

Valve series VOFD

FESTO



Solenoid valves VOFD

Key features

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General information

- The valves in the VOFD series are special 3/2-way valves for the area of process automation for use in chemical and petrochemical plants, where they are frequently used as pilot valves for butterfly valves and drives. Their sturdy design and high resistance to corrosion make these valves suitable for outdoor use under harsh ambient conditions.
- The NAMUR flange pattern makes the solenoid valves especially suitable for quarter-turn actuators. The integrated spring chamber venting protects quarter-turn actuators with spring return (single-acting cylinders and drives) against contaminated ambient air and weather influences such as rain.
- With German Technical Control Board (TÜV) approval up to AK7/SIL-4

Function, design

- 3/2-way directly actuated poppet valves

Safety

- Can be used in emergency shutdown (ESD) applications
- Suitable for use in safety-related systems up to and including SIL4 to IEC 61508

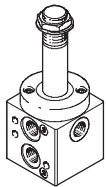
Sturdy

- The surface of the valve housing is treated with hard Ematal. This treatment involves converting the aluminium surface into a very hard aluminium oxide layer with titanium oxide intercalations. This makes the valves very 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

Economical

- One valve, two connection options
- Port pattern to NAMUR for direct mounting of a drive as well as G and NPT threaded connections
- Manual override can be ordered optionally
- Manual override can be retrofitted and removed again – no additional valve version required

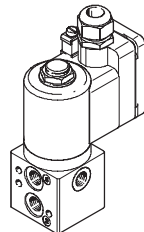
VOFD – Basic valves



- 3/2-way valves
- G $\frac{1}{4}$, NPT $\frac{1}{4}$ connections
- NAMUR port pattern, NAMUR port pattern with P duct

→ Page 7

VOFD – Solenoid valves



- Combination of VOFD basic valve and VACC-S18 coil
- 3/2-way valves
- Ignition protection types Ex emb II

→ Page 13

Accessories for VOFD valves

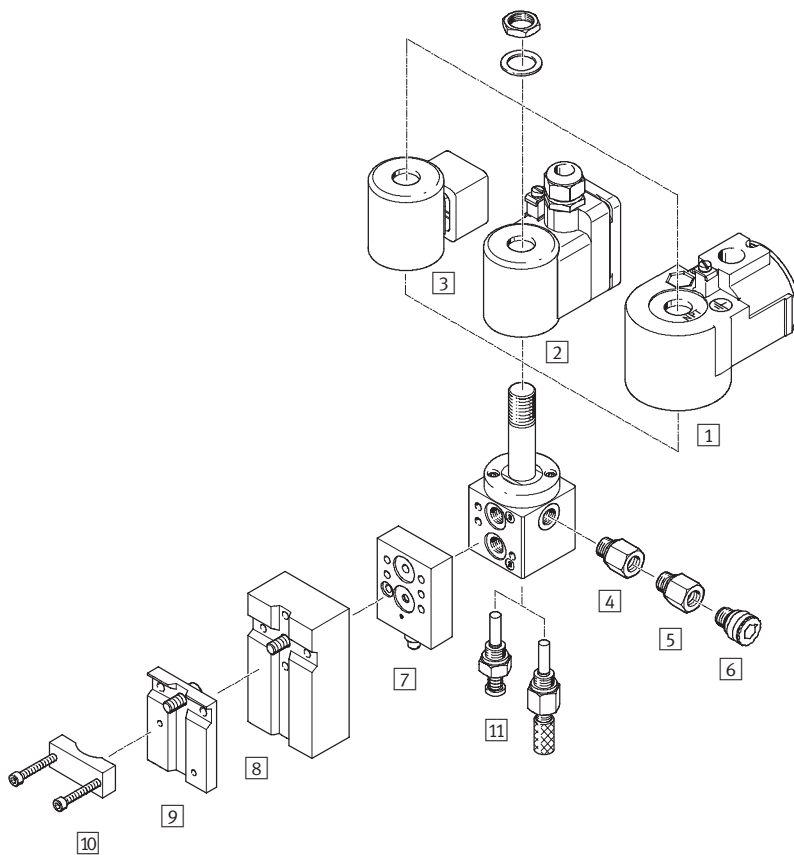


- Flow control plates
- Exhaust protection
- Manual override

→ Page 17

Solenoid valves VOFD

Overview of peripherals



Mounting attachments and accessories		
	Brief description	→ Page/Internet
1	Solenoid coil VACC-S18	Standard solenoid
2	Solenoid coil VACC-S18-me	Ex-emb solenoid
3	Solenoid coil VACC-S18-d	Ex-d solenoid
4	Adapter NPFV-AF-G14-N14-MF	Adapter from G $\frac{1}{4}$ to NPT $\frac{1}{4}$, with filter
5	Adapter NPFV-AF-G14-G14-MF	Adapter from G $\frac{1}{4}$ to G $\frac{1}{4}$, with filter
6	Exhaust protection VABD-D3-SN-G14	Exhaust protection to IP65. The spring chamber of drive 8 solenoid valve is protected against the ingress of aggressive ambient air and water by the one-way flow control system
7	Flow control plate VABF-S7-F1B5P1-F	Exhaust air flow control plate for NAMUR interface for installation between the solenoid valve and single-acting drives
8	Connection plate kit VABF-S7-S-G14	Mounting plate for attaching the valve to a NAMUR rib
9	Mounting plate VAME-S7-P	Mounting plate for attaching the valve to a NAMUR rib
10	Mounting bracket VAME-S7-Y	Alternative option (instead of screw) for attaching the valve to a NAMUR rib with the help of a mounting bracket
11	Hand lever VAOH-S8	Manual override

Solenoid valves VOFD

Type codes

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		VOFD	-	LT	-	M32	-	MN	-	G14	-	1	-	A1	-
Type															
VOFD	Solenoid valves														
Directional control valve type, design principle															
LT	In-line valve, poppet valve														
Valve function															
M32	Universal valves														
Reset method for single solenoid valves															
MN	Mechanical spring without pilot air														
Pneumatic connection															
G14	G $\frac{1}{4}$														
N14	NPT $\frac{1}{4}$														
FG14	NAMUR G $\frac{1}{4}$														
FGP14	NAMUR G $\frac{1}{4}$ with P connection														
Nominal operating voltage															
	Without solenoid coil/not relevant														
1	24 V DC														
1U	24 V DC and AC														
2A	110 V AC/50-60 Hz														
2U	110 V DC and AC														
3A	230 V AC/50-60 Hz														
3U	230 V DC and AC														
1A	Extension by one position														
Electrical connection															
A1	Port pattern type A, to EN 175 301														
K4	Cable connector M20														
F10	Armature tube for solenoid coil 18														

Solenoid valves VOFD

Type codes

		F	-	EX3	-	D
Protective circuit						
	None/standard					
F	Fuse					
Approval EU, US						
	Approval defined upon introduction (standard)					
Ex3	II 2G					
Ex4	II 2GD					
Explosion protection type						
	None					
D	Pressure-resistant encapsulation					
ME	Moulded encapsulation, enhanced safety emb					

Solenoid coils VACC-S18

Type codes

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		VACC	-	S18	-	A1	-	1	-	F	-		-	
Type														
VACC	Solenoid coil													
Solenoid coil type														
S18	Shaft 18 mm													
Electrical connection														
A1	Port pattern type A, to EN 175 301													
K4	Cable connector M20													
K5	Cable connector NPT													
Nominal operating voltage														
1	24 V DC													
1A	24 V AC													
1U	24 V DC and AC													
2A	110 V AC/50-60 Hz													
2U	110 V DC and AC													
3A	230 V AC/50-60 Hz													
3U	230 V DC and AC													
Protective circuit														
	None													
F	Fuse													
Approval EU, US														
Ex3	II2G													
Ex4	II2GD													
Explosion protection type														
D	Pressure-resistant encapsulation													
ME	Moulded encapsulation, enhanced safety													
A	Intrinsically safe													

Basic valves VOFD

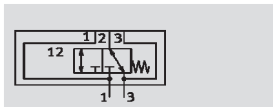
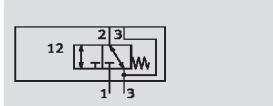
Technical data – 3/2-way valves, G $\frac{1}{4}$ and NAMUR

Function

3/2-way valve

Flow rate

450 l/min



General technical data			G $\frac{1}{4}$ basic valve and NAMUR	G $\frac{1}{4}$ basic valve and NAMUR, P connection
Valve function			3/2-way, closed, single solenoid	
Pneumatic connection	1		G $\frac{1}{4}$	NAMUR port pattern
	2		G $\frac{1}{4}$ and NAMUR port pattern	
	3		G $\frac{1}{4}$	
	4		G $\frac{1}{4}$ and NAMUR port pattern	
Design			Directly actuated poppet valve	
Width	[mm]		51	
Mounting position			Any	
Duty cycle			100%	
Sealing principle			Soft	
Manual override			None	
Reset method			Mechanical spring	
Actuation type			Electric	
Suitable for vacuum			Yes	
Type of control			Direct	
Flow rate for piston valve pressurisation	[m 3 /h]		0.36	
Flow rate for piston valve exhausting	[m 3 /h]		0.36	
Direction of flow			Non-reversible	
Product weight	[g]		560	
Response time off	[ms]		9	
Response time on	[ms]		45	
Nominal size	[mm]		5	
Standard nominal flow rate	[l/min]		450	

Basic valves VOFD

Technical data – 3/2-way valves, G $\frac{1}{4}$ and NAMUR

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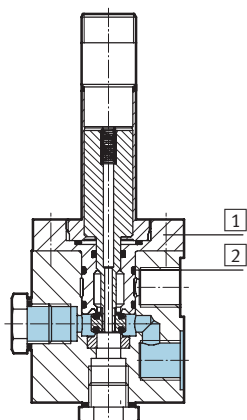
Operating and environmental conditions		
	G $\frac{1}{4}$ basic valve and NAMUR	G $\frac{1}{4}$ basic valve and NAMUR, P connection
Operating medium	Compressed air	
Protection class	IP65	
Operating pressure range [bar]	0 ... 10	
Temperature of medium [°C]	–10 ... 60	
Ambient temperature [°C]	–10 ... 60	
Extended ambient temperature, Low Demand mode [°C]	–25 ... 60	
Safety integrity level [SIL]	Up to SIL 4 Low Demand mode	
	Up to SIL 4 High Demand mode	
Corrosion resistance class CRC ¹⁾	4	

1) Corrosion resistance class 4 according to Festo standard 940 070

Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Materials

Sectional view



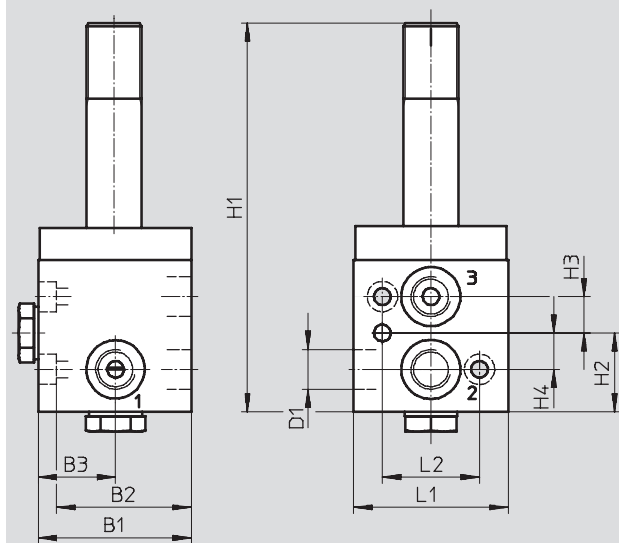
Solenoid valves	G $\frac{1}{4}$ basic valve and NAMUR	G $\frac{1}{4}$ basic valve and NAMUR, P connection
1 Housing	Hard Ematal-anodised aluminium	
2 Seals	Nitrile rubber	
– Note on materials	Contains PWIS (paint-wetting impairment substances), RoHS-compliant	

Basic valves VOFD

Technical data – 3/2-way valves, G $\frac{1}{4}$ and NAMUR

Dimensions – G $\frac{1}{4}$ basic valve and NAMUR

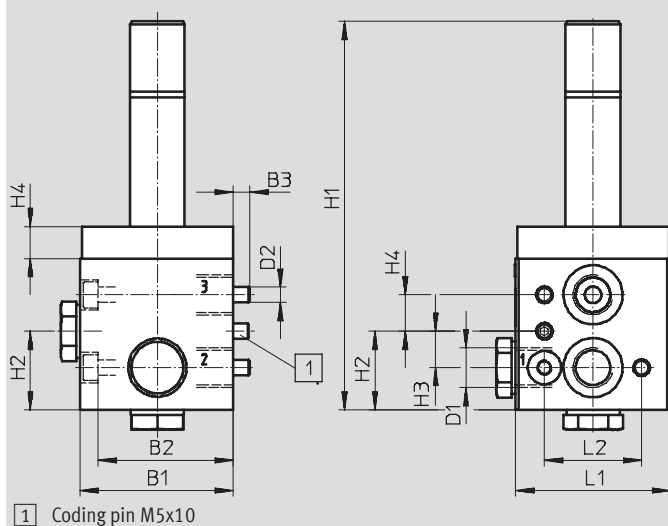
Download CAD Data → www.festo.com/us/cad



Type	B1	B2	B3	D1	H1	H2	H3	H4	L1	L2
VOFD-LT-M32-MN-FG14-F10	50.5	25.5	25.5	G $\frac{1}{4}$, NAMUR	128.2	26	12	12	51	32

Dimensions – G $\frac{1}{4}$ basic valve and NAMUR, P connection

Download CAD Data → www.festo.com/us/cad



Type	B1	B2	B3	D1	D2	H1	H2	H3	H4	L1	L2
VOFD-LT-M32-MN-FGP14-F10	50.5	44.5	5.5	G $\frac{1}{4}$, NAMUR	M5	128.2	26	10.5	12	51	32

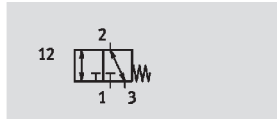
Basic valves VOFD

Technical data – 3/2-way valves, G $\frac{1}{4}$ and NPT $\frac{1}{4}$ -18

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Function
3/2-way valve

Flow rate
450 l/min



General technical data			
		G $\frac{1}{4}$ basic valve	NPT $\frac{1}{4}$ -18
Valve function		3/2-way, closed, single solenoid	
Pneumatic connection	1	G $\frac{1}{4}$	NPT $\frac{1}{4}$ -18
	2	G $\frac{1}{4}$	NPT $\frac{1}{4}$ -18
	3	G $\frac{1}{4}$	NPT $\frac{1}{4}$ -18
Design		Directly actuated poppet valve	
Width	[mm]	51	
Mounting position		Any	
Duty cycle		100%	
Sealing principle		Soft	
Manual override		None	
Reset method		Mechanical spring	
Actuation type		Electric	
Suitable for vacuum		Yes	
Type of control		Direct	
Flow rate for piston valve pressurisation	[m ³ /h]	0.36	
Flow rate for piston valve exhausting	[m ³ /h]	0.36	
Direction of flow		Reversible	
Product weight	[g]	560	
Response time off	[ms]	9	
Response time on	[ms]	45	
Nominal size	[mm]	5	
Standard nominal flow rate	[l/min]	450	

Operating and environmental conditions		
	G1/4 basic valve	NPT1/4-18
Operating medium	Compressed air	
Protection class	IP65	
Operating pressure range [bar]	0 ... 10	
Temperature of medium [°C]	−10 ... 60	
Ambient temperature [°C]	−10 ... 60	
Extended ambient temperature, Low Demand mode [°C]	−25 ... 60	
Safety integrity level [SIL]	Up to SIL 4 Low Demand mode	
	Up to SIL 4 High Demand mode	
Corrosion resistance class CRC ¹⁾	4	

1) Corrosion resistance class 4 according to Festo standard 940 070

Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

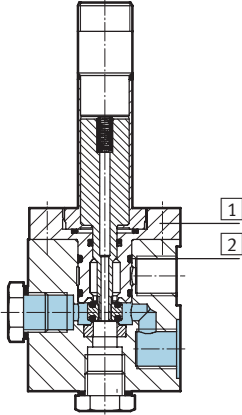
Basic valves VOFD

Technical data – 3/2-way valves, G $\frac{1}{4}$ and NPT $\frac{1}{4}$ -18

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Materials

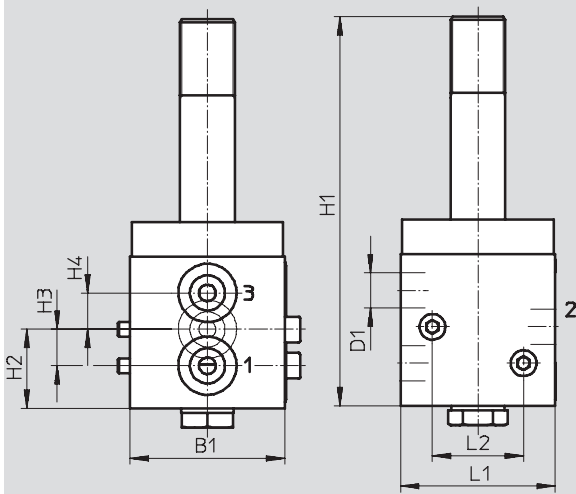
Sectional view



Solenoid valves	G $\frac{1}{4}$ basic valve	NPT $\frac{1}{4}$ -18
1 Housing	Hard Ematal-anodised aluminium	
2 Seals	Nitrile rubber	
– Note on materials	Contains PWIS (paint-wetting impairment substances), RoHS-compliant	

Dimensions

Download CAD Data → www.festo.com/us/cad

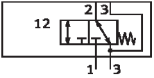
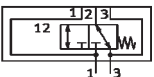
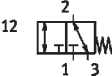
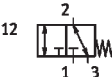


Type	B1	D1	H1	H2	H3	H4	L1	L2
VOFD-LT-M32-MN-G14-F10	51	G $\frac{1}{4}$	128.2	26	12	12	51	30
VOFD-LT-M32-MN-N14-F10	51	NPT $\frac{1}{4}$	128.2	26	12	12	51	30

Basic valves VOFD

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Technical data – 3/2-way valves, G $\frac{1}{4}$ and NPT $\frac{1}{4}$ -18

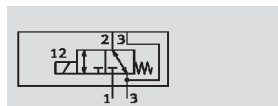
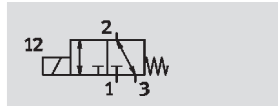
Ordering data				
Circuit symbol	Function	Pneumatic connection	Part No.	Type
Directly actuated poppet valve				
	3/2-way, closed, single solenoid	G $\frac{1}{4}$ and NAMUR	562 883	VOFD-LT-M32-MN-FG14-F10
	3/2-way, closed, single solenoid	NAMUR with P connection	570 786	VOFD-LT-M32-MN-FGP14-F10
	3/2-way, closed, single solenoid	G $\frac{1}{4}$	562 881	VOFD-LT-M32-MN-G14-F10
	3/2-way, closed, single solenoid	NPT $\frac{1}{4}$ -18	562 882	VOFD-LT-M32-MN-N14-F10

Solenoid valves VOFD

Technical data – 3/2-way valves, G $\frac{1}{4}$

Function

3/2-way valve



Flow rate

450 l/min

Voltage

24 V DC/AC



General technical data						
			G1/4 solenoid valve	NPT1/4 solenoid valve	G1/4 solenoid valve and NAMUR	
Valve function			3/2-way, closed, single solenoid			
Pneumatic connection	1		G1/4	NPT1/4-18	G1/4	
	2		G1/4	NPT1/4-18	G1/4 and NAMUR port pattern	
	3		G1/4	NPT1/4-18	G1/4	
	4		–	–	G1/4 and NAMUR port pattern	
Design			Directly actuated poppet valve			
Width		[mm]	51			
Mounting position			Any			
Duty cycle			100%			
Sealing principle			Soft			
Manual override			None			
Reset method			Mechanical spring			
Actuation type			Electric			
Electrical connection			Terminal box, cable entry thread M20x1.5			
Permissible voltage fluctuations			–15%/+10%			
Coil characteristics	DC voltage 24 V	[W]	3.5			
	AC voltage 24 V	[VA]	3.5			
Suitable for vacuum			Yes			
Type of control			Direct			
Flow rate for piston valve pressurisation		[m³/h]	0.36			
Flow rate for piston valve exhausting		[m³/h]	0.36			
Direction of flow			Non-reversible			G1/4 + NPT: reversible, G1/4 + Namur: non-reversible
Product weight		[g]	1,140			
Response time off		[ms]	9			
Response time on		[ms]	45			
Nominal size		[mm]	5			
Standard nominal flow rate		[l/min]	450			

Solenoid valves VOFD

Technical data – 3/2-way valves, G $\frac{1}{4}$

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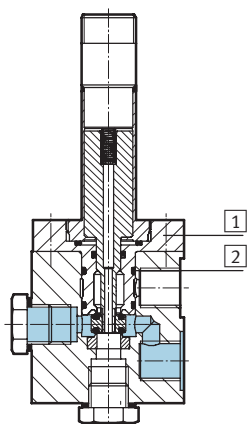
Operating and environmental conditions			
	G¼ solenoid valve	NPT¼ solenoid valve	G¼ solenoid valve and NAMUR
Operating medium	Compressed air		
Protection class	IP65		
Operating pressure range	[bar]	0 ... 10	
Temperature of medium	[°C]	-10 ... 60	
Ambient temperature	[°C]	-10 ... 60	
Extended ambient temperature, Low Demand mode	[°C]	-25 ... 60	
ATEX category for gas	II 2G		
ATEX category for dust	II 2D		
Explosion ignition protection type for gas	Ex emb II T6, T5		
Explosion ignition protection type for dust	Ex tD A21 IP65 T80°C, T95°C		
Explosion-proof temperature rating	T80°C	-20°C <= Ta <= +50°C	
	T95°C	-20°C <= Ta <= +60°C	
Certificate issuing authority	PTB 08 ATEX 2033 X		
CE mark (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)		
Safety integrity level	[SIL]	Up to SIL 4 Low Demand mode	
		Up to SIL 4 High Demand mode	
Corrosion resistance class CRC ¹⁾	4		

1) Corrosion resistance class 4 according to Festo standard 940 070

Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Materials

Sectional view



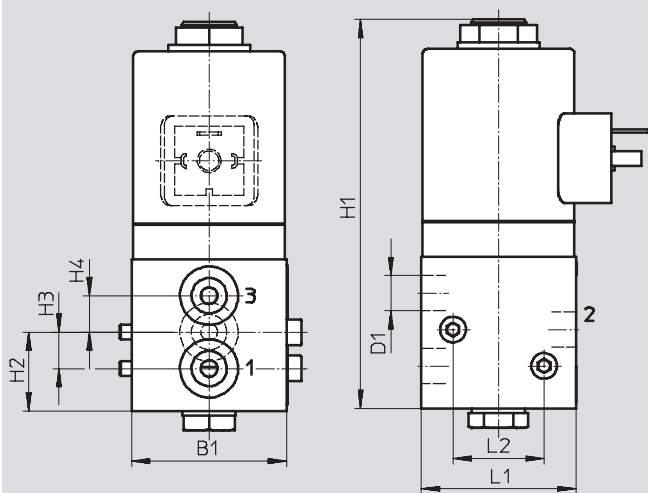
Solenoid valves	G $\frac{1}{4}$ solenoid valve	NPT $\frac{1}{4}$ solenoid valve	G $\frac{1}{4}$ solenoid valve and NAMUR
1 Housing	Hard Ematal-anodised aluminium		
2 Seals	Nitrile rubber		
– Note on materials	Contains PWIS (paint-wetting impairment substances), RoHS-compliant		

Solenoid valves VOFD

Technical data – 3/2-way valves, G $\frac{1}{4}$

Dimensions

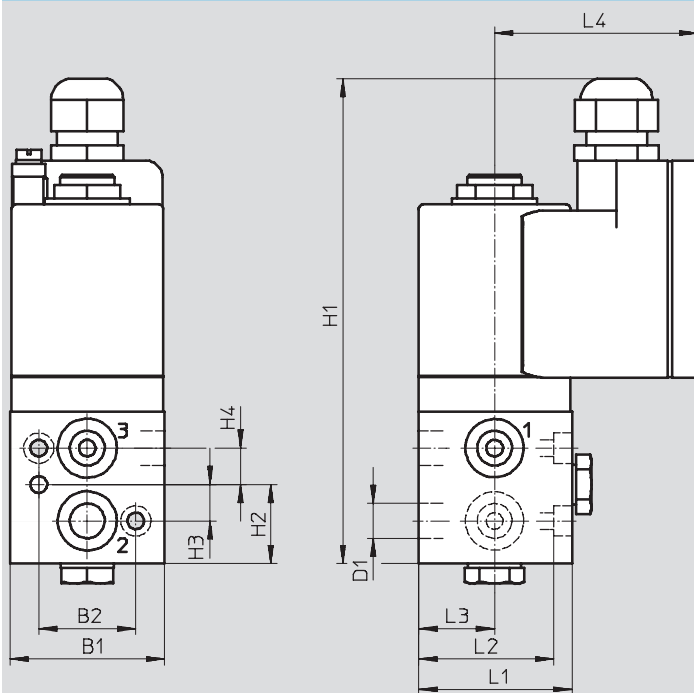
Download CAD Data → www.festo.com/us/cad



Type	B1	B2	D1	H1	H2	H3	H4	H5	H6	L1	L2
VOFD-LT-M32-MN-G14-1UK4-Ex4me	51	30	G $\frac{1}{4}$	159.8	38	26	14	14	12	51	67
VOFD-LT-M32-MN-N14-1UK4-Ex4me	51	30	NPT $\frac{1}{4}$	159.8	38	26	14	14	12	51	67

Dimensions

Download CAD Data → www.festo.com/us/cad

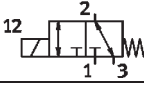
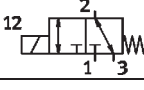
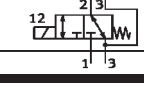


Type	B1	B2	D1	H1	H2	H3	H4	L1	L2	L3	L4
VOFD-LT-M32-MN-FG14-1UK4-Ex4me	51	32	NAMUR G $\frac{1}{4}$	159.8	26	12	12	50.5	44.5	25	67

Solenoid valves VOFD

Technical data – 3/2-way valves, G $\frac{1}{4}$

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Ordering data					
Circuit symbol	Function	Pneumatic connection	Ex ignition protection type	Part No.	Type
Directly actuated poppet valve					
	3/2-way, closed, single solenoid	G $\frac{1}{4}$	Ex emb II T6, T5	562 884	VOFD-LT-M32-MN-G14-1UK4-Ex4me
	3/2-way, closed, single solenoid	NPT $\frac{1}{4}$	Ex emb II T6, T5	562 885	VOFD-LT-M32-MN-N14-1UK4-Ex4me
	3/2-way, closed, single solenoid	G $\frac{1}{4}$ and NAMUR	Ex emb II T6, T5	562 886	VOFD-LT-M32-MN-FG14-1UK4-Ex4me

Solenoid coils VACC-S18

Technical data

Voltage

24 V DC/AC

Temperature range

-20 ... +60 °C



General technical data				
Type	VACC-S18-K4-1U-Ex4me [24 V DC/AC]	VACC-S18-K4-2U-Ex4me [110 V DC/AC]	VACC-S18-K4-3U-Ex4me [230 V DC/AC]	VACC-S18-K4-1UF-Ex4me [24 V DC/AC]
Actuation type	Electric			
Mounting position	Any			
Duty cycle [%]	100			
Electrical connection	Terminal box, cable entry thread M20x1.5			
Internal fuse protection	–			Fuse
Manual override	None			
Switching position display	No			
Product weight [g]	580			
Note on materials	Contains PWIS (paint-wetting impairment substances), RoHS-compliant			
Information on solenoid coil materials	Polyamide, steel			
Coil characteristics	DC voltage 24 V	[W]	3.5	
	AC voltage 24 V	[VA]	3	

Operating and environmental conditions		
Protection class	IP65	
Permissible voltage fluctuations	-15 %/+10 %	
Ambient temperature [°C]	-20 ... 60	
ATEX category for gas	II 2G	
ATEX category for dust	II 2D	
Explosion ignition protection type for gas	Ex emb II T6, T5	
Explosion ignition protection type for dust	Ex tD A21 IP65 T80°C, T95°C	
Explosion-proof temperature rating	T80°C	-20°C ≤ Ta ≤ +50°C
	T95°C	-20°C ≤ Ta ≤ +60°C
Certificate issuing authority	PTB 08 ATEX 2033 X	
CE mark (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)	
Corrosion resistance class CRC ¹⁾	4	

1) Corrosion resistance class 4 according to Festo standard 940 070

Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Materials	
Solenoid coils	
Housing	Steel, polyamide
Note on materials	RoHS-compliant, contains PWIS (paint-wetting impairment substances)

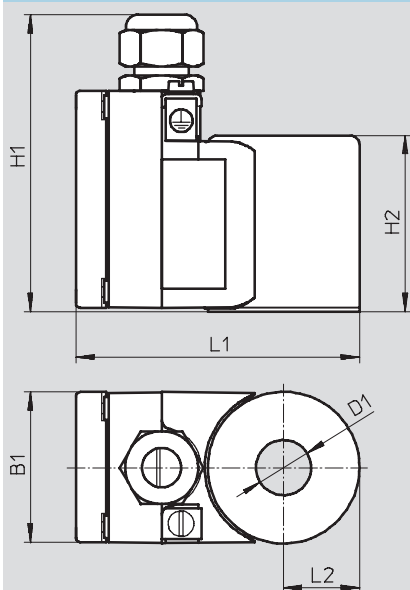
Solenoid coils VACC-S18

Technical data

FESTO

Dimensions

Download CAD Data → www.festo.com/us/cad



Type	B1	D1 Ø	H1	H2	L1	L2
VACC-S18-K4-1U-Ex4me	50	18.2	100	58	95	25
VACC-S18-K4-2U-Ex4me	50	18.2	100	58	95	25
VACC-S18-K4-3U-Ex4me	50	18.2	100	58	95	25
VACC-S18-K4-1UF-Ex4me	50	18.2	100	58	95	25

Solenoid coils VACC-S18

Technical data

Voltage

24 V DC/AC

Temperature range

-20 ... +60 °C



General technical data			
Type	VACC-S18-K5-1U-Ex3D [24 V DC/AC]	VACC-S18-K5-2U-Ex3D [110 V DC/AC]	VACC-S18-K5-3U-Ex3D [230 V DC/AC]
Actuation type	Electric		
Mounting position	Any		
Duty cycle [%]	100		
Electrical connection	Terminal box, cable entry thread NPT 1/2		
Manual override	None		
Switching position display	No		
Product weight [g]	1,700		
Note on materials	Contains PWIS (paint-wetting impairment substances), RoHS-compliant		
Information on solenoid coil materials	Wrought aluminium alloy, grey cast iron		
Coil characteristics	DC voltage 24 V [W]	3.5	
	AC voltage 24 V [VA]	3	

Operating and environmental conditions		
Protection class	IP65	
Permissible voltage fluctuations	-15 %/+10 %	
Ambient temperature [°C]	-20 ... 60	
Operating pressure range [bar]	0 ... 10	
ATEX category for gas	II 2G	
ATEX category for dust	II 2D	
Explosion ignition protection type for gas	Ex d IIC T6, T5, T4	
Explosion ignition protection type for dust	Ex tD A21 IP65 T80°C, T95°C	
Explosion-proof temperature rating	T4	-20°C ≤ Ta ≤ +90°C
	T5	-20°C ≤ Ta ≤ +5°C
	T6	-20°C ≤ Ta ≤ +40°C
Certificate issuing authority	PTB 08 ATEX 1086	
CE mark (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)	
Corrosion resistance class CRC ¹⁾	4	

1) Corrosion resistance class 4 according to Festo standard 940 070

Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Materials	
Solenoid coils	
Housing	Grey cast iron, wrought aluminium alloy
Note on materials	RoHS-compliant, contains PWIS (paint-wetting impairment substances)

Solenoid coils VACC-S18

Technical data

FESTO

Voltage

24 V DC/AC

Temperature range

-20 ... +60 °C



General technical data			
Type	VACC-S18-K4-1U-Ex3D [24 V DC/AC]	VACC-S18-K4-2U-Ex3D [110 V DC/AC]	VACC-S18-K4-3U-Ex3D [230 V DC/AC]
Actuation type	Electric		
Mounting position	Any		
Duty cycle [%]	100		
Electrical connection	Terminal box, cable entry thread M20x1.5		
Manual override	None		
Switching position display	No		
Product weight [g]	1,700		
Note on materials	Contains PWIS (paint-wetting impairment substances), RoHS-compliant		
Information on solenoid coil materials	Wrought aluminium alloy, grey cast iron		
Coil characteristics	DC voltage 24 V [W]	2.5	
	AC voltage 24 V [VA]	3.5	

Operating and environmental conditions		
Protection class		IP65
Permissible voltage fluctuations		−15 %/+10 %
Ambient temperature	[°C]	−20 ... 60
Operating pressure range	[bar]	0 ... 10
ATEX category for gas		II 2G
ATEX category for dust		II 2D
Explosion ignition protection type for gas		Ex d IIC T6, T5, T4
Explosion ignition protection type for dust		Ex tD A21 IP65 T80°C, T95°C
Explosion-proof temperature rating	T4	-20°C ≤ Ta ≤ +90°C
	T5	-20°C ≤ Ta ≤ +5°C
	T6	-20°C ≤ Ta ≤ +40°C
Certificate issuing authority		PTB 08 ATEX 1086
CE mark (see declaration of conformity)		To EU Explosion Protection Directive (ATEX)
Corrosion resistance class CRC ¹⁾		4

1) Corrosion resistance class 4 according to Festo standard 940 070

Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Materials	
Solenoid coils	
Housing	Grey cast iron, wrought aluminium alloy
Note on materials	RoHS-compliant, contains PWIS (paint-wetting impairment substances)

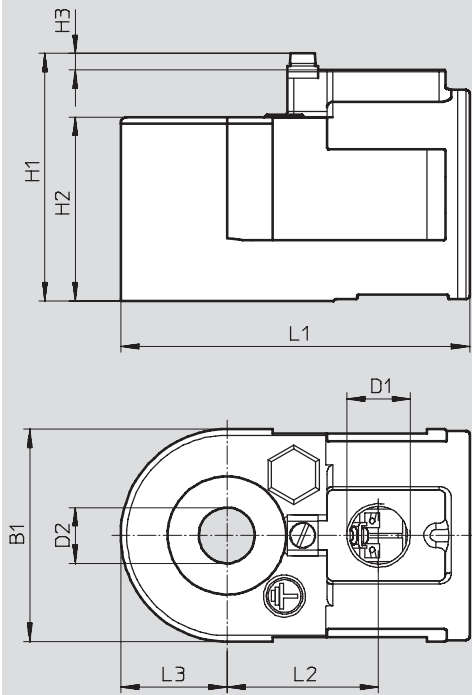
Solenoid coils VACC-S18

Technical data

FESTO

Dimensions

Download CAD Data → www.festo.com/us/cad



Type	B1	D1	D2 Ø	H1	H2	H3	L1	L2	L3
VACC-S18-K4-1U-Ex3D	70	M20x1.5	18.2	82	60.5	6	115	50	35
VACC-S18-K4-2U-Ex3D	70	M20x1.5	18.2	82	60.5	6	115	50	35
VACC-S18-K4-3U-Ex3D	70	M20x1.5	18.2	82	60.5	6	115	50	35

Type	B1	D1	D2 Ø	H1	H2	H3	L1	L2	L3
VACC-S18-K5-1U-Ex3D	70	NPT 1/2	18.2	82	60.5	6	115	50	35
VACC-S18-K5-2U-Ex3D	70	NPT 1/2	18.2	82	60.5	6	115	50	35
VACC-S18-K5-3U-Ex3D	70	NPT 1/2	18.2	82	60.5	6	115	50	35

Solenoid coils VACC-S18

Technical data

FESTO

Voltage

24 V DC/AC

Temperature range

-20 ... +60 °C



General technical data				
Type	VACC-S18-A1-1 [24 V DC]	VACC-S18-A1-1A [24 V AC]	VACC-S18-A1-2A [110 V AC]	VACC-S18-A1-3A [230 V AC]
Actuation type	Electric			
Mounting position	Any			
Duty cycle [%]	100			
Electrical connection	Plug design to EN 175301-803, type A			
Manual override	None			
Switching position display	No			
Product weight [g]	530			580
Note on materials	Contains PWIS (paint-wetting impairment substances), RoHS-compliant			
Information on solenoid coil materials	Polyamide, steel			
Coil characteristics	DC voltage 24 V [W]	3.5		
	AC voltage 24 V [VA]	5		

Operating and environmental conditions	
Protection class	IP65
Permissible voltage fluctuations	-15 %/+10 %
Ambient temperature [°C]	-20 ... 60
Operating pressure range [bar]	0 ... 10
Corrosion resistance class CRC ¹⁾	4

1) Corrosion resistance class 4 according to Festo standard 940 070

Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

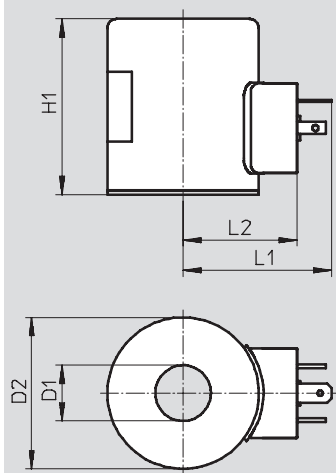
Materials	
Solenoid coils	
Housing	Steel, polyamide
Note on materials	RoHS-compliant, contains PWIS (paint-wetting impairment substances)

Solenoid coils VACC-S18

Technical data

Dimensions

Download CAD Data → www.festo.com/us/cad



Type	D1 Ø	D2 Ø	H1	L1	L2
VACC-S18-A1-1	18.2	50	58	50	38
VACC-S18-A1-1A	18.2	50	58	50	38
VACC-S18-A1-2A	18.2	50	58	50	38
VACC-S18-A1-3A	18.2	50	58	50	38

Ordering data

		Part No.	Type
Ex-me coil			
		562 897	VACC-S18-K4-1U-Ex4me
		562 898	VACC-S18-K4-2U-Ex4me
		562 899	VACC-S18-K4-3U-Ex4me
Ex-3D coil			
		562 900	VACC-S18-K5-1U-Ex3D
		562 901	VACC-S18-K5-2U-Ex3D
		562 902	VACC-S18-K5-3U-Ex3D
		562 903	VACC-S18-K4-1U-Ex3D
		562 904	VACC-S18-K4-2U-Ex3D
		562 905	VACC-S18-K4-3U-Ex3D
A1 coil			
		562 906	VACC-S18-A1-1
		562 907	VACC-S18-A1-1A
		562 908	VACC-S18-A1-2A
		562 909	VACC-S18-A1-3A

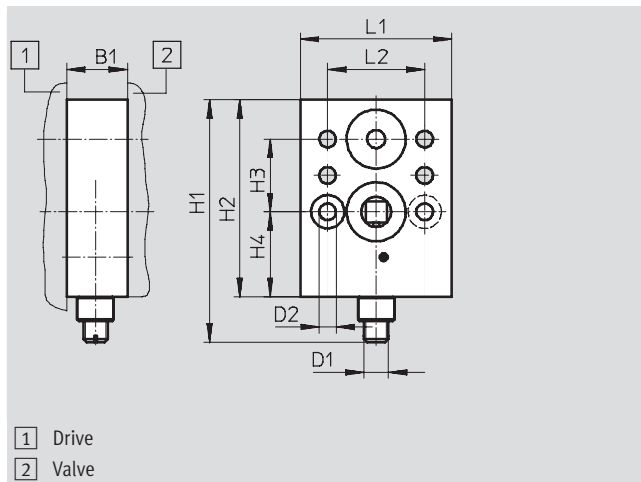
Solenoid valves

Accessories

FESTO

Flow control plate

Material: Manifold rail:
Wrought aluminium alloy
Contains PWIS (paint-wetting
impairment substances),
RoHS-compliant

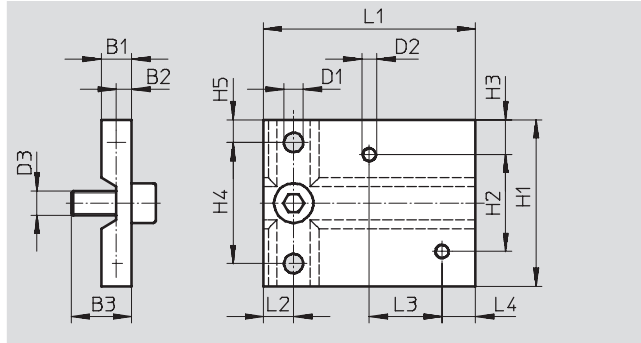


Dimensions and ordering data													Part No.	Type
Type [mm]	B1	D1	D2	H1	H2	H3	H4	L1	L2	L3	CRC ¹⁾			
	15	G ¹ / ₄	5.5	73	56	12	32	50	24	13	3		563 401	VABF-S7-F1B5P1-F

- 1) Corrosion resistance class 3 according to Festo standard 940 070
Components subject to high corrosion stress. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.

Mounting plate

Material: Wrought aluminium alloy
Contains PWIS (paint-wetting
impairment substances),
RoHS-compliant



Dimensions and ordering data																	Part No.	Type
Type [mm]	B1	B2	B3	D1	D2	D3	H1	H2	H3	H4	H5	L1	L2	L3	L4	CRC ¹⁾		
	10	5	20	6.4	M5	M8	55	32	11.5	40	7.5	70	10	24	11	3	563 399	VAME-S7-P

- 1) Corrosion resistance class 3 according to Festo standard 940 070
Components subject to high corrosion stress. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.

Solenoid valves

Accessories

FESTO

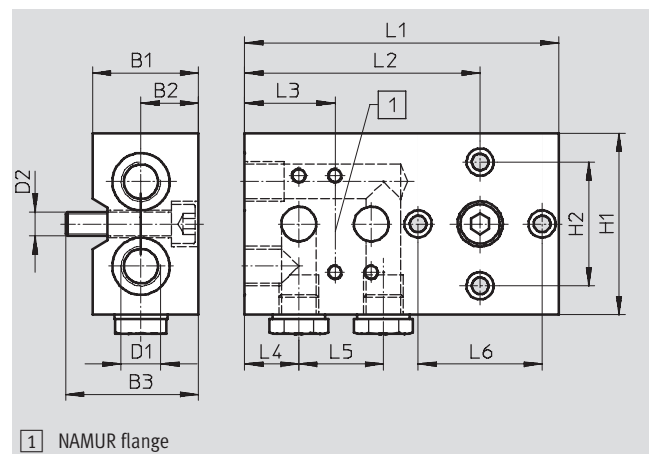
Connection plate kit

Material:

Wrought aluminium alloy

Contains PWIS (paint-wetting
impairment substances),

RoHS-compliant



Dimensions and ordering data																
Type [mm]	B1	B2	B3	D1	D2	H1	H2	L1	L2	L3	L4	L5	L6	CRC ¹⁾	Part No.	Type
	35	19	44	G $\frac{1}{4}$	M8	60	41	104	70	30	18	28	41	3	563 396	VABF-S7-S-G14

1) Corrosion resistance class 3 according to Festo standard 940 070

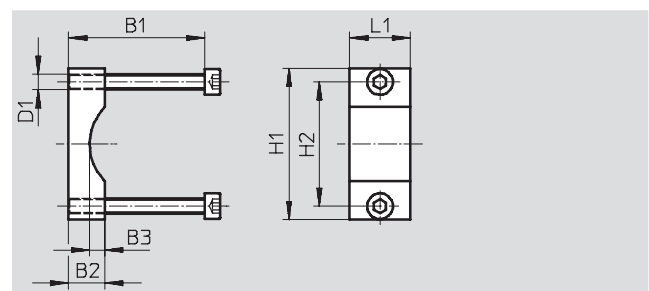
Components subject to high corrosion stress. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.

Mounting bracket

Material: Wrought aluminium alloy

Contains PWIS (paint-wetting
impairment substances),

RoHS-compliant



Dimensions and ordering data									
Type [mm]	B1	B2	B3	D1	H1	H2	L1	CRC ¹⁾	Part No. Type
	45/65	12	5	M5	50	41	20	3	563 403 VAME-S7-Y

1) Corrosion resistance class 3 according to Festo standard 940 070

Components subject to high corrosion stress. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.

Solenoid valves

Accessories

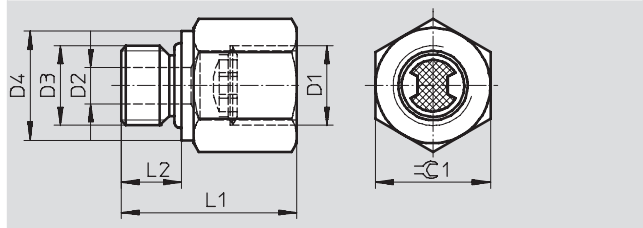
FESTO

Adapter with filter

Note on materials:

Contains PWIS (paint-wetting
impairment substances),

RoHS-compliant



Dimensions and ordering data									
Type [mm]	D1	D2	D3	D4	L1	L2	$\approx \varnothing 1$	CRC ¹⁾	Part No. Type
	NPT $\frac{1}{4}$	6	G $\frac{1}{4}$	18	29	10	19	1	563 397 NPFV-AF-G14-N14-MF
	G $\frac{1}{4}$	6	G $\frac{1}{4}$	18	29	10	19	1	563 398 NPFV-AF-G14-G14-MF

1) Corrosion resistance class 1 according to Festo standard 940 070

Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

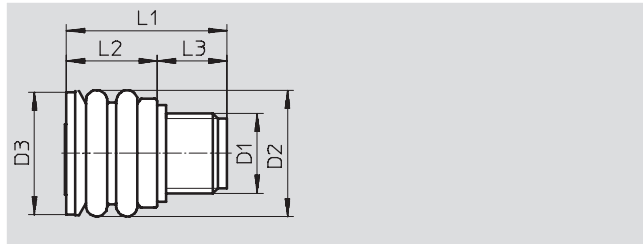
Exhaust protection

Material:

Ethylene propylene rubber

Contains PWIS (paint-wetting
impairment substances),

RoHS-compliant



Dimensions and ordering data							
Type [mm]	D1	D2	D3	L1	L2	L3	CRC ¹⁾
	G $\frac{1}{4}$	21	20.5	26.5	15	11.5	3

1) Corrosion resistance class 3 according to Festo standard 940 070

Components subject to high corrosion stress. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.

Solenoid valves

Accessories

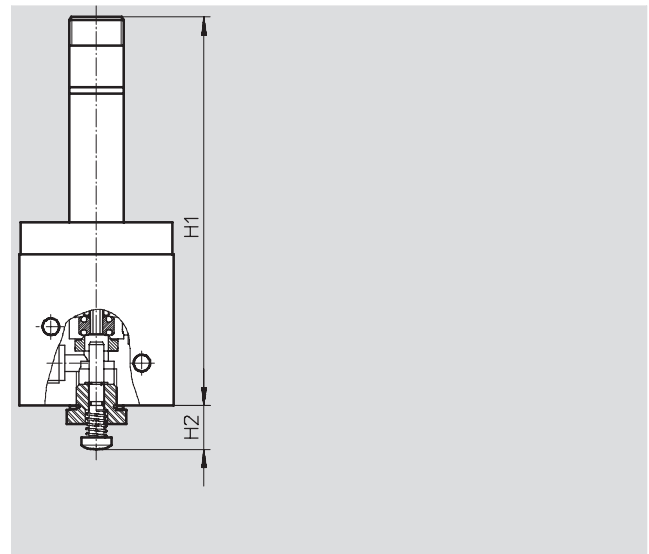
FESTO

Hand lever

Material:

Contains PWIS (paint-wetting
impairment substances),

RoHS-compliant



Dimensions and ordering data					
Type [mm]	H1	H2	CRC ¹⁾	Part No.	Type
	128	14	3	563 402	VAOH-S8

1) Corrosion resistance class 3 according to Festo standard 940 070

Components subject to high corrosion stress. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.

Ordering data			
		Part No.	Type
Cable		Technical data → Internet: kmc	
		30 931	KMC-1-24 DC-2,5-LED
		30 932	KMC-1-230 AC-2,5
		30 933	KMC-1-24 DC-5-LED
		30 934	KMC-1-230 AC-5
		30 935	KMC-1-24-10-LED
Plug socket with screw terminal technology			
		34 583	MSSD-C

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