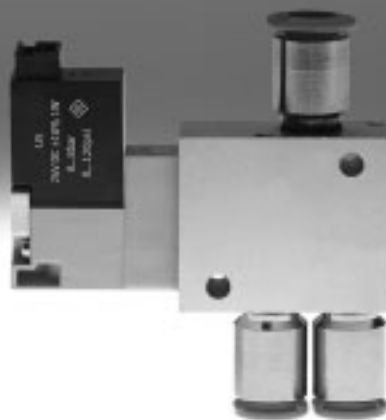


Valve series VOVG

FESTO



Solenoid valves VOVG

Product range overview



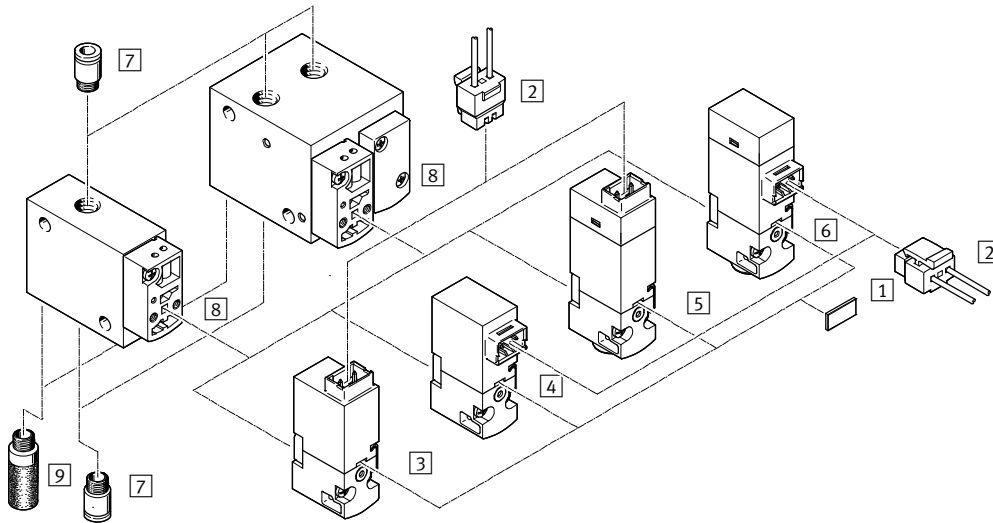
Function	Symbol	Version	Normally		Voltage [V DC]			→ Page/ Internet
			open	closed	5	12	24	
3/2-way valve		In-line valve	■	■	■	■	■	8/vovg
		Semi in-line valve	■	■	■	■	■	
		Sub-base valve	■	■	■	■	■	
5/2-way valve		In-line valve	-	-	■	■	■	
		Semi in-line valve	-	-	■	■	■	
		Sub-base valve	-	-	■	■	■	

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



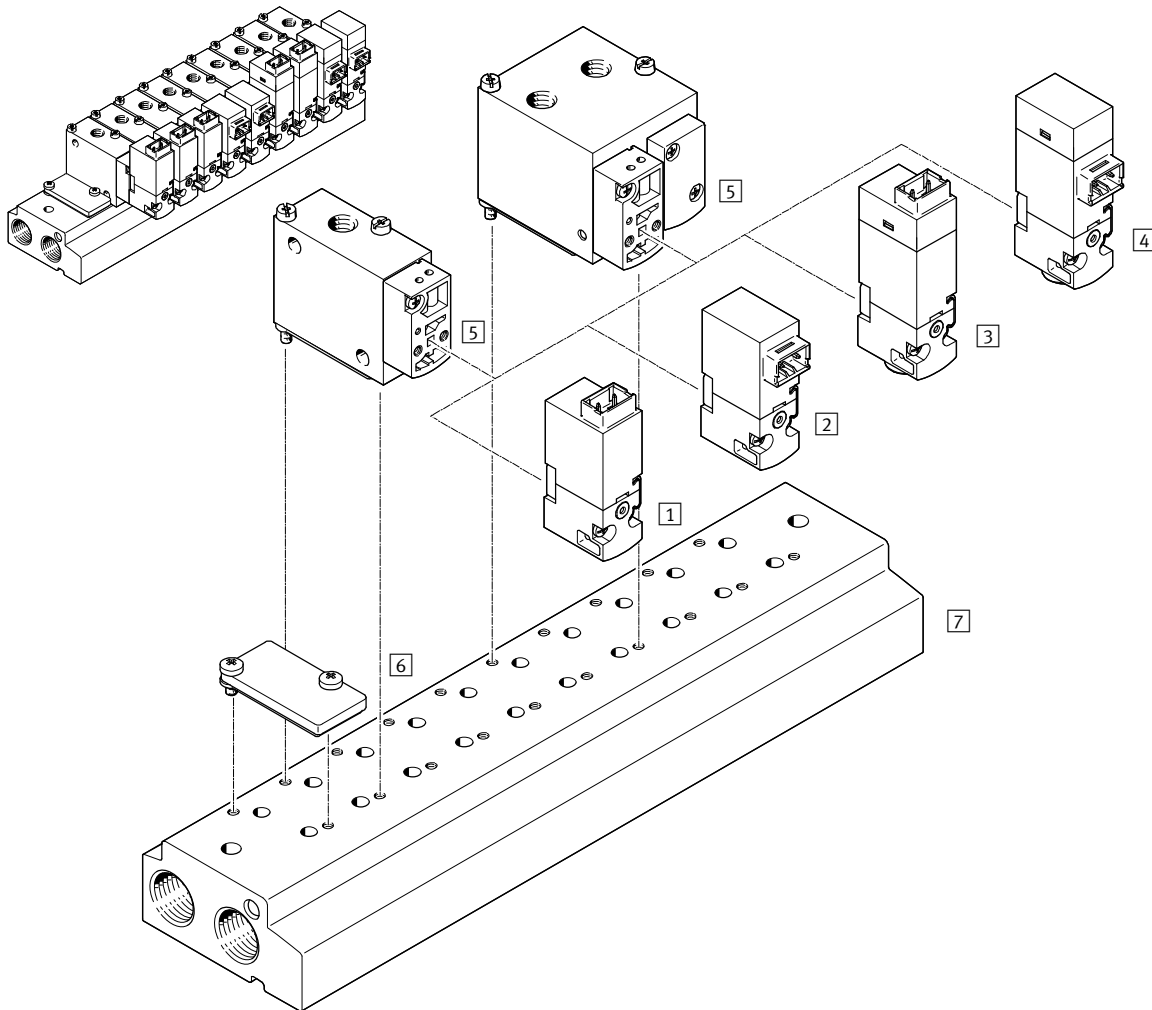
Component parts			
	Type	Brief description	→ Page/ Internet
1	MH-BZ-80X	For identifying the solenoid valves	19
2	NEBV	For solenoid coils	19
3	–	Sub-assembly of the solenoid valve VOVG with vertical plug connection	8
4	–	Sub-assembly of the solenoid valve VOVG with horizontal plug connection	
5	–	Sub-assembly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

Solenoid valves VOVG

System overview

FESTO

Manifold assembly – Semi in-line valves

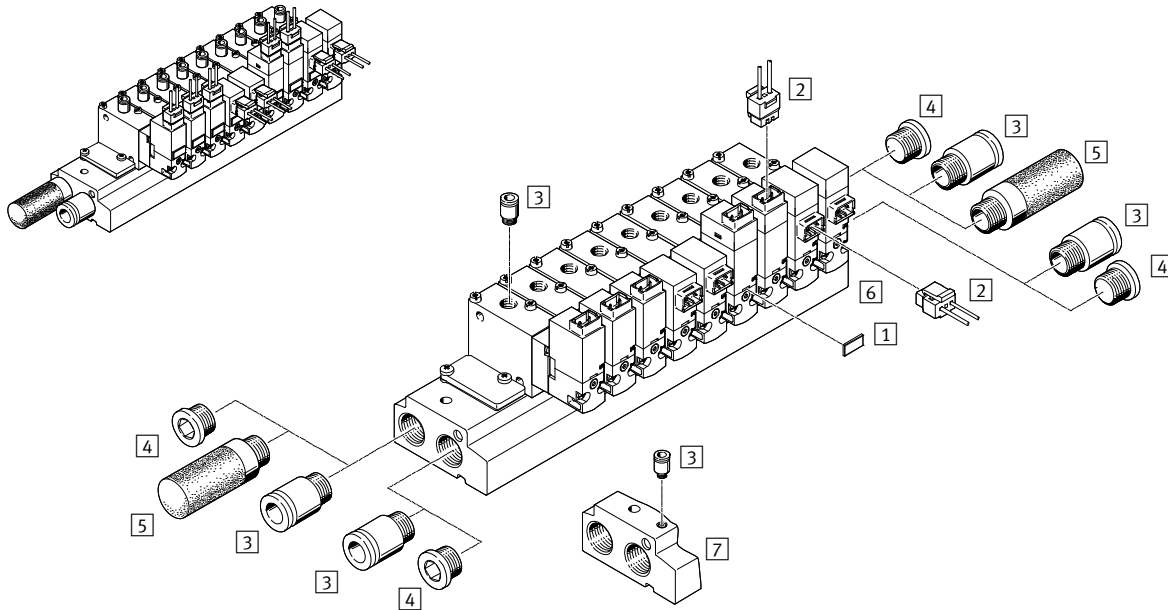


Component parts			
	Type	Brief description	→ Page/ Internet
1	–	Sub-assembly of the solenoid valve VOVG with vertical plug connection	8
2	–	Sub-assembly of the solenoid valve VOVG with horizontal plug connection	
3	–	Sub-assembly of the solenoid valve VOVG with vertical plug connection and LED	
4	–	Sub-assembly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

Solenoid valves VOVG

Peripherals overview

Manifold assembly – Semi in-line valves with accessories



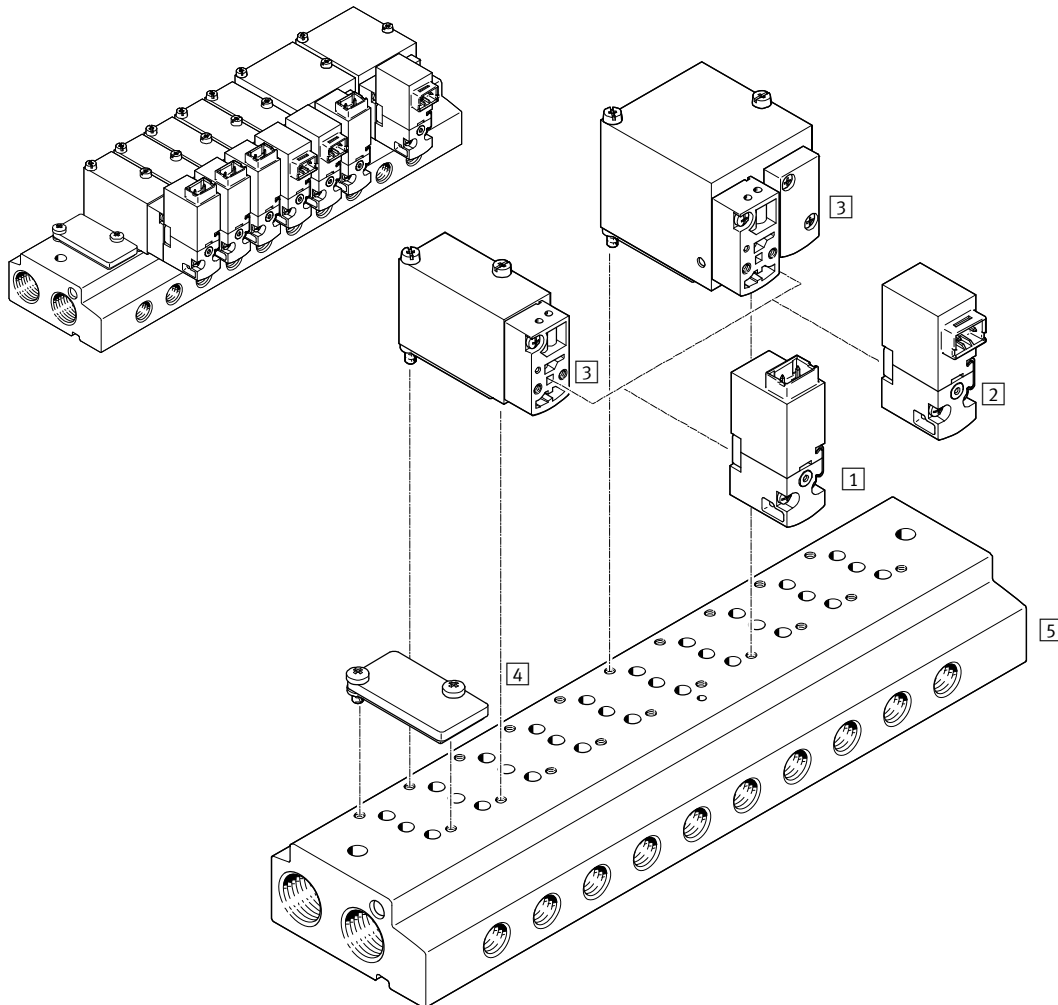
Component parts			
	Type	Brief description	→ Page/ Internet
1	MH-BZ-80X	Inscription label For identifying the solenoid valves	19
2	NEBV	Plug socket with cable For solenoid coils	19
3	QS/QSM	Push-in fitting For standard O.D. tubing	18
4	B	Blanking plug For sealing unused ports	18
5	U	Silencer For fitting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

Solenoid valves VOVG

System overview

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Manifold assembly – Sub-base valves

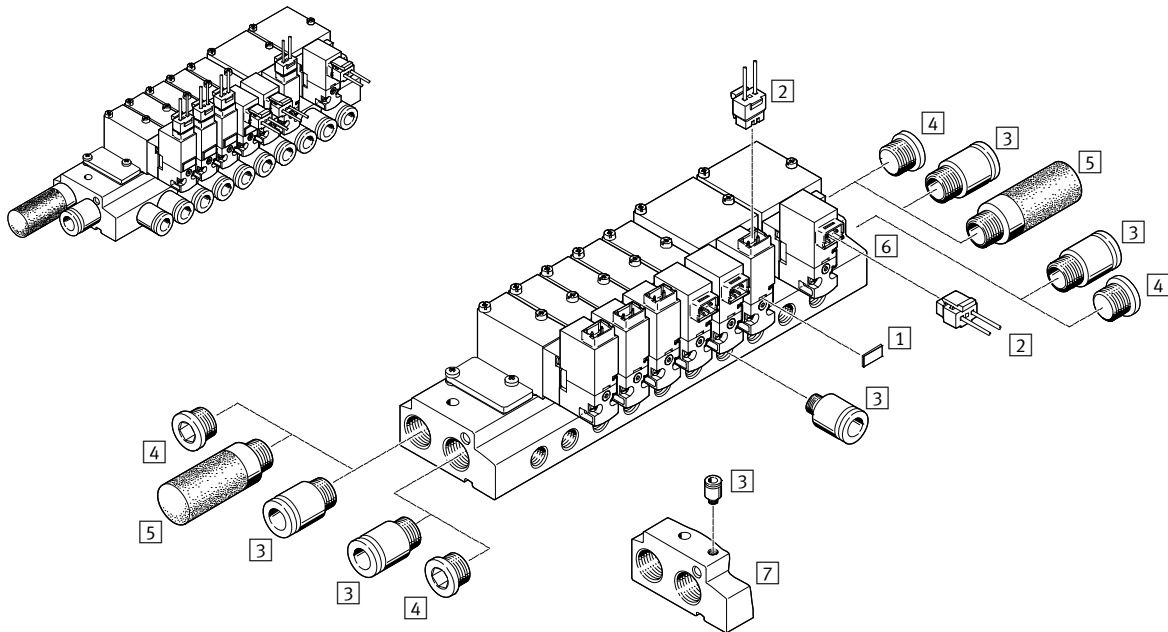


Component parts			
	Type	Brief description	→ Page/ Internet
1	–	Sub-assembly of the solenoid valve VOVG with vertical plug connection	8
2	–	Sub-assembly of the solenoid valve VOVG with horizontal plug connection	
3	–	Sub-assemblies of the solenoid valves VOVG	
4	VABB-C7-12-W	For vacant positions	44
5	VABM-C7-...	For sub-base valves	17

Solenoid valves VOVG

Peripherals overview

Manifold assembly – Sub-base valves with accessories



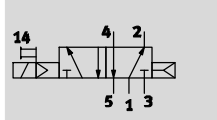
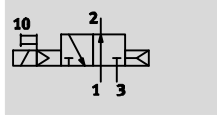
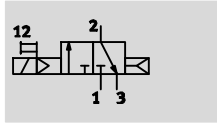
Component parts			
	Type	Brief description	→ Page/ Internet
1	MH-BZ-80X	Inscription label For identifying the solenoid valves	19
2	NEBV	Plug socket with cable For solenoid coils	19
3	QS/QSM	Push-in fitting For standard O.D. tubing	18
4	B	Blanking plug For sealing unused ports	18
5	U	Silencer For fitting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


Solenoid valves VOVG


Technical data


FESTO

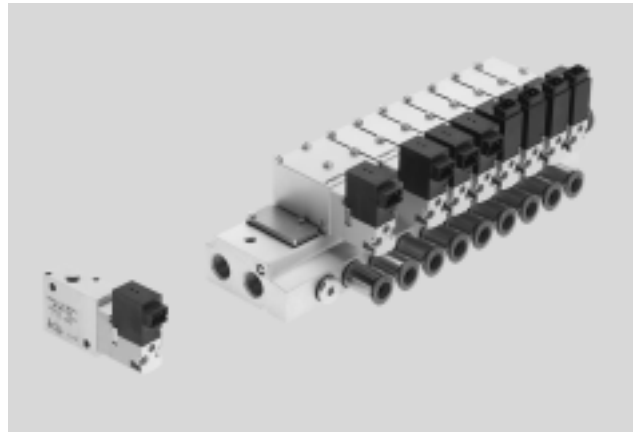
Function



-  - 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						
Lap	Overlap						
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

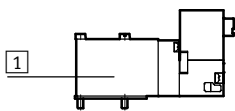
1) The minimum pilot pressure (at port 12) is 4 bar with vacuum (at port 3) and ejector pulse (at port 1).

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



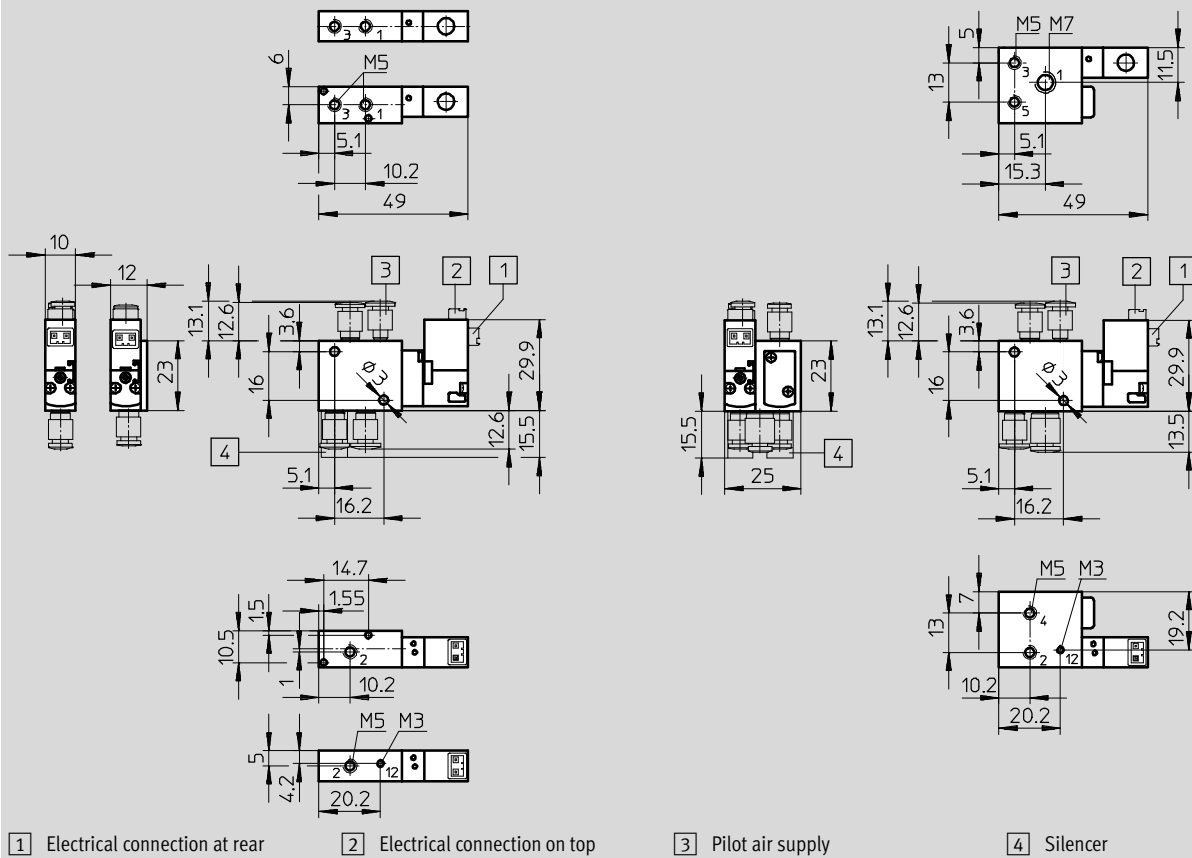
1	Housing	Aluminium
-	Seals	FPM, NBR, HNBR
-	Note on materials	RoHS-compliant

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

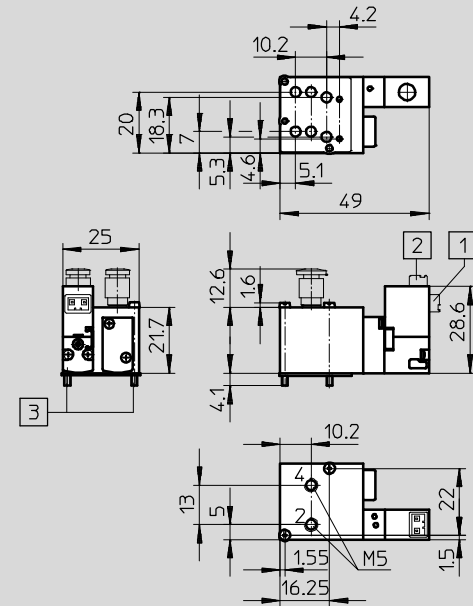
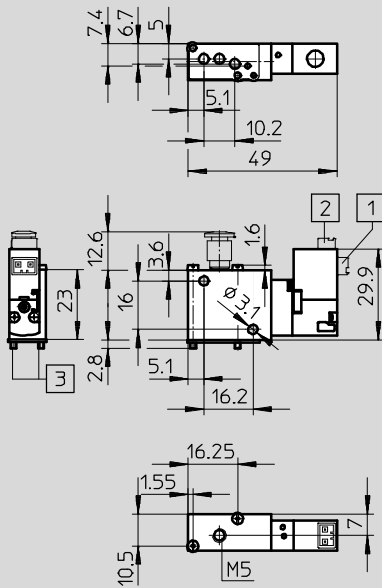
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Dimensions – Valve

Download CAD data → www.festo.com

3/2-way semi in-line valve

5/2-way semi in-line valve



1 Electrical connection at rear

2 Electrical connection on top

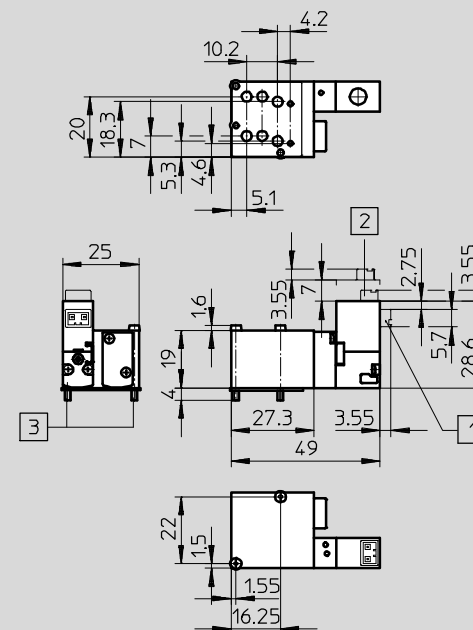
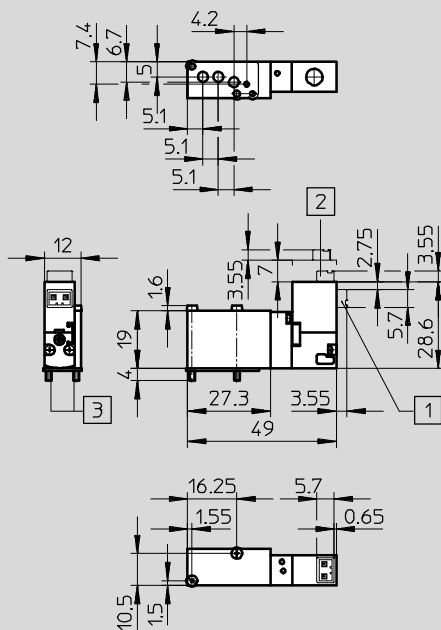
3 Mounting screws M2x25

Dimensions – Valve

Download CAD data → www.festo.com

3/2-way sub-base valve

5/2-way sub-base valve



1 Electrical connection at rear

2 Electrical connection on top

3 Mounting screws M2x23

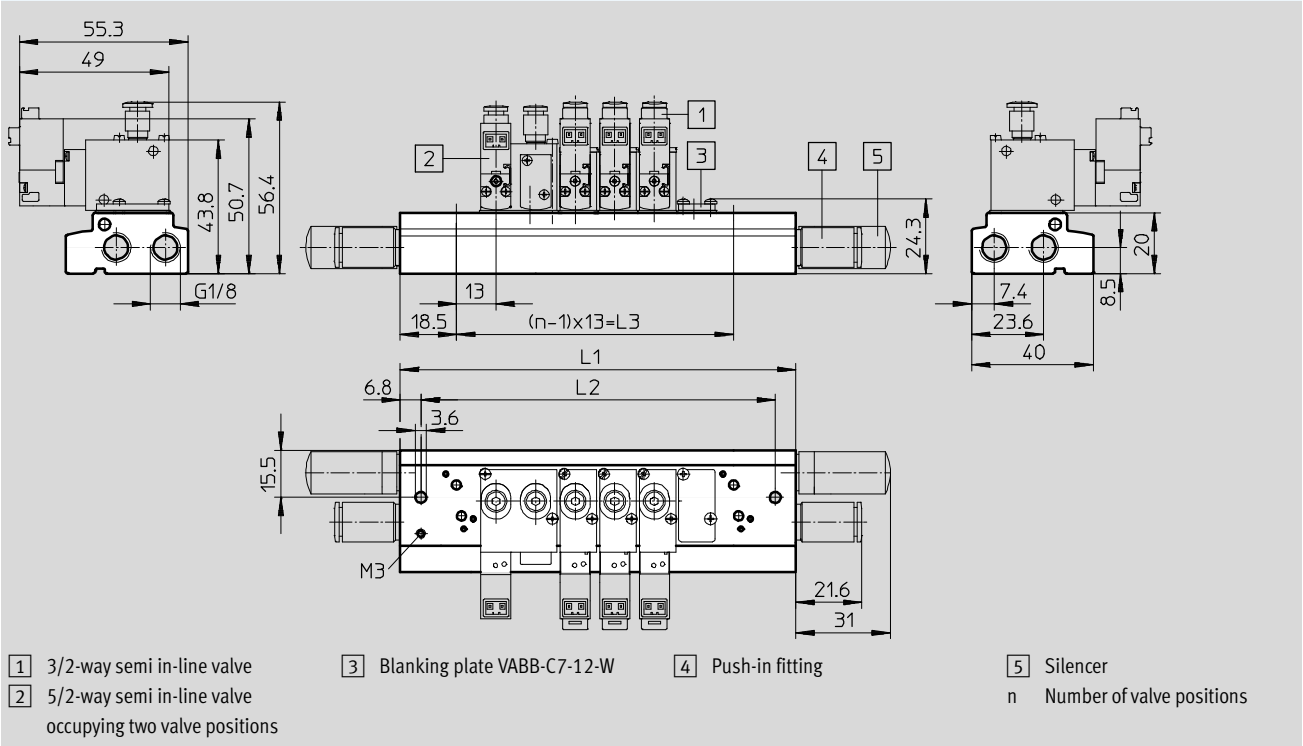
Solenoid valves VOVG

Technical data

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

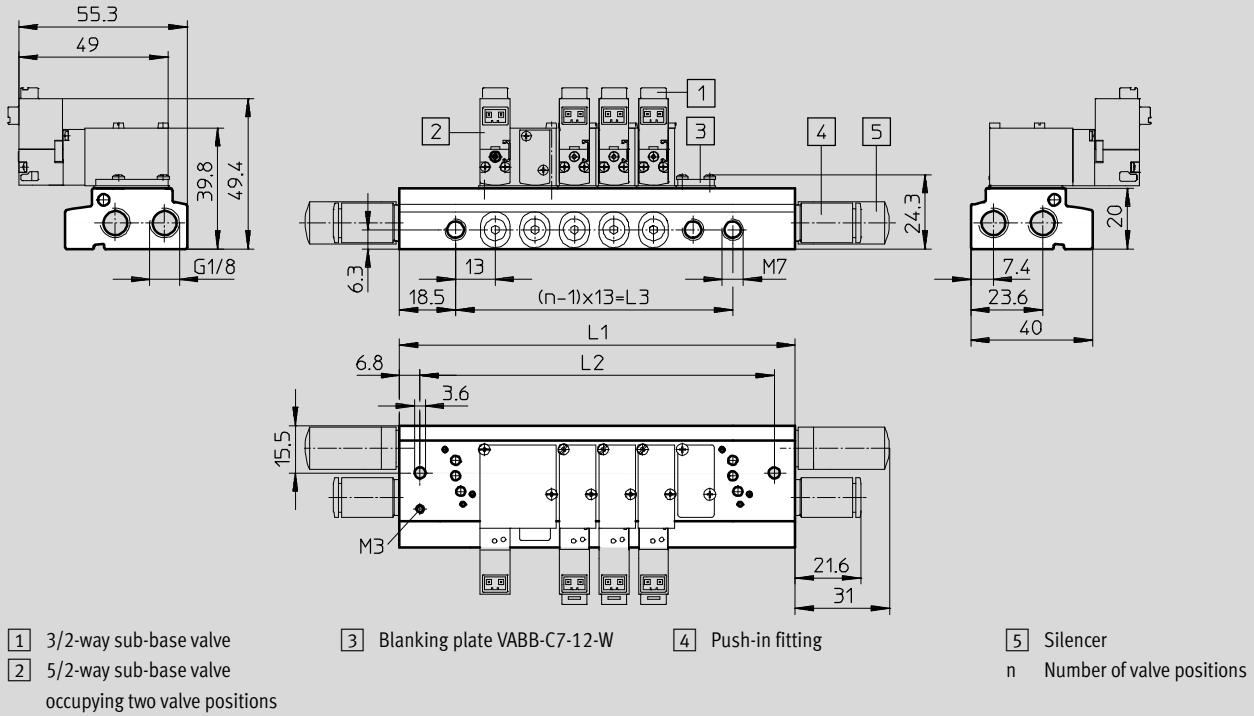
Technical data

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Dimensions – Manifold assembly

Download CAD data → www.festo.com

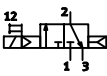
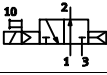
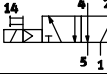
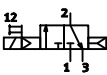
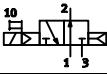
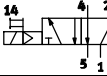
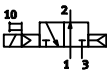
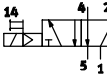
Sub-base valve



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
		Open	Horizontal			560 699	VOVG-L10-M32U-AH-M5-1H2
			Vertical			560 700	VOVG-L10-M32U-AH-M5-1H3
	5/2-way, single solenoid	–	Horizontal			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
		Open	Horizontal			560 705	VOVG-S12-M32U-AH-M5-1H2
			Vertical			560 706	VOVG-S12-M32U-AH-M5-1H3
	5/2-way, single solenoid	–	Horizontal			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
		Open	Horizontal			560 711	VOVG-B12-M32U-AH-F-1H2
			Vertical			560 712	VOVG-B12-M32U-AH-F-1H3
	5/2-way, single solenoid	–	Horizontal			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



M Mandatory data **O** 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
M	Module No.		549438	
	Valve		Solenoid valve	VOVG
	Valve type		Sub-base valve	-B
			Semi in-line valve	-S
			In-line valve	-L
	Size		10 (200 l/min)	10
		1	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	-M52Q
	Reset method		Pneumatic spring	-A
O	Pilot air supply		Internal pilot air supply	
↓			External pilot air supply	Z
		9		

1 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



[M] Options				[M] 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**

[5] **U**

[7] **L**

Not with valve type B

Not with pneumatic connection F, M5

Not with nominal operating voltage 5 V DC, 12 V DC

Transfer order code

	–		–		+	
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Solenoid valves VOVG

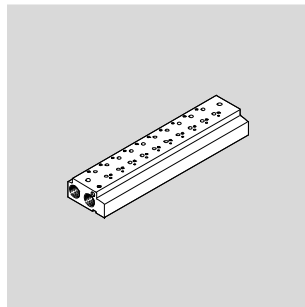
Technical data – Manifold rail



Manifold rail VABM-C7 for semi in-line valves

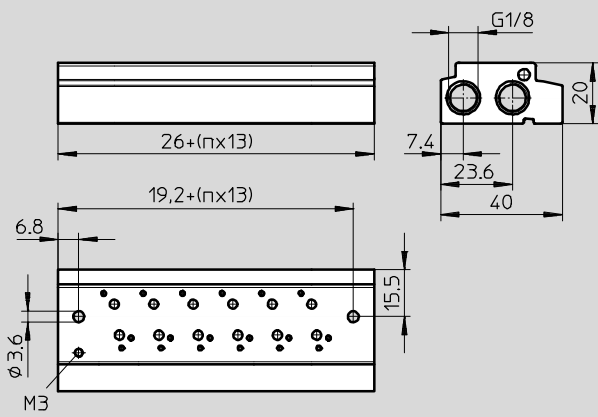
Material:
Wrought aluminium alloy

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 CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Solenoid valves VOVG

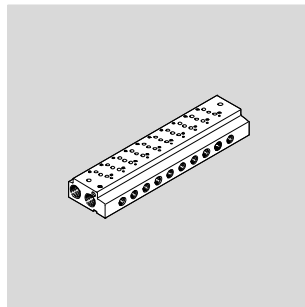
Technical data – Manifold rail



Manifold rail VABM-C7 for sub-base valves

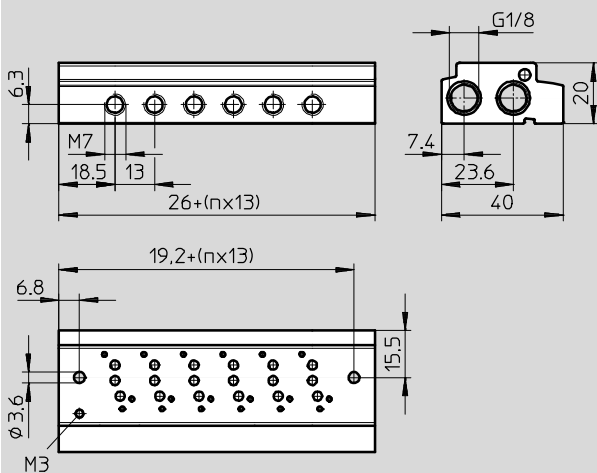
Material:
Wrought aluminium alloy

Note on materials
RoHS-compliant



Dimensions – Manifold rails for sub-base valves

Download CAD data → www.festo.com



n Number of valve positions

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 CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Solenoid valves VOVG

Accessories

FESTO

Blanking plate VABB-C7

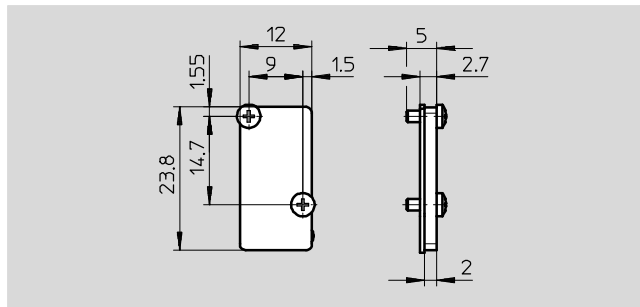
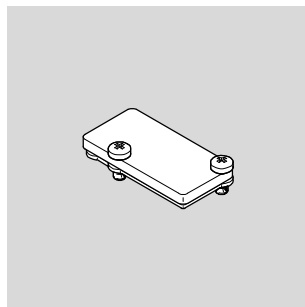
Material:

Blanking plate: Steel

Seal: NBR

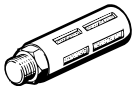

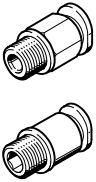
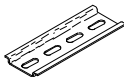
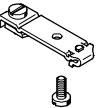
Note on materials

RoHS-compliant



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


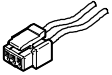
1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Ordering data – Accessories					
Designation			Part No.	Type	
Silencer					
	Connecting thread G1/8	Polymer version	2307	U-1/8	
		Metal version	6841	U-1/8-B	
Blanking plug					
	Thread G1/8	10 pieces	3568	B-1/8	
Push-in fitting					
	Connecting thread G1/8 for tubing O.D.	6 mm (10 pieces)	153002	QS-1/8-6	
		8 mm (10 pieces)	153004	QS-1/8-8	
	Connecting thread M3 for tubing O.D.	3 mm (10 pieces)	153312	QSM-M3-3-I	
		Connecting thread M5 for tubing O.D.	3 mm (10 pieces)	153313	QSM-M5-3-I
			4 mm (10 pieces)	153315	QSM-M5-4-I
		Connecting thread M7 for tubing O.D.	6 mm (10 pieces)	153317	QSM-M5-6-I
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

FESTO

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