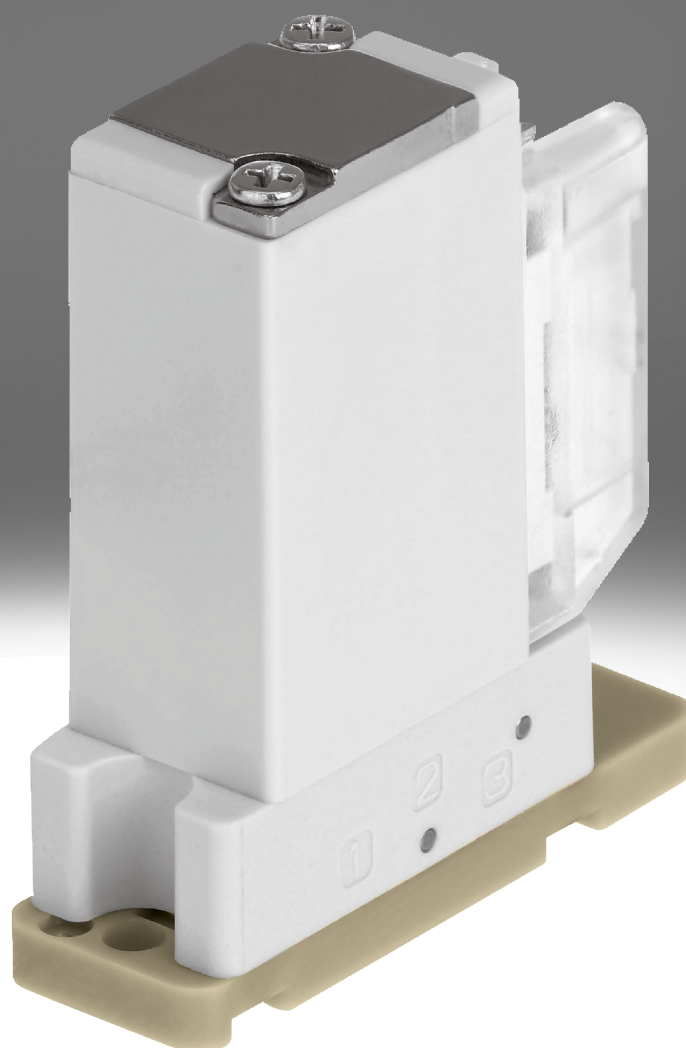


Media separated solenoid valve VYKB

FESTO



Characteristics

At a glance

[Link](#) [vykb](#)

General information:

- Media-separated diaphragm valve for switching different gases and liquids
- Directly actuated solenoid valve with spring return for voltages of 12V and 24V
- Large pressure/vacuum range and high flow rate with different nominal widths
- Extremely versatile thanks to 2/2-way and 3/2-way variants, ideal for controlling and mixing media
- Extensive range of accessories for electrical and fluidic connection options for customised integration of components

Special characteristics:

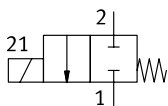
- Very easy to clean thanks to media separation
- Low media consumption thanks to small internal volume
- High-quality materials, therefore also suitable for aggressive media
- Low media consumption and easy to clean thanks to small internal volume

Function:

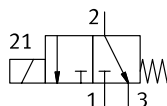
- The valve VYKA is a directly actuated valve with solenoid coil. When de-energised, the valve automatically returns to its normal position.

Valve function

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

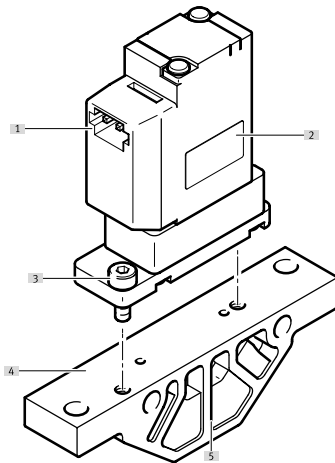


[M32] 3/2-way valve, normally closed or open



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, single solenoid, closed		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			
Internal volume	35 µl	60 µl	35 µl	60 µl
Sealing principle	Soft			
Flow direction	Non-reversible			
Type of actuation	Electrical			
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	Any			
Degree of protection	IP40			
Product weight	18 g	40 g	18 g	40 g

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	
Standard nominal flow rate (standardised to DIN 1343)	18 l/min	–
Note on standard nominal flow rate	In case of a pressure drop of 1 → 0 bar (gaseous media)	–
Flow rate Kv	0.034 m³/h	0.056 m³/h
Flow rate Kv	0.57 l/min	0.93 l/min
Note on flow rate Kv	For water as medium, Pressure difference 1 bar	
Ambient temperature	0 ... 50°C	
Media temperature	0 ... 50°C	
Storage temperature	-20 ... 70°C	
Corrosion resistance class CRC	0 - No corrosion stress	
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

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%
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%			
Electrical connection 1, connection type	Cable with plug			
Electrical connection 1, connector system	Plug pattern HP			

Datasheet

Switching frequency

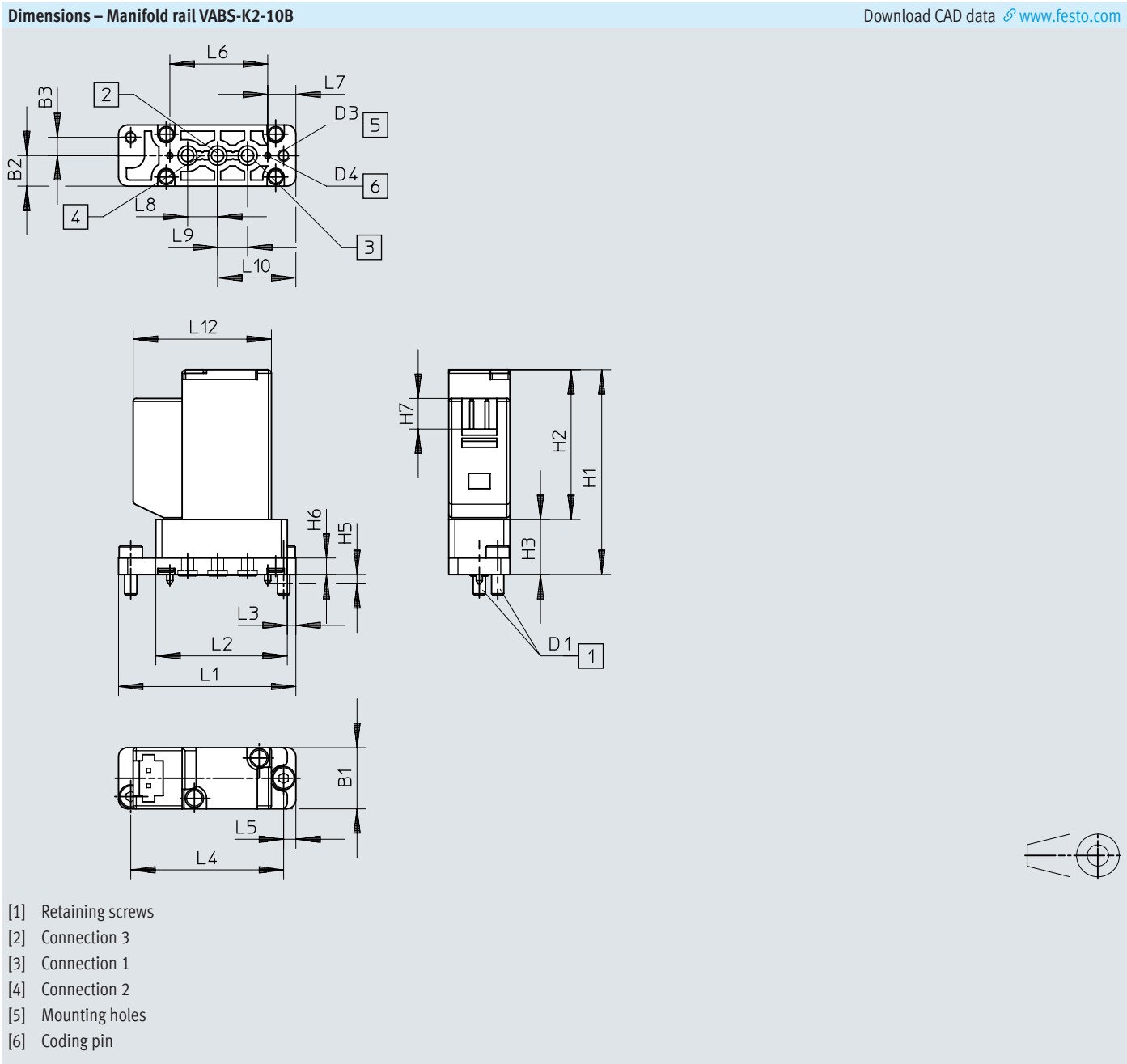
Diaphragm and sealing material	EPDM [E]	FFPM [F]	FPM [V]
Switching time on gaseous media	15 ms	20 ms	15 ms
Switching time off gaseous media	15 ms	20 ms	15 ms
Max. switching frequency ¹⁾	2 Hz		
Note on switching frequency	Dependent on the ambient temperature and installation state		

1) With 100% duty cycle

Materials

Size	10	12
Material housing	PEEK	
Material membrane	EPDM FFPM Fluoro rubber	EPDM
Material seals	EPDM FFPM Fluoro rubber	EPDM
Note on materials	RoHS compliant	

Dimensions

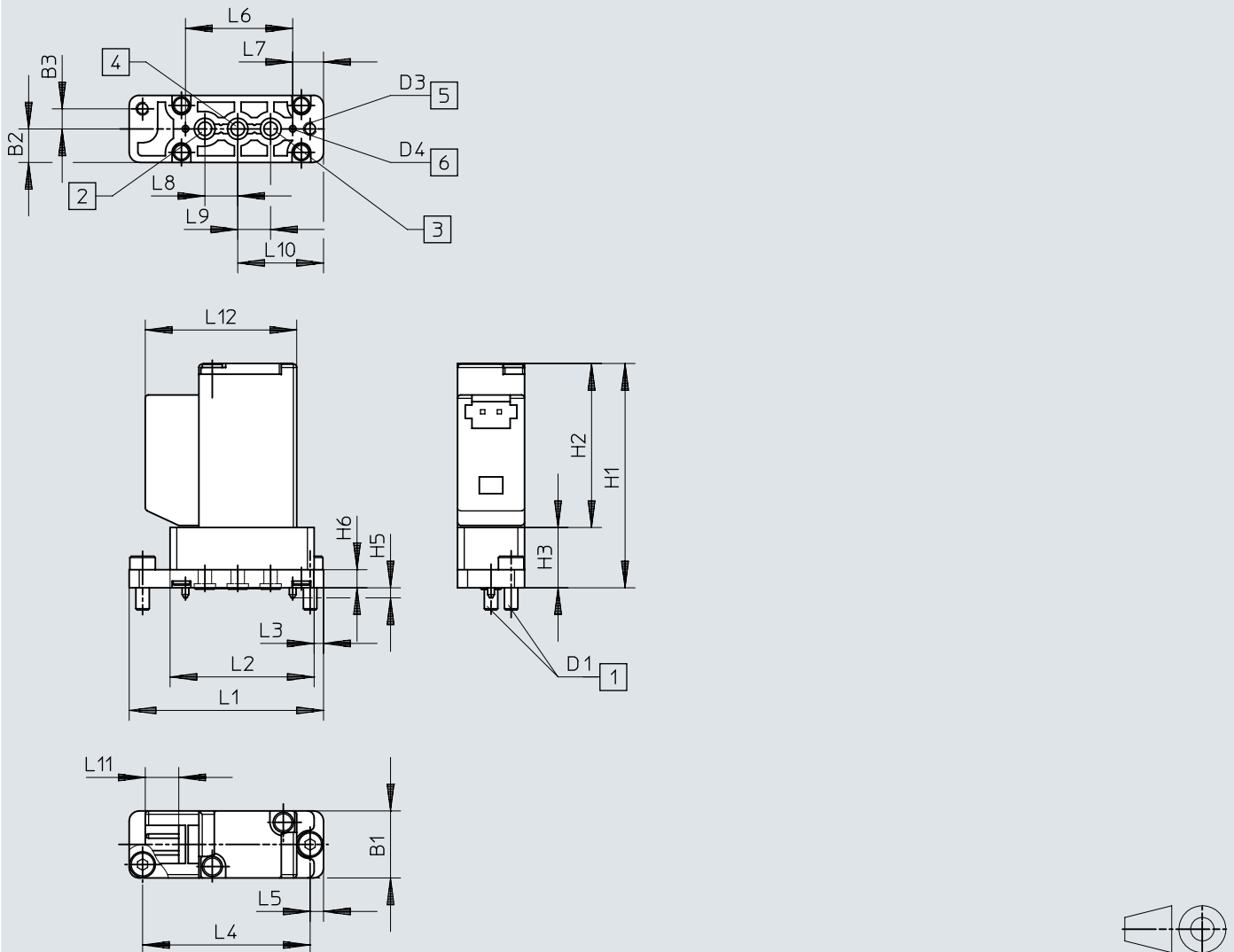


	B1	B2	B3	D1	D3 Ø	D4 Ø	H1	H2	H3	H5	H6	H7
VYKB-...-S	10	5	3	M2x0,4	2,1	1	33,5	24,5	9	1,5	2,7	5

	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

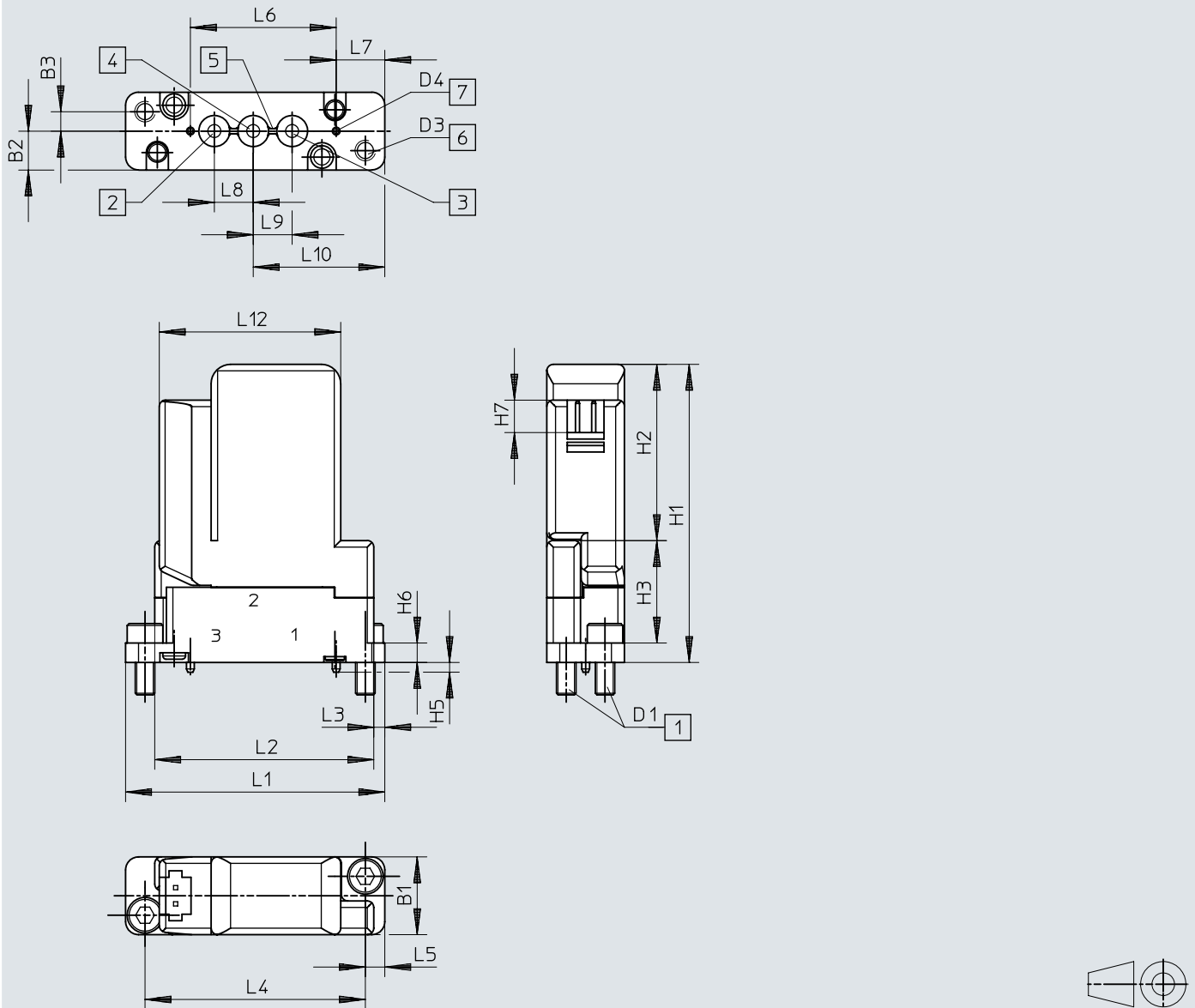
- [1] Retaining screws
- [2] Connection 3
- [3] Connection 1
- [4] Connection 2
- [5] Mounting holes
- [6] Coding pin

	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



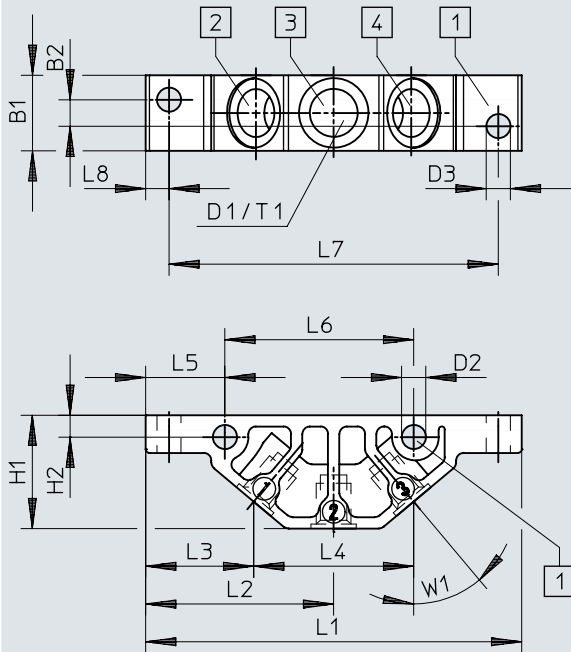
- [1] Retaining screws
- [2] Connection 3
- [3] Connection 1
- [4] Connection 2
- [5] Seal
- [6] Mounting holes
- [7] Coding pin

	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

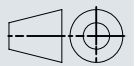
	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L12
VYKB-...-S	40	33,8	1,7	34	3	22,5	7,5	6	6	20,3	28

Dimensions

Dimensions – Solenoid valve size 12 mm

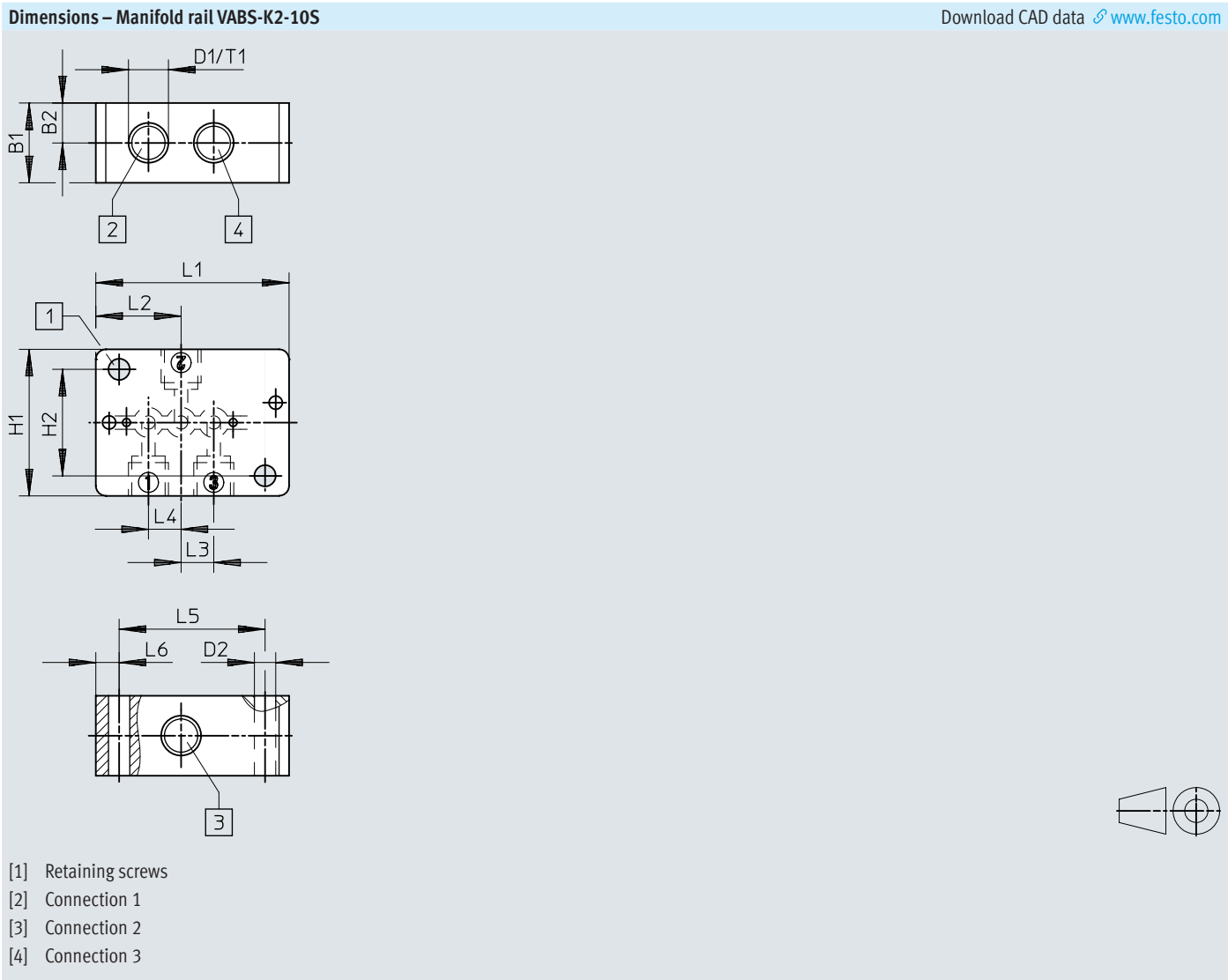
[Download CAD data](#) www.festo.com


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



	B1	B2	D1	D2 Ø	D3 Ø	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

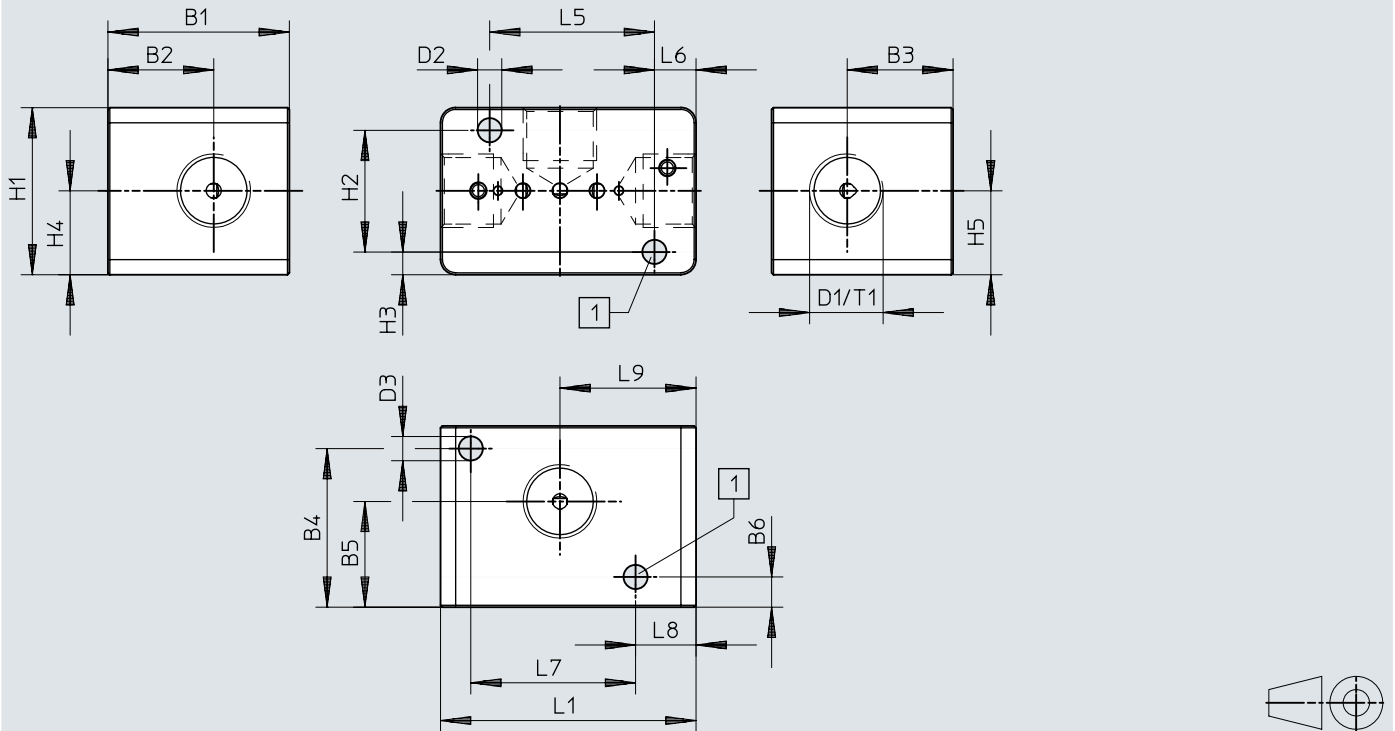


	B1	B2	D1	D2 Ø	H1	H2	L1	L2	L3	L4	L5	L6	T1
VABS-K2-10S-16-M6-P	12	6	M6	3,2	22	16	29	12,8	4,9	4,9	21,9	3,5	6
VABS-K2-10S-16-U14-P			1/4-28 UNF										

Dimensions

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

Download CAD data www.festo.com

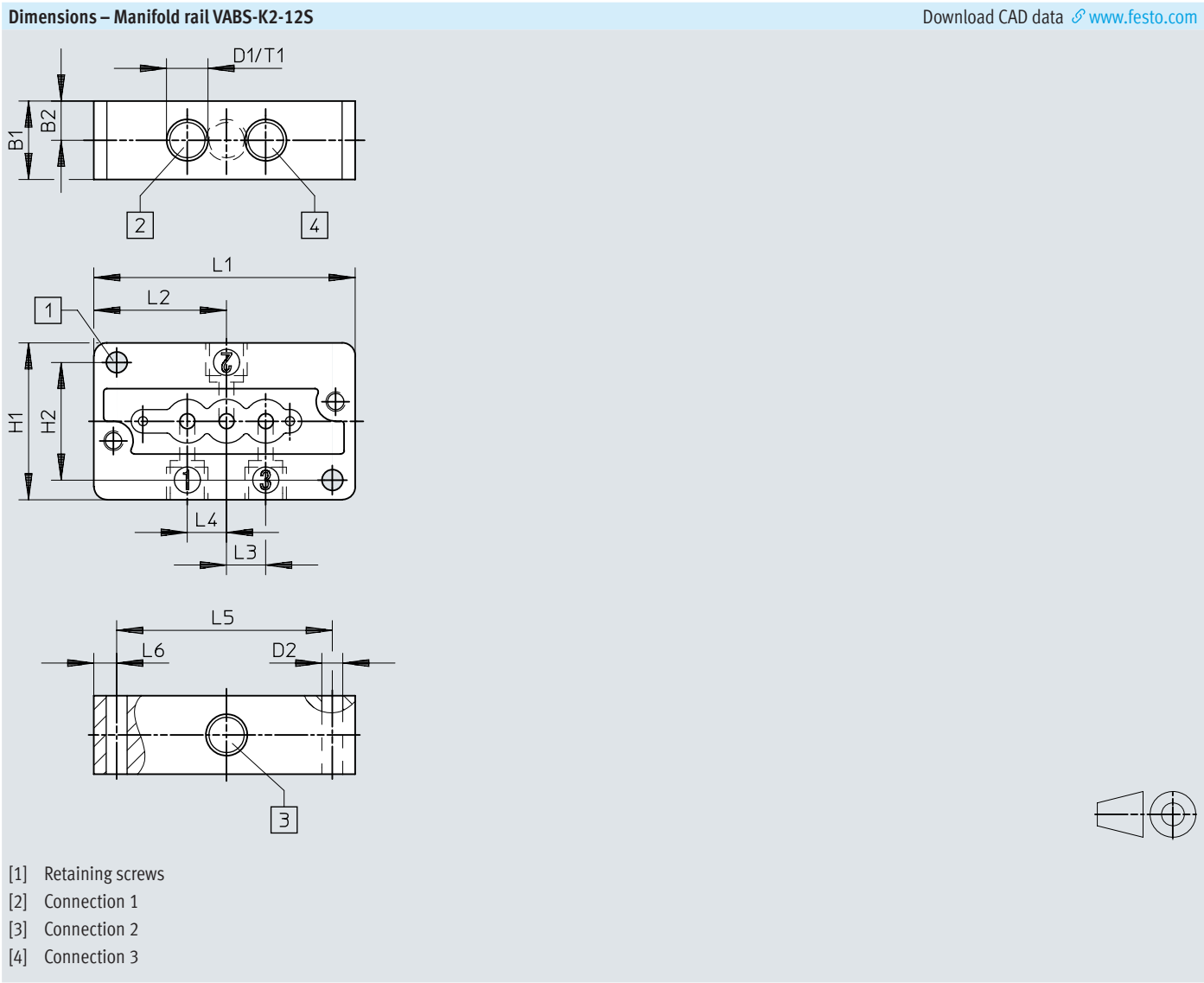


[1] Mounting holes

	B1	B2	B3	B4	B5	B6	D1	D2 Ø	D3 Ø
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

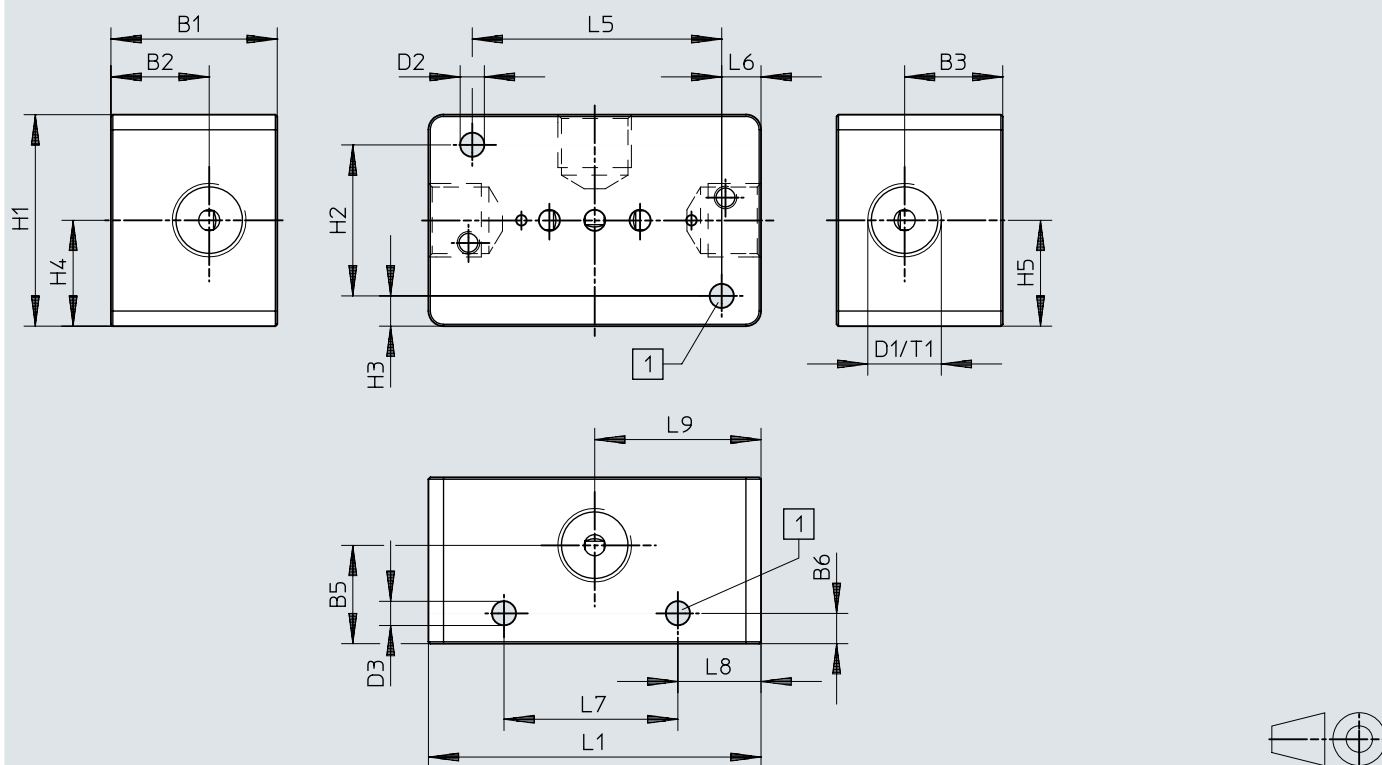
Dimensions



	B1	B2	D1	D2 Ø	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


[1] Mounting holes

	B1	B2	B3	B5	B6	D1	D2 Ø	D3 Ø
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

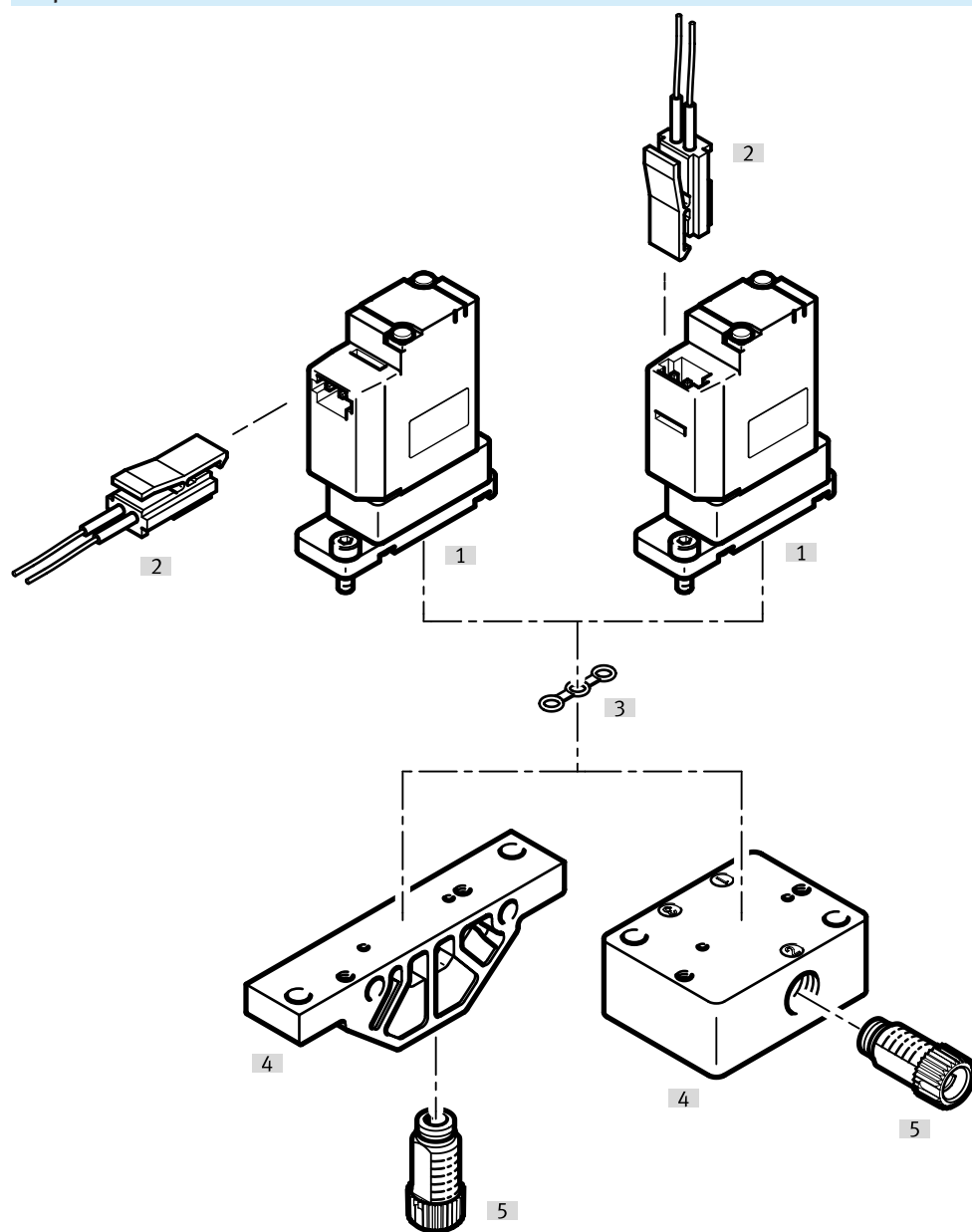
Ordering data

Solenoid valve VYKB, size 10 mm						
	Valve function	Nominal size	Diaphragm and sealing material	Outlet direction of electrical components	Part no.	Type
	2/2-way, single solenoid, closed	1.6 mm	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	1.6 mm	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

Solenoid valve VYKB, size 12 mm						
	Valve function	Nominal size	Diaphragm and sealing material	Outlet direction of electrical components	Part no.	Type
	2/2-way, single solenoid, closed	2 mm	EPDM	Straight	8140315	VYKB-F12-M22C-20-PE-5HPS
					8140316	VYKB-F12-M22C-20-PE-1HPS
	3/2-way, monostable, open/closed				8140317	VYKB-F12-M32-20-PE-5HPS
					8140318	VYKB-F12-M32-20-PE-1HPS

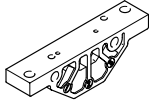
Peripherals

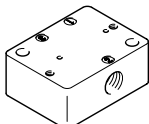
Peripherals overview

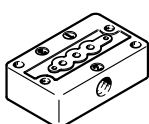


Accessories			→ Link
Type/order code	Description		
[1] Solenoid valve	VYKB		☞ vyk
[2] Connecting cable	NEBV-HPG2		16
[3] Seal	VAVC-K2		16
[4] Manifold rail	VABS-K2		16
[5] Fitting	NLFA-D		17

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	
	Female thread M6	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	
	Female thread M6	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	
	Female thread M6	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	Plug 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	
	Fluoro rubber	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

Accessories

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