

## Pilot valve VOFX

**FESTO**



## Characteristics

### At a glance

Pilot valves VOFX are 3/2-way directly actuated valves designed for the requirements of process automation. They are ideally suited for the insert of the VZXF and VZXA angle seat valves with single-acting actuator.

- A mechanical spring (single solenoid valves) ensures safe switching to the initial position in the event of a power failure
- Detenting manual override
- Exhaust air that can be throttled
- Compact design
- Any mounting position possible
- Can be used wherever valve terminals are not economically or technically viable
- Easy to mount as the pilot valves can be screwed directly onto the actuators thanks to the G1/8 thread

### EU certification

[EX2]	II 3GD	[EX4]	II 2GD
<ul style="list-style-type: none"> <li>• ATEX category for gas II 3G</li> <li>• Type of ignition protection gas IIC T5/T4 X</li> <li>• ATEX category for dust II 3D</li> <li>• Type of ignition protection dust IIIC T95°C /105 °C X</li> <li>• Explosion-proof ambient temperature rating <math>-20^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}</math></li> </ul>		<ul style="list-style-type: none"> <li>• ATEX category for gas II 2G</li> <li>• Type of ignition protection gas IIC T6 X</li> <li>• ATEX category for dust II 2D</li> <li>• Type of ignition protection dust IIIC T80 °C X</li> <li>• Explosion-proof ambient temperature range <math>-20^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}</math></li> </ul>	

## Type code

001	Series	
<b>VOFX</b>	Pilot valve	

002	Directional control valve type	
<b>L</b>	In-line valve	

003	Design principle	
<b>T</b>	Poppet valve	

004	Valve function	
<b>M32C</b>	3/2-way valve, normally closed	

005	Reset method for monostable/single solenoid valves	
<b>M</b>	Mechanical spring	

006	Manual override	
<b>Y</b>	Detenting	

007	Pneumatic connection	
<b>G18</b>	G1/8	

008	Valve pilot control interface	
<b>SG18</b>	Interface with thread G1/8	

009	Nominal operating voltage	
<b>1</b>	24 V DC	
<b>3A</b>	230 V AC/50-60 Hz	

010	Electrical connection	
<b>A1</b>	Plug pattern type A, to EN 175301-803	
<b>B2</b>	Connection pattern type B, industry standard	
<b>C3</b>	Cable, 3 m	

011	EU certification	
	None	
<b>EX2</b>	II 3GD	
<b>EX4</b>	II 2GD	

012	Type of ignition protection	
	None	
<b>M</b>	Encapsulation	
<b>N</b>	Non-sparking	

## Datasheet

## General technical data

Electrical connection	Cable, 3 m	Plug pattern type A, to EN 175301-803	Connection pattern type B, industry standard
Construction width	22 mm		
Nominal size	1.3 mm		
Valve function	3/2-way, closed, monostable		
Type of actuation	Electric		
Design	Directly actuated poppet valve		
Exhaust-air function	With flow control option		
Type of reset	Mechanical spring		
Sealing principle	Soft		
Mounting position	optional		
Manual override	Detenting		
Type of piloting	Direct		
Pilot air supply	Internal		
Flow direction	Non-reversible		
Pneumatic connection, port 1	G1/8		
Pneumatic connection, port 2	G1/8		
Pneumatic connection, port 3	M5		
Switching time off	–		46 ms
Switching time on	–		31 ms
Duty cycle	100%		
Characteristic coil data	24 V DC: 2.6 W	230 V AC: 50 Hz, pick-up power 6.2 VA, holding power 3.7 VA, 230 V AC: 60 Hz, pick-up power 4.9 VA, holding power 2.9 VA, 24 V DC: 2.1 W	24 V DC: 3.0 W
Permissible voltage fluctuations	+/- 10%		
Product weight	418 g	160 g	

## Operating and environmental conditions

Operating pressure	-0.9 ... 8 bar		
Ambient temperature	-10 ... 50°C		
Media temperature	-10 ... 50°C		
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]		
Degree of protection	IP65		
Standard nominal flow rate (standardised to DIN 1343)	50 l/min		
Corrosion resistance class CRC	2 - Moderate corrosion stress		

## ATEX

ATEX category gas	II 2G	II 3G
Explosion ignition protection type for gas	Ex mb IIC T6 Gb	Ex nA IIC T5/T4 X Gc
ATEX category dust	II 2D	II 3D
Explosion ignition protection type for dust	Ex mb tb IIIC T80°C Db	Ex tc IIIC T95°C/T105°C X Dc
Explosion ambient temperature	-20°C ≤ Ta ≤ +50°C	-20°C ≤ Ta ≤ +60°C

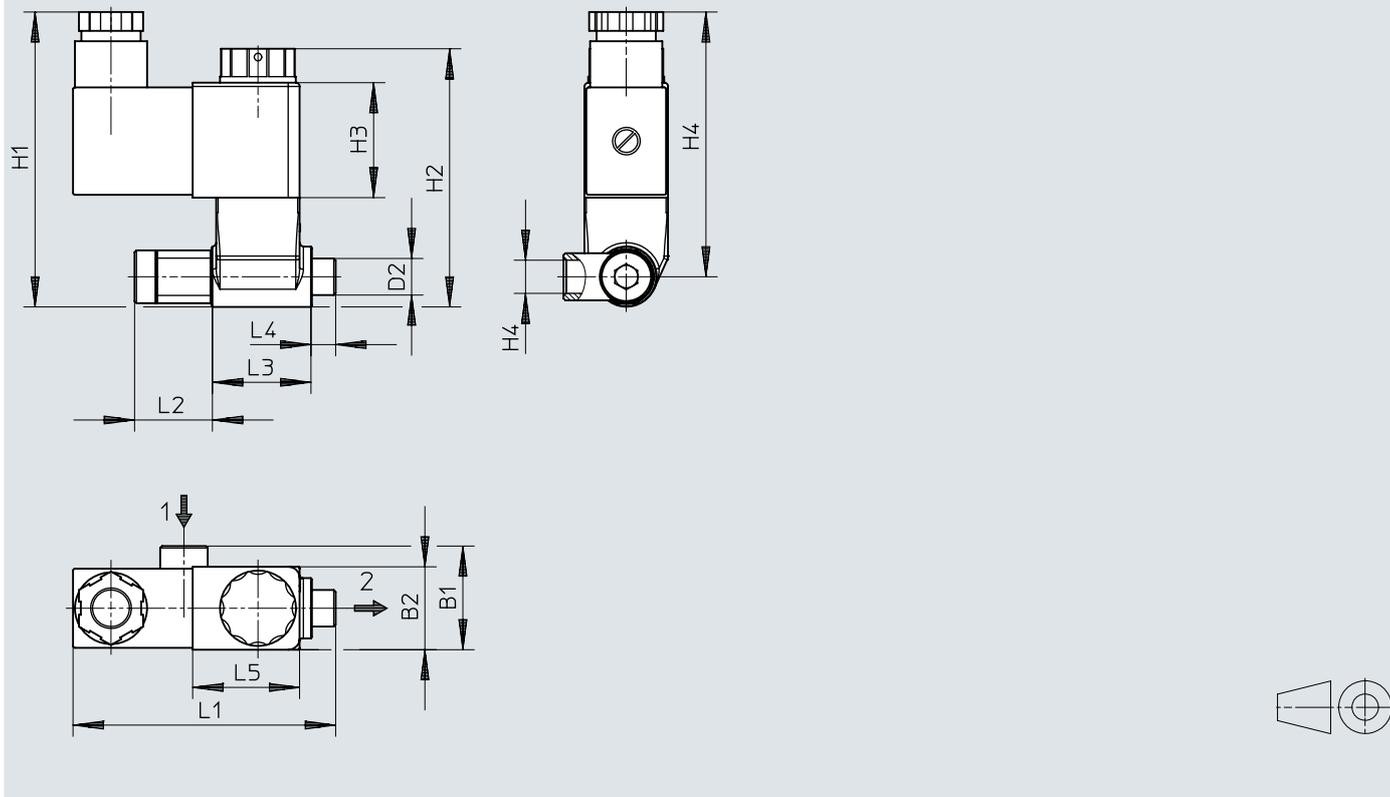
## Materials

Material seals	NBR
Material housing	PA
LABS (PWIS) conformity	VDMA24364 zone III
Note on materials	RoHS-compliant

## Dimensions

### Dimensions – Angle seat valves

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



	B1	B2	D1	D2	H1	H2	H3	H4	L1	L2	L3	L4	L5
VOFX-...-1B2	27,5	22	G1/8	G1/8	~78,3	68,5	30,5	~70,3	69,2	20,5	26	6,5	28,2
VOFX-...-3AA1	27,5	30	G1/8	G1/8	~77,5	68,5	29,5	~69,5	86,5	20,5	26	6,5	35,5
VOFX-...-1A1-EX2-N	27,5	30	G1/8	G1/8	~77,5	68,5	29,5	~69,5	86,5	20,5	26	6,5	35,5
VOFX-...-1-EX4-M	27,5	29,7	G1/8	G1/8	~78,3	68,5	31,3	~70,3	67,8	20,5	26	6,5	35,6

## Ordering data

Pilot valve				
	Operating voltage	Product weight	Part no.	Type
	230V AC	160 g	<b>8178210</b>	<b>VOFX-LT-M32C-MY-G18-SG18-3AA1</b>
	24V DC		<b>8178211</b>	<b>VOFX-LT-M32C-MY-G18-SG18-1A1-EX2-N</b>
			<b>8119587</b>	<b>VOFX-LT-M32C-MY-G18-SG18-1B2</b>
		418 g	<b>8178212</b>	<b>VOFX-LT-M32C-MY-G18-SG18-1C3-EX4-M</b>

## Accessories

Illuminating seal MF						
	Description	Product weight	Max. tightening torque	Operational voltage range DC	Part no.	Type
	Illuminating seal for F solenoid coils, Degree of protection to EN 60529 IP65 (when mounted)	1.6 g	0.6 Nm	12 ... 24 V	<b>19143</b>	<b>MF-LD-12-24DC</b>