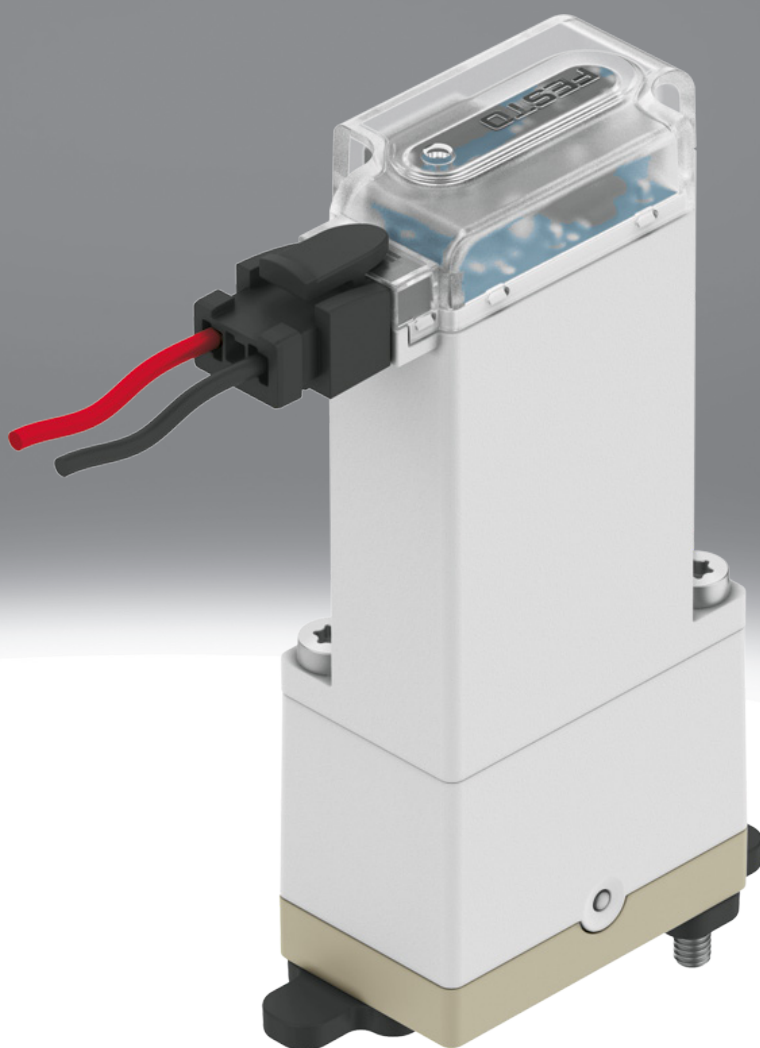


Media separated solenoid valve VYKC

FESTO



Characteristics

At a glance

[Link](#) [vykc](#)

Special characteristics:

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

Function:

- The media separated solenoid valve VYKC is intended to be mounted on laboratory devices. The product is used to control gaseous and liquid media within its technical data.
- The valve VYKC is a directly actuated valve with solenoid coil. When de-energised, the valve automatically returns to its normal position. A closed or an open normal position (3/2-way solenoid valve only) are available as variants.

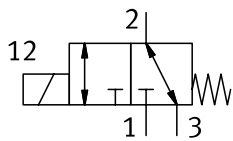
Nominal width

[16]	1.6 mm
------	--------

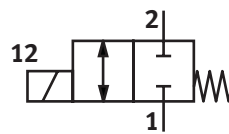
[20]	2 mm
------	------

Valve function

[32]	3/2-way valve
------	---------------



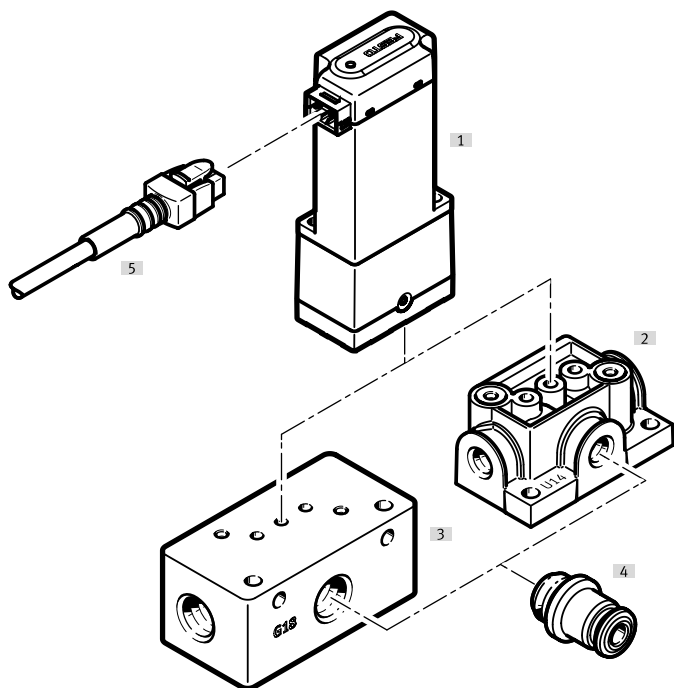
[M22C]	2/2-way valve, normally closed
--------	--------------------------------



Characteristics

Series

[VYKC] Solenoid valve VYKC



- [1] Solenoid valve VYKC
- [2] Manifold rail VABS-K3-16S-20-...
- [3] Manifold rail VABS-K3-16-S-20-...18-P
- [4] Fitting
- [5] Connecting cable

Type code

001	Series	
VYKC	Solenoid valve VYKC	

002	Directional control valve type	
F	Flanged valve	

003	Size	
16	Size 16	

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	

008	Electrical connection	
H2	Connection pattern H, horizontal plug	

009	Circuitry	
	None	
R	Holding current reduction with integrated protective circuit	

Datasheet

General technical data				
Valve function	2/2-way, closed, monostable		3/2-way, monostable, open/closed	
Nominal size	1.6 mm	2 mm	1.6 mm	2 mm
Size	16			
Design	Electrical connection at the side Rocker valve with diaphragm seal			
Type of reset	Mechanical spring			
Fluid connection	Flange			
Flow rate Kv	0.046 m ³ /h	0.048 m ³ /h	0.046 m ³ /h	
Flow rate Kv	0.77 l/min	0.8 l/min	0.77 l/min	
Note on flow rate Kv	For medium water, Pressure difference 1 bar			
Water flow rate at max. operating pressure	0.07 m ³ /h, 1.2 l/min			
Internal volume	108 µl valve with fluid connections 89 µl fluid chamber valve	110 µl valve with fl. conn. 89 µl fluid chamber valve	59 µl fluid chamber valve 94 µl valve with fl. conn.	
Sealing principle	Soft			
Flow direction	Reversible			
Type of actuation	Electric			
Type of piloting	Direct			
Manual override	None			
Type of mounting	With through-hole for M2.5 screw			
Mounting position	optional			
Degree of protection	IP40			
Corrosion resistance class CRC ¹⁾	0 - No corrosion stress			
Product weight	50 g			

1) More information: www.festo.com/x/topic/crc

Operating and environmental conditions		
Nominal size	1.6 mm	2 mm
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	10 ... 50°C	0 ... 50°C
Media temperature for fluids	10 ... 50°C	0 ... 50°C
Ambient temperature	10 ... 50°C	0 ... 50°C
Storage temperature	-20 ... 70°C	
Medium pressure	-0.75 ... 3 bar	-0.75 ... 2 bar

Electrical data	
Operational voltage range DC	12 V, 24 V
Permissible voltage fluctuations	+/- 10%
Electrical connection 1, connection type	Cable with plug
Electrical connection 1, connector system	Connection pattern H
Characteristic coil data	12 - 24 V DC: low-current phase 1.4 W, high-current phase 5.5 W
Duty cycle	100% in conjunction with holding current reduction Observe the notes on operating the solenoid valves.

Switching time				
Valve function	2/2-way, closed, monostable		3/2-way, monostable, open/closed	
Nominal size	1.6 mm	2 mm	1.6 mm	2 mm
Switching time on gaseous media	13 ms	12 ms	13 ms	
Switching time off gaseous media	-			3 ms
Switch-on time for fluids	17 ms	16 ms	17 ms	
Switch-off time for fluids	-			12 ms

Datasheet

Switching frequency

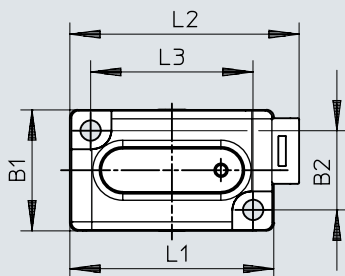
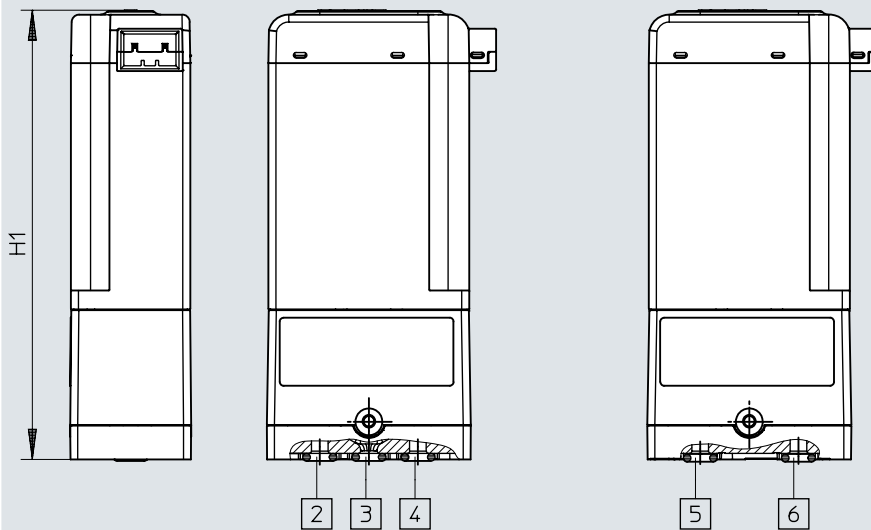
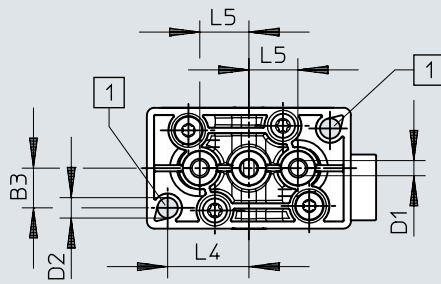
Max. switching frequency	4 Hz
Note on switching frequency	Dependent on the ambient temperature and installation state, At 100% duty cycle depending on ambient temperature and installation condition. Higher switching frequencies possible with duty cycle < 100%.

Materials

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

Dimensions

Dimensions – Solenoid valve VYKC

Download CAD data www.festo.com

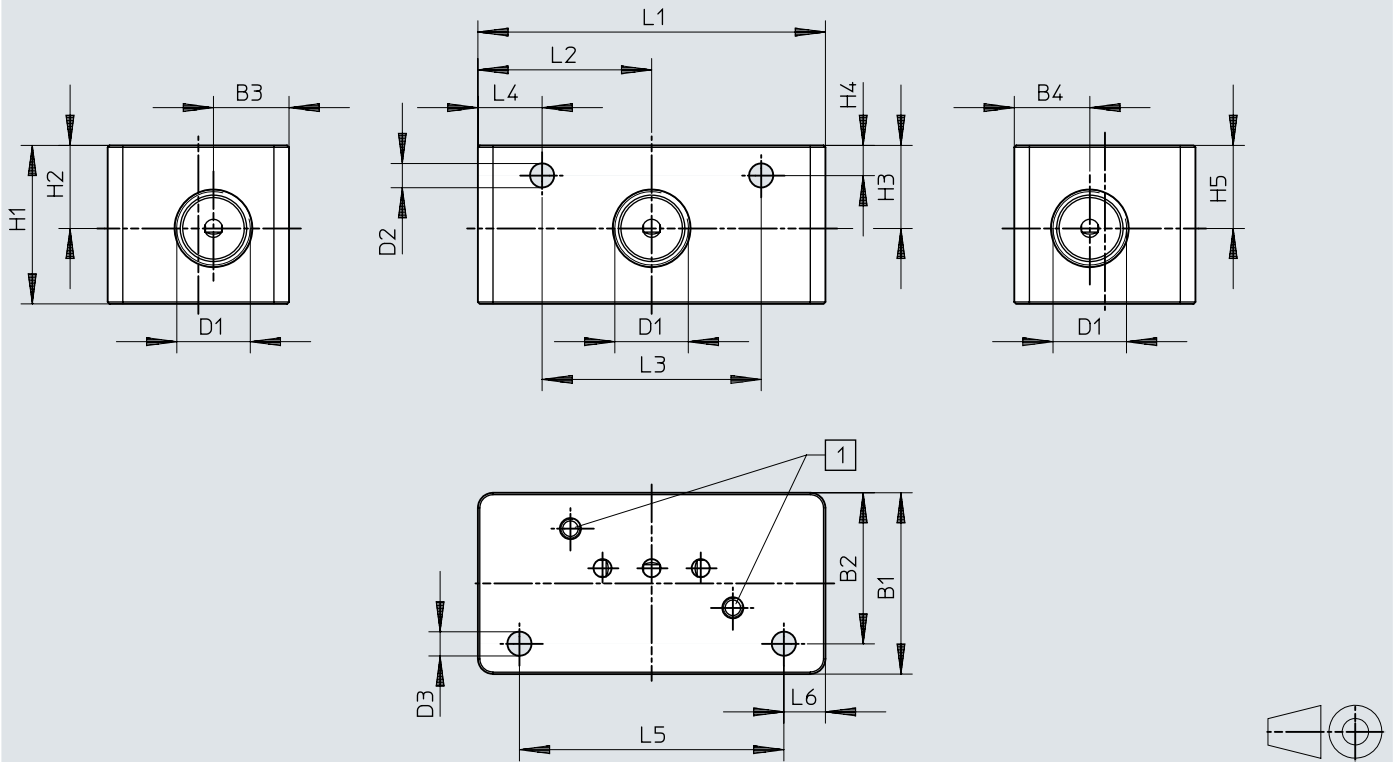
- [1] Mounting holes. Screws enclosed for M2.5 thread
- [2] Connection NO
- [3] Connection COM
- [4] Connection NC
- [5] Connection IN
- [6] Connection OUT

Dimensions

	B1 ±0,3	B2	B3	D1 ∅	D2 ∅	H1 ±0,4	L1 ±0,3	L2 ±0,4	L3	L4	L5
VYKC-F16-M32-16-PE-H2R	16	10,5	5,3	2,2	2,7	59,5	27	30,3	21,5	10,8	6,5
VYKC-F16-M32-16-PE-H2											
VYKC-F16-M22C-16-PE-H2R											
VYKC-F16-M22C-16-PE-H2											
VYKC-F16-M32-20-PE-H2R											
VYKC-F16-M32-20-PE-H2											
VYKC-F16-M22C-20-PE-H2R											
VYKC-F16-M22C-20-PE-H2											

Dimensions

Dimensions – Manifold rail VABS-K2-16S

Download CAD data www.festo.com

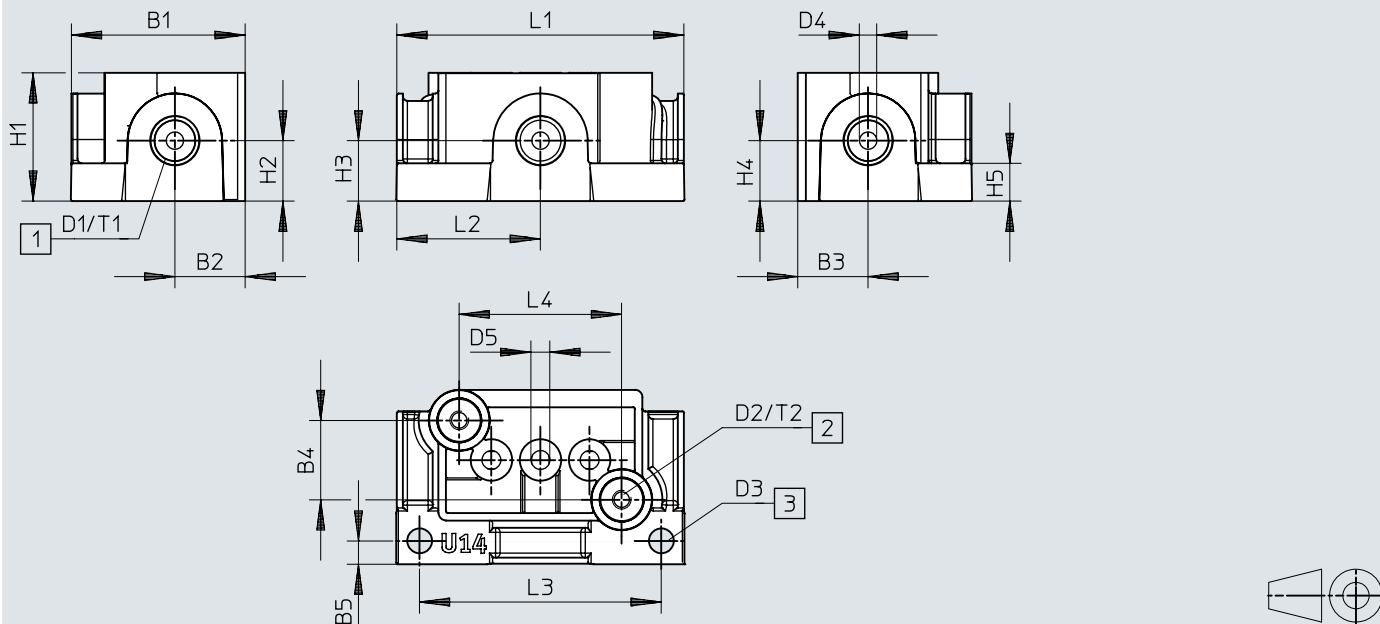
[1] Mounting holes: M2.5 thread (depth 6.5 mm)

	B1	B2	B3	B4	D1 ø	D2 ø	D3 ø	H1	H2
VABS-K3-16S-20-G18-P	24	20	10	10	G1/8	3,2	3,2	21	11
VABS-K3-16S-20-N18-P					NPT1/8-27				
	H3	H4	H5	L1	L2	L3	L4	L5	L6
VABS-K3-16S-20-G18-P	11	4	11	46	23	29	8,5	35	5,5
VABS-K3-16S-20-N18-P									

Dimensions

Dimensions – Manifold rail VABS-K2-16S-20-...

Download CAD data www.festo.com




- [1] Fluid connection
- [2] Valve mounting
- [3] Base plate mounting

	B1	B2	B3	B4	B5	D1	D2	D3	D4	D5
	±0,5				±0,5	±0,5	±0,2	∅ ±0,1	∅	∅
VABS-K3-16S-20-M5-P	23	9,3	9,3	10,5	3,1	M5	M2,5	3,3	2,3	2,5
VABS-K3-16S-20-U14-P						1/4-24 UNF-2A				

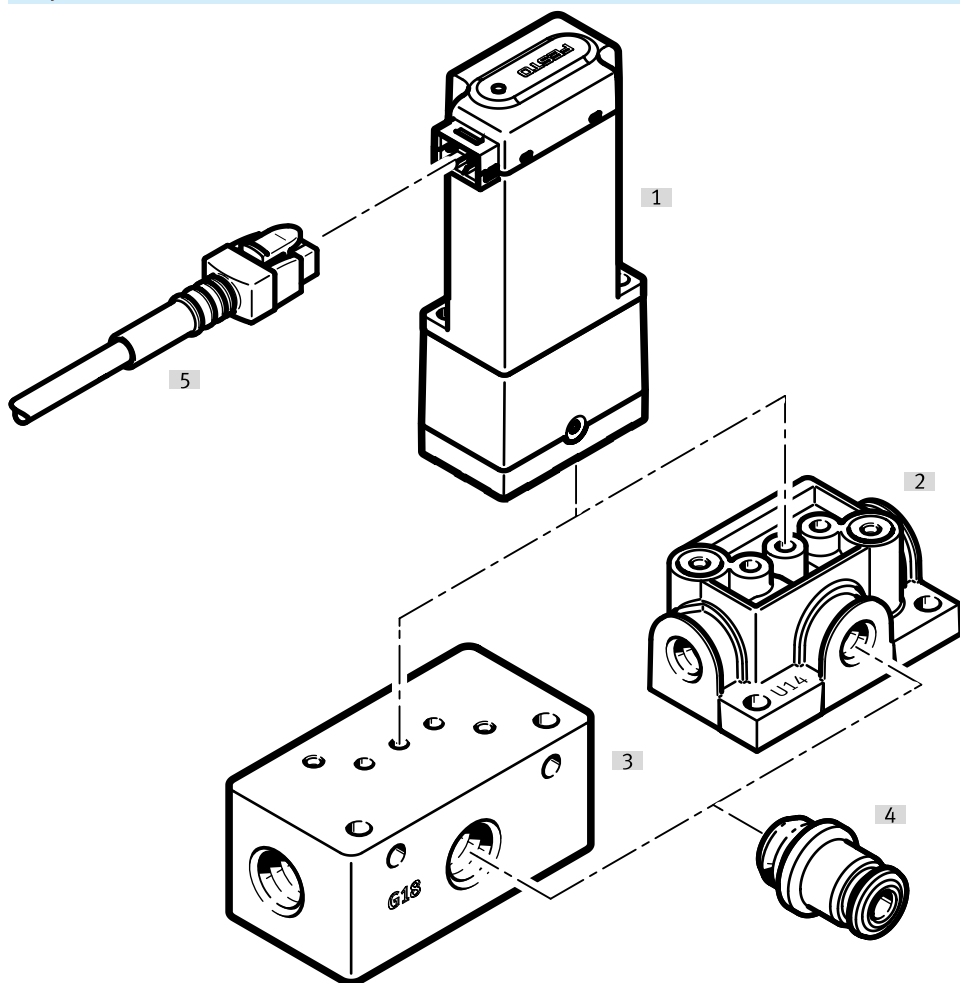
	H1	H2	H3	H4	H5	L1	L2	L3	L4	T1	T2
	±0,5				±0,5	±0,5		±0,5			±0,2
VABS-K3-16S-20-M5-P	17	8	8	8	5	38	19	32	21,5	7,5 ±0,5	7,5
VABS-K3-16S-20-U14-P										8,9 ±0,1	

Ordering data

Solenoid valve VYKC				
	Valve function	Nominal size	Part no.	Type
	2/2-way, closed, monostable	1.6 mm	8172729	VYKC-F16-M22C-16-PE-H2
			8172715	VYKC-F16-M22C-16-PE-H2R
		2 mm	8172734	VYKC-F16-M22C-20-PE-H2
			★ 8172719	VYKC-F16-M22C-20-PE-H2R
	3/2-way, monostable, open/closed	1.6 mm	8172704	VYKC-F16-M32-16-PE-H2
			8172695	VYKC-F16-M32-16-PE-H2R
		2 mm	★ 8172698	VYKC-F16-M32-20-PE-H2R
			8172707	VYKC-F16-M32-20-PE-H2

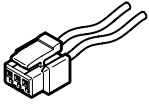
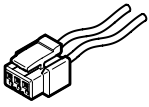
Peripherals


Peripherals overview

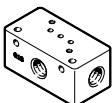


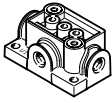
Accessories			→ Link
Type/order code	Description		
[1]	Solenoid valve	VYKC	vykc
[2]	Manifold rail	VABS-K3-16S-20-...	13
[3]	Manifold rail	VABS-K316S-20-...18-P	13
[4]	Fitting	NPQR-DK-... NLFA-D-U14-...	13
[5]	Connecting cable	NEBV-H1G2-KN-...	13


Accessories


Connecting cable						
	Electrical connection 1, connection type	Electrical connection 1, cable outlet	Electrical connection 1, connector system	Cable length	Part no.	Type
	Socket	Straight	Connection pattern H	0.5 m	★ 566654	NEBV-H1G2-KN-0.5-N-LE2
					★ 566658	NEBV-H1G2-P-0.5-N-LE2
				1 m	★ 566659	NEBV-H1G2-P-1-N-LE2
					★ 566655	NEBV-H1G2-KN-1-N-LE2
				2.5 m	★ 566660	NEBV-H1G2-P-2.5-N-LE2
				5 m	★ 566657	NEBV-H1G2-KN-5-N-LE2
					★ 566661	NEBV-H1G2-P-5-N-LE2

Valve control module			
	Max. number of outputs	Part no.	Type
	8	8088772	VAEM-V-S8EPRS2


Manifold rail			
	Fluid connection	Part no.	Type
	Female thread 1/8 NPT	8186872	VABS-K3-16S-20-N18-P
	Female thread G1/8	8186873	VABS-K3-16S-20-G18-P

	Fluid connection	Part no.	Type
	Female thread 1/4-28 UNF-2B	8187600	VABS-K3-16S-20-U14-P
	Female thread M5	8187601	VABS-K3-16S-20-M5-P

Push-in fitting					
	Nominal size	Pneumatic connection, port 1	Pneumatic connection, port 2	Part no.	Type
	2.1 mm	Male thread M5	For tubing outside diameter of 4 mm	8085657	NPQR-DK-M5-Q4
	2.6 mm		For tubing outside diameter of 6 mm	8085659	NPQR-DK-M5-Q6
	4.2 mm	Male thread G1/8	For tubing outside diameter of 4 mm	8085661	NPQR-DK-G18-Q4
			For tubing outside diameter of 6 mm	★ 8085662	NPQR-DK-G18-Q6
			For tubing outside diameter of 8 mm	8085663	NPQR-DK-G18-Q8
			For tubing outside diameter of 10 mm	8087695	NPQR-DK-G18-Q10

Fitting			
	Fluid connection 2	Part no.	Type
	For tubing O.D. 3 mm	8104286	NLFA-D-U14-K3-PP-P10

Accessories

Fitting	Fluid connection 2	Part no.	Type
	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