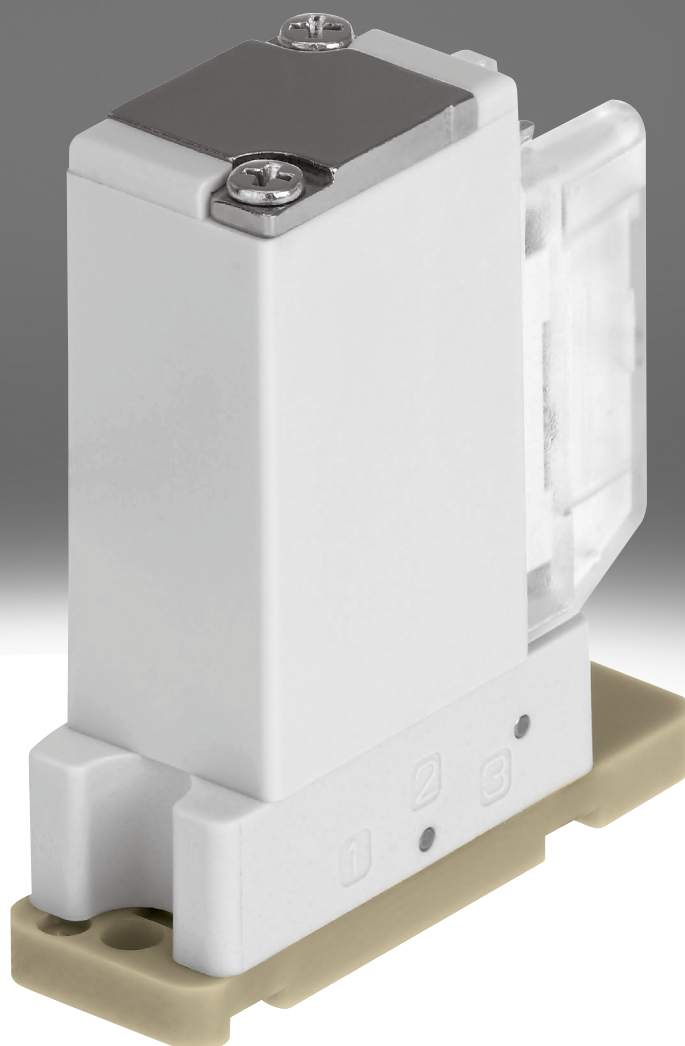


## Media separated solenoid valve VYKB

**FESTO**



## Characteristics

### At a glance

[Link !\[\]\(99f58673407353e96a019fbca558fd72\_img.jpg\) vykb](#)

Special characteristics:

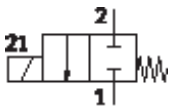
- Very easy to clean thanks to media separation
- Low media consumption thanks to small internal volume
- High-quality materials, therefore also suitable for aggressive media
- High flow rate with small size
- High repetition accuracy, switching frequency and precision, therefore also suitable for extremely small volumes and dispensing tasks
- Low power consumption due to holding current reduction
- Very flexible in use thanks to 3/2-way and 2/2-way variants as well as 12 ... 24 V DC actuation

Function:

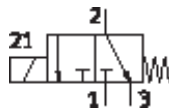
- The media separated solenoid valve VYKB is intended for mounting in laboratory devices. The valve is used to control gaseous and liquid media in line with its technical data.
- The valve VYKA is a directly actuated valve with solenoid coil. When de-energised, the valve automatically returns to its normal position.

### Valve function

[6] 2/2-way valve, normally closed

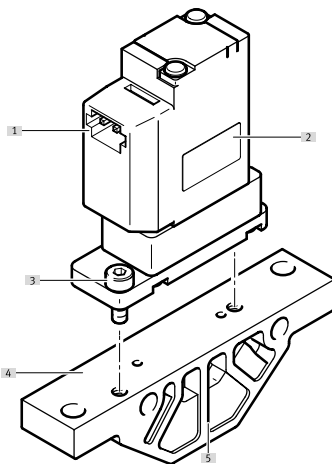


[M32] 3/2-way valve, normally closed or open



### Series

[VYKB] Solenoid valve VYKB



[1] Terminal contact for connecting cable NEBV

[2] Solenoid valve VYKB

[3] Screws for mounting on the sub-base (included in the scope of delivery of the valves)

[4] Sub-base VABS

[5] Media connections

## Type code

<b>001</b>	Series	
<b>VYKB</b>	Solenoid valve VYKB	
<b>002</b>	Directional control valve type	
<b>F</b>	Flanged valve	
<b>003</b>	Size	
<b>10</b>	Size 10	
<b>12</b>	Size 12	
<b>004</b>	Valve function	
<b>M22C</b>	2/2-way valve, normally closed	
<b>M32</b>	3/2-way valve, normally closed or open	
<b>005</b>	Nominal width	
<b>16</b>	1.6 mm	
<b>20</b>	2 mm	

<b>006</b>	Housing material	
<b>P</b>	PEEK	
<b>007</b>	Diaphragm and sealing material	
<b>E</b>	EPDM	
<b>F</b>	FFPM	
<b>V</b>	FPM	
<b>008</b>	Nominal operating voltage	
<b>1</b>	24 V DC	
<b>5</b>	12 V DC	
<b>009</b>	Electrical connection	
<b>HP</b>	Port pattern HP	
<b>010</b>	Outlet direction of electrical components	
<b>A</b>	Angled	
<b>S</b>	Straight	

## Datasheet

General technical data				
Valve function	2/2-way, closed, monostable		3/2-way, monostable, open/closed	
Size	10	12	10	12
Design	Electrical connection at top, Electrical connection at the side, Rocker valve with diaphragm seal	Electrical connection at top, Rocker valve with diaphragm seal	Electrical connection at top, Electrical connection at the side, Rocker valve with diaphragm seal	Electrical connection at top, Rocker valve with diaphragm seal
Type of reset	Mechanical spring			
Nominal size	1.6 mm	2 mm	1.6 mm	2 mm
Fluid connection	Flange			
Flow rate Kv	0.034 m <sup>3</sup> /h	0.056 m <sup>3</sup> /h	0.034 m <sup>3</sup> /h	0.056 m <sup>3</sup> /h
Flow rate Kv	-			
Note on flow rate Kv	-			
Water flow rate at max. operating pressure	-			
Internal volume	35 µl	60 µl	35 µl	60 µl
Sealing principle	Soft			
Flow direction	Non-reversible			
Type of actuation	Electric			
Type of piloting	Direct			
Manual override	None			
Type of mounting	Via through-hole for M2 screw	Via through-hole for M3 screw	Via through-hole for M2 screw	Via through-hole for M3 screw
Mounting position	optional			
Degree of protection	IP40			
Corrosion resistance class CRC <sup>1)</sup>	0 - No corrosion stress			
Product weight	18 g	40 g	18 g	40 g

1) Corrosion resistance class CRC 0 to Festo standard FN 940070

No corrosion stress. Applies to small, visually irrelevant standard parts, such as threaded pins, circlips, clamping sleeves, etc., which are usually only available on the market in phosphated or black oxide finish (oiled if necessary), as well as to ball bearings (for components < KBK3) and plain bearings.

## Operating and environmental conditions

Size	10	12
Medium	Liquid media, Gaseous media	
Note on the medium	Observe resistance of materials that come into contact with the media, Maximum particle size 5 µm	
Media temperature	0 ... 50°C	
Media temperature for fluids	0 ... 50°C	
Ambient temperature	0 ... 50°C	
Storage temperature	-20 ... 70°C	
Medium pressure	-0.75 ... 1 bar	-0.75 ... 3 bar

## Materials

Material in contact with the medium	EPDM FFPM FPM PEEK
Material housing	PEEK
Material membrane	EPDM FFPM FPM
Material seals	EPDM FFPM FPM
Note on materials	RoHS-compliant

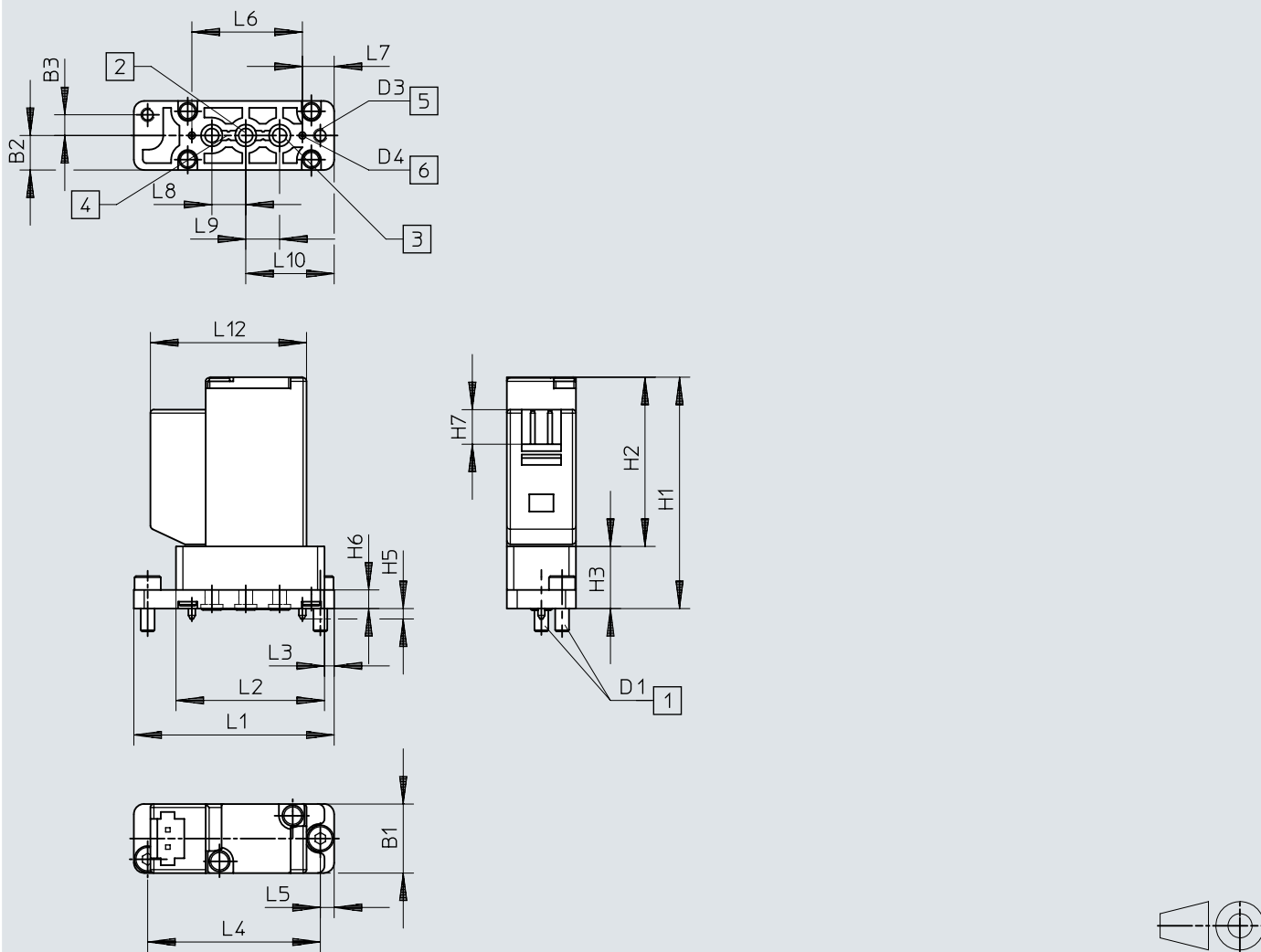
## Datasheet

Electrical data				
Size	10		12	
Operational voltage range DC	12 V	24 V	12 V	24 V
Permissible voltage fluctuations	-5% / +10%	+/- 10%	-5% / +10%	+/- 10%
Electrical connection 1, connection type	Cable with plug			
Electrical connection 1, connector system	Connection pattern HP			
Characteristic coil data	12 V DC: low-current phase 1 W, high-current phase 3.7 W	24 V DC: low-current phase 1 W, high-current phase 3.7 W	12 V DC: low-current phase 1 W, high-current phase 5.2 W	24 V DC: low-current phase 1 W, high-current phase 5.2 W
Duty cycle	100%			

## Dimensions

Dimensions – Manifold rail VABS-K2-10B

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

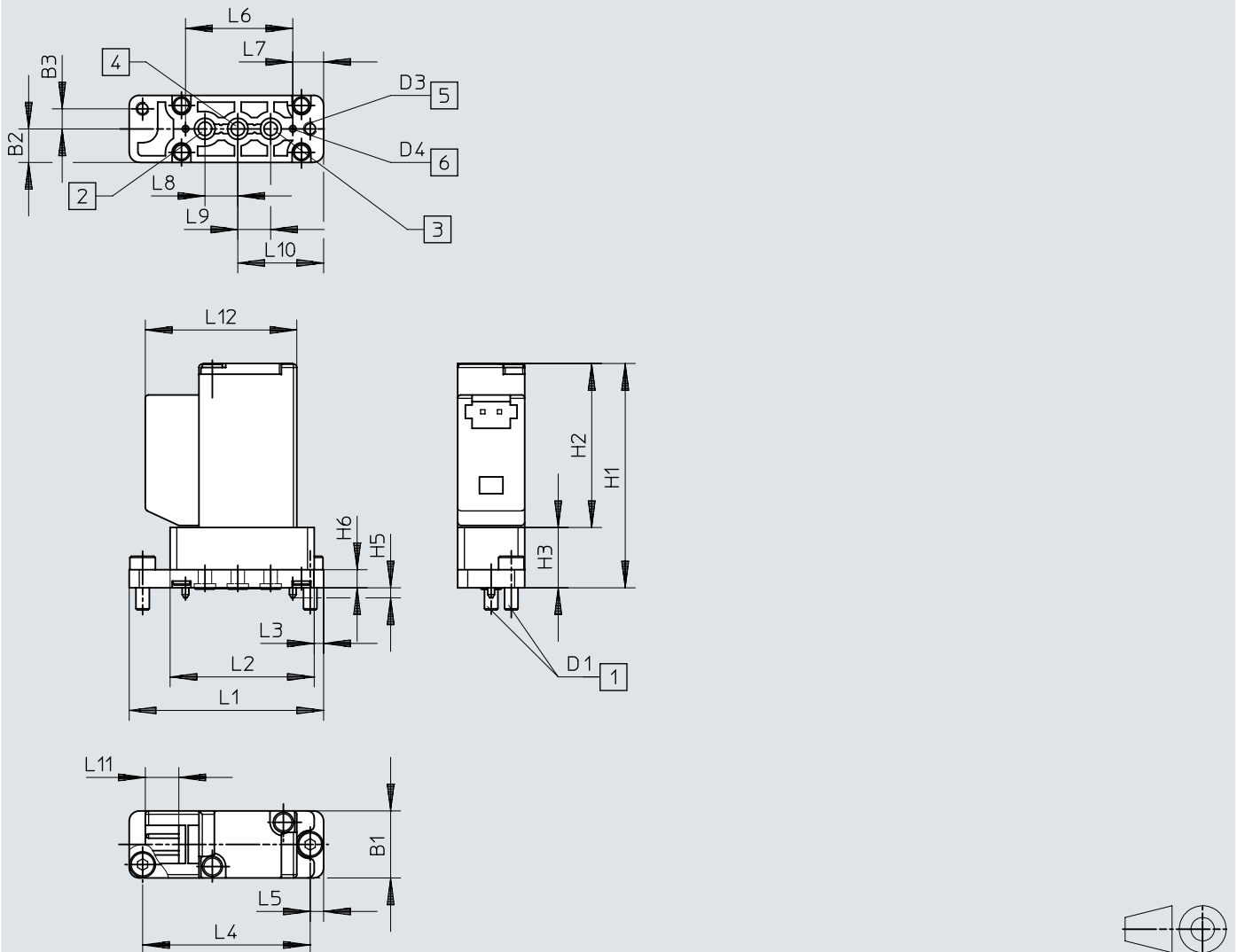


- [1] Retaining screws
- [2] Connection 3
- [3] Connection 1
- [4] Connection 2
- [5] Mounting holes
- [6] Coding pin

	B1	B2	B3	D1	D3 Ø	D4 Ø	H1	H2	H3	H5	H6	H7
VYKB-...-S	10	5	3	M2x0,4	2,1	1	33,5	24,5	9	1,5	2,7	5
	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L12	
VYKB-...-S	29	21,5	1,4	25	2	16	4,6	4,9	4,9	12,8	22,6	

## Dimensions

## Dimensions – Manifold rail VABS-K2-10S

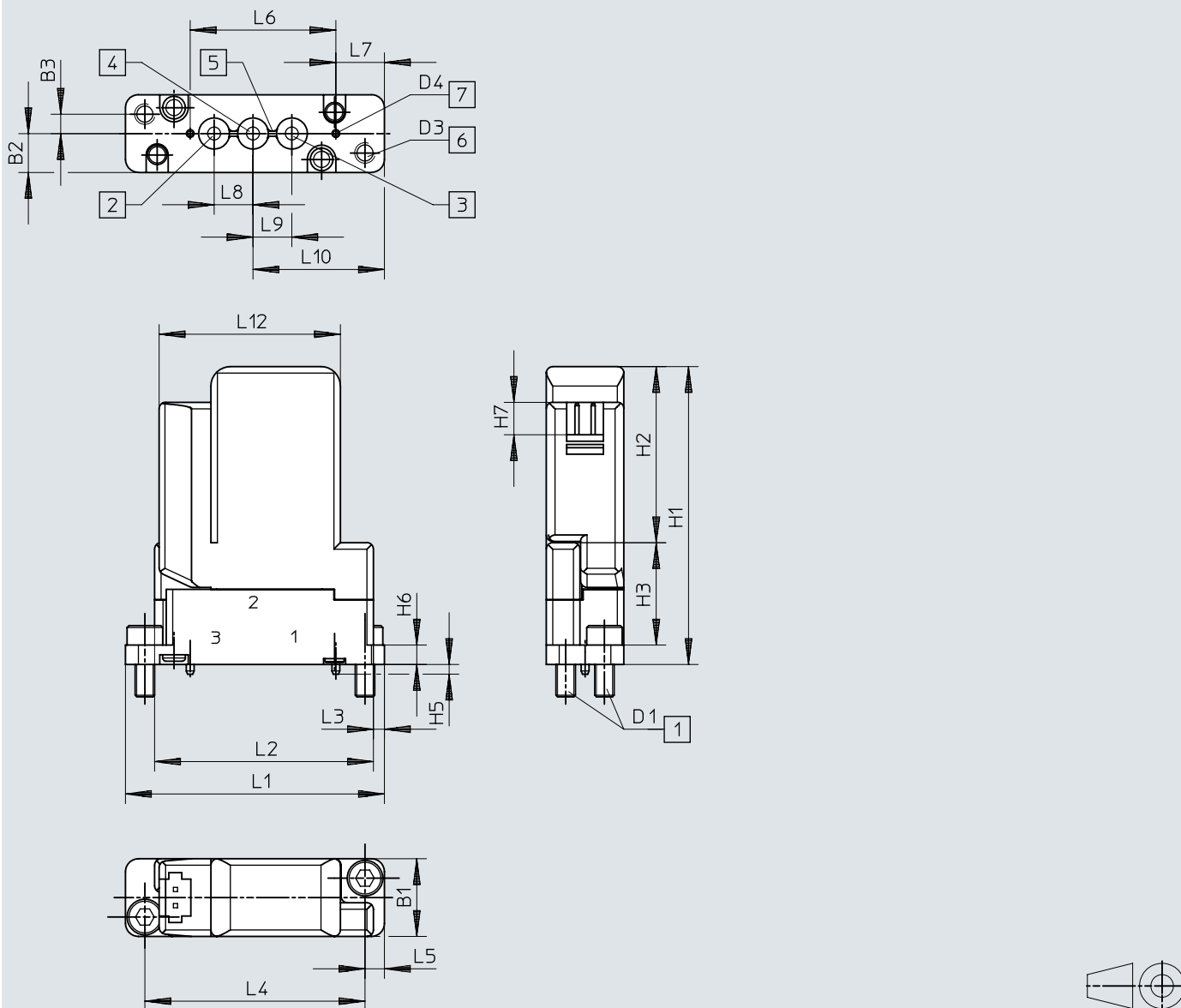
Download CAD data [www.festo.com](http://www.festo.com)

- [1] Retaining screws
- [2] Connection 3
- [3] Connection 1
- [4] Connection 2
- [5] Mounting holes
- [6] Coding pin

	B1	B2	B3	D1	D3 Ø	D4 Ø	H1	H2	H3	H5	H6	
VYKB-...-A	10	5	3	M2x0,4	2,1	1	33,5	24,5	9	1,5	2,7	
	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12
VYKB-...-A	29	21,5	1,4	25	2	16	4,6	4,9	4,9	12,8	5	22,6

## Dimensions

## Dimensions – Solenoid valve size 10 mm

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

- [1] Retaining screws
- [2] Connection 3
- [3] Connection 1
- [4] Connection 2
- [5] Seal
- [6] Mounting holes
- [7] Coding pin

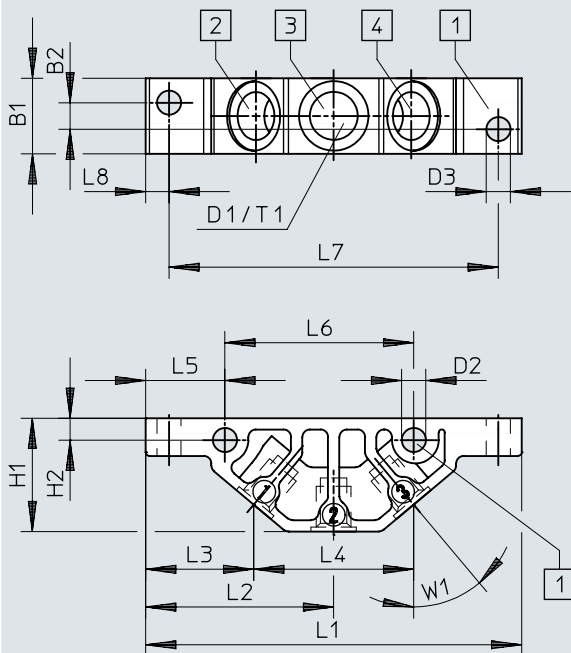
	B1	B2	B3	D1	D3 Ø	D4 Ø	H1	H2	H3	H5	H6	H7
VYKB-...-S	12	6	3	M3x0,5	3,2	1,2	46	27,2	15,8	1,5	3	5

	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L12
VYKB-...-S	40	33,8	1,7	34	3	22,5	7,5	6	6	20,3	28



## Dimensions

## Dimensions – Solenoid valve size 12 mm

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

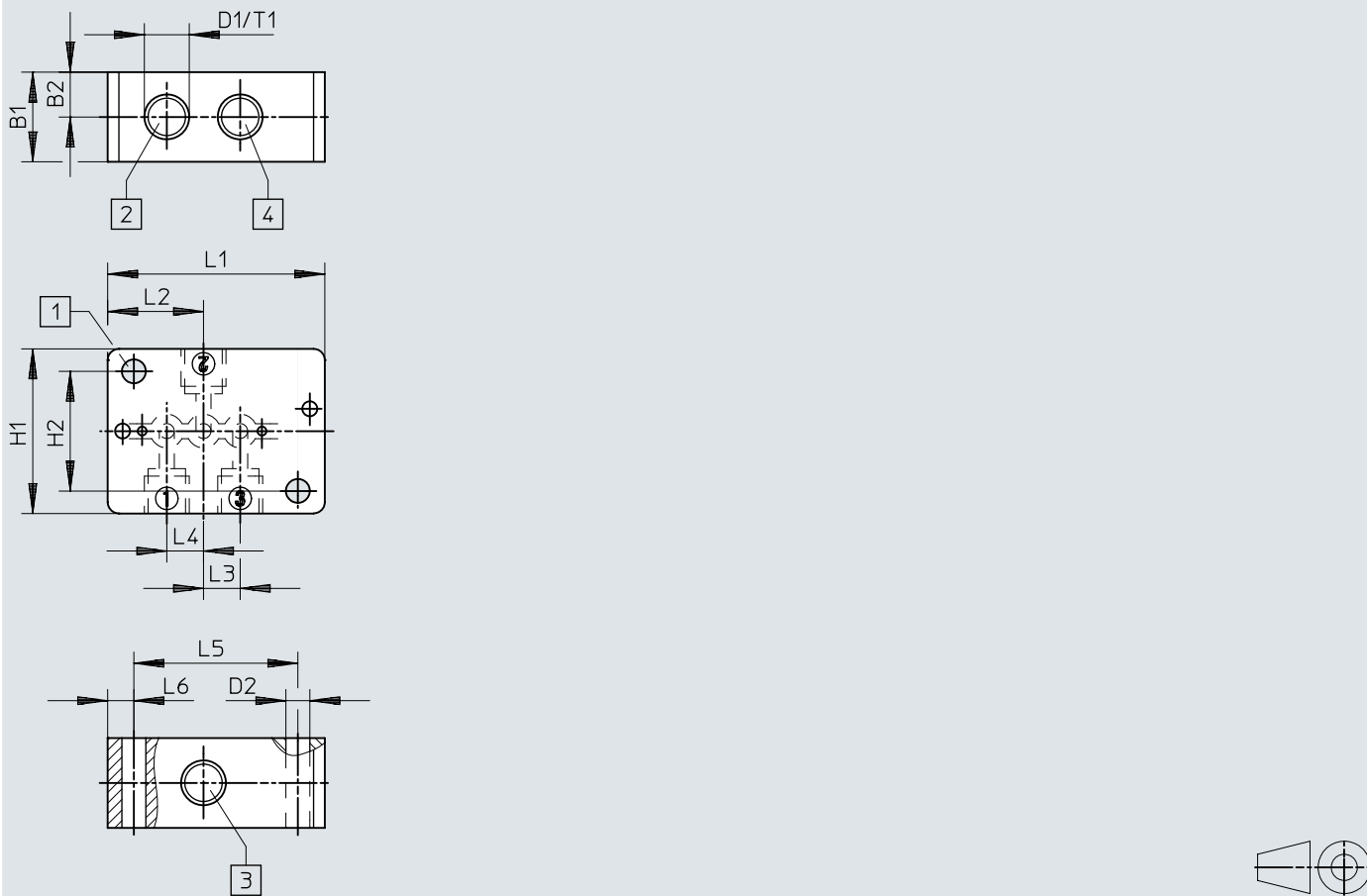
- [1] Retaining screws
- [2] Connection 1
- [3] Connection 2
- [4] Connection 3

	B1	B2	D1	D2 ∅	D3 ∅	H1	H2	L1	L2	L3	L4	L5	L6	L7	L8	T1	W1
VABS-K2-10B-16-M6-P	10	3,5	M6	3,2	3,2	15	2,9	49,8	24,9	14,3	21,2	10,5	25	43,6	3,1	6	40°
VABS-K2-10B-16-U14-P			1/4-28 UNF														

## Dimensions

### Dimensions – Manifold rail VABS-K2-10S

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

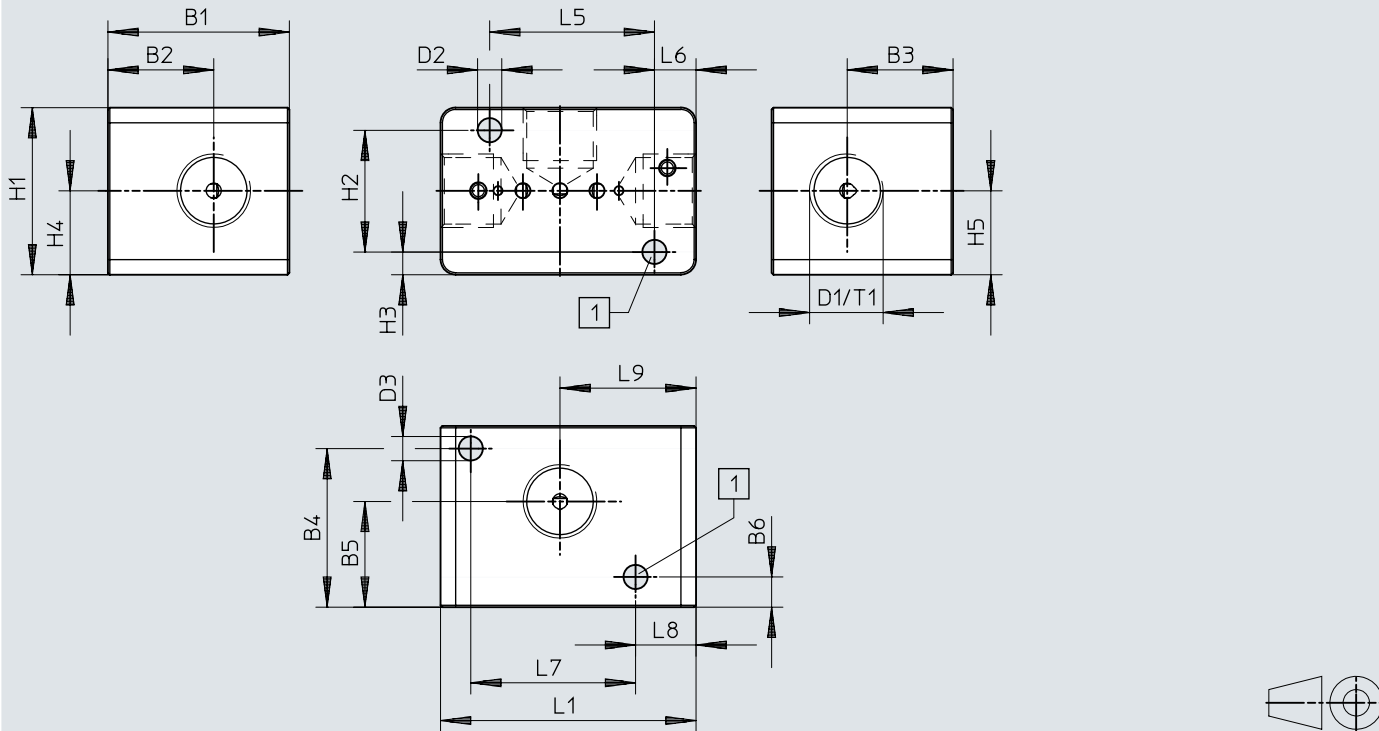


- [1] Retaining screws
- [2] Connection 1
- [3] Connection 2
- [4] Connection 3

	B1	B2	D1	D2 Ø	H1	H2	L1	L2	L3	L4	L5	L6	T1
VABS-K2-10S-16-M6-P	12	6	M6	3,2	22	16	29	12,8	4,9	4,9	21,9	3,5	6
VABS-K2-10S-16-U14-P			1/4-28 UNF										

## Dimensions

## Dimensions – Manifold rail VABS-K2-10-16-...-P

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

[1] Mounting holes

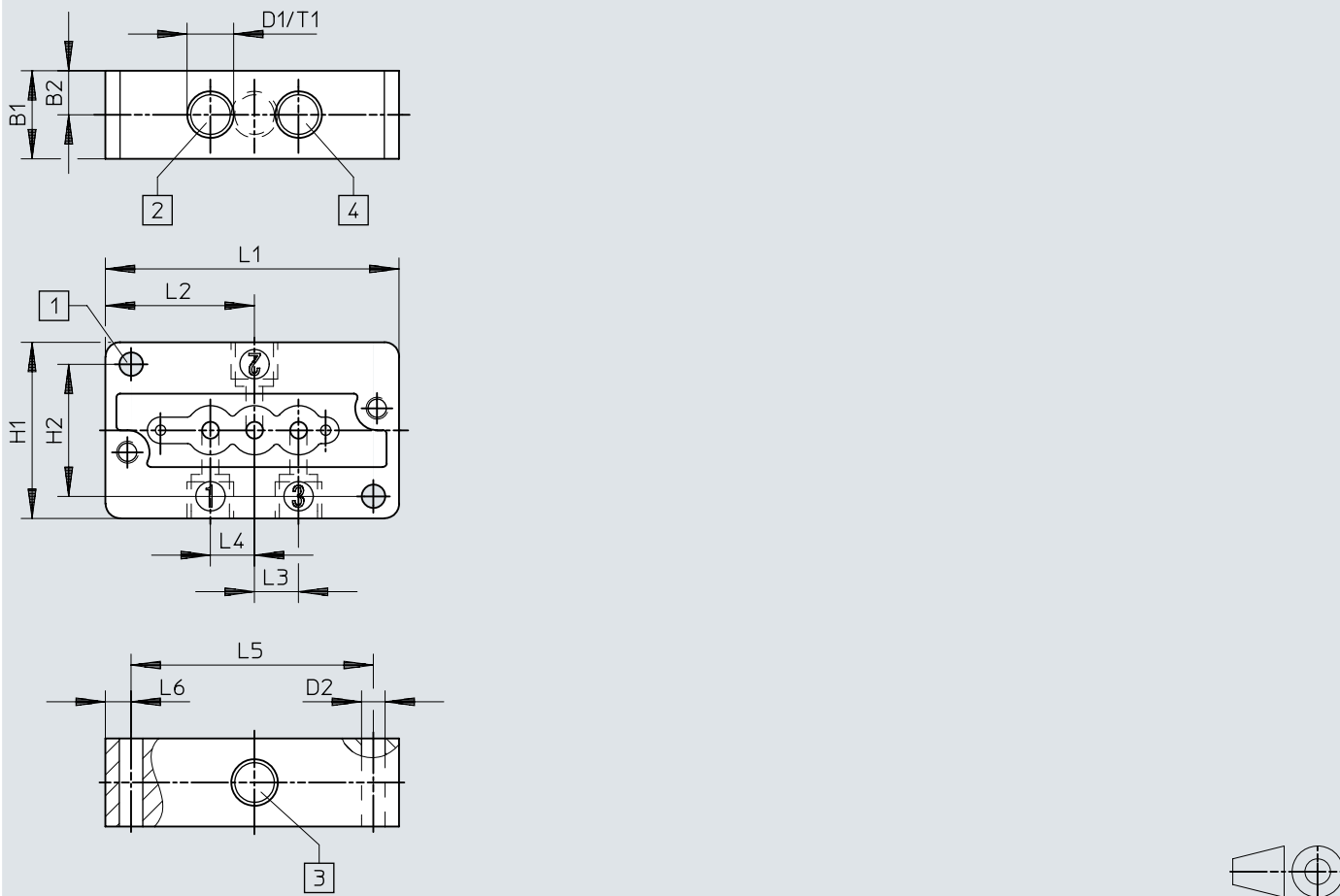
	B1	B2	B3	B4	B5	B6	D1	D2 ∅	D3 ∅
VABS-K2-10-16-G18-P	24	14	14	21	14	4	G1/8	3,2	3,2
VABS-K2-10-16-M5-P	24	14	14	21	14	4	M5	3,2	3,2

	H1	H2	H3	H4	H5	L1	L5	L6	L7	L8	L9	T1
VABS-K2-10-16-G18-P	22,1	16,1	3	11,1	11,1	33,8	21,8	5,5	21,8	8	18	8
VABS-K2-10-16-M5-P	22,1	16,1	3	11,1	11,1	33,8	21,8	5,5	21,8	8	18	6

## Dimensions

### Dimensions – Manifold rail VABS-K2-12S

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

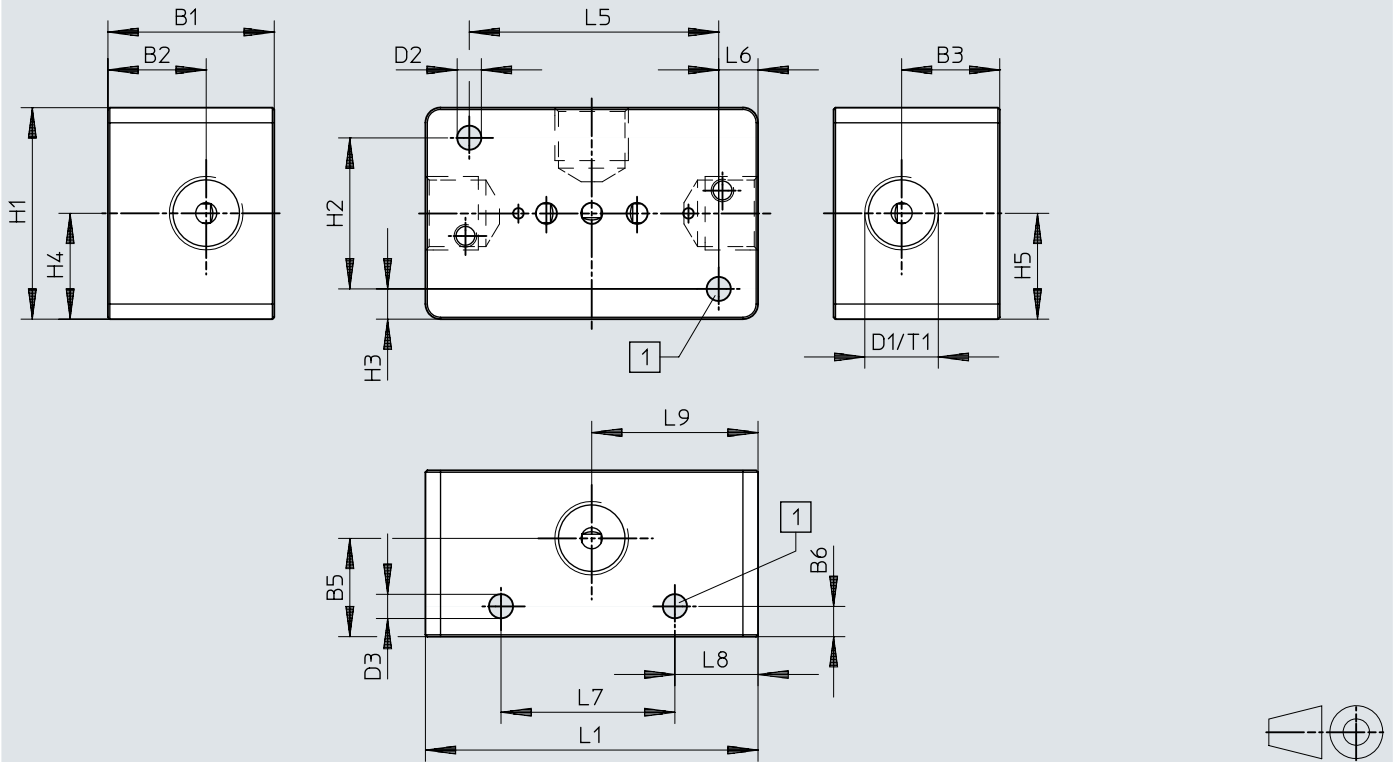


- [1] Retaining screws
- [2] Connection 1
- [3] Connection 2
- [4] Connection 3

	B1	B2	D1	D2 ∅	H1	H2	L1	L2	L3	L4	L5	L6	T1
VABS-K2-12S-20-M6-P	12	6	M6	3,2	24	18	40	20,3	6	6	33	3,5	6
VABS-K2-12S-20-U14-P			1/4-28 UNF										

## Dimensions

## Dimensions – Manifold rail VABS-K2-12S-20-...18-P


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


[1] Mounting holes

	B1	B2	B3	B5	B6	D1	D2 ∅	D3 ∅
VABS-K2-12S-20-G18-P	22	13	13	13	4	G1/8	3,2	3,2
VABS-K2-12S-20-N18-P	22	13	13	13	4	NPT1/8-27	3,2	3,2

	H1	H2	H3	H4	H5	L1	L5	L6	L7	L8	L9	T1
VABS-K2-12S-20-G18-P	28	20	4	14	14	44	33	5,2	23	11	22	8
VABS-K2-12S-20-N18-P	28	20	4	14	14	44	33	5,2	23	11	22	10


## Ordering data

Ordering data, solenoid valve size 10 mm						
	Valve function	Diaphragm and sealing material	Outlet direction of electrical components	Part no.	Type	
	2/2-way, closed, monostable	EPDM	Angled	8122801	VYKB-F10-M22C-16-PE-5HPA	
				8122804	VYKB-F10-M22C-16-PE-1HPA	
				8122816	VYKB-F10-M22C-16-PE-1HPS	
			Straight	8140315	VYKB-F12-M22C-20-PE-5HPS	
				8140316	VYKB-F12-M22C-20-PE-1HPS	
				8122813	VYKB-F10-M22C-16-PE-5HPS	
		FFPM	Angled	8122806	VYKB-F10-M22C-16-PF-1HPA	
				8122803	VYKB-F10-M22C-16-PF-5HPA	
				8122818	VYKB-F10-M22C-16-PF-1HPS	
			Straight	8122815	VYKB-F10-M22C-16-PF-5HPS	
				8122802	VYKB-F10-M22C-16-PV-5HPA	
				8122805	VYKB-F10-M22C-16-PV-1HPA	
	FPM	Angled	8122817	VYKB-F10-M22C-16-PV-1HPS		
			8122814	VYKB-F10-M22C-16-PV-5HPS		
			3/2-way, monostable, open/closed	EPDM	Angled	8122807
		8122810				VYKB-F10-M32-16-PE-1HPA
		Straight				8140318
					8122819	VYKB-F10-M32-16-PE-5HPS
8140317	VYKB-F12-M32-20-PE-5HPS					
FFPM	Angled	8122822			VYKB-F10-M32-16-PE-1HPS	
		8122812	VYKB-F10-M32-16-PF-1HPA			
		8122809	VYKB-F10-M32-16-PF-5HPA			
	Straight	8122821	VYKB-F10-M32-16-PF-5HPS			
		8122824	VYKB-F10-M32-16-PF-1HPS			
		FPM	Angled	8122808	VYKB-F10-M32-16-PV-5HPA	
8122811	VYKB-F10-M32-16-PV-1HPA					
Straight	8122820			VYKB-F10-M32-16-PV-5HPS		
	8122823		VYKB-F10-M32-16-PV-1HPS			

Ordering data, solenoid valve size 12 mm						
	Valve function	Diaphragm and sealing material	Outlet direction of electrical components	Part no.	Type	
	2/2-way, closed, monostable	EPDM	Angled	8122801	VYKB-F10-M22C-16-PE-5HPA	
				8122804	VYKB-F10-M22C-16-PE-1HPA	
				8122816	VYKB-F10-M22C-16-PE-1HPS	
			Straight	8140315	VYKB-F12-M22C-20-PE-5HPS	
				8140316	VYKB-F12-M22C-20-PE-1HPS	
				8122813	VYKB-F10-M22C-16-PE-5HPS	
		FFPM	Angled	8122806	VYKB-F10-M22C-16-PF-1HPA	
				8122803	VYKB-F10-M22C-16-PF-5HPA	
				8122818	VYKB-F10-M22C-16-PF-1HPS	
			Straight	8122815	VYKB-F10-M22C-16-PF-5HPS	
				8122802	VYKB-F10-M22C-16-PV-5HPA	
				8122805	VYKB-F10-M22C-16-PV-1HPA	
	FPM	Angled	8122817	VYKB-F10-M22C-16-PV-1HPS		
			8122814	VYKB-F10-M22C-16-PV-5HPS		
			3/2-way, monostable, open/closed	EPDM	Angled	8122807
		8122810				VYKB-F10-M32-16-PE-1HPA
		Straight				8140318

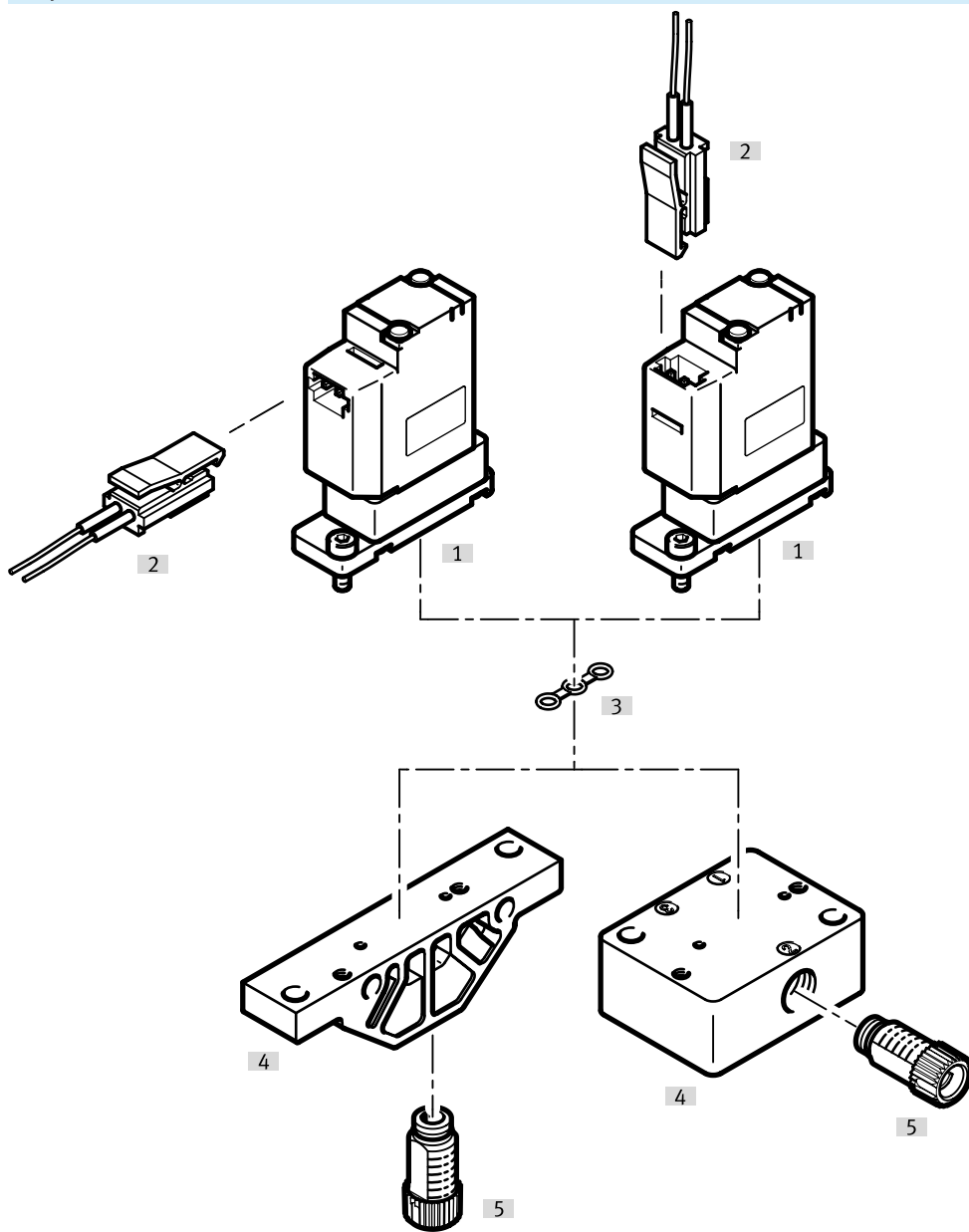
## Ordering data

## Ordering data, solenoid valve size 12 mm

	Valve function	Diaphragm and sealing material	Outlet direction of electrical components	Part no.	Type
	3/2-way, monostable, open/closed	EPDM	Straight	8122819	VYKB-F10-M32-16-PE-5HPS
				8140317	VYKB-F12-M32-20-PE-5HPS
				8122822	VYKB-F10-M32-16-PE-1HPS
		FFPM	Angled	8122812	VYKB-F10-M32-16-PF-1HPA
				8122809	VYKB-F10-M32-16-PF-5HPA
				8122821	VYKB-F10-M32-16-PF-5HPS
			Straight	8122824	VYKB-F10-M32-16-PF-1HPS
				8122808	VYKB-F10-M32-16-PV-5HPA
				8122811	VYKB-F10-M32-16-PV-1HPA
		FPM	Angled	8122820	VYKB-F10-M32-16-PV-5HPS
				8122823	VYKB-F10-M32-16-PV-1HPS
			Straight		

## Peripherals

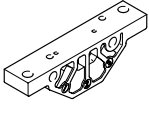
### Peripherals overview

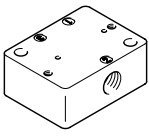


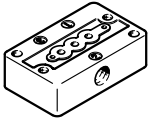
Accessories			→ Link
Type/order code	Description		
[1] Solenoid valve	VYKB		<a href="#">↗</a>
[2] Connecting cable	NEBV-HPG2		<a href="#">17</a>
[3] Seal	VAVC-K2		<a href="#">17</a>
[4] Manifold rail	VABS-K2		<a href="#">17</a>
[5] Fitting	NLFA-D		<a href="#">17</a>





## Accessories


Manifold rail, connection underneath, size 10 mm				
	Fluid connection	Part no.	Type	
	Female thread 1/4-28 UNF-2B	8122826	VABS-K2-10B-16-U14-P	
	M6 female thread	8122825	VABS-K2-10B-16-M6-P	


Manifold rail, connection on the side, size 10 mm				
	Fluid connection	Part no.	Type	
	Female thread 1/4-28 UNF-2B	8122828	VABS-K2-10S-16-U14-P	
	Female thread G1/8	8186874	VABS-K2-10S-16-G18-P	
	Female thread M5	8186875	VABS-K2-10S-16-M5-P	
	M6 female thread	8122827	VABS-K2-10S-16-M6-P	

Manifold rail, connection on the side, size 12 mm				
	Fluid connection	Part no.	Type	
	Female thread 1/4-28 UNF-2B	8140320	VABS-K2-12S-20-U14-P	
	Female thread 1/8 NPT	8186870	VABS-K2-12S-20-N18-P	
	Female thread G1/8	8186871	VABS-K2-12S-20-G18-P	
	M6 female thread	8140319	VABS-K2-12S-20-M6-P	

Connecting cable					
	Electrical connection 1, connection type	Electrical connection 1, cable outlet	Electrical connection 1, connector system	Part no.	Type
	Cable with socket	Straight	Connection pattern HP	8122832	NEBV-HPG2-PN-0.3-N-LE2

Seal (included in the scope of delivery of the valves), for valves size 10 mm, for mounting on manifold rails				
	Material seals	Part no.	Type	
	EPDM	8122829	VAVC-K2-S-3-E	
	FFPM	8122831	VAVC-K2-S-3-F	
	FPM	8122830	VAVC-K2-S-3-V	

Fitting				
	Fluid connection	Fluid connection 2	Part no.	Type
	UNF1/4-28	For tubing O.D. 3 mm	8104286	NLFA-D-U14-K3-PP-P10
		For tubing I.D. 1.2 mm	8104288	NLFA-D-U14-B1.2-PP-P10
		For tubing I.D. 2.1 mm	8104289	NLFA-D-U14-B2.1-PP-P10
		For tubing O.D. 1.6 mm (1/16")	8104285	NLFA-D-U14-K1.6-PP-P10
		For tubing O.D. 3.2 mm (1/8")	8104287	NLFA-D-U14-K3.2-PP-P10

Fitting				
	Pneumatic connection, port 1	Pneumatic connection, port 2	Part no.	Type
	Male thread M6	For tubing outside diameter of 6 mm	★ 132600	QSM-M6-6