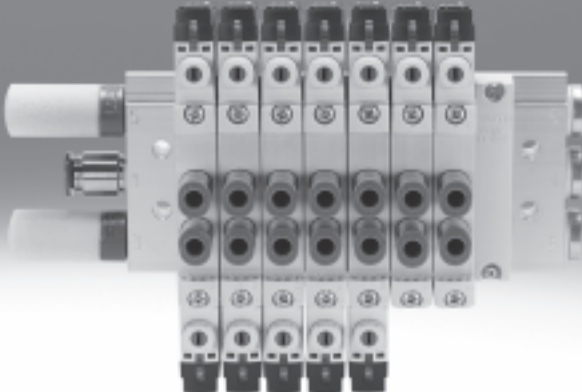


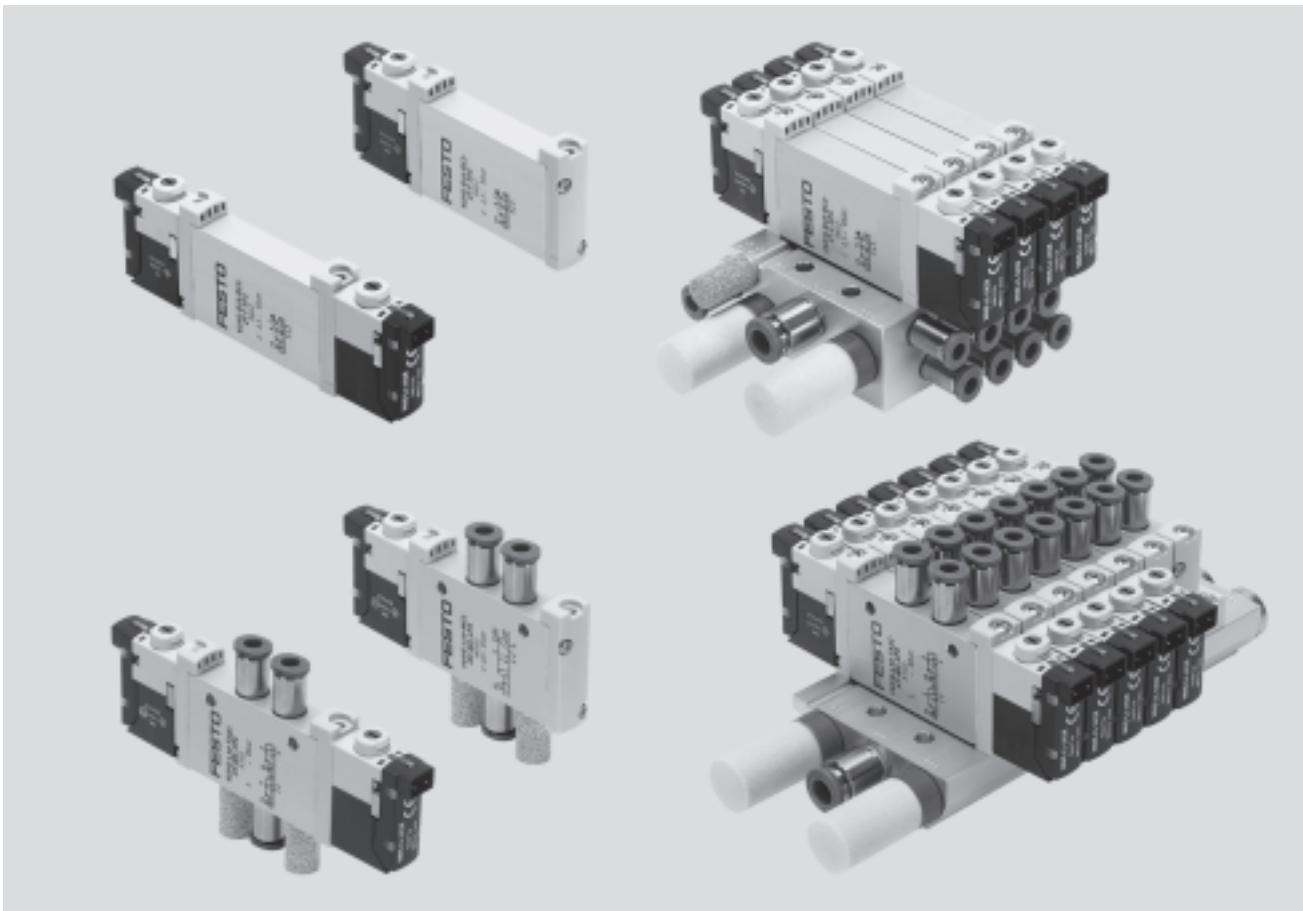
Solenoid valves VUVG



Solenoid valves VUVG

Key features

FESTO



Innovative

- Internal or external pilot air supply can be set for valve manifolds with sub-base valves
- Connection technology can be easily changed via electric sub-baseconnection plate (electronics E- box)
- Maximum pressure of 10 bar

Versatile

- Wide range of valve functions
- Choice of quick push-in connectors
- In-line valves can be used as individual valves or manifold valves
- M5 and M7 in-line valves can be combined on one manifold rail
- Identical sub-base valves for M5 or M7 manifold rail
- Valve manifolds with pressure zones
- IP40, IP65

Reliable

- Sturdy and durable metal components
 - Valves
 - Manifold rails
- Fast troubleshooting thanks to 360° LED display
- Reliability of service thanks to valves that can be replaced quickly and easily
- Choice of non-detenting, detenting or covered manual override

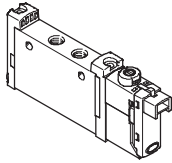
Easy to mount

- Secure mounting on wall or H-rail
- Easy mounting thanks to captive screws and seal
- Connection technology can be easily changed via electric sub-baseconnection plate
- Inscription label holders for labelling valves

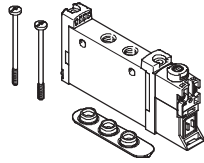
Solenoid valves VUVG

Key features

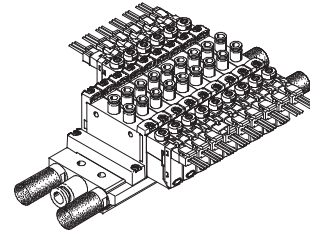
Individual valves and valve manifolds



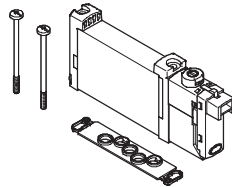
VUVG-L in-line valve
as individual valve



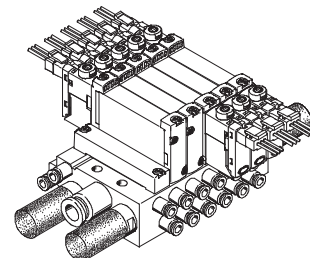
VUVG-S in-line valve
for manifold assembly



VUVG-S valve manifold
consisting of in-line valves

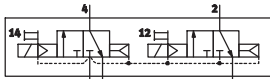


VUVG-B sub-base valve
for manifold assembly

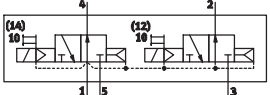


VUVG-B valve manifold consisting
of sub-base valves

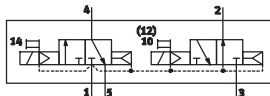
Functions – In-line valve



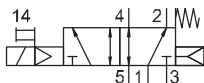
T32C: 2x3/2-way valve with internal pilot air supply, 2x normally closed



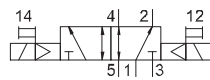
T32U: 2x3/2-way valve with internal pilot air supply, 2x normally open



T32H: 2x3/2-way valve with internal pilot air supply, 1x normally closed, 1x normally open



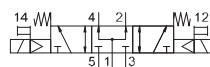
M52: 5/2-way valve, single solenoid, with internal pilot air supply



B52: 5/2-way valve, double solenoid, with internal pilot air supply



P53C: 5/3-way valve with internal pilot air supply, normally closed

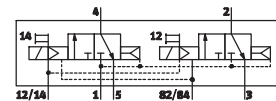


P53U: 5/3-way valve with internal pilot air supply, normally open

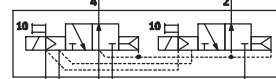


P53E: 5/3-way valve with internal pilot air supply, normally exhausted

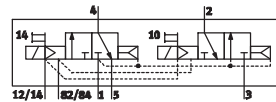
Functions – Sub-base valve



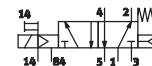
T32C: 2x3/2-way valve with external pilot air supply, 2x normally closed



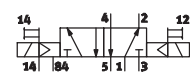
T32U: 2x3/2-way valve with external pilot air supply, 2x normally open



T32H: 2x3/2-way valve with external pilot air supply, 1x normally closed, 1x normally open



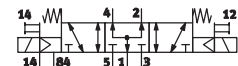
M52: 5/2-way valve, single solenoid, with external pilot air supply



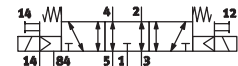
B52: 5/2-way valve, double solenoid, with external pilot air supply



P53C: 5/3-way valve with external pilot air supply, normally closed



P53U: 5/3-way valve with external pilot air supply, normally open

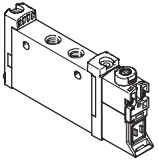


P53E: 5/3-way valve with external pilot air supply, normally exhausted

Solenoid valves VUVG

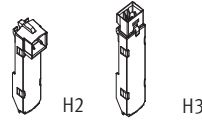
Key features

VUVG basic valves



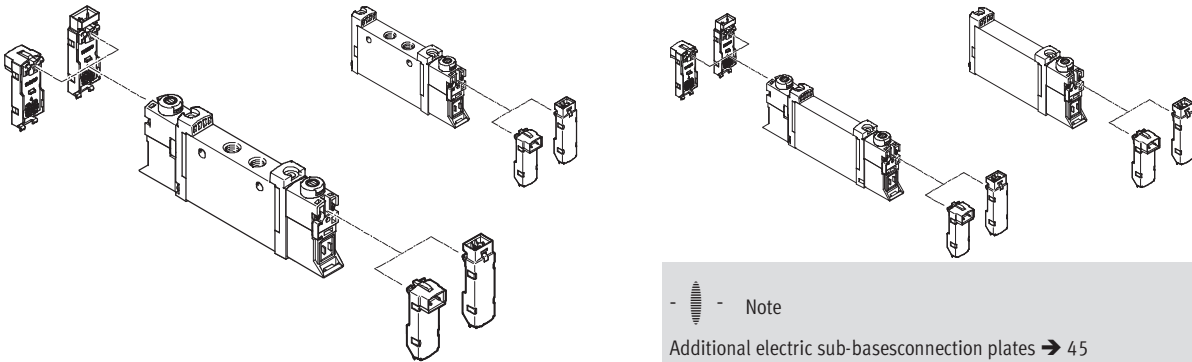
- Width 10 mm and 14 mm
- In-line valves
- Sub-base valves
- 2x3/2-way, 5/2-way and 5/3-way valves

Electric sub-basesconnection plates



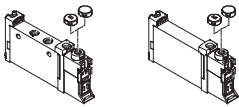
- 5, 12 and 24 V DC
- With or without holding current reduction
- LED

Combinations of basic valve and electric sub-bases



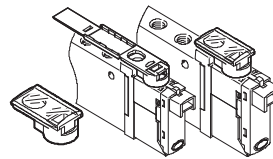
Note
Additional electric sub-basesconnection plates → 45

Cover caps for manual override



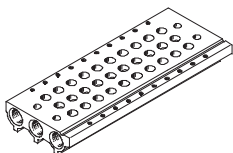
- Closed cover cap for covering the manual override
- Slotted cover cap for permitting non-detenting actuation of the manual override only

Inscription label holder



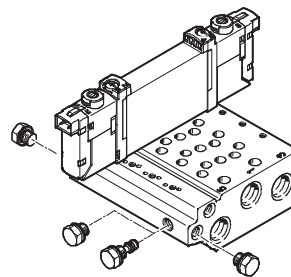
- The inscription label holder can be used instead of the slotted cover cap
- The folded-in inscription label holder covers the mounting screw and the manual override

Manifold rail for in-line valves



- For in-line valves M5 and M7, width 10
- For 2x3/2-way, 5/2-way and 5/3-way valves
- 2 to 10 and 12, 14, 16 valve positions

Manifold rail for sub-base valves



- For sub-base valves, valve width 10
- Manifold rail with M5 or M7 working lines
- For 2x3/2-way, 5/2-way and 5/3-way valves
- 2 to 10, 12, 14 and 16 valve positions
- The sub-base valves are supplied with pilot air via the manifold rail
- The manifold can be operated with internal or external pilot air supply by inserting different blanking plugs

Blanking plate for vacant position



- Vacant position cover

Supply plate



- For an additional air supply and exhausting via a valve position

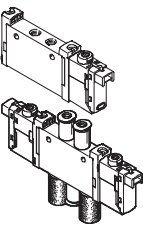
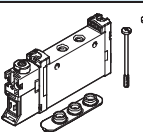
Separator for pressure zones

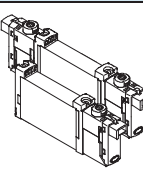


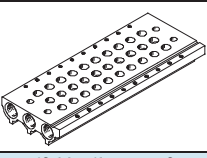
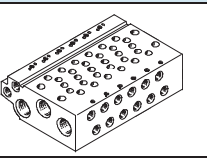
- For creating multiple pressure zones on a valve manifold

Solenoid valves VUVG

Product range overview

Design	Working line	Type code	Functions and flow rate [l/min]									→ Page/ Internet
			T32C	T32U	T32H	M52	B52	P53C	P53U	P53E		
In-line valve as individual valve 	Solenoid valve VUVG-L											
	M3	10A	–	–	–	■	■	■	■	■	■	8
	M5	10	■	■	■	■	■	■	■	■	■	15
	M7	10	■	■	■	■	■	■	■	■	■	17
	G ¹ / ₈	14	■	■	■	■	■	■	■	■	■	23
In-line valve for manifold assembly 	Solenoid valve VUVG-S											
	M3	10A	–	–	–	■	■	■	■	■	■	8
	M5	10	■	■	■	■	■	■	■	■	■	15
	M7	10	■	■	■	■	■	■	■	■	■	17
	G ¹ / ₈	14	■	■	■	■	■	■	■	■	■	23

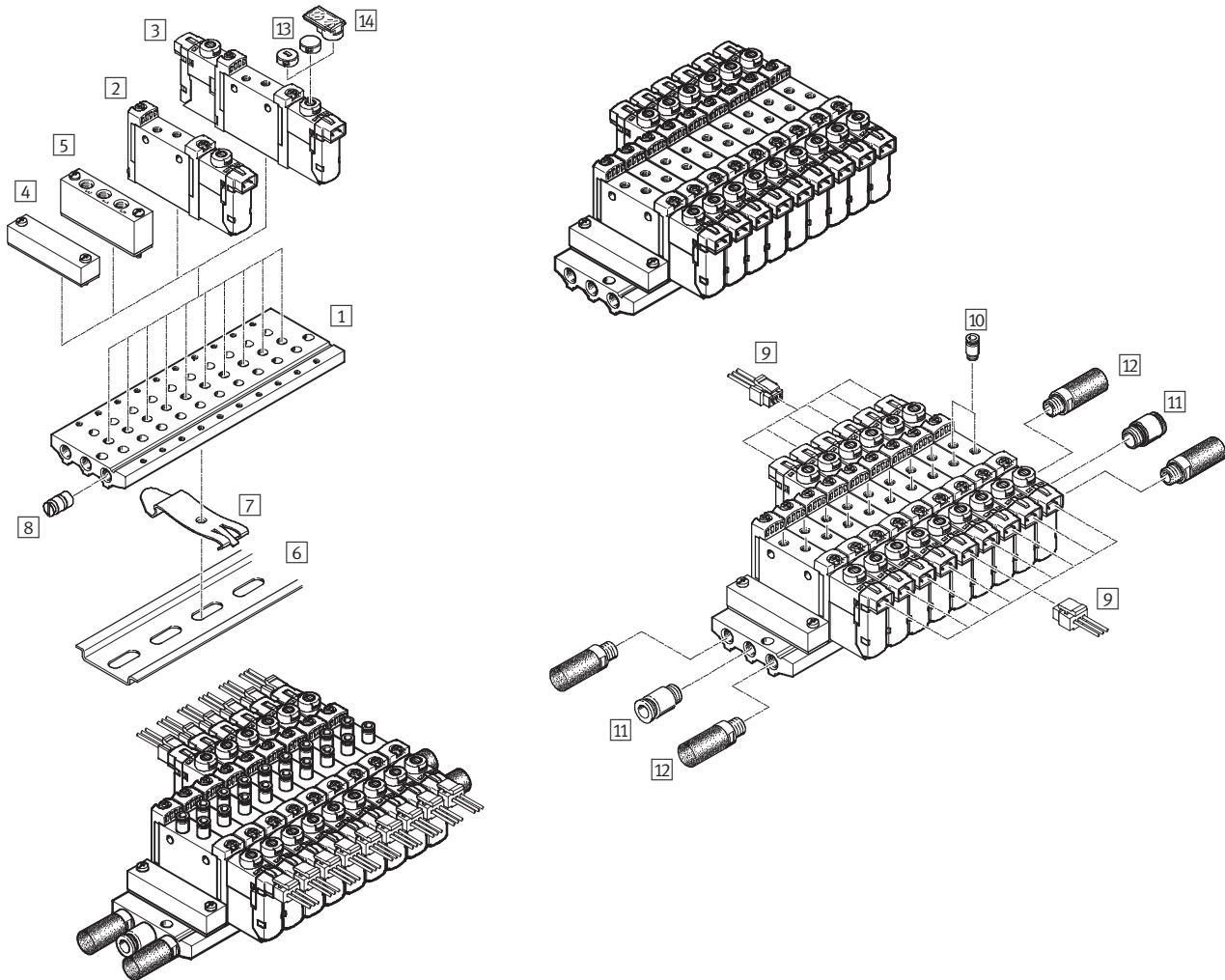
Design	Working line	Type code	Functions and flow rate [l/min]									→ Page/ Internet
			T32C	T32U	T32H	M52	B52	P53C	P53U	P53E		
Sub-base valve 	Solenoid valve VUVG-B											
	–	10A	–	–	–	■	■	■	■	■	■	28
	–	10	■	■	■	■	■	■	■	■	■	35
	–	10	■	■	■	■	■	■	■	■	■	35
	–	14	■	■	■	■	■	■	■	■	■	41

Design	Working line	Type code	Description	→ Page/ Internet
Manifold rail 	Manifold rail VABM- ... -S- ... , for in-line valves (manifold assembly)			11
	–	–	Valve size M3, M5, M7, G ¹ / ₈	
Manifold rail 	Manifold rail VABM, for sub-base valves			31
	–	10AW	Connection size M3	
	–	10W	Connection size M5	
	–	10HW	Connection size M7	
	–	14W	Connection size G ¹ / ₈	

Solenoid valves VUVG-L10A and VUVG-S10A, in-line valves M3

System overview

Manifold assembly



Manifold assembly and accessories				
	Type	Brief description	→ Page/Internet	
1	Manifold rail	VABM-L1-10AS-M5-...	For 2 to 10, 12, 14 and 16 valve positions	11
2	Solenoid valve	VUVG- ...	In-line valve, 5/2-way single solenoid	7
3	Solenoid valve	VUVG-B ...	In-line valve, 2x3/2-way, 5/2-way double solenoid and 5/3-way single solenoid	7
4	Blanking plate	VABB-L1-10-S	For covering an unused valve position	11
5	Supply plate	VABF-L1-10-P3A4- ...	For air supply 1 and outlet port 3 and 5	11
6	H-rail	NRH-35-2000	For mounting the valve manifold	48
7	H-rail mounting	VAME-T-M4	2 pieces for attaching the valve manifold to the H-rail	48
8	Blanking plug	VABD-8-B	For creating pressure zones	11
9	Plug socket with cable	NEBV-H1G2-KN-...-LE2	For electric sub-base H2 and H3	48
10	Push-in fitting	QS...	Push-in fitting for outlet port 2 and 4	48
11	Push-in fitting	QS...	Push-in fitting for air supply 1	quick star
12	Silencer	U...	For outlet port 3 and 5	48
13	Cover cap	VMPPA-HB...-B	For manual override	48
14	Inscription label holder	ASLR-D	For labelling the valves, covering the mounting screw and the manual override	49

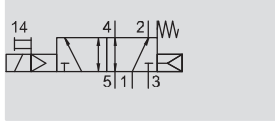
Solenoid valves VUVG-L10A and VUVG-S10A, in-line valves M3

FESTO




Technical data

Function

5/2-way, single solenoid
5/2-way, double solenoid
5/3C, 5/3U, 5/3E



E.g. 5/2-way valve with internal pilot air supply and combined reset via mechanical plus pneumatic spring

-  - Width 10 mm
-  - Flow rate
90 ... 100 l/min
-  - Voltage
5, 12 and 24 V DC



General technical data				
Valve function	5/2-way		5/3-way	
Normal position	-	-	C ¹⁾	U ²⁾ E ³⁾
Memory stability	Single solenoid	Double solenoid	Single solenoid	
Pneumatic spring reset method	Yes ⁵⁾	-	No	
Mechanical spring reset method	Yes ⁵⁾	-	Yes	
Vacuum operation at port 1	Only with external pilot air supply			
Design	Piston spool valve			
Sealing principle	Soft			
Actuation type	Electric			
Type of control	Piloted			
Pilot air supply	Internal or external			
Exhaust function	Flow control			
Manual override	Choice of non-detenting, detenting or covered			
Type of mounting	Optionally via through-holes ⁷⁾ or on manifold rail			
Mounting position	Any			
Nominal size	[mm]	2		
Standard nominal flow rate	[l/min]	100	90	
Flow rate on manifold rail	[l/min]	100	90	
Switching time on/off	[ms]	7/15	-	8/25
Changeover time	[ms]	-	5	14
Width	[mm]	10		
Port	1, 2, 3, 4, 5, 14	M3		
Product weight	[g]	38	49	
Corrosion resistance class	CRC	2 ⁶⁾		

1) C = normally closed

2) U = normally open

3) E = normally exhausted

5) Combined reset method

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

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

7) If several valves are to be screwed together via the through-holes to form a block, a minimum distance of 0.3 mm must be ensured by inserting spacer discs

Solenoid valves VUVG-L10A and VUVG-S10A, in-line valves M3

Technical data

Operating and environmental conditions									
Valve function		5/2-way, single solenoid		5/2-way, double solenoid	5/3-way				
Operating medium					Filtered compressed air, grade of filtration 40 µm, lubricated or unlubricated				
Operating pressure at port 1 with pilot air supply	Internal	[bar]	2.5 ... 8		1.5 ... 8		3 ... 8		
	External	[bar]	-0.9 ... 10						
Operating pressure at port 3 or 5 with pilot air supply	Internal or external	[bar]	-0.9 ... 10						
	Pilot pressure	[bar]	2.5 ... 8		1.5 ... 8		3 ... 8		
Ambient temperature		[°C]	-5 ... +50, -5 ... +60 with holding current reduction						
Temperature of medium		[°C]	-5 ... +50, -5 ... +60 with holding current reduction						

Electrical data				
Electrical connection		Via electric sub-base		
Operating voltage	[V DC]	5, 12 and 24 ±10%		
Output	[W]	1, reduced to 0.35 via holding current reduction		
Duty cycle	[%]	100		
Protection class to EN 60529		IP40 (with plug socket), IP65 (with M8)		

Materials	
Housing	Wrought aluminium alloy
Seals	HNBR, NBR
Note on materials	RoHS-compliant

Solenoid valves VUVG-L10A and VUVG-S10A, in-line valves M3

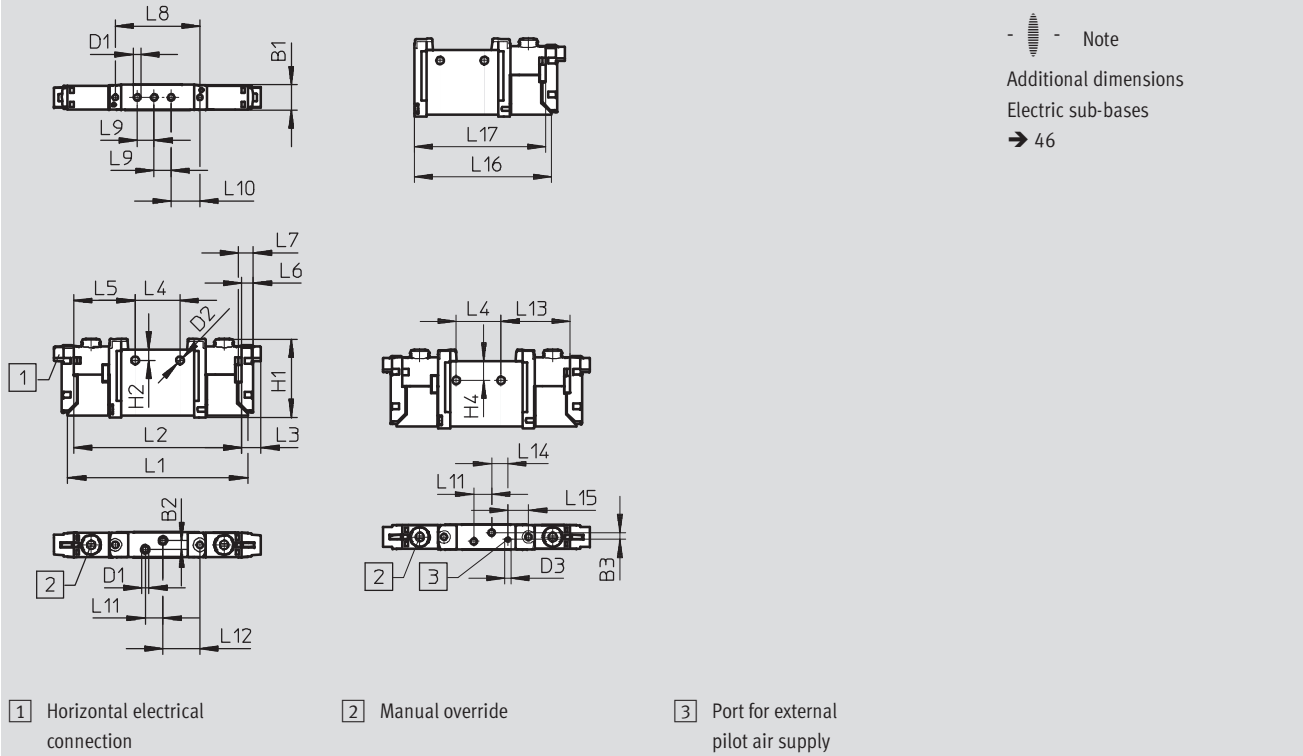
Technical data

FESTO

Dimensions

Download CAD data → www.festo.com

5/2-way and 5/3-way valves



Type	B1	B2	B3	D1	D2	H1	H2	L1	L2	L3	L4	L5
VUVG-L-10 -...-M3 ...	10.2	3.6	2.83	M3	3.2	32.5	4.4	74.3	69.3	8	18.5	25.4
VUVG-S-10 -...-M3 ...	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16	L17
	4.85	6.15	34.9	7	11.9	7.3	15.25	28.5	6.7	8.54	57.06	54.56

Solenoid valves VUVG-S10A, in-line valves M3

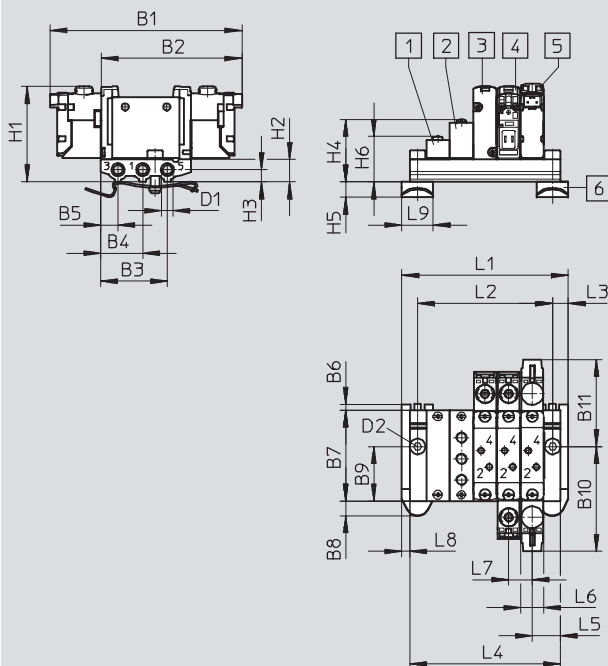
Manifold assembly

In-line valves for
manifold assembly



Dimensions

Download CAD data → www.festo.com



Note
Additional dimensions
Electric sub-bases
→ 46

- 1 Blanking plate VABB-L1-10A-S
- 2 Supply plate VABF-L1-10A-P3A4-M3
- 3 Single solenoid valve, without electric sub-base
- 4 Double solenoid valve, without electric sub-base
- 5 Solenoid valve, vertical electrical connection
- 6 H-rail mounting (2x M4x16 screws to DIN 912 are required for mounting)

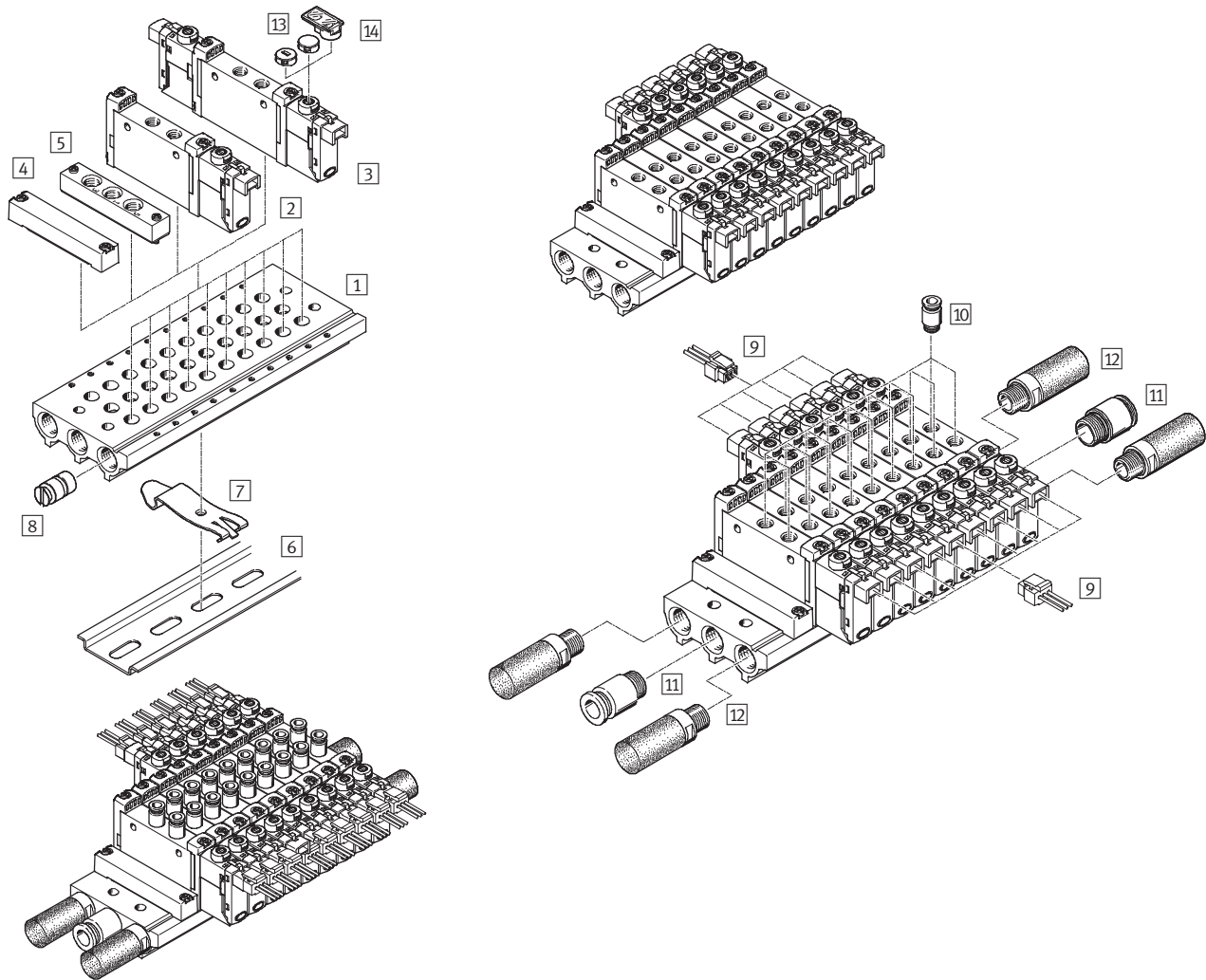
Type	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	D1
VUVG-S10A-...-M3 ...	85.3	62.6	29.7	18.7	7.7	2.95	40.3	6.75	24.2	46.7	38.6	M5
	D2	H1	H2	H3	H4	H5	H6	L3	L5	L6	L7	L8
	ø4.5	43.8	10	5.5	27.8	6.8	20.3	7	12.5	10.2	10.5	3.5
	L9											
	14											

Valve positions	2	3	4	5	6	7	8	9	10	12	14	16
L1 [mm]	42.5	53	63.5	74	84.5	95	105.5	116	126.5	147.5	168.5	189.5
L2 [mm]	28.5	39	49.5	60	70.5	81	91.5	102	112.5	133.5	154.5	175.5
L4 [mm]	35.5	46	56.5	67	77.5	88	98.5	109	119.5	140.5	161.5	182.5
VABM weight [g]	26	34	42	50	58	66	74	82	90	106	122	138

Solenoid valves VUVG-L10 and VUVG-S10, in-line valves M5/M7

System overview

Manifold assembly



Manifold assembly and accessories				
	Type	Brief description	→ Page/Internet	
1	Manifold rail	VABM-L1-10S-G18-...	For 2 to 10, 12, 14 and 16 valve positions	11
2	Solenoid valve	VUVG- ...	In-line valve, 5/2-way single solenoid	7
3	Solenoid valve	VUVG- ...	In-line valve, 2x3/2-way, 5/2-way double solenoid and 5/3-way single solenoid	7
4	Blanking plate	VABB-L1-10-S	For covering an unused valve position	11
5	Supply plate	VABF-L1-10-P3A4- ...	For air supply 1 and outlet port 3 and 5	11
6	H-rail	NRH-35-2000	For mounting the valve manifold	48
7	H-rail mounting	VAME-T-M4	2 pieces for attaching the valve manifold to the H-rail	48
8	Blanking plug	VABD-8-B	For creating pressure zones	11
9	Plug socket with cable	NEBV-H1G2-KN-...-LE2	For electric sub-base H2 and H3	48
10	Push-in fitting	QS...	Push-in fitting for outlet port 2 and 4	48
11	Push-in fitting	QS...	Push-in fitting for air supply 1	quick star
12	Silencer	U...	For outlet port 3 and 5	48
13	Cover cap	VMPA-HB...-B	For manual override	48
14	Inscription label holder	ASLR-D	For labelling the valves, covering the mounting screw and the manual override	49

Solenoid valves VUVG-L10 and VUVG-S10, in-line valves M5

Technical data

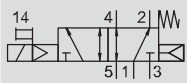
Function

2x3/2C, 2x3/2U, 2x3/2H




5/2-way, single solenoid

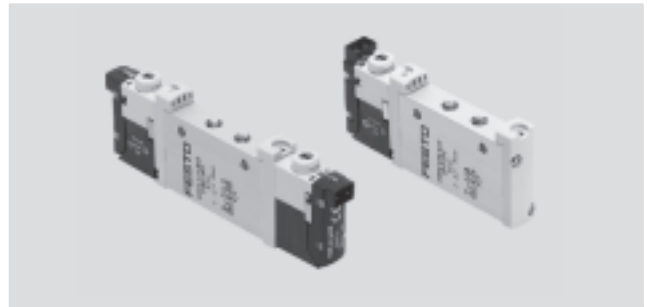
5/2-way, double solenoid

5/3C, 5/3U, 5/3E



E.g. 5/2-way valve with internal pilot air supply and combined reset via mechanical plus pneumatic spring

-  - Width 10 mm
-  - Flow rate
150 ... 220 l/min
-  - Voltage
5, 12 and 24 V DC



General technical data									
Valve function	2x3/2-way			5/2-way		5/3-way			
Normal position	C ¹⁾	U ²⁾	H ⁴⁾	-	-	C ¹⁾	U ²⁾	E ³⁾	
Memory stability	Single solenoid				Double solenoid	Single solenoid			
Pneumatic spring reset method	Yes			Yes ⁵⁾	-	No			
Mechanical spring reset method	No			Yes ⁵⁾	-	Yes			
Vacuum operation at port 1	No			Only with external pilot air supply					
Design	Piston spool valve								
Sealing principle	Soft								
Actuation type	Electric								
Type of control	Piloted								
Pilot air supply	Internal or external								
Exhaust function	Flow control								
Manual override	Choice of non-detenting, detenting or covered								
Type of mounting	Optionally via through-holes ⁷⁾ or on manifold rail								
Mounting position	Any								
Nominal size	[mm]	2.7			3.2				
Standard nominal flow rate	[l/min]	150			220		210		
Flow rate on manifold rail	[l/min]	150			220		210		
Switching time on/off	[ms]	6/16			7/19	-	10/30		
Changeover time	[ms]	-			7		16		
Width	[mm]	10							
Port	1, 2, 3, 4, 5	M5							
	12, 14	M3							
Product weight	[g]	55			45	55			
Corrosion resistance class	CRC	2 ⁶⁾							

1) C = normally closed

2) U = normally open

3) E = normally exhausted

4) H=2x3/2-way valve in one housing with 1x normally closed and 1x normally open

5) Combined reset method

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

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

7) If several valves are to be screwed together via the through-holes to form a block, a minimum distance of 0.3 mm must be ensured by inserting spacers

Solenoid valves VUVG-L10 and VUVG-S10, in-line valves M5

FESTO

Technical data

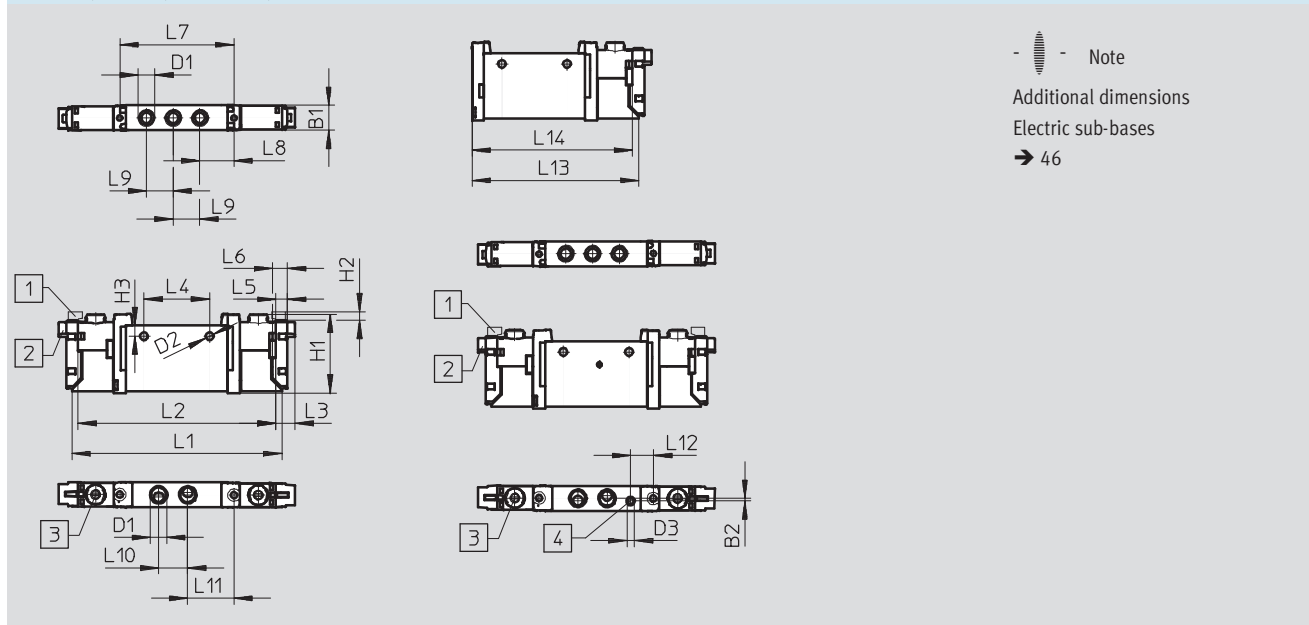
Operating and environmental conditions						
Valve function			2x3/2-way	5/2-way, single solenoid	5/2-way, double solenoid	5/3-way
Operating medium	Filtered compressed air, grade of filtration 40 µm, lubricated or unlubricated					
Operating pressure at port 1 with pilot air supply	Internal	[bar]	1.5 ... 8	2.5 ... 8	1.5 ... 8	3 ... 8
	External	[bar]	1.5 ... 10	-0.9 ... 10		
Operating pressure at port 3 or 5 with pilot air supply	Internal or external	[bar]	-0.9 ... 10			
Ambient temperature		[°C]	-5 ... +50, -5 ... +60 with holding current reduction			
Temperature of medium		[°C]	-5 ... +50, -5 ... +60 with holding current reduction			

Electrical data	
Electrical connection	Via electric sub-base
Operating voltage	[V DC] 5, 12 and 24 ±10%
Output	[W] 1, reduced to 0.35 via holding current reduction
Duty cycle	[%] 100
Protection class to EN 60529	IP40 (with plug socket), IP65 (with M8)

Materials	
Housing	Wrought aluminium alloy
Seals	HNBR, NBR
Note on materials	RoHS-compliant

Dimensions Download CAD data → www.festo.com

2x3/2-way, 5/2-way and 5/3-way valves



1 Vertical electrical connection
 2 Horizontal electrical connection
 3 Manual override
 4 Port for external pilot air supply

Note
Additional dimensions
Electric sub-bases
→ 46

Type	B1	B2	D1	D2	D3	H1	H2	H3	L1	L2	L3	L4
VUVG-L-10 -...-M5 ...	10.2	-	M5	3.2	M3	32.5	3.6	4.4	86.5	81.5	8	27
VUVG-S-10 -...-M5 ...	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14		
	4.85	6.15	47	14	11	12	19	-	69.2	66.7		

Solenoid valves VUVG-L10 and VUVG-S10, in-line valves M7

Technical data

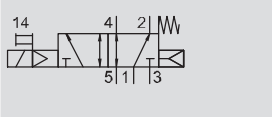
Function

2x3/2C, 2x3/2U, 2x3/2H




5/2-way, single solenoid

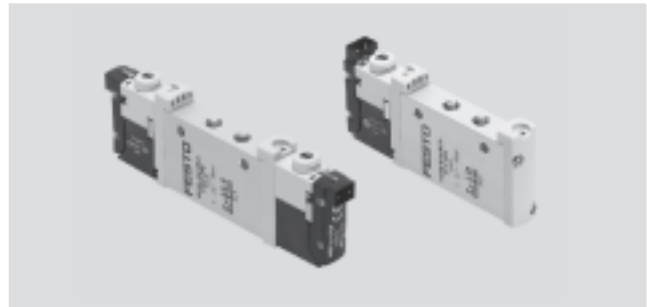
5/2-way, double solenoid

5/3C, 5/3U, 5/3E



E.g. 5/2-way valve with internal pilot air supply and combined reset via mechanical plus pneumatic spring

-  - Width 10 mm
-  - Flow rate
190 ... 380 l/min
-  - Voltage
5, 12 and 24 V DC



General technical data								
Valve function	2x3/2-way			5/2-way		5/3-way		
Normal position	C ¹⁾	U ²⁾	H ⁴⁾	-	-	C ¹⁾	U ²⁾	E ³⁾
Memory stability	Single solenoid				Double solenoid	Single solenoid		
Pneumatic spring reset method	Yes			Yes ⁵⁾	-	No		
Mechanical spring reset method	No			Yes ⁵⁾	-	Yes		
Vacuum operation at port 1	No			Only with external pilot air supply				
Design	Piston spool valve							
Sealing principle	Soft							
Actuation type	Electric							
Type of control	Piloted							
Pilot air supply	Internal or external							
Exhaust function	Flow control							
Manual override	Choice of non-detenting, detenting or covered							
Type of mounting	Optionally via through-holes ⁷⁾ or on manifold rail							
Mounting position	Any							
Nominal size	[mm]	2.7	4.0			3.5		
Standard nominal flow rate	[l/min]	190	380		320			
Flow rate on manifold rail	[l/min]	170	340		300			
Switching time on/off	[ms]	6/16	7/19	-	10/30			
Changeover time	[ms]	-	7		16			
Width	[mm]	10						
Port	1, 2, 3, 4, 5	M7						
	12, 14	M3						
Product weight	[g]	55	45	55				
Corrosion resistance class	CRC	2 ⁶⁾						

1) C = normally closed

2) U = normally open

3) E = normally exhausted

4) H=2x3/2-way valve in one housing with 1x normally closed and 1x normally open

5) Combined reset method

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

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

7) If several valves are to be screwed together via the through-holes to form a block, a minimum distance of 0.3 mm must be ensured by inserting spacer discs

Solenoid valves VUVG-L10 and VUVG-S10, in-line valves M7

FESTO

Technical data

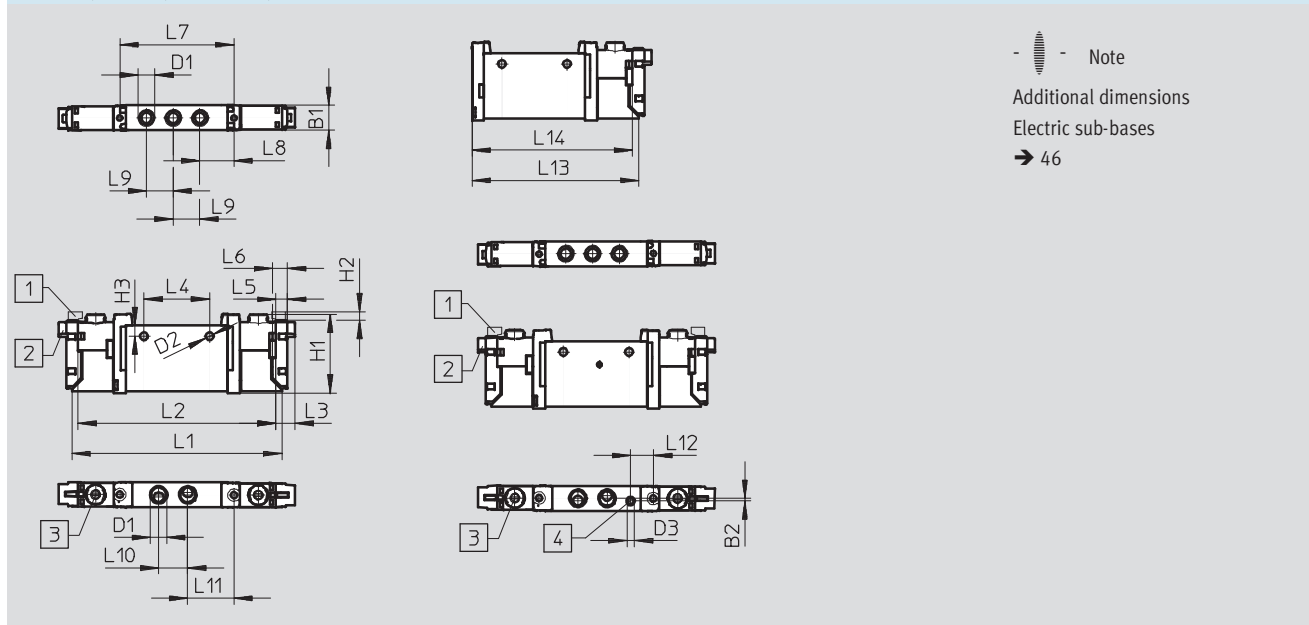
Operating and environmental conditions						
Valve function			2x3/2-way	5/2-way, single solenoid	5/2-way, double solenoid	5/3-way
Operating medium	Filtered compressed air, grade of filtration 40µm, lubricated or unlubricated					
Operating pressure at port 1 with pilot air supply	Internal	[bar]	1.5 ... 8	2.5 ... 8	1.5 ... 8	3 ... 8
	External	[bar]	1.5 ... 10	-0.9 ... 10		
Operating pressure at port 3 or 5 with pilot air supply	Internal or external	[bar]	-0.9 ... 10			
Ambient temperature		[°C]	-5 ... +50, -5 ... +60 with holding current reduction			
Temperature of medium		[°C]	-5 ... +50, -5 ... +60 with holding current reduction			

Electrical data	
Electrical connection	Via electric sub-base
Operating voltage	[V DC] 5, 12, 24 ±10%
Output	[W] 1, reduced to 0.35 via holding current reduction
Duty cycle	[%] 100
Protection class to EN 60529	IP40 (with plug socket), IP65 (with M8)

Materials	
Housing	Wrought aluminium alloy
Seals	HNBR, NBR
Note on materials	RoHS-compliant

Dimensions Download CAD data → www.festo.com

2x3/2-way, 5/2-way and 5/3-way valves



Note
Additional dimensions
Electric sub-bases
→ 46

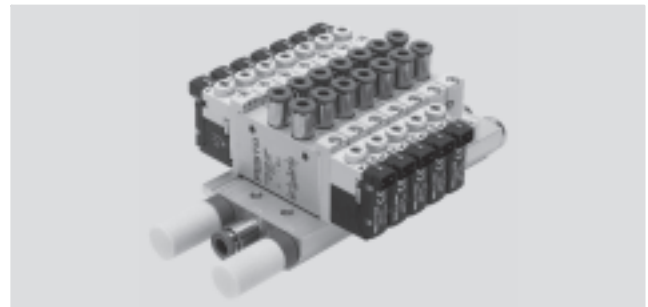
1 Vertical electrical connection
2 Horizontal electrical connection
3 Manual override
4 Port for external pilot air supply

Type	B1	B2	D1	D2	D3	H1	H2	H3	L1	L2	L3	L4
VUVG-L-10 -...-M7 ...	10.2	-	M7	3.2	M3	32.5	3.6	4.4	86.5	81.5	8	27
VUVG-S-10 -...-M7 ...	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14		
	4.85	6.15	47	14	11	12	19	-	69.2	66.7		

Solenoid valves VUVG-S10, in-line valves M5/M7

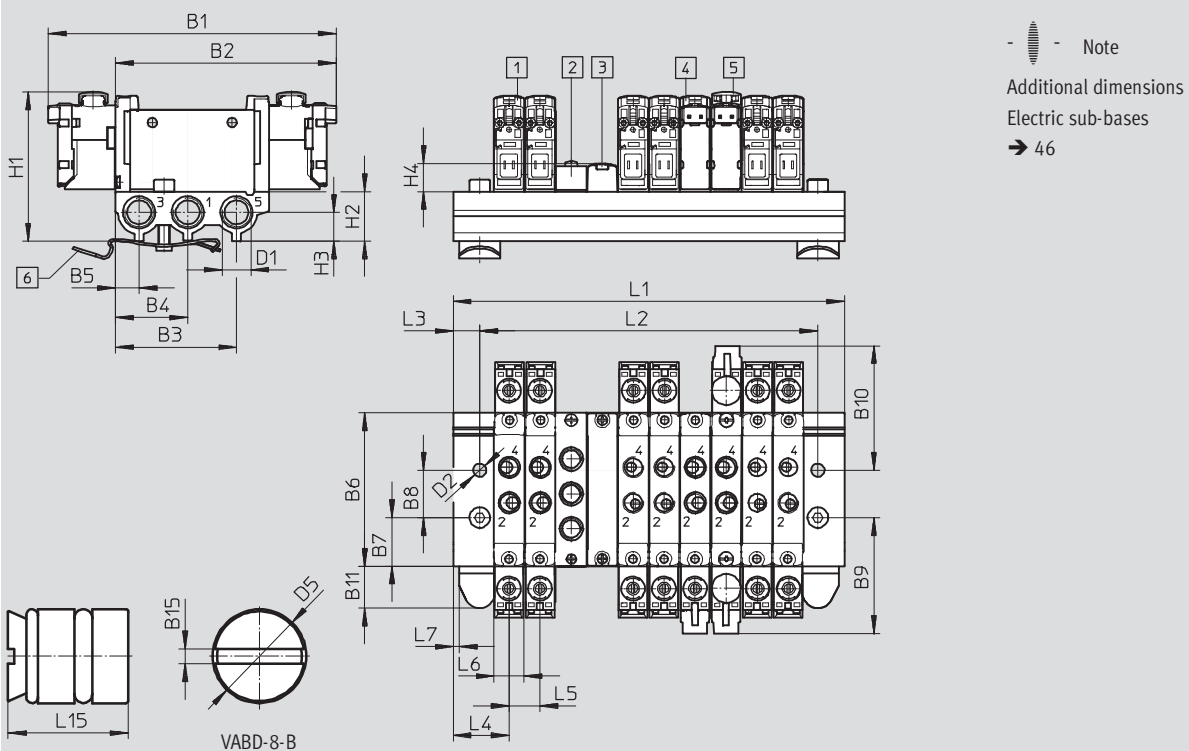
Manifold assembly

In-line valves for
manifold assembly



Dimensions

Download CAD data → www.festo.com



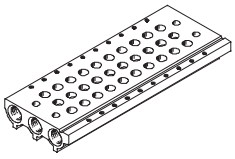
- 1 Solenoid valve, vertical electrical connection
- 2 Supply plate M5 or M7 for 1, 3, 5
- 3 Blanking plate VABB-L1-10-S
- 4 Solenoid valve, horizontal electrical connection
- 5 Cover cap for manual override
- 6 H-rail mounting (2x M4x20 screws to DIN 912 are required)

Type	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B15
VUVG-S10 -...-M5 ...	97.5	74.8	41	24.5	8	52	16.5	16	39.2	42.3	14.45	1
	D1	D2	D5	H1	H2	H3	H4	L3	L4	L5	L6	L7
	G $\frac{1}{8}$	4.5	Ø8	50.6	16.8	7	9.6	9	19	10.5	10.2	2
	L15											
	10											

Valve positions	2	3	4	5	6	7	8	9	10	12	14	16
L1 [mm]	48.5	59	69.5	80	90.5	101	111.5	122	132.5	153.5	174.5	195.5
L2 [mm]	30.5	41	51.5	62	72.5	83	93.5	104	114.5	135.5	156.5	177.5
VABM weight [g]	66	81	96	111	126	141	156	171	186	216	246	276

Solenoid valves VUVG-S10, in-line valves M5/M7

Ordering data





Technical data – Manifold rails							
	Port	CRC	Material ²⁾	Operating pressure	Max. tightening torque for assembly [Nm]		
	1, 3, 5			[bar]	Valve	H-rail	Wall
	G $\frac{1}{8}$	2 ¹⁾	Wrought aluminium alloy	-0.9 ... 10	0.45	1.5	3

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

Order code – Manifold rails

VABM	-	L1	-	10	S	-	G18	-	
Manifold assembly components							Number of valve positions		
Manifold rail		VABM					2 to 10, 12, 14 and 16		
Valve series							Ports 1, 3 and 5		
VUVG		L1					G18 G $\frac{1}{8}$		
Valve width									
10 mm				10					
Manifold rail with ports 1, 3, 5									
For M5 and M7 in-line valves					S				

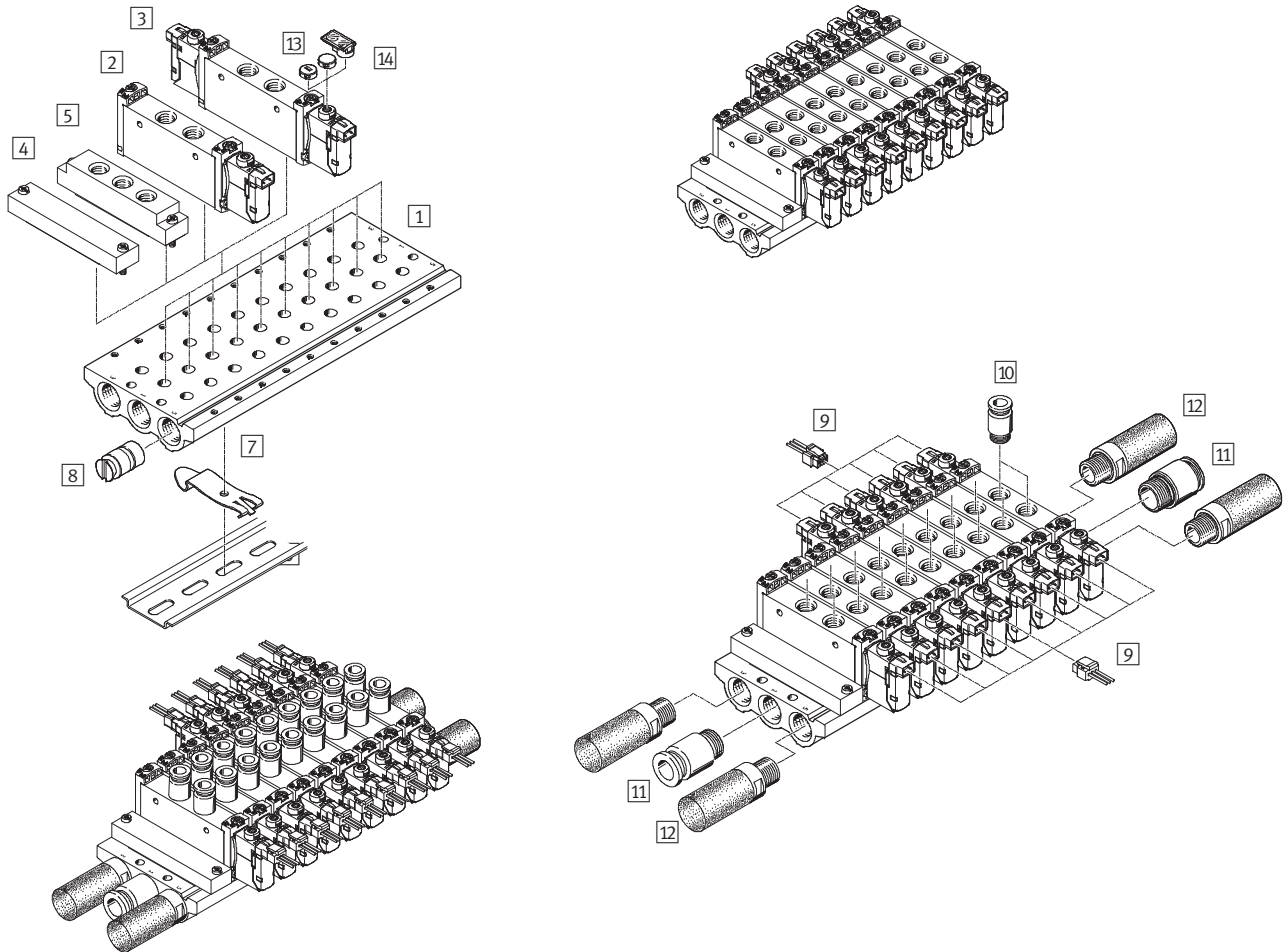
Ordering data – Accessories

				Type
Blanking plate				Technical data → Internet: vabb
	For manifold rail for M5/M7 in-line valves	Incl. screws and seal		VABB-L1-10-S
Blanking plug				Technical data → Internet: vabd
	For manifold rail for M5/M7 in-line valves	Separator for pressure zones		VABD-8-B
Supply plate				Technical data → Internet: vabf
	For manifold rail for M5 in-line valves	Incl. screws and seal		VABF-L1-10-P3A4-M5
	For manifold rail for M7 in-line valves			VABF-L1-10-P3A4-M7
Seals for in-line valves				Technical data → Internet: vabd
	M5	10 seals and 20 screws		VABD-L1-10X-S-M5
	M7			VABD-L1-10X-S-M7

Solenoid valves VUVG-L14 and VUVG-S14, in-line valves G1/8

System overview

Manifold assembly



Manifold assembly and accessories				
	Type	Brief description	→ Page/Internet	
1	Manifold rail	VABM-L1-14S-G14- ...	For 2 to 10, 12, 14 and 16 valve positions	26
2	Solenoid valve	VUVG- ...	In-line valve, 5/2-way single solenoid	22
3	Solenoid valve	VUVG- ...14	In-line valve, 2x3/2-way, 5/2-way double solenoid and 5/3-way single solenoid	22
4	Blanking plate	VABB-L1-14-S	For covering an unused valve position	26
5	Supply plate	VABF-L1-14-P3A4- ...	For air supply 1 and outlet port 3 and 5	26
6	H-rail	NRH-35-2000	For mounting the valve manifold	49
7	H-rail mounting	VAME-T-M4	2 pieces for attaching the valve manifold to the H-rail	49
8	Blanking plug	VABD-10-B	For creating pressure zones	26
9	Plug socket with cable	NEBV-H1G2-KN-...-LE2	For electric sub-base H2 and H3	48
10	Push-in fitting	QS...	Push-in fitting for outlet port 2 and 4	48
11	Push-in fitting	QS...	Push-in fitting for air supply 1	quick star
12	Silencer	U...	For outlet port 3 and 5	48
13	Cover cap	VMPA-HB...-B	For manual override	48
14	Inscription label holder	ASLR-D	For labelling the valves, covering the mounting screw and the manual override	49

Solenoid valves VUVG-L14 and VUVG-S14, in-line valves G1/8

Technical data

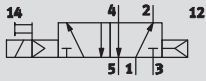
Function

2x3/2C, 2x3/2U, 2x3/2H




5/2-way, single solenoid

5/2-way, double solenoid

5/3C, 5/3U, 5/3E



E.g. 5/2-way valve with internal pilot air supply and reset via pneumatic spring

-  - Width 14 mm
-  - Flow rate
580 ... 780 l/min
-  - Voltage
5, 12 and 24 V DC



General technical data								
Valve function	2x3/2-way			5/2-way		5/3-way		
Normal position	C ¹⁾	U ²⁾	H ⁴⁾	-	-	C ¹⁾	U ²⁾	E ³⁾
Memory stability	Single solenoid				Double solenoid	Single solenoid		
Pneumatic spring reset method	Yes				-	No		
Mechanical spring reset method	No				-	Yes		
Vacuum operation at port 1	No			Only with external pilot air supply				
Design	Piston spool valve							
Sealing principle	Soft							
Actuation type	Electric							
Type of control	Piloted							
Pilot air supply	Internal or external							
Exhaust function	Flow control							
Manual override	Choice of non-detenting, detenting or covered							
Type of mounting	Optionally via through-holes ⁷⁾ or on manifold rail							
Mounting position	Any							
Nominal size	[mm] 4.6			5.6				
Standard nominal flow rate	[l/min] 650	600	650	780		650	600	
Flow rate on manifold rail	[l/min] 580			700		600		
Switching time on/off	[ms] 8/23			14/28	-	12/40		
Changeover time	[ms] -			8		20		
Width	[mm] 14							
Port	1, 2, 3, 4, 5			G1/8				
	14			M5				
Product weight	[g] 89			78	89			
Corrosion resistance class	CRC			2 ⁶⁾				

1) C = normally closed

2) U = normally open

3) E = normally exhausted

4) H=2x3/2-way valve in one housing with 1x normally closed and 1x normally open

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

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

Solenoid valves VUVG-L14 and VUVG-S14, in-line valves G1/8

FESTO

Technical data

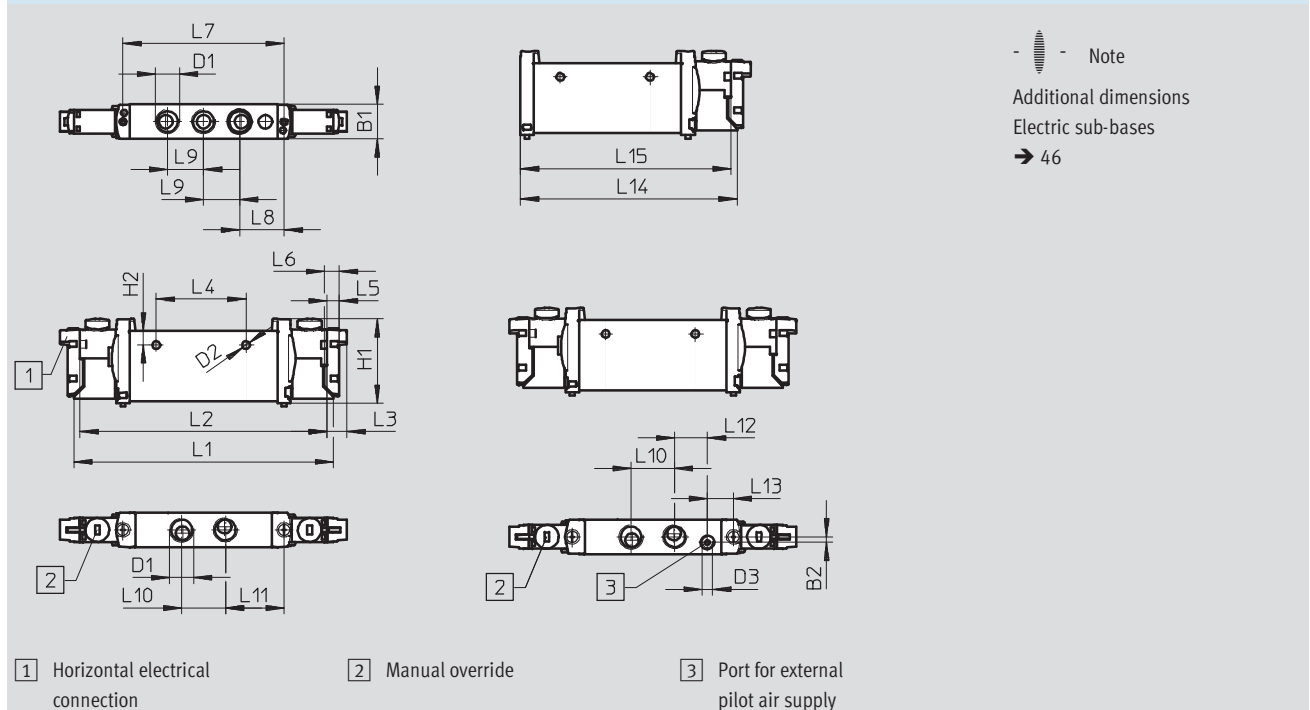
Operating and environmental conditions						
Valve function			2x3/2-way	5/2-way, single solenoid	5/2-way, double solenoid	5/3-way
Operating medium	Filtered compressed air, grade of filtration 40 µm, lubricated or unlubricated					
Operating pressure at port 1 with pilot air supply	Internal	[bar]	1.5 ... 8	2.5 ... 8	1.5 ... 8	3 ... 8
	External	[bar]	1.5... 10	-0.9... 10		
Operating pressure at port 3 or 5 with pilot air supply	Internal or external	[bar]	-0.9... 10			
Pilot pressure		[bar]	1.5 ... 8	2.5 ... 8	1.5 ... 8	3 ... 8
Ambient temperature		[°C]	-5 ... +50, -5 ... +60 with holding current reduction			
Temperature of medium		[°C]	-5 ... +50, -5 ... +60 with holding current reduction			

Electrical data	
Electrical connection	Via electric sub-base
Operating voltage	[V DC] 5, 12 and 24 ±10%
Output	[W] 1, reduced to 0.35 via holding current reduction
Duty cycle	[%] 100
Protection class to EN 60529	IP40 (with plug socket), IP65 (with M8)

Materials	
Housing	Wrought aluminium alloy
Seals	HNBR, NBR
Note on materials	RoHS-compliant

Dimensions Download CAD data → www.festo.com

2x3/2-way, 5/2-way and 5/3-way valves



Type	B1	B2	D1	D2	D3	H1	H2	L1	L2	L3	L4	L5	L6
VUVG-L-14 -...-G18 ...	14.4	2.3	G1/8	Ø3.2	M5	34.8	5.8	107	102	8	37	4.85	6.15
VUVG-S-14 -...-G18 ...	L7	L8	L9	L10	L11	L12	L13	L14	L15				
	66.5	18.35	14.9	18	24.25	13.45	10.8	89.4	86.95				

Solenoid valves VUVG-S14, in-line valves G1/8

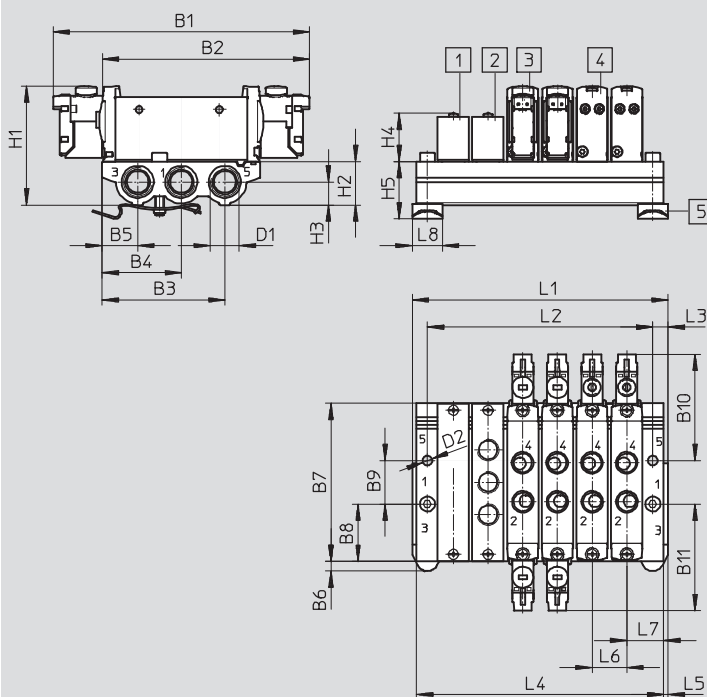
Manifold assembly


In-line valves for
manifold assembly



Dimensions

Download CAD data → www.festo.com



 Note
Additional dimensions
Electric sub-bases
→ 46

1 Blanking plate
VABB-L1-14

2 Supply plate
VABF-L1-14-P3A4-G18

3 Double solenoid valve

4 Single solenoid valve

5 H-rail mounting (2x M4x25
screws to DIN 912 are required
for mounting)

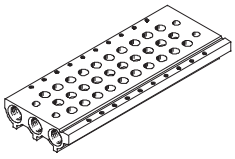
Type	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	D1
VUVG-S14-...-G18 ...	118.3	95.1	56.55	36.45	16.35	4.5	72.9	26.45	20	49.15	49.15	G1/4
	D2	H1	H2	H3	H4	H5	L3	L5	L6 ¹⁾	L7		
	Ø4.5	54.8	20	10.6	22.3	26.4	7	2	16	17		

Valve positions	2	3	4	5	6	7	8	9	10	12	14	16
L1 [mm]	54	70	86	98	118	134	150	166	182	214	246	278
L2 [mm]	40	56	72	88	104	120	136	152	168	200	232	264
L4 [mm]	50	66	82	98	114	130	146	162	178	210	242	274
VABM weight [g]	118	159	200	241	282	323	364	405	446	528	610	692

1) Grid dimension

Solenoid valves VUVG-S14, in-line valves G1/8

Ordering data





Technical data – Manifold rails							
	Port	CRC	Material ²⁾	Operating pressure	Max. tightening torque for assembly [Nm]		
	1, 3, 5			[bar]	Valve	H-rail	Wall
	G1/4	2 ¹⁾	Wrought aluminium alloy	-0.9 ... 10	0.65	1.5	3

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

Order code – Manifold rails

VABM	-	L1	-	14	S	-	G14	-	
Manifold assembly components									Number of valve positions
Manifold rail		VABM							2 to 10, 12, 14 and 16
Valve series									Ports 1, 3 and 5
VUVG		L1					G14	G1/4	
Valve width									
14 mm				14					
Manifold rail with ports 1, 3, 5									
For G 1/8 in-line valves					S				

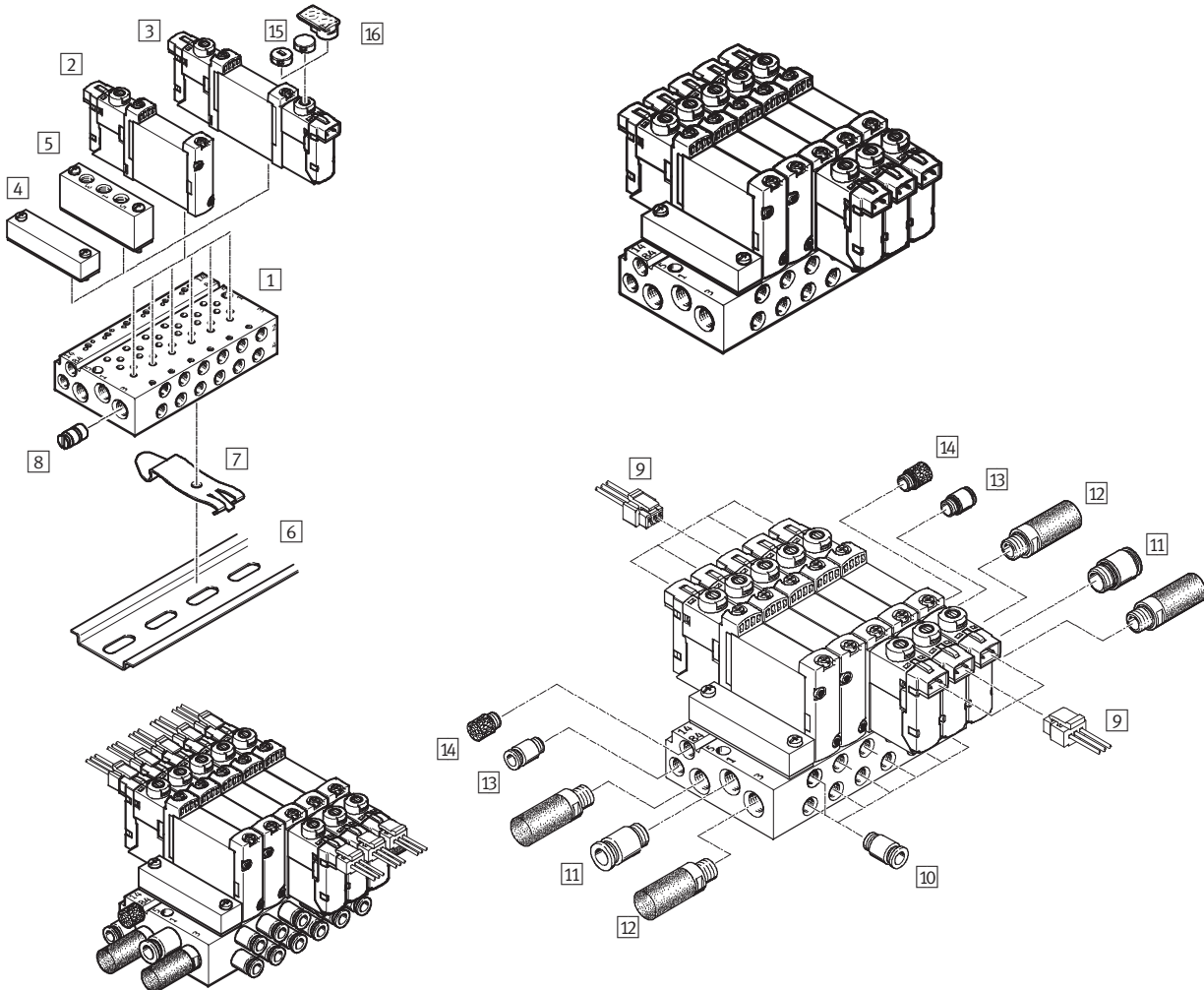
Ordering data – Accessories

				Type
Blanking plate				Technical data → Internet: vabb
	For manifold rail for M5/M7 in-line valves	Incl. screws and seal		VABB-L1-14
Blanking plug				Technical data → Internet: vabd
	For manifold rail for G 1/8 in-line valves	Separator for pressure zones		VABD-10-B
Supply plate				Technical data → Internet: vabf
	For manifold rail for G 1/8 in-line valves	Incl. screws and seal		VABF-L1-14-P3A4-G18
Seals for in-line valves				Technical data → Internet: vabd
	G 1/8	10 seals and 20 screws		VABD-L1-14X-S-G18

Solenoid valves VUVG-B10A, sub-base valves

System overview

Manifold assembly



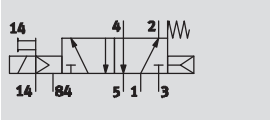
Manifold assembly and accessories				
	Type	Brief description	→ Page/Internet	
1	Manifold rail	VABM-L1-10 ...-G18- ...	For 2 to 10, 12, 14 and 16 valve positions	31
2	Solenoid valve	VUVG- ...	Sub-base valve, 5/2-way single solenoid	28
3	Solenoid valve	VUVG- ...	Sub-base valve, 2x3/2-way, 5/2-way double solenoid and 5/3-way single solenoid	28
4	Blanking plate	VABB-L1-10-S	For covering an unused valve position	31
5	Supply plate	VABF-L1-10-P3A4- ...	For air supply 1 and outlet port 3 and 5	31
6	H-rail	NRH-35-2000	For mounting the valve manifold	48
7	H-rail mounting	VAME-T-M4	2 pieces for attaching the valve manifold to the H-rail	49
8	Blanking plug	VABD- ...	For creating pressure zones	26
9	Plug socket with cable	NEBV-H1G2-KN-...-LE2	For electric sub-base H2 and H3	48
10	Push-in fitting	QS...	Push-in fitting for outlet port 2 and 4	quick star
11	Push-in fitting	QS...	Push-in fitting for air supply 1	quick star
12	Silencer	U...	For outlet port 3 and 5	48
13	Push-in fitting	QS...	Push-in fitting for pilot air supply 12/14	quick star
14	Silencer	U...	Silencer for pilot air exhaust 82/84	quick star
15	Cover cap	VMPA-HB...-B	For manual override	48
16	Inscription label holder	ASLR-D	For labelling the valves, covering the mounting screw and the manual override	49

Solenoid valves VUVG-B10A, sub-base valves




Technical data

Function

5/2-way, single solenoid
5/2-way, double solenoid
5/3C, 5/3U, 5/3E



E.g. 5/2-way valve with internal pilot air supply and combined reset via mechanical plus pneumatic spring

-  - Width 10 mm
-  - Flow rate
90 ... 100 l/min
-  - Voltage
5, 12 and 24 V DC



General technical data					
Valve function	5/2-way		5/3-way		
Normal position	-	-	C ¹⁾	U ²⁾	E ³⁾
Memory stability	Single solenoid	Double solenoid	Single solenoid		
Pneumatic spring reset method	Yes ⁵⁾	-	No		
Mechanical spring reset method	Yes ⁵⁾	-	Yes		
Vacuum operation at port 1	Only with external pilot air supply				
Design	Piston spool valve				
Sealing principle	Soft				
Actuation type	Electric				
Type of control	Piloted				
Pilot air supply	Internal or external				
Exhaust function	Flow control				
Manual override	Choice of non-detenting, detenting or covered				
Type of mounting	On manifold rail				
Mounting position	Any				
Nominal size	[mm]	2			
Standard nominal flow rate	[l/min]	100	90		
Flow rate on manifold rail M3	[l/min]	100	90		
Switching time on/off	[ms]	7/15	-	8/25	
Changeover time	[ms]	-	5	14	
Width	[mm]	10			
Port	1, 3, 5	M7 in manifold rail			
	2, 4	M5 in manifold rail			
	12/14, 82/84	M5 in manifold rail			
Product weight	[g]	38	49		
Corrosion resistance class	CRC	2 ⁶⁾			

1) C = normally closed

2) U = normally open

3) E = normally exhausted

5) Combined reset method

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

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

Solenoid valves VUVG-B10A, sub-base valves

Technical data

Operating and environmental conditions			
Valve function			5/2-way, single solenoid 5/2-way, double solenoid 5/3-way
Operating medium			Filtered compressed air, grade of filtration 40 µm, lubricated or unlubricated
Operating pressure at port 1 with pilot air supply	Internal	[bar]	2.5 ... 8
	External	[bar]	-0.9 ... 10
Operating pressure at port 3 or 5 with pilot air supply	Internal or external	[bar]	-0.9 ... 10
Pilot pressure ¹⁾		[bar]	2.5 ... 8 1.5 ... 8 3 ... 8
Ambient temperature		[°C]	-5 ... +50, -5 ... +60 with holding current reduction
Temperature of medium		[°C]	-5 ... +50, -5 ... +60 with holding current reduction

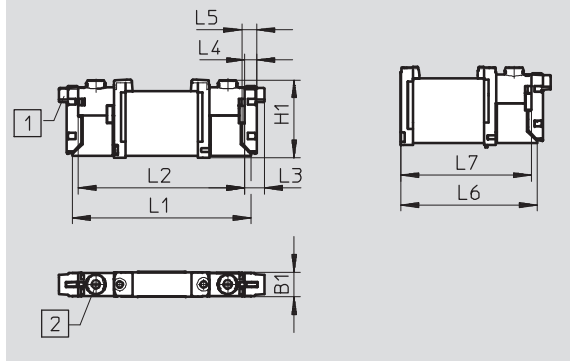
1) Minimum pilot pressure 50% of the operating pressure

Electrical data	
Electrical connection	Via electric sub-base
Operating voltage	[V DC] 5, 12 and 24 ±10%
Output	[W] 1, reduced to 0.35 via holding current reduction
Duty cycle	[%] 100
Protection class to EN 60529	IP40 (with plug socket), IP65 (with M8)

Materials	
Housing	Wrought aluminium alloy
Seals	HNBR, NBR
Note on materials	RoHS-compliant


Dimensions

5/2-way and 5/3-way valves



1 Vertical electrical connection 2 Manual override

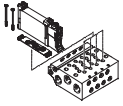
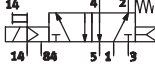
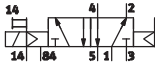
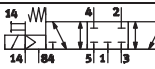

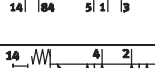

















Download CAD data → www.festo.com

 Note
Additional dimensions
Electric sub-bases
→ 46

Type	B1	H1	L1	L2	L3	L4	L5	L6	L7
VUVG-B10A-...-F ...	10.2	32.5	73.9	68.9	8	4.85	6.15	56.9	54.4

Solenoid valves VUVG-B10A, sub-base valves

Order code

VUVG	-	B	10A	-		-	Z		-	F	-				L	-	
Valve design																	
 <p>Sub-base, manifold valve incl. seal and screws</p>																	
Width																	
10 mm 10A																	
Valve functions																	
 <p>M52</p>																	
 <p>B52</p>																	
 <p>P53C</p>																	
 <p>P53U</p>																	
 <p>P53E</p>																	
Reset method																	
Pneu./mech. spring for M52 R																	
With B52 and P53 -																	
Pilot air supply																	
External Z																	
Manual override																	
 Non-detenting H																	
 Covered S																	
 Detenting T																	
Connecting cable																	
W1...4¹⁾ Not sheathed for H 																	
C1...4¹⁾ Sheathed for H 																	
WS1...4¹⁾ Not sheathed for S 																	
S1...4¹⁾ Sheathed for S 																	
N1...4⁶⁾ M8x1, 3-pin 																	
N5...8⁶⁾ M8x1, 4-pin 																	
Display																	
L LED																	
Protective circuit																	
- Without holding current reduction (HCR) 1																	
R2 With holding current reduction (HCR) 1 to 0.35																	
Electric sub-base																	
H2 Port pattern H, horizontal plug 																	
H3 Port pattern H, vertical plug 																	
S2 Port pattern S, horizontal plug 																	
S3 Port pattern S, vertical plug 																	
L1...4 With 2x stranded wire L: 1 = 0.5 m, 2 = 1 m, 3 = 2.5 m, 4 = 5 m 																	
R1 M8 individual plug, 4-pin, only without HCR 																	
R8 M8 individual plug, 3-pin, only without HCR 																	
P3 Without electric sub-base 																	
Operating voltage																	
1 24 V DC																	
5 12 V DC																	
4 5 V DC																	
Pneumatic connection																	
F In the manifold rail																	

1) W1/C1/S1/WS1 = 0.5 m, W2/C2/S2/WS2 = 1 m, W3/C3/S3/WS3 = 2.5 m, W4/C4/S4/WS4 = 5 m
2) At 24 V DC

3) If Q... is chosen for the pneumatic connection, this also applies to the exhaust ports 3 and 5

6) Straight: N1/N5 = 2.5 m, N2/N6 = 5 m
Angled: N3/N7 = 2.5 m, N4/N8 = 5 m

Solenoid valves VUVG-B10A, sub-base valves

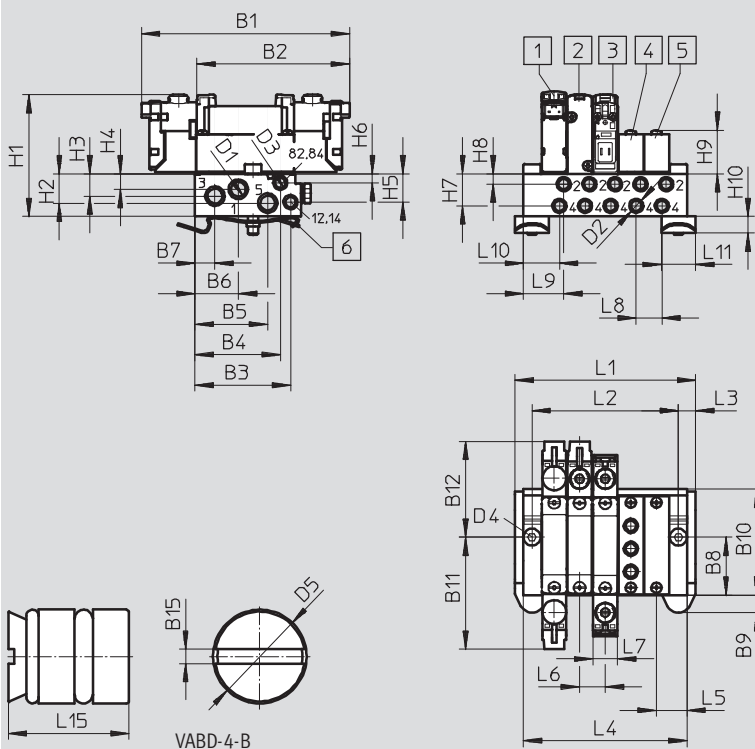
Manifold assembly

Sub-base valve for manifold assembly, connection M5



Dimensions

Download CAD data → www.festo.com



- - Note
Additional dimensions
Electric sub-bases
→ 46

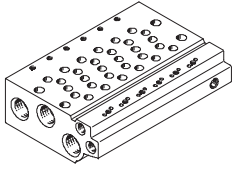
- 1 Solenoid valve
- 2 Solenoid valve
- 3 Solenoid valve
- 4 Supply plate
- 5 Blanking plate
- 6 H-rail mounting (2x M4x25 screws to DIN 912 are required)

Type	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
VUVG-B10A-...-F-...	84.9	62.4	39.12	34.95	29.83	17.75	8.15	24	7.15	43.5	45.75	39.15
	B15	D1	D2	D3	D4	D5	H1	H2	H3	H4	H5	H6
	0.48	M7	M5	M5	∅4.5	∅4	53.1	12	9.1	6.3	11.57	3.6
	H7	H8	H9	H10	H15	L3	L5	L6	L7	L8	L9	L10
	13.1	4.2	17.8	6.8	1.9	7	12.5	10.5	10.2	10.5	16.5	14.7
	L11	L15										
	14	8.5										

Valve positions	2	3	4	5	6	7	8	9	10	12	14	16
L1 [mm]	42.5	53	63.5	74	84.5	96	106.5	116	126.5	147.5	168.5	189.5
L2 [mm]	28.5	39	49.5	60	70.5	81	91.5	102	112.5	133.5	154.5	175.5
L4 [mm]	35.5	46	56.5	67	77.5	89	99.5	109	119.5	140.5	161.5	182.5
VABM weight [g]	60	78	96	114	132	150	168	186	204	240	276	312

Solenoid valves VUVG-B10A, sub-base valves

Ordering data





Technical data – Manifold rails									
	Port			CRC	Material ²⁾	Operating pressure [bar]	Max. tightening torque for assembly [Nm]		
	2, 4	1, 3, 5	12/14, 82/84				Valve	H-rail	Wall
	M5	M7	M5	2 ¹⁾	Wrought aluminium alloy	-0.9 ... 10	0.45	1.5	1.5

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

Order code – Manifold rails M3/M5

VABM	-	L1	-	10A	-	M7	-	
Manifold assembly components								Number of valve positions
Manifold rail		VABM						2 to 10, 12, 14 and 16
Valve series								Ports 1, 3 and 5
VUVG		L1				M7	M7	
Valve width								
10 mm				10A				
Rail with ports 1, 2, 3, 4, 5, 12/14, 82/84								
Port 2 and 4 in M5								
								W

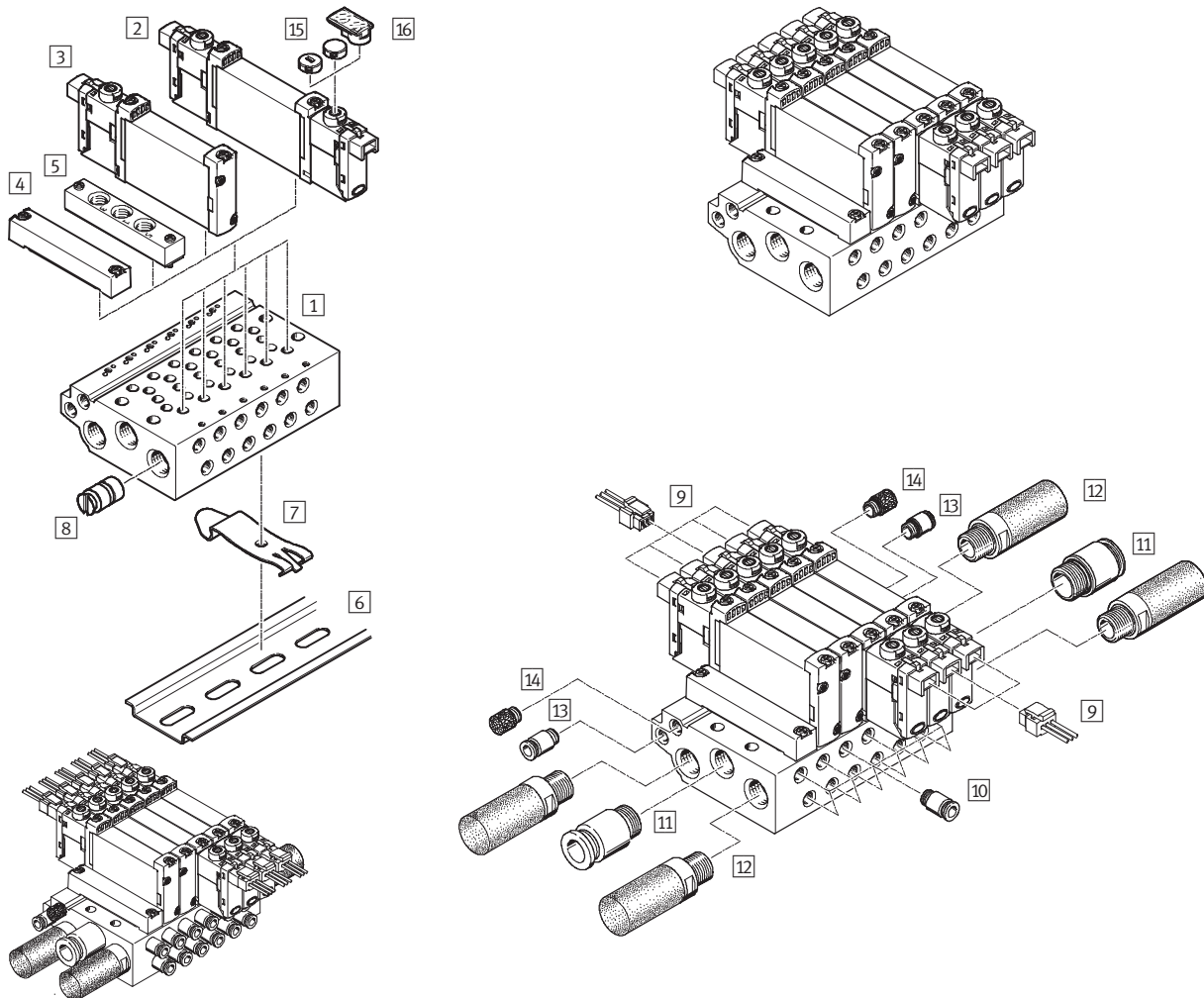
Ordering data – Accessories

				Type
Blanking plate				Technical data → Internet: vabb
	For manifold rail 10AW	Incl. screws and seal		VABB-L1-10A
Blanking plug				Technical data → Internet: vabd
	For manifold rail 10AW	Separator for pressure zones		VABD-4.2-B
Supply plate				Technical data → Internet: vabf
	For manifold rail 10AW	Incl. screws and seal		VABF-L1-10A-P3A4-M5
Seals				Technical data → Internet: vabd
	For sub-base valves B10A	10 seals and 20 screws		VABD-L1-10AB-S-M3

Solenoid valves VUVG-B10, sub-base valves

System overview

Manifold assembly



Manifold assembly and accessories				
	Type	Brief description	→ Page/Internet	
1	Manifold rail	VABM-L1-10 ...-G18- ...	For 2 to 10, 12, 14 and 16 valve positions	31
2	Solenoid valve	VUVG- ...	Sub-base valve, 5/2-way single solenoid	28
3	Solenoid valve	VUVG- ...	Sub-base valve, 2x3/2-way, 5/2-way double solenoid and 5/3-way single solenoid	28
4	Blanking plate	VABB-L1-10-S	For covering an unused valve position	31
5	Supply plate	VABF-L1-10-P3A4- ...	For air supply 1 and outlet port 3 and 5	31
6	H-rail	NRH-35-2000	For attaching the valve manifold	48
7	H-rail mounting	VAME-T-M4	2 pieces for attaching the valve manifold to the H-rail	48
8	Blanking plug	VABD- ...	For creating pressure zones	31
9	Plug socket with cable	NEBV-H1G2-KN-...-LE2	For electric sub-base H2 and H3	48
10	Push-in fitting	QS...	Push-in fitting for outlet port 2 and 4	quick star
11	Push-in fitting	QS...	Push-in fitting for air supply 1	quick star
12	Silencer	U...	For outlet port 3 and 5	48
13	Push-in fitting	QS...	Push-in fitting for pilot air supply 12/14	quick star
14	Silencer	U...	Silencer for pilot air exhaust 82/84	quick star
15	Cover cap	VMPA-HB...-B	For manual override	48
16	Inscription label holder	ASLR-D	For labelling the valves, covering the mounting screw and the manual override	49

Solenoid valves VUVG-B10, sub-base valves

Technical data

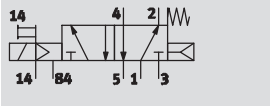
Function

2x3/2C, 2x3/2U, 2x3/2H




5/2-way, single solenoid

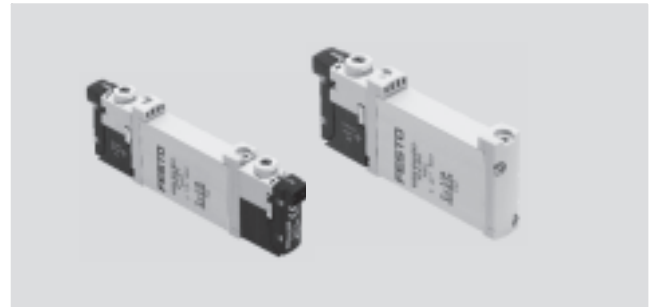
5/2-way, double solenoid

5/3C, 5/3U, 5/3E



E.g. 5/2-way valve with internal pilot air supply and combined reset via mechanical plus pneumatic spring

-  - Width 10 mm
-  - Flow rate
160 ... 270 l/min
-  - Voltage
5, 12 and 24 V DC



General technical data								
Valve function	2x3/2-way			5/2-way		5/3-way		
Normal position	C ¹⁾	U ²⁾	H ⁴⁾	-	-	C ¹⁾	U ²⁾	E ³⁾
Memory stability	Single solenoid				Double solenoid	Single solenoid		
Pneumatic spring reset method	Yes			Yes ⁵⁾	-	No		
Mechanical spring reset method	No			Yes ⁵⁾	-	Yes		
Vacuum operation at port 1	No			Only with external pilot air supply				
Design	Piston spool valve							
Sealing principle	Soft							
Actuation type	Electric							
Type of control	Piloted							
Pilot air supply	Internal or external							
Exhaust function	Flow control							
Manual override	Choice of non-detenting, detenting or covered							
Type of mounting	On manifold rail							
Mounting position	Any							
Nominal size	[mm]	2.7			3.2			
Standard nominal flow rate	[l/min]	160			270		250	
Flow rate on manifold rail M5	[l/min]	150			210		200	
Flow rate on manifold rail M7	[l/min]	160			270		250	
Switching time on/off	[ms]	6/16			7/19	-	10/30	
Changeover time	[ms]	-			7		16	
Width	[mm]	10						
Port	1, 3, 5	G $\frac{1}{8}$ in manifold rail						
	2, 4	M5 or M7 in manifold rail						
	12/14, 82/84	M5 in manifold rail						
Product weight	[g]	55			45	55		
Corrosion resistance class	CRC	2 ⁶⁾						

1) C = normally closed

2) U = normally open

3) E = normally exhausted

4) H=2x3/2-way valve in one housing with 1x normally closed and 1x normally open

5) Combined reset method

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

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

Solenoid valves VUVG-B10, sub-base valves

Technical data

Operating and environmental conditions						
Valve function			2x3/2-way	5/2-way, single solenoid	5/2-way, double solenoid	5/3-way
Operating medium	Filtered compressed air, grade of filtration 40 µm, lubricated or unlubricated					
Operating pressure at port 1 with pilot air supply	Internal	[bar]	1.5 ... 8	2.5 ... 8	1.5 ... 8	3 ... 8
	External	[bar]	1.5 ... 10	-0.9 ... 10		
Operating pressure at port 3 or 5 with pilot air supply	Internal or external	[bar]	-0.9 ... 10			
Pilot pressure ¹⁾		[bar]	1.5 ... 8	2.5 ... 8	1.5 ... 8	3 ... 8
Ambient temperature		[°C]	-5 ... +50, -5 ... +60 with holding current reduction			
Temperature of medium		[°C]	-5 ... +50, -5 ... +60 with holding current reduction			

1) Minimum pilot pressure 50% of the operating pressure

Electrical data	
Electrical connection	Via electric sub-base
Operating voltage [V DC]	5, 12 and 24 ±10%
Output [W]	1, reduced to 0.35 via holding current reduction
Duty cycle [%]	100
Protection class to EN 60529	IP40 (with plug socket)

Materials	
Housing	Wrought aluminium alloy
Seals	HNBR, NBR
Note on materials	RoHS-compliant

Dimensions

2x3/2-way, 5/2-way and 5/3-way valves

1 Vertical electrical connection 2 Horizontal electrical connection 3 Manual override

Download CAD data → www.festo.com

- - Note
Additional dimensions
Electric sub-bases
→ 46

Type	B1	H1	H2	L1	L2	L3	L4	L5	L6	L7
VUVG-B10 -...-F ...	10.2	32.5	3.6	86.5	81.5	8	4.85	6.15	69.2	66.7

Solenoid valves VUVG-B10, sub-base valves

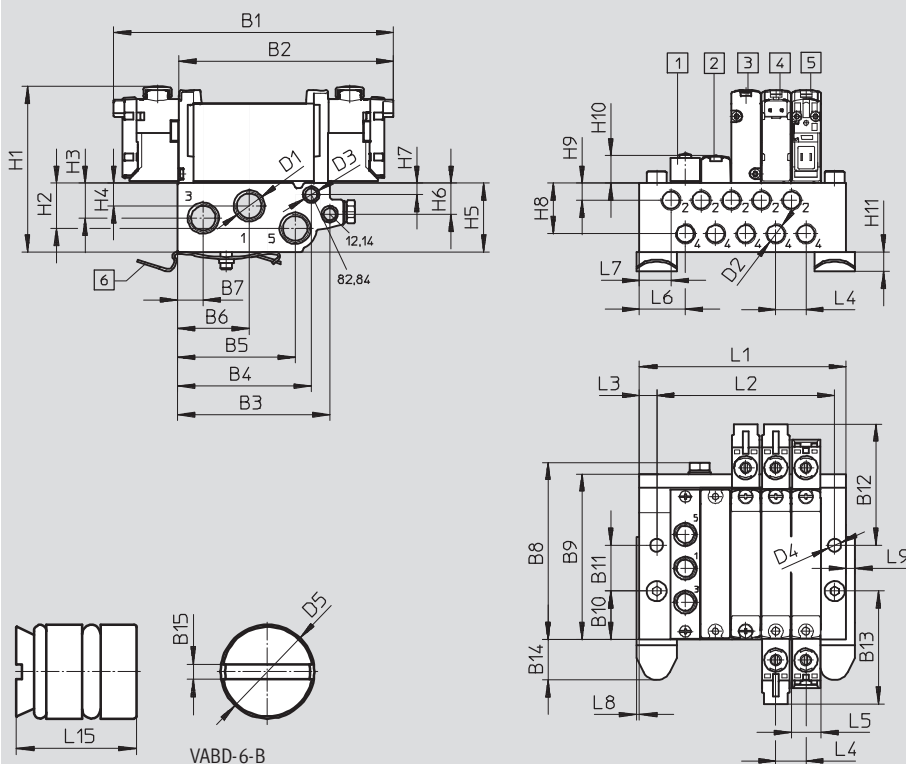
Manifold assembly

Sub-base valve for manifold assembly, M5 or M7 connection



Dimensions

Download CAD data → www.festo.com



Note
Additional dimensions
Electric sub-bases
→ 46

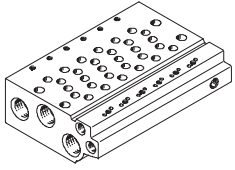
- 1 Supply plate
- 2 Blanking plate
- 3 Solenoid valve
- 4 Solenoid valve
- 5 Solenoid valve
- 6 H-rail mounting (2x M4x30 screws to DIN 912 are required)

Type	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
VUVG-B10 -...-F ...	97.5	74.8	52.9	46.5	40.9	24.9	8.9	62	57.7	16.9	16	42.2
	B13	B14	B15	D1	D2	D3	D4	D5	H1	H2	H3	H4
	39.3	14.05	1.2	G $\frac{1}{8}$	M5/M7	M5	4.5	Ø6	56.4	15.7	12.17	7.87
	H5	H6	H7	H8	H9	H10	H11	L3	L4	L5	L6	L7
	23.9	10.8	4	17.6	5.9	10	6.8	4	10.5	10.2	16	11
	L8	L9	L15									
	1	3	10									

Valve positions	2	3	4	5	6	7	8	9	10	12	14	16
L1 [mm]	40.5	51	61.5	72	82.5	93	103.5	114	122.5	145.5	166.5	187.5
L2 [mm]	30.5	41	51.5	62	72.5	83	93.5	104	114.5	135.5	156.5	177.5
VABM weight [g]	107	135	163	191	219	247	275	303	331	387	415	471

Solenoid valves VUVG-B10, sub-base valves

Ordering data





Technical data – Manifold rails									
	Port			CRC	Material ²⁾	Operating pressure [bar]	Max. tightening torque for assembly [Nm]		
	2, 4	1, 3, 5	12/14, 82/84				Valve	H-rail	Wall
	M5 or M7	G $\frac{1}{8}$	M5	2 ¹⁾	Wrought aluminium alloy	-0.9 ... 10	0.45	1.5	3

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

Order code – Manifold rails M5 and M7

VABM	-	L1	-	10	-	G18	-	
Manifold assembly components								Number of valve positions
Manifold rail		VABM						2 to 10, 12, 14 and 16
Valve series								Ports 1, 3 and 5
VUVG		L1				G18		G $\frac{1}{8}$
Valve width								
10 mm				10				
Rail with ports 1, 2, 3, 4, 5, 12/14, 82/84								
Port 2 and 4 in M5								W
Port 2 and 4 in M7								HW

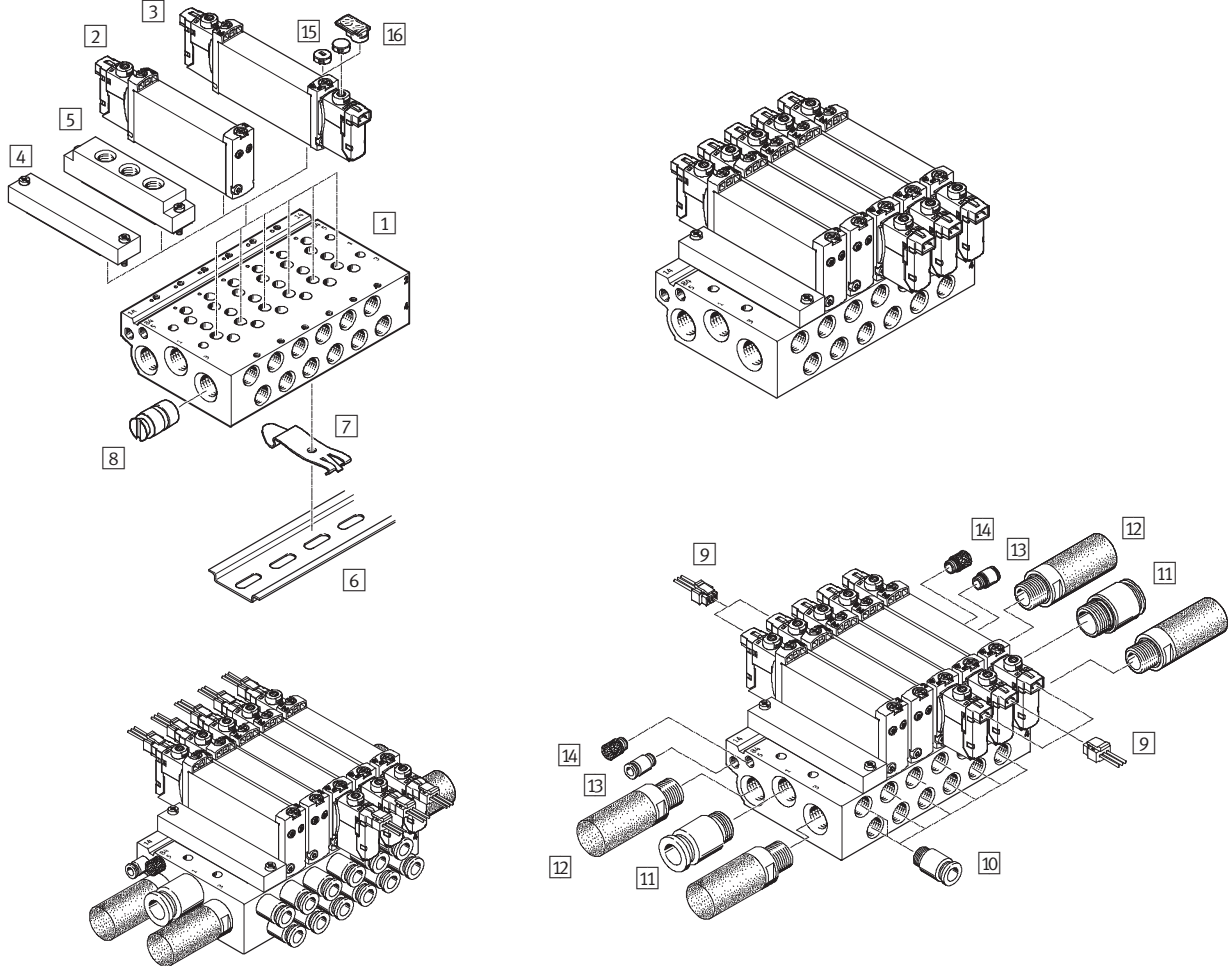
Ordering data – Accessories

				Type
Blanking plate				Technical data → Internet: vabb
	For manifold rail 10W/10HW, sub-base valves	Incl. screws and seal		VABB-L1-10-W
Blanking plug				Technical data → Internet: vabd
	For manifold rail 10W and 10HW, sub-base valves	Separator for pressure zones		VABD-6-B
Supply plate				Technical data → Internet: vabf
	For manifold rail 10W	Incl. screws and seal		VABF-L1-10-P3A4-M5
	For manifold rail 10HW			VABF-L1-10-P3A4-M7
Seals				Technical data → Internet: vabd
	For sub-base valves B10	10 seals and 20 screws		VABD-L1-10B-S-M7

Solenoid valves VUVG-B14, sub-base valves

System overview

Manifold assembly



Manifold assembly and accessories				
	Type	Brief description	→ Page/Internet	
1	Manifold rail	VABM-L1-10 ...-G18- ...	For 2 to 10, 12, 14 and 16 valve positions	31
2	Solenoid valve	VUVG- ...	Sub-base valve, 5/2-way single solenoid	28
3	Solenoid valve	VUVG- ...	Sub-base valve, 2x3/2-way, 5/2-way double solenoid and 5/3-way single solenoid	28
4	Blanking plate	VABB-L1-10-S	For covering an unused valve position	31
5	Supply plate	VABF-L1-10-P3A4- ...	For air supply 1 and outlet port 3 and 5	31
6	H-rail	NRH-35-2000	For mounting the valve manifold	48
7	H-rail mounting	VAME-T-M4	2 pieces for attaching the valve manifold to the H-rail	48
8	Blanking plug	VABD- ...	For creating pressure zones	31
9	Plug socket with cable	NEBV-H1G2-KN-...-LE2	For electric sub-base H2 and H3	48
10	Push-in fitting	QS...	Push-in fitting for outlet port 2 and 4	quick star
11	Push-in fitting	QS...	Push-in fitting for air supply 1	quick star
12	Silencer	U...	For outlet port 3 and 5	48
13	Push-in fitting	QS...	Push-in fitting for pilot air supply 12/14	quick star
14	Silencer	U...	Silencer for pilot air exhaust 82/84	quick star
15	Cover cap	VMPA-HB...-B	For manual override	48
16	Inscription label holder	ASLR-D	For labelling the valves, covering the mounting screw and the manual override	49

Solenoid valves VUVG-B14, sub-base valves

Technical data

Function


2x3/2C, 2x3/2U, 2x3/2H


5/2-way, single solenoid

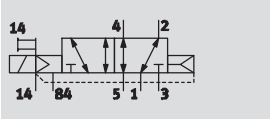
5/2-way, double solenoid

5/3C, 5/3U, 5/3E

 - Width 14 mm

 - Flow rate
510 ... 700 l/min

 - Voltage
5, 12 and 24 V DC



E.g. 5/2-way valve with internal pilot air supply and reset via pneumatic spring

General technical data								
Valve function	2x3/2-way			5/2-way		5/3-way		
Normal position	C ¹⁾	U ²⁾	H ⁴⁾	-	-	C ¹⁾	U ²⁾	E ³⁾
Memory stability	Single solenoid				Double solenoid	Single solenoid		
Pneumatic spring reset method	Yes				-	No		
Mechanical spring reset method	No				-	Yes		
Vacuum operation at port 1	No			Only with external pilot air supply				
Design	Piston spool valve							
Sealing principle	Soft							
Actuation type	Electric							
Type of control	Piloted							
Pilot air supply	Internal or external							
Exhaust function	Flow control							
Manual override	Choice of non-detenting, detenting or covered							
Type of mounting	On manifold rail							
Mounting position	Any							
Nominal size	[mm]	4.6			5.6			
Standard nominal flow rate	[l/min]	580			700		600	
Flow rate on manifold rail G $\frac{1}{8}$	[l/min]	510			580		540	
Switching time on/off	[ms]	8/23			14/28		-	
Changeover time	[ms]	-			8		20	
Width	[mm]	14						
Port	1, 3, 5	G $\frac{1}{4}$ in manifold rail						
	2, 4	G $\frac{1}{8}$ in manifold rail						
	12/14, 82/84	M5 in manifold rail						
Product weight	[g]	89			78		89	
Corrosion resistance class	CRC	2 ⁶⁾						

1) C = normally closed

2) U = normally open

3) E = normally exhausted

4) H=2x3/2-way valve in one housing with 1x normally closed and 1x normally open

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

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

Solenoid valves VUVG-B14, sub-base valves

FESTO

Technical data

Operating and environmental conditions						
Valve function			2x3/2-way	5/2-way, single solenoid	5/2-way, double solenoid	5/3-way
Operating medium	Filtered compressed air, grade of filtration 40 µm, lubricated or unlubricated					
Operating pressure at port 1 with pilot air supply	Internal	[bar]	1.5 ... 8	2.5 ... 8	1.5 ... 8	3 ... 8
	External	[bar]	1.5 ... 10	-0.9 ... 10		
Operating pressure at port 3 or 5 with pilot air supply	Internal or external	[bar]	-0.9 ... 10			
Pilot pressure ¹⁾		[bar]	1.5 ... 8	2.5 ... 8	1.5 ... 8	3 ... 8
Ambient temperature		[°C]	-5 ... +50, -5 ... +60 with holding current reduction			
Temperature of medium		[°C]	-5 ... +50, -5 ... +60 with holding current reduction			

1) Minimum pilot pressure 50% of the operating pressure

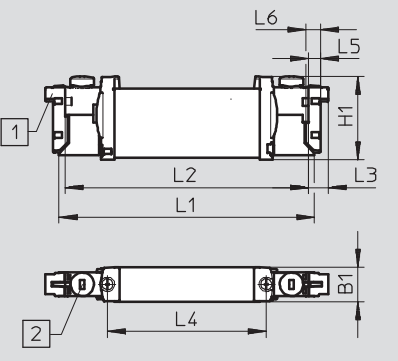
Electrical data	
Electrical connection	Via electric sub-base
Operating voltage [V DC]	5, 12 and 24 ±10%
Output [W]	1, reduced to 0.35 via holding current reduction
Duty cycle [%]	100
Protection class to EN 60529	IP40 (with plug socket)

Materials	
Housing	Wrought aluminium alloy
Seals	HNBR, NBR
Note on materials	RoHS-compliant

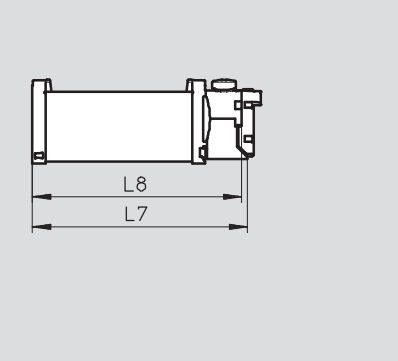
Dimensions

2x3/2-way, 5/2-way and 5/3-way valves


Download CAD data → www.festo.com



1 Horizontal electrical connection



2 Manual override

 Note

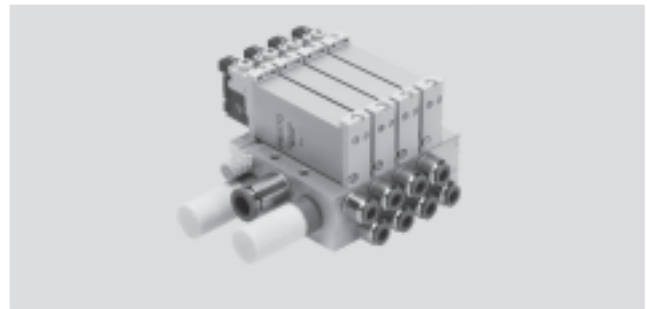
Additional dimensions
Electric sub-bases
→ 46

Type	B1	H1	L1	L2	L3	L4	L5	L6	L7	L8
VUVG-B14 -...-F ...	14.4	34.8	107	102	8	66.5	4.85	6.15	89.45	86.95

Solenoid valves VUVG-B14, sub-base valves

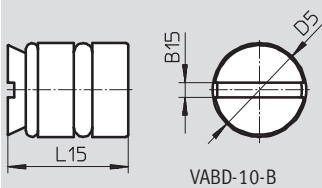
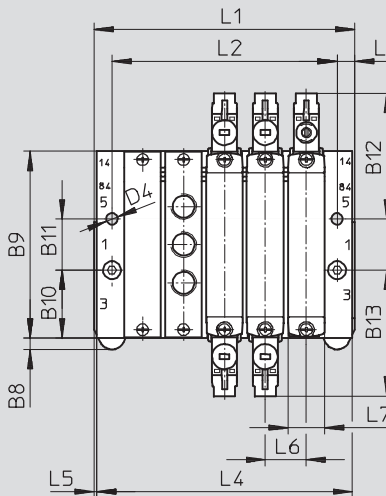
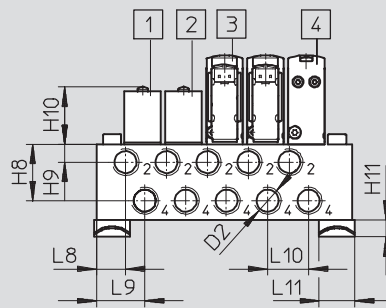
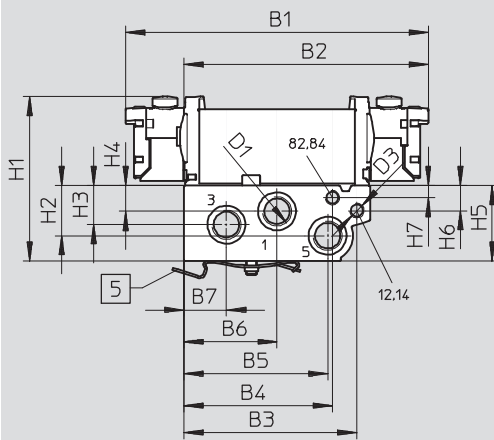
Manifold assembly

Sub-base valve for manifold assembly, G $\frac{1}{8}$ connection



Dimensions

Download CAD data → www.festo.com



Note
Additional dimensions
Electric sub-base
→ 46

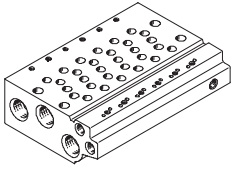
- 1 Blanking plate VABB-L1-14
- 2 Supply plate VABF-L1-14-P3A4-G18
- 3 Double solenoid valve
- 4 Single solenoid valve
- 5 H-rail mounting (2x M4x25 screws to DIN 912 are required)

Type	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
VUVG-B14 -...-F- ...	118.3	95.1	67.7	58.15	56.25	36.6	16.7	4.5	72.9	26.5	20	49.1
	B13	B15	D1	D2	D3	D4	D5	H1	H2	H3	H4	H5
	49.1	1.2	G $\frac{1}{4}$	G $\frac{1}{8}$	M5	Ø4.5	Ø9.8	64.3	19.6	15.3	10.1	29.5
	H6	H7	H8	H9	H10	H11	L3	L5	L6	L7	L8	L9
	9.83	4.8	22.1	7	22.3	6.8	6	1	16	14.4	11.3	18.5
	L10	L11	L15									
	16	14	11									

Solenoid valves VUVG-B14, sub-base valves for G $\frac{1}{8}$

Ordering data

Valve positions	2	3	4	5	6	7	8	9	10	12	14	16
L1 [mm]	56.3	72.3	88.3	104.3	120.3	136.3	152.3	168.3	184.3	216.3	248.3	280.3
L2 [mm]	40	56	72	88	104	120	136	152	168	200	232	264
L4 [mm]	54.3	70.3	86.3	102.3	118.3	134.3	150.3	166.3	182.3	214.3	246.6	278.3
VABM weight [g]	232	306	380	454	528	602	676	750	824	972	1120	1268





Technical data – Manifold rails									
	Port			CRC	Material ²⁾	Operating pressure [bar]	Max. tightening torque for assembly [Nm]		
	2, 4	1, 3, 5	12/14, 82/84				Valve	H-rail	Wall
	G $\frac{1}{8}$	G $\frac{1}{4}$	M5	2 ¹⁾	Wrought aluminium alloy	-0.9 ... 10	0.65	1.5	3

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

Order code – Manifold rails G $\frac{1}{8}$

VABM	-	L1	-	14	W	-	G14	-	
Manifold assembly components									Number of valve positions
Manifold rail		VABM							2 to 10, 12, 14 and 16
Valve series									Ports 1, 3 and 5
VUVG		L1					G14	G $\frac{1}{4}$	
Valve width									
14 mm					14				
Rail with ports 1, 2, 3, 4, 5, 12/14, 82/84									
Port 2 and 4 in G $\frac{1}{8}$									
					W				







Ordering data – Accessories

				Type
Blanking plate				Technical data → Internet: vabb
	For manifold rail 14W, sub-base valves	Incl. screws and seal		VABB-L1-14
Blanking plug				Technical data → Internet: vabd
	For manifold rail 14W, sub-base valves	Separator for pressure zones		VABD-10-B
Supply plate				Technical data → Internet: vabf
	For manifold rail 14W	Incl. screws and seal		VABF-L1-14-P3A4-G18
Seals				Technical data → Internet: vabd
	For sub-base valves B14	10 seals and 20 screws		VABD-L1-14B-S-G18

Solenoid valves VUVG

Ordering data – Electric connection plates

General technical data							
Variants	H2	H3	S2	S3	L-	R1	R8
Mounting position	Any						
Electrical connection	2-pin, socket				Stranded wire	M8 individual plug, 4-pin	M8 individual plug, 3-pin
Protection class	IP40					IP65	
Switching position display	LED						
Type of mounting	Clip					Self-tapping screw	
Note on materials	RoHS-compliant						
Housing colour	Black						
Housing material	PA						

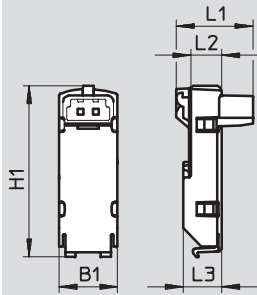
Ordering data – Electric connection plates							
Design	Plug	Additional functions	Ambient temperature [°C]	Code	Output	Voltage	Type
					[W]	[V DC]	
	NEBV-H1 ...	Spark arresting, bipolar	-5 ... +50	H2	1	12/24	VAVE-L1-1VH2-LP
		Spark arresting, holding current reduction	-5 ... +60	H2R	1/0.35	24	VAVE-L1-1H2-LR
	NEBV-H1 ...	Spark arresting, bipolar	-5 ... +50	H3	1	12/24	VAVE-L1-1VH3-LP
		Spark arresting, holding current reduction	-5 ... +60	H3R	1/0.35	24	VAVE-L1-1H3-LR
	NEBV-HS ...	Spark arresting, bipolar	-5 ... +50	S2	1	12/24	VAVE-L1-1VS2-LP
		Spark arresting, holding current reduction	-5 ... +60	S2R	1/0.35	24	VAVE-L1-1S2-LR
	NEBV-HS ...	Spark arresting, bipolar	-5 ... +50	S3	1	12/24	VAVE-L1-1VS3-LP
		Spark arresting, holding current reduction	-5 ... +60	S3R	1/0.35	24	VAVE-L1-1S3-LR
	Open cable end	Spark arresting, bipolar	-5 ... +50	L	1	12/24	VAVE-L1-1VL1-LP
		Spark arresting, bipolar	-5 ... +50	L	1	12/24	VAVE-L1-1VL2-LP
		Spark arresting, bipolar	-5 ... +50	L	1	12/24	VAVE-L1-1VL3-LP
		Spark arresting, bipolar	-5 ... +50	L	1	12/24	VAVE-L1-1VL4-LP
		Spark arresting, holding current reduction	-5 ... +60	LR	1/0.35	24	VAVE-L1-1L1-LR
		Spark arresting, holding current reduction	-5 ... +60	LR	1/0.35	24	VAVE-L1-1L2-LR
		Spark arresting, holding current reduction	-5 ... +60	LR	1/0.35	24	VAVE-L1-1L3-LR
		Spark arresting, holding current reduction	-5 ... +60	LR	1/0.35	24	VAVE-L1-1L4-LR
	NEBU-M8 ...	Spark arresting, bipolar	-5 ... +50	R8	1	12/24	VAVE-L1-1VR8-LP
		Spark arresting, bipolar	-5 ... +50	R1	1	12/24	VAVE-L1-1VR1-LP

Solenoid valves VUVG

Ordering data – Electric connection plates

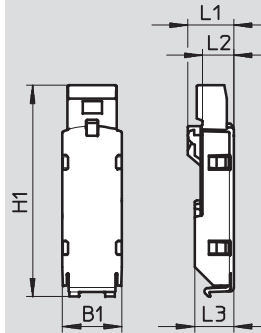
Dimensions

Electric connection plates



Type	B1	H1	L1	L2	L3
VAVE-L1-1VS2-LP	9.8	28.8	12.9	5.2	6.5
VAVE-L1-1S2-LR					
VAVE-L1-1VH2-LP			10.75		
VAVE-L1-H2-LR					

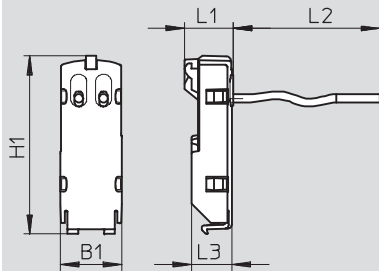
Download CAD data → www.festo.com



Type	B1	H1 ± 0.5	L1	L2	L3
VAVE-L1-1VS3-LP	9.8	35	7.6	5.2	6.5
VAVE-L1-1S3-LR					
VAVE-L1-1VH3-LP			7.5		
VAVE-L1-1H3-LR					

Dimensions

Electric connection plates



Type	B1	H1	L1	L2	L3
VAVE-L1-1VL1-LP	9.8	28.8	7.85	0.5	6.5
VAVE-L1-1L1-LR					
VAVE-L1-1VL2-LP				1	
VAVE-L1-1L2-LR					
VAVE-L1-1VL3-LP				2.5	
VAVE-L1-1L3-LR					
VAVE-L1-1VL4-LP				5	
VAVE-L1-1L4-LR					

Download CAD data → www.festo.com

Solenoid valves VUVG

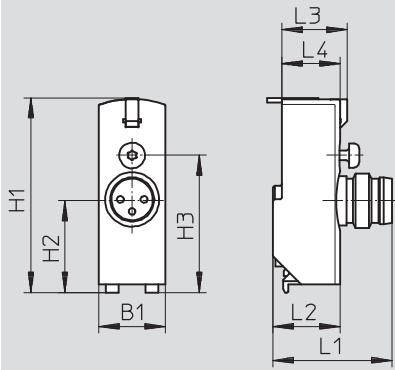
Ordering data – Electric connection plates

FESTO

Dimensions

Download CAD data → www.festo.com


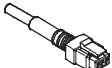
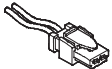
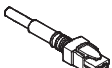
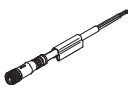

Electric connection plates



Type	B1	H1	H2	H3	L1	L2	L3	L4
VAVE-L1-1VR8-LP	9.8	28.7	13.5	20.2	17.55	9.9	9.65	8.6
VAVE-L1-1VR1-LP								





Solenoid valves VUVG

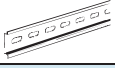




Accessories

Ordering data				
	Voltage	Cable length [m]	Description	Type
Plug socket with cable, not sheathed, open end				Technical data → Internet: nebv
	5, 12 and 24 V DC	0.5	Socket, 2-pin, H2/H3	NEBV-H1G2-KN-0.5-LE2
		1		NEBV-H1G2-KN-1-LE2
		2.5		NEBV-H1G2-KN-2.5-LE2
		5		NEBV-H1G2-KN-5-LE2
Plug socket with cable, sheathed, open end				Technical data → Internet: nebv
	5, 12 and 24 V DC	0.5	Socket, 2-pin, H2/H3	NEBV-H1G2-P-0.5-N-LE2
		1		NEBV-H1G2-P-1-N-LE2
		2.5		NEBV-H1G2-P-2.5-N-LE2
		5		NEBV-H1G2-P-5-N-LE2
Plug socket with cable, not sheathed, open end				Technical data → Internet: nebv
	5, 12 and 24 V DC	0.5	Socket, 2-pin, S2/S3	NEBV-HSG2-KN-0.5-N-LE2
		1		NEBV-HSG2-KN-1-N-LE2
		2.5		NEBV-HSG2-KN-2.5-N-LE2
		5		NEBV-HSG2-KN-5-N-LE2
Plug socket with cable, sheathed, open end				Technical data → Internet: nebv
	5, 12 and 24 V DC	0.5	Socket, 2-pin, S2/S3	NEBV-HSG2-P-0.5-N-LE2
		1		NEBV-HSG2-P-1-N-LE2
		2.5		NEBV-HSG2-P-2.5-N-LE2
		5		NEBV-HSG2-P-5-LE2
Connecting cable, open end				Technical data → Internet: nebu
	5, 12 and 24 V DC	2.5	3-pin, straight socket, M8x1	NEBU-M8G3-K-2.5-LE3
		5		NEBU-M8G3-K-5-LE3
		2.5	4-pin, straight socket, M8x1	NEBU-M8G4-K-2.5-LE4
		5		NEBU-M8G4-K-5-LE4
Connecting cable, open end				Technical data → Internet: nebu
	5, 12 and 24 V DC	2.5	3-pin, angled socket, M8x1	NEBU-M8W3-K-2.5-LE3
		5		NEBU-M8W3-K-5-LE3
		2.5	4-pin, angled socket, M8x1	NEBU-M8W4-K-2.5-LE4
		5		NEBU-M8W4-K-5-LE4

Solenoid valves VUVG

Accessories

Ordering data			
	Description		Type
Blanking plug Technical data → Internet: b			
	For manifold rail		B-M5 B-M7 B-1/8
Blanking plug Technical data → Internet: qsm			
	M thread with sealing ring		
	M5		QSC-F-M5-I
	M7		QSC-F-M7-I
	G thread with sealing ring		
	G1/8		QSC-F-G1/8-I
	G1/4		QSC-F-G1/4-I
Fittings Technical data → Internet: qsm			
	For tubing Ø 3 mm	10 pieces	QSM-M5-3-I
	For tubing Ø 4 mm		QSM-M5-4-I
	For tubing Ø 6 mm		QSM-M5-6-I
	For tubing Ø 4 mm		QSM-M7-4-I
	For tubing Ø 6 mm		QSM-M7-6-I
	For tubing Ø 3 mm	100 pieces	QSM-M5-3-I-R100
	For tubing Ø 4 mm		QSM-M5-4-I-R100
	For tubing Ø 6 mm		QSM-M5-6-I-R100
	For tubing Ø 6 mm		QSM-M7-6-I-R100
Silencer Technical data → Internet: uc			
	For thread M5		U-M5
	For thread M7		UC-M7
	For thread G1/8		UC-1/8

Ordering data			
	Description		Type
H-rail Technical data → Internet: nrh			
	–	2 m	NRH-35-2000
H-rail mounting Technical data → Internet: vame			
	–	2 pieces	VAME-T-M4
Covers for manual override Technical data → Internet: vmpa			
	Covered	–	VMPA-HBV-B
	Non-detenting		VMPA-HBT-B
Inscription label holder Technical data → Internet: aslr			
	Holder for one inscription label and covering for mounting screw and manual override	10 pieces	ASLR-D-L1