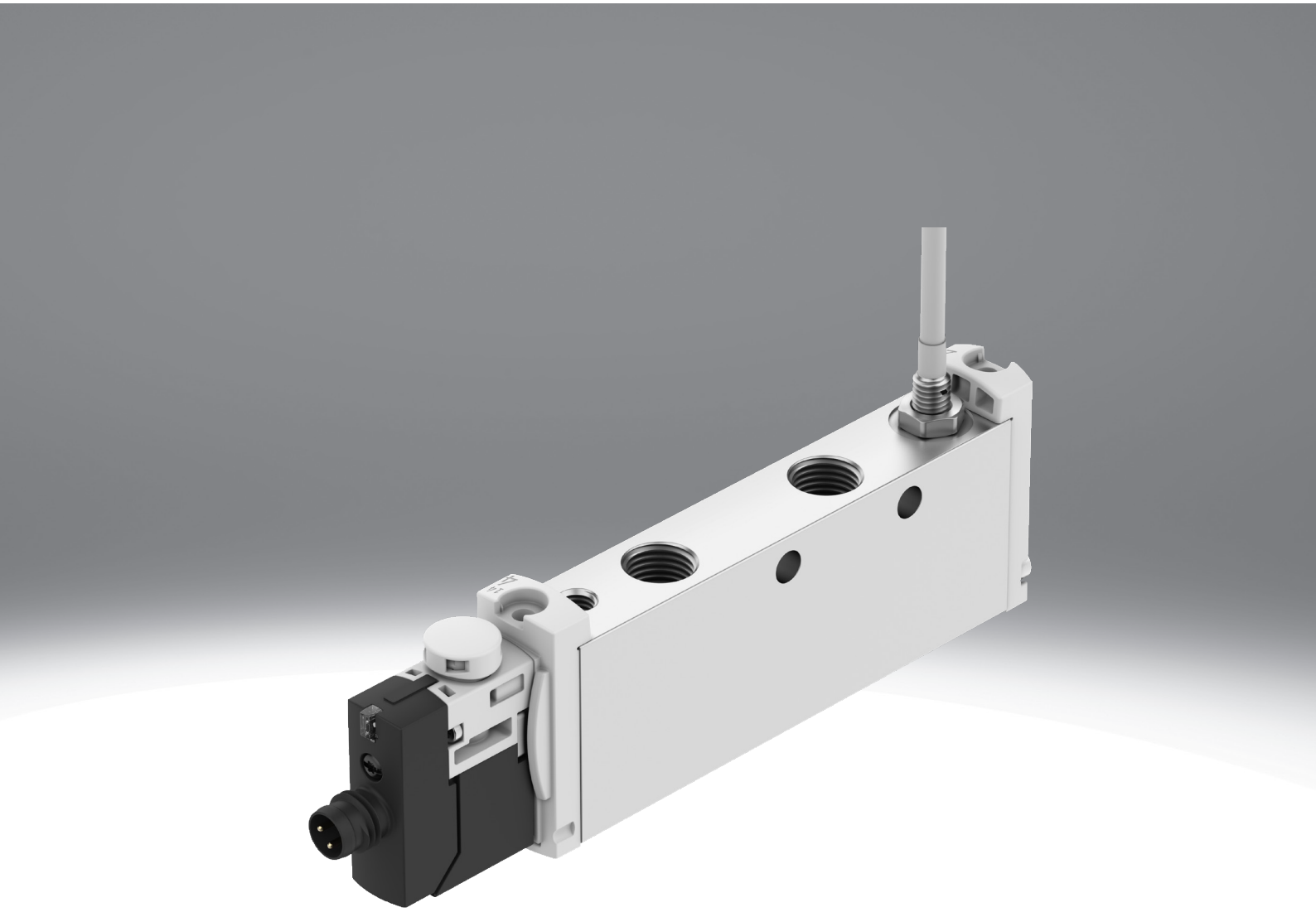
Control block VOFT

FESTO



Characteristics

At a glance

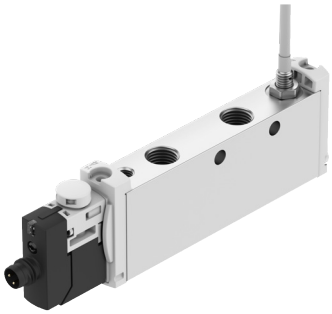
The VOFT valve is an electric, monostable 6/2- way control valve for inline installation. The valve has a diagnostic function by querying the switching position and is closed in the rest position. The piston is reset by a mechanical compression spring.
The valve is available in 4 variants. Single or dual-channel, each with concealed or push-button manual override.

Additional function

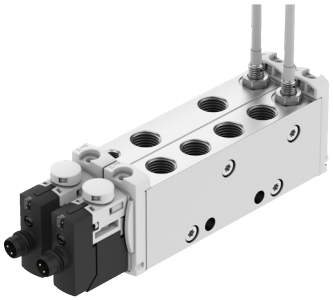
The valve is suitable for implementing the safety functions due to its function, its robust design and its reliable switching position monitoring:
- STO (Safe torque-off)
- PUS (Protection against unexpected start-up)

Valve function

[M62]	6/2-way valve, single solenoid

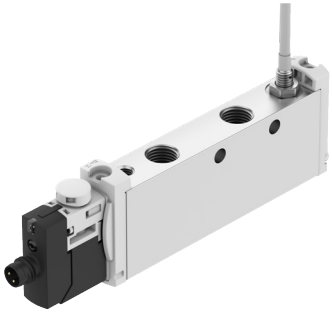


[T62]	6/2-way valve, single solenoid, two-channel

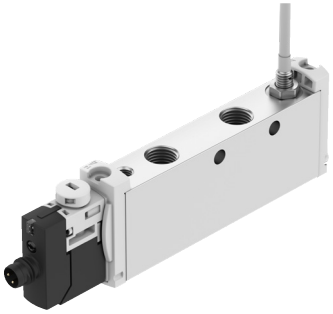


Manual override

[S]	Covered



[T2]	Non-detenting and detenting, only non-detenting via accessories



By pressing the manual override, the VOFT valve is moved from the home position to the switching position.

Type code

001	Series	
VOFT	Control block	

002	Directional control valve type	
L	In-line valve	

003	Design principle	
	Piston spool	

004	Sealing principle	
	Soft seal	

005	Size	
14	Size 14	

006	Valve function	
M62	6/2-way valve, single solenoid	
T62	6/2-way valve, single solenoid, two-channel	

007	Reset method for monostable/single solenoid valves	
M	Mechanical spring	

008	Pilot air	
Z	External	

009	Manual override	
S	Covered	
T2	Non-detenting and detenting, only non-detenting via accessories	

010	Pneumatic connection	
G18	G1/8	

011	Nominal operating voltage	
1	24 V DC	

012	Electrical connection	
M8	Plug M8, A-coded	

013	Circuitry	
R	Holding current reduction with integrated protective circuit	

014	Display	
L	LED	

015	Position sensing	
2APC	2 proximity switches, PNP with open cable end	
APC	Proximity sensor, PNP with open cable ends	

Datasheet

Safety characteristics	
Reverse polarity protection	For all electrical connections
Reverse polarity protection sensor	For all electrical connections
Determination method, well-tried component	Path c2) to EN ISO 13894-1:2023, chapter 6.1.11; Must be manufactured, verified and validated according to principles that demonstrate its suitability and reliability for safety-related applications in accordance with the relevant product and application standards. Method: Compliance with safety principles and tests, for details see CA-0759
Protection against direct and indirect contact	PELV
Degree of protection	IP65

General technical data				
Manual override	Non-detenting		Concealed	
Valve function	6/2-way valve, monostable, two-channel	6/2-way valve, single solenoid	6/2-way valve, monostable, two-channel	6/2-way valve, single solenoid
Construction width	29 mm	14.5 mm	29 mm	14.5 mm
Type of actuation	Electrical			
Design	Piston gate valve			
Type of reset	Mechanical spring			
Exhaust-air function	Cannot be throttled			
Sealing principle	Soft			
Mounting position	Any			
Conforms to standard	EN 60947-5-2			
Type of piloting	Piloted			
Pilot air supply	External			
Flow direction	Non-reversible			
Measuring principle	Inductive			
lap	Underlap			
Note on forced dynamization	Current information on this topic can be found in Technical Report V			
Switching position indicator	LED			
Switching status display sensor	LED			
Signal status display	Yellow LED, valve control			
Switching position sensing	Normal position with sensor			
Duty cycle	100%			
Type of mounting	Via through-hole for M4 screw			
Switching element function	N/C contact			
Nominal flow rate standardised according to ISO 8778	400 l/min	830 l/min	400 l/min	830 l/min
Standard nominal flow rate (standardised to DIN 1343)	360 l/min	770 l/min	360 l/min	770 l/min
Product weight	280 g	140 g	280 g	140 g
b value	0.45	0.42	0.45	0.42
C value	1.5 l/sbar	3 l/sbar	1.5 l/sbar	3 l/sbar

Datasheet

Operating and environmental conditions	
Pneumatic connection, port 1	G1/8
Pneumatic connection, port 2	G1/8
Pneumatic connection, port 3	G1/8
Pneumatic connection, port 4	G1/8
Pneumatic connection, port 5	G1/8
Pneumatic connection 6	G1/8
Pilot air port 14	M5
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Pilot medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Note on operating and pilot medium	Lubricated operation not possible
Vibration resistance	Transport application test with severity level 2 to FN 942017-4 and EN 60068-2-6
Shock resistance	Shock test with severity level 2 to FN 942017-5 and EN 60068-2-27
CE mark (see declaration of conformity) [1]	To EU EMC Directive In accordance with EU RoHS Directive
UKCA marking (see declaration of conformity)[2]	To UK instructions for EMC To UK RoHS instructions
Corrosion resistance class CRC [3]	2 - Moderate corrosion stress
Nominal altitude of use	1,000 m in accordance with VDE 0580
Cleanroom suitability, measured according to ISO 14644-14	Class 5 according to ISO 14644-1
Sound pressure level	64 dB(A)
Storage temperature	-10 ... 60°C
Ambient temperature	-5 ... 50°C
Media temperature	-5 ... 50°C

1) For information about the area of use, see the EC declaration of conformity at: www.festo.com/catalogue/... -> Support/Downloads.
If the devices are subject to usage restrictions in residential, commercial or industrial environments as well as small businesses, further measures for reducing the emitted interference may be necessary.
2) For information about the area of use, see the EC declaration of conformity at: www.festo.com/catalogue/... -> Support/Downloads.
If the devices are subject to usage restrictions in residential, commercial or industrial environments as well as small businesses, further measures for reducing the emitted interference may be necessary.
3) More information at www.festo.com/x/topic/kbk

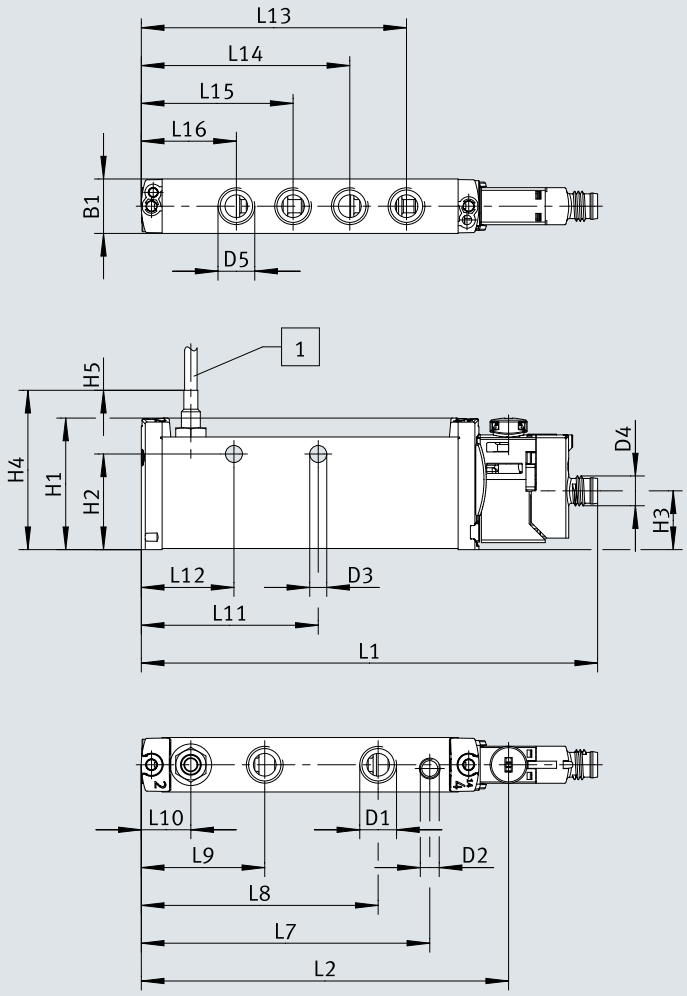
Electrical data	
Operational voltage range DC	24 V
Nominal operating voltage DC	24 V
Operating voltage range, DC sensor	10 ... 30 V
Max. positive test pulse with 0 signal	800 µs
Max. negative test pulse with 1 signal	400 µs
Permissible voltage fluctuations	-10%
Characteristic coil data	24 V DC: Low-current phase 0.4 W, high-current phase 1.0 W
Short-circuit strength sensor	Yes
Idle current sensor	10 mA
Max. output current sensor	200 mA
Max. switching frequency sensor	5,000 Hz
Residual ripple sensor	±10%
Voltage drop sensor	2 V
Sensor connection	Cable, 3-pin, 2.5 m
Valve - sensor switching time off	70 ms
Valve - sensor switching time on	11 ms
Electrical connection	2x plugs, 3-pin, M8x1 A-encoded to EN 61076-2-104, Plug
Switching time on	14 ms
Switching time off	65 ms

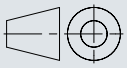
Datasheet

Materials	
Material seals	Fluoro rubber, HNBR, NBR
Material housing	Wrought aluminium alloy
Material cable sheath	PVC
Material screws	Steel, chemically nickel-plated
Note on materials	RoHS compliant
LABS (PWIS) conformity	VDMA24364 zone III

Dimensions

Dimensions – Control block, single-channel Download CAD data www.festo.com





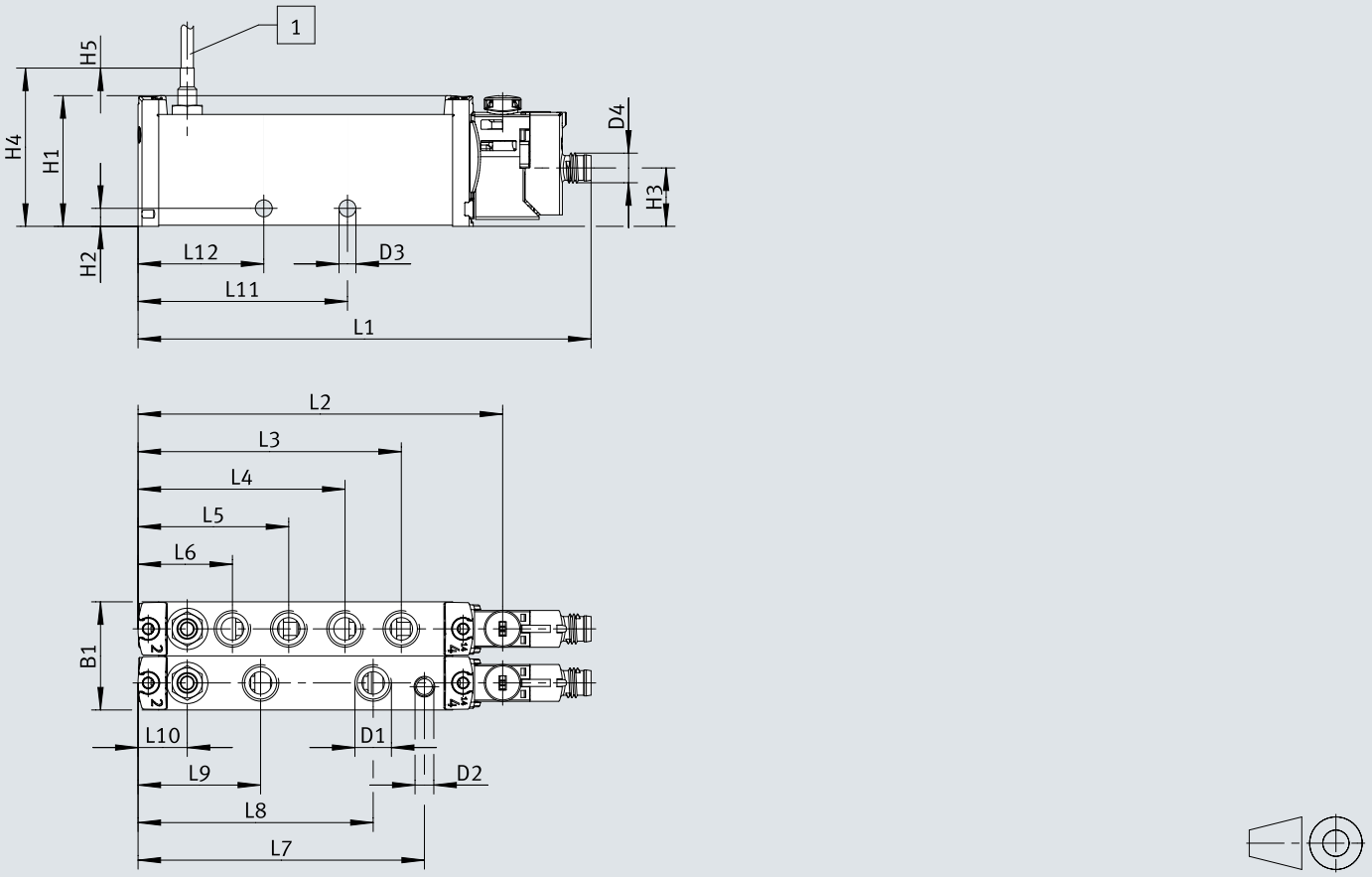
[1] Cable length

	B1	D1	D2	D3 Ø	D4	D5	H1	H2	H3	H4	H5
VOFT-L14-M62-MZT2-G18-1M8RL-APC	14,4	G1/8	M5	4,5	M8	G1/8	34,8	25,3	15,6	15,6	2500
VOFT-L14-M62-MZS-G18-1M8RL-APC											

	L1	L2	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16
VOFT-L14-M62-MZT2-G18-1M8RL-APC	120,7	97,2	76,3	62,6	32,6	13,1	46,8	24,5	70,1	55,1	40,1	25,1
VOFT-L14-M62-MZS-G18-1M8RL-APC												

Dimensions

Dimensions – Control block, 2-channel Download CAD data www.festo.com



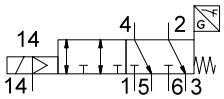
[1] Cable length

	B1	D1	D2	D3 Ø	D4	H1	H2	H3	H4	H5
VOFT-L14-T62-MZT2-G18-1M8RL-2APC VOFT-L14-T62-MZS -G18-1M8RL-2APC	28,8	G1/8	M5	4,5	M8	34,8	4,8	15,6	15,6	2500

	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12
VOFT-L14-T62-MZT2-G18-1M8RL-2APC VOFT-L14-T62-MZS -G18-1M8RL-2APC	120,7	97,2	70,1	55,1	40,1	25,1	76,3	62,6	32,6	13,1	55,8	33,5

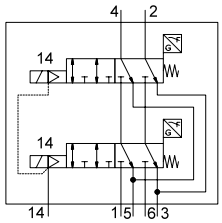
Ordering data

Control block, single-channel



Valve function	Manual override	Part no.	Type
6/2-way valve, single solenoid	Non-detenting	**8219319**	**VOFT-L14-M62-MZT2-G18-1M8RL-APC**
	Concealed	**8219320**	**VOFT-L14-M62-MZS-G18-1M8RL-APC**

Control block, 2-channel



Valve function	Manual override	Part no.	Type
6/2-way valve, monostable, two-channel	Non-detenting	**8219317**	**VOFT-L14-T62-MZT2-G18-1M8RL-2APC**
	Concealed	**8219318**	**VOFT-L14-T62-MZS-G18-1M8RL-2APC**

Accessories

Silencers for safety-related applications

Pneumatic connection	Material shock absorber insert	Operating pressure [1]	Ambient temperature	Part no.	Type
G1/8	Packaging unit	0 ... 8 bar	-10 ... 60 °C	**197583**	**UO-1/8**

1) Depending on the required safety category, the use of open silencers is mandatory for safety-related applications.
The maximum permissible working pressure of the silencers used must not be exceeded.

Silencers for standard applications

Pneumatic connection	Material shock absorber insert	Sound pressure level	Part no.	Type
G1/8	Packaging unit	59 dB(A)	**161419**	**UC-1/8**