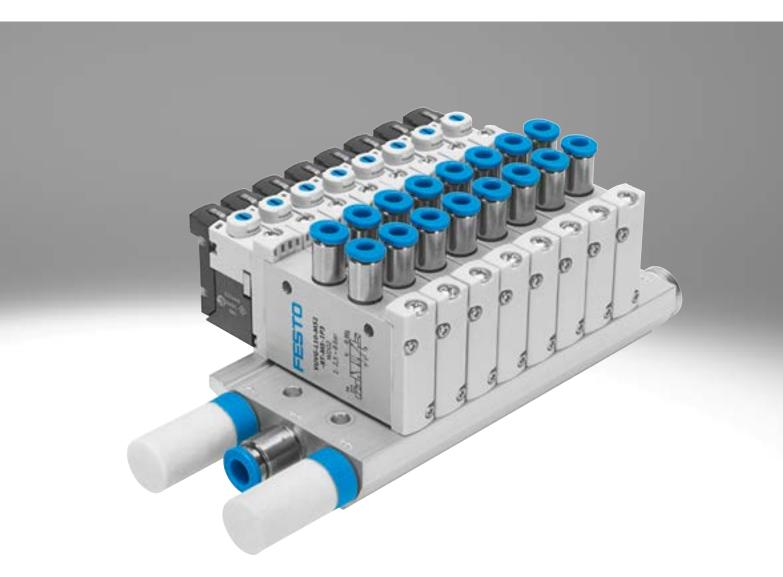
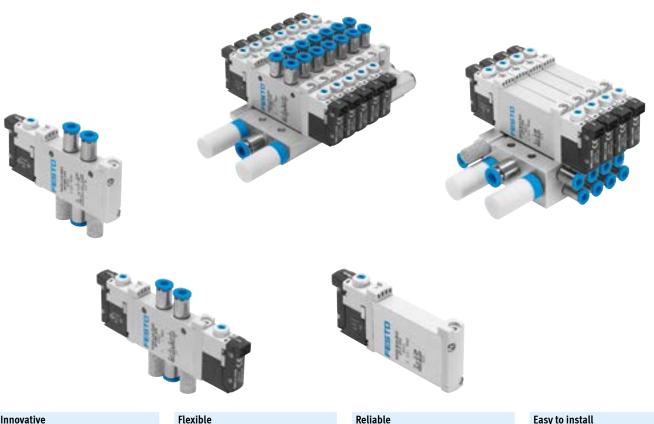
Solenoid valves VUVG/valve terminals VTUG





★/☆	Festo core product range	\star Generally ready for dispatch from the factory within 24 hours
	Covers 80% of your automation tasks	In stock at 13 Service Centres worldwide
		More than 2200 products
Worldwide:	Always in stock	\star Generally ready for dispatch from the factory within 5 days
Superb:	Festo quality at an attractive price	Assembled for you at 4 Service Centres worldwide
Easy:	Simplified procurement and warehousing	Up to 6 \times 10 ¹² variants per product family

Key features



Innovative

- Can be set to internal or external pilot air supply for manifold assemblies with sub-base valves
- Maximum pressure 10 bar •
- ٠ Design principle:
 - Piston spool with sealing ring (VUVG-LK, VUVG-BK)
 - Piston spool with sealing cartridge (VUVG-L, VUVG-B)

- Wide range of valve functions • Choice of quick push-in connectors
- Semi in-line valves for manifold assembly
- M5 and M7 in-line valves can be combined on one manifold rail
- · Valve manifold assembly with pressure zones
- IP40, IP65 • Connection technology via:
 - E-box

• In-line valves

- Sturdy and durable metal components - Valves
 - Manifold rails
- Fast troubleshooting thanks to 360° LED display
- Reliable servicing thanks to valves that can be replaced quickly and easily
- Choice of manual override: non-detenting, covered, non-detenting/detenting or detenting (without accessories)

Easy to install

- Secure mounting on wall or H-rail
- · Easy mounting, captive screws and seal
- Connection technology easy to change via the E-box
- · Identification holder for labelling the valves

Valve terminal configurator

A valve terminal configurator is available to help you select a suitable valve terminal VTUG. This makes it much easier to order the right product.

Valve terminals VTUG are ordered via an ident. code. All valve terminals are supplied fully assembled and individually tested.

This reduces assembly and installation time to a minimum.

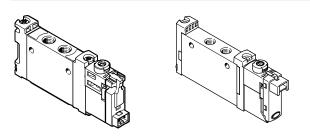
Download CAD data → <u>www.festo.com</u>

Ordering system for valve terminal VTUG

→ Internet: vtug

Key features – Pneumatic components

Individual valves and valve manifold assemblies In-line valves as individual valve



In-line valves are designed to be used without pneumatic links, as all connections to the fittings/tubing are on the valve. The electrical connection is provided by different E-boxes.

The supply ports (1, 3 and 5) for semi

valve by common pneumatic links (e.g.

in-line valves are connected to the

sub-base).

If a special seal set is used, in-line valves VUVG can also be mounted on a manifold rail (pneumatic linking) as semi in-line valves.

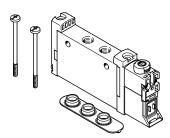
The working ports (2, 4) are on the

vided by different E-boxes.

valve. The electrical connection is pro-

In-line valve VUVG-LK/VUVG-L

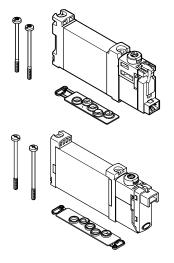
Semi in-line valves for manifold assembly



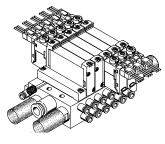
Semi in-line valve VUVG-S

Valve manifold assembly VTUG comprising semi in-line valves VUVG-S

Sub-base valves for manifold assembly



Sub-base valve VUVG-BK/VUVG-B

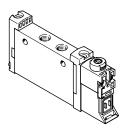


Valve manifold assembly VTUG comprising sub-base valves VUVG-BK/VUVG-B The supply ports (1, 3 and 5) and the working ports (2, 4) of sub-base valves are connected through the sub-base or manifold to the valve. The electrical connection is provided by different E-boxes.

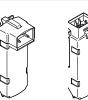
Solenoid valves VUVG

Key features – Pneumatic components

Basic valves VUVG



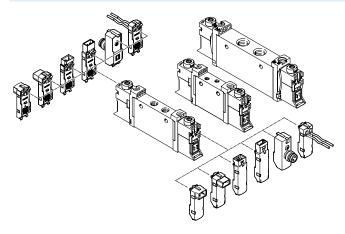
- Size 10, 14 and 18 mm
- In-line valves and semi in-line valves
- Sub-base valves
- 2x 3/2-, 5/2- and 5/3-way valves



E-boxes

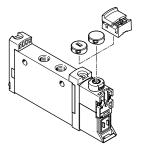
- 5, 12 and 24 V DC
- With or without holding current reduction
- LED

Combinations of basic valve and E-boxes



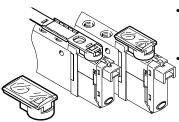
- ∰ - Note More E-boxes → page 100

Cover caps for manual override



- Closed cover cap, covered manual override
- Slotted cover cap, non-detenting manual override
- Cover, detenting manual override

Identification holder



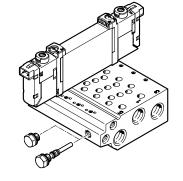
- The identification holder is mounted in the same way as a cover cap for manual override
- The hinged identification holder covers the retaining screw and the manual override

Key features – Pneumatic components

Manifold rail for in-line valves



- For in-line valves M3, M5, M7, G1/8 and G1/4
- For 2x 3/2-way, 5/2-way and 5/3way valves
- 2 to 10 and 12, 14, 16 valve positions



Manifold rail for sub-base valves

- For sub-base valves 10A, 10, 14 and 18
- Manifold rail with M5, M7, G1/8 and G1/4 working ports
- For 2x 3/2-way, 5/2-way and 5/3way valves
- 2 to 10, 12, 14 and 16 valve positions
- The sub-base valves always have external pilot air. The pilot air is set via the manifold rail. A short and a long blanking plug are included in the scope of delivery of the manifold rail for this purpose.

- Note

Pressurisation and exhaust at both ends is recommended for an optimised flow rate in cases where multiple valves switch simultaneously.

Cover plate for vacant position



Vacant position cover

Supply plate



For additional air supply and exhaust via a valve position

Separator for pressure zones

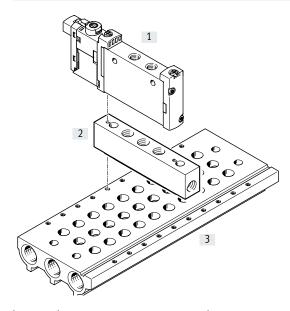


For creating multiple pressure zones in a valve manifold assembly

Key features – Pneumatic components

Vertical pressure supply plate

For in-line valves M5/M7 and G1/8



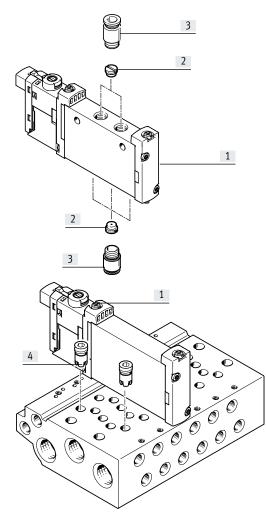
- [1] In-line valves VUVG
- [2] Vertical pressure supply plate
- [3] Manifold rail

The vertical pressure supply plate allows for separate pressurisation and exhausting of the valve mounted on it. If two vertical pressure supply plates are mounted one on top of the other, the valve can be supplied with compressed air and exhausted completely independently of the valve terminal (terminal code CS).

Code	Туре	For in-line valve	S	Description
		M5/M7	G1/8	
ZU	VABF-L1-P3A	•	•	Plate with port 1 for supplying an individual operating pressure or separate exhausting (reverse operation) for a valve position.
ZV	VABF-L1-P7A	•	•	Plate with ports 3 and 5 for exhausting the valve or supplying an indi- vidual operating pressure (reverse operation) for a valve position.

Key features - Pneumatic components

Exhaust functions



- [1] Valves VUVG with individual electrical connection
- [2] Flow restrictor for M5 thread
- [3] Fitting
- [4] Fixed flow restrictor, self-tapping/check valve

Flow restrictor for M5 thread

In-line valve, individual electrical connection: flow restrictor can be fitted in port 1, 3, 5 and/or in port 2, 4.

Fixed flow restrictor, self-tapping

The fixed flow restrictor can be used to permanently set the exhaust flow rate in ducts 3 and 5.

Check valve

Check valves block the flow towards the valves if back pressure develops in ducts 3 and 5 in the case of a high exhaust capacity, thereby preventing actuators from switching unexpectedly. The check valves are screwed into ducts 3 and 5 in the manifold rail. Please see the relevant assembly instructions:

→ www.festo.com/sp

Sub-base valve, individual electrical connection: flow restrictor can be fitted in port 2, 4.

The fixed flow restrictors are screwed into ducts 3 and 5 in the manifold rail.

Please see the relevant assembly instructions:

→ www.festo.com/sp

- Note

- It is not possible to use a check valve and a fixed flow restrictor (in the same duct) at the same time.
- When screwing in again, use the threads already present.

Key features – Pneumatic components

Creating pressure zones and separating exhaust air

Compressed air is supplied and exhausted via the manifold rail and via supply plates.

The position of the supply plates and channel separations can be freely selected with the VUVG.

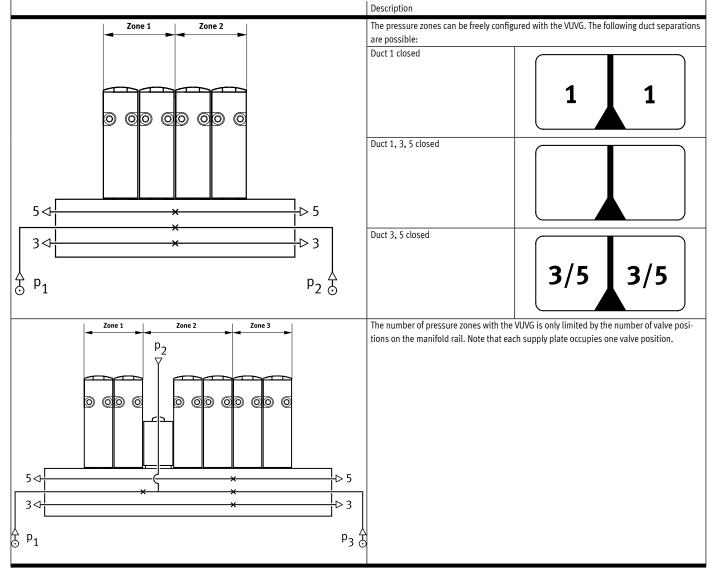
Pressure zones are created by isolating the internal supply ducts between the manifold sub-bases by appropriate duct separation. Pressure zone separation can be used for the following ducts:

- Duct 1
- Duct 3
- Duct 5

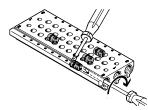
- Note

- Use a separator if the exhaust air pressures are high
- Use at least one supply plate/air supply for each pressure zone
- Pressure zone separation is not possible in duct 12/14 (pilot air supply)

Duct separation



Separator VABD



📲 - Note

As the separators are fitted from only one side using a slotted screwdriver, several pressure zones can be created in one profile.

Key features - Pneumatic components

Pilot air supply

Internal pilot air supply

Internal pilot air supply can be chosen with an operating pressure between 1.5 ... 8 bar, 2.5 ... 8 bar, or 3 ... 8 bar (depending on the valve used). The pilot air supply is branched from duct 1 (compressed air supply) using an internal connection.

External pilot air supply

External pilot air supply is required for

vacuum operation. The port for external pilot air supply (port 12/14) is located on the valve in the case of in-line valves and on the manifold rail in the case of sub-base valves.

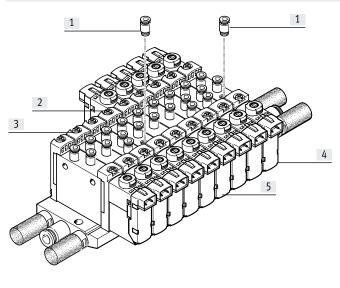
- [1] Push-in fitting for external pilot air supply at port 12/14
- [2] Single solenoid valve with external pilot air supply
- [3] Single solenoid valve with internal pilot air supply
- [4] Double solenoid valve with external pilot air supply
- [5] Double solenoid valve with internal pilot air supply

Pilot exhaust air

With in-line valves, the pilot exhaust air escapes via exhaust holes. With sub-base valves, the pilot exhaust air is discharged via duct 82/84 of the manifold rail.

The internal pilot air is branched from port 1 in the valve body. The external pilot air (port 12/14) is supplied individually at each valve housing.

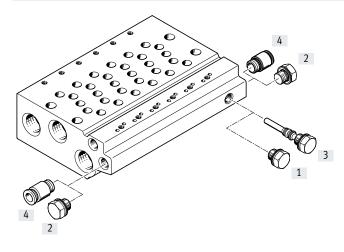
Pilot air supply with in-line and semi in-line valves



- 🚪 - Note

Semi in-line valves cannot be supplied centrally with pilot air via the manifold rail.

Pilot air supply with sub-base valves



- [1] Blanking plug, short, with internal pilot air
- [2] Blanking plug for duct 12/14 with internal pilot air
- [3] Blanking plug, long, with external pilot air
- [4] Push-in fitting in duct 12/14 with external pilot air

The manifold rails for sub-base valves have an internal connection between duct 12/14 and duct 1.

By inserting a blanking plug into this connection, it is possible to switch between internal and external pilot air.

Key features – Pneumatic components

Operation with different pressures Vacuum operation

Points to note with 3/2-way

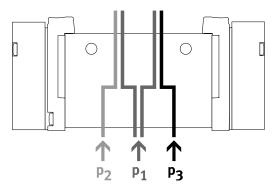
valves

The 3/2-way valves are available in a design with two valves in one valve body and with pneumatic spring return. With these valves, the force for the return movement is obtained from port 1.

- 闄 - Note

Pressure must be present at port 1.

Pressure deflector (internal pilot air)



Vacuum operation is therefore only possible at port 3 and 5, not at port 1.

With external pilot air supply, vacuum can be connected at port 1, 3, 5 of the 5/2-way and 5/3-way valves.

Reverse operation

The 3/2-way valves with pneumatic spring are not suitable for reverse operation, since at least the minimum pilot pressure must be present in duct 1.

- If two different pressures are required.
- Different pressures can be supplied at duct 1, 3 and 5.

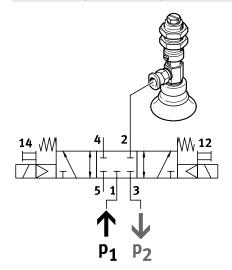
- 着 - Note

- With internal pilot air supply, the minimum pilot pressure must be adhered to in duct 1
- With 2x 3/2-way valves without spring return, the minimum pilot pressure must always be adhered to in duct 1

Advantages

Any pressure or vacuum can be connected at ducts 3 and 5 both with external and internal pilot air.

Vacuum, ejector pulse and normal position



Vacuum, ejector pulse and normal position can be achieved as follows:

- Internal pilot air supply
- Vacuum in duct 3
- Pressure for the ejector pulse in duct 1

Solenoid valves VUVG

Product range overview

Design	Working	Size	Functio	ns and flo	ow rate [/min]									→ Page/
0	port		T32C	T32U	T32H	T32C/M	T32U/M	T32H/M	M52	M52/M	B52	P53C	P53U	P53E	Internet
n-line valve as indiv	idual valve, so	lenoid valv	/e VUVG-L	К											
	M5	10	■ 180	-	-	-	-	-	■ 195	-	■ 195	-	-	-	27
	M7	10	■ 280	-	-	-	-	-	■ 340	-	■ 340	-	-	-	31
	G1/8	14	■ 570	-	-	-	-	-	■ 660	-	■ 660	-	-	-	46
1-line valve as indiv	idual valve so	lenoid valv	/e VIIVG-I												
	M3	10A	-	-	-	-	-	-	■ 100	■ 80	■ 100	■ 90	■ 90	■ 90	21
	M5	10	■ 150	■ 150	■ 150	■ 135	■ 125	■ 125	220	∎ 190	220	210	210	210	35
	M7	10	■ 190	■ 190	■ 190	■ 150	∎ 140	∎ 140	■ 380	■ 320	■ 380	1 320	1 320	1 320	39
	G1/8	14	■ 650	■ 600	■ 650	■ 550	■ 500	■ 500	■ 780	■ 780	■ 780	■ 650	■ 600	■ 600	50
	G1/4	18	∎ 1000	■ 1000	■ 1000	∎ 1000	■ 1000	■ 1000	∎ 1300	∎ 1300	∎ 1380	∎ 1200	∎ 1000	■ 1000	58
emi in-line valve fo	r manifold asse		enoid valv	re VUVG-	5										
	M3	10A	-	-	-	-	-	-	∎ 100	∎ 80	∎ 100	■ 90	■ 90	■ 90	21
	M5	10	∎ 150	∎ 150	∎ 150	∎ 135	∎ 125	∎ 125	2 20	∎ 190	■ 220	1 210	2 10	■ 210	35
-97 -	M7	10	∎ 170	■ 170	∎ 170	1 40	∎ 130	1 30	■ 340	∎ 290	■ 340	■ 300	■ 300	■ 300	39
	G1/8	14	■ 620	■ 580	■ 580	■ 520	■ 480	■ 480	■ 730	■ 730	■ 730	■ 620	■ 580	■ 580	50
	G1/4	18	∎ 1000	∎ 1000	∎ 1000	∎ 1000	∎ 1000	■ 1000	∎ 1300	∎ 1300	■ 1380	∎ 1200	∎ 1000	∎ 1000	58
esign	Working port	Size	Functio	ons and f	-										→ Page/
			T32C	T32U	T32H	T32C/M	T32U/M	T32H/M	M52	M52/M	B52	P53C	P53U	P53E	Internet
ub-base valve, sole		-r	-,		,							,	,	,	
	M5	10	1 60	-	-	-	-	-	1 60	-	∎ 160	-	-	-	72
	M7	10	■ 160	-	-	-	-	-	■ 160	-	∎ 160	-	-	-	72
	G1/8	14	■ 350	-	-	-	_	_	■ 380	-	■ 380	-	-	-	82
ub-base valve, sole	noid valve VUV	G-B													
	M3	10A	-	-	-	-	-	-	■ 100	■ 80	■ 100	■ 90	■ 90	■ 90	66
	M5	10	∎ 150	∎ 150	∎ 150	∎ 130	■ 120	1 20	1 210	1 80	1 210	■ 200	2 00	2 00	75
	M7	10	∎ 160	∎ 160	∎ 160	1 40	∎ 130	∎ 130	2 70	230	■ 270	∎ 250	2 50	2 50	75
	G1/8	14	5 40	5 10	5 40	4 30	4 10	4 10	5 80	■ 580	■ 580	5 40	5 10	5 10	82
	G1/4	18													91

Solenoid valves VUVG

Product range overview

Design	Size	Description	→ Page/ Internet
Manifold rail VABMS	, for in-line v	lves (manifold assembly)	
	10AS	Size M3	26, 44,
	10S	Size M5, M7	56, 64
	14S	Size G1/8	
	18S	Size G1/4	
Manifold rail VABM, for sub	o-base valves (r	anifold assembly)	
1 Andrews	10AW	Size M3	70, 81,
1 000 00 00 00 00 00 00 00 00 00 00 00 0	10W	Size M5	89, 96
	10HW	Size M7	
	14W	Size G1/8	
	18W	Size G1/4	
\checkmark		•	

Valve	Valve	Description	VUVG-LK, V	/UVG-BK	VUVG-L, VU	IVG-B		
	code		Size M5/M7	G1/8	Size M3	M5/M7	G1/8	G1/4
2x 3/2-way valve, normally closed, pneumatic sp	ing			01/0			01/0	01/ 1
	T32C-A	In-line valve, pilot air supply Internal	•	•	-	•	•	•
	-	In-line valve, pilot air supply External	-	-	_		•	_
		Sub-base valve, external pilot air supply	-	-	-			
2x 3/2-way valve, normally open, pneumatic spri	ıg							
	T32U-A	In-line valve, pilot air supply Internal	-	-	-	•		•
		In-line valve, pilot air supply External	_	-	-			_
	_	Sub-base valve, external pilot air supply	-	-	-	•	•	•
2x 3/2-way valve, 1x normally open, 1x normally	closed, pneu	imatic spring						
	T32H-A	In-line valve, pilot air supply Internal	-	-	_	•	•	•
		In-line valve, pilot air supply External	-	-	_	•	•	-
		Sub-base valve, external pilot air supply	-	_	_	•	•	•

Solenoid valves VUVG

Valve	Valve	Description	VUVG-LK, V	/UVG-BK	VUVG-L, VL	JVG-B		
	code		Size	64/0	Size	145 (147	64/0	64.14
			M5/M7	G1/8	M3	M5/M7	G1/8	G1/4
2x 3/2-way valve, normally closed, mechanical spri		In line value, nilot air sunnlu		1	1			
	T32C-M	In-line valve, pilot air supply Internal	_	_	_		•	
		In-line valve, pilot air supply External	-	-	-		•	•
4 2 14 12 14 12 12/14 12 12/14 12 12/14 12 11/1 12 12/14 12 12/14 12 11/1 12 11/1 12 12/14 12 13/1		Sub-base valve, external pilot air supply	-	-	-			•
2x 3/2-way valve, normally open, mechanical spring	3							
	T32U-M	In-line valve, pilot air supply Internal	-	_	_		•	•
		In-line valve, pilot air supply External	-	_	-			•
4 2 10(14) 10(12) 10(14) 10(12) 1		Sub-base valve, external pilot air supply	-	-	-	•		
2x 3/2-way valve, 1x normally open, 1x normally clo	sed mecha	nical spring						
$\begin{array}{c c} 2 \\ \hline 2 \\ \hline 14 \\ \hline 10(12) \\ \hline 1 \\ \hline 5 \\ \hline 3 \\ \hline \end{array}$	T32H-M	In-line valve, pilot air supply Internal	-	-	-	•		•
4 2 14 10(12) 10/14 1 5 3		In-line valve, pilot air supply External	-	-	-	•	•	•
4 14 10(12) 10/14 82/84 15 3		Sub-base valve, external pilot air supply	-	_	-	•		•

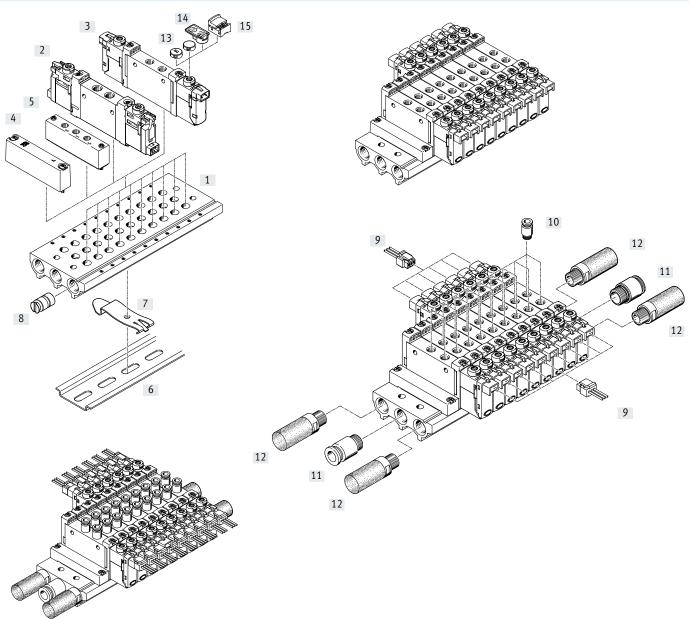
Valve	Valve	Description	VUVG-LK,	/UVG-BK	VUVG-L, V	UVG-B		
	code		Size M5/M7	G1/8	Size M3	M5/M7	G1/8	G1/4
5/2-way double solenoid valve	1		,	· ·			· ·	
	B52	In-line valve, pilot air supply Internal		•	•			
		In-line valve, pilot air supply External	-	-				
		Sub-base valve, external pilot air supply	_	_				
5/2-way valve, single solenoid, pneumatic spring	[
	M52-A	In-line valve, pilot air supply Internal	•	•	-	-	•	-
		In-line valve, pilot air supply External	-	-	-	_	•	-
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		Sub-base valve, external pilot air supply	-	-	-	-	•	-
5/2-way single solenoid valve, mechanical spring	g							
	M52-M	In-line valve, pilot air supply Internal	-	-	•			
		In-line valve, pilot air supply External	-	-	•	•	•	•
		Sub-base valve, external pilot air supply	-	-	•	•	•	•
5/2-way valve, single solenoid, pneumatic/mech	anical spring							
	M52-R	In-line valve, pilot air supply Internal	-	-	•	•	-	•
		In-line valve, pilot air supply External	-	-	•		-	•
		Sub-base valve, external pilot air supply	-	-	•		-	

Solenoid valves VUVG

Valve	Description		/UVG-BK		JVG-B		
code			/a				
		M5/M7	G1/8	M3	M5/M7	G1/8	G1/4
P53C	In-line valve, pilot air supply Internal	-	-		•	•	•
	In-line valve, pilot air supply External	-	-	•	•	•	•
-	Sub-base valve, external pilot air supply	-	-	•	•	•	•
			•				
P53U	In-line valve, pilot air supply Internal	-	-	•	•	•	•
	In-line valve, pilot air supply External	-	-	•	•	•	•
-	Sub-base valve, external pilot air supply	-	-	•	•	•	•
	1						
P53E	In-line valve, pilot air supply Internal	-	-	•	•	•	•
	In-line valve, pilot air supply External	-	-	•	•	-	•
	Sub-base valve, external pilot air supply	-	-	•	•	•	•
	code P53C P53U	code In-line valve, pilot air supply Internal P53C In-line valve, pilot air supply External In-line valve, pilot air supply External Sub-base valve, external pilot air supply P53U In-line valve, pilot air supply Internal In-line valve, pilot air supply External Sub-base valve, external pilot air supply Internal P53E In-line valve, pilot air supply Internal P53E In-line valve, pilot air supply Internal In-line valve, pilot air supply Internal In-line valve, pilot air supply Internal	code Size M5/M7 P53C In-line valve, pilot air supply Internal - In-line valve, pilot air supply External - Sub-base valve, external pilot air supply Internal - P53U In-line valve, pilot air supply Internal - In-line valve, pilot air supply Internal - Sub-base valve, external pilot air supply External - P53E In-line valve, pilot air supply Internal - P53E In-line valve, pilot air supply Internal - In-line valve, pilot air supply Internal - In-line valve, pilot air supply Internal -	code Size P53C In-line valve, pilot air supply Internal - In-line valve, pilot air supply - External - Sub-base valve, external pilot air supply - P53U In-line valve, pilot air supply - In-line valve, pilot air supply - - P53U In-line valve, pilot air supply - In-line valve, pilot air supply - - In-line valve, pilot air supply - - Sub-base valve, external pilot air supply - - In-line valve, pilot air supply - - Sub-base valve, external pilot air supply - - P53E In-line valve, pilot air supply - - In-line valve, pilot air supply - - -	code Size Size M5/M7 G1/8 M3 P53C In-line valve, pilot air supply - - In-line valve, pilot air supply - - • External - - • P53U In-line valve, pilot air supply - - P53U In-line valve, pilot air supply - - In-line valve, pilot air supply - - • P53U In-line valve, pilot air supply - - In-line valve, pilot air supply - - • In-line valve, pilot air supply - - • Sub-base valve, external pilot air supply - - • Sub-base valve, external pilot air supply - - • F33E In-line valve, pilot air supply - - • In-line valve, pilot air supply - - • • In-line valve, pilot air supply - - • • In-line valve, pilot air supply - - • • In-line valve, pilot air supply - - • • In-line valve, pilot air supply - - • •<	code Size Size M5/M7 G1/8 M3 M5/M7 P53C In-line valve, pilot air supply - - • In-line valve, pilot air supply - - • • Sub-base valve, external pilot air supply - - • • P53U In-line valve, pilot air supply - - • • In-line valve, pilot air supply - - • • P53U In-line valve, pilot air supply - - • In-line valve, pilot air supply - - • • Sub-base valve, external pilot air supply - - • • In-line valve, pilot air supply - - • • Sub-base valve, external pilot air supply - - • • P53E In-line valve, pilot air supply - - • • In-line valve, pilot air supply - - • • In-line valve, pilot air supply - - • • In-line valve, pilot air supply - - • •	Size Size Size Size Size M5/M7 G1/8 M3 M5/M7 G1/8 P53C In-line valve, pilot air supply - - • • In-line valve, pilot air supply - - • • • Sub-base valve, external pilot air supply - - • • • P53U In-line valve, pilot air supply - - • • • In-line valve, pilot air supply - - • • • • P53U In-line valve, pilot air supply - - • • • In-line valve, pilot air supply - - • • • • Sub-base valve, external pilot air supply - - • • • • P53E In-line valve, pilot air supply - - • • • • In-line valve, pilot air supply - - • • • • • In-line valve, pilot air supply

Peripherals overview example - In-line valves

Manifold assembly

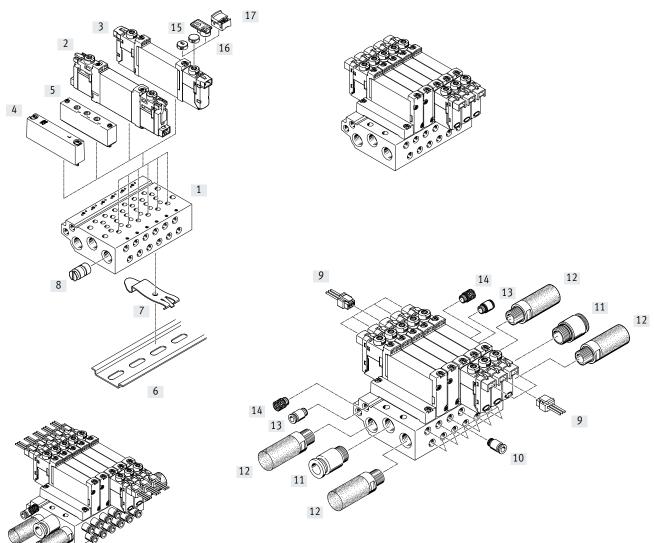


Manifold assembly and accessories

		Туре	Description	→ Page/Internet
[1]	Manifold rail	VABM-L1	For 2 to 10, 12, 14 and 16 valve positions	11
[2]	Solenoid valve	VUVG-LK	In-line valve 2x 3/2-way, 5/2-way and 5/3-way	27
[3]	Solenoid valve	VUVG-L	In-line valve 2x 3/2-way, 5/2-way and 5/3-way	27
[4]	Cover plate	VABB-L1	For covering a vacant position	26
[5]	Supply plate	VABF-L1	For air supply at duct 1 and duct 3 and 5	26
[6]	H-rail	NRH-35-2000	For mounting the valve manifold assembly	105
[7]	H-rail mounting	VAME-T-M4	2 pieces for fitting the valve manifold assembly on an H-rail	105
[8]	Separator	VABD	For creating pressure zones	26
[9]	Plug socket with cable	NEBV-H1G2LE2	For E-box H2 and H3	103
[10]	Push-in fitting	QS	Push-in fitting for duct 2 and 4	104
[11]	Push-in fitting	QS	Push-in fitting for air supply at duct 1	104
[12]	Silencer	U	For duct 3 and 5	105
[13]	Cover cap	VMPA-HBB	For manual override	105
[14]	Identification holder	ASLR-D	For labelling the valves, covering the retaining screw and the manual over- ride	105
[15]	Cover	VAMC	For manual override	105

Peripherals overview example - Sub-base valves

Manifold assembly



Manifold assembly and accessories

Mani	ifold assembly and accessories			
		Туре	Description	→ Page/Internet
[1]	Manifold rail	VABM-L1	For 2 to 10, 12, 14 and 16 valve positions	80
[2]	Solenoid valve	VUVG-BK	Sub-base valve 2x 3/2-way, 5/2-way and 5/3-way	72
[3]	Solenoid valve	VUVG-B	Sub-base valve 2x 3/2-way, 5/2-way and 5/3-way	72
[4]	Cover plate	VABB-L1	For covering a vacant position	81
[5]	Supply plate	VABF-L1	For air supply at duct 1 and duct 3 and 5	81
[6]	H-rail	NRH-35-2000	For mounting the valve manifold assembly	105
[7]	H-rail mounting	VAME-T-M4	2 pieces for fitting the valve manifold assembly on an H-rail	105
[8]	Separator	VABD	For creating pressure zones	81
[9]	Plug socket with cable	NEBV-H1G2-KNLE2	For E-box H2 and H3	103
[10]	Push-in fitting	QS	Push-in fitting for duct 2 and 4	104
[11]	Push-in fitting	QS	Push-in fitting for air supply at duct 1	104
[12]	Silencer	U	For duct 3 and 5	105
[13]	Push-in fitting	QS	Push-in fitting for pilot air supply at duct 12/14	104
[14]	Silencer	U	Silencer for pilot air exhaust at duct 82/84	105
[15]	Cover cap	VMPA-HBB	For manual override	105
[16]	Identification holder	ASLR-D	For labelling the valves, covering the retaining screw and the manual over- ride	105
[17]	Cover	VAMC	For manual override	105

Type codes

001	Series	_
VUVG	Solenoid valve	
002	Directional control valve type	
L	In-line valve	
S	Semi-inline valve	
В	Sub-base valve	
003	Design principle	
	Piston spool	
К	Piston spool with sealing ring	
004	Size	
10A	Size 10, deviating flow	
10	Size 10	
14	Size 14	
18	Size 18	
005	Valve function	
T32U	2x3/2-way valve, normally open	
T32C	2x3/2-way valve, normally closed	
T32H	2x3/2-way valve, 1x normally closed, 1x normally open	
M52	5/2-way valve, single solenoid/monostable	
B52	5/2-way valve, double solenoid/bistable	
P53U	5/3-way valve, mid-position pressurised	
P53E	5/3-way valve, mid-position exhausted	
P53C	5/3-way valve, mid-position closed	
006	Reset method for monostable/single solenoid valves	
	None	
A	Pneumatic spring	
м	Mechanical spring	
R	Mixed, pneumatic/mechanical spring	
007	Pilot air	
	Internal	
Z	External	
008	Manual override	
	None	
Н	Non-detenting	
т	Non-detenting, detenting with accessories	
Y	Detenting	
S	Covered	

009	Pneumatic connection	
F	Flange/sub-base	
M3	M3	
M5	M5	
M7	M7	
G18	G1/8	
G14	G1/4	
Q3	Push-in connector 3 mm	
Q4	Push-in connector 4 mm	
Q4H	Push-in connector 4 mm, with connecting thread M7	
Q6	Push-in connector 6 mm	
Q6H	Push-in connector 6 mm, with connecting thread M7	
Q8	Push-in connector 8 mm	
Q10	Push-in connector 10 mm	
T18	Push-in connector 1/8"	
T532	Push-in connector 5/32"	
T316	Push-in connector 3/16"	
T316H	Push-in connector for 3/16", M7	
T14	Push-in connector 1/4"	
T14 T14H	Push-in connector for 1/4", M7	
T38	Push-in connector 3/8"	
T516	Push-in connector 5/16"	
T516H		
12100	Push-in connector 5/16", M7	
010	Exhaust	
	No fitting	
QN	With fitting	
U	Silencer	
011	Nominal operating voltage	
011		
	None	
1	None 24 V DC	
1 4	None 24 V DC 5 V DC	
1	None 24 V DC	
1 4	None 24 V DC 5 V DC	
1 4 5	None 24 V DC 5 V DC 12 V DC	
1 4 5 012	None 24 V DC 5 V DC 12 V DC Electrical connection	
1 4 5 012 P3	None 24 V DC 5 V DC 12 V DC Electrical connection Without electrical sub-base	
1 4 5 012 P3 H2	None 24 V DC 5 V DC 12 V DC Electrical connection Without electrical sub-base Connection pattern H, horizontal plug	
1 4 5 012 P3 H2 H3	None 24 V DC 5 V DC 12 V DC Electrical connection Without electrical sub-base Connection pattern H, horizontal plug Connection pattern H, vertical plug	
1 4 5 012 P3 H2 H3 R1	None 24 V DC 5 V DC 12 V DC Electrical connection Without electrical sub-base Connection pattern H, horizontal plug Connection pattern H, vertical plug Individual connector M8, 4-pin	
1 4 5 012 P3 H2 H3 R1 R8	None 24 V DC 5 V DC 12 V DC Electrical connection Without electrical sub-base Connection pattern H, horizontal plug Connection pattern H, vertical plug Individual connector M8, 4-pin Individual connector M8, 3-pin	
1 4 5 012 P3 H2 H3 R1 R8 S2	None 24 V DC 5 V DC 12 V DC Electrical connection Without electrical sub-base Connection pattern H, horizontal plug Connection pattern H, vertical plug Individual connector M8, 4-pin Individual connector M8, 3-pin Connection pattern S, horizontal plug	
1 4 5 012 P3 H2 H3 R1 R8 S2 S3	None 24 V DC 5 V DC 12 V DC Electrical connection Without electrical sub-base Connection pattern H, horizontal plug Connection pattern H, vertical plug Individual connector M8, 4-pin Individual connector M8, 3-pin Connection pattern S, horizontal plug Connection pattern S, vertical connector	
1 4 5 012 P3 H2 H3 R1 R8 S2 S3 L1	None 24 V DC 5 V DC 12 V DC Electrical connection Without electrical sub-base Connection pattern H, horizontal plug Connection pattern H, vertical plug Individual connector M8, 4-pin Individual connector M8, 3-pin Connection pattern S, horizontal plug Connection pattern S, vertical connector Leads 0.5 m	
1 4 5 012 P3 H2 H3 R1 R8 S2 S3 L1 L2	None 24 V DC 5 V DC 12 V DC Electrical connection Without electrical sub-base Connection pattern H, horizontal plug Connection pattern H, vertical plug Individual connector M8, 4-pin Individual connector M8, 3-pin Connection pattern S, horizontal plug Connection pattern S, vertical connector Leads 0.5 m Leads 1 m	
1 4 5 012 P3 H2 H3 R1 R8 S2 S3 L1 L2 L3	None 24 V DC 5 V DC 12 V DC Electrical connection Without electrical sub-base Connection pattern H, horizontal plug Connection pattern H, vertical plug Individual connector M8, 4-pin Individual connector M8, 3-pin Connection pattern S, horizontal plug Connection pattern S, vertical connector Leads 0.5 m Leads 1 m Leads 2.5 m	
1 4 5 012 P3 H2 H3 R1 R8 S2 S3 L1 L2 L3 L4	None24 V DC5 V DC12 V DCElectrical connectionWithout electrical sub-baseConnection pattern H, horizontal plugConnection pattern H, vertical plugIndividual connector M8, 4-pinIndividual connector M8, 3-pinConnection pattern S, horizontal plugConnection pattern S, vertical connectorLeads 0.5 mLeads 1 mLeads 5 m	
1 4 5 012 P3 H2 H3 R1 R8 S2 S3 L1 L2 L3 L4 K6 K7	None24 V DC5 V DC12 V DCElectrical connectionWithout electrical sub-baseConnection pattern H, horizontal plugConnection pattern H, vertical plugIndividual connector M8, 4-pinIndividual connector M8, 3-pinConnection pattern S, horizontal plugConnection pattern S, vertical connectorLeads 0.5 mLeads 1 mLeads 5 mCable 0.5 mCable 1 m	
1 4 5 012 P3 H2 H3 R1 R8 S2 S3 L1 L2 L3 L4 K6 K7 K8	None24 V DC5 V DC12 V DCElectrical connectionWithout electrical sub-baseConnection pattern H, horizontal plugConnection pattern H, vertical plugIndividual connector M8, 4-pinIndividual connector M8, 3-pinConnection pattern S, horizontal plugConnection pattern S, vertical connectorLeads 0.5 mLeads 1 mLeads 5 mCable 0.5 mCable 1 mCable 2.5 m	
1 4 5 012 P3 H2 H3 R1 R8 S2 S3 L1 L2 L3 L4 K6 K7 K8 K9	None 24 V DC 5 V DC 12 V DC Electrical connection Without electrical sub-base Connection pattern H, horizontal plug Connection pattern H, vertical plug Individual connector M8, 4-pin Individual connector M8, 3-pin Connection pattern S, horizontal plug Connection pattern S, vertical connector Leads 0.5 m Leads 1 m Leads 5 m Cable 0.5 m Cable 1 m Cable 2.5 m Cable 5 m	
1 4 5 012 P3 H2 H3 R1 R8 S2 S3 L1 L2 L3 L1 L2 L3 L4 K6 K7 K8	None 24 V DC 5 V DC 12 V DC Electrical connection Without electrical sub-base Connection pattern H, horizontal plug Connection pattern H, vertical plug Individual connector M8, 4-pin Individual connector M8, 3-pin Connection pattern S, horizontal plug Connection pattern S, horizontal plug Connection pattern S, vertical connector Leads 0.5 m Leads 1 m Leads 5 m Cable 0.5 m Cable 1 m Cable 2.5 m Cable 5 m Display	
1 4 5 012 P3 H2 H3 R1 R8 S2 S3 L1 L2 L3 L4 K6 K7 K8 K9	None 24 V DC 5 V DC 12 V DC Electrical connection Without electrical sub-base Connection pattern H, horizontal plug Connection pattern H, vertical plug Individual connector M8, 4-pin Individual connector M8, 3-pin Connection pattern S, horizontal plug Connection pattern S, vertical connector Leads 0.5 m Leads 1 m Leads 5 m Cable 0.5 m Cable 1 m Cable 2.5 m Cable 5 m	

	Hone	
L	LED	
014	Circuitry	
	None	
R	Holding current reduction with integrated protective circuit	

Solenoid valves VUVG

Type codes

015	Electrical valve accessories	
	None	
C1	Connecting cable, 0.5 m	
C2	Connecting cable 1 m	
С3	Connecting cable 2.5 m	
C4	Connecting cable, 5 m	
N1	Connecting cable 2.5 m, straight plug socket M8, 3-pin	
N2	Connecting cable 5 m, straight plug socket M8, 3-pin	
N3	Connecting cable 2.5 m, angled plug socket M8, 3-pin	
N4	Connecting cable 5 m, angled plug socket M8, 3-pin	
N5	Connecting cable 2.5 m, straight plug socket M8, 4-pin	
N6	Connecting cable 5 m, straight plug socket M8, 4-pin	
N7	Connecting cable 2.5 m, angled plug socket M8, 4-pin	
N8	Connecting cable 5 m, angled plug socket M8, 4-pin	
S1	Connecting cable, 0.5 m, S-connector	
S2	Connecting cable 1 m, S-connector	
S3	Connecting cable 2.5 m, S-connector	
S 4	Connecting cable, 5 m, S-plug	
W1	Connecting cable, flying leads, 0.5 m	
W2	Connecting cable, flying leads, 1 m	
W3	Connecting cable, flying leads, 2.5 m	
W4	Connecting cable, flying leads, 5 m	
WS1	Connecting cable, S-plug with flying leads, 0.5 m	
WS2	Connecting cable, S-plug with flying leads, 1 m	
WS3	Connecting cable, S-plug with flying leads, 2.5 m	
WS4	Connecting cable, S-plug with flying leads, 5 m	
016	Version	
	Expanded properties	
S	Focused properties	

Data sheet

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

Circuit symbols → page 13

- **[]** Size 10 mm - **[]** - Flow rate 90 ... 100 l/min
- **4** Voltage 5, 12 and 24 V DC



General technical data VUVG-L

Valve function		M52-R	B52	M52-M	P53				
Normal position		-	-	-	C1)	U ²⁾	E ³⁾		
Stable position		Monostable	Bistable	Monostable	Monostable				
Pneumatic spring reset		Yes ⁴⁾	-	No	-				
Mechanical spring reset		Yes ⁴⁾	-	Yes	Yes				
Vacuum operation at port 1		Only with extern	nal pilot air supply		•				
Design		Piston spool							
Sealing principle		Soft							
Type of actuation		Electrical							
Type of control		Piloted							
Pilot air supply		Internal or exte	rnal						
Exhaust function		Can be throttled	Can be throttled						
Manual override		Choice of non-detenting, covered, non-detenting/detenting or detenting							
Type of mounting		Optionally via through-holes ⁵⁾ or on manifold rail							
Mounting position		Any							
Nominal width	[mm]	2		1.4	2				
Standard nominal flow rate	[l/min]	100		80	90				
Flow rate on manifold rail	[l/min]	100		80	90				
Switching time on/off	[ms]	7/15	-	7/21	8/25				
Switching time changeover	[ms]	-	5	-	14				
Size	[mm]	10			· · ·				
Connection 1, 2, 3, 4,	5,12/14	M3							
Product weight	[g]	38	49	37					
Certification		c UL us - Recogr	nized (OL)						
		c CSA us (OL)							
		RCM complianc	e mark						
CE marking (see declaration of conformity) ⁶⁾		To EU EMC Direc	To EU EMC Directive						
Corrosion resistance class CRC ⁷⁾		2							

1) C=Normally closed/mid-position closed

2) U=Normally open/mid-position pressurised

3) E=Mid-position exhausted

4) Combined reset method

5) 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 placing spacer discs between them.

6) For information about the area of use, see the EC declaration of conformity at: www.festo.com/sp → Certificates.

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary. 7) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Data sheet

Operating and environmental conditions

Operating and environmental conditions							
Valve function			M52-R ¹⁾	B52	M52-M ²⁾	P53	
Operating medium			Compressed air to	ISO 8573-2010 [7:4:4]			
Operating pressure	Internal	[bar]	2.5 8	1.5 8	38	38	
	External	[bar]	-0.9 10		· · ·	-0.9 8	
Pilot pressure		[bar]	2.5 8	1.5 8	38		
Ambient temperature [°C] -5 +50, with holding current reduction -5 +60							
Temperature of medium [°C] -5 +50, with holding current reduction -5 +60							

1) Mixed, pneumatic/mechanical spring

2) Mechanical spring

Electrical data

Electrical connection		Via E-box → page 98	
Operating voltage	[V DC]	5, 12 and 24 ±10%	
Power	[W]	1, reduced to 0.35 with holding current reduction	
Duty cycle	[%]	100	
Degree of protection to EN 60529		IP40 (with plug socket), IP65 (with M8)	

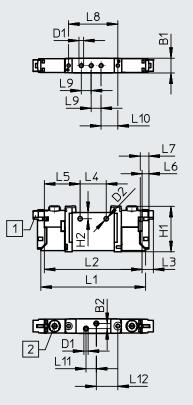
Information on materials Wrought aluminium alloy Housing HNBR, NBR Seals Note on materials RoHS-compliant

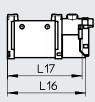
Solenoid valves VUVG-L10A and VUVG-S10A, in-line valves M3

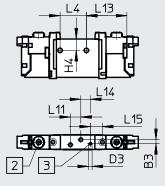
Data sheet

Dimensions









[1] Electrical connection for sole- [2] Manual override noid valve, horizontal

ride

[3] Port for external pilot air supply

Туре	B1	B2	B3	D1	D2	D3	H1	H2	2	L1	L2	L3	L4	L5
VUVG-L10AM3 VUVG-S10AM3	10.2	3.6	2.83	M3	3.2	M3	32.	5 4.4	4 7	4.3	69.3	8	18.5	25.4
Туре	L6	L7	L8	L9	L10	L:	11	L12	L13		L14	L15	L16	L17
VUVG-L10AM3 VUVG-S10AM3	4.85	6.15	34.9	7	11.9) 7	.3	15.25	28.5		6.7	8.54	57.06	54.56

Download CAD data → <u>www.festo.com</u>



Ordering data

Ordering data								
	Description		Part no.	Туре				
n-line valve M3, witho	out E-box							
	5/2-way single solenoid valve							
	Internal pilot air supply	Pneumatic/mechanical spring reset	566437	VUVG-L10A-M52-RT-M3-1P3				
		Mechanical spring reset	574345	VUVG-L10A-M52-MT-M3-1P3				
L ONCO	External pilot air supply	Pneumatic/mechanical spring reset	566443	VUVG-L10A-M52-RZT-M3-1P3				
		Mechanical spring reset	574346	VUVG-L10A-M52-MZT-M3-1P3				
	5/2-way double solenoid valve							
	Internal pilot air supply		566438	VUVG-L10A-B52-T-M3-1P3				
	External pilot air supply		566444	VUVG-L10A-B52-ZT-M3-1P3				
	5/3-way valve							
	Internal pilot air supply	Mid-position closed, mechanical spring reset	566439	VUVG-L10A-P53C-T-M3-1P3				
		Mid-position exhausted, mechanical spring reset	566440	VUVG-L10A-P53E-T-M3-1P3				
		Mid-position pressurised, mechanical spring reset	566441	VUVG-L10A-P53U-T-M3-1P3				
	External pilot air supply	Mid-position closed, mechanical spring reset	566445	VUVG-L10A-P53C-ZT-M3-1P3				
		Mid-position exhausted, mechanical spring reset	566446	VUVG-L10A-P53E-ZT-M3-1P3				
		Mid-position pressurised, mechanical spring reset	566447	VUVG-L10A-P53U-ZT-M3-1P3				

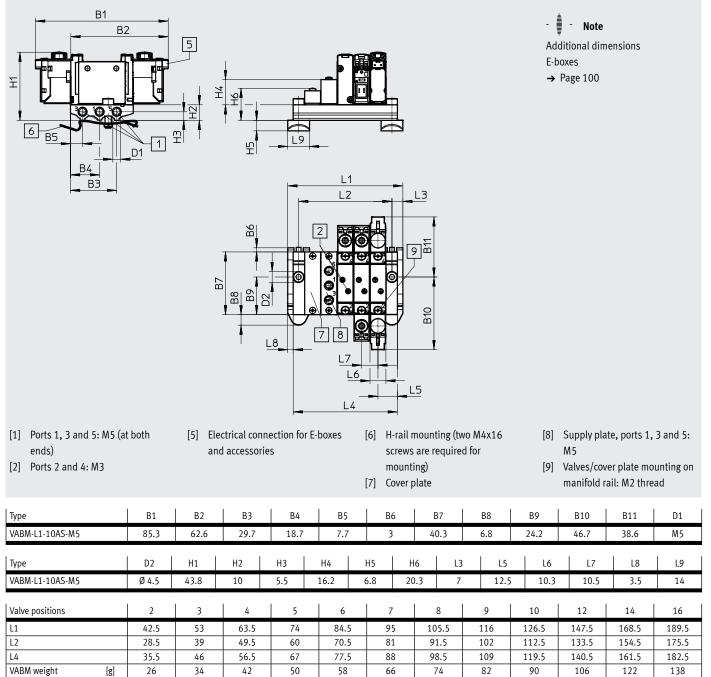
Manifold assembly

Dimensions

In-line valves for manifold assembly



Download CAD data → <u>www.festo.com</u>



Solenoid valves VUVG-S10A, in-line valves M3

Ordering data

Technical data – Manifold rails								
	Connection	CRC	Material ²⁾	Operating pressure	Max. tightening torque	e for assembly [Nm]		
	1, 3, 5			[bar]	Valve	H-rail	Wall	
	M5	21)	Wrought aluminium alloy	-0.9 10	0.45	1.5	3	

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

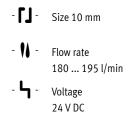
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment. 2) Note on materials: RoHS-compliant.

Ordering data – Manifold rail				
	Description		Part no.	Туре
Manifold rail for in-line valves (mani	fold assembly)			
\frown	For size M3	2 valve positions	566522	VABM-L1-10AS-M5-2
		3 valve positions	566523	VABM-L1-10AS-M5-3
		4 valve positions	566524	VABM-L1-10AS-M5-4
		5 valve positions	566525	VABM-L1-10AS-M5-5
		6 valve positions	566526	VABM-L1-10AS-M5-6
		7 valve positions	566527	VABM-L1-10AS-M5-7
- Jal		8 valve positions	566528	VABM-L1-10AS-M5-8
		9 valve positions	566529	VABM-L1-10AS-M5-9
		10 valve positions	566530	VABM-L1-10AS-M5-10
		12 valve positions	566531	VABM-L1-10AS-M5-12
		14 valve positions	566532	VABM-L1-10AS-M5-14
		16 valve positions	566533	VABM-L1-10AS-M5-16
Cover plate				Data sheets → Internet: vabb
	For valve position on manifold rail, includ	ing scrows and soal	569986	VABB-L1-10A
Separator				Data sheets → Internet: vabd
M	For creating pressure zones		570872	VABD-4.2-B
Supply plate				Data sheets → Internet: vabf
	For valve position on manifold rail, includ	ing screws and seal	569990	VABF-L1-10A-P3A4-M5
Seals for in-line valves				Data sheets → Internet: vabd
	For in-line valves M3	Delivery quantity: 10 sets (each with 2 screws and 1 seal)	566670	VABD-L1-10AX-S-M3

Data sheet

Function
2x 3/2C
5/2-way, single solenoid
5/2-way, double solenoid valve

Circuit symbols → page 13





General technical data VUVG-LK

Valve function		T32-A	M52-A	B52			
Normal position	Normal position C			-			
Stable position		Monostable		Bistable			
Pneumatic spring reset		Yes	Yes	-			
Design		Piston spool					
Sealing principle		Soft					
Type of actuation		Electrical					
Type of control		Piloted					
Pilot air supply		Internal	Internal				
Exhaust function		Can be throttled					
Manual override		Detenting, non-detenting					
Type of mounting		Optionally via through-holes ²⁾ or on manifold rail					
Mounting position		Any					
Standard nominal flow rate	[l/min]	180	195	195			
Switching time on/off	[ms]	12/14	14/17	-			
Switching time changeover	[ms]	-		7			
Size	[mm]	10					
Connection 2, 4		M5					
Product weight	[g]	55	45	57			
Corrosion resistance class CRC ³⁾		2					

1) C=Normally closed

2) 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 placing spacer discs between them.

3) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Safety data

Max. positive test pulse with 0 signal	[µs]	1600
Max. negative test pulse with 1 signal	[µs]	3000
Shock resistance		Shock test with severity level 1 to FN 942017-5 and EN 60068-2-27
Vibration resistance		Transport application test with severity level 1 to FN 942017-4 and EN 60068-2-6

Solenoid valves VUVG-LK10, in-line valves M5

Data sheet

Operating and environmental conditions					
Valve function		T32-A ¹⁾	M52-A ¹⁾	B52	
Operating medium		Compressed air to ISO 8573-2010 [7:4:4]			
Note on the operating/pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)			
Operating pressure	[bar]	1.5 7	2.5 7	1.5 7	
Ambient temperature	[°C]	-5 +50			
Temperature of medium	[°C]	-5 +50			

1) Pneumatic spring

Electrical data

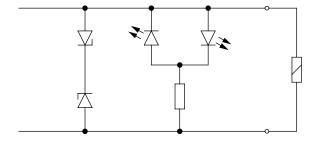
Electrical connection		Via E-box → page 100
Operating voltage	[V DC]	24±10%
Power	[W]	0.7
Duty cycle	[%]	100
Degree of protection to EN 60529		IP40 (with plug socket), IP65 (with M8)
Signal status display		LED
Maximum switching frequency	[Hz]	2

Information on materials

Information on materials		
Housing	Wrought aluminium alloy	
Seals	HNBR, NBR	
Note on materials	RoHS-compliant Compliant	
	Contains paint-wetting impairment substances	

Pin allocation for E-box			
	Pin		Description
Rectangular plug, connection pattern H			
	1	+ or –	Protective circuit without holding current reduction
2	2	+ or –	
Round plug, M8, 3-pin			
4	1	Not used	Protective circuit without holding current reduction
$\left(\begin{array}{c} + \\ + \\ \end{array}\right)$ 3	3	+ 0r –	
	4	+ or –	

Protective circuit without holding current reduction



The solenoid coils have a protective circuit to arrest sparks and protect against polarity reversal.

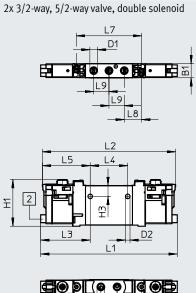
E-boxes → Page 100

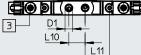
Note

Additional dimensions

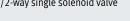
Data sheet

Dimensions

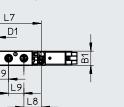




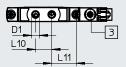
5/2-way single solenoid valve



Download CAD data → <u>www.festo.com</u>



L2 L5 L4 2 Ξ ď D2 L3 L



[2] Horizontal electrical connection [3] Manual override

B1	D1	D2	H1	H3	L1	L2	L3	L4
10.2	M5	3.3	33.6	7.8	98.3	95.8	35.7	27
					75.9	74.6		
				-				
L5		L7	L8		L9	L10		L11
34.4		47	12.5		11	11.7		17.7
]								
13.2								
	10.2 L5 34.4	10.2 M5	10.2 M5 3.3 L5 L7 34.4 47	10.2 M5 3.3 33.6 L5 L7 L8 34.4 47 12.5	10.2 M5 3.3 33.6 7.8 L5 L7 L8 34.4 47 12.5	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$

Ordering data

★ Core product range

Ordering data							
	Description		Part no.	Туре			
In-line valve M5, with E	-box R8						
	2x 3/2-way valve						
	Internal pilot air supply	Normally closed, pneumatic spring reset	★ 8042542	VUVG-LK10-T32C-AT-M5-1R8L-S			
	5/2-way single solenoid valve	ŀ		·			
	Internal pilot air supply	Pneumatic spring reset	★ 8042543	VUVG-LK10-M52-AT-M5-1R8L-S			
	5/2-way double solenoid valve						
	Internal pilot air supply		★ 8042544	VUVG-LK10-B52-T-M5-1R8L-S			
In-line valve M5, with E	-box H2						
	2x 3/2-way valve						
	Internal pilot air supply	Normally closed, pneumatic spring reset	★ 8042538	VUVG-LK10-T32C-AT-M5-1H2L-S			
	5/2-way single solenoid valve						
	Internal pilot air supply	Pneumatic spring reset	★ 8042539	VUVG-LK10-M52-AT-M5-1H2L-S			
	5/2-way double solenoid valve	·		·			
	Internal pilot air supply		★ 8042540	VUVG-LK10-B52-T-M5-1H2L-S			

Festo core product range

★ ☆

Solenoid valves VUVG-LK10, in-line valves M7

Data sheet

Function
2x 3/2C
5/2-way, single solenoid
5/2-way, double solenoid valve

Circuit symbols → page 13

- N - Flow rate 280 ... 340 l/min - Ŋ - Voltage 24 V DC

- **[]** - Size 10 mm

General technical data VUVG-LK

General technical data VUVG-LK						
Valve function		T32-A	M52-A	B52		
Normal position		C ¹⁾	-	-		
Stable position		Monostable	1	Bistable		
Pneumatic spring reset		Yes	Yes	-		
Design		Piston spool	· ·	·		
Sealing principle		Soft				
Type of actuation		Electrical				
Type of control		Piloted				
Pilot air supply		Internal				
Exhaust function	Exhaust function		Can be throttled			
Manual override		Detenting, non-detenting				
Type of mounting		Optionally via through-holes ²⁾ or on manifold rail				
Mounting position		Any				
Standard nominal flow rate	[l/min]	280	340	340		
Switching time on/off	[ms]	12/14	14/17	-		
Switching time changeover	[ms]	-		7		
Size	[mm]	10				
Connection 2, 4		M7				
Product weight	[g]	55	45	57		
Corrosion resistance class CRC ³⁾		2				

1) C=Normally closed

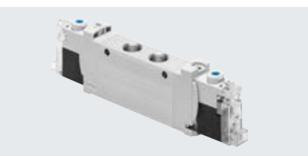
2) If several valves are to be screwed together via the through-holes to form a block, a minimum distance of 0.3 mm must be ensured by placing spacer discs between them.

3) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Safety data

Max. positive test pulse with 0 signal	[µs]	1600
Max. negative test pulse with 1 signal	[µs]	3000
Shock resistance		Shock test with severity level 1 to FN 942017-5 and EN 60068-2-27
Vibration resistance		Transport application test with severity level 1 to FN 942017-4 and EN 60068-2-6



Solenoid valves VUVG-LK10, in-line valves M7

Data sheet

Operating and environmental conditions					
Valve function		T32-A ¹⁾	M52-A ¹⁾	B52	
Operating medium		Compressed air to ISO 8573-2010 [7:4:4]			
Note on the operating/pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)			
Operating pressure	[bar]	1.5 7	2.5 7	1.5 7	
Ambient temperature	[°C]	-5 +50			
Temperature of medium	[°C]	-5 +50			

1) Pneumatic spring

Electrical data

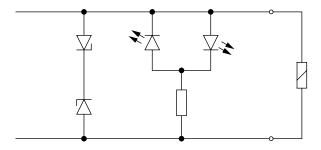
Electrical connection		Via E-box → page 98
Operating voltage	[V DC]	24 ±10%
Power	[W]	0.7
Duty cycle	[%]	100
Degree of protection to EN 60529		IP40 (with plug socket), IP65 (with M8)
Signal status display		LED
Maximum switching frequency	[Hz]	2

Information on materials

Housing	Wrought aluminium alloy
Seals	HNBR, NBR
Note on materials	RoHS-compliant
	Contains paint-wetting impairment substances

Pin allocation for E-box			
	Pin		Description
Rectangular plug, connection pattern H			
	1	+ 0r -	Protective circuit without holding current reduction
2- <u>+++</u> 1	2	+ 0r -	
Round plug, M8, 3-pin			
4	1	Not used	Protective circuit without holding current reduction
$\left(\begin{array}{c} + \\ + \\ \end{array}\right)$ 3	3	+ 0r –	
	4	+ or –	

Protective circuit without holding current reduction

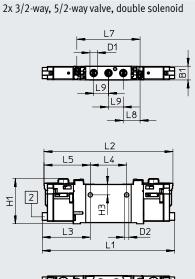


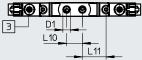
The solenoid coils have a protective circuit to arrest sparks and protect against polarity reversal.

T

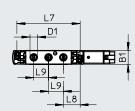
Data sheet

Dimensions



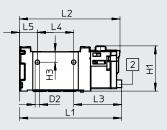


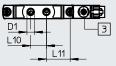
5/2-way single solenoid valve



- ■ - Note
 Additional dimensions
 E-boxes
 → Page 100

Download CAD data → <u>www.festo.com</u>





[2] Horizontal electrical connection [3] Manual override

Туре	B1	D1	D2	H1	H3	L1	L2	L3	L4
VUVG-LK10-T32CM7 VUVG-LK10-B52M7	10.2	M7	3.3	33.6	7.8	98.3	95.8	35.7	27
VUVG-LK10-M52M7						75.9	74.6	35.7	
Туре	L5		L7	L8		L9	L10		L11
VUVG-LK10-T32CM7 VUVG-LK10-B52M7	34.4		47	12.5		11	11.7		17.7
VUVG-LK10-M52M7	13.2								

Ordering data

★ Core product range

Ordering data								
	Description		Part no.	Туре				
In-line valve M7, with	E-box R8							
	2x 3/2-way valve							
	Internal pilot air supply	Normally closed, pneumatic spring reset	★ 8042550	VUVG-LK10-T32C-AT-M7-1R8L-S				
	5/2-way single solenoid valve			·				
	Internal pilot air supply	Pneumatic spring reset	★ 8042551	VUVG-LK10-M52-AT-M7-1R8L-S				
	5/2-way double solenoid valve							
	Internal pilot air supply		★ 8042552	VUVG-LK10-B52-T-M7-1R8L-S				
In-line valve M7, with	E-box H2							
1 1 1	2x 3/2-way valve							
	Internal pilot air supply	Normally closed, pneumatic spring reset	★ 8042546	VUVG-LK10-T32C-AT-M7-1H2L-S				
	5/2-way single solenoid valve							
	Internal pilot air supply	Pneumatic spring reset	★ 8042547	VUVG-LK10-M52-AT-M7-1H2L-S				
	5/2-way double solenoid valve	2						
	Internal pilot air supply		★ 8042548	VUVG-LK10-B52-T-M7-1H2L-S				

Festo core product range

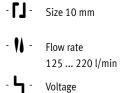
★ ☆

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

Data sheet

Function 2x 3/2C, 2x 3/2U, 2x 3/2H 5/2-way, single solenoid 5/2-way, double solenoid valve 5/3C, 5/3U, 5/3E

Circuit symbols → page 13



5, 12 and 24 V DC



General technical data VUVG-L M5

Valve function			T32-	A		T32-M			M52-R	B52	M52-M	P53	
Normal position			C1)	U ²⁾	H ⁴⁾	C ¹⁾	U ²⁾	H ⁴⁾	-	-	-	C ¹⁾ L	J ²⁾ E ³⁾
Stable position			Mon	Monostable Bistable Monostable						Monostable	Monost	able	
Pneumatic spring reset			Yes			No			Yes ⁵⁾	-	No	-	
Mechanical spring reset			No			Yes			Yes ⁵⁾	-	Yes	Yes	
Vacuum operation at port 1			No			Only wi	th external p	ilot air supply			•		
Design			Pisto	on sp	ool	•							
Sealing principle			Soft										
Type of actuation			Elect	trical									
Type of control			Pilot	ed									
Pilot air supply			Inter	rnal o	r extern	al							
Exhaust function			Can be throttled										
Manual override			Choice of non-detenting, covered, non-detenting/detenting or detenting										
Type of mounting			Optionally via through-holes ⁶⁾ or on manifold rail										
Mounting position			Any										
Nominal width		[mm]	2.7			1.9	1.8		3.2		2.2	3.2	
Standard nominal flow rate		[l/min]	150			135	125	125	220		190	210	
Flow rate on manifold rail		[l/min]	150			135	125	125	220		190	210	
Switching time on/off		[ms]	6/16	ó		8/11			7/19	-	8/24	10/30	
Switching time changeover		[ms]	-							7	-	15	
Size		[mm]	10										
Connection	1, 2, 3, 4, 5		M5										
	12/14		M3										
Product weight		[g]	55			54			45	55	44	55	
Certification			c UL	us - F	Recogniz	ed (OL)			· · · · · · · · · · · · · · · · · · ·				
			c CSA us (OL)										
			RCM compliance mark										
CE marking (see declaration of cor	nformity) ⁷⁾		To El	U EMO	C Directi	ve							
Corrosion resistance class CRC ⁸⁾			2										

1) C=Normally closed/mid-position closed

2) U=Normally open/mid-position pressurised

3) E=Mid-position exhausted

4) H=2x 3/2-way value in one housing with 1x normally closed and 1x normally open

5) Combined reset method

6) 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 placing spacer discs between them.

7) For information about the area of use, see the EC declaration of conformity at: www.festo.com/sp → Certificates.

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

8) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Data sheet

Operating and environmental conditions

Operating and environmental conditions											
Valve function	T32-A ¹⁾	T32-M ³⁾	M52-R ²⁾	B52	M52-M ³⁾	P53					
Operating medium	Compressed a	Compressed air to ISO 8573-2010 [7:4:4]									
Operating pressure	Internal	[bar]	1.5 8	2.5 8	2.5 8	1.5 8	38	3 8			
	External	[bar]	1.5 10	-0.9 10			-0.98	-0.9 10			
Pilot pressure		[bar]	ar] 1.58 28 2.58 1.58 38								
Ambient temperature		[°C]	-5 +50, with holding current reduction -5 +60								
Temperature of medium		[°C]	-5 +50, wit	-5 +50, with holding current reduction -5 +60							

1) Pneumatic spring

2) Mixed, pneumatic/mechanical spring

3) Mechanical spring

Electrical data

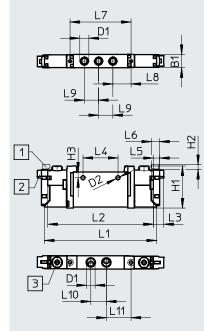
Electrical data		
Electrical connection		Via E-box → page 98
Operating voltage	[V DC]	5, 12 and 24 ±10%
Power	[W]	1, reduced to 0.35 with holding current reduction
Duty cycle	[%]	100
Degree of protection to EN 60529		IP40 (with plug socket), IP65 (with M8)

Information on materials

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

Dimensions

2x 3/2-way, 5/2-way and 5/3-way valve



[1] Vertical electrical connection

[2] Horizontal electrical connection

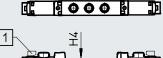
[3] Manual override

[4] Port for external pilot air supply

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

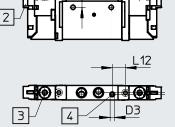
Download CAD data → <u>www.festo.com</u>

-Note Additional dimensions E-boxes → Page 100



L14

L13



566463

566464

566465

574352

574353

574354

566457

574351

566466

574355

VUVG-L10-T32C-AZT-M5-1P3

VUVG-L10-T32U-AZT-M5-1P3

VUVG-L10-T32H-AZT-M5-1P3

VUVG-L10-T32C-MZT-M5-1P3

VUVG-L10-T32U-MZT-M5-1P3

VUVG-L10-T32H-MZT-M5-1P3

VUVG-L10-M52-RT-M5-1P3

VUVG-L10-M52-MT-M5-1P3

VUVG-L10-M52-RZT-M5-1P3

VUVG-L10-M52-MZT-M5-1P3

Ordering data

★ Core product range

External pilot air supply

5/2-way single solenoid valve

Internal pilot air supply

External pilot air supply

Ordering data				
	Description		Part no.	Туре
n-line valve M5, wit	h E-box R8			
A	5/3-way valve			
	Internal pilot air supply	Mid-position closed, mechanical spring reset	★ 577346	VUVG-L10-P53C-T-M5-1R8L
dering data				
n-line valve M5, wit			Part no.	Туре
n-line valve M5, wit			Part no.	Туре
n-line valve M5, wit	hout E-box	Normally closed, pneumatic spring reset	Part no. 566454	Туре VUVG-L10-T32C-AT-M5-1Р3
I-line valve M5, wit	hout E-box 2x 3/2-way valve	Normally closed, pneumatic spring reset Normally open, pneumatic spring reset		
-line valve M5, wit	hout E-box 2x 3/2-way valve Internal pilot air supply		566454	VUVG-L10-T32C-AT-M5-1P3
-line valve M5, wit	hout E-box 2x 3/2-way valve Internal pilot air supply	Normally open, pneumatic spring reset 1x normally open, 1x normally closed, pneumatic spring	566454 566455	VUVG-L10-T32C-AT-M5-1P3 VUVG-L10-T32U-AT-M5-1P3
I-line valve M5, wit	hout E-box 2x 3/2-way valve Internal pilot air supply	Normally open, pneumatic spring reset 1x normally open, 1x normally closed, pneumatic spring reset	566454 566455 566456	VUVG-L10-T32C-AT-M5-1P3 VUVG-L10-T32U-AT-M5-1P3 VUVG-L10-T32H-AT-M5-1P3
	hout E-box 2x 3/2-way valve Internal pilot air supply	Normally open, pneumatic spring reset 1x normally open, 1x normally closed, pneumatic spring reset Normally closed, mechanical spring reset	566454 566455 566456 574348	VUVG-L10-T32C-AT-M5-1P3 VUVG-L10-T32U-AT-M5-1P3 VUVG-L10-T32H-AT-M5-1P3 VUVG-L10-T32C-MT-M5-1P3

Normally closed, pneumatic spring reset

Normally closed, mechanical spring reset Normally open, mechanical spring reset

Pneumatic/mechanical spring reset

Pneumatic/mechanical spring reset

Mechanical spring reset

Mechanical spring reset

1x normally open, 1x normally closed, pneumatic spring

1x normally open, 1x normally closed, mechanical

Normally open, pneumatic spring reset

reset

spring reset

Festo core product range

Generally ready for dispatch from the factory within 24 hours

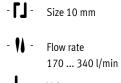
ordering data	1		I									
	Description		Part no.	Туре								
-line valve M5, with												
R	5/2-way double solenoid valve	· · · · · · · · · · · · · · · · · · ·										
0	Internal pilot air supply		566458	VUVG-L10-B52-T-M5-1P3								
	External pilot air supply		566467	VUVG-L10-B52-ZT-M5-1P3								
	5/3-way valve											
	Internal pilot air supply	Mid-position closed, mechanical spring reset	566459	VUVG-L10-P53C-T-M5-1P3								
		Mid-position exhausted, mechanical spring reset	566460	VUVG-L10-P53E-T-M5-1P3								
¥		Mid-position pressurised, mechanical spring reset	566461	VUVG-L10-P53U-T-M5-1P3								
	External pilot air supply	Mid-position closed, mechanical spring reset	566468	VUVG-L10-P53C-ZT-M5-1P3								
		Mid-position exhausted, mechanical spring reset	566469	VUVG-L10-P53E-ZT-M5-1P3								
		Mid-position pressurised, mechanical spring reset	566470	VUVG-L10-P53U-ZT-M5-1P3								
-line valve M5, with	F-box R8											
<u></u>	2x 3/2-way valve											
	Internal pilot air supply	Normally closed, pneumatic spring reset	577347	VUVG-L10-T32C-AT-M5-1R8L								
0		Normally open, pneumatic spring reset	8031466	VUVG-L10-T32U-AT-M5-1R8L								
) NGS		1x normally open, 1x normally closed, pneumatic spring	8031467	VUVG-L10-T32H-AT-M5-1R8L								
		reset	0051407	V0VG-L10-1921-Al-M9-1K0L								
	▶	Normally closed, mechanical spring reset	8031468	VUVG-L10-T32C-MT-M5-1R8L								
\checkmark		Normally open, mechanical spring reset	8031469	VUVG-L10-T32U-MT-M5-1R8L								
		1x normally open, 1x normally closed, mechanical	8031470	VUVG-L10-T32H-MT-M5-1R8L								
		spring reset	8031470	V0V0-L10-15211-MI-M5-1K6L								
	5/2-way single solenoid valve	spring reser										
	Internal pilot air supply	Pneumatic/mechanical spring reset	572634	VUVG-L10-M52-RT-M5-1R8L								
		Mechanical spring reset	8031472	VUVG-L10-M52-MT-M5-1R8L								
	E/2 way double colonaid value		8031472	0000-E10-M32-M1-M3-1R8E								
	Internal pilot air supply	5/2-way double solenoid valve Internal pilot air supply 576664 VUVG-L10-B52-T-M5-1R8L										
	5/3-way valve		570004	V0V0-L10-D92-1-M9-1R8L								
	Internal pilot air supply	Mid-position exhausted, mechanical spring reset	8031475	VUVG-L10-P53E-T-M5-1R8L								
		Mid-position pressurised, mechanical spring reset	8031475	VUVG-L10-P53U-T-M5-1R8L								
		Mid-position pressurised, mechanical spring reset	8031470	V0VG-L10-P350-I-M3-1K8L								
l-line valve M5, with	E-box H2											
2	5/2-way single solenoid valve											
~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	Internal pilot air supply	Pneumatic/mechanical spring reset	577316	VUVG-L10-M52-RT-M5-1H2L-W1								
		Mechanical spring reset	578162	VUVG-L10-M52-MT-M5-1H2L-W1								
	5/2-way double solenoid valve	· · · · · · · · · · · · · · · · · · ·	•									
a la suel	Internal pilot air supply		577317	VUVG-L10-B52-T-M5-1H2L-W1								
			1									
emi in-line valve M5												
	5/2-way single solenoid valve											
	Internal pilot air supply	Pneumatic/mechanical spring reset	577324	VUVG-S10-M52-RT-M5-1H2L-W1								
	<i>h</i>											

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

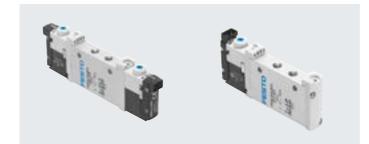
Data sheet

Function 2x 3/2C, 2x 3/2U, 2x 3/2H 5/2-way, single solenoid 5/2-way, double solenoid valve 5/3C, 5/3U, 5/3E

Circuit symbols → page 13



Voltage 5, 12 and 24 V DC



General technical data VUVG-L M7

General technical data VUVG-	LM/								i		1			
Valve function			T32-	A		T32-M			M52-R	B52	M52-M	P53		
Normal position			C1)	U ²⁾	H ⁴⁾	C1)	U ²⁾	H ⁴⁾	-	-	-	C1)	U ²⁾	E ³⁾
Stable position			Mon	ostable						Bistable	Monostable	Mono	stable	
Pneumatic spring reset			Yes			No			Yes ⁵⁾	-	No	-		
Mechanical spring reset			No			Yes			Yes ⁵⁾	-	Yes	Yes		
Vacuum operation at port 1			No			Only w	ith extern	al pilot a	ir supply	·				
Design			Pisto	on spoo	l									
Sealing principle			Soft											
Type of actuation			Elect	trical										
Type of control			Pilot	ed										
Pilot air supply			Inter	rnal or e	external									
Exhaust function	Can be throttled													
Manual override		Choice of non-detenting, covered, non-detenting/detenting or detenting												
Type of mounting		Optionally via through-holes ⁶⁾ or on manifold rail												
Mounting position			Any											
Nominal width		[mm]	2.7			2.0	1.9	1.9	4.0		2.8	3.5		
Standard nominal flow rate		[l/min]	190			150	140	140	330	380	220	320		
Flow rate on manifold rail		[l/min]	170			140	130	130	330	340	220	300		
Switching time on/off		[ms]	6/16	5		8/11			7/19	-	8/24	10/30)	
Switching time changeover		[ms]	-							7		15		
Size		[mm]	10											
Connection	1, 2, 3, 4, 5		M7											
	12/14		M3											
Product weight		[g]	55			54			45	55	44	55		
Certification			c UL	us - Reo	cognized (OL)								
				A us (Ol	<i>'</i>									
			RCM compliance mark											
CE marking (see declaration of	<i>j</i> .		To El	U EMC D	irective									
Corrosion resistance class CRC	8)		2											

1) C=Normally closed/mid-position closed

2) U=Normally open/mid-position pressurised

3) E=Mid-position exhausted

4) H=2x 3/2-way value in one housing with 1x normally closed and 1x normally open

5) Combined reset method

6) 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 placing spacer discs between them.

7) For information about the area of use, see the EC declaration of conformity at: www.festo.com/sp \rightarrow Certificates.

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

8) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Operating and environmental conditions

Operating and environmen	tal conditions										
Valve function	T32-A ¹⁾	T32-M ³⁾	M52-R ²⁾	B52	M52-M ³⁾	P53					
Operating medium			Compressed a	Compressed air to ISO 8573-2010 [7:4:4]							
Operating pressure	Internal	[bar]	1.5 8	2.5 8	2.5 8	1.5 8	38				
	External	[bar]	1.5 10	-0.9 10	-0.9 10			-0.9 10			
Pilot pressure		[bar]	1.5 8	28	2.5 8	1.5 8	38	3 8			
Ambient temperature		[°C]	-5 +50, wit	-5 +50, with holding current reduction -5 +60							
Temperature of medium		[°C]	-5 +50, wit	h holding current re	duction -5 +60						

1) Pneumatic spring

2) Mixed, pneumatic/mechanical spring

3) Mechanical spring

Electrical data

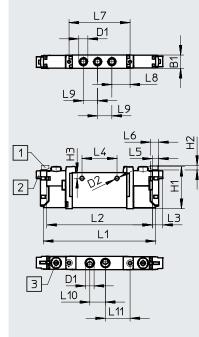
Electrical data		
Electrical connection		Via E-box → page 98
Operating voltage	[V DC]	5, 12, 24 ±10%
Power	[W]	1, reduced to 0.35 with holding current reduction
Duty cycle	[%]	100
Degree of protection to EN 60529		IP40 (with plug socket), IP65 (with M8)

Information on materials

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

Dimensions

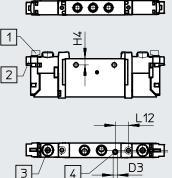
 $2x\ 3/2\ \mbox{way},\ 5/2\ \mbox{way}\ \mbox{and}\ \ 5/3\ \mbox{way}\ \ \ value$



	 	•			
		L14			
		L13			
	-			- 1	
_		-	-		

Download CAD data \rightarrow <u>www.festo.com</u>

-- Note Additional dimensions E-boxes → Page 100



[1] Vertical electrical conne	ection	[2] Horizo	ntal elec	trical co	al connection [3] Manual override [4] Port for external pilot air							
Туре	B1	B2	D1	D2	D3	H1	H2	H3	L1	L2	L3	L4
VUVG-L-10M7 VUVG-S-10M7	10.2	-	M7	3.2	M3	32.5	3.6	4.4	86.5	81.5	8	27
Туре	L5	L6	L	7	L8	L9	L10	L11	L	12	L13	L14
VUVG-L-10M7 VUVG-S-10M7	4.85	6.15	4	7	14	11	12	19		-	69.2	66.7

★ Core product range

Ordering data	Description		Part no.	Туре
	•		ruitilo.	13PC
n-line valve M7, with	1			
	5/3-way valve			
000	Internal pilot air supply	Mid-position closed, mechanical spring reset	★ 574223	VUVG-L10-P53C-T-M7-1R8L
L MA				
	ð			
Ordering data	1		1 -	1-
	Description		Part no.	Туре
n-line valve M7, with	nout E-box			
	2x 3/2-way valve			
	Internal pilot air supply	Normally closed, pneumatic spring reset	566471	VUVG-L10-T32C-AT-M7-1P3
		Normally open, pneumatic spring reset	566472	VUVG-L10-T32U-AT-M7-1P3
r ojka	a l	1x normally open, 1x normally closed, pneumatic spring	566473	VUVG-L10-T32H-AT-M7-1P3
		reset		
		Normally closed, mechanical spring reset	574356	VUVG-L10-T32C-MT-M7-1P3
	~	Normally open, mechanical spring reset	574357	VUVG-L10-T32U-MT-M7-1P3
		1x normally open, 1x normally closed, mechanical	574358	VUVG-L10-T32H-MT-M7-1P3
		spring reset		
	External pilot air supply	Normally closed, pneumatic spring reset	566479	VUVG-L10-T32C-AZT-M7-1P3
		Normally open, pneumatic spring reset	566480	VUVG-L10-T32U-AZT-M7-1P3
		1x normally open, 1x normally closed, pneumatic spring	566481	VUVG-L10-T32H-AZT-M7-1P3
		reset		
		Normally closed, mechanical spring reset	574360	VUVG-L10-T32C-MZT-M7-1P3
		Normally open, mechanical spring reset	574361	VUVG-L10-T32U-MZT-M7-1P3
		Normally closed, mechanical spring reset	574362	VUVG-L10-T32H-MZT-M7-1P3

Festo core product range

Generally ready for dispatch from the factory within 24 hours

ıg data	Description		Part no.	Туре
valve M7, witho			i urt no.	i)pc
valve M7, witho				
<	5/2-way single solenoid valve		57/250	VUVG-L10-M52-MT-M7-1P3
	Internal pilot air supply	Mechanical spring reset Pneumatic/mechanical spring reset	574359 566474	VUVG-L10-M52-M1-M7-1P3
	External pilot air supply		574363	VUVG-L10-M52-M7-1P3
		Mechanical spring reset Pneumatic/mechanical spring reset	566482	VUVG-L10-M52-RZT-M7-1P3
	5/2-way double solenoid valve		500482	V0VG-L10-M32-R21-M7-1F3
	Internal pilot air supply		566475	VUVG-L10-B52-T-M7-1P3
	External pilot air supply		566483	VUVG-L10-B52-ZT-M7-1P3
	5/3-way valve		500405	V0VG-E10-D92-21-M7-11-5
	Internal pilot air supply	Mid-position closed, mechanical spring reset	566476	VUVG-L10-P53C-T-M7-1P3
		Mid-position exhausted, mechanical spring reset	566477	VUVG-L10-P53E-T-M7-1P3
		Mid-position exhausted, mechanical spring reset	566478	VUVG-L10-P53U-T-M7-1P3
	External pilot air supply	Mid-position pressursed, mechanical spring reset	566484	VUVG-L10-P53C-ZT-M7-1P3
		Mid-position exhausted, mechanical spring reset	566485	VUVG-L10-P53E-ZT-M7-1P3
		Mid-position pressurised, mechanical spring reset	566486	VUVG-L10-P53U-ZT-M7-1P3
		Mid-position pressursed, mechanical spring reset	500460	V0VG-L10-F550-21-M7-1F5
valve M7, with	E-box R8			
	2x 3/2-way valve			
	Internal pilot air supply	Normally closed, pneumatic spring reset	574218	VUVG-L10-T32C-AT-M7-1R8L
A Ba		Normally open, pneumatic spring reset	574219	VUVG-L10-T32U-AT-M7-1R8L
		1x normally open, 1x normally closed, pneumatic spring	574220	VUVG-L10-T32H-AT-M7-1R8L
		reset		
	'	Normally closed, mechanical spring reset	8031480	VUVG-L10-T32C-MT-M7-1R8L
		Normally open, mechanical spring reset	8031481	VUVG-L10-T32U-MT-M7-1R8L
		1x normally open, 1x normally closed, mechanical	8031482	VUVG-L10-T32H-MT-M7-1R8L
		spring reset		
	. , .			1
	Internal pilot air supply	Pneumatic/mechanical spring reset	574221	VUVG-L10-M52-RT-M7-1R8L
		Mechanical spring reset	8031485	VUVG-L10-M52-MT-M7-1R8L
	. ,	2		1
			574222	VUVG-L10-B52-T-M7-1R8L
	. ,			
	Internal pilot air supply	Mid-position exhausted, mechanical spring reset	574225	VUVG-L10-P53E-T-M7-1R8L
		Mid-position pressurised, mechanical spring reset	574224	VUVG-L10-P53U-T-M7-1R8L
valve M7, with	F-box H2			
·	5/2-way single solenoid valve			
	Internal pilot air supply	Pneumatic/mechanical spring reset	577333	VUVG-L10-M52-RT-M7-1H2L-W1
		Mechanical spring reset	578163	VUVG-L10-M52-MT-M7-1H2L-W1
	5/2-way double solenoid valve		5/0105	1010 LIU-MJ2-MI-M/-III2LWI
U Ve	Solution and S		577332	VUVG-L10-B52-T-M7-1H2L-W1

2020/08 - Subject to change

[1] Ports 1, 3 and 5: G1/8

and accessories

[2] Ports 1, 2, 3, 4 and 5 on the valve: M7 or M5

[5] Electrical connection for E-boxes

In-line valves for manifold assembly

Manifold assembly

Dimensions

Download CAD data → <u>www.festo.com</u>

- 着 - Note Additional dimensions E-boxes → Page 100



[6] H-rail mounting (two M4x20

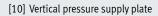
ing)

[7] Cover plate

screws are required for mount-

[8]	Supply plate	
lol	Supply plate	

[9] Valves/cover plate mounting on manifold rail: M2 thread

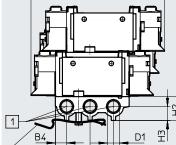


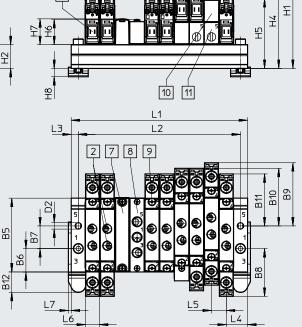
[11] Vertical pressure exhaust plate

Туре	B1	B	2	B3	B4	E	35	B6	B7	В	8	B9	B10	В	11	B12
VABML-L1-10S-G18	94.3	4	41 2		8 52.1		2.1	16.5	16	33	8.7	44.6	40.7	36	ó.7 14.4	
Туре	D1	D2	D5	H1	H2	H3	H4	H5	H6	H7	H8	L3	L4	L5	L6	L7
VABML-L1-10S-G18	G1/8	4.5	8	80.6	16.8	9.8	64.9	49.3	17.8	18	5.9	5	15	10.5	10.3	2



B1	
6 <u>B3</u> <u>B3</u> <u>B2</u>	





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

Ordering data

Valve positions	2	3	4	5	6	7	8	9	10	12	14	16	22
L1	40.5	51	61.5	72	82.5	93	103.5	114	124.5	145.5	166.5	187.5	250.5
L2	30.5	41	51.5	62	72.5	83	93.5	104	114.5	135.5	156.5	177.5	240.5
VABM weight [g]	63	78	93	108	123	138	153	168	183	213	243	273	363

Technical data – Manifold rails

	Connection	CRC	Material ²⁾	Operating pressure	Max. tightening torque	e for assembly [Nm]	
	1, 3, 5			[bar]	Valve	H-rail	Wall
10000 10000 10000 10000	G1/8	21)	Wrought aluminium alloy	-0.9 10	0.45	1.5	3

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

2) Note on materials: RoHS-compliant.

Ordering data – Manifold rail

	Description		Part no.	Туре
Manifold rail for in-line valve (manifo	old assembly)			
	For size M5/M7	2 valve positions	★ 566558	VABM-L1-10S-G18-2
		3 valve positions	★ 566559	VABM-L1-10S-G18-3
		4 valve positions	★ 566560	VABM-L1-10S-G18-4
		5 valve positions	566561	VABM-L1-10S-G18-5
		6 valve positions	★ 566562	VABM-L1-10S-G18-6
		7 valve positions	566563	VABM-L1-10S-G18-7
		8 valve positions	★ 566564	VABM-L1-10S-G18-8
		9 valve positions	566565	VABM-L1-10S-G18-9
		10 valve positions	★ 566566	VABM-L1-10S-G18-10
		12 valve positions	566567	VABM-L1-10S-G18-12
		14 valve positions	566568	VABM-L1-10S-G18-14
		16 valve positions	566569	VABM-L1-10S-G18-16

→ Internet: www.festo.com/catalogue/...

I

Ordering data – Accessories				
	Description		Part no.	Туре
Cover plate				Data sheets → Internet: vabb
*	For valve position on manifold rail, incl	uding screws and seal	★ 566462	VABB-L1-10-S
Separator				Data sheets → Internet: vabd
	For creating pressure zones		569995	VABD-8-B
Supply plate				Data sheets → Internet: vab
	For valve position (in-line valves M5) or	n manifold rail, including screws and seal	569991	VABF-L1-10-P3A4-M5
	For valve position (in-line valves M7) or	n manifold rail, including screws and seal	569992	VABF-L1-10-P3A4-M7
Seals				Data sheets → Internet: vabo
••••••	In-line valves VUVG-LK			
	For in-line valves M5	Delivery quantity: 10 sets (each with	* 8043718	VABD-L1-10XK-S-M5-S
	For in-line valves M7	2 screws and 1 seal)	* 8043719	VABD-L1-10XK-S-M7-S
	In-line valves VUVG-L		1	- I
U	For in-line valves M5	Delivery quantity: 10 sets (each with	★ 566672	VABD-L1-10X-S-M5
	For in-line valves M7	2 screws and 1 seal)	★ 566673	VABD-L1-10X-S-M7
Vertical pressure supply plate				
	Pneumatic connection 1: M7	Terminal code CP	574592	VABF-L1-P3A3-M7
Vertical pressure exhaust plate				
a o o o d a	Pneumatic connection 3, 5: M7	Terminal code CR	574594	VABF-L1-P7A13-M7

Solenoid valves VUVG-LK14, in-line valves G1/8

Data sheet

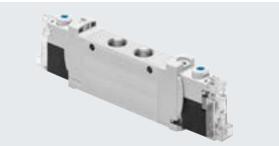
Function 2x 3/2C 5/2-way, single solenoid 5/2-way, double solenoid valve

Circuit symbols → page 13

- N - Flow rate 570 ... 660 l/min

- **Size** 14 mm





General technical data VUVG-LK

Valve function		T32-A	M52-A	B52
Normal position		C ¹⁾	-	-
Stable position		Monostable	•	Bistable
Pneumatic spring reset		Yes	Yes	-
Design		Piston spool	·	·
Sealing principle		Soft		
Type of actuation		Electrical		
Type of control		Piloted		
Pilot air supply		Internal		
Exhaust function		Can be throttled		
Manual override		Non-detenting, detenting	5	
Type of mounting		Optionally via through-h	oles ²⁾ or on manifold rail	
Mounting position	·	Any		
Standard nominal flow rate	[l/min]	570	660	660
Switching time on/off	[ms]	13/20	14/24	-
Switching time changeover	[ms]	-		8
Size	[mm]	14		
Connection 2, 4		G1/8		
Product weight	[g]	75	65	85
Corrosion resistance class CRC ³⁾		2		

1) C=Normally closed

2) 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 placing spacer discs between them.

3) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Safety data

Max. positive test pulse with 0 signal	[µs]	1600
Max. negative test pulse with 1 signal	[µs]	3000
Shock resistance		Shock test with severity level 1 to FN 942017-5 and EN 60068-2-27
Vibration resistance		Transport application test with severity level 1 to FN 942017-4 and EN 60068-2-6

Operating and environmental conditions

- persona en				
Valve function		T32-A ¹⁾	M52-A ¹⁾	B52
Operating medium		Compressed air to ISO 8573-2010 [7:4	4:4]	
Note on the operating/pilot medium		Lubricated operation possible (in whic	h case lubricated operation will always	be required)
Operating pressure	[bar]	1.5 7	2.5 7	1.5 7
Ambient temperature	[°C]	-5 +50		
Temperature of medium	[°C]	-5 +50		
1) Pneumatic spring				

Electrical data

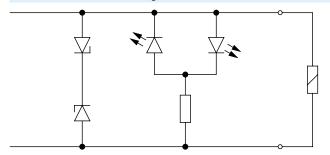
Electrical connection		Via E-box → page 98
Operating voltage	[V DC]	24 ±10%
Power	[W]	0.7
Duty cycle	[%]	100
Degree of protection to EN 60529		IP40 (with plug socket), IP65 (with M8)
Signal status display		LED
Maximum switching frequency	[Hz]	2

Information on materials

Housing	Wrought aluminium alloy
Seals	HNBR, NBR
Note on materials	RoHS-compliant
	Contains paint-wetting impairment substances

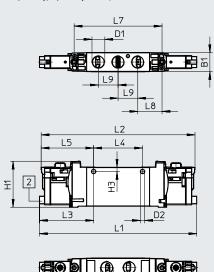
Pin allocation for E-box			
	Pin		Description
Rectangular plug, connection pattern H			
3 1 1 1	1	+ 0r -	Protective circuit without holding current reduction
	2	+ 0r -	
Round plug, M8, 3-pin			
4	1	Not used	Protective circuit without holding current reduction
+			
$\left(\begin{array}{c} + \end{array} \right) + 3$	3	+ or –	
	4	+ or –	

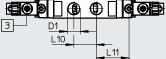
Protective circuit without holding current reduction



The solenoid coils have a protective circuit to arrest sparks and protect against polarity reversal.

Dimensions

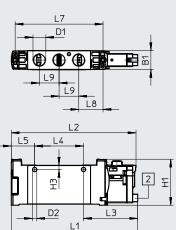




2x 3/2-way, 5/2-way valve, double solenoid

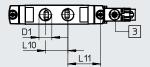
5/2-way single solenoid valve

Download CAD data → <u>www.festo.com</u>



Additional dimensions E-boxes → Page 100

- Note



[2] Horizontal electrical connection [3] Manual (override
---	----------

Туре	B1	D1	D2	H1	H3	L1	L2	L3	L4	L5
VUVG-LK14-T32CG18	14.4	G1/8	3.3	34.8	3.2	118.9	116.4	41	37	39.7
VUVG-LK14-B52G18										
VUVG-LK14-M52G18						95.6	94.4			17.7
Туре	เ	.7	L	.8	L	9	L:	10	L:	11
VUVG-LK14-T32CG18	60	6.5	18	8.4	14.9 17		24.8			
VUVG-LK14-B52G18										
			1		1		1		1	

★ Core product range

Ordering data										
	Description		Part no.	Туре						
In-line valve G1/8, wi	th E-box R8									
	2x 3/2-way valve									
	Internal pilot air supply	Normally closed, pneumatic spring reset	★ 8042566	VUVG-LK14-T32C-AT-G18-1R8L-S						
	5/2-way single solenoid valve	5/2-way single solenoid valve								
	Internal pilot air supply	Pneumatic spring reset	★ 8042567	VUVG-LK14-M52-AT-G18-1R8L-S						
	5/2-way double solenoid valve	5/2-way double solenoid valve								
	Internal pilot air supply		★ 8042568	VUVG-LK14-B52-T-G18-1R8L-S						
In-line valve G1/8, wit	th E-box H2									
A CONTRACTOR	2x 3/2-way valve									
	Internal pilot air supply	Normally closed, pneumatic spring reset	★ 8042562	VUVG-LK14-T32C-AT-G18-1H2L-S						
	5/2-way single solenoid valve	• !	L.	·						
	Internal pilot air supply	Pneumatic spring reset	★ 8042563	VUVG-LK14-M52-AT-G18-1H2L-S						
	5/2-way double solenoid valv	5/2-way double solenoid valve								
	Internal pilot air supply		★ 8042564	VUVG-LK14-B52-T-G18-1H2L-S						
~										

Festo core product range

Generally ready for dispatch from the factory within 24 hours Generally ready for dispatch from the factory within 5 days

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

Data sheet

Function 2x 3/2C, 2x 3/2U, 2x 3/2H 5/2-way, single solenoid 5/2-way, double solenoid valve 5/3C, 5/3U, 5/3E

Circuit symbols → page 13

- **[]** Size 14 mm - **]** - Flow rate
 - 480 ... 780 l/min
- **b** Voltage 5, 12 and 24 V DC



General technical data VUVG-L

Valve function			T32-A			T32-M			M52-A	B52	M52-M	P53		
Normal position			C1)	U ²⁾	H ⁴⁾	C1)	U ²⁾	H ⁴⁾	-	-	-	C1)	U ²⁾	E ³⁾
Stable position	Monos	table						Bistable	Monostab	le				
Pneumatic spring reset						No			Yes	-	No	-		
Mechanical spring reset	No			Yes			No	-	Yes	Yes				
Vacuum operation at port 1	No			Only wi	th exterr	nal pilot a	air supply	÷	•	÷				
Size	14													
Design			Piston	spool										
Sealing principle			Soft											
Type of actuation			Electric	al										
Type of control				Piloted										
Pilot air supply			Internal or external											
Exhaust function			Can be throttled											
Manual override			Choice of non-detenting, covered, non-detenting/detenting or detenting											
Type of mounting			Optionally via through-holes ⁵⁾ or on manifold rail											
Mounting position			Any											
Nominal width		[mm]	4.6			4.3			5.6	5.6	5.6	5.6		
Standard nominal flow rate		[l/min]	560	600	590	550	500	500	780	780	780	650	560	
Flow rate on manifold rail		[l/min]	560	580		520	480	480	680	700	700	620	560	
Switching time	On/off	[ms]	8/23			15/11			14/22	-	13/40	12/40		
	Changeover	[ms]	-							8	-	20		
Pneumatic connection	1, 2, 3, 4, 5		G1/8											
	12/14		M5											

1) C=Normally closed/mid-position closed

2) U=Normally open/mid-position pressurised

3) E=Mid-position exhausted

4) H=2x 3/2-way valve in one housing with 1x normally closed and 1x normally open

5) 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 placing spacer discs between them.

General technical data V	General technical data VUVG-L								
Valve function		T32-A	T32-M	M52-A	B52	M52-M	P53		
Product weight	[g]	89	80	78	89	70	89		
Certification		c UL us - Recognized (OL)							
		c CSA us (OL)							
		RCM compliance mark							
CE marking (see declarati	CE marking (see declaration of con- To EU EMC Directive								
formity) ¹⁾									
Corrosion resistance class	s CRC ²⁾	2							

1) For information about the area of use, see the EC declaration of conformity at: www.festo.com/sp → Certificates.

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

2) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Operating and environmental conditions

operating and environment	at conditions							
Valve function			T32-A ¹⁾	T32-M ²⁾	M52-A ¹⁾	B52	M52-M ²⁾	P53
Operating medium			Compressed a	air to ISO 8573-201) [7:4:4]			
Operating pressure	Internal	[bar]	1.5 8	38	2.5 8	1.5 8	3 8	38
	External	[bar]	1.5 10	-0.9 10			-0.9 8	-0.9 10
Pilot pressure		[bar]	1.5 8	3.5 8	2.5 8	1.5 8	3 8	38
Ambient temperature	-5 +50, with holding current reduction -5 +60							
Temperature of medium	-5 +50, with holding current reduction -5 +60							

1) Pneumatic spring

2) Mechanical spring

Electrical data

Electrical connection		Via E-box → page 98
Operating voltage	[V DC]	5, 12 and 24 ±10%
Power	[W]	1, reduced to 0.35 with holding current reduction
Duty cycle	[%]	100
Degree of protection to EN 60529		IP40 (with plug socket), IP65 (with M8)

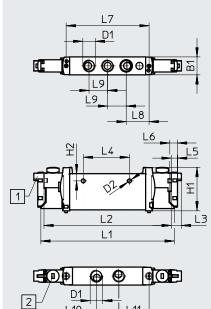
Safety data		
Max. positive test pulse with 0 signal	[µs]	700
Max. negative test pulse with 1 signal	[µs]	900
Shock resistance		Shock test with severity level 2 to FN 942017-5 and EN 60068-2-27
Vibration resistance		Transport application test with severity level 2 to FN 942017-4 and EN 60068-2-6

Information on materials

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

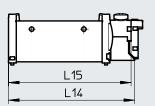
Dimensions VUVG

2x 3/2-way, 5/2-way and 5/3-way valve



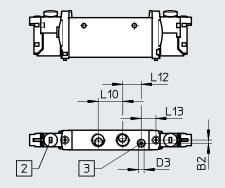
L11

L10



Download CAD data → <u>www.festo.com</u>

Note -Additional dimensions E-boxes → Page 100



[1] Horizontal electrical co	nnection	[2] N	lanual over	ride		[3]	Port for exter	rnal pilot a	ir supply				
Туре	B1	B2	D1	D2 Ø	D3	H1	H2	L1	L2	L3	L4	L5	L6
VUVG-L14G18 VUVG-S14G18	14.4	2.3	G1/8	3.2	-	34.8	5.8	107	102	8	37	4.85	6.2
Туре	L7		L8	L9	1	.10	L11	L1	2	L13	L14		L15
VUVG-L14G18 VUVG-S14G18	66.5		18.35	14.9		18	24.3	13	.5	10.8	89.4	ļ.	87

★ Core product range

Ordering data									
	Description		Part no.	Туре					
In-line valve G1/8, with	In-line valve G1/8, with E-box R8								
1990	5/3-way valve								
	Internal pilot air supply	Mid-position closed, mechanical spring reset	★ 574231	VUVG-L14-P53C-T-G18-1R8L					

Ordering data

	Description		Part no.	Туре
n-line valve G1/8, wi	thout E-box			
	2x 3/2-way valve			
	Internal pilot air supply	Normally closed, pneumatic spring reset	566496	VUVG-L14-T32-AT-G18-P3
		Normally open, pneumatic spring reset	566497	VUVG-L14-32U-AT-G18-1P3
		1x normally open, 1x normally closed, pneumatic spring reset	566498	VUVG-L14-T32H-AT-G18-1P3
		Normally closed, mechanical spring reset	574368	VUVG-L14-T32C-MT-G18-1P3
		Normally open, mechanical spring reset	574369	VUVG-L14-T32U-MT-G18-1P3
		1x normally open, 1x normally closed, mechanical spring reset	574370	VUVG-L14-T32H-MT-G18-1P3
	External pilot air supply	Normally closed, pneumatic spring reset	566505	VUVG-L14-T32C-AZT-G18-1P3
		Normally open, pneumatic spring reset	566506	VUVG-L14-T32U-AZT-G18-1P3
		1x normally open, 1x normally closed, pneumatic	566507	VUVG-L14-T32H-AZT-G18-1P3
		spring reset		
		Normally closed, mechanical spring reset	574372	VUVG-L14-T32C-MZT-G18-1P3
		Normally open, mechanical spring reset	574373	VUVG-L14-T32U-MZT-G18-1P3
		Normally closed, mechanical spring reset	574374	VUVG-L14-T32H-MZT-G18-1P3
	5/2-way single solenoid valve			
	Internal pilot air supply	Pneumatic spring reset	566499	VUVG-L14-M52-AT-G18-1P3
		Mechanical spring reset	574371	VUVG-L14-M52-MT-G18-1P3
	External pilot air supply	Pneumatic spring return	566508	VUVG-L14-M52-AZT-G18-1P3
		Mechanical spring reset	574375	VUVG-L14-M52-MZT-G18-1P3
	5/2-way double solenoid valve		-	
	Internal pilot air supply		566500	VUVG-L14-B52-T-G18-1P3
	External pilot air supply		566509	VUVG-L14-B52-ZT-G18-1P3

★ ☆ Generally ready for dispatch from the factory within 24 hours

Ordering data										
	Description		Part no.	Туре						
In-line valve G1/8, with	out E-box									
	5/3-way valve									
	Internal pilot air supply	Mid-position closed, mechanical spring reset	566501	VUVG-L14-P53C-T-G18-1P3						
		Mid-position exhausted, mechanical spring reset	566502	VUVG-L14-P53E-T-G18-1P3						
		Mid-position pressurised, mechanical spring reset	566503	VUVG-L14-P53U-T-G18-1P3						
	External pilot air supply	Mid-position closed, mechanical spring reset	566510	VUVG-L14-P53C-ZT-G18-1P3						
		Mid-position exhausted, mechanical spring reset	566511	VUVG-L14-P53E-ZT-G18-1P3						
		Mid-position pressurised, mechanical spring reset	566512	VUVG-L14-P53U-ZT-G18-1P3						
n-line valve G1/8, with	E-box R8									
	2x 3/2-way valve									
	Internal pilot air supply	Normally closed, pneumatic spring reset	574226	VUVG-L14-T32C-AT-G18-1R8L						
VI Con		Normally open, pneumatic spring reset	574227	VUVG-L14-T32U-AT-G18-1R8L						
		1x normally open, 1x normally closed, pneumatic	574228	VUVG-L14-T32H-AT-G18-1R8L						
		spring reset								
		Normally closed, mechanical spring reset	8031504	VUVG-L14-T32C-MT-G18-1R8L						
		Normally open, mechanical spring reset	8031505	VUVG-L14-T32U-MT-G18-1R8L						
		1x normally open, 1x normally closed, mechanical	8031506	VUVG-L14-T32H-MT-G18-1R8L						
		spring reset								
	5/2-way single solenoid valve									
	Internal pilot air supply	Pneumatic spring reset	574229	VUVG-L14-M52-AT-G18-1R8L						
		Mechanical spring reset	8031508	VUVG-L14-M52-MT-G18-1R8L						
	5/2-way double solenoid valve									
	Internal pilot air supply		574230	VUVG-L14-B52-T-G18-1R8L						
	5/3-way valve									
	Internal pilot air supply	Mid-position exhausted, mechanical spring reset	574233	VUVG-L14-P53E-T-G18-1R8L						
		Mid-position pressurised, mechanical spring reset	574232	VUVG-L14-P53U-T-G18-1R8L						
n-line valve G1/8, with	E-box H2									
, , ,	2x 3/2-way valve									
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Internal pilot air supply	Normally closed, pneumatic spring reset	577321	VUVG-L14-T32C-AT-G18-1H2L-W1						
	5/2-way single solenoid valve	1	1	<u>.</u>						
	Internal pilot air supply	Pneumatic spring reset	576256	VUVG-L14-M52-AT-G18-1H2L-W1						
a a mai		Mechanical spring reset	578164	VUVG-L14-M52-MT-G18-1H2L-W1						
	5/2-way double solenoid valve	ł	•	•						
	Internal pilot air supply		577319	VUVG-L14-B52-T-G18-1H2L-W1						
emi in-line valve G1/8	with F-box H2									
/2-way single solenoid										
• <u></u>	Internal pilot air supply	Pneumatic spring reset	577325	VUVG-S14-M52-AT-G18-1H2L-W1						
the second	,									
- 4										

#### 2020/08 - Subject to change

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

# Manifold assembly

Dimensions

1

In-line valves for manifold assembly

B1

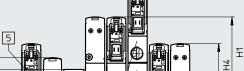
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### Download CAD data → <u>www.festo.com</u>

- Note
 Additional dimensions
 E-boxes
 → Page 100

- [1] Ports 1, 3 and 5: G1/4 (at both ends)
- [2] Ports 1, 2, 3, 4 and 5 on the valve: G1/8
- [5] Electrical connection for E-boxes and accessories
- [6] H-rail mounting (two M4x25 screws are required for mounting)
- [7] Cover plate

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L3

S)

L7

B5 B7

B6

B12

[8] Supply plate, ports 1, 3 and 5: G1/8

L5 L4

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B11 B10 B9

- [9] Valves/cover plate mounting on manifold rail: M2.5 thread
- [10] Vertical pressure supply plate[11] Vertical pressure exhaust plate

Туре		B1	B2	B3	B4	B5	B6	B7	В	8 B	9   B10	B11	B12	D1	D2
VABM-L1-14S-G14		116.6	56.6	36.5	16.4	72.9	26.5	20	43	.5 53	1 48.3	43.5	4.5	G1/4	4.5
Туре		H1	H2	НЗ	H4	Н5	Н	6	H7	Н8	L3	L4	L5	L6	L7
VABM-L1-14S-G14		95.3	20	10.6	74.9	54.8		-	15.4	6.5	5	17	16	14.5	2
Valve positions		2	3	4	5	6	7	.	8	9	10	12	14	16	22
L1		50	66	82	98	114	13	0	146	162	178	210	242	274	306
L2		40	56	72	88	104	12	0	136	152	168	200	232	264	296
VABM weight	[g]	118	159	200	241	282	32	3	364	405	446	528	610	692	938

→ Internet: www.festo.com/catalogue/...



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

# Ordering data

Technical data – Manifold rails							
	Connection	CRC	Material ²⁾	Operating pressure	Max. tightening torque	e for assembly [Nm]	
	1, 3, 5			[bar]	Valve	H-rail	Wall
	G1/4	21)	Wrought aluminium alloy	-0.9 10	0.65	1.5	3

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment. 2) Note on materials: RoHS-compliant.

Ordering data – Manifold rail				
	Description		Part no.	Туре
Manifold rail for in-line valves (mani	fold assembly)			
	For size G1/8	2 valve positions	★ 566618	VABM-L1-14S-G14-2
		3 valve positions	★ 566619	VABM-L1-14S-G14-3
		4 valve positions	★ 566620	VABM-L1-14S-G14-4
		5 valve positions	566621	VABM-L1-14S-G14-5
		6 valve positions	★ 566622	VABM-L1-14S-G14-6
		7 valve positions	566623	VABM-L1-14S-G14-7
- Well		8 valve positions	★ 566624	VABM-L1-14S-G14-8
		9 valve positions	566625	VABM-L1-14S-G14-9
		10 valve positions	★ 566626	VABM-L1-14S-G14-10
		12 valve positions	566627	VABM-L1-14S-G14-12
		14 valve positions	566628	VABM-L1-14S-G14-14
		16 valve positions	566629	VABM-L1-14S-G14-16

Festo core product range

Generally ready for dispatch from the factory within 24 hours Generally ready for dispatch from the factory within 5 days

Ordering data – Accessories				
	Description		Part no.	Туре
Cover plate				Data sheets → Internet: vabl
Č Č Č	For valve position on manifold rail, includ	ing screws and seal	★ 569989	VABB-L1-14
Separator				Data sheets → Internet: vabo
	For creating pressure zones		569996	VABD-10-B
Supply plate				Data sheets → Internet: vab
	For valve position on manifold rail, includ	ing screws and seal	569993	VABF-L1-14-P3A4-G18
Seals for in-line valves				Data sheets → Internet: vabo
	In-line valves VUVG-LK			
	For G1/8 in-line valves	Delivery quantity: 10 sets (each with 2 screws and 1 seal)	* 8043720	VABD-L1-14XK-S-G18-S
	In-line valves VUVG-L			
Ś	For G1/8 in-line valves	Delivery quantity: 10 sets (each with 2 screws and 1 seal)	★ 566675	VABD-L1-14X-S-G18
Vertical pressure supply plate				
a a a a a a a a a a a a a a a a a a a	Pneumatic connection 1: G1/8	Terminal code CP	574593	VABF-L1-P3A3-G18
Vertical pressure exhaust plate				
C C C C C C C C C C C C C C C C C C C	Pneumatic connection 3, 5: G1/8	Terminal code CR	574595	VABF-L1-P7A13-G18

★ ☆

# Solenoid valves VUVG-L18 and VUVG-S18, in-line valves G1/4

### Data sheet

Function 2x 3/2C, 2x 3/2U, 2x 3/2H 5/2-way, single solenoid 5/2-way, double solenoid valve 5/3C, 5/3U, 5/3E

Circuit symbols → page 13

- **[**] Size 18 mm
- 1000 ... 1380 l/min
  - Voltage
     5, 12 and 24 V DC



#### General technical data VUVG-L

General technical da	ta vuvg-L		1			<b>-</b>				1	1	1			
Valve function			T32-A			T32-M			M52-R	B52	M52-M	P53			
Normal position			C ¹⁾	U ²⁾	H ⁴⁾	C ¹⁾	U ²⁾	H ⁴⁾	-	-	-	C ¹⁾	U ²⁾	E ³⁾	
Stable position			Monosta	Monostable						Bistable	Monosta	Monostable			
Pneumatic spring res	et		Yes			No			Yes ⁵⁾	-	No	-			
Mechanical spring re	set		No			Yes			Yes ⁵⁾	-	Yes	Yes			
Vacuum operation at	port 1		No			Only wit	th external	pilot air sup	oply						
Size	[mm]	18													
Design			Piston s	looc											
Sealing principle			Soft												
Type of actuation			Electrica	l											
Type of control			Piloted												
Pilot air supply			Internal/	Internal/external											
Exhaust function			Can be throttled												
Manual override			Choice of non-detenting, covered, non-detenting/detenting or detenting												
Type of mounting			Optionally via through-holes ⁶⁾ or on manifold rail												
Mounting position			Any												
Nominal width		[mm]	5.7						6.9	7.3	6.9	6.5	6.3		
Standard nominal flo	w rate	[l/min]	880	970	950	870	990	920	1300	1380	1300	1200	1000	910	
Flow rate on manifold	l rail		780	980	820	780	960	820	1300	1370	1300	1180	1220	1050	
Switching time	On/off	[ms]	13/25			15/22			15/31	-	10/45	15/48			
	Changeover	[ms]	-			-			-	11	-	29			
Pneumatic connec-	1, 2, 3, 4, 5		G1/4												
tion	12/14		M5												
Product weight		[g]	164			164			154	164	154	160			
Certification			c UL us -	Recognize	d (OL)										
			c CSA us	(OL)											
			RCM con	npliance m	ark										
CE marking (see decl	aration of conform	ity) ⁷⁾	To EU EN	IC Directive	e										
Corrosion resistance	class CRC ⁸⁾		2												

1) C=Normally closed/mid-position closed

2) U=Normally open/mid-position pressurised

3) E=Mid-position exhausted

4) H=2x 3/2-way value in one housing with 1x normally closed and 1x normally open

5) Combined reset method

6) If several values are to be screwed together via the through-holes to form a block, a minimum distance of 0.3 mm must be ensured by placing spacer discs between them.

7) For information about the area of use, see the EC declaration of conformity at: www.festo.com/sp → Certificates.

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary. 8) Corrosion resistance class CRC 2 to Festo standard FN 940070

6) Conosion resistance class CRC 2 to resto standard PN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

### Operating and environmental conditions

operating and environmental to	Inditions							
Valve function			T32-A ¹⁾	T32-M ³⁾	M52-R ²⁾	B52	M52-M ³⁾	P53
Operating medium	Compressed air to	Compressed air to ISO 8573-2010 [7:4:4]						
Note on the operating/pilot media	Lubricated operat	Lubricated operation possible (in which case lubricated operation will always be required)						
Operating pressure	Internal	[bar]	1.5 8	3 8	2.5 8	1.5 8	38	
	External	[bar]	1.5 10	-0.9 10				
Pilot pressure		[bar]	1.5 8	2 8	2.5 8	1.5 8	3 8	
Ambient temperature	VUVG	[°C]	-5 +50, with he	olding current reduc	ction – 5 +60			
Temperature of medium	VUVG	[°C]	-5 +50, with he	olding current reduc	ction –5 +60			

1) Pneumatic spring

2) Mixed, pneumatic/mechanical spring

3) Mechanical spring

### Electrical data

Electrical connection		Via E-box → page 98
Operating voltage	[V DC]	5, 12 and 24 ±10%
Power	[W]	1, reduced to 0.35 with holding current reduction
Duty cycle	[%]	100
Degree of protection to EN 60529		IP40 (with plug socket), IP65 (with M8)

#### Safety data

Salety auta		
Max. positive test pulse with 0 signal	[µs]	700
Max. negative test pulse with 1 signal	[µs]	900
Shock resistance		Shock test with severity level 2 to FN 942017-5 and EN 60068-2-27
Vibration resistance		Transport application test with severity level 2 to FN 942017-4 and EN 60068-2-6

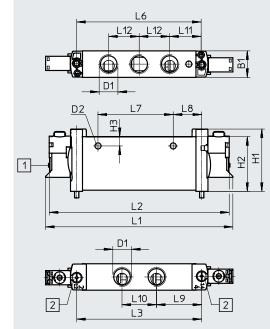
### Information on materials

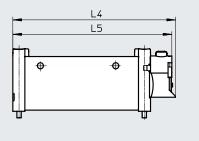
Housing	Wrought aluminium alloy
Seals	HNBR, NBR
Note on materials	RoHS-compliant

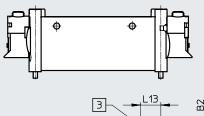
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### Dimensions VUVG-...

2x 3/2-way, 5/2-way and 5/3-way valve

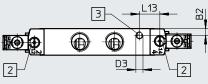






Download CAD data → <u>www.festo.com</u>

- ▶ Page 100
 - Note
 Note



[3] Port for external pilot air supply

[1] Electrical connection without [2] Retaining screw E-box

E-box Туре B1 B2 D1 D2 D3 H1 H2 H3 L1 L2 L3 L4 L5 VUVG-L18-.. ø 4.2 18.3 4.5 G1/4 Μ5 43.1 37.8 6.4 129.4 124.4 86.4 112.2 109.7 VUVG-S18-. L6 L7 L8 L9 L10 L11 L12 L13 Туре VUVG-L18-... 86 52 19.7 31.3 23.8 21.7 21.1 14

VUVG-S18-...

# ★ Core product range

Ordering data									
	Description		Part no.	Туре					
In-line valve G1/4, with	-line valve G1/4, with E-box R8								
R A	2x 3/2-way valve								
	Internal pilot air supply	Normally closed, pneumatic spring reset	★ 8031525	VUVG-L18-T32C-AT-G14-1R8L					
	5/2-way single solenoid valve								
	Internal pilot air supply	Pneumatic/mechanical spring reset	★ 8031531	VUVG-L18-M52-RT-G14-1R8L					
		Mechanical spring reset	★ 8031532	VUVG-L18-M52-MT-G14-1R8L					
	Mechanical spring reset 🗶 8031532 VUVG-L18-M52-MI-G14-1K8L								
↓ Ý	Internal pilot air supply	Mid-position closed, mechanical spring reset	★ 8031534	VUVG-L18-P53C-T-G14-1R8L					

-	Description		Part no.	Туре
line valve G1/4, wi	thout E-box			
	2x 3/2-way valve			
	Internal pilot air supply	Normally closed, pneumatic spring reset	574422	VUVG-L18-T32C-AT-G14-1P3
° Vera		Normally open, pneumatic spring reset	574423	VUVG-L18-T32U-AT-G14-1P3
		1x normally open, 1x normally closed, pneumatic spring reset	574424	VUVG-L18-T32H-AT-G14-1P3
		Normally closed, mechanical spring reset	574425	VUVG-L18-T32C-MT-G14-1P3
		Normally open, mechanical spring reset	574426	VUVG-L18-T32U-MT-G14-1P3
		1x normally open, 1x normally closed, mechanical spring reset	574427	VUVG-L18-T32H-MT-G14-1P3
	External pilot air supply	Normally closed, mechanical spring reset	574434	VUVG-L18-T32C-MZT-G14-1P3
		Normally open, mechanical spring reset	574435	VUVG-L18-T32U-MZT-G14-1P3
		1x normally open, 1x normally closed, mechanical spring reset	574436	VUVG-L18-T32H-MZT-G14-1P3
	5/2-way single solenoid valve			·
	Internal pilot air supply	Pneumatic/mechanical spring reset	574428	VUVG-L18-M52-RT-G14-1P3
		Mechanical spring reset	574429	VUVG-L18-M52-MT-G14-1P3
	External pilot air supply	Mechanical spring reset	574438	VUVG-L18-M52-MZT-G14-1P3
		Pneumatic/mechanical spring reset	574437	VUVG-L18-M52-RZT-G14-1P3
	5/2-way double solenoid valve	· · · · · · · · · · · · · · · · · · ·		· ·
	Internal pilot air supply		574430	VUVG-L18-B52-T-G14-1P3
	External pilot air supply		574439	VUVG-L18-B52-ZT-G14-1P3

Festo core product range

Ordering data								
	Description		Part no.	Туре				
n-line valve G1/4, wit	hout E-box							
	5/3-way valve							
	Internal pilot air supply	Mid-position closed, mechanical spring reset	574431	VUVG-L18-P53C-T-G14-1P3				
		Mid-position exhausted, mechanical spring reset	574432	VUVG-L18-P53E-T-G14-1P3				
		Mid-position pressurised, mechanical spring reset	574433	VUVG-L18-P53U-T-G14-1P3				
	External pilot air supply	Mid-position closed, mechanical spring reset	574440	VUVG-L18-P53C-ZT-G14-1P3				
		Mid-position exhausted, mechanical spring reset	574441	VUVG-L18-P53E-ZT-G14-1P3				
	,	Mid-position pressurised, mechanical spring reset	574442	VUVG-L18-P53U-ZT-G14-1P3				
1-line valve G1/4, wit	h E-box R8							
8	2x 3/2-way valve							
le la	Internal pilot air supply	Normally open, pneumatic spring reset	8031526	VUVG-L18-T32U-AT-G14-1R8L				
		1x normally open, 1x normally closed, pneumatic spring	8031527	VUVG-L18-T32H-AT-G14-1R8L				
		reset						
		Normally closed, mechanical spring reset	8031528	VUVG-L18-T32C-MT-G14-1R8L				
	<b>'</b>	Normally open, mechanical spring reset	8031529	VUVG-L18-T32U-MT-G14-1R8L				
		1x normally open, 1x normally closed, mechanical	8031530	VUVG-L18-T32H-MT-G14-1R8L				
		spring reset						
	5/2-way double solenoid valve							
	Internal pilot air supply		8031533	VUVG-L18-B52-T-G14-1R8L				
	5/3-way valve							
	Internal pilot air supply	Mid-position exhausted, mechanical spring reset	8031535	VUVG-L18-P53E-T-G14-1R8L				
		Mid-position pressurised, mechanical spring reset	8031536	VUVG-L18-P53U-T-G14-1R8L				
1-line valve G1/4, wit	h E-box H2							
S	5/2-way single solenoid valve							
	Internal pilot air supply	Pneumatic/mechanical spring reset	578823	VUVG-L18-M52-RT-G14-1H2L-W1				
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~								
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Manifold assembly

In-line valves for manifold assembly

Dimensions

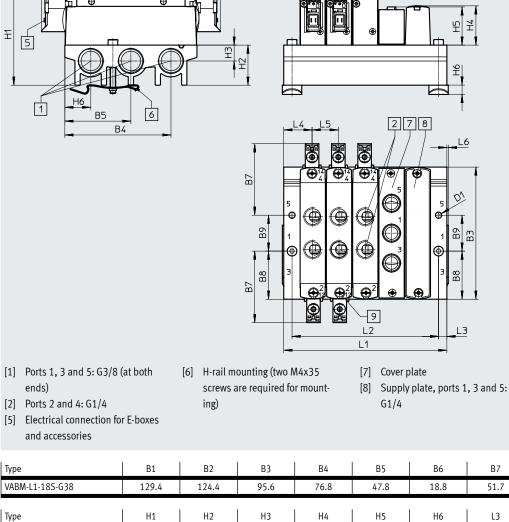
B1

B2



Download CAD data → <u>www.festo.com</u>

- 📲 - Note Additional dimensions E-boxes → Page 100



[9] Valves/cover plate mounting on manifold rail: M3 thread

B9

D1

B8

VABM-L1-18S-G38		129.4	124.4	9	5.6	76.8	47.8	18.8	51.7	34	4.8	26	4.5
Туре	ype H1 H2		+	13	H4	H5	H6	L3	1	_4	L5	L6	
VABM-L1-18S-G38	M-L1-18S-G38 72.1 29 11.5		1.5	28.4	27.6	6.5	6	6 20.5 19		19	1		
Valve positions		2	3	4	5	6	7	8	9	10	12	14	16
L1		61	80	99	118	137	156	175	194	213	251	289	327
L2		49	68	87	106	125	144	163	182	201	239	277	315
VABM weight	[g]	118	159	200	241	282	323	364	405	446	528	610	692

Solenoid valves VUVG-S18, in-line valves G1/4

Ordering data

Technical data – Manifold rails									
	Connection		Material ²⁾	Operating pressure	Max. tightening torque for assembly [Nm]				
	1, 3, 5			[bar]	Valve	H-rail	Wall		
	G3/8	21)	Wrought aluminium alloy	-0.9 10	1.18	1.5	3		

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decrative surface requirements which are in direct contact with a normal industrial environment. 2) Note on materials: RoHS-compliant.

Ordering	data -	Manifold rai	íl –

Ordering data – Manifold rail				
	Description		Part no.	Туре
Manifold rail for in-line valve				
	For size G1/4	2 valve positions	★ 574455	VABM-L1-18S-G38-2
		3 valve positions	★ 574456	VABM-L1-18S-G38-3
		4 valve positions	★ 574457	VABM-L1-18S-G38-4
		5 valve positions	574458	VABM-L1-18S-G38-5
		6 valve positions	★ 574459	VABM-L1-18S-G38-6
		7 valve positions	574460	VABM-L1-18S-G38-7
and the second s		8 valve positions	★ 574461	VABM-L1-18S-G38-8
		9 valve positions	574462	VABM-L1-18S-G38-9
		10 valve positions	★ 574463	VABM-L1-18S-G38-10
		12 valve positions	574464	VABM-L1-18S-G38-12
		14 valve positions	574465	VABM-L1-18S-G38-14
		16 valve positions	574466	VABM-L1-18S-G38-16

Ordering data – Accessories				
	Description		Part no.	Туре
Cover plate				Data sheets → Internet: vabb
	For valve position on manifold rail, includ	ing screws and seal	★ 574482	VABB-L1-18
Separator				Data sheets → Internet: vabd
	For creating pressure zones	574483	VABD-14-B	
Supply plate				Data sheets → Internet: vabf
	For valve position on manifold rail, includ	574481	VABF-L1-18-P3A4-G14	
Seals for in-line valves				Data sheets → Internet: vabd
	For G1/4 in-line valves	Delivery quantity: 10 sets (each with 2 screws and 1 seal)	★ 574479	VABD-L1-18X-S-G14

- 🌡 - Note

Connect supply plate at port 1 with compressed air. Reverse operation (pressure at port 3, 5) is not permissible.

★ ☆

Data sheet

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

Circuit symbols \rightarrow page 13

- **[]** - Size 10 mm

Voltage

- ५ -

- 🚺 - Flow rate 90 ... 100 l/min

5, 12 and 24 V DC



General technical data VUVG-	3												
Valve function			M52-R	B52	M52-M	P53							
Normal position			-	-	-	C ¹⁾	U ²⁾	E ³⁾					
Stable position			Monostable	Bistable	Monostable	Monostable	Monostable						
Pneumatic spring reset			Yes ⁴⁾	-	No	-	-						
Mechanical spring reset			Yes ⁴⁾	-	Yes	Yes							
Vacuum operation at port 1			Only with exter	y with external pilot air supply									
Design			Piston spool										
Sealing principle			Soft										
Type of actuation			Electrical										
Type of control			Piloted										
Pilot air supply			External, interr	External, internal; can be selected via sub-base									
Exhaust function			Can be throttled										
Manual override			Choice of non-o	detenting, covered,	non-detenting/deten	ting or detenting	8						
Type of mounting			On manifold ra	il									
Mounting position	Any												
Nominal width		[mm]	2 1.4 2										
Standard nominal flow rate		[l/min]	100		80	90							
Flow rate on manifold rail M3		[l/min]	100		80	90							
Switching time on/off		[ms]	7/15	-	7/21	8/25							
Switching time changeover		[ms]	-	5	-	14							
Size		[mm]	10										
Connection	1, 3, 5		M7 in manifold	1 rail									
	2,4		M5 in manifold	M5 in manifold rail									
	12/14, 82/84		M5 in manifold	l rail									
Product weight		[g]	38	49	37	49							
Certification			c UL us - Recog	nized (OL)									
			c CSA us (OL)										
			RCM compliant	RCM compliance mark									
CE marking (see declaration of	conformity)5)		To EU EMC Dire	ctive									
Corrosion resistance class CRC ⁶	i)		2										

1) C=Normally closed/mid-position closed

2) U=Normally open/mid-position pressurised

3) E=Mid-position exhausted

4) Combined reset method

5) For information about the area of use, see the EC declaration of conformity at: www.festo.com/sp \rightarrow Certificates.

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

6) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Operating and environmental conditions

operating and environmental con	peruting and environmental conditions											
Valve function			M52-R ¹⁾	B52	M52-M ²⁾	P53						
Operating medium			Compressed air to ISO 8573-2010 [7:4:4]									
Operating pressure Internal [bar]			2.5 8	1.5 8	38							
	External	[bar]	-0.9 10		-0.98	-0.9 10						
Pilot pressure	Pilot pressure [bar]		2.5 8	1.5 8	2 8	38						
Ambient temperature		[°C]	-5 +50, with holding current reduction -5 +60									
Temperature of medium		[°C]	−5 +50, with holding current reduction −5 +60									

1) Mixed, pneumatic/mechanical spring

2) Mechanical spring

Electrical data

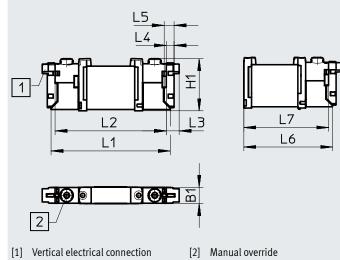
Electrical connection		Via E-box → page 98
Operating voltage	[V DC]	5, 12 and 24 ±10%
Power	[W]	1, reduced to 0.35 with holding current reduction
Duty cycle	[%]	100
Degree of protection to EN 60529		IP40 (with plug socket), IP65 (with M8)

Information on materials

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

Dimensions

5/2-way and 5/3-way valve



Download CAD data → <u>www.festo.com</u>



Туре	B1	H1	L1	L2	L3	L4	L5	L6	L7
VUVG-B10AF	10.2	32.5	73.9	68.9	8	4.85	6.15	56.9	54.4

Ordering data

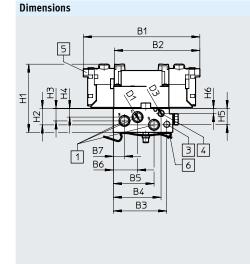
Description		Part no.	Туре								
3, without E-box											
5/2-way single solenoid valve	5/2-way single solenoid valve										
External pilot air supply	Pneumatic/mechanical spring reset	566448	VUVG-B10A-M52-RZT-F-1P3								
	Mechanical spring reset	574347	VUVG-B10A-M52-MZT-F-1P3								
5/2-way double solenoid valve	5/2-way double solenoid valve										
External pilot air supply		566449	VUVG-B10A-B52-ZT-F-1P3								
5/3-way valve	5/3-way valve										
External pilot air supply	Mid-position closed, mechanical spring reset	566450	VUVG-B10A-P53C-ZT-F-1P3								
	Mid-position exhausted, mechanical spring reset	566451	VUVG-B10A-P53E-ZT-F-1P3								
	Mid-position pressurised, mechanical spring reset	566452	VUVG-B10A-P53U-ZT-F-1P3								
	 without E-box 5/2-way single solenoid valve External pilot air supply 5/2-way double solenoid valve External pilot air supply 5/3-way valve 	without E-box 5/2-way single solenoid valve External pilot air supply Pneumatic/mechanical spring reset Mechanical spring reset 5/2-way double solenoid valve External pilot air supply 5/3-way valve External pilot air supply Mid-position closed, mechanical spring reset Mid-position exhausted, mechanical spring reset	without E-box 5/2-way single solenoid valve External pilot air supply Pneumatic/mechanical spring reset 5/2-way double solenoid valve External pilot air supply 5/2-way double solenoid valve External pilot air supply 5/3-way valve External pilot air supply Mid-position closed, mechanical spring reset 566450 Mid-position exhausted, mechanical spring reset 566451								

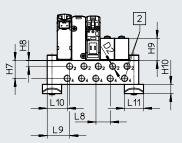
Manifold assembly

Sub-base valve for manifold assembly **Connection M5**

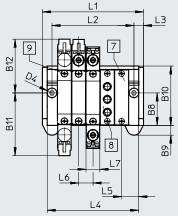


Download CAD data → <u>www.festo.com</u>





- 着 - Note Additional dimensions E-boxes → Page 100



and accessories

- [1] Ports 1, 3 and 5: M7 (at both ends)
- [2] Ports 2, 4: M5
- [3] Ports 12, 14: M5
- [4] Ports 82, 84: M5
- [5] Electrical connection for E-boxes [6] H-rail mounting (two M4x25
 - screws are required for mounting)
- [7] Cover plate
- Supply plate, ports 1, 3 and 5: [8] Μ5
- [9] Valves/cover plate mounting on manifold rail: M2 thread

Туре	B1	B2	B3	B4	E	85	B6	B7		B8	B9	B10	B11	B12
VABM-L1-10AW-M7	84.9	62.4	39.1	35	2	9.8	17.8	8.2		24	7.2	43.5	45.8	39.2
Туре	D1	D2	D3		D4	D5	н	1	H2		H3	H4	H5	H6
VABM-L1-10AW-M7	M7	M5	M5	Ģ	ð 4.5	Ø 4	53	.1	12		9.1	6.3	11.6	3.6
Туре	H7	H8	H9	H10	H15	L3	L	5	L6	L7	L8	L9	L10	L11
VABM-L1-10AW-M7	13.1	4.2	16.2	6.8	1.9	7.5	12	.5	10.5	10.2	10.5	17	15.2	14

Ordering data

Valve positions		2	3	4	5	6	7	8	9	10	12	14	16
L1		43.5	54	64.5	75	85.5	97	107.5	117	127.5	148.5	169.5	190.5
L2		28.5	39	49.5	60	70.5	81	91.5	102	112.5	133.5	154.5	175.5
L4		36.5	47	57.5	68	78.5	89	99.5	110	120.5	141.5	162.5	183.5
VABM weight	[g]	60	78	96	114	132	150	168	186	204	240	276	312

| Technical data – Manifold rails¹⁾

	Connection			CRC Material ³⁾	Material ³⁾	Operating pres-	Max. tightening torque for assembly [Nm]		
	2,4	1, 3, 5	12/14 , 82/84			sure [bar]	Valve	H-rail	Wall
$\langle \mathfrak{O} \rangle$	M5	M7	M5	2 ²⁾	Wrought alumini- um alloy	-0.9 10	0.45	1.5	1.5

1) Blanking plugs are included with the manifold rail.

2) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

3) Note on materials: RoHS-compliant.

Ordering data – Manifold rails

Ordering data – Manifold rails				
	Description		Part no.	Туре
Manifold rail for sub-base valve M3				
	For size B10A (M3)	2 valve positions	566546	VABM-L1-10AW-M7-2
		3 valve positions	566547	VABM-L1-10AW-M7-3
		4 valve positions	566548	VABM-L1-10AW-M7-4
		5 valve positions	566549	VABM-L1-10AW-M7-5
		6 valve positions	566550	VABM-L1-10AW-M7-6
QO		7 valve positions	566551	VABM-L1-10AW-M7-7
		8 valve positions	566552	VABM-L1-10AW-M7-8
		9 valve positions	566553	VABM-L1-10AW-M7-9
		10 valve positions	566554	VABM-L1-10AW-M7-10
		12 valve positions	566555	VABM-L1-10AW-M7-12
		14 valve positions	566556	VABM-L1-10AW-M7-14
		16 valve positions	566557	VABM-L1-10AW-M7-16

I

Ordering data – Accessories				
	Description		Part no.	Туре
Cover plate				Data sheets → Internet: vabl
	For valve position on manifold ra	il, including screws and seal	569986	VABB-L1-10A
Separator				 Data sheets → Internet: vabo
D	For creating pressure zones		570872	VABD-4.2-B
Supply plate				Data sheets → Internet: vab
	For valve position on manifold ra	il, including screws and seal	569990	VABF-L1-10A-P3A4-M5
Seals				 Data sheets → Internet: vabo
C C C C C C C C C C C C C C C C C C C	For sub-base valve M3	Delivery quantity: 10 sets (each with 2 screws and 1 seal)	566671	VABD-L1-10AB-S-M3

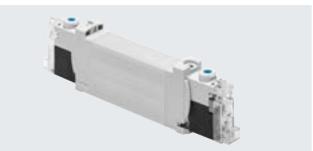
Data sheet

Function 2x 3/2C 5/2-way, single solenoid 5/2-way, double solenoid valve

Circuit symbols → page 13

- N - Flow rate 160 l/min - Ŋ - Voltage 24 V DC

- **Г**] - Size 10 mm



General technical data VUVG-BK

Valve function		T32-A	M52-A	B52	
Normal position		C ¹⁾	-	-	
Stable position		Monostable		Bistable	
Pneumatic spring reset		Yes	Yes	-	
Design		Piston spool	•	·	
Sealing principle		Soft			
Type of actuation		Electrical			
Type of control		Piloted			
Pilot air supply	Internal				
Exhaust function	Can be throttled				
Manual override	Non-detenting, detenting				
Type of mounting	On manifold rail				
Mounting position		Any			
Standard nominal flow rate	[l/min]	160	160	160	
Switching time on/off	[ms]	12/14	14/17	-	
Switching time changeover	[ms]	-		7	
Size	[mm]	10			
Connection 2, 4		M5/M7 in manifold rail			
Product weight	[g]	55	45	57	
Corrosion resistance class CRC ²⁾		2			

1) C=Normally closed

2) Corrosion resistance class CRC 2 to Festo standard FN 940070

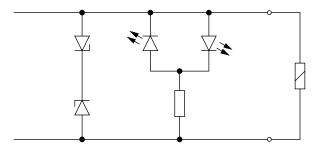
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Safety data

Max. positive test pulse with 0 signal [µs]		1600
Max. negative test pulse with 1 signal	[µs]	3000
Shock resistance		Shock test with severity level 1 to FN 942017-5 and EN 60068-2-27
Vibration resistance		Transport application test with severity level 1 to FN 942017-4 and EN 60068-2-6

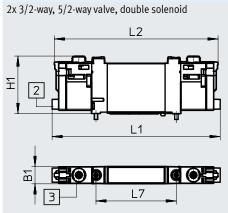
Operating and environmental conditions										
Valve function			T32-A ¹⁾	M52-A ¹⁾	B52					
Operating medium			Compressed air to ISO 85	573-2010 [7:4:4]						
Note on the operating/pilot medium			Lubricated operation pos	ssible (in which case lubricated operat	ion will always be required)					
Operating pressure		[bar]	1.5 7	2.5 7	1.5 7					
Ambient temperature		[°C]	-5 +50							
Temperature of medium		[°C]	-5 +50							
1) Pneumatic spring										
Electrical data										
Electrical connection			Via E-box → page 98							
Operating voltage										
Nominal operating voltage										
Power		[W]	0.7							
Duty cycle		[%]	100							
Degree of protection to EN 60529			IP40 (with plug socket), IP65 (with M8)							
Signal status display			LED							
Maximum switching frequency		[Hz]	2							
Information on materials										
Housing			Wrought aluminium alloy							
Seals			HNBR, NBR							
Note on materials			RoHS-compliant							
			Contains paint-wetting impairment substances							
Pin allocation for E-box										
	Pin			Descriptio	n					
Rectangular plug, connection pattern H										
	1	+ 0r –		Protective	circuit without holding current reduction					
	2	+ 0r –								
Round plug, M8, 3-pin		1		1						
4	1	Not used		Protective	e circuit without holding current reduction					
+	· +									
(+ +)3	3	+ or –								
	4	+ or –								

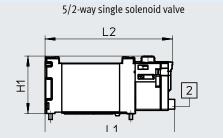
Protective circuit without holding current reduction



The solenoid coils have a protective circuit to arrest sparks and protect against polarity reversal.

Dimensions





Download CAD data → <u>www.festo.com</u>

[2] Horizontal electrical connection [3] Manual override

Туре	B1	H1	L1	L2	L7
VUVG-BK10-T32C	10.2	33.6	98.3	95.8	47
VUVG-BK10-B52					
VUVG-BK10-M52			75.9	74.6	

Ordering data

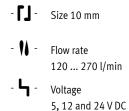
★ Core product range

Ordering data												
	Description		Part no.	Туре								
Sub-base valve M5/M	7, with E-box R8											
S.	2x 3/2-way valve											
	Internal pilot air supply	Normally closed, pneumatic spring reset	★ 8042558	VUVG-BK10-T32C-AT-F-1R8L-S								
	5/2-way single solenoid valve											
	Internal pilot air supply	Pneumatic spring reset	★ 8042559	VUVG-BK10-M52-AT-F-1R8L-S								
	5/2-way double solenoid valve	5/2-way double solenoid valve										
	Internal pilot air supply		★ 8042560	VUVG-BK10-B52-T-F-1R8L-S								
Sub-base valve M5/M	7, with E-box H2											
S.	2x 3/2-way valve											
	Internal pilot air supply	Normally closed, pneumatic spring reset	★ 8042554	VUVG-BK10-T32C-AT-F-1H2L-S								
	5/2-way single solenoid valve		·									
	Internal pilot air supply	Pneumatic spring reset	★ 8042555	VUVG-BK10-M52-AT-F-1H2L-S								
	5/2-way double solenoid valve											
	Internal pilot air supply		★ 8042556	VUVG-BK10-B52-T-F-1H2L-S								

 ⁻ Note
 Additional dimensions
 E-boxes
 → Page 100

Function 2x 3/2C, 2x 3/2U, 2x 3/2H 5/2-way, single solenoid 5/2-way, double solenoid valve 5/3C, 5/3U, 5/3E

Circuit symbols → page 13





General technical data VUVG-B

Valve function			T32-A			T32-M			M52-R	B52	M52-M	P53			
Normal position			C1)	U ²⁾	H ⁴⁾	C ¹⁾	U ²⁾	H ⁴⁾	-	-	-	C1)	U ²⁾	E ³⁾	
Stable position			Monos	stable						Bistable	Monostable	Mono	stable		
Pneumatic spring reset			Yes			No			Yes ⁵⁾	-	No	-			
Mechanical spring reset			No			Yes			Yes ⁵⁾	-	Yes	Yes			
Vacuum operation at port 1			No			Only w	ith exter	nal pilot	air supply			•			
Design			Piston	spool		÷									
Sealing principle			Soft												
Type of actuation			Electrical												
Type of control			Piloted												
Pilot air supply			External, internal; can be selected via sub-base												
Exhaust function			Can be throttled												
Manual override					Choice of non-detenting, covered, non-detenting/detenting or detenting										
Type of mounting			On manifold rail												
Mounting position				Any											
Nominal width		[mm]	2.7			1.8	1.8 1.7		4		2.3	3.5			
Standard nominal flow rate		[l/min]	170			150	140	140	330		285	300			
Flow rate on manifold rail M5		[l/min]	150			130	120	120	210		180	200			
Flow rate on manifold rail M7		[l/min]	160			140	130	130	270		230	250			
Switching time on/off		[ms]	6/16			8/11			7/19	-	8/24	11/30)		
Switching time changeover		[ms]	-							7		14			
Size		[mm]	10												
Connection	1, 3, 5		G1/8 i	n manifo	old rail										
	2,4		M5 or	M7 in m	anifold r	ail									
	12/14, 82/84		M5 in	manifolo	d rail										
Product weight		[g]	55			54			45	55	44	55			
Certification			c UL us	s - Recog	nized (O	L)									
			c CSA i	us (OL)											
			RCM c	omplian	ce mark										
CE marking (see declaration of c	conformity) ⁶⁾		To EU	EMC Dire	ective										
Corrosion resistance class CRC ⁷⁾			2												

1) C=Normally closed/mid-position closed

2) U=Normally open/mid-position pressurised

3) E=Mid-position exhausted

4) H=2x 3/2-way value in one housing with 1x normally closed and 1x normally open

5) Combined reset method

6) For information about the area of use, see the EC declaration of conformity at: www.festo.com/sp → Certificates.

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

7) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Operating and environmental conditions

Operating and environmen	ital conditions										
Valve function			T32-A ¹⁾	T32-M ³⁾	M52-R ²⁾	B52	M52-M ³⁾	P53			
Operating medium			Compressed a	Compressed air to ISO 8573-2010 [7:4:4]							
Valve function Operating medium Operating pressure Pilot pressure Ambient temperature	Internal	[bar]	1.5 8	3 8	2.58 1.58		38	38			
	External	[bar]	1.5 10	-0.9 10	-0.9 10			-0.9 10			
Pilot pressure		[bar]	1.5 8	2 8	2.5 8	1.5 8	38	· ·			
Ambient temperature		[°C]	-5 +50, wit	h holding current re	duction -5 +60						
Temperature of medium	ture of medium [°C] -5 +50, with holding current reduction -5 +60										

1) Pneumatic spring

2) Mixed, pneumatic/mechanical spring

3) Mechanical spring

Electrical data

Electrical connection		Via E-box → page 98
Operating voltage	[V DC]	5, 12 and 24 ±10%
Power	[W]	1, reduced to 0.35 with holding current reduction
Duty cycle	[%]	100
Degree of protection to EN 60529		IP40 (with plug socket), IP65 (with M8)

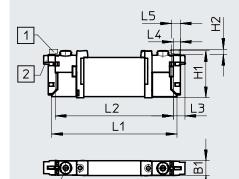
Information on materials

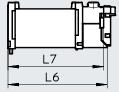
Information on materials	
Housing	Wrought aluminium alloy
Seals	HNBR, NBR
Note on materials	RoHS-compliant

Dimensions

З

2x 3/2-way, 5/2-way and 5/3-way valve





Download CAD data → <u>www.festo.com</u>

T

-	A	-	Note
A	ddi	tior	nal dimensions
E	-bo	xes	
_	P	age	100

[1] Vertical electrical conn	ection	[2] Horizon	tal electrical c	onnection	[3] Manual override						
Туре	B1	H1	H2	L1	L2	L3	L4	L5	L6	L7	
VUVG-B10F	10.2	32.5	3.6	86.5	81.5	8	4.85	6.15	69.2	66.7	

Ordering data

Description		Part no.	Туре				
M7, without E-box							
2x 3/2-way valve							
External pilot air supply	Normally closed, pneumatic spring reset	566487	VUVG-B10-T32C-AZT-F-1P3				
	Normally open, pneumatic spring reset	566488	VUVG-B10-T32U-AZT-F-1P3				
	1x normally open, 1x normally closed, pneumatic spring	566489	VUVG-B10-T32H-AZT-F-1P3				
	reset						
	Normally closed, mechanical spring reset	574364	VUVG-B10-T32C-MZT-F-1P3				
	Normally open, mechanical spring reset	574365	VUVG-B10-T32U-MZT-F-1P				
	1x normally open, 1x normally closed, mechanical spring	574366	VUVG-B10-T32H-MZT-F-1P				
	reset						
5/2-way single solenoid valv	e						
External pilot air supply	Pneumatic/mechanical spring reset	566490	VUVG-B10-M52-RZT-F-1P3				
	Mechanical spring reset	574367	VUVG-B10-M52-MZT-F-1P				
5/2-way double solenoid val	ve						
External pilot air supply		566491	VUVG-B10-B52-ZT-F-1P3				
5/3-way valve		*					
External pilot air supply	Mid-position closed, mechanical spring reset	566492	VUVG-B10-P53C-ZT-F-1P3				
	Mid-position exhausted, mechanical spring reset	566493	VUVG-B10-P53E-ZT-F-1P3				
	Mid-position pressurised, mechanical spring reset	566494	VUVG-B10-P53U-ZT-F-1P3				

Ordering data

rdering data													
	Description		Part no.	Туре									
ıb-base valve M5/N	17, with E-box R8												
2	2x 3/2-way valve	2x 3/2-way valve											
	External pilot air supply	Normally closed, pneumatic spring reset	574234	VUVG-B10-T32C-AZT-F-1R8L									
- Ba		Normally open, pneumatic spring reset	574235	VUVG-B10-T32U-AZT-F-1R8L									
		1x normally open, 1x normally closed, pneumatic spring	574236	VUVG-B10-T32H-AZT-F-1R8L									
		reset											
	Ø	Normally closed, mechanical spring reset	8031492	VUVG-B10-T32C-MZT-F-1R8L									
		Normally open, mechanical spring reset	8031493	VUVG-B10-T32U-MZT-F-1R8L									
		1x normally open, 1x normally closed, mechanical spring	8031494	VUVG-B10-T32H-MZT-F-1R8L									
		reset											
	5/2-way single solenoid valve	5/2-way single solenoid valve											
	External pilot air supply	Pneumatic/mechanical spring reset	574237	VUVG-B10-M52-RZT-F-1R8L									
		Mechanical spring reset	578157	VUVG-B10-M52-MZT-F-1R8L									
	5/2-way double solenoid valve	2	•										
	External pilot air supply		574238	VUVG-B10-B52-ZT-F-1R8L									
	5/3-way valve		•	·									
	External pilot air supply	Mid-position closed, mechanical spring reset	574239	VUVG-B10-P53C-ZT-F-1R8L									
		Mid-position exhausted, mechanical spring reset	574241	VUVG-B10-P53E-ZT-F-1R8L									
		Mid-position pressurised, mechanical spring reset	574240	VUVG-B10-P53U-ZT-F-1R8L									

Manifold assembly

Sub-base valve for manifold assembly M5 or M7 connection



Download CAD data → <u>www.festo.com</u>

B11

16

H3

12.2

L8

1

L7

11.9

B12

42.2

H4

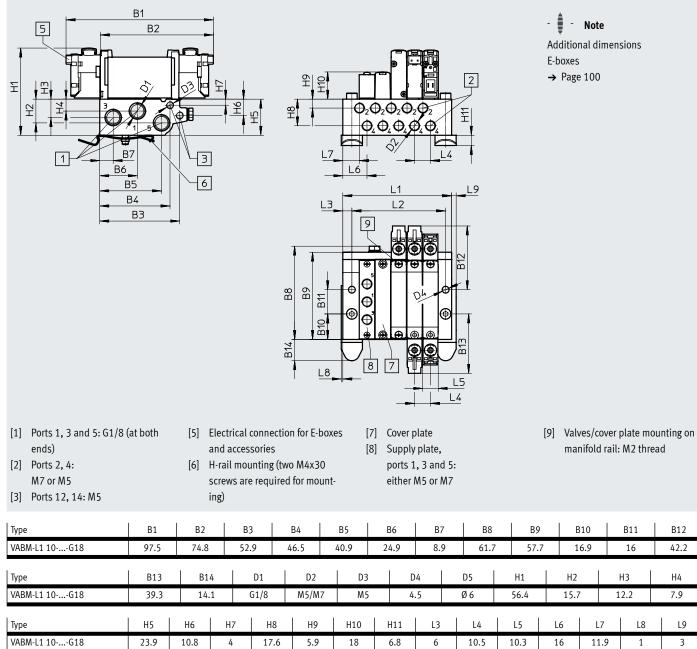
7.9

L9

3

- Note Additional dimensions E-boxes → Page 100





Solenoid valves VUVG-B10, sub-base valves M5/M7

Solenoid valves VUVG-B10, sub-base valves M5/M7

Manifold assembly

Valve positions		2	3	4	5	6	7	8	9	10	12	14	16	22
L1		40.5	51	61.5	72	82.5	93	103.5	114	124.5	145.5	166.5	187.5	250.5
L2		30.5	41	51.5	62	72.5	83	93.5	104	114.5	135.5	156.5	177.5	240.5
VABM weight	[g]	107	135	163	191	219	247	275	303	331	387	415	471	499

Technical data – Manifold rails ¹⁾										
	Connection					Operating pres- sure	Max. tightening torque for assembly [Nm]			
	2,4	1, 3, 5	12/14, 82/84			[bar]	Valve	H-rail	Wall	
	M5 or M7	G1/8	M5	2 ²⁾	Wrought alumini- um alloy	-0.9 10	0.45	1.5	3	

1) Blanking plugs are included with the manifold rail.

2) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

3) Note on materials: RoHS-compliant.

Ordering data – Manifold rails				
	Description		Part no.	Туре
Manifold rail for sub-base valve M5	/M7			
	For size B10 (M5)	2 valve positions	★ 566582	VABM-L1-10W-G18-2
		3 valve positions	★ 566583	VABM-L1-10W-G18-3
		4 valve positions	★ 566584	VABM-L1-10W-G18-4
		5 valve positions	566585	VABM-L1-10W-G18-5
		6 valve positions	★ 566586	VABM-L1-10W-G18-6
		7 valve positions	566587	VABM-L1-10W-G18-7
		8 valve positions	★ 566588	VABM-L1-10W-G18-8
		9 valve positions	566589	VABM-L1-10W-G18-9
		10 valve positions	★ 566590	VABM-L1-10W-G18-10
		12 valve positions	566591	VABM-L1-10W-G18-12
		14 valve positions	566592	VABM-L1-10W-G18-14
		16 valve positions	566593	VABM-L1-10W-G18-16

Festo core product range

Manifold assembly

Ordering data – Accessories				
	Description		Part no.	Туре
Manifold rail for sub-base valve I	M5/M7			
<u>,</u>	For size B10 (M7)	2 valve positions	★ 566606	VABM-L1-10HW-G18-2
		3 valve positions	* 566607	VABM-L1-10HW-G18-3
	\geq	4 valve positions	* 566608	VABM-L1-10HW-G18-4
		5 valve positions	566609	VABM-L1-10HW-G18-5
		6 valve positions	★ 566610	VABM-L1-10HW-G18-6
		7 valve positions	566611	VABM-L1-10HW-G18-7
		8 valve positions	* 566612	VABM-L1-10HW-G18-8
\checkmark		9 valve positions	566613	VABM-L1-10HW-G18-9
		10 valve positions	★ 566614	VABM-L1-10HW-G18-10
		12 valve positions	566615	VABM-L1-10HW-G18-12
		14 valve positions	566616	VABM-L1-10HW-G18-14
		16 valve positions	566617	VABM-L1-10HW-G18-16
C				
Cover plate	For valve position on manifold rail,		* 566495	Data sheets → Internet: vabl VABB-L1-10-W
Separator			5(000)	Data sheets → Internet: vabo
	For creating pressure zones		569994	VABD-6-B
Supply plate				Data sheets → Internet: vab
	For valve position (sub-base valves	M5) on manifold rail, including screws and seal	569991	VABF-L1-10-P3A4-M5
	For valve position (sub-base valves	M7) on manifold rail, including screws and seal	569992	VABF-L1-10-P3A4-M7
Seals				Data sheets → Internet: vabo
C est	For sub-base valves M5/M7	Delivery quantity: 10 sets (each with 2 screws and 1 seal)	566674	VABD-L1-10B-S-M7

Festo core product range

★ ☆

Solenoid valves VUVG-BK14, sub-base valves G1/8

Data sheet

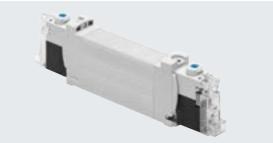
Function 2x 3/2C 5/2-way, single solenoid 5/2-way, double solenoid valve

Circuit symbols → page 13

- N - Flow rate 350 ... 380 l/min - ┗ - Voltage

- **ГЈ** - Size 14 mm





General technical data VUVG-BK

Valve function		T32-A	M52-A	B52				
Normal position		C ¹⁾	-	-				
Stable position		Monostable	I	Bistable				
Pneumatic spring reset		Yes	Yes	-				
Design		Piston spool						
Sealing principle		Soft						
Type of actuation		Electrical						
Type of control		Piloted						
Pilot air supply		Internal						
Exhaust function		Can be throttled						
Manual override		Non-detenting, detenting						
Type of mounting		On manifold rail						
Mounting position		Any						
Standard nominal flow rate	[l/min]	350	380	380				
Switching time on/off	[ms]	13/20	14/24	-				
Switching time changeover	[ms]	-	·	8				
Size	[mm]	14		·				
Connection 2, 4		G1/8 in manifold rail						
Product weight	[g]	75	65	85				
Corrosion resistance class CRC ²⁾		2						

1) C=Normally closed

2) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Safety data

Max. positive test pulse with 0 signal	[µs]	1600
Max. negative test pulse with 1 signal	[µs]	3000
Shock resistance		Shock test with severity level 1 to FN 942017-5 and EN 60068-2-27
Vibration resistance		Transport application test with severity level 1 to FN 942017-4 and EN 60068-2-6

Operating and environmental conditions

operating and environmental contaitions								
Valve function		T32-A ¹⁾	M52-A ¹⁾	B52				
Operating medium		Compressed air to ISO 8573-	2010 [7:4:4]					
Note on the operating/pilot medium		Lubricated operation possibl	Lubricated operation possible (in which case lubricated operation will always be required)					
Operating pressure	[bar]	1.5 7	2.5 7	1.5 7				
Ambient temperature	[°C]	-5 +50						
Temperature of medium	[°C]	-5 +50						
1) Pneumatic spring								

Pneumatic spring

Electrical data

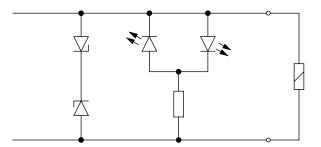
Electrical connection		Via E-box → page 98
Operating voltage	[V DC]	24 ±10%
Nominal operating voltage	[V DC]	22
Power	[W]	0.7
Duty cycle	[%]	100
Degree of protection to EN 60529		IP40 (with plug socket), IP65 (with M8)
Signal status display		LED
Maximum switching frequency	[Hz]	2

Information on materials

Housing	Wrought aluminium alloy
Seals	HNBR, NBR
Note on materials	RoHS-compliant
	Contains paint-wetting impairment substances

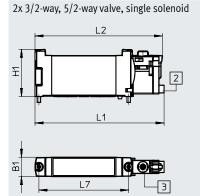
Pin allocation for E-box			
	Pin		Description
Rectangular plug, connection pattern H			
2 1 1 1	1	+ 0r -	Protective circuit without holding current reduction
	2	+ 0r -	
Round plug, M8, 3-pin			
	1	Not used	Protective circuit without holding current reduction
	1	Not used	
(+ +)3	1	+ or –	
	4	+ or –	

Protective circuit without holding current reduction



The solenoid coils have a protective circuit to arrest sparks and protect against polarity reversal.

Dimensions



5/2-way double solenoid valve

[3] Manual override

L2

L1

C O D

Download CAD data → <u>www.festo.com</u>



[2] Horizontal electrical connection

Туре	B1	H1	L1	L2	L7
VUVG-BK14-T32C	14.4	34.8	118.9	116.4	66.5
VUVG-BK14-B52					
VUVG-BK14-M52			95.6	94.4	

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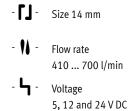
Ordering data

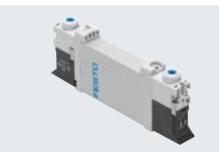
★ Core product range

Ordering data									
	Description		Part no.	Туре					
Sub-base valve G1/8, v	vith E-box R8								
	2x 3/2-way valve								
	Internal pilot air supply Normally closed, pneumatic spring reset		★ 8042574	VUVG-BK14-T32C-AT-F-1R8L-S					
	5/2-way single solenoid valve								
	Internal pilot air supply	Pneumatic spring reset	★ 8042575	VUVG-BK14-M52-AT-F-1R8L-S					
	5/2-way double solenoid valve	2-way double solenoid valve							
	Internal pilot air supply		★ 8042576	VUVG-BK14-B52-T-F-1R8L-S					
Sub-base valve G1/8, v	vith E-box H2								
S.	2x 3/2-way valve								
ζ ×	Internal pilot air supply	Normally closed, pneumatic spring reset	★ 8042570	VUVG-BK14-T32C-AT-F-1H2L-S					
	5/2-way single solenoid valve								
	Internal pilot air supply	Pneumatic spring reset	★ 8042571	VUVG-BK14-M52-AT-F-1H2L-S					
	5/2-way double solenoid valv	e	·						
	Internal pilot air supply		★ 8042572	VUVG-BK14-B52-T-F-1H2L-S					

Function 2x 3/2C, 2x 3/2U, 2x 3/2H 5/2-way, single solenoid 5/2-way, double solenoid valve 5/3C, 5/3U, 5/3E

Circuit symbols → page 13





General technical data VUVG-B

General technical data VUVG-B															
Valve function			T32-A			T32-M			M52-A	B52	M52-M	P53			
Normal position			C1)	U ²⁾	H ⁴⁾	C1)	U ²⁾	H ⁴⁾	-	-	-	C1)	U ²⁾	E ³⁾	
Stable position			Monos	stable					·	Bistable	Monostable	Monos	onostable		
Pneumatic spring reset			Yes			No			Yes	-	No	-			
Mechanical spring reset			No			Yes			No	-	Yes	Yes			
Vacuum operation at port 1			No			Only w	ith exte	rnal pilo	t air supply		•				
Size		[mm]	14												
Design			Piston	spool											
Sealing principle			Soft												
Type of actuation			Electri	cal											
Type of control			Piloteo	d											
Pilot air supply			Extern	al, interna	al; can ł	pe select	ed via s	ub-base							
Exhaust function			Can be throttled												
Manual override			Choice of non-detenting, covered, non-detenting/detenting or detenting												
Type of mounting			On manifold rail												
Mounting position			Any												
Nominal width		[mm]	4.6			4.3			5.6						
Standard nominal flow rate		[l/min]	600	580		470	450		630	680		600	580	580	
Flow rate on manifold rail G1/8		[l/min]	510			430	410		520	570		520	500	460	
Switching time	On/off	[ms]	8/23			15/11			14/22	-	13/40	12/40			
	Changeover	[ms]	-							8		20			
Pneumatic connection	1, 3, 5		1 .	n manifol											
	2,4			n manifol											
	12/14,82/84		-	manifold	rail										
Product weight		[g]	89 80 78 89 70 89												
Certification				s - Recogn	ized (O	L)									
			c CSA us (OL)												
			RCM compliance mark												
CE marking (see declaration of co	onformity) ⁵⁾		To EU EMC Directive												
				Low Voltag	ge Direc	tive									
Corrosion resistance class CRC ⁶⁾			2												

1) C=Normally closed/mid-position closed

2) U=Normally open/mid-position pressurised

3) E=Mid-position exhausted

4) H=2x 3/2-way valve in one housing with 1x normally closed and 1x normally open

5) For information about the area of use, see the EC declaration of conformity at: www.festo.com/sp \rightarrow Certificates.

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

6) Corrosion resistance class CRC 2 to Festo standard FN 940070 Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Operating and environmental conditions

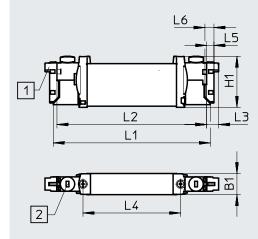
Operating and environmer	ntal conditions									
Valve function			T32-A ¹⁾	T32-M ²⁾	M52-A ¹⁾	B52	M52-M ²⁾	P53		
Operating medium			Compressed ai	ir to ISO 8573-2010	[7:4:4]					
Note on the operating/pilot	Lubricated ope	eration possible (in	which case lubricate	ed operation will alv	/ays be required)					
Operating pressure	Internal	[bar]	1.5 8	3 8	2.5 8	1.5 8	38			
	External	[bar]	1.5 10	-0.9 10	·	÷	-0.9 8	-0.9 10		
Pilot pressure		[bar]	1.5 8	3 8	2.5 8	1.5 8	38			
Ambient temperature		[°C]	-5 +50, with	h holding current re	duction -5 +60					
Temperature of medium		[°C]	-5 +50, with	h holding current re	duction -5 +60					
) Pneumatic spring										
Mechanical spring										
Electrical data										
Electrical connection			Via E-box → pa	Via E-box → page 98						
Operating voltage		[V DC]	5, 12 and 24 ±	5, 12 and 24 ±10%						
Power		[W]	1, reduced to C).35 with holding cu	rrent reduction					

Duty cycle [%] 100 Degree of protection to EN 60529 IP40 (with plug socket), IP65 (with M8)

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

Dimensions VUVG

2x 3/2-way, 5/2-way and 5/3-way valve



[1] Horizontal electrical connection [2] Manual override

L8 L7

5/2-way single solenoid valve

Download CAD data → <u>www.festo.com</u>

- 🗍 - Note

Additional dimensions E-boxes → Page 100

		[2]	oronnao							
Туре	B1	H1	L1	L2	L3	L4	L5	L6	L7	L8
VUVG-B14F	14	34.8	107	102	8	66.5	4.9	6.2	89.5	87

Ordering data

dering data				1 -
	Description		Part no.	Туре
ub-base valve G1/8	, without E-box			
-	2x 3/2-way valve			
- Course	External pilot air supply	Normally closed, pneumatic spring reset	566513	VUVG-B14-T32C-AZT-F-1P3
		Normally open, pneumatic spring reset	566514	VUVG-B14-T32U-AZT-F-1P3
		1x normally open, 1x normally closed, pneumatic spring reset	566515	VUVG-B14-T32H-AZT-F-1P3
		Normally closed, mechanical spring reset	574376	VUVG-B14-T32C-MZT-F-1P3
		Normally open, mechanical spring reset	574377	VUVG-B14-T32U-MZT-F-1P3
Ý		1x normally open, 1x normally closed, mechanical spring reset	574378	VUVG-B14-T32H-MZT-F-1P3
	5/2-way single solenoid valve		1	-
	External pilot air supply	Pneumatic spring reset	566516	VUVG-B14-M52-AZT-F-1P3
		Mechanical spring reset	574379	VUVG-B14-M52-MZT-F-1P3
	5/2-way double solenoid valve		L	
	External pilot air supply		566517	VUVG-B14-B52-ZT-F-1P3
	5/3-way valve			
	External pilot air supply	Mid-position closed, mechanical spring reset	566518	VUVG-B14-P53C-ZT-F-1P3
		Mid-position exhausted, mechanical spring reset	566519	VUVG-B14-P53E-ZT-F-1P3
		Mid-position pressurised, mechanical spring reset	566520	VUVG-B14-P53U-ZT-F-1P3
ub-base valve G1/8				
A	2x 3/2-way valve			1
	External pilot air supply	Normally closed, pneumatic spring reset	574242	VUVG-B14-T32C-AZT-F-1R8L
Re		Normally open, pneumatic spring reset	574243	VUVG-B14-T32U-AZT-F-1R8L
		1x normally open, 1x normally closed, pneumatic spring reset	574244	VUVG-B14-T32H-AZT-F-1R8L
		Normally closed, mechanical spring reset	578248	VUVG-B14-T32C-MZT-F-1R8L
		Normally open, mechanical spring reset	8031517	VUVG-B14-T32U-MZT-F-1R8L
		1x normally open, 1x normally closed, mechanical spring reset	8031518	VUVG-B14-T32H-MZT-F-1R8L
	5/2-way single solenoid valve			
	External pilot air supply	Pneumatic spring reset	574245	VUVG-B14-M52-AZT-F-1R8L
		Mechanical spring reset	578158	VUVG-B14-M52-MZT-F-1R8L
	5/2-way double solenoid valve			
	External pilot air supply		574246	VUVG-B14-B52-ZT-F-1R8L
	5/3-way valve			
	External pilot air supply	Mid-position closed, mechanical spring reset	574247	VUVG-B14-P53C-ZT-F-1R8L
		Mid-position exhausted, mechanical spring reset	574249	VUVG-B14-P53E-ZT-F-1R8L
		Mid-position pressurised, mechanical spring reset	574248	VUVG-B14-P53U-ZT-F-1R8L

Solenoid valves VUVG-B14, sub-base valves G1/8

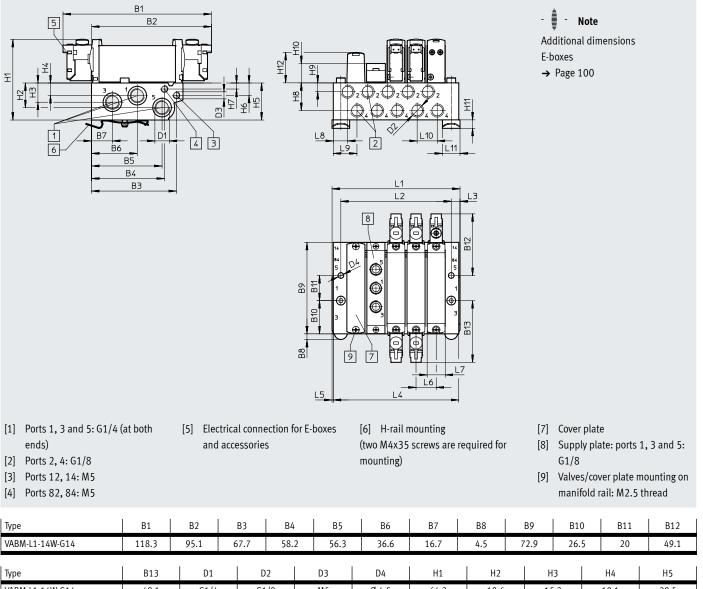
Manifold assembly

Sub-base valve for manifold assembly Connection G1/8



Download CAD data → <u>www.festo.com</u>

Dimensions



	11019	,,,	-		5012	5015	50.	•	1017		7217	201	5	20	1913
Туре	B13		D1	D2	I	D3	D4		H1	Н2		H3	H4		H5
VABM-L1-14W-G14	49.1		G1/4	G1/		M5	Ø 4.5		64.3	19.6		15.3	10.1		29.5
Туре	H6	H7	H8	H9	H10	H11	H12	L3	L5	L6	L7	L8	L9	L10	L1
VABM-L1-14W-G14	9.8	4.8	22.1	7	15.4	6.8	23.9	6	1	16	14.4	11.3	18.5	16	14

Solenoid valves VUVG-B14, sub-base valves G1/8

Ordering data

Valve positions		2	3	4	5	6	7	8	9	10	12	14	16
L1		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		40	56	72	88	104	120	136	152	168	200	232	264
L4		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 rails¹⁾

Connection	Connection			Material ³⁾	Operating pres-				
2,4	1, 3, 5	12/14, 82/84			sure [bar]	Valve	H-rail	Wall	
G1/8	G1/4	M5	2 ²⁾	Wrought alumini- um alloy	-0.9 10	0.65	1.5	3	

1) Blanking plugs are included with the manifold rail.

2) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

3) Note on materials: RoHS-compliant.

Ordering data – Manifold rail				
	Description		Part no.	Туре
Manifold rail for sub-base valve G1	8			
	For size B14 (G1/8)	2 valve positions	★ 566642	VABM-L1-14W-G14-2
*************		3 valve positions	★ 566643	VABM-L1-14W-G14-3
		4 valve positions	★ 566644	VABM-L1-14W-G14-4
		5 valve positions	566645	VABM-L1-14W-G14-5
		6 valve positions	★ 566646	VABM-L1-14W-G14-6
		7 valve positions	566647	VABM-L1-14W-G14-7
		8 valve positions	★ 566648	VABM-L1-14W-G14-8
Ť		9 valve positions	566649	VABM-L1-14W-G14-9
		10 valve positions	★ 566650	VABM-L1-14W-G14-10
		12 valve positions	566651	VABM-L1-14W-G14-12
		14 valve positions	566652	VABM-L1-14W-G14-14
		16 valve positions	566653	VABM-L1-14W-G14-16

Festo core product range

Solenoid valves VUVG-B14, sub-base valves G1/8

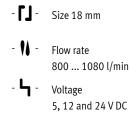
Ordering data

Ordering data – Accessories Description Part no. Туре Cover plate Data sheets → Internet: vabb ★ 569989 VABB-L1-14 For valve position on manifold rail, including screws and seal Ś Separator Data sheets → Internet: vabd VABD-10-B For creating pressure zones 569996 Supply plate Data sheets \rightarrow Internet: vabf For valve position on manifold rail, including screws and seal 569993 VABF-L1-14-P3A4-G18 ₫ Ò Ò Seals Data sheets → Internet: vabd 566676 For sub-base valves G1/8 Delivery quantity: 10 sets (each with 2 VABD-L1-14B-S-G18 screws and 1 seal) Ż

Festo core product range

Function 2x 3/2C, 2x 3/2U, 2x 3/2H 5/2-way, single solenoid 5/2-way, double solenoid valve 5/3C, 5/3U, 5/3E

Circuit symbols → page 13





General technical data VUVG-B

Valve function			T32-A			T32-M			M52-R	B52	M52-M	P53		
Normal position			C1)	U ²⁾	H ⁴⁾	C ¹⁾	U ²⁾	H ⁴⁾	-	-	-	C1)	U ²⁾	E ³⁾
Stable position			Mono	stable						Bistable	Monostable	Mono	stable	
Pneumatic spring reset			Yes			No			Yes ⁵⁾	-	No	-		
Mechanical spring reset			No			Yes			Yes ⁵⁾	-	Yes	Yes		
Vacuum operation at port 1			No			Only w	ith exter	nal pilot	air supply			_		
Design			Piston	n spool										
Sealing principle			Soft											
Type of actuation			Electri	ical										
Type of control			Pilote	d										
Pilot air supply			Extern	nal, interi	nal; can b	oe selecte	ed via su	b-base						
Exhaust function			Can b	e throttle	ed									
Manual override			Choice	e of non-	detenting	g, covered	d, non-de	etenting/	detenting o	r detenting				
Type of mounting			On ma	anifold ra	ail									
Mounting position			Any											
Nominal width		[mm]	5.7						6.9	7.3	6.9	6.5		
Standard nominal flow rate		[l/min]	900						1150	•	•	1080		
Flow rate on manifold rail			800						1000			950		
Switching time on/off		[ms]	13/27	7		15/22			15/31	-	10/45	15/4	8	
Switching time changeover		[ms]	-							11		29		
Size		[mm]	18											
Connection	1, 3, 5		G3/8	in manifo	old rail									
	2,4		G1/4	in manifo	old rail									
	12/14,82/84		M5 in	manifolo	d rail									
Product weight		[g]	164						154	160	154	160		
Certification			c UL u	s - Recog	nized (Ol	L)				- -				
			c CSA	us (OL)										
			RCM c	omplian	ce mark									
CE marking (see declaration of confo	ormity) ⁶⁾		To EU	EMC Dire	ective									
Corrosion resistance class CRC ⁷⁾			2											

1) C=Normally closed/mid-position closed

2) U=Normally open/mid-position pressurised

3) E=Mid-position exhausted

4) H=2x 3/2-way value in one housing with 1x normally closed and 1x normally open

5) Combined reset method

6) For information about the area of use, see the EC declaration of conformity at: www.festo.com/sp → Certificates.

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

7) Corrosion resistance class CRC 2 to Festo standard FN 940070 Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Operating and environmental conditions

Operating and environmen	ital conditions									
Valve function			T32-A ¹⁾	T32-M ³⁾	M52-R ²⁾	B52	M52-M ³⁾	P53		
Operating medium			Compressed a	ir to ISO 8573-2010	[7:4:4]					
Operating pressure	Internal	[bar]	1.5 8	3.5 8	2.5 8	1.5 8	38			
	External	[bar]	1.5 10	-0.9 10			-0.9 8	-0.9 10		
Pilot pressure		[bar]	1.5 8	38	2.5 8	1.5 8	38	· · ·		
Ambient temperature		[°C]	-5 +50, wit	h holding current re	duction –5 +60					
Temperature of medium		[°C]	-5 +50, wit	-5 +50, with holding current reduction -5 +60						

1) Pneumatic spring

2) Mixed, pneumatic/mechanical spring

3) Mechanical spring

Electrical data

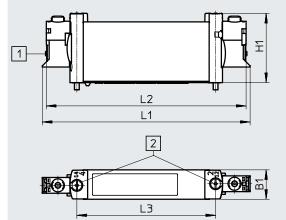
	Via E-box → page 98
[V DC]	5, 12 and 24 ±10%
[W]	1, reduced to 0.35 with holding current reduction
[%]	100
	IP40 (with plug socket), IP65 (with M8)
	[W]

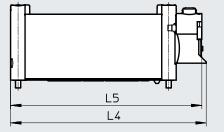
Information on materials

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

Dimensions

 $2x\ 3/2\ \mbox{way},\ 5/2\ \mbox{way}\ \mbox{and}\ \ 5/3\ \mbox{way}\ \ \ value$





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- Note Additional dimensions E-boxes

→ Page 100

[1] Horizontal electrical connection [2] Manual ove

Туре	B1	H1	L1	L2	L3	L4	L5
VUVG-B18F	18.3	43.1	129.4	124.4	86.4	112.2	109.7

Ordering data

	Description		Part no.	Туре
Sub-base valve G1/4,	without E-box			
	2x 3/2-way valve			
A CONTRACTOR OF	External pilot air supply	Normally closed, pneumatic spring reset	574443	VUVG-B18-T32C-AZT-F-1P3
		Normally open, pneumatic spring reset	574444	VUVG-B18-T32U-AZT-F-1P3
		1x normally open, 1x normally closed, pneumatic spring reset	574445	VUVG-B18-T32H-AZT-F-1P3
		Normally closed, mechanical spring reset	574446	VUVG-B18-T32C-MZT-F-1P3
	,	Normally open, mechanical spring reset	574447	VUVG-B18-T32U-MZT-F-1P3
		1x normally open, 1x normally closed, mechanical spring	574448	VUVG-B18-T32H-MZT-F-1P3
		reset		
	5/2-way single solenoid valve			
	External pilot air supply	Pneumatic/mechanical spring reset	574449	VUVG-B18-M52-RZT-F-1P3
		Mechanical spring reset	574450	VUVG-B18-M52-MZT-F-1P3
	5/2-way double solenoid valve	2		
	External pilot air supply		574451	VUVG-B18-B52-ZT-F-1P3
	5/3-way valve			
	External pilot air supply	Mid-position closed, mechanical spring reset	574452	VUVG-B18-P53C-ZT-F-1P3
		Mid-position exhausted, mechanical spring reset	574453	VUVG-B18-P53E-ZT-F-1P3
		Mid-position pressurised, mechanical spring reset	574454	VUVG-B18-P53U-ZT-F-1P3

Ordering data

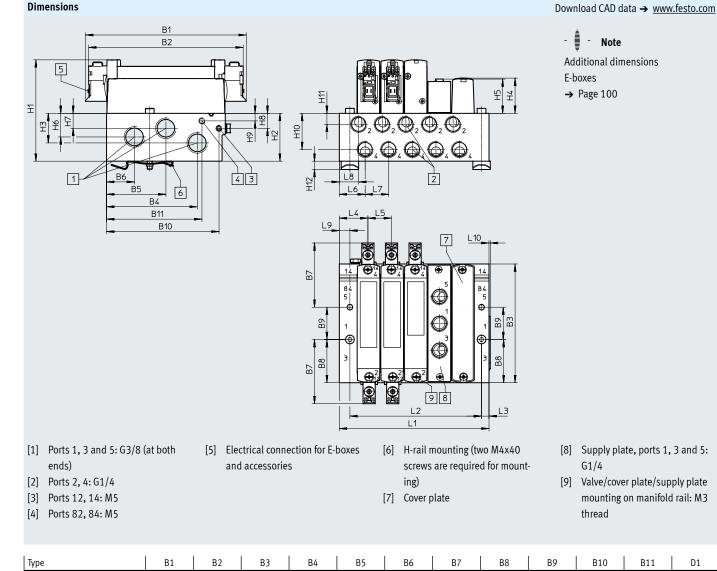
	Description		Part no.	Туре
se valve G1/	4, with E-box R8			
	2x 3/2-way valve			
	External pilot air supply	Normally closed, pneumatic spring reset	8031537	VUVG-B18-T32C-AZT-F-1R8L
		Normally open, pneumatic spring reset	8031538	VUVG-B18-T32U-AZT-F-1R8L
	Ĩ	1x normally open, 1x normally closed, pneumatic spring reset	8031539	VUVG-B18-T32H-AZT-F-1R8L
	()	Normally closed, mechanical spring reset	8031540	VUVG-B18-T32C-MZT-F-1R8L
\rightarrow		Normally open, mechanical spring reset	8031541	VUVG-B18-T32U-MZT-F-1R8L
		1x normally open, 1x normally closed, mechanical spring	8031542	VUVG-B18-T32H-MZT-F-1R8L
		reset		
	5/2-way single solenoid valve		•	
	External pilot air supply	Pneumatic/mechanical spring reset	8031543	VUVG-B18-M52-RZT-F-1R8L
		Mechanical spring reset	8031544	VUVG-B18-M52-MZT-F-1R8L
	5/2-way double solenoid valve	2		·
	External pilot air supply		8031545	VUVG-B18-B52-ZT-F-1R8L
	5/3-way valve			_
	External pilot air supply	Mid-position closed, mechanical spring reset	8031546	VUVG-B18-P53C-ZT-F-1R8L
		Mid-position exhausted, mechanical spring reset	8031547	VUVG-B18-P53E-ZT-F-1R8L
		Mid-position pressurised, mechanical spring reset	8031548	VUVG-B18-P53U-ZT-F-1R8L

Manifold assembly

Sub-base valve for manifold assembly Connection G1/4



Dimensions



47.8

H5

27.6

73.1

H4

28.4

L5

19

22.5

H6

19

L6

20.8

51.7

H7

12

L7

19

34.8

H8

12.1

26

H9

6.1

L8

15.6

90.6

H10

29.1

L9

8.5

76.8

H11

8.8

4.5

H12

6.5

L10

1

Solenoid valves VUVG-B18, sub-base valves G1/4

VABM-L1-18W-G38

VABM-L1-18W-G38

VABM-L1-18W-G38

Туре

Туре

129.4

H1

81.6

L3

6

124.4

H2

38.5

95.6

H3

11.5

L4

23

Solenoid valves VUVG-B18, sub-base valves G1/4

Ordering data

Valve positions		2	3	4	5	6	7	8	9	10	12	14	16
L1		63.5	82.5	101.5	120.5	139.5	158.5	177.5	196.5	215.5	253.5	291.5	329.5
L2		49	68	87	106	125	144	163	182	201	239	277	315
VABM weight	[g]	232	306	380	454	528	602	676	750	824	972	1120	1268

Technical data – Manifold rails ¹⁾									
	Connection	onnection CRC Material ³⁾		Operating pres- sure Max. tightening torque for assembly			Nm]		
	2,4	1, 3, 5	12/14, 82/84			[bar]	Valve	H-rail	Wall
	G1/4	G3/8	M5	2 ²⁾	Wrought alumini- um alloy	-0.9 10	1.18	1.5	3

1) Blanking plugs are included with the manifold rail.

2) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

3) Note on materials: RoHS-compliant.

Ordering data – Manifold rails				
	Description		Part no.	Туре
Manifold rail for sub-base valve G1	/4			
	For size B18 (G1/4)	2 valve positions	574467	VABM-L1-18W-G38-2
		3 valve positions	574468	VABM-L1-18W-G38-3
		4 valve positions	574469	VABM-L1-18W-G38-4
		5 valve positions	574470	VABM-L1-18W-G38-5
		6 valve positions	574471	VABM-L1-18W-G38-6
		7 valve positions	574472	VABM-L1-18W-G38-7
		8 valve positions	574473	VABM-L1-18W-G38-8
÷		9 valve positions	574474	VABM-L1-18W-G38-9
		10 valve positions	574475	VABM-L1-18W-G38-10
		12 valve positions	574476	VABM-L1-18W-G38-12
		14 valve positions	574477	VABM-L1-18W-G38-14
		16 valve positions	574478	VABM-L1-18W-G38-16

Ordering data

Ordering data – Accessories				
	Description		Part no.	Туре
Cover plate				Data sheets → Internet: vabb
	For valve position on manifold rail	, including screws and seal	★ 574482	VABB-L1-18
Separator				Data sheets → Internet: vabd
D	For creating pressure zones		574483	VABD-14-B
Supply plate				Data sheets → Internet: vab
	For valve position on manifold rail	, including screws and seal	574481	VABF-L1-18-P3A4-G14
Seals				Data sheets → Internet: vabd
P	For sub-base valves G1/4	Delivery quantity: 10 sets (each with 2 screws and 1 seal)	574480	VABD-L1-18B-S-G14

 - Note

Connect supply plate at port 1 with compressed air. Reverse operation (pressure at port 3, 5) is not permissible.

Festo core product range

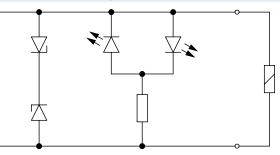
★ ☆

Solenoid valves VUVG

E-boxes

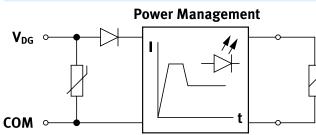
General technical data							
Variants	H2	Н3	S2	S3	Ŀ	R1	R8
Mounting position	Any						
Electrical connection	2-pin, socke	2-pin, socket Flying Indiv				Individual plug M8,	Individual plug M8,
					leads	4-pin	3-pin
Degree of protection	IP40 IP65						
Signal status display	LED						
Type of mounting	Clip					Self-tapping screw	
Note on materials	RoHS-comp	liant					
Housing colour	Black						
Information on housing materials	PA						
Certification	RCM compli	ance mark					

Protective circuit without holding current reduction



The solenoid coils (P type) of the 5, 12 and 24 V designs have a protective circuit to arrest sparks and protect against polarity reversal.

Protective circuit with holding current reduction



The 24 V DC design (R type) additionally features holding current reduction. This reduces the power from 1 W to 0.35 W.

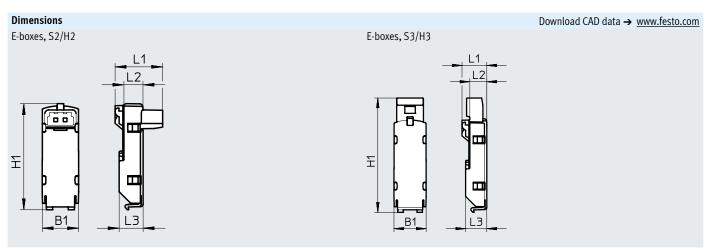
Pin allocation for E-box								
	Pin		Description					
Rectangular plug, connection patter	n H							
	VAVE-L1	I-1VH2-LP, VAVE-L1-1VH3-LP						
	1	+ or –	Without holding current reduction					
∠ i + + <u>i</u> -⊥	2	+ or –						
	VAVE-L1	I-1H2-LR, VAVE-L1-1H3-LR						
	1	+	With holding current reduction					
	2	_						
Rectangular plug, connection patter	n S							
	VAVE-L1	VAVE-L1-1VS2-LP, VAVE-L1-1VS3-LP						
<u>?</u> + + <u>5</u> 1	1	+ or –	Without holding current reduction					
	2	+ or –						
	VAVE-L1	I-1S2-LR, VAVE-L1-1S3-LR						
	1	-	With holding current reduction					
	2	+						
Flying leads, 2-pin								
	VAVE-L1	I-1VL14- LP						
	1	+ or –	Without holding current reduction					
	2	+ or –						
1-+∞ ©+-2	VAVE-L1	I-1L14-LR						
	1	-	With holding current reduction					
	2	+						

E-boxes

Pin allocation for E-box							
	Pin		Description				
Round plug, M8, 3-pin							
4	VAVE	VAVE-L1-1VR8-LP					
· +	1	Not used	Without holding current reduction				
(+ +)3	3	+ 0r -					
	4	+ 0r -					
	VAVE	L1-1R8-LR					
	1	Not used	With holding current reduction				
	3	+ 0r -					
	4	+ 0r -					
Round plug, M8, 4-pin							
3 1	VAVE	L1-1VR1-LP					
	1	Not used	Without holding current reduction				
	2	Not used					
	3	+ 0r -					
	4	+ 01 -					
4 2	VAVE	L1-1R1-LR					
	1	Not used	With holding current reduction				
	2	Not used					
	3	+ 0r -					
	4	+ 0r -					
Open cable end							
	VAVE	L1-1VK					
вк	BK	+ 0r -	Without holding current reduction				
BK	BK	+ 0r –	~ ~				
	VAVE	L1-1K	1				
	BK	+ 0r -	With holding current reduction				
	BK	+ 0r -					

Solenoid valves VUVG

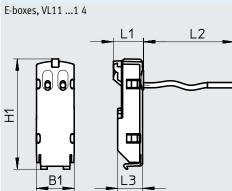
E-boxes



Туре	B1	H1 ±0.5	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			10.8		
VAVE-L1-H2-LR					

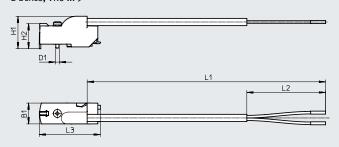
Туре	B1	H1 ±0.5	L1	L2	L3
VAVE-L1-1VS3-LP	9.8	35	7.6	5.2	6.5
VAVE-L1-1S3-LR	1				
VAVE-L1-1VH3-LP		33.6	7.5		
VAVE-L1-1H3-LR]				

Dimensions



E-boxes, VK6 ... 9

Download CAD data → www.festo.com



Туре	B1	H1 ±0.5	L1	L2	L3
VAVE-L1-1VL1-LP	9.8	28.8	7.9	0.5	6.5
VAVE-L1-1L1-LR					
VAVE-L1-1VL2-LP				1	1
VAVE-L1-1L2-LR					
VAVE-L1-1VL3-LP				2.5	1
VAVE-L1-1L3-LR					
VAVE-L1-1VL4-LP				5	1
VAVE-L1-1L4-LR					

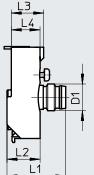
Туре	B1	H1	H2	L1	L2	L3	D1
			±0.3		±5	±0.5	Ø
VAVE-L1-1VK6-LP	9.8	15.3	11.8	0.5	50	28.7	1.8
VAVE-L1-1VK7-LP]			1.0			
VAVE-L1-1VK8-LP				2.5			
VAVE-L1-1VK9-LP]			5.0			
VAVE-L1-1K6-LR				0.5			
VAVE-L1-1K7-LR	1			1.0			
VAVE-L1-1K8-LR	1			2.5			
VAVE-L1-1K9-LR				5.0			

Download CAD data → <u>www.festo.com</u>

E-boxes

Dimensions

E-boxes, R8/R1



Туре	B1	H1	H2	H3	L1	L2	L3	L4	D1
									Ø
VAVE-L1-1VR8-LP	9.8	28.7	13.7	20.2	18.4	9.9	9.7	8.6	M8
VAVE-L1-1VR1-LP									

Design	Plugs	Additional functions	Ambient	Code	Power	Voltage	Part no.	Туре
	T tugs	Additional functions	temperature [°C]	coue	[W]	[V DC]	Tart no.	туре
	NEBV-H1	Spark arresting, bipolar, IP40	-5 +50	H2	1	12/24	★ 566714	VAVE-L1-1VH2-LP
		Spark arresting, holding current reduction, IP40	-5 +60	H2R	0.35	24	★ 566716	VAVE-L1-1H2-LR
	NEBV-H1	Spark arresting, bipolar, IP40	-5 +50	H3	1	12/24	566715	VAVE-L1-1VH3-LP
		Spark arresting, holding current reduction, IP40	-5 +60	H3R	0.35	24	566717	VAVE-L1-1H3-LR
	NEBV-HS	Spark arresting, bipolar, IP40	-5 +50	S2	1	12/24	566718	VAVE-L1-1VS2-LP
		Spark arresting, holding current reduction, IP40	-5 +60	S2R	0.35	24	566720	VAVE-L1-1S2-LR
Ē.	NEBV-HS	Spark arresting, bipolar, IP40	-5 +50	S3	1	12/24	566719	VAVE-L1-1VS3-LP
		Spark arresting, holding current reduction, IP40	-5 +60	S3R	0.35	24	566721	VAVE-L1-1S3-LR
	Open	Spark arresting, bipolar, IP40	-5 +50	L1	1	12/24	566722	VAVE-L1-1VL1-LP
	cable end			L2	1		566723	VAVE-L1-1VL2-LP
Ĩ				L3			566724	VAVE-L1-1VL3-LP
				L4	7		566725	VAVE-L1-1VL4-LP
v		Spark arresting, holding current reduction,	-5 +60	L1R	0.35	24	566726	VAVE-L1-1L1-LR
		IP40		L2R	7		566727	VAVE-L1-1L2-LR
				L3R	7		566728	VAVE-L1-1L3-LR
				L4R	1		566729	VAVE-L1-1L4-LR



Solenoid valves VUVG

E-boxes

Ordering data – E-boxes

esign	Plugs	Additional functions	Ambient temperature [°C]	Code	Power [W]	Voltage [V DC]	Cable length [m]	Part no.	Туре	
3	Open cable	Spark arresting, bipolar, IP65	-5 +60	K6	1	12/24	0.5	573941	VAVE-L1-1VK6-LP	
Open cable end			K7	1		1	★ 573942	VAVE-L1-1VK7-LP		
			K8	1		2.5	573943	VAVE-L1-1VK8-LP		
			К9			5	573944	VAVE-L1-1VK9-LP		
		Spark arresting, bipolar, holding	-5 +60	K6R	0.35	24	0.5	573945	VAVE-L1-1K6-LR	
		current reduction, IP65		K7R	K7R K8R K9R		1	573946	VAVE-L1-1K7-LR	
				K8R				2.5	573947	VAVE-L1-1K8-LR
				K9R			5	573948	VAVE-L1-1K9-LR	
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	NEBU-M8	Spark arresting, bipolar, IP65	-5 +60	R8	1	12/24	-	★ 573919	VAVE-L1-1VR8-LP	
		Spark arresting, bipolar, holding current reduction, IP65		R8R	0.35	24	-	573920	VAVE-L1-1R8-LR	
$\mathcal{P}$		Spark arresting, bipolar, IP65	1	R1	1	12/24	-	573921	VAVE-L1-1VR1-LP	
		Spark arresting, bipolar, holding current reduction, IP65		R1R	0.35	24	-	573922	VAVE-L1-1R1-LR	

Festo core product range

Accessories

Ordering data				
	Description	Cable length [m]	Part no.	Туре
Plug socket with ca	able, not sheathed, open end			Data sheets → Internet: nebv
~	For E-box code H2, H2R or H3, H3R,	0.5	★ 566654	NEBV-H1G2-KN-0.5-N-LE2
	2-pin socket	1	★ 566655	NEBV-H1G2-KN-1-N-LE2
NS A		2.5	★ 566656	NEBV-H1G2-KN-2.5-N-LE2
		5	566657	NEBV-H1G2-KN-5-N-LE2
Plug socket with ca	able, sheathed, open end			Data sheets → Internet: nebv
$\sim$	For E-box code H2, H2R or H3, H3R,	0.5	* 566658	NEBV-H1G2-P-0.5-N-LE2
$\sim$	2-pin socket	1	* 566659	NEBV-H1G2-P-1-N-LE2
		2.5	* 566660	NEBV-H1G2-P-2.5-N-LE2
		5	566661	NEBV-H1G2-P-5-N-LE2
Plug socket with ca	able, not sheathed, open end		I	Data sheets → Internet: nebv
	For E-box code S2, S2R or S3, S3R,	0.5	566662	NEBV-HSG2-KN-0.5-N-LE2
	2-pin socket	1	566663	NEBV-HSG2-KN-0.5-N-LE2
	2-pin socket			NEBV-HSG2-KN-1-N-LE2
ų pos	<u>ا</u> و	2.5	566664	-
~~~		5	566665	NEBV-HSG2-KN-5-N-LE2
Plug socket with ca	able, sheathed, open end			Data sheets → Internet: nebv
2	For E-box code S2, S2R or S3, S3R,	0.5	566666	NEBV-HSG2-P-0.5-N-LE2
	2-pin socket	1	566667	NEBV-HSG2-P-1-N-LE2
		2.5	566668	NEBV-HSG2-P-2.5-N-LE2
	8	5	566669	NEBV-HSG2-P-5-N-LE2
Connecting cable, o	open end			
connecting cable, o	 For pilot valve VSCS to ISO 15218, 	2.5	8032623	NEBV-C1SW2L-P-K-2.5-N-LE2-S9
	narrow socket, type C to EN 175301-803	5	8032626	NEBV-C1SW2L-P-K-5-N-LE2-S9
		10	8032627	NEBV-C1SW2L-P-K-10-N-LE2-S9
		2.5	8032628	NEBV-C1SW2E-F-K-10-K-EE2-S9
\checkmark		5	8032629	NEBV-C15W3-K-2:5-N-LE3-S9
		, ,	0052025	
Connecting cable, o				Data sheets → Internet: nebu
	For E-box code R8	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
<i>A</i>	3-pin, straight socket, M8x1	5	★ 541334	NEBU-M8G3-K-5-LE3
The second second	For E-box code R1	2.5	541342	NEBU-M8G4-K-2.5-LE4
	4-pin, straight socket, M8x1	5	541343	NEBU-M8G4-K-5-LE4
Connecting cable, o	open end			Data sheets → Internet: nebu
	For E-box code R8	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
	3-pin, angled socket, M8x1	5	* 541341	NEBU-M8W3-K-5-LE3
	For E-box code R1	2.5	541344	NEBU-M8W4-K-2.5-LE4
The second seco	4-pin, angled socket, M8x1	5	541345	NEBU-M8W4-K-5-LE4
Connecting cable				Data chasta > Internet
	For E-box code R8,	0.5	★ 541346	Data sheets → Internet: nebu NEBU-M8G3-K-0.5-M8G3
35	3-pin, straight socket, M8x1	1	× 541346	NEBU-M8G3-K-1-M8G3
TAT	ש-אווו, שומוצווו שונאבו, וווטאב			
ALL AND		2.5	★ 541348	NEBU-M8G3-K-2.5-M8G3
-		5	★ 541349	NEBU-M8G3-K-5-M8G3
		10	569844	NEBU-M8G3-K-10-M8G3
	For E-box code R1,	2.5	554035	NEBU-M8G4-K-2.5-M8G4
	4-pin, straight socket, M8x1			

★ ☆

Generally ready for dispatch from the factory within 24 hours Generally ready for dispatch from the factory within 5 days

Solenoid valves VUVG

Accessories

Ordering data	Description			Part no.	Type	PU ¹⁾
				Fait 110.	Туре	10-7
Connecting cable				5/42/2		
	For pilot valve VSCS to ISO 15218, straight socket, M12x1, A-coded to	EN 61076 0 101	2.5 m long	541363	NEBU-M12G5-K-2.5-LE3	
STATE .	Straight socket, M12X1, A-coded to	EN 01070-2-101	5 m long	541364	NEBU-M12G5-K-5-LE3	
			Jintong	541504	NEDO-M120J-K-J-LEJ	
•	For pilot valve VSCS to ISO 15218,		2.5 m long	541367	NEBU-M12W5-K-2.5-LE3	
A I	angled socket, M12x1, A-coded to	EN 61076-2-101				
Ser .			5 m long	541370	NEBU-M12W5-K-5-LE3	
~~/						
Blanking plug					Data sheets	→ Internet
	For manifold rail and valve	M5 thread		* 3843	B-M5	10
		M7 thread		★ 174309	B-M7	10
0)	For manifold rail	G1/8 thread		* 3568	B-1/8	10
0		G1/4 thread		★ 3569	B-1/4	10
		G3/8 thread		★ 3570	B-3/8	10
\sim	For valve	G1/8 thread		578406	NPQH-BK-G18-P10	10
S.		G1/4 thread		578407	NPQH-BK-G14-P10	10
Reducing nipple						
	M7 male thread	M5 female thread		161359	D-M5I-M7A-ISK	10
OHU						
-						
ittings					Data sheets →	<u> </u>
	M3 thread	For tubing Ø 3 mm	Round releasing ring	133001	QSM-M3-3-I-R	10
		For tubing Ø 4 mm	Round releasing ring	133002	QSM-M3-4-I-R	10
0	M5 thread	For tubing Ø 3 mm	Round releasing ring	133003	QSM-M5-3-I-R	10
•			Oval releasing ring	153313	QSM-M5-3-I	10
		For tubing Ø 4 mm	Round releasing ring	133004	QSM-M5-4-I-R	10
			Oval releasing ring	★ 153315	QSM-M5-4-I	10
		For tubing Ø 6 mm	Round releasing ring	133005	QSM-M5-6-I-R	10
	MZthrood	End 11 mil	Oval releasing ring	* 153317	QSM-M5-6-I	10
	M7 thread	For tubing Ø 4 mm	Oval releasing ring	± 153319	QSM-M7-4-I	10
		For tubing Ø 6 mm	Round releasing ring	133007	QSM-M7-6-I-R	10
	G1/8 thread	For tubing of 4 mm	Oval releasing ring	★ 153321 ★ 186106	QSM-M7-6-I	10
	01/0 lilleau	For tubing Ø 4 mm	Oval releasing ring		QS-G1/8-4-I	
		For tubing Ø 6 mm	Oval releasing ring	★ 186107	QS-G1/8-6-I	10
		For tubing Ø 8 mm	Oval releasing ring	* 186109	QS-G1/8-8-I	10
		For tubing Ø 10 mm	Oval releasing ring	† 132999	QS-G1/8-10-I	10
	G1/4 thread	For tubing Ø 6 mm	Oval releasing ring	* 186108	QS-G1/4-6-I	10
			Oval releasing ring	130677	QS-1/4-6-100	100
		F + 11 - 17	I I IVI I IVI I I I I I I I I I I I I I	★ 186110	QS-G1/4-8-I	10
		For tubing Ø 8 mm		4 1 2 2 2 4 4		4.0
				* 153016	QS-1/4-8-I	10
		For tubing Ø 8 mm For tubing Ø 10 mm	Oval releasing ring	★ 186112	QS-1/4-8-I QS-G1/4-10-I	10
	D2/9 thread	For tubing Ø 10 mm	Oval releasing ring	★ 186112 ★ 153018	QS-1/4-8-I QS-61/4-10-I QS-1/4-10-I	10 10
	R3/8 thread	For tubing Ø 10 mm	Oval releasing ring Oval releasing ring	★ 186112 ★ 153018 130681	QS-1/4-8-I QS-G1/4-10-I QS-1/4-10-I QS-3/8-8-50	10 10 50
	R3/8 thread	For tubing Ø 10 mm For tubing Ø 8 mm For tubing Ø 10 mm	Oval releasing ring Oval releasing ring Oval releasing ring Oval releasing ring	★ 186112 ★ 153018 130681 130682	QS-1/4-8-I QS-61/4-10-I QS-1/4-10-I QS-3/8-8-50 QS-3/8-10-50	10 10 50 50
	R3/8 thread	For tubing Ø 10 mm	Oval releasing ring Oval releasing ring	★ 186112 ★ 153018 130681	QS-1/4-8-I QS-G1/4-10-I QS-1/4-10-I QS-3/8-8-50	10 10 50

1) Packaging unit.

Accessories

Ordering data	Description		Part no.	Туре	PU ¹⁾
Silencer				Data sheets	→ Internet: am
	For M3 thread		1231120	AMTE-M-LH-M3	20
OD P	For M5 thread		★ 1205858	AMTE-M-LH-M5	20
\sim	For M7 thread		161418	UC-M7	1
	For G1/8 thread	High flow rate	★ 2307	U-1/8	1
		Lower flow rate	161419	UC-1/8	1
and the second s	For G1/4 thread	High flow rate	★ 2316	U-1/4	1
		Lower flow rate	165004	UC-1/4	1
	For G3/8 thread	High flow rate	★ 2309	U-3/8	1
		Lower flow rate	1707427	UC-3/8	1
		Metal housing	★ 6843	U-3/8-B	1
	•				
H-rail	To EN 60715, 35 x 7.5 (WxH)	2 m long	35430	Data sheet	$s \rightarrow \text{Internet: nr}$
H-rail mounting				Data sheets	→ Internet: vam
Re J	>		★ 569998	VAME-T-M4	2
Cover cap for man	ual override				
	Covered		540898	VMPA-HBV-B	10
	Non-detenting		540897	VMPA-HBT-B	10
	Detenting (without accessories)			VAMC-L1-CD	10
Identification hold	ler			Data sheet	s → Internet: as
		over for the retaining screw and manual override	570818	ASLR-D-L1	10

1) Packaging unit.

Solenoid valves VUVG

Accessories

Ordering data						
	Description			Part no.	Туре	PU ¹⁾
Check valve						
	For manifold rails	For blocking the flow in the event of b	ack pressure in duct 3 and 5	8047364	VABF-L1-10H-H2	10
	VABM-L1-10					
Ga be	For manifold rails			8047365	VABF-L1-14-H2	10
_	VABM-L1-14					
low restrictor						
\sim	For manifold rails	For setting the flow rate during pres-	Nominal size: 0.5 mm	8025709	VFFG-T-M5-5	10
	VABM-L1-10	surisation and exhausting (for M5	Nominal size: 0.6 mm	8025710	VFFG-T-M5-6	10
		threaded connection)	Nominal size: 0.7 mm	8025711	VFFG-T-M5-7	10
-			Nominal size: 0.85 mm	8025712	VFFG-T-M5-8	10
			Nominal size: 1.05 mm	8025713	VFFG-T-M5-10	10
			Nominal size: 1.2 mm	8025714	VFFG-T-M5-12	10
			Nominal size: 1.55 mm	8025715	VFFG-T-M5-15	10
		For setting the flow rate for pressuri-	Nominal size: 0.5 mm	8047346	VFFG-T-F4-5	10
		sation and exhausting (for Ø 4 mm)	Nominal size: 0.6 mm	8047347	VFFG-T-F4-6	10
			Nominal size: 0.7 mm	8047348	VFFG-T-F4-7	10
\bigcirc			Nominal size: 0.85 mm	8047349	VFFG-T-F4-8	10
			Nominal size: 1.05 mm	8047350	VFFG-T-F4-10	10
			Nominal size: 1.2 mm	8047351	VFFG-T-F4-12	10
			Nominal size: 1.55 mm	8047352	VFFG-T-F4-15	10
	For manifold rails	For setting the flow rate for pressuri-	Nominal size: 0.7 mm	8047353	VFFG-T-F6-7	10
	VABM-L1-14	sation and exhausting (for Ø	Nominal size: 0.85 mm	8047354	VFFG-T-F6-8	10
		5.8 mm)	Nominal size: 1.05 mm	8047355	VFFG-T-F6-10	10
			Nominal size: 1.15 mm	8047356	VFFG-T-F6-11	10
			Nominal size: 1.4 mm	8047357	VFFG-T-F6-14	10
			Nominal size: 1.6 mm	8047358	VFFG-T-F6-16	10
			Nominal size: 1.8 mm	8047359	VFFG-T-F6-18	10
			•	·	•	
low control set	For manifold rails	Two of each size, for M5 threaded cor	naction	8025716	VFFG-T-M5-A-V1	14
Ì	VABM-L1-10	iwo of each size, for MS threaded cor	metion	8023716	VFFG-I-M3-A-V1	14
$\overline{\mathbb{A}}$		Two of each size, for Ø 4 mm		8062200	VFFG-T-F4-A-V1	14
Ĭ	For manifold rails VABM-L1-14	Two of each size, for Ø 5.8 mm		8062201	VFFG-T-F6-A-V1	14

1) Packaging unit.