

## Valve series VOFC

**FESTO**



## Characteristics

### General

- The valves of series VOFC are special 3/2-way and 5/2-way valves for process automation and applications in chemical and petrochemical installations, where they are frequently used as pilot valves for butterfly valves and actuators. Their sturdy design and high resistance to corrosion make these valves suitable for outdoor use under harsh ambient conditions.
- With the flange pattern to NAMUR, the solenoid valves are particularly suitable for quarter turn actuators.
- The integrated spring chamber re-breather function protects quarter-turn actuators with spring return (single-acting cylinders and actuators) against contaminated ambient air and weather conditions such as rain.
- With German Technical Control Board (TÜV) report up to SIL3

### Function, design

- 3/2-way or 5/2-way, single or double solenoid, depending on the type
- Pilot-actuated piston spool and poppet valves

### Sturdy

- The surface of the valve housing is Ematal-coated. This treatment involves converting the aluminium surface into a very hard aluminium oxide layer with titanium oxide deposits, which makes the valves extremely resistant to wear and abrasion and gives them first-class sliding qualities. This provides optimum protection against atmospheric and chemical influences. You can find information on the media resistance of the product at  
→ [www.festo.com](http://www.festo.com).

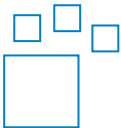
### Flexible functionality

- Changeover between internal and external pilot air via automatic OR valve
- Suitable for vacuum

### Economical

- Connection pattern to NAMUR for direct mounting on the actuator and G and NPT threaded connections in a valve housing

### Ordering data – Product options



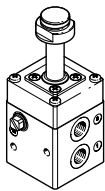
Configurable product  
This product and all its product options can be ordered using the configurator.

The configurator can be found under Products on the DVD or at  
→ [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...)

Part no.	Type
3344863	VOFC-L
2868687	VOFC-LT

## Characteristics

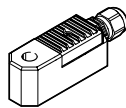
### VOFC – Basic valves



- 3/2, 5/2-way valves
- Connections G1/4, 1/4 NPT, G1/2, 1/2 NPT, flanged connections
- Connection pattern to NAMUR, optionally with P duct

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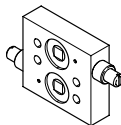
### VACC – S13 coils



- AC and DC voltage 24 V, 60 V 110 V, 230 V
- CE marking (see declaration of conformity) to EU Explosion Protection Directive (ATEX)

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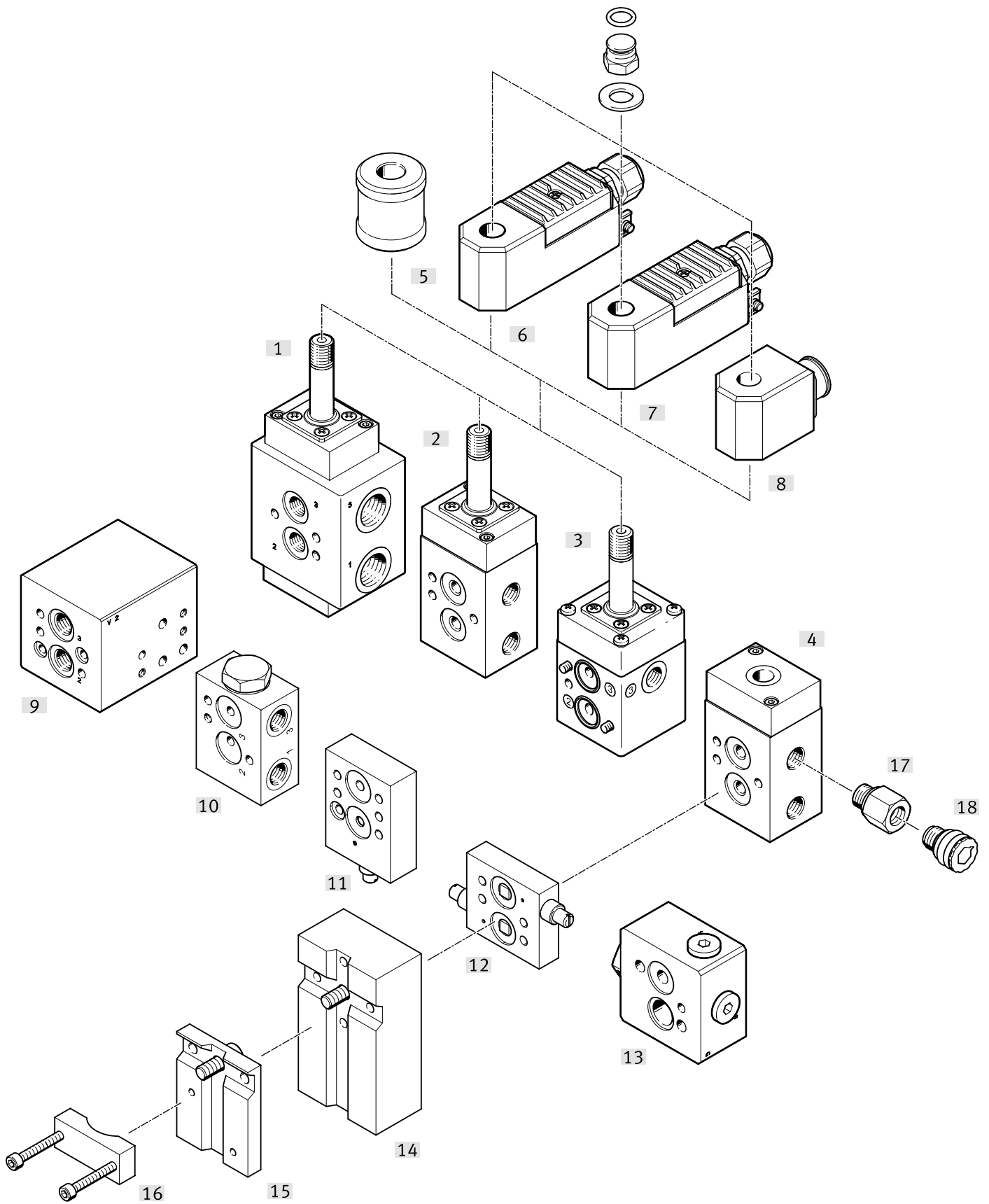
### VOFC – Accessories



- Throttle plate
- Sub-base
- Mounting plate
- Connection set
- Adapter with filter
- Mounting bracket
- Manual override

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Peripherals overview



## Peripherals overview

Mounting components and accessories		Brief description	→ Page/Internet
[1]	Basic valve VOFC-LT-...-FG12-...-F19...	3/2-way valve, connection G1/2, poppet valve → modular product system – can be configured using the online configurator	2
[2]	Basic valve VOFC-L-...-FG14-...-F19...	3/2-way valve, connection G1/4, piston spool → modular product system – can be configured using the online configurator	2
[3]	Basic valve VOFC-LT-...-FG14-...-F19...	3/2-way valve, connection G1/4, poppet valve → modular product system – can be configured using the online configurator	2
[4]	Directional control valve VOFC-L-...-SG14/SN14-...	3/2-way valve, 5/2-way valve, connection G1/4, piston spool → modular product system – can be configured using the online configurator	2
[5]	Manual override VAOH-MB-S7-S13	Manual override (MO)	54
[6]	Solenoid coil VACC-S13-...3A	Type of ignition protection iA = intrinsically safe, for use in zone 1	55
[7]	Solenoid coil VACC-S13-...ME	Type of ignition protection ME = encapsulated, for use in zone 1	55
[8]	Solenoid coil VACC-S13-...A1	IP65, electrical plug pattern type A to DIN EN 175-803	55
[9]	Sub-base VABS-S7-RB-B-...14-V14-A	For mounting two solenoid valves for redundant circuitry, with flange 1/4, connection pattern to NAMUR	47
[10]	Sub-base VABS-S7-BE-B-...14-V14-A	Pressurisation and exhaust block, with flange 1/4, connection pattern to NAMUR	47
[11]	Throttle plate VABF-S7-F1B5P1-F	Exhaust air throttle plate for NAMUR interface for installation between the solenoid valve and single-acting actuators	50
[12]	Throttle plate VABF-S7-F1B1P2-F	Exhaust air throttle plate for NAMUR interface for installation between the solenoid valve and double-acting actuators	50
[13]	Sub-base VABS-...	Sub-base for NAMUR interface for installation between the solenoid valve and actuators. Interface solenoid valve: VDI/VDE 3847. Interface actuator: VDI/VDE 3845.	51
[14]	Connection set VABF-S7-S-G14	Mounting plate for attaching the valve to the NAMUR rib	50
[15]	Mounting plate VAME-S7-P	Mounting plate for attaching the valve to the NAMUR rib	49
[16]	Mounting bracket VAME-S7-Y	Alternative (instead of screw) for mounting the valve on a NAMUR rib using a mounting bracket	53
[17]	Adapter NPFV-AF-...-MF	Adapter with filter	53
[18]	Exhaust protection VABD-D3-SN-...	Exhaust protection to IP65. The spring chamber of the solenoid valve is protected against the ingress of aggressive ambient air and water by the one-way flow control system	53

## Type codes for VOFC



<b>001</b>	<b>Series</b>	
<b>VOFC</b>	Solenoid valve	
<b>002</b>	<b>Directional control valve type</b>	
<b>L</b>	In-line valve	
<b>003</b>	<b>Design principle</b>	
	Piston spool	
<b>T</b>	Poppet valve	
<b>004</b>	<b>Valve function</b>	
<b>M32C</b>	3/2-way valve, normally closed	
<b>B52</b>	5/2-way valve, double solenoid/bistable	
<b>M52</b>	5/2-way valve, single solenoid/monostable	
<b>005</b>	<b>Reset method for monostable/single solenoid valves</b>	
	None	
<b>M</b>	Mechanical spring	
<b>006</b>	<b>Pilot air</b>	
	Internal	
<b>Z</b>	External	
<b>C</b>	Internal/external	
<b>007</b>	<b>Manual override</b>	
	None	
<b>H</b>	Non-detenting	
<b>Y</b>	Detenting	
<b>008</b>	<b>Pneumatic connection</b>	
<b>G14</b>	G1/4	
<b>G12</b>	G1/2	
<b>N14</b>	1/4 NPT	
<b>N12</b>	1/2 NPT	
<b>FG14</b>	NAMUR port pattern 1/4, connections G1/4	
<b>FGP14</b>	NAMUR port pattern 1/4, connections G1/4 with extended NAMUR interface	
<b>FG12</b>	NAMUR port pattern 1/4, connections G1/2	
<b>FG13</b>	NAMUR port pattern 1/2, connections G1/2	
<b>FN14</b>	NAMUR port pattern 1/4, connections 1/4 NPT	
<b>FNP14</b>	NAMUR port pattern 1/4, connections 1/4 NPT with extended NAMUR interface	
<b>FN12</b>	NAMUR port pattern 1/4, connections 1/2 NPT	
<b>FN13</b>	NAMUR port pattern 1/2, connections 1/2 NPT	
<b>009</b>	<b>Supply connection version</b>	
<b>NPF</b>	With particle filter and connecting thread NPT	
	Standard	
<b>PF</b>	With particle filter	

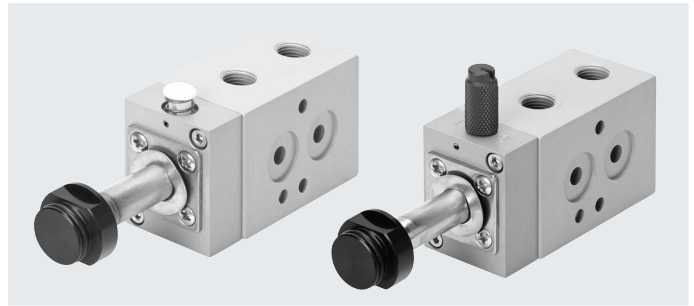
<b>010</b>	<b>Exhaust</b>	
	No fitting	
<b>U6</b>	With exhaust protection	
<b>011</b>	<b>Corrosion protection</b>	
	Standard	
<b>R1</b>	Stainless steel	
<b>012</b>	<b>Valve pilot control interface</b>	
<b>F19</b>	Electric with armature tube for solenoid coil, 13 mm	
<b>F19A</b>	Electric with armature tube for solenoid coil 13 mm, intrinsically safe	
<b>FN</b>	With armature tube 9 mm	
<b>SG14</b>	Interface with thread G1/4	
<b>SN14</b>	Interface with thread 1/4 NPT	
<b>013</b>	<b>Power consumption</b>	
	None	
<b>11</b>	1.1 W	
<b>18</b>	1.8 W	
<b>014</b>	<b>Nominal operating voltage</b>	
	None	
<b>1</b>	24 V DC	
<b>1U</b>	24 V DC and AC	
<b>2U</b>	110 V DC and AC	
<b>3U</b>	230 V DC and AC	
<b>27</b>	60 V DC	
<b>015</b>	<b>Electrical connection</b>	
	None	
<b>A1</b>	Plug pattern type A, to EN 175301-803	
<b>K4</b>	Cable connector metric	
<b>016</b>	<b>Circuitry</b>	
	None	
<b>F</b>	Fuse	
<b>017</b>	<b>EU certification</b>	
	None	
<b>EX4</b>	II 2GD	
<b>018</b>	<b>Type of ignition protection</b>	
	None	
<b>A</b>	Intrinsically safe	
<b>ME</b>	Encapsulation, enhanced security	

## Data sheet – Modular system, piston spool valves

## Function

- 3/2-way solenoid valve
- 5/2-way single solenoid valve
- 5/2-way double solenoid valve

-  - Temperature range  
-25 ... 60°C
-  - Flow rate  
913 ... 1030 l/min



General technical data	
Type VOFC-L...	
Valve functions	3/2-way closed, single solenoid, 5/2-way single solenoid, 5/2-way double solenoid
Design	Piston spool
Sealing principle	Soft
Width [mm]	40
Mounting position	Any
Manual override	None
	Non-detenting
	Detenting
Reset method	Without
	Mechanical spring
Actuation type	Electric
Type of control	Piloted
Pilot air supply	Internal
	External
Flow rate Kv for pressurisation [m³/h]	0.66 ... 1.08
Flow rate Kv for exhausting [m³/h]	0.66 ... 1.08
Switching time off [ms]	22 (VOFC-L-B52-..., VOFC-L-M52-...)
Switching time on [ms]	26 (VOFC-L-B52-..., VOFC-L-M52-...)
Flow direction	Non-reversible
Nominal width [mm]	6
Standard nominal flow rate 1→2 [l/min]	913 ... 1030
Standard nominal flow rate 2→3 [l/min]	978 ... 983

Technical data, 5/2-way valve, single or double solenoid		
VOFC-L-B52-G14-	1	G1/4
VOFC-L-M52-...-G14-	2	G1/4
	3	G1/4
	4	G1/4
	5	G1/4
	VOFC-L-B52-N14-	1
VOFC-L-M52-...-N14-	2	1/4 NPT
	3	1/4 NPT
	4	1/4 NPT
	5	1/4 NPT
	VOFC-L-B52-FG14-	1
VOFC-L-M52-...-FG14-	2	Connection pattern to NAMUR, flange 1/4
	3	G1/4
	4	Connection pattern to NAMUR, flange 1/4
	5	G1/4
	VOFC-L-B52-FN14-	1
	2	Connection pattern to NAMUR, flange 1/4
	3	1/4 NPT
	4	Connection pattern to NAMUR, flange 1/4
	5	1/4 NPT

## Data sheet – Modular system, piston spool valves

**Technical data, 3/2-way valve, single or double solenoid**

VOFC-L-M32C-...-FG14-	1	G1/4
	2	Connection pattern to NAMUR, flange 1/4
	3	G1/4

**Technical data, weights**

Type	Weight of basic valve
VOFC-L-B52-G14-...	790
VOFC-L-B52-N14-...	790
VOFC-L-B52-FG14-...	680
VOFC-L-M52-MH-G14-...	520
VOFC-L-M52-MY-G14-...	520
VOFC-L-M52-MH-FG14-...	520
VOFC-L-M52-MY-FG14-...	520
VOFC-L-M52-M-N14-...	520
VOFC-L-M32C-MH-FG14-...	520
VOFC-L-M32C-MY-FG14-...	520
VOFC-L-M52-MZ-...	430
VOFC-L-M32C-MZ-...	430

**Operating and environmental conditions**

Operating medium	Compressed air to ISO 8573-1:2010 [7:2:2]	
Degree of protection	IP50, IP65	
Operating pressure range	[bar]	2.5 ... 8
	[psi]	36 ... 116
Temperature of medium	[°C]	-25 ... 60
Ambient temperature	[°C]	-25 ... 60
Corrosion resistance class CRC <sup>1)</sup>		4
Note on materials		RoHS-compliant
PWIS conformity		VDMA24364 zone III

1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

**Materials**

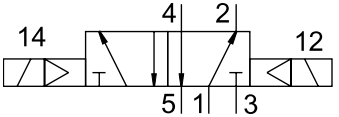
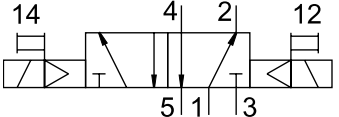
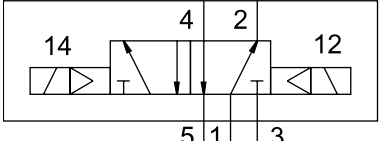
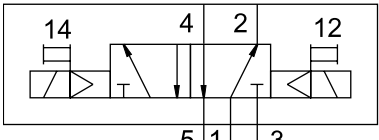
	VOFC-L-...
Housing	Ematal-coated aluminium
Seals	NBR



## Data sheet – Modular system, piston spool valves

Valve functions Circuit symbol	Type code	Description
	VOFC-L-M32C-M-FG14-...	3/2-way valve, single solenoid, closed <ul style="list-style-type: none"> <li>Electrically piloted</li> <li>Non-reversible</li> <li>With spring return</li> <li>Internal pilot air supply</li> <li>With NAMUR connection</li> <li>Without manual override (MO)</li> </ul>
	VOFC-L-M32C-MH-FG14-... (MO non-detenting) VOFC-L-M32C-MY-FG14-... (MO detenting)	3/2-way valve, single solenoid, closed <ul style="list-style-type: none"> <li>Electrically piloted</li> <li>Non-reversible</li> <li>With spring return</li> <li>Internal pilot air supply</li> <li>With NAMUR connection</li> <li>With manual override (MO)</li> </ul>
	VOFC-L-M32C-MZ-...	3/2-way valve, monostable, closed <ul style="list-style-type: none"> <li>Pneumatically piloted</li> <li>Non-reversible</li> <li>With spring return</li> <li>External pilot air supply</li> <li>With NAMUR connection</li> <li>Without manual override (MO)</li> </ul>
	VOFC-L-M52-M-G14-... VOFC-L-M52-M-N14-...	5/2-way single solenoid valve <ul style="list-style-type: none"> <li>Electrically piloted</li> <li>Non-reversible</li> <li>With spring return</li> <li>Internal pilot air supply</li> <li>Without manual override (MO)</li> </ul>
	VOFC-L-M52-MH-G14-... (MO non-detenting) VOFC-L-M52-MY-G14-... (MO detenting) VOFC-L-M52-MH-N14-... (MO non-detenting) VOFC-L-M52-MY-N14-... (MO detenting)	5/2-way single solenoid valve <ul style="list-style-type: none"> <li>Electrically piloted</li> <li>Non-reversible</li> <li>With spring return</li> <li>Internal pilot air supply</li> <li>With manual override (MO)</li> </ul>
	VOFC-L-M52-M-FG14-... VOFC-L-M52-M-FN14-...	5/2-way single solenoid valve <ul style="list-style-type: none"> <li>Electrically piloted</li> <li>Non-reversible</li> <li>With spring return</li> <li>Internal pilot air supply</li> <li>With NAMUR connection</li> <li>Without manual override (MO)</li> </ul>
	VOFC-L-M52-MH-FG14-... (MO non-detenting) VOFC-L-M52-MY-FG14-... (MO detenting) VOFC-L-M52-MH-FN14-... (MO non-detenting) VOFC-L-M52-MY-FN14-... (MO detenting)	5/2-way single solenoid valve <ul style="list-style-type: none"> <li>Electrically piloted</li> <li>Non-reversible</li> <li>With spring return</li> <li>Internal pilot air supply</li> <li>With NAMUR connection</li> <li>With manual override (MO)</li> </ul>
	VOFC-L-M52-MZ-...	5/2-way monostable valve <ul style="list-style-type: none"> <li>Pneumatically piloted</li> <li>Non-reversible</li> <li>With spring return</li> <li>External pilot air supply</li> <li>With NAMUR connection</li> <li>Without manual override (MO)</li> </ul>

Data sheet – Modular system, piston spool valves

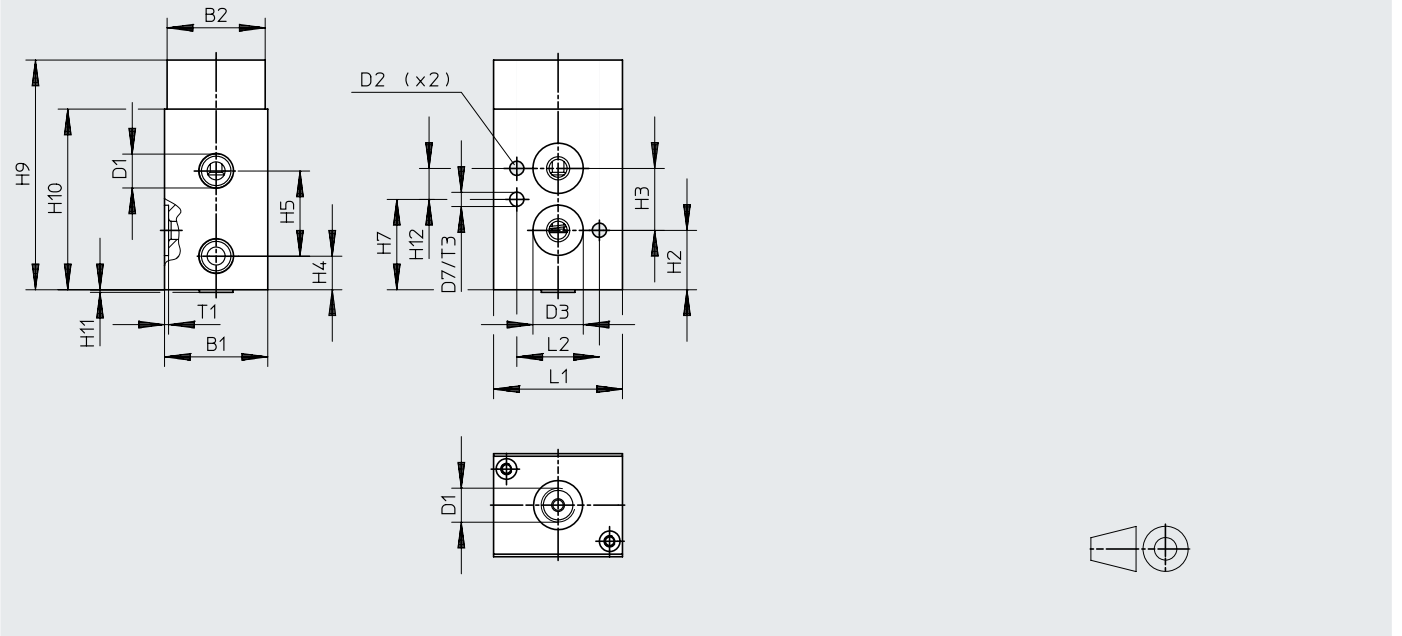
Valve functions Circuit symbol	Type code	Description
	VOFC-L-B52-G14-... VOFC-L-B52-N14-...	5/2-way double solenoid valve <ul style="list-style-type: none"> <li>• Electrically piloted</li> <li>• Non-reversible</li> <li>• Internal pilot air supply</li> <li>• Without manual override (MO)</li> </ul>
	VOFC-L-B52-H-G14-... (MO non-detenting) VOFC-L-B52-H-N14-... (MO non-detenting)	5/2-way double solenoid valve <ul style="list-style-type: none"> <li>• Electrically piloted</li> <li>• Non-reversible</li> <li>• Internal pilot air supply</li> <li>• With manual override (MO)</li> </ul>
	VOFC-L-B52-FG14-... VOFC-L-B52-FN14-...	5/2-way double solenoid valve <ul style="list-style-type: none"> <li>• Electrically piloted</li> <li>• Non-reversible</li> <li>• Internal pilot air supply</li> <li>• With NAMUR connection</li> <li>• Without manual override (MO)</li> </ul>
	VOFC-L-B52-H-FG14-... (MO non-detenting)	5/2-way double solenoid valve <ul style="list-style-type: none"> <li>• Electrically piloted</li> <li>• Non-reversible</li> <li>• Internal pilot air supply</li> <li>• With NAMUR connection</li> <li>• With manual override (MO)</li> </ul>

Data sheet – Modular system, piston spool valves

**Dimensions**

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

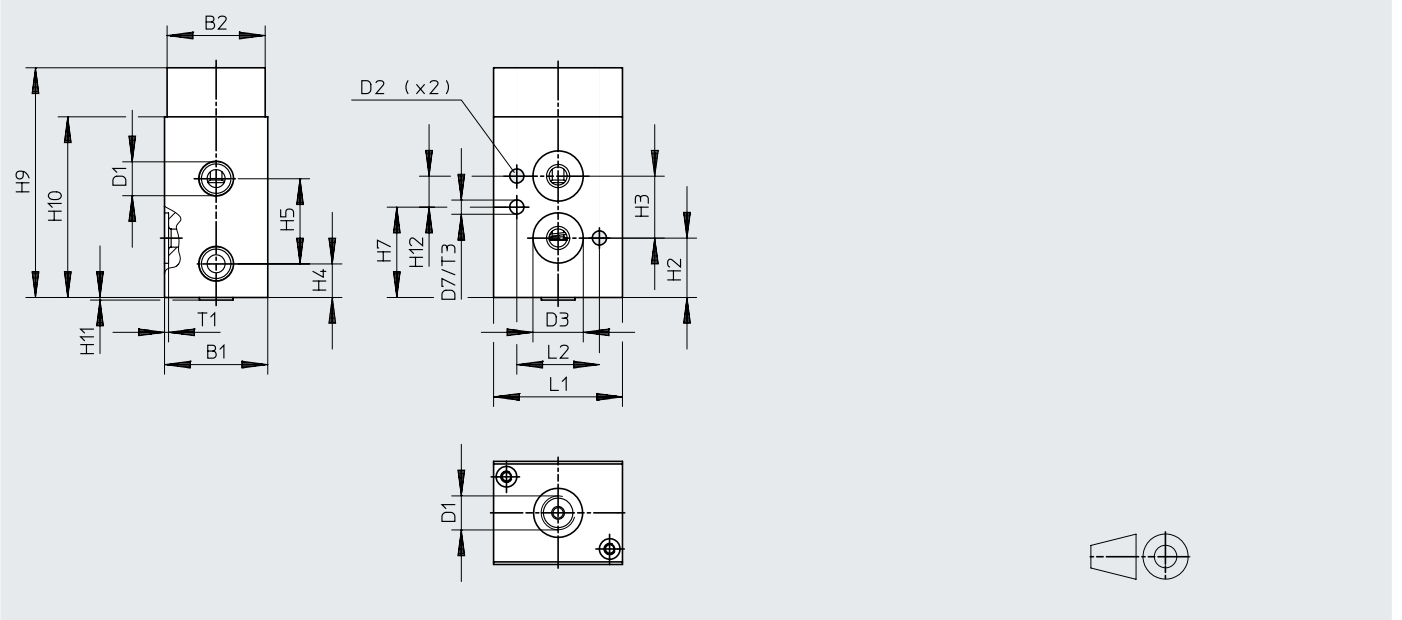
3/2-way valves (without armature tube)  
Interface -SG14/-SN14



**Dimensions**

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

5/2-way valves (without armature tube)  
Interface -SG14/-SN14



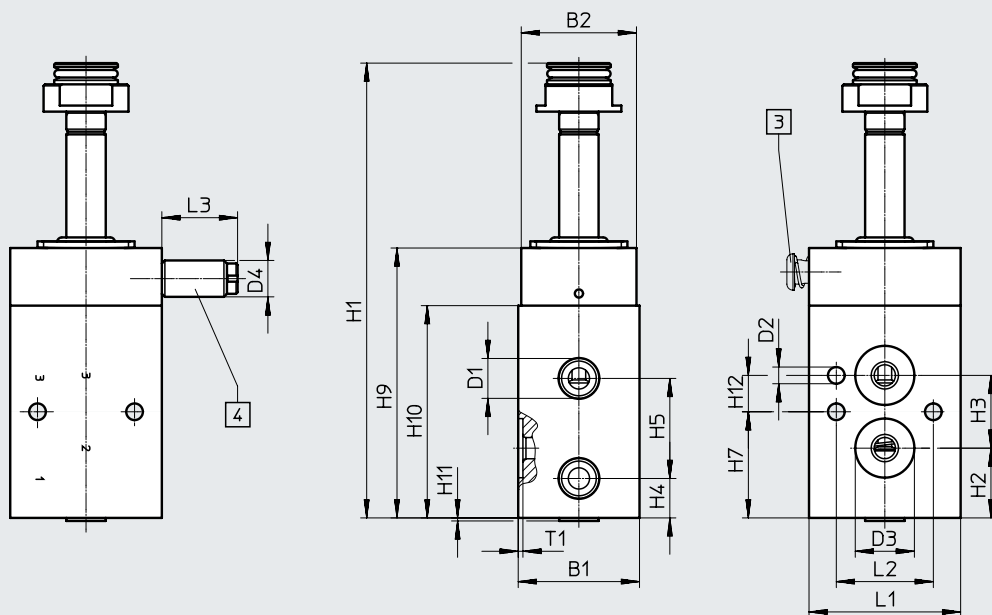
Type	B1	B2	D1	D2 ø	D3 ø	D7 ø	H2	H3	H4	H5	H7	H9	H10	H11	H12	L1	L2	T1	T3
VOFC-L-M32-MZ-FG14-SG14-...	40	38	G1/4	5.5	19.5	5.5	23	24	13	33	35	89	70	1	12	50	32	1.6	3
VOFC-L-M32-MZ-FN14-SN14-...			1/4 NPT																
VOFC-L-M52-MZ-FG14-SG14-...			G1/4																
VOFC-L-M52-MZ-FN14-SN14-...			1/4 NPT																

Data sheet – Modular system, piston spool valves

Dimensions

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

3/2-way valves, basic valve



[3] Manual override non-detenting (VOFC-L-M32-MH- ...)

[4] Manual override detenting (VOFC-L-M32-MY- ...)

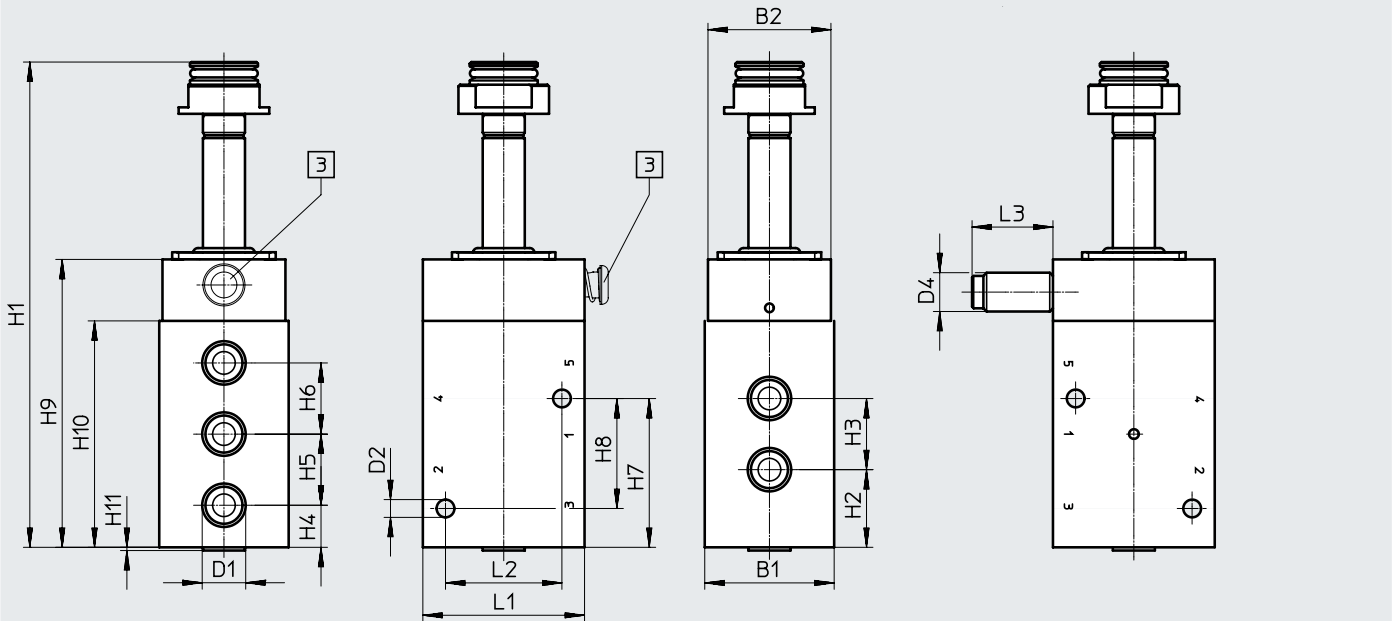
Type	B1	B2	D1	D2 ∅	D3 ∅	D4 ∅	H1	H2	H3	H4	H5	H7	H9	H10	H11	H12	L1	L2	L3	T1
VOFC-L-M32-M-FG14-...	40	38	G1/4	5.5	19.5	-	150	23	24	13	33	35	89	70	1	12	50	32	-	1.6
VOFC-L-M32-MH-FG14-...						12													25	
VOFC-L-M32-MY-FG14-...						12													25	

Data sheet – Modular system, piston spool valves

Dimensions

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

5/2-way valves, basic valve, connection -G14/-N14



[3] Manual override non-detenting (VOFC-L-M52-MH- ...)

[4] Manual override detenting (VOFC-L-M52-MY- ...)

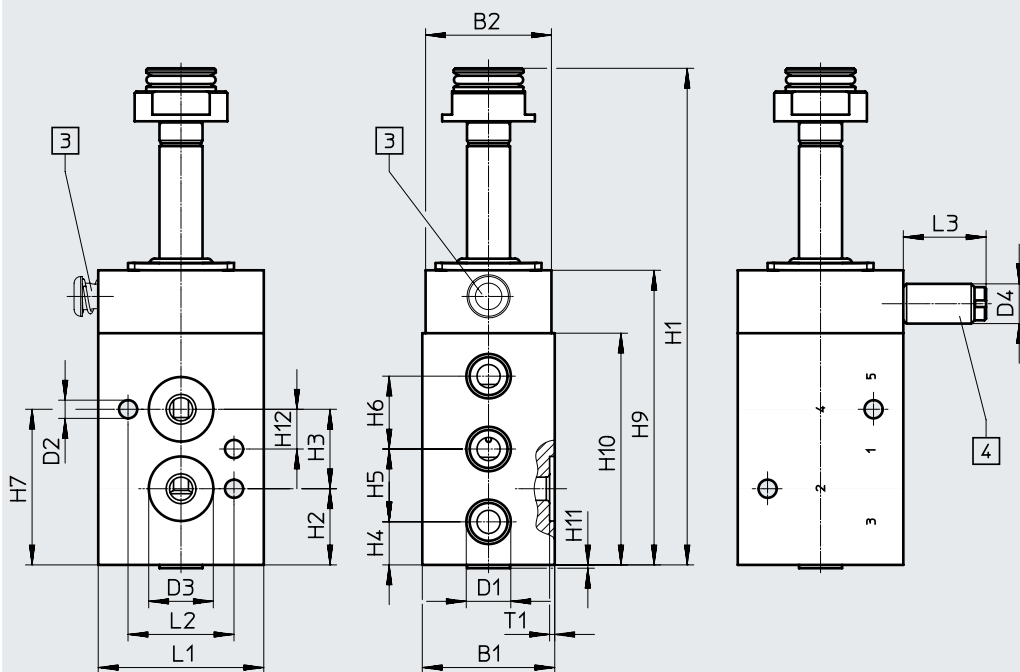
Type	B1	B2	D1	D2 ∅	D4 ∅	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	L1	L2	L3		
VOFC-L-M52-M-G14-...	40	38	G1/4	5.5	-	150	24	22	13	22	22	46	34	89	70	1	50	36	-	-	
VOFC-L-M52-MH-G14-...																					
VOFC-L-M52-M-N14-...			1/4 NPT																		
VOFC-L-M52-MH-N14-...																					
VOFC-L-M52-MY-G14-...			G1/4		12																25

Data sheet – Modular system, piston spool valves

Dimensions

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

5/2-way valves, basic valve, connection -FG14



[3] Manual override  
non-detenting  
(VOFC-L-M52-MH- ...)

[4] Manual override  
detenting  
(VOFC-L-M52-MY- ...)

Type	B1	B2	D1	D2 ∅	D3 ∅	D4 ∅	H1	H2	H3	H4	H5	H6	H7	H9	H10	H11	H12	L1	L2	L3	T1
VOFC-L-M52-M-FG14-...	40	38	G1/4	5.5	19.5	-	150	23	24	13	22	22	47	89	70	1	12	50	32	-	1.6
VOFC-L-M52-MH-FG14-...						12														25	
VOFC-L-M52-MY-FG14-...						12														25	

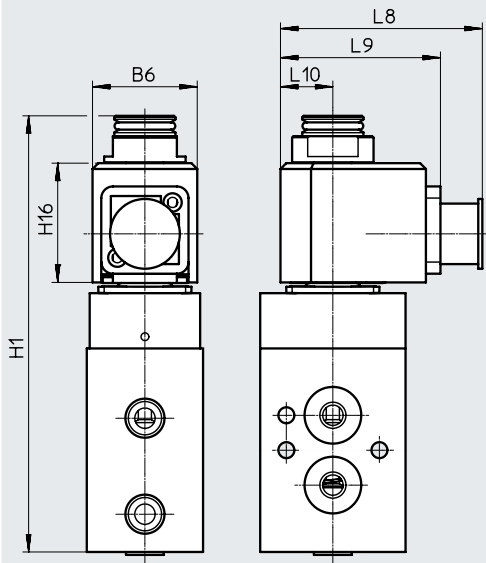
Data sheet – Modular system, piston spool valves

Dimensions

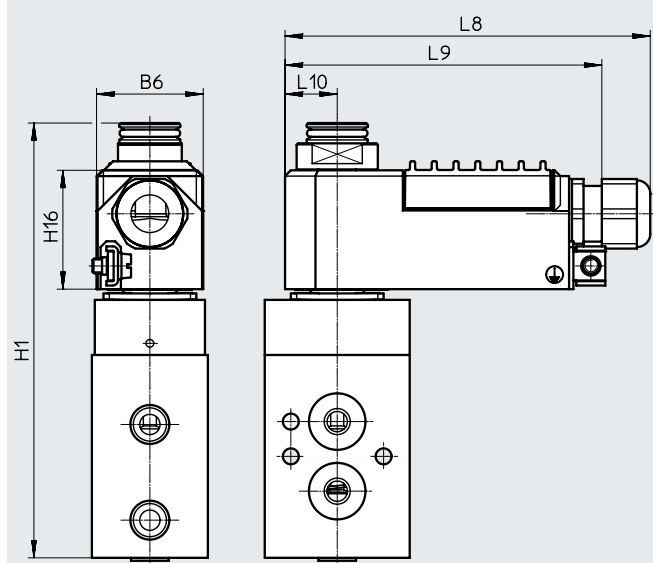
Download CAD data → [www.festo.com](http://www.festo.com)

Single solenoid valves with solenoid coil

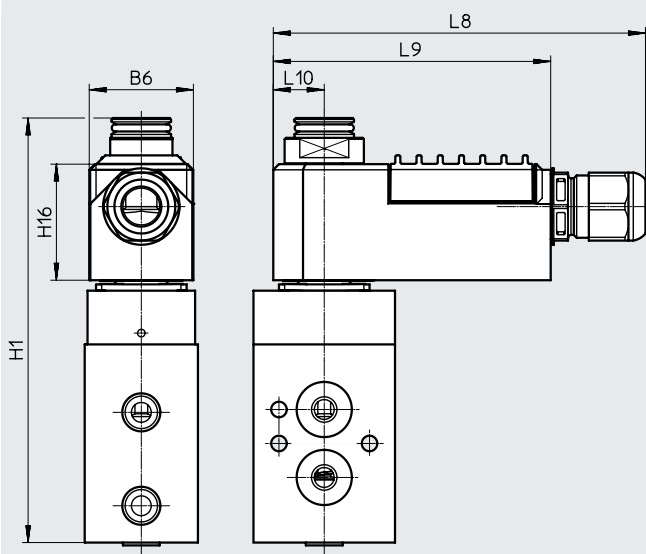
VOFC-...-18-A1-...



VOFC-...-18-K4-...-EX4ME



VOFC-...-11-K4-1-EX4A



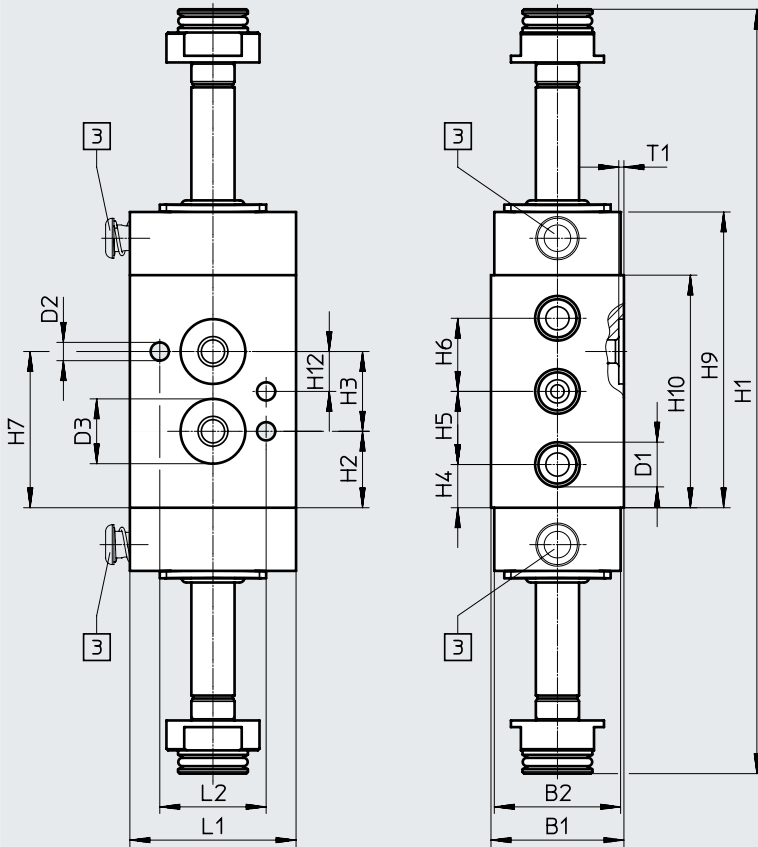
Type	B6	H1	H16	L8	L9	L10
VOFC-...-18-A1-...	36	150	41	69.4	55	18
VOFC-...-18-K4-...-EX4ME	37	150	41	125	111	18
VOFC-...-11-K4-1-EX4A	37	150	41	125	98	18

Data sheet – Modular system, piston spool valves

Dimensions

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

5/2-way valves, double solenoid, basic valve  
 Connection -FG



[3] Manual override  
 non-detenting  
 (VOFC-L-B52-H- ...)

Type	B1	B2	D1	D2 ∅	D3 ∅	H1	H2	H3	H4	H5	H6	H7	H9	H10	H12	L1	L2	T1
VOFC-L-B52-...-FG14-...	40	38	G1/4	5.5	19.5	230	23	24	13	22	22	47	89	70	12	50	32	1.6
VOFC-L-B52-H-...-FG14-...																		

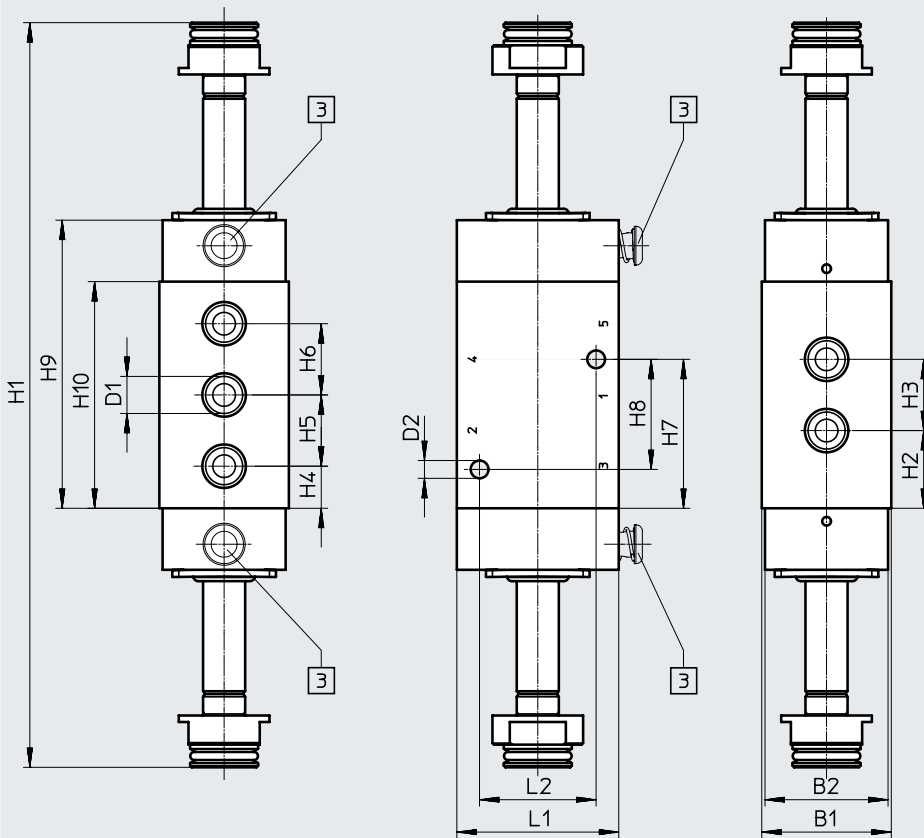


Data sheet – Modular system, piston spool valves

**Dimensions**

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

5/2-way valves, double solenoid, basic valve  
 Connection -G14/-N14



[3] Manual override  
 non-detenting  
 (VOFC-L-B52-H- ...)

Type	B1	B2	D1	D2 ∅	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	L1	L2
VOFC-L-B52-...-G14-...	40	38	G1/4	5.5	230	24	22	13	22	22	46	34	89	70	50	36
VOFC-L-B52-H-G14-...																
VOFC-L-B52-...-N14-...																
VOFC-L-B52-H-N14-...																

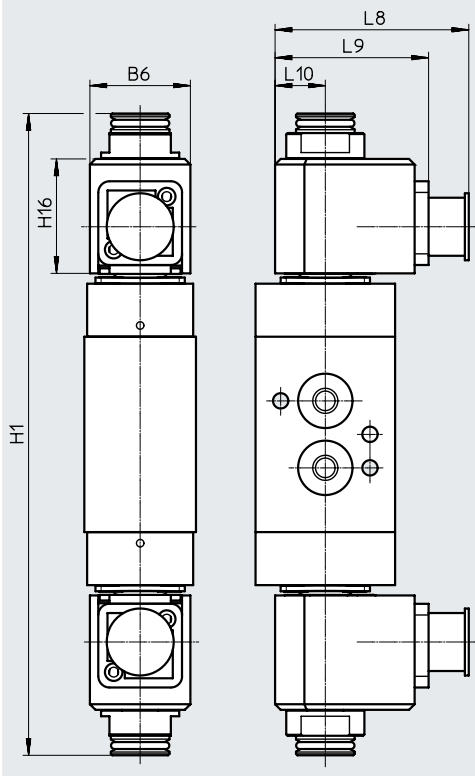
Data sheet – Modular system, piston spool valves

**Dimensions**

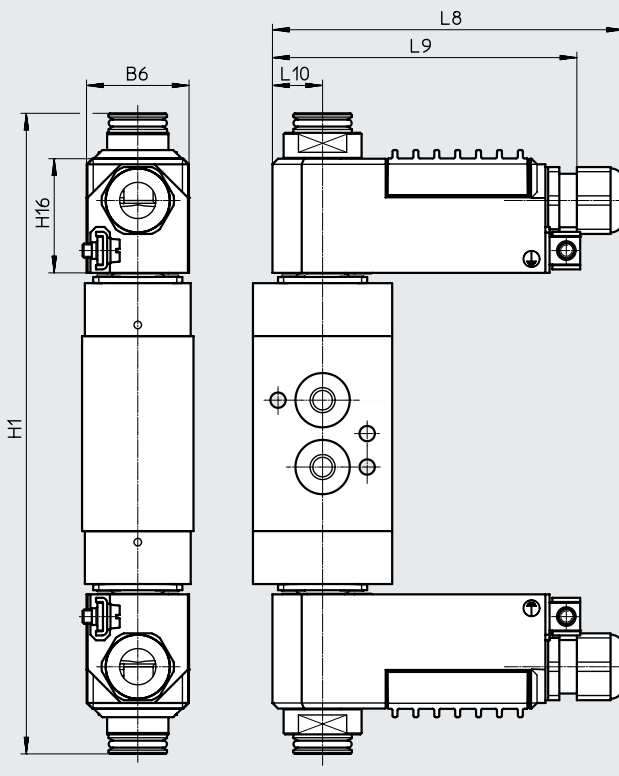
Download CAD data → [www.festo.com](http://www.festo.com)

Double solenoid valves with solenoid coil

VOFC...-18-A1-...



VOFC...-18-K4-...-EX4ME



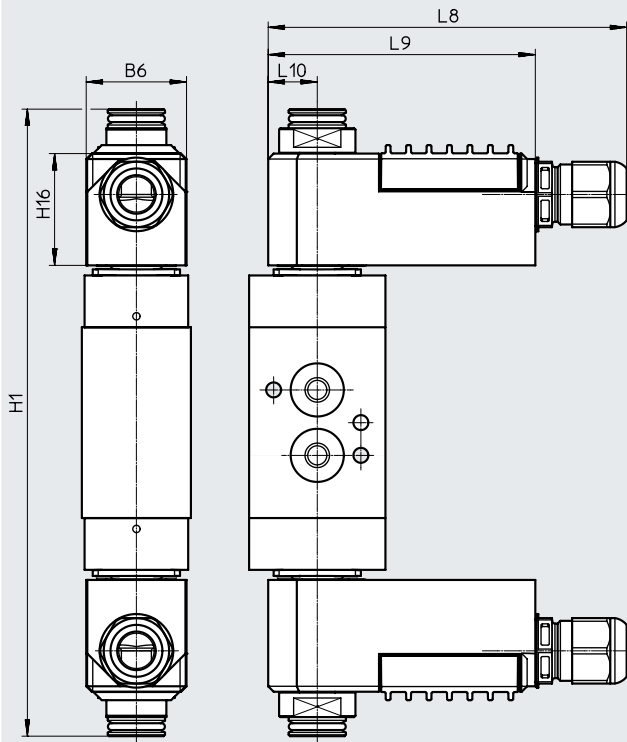
Type	B6	H1	H16	L8	L9	L10
VOFC...-18-A1-...	36	230	41	69.4	55	18
VOFC...-18-K4-...-EX4ME	37	230	41	125	111	18

## Data sheet – Modular system, piston spool valves

## Dimensions

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

Double solenoid valves with solenoid coil  
VOFC...-11-K4-1-EX4A




Type	B6	H1	H16	L8	L9	L10
VOFC...-11-K4-1-EX4A	37	230	41	125	98	18

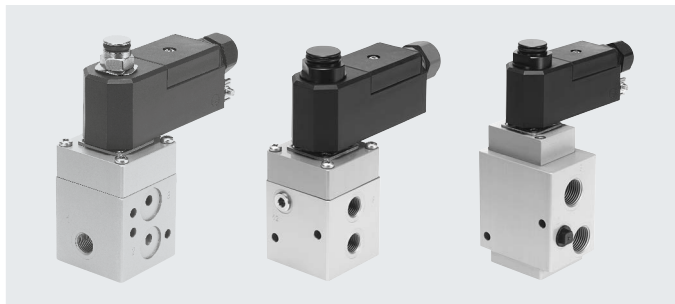
## Data sheet – Modular system, poppet valves

Function

- 3/2-way solenoid valve

-  - Temperature range  
-25 ... 60°C

-  - Flow rate  
766 ... 2686 l/min



General technical data		VOFC-LT-M32C-M...12-...	VOFC-LT-M32C-M...13-...	VOFC-LT-M32C-M...14-...
Type		VOFC-LT-M32C-M...12-...	VOFC-LT-M32C-M...13-...	VOFC-LT-M32C-M...14-...
Valve functions		3/2-way closed, single solenoid		
Design		Poppet valve		
Sealing principle		Hard		
Width	[mm]	51		
Mounting position		Any		
Manual override		None		
Reset method		Mechanical spring		
Actuation type		Electric		
Type of control		Piloted		
Pilot air supply		Internal Internal/external		
Flow rate Kv for pressurisation	[m <sup>3</sup> /h]	0.5 ... 2.4		
Flow rate Kv for exhausting	[m <sup>3</sup> /h]	0.65 ... 3.3		
Switching time off	[ms]	14		18
Switching time on	[ms]	25		24
Flow direction		Non-reversible		
Nominal width	[mm]	6 ... 12		
Standard nominal flow rate 1 → 2	[l/min]	766 ... 2686		
Standard nominal flow rate 2 → 3	[l/min]	1467 ... 3462		

Technical data of pneumatic connection, type VOFC-LT-...14-...			
VOFC-LT-M32C-...-G14-...	1	G1/4	
	2	G1/4	
	3	G1/4	
VOFC-LT-M32C-...-N14-...	1	1/4 NPT	
	2	1/4 NPT	
	3	1/4 NPT	
VOFC-LT-M32C-...-FG14-...	1	G1/4	
	2	Connection pattern to NAMUR, flange 1/4	
	3	G1/4	
VOFC-LT-M32C-...-FGP14-...	1	Connection pattern to M 5 NAMUR	
	2	Connection pattern to NAMUR, flange 1/4	
	3	G1/4	
VOFC-LT-M32C-...-FNP14-...	1	Connection pattern to M 5 NAMUR	
	2	Connection pattern to NAMUR, flange 1/4	
	3	1/4 NPT	
VOFC-LT-M32C-...-FN14-...	1	1/4 NPT	
	2	Connection pattern to NAMUR, flange 1/4	
	3	1/4 NPT	

## Data sheet – Modular system, poppet valves

Technical data of pneumatic connection, type VOFC-LT-...12-..., type VOFC-LT-...13-...		
VOFC-LT-M32C-...-G12-...	1	G1/2
	2	G1/2
	3	G1/2
VOFC-LT-M32C-...-N12-...	1	1/2 NPT
	2	1/2 NPT
	3	1/2 NPT
VOFC-LT-M32C-...-FG12-...	1	G1/2
	2	Connection pattern to NAMUR, flange 1/4
	3	G1/2
VOFC-LT-M32C-...-FN12-...	1	1/2 NPT
	2	Connection pattern to NAMUR, flange 1/4
	3	1/2 NPT
VOFC-LT-M32C-...-FG13-...	1	G1/2
	2	Connection pattern to NAMUR, flange 1/2
	3	G1/2
VOFC-LT-M32C-...-FN13-...	1	1/2 NPT
	2	Connection pattern to NAMUR, flange 1/2
	3	1/2 NPT

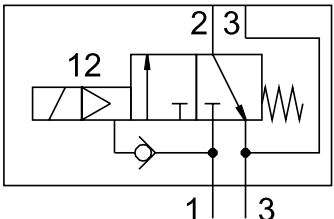
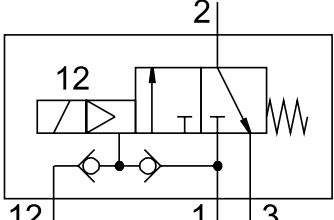
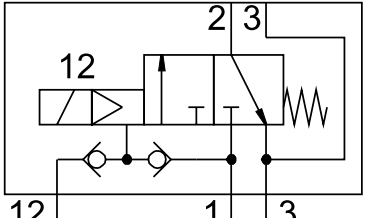
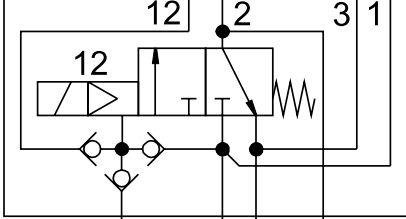
Technical data, weights	
Type	Weight of basic valve
VOFC-LT-M32C-M-...12-...	880
VOFC-LT-M32C-MC-G14-...	550
VOFC-LT-M32C-MC-N14-...	550
VOFC-LT-M32C-M-F-...14-...	600
VOFC-LT-M32C-MC-F-...P14-...	600
VOFC-LT-M32C-MC-F-...13-...	900

Operating and environmental conditions					
Type VOFC-LT-...	-M32C-M-...12-...	-M32C-M-...14-...	-M32C-MC-...12-... -M32C-MC-...13-...	-M32C-MC-...14-...	-M32C-MZ-...14-...
Operating medium	Compressed air to ISO 8573-1:2010 [7:2:2]				
Degree of protection	IP50, IP65				
Operating pressure range	[bar]	2 ... 8	1 ... 8	2 ... 8	1 ... 8
	[psi]	29 ... 116	15 ... 116	29 ... 116	15 ... 116
Note on operating pressure	[bar]	-			0 ... 8 (with external pilot air)
Pilot pressure	[bar]	-			> 2
Temperature of medium	[°C]	-25 ... 60			
Ambient temperature	[°C]	-25 ... 60			
Safety integrity level	[SIL]	Up to SIL3 low demand mode			
		Up to SIL3 high demand mode			
Corrosion resistance class CRC <sup>1)</sup>		4			
Note on materials		RoHS-compliant			
PWIS conformity		VDMA24364 zone III			

1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

Materials		
Type	VOFC-LT-...	VOFC-LT-... -R1-...
Housing	Ematal-coated aluminium	High-alloy stainless steel
Seals	NBR	NBR

Data sheet – Modular system, poppet valves

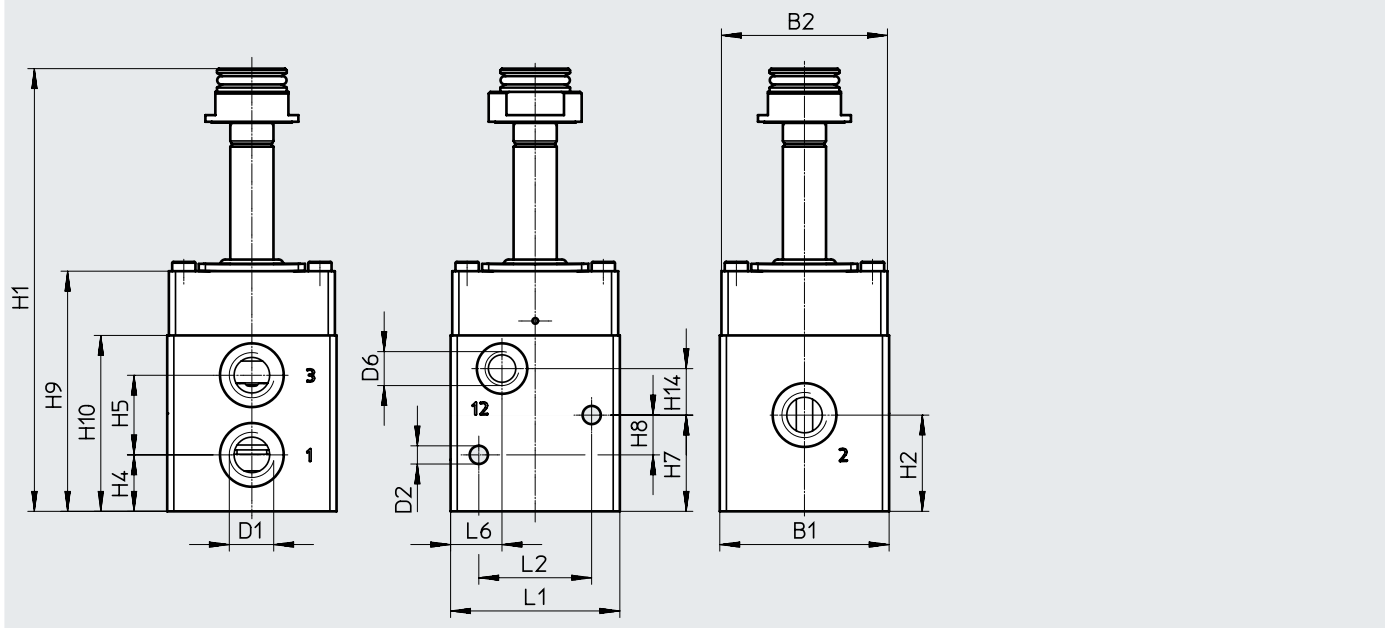
Valve functions Circuit symbol	Type code	Description
	VOFC-LT-M32C-M-FG12- VOFC-LT-M32C-M-FG14- VOFC-LT-M32C-M-FN12- VOFC-LT-M32C-M-FN14-	3/2-way valve, single solenoid, closed <ul style="list-style-type: none"> <li>• Electrically piloted</li> <li>• Non-reversible</li> <li>• With spring return</li> <li>• Internal pilot air supply</li> <li>• With NAMUR connection</li> <li>• Without manual override</li> <li>• One-way flow control valve</li> </ul>
	VOFC-LT-M32C-MC-G12- VOFC-LT-M32C-MC-G14- VOFC-LT-M32C-MC-N12- VOFC-LT-M32C-MC-N14-	3/2-way valve, single solenoid, closed <ul style="list-style-type: none"> <li>• Electrically piloted</li> <li>• Non-reversible</li> <li>• With spring return</li> <li>• Pilot air supply, internal/external</li> <li>• Without manual override</li> <li>• One-way flow control valve</li> </ul>
	VOFC-LT-M32C-MC-FG13- VOFC-LT-M32C-MC-FN13-	3/2-way valve, single solenoid, closed <ul style="list-style-type: none"> <li>• Electrically piloted</li> <li>• Non-reversible</li> <li>• With spring return</li> <li>• Pilot air supply, internal/external</li> <li>• With NAMUR connection</li> <li>• Without manual override</li> <li>• One-way flow control valve</li> </ul>
	VOFC-LT-M32C-MC-FGP14- VOFC-LT-M32C-MC-FNP14-	3/2-way valve, single solenoid, closed <ul style="list-style-type: none"> <li>• Electrically piloted</li> <li>• Non-reversible</li> <li>• With spring return</li> <li>• Pilot air supply, internal/external</li> <li>• With NAMUR connection with additional P connection</li> <li>• Without manual override</li> <li>• One-way flow control valve</li> </ul>

Data sheet – Modular system, poppet valves

Dimensions

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

3/2-way valves, basic valve, connection -G14/-N14



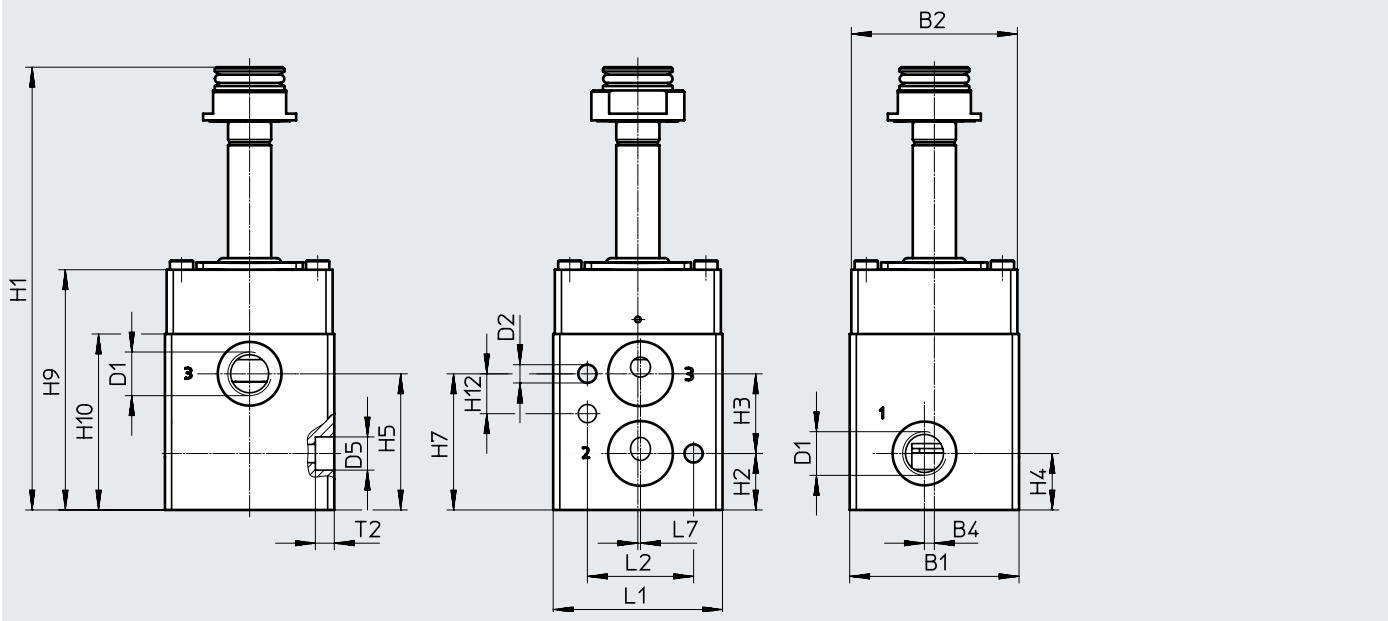
Type	B1	B2	D1	D2 ø	H1	H2	H4	H5
VOFC-LT-M32C-MC-G14-...	51	50	G1/4	5.5	133	29	17	24
VOFC-LT-M32C-MC-N14-...			1/4 NPT					
Type	H7	H8	H9	H10	H14	L1	L2	L6
VOFC-LT-M32C-MC-G14-...	29	12	72	53	14	51	34	15.5
VOFC-LT-M32C-MC-N14-...								

Data sheet – Modular system, poppet valves

Dimensions

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

3/2-way valves, basic valve, connection -FG14



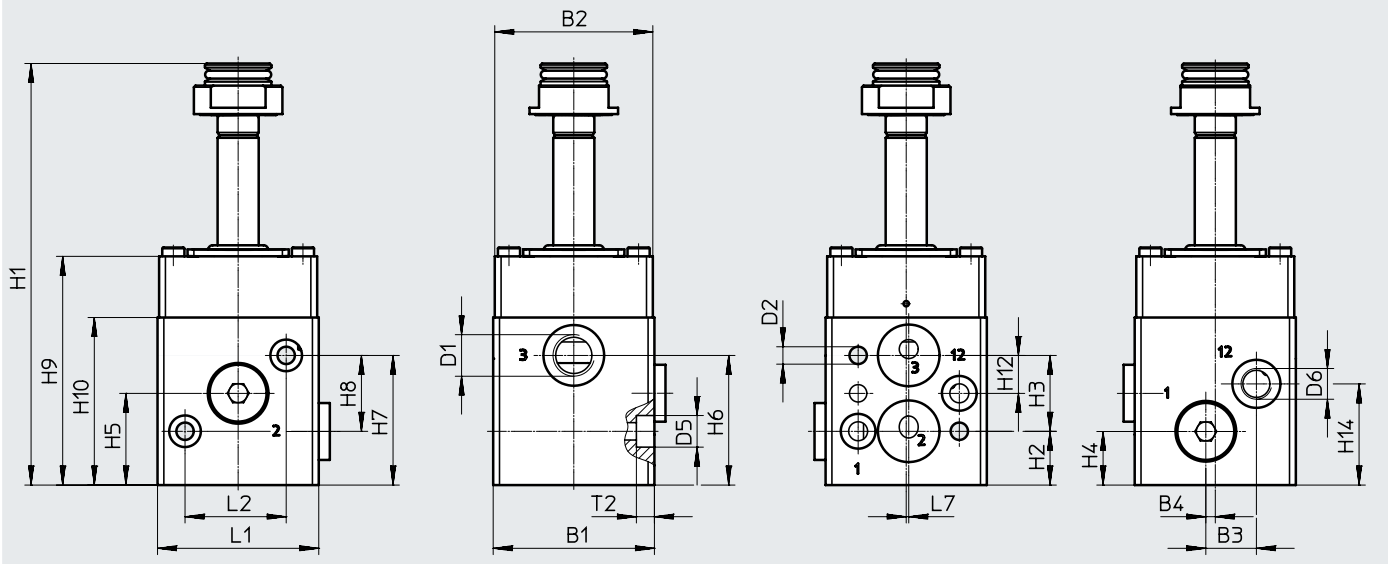
Type	B1	B2	B4	D1	D2 ∅	D5 ∅	H1	H2	H3	H4
VOFC-LT-M32C-M-FG14-...	51	50	3	G1/4	5.5	10	133	17	24	17

Type	H5	H7	H9	H10	H12	L1	L2	L7	T2
VOFC-LT-M32C-M-FG14-...	41	41	72	53	12	51	32	0.8	5.7

Dimensions

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

3/2-way valves, basic valve, connection -FGP14



Type	B1	B2	B3	B4	D1	D2 ∅	D5 ∅	D6	H1	H2	H3	H4
VOFC-LT-M32C-M-FGP14-...	51	50	16	3	G1/4	5.5	10	G1/8	133	17	24	17

Type	H5	H6	H7	H8	H9	H10	H12	H14	L1	L2	L7	T2
VOFC-LT-M32C-M-FGP14-...	29	41	41	24	72	53	12	32	51	32	0.8	5.7

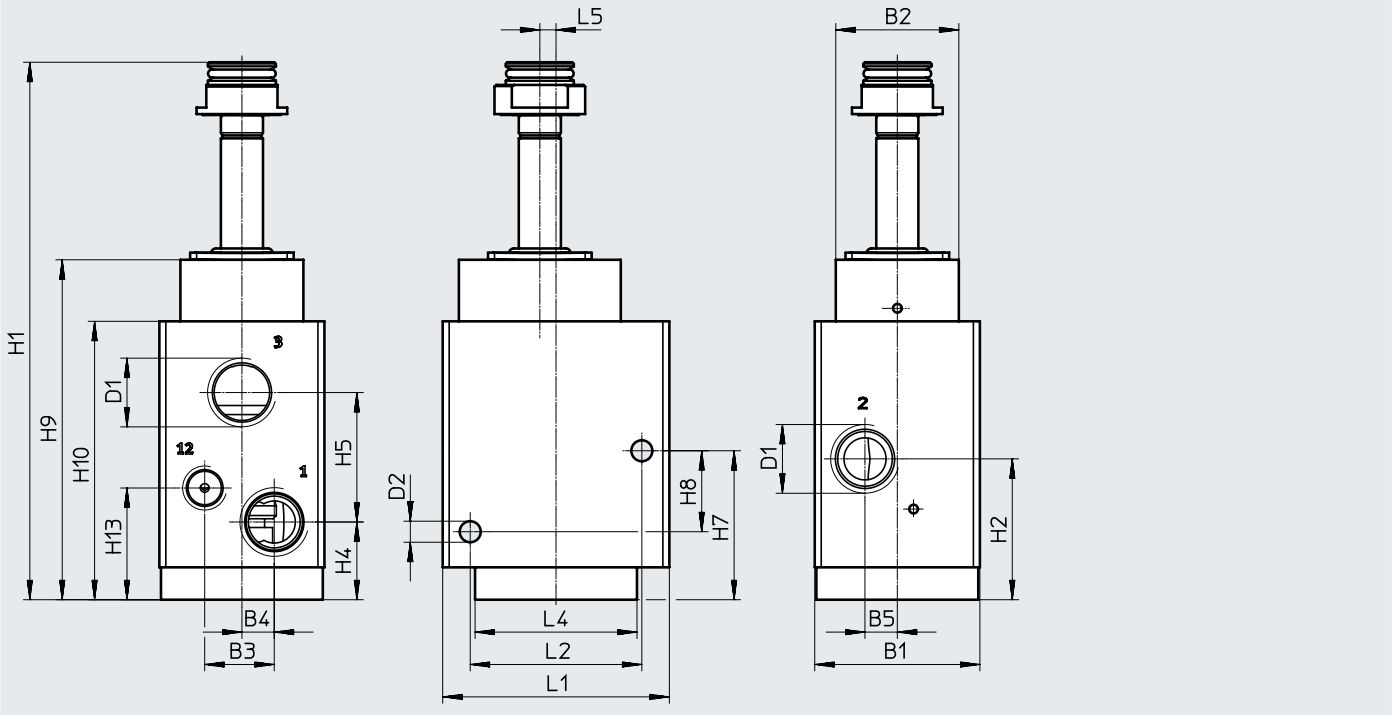


Data sheet – Modular system, poppet valves

Dimensions

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

3/2-way valves, basic valve, connection -G12/-N12



Type	B1	B2	B3	B4	B5	D1	D2 ∅	H1	H2	H4
VOFC-LT-M32C-MC-G12-...	51	38	22	10	10	G1/2	5.5	166	43.5	24
VOFC-LT-M32C-MC-N12-...			21.5			1/2 NPT				

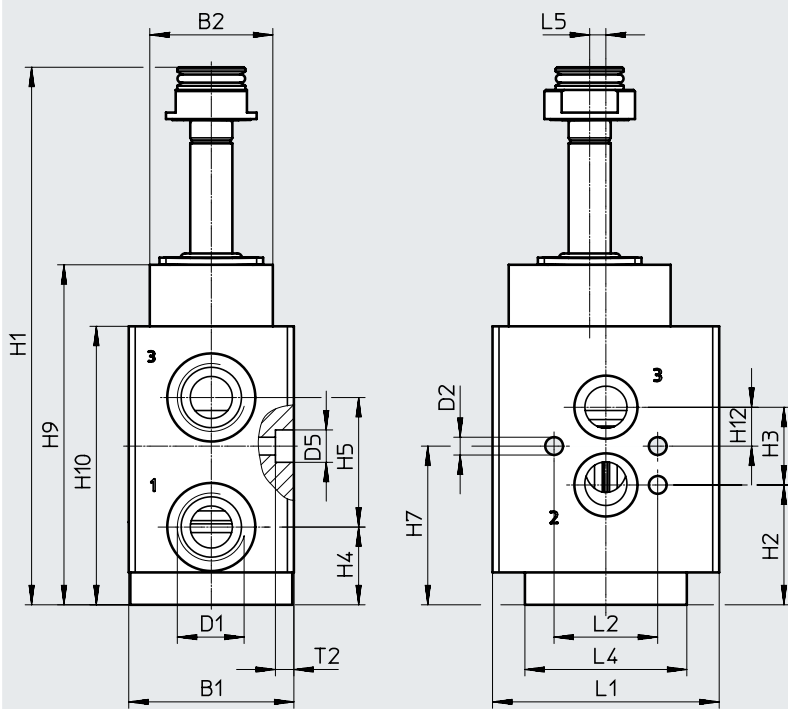
Type	H5	H7	H8	H9	H10	H13	L1	L2	L4	L5
VOFC-LT-M32C-MC-G12-...	40	46	25	89	105	34.5	70	53	50	5
VOFC-LT-M32C-MC-N12-...										

Data sheet – Modular system, poppet valves

Dimensions

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

3/2-way valves, basic valve, connection -FG12



Type	B1	B2	D1	D2 ∅	D5 ∅	H1	H2	H3	H4	H5
VOFC-LT-M32C-MC-FG12-...	51	38	G1/2	5.5	10	166	37	24	24	40

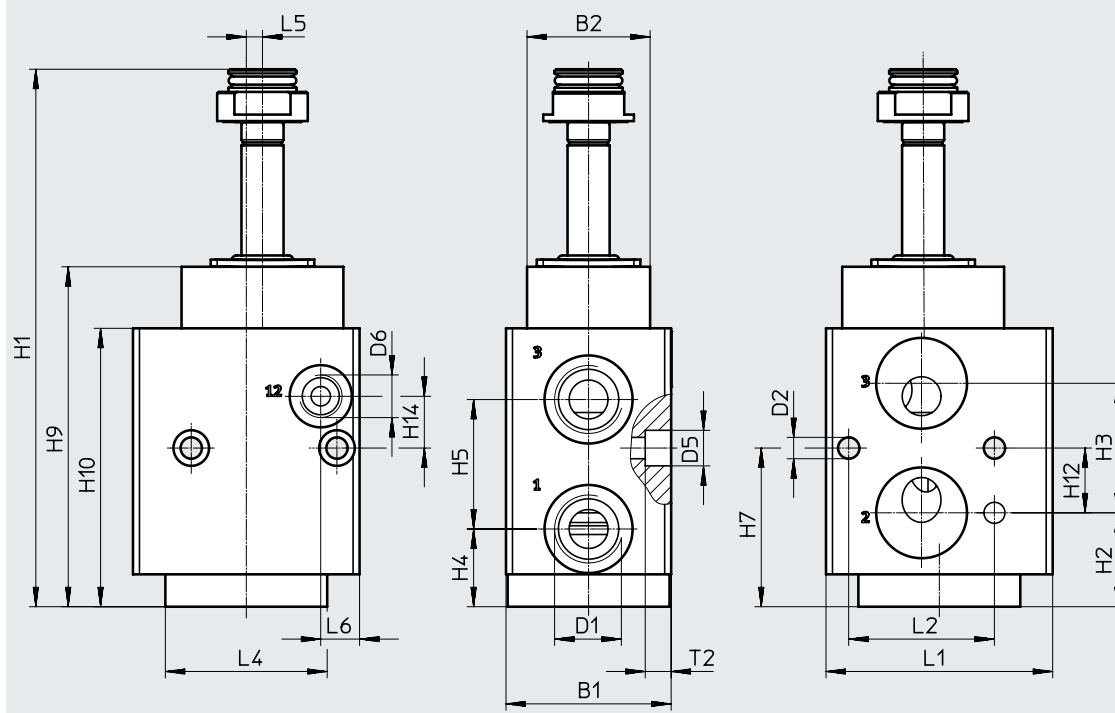
Type	H7	H9	H10	H12	L1	L2	L4	L5	T2
VOFC-LT-M32C-MC-FG12-...	49	105	86	12	70	32	50	5	5.7

## Data sheet – Modular system, poppet valves

## Dimensions

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

3/2-way valves, basic valve, connection -FG13



Type	B1	B2	D1	D2 ∅	D5 ∅	H1	H2	H3	H4	H5
VOFC-LT-M32C-M-FG13-...	51	38	G1/2	6.6	11	166	29	40	24	40

Type	H7	H9	H10	H12	H14	L1	L2	L4	L5	L6	T2
VOFC-LT-M32C-M-FG13-...	49	105	86	20	16	70	45	50	5	12	8

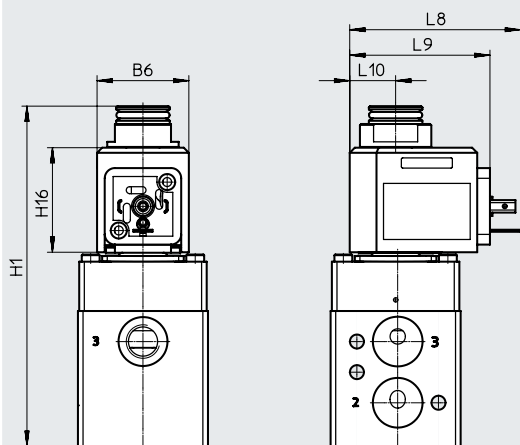
Data sheet – Modular system, poppet valves

**Dimensions**

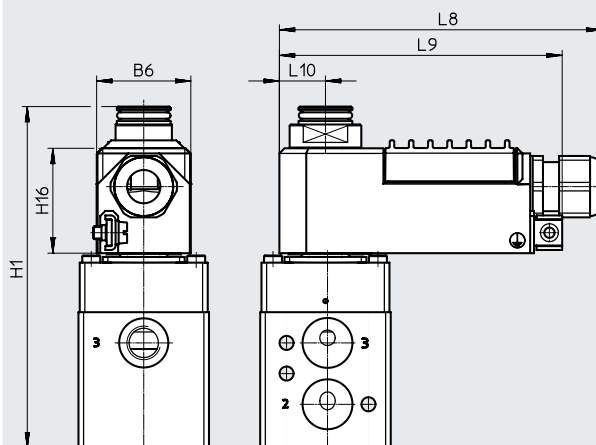
Download CAD data → [www.festo.com](http://www.festo.com)

Valves with solenoid coil, pneumatic connection, size 1/4"

VOFC-LT-...-18-A1-...



VOFC-LT-...-18-K4-...-EX4ME

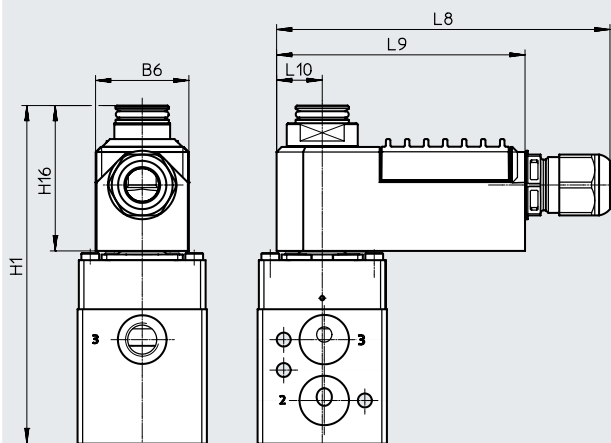


**Dimensions**

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

Valves with solenoid coil, pneumatic connection, size 1/4"

VOFC-LT-...-11-K4-1-EX4A



Type	B6	H1	H16	L8	L9	L10
VOFC-LT-...-18-A1-...	36	133	41	67	55	18
VOFC-LT-...-18-K4-...-EX4ME	37	133	41	125	111	18
VOFC-LT-...-11-K4-1-EX4A	37	133	41	125	98	18

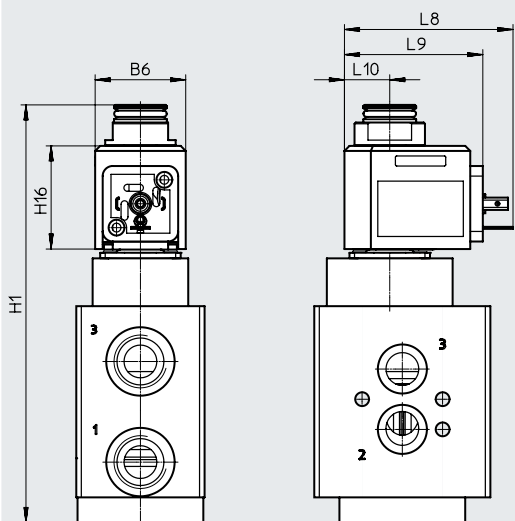
## Data sheet – Modular system, poppet valves

### Dimensions

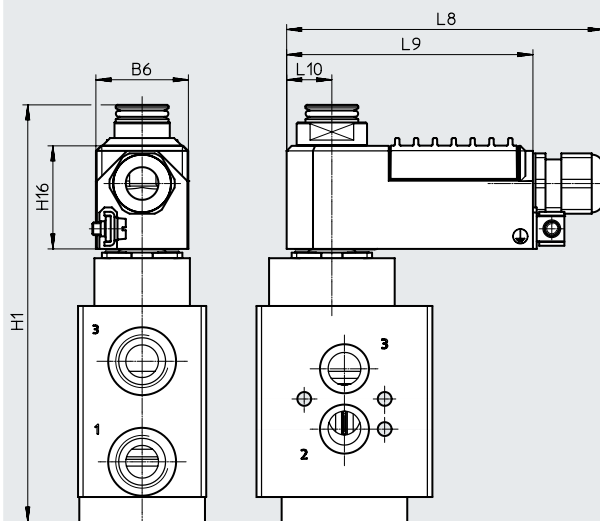
Download CAD data → [www.festo.com](http://www.festo.com)

Valves with solenoid coil, pneumatic connection, size 1/2"

VOFC-LT-...-18-A1-...



VOFC-LT-...-18-K4-...-EX4ME

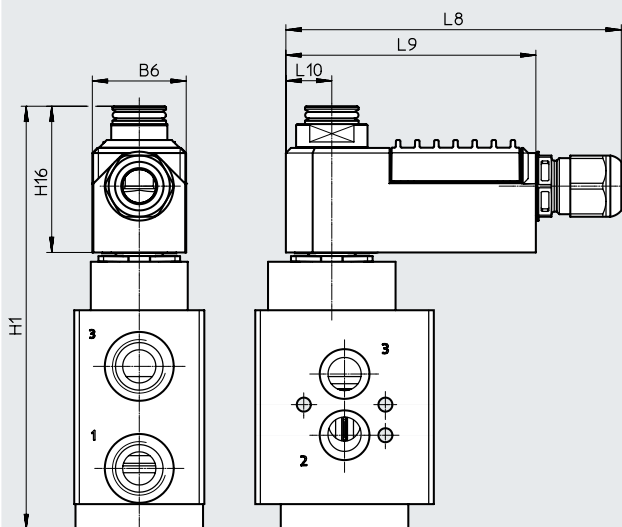


### Dimensions

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

Valves with solenoid coil, pneumatic connection, size 1/2"

VOFC-LT-...-11-K4-1-EX4A

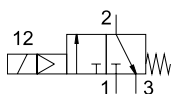



Type	B6	H1	H16	L8	L9	L10
VOFC-LT-...-18-A1-...	36	166	41	67	55	18
VOFC-LT-...-18-K4-...-EX4ME	37	166	41	125	111	18
VOFC-LT-...-11-K4-1-EX4A	37	166	41	125	98	18


## Data sheet – 3/2-way valves, poppet valve, single solenoid, G1/4 NAMUR

## Function

3/2-way valve



-  - Temperature range  
-25 ... 60°C

-  - Flow rate  
766 l/min



## General technical data

		G1/4 basic valve, NAMUR	G1/4 basic valve, NAMUR, intrinsically safe	G1/4 basic valve, NAMUR, P connection	G1/4 basic valve, NAMUR, P connection, intrinsically safe
Valve function		3/2-way closed, single solenoid			
Pneumatic connection	1	G1/4		M5 and connection pattern to NAMUR	
	2	Flange 1/4 and connection pattern to NAMUR			
	3	G1/4			
Design		Piloted poppet valve			
Width	[mm]	51			
Mounting position		Any			
Sealing principle		Hard			
Manual override		None			
Reset method		Mechanical spring			
Actuation type		Electric			
Type of control		Piloted			
Pilot air supply		Internal		Internal, external	
Flow rate Kv for pressurisation	[m <sup>3</sup> /h]	0.55		0.54	
Flow rate Kv for exhausting	[m <sup>3</sup> /h]	0.99		0.98	
Flow direction		Non-reversible			
Product weight	[g]	600			
Switching time off	[ms]	18			
Switching time on	[ms]	24			
Nominal width		6			
Standard nominal flow rate 1 → 2	[l/min]	601		595	
Standard nominal flow rate 2 → 3	[l/min]	1085		1066	

## Operating and environmental conditions

		G1/4 basic valve, NAMUR	G1/4 basic valve, NAMUR, intrinsically safe	G1/4 basic valve, NAMUR, P connection	G1/4 basic valve, NAMUR, P connection, intrinsically safe
Operating medium		Compressed air to ISO 8573-1:2010 [7:2:2]			
Degree of protection		IP65			
Operating pressure	[bar]	1 ... 8			
	[MPa]	0.1 ... 0.8			
Note on operating pressure in case of external pilot air	[MPa]	0 ... 0.8			
Temperature of medium	[°C]	-25 ... 60			
Ambient temperature	[°C]	-25 ... 60			
Safety integrity level	[SIL]	Up to SIL3 low demand mode			
		Up to SIL3 high demand mode			
Corrosion resistance class CRC <sup>1)</sup>		4			

1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

Data sheet – 3/2-way valves, poppet valve, single solenoid, G1/4 NAMUR

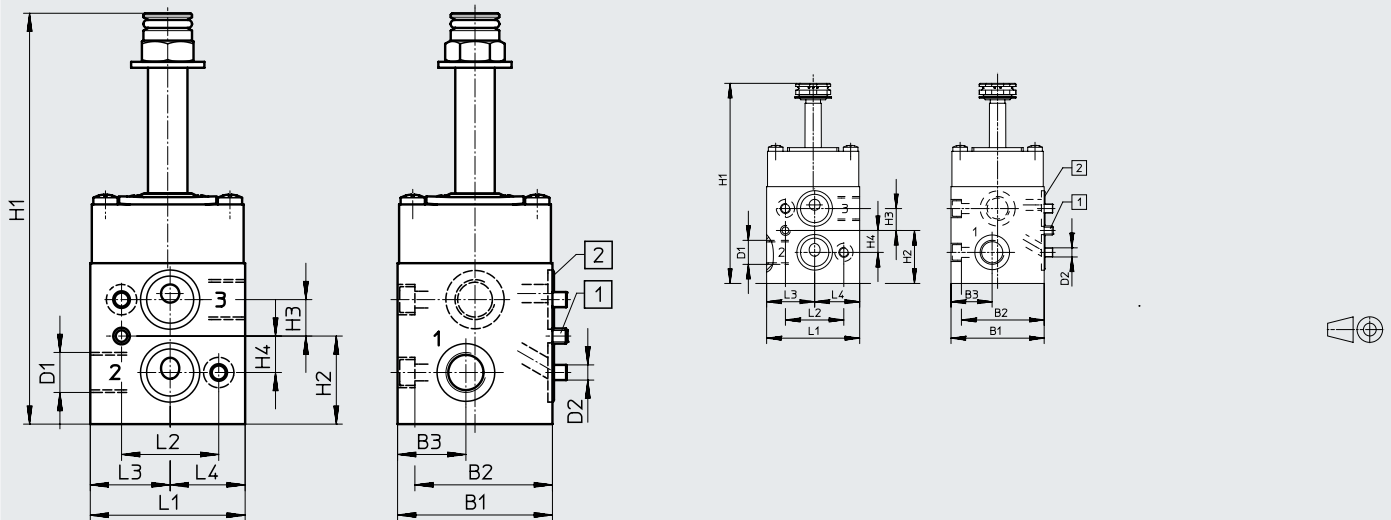
Materials	
Housing	Ematal-coated aluminium
Seals	NBR
Note on materials	RoHS-compliant
PWIS conformity	VDMA24364 zone III

Dimensions

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

VOFC-LT...-FG...

VOFC-LT...-FN



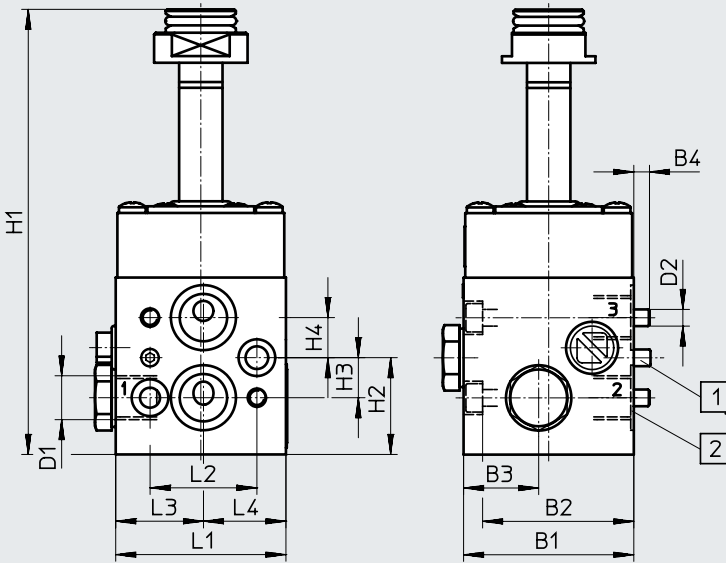
- [1] Coding pin M5x10
- [2] O-ring 16x2

Type	B1	B2	B3	D1	D2	H1	H2	H3	H4	L1	L2	L3	L4
VOFC-LT-M32C-M-FG14-F19	51	45.3	22.5	G1/4	5.5	135.3	29	12	12	51	32	26.3	24.7
VOFC-LT-M32C-M-FG14-F19A					M5								
VOFC-LT...-FN					M5								

Data sheet – 3/2-way valves, poppet valve, single solenoid, G1/4 NAMUR

Dimensions

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- [1] Coding pin M5x10
- [2] O-ring 16x2

Type	B1	B2	B3	B4	D1	D2	H1	H2	H3	H4	L1	L2	L3	L4
VOFC-LT-M32C-MC-FGP14-F19	51	45.3	22.5	4.7	NAMUR G1/4	M5	133.4	29	12	12	51	32	26.3	24.7
VOFC-LT-M32C-MC-FGP14-F19A														

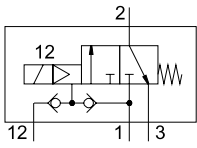
Ordering data


Circuit symbol	Function	Pneumatic connection	Type of ignition protection	Part no.	Type
<b>In-line valve</b>					
	3/2-way closed, single solenoid	G1/4 and NAMUR	Without	4514738	VOFC-LT-M32C-M-FG14-F19
			Intrinsically safe	4514739	VOFC-LT-M32C-M-FG14-F19A
	3/2-way closed, single solenoid	G1/4 and NAMUR, P connection	Without	4514744	VOFC-LT-M32C-MC-FGP14-F19
			Intrinsically safe	4514745	VOFC-LT-M32C-MC-FGP14-F19A
	3/2-way closed, single solenoid	1/4 NPT and NAMUR	–	8122932	VOFC-LT-M32C-M-FN14-FN




## Data sheet – 3/2-way valves, poppet valve, single solenoid, G1/4 in-line

Function  
3/2-way valve



-  - Temperature range  
-25 ... 60°C

-  - Flow rate  
766 l/min



## General technical data

		G1/4 basic valve	G1/4 basic valve, intrinsically safe	NPT basic valve	NPT basic valve, intrinsically safe
Valve function		3/2-way closed, single solenoid			
Pneumatic connection	1	G1/4	G1/4	1/4 NPT	1/4 NPT
	2	G1/4	G1/4	1/4 NPT	1/4 NPT
	3	G1/4	G1/4	1/4 NPT	1/4 NPT
Design		Pilotd poppet valve			
Width	[mm]	51			
Mounting position		Any			
Sealing principle		Hard			
Manual override		None			
Reset method		Mechanical spring			
Actuation type		Electric			
Type of control		Pilotd			
Pilot air supply		Internal, external			
Flow rate Kv for pressurisation	[m <sup>3</sup> /h]	0.64			
Flow rate Kv for exhausting	[m <sup>3</sup> /h]	1.46			
Flow direction		Non-reversible			
Product weight	[g]	550			
Switching time off	[ms]	18			
Switching time on	[ms]	24			
Nominal width	[mm]	6			
Standard nominal flow rate 1→2	[l/min]	703			
Standard nominal flow rate 2→3	[l/min]	1596			

## Operating and environmental conditions

Operating medium	Compressed air to ISO 8573-1:2010 [7:2:2]				
Degree of protection	IP65				
Operating pressure	[bar]	1 ... 8			
	[MPa]	0.1 ... 0.8			
Note on operating pressure in case of external pilot air	[MPa]	0 ... 0.8			
Temperature of medium	[°C]	-25 ... 60			
Ambient temperature	[°C]	-25 ... 60			
Safety integrity level	[SIL]	Up to SIL3 low demand mode			
		Up to SIL3 high demand mode			
Corrosion resistance class CRC <sup>1)</sup>	4				

1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

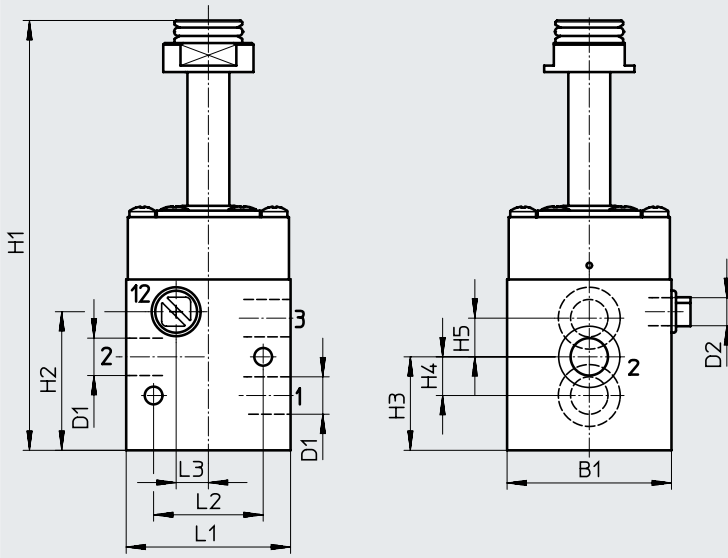
## Materials

Housing	Ematal-coated aluminium
Seals	NBR
Note on materials	RoHS-compliant
PWIS conformity	VDMA24364 zone III

Data sheet – 3/2-way valves, poppet valve, single solenoid, G1/4 in-line

Dimensions

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Type	B1	D1	D2	H1	H2	H3	H4	H5	L1	L2	L3
VOFC-LT-M32C-MC-G14-F19	51	G1/4	G1/8	133	43	29	12	12	51	34	10
VOFC-LT-M32C-MC-G14-F19A											
VOFC-LT-M32C-MC-N14-F19		1/4NPT	1/8NPT								
VOFC-LT-M32C-MC-N14-F19A											

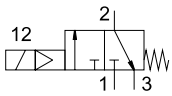
Ordering data


Circuit symbol	Function	Pneumatic connection	Type of ignition protection	Part no.	Type
	3/2-way closed, single solenoid	G1/4	Without	4514740	VOFC-LT-M32C-MC-G14-F19
			Intrinsically safe	4514741	VOFC-LT-M32C-MC-G14-F19A
		1/4 NPT	Without	4514742	VOFC-LT-M32C-MC-N14-F19
			Intrinsically safe	4514743	VOFC-LT-M32C-MC-N14-F19A
	3/2-way closed, single solenoid	1/4 NPT	–	8122933	VOFC-LT-M32C-MC-N14-FN


## Data sheet – 3/2-way valve, poppet valve, single solenoid, G1/2 NAMUR

## Function

3/2-way valve



-  - Temperature range  
-25 ... 60°C

-  - Flow rate  
2868 l/min



## General technical data

		VOFC...-FG12-F19 VOFC...-FG12-F19A	VOFC...-FG13-F19 VOFC...-FG13-F19A
Valve function		3/2-way closed, single solenoid	
Pneumatic connection	1	G1/2	
	2	Flange 1/4 and connection pattern to NAMUR	
	3	Flange 1/2 and connection pattern to NAMUR	
Design		Piloted poppet valve	
Width	[mm]	51	
Mounting position		Any	
Sealing principle		Hard	
Manual override		None	
Reset method		Mechanical spring	
Actuation type		Electric	
Type of control		Piloted	
Pilot air supply		Internal	Internal, external
Flow rate Kv for pressurisation	[m <sup>3</sup> /h]	2.4	
Flow rate Kv for exhausting	[m <sup>3</sup> /h]	3.3	
Flow direction		Non-reversible	
Product weight	[g]	880	900
Switching time off	[ms]	14	
Switching time on	[ms]	25	
Nominal width	[mm]	12	
Standard nominal flow rate 1→2	[l/min]	2686	
Standard nominal flow rate 2→3	[l/min]	3462	

## Operating and environmental conditions

		VOFC...-FG12-F19 VOFC...-FG12-F19A	VOFC...-FG13-F19 VOFC...-FG13-F19A
Operating medium		Compressed air to ISO 8573-1:2010 [7:2:2]	
Degree of protection		IP65	
Operating pressure range		2 ... 8	
Operating pressure range in case of external pilot air		-	0 ... 8
Temperature of medium		-25 ... 60	
Ambient temperature		-25 ... 60	
Safety integrity level		Up to SIL3 low demand mode Up to SIL3 high demand mode	
Corrosion resistance class CRC <sup>1)</sup>		4	

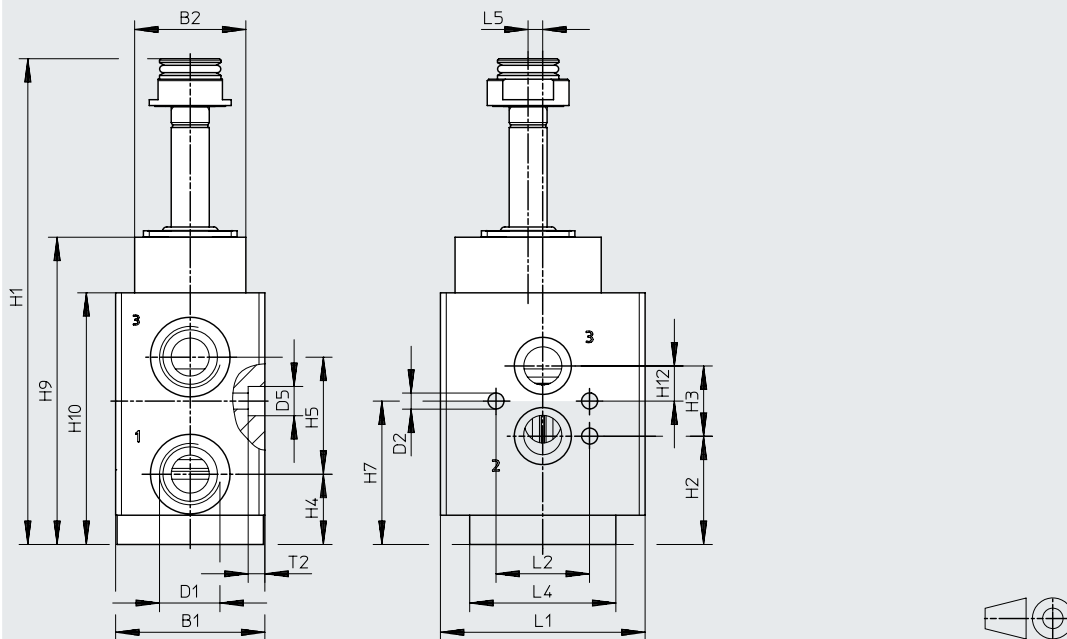
1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

Data sheet – 3/2-way valve, poppet valve, single solenoid, G1/2 NAMUR

Materials	
Housing	Ematal-coated aluminium
Seals	NBR
Note on materials	RoHS-compliant
PWIS conformity	VDMA24364 zone III

Dimensions

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

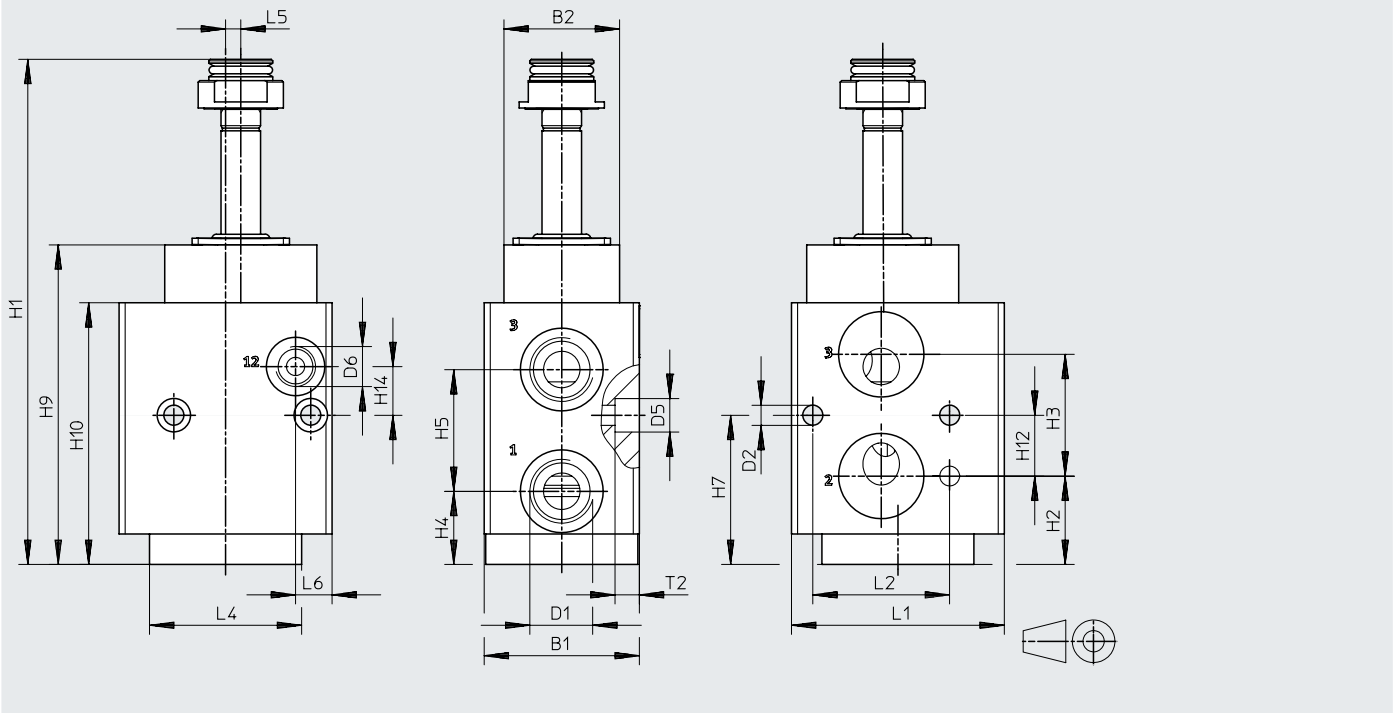


Type	B1	B2	D1	D2 ø	D5 ø	H1	H2	H3	H4	H5	H7	H9	H10	H12	L1	L2	L4	L5	T2
VOFC-LT-M32C-M-FG12-F19	51	38	G1/2	5.5	10	166	37	24	24	40	49	105	86	12	70	32	50	5	8
VOFC-LT-M32C-M-FG12-F19A																			

Data sheet – 3/2-way valve, poppet valve, single solenoid, G1/2 NAMUR

Dimensions

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Type	B1	B2	D1	D2 ø	D5 ø	D6	H1	H2	H3	H4	H5
VOFC-LT-M32C-MC-FG13-F19	51	38	G1/2	6.6	11	G1/4	166	29	40	24	40
VOFC-LT-M32C-MC-FG13-F19A											

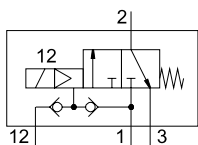
Type	H7	H9	H10	H12	H14	L1	L2	L4	L5	L6	T2
VOFC-LT-M32C-MC-FG13-F19	49	105	86	20	16	70	45	50	5	12	8
VOFC-LT-M32C-MC-FG13-F19A											


Ordering data


Circuit symbol	Function	Pneumatic connection	Type of ignition protection	Part no.	Type
<b>In-line valve</b>					
	3/2-way closed, single solenoid	G1/2 and NAMUR	Without	4514746	VOFC-LT-M32C-M-FG12-F19
			Intrinsically safe	4514747	VOFC-LT-M32C-M-FG12-F19A
	3/2-way closed, single solenoid	G1/2 Flange 1/2 (connection pattern to NAMUR), G1/2	Without	4527268	VOFC-LT-M32C-MC-FG13-F19
			Intrinsically safe	4527269	VOFC-LT-M32C-MC-FG13-F19A

## Data sheet – 3/2-way valve, poppet valve, single solenoid, G1/2 in-line

Function  
3/2-way valve



-  - Temperature range  
-25 ... 60°C

-  - Flow rate  
2686 l/min

**General technical data**

Valve function		3/2-way closed, single solenoid
Pneumatic connection	1	G1/2
	2	G1/2
	3	G1/2
Design		Piloted poppet valve
Width	[mm]	51
Mounting position		Any
Sealing principle		Hard
Manual override		None
Reset method		Mechanical spring
Actuation type		Electric
Type of control		Piloted
Pilot air supply		Internal, external
Flow rate Kv for pressurisation	[m <sup>3</sup> /h]	2.4
Flow rate Kv for exhausting	[m <sup>3</sup> /h]	3.3
Flow direction		Non-reversible
Product weight	[g]	880
Switching time off	[ms]	14
Switching time on	[ms]	25
Nominal width	[mm]	12
Standard nominal flow rate 1 → 2	[l/min]	2686
Standard nominal flow rate 2 → 3	[l/min]	3462

**Operating and environmental conditions**

Operating medium		Compressed air to ISO 8573-1:2010 [7:2:2]
Degree of protection		IP65
Operating pressure range	[bar]	2 ... 8
Operating pressure range in case of external pilot air	[bar]	0 ... 8
Temperature of medium	[°C]	-25 ... 60
Ambient temperature	[°C]	-25 ... 60
Safety integrity level	[SIL]	Up to SIL3 low demand mode Up to SIL3 high demand mode
Corrosion resistance class CRC <sup>1)</sup>		4

1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

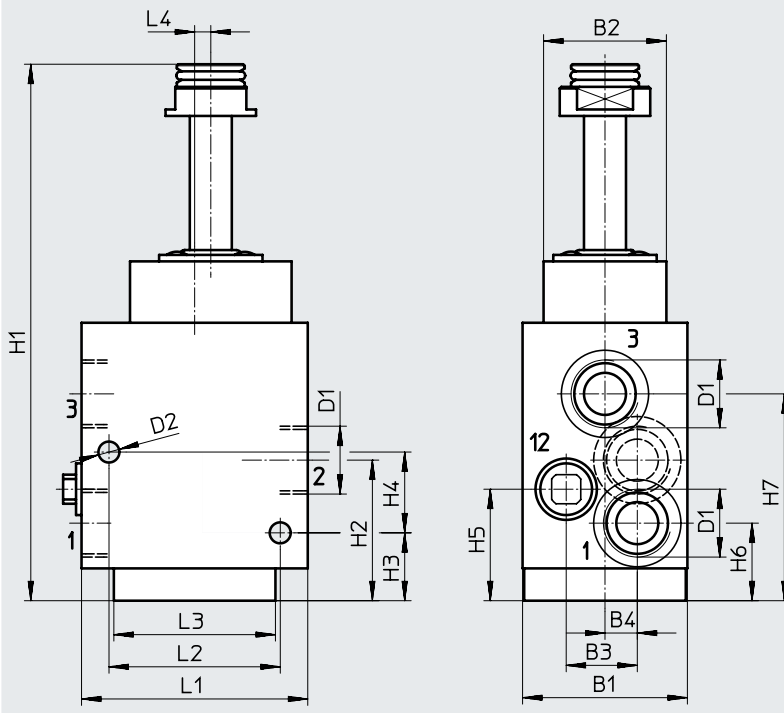
**Materials**

Housing		Ematal-coated aluminium
Seals		NBR
Note on materials		RoHS-compliant
PWIS conformity		VDMA24364 zone III

Data sheet – 3/2-way valve, poppet valve, single solenoid, G1/2 in-line

Dimensions

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Type	B1	B2	B3	B4	D1	D2	H1	H2	H3	H4	H5	L1	L2	L3	L4	
VOFC-LT-M32C-MC-G12-F19	51	37	22	10	G1/2	6.5	166	43.5	21	25	34.5	70	53	50	5	
VOFC-LT-M32C-MC-G12-F19A																

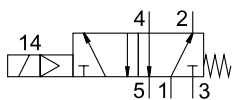
Ordering data


Circuit symbol	Function	Pneumatic connection	Type of ignition protection	Part no.	Type
	3/2-way closed, single solenoid	G1/2	Without	4514748	VOFC-LT-M32C-MC-G12-F19
			Intrinsically safe	4514749	VOFC-LT-M32C-MC-G12-F19A


## Data sheet – 5/2-way valve, piston spool, single solenoid, G1/4 NAMUR

### Function

5/2-way valve



-  - Temperature range  
-25 ... 60°C

-  - Flow rate  
1030 l/min



### General technical data

Valve function		5/2-way, single solenoid
Pneumatic connection	1	G1/4
	2	G1/4 and connection pattern to NAMUR
	3	G1/4
	4	G1/4 and connection pattern to NAMUR
	5	G1/4
Design		Piston spool valve
Mounting position		Any
Width	[mm]	40
Sealing principle		Soft
Manual override		None
Reset method		Mechanical spring
Actuation type		Electric
Type of control		Piloted
Pilot air supply		Internal
Flow rate Kv for pressurisation	[m <sup>3</sup> /h]	1.08
Flow rate Kv for exhausting	[m <sup>3</sup> /h]	1.08
Flow direction		Non-reversible
Product weight	[g]	520
Switching time off	[ms]	22
Switching time on	[ms]	26
Nominal width	[mm]	6
Standard nominal flow rate 1→2	[l/min]	1030
Standard nominal flow rate 2→3	[l/min]	978

### Operating and environmental conditions

Operating medium		Compressed air to ISO 8573-1:2010 [7:2:2]
Degree of protection		IP65
Operating pressure range	[bar]	2.5 ... 8
Temperature of medium	[°C]	-25 ... 60
Ambient temperature	[°C]	-25 ... 60
Corrosion resistance class CRC <sup>1)</sup>		4

1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

### Materials

Housing		Ematal-coated aluminium
Seals		NBR
Note on materials		RoHS-compliant
PWIS conformity		VDMA24364 zone III

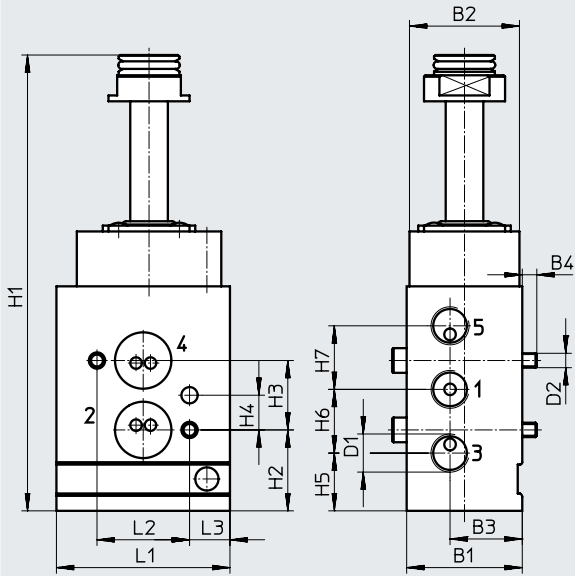


Data sheet – 5/2-way valve, piston spool, single solenoid, G1/4 NAMUR

Dimensions

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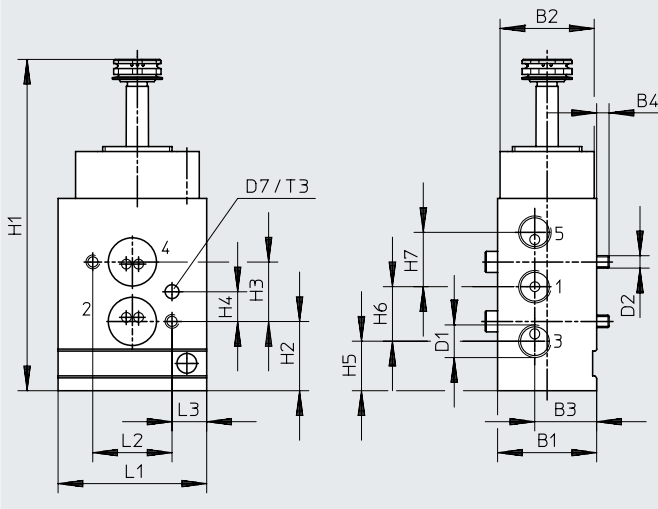
VOFC-L...-FG14-...



Dimensions

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VOFC-L...-FN14-...-FN



Type	B1	B2	B3	B4	D1	D2	D7 ∅	H1	H2	H3	H4	H5	H6	H7	L1	L2	L3	T3
VOFC-L-M52-M-FG14-F19	40	38	25	5	G1/4	M5	5.5	158	28	24	12	20	22	22	60	32	14	3
VOFC-L-M52-M-FG14-F19A								133.8										
VOFC-L-M52-M-FN14-...-FN																		

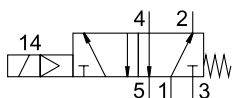
Ordering data


Circuit symbol	Function	Pneumatic connection	Type of ignition protection	Part no.	Type
	5/2-way, single solenoid	G1/4 and NAMUR	Without	4514923	VOFC-L-M52-M-FG14-F19
			Intrinsically safe	4514924	VOFC-L-M52-M-FG14-F19A
	5/2-way, single solenoid	1/4 NPT and NAMUR	-	8122930	VOFC-L-M52-M-FN14-FN


## Data sheet – 5/2-way valve, piston spool, single solenoid, G1/4 in-line

### Function

5/2-way valve



-  - Temperature range  
-25 ... 60°C

-  - Flow rate  
1030 l/min



### General technical data

Valve function	5/2-way, single solenoid	
Pneumatic connection	1	G1/4
	2	G1/4
	3	G1/4
	4	G1/4
	5	G1/4
Design	Piston spool valve	
Mounting position	Any	
Width	[mm]	40
Sealing principle	Soft	
Manual override	None	
Reset method	Mechanical spring	
Actuation type	Electric	
Type of control	Piloted	
Pilot air supply	Internal	
Flow rate Kv for pressurisation	[m <sup>3</sup> /h]	1.08
Flow rate Kv for exhausting	[m <sup>3</sup> /h]	1.08
Flow direction	Non-reversible	
Product weight	[g]	520
Switching time off	[ms]	22
Switching time on	[ms]	26
Nominal width	[mm]	6
Standard nominal flow rate 1→2	[l/min]	1030
Standard nominal flow rate 2→3	[l/min]	978

### Operating and environmental conditions

Operating medium	Compressed air to ISO 8573-1:2010 [7:2:2]	
Degree of protection	IP65	
Operating pressure range	[bar]	2.5 ... 8
Temperature of medium	[°C]	-25 ... 60
Ambient temperature	[°C]	-25 ... 60
Corrosion resistance class CRC <sup>1)</sup>	4	

1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

### Materials

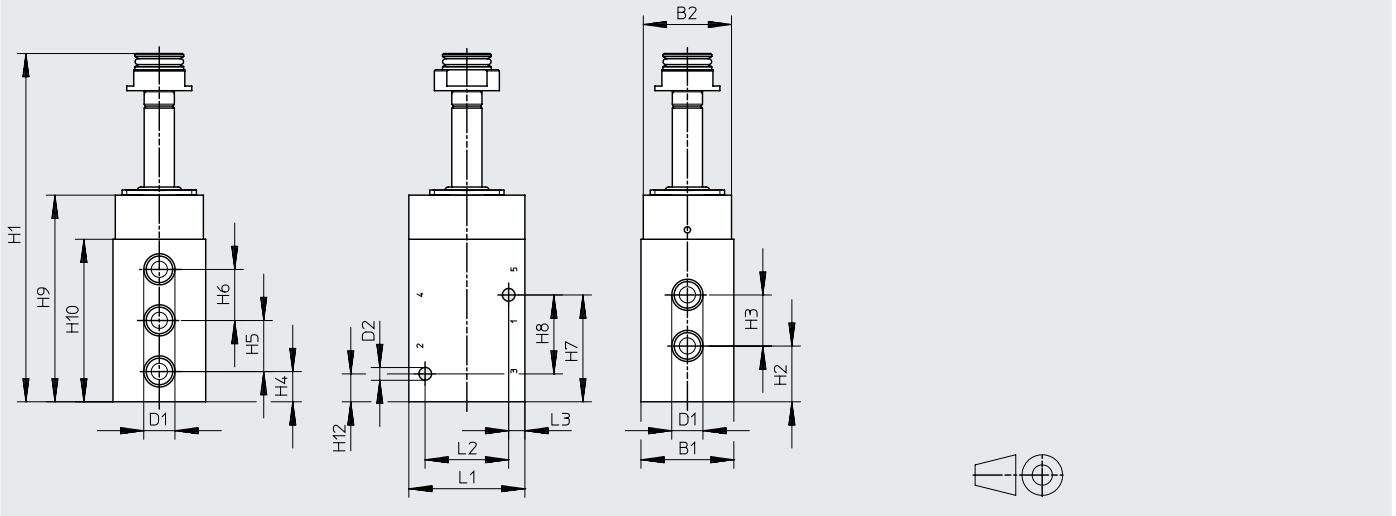
Housing	Ematal-coated aluminium	
Seals	NBR	
Note on materials	RoHS-compliant	
PWIS conformity	VDMA24364 zone III	

Data sheet – 5/2-way valve, piston spool, single solenoid, G1/4 in-line

Dimensions

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VOFC-L...-F19...



Dimensions

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VOFC-L...-FN



Type	B1	B2	D1	D2 ∅	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H12	L1	L2	L3
VOFC-L-M52-M-G14-F19	40	38	G1/4	5.5	150	24	22	13	22	22	46	34	89	70	12	50	36	7
VOFC-L-M52-M-G14-F19A																		
VOFC-L...-FN	40	-	-	-	126	-	-	-	-	-	-	-	89	-	-	50	-	-

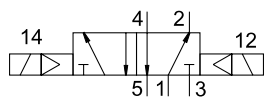
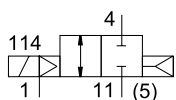
Ordering data


Circuit symbol	Function	Pneumatic connection	Type of ignition protection	Part no.	Type
<b>In-line valve</b>					
	5/2-way, single solenoid	G1/4	Without Intrinsically safe	<b>4514925</b> <b>4514926</b>	<b>VOFC-L-M52-M-G14-F19</b> <b>VOFC-L-M52-M-G14-F19A</b>
	5/2-way, single solenoid	NPT1/4	-	<b>8122931</b>	<b>VOFC-L-M52-M-N14-FN</b>
	5/2-way, single solenoid	G1/4	-	<b>8155960</b>	<b>VOFC-L-M52-MY-G14-F19A</b>
	5/2-way, single solenoid	G1/4	Encapsulation, enhanced safety	<b>8155959</b>	<b>VOFC-L-M52-MY-G14-F19-18-1UK4-EX4ME</b>


## Data sheet – 5/2-way valves, piston spool, double solenoid, G1/4, NAMUR

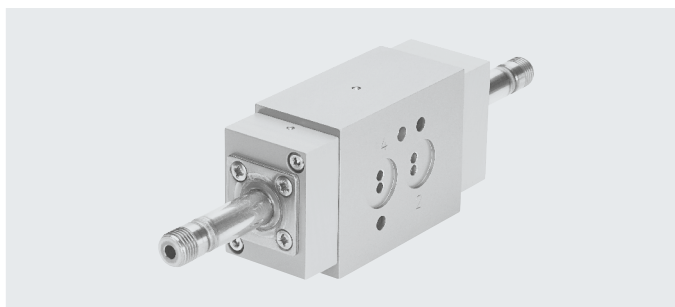
### Function

5/2-way valve



-  - Temperature range  
-25 ... 60°C

-  - Flow rate  
989 l/min



General technical data		G1/4, NAMUR	G1/4
Valve function		5/2-way, double solenoid	
Pneumatic connection	1	G1/4	G1/4
	2	Flange 1/4 and connection pattern to NAMUR	G1/4
	3	G1/4	G1/4
	4	Flange 1/4 and connection pattern to NAMUR	G1/4
	5	G1/4	G1/4
Design		Piston spool valve	
Mounting position		Any	
Width	[mm]	40	
Sealing principle		Soft	
Manual override		None	
Actuation type		Electric	
Type of control		Piloted	
Pilot air supply		Internal	
Flow rate Kv for pressurisation	[m <sup>3</sup> /h]	1.08	
Flow rate Kv for exhausting	[m <sup>3</sup> /h]	1.08	
Flow direction		Non-reversible	
Product weight	[g]	680	790
Switching time off	[ms]	22	
Switching time on	[ms]	26	
Max. switching frequency	[Hz]	1	
Nominal width	[mm]	6	
Standard nominal flow rate 1 → 2	[l/min]	989	
Standard nominal flow rate 2 → 3	[l/min]	978	

Operating and environmental conditions	
Operating medium	Compressed air to ISO 8573-1:2010 [7:2:2]
Degree of protection	IP65
Operating pressure range	[bar] 2.5 ... 8
Temperature of medium	[°C] -25 ... 60
Ambient temperature	[°C] -25 ... 60
Corrosion resistance class CRC <sup>1)</sup>	4

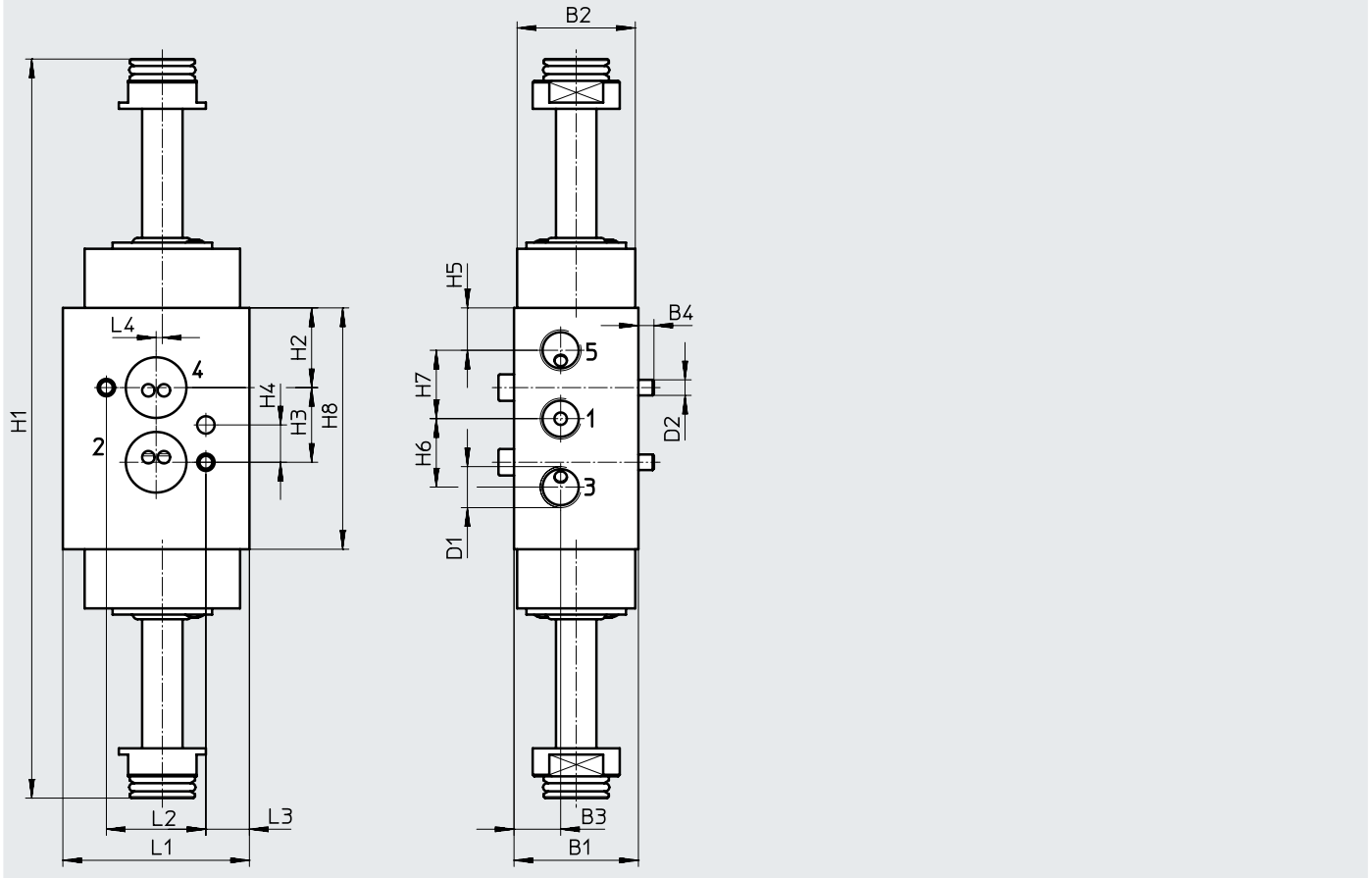
1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

Materials	
Housing	Ematal-coated aluminium
Seals	NBR
Note on materials	RoHS-compliant
PWIS conformity	VDMA24364 zone III

Data sheet – 5/2-way valves, piston spool, double solenoid, G1/4, NAMUR

Dimensions

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

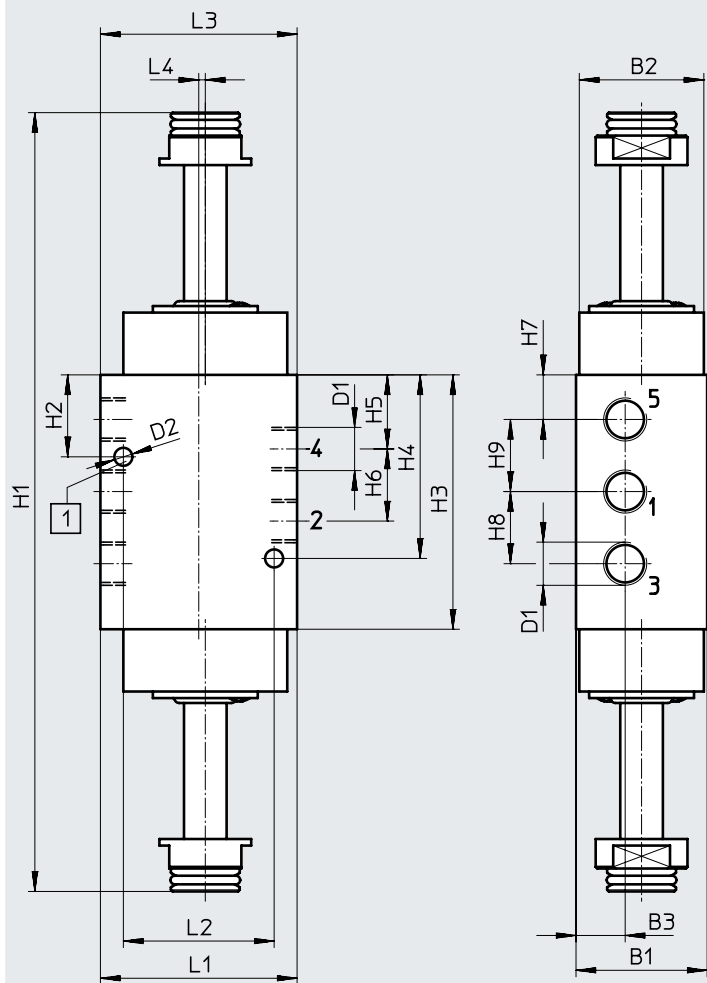


Type	B1	B2	B3	B4	D1	D2	H1	H2	H3	H4	H5	H6	H7	H8	L1	L2	L3	L4	
VOFC-L-B52-FG14-F19	40	38	15	5	G1/4	M5	237.6	25.6	24	12	13.6	22	22	77.6	60	32	14	2	
VOFC-L-B52-FG14-F19A																			

Data sheet – 5/2-way valves, piston spool, double solenoid, G1/4, NAMUR

Dimensions

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



[1] Coding pin M5x10

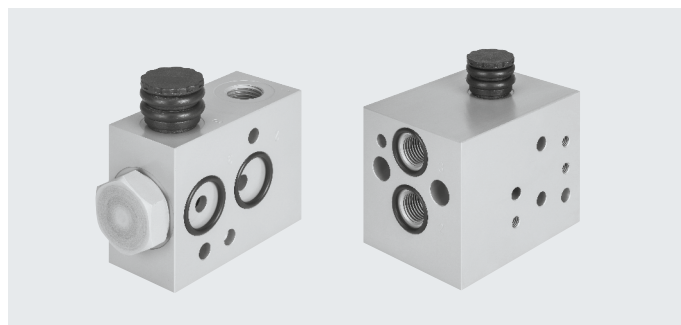
Type	B1	B2	B3	D1	D2	H1	H2	H3	H4	H5	H6	H7	H8	H9	L1	L2	L3	L4	
VOFC-L-B52-G14-F19	40	38	15	G1/4	5.5	240	25	77.6	56	22.6	22	13.6	22	22	60	46	60	2	
VOFC-L-B52-G14-F19A																			

Ordering data

Circuit symbol	Function	Pneumatic connection	Type of ignition protection	Part no.	Type
	5/2-way, double solenoid	G1/4 and NAMUR	Without	4514929	VOFC-L-B52-FG14-F19
			Intrinsically safe	4514930	VOFC-L-B52-FG14-F19A
	5/2-way, double solenoid	G1/4	Without	4514927	VOFC-L-B52-G14-F19
			Intrinsically safe	4514928	VOFC-L-B52-G14-F19A

## Accessories – Sub-base VABS-S7-RB/BE-...

Connection pattern: NAMUR



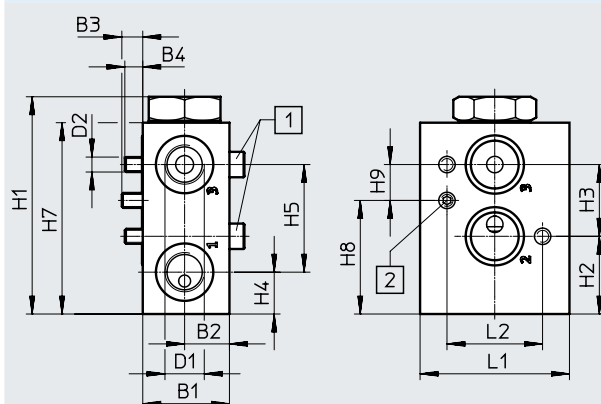
General technical data		Pressurisation and exhaust block VABS-S7-BE-...	Redundancy block VABS-S7-RB-...
Type		Pressurisation and exhaust block VABS-S7-BE-...	Redundancy block VABS-S7-RB-...
Type of mounting		Via through-hole	
Mounting position		Any	
Flow rate Kv for pressurisation	[m <sup>3</sup> /h]	2.2	–
Flow rate Kv for exhausting	[m <sup>3</sup> /h]	8.6	–
Product weight	[g]	250	
Pneumatic connection	1	G1/4, 1/4 NPT	G1/4, 1/4 NPT
	2	Flange 1/4, connection pattern to NAMUR	Flange 1/4, connection pattern to NAMUR
	3	G1/4, 1/4 NPT	G1/4, 1/4 NPT
	12	–	G1/4, 1/4 NPT

Operating and environmental conditions		VABS-S7-BE	VABS-S7-RB
Operating medium		Compressed air to ISO 8573-1:2010 [7:2:2]	
Operating pressure	[bar]	2 ... 8	0 ... 10
Pilot air supply		Internal	External/internal
Degree of protection		IP65 (in the installed state)	
Corrosion resistance class CRC <sup>1)</sup>		4	

1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

Materials	
Sub-base	Ematal-coated aluminium
Seals	NBR
Note on materials	RoHS-compliant
PWIS conformity	VDMA24364 zone III

## Dimensions

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

[1] Socket head screw M5x35

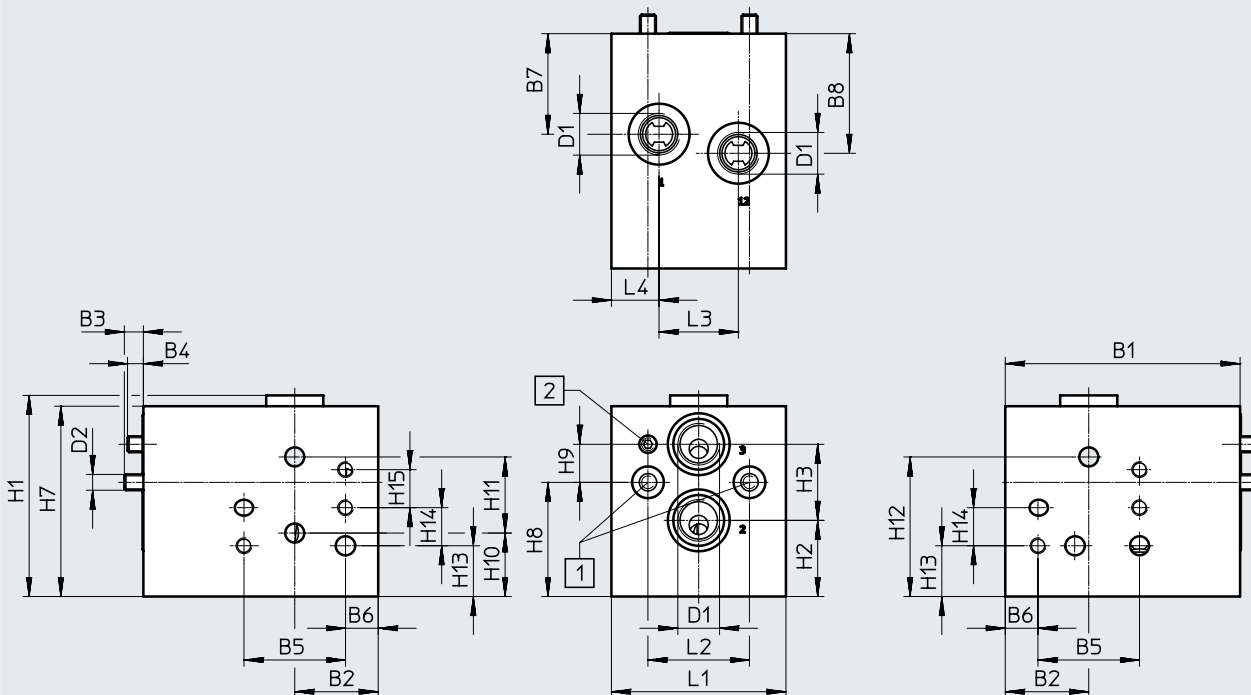
[2] Threaded pin M5x10

Type	B1	B2	B3	B4	D1	D2	H1	H2	H3	H4	H5	H7	H8	H9	L1	L2
VABS-S7-BE-B-G14-V14	29	15	7	6	G1/4	M5	72.7	26	24	14	36	64	38	12	50	32
VABS-S7-BE-B-N14-V14					1/4 NPT											

Accessories – Sub-base VABS-S7-RB/BE-...

Dimensions

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



[1] Socket head screw M5x70      [2] Threaded pin M5x10

Type	B1	B2	B3	B4	B5	B6	B7	B8	D1	D2	L1	L2	L3	L4
VABS-S7-RB-B-G14-V14	74	26.3	6	5	32	10.3	31.7	37.7	G1/4	M5	55	32	25	15
VABS-S7-RB-B-N14-V14									1/4 NPT					

Type	H1	H2	H3	H7	H8	H9	H10	H11	H12	H13	H14	H15
VABS-S7-RB-B-G14-V14	63.4	24	24	60	36	12	20	24	44	16	12	12
VABS-S7-RB-B-N14-V14												

Ordering data

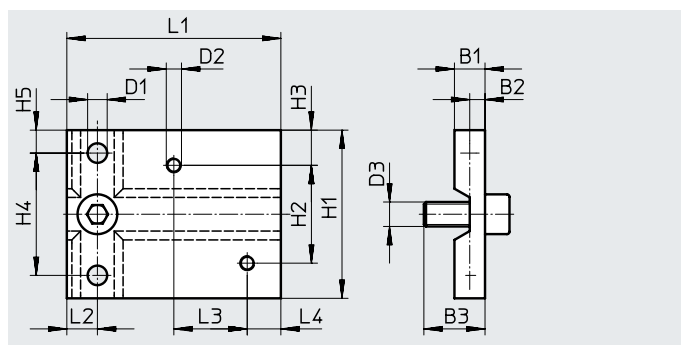
	Description	Part no.	Type
	Sub-base for mounting two solenoid valves with G-thread connection for redundant circuitry, with flange 1/4, connection pattern to NAMUR Using the additional auxiliary power terminal, the intermediate plate can also be used with pilot-controlled solenoid valves on actuators that have a positioner for fail-safe functions.	3580505	VABS-S7-RB-B-G14-V14
	Sub-base for mounting two solenoid valves with NPT-thread connection for redundant circuitry, with flange 1/4, connection pattern to NAMUR Using the additional auxiliary power terminal, the intermediate plate can also be used with pilot-controlled solenoid valves on actuators that have a positioner for fail-safe functions.	4727331	VABS-S7-RB-B-N14-V14
	Sub-base as a pressurisation and exhaust block with G-thread connection, with flange 1/4, connection pattern to NAMUR	2999476	VABS-S7-BE-B-G14-V14
	Sub-base as a pressurisation and exhaust block with NPT-thread connection, with flange 1/4, connection pattern to NAMUR	4727328	VABS-S7-BE-B-N14-V14



## Accessories

**Mounting plate VAME-S7-P**

Mounting plate material:  
Ematal-coated aluminium  
RoHS-compliant  
PWIS conformity:  
VDMA24364 zone III  
Mounting: via through-hole

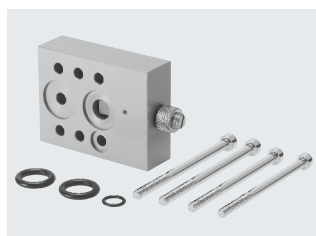
**Dimensions [mm] and ordering data**

B1	B2	B3	D1	D2	D3	H1	H2	H3	H4	H5	L1	L2	L3	L4	CRC <sup>1)</sup>	Part no.	Type
10	5	20	6.4	M5	M8	55	32	11.5	40	7.5	70	10	24	11	4	563399	VAME-S7-P

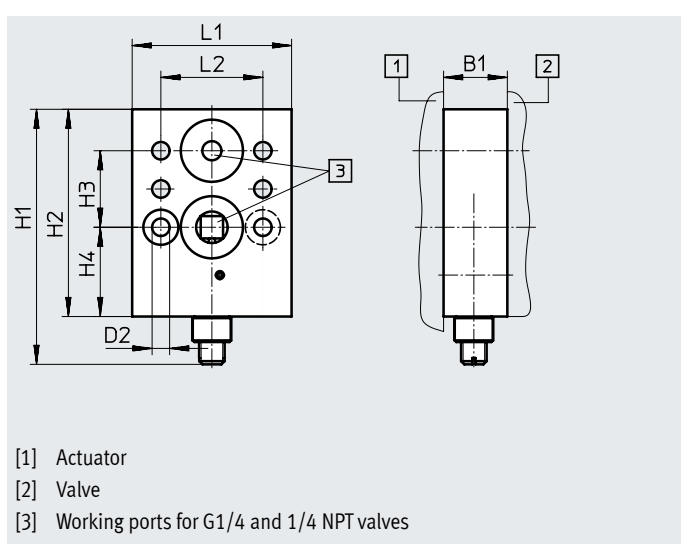
1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

**Throttle plate for single-acting actuators**

Throttle plate material: Ematal-coated aluminium  
Seals material: NBR  
RoHS-compliant  
PWIS conformity:  
VDMA24364 zone III  
Operating medium: Compressed air to ISO 8573-1:2010 [7:-:-]  
Operating pressure: 0 ... 12 bar  
Pilot air supply: internal/external  
Mounting position: any  
Mounting: via through-hole  
Degree of protection: IP65 (when installed)



Function:  
Flow control for supply air and/or exhaust air for an actuator with NAMUR interface for valves VOFC/VOFD



- [1] Actuator
- [2] Valve
- [3] Working ports for G1/4 and 1/4 NPT valves

**Dimensions [mm] and ordering data**

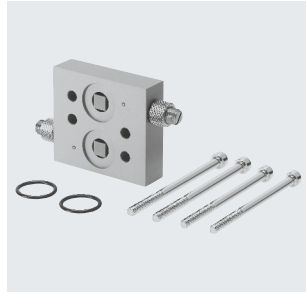
B1	D2	H1	H2	H3	H4	L1	L2	CRC <sup>1)</sup>	Part no.	Type
20	5.5	80	65	24	28	50	32	4	563401	VABF-S7-F1B5P1-F

1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

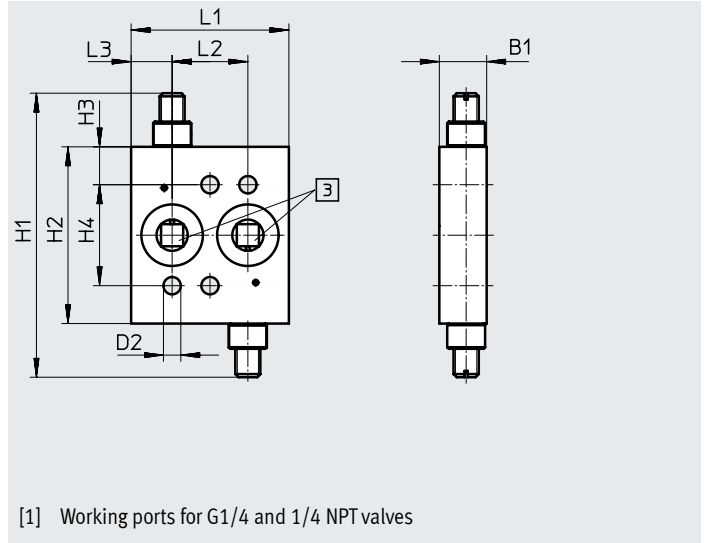
Accessories

**Throttle plate for double-acting actuators**

Throttle plate material: Ematal-coated aluminium  
 Seals material: NBR  
 RoHS-compliant  
 PWIS conformity:  
 VDMA24364 zone III  
 Operating medium: Compressed air to ISO 8573-1:2010 [7:--:-]  
 Operating pressure: 0 ... 12 bar  
 Pilot air supply: internal/external  
 Mounting position: any  
 Mounting: via through-hole  
 Degree of protection: IP65 (when installed)



Function:  
 2-duct exhaust air flow control for an actuator with NAMUR interface

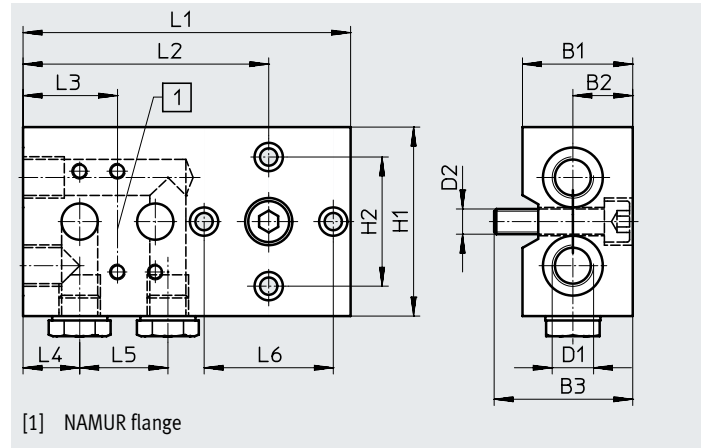
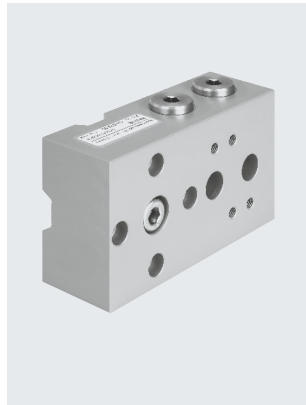


Dimensions [mm] and ordering data													
B1	D2	H1	H2	H3	H4	L1	L2	L3	CRC <sup>1)</sup>	Part no.	Type		
15	5.5	90	56	12	32	50	24	13	4	563395	VABF-S7-F1B1P2-F		

1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

**Sub-base**

Sub-base material: Ematal-coated aluminium  
 Seals material: NBR  
 RoHS-compliant  
 PWIS conformity:  
 VDMA24364 zone III  
 Operating medium: Compressed air to ISO 8573-1:2010 [7:--:-]  
 Operating pressure: 0 ... 10 bar  
 Mounting position: any  
 Mounting: via through-hole  
 Degree of protection: IP65 (when installed)



Dimensions [mm] and ordering data															
B1	B2	B3	D1	D2	H1	H2	L1	L2	L3	L4	L5	L6	CRC <sup>1)</sup>	Part no.	Type
35	19	44	G1/4	M8	60	41	104	78	30	18	28	41	4	563396	VABS-S7-S-G14

1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

## Accessories – Sub-base VABS-S7-RB-B-...

**Sub-base**

Sub-base material: Ematal-coated aluminium

Material of seals: NBR

PWIS conformity:

VDMA24364 zone III

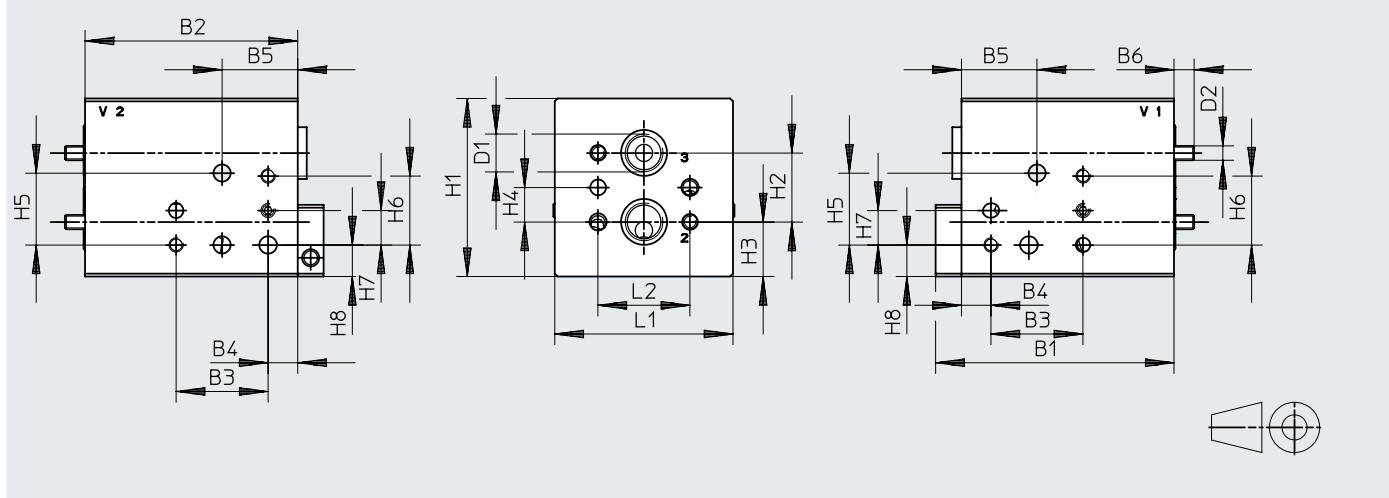
Operating medium: Compressed air to ISO 8573-1:2010 [:-:-]

Operating pressure: 0 ... 10 bar

Mounting position: Any

Mounting: Via through-hole

Port pattern to NAMUR: VDI/VDE 3847

**Dimensions**Download CAD data → [www.festo.com](http://www.festo.com)**Dimensions [mm] and ordering data**

B1	B2	B3	B4	B5	B6	H3 H8	D1	D2	H1	H2	H3	H4
83	74	32	10.3	26.3	7	25.6	G14	M7	62	24	19	12

H5	H6	H7	H8	L1	L2	CRC <sup>1)</sup>	Weight [g]	Part no.	Type
25	24	12	11	62	32	4	750	<b>8141067</b>	<b>VABS-S7-RB-B-G14-A-R-12</b>

1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

## Accessories – Sub-base VABS-BE-BS-...

### Sub-base

Sub-base material: Ematal-coated aluminium

Material of seals: NBR

PWIS conformity:

VDMA24364 zone III

Operating medium: Compressed air to ISO 8573-1:2010 [---]

Operating pressure: 0 ... 10 bar

Mounting position: Any

Mounting: Via through-hole

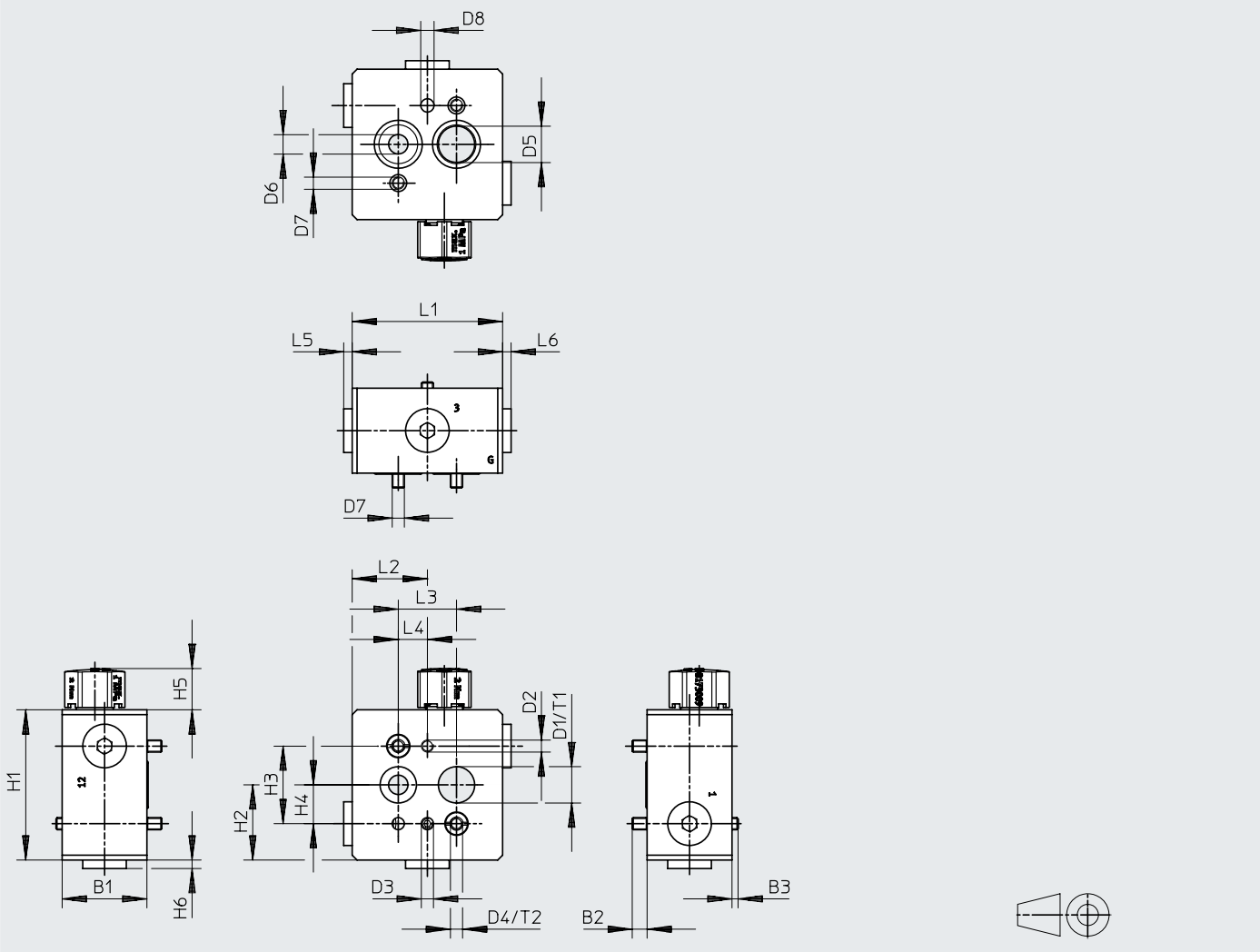
Port pattern to NAMUR: VDI/VDE 3845 for direct attachment

on semi-rotary drives + VDI/VDE 3847 for attachment to solenoid valve.

Exhaust protection 8177960 - VABD-D3-L-GN14 is included in the scope of delivery

### Dimensions

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



### Dimensions [mm] and ordering data

B1	B2	B3	D1 ∅	D2	D3	D4	D5 ∅	D6 ∅	D7	D8 ∅	H1	H2	H3	H4	H5
35	6.1	2.5	15	M5	M5	M5	15	8	M5	5.5	62	31	32	16	17
H6	L1	L2	L3	L4	L5	L6	T1	T2	CRC <sup>1)</sup>	Weight [g]	Part no.	Type			
3.5	62	31	24	12	3.5	3.5	3	8	4	330	8072668	VABS-BE-BS-G14-V14-A			

1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

## Accessories

### Mounting bracket

Mounting bracket material:

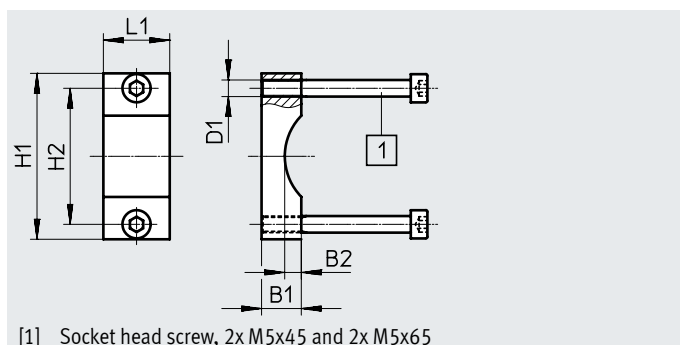
Ematal-coated aluminium

Note on materials:

RoHS-compliant

PWIS conformity:

VDMA24364 zone III



[1] Socket head screw, 2x M5x45 and 2x M5x65

Dimensions [mm] and ordering data									
B1	B2	D1	H1	H2	L1	CRC <sup>1)</sup>	Part no.	Type	
12	5	M5	50	41	20	4	563403	VAME-S7-Y	

1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

### Adapter with filter

Adapter material: high-alloy stainless steel

Seals material: NBR

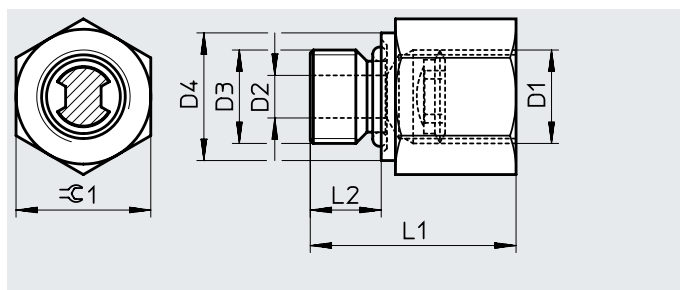
Note on materials:

RoHS-compliant

PWIS conformity:

VDMA24364 zone III

Operating pressure 2 ... 8 bar



Dimensions [mm] and ordering data									
D1	D2	D3	D4	L1	L2	$\approx \varnothing 1$	CRC <sup>1)</sup>	Part no.	Type
1/4 NPT	6	G1/4	18	29	10	19	1	563397	NPFV-AF-G14-N14-MF
G1/4	6	G1/4	18	29	10	19	1	563398	NPFV-AF-G14-G14-MF
1/4 NPT	6	1/4 NPT	18	29	10	19	1	4727333	NPFV-AF-N14-N14-MF

1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

### Exhaust protection G1/4

Housing material: PA

Seals material: EPDM

Note on materials:

RoHS-compliant

PWIS conformity:

VDMA24364 zone III

Operating medium: Compressed air to

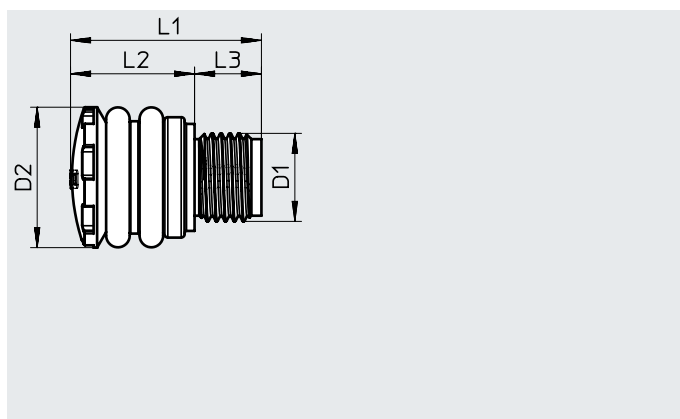
ISO 8573-1:2010 [7:-:-]

Operating pressure: 0 ... 10 bar

Ambient temperature: -50 ... 60°C

Type of mounting: screw-in, with male

thread

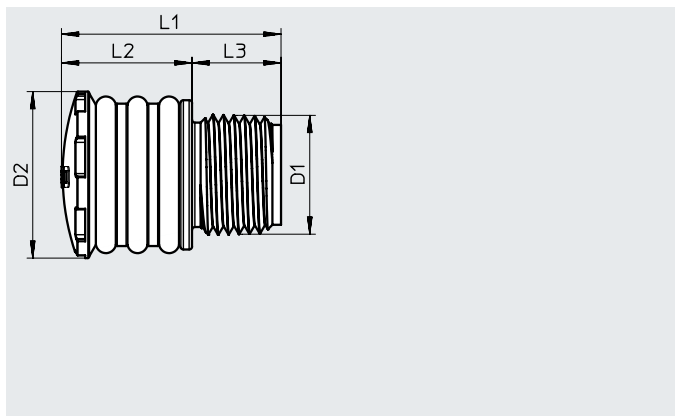


Dimensions [mm] and ordering data									
D1	D2	L1	L2	L3	Part no.	Type			
G1/4, 1/4 NPT	21	28.5	18.5	10	563400	VABD-D3-SN-G14			

Accessories

**Exhaust protection 1/2 NPT**

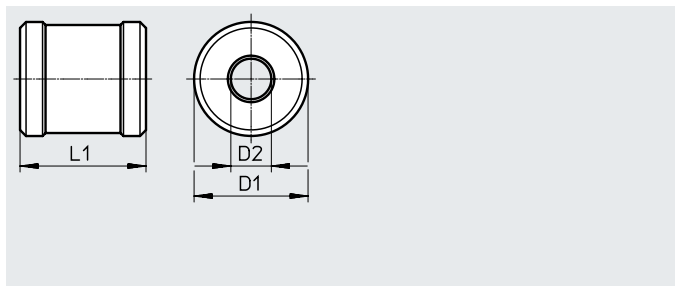
Housing material: PA  
 Seals material: EPDM  
 Note on materials:  
 RoHS-compliant  
 PWIS conformity:  
 VDMA24364 zone III  
 Operating medium: Compressed air to ISO 8573-1:2010 [7:-:-]  
 Operating pressure: 0 ... 12 bar  
 Ambient temperature: -50 ... 60°C  
 Type of mounting: screw-in, with male thread



Dimensions [mm] and ordering data						
D1	D2	L1	L2	L3	Part no.	Type
G1/2, 1/2 NPT	29	38	23	15	3535104	VABD-D3-SN-N12

**Manual override**

Material: anodised aluminium  
 Note on materials:  
 RoHS-compliant  
 PWIS conformity:  
 VDMA24364 zone III  
 Function:  
 Manual override of basic valves instead of a solenoid coil

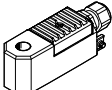


Dimensions [mm] and ordering data						
D1	D2	L1	Weight [g]	CRC <sup>1)</sup>	Part no.	Type
38	13.5	42	120	2	3580654	VAOH-MB-S7-S13

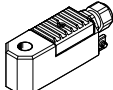
1) More information: [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

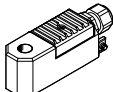
Ordering data		Part no.	Type
Description			
<b>Connecting cable</b> <span style="float: right;">Data sheets → Internet: kmc</span>			
	Operating voltage 24 V DC, switching status indication with LED	Cable length 2.5 m	30931 KMC-1-24 DC-2.5-LED
		Cable length 5 m	30933 KMC-1-24 DC-5-LED
	Operating voltage up to 240 V AC	Cable length 10 m	193459 KMC-1-24-10-LED
		Cable length 2.5 m	30932 KMC-1-230 AC-2.5
Cable length 5 m	30934 KMC-1-230 AC-5		
<b>Plug socket</b> <span style="float: right;">Data sheets → Internet: mssd</span>			
	Cable connection using locking screws	34583	MSSD-C

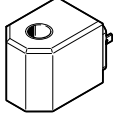
## Accessories

Encapsulated solenoid coil with increased safety, Ex-me, VACC-S13-...								
	Nominal operating voltage	Characteristic coil data	Explosion prevention and protection	Certification	Part no.	Type		
	24 V DC and 24 V AC	24 V DC: 1.8 W, 24 V AC: 40/65 Hz, power 1.8 VA	Zone 1 (BR), zone 21 (BR)	INMETRO (Ex certification Brazil, EPL Gb and Db)	8118324	VACC-S13-18-K4-1U-NM4ME		
					8118327	VACC-S13-18-K4-1UF-NM4ME		
			Zone 1 (ATEX), zone 1 (IEC-EX), zone 1 (UKEX), zone 2 (ATEX), zone 21 (ATEX), zone 21 (IEC-EX), zone 21 (UKEX), zone 22 (ATEX)	Without	8109396	VACC-S13-18-K4-1U-EX4ME		
					8109399	VACC-S13-18-K4-1UF-EX4ME		
					8118332	VACC-S13-18-K4-1UF-NE4ME		
						8118329	VACC-S13-18-K4-1U-NE4ME	
			Zone 1 (KR), zone 21 (KR)	KOSHA (Ex certification Korea, EPL Gb and Db)	8156762	VACC-S13-18-K4-1UF-KS4ME		
					8156759	VACC-S13-18-K4-1U-KS4ME		
			110 V DC and 110 V AC	110 V DC: 1.8 W, 110 V AC: 40/65 Hz, power 1.8 VA	Zone 1 (BR), zone 21 (BR)	INMETRO (Ex certification Brazil, EPL Gb and Db)	8118325	VACC-S13-18-K4-2U-NM4ME
							Zone 1 (ATEX), zone 1 (IEC-EX), zone 1 (UKEX), zone 2 (ATEX), zone 21 (ATEX), zone 21 (IEC-EX), zone 21 (UKEX), zone 22 (ATEX)	Without
					8118330	VACC-S13-18-K4-2U-NE4ME		
						8156760		
	Zone 1 (KR), zone 21 (KR)	KOSHA (Ex certification Korea, EPL Gb and Db)						
	230 V DC and 230 V AC	230 V DC: 1.8 W, 230 V AC: 40/65 Hz, power 1.8 VA			Zone 1 (BR), zone 21 (BR)	INMETRO (Ex certification Brazil, EPL Gb and Db)	8118326	VACC-S13-18-K4-3U-NM4ME
			Zone 1 (CN), zone 21 (CN)	CCC-Ex (Ex certification China, EPL Gb and Db)			8118331	VACC-S13-18-K4-3U-NE4ME
					Zone 1 (ATEX), zone 1 (IEC-EX), zone 1 (UKEX), zone 2 (ATEX), zone 21 (ATEX), zone 21 (IEC-EX), zone 21 (UKEX), zone 22 (ATEX)	Without	8109398	VACC-S13-18-K4-3U-EX4ME
8156761							VACC-S13-18-K4-3U-KS4ME	
Zone 1 (KR), zone 21 (KR)			KOSHA (Ex certification Korea, EPL Gb and Db)					

Accessories

Encapsulated solenoid coil with increased safety, Ex-me, VACC-S13-...						
	Nominal operating voltage	Characteristic coil data	Explosion prevention and protection	Certification	Part no.	Type
	60 V DC and 60 V AC	60 V AC: 40/65 Hz, power 1.8 VA, 60 V DC: 1.8 W	Zone 1 (BR), zone 21 (BR)	INMETRO (Ex certification Brazil, EPL Gb and Db)	<b>8118328</b>	VACC-S13-18-K4-27U-NM4ME
	60 V DC and 60 V AC	60 V AC: 40/65 Hz, power 1.8 VA, 60 V DC: 1.8 W	Zone 1 (CN), zone 21 (CN)	CCC-Ex (Ex certification China, EPL Gb and Db)	<b>8118333</b>	VACC-S13-18-K4-27U-NE4ME
			Zone 1 (KR), zone 21 (KR)	KOSHA (Ex certification Korea, EPL Gb and Db)	<b>8156763</b>	VACC-S13-18-K4-27U-KS4ME
			Zone 1 (ATEX), zone 1 (IEC-EX), zone 1 (UKEX), zone 2 (ATEX), zone 21 (ATEX), zone 21 (IEC-EX), zone 21 (UKEX), zone 22 (ATEX)	Without	<b>8109400</b>	VACC-S13-18-K4-27U-EX4ME

Solenoid coil intrinsically safe Ex-ia, VACC-S13-11-...						
	Nominal operating voltage	Characteristic coil data	Explosion prevention and protection	Certification	Part no.	Type
	24 V DC	14-32 V DC: 0.22 - 1.1 W	Zone 1 (ATEX), zone 1 (IEC-EX), zone 1 (UKEX), zone 2 (ATEX), zone 21 (ATEX), zone 21 (IEC-EX), zone 21 (UKEX), zone 22 (ATEX)	Without	<b>8109401</b>	VACC-S13-11-K4-1-EX4A
			Zone 1 (BR), zone 21 (BR)	INMETRO (Ex certification Brazil, EPL Gb and Db)	<b>8114078</b>	VACC-S13-11-K4-1-NM4A
			Zone 1 (CN), zone 21 (CN)	CCC-Ex (Ex certification China, EPL Gb and Db)	<b>8114135</b>	VACC-S13-11-K4-1-NE4A

Solenoid coil for armature system F19, VACC-S13-18-...						
	Nominal operating voltage	Characteristic coil data	Certification	Electrical connection	Part no.	Type
	24 V DC	24 V DC: 2.1 W	Without	Plug type A, to EN 175301-803	<b>562889</b>	VACC-S13-18-A1-1
	24 V DC and 24 V AC	24 V DC: 2.1 W, 24 V AC: 50/60 Hz, power 2.1 VA			<b>562890</b>	VACC-S13-18-A1-1U
					<b>562891</b>	VACC-S13-18-A1-2U
	230 V DC and 230 V AC	230 V DC: 1.8 W, 230 V AC: 50/60 Hz, power 1.8 VA			<b>562892</b>	VACC-S13-18-A1-3U