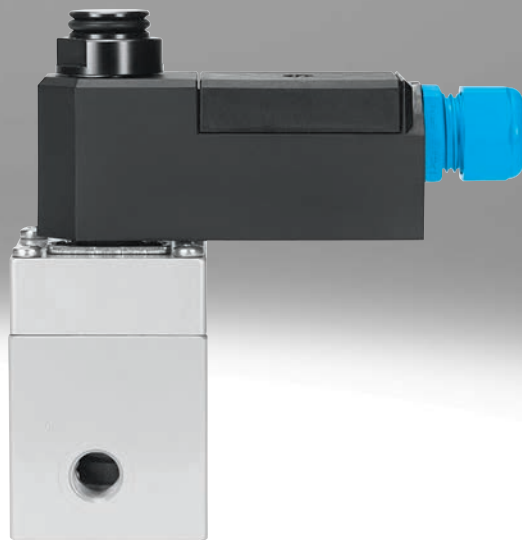
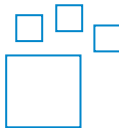


Valve series VOFC

FESTO

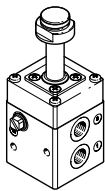


Characteristics

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		Sturdy	Flexible functionality	Economical						
3/2-way or 5/2-way, single or double solenoid, depending on the type - Pilot-actuated piston spool and poppet valves		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.	- Changeover between internal and external pilot air via automatic OR valve - Suitable for vacuum	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/...	<table><tr><th>Part no.</th><th>Type</th></tr><tr><td>3344863</td><td>VOFC-L</td></tr><tr><td>2868687</td><td>VOFC-LT</td></tr></table>	Part no.	Type	3344863	VOFC-L	2868687	VOFC-LT
Part no.	Type									
3344863	VOFC-L									
2868687	VOFC-LT									

Characteristics

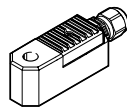
VOFC – Basic valves



- 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

→ Page 7

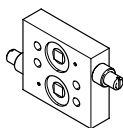
VACC – S13 coils



- 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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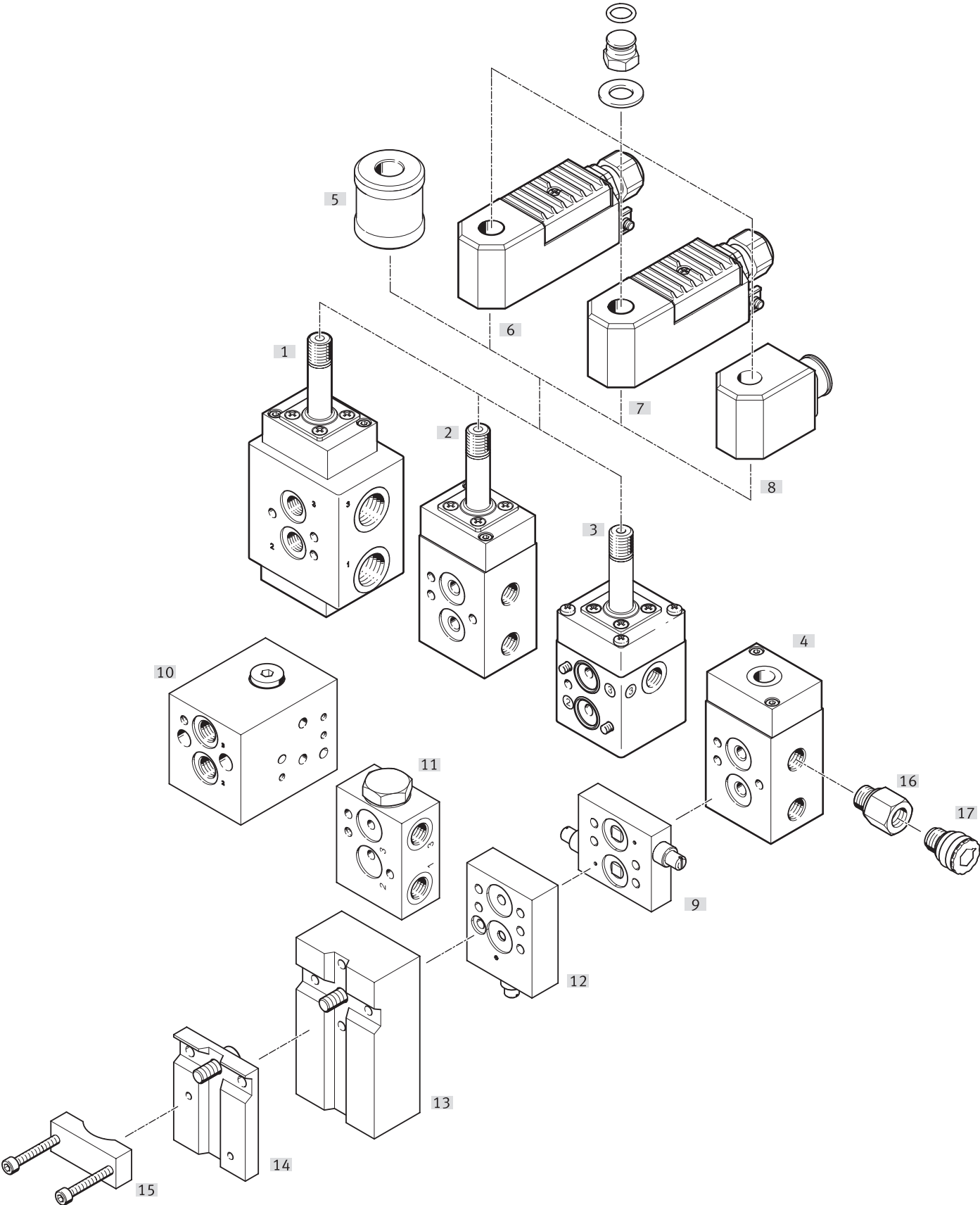
VOFC – Accessories



- 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)	53
[6]	Solenoid coil VACC-S13-...3A	Type of ignition protection iA = intrinsically safe, for use in zone 1	47
[7]	Solenoid coil VACC-S13-...ME	Type of ignition protection ME = encapsulated, for use in zone 1	47
[8]	Solenoid coil VACC-S13...A1	IP65, electrical plug pattern type A to DIN EN 175-803	47
[9]	Throttle plate VABF-S7-F1B1P2-F	Exhaust air throttle plate for NAMUR interface for installation between the solenoid valve and double-acting actuators	51
[10]	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	48
[11]	Sub-base VABS-S7-BE-B-...14-V14-A	Pressurisation and exhaust block, with flange 1/4, connection pattern to NAMUR	48
[12]	Throttle plate VABF-S7-F1B5P1-F	Exhaust air throttle plate for NAMUR interface for installation between the solenoid valve and single-acting actuators	51
[13]	Connection set VABF-S7-S-G14	Mounting plate for attaching the valve to the NAMUR rib	51
[14]	Mounting plate VAME-S7-P	Mounting plate for attaching the valve to the NAMUR rib	50
[15]	Mounting bracket VAME-S7-Y	Alternative (instead of screw) for mounting the valve on a NAMUR rib using a mounting bracket	52
[16]	Adapter NPFV-AF-...-MF	Adapter with filter	52
[17]	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	52

Type codes for VOFC

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

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

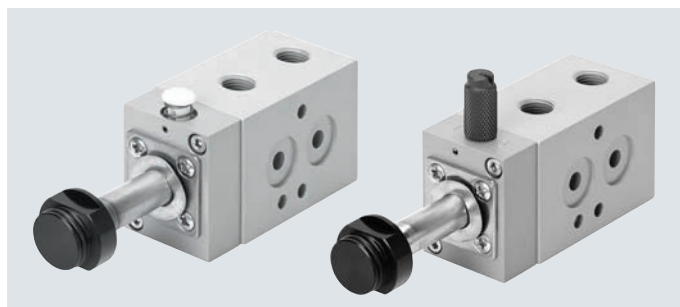
Data sheet – Modular system, piston spool valves

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- VOFC-L-M52-...-G14-	1	G1/4
	2	G1/4
	3	G1/4
	4	G1/4
	5	G1/4
VOFC-L-B52-N14- VOFC-L-M52-...-N14-	1	1/4 NPT
	2	1/4 NPT
	3	1/4 NPT
	4	1/4 NPT
	5	1/4 NPT
VOFC-L-B52-FG14- VOFC-L-M52-...-FG14-	1	G1/4
	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	1/4 NPT
	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

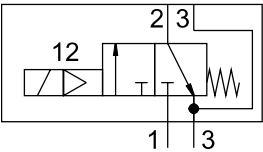
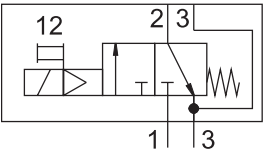
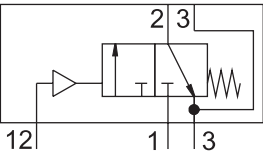
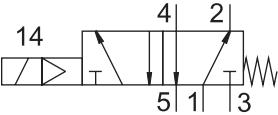
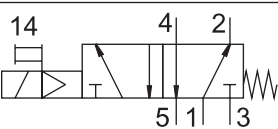
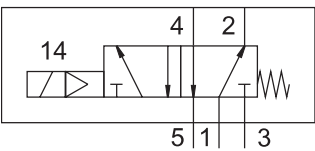
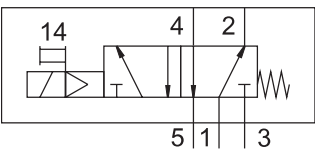
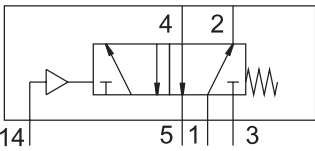
Technical data, weights	
Type	Weight of basic valve
VOFC-L-B52-G14-...	790
VOFC-L-B52-N14-...	790
VOFC-L-B52-FG14-...	680
VOFC-L-M52-MH-G14-...	520
VOFC-L-M52-MY-G14-...	520
VOFC-L-M52-MH-FG14-...	520
VOFC-L-M52-MY-FG14-...	520
VOFC-L-M52-M-N14-...	520
VOFC-L-M32C-MH-FG14-...	520
VOFC-L-M32C-MY-FG14-...	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
Safety integrity level	[SIL]	Up to SIL2 low demand mode
		Up to SIL2 high demand mode
Corrosion resistance class CRC ¹⁾		4
Note on materials		Contains paint-wetting impairment substances
		RoHS-compliant

- 1) Corrosion resistance class CRC 4 to Festo standard FN 940070
 Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests
 (→ also FN 940082), using appropriate media.

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 - Electrically piloted - Non-reversible - With spring return - Internal pilot air supply - With NAMUR connection - Without manual override (MO)
	VOFC-L-M32C-MH-FG14-... (MO non-detenting) VOFC-L-M32C-MY-FG14-... (MO detenting)	3/2-way valve, single solenoid, closed - Electrically piloted - Non-reversible - With spring return - Internal pilot air supply - With NAMUR connection - With manual override (MO)
	VOFC-L-M32C-MZ-...	3/2-way valve, monostable, closed - Pneumatically piloted - Non-reversible - With spring return - External pilot air supply - With NAMUR connection - Without manual override (MO)
	VOFC-L-M52-M-G14-... VOFC-L-M52-M-N14-...	5/2-way single solenoid valve - Electrically piloted - Non-reversible - With spring return - Internal pilot air supply - Without manual override (MO)
	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 - Electrically piloted - Non-reversible - With spring return - Internal pilot air supply - With manual override (MO)
	VOFC-L-M52-M-FG14-... VOFC-L-M52-M-FN14-...	5/2-way single solenoid valve - Electrically piloted - Non-reversible - With spring return - Internal pilot air supply - With NAMUR connection - Without manual override (MO)
	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 - Electrically piloted - Non-reversible - With spring return - Internal pilot air supply - With NAMUR connection - With manual override (MO)
	VOFC-L-M52-MZ-...	5/2-way monostable valve - Pneumatically piloted - Non-reversible - With spring return - External pilot air supply - With NAMUR connection - Without manual override (MO)

Data sheet – Modular system, piston spool valves

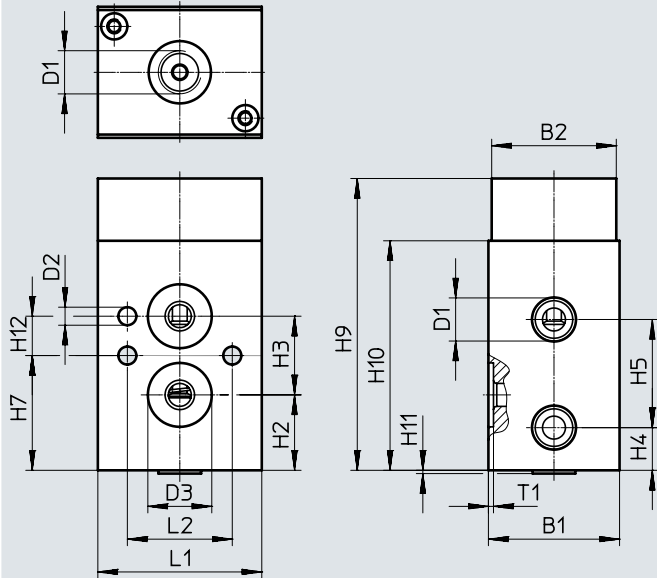
Valve functions		
Circuit symbol	Type code	Description
The circuit symbol shows a 5/2-way double solenoid valve. It has two solenoid coils at the top, labeled 14 and 12. The valve has five ports: 4 (top left), 2 (top right), 5 (bottom left), 1 (bottom center), and 3 (bottom right). The symbol indicates that the valve is electrically piloted, non-reversible, has an internal pilot air supply, and does not have a manual override (MO).	VOFC-L-B52-G14-... VOFC-L-B52-N14-...	5/2-way double solenoid valve • Electrically piloted • Non-reversible • Internal pilot air supply • Without manual override (MO)
The circuit symbol is identical to the first one, but it includes a manual override (MO) feature, represented by a small rectangle on the top of each solenoid coil.	VOFC-L-B52-H-G14-... (MO non-detenting) VOFC-L-B52-H-N14-... (MO non-detenting)	5/2-way double solenoid valve • Electrically piloted • Non-reversible • Internal pilot air supply • With manual override (MO)
The circuit symbol is identical to the first one, but it includes a NAMUR connection, represented by a small rectangle on the top of each solenoid coil.	VOFC-L-B52-FG14-... VOFC-L-B52-FN14-...	5/2-way double solenoid valve • Electrically piloted • Non-reversible • Internal pilot air supply • With NAMUR connection • Without manual override (MO)
The circuit symbol is identical to the first one, but it includes both a manual override (MO) and a NAMUR connection, represented by small rectangles on the top of each solenoid coil.	VOFC-L-B52-H-FG14-... (MO non-detenting)	5/2-way double solenoid valve • Electrically piloted • Non-reversible • Internal pilot air supply • With NAMUR connection • With manual override (MO)

Data sheet – Modular system, piston spool valves

Dimensions

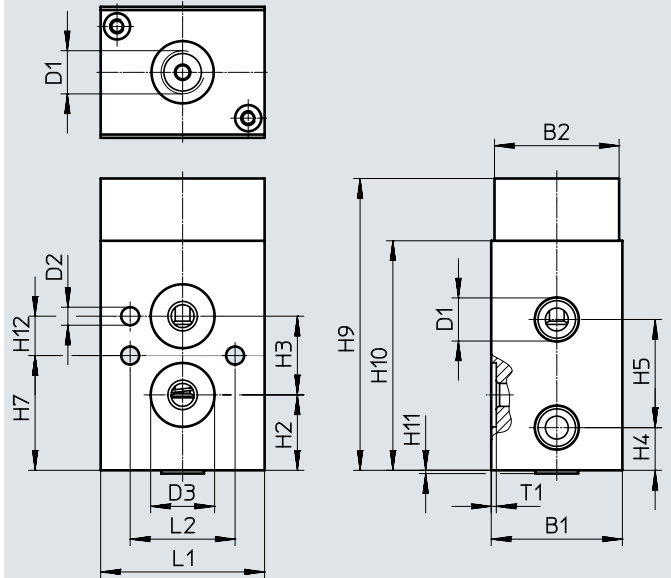
3/2-way valves (without armature tube)

Interface -SG14/-SN14

Download CAD data → www.festo.com

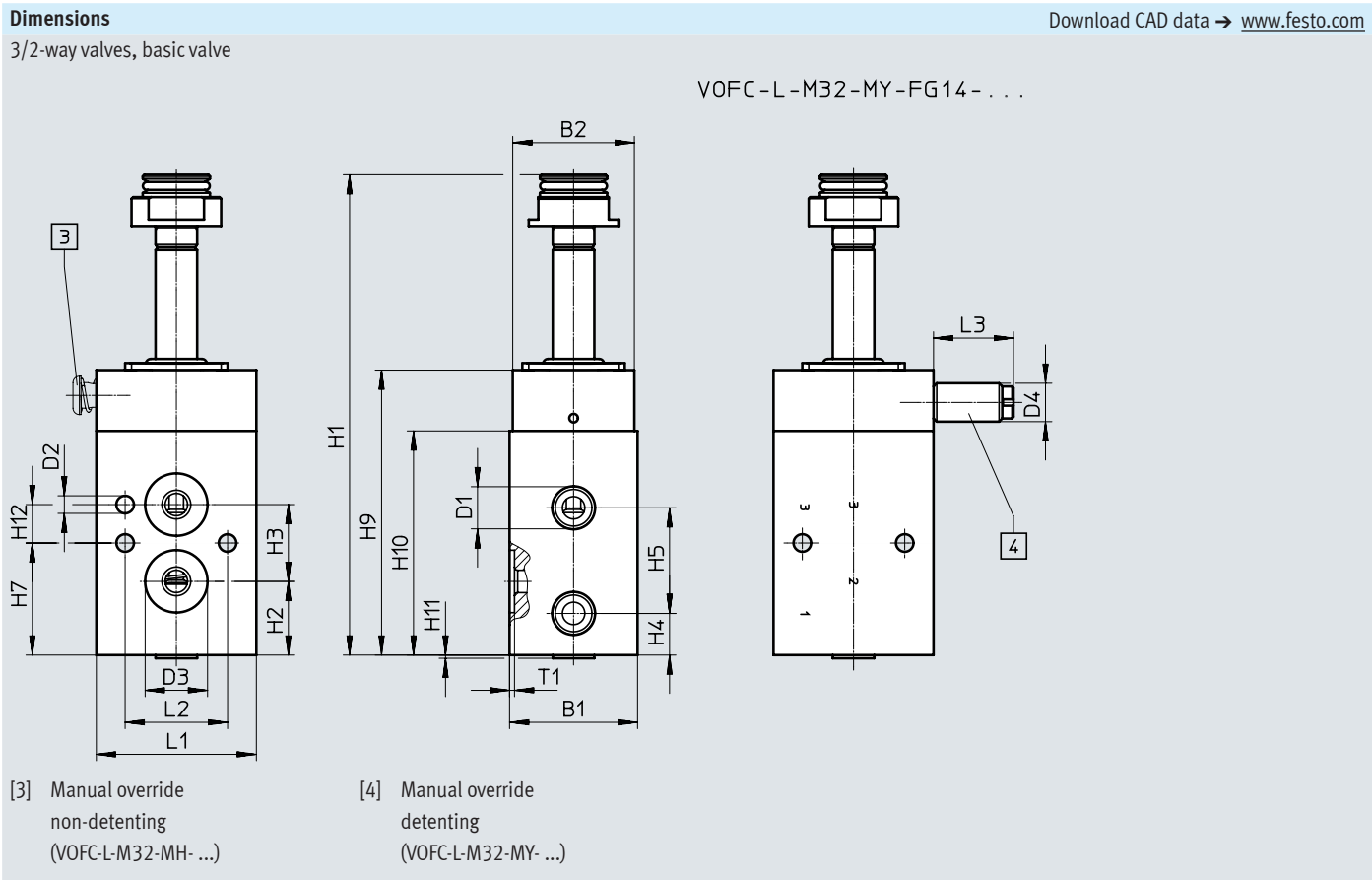
5/2-way valves (without armature tube)

Interface -SG14/-SN14



Type	B1	B2	D1	D2 Ø	D3 Ø	H2	H3	H4	H5	H6	H7	H9	H10	H11	H12	L1	L2	T1
VOFC-L-M32-MZ-FG14-SG14-...	40	38	G1/4	5.5	19.5	23	24	13	33	-	35	89	70	1	12	50	32	1.6
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



Type	B1	B2	D1	D2 Ø	D3 Ø	D4 Ø	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-...																				
VOFC-L-M32-MY-FG14-...						12													25	

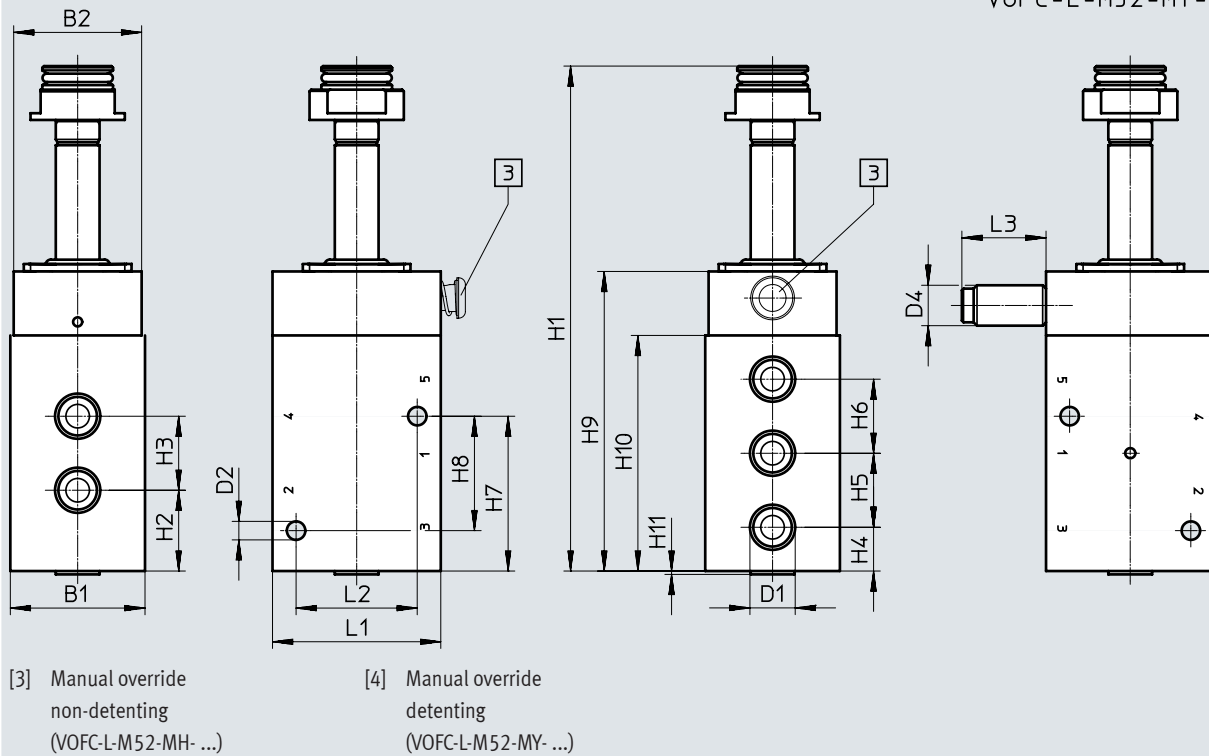
Data sheet – Modular system, piston spool valves

Dimensions

Download CAD data → www.festo.com

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

VOFC-L-M52-MY-...



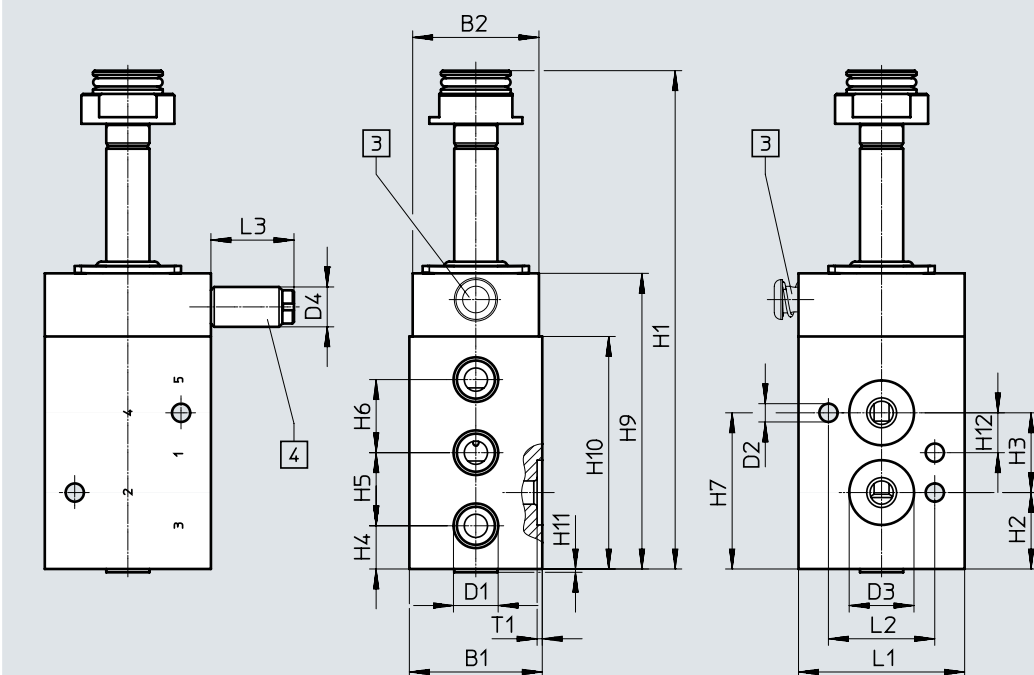
Type	B1	B2	D1	D2 Ø	D4 Ø	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	L1	L2	L3
VOFC-L-M52-M-G14-...	40	38	G1/4	5.5	-	150	24	22	13	22	22	46	34	89	70	1	50	36	-
VOFC-L-M52-MH-G14-...			1/4 NPT																
VOFC-L-M52-M-N14-...			1/4 NPT																
VOFC-L-M52-MH-N14-...			G1/4		12														25
VOFC-L-M52-MY-G14-...																			

Data sheet – Modular system, piston spool valves

Dimensions

Download CAD data → 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 Ø	D3 Ø	D4 Ø	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-...																					
VOFC-L-M52-MY-FG14-...						12														25	

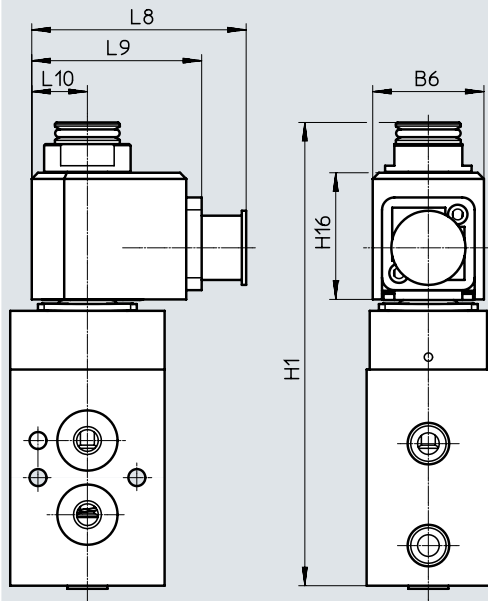
Data sheet – Modular system, piston spool valves

Dimensions

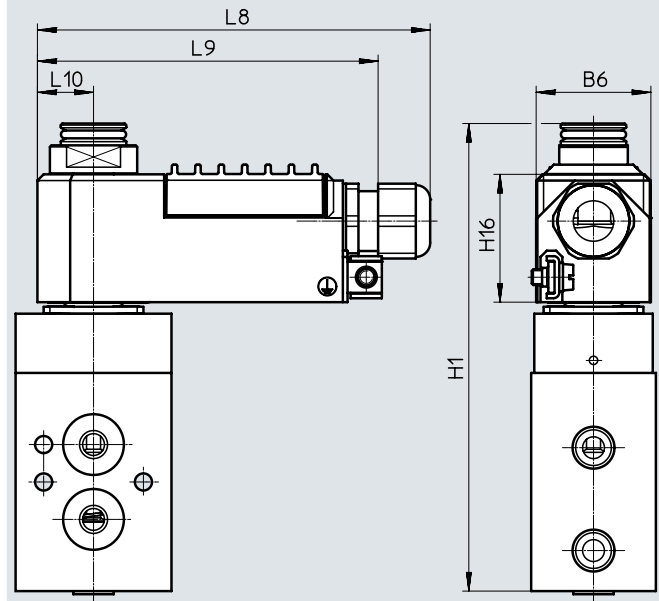
Download CAD data → www.festo.com

Single solenoid valves with solenoid coil

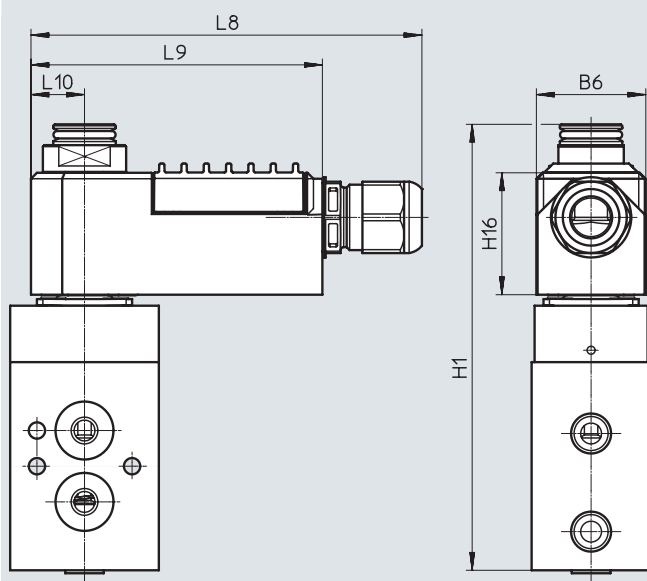
VOFC-...-18-A1-...



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



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



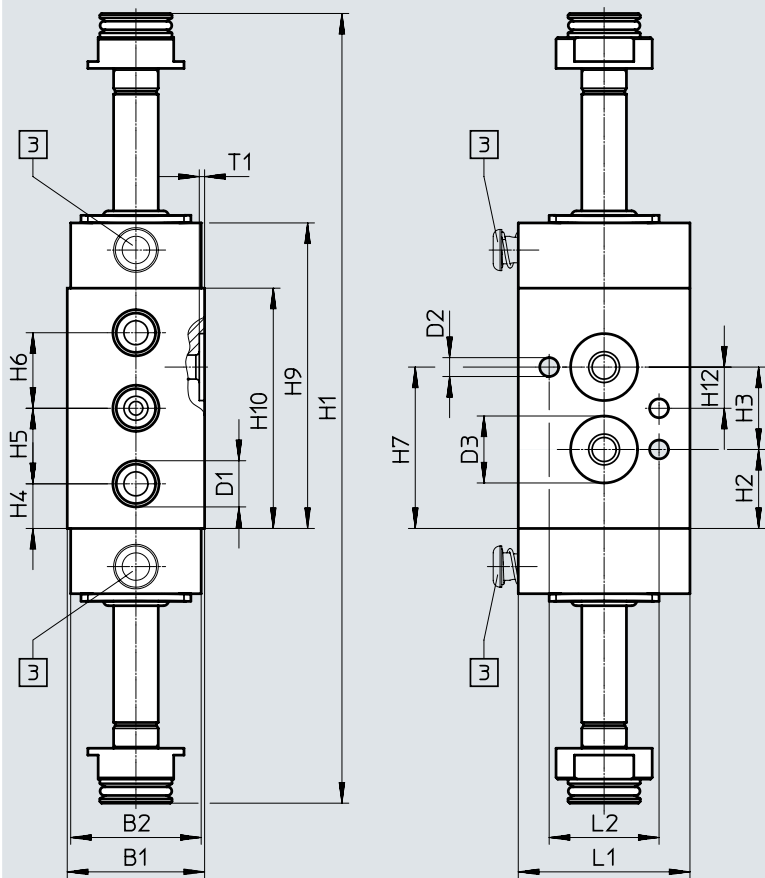
Type	B6	H1	H16	L8	L9	L10
VOFC-...-18-A1-...	36	150	41	69.4	55	18
VOFC-...-18-K4-...-EX4ME	37	150	41	125	111	18
VOFC-...-11-K4-1-EX4A	37	150	41	125	98	18

Data sheet – Modular system, piston spool valves

Dimensions

Download CAD data → www.festo.com

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



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

Type	B1	B2	D1	D2 Ø	D3 Ø	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-...																		

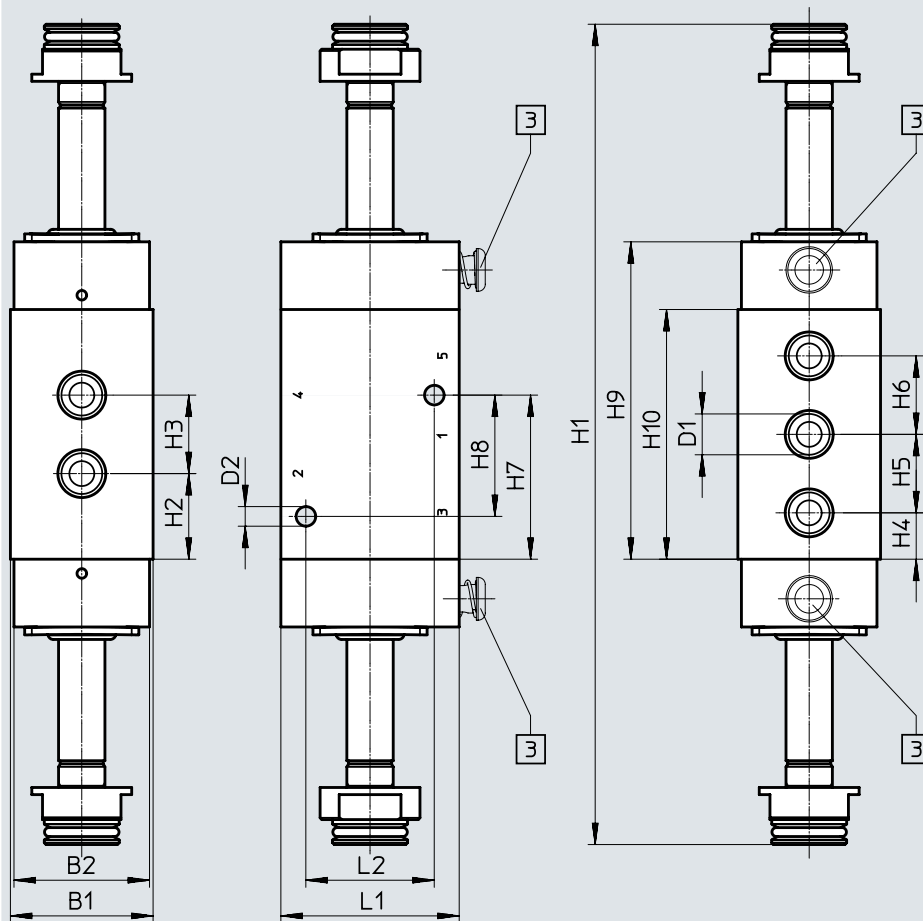
Data sheet – Modular system, piston spool valves

Dimensions

Download CAD data → www.festo.com

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

Connection -G14/-N14



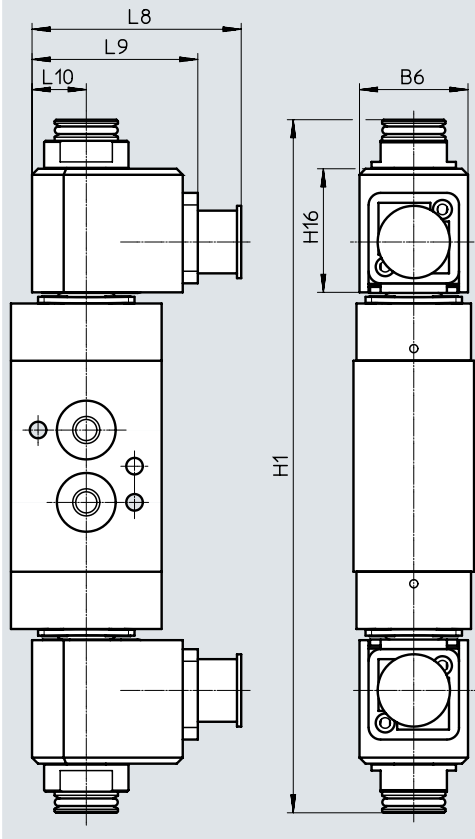
[3] Manual override
non-detenting
(VOFC-L-B52-H- ...)

Type	B1	B2	D1	D2 Ø	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-...			1/4 NPT													
VOFC-L-B52-H-N14-...																

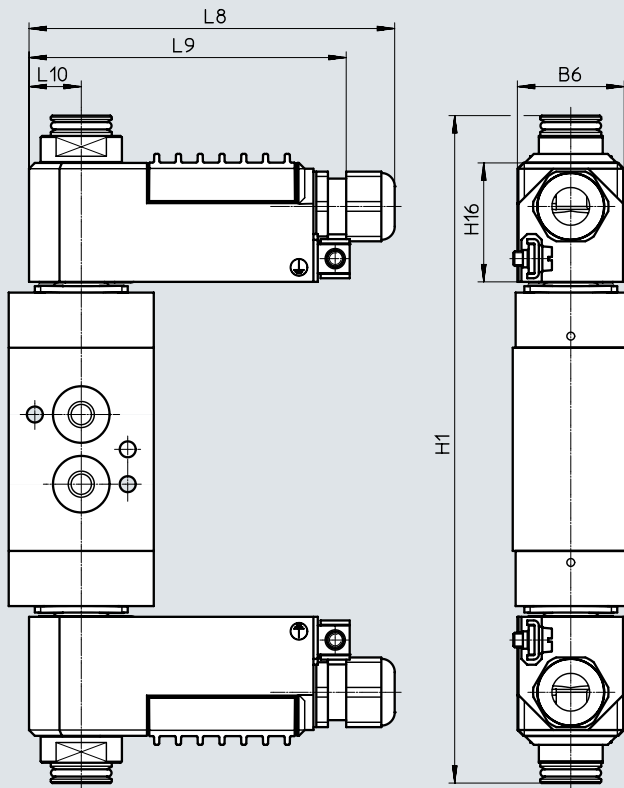
Data sheet – Modular system, piston spool valves

Dimensions Download CAD data → www.festo.com

Double solenoid valves with solenoid coil
VOFC-...-18-A1-...



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



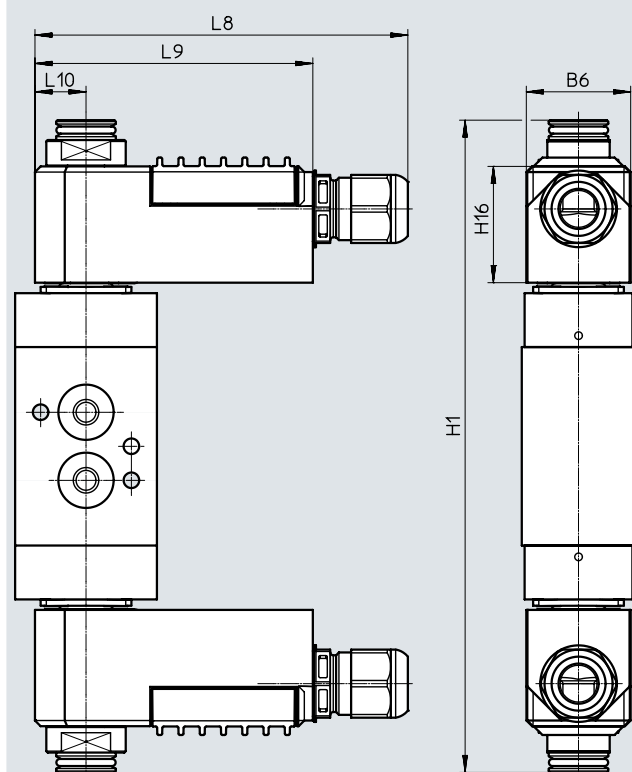
Type	B6	H1	H16	L8	L9	L10
VOFC-...-18-A1-...	36	230	41	69.4	55	18
VOFC-...-18-K4-...-EX4ME	37	230	41	125	111	18

Data sheet – Modular system, piston spool valves

DimensionsDownload CAD data → 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

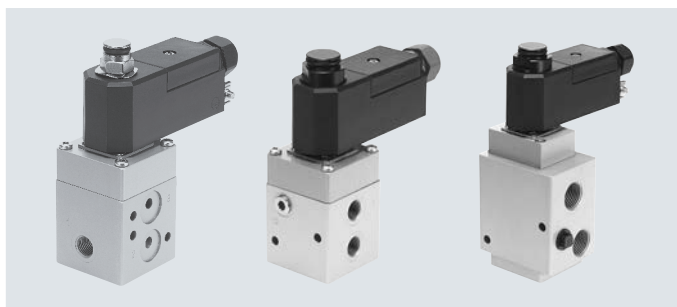
Data sheet – Modular system, poppet valves

Function

- 3/2-way solenoid valve

-  - Temperature range
-25 ... 60°C

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



General technical data

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 [m³/h]	0.5 ... 2.4		
Flow rate Kv for exhausting [m³/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

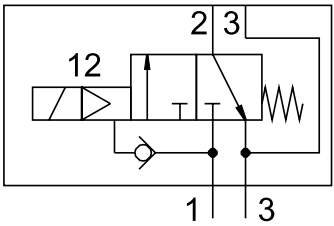
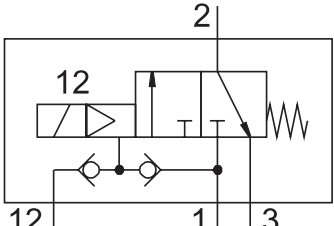
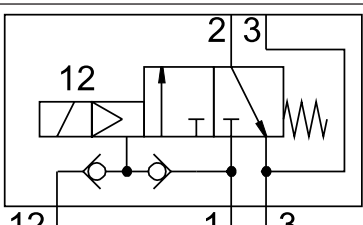
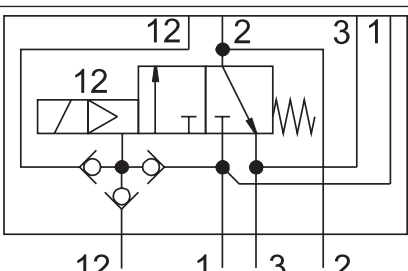
Operating and environmental conditions					
Type VOFC-LT-...	-M32C-M-...12-...	-M32C-M-...14-...	-M32C-MC-...12-... -M32C-MC-...13-...	-M32C-MC-...14-...	-M32C-MZ-...14-...
Operating medium	Compressed air to ISO 8573-1:2010 [7:2:2]				
Degree of protection	IP50, IP65				
Operating pressure range	[bar]	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 ¹⁾	4				
Note on materials	Contains paint-wetting impairment substances				
	RoHS-compliant				

1) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests (→ also FN 940082), using appropriate media.

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

Data sheet – Modular system, poppet valves

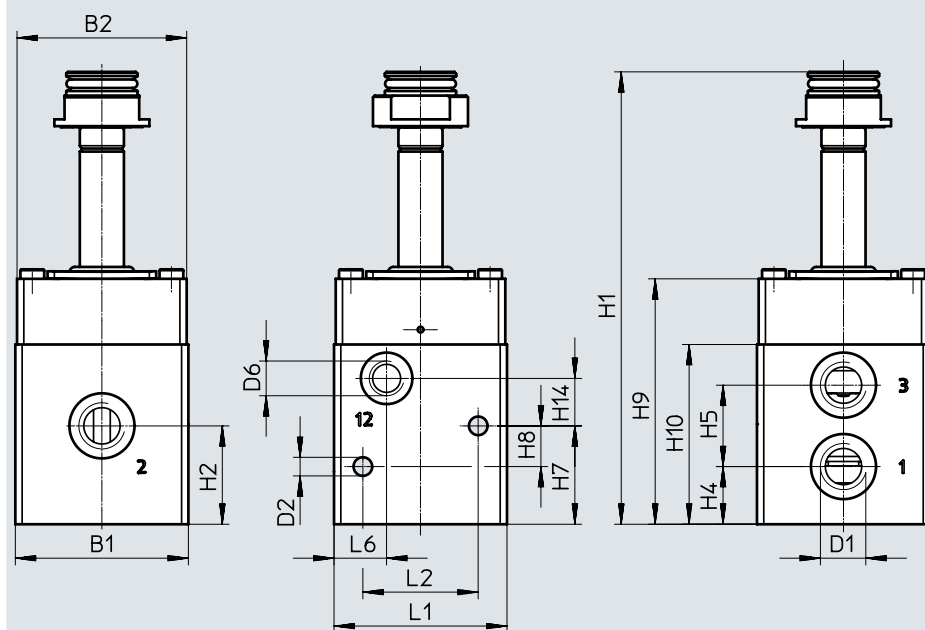
Valve functions	Type code	Description
Circuit symbol 	VOFC-LT-M32C-M-FG12- VOFC-LT-M32C-M-FG14- VOFC-LT-M32C-M-FN12- VOFC-LT-M32C-M-FN14-	3/2-way valve, single solenoid, closed • Electrically piloted • Non-reversible • With spring return • Internal pilot air supply • With NAMUR connection • Without manual override • One-way flow control valve
	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 • Electrically piloted • Non-reversible • With spring return • Pilot air supply, internal/external • Without manual override • One-way flow control valve
	VOFC-LT-M32C-MC-FG13- VOFC-LT-M32C-MC-FN13-	3/2-way valve, single solenoid, closed • Electrically piloted • Non-reversible • With spring return • Pilot air supply, internal/external • With NAMUR connection • Without manual override • One-way flow control valve
	VOFC-LT-M32C-MC-FGP14- VOFC-LT-M32C-MC-FNP14-	3/2-way valve, single solenoid, closed • Electrically piloted • Non-reversible • With spring return • Pilot air supply, internal/external • With NAMUR connection with additional P connection • Without manual override • One-way flow control valve

Data sheet – Modular system, poppet valves

Dimensions

Download CAD data → 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					

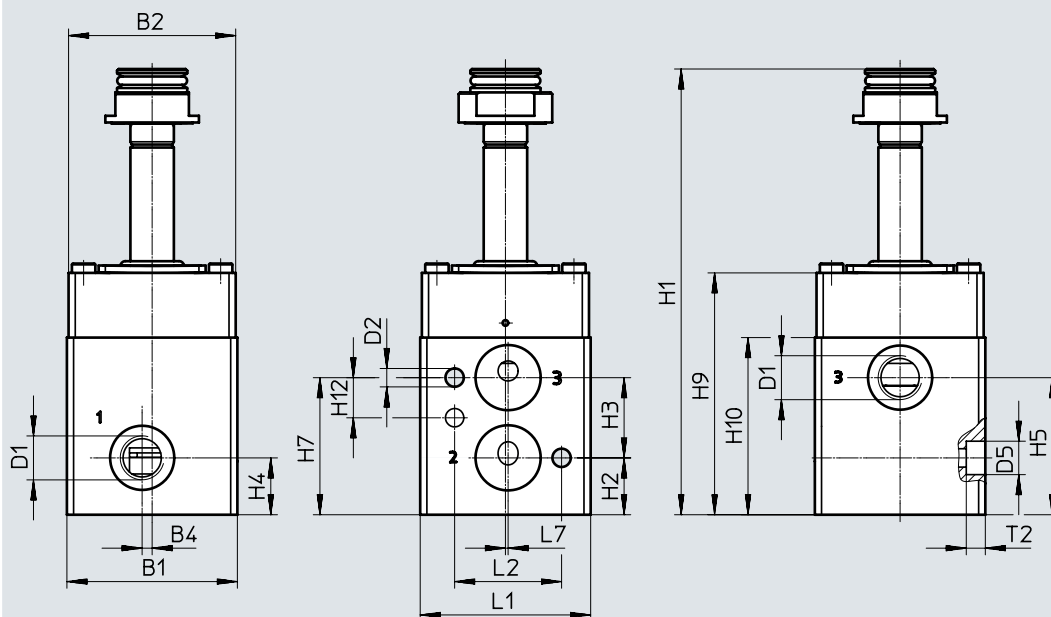
Type	H7	H8	H9	H10	H14	L1	L2	L6
VOFC-LT-M32C-MC-G14-...	29	12	72	53	14	51	34	15.5
VOFC-LT-M32C-MC-N14-...								

Data sheet – Modular system, poppet valves

Dimensions

Download CAD data → www.festo.com

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



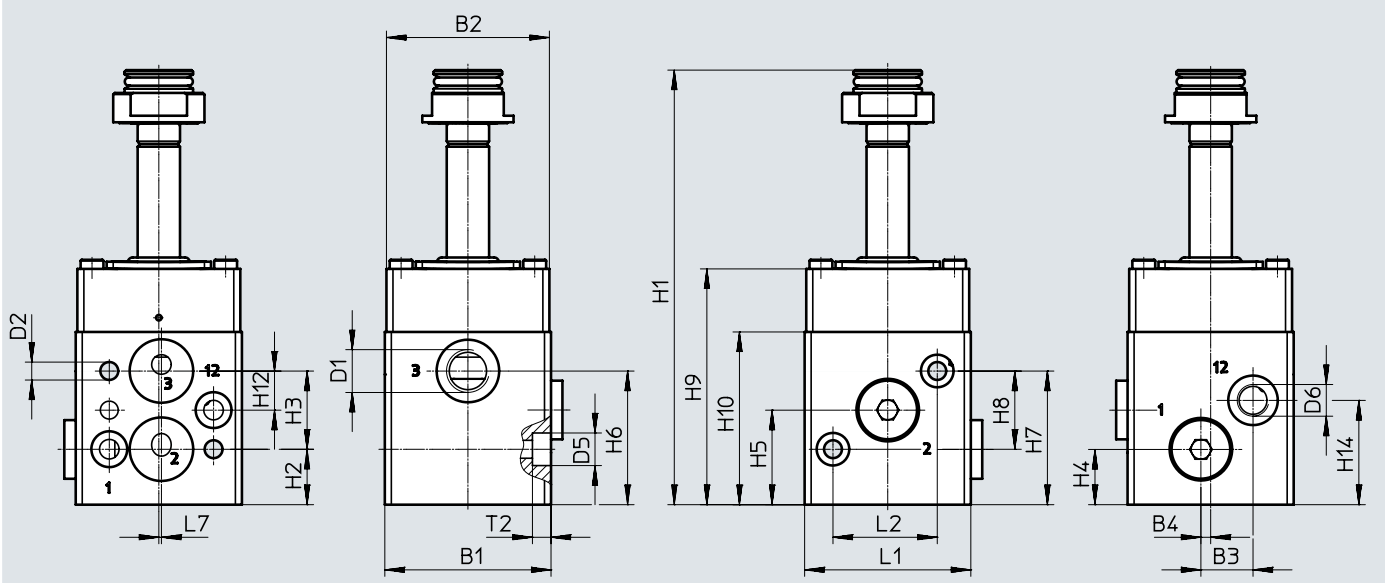
Type	B1	B2	B4	D1	D2 Ø	D5 Ø	H1	H2	H3	H4
VOFC-LT-M32C-M-FG14-...	51	50	3	G1/4	5.5	10	133	17	24	17

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

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



Type	B1	B2	B3	B4	D1	D2 Ø	D5 Ø	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

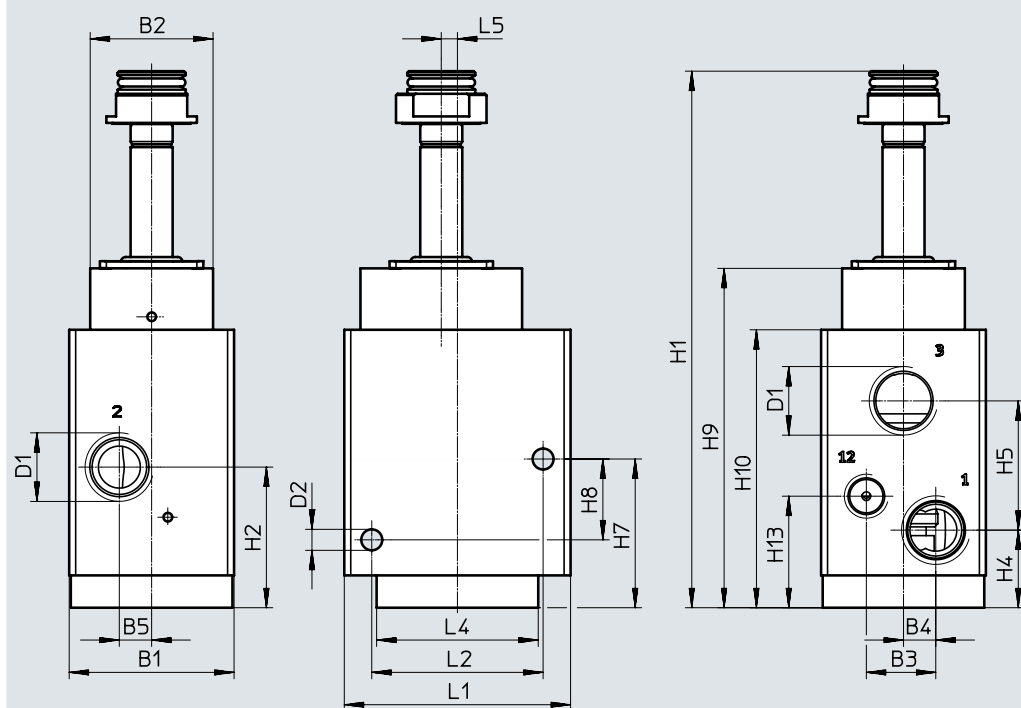
Type	H5	H6	H7	H8	H9	H10	H12	H14	L1	L2	L7	T2
VOFC-LT-M32C-M-FGP14-...	29	41	41	24	72	53	12	32	51	32	0.8	5.7

Data sheet – Modular system, poppet valves

Dimensions

Download CAD data → www.festo.com

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



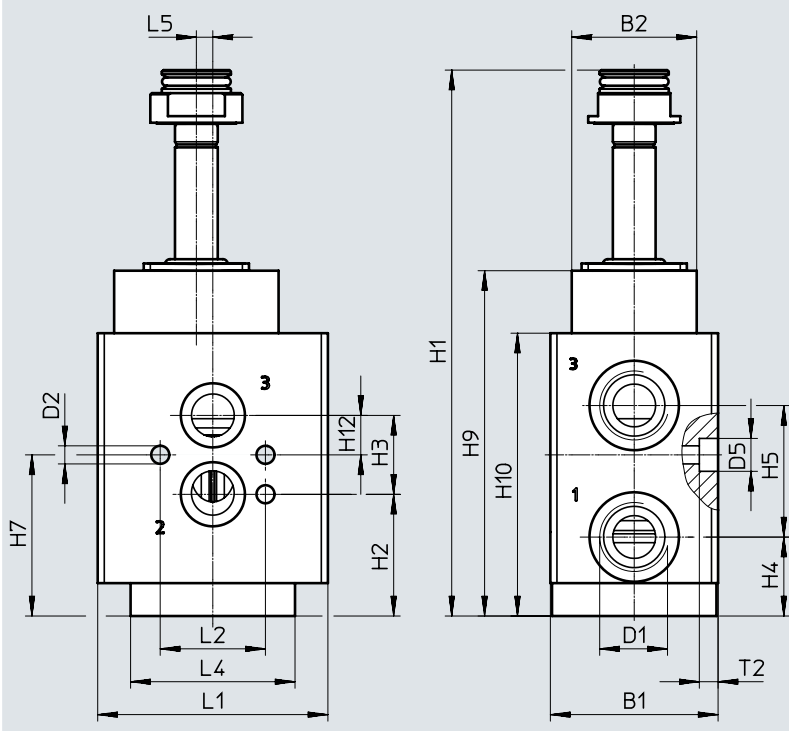
Type	B1	B2	B3	B4	B5	D1	D2 Ø	H1	H2	H4
VOFC-LT-M32C-MC-G12-...	51	38	22	10	10	G1/2	5.5	166	43.5	24
VOFC-LT-M32C-MC-N12-...			21.5			1/2 NPT				

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

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



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

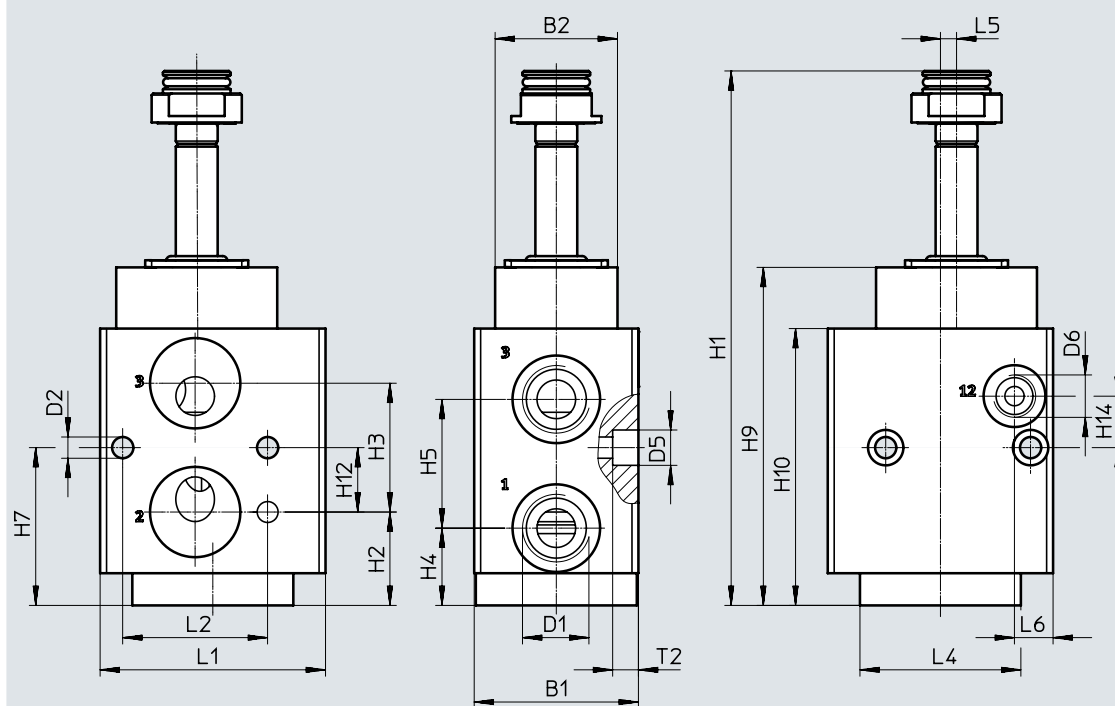
Type	H7	H9	H10	H12	L1	L2	L4	L5	T2
VOFC-LT-M32C-MC-FG12-...	49	105	86	12	70	32	50	5	5.7

Data sheet – Modular system, poppet valves

Dimensions

Download CAD data → www.festo.com

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



Type	B1	B2	D1	D2 Ø	D5 Ø	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

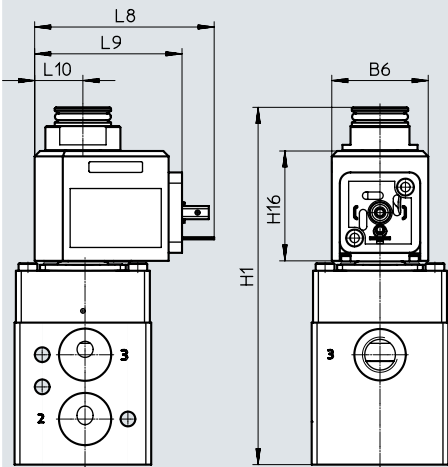
Data sheet – Modular system, poppet valves

Dimensions

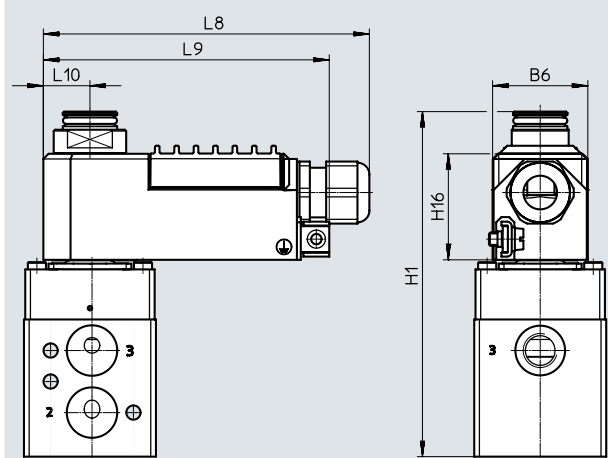
Download CAD data → www.festo.com

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

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



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

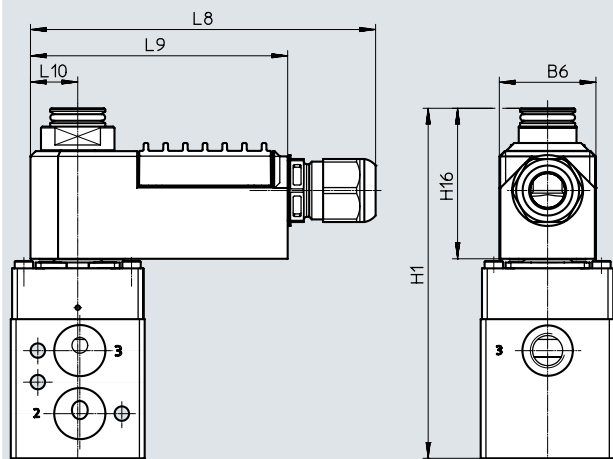


Dimensions

Download CAD data → www.festo.com

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

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



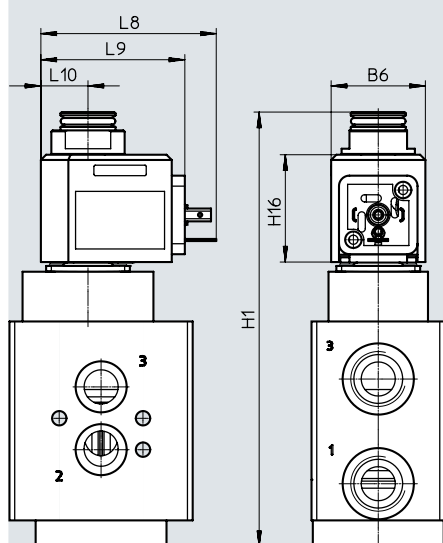
Type	B6	H1	H16	L8	L9	L10
VOFC-LT-...-18-A1-...	36	133	41	67	55	18
VOFC-LT-...-18-K4-...-EX4ME	37	133	41	125	111	18
VOFC-LT-...-11-K4-1-EX4A	37	133	41	125	98	18

Data sheet – Modular system, poppet valves

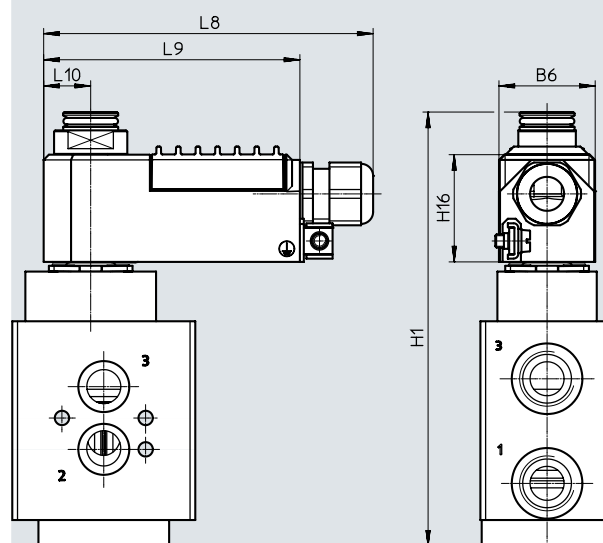
DimensionsDownload CAD data → www.festo.com

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

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

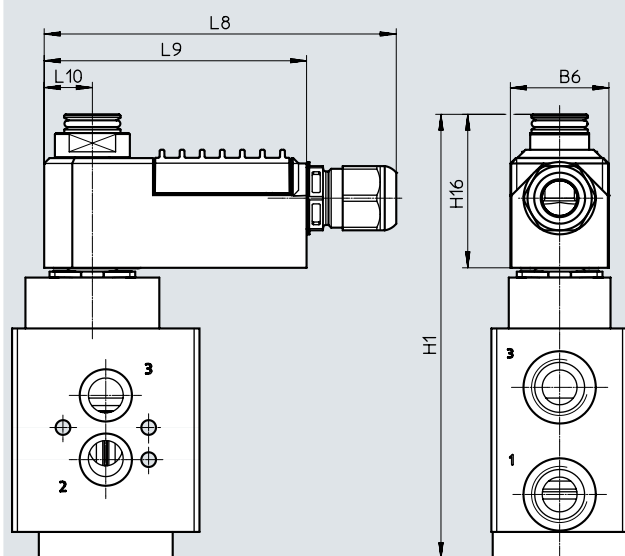


VOFC-LT-...-18-K4-...-EX4ME

**Dimensions**Download CAD data → www.festo.com

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

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

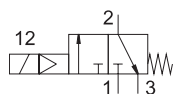


Type	B6	H1	H16	L8	L9	L10
VOFC-LT-...-18-A1-...	36	166	41	67	55	18
VOFC-LT-...-18-K4-...-EX4ME	37	166	41	125	111	18
VOFC-LT-...-11-K4-1-EX4A	37	166	41	125	98	18

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

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	[m³/h]	0.55		0.54	
Flow rate Kv for exhausting	[m³/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	[mm]	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

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		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 ¹⁾		4			

1) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests (→ also FN 940082), using appropriate media.

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

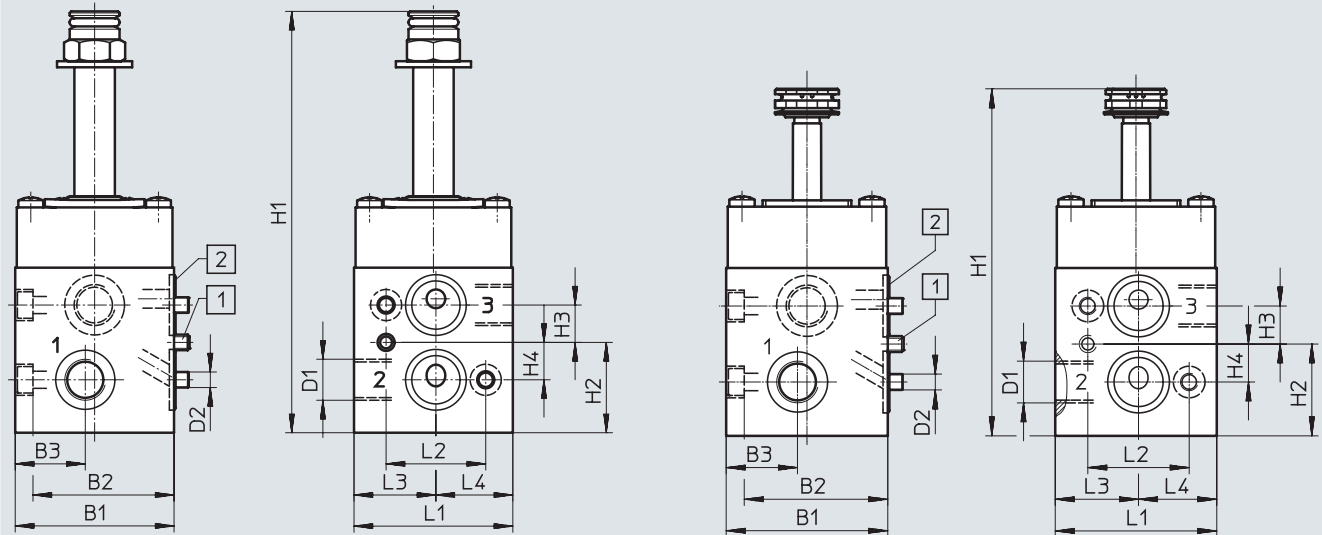
Materials	
Housing	Ematal-coated aluminium
Seals	NBR
Note on materials	Contains paint-wetting impairment substances, RoHS-compliant

Dimensions

Download CAD data → www.festo.com

VOFC-LT-...-FG-...

VOFC-LT-...-FN



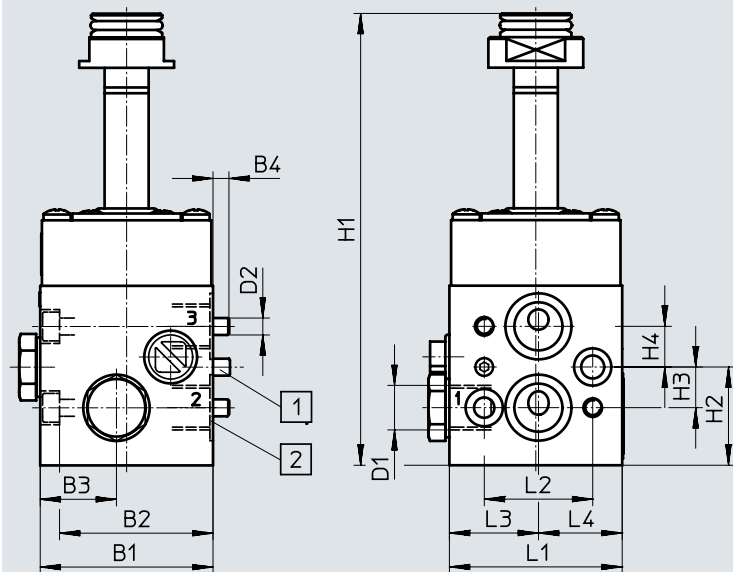
[1] Coding pin M5x10

[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													
VOFC-LT-...-FN					M5	109.6							

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

Dimensions

Download CAD data → www.festo.com

[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														

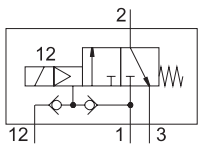
Ordering data

Circuit symbol	Function	Pneumatic connection	Type of ignition protection	Part no.	Type
In-line valve					
	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		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	[m³/h]	0.64			
Flow rate Kv for exhausting	[m³/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 ¹⁾		4	

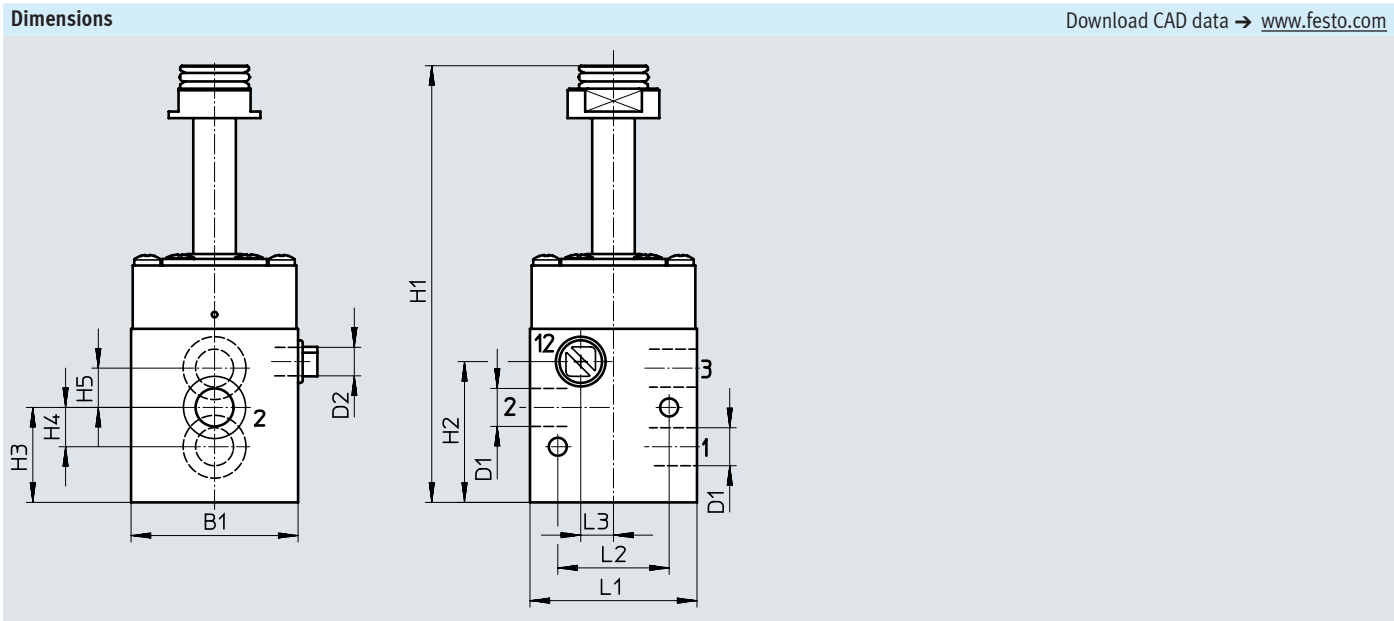
1) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests (→ also FN 940082), using appropriate media.

Materials

Housing	Ematal-coated aluminium
Seals	NBR
Note on materials	Contains paint-wetting impairment substances, RoHS-compliant

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



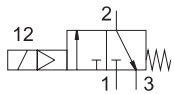
Type	B1	D1	D2	H1	H2	H3	H4	H5	L1	L2	L3
VOFC-LT-M32C-MC-G14-F19	51	G1/4	G1/8	133	43	29	12	12	51	34	10
VOFC-LT-M32C-MC-G14-F19A											
VOFC-LT-M32C-MC-N14-F19		1/4NPT	1/8NPT								
VOFC-LT-M32C-MC-N14-F19A											

Ordering data					
Circuit symbol	Function	Pneumatic connection	Type of ignition protection	Part no.	Type
In-line valve					
	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	Flange 1/2 and connection pattern to NAMUR
	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	Internal, external
Flow rate Kv for pressurisation	[m³/h]	2.4	
Flow rate Kv for exhausting	[m³/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	[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 ¹⁾		4	

1) Corrosion resistance class CRC 4 to Festo standard FN 940070

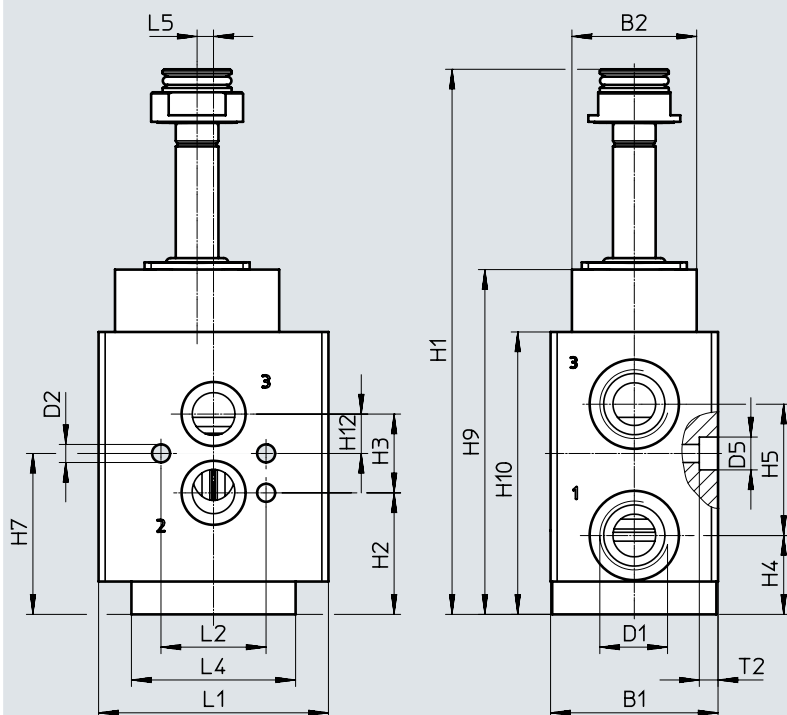
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests (→ also FN 940082), using appropriate media.

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

Materials	
Housing	Ematal-coated aluminium
Seals	NBR
Note on materials	Contains paint-wetting impairment substances, RoHS-compliant

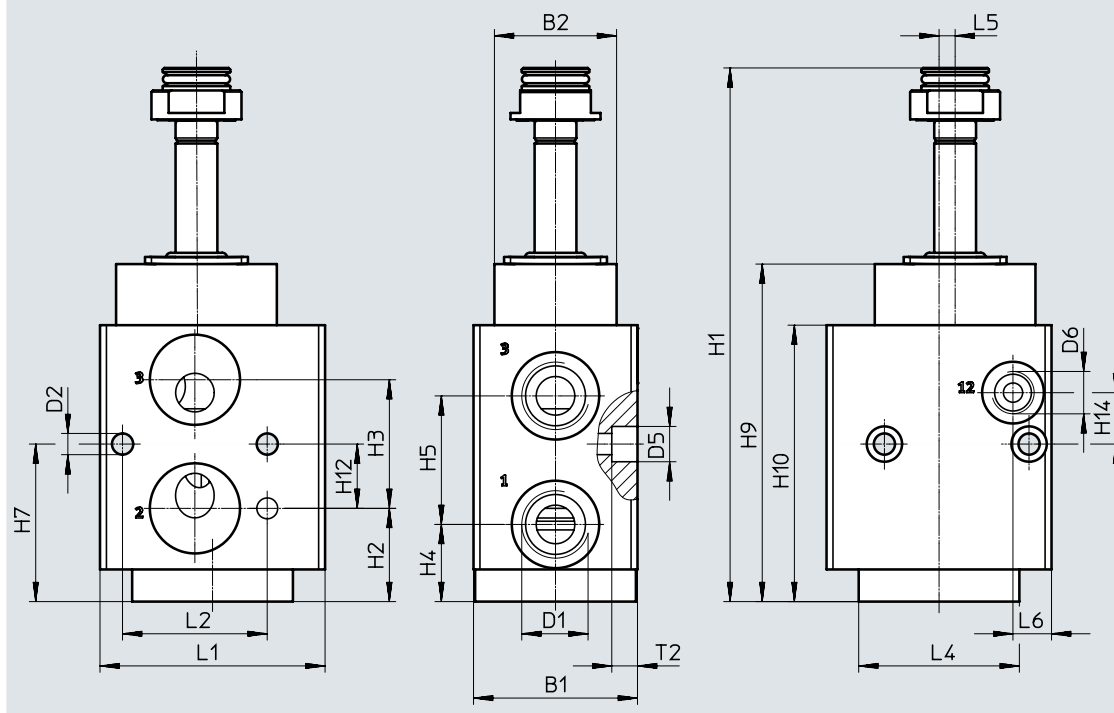
Dimensions

Download CAD data → www.festo.com

[illegible]

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

Dimensions

Download CAD data → www.festo.com

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											

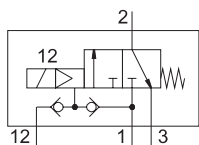
Ordering data

Circuit symbol	Function	Pneumatic connection	Type of ignition protection	Part no.	Type
In-line valve					
	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	[m³/h]	2.4
Flow rate Kv for exhausting	[m³/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 ¹⁾		4

1) Corrosion resistance class CRC 4 to Festo standard FN 940070

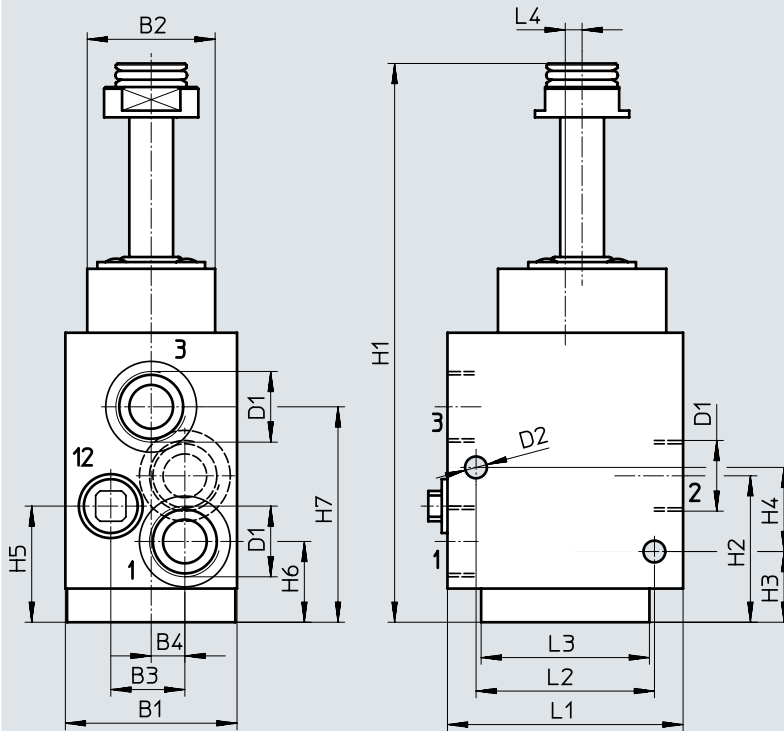
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests (→ also FN 940082), using appropriate media.

Materials

Housing	Ematal-coated aluminium
Seals	NBR
Note on materials	Contains paint-wetting impairment substances, RoHS-compliant

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

Dimensions

Download CAD data → www.festo.com

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															

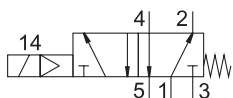
Ordering data

Circuit symbol	Function	Pneumatic connection	Type of ignition protection	Part no.	Type
In-line valve					
	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	[m³/h]	1.08
Flow rate Kv for exhausting	[m³/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
Safety integrity level	Up to SIL2 low demand mode	
	Up to SIL2 high demand mode	
Corrosion resistance class CRC ¹⁾	4	

1) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests
(→ also FN 940082), using appropriate media.

Materials

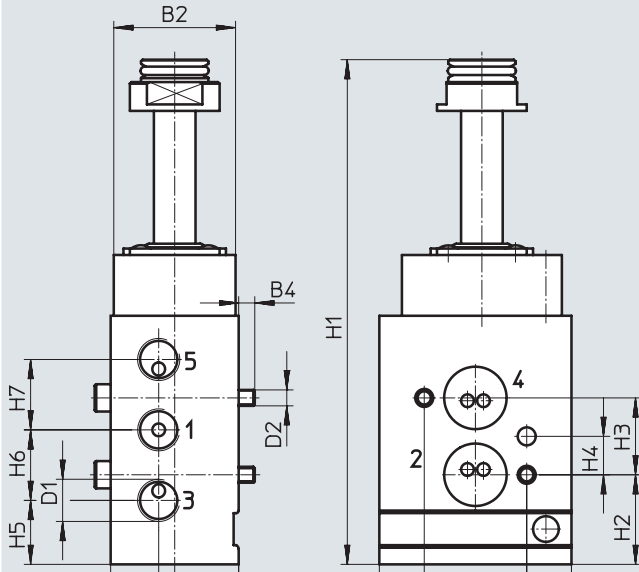
Housing	Ematal-coated aluminium
Seals	NBR
Note on materials	Contains paint-wetting impairment substances, RoHS-compliant

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

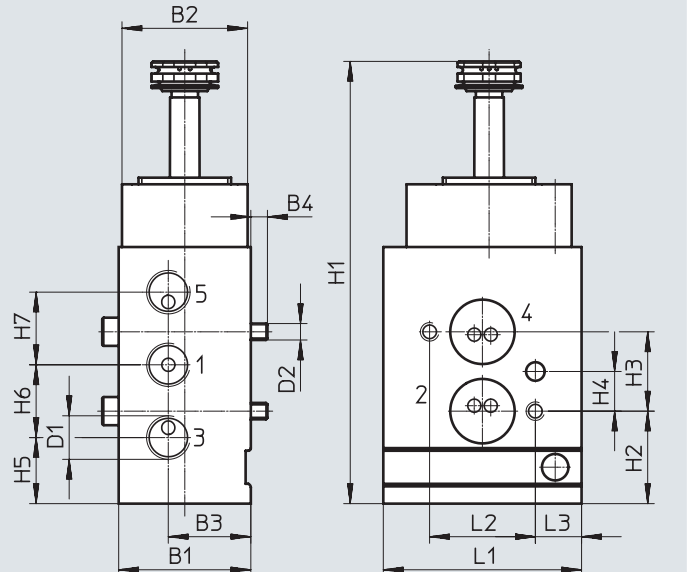
Dimensions

Download CAD data → www.festo.com

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



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



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

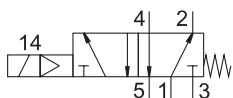
Ordering data

Circuit symbol	Function	Pneumatic connection	Type of ignition protection	Part no.	Type
In-line valve					
	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	[m³/h]	1.08
Flow rate Kv for exhausting	[m³/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
Safety integrity level	[SIL]	Up to SIL2 low demand mode
		Up to SIL2 high demand mode
Corrosion resistance class CRC ¹⁾	4	

1) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests (→ also FN 940082), using appropriate media.

Materials

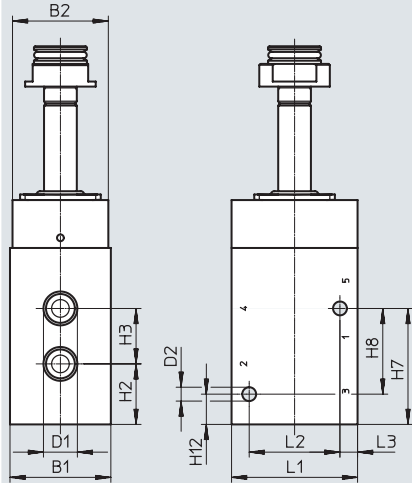
Housing	Ematal-coated aluminium
Seals	NBR
Note on materials	Contains paint-wetting impairment substances, RoHS-compliant

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

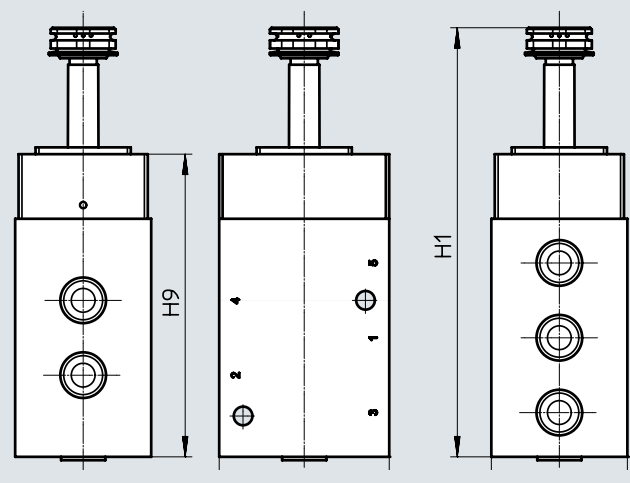
Dimensions

Download CAD data → www.festo.com

VOFC-L...-F19...



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	–	–

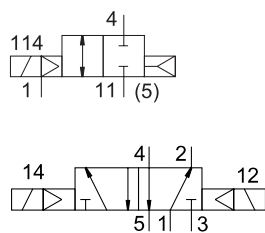
Ordering data

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

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

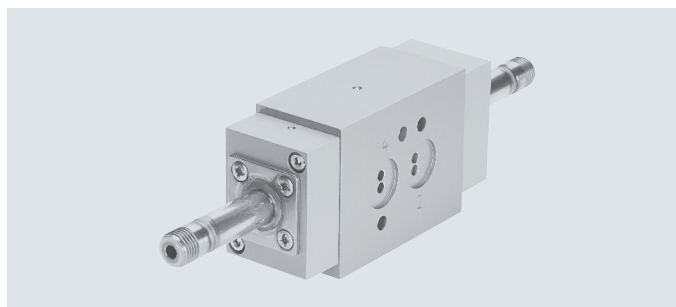
Function

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	[m³/h]	1.08	
Flow rate Kv for exhausting	[m³/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
Safety integrity level	[SIL] Up to SIL 2 low demand mode
	Up to SIL 2 high demand mode
Corrosion resistance class CRC ¹⁾	4

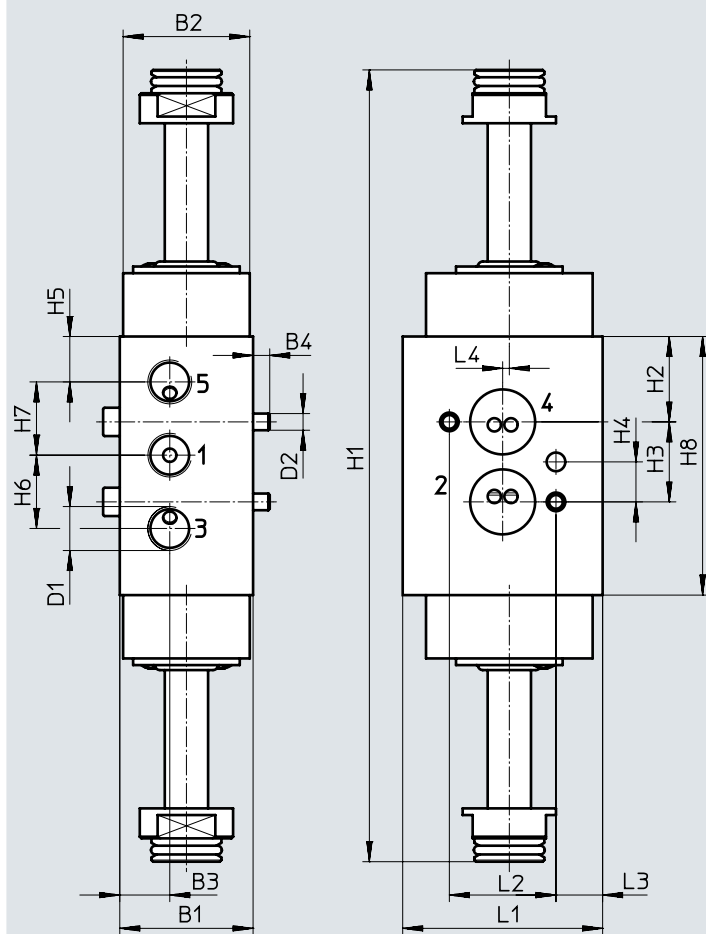
1) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests (→ also FN 940082), using appropriate media.

Materials	
Housing	Ematal-coated aluminium
Seals	NBR
Note on materials	Contains paint-wetting impairment substances, RoHS-compliant

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

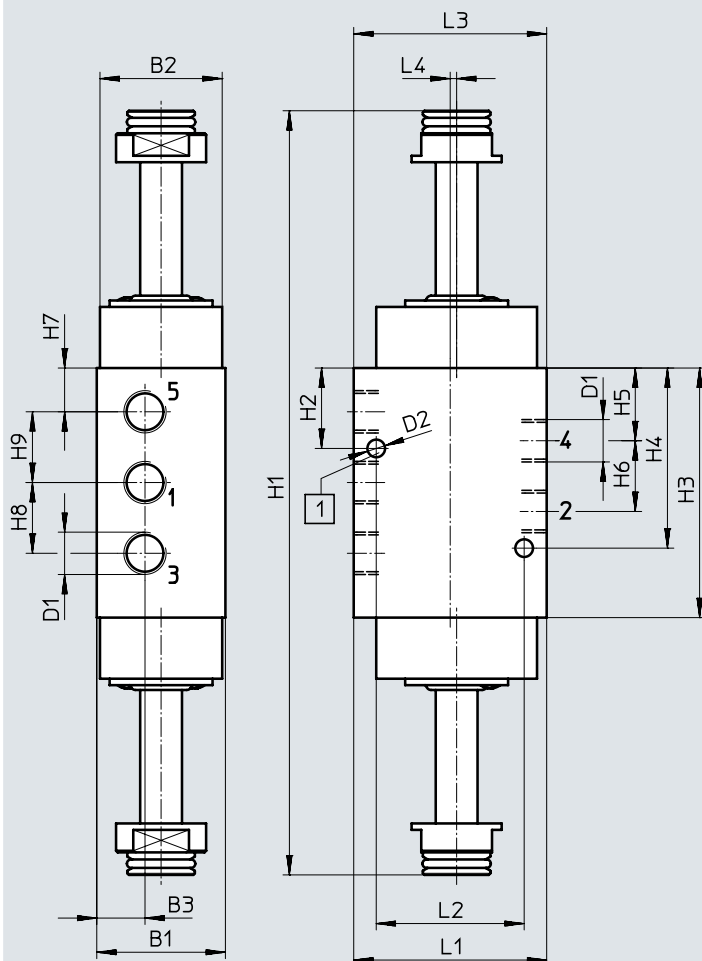
Dimensions

Download CAD data → 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

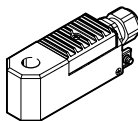
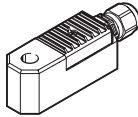
Download CAD data → www.festo.com

[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																		

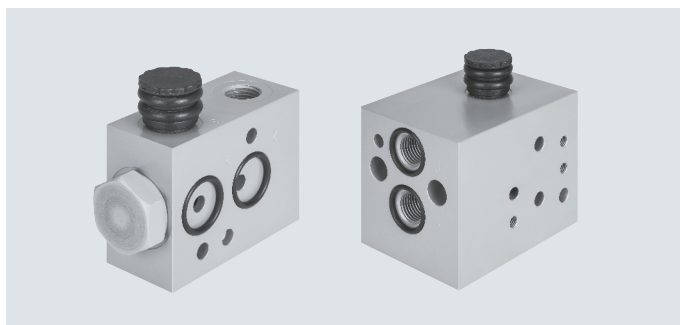
Ordering data					
Circuit symbol	Function	Pneumatic connection	Type of ignition protection	Part no.	Type
In-line valve					
	5/2-way, double solenoid	G1/4 and NAMUR	Without	4514929	VOFC-L-B52-FG14-F19
			Intrinsically safe	4514930	VOFC-L-B52-FG14-F19A
	5/2-way, double solenoid	G1/4	Without	4514927	VOFC-L-B52-G14-F19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

Accessories – Solenoid coils S13

Ordering data	Description	Certification	Type of ignition protection	Operating voltage	Internal fuse protection	Part no.	Type
	Terminal box, cable entry thread metric, M20x1.5	To EU Explosion Protection Directive (ATEX)	Encapsulation, enhanced safety	24 V AC/DC	–	8109396	VACC-S13-18-K4-1U-EX4ME
					Fuse	8109399	VACC-S13-18-K4-1UF-EX4ME
				60 V AC/DC	–	8109400	VACC-S13-18-K4-27U-EX4ME
				110 V AC/DC	–	8109397	VACC-S13-18-K4-2U-EX4ME
		NEPSI		230 V AC/DC	–	8109398	VACC-S13-18-K4-3U-EX4ME
				24 V AC/DC	–	8118329	VACC-S13-18-K4-1U-NE4ME
					Fuse	8118332	VACC-S13-18-K4-1UF-NE4ME
				60 V AC/DC	–	8118333	VACC-S13-18-K4-27U-NE4ME
				110 V AC/DC	–	8118330	VACC-S13-18-K4-2U-NE4ME
				230 V AC/DC	–	8118331	VACC-S13-18-K4-3U-NE4ME
		INMETRO		24 V AC/DC	–	8118324	VACC-S13-18-K4-1U-NM4ME
					Fuse	8118327	VACC-S13-18-K4-1UF-NM4ME
				60 V AC/DC	–	8118328	VACC-S13-18-K4-27U-NM4ME
				110 V AC/DC	–	8118325	VACC-S13-18-K4-2U-NM4ME
				230 V AC/DC	–	8118326	VACC-S13-18-K4-3U-NM4ME
	To EU Explosion Protection Directive (ATEX)	Intrinsically safe	14 ... 32 V DC	–	8109401	VACC-S13-11-K4-1-EX4A	
					8114135	VACC-S13-11-K4-1-NE4A	
					8114078	VACC-S13-11-K4-1-NM4A	
	A1 coil, plug to EN 175301-803, type A	–	Without	24 V DC	–	562889	VACC-S13-18-A1-1
				24 V AC/DC	–	562890	VACC-S13-18-A1-1U
				110 V AC/DC	–	562891	VACC-S13-18-A1-2U
				230 V AC/DC	–	562892	VACC-S13-18-A1-3U

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			
Type of mounting		Via through-hole	
Mounting position		Any	
Flow rate Kv for pressurisation	[m³/h]	2.2	–
Flow rate Kv for exhausting	[m³/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

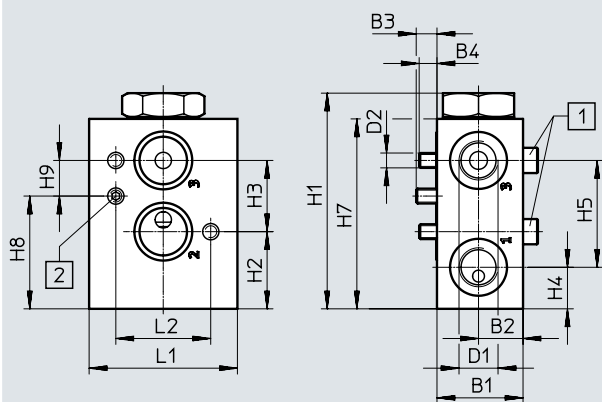
Operating and environmental conditions		VABS-S7-BE	VABS-S7-RB
Operating medium		Compressed air to ISO 8573-1:2010 [7:2:2]	
Operating pressure	[bar]	2 ... 8	0 ... 10
Pilot air supply		Internal	External/internal
Degree of protection		IP65 (in the installed state)	
Corrosion resistance class CRC ¹⁾		4	

1) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests (→ also FN 940082), using appropriate media.

Materials	
Sub-base	Ematal-coated aluminium
Seals	NBR
Note on materials	Contains paint-wetting impairment substances, RoHS-compliant

Dimensions

Download CAD data → www.festo.com

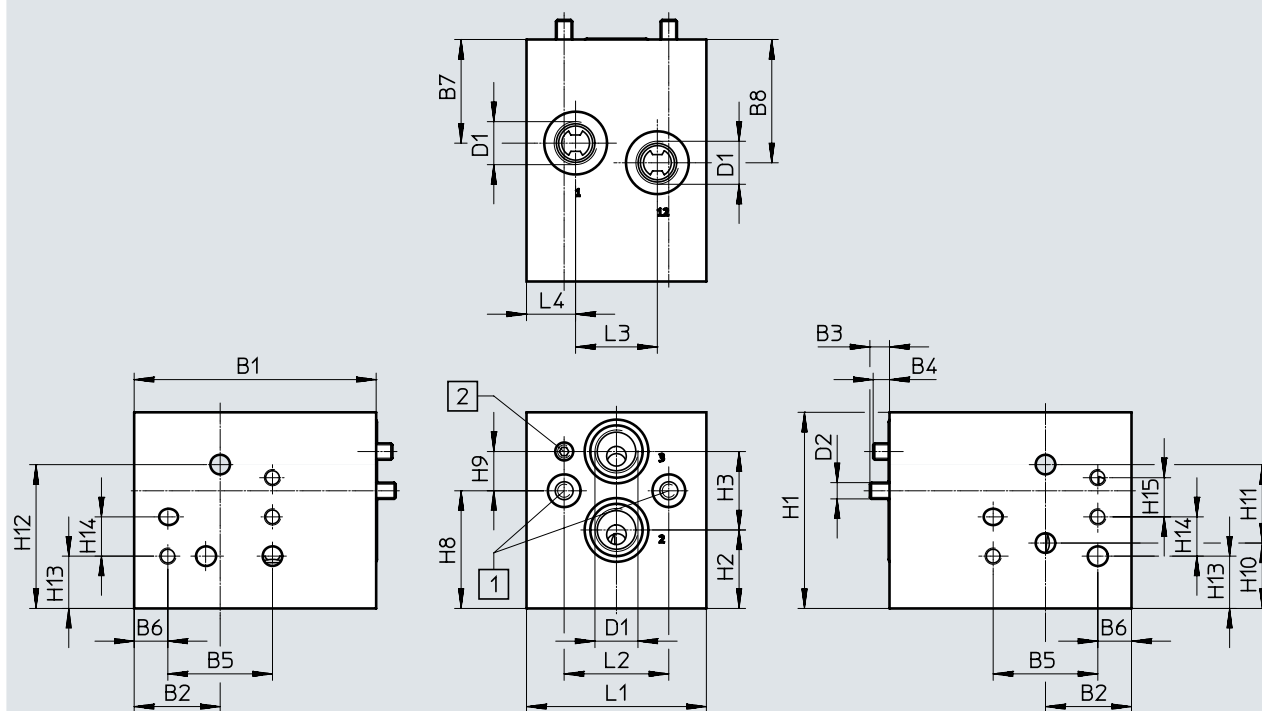
[1] Socket head screw M5x35

[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-A	29	15	7	6	G1/4	M5	72.7	26	24	14	36	64	38	12	50	32
VABS-S7-BE-B-N14-V14-A					1/4 NPT											

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

Dimensions

Download CAD data → 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-A	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-A									1/4 NPT					

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

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-A
	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-A
	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-A
	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-A

Accessories

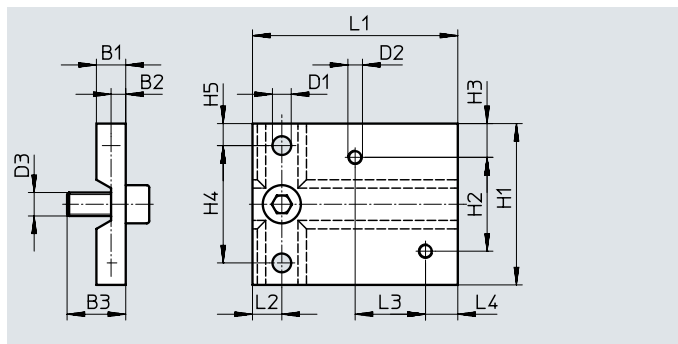
Mounting plate VAME-S7-P

Mounting plate material:

Ematal-coated aluminium

Contains paint-wetting impairment substances, RoHS-compliant

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 ¹⁾	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) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests

(→ also FN 940082), using appropriate media.

Throttle plate for single-acting actuators

Throttle plate material: Ematal-coated aluminium

Seals material: NBR

Contains paint-wetting impairment substances, RoHS-compliant

Operating medium: Compressed air to ISO 8573-1:2010 [7:-:-]

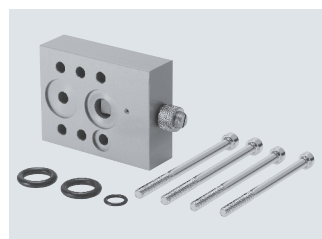
Operating pressure: 0 ... 12 bar

Pilot air supply: internal/external

Mounting position: any

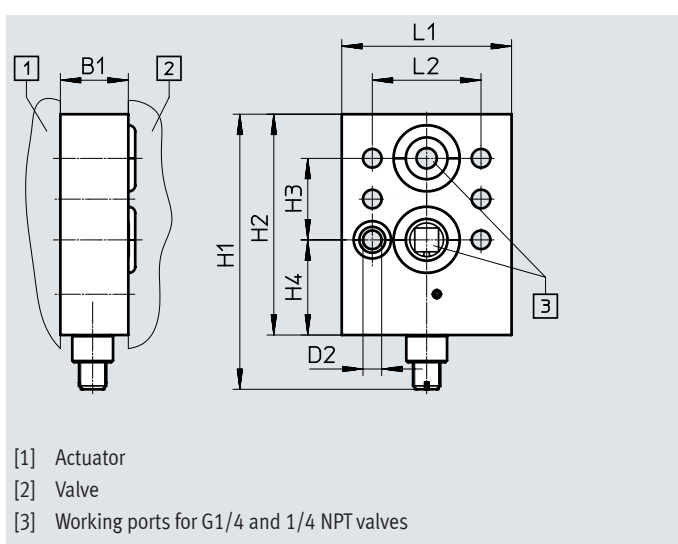
Mounting: via through-hole

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

**Dimensions [mm] and ordering data**

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

1) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests

(→ also FN 940082), using appropriate media.

Accessories

Throttle plate for double-acting actuators

Throttle plate material: Ematal-coated aluminium

Seals material: NBR

Contains paint-wetting impairment substances, RoHS-compliant

Operating medium: Compressed air to ISO 8573-1:2010 [7:-:-]

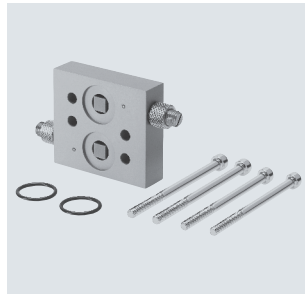
Operating pressure: 0 ... 12 bar

Pilot air supply: internal/
external

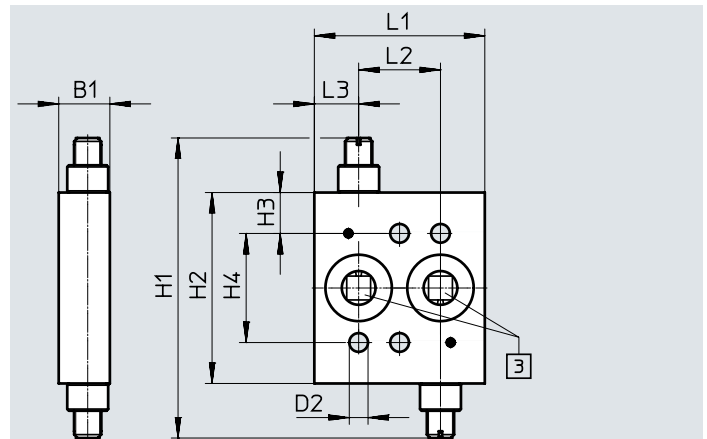
Mounting position: any

Mounting: via through-hole

Degree of protection: IP65 (when installed)



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



[1] Working ports for G1/4 and 1/4 NPT valves

Dimensions [mm] and ordering data

B1	D2	H1	H2	H3	H4	L1	L2	L3	CRC ¹⁾	Part no.	Type
15	5.5	90	56	12	32	50	24	13	4	563395	VABF-S7-F1B1P2-F

1) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests (→ also FN 940082), using appropriate media.

Sub-base

Sub-base material: Ematal-coated aluminium

Seals material: NBR

Contains paint-wetting impairment substances, RoHS-compliant

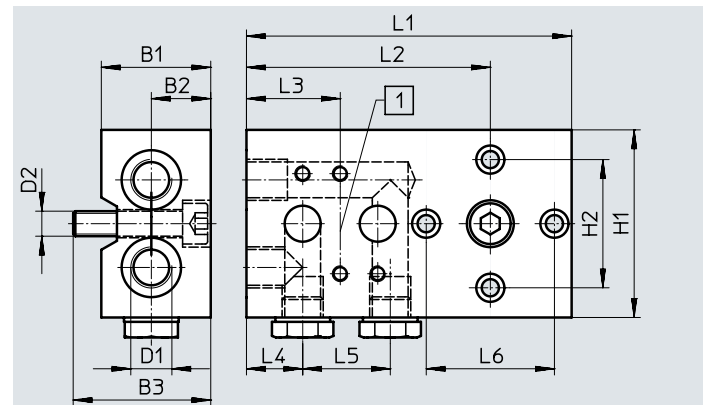
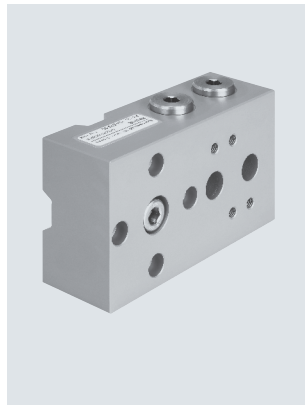
Operating medium: Compressed air to ISO 8573-1:2010 [7:-:-]

Operating pressure: 0 ... 10 bar

Mounting position: any

Mounting: via through-hole

Degree of protection: IP65 (when installed)



[1] NAMUR flange

Dimensions [mm] and ordering data

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

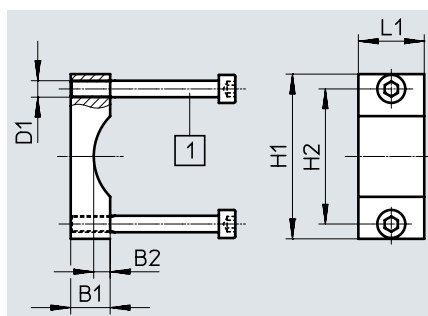
1) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests (→ also FN 940082), using appropriate media.

Accessories

Mounting bracket

Mounting bracket material:
Ematal-coated aluminium
Contains paint-wetting impairment
substances, RoHS-compliant



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

Dimensions [mm] and ordering data

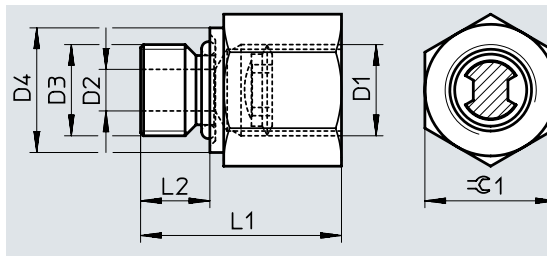
B1	B2	D1	H1	H2	L1	CRC ¹⁾	Part no.	Type
12	5	M5	50	41	20	4	563403	VAME-S7-Y

1) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests (→ also FN 940082), using appropriate media.

Adapter with filter

Adapter material: high-alloy stainless steel
Seals material: NBR
Note on materials:
Contains paint-wetting impairment
substances, RoHS-compliant
Operating pressure 2 ... 8 bar



Dimensions [mm] and ordering data

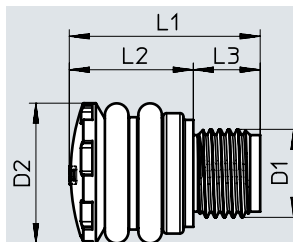
D1	D2	D3	D4	L1	L2	G1	CRC ¹⁾	Part no.	Type
1/4 NPT	6	G1/4	18	29	10	19	1	563397	NPFV-AF-G14-N14-MF
G1/4	6	G1/4	18	29	10	19	1	563398	NPFV-AF-G14-G14-MF
1/4 NPT	6	1/4 NPT	18	29	10	19	1	4727333	NPFV-AF-N14-N14-MF

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

Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Exhaust protection G1/4

Housing material: PA
Seals material: EPDM
Contains paint-wetting impairment
substances, RoHS-compliant
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

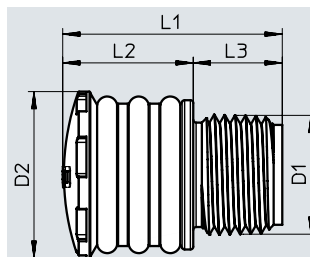
Contains paint-wetting impairment substances, RoHS-compliant

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



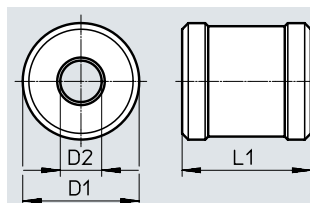
Dimensions [mm] and ordering data						
D1	D2	L1	L2	L3	Part no.	Type
G1/2, 1/2 NPT	29	38	23	15	3535104	VABD-D3-SN-N12

Manual override

Material: anodised aluminium, contains paint-wetting impairment substances, RoHS-compliant

Function:

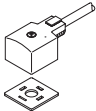
Manual override of basic valves instead of a solenoid coil



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

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Ordering data				
	Description		Part no.	Type
Connecting cable				
Data sheets → Internet: kmc				
	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
		Cable length 10 m	193459	KMC-1-24-10-LED
	Operating voltage up to 240 V AC	Cable length 2.5 m	30932	KMC-1-230 AC-2.5
		Cable length 5 m	30934	KMC-1-230 AC-5
Plug socket				
Data sheets → Internet: mssd				
	Cable connection using locking screws		34583	MSSD-C

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