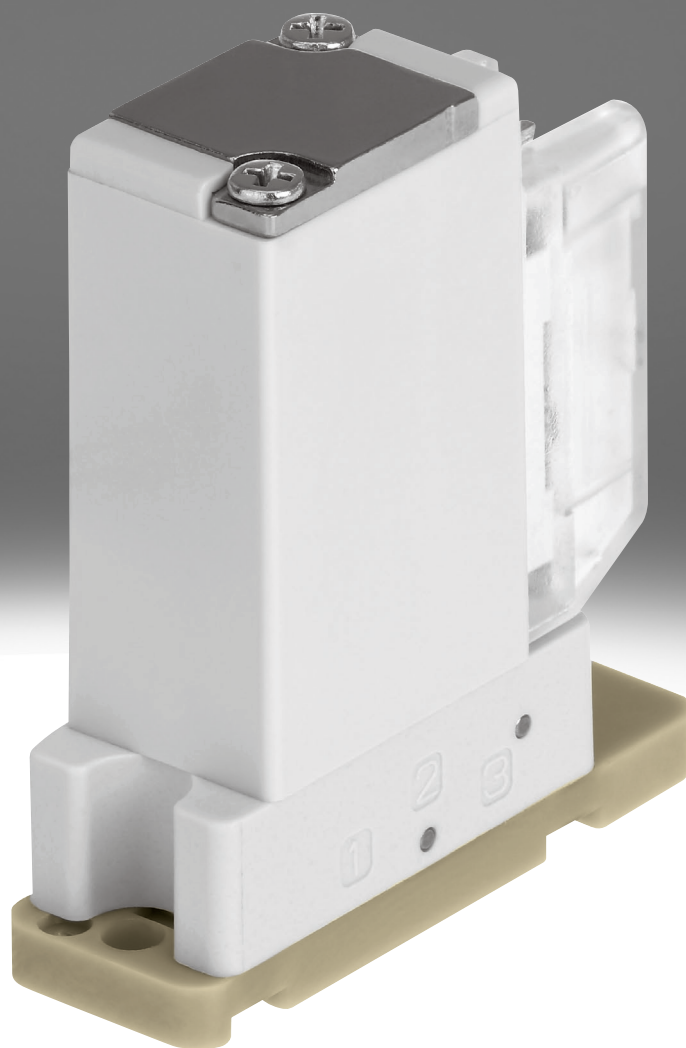


Media separated solenoid valve VYKB

FESTO



Characteristics

At a glance

[Link !\[\]\(99f58673407353e96a019fbca558fd72_img.jpg\) vykb](#)

Special characteristics:

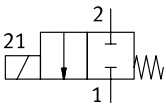
- Very easy to clean thanks to media separation
- Low media consumption thanks to small internal volume
- High-quality materials, therefore also suitable for aggressive media
- High flow rate with small size
- High repetition accuracy, switching frequency and precision, therefore also suitable for extremely 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:

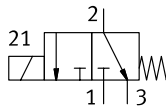
- The media separated solenoid valve VYKB is intended for mounting in laboratory devices. The valve is used to control gaseous and liquid media in line with its technical data.
- The valve VYKA is a directly actuated valve with solenoid coil. When de-energised, the valve automatically returns to its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

Valve function

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

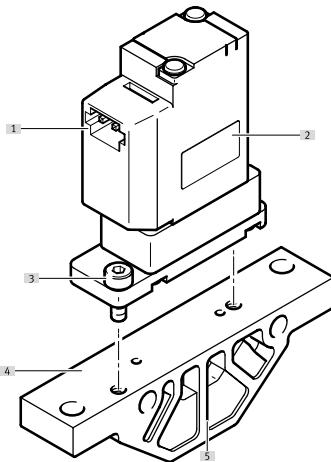


[M32] 3/2-way valve, normally closed or open



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

001	Series	
VYKB	Solenoid valve VYKB	

002	Directional control valve type	
F	Flanged valve	

003	Size	
10	Size 10	
12	Size 12	

004	Valve function	
M22C	2/2-way valve, normally closed	
M32	3/2-way valve, normally closed or open	

005	Nominal width	
16	1.6 mm	
20	2 mm	

006	Housing material	
P	PEEK	

007	Diaphragm and sealing material	
E	EPDM	
F	FFPM	
V	FPM	

008	Nominal operating voltage	
1	24 V DC	
5	12 V DC	

009	Electrical connection	
HP	Port pattern HP	

010	Outlet direction of electrical components	
A	Angled	
S	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 ³ /h	0.056 m ³ /h	0.034 m ³ /h	0.056 m ³ /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 ¹⁾	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	-0.075 ... 0.1 MPa	-0.075 ... 0.3 MPa
Medium pressure	-0.75 ... 1 bar	-0.75 ... 3 bar
Medium pressure	-10.875 ... 14.5 psi	-10.875 ... 43.5 psi

Materials		
Size	10	12
Material in contact with the medium	EPDM FFPM FPM PEEK	EPDM PEEK
Material housing	PEEK	
Material membrane	EPDM FFPM FPM	EPDM
Material seals	EPDM FFPM FPM	EPDM
Note on materials	RoHS-compliant	

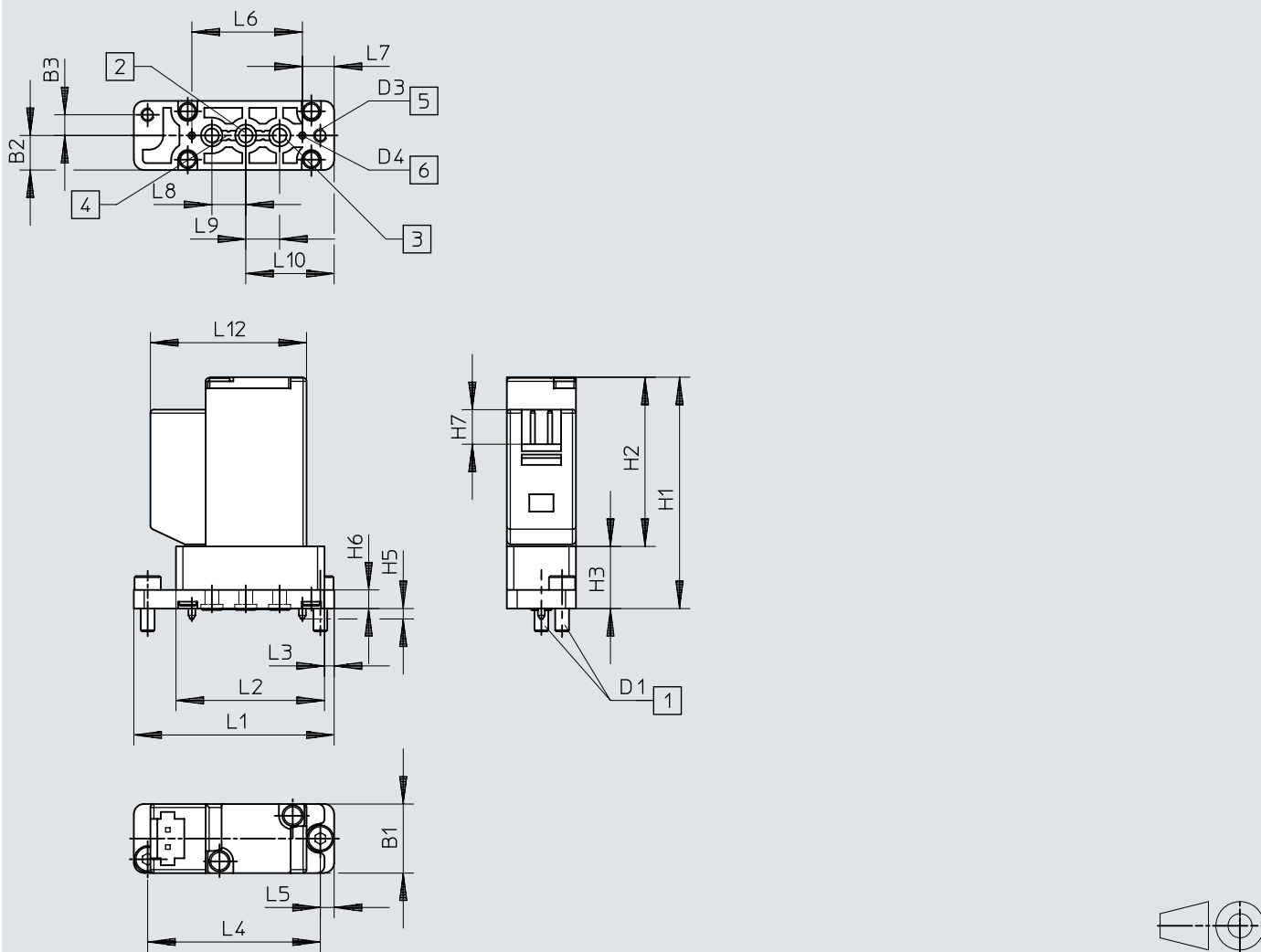
Datasheet

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

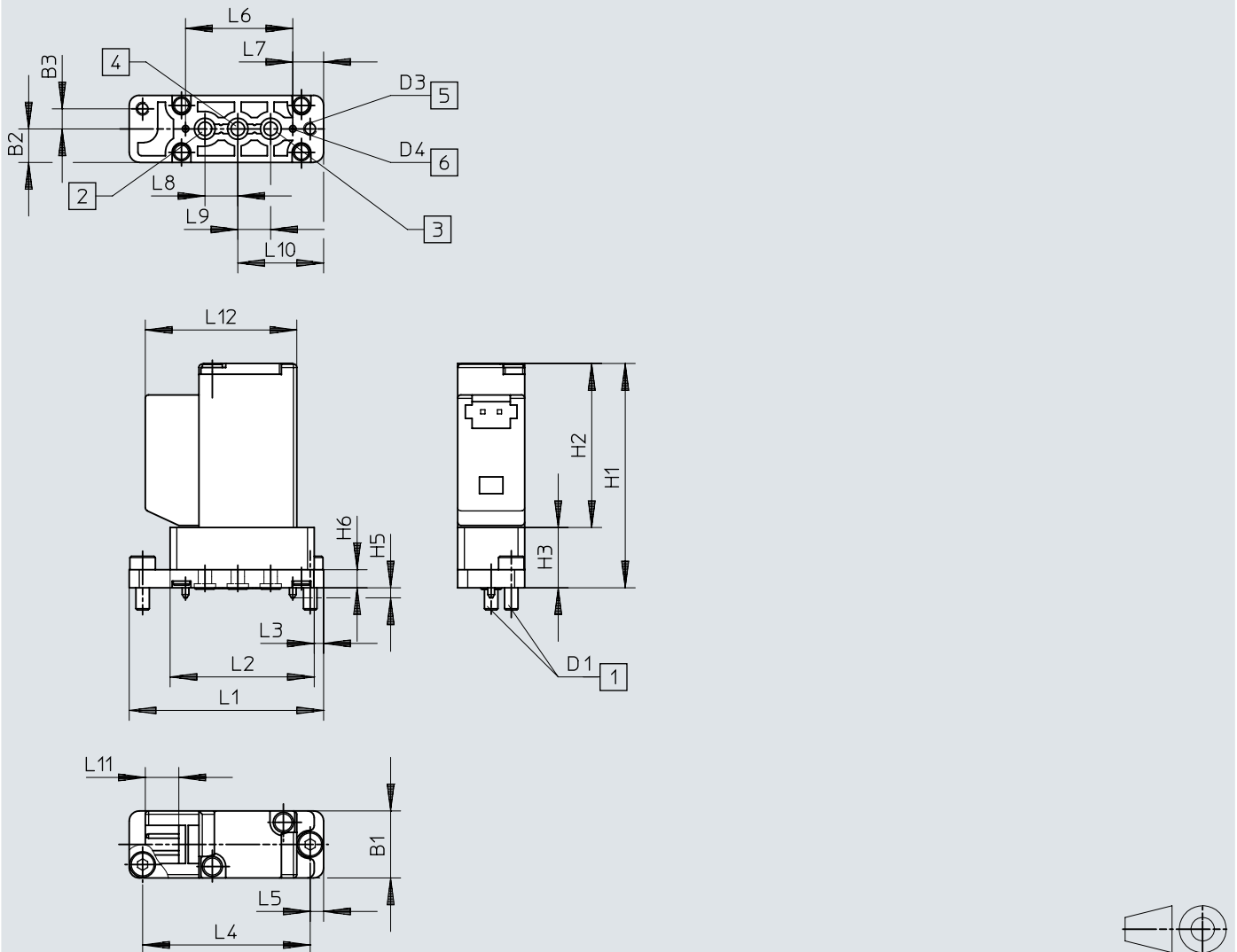


- [1] Retaining screws
- [2] Connection 3
- [3] Connection 1
- [4] Connection 2
- [5] Mounting holes
- [6] Coding pin

	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

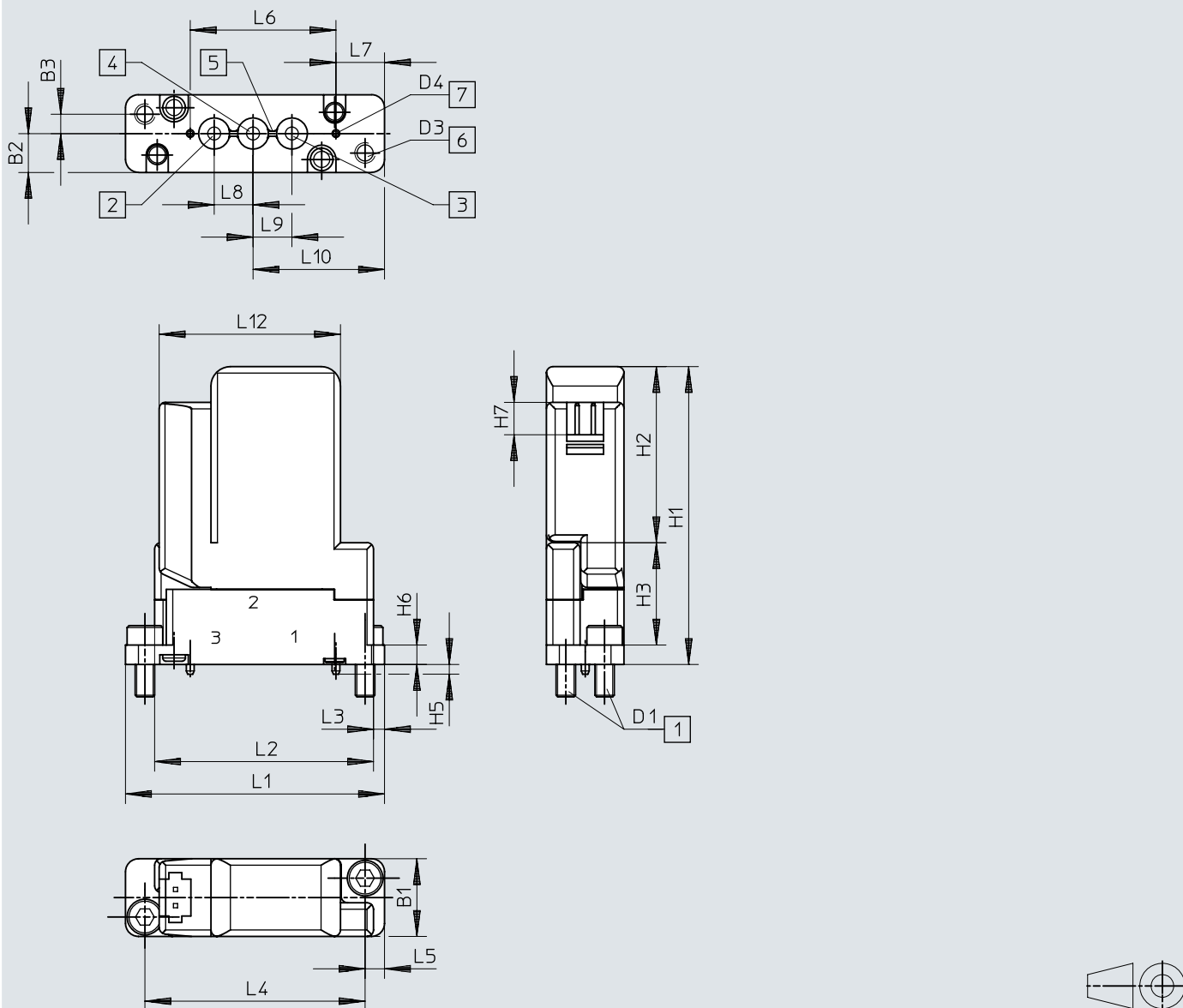
- [1] Retaining screws
- [2] Connection 3
- [3] Connection 1
- [4] Connection 2
- [5] Mounting holes
- [6] Coding pin

	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



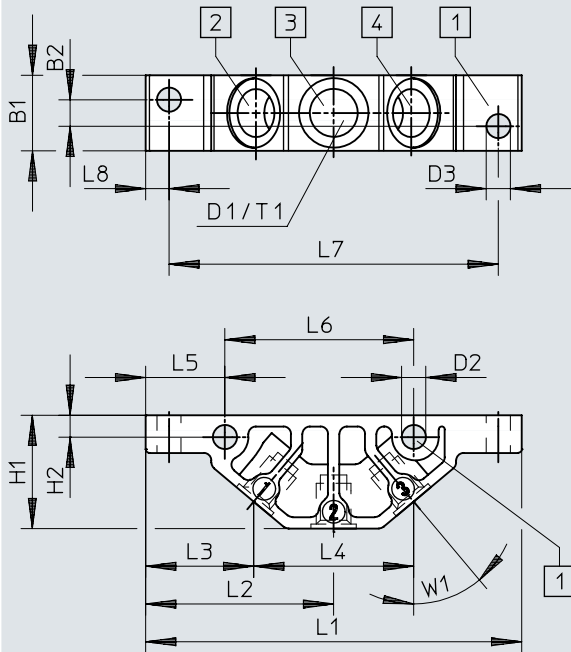
- [1] Retaining screws
- [2] Connection 3
- [3] Connection 1
- [4] Connection 2
- [5] Seal
- [6] Mounting holes
- [7] Coding pin

	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

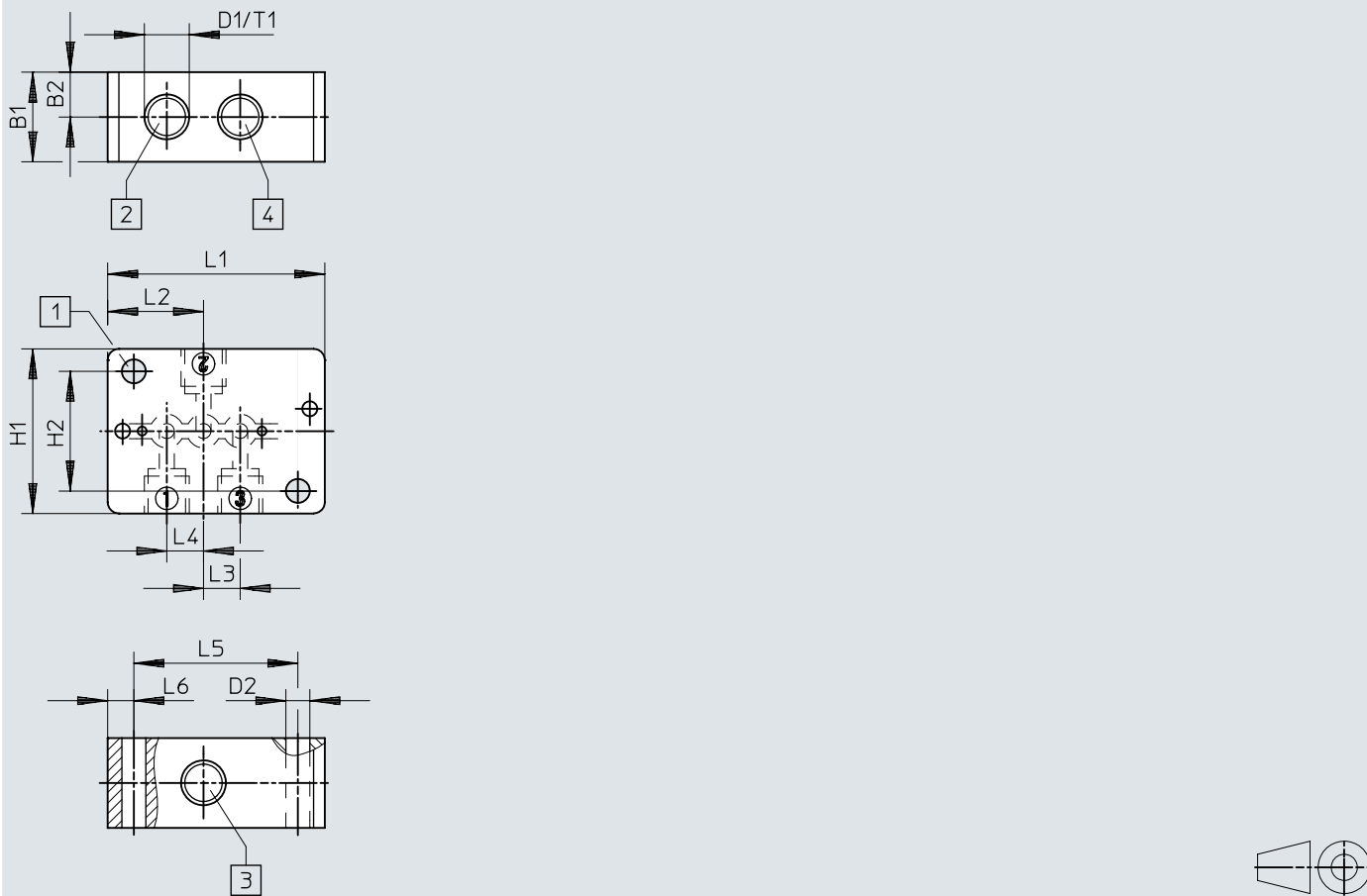
- [1] Retaining screws
- [2] Connection 1
- [3] Connection 2
- [4] Connection 3

	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

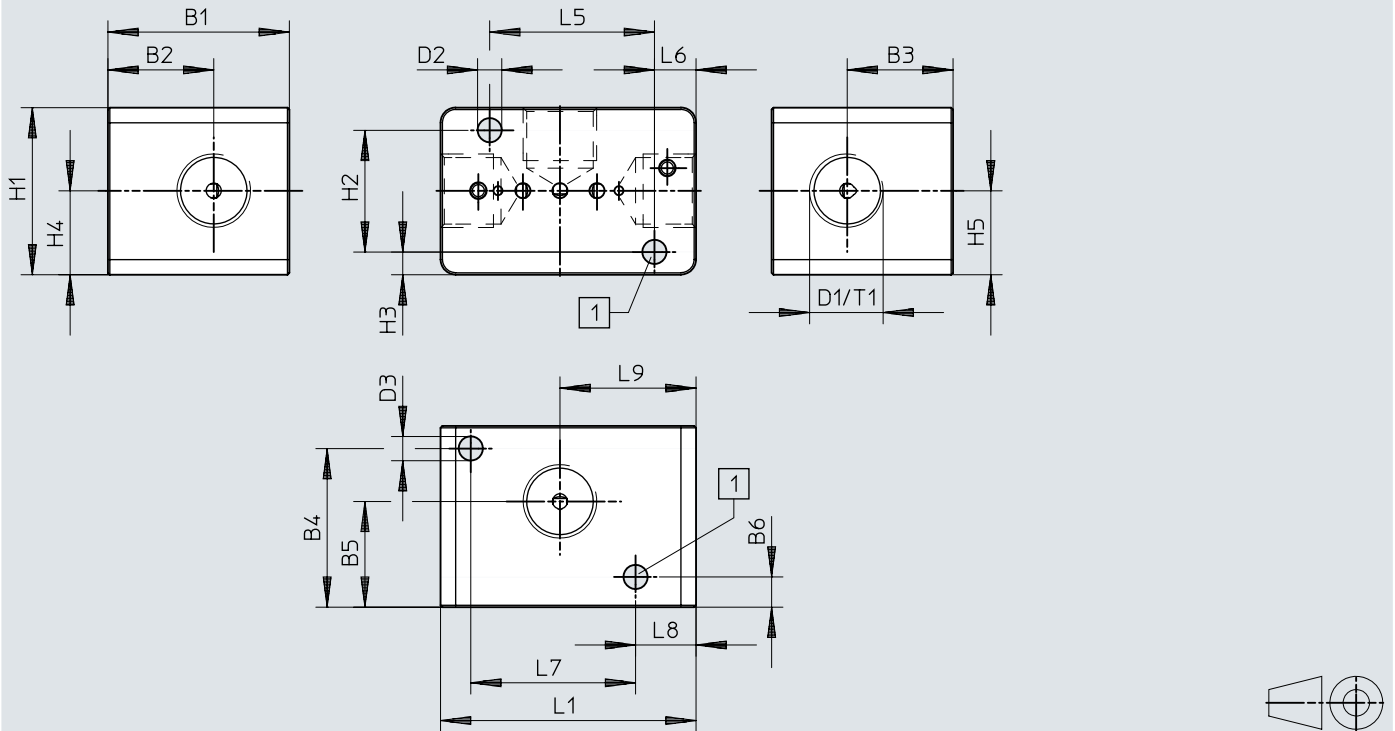


- [1] Retaining screws
- [2] Connection 1
- [3] Connection 2
- [4] Connection 3

	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

[1] Mounting holes

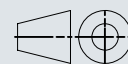
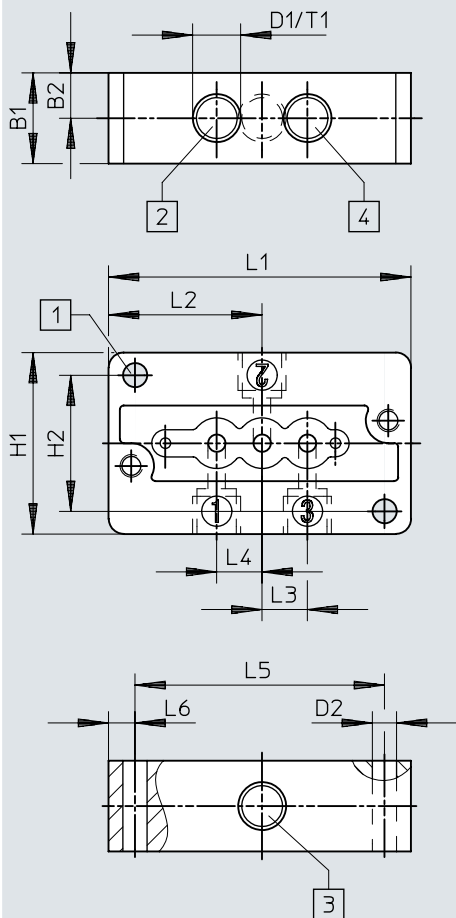
	B1	B2	B3	B4	B5	B6	D1	D2 ∅	D3 ∅
VABS-K2-10-16-G18-P	24	14	14	21	14	4	G1/8	3,2	3,2
VABS-K2-10-16-M5-P	24	14	14	21	14	4	M5	3,2	3,2

	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

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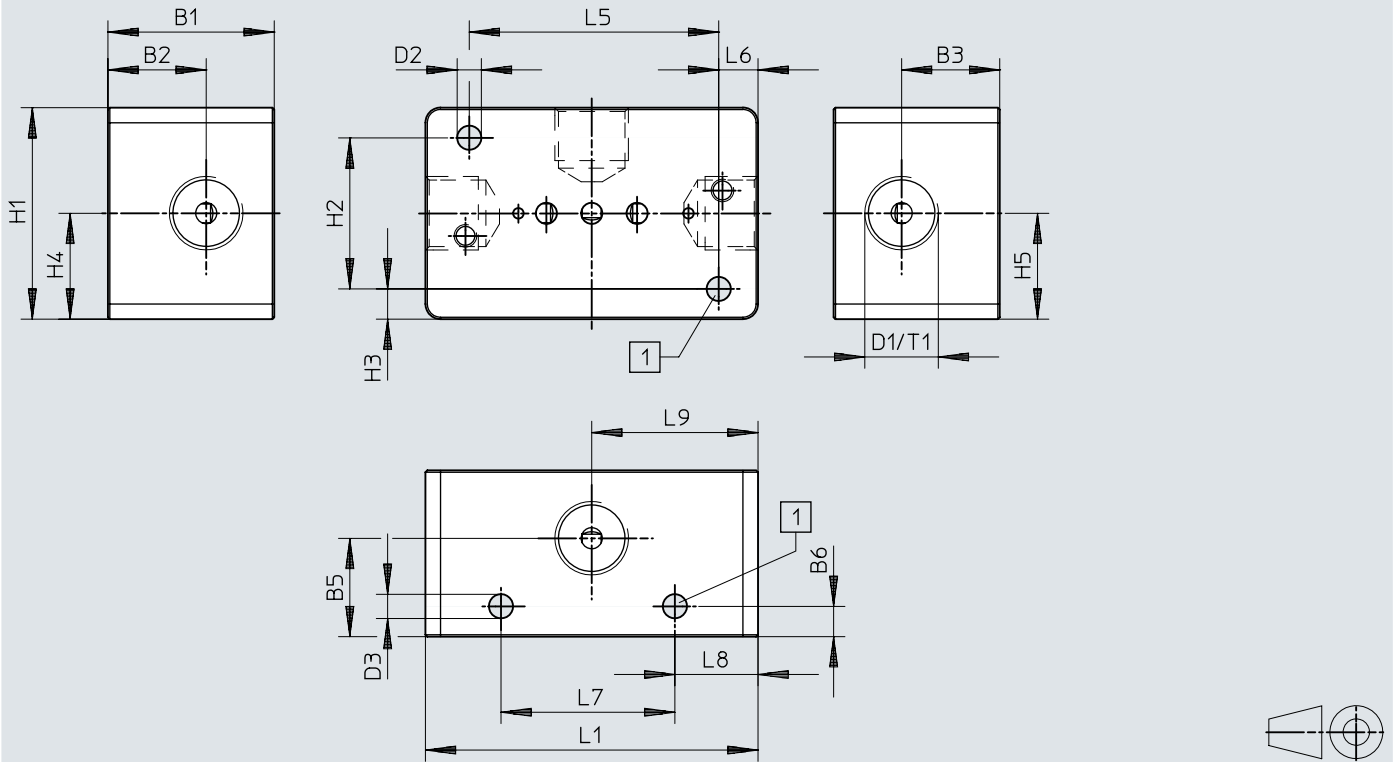


- [1] Retaining screws
- [2] Connection 1
- [3] Connection 2
- [4] Connection 3

	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


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[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

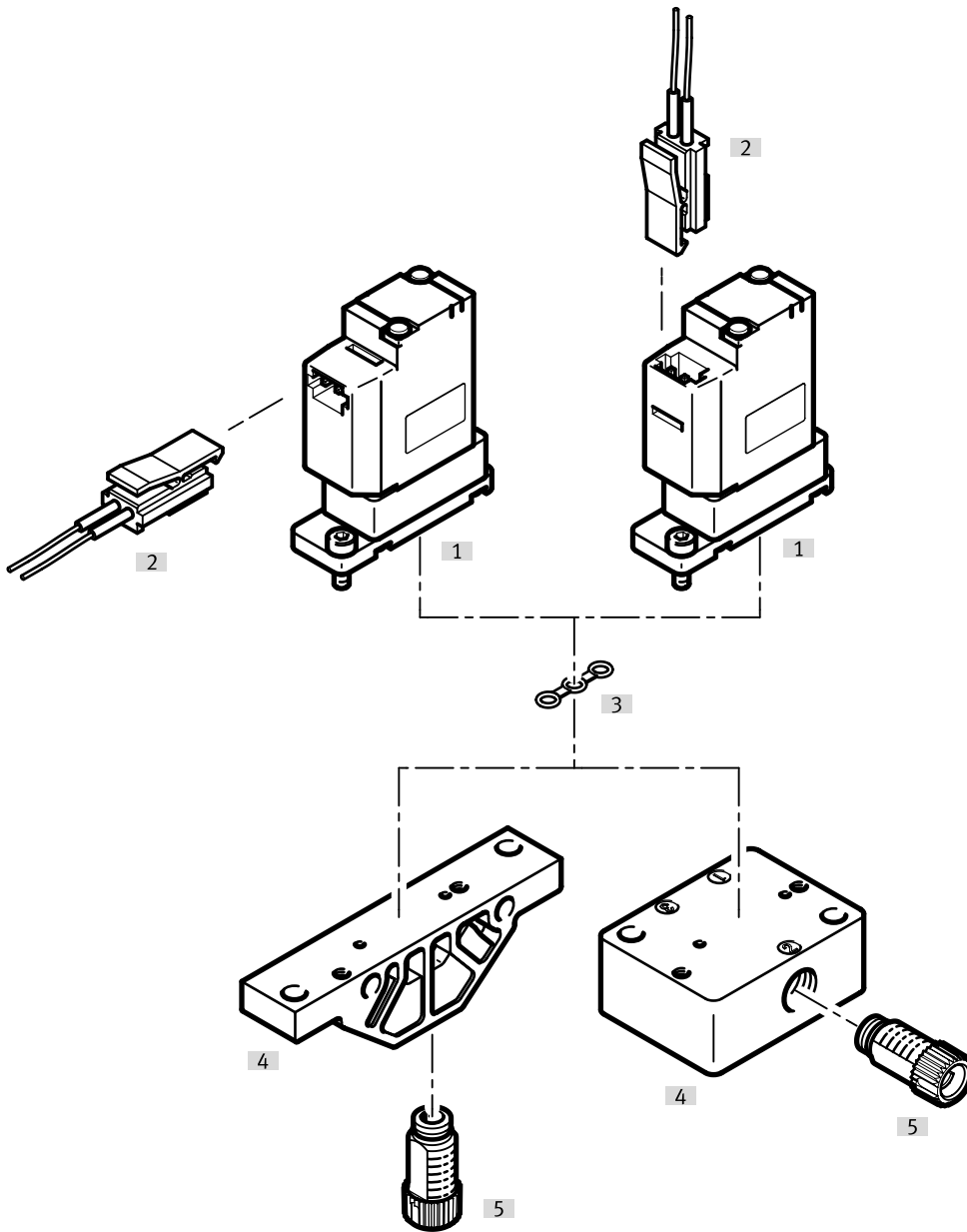
Ordering data

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	
			Straight	8122816	VYKB-F10-M22C-16-PE-1HPS	
				8122813	VYKB-F10-M22C-16-PE-5HPS	
			FFPM	Angled	8122803	VYKB-F10-M22C-16-PF-5HPA
					8122806	VYKB-F10-M22C-16-PF-1HPA
		Straight	8122818	VYKB-F10-M22C-16-PF-1HPS		
			8122815	VYKB-F10-M22C-16-PF-5HPS		
		FPM	Angled	8122802	VYKB-F10-M22C-16-PV-5HPA	
				8122805	VYKB-F10-M22C-16-PV-1HPA	
			Straight	8122817	VYKB-F10-M22C-16-PV-1HPS	
				8122814	VYKB-F10-M22C-16-PV-5HPS	
	3/2-way, monostable, open/closed		EPDM	Angled	8122807	VYKB-F10-M32-16-PE-5HPA
					8122810	VYKB-F10-M32-16-PE-1HPA
		Straight		★ 8122822	VYKB-F10-M32-16-PE-1HPS	
				8122819	VYKB-F10-M32-16-PE-5HPS	
		FFPM	Angled	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	Straight	★ 8140315	VYKB-F12-M22C-20-PE-5HPS
	3/2-way, monostable, open/closed			8140316	VYKB-F12-M22C-20-PE-1HPS
				8140317	VYKB-F12-M32-20-PE-5HPS
				★ 8140318	VYKB-F12-M32-20-PE-1HPS

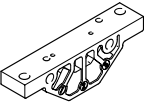
Peripherals

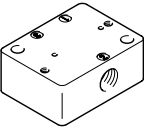
Peripherals overview

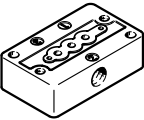



Accessories			→ Link
Type/order code	Description		
[1] Solenoid valve	VYKB		-
[2] Connecting cable	NEBV-HPG2		16
[3] Seal	VAVC-K2		16
[4] Manifold rail	VABS-K2		16
[5] Fitting	NLFA-D		16


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