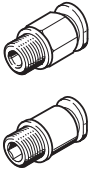
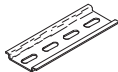
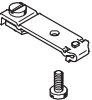
Material:
Blanking plate: Steel
Seal: NBR

Note on materials
RoHS-compliant




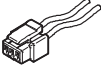
Ordering data				
	Weight [g]	CRC	Part No.	Type
Blanking plate for vacant positions	6	2 ¹⁾	552651	VABB-C7-12-W

1) Corrosion resistance class 2 as per 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.

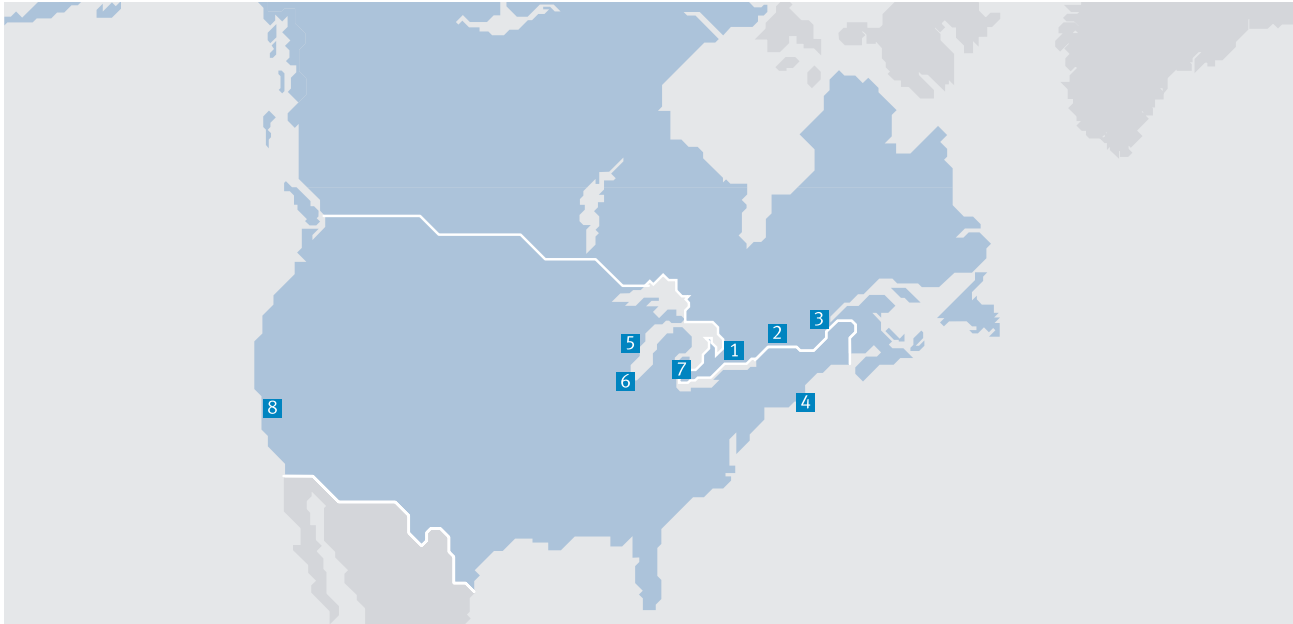
Ordering data – Accessories				
Designation			Part No.	Type
Silencer				
	Connecting thread G $\frac{1}{8}$		2307	U- $\frac{1}{8}$
			6841	U- $\frac{1}{8}$ -B
Blanking plug				
	Thread G $\frac{1}{8}$	10 pieces	3568	B- $\frac{1}{8}$
Push-in fitting				
	Connecting thread G $\frac{1}{8}$ for tubing O.D.	6 mm (10 pieces)	153002	QS- $\frac{1}{8}$ -6
		8 mm (10 pieces)	153004	QS- $\frac{1}{8}$ -8
	Connecting thread M3 for tubing O.D.	3 mm (10 pieces)	153312	QSM-M3-3-I
		3 mm (10 pieces)	153313	QSM-M5-3-I
	Connecting thread M5 for tubing O.D.	4 mm (10 pieces)	153315	QSM-M5-4-I
		6 mm (10 pieces)	153317	QSM-M5-6-I
Connecting thread M7 for tubing O.D.	4 mm (10 pieces)	153319	QSM-M7-4-I	
	6 mm (10 pieces)	153321	QSM-M7-6-I	
H-rail				
			35430	NRH-35-2000
Mounting				
	For H-rail		527392	CPASC1-BG-NRH

Solenoid valves VOVG

Accessories

Ordering data – Accessories			
Designation		Part No.	Type
Inscription label			
	For identifying the valve positions	80 pieces	197259 MH-BZ-80X
Plug socket with cable			
	For 1 coil, 2-wire	0.5 m	566654 NEBV-H1G2-KN-0.5-N-LE2
		1 m	566655 NEBV-H1G2-KN-1-N-LE2
		2.5 m	566656 NEBV-H1G2-KN-2.5-N-LE2
		5 m	566657 NEBV-H1G2-KN-5-N-LE2

Festo North America



1 Festo Canada Headquarters
Festo Inc.
5300 Explorer Drive
Mississauga, ON
L4W 5G4

2 Montréal
5600, Trans-Canada
Pointe-Claire, QC
H9R 1B6

3 Québec City
2930, rue Watt#117
Québec, QC
G1X 4G3



4 Festo United States Headquarters
Festo Corporation
395 Moreland Road
Hauppauge, NY
11788

5 Appleton
North 922 Tower View Drive, Suite N
Greenville, WI
54942

7 Detroit
1441 West Long Lake Road
Troy, MI
48098

6 Chicago
85 W Algonquin - Suite 340
Arlington Heights, IL
60005

8 Silicon Valley
4935 Southfront Road, Suite F
Livermore, CA
94550

Festo Regional Contact Center

Canadian Customers

Commercial Support:
Tel: 1 877 GO FESTO (1 877 463 3786)
Fax: 1 877 FX FESTO (1 877 393 3786)
Email: festo.canada@ca.festo.com

Technical Support:
Tel: 1 866 GO FESTO (1 866 463 3786)
Fax: 1 877 FX FESTO (1 877 393 3786)
Email: technical.support@ca.festo.com

USA Customers

Commercial Support:
Tel: 1 800 99 FESTO (1 800 993 3786)
Fax: 1 800 96 FESTO (1 800 963 3786)
Email: customer.service@us.festo.com

Technical Support:
Tel: 1 866 GO FESTO (1 866 463 3786)
Fax: 1800 96 FESTO (1 800 963 3786)
Email: product.support@us.festo.com