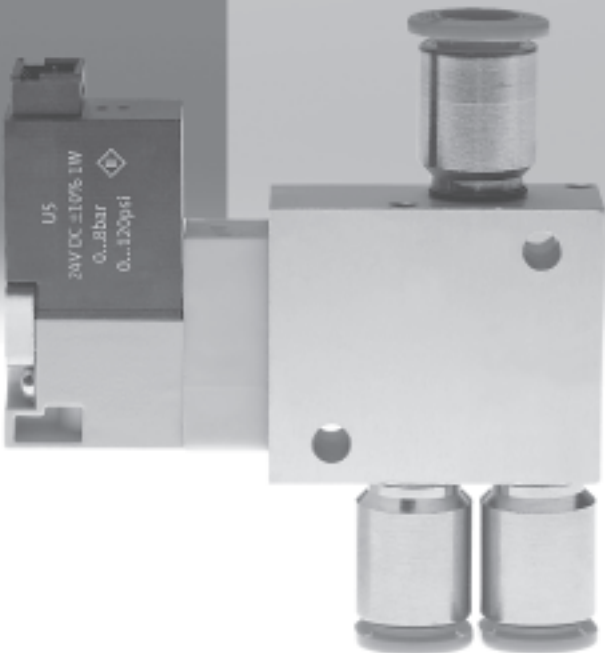


Valve series VOVG



# Solenoid valves VOVG

Product range overview

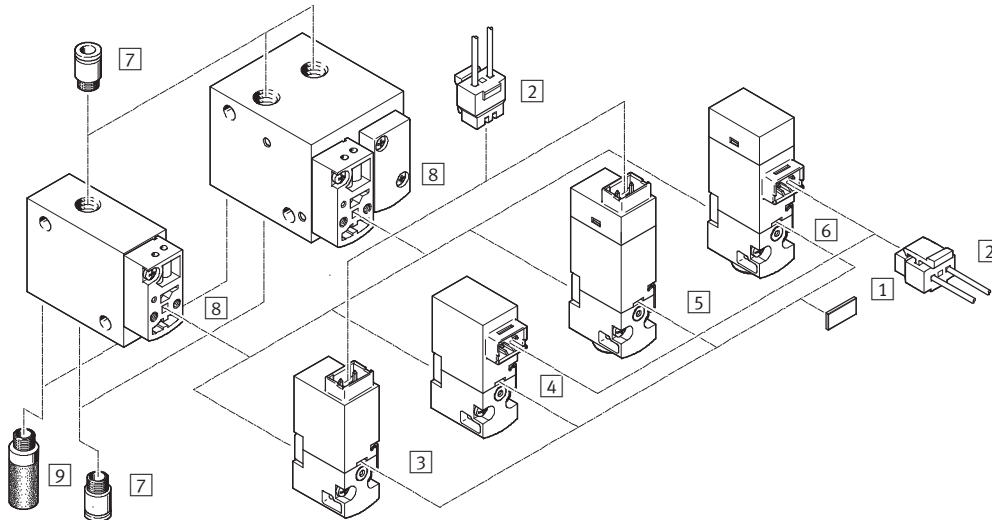
Function	Symbol	Version	Normally		Voltage [V DC]			→ Page/ Internet
			open	closed	5	12	24	
3/2-way valve		In-line valve	■	■	■	■	■	8/vovg
		Semi in-line valve	■	■	■	■	■	
		Sub-base valve	■	■	■	■	■	
5/2-way valve		In-line valve	-	-	■	■	■	
		Semi in-line valve	-	-	■	■	■	
		Sub-base valve	-	-	■	■	■	

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

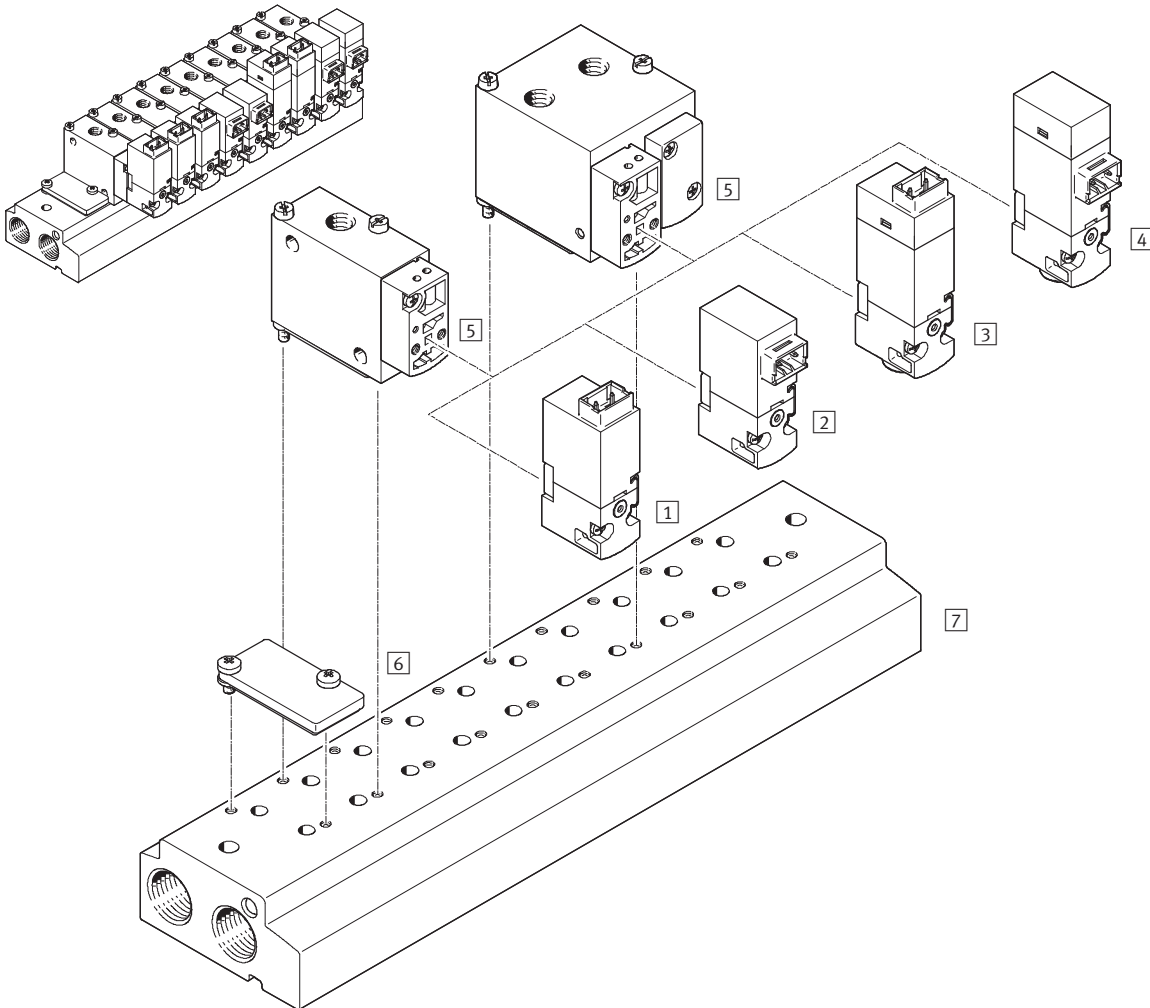


Component parts				
	Type	Brief description	→ Page/ Internet	
1	Inscription label	MH-BZ-80X	For identifying the solenoid valves	19
2	Plug socket with cable	KMH	For solenoid coils	19
3	Pilot valve	-	Sub-assembly of the solenoid valve VOVG with vertical plug connection	8
4	Pilot valve	-	Sub-assembly of 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

## Manifold assembly – Semi in-line valves

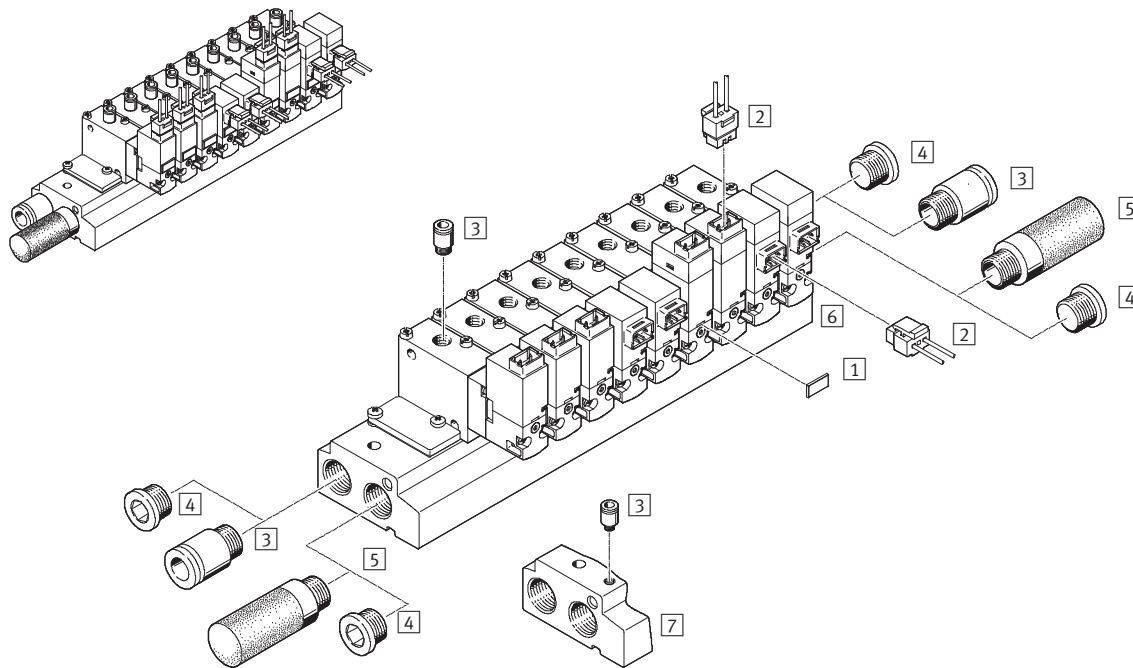


Component parts			
	Type	Brief description	→ Page/ Internet
1	–	Sub-assembly of the solenoid valve VOVG with vertical plug connection	8
2	–	Sub-assembly of the solenoid valve VOVG with horizontal plug connection	
3	–	Sub-assembly of the solenoid valve VOVG with vertical plug connection and LED	
4	–	Sub-assembly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

# Solenoid valves VOVG

Peripherals overview

## Manifold assembly – Semi in-line valves with accessories

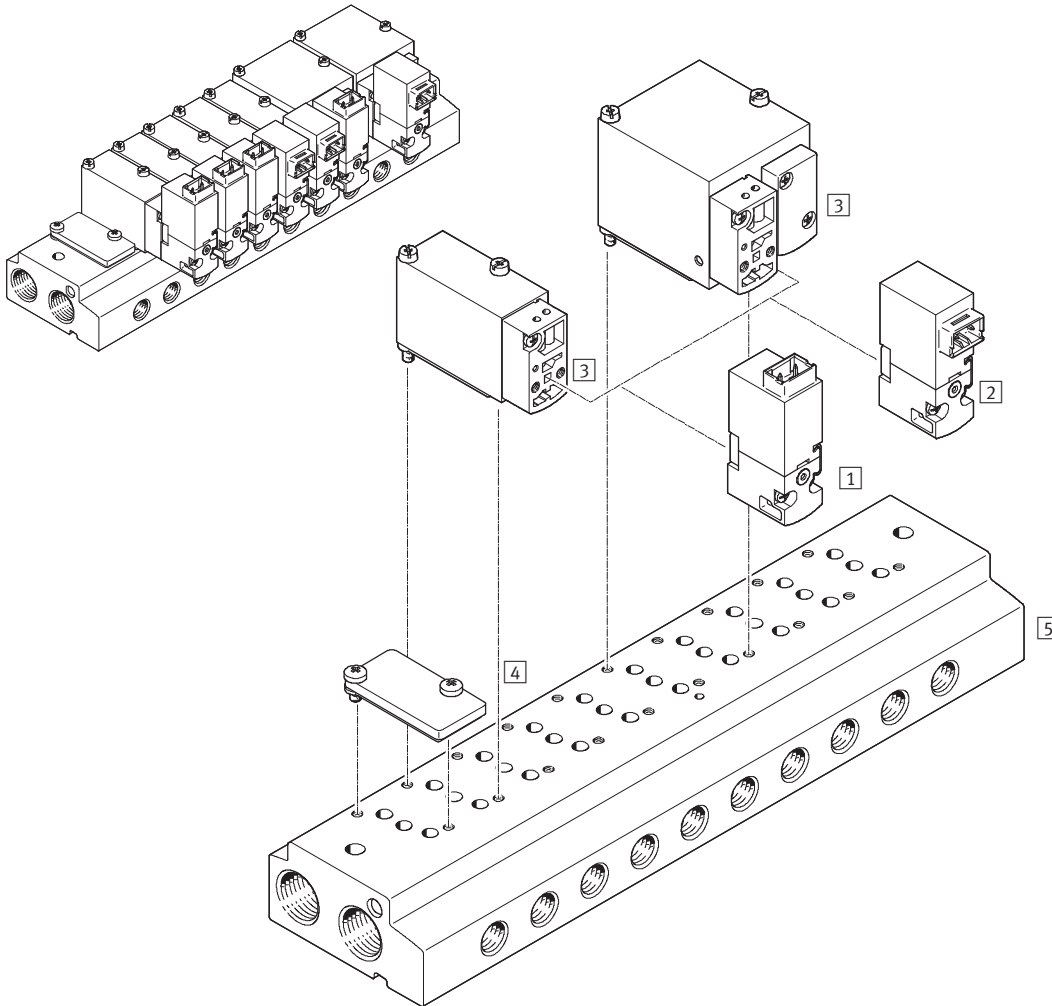


Component parts			
	Type	Brief description	→ Page/ Internet
1	MH-BZ-80X	Inscription label For identifying the solenoid valves	19
2	KMH	Plug socket with cable For solenoid coils	19
3	QS/QSM	Push-in fitting For standard O.D. tubing	18
4	B	Blanking plug For sealing unused ports	18
5	U	Silencer For fitting 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

## Manifold assembly – Sub-base valves

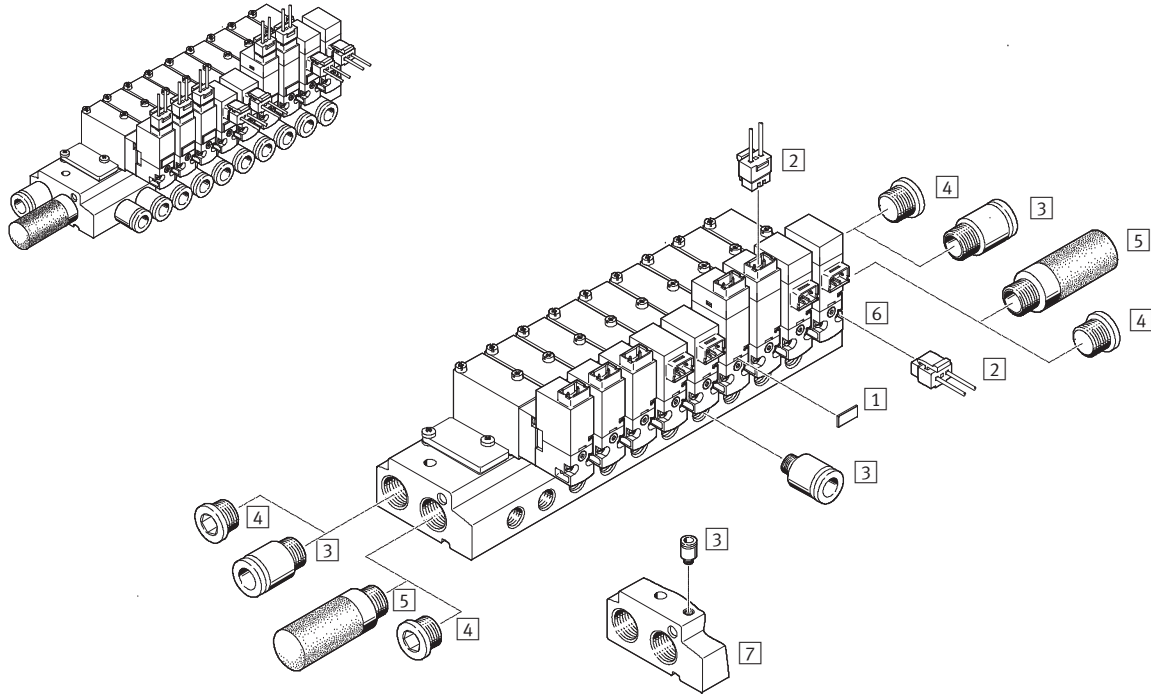


Component parts			
	Type	Brief description	→ Page/ Internet
1	–	Sub-assembly of the solenoid valve VOVG with vertical plug connection	8
2	–	Sub-assembly of the solenoid valve VOVG with horizontal plug connection	
3	–	Sub-assemblies of the solenoid valves VOVG	
4	VABB-C7-12-W	For vacant positions	18
5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

# Solenoid valves VOVG

Peripherals overview

## Manifold assembly – Sub-base valves with accessories

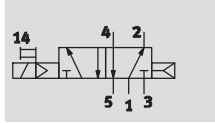
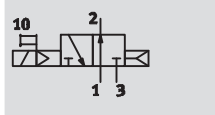
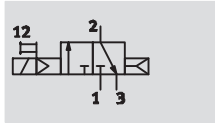


Component parts				
	Type	Brief description	→ Page/ Internet	
1	Inscription label	MH-BZ-80X	For identifying the solenoid valves	19
2	Plug socket with cable	KMH	For solenoid coils	19
3	Push-in fitting	QS/QSM	For standard O.D. tubing	18
4	Blanking plug	B	For sealing unused ports	18
5	Silencer	U	For fitting 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


Technical data

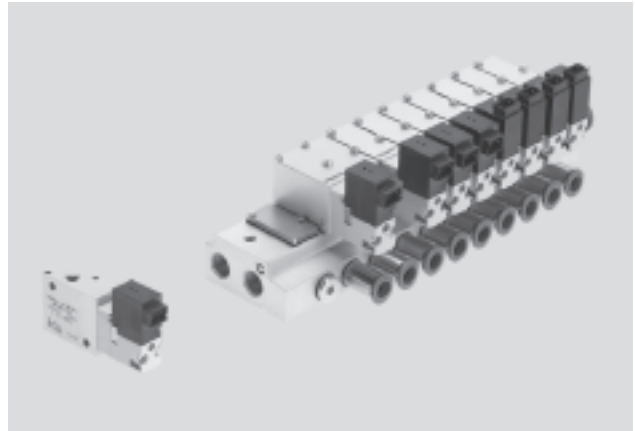
**Function**



 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	Filtered compressed air, lubricated or unlubricated, grade of filtration 40 µm
Operating pressure with internal pilot air supply	[bar] 2 ... 8
Operating pressure with external pilot air supply <sup>1)</sup>	[bar] -0.9 ... 8
Pilot pressure	[bar] 3 ... 8
Ambient temperature	[°C] -5 ... +50
Temperature of medium	[°C] -5 ... +50

1) Vacuum operation possible with special connection method



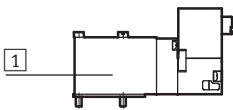
# Solenoid valves VOVG

Technical data

**FESTO**

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 KMH		IP40

## Materials



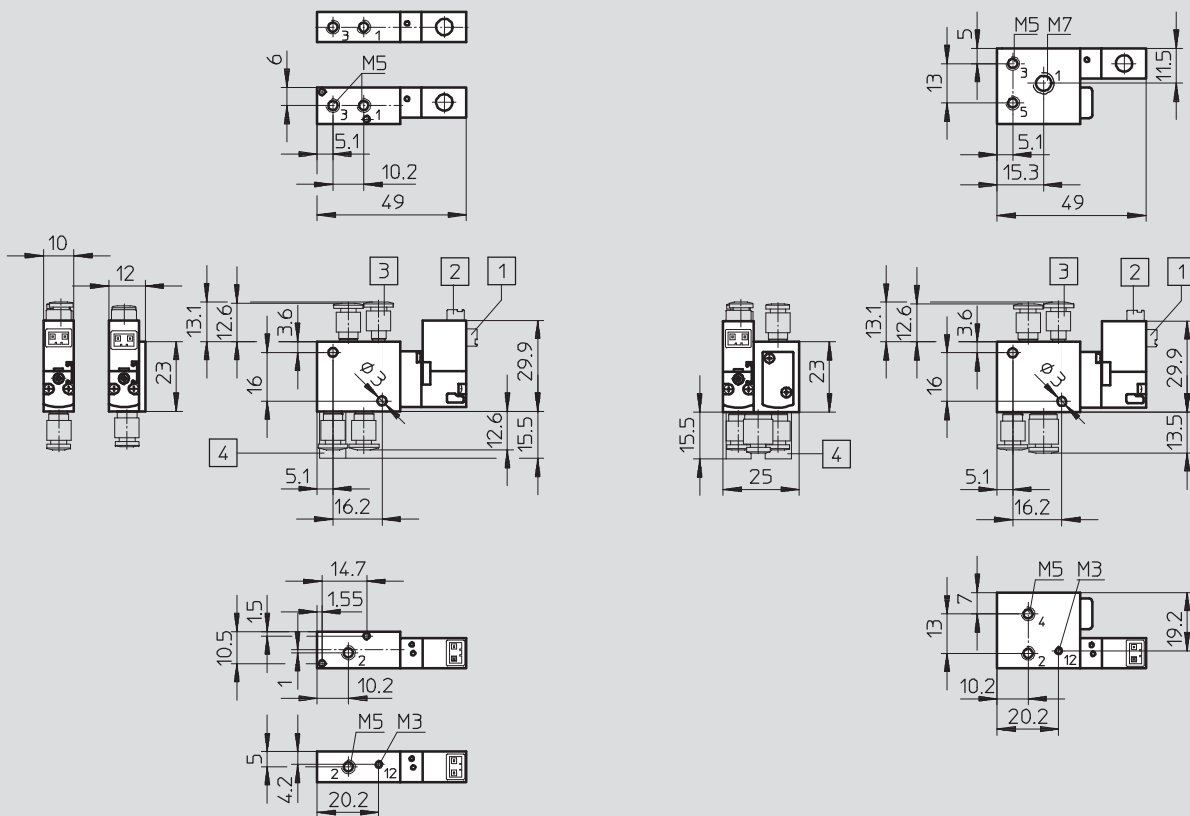
1	Housing	Aluminium
-	Seals	Fluoro elastomer, hydrogenated nitrile rubber, nitrile rubber

## Dimensions – Valve

Download CAD data → [www.festo.com](http://www.festo.com)

3/2-way in-line valve

5/2-way in-line valve



1 Electrical connection at rear

2 Electrical connection on top

3 Pilot air supply

4 Silencer

# Solenoid valves VOVG

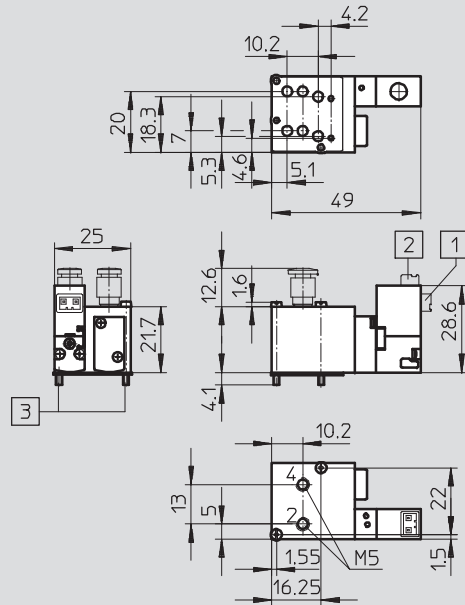
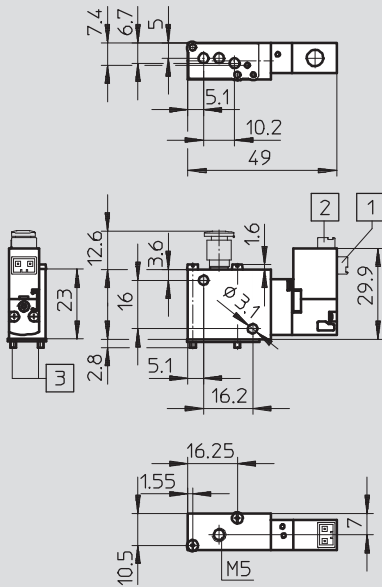
Technical data

## Dimensions – Valve

Download CAD data → [www.festo.com](http://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

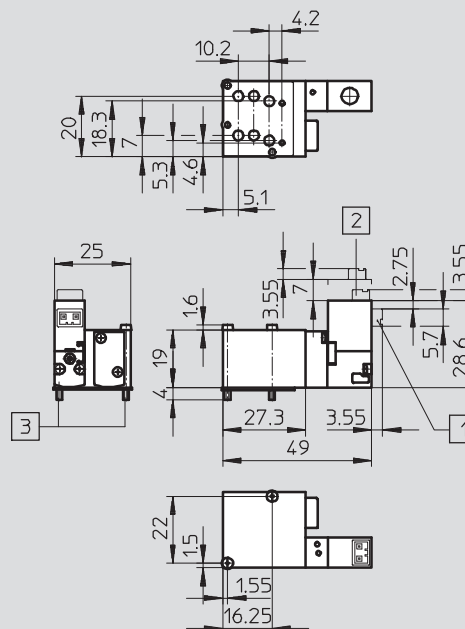
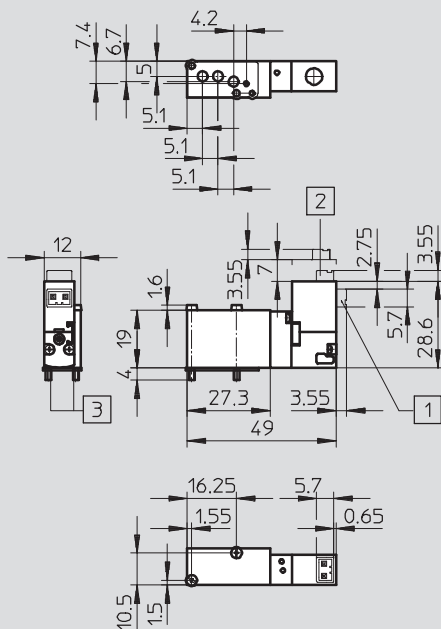
3 Mounting screws M2x25

## Dimensions – Valve

Download CAD data → [www.festo.com](http://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

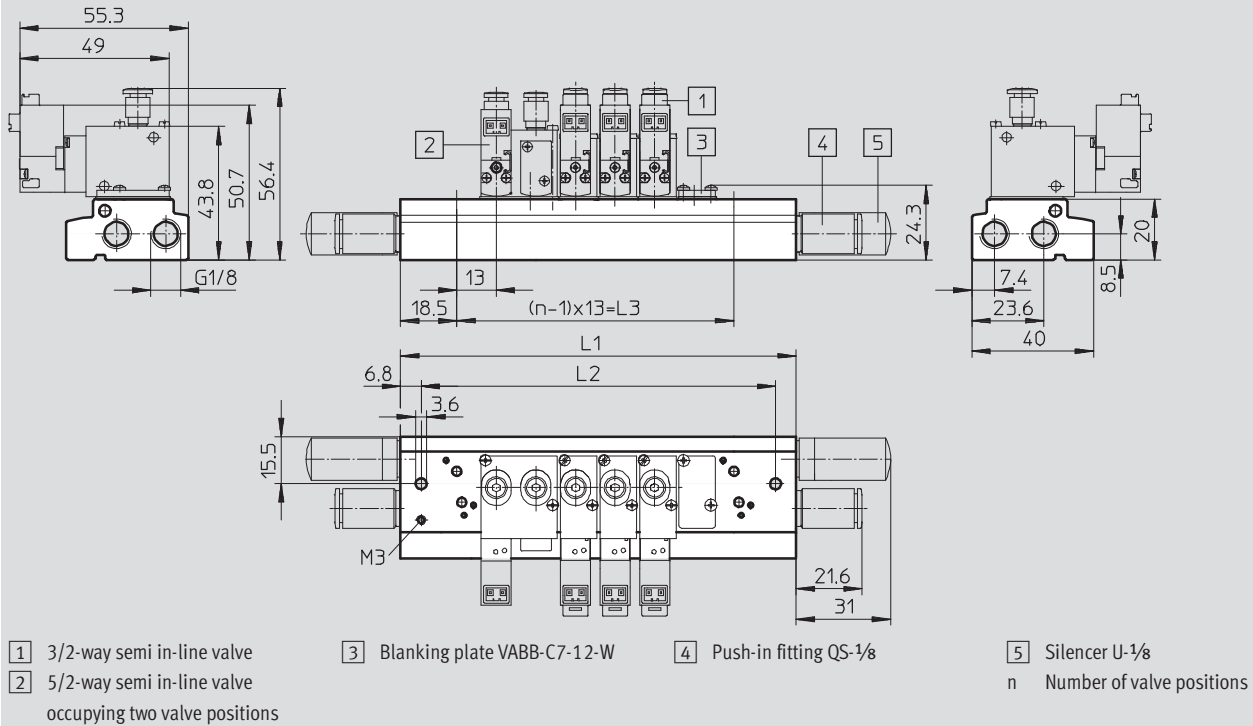
# Solenoid valves VOVG

Technical data

## Dimensions – Manifold assembly

Download CAD data → [www.festo.com](http://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

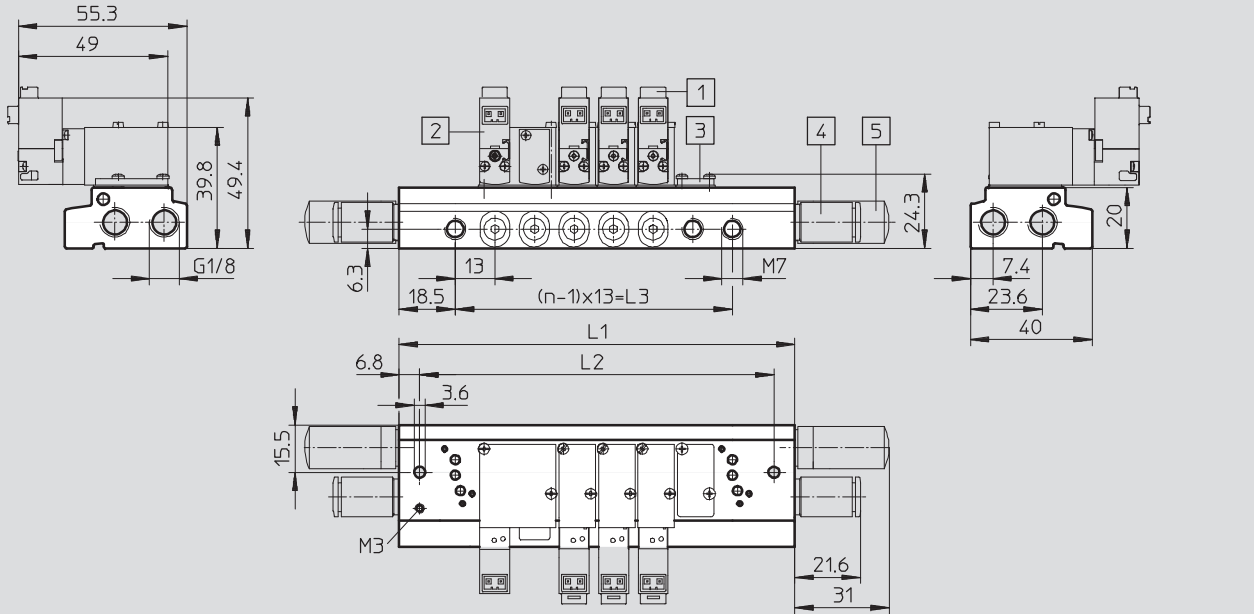
# Solenoid valves VOVG

Technical data

**Dimensions – Manifold assembly**

Download CAD data → [www.festo.com](http://www.festo.com)

Sub-base valve

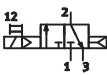
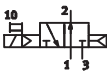
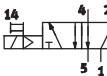
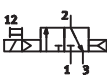
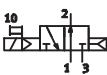

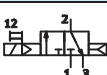
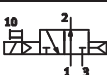



- 1 3/2-way sub-base valve
  - 2 5/2-way sub-base valve occupying two valve positions
  - 3 Blanking plate VABB-C7-12-W
  - 4 Push-in fitting QS-1/8
  - 5 Silencer U-1/8
- n Number of valve positions

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 <sup>1)</sup>	Part No.	Type
<b>In-line valve</b>							
	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
<b>Semi in-line valve</b>							
	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
<b>Sub-base valve</b>							
	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
<b>Order example</b>						
<b>549438</b>	<b>VOVG</b>	- <b>S</b>	<b>12</b>	- <b>M32U</b>	- <b>A</b>	

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

**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**

- 

 -

# Solenoid valves VOVG

Ordering data – Modular products

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

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

- |   |  |   |
|---|--|---|
| [1] <b>10, D, U</b> Not with valve type B, S                    | [4] <b>M5, Q3, Q4, Q6</b> Not with valve type B  | [7] <b>L</b> Not with nominal operating voltage 5 V DC, 12 V DC |
| [2] <b>D</b> Not with nominal operating voltage 5 V DC, 12 V DC | [5] <b>U</b> Not with pneumatic connection F, M5 |   |
| [3] <b>F</b> Not with valve type L, S                           |  |   |

Transfer order code

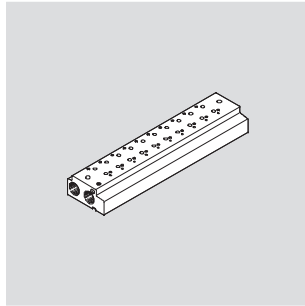
	–								+	
--	---	--	--	--	--	--	--	--	---	--

## Solenoid valves VOVG

Technical data – Manifold rail

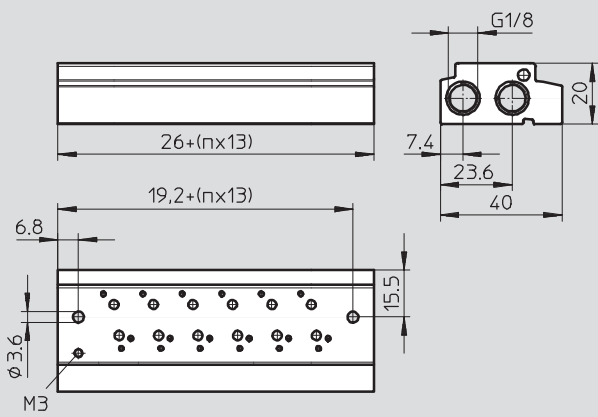
### Manifold rail VABM-C7 for semi in-line valves

Material:  
Wrought aluminium alloy



### Dimensions – Manifold rails for semi in-line valves

Download CAD data → [www.festo.com](http://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
<b>For valves with internal pilot air</b>				
2	84	2 <sup>1)</sup>	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
<b>For valves with external pilot air</b>				
2	84	2 <sup>1)</sup>	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.

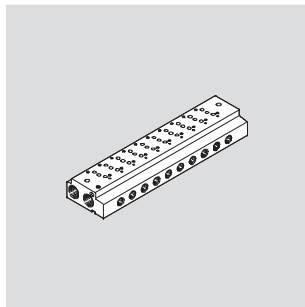


# Solenoid valves VOVG

Technical data – Manifold rail

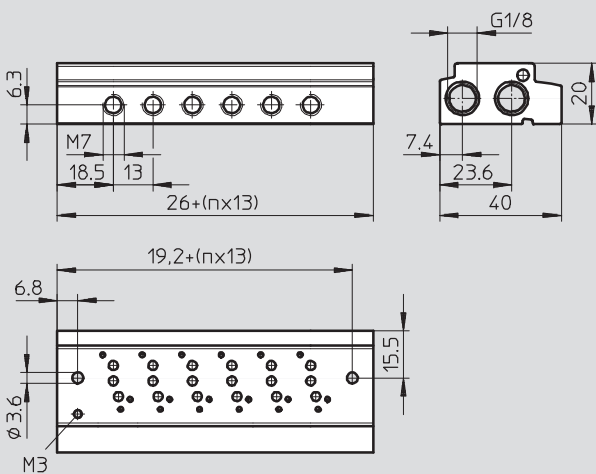
## Manifold rail VABM-C7 for sub-base valves

Material:  
Wrought aluminium alloy



### Dimensions – Manifold rails for sub-base valves

Download CAD data → [www.festo.com](http://www.festo.com)



n Number of valve positions

### Ordering data – Manifold rails for sub-base valves

Valve positions	Weight [g]	CRC	Part No.	Type
<b>For valves with internal pilot air</b>				
2	82	2 <sup>1)</sup>	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
<b>For valves with external pilot air</b>				
2	82	2 <sup>1)</sup>	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

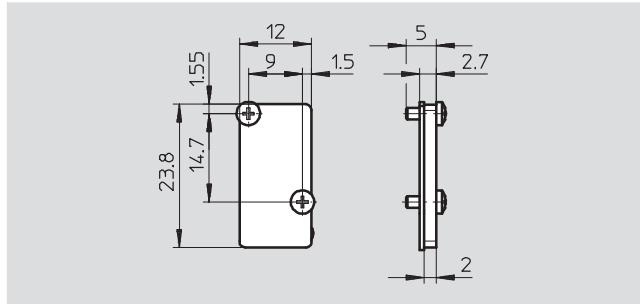
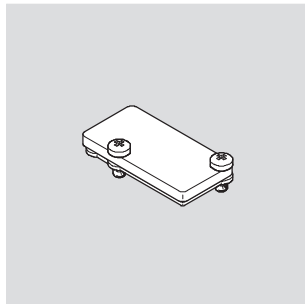
Accessories

## Blanking plate VABB-C7

Material:

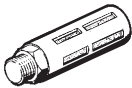

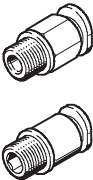
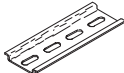
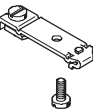
Blanking plate: Steel

Seal: Nitrile rubber



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


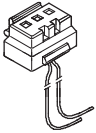
1) Corrosion resistance class 2 as per Festo standard 940 070  
 Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Ordering data – Accessories					
Designation			Part No.	Type	
<b>Silencer</b>					
	Connecting thread G1/8		2307	U-1/8	
			6841	U-1/8-B	
<b>Blanking plug</b>					
	Thread G1/8	10 pieces	3568	B-1/8	
<b>Push-in fitting</b>					
	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	
<b>H-rail</b>					
			35430	NRH-35-2000	
<b>Mounting</b>					
	For H-rail		527392	CPASC1-BG-NRH	

## Solenoid valves VOVG

Accessories

**FESTO**

Ordering data – Accessories			
Designation		Part No.	Type
<b>Inscription label</b>			
	For solenoid valve	80 pieces	<b>197259</b> MH-BZ-80X
<b>Plug socket with cable</b>			
	For 1 coil, 2-wire	0.5 m	<b>197263</b> KMH-0,5
		1 m	<b>197264</b> KMH-1
		2.5 m	<b>527400</b> KMH-2,5
		5 m	<b>527401</b> KMH-5