

## Valve series VOFD

**FESTO**



## Key features

### General

- The valves from the series VOFD are special 3/2-way valves for process automation for use in chemical and petrochemical plants. Here 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.
- The NAMUR flange pattern makes the solenoid valves especially 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) approval up to SIL 3

### 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 SIL 3 to IEC 61508

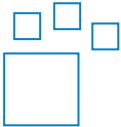
### Heavy-duty

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

### Economical

- One valve, two connection options
- Connection patterns to NAMUR for direct installation on the actuator 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

### Ordering data – Product options



Configurable product

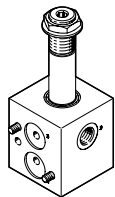
This product and all its product options can be ordered using the configurator.

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

Part no.	Type
2956784	VOFD-L35T
3212962	VOFD-L50T
2964753	VOFD-L100T

## Key features

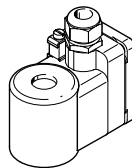
## VOFD – Basic valves



- 3/2-way valves
- Connections G1/4, 1/4 NPT, G1/2, 1/2 NPT
- NAMUR connection pattern, NAMUR connection pattern with P duct

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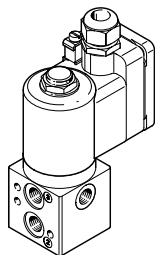
## VACC - Solenoid coils



- EX4ME coil
- EX4D coil
- A1 coil
- U2D coil
- EX4A coil

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## VOFD – Solenoid valves



- Combination of basic valve VOFD and coil VACC-S18 (in the case of basic valve VOFD-L12T... VACC-S13 coil)
- 3/2-way valves
- Type of ignition protection EX EMB II, EX tD

Configurable product

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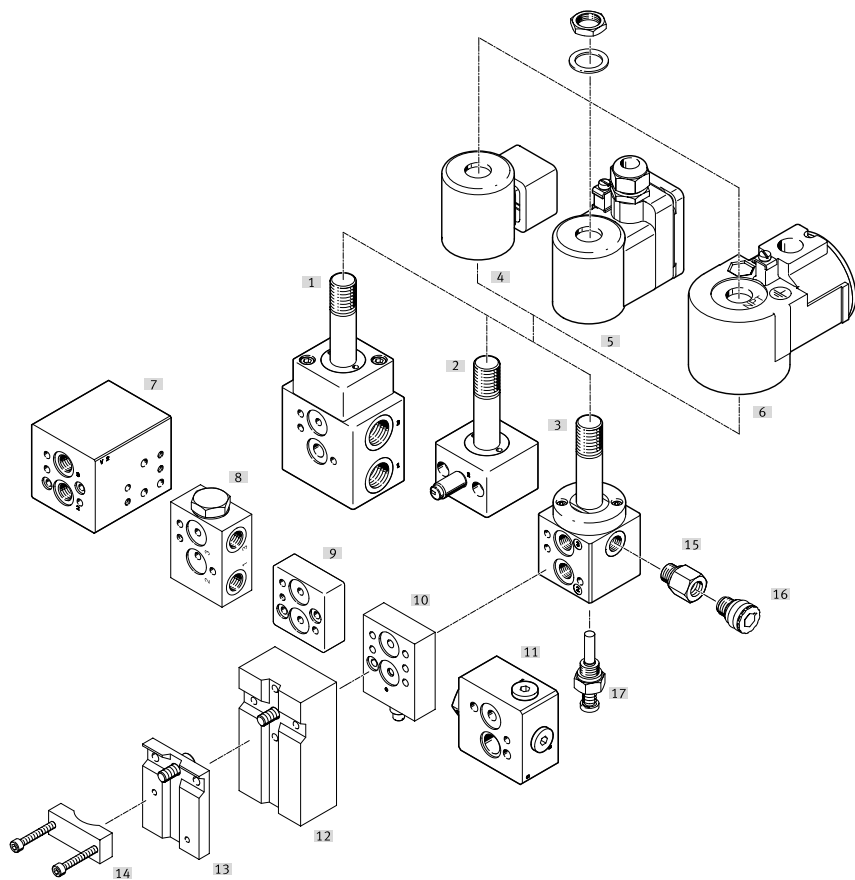
## VOFD – Accessories



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

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Peripherals overview

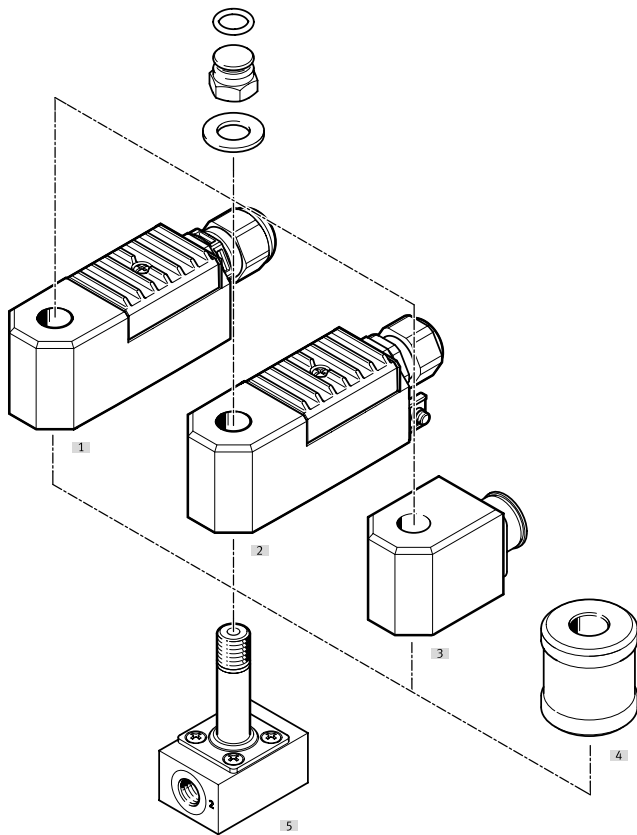


Mounting components and accessories

	Brief description	→ Page/Internet
[1]	Basic valve VOFD-L100T-... → modular product system – can be configured using the online configurator	4
[2]	Basic valve VOFD-L35T-... → modular product system – can be configured using the online configurator	4
[3]	Basic valve VOFD-L50T-... → modular product system – can be configured using the online configurator	4
[4]	Solenoid coil VACC-S18-...-A1-... A1 standard solenoid	27
[5]	Solenoid coil VACC-S18-...-ME Ex-ME solenoid	27
[6]	Solenoid coil VACC-S18-...-D Ex-D solenoid	27
[7]	Sub-base VABS-S7-RB-... Sub-base for mounting two solenoid valves for redundant circuitry	30
[8]	Sub-base VABS-S7-BE-... Sub-base as a pressurisation and exhaust block	30
[9]	Mounting plate VAME-S7-P-N-V14-A Mounting plate as a spacer plate for solenoid valves when combined with ATEX solenoid coils	36
[10]	Throttle plate VABF-S7-F1B5P1-F Exhaust air throttle plate for NAMUR interface for installation between the solenoid valve and single-acting actuators	35
[11]	Sub-base VABS-... Sub-base for NAMUR interface for installation between the solenoid valve and actuators. Interface solenoid valve: VDI/VDE 3847. Interface actuator: VDI/VDE 3845.	32
[12]	Connection set VABF-S7-S-G14 Mounting plate for attaching the valve to the NAMUR rib	36
[13]	Mounting plate VAME-S7-P Mounting plate for attaching the valve to the NAMUR rib	35

## Peripherals overview

Mounting components and accessories		Brief description	→ Page/Internet
[14]	Mounting bracket VAME-S7-Y	Alternative (instead of screw) for attaching the valve to the NAMUR rib using a mounting bracket	36
[15]	Manual override VAOH-S8	Manual override	38
[16]	Adapter NPFV-AF-...-MF	Adapter with filter	37
[17]	Exhaust protection VABD-D3-SN-G14	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	37



Accessories – Valve pilot control interface for solenoid coil 13 mm		Brief description	→ Page/Internet
[1]	Solenoid coil VACC-S13-...-4A	Ex-4A solenoid	27
[2]	Solenoid coil VACC-S13-...-ME	Ex-ME solenoid	27
[3]	Solenoid coil VACC-S13-...-A1-...	A1 standard solenoid	27
[4]	Manual override VAOH-MB-S7-S13	Manual override (MO)	38
[5]	Basic valve VOFD-L12T-...	3/2-way valve, connection G1/4, poppet valve, valve pilot control interface for solenoid coil 13 mm	7

## Type codes VOFD

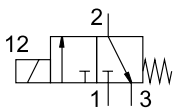
<b>001</b>	<b>Series</b>	
<b>VOFD</b>	Solenoid valve, series D	
<b>002</b>	<b>Directional control valve type</b>	
<b>L</b>	In-line valve	
<b>003</b>	<b>Nominal width</b>	
<b>12</b>	1.2 mm	
<b>35</b>	3.5 mm	
<b>50</b>	5 mm	
<b>100</b>	10 mm	
<b>004</b>	<b>Design principle</b>	
<b>T</b>	Poppet valve	
<b>005</b>	<b>Valve function</b>	
<b>M32</b>	3/2-way valve, normally closed or open	
<b>M32A</b>	3/2-way valve, normally closed, semi-automatic	
<b>006</b>	<b>Reset method for monostable/single solenoid valves</b>	
<b>M</b>	Mechanical spring	
<b>007</b>	<b>Pilot air</b>	
<b>N</b>	None	
<b>008</b>	<b>Manual override</b>	
	None	
<b>H</b>	Non-detenting	
<b>Y</b>	Detenting	
<b>009</b>	<b>Pneumatic connection</b>	
<b>G12</b>	G1/2	
<b>G14</b>	G1/4	
<b>N12</b>	1/2 NPT	
<b>N14</b>	1/4 NPT	
<b>FG12</b>	Flange G1/4, connections G1/2	
<b>FG14</b>	Flange G1/4, connections G1/4	
<b>FGP14</b>	Flange G1/4, connections G1/4 and other pneumatic connection	
<b>FNP14</b>	Flange 1/4 NPT, connections 1/4 NPT and another pneumatic connection	
<b>010</b>	<b>Supply connection version</b>	
	Standard	
<b>PF</b>	With particle filter	
<b>NPF</b>	With particle filter and connecting thread NPT	
<b>011</b>	<b>Exhaust</b>	
	No fitting	
<b>U6</b>	With exhaust protection	
<b>012</b>	<b>Pressure range [bar]</b>	
<b>8</b>	0 ... 8	
<b>10</b>	0 ... 10	
<b>12</b>	0 ... 12	
<b>013</b>	<b>Temperature range</b>	
	Standard	
<b>T6</b>	-50 ... +60°C	


<b>014</b>	<b>Corrosion protection</b>	
	Standard	
<b>R1</b>	Stainless steel	
<b>015</b>	<b>Valve pilot control interface</b>	
<b>F10</b>	Electric with armature tube for solenoid coil, 18 mm	
<b>F19</b>	Electric with armature tube for solenoid coil, 13 mm	
<b>F19A</b>	Electric with armature tube for solenoid coil 13 mm, intrinsically safe	
<b>016</b>	<b>Power consumption</b>	
	None	
<b>18</b>	1.8 W	
<b>25</b>	2.5 W	
<b>35</b>	3.5 W	
<b>70</b>	7 W	
<b>120</b>	12 W	
<b>017</b>	<b>Nominal operating voltage</b>	
	None	
<b>1A</b>	24 V AC/50-60 Hz	
<b>1U</b>	24 V DC and AC	
<b>2A</b>	110 V AC/50-60 Hz	
<b>2U</b>	110 V DC and AC	
<b>3A</b>	230 V AC/50-60 Hz	
<b>3U</b>	230 V DC and AC	
<b>7U</b>	48 V DC and AC	
<b>16U</b>	120 V DC and AC	
<b>1</b>	24 V DC	
<b>3</b>	230 V DC	
<b>7</b>	48 V DC	
<b>16</b>	120 V DC	
<b>27</b>	60 V DC	
<b>018</b>	<b>Electrical connection</b>	
	None	
<b>A1</b>	Connection pattern type A, to EN 175 301	
<b>K4</b>	Cable connector metric	
<b>K5</b>	Cable connector NPT	
<b>019</b>	<b>Circuitry</b>	
	None	
<b>F</b>	Fuse	
<b>020</b>	<b>EU certification</b>	
	None	
<b>EX4</b>	II 2GD	
<b>021</b>	<b>Certification</b>	
	None	
<b>U2</b>	cULus, hazardous environment, USA and Canada (NEC 500)	
<b>022</b>	<b>Type of ignition protection</b>	
	None	
<b>A</b>	Intrinsically safe	
<b>D</b>	Flameproof encapsulation	
<b>ME</b>	Encapsulation, enhanced security	

## Data sheet – Basic valve VOFD-L12T-...

## Function

3/2-way valve



-  - Flow rate  
up to 52 l/min



General technical data		VOFD- ... -F19	VOFD- ... -F19-A
Basic valve G1/4		VOFD- ... -F19	VOFD- ... -F19-A
Valve function		3/2-way, single solenoid, closed	
Pneumatic connection	1	G1/4	
	2	G1/4	
	3	G1/4	
Design		Directly actuated poppet valve	
Width	[mm]	50	
Mounting position		Any	
Sealing principle		Soft	
Manual override		None	
Reset method		Mechanical spring	
Actuation type		Electric	
Suitable for vacuum		Yes	
Type of control		Direct	
Flow rate Kv for pressurisation	[m <sup>3</sup> /h]	0.04	
Flow rate Kv for exhausting	[m <sup>3</sup> /h]	0.04	
b value		0.2	0.53
C value	[l/s bar]	0.44	0.21
Flow direction		Non-reversible	
Product weight	[g]	170	
Switching time off	[ms]	60	
Switching time on	[ms]	40	
Nominal width	[mm]	1.2	
Standard nominal flow rate	[l/min]	52	
Standard nominal flow rate 2→3	[l/min]	49	

Operating and environmental conditions	
Operating medium	Compressed air to ISO 8573-1:2010 [7:2:2]
Operating pressure range	[bar] 0 ... 8
Temperature of medium	[°C] -25 ... 60
Ambient temperature	[°C] -25 ... 60
Corrosion resistance class CRC <sup>1)</sup>	4

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

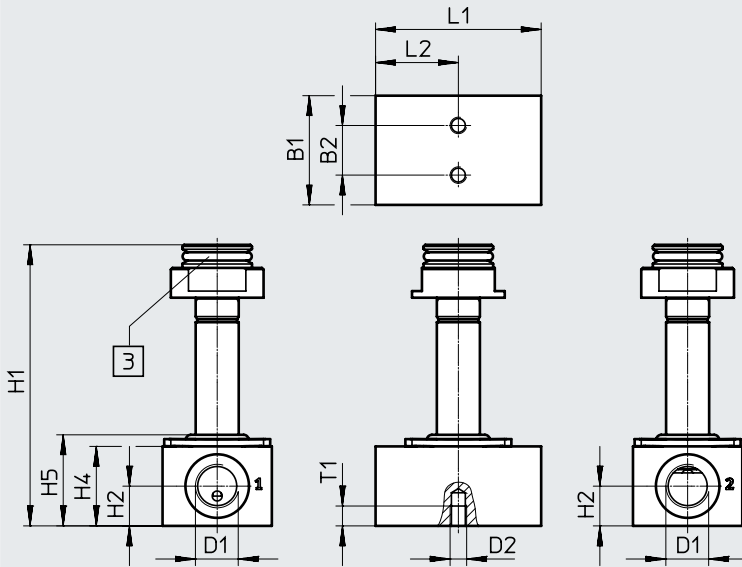
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests (→ also FN 940082), using appropriate media.

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

Data sheet – Basic valve VOFD-L12T...

Dimensions

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



[3] Pneumatic connection 3

Type	B1	B2	D1	D2 ∅	H1	H2	H4	H5	L1	L2	T1
VOFD-L12T-M32-MN-G14-F19	33	15	G1/4	M5	85	12	24	27.5	50	25	6
VOFD-L12T-M32-MN-G14-F19-A											


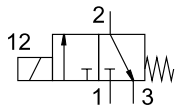
Ordering data					
Circuit symbol	Function	Pneumatic connection	Type of ignition protection	Part no.	Type
<b>Directly actuated poppet valve</b>					
	3/2-way closed, single solenoid	G1/4	None	3013904	VOFD-L12T-M32-MN-G14-8-F19
			Intrinsically safe	3014556	VOFD-L12T-M32-MN-G14-8-F19A



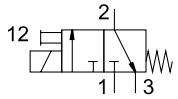
## Data sheet – Modular system NW 3.5 mm

Function

3/2-way valve

 Flow rate  
up to 406 l/min


-MN-



-MNH-

-MNY-



## General technical data


Basic valve G1/4		VOFD-L35T...-MN...	VOFD-L35T...-MNH...	VOFD-L35T...-MNY...
Valve function		3/2-way, single solenoid, closed (M32)		
		3/2-way, single solenoid, closed, semi-automatic (M32A)		
Pneumatic connection	1	G1/4		
VOFD-...-G14	2	G1/4		
	3	G1/4		
Pneumatic connection	1	1/4 NPT		
VOFD-...-N14	2	1/4 NPT		
	3	1/4 NPT		
Design		Directly actuated poppet valve		
Width	[mm]	51 (50 stainless steel design)		
Mounting position		Any		
Sealing principle		Soft		
Manual override		None	Non-detenting	Detenting
Reset method		Mechanical spring		
Actuation type		Electric		
Suitable for vacuum		No		
Type of control		Direct		
Flow rate Kv for pressurisation	[m³/h]	0.32		
Flow rate Kv for exhausting	[m³/h]	0.32		
b value		0.15		
C value	[l/s bar]	1.8		
Flow direction		Non-reversible		
Product weight	[g]	390		
Switching time off	[ms]	60		
Switching time on	[ms]	40		
Nominal width	[mm]	3.5		
Standard nominal flow rate 1 → 2	[l/min]	406		
Standard nominal flow rate 2 → 3	[l/min]	440		

## Selection of solenoid coils

Suitable solenoid coils for the basic valves are available in the section on accessories.

The following solenoid coils can be selected:

- S18-18, nominal power: 3 watt at 230 V AC (Ex-D)
- S18-70, nominal power: 7 watt at 24 V DC (Ex-D)
- S18-120, nominal power: 12 watt at 24 V DC (Ex-ME)

 **Note**

Additional information and solenoid coils to fit basic valves can be found in the Festo online configurator.

- → Internet: VACC
- → [www.festo.com/sp](http://www.festo.com/sp)

## Data sheet – Modular system NW 3.5 mm

Operating and environmental conditions		
Operating medium		Compressed air to ISO 8573-1:2010 [7:2:2]
Operating pressure range	[bar]	0 ... 8
Temperature of medium	[°C]	-25 ... 60
Temperature of medium, low temperature	[°C]	-50 ... 60
Ambient temperature	[°C]	-25 ... 60
Ambient temperature, low temperature	[°C]	-50 ... 60
Corrosion resistance class CRC <sup>1)</sup>		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
Stainless steel housing	High-alloy stainless steel
Seals	NBR
Low temperature seals, stainless steel	VMQ
Note on materials	Contains paint-wetting impairment substances, RoHS-compliant

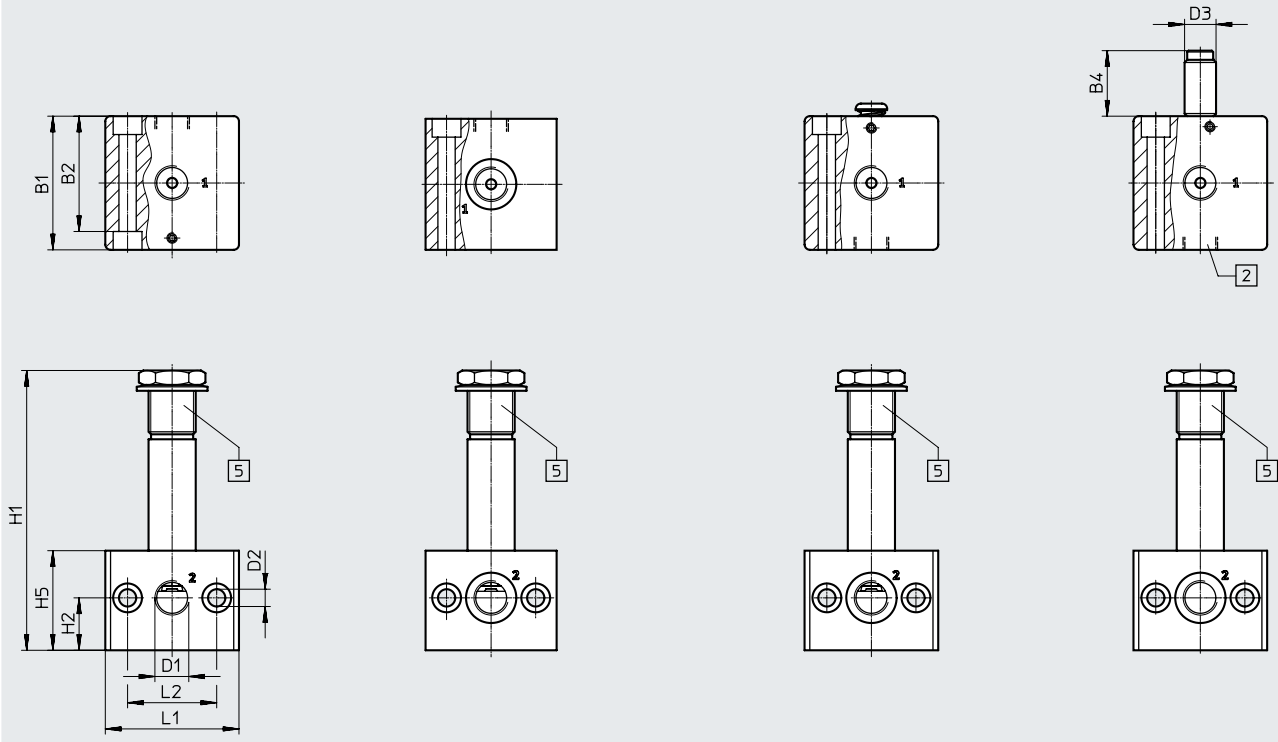
Data sheet – Modular system NW 3.5 mm

Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)  
VOFD-L35T-M32-MNY-...

VOFD-L35T-M32-MN-...-R1

VOFD-L35T-M32-MNH-...



[2] Working port


[5] Connection 3

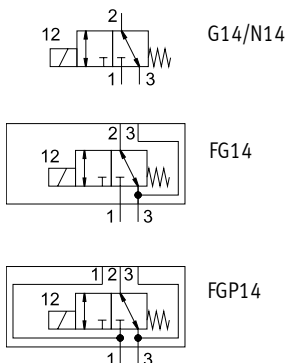
Type of G thread	B1	B2	B4	D1	D2 ∅	D3 ∅	H1	H2	H5	L1	L2
VOFD-L35T-M32-MN-G14-...-F10	51	44	-	G1/4	6.6	-	106.5	20	38	51	34
VOFD-L35T-M32-MN-G14-...-R1-F10	50	43	-			-					
VOFD-L35T-M32-MNH-G14-...-F10	51	44	-			-					
VOFD-L35T-M32-MNY-G14-...-F10	51	44	25			12				51	

Type of NPT thread	B1	B2	B4	D1	D2 ∅	D3 ∅	H1	H2	H5	L1	L2
VOFD-L35T-M32-MN-N14-...-F10	51	44	-	1/4 NPT	6.6	-	106.5	20	38	51	34
VOFD-L35T-M32-MN-N14-...-R1-F10	50	43								50	
VOFD-L35T-M32-MNH-N14-...-F10	51	44								51	
VOFD-L35T-M32A-MNH-N14-...-F10	51	44								51	
VOFD-L35T-M32A-MNH-N14-...-R1-F10	50	43								50	

Data sheet – Modular system NW 5 mm

Function  
3/2-way valve

 Flow rate  
up to 493 l/min



**General technical data**

Basic valve G1/4		VOFD-L50T-...G14-... VOFD-L50T-...N14-...	VOFD-L50T-...FG14-... VOFD-L50T-...FGP14-...	VOFD-L50T-...G14-R1-... VOFD-L50T-...N14-R1-...
Valve function		3/2-way, single solenoid, closed		
Pneumatic connection	1	G1/4		
VOFD-...-G14	2	G1/4		
	3	G1/4		
Pneumatic connection	1	1/4 NPT		
VOFD-...-N14	2	1/4 NPT		
	3	1/4 NPT		
Pneumatic connection	1	G1/4		
VOFD-...-FG14	2	Connection pattern to NAMUR, flange 1/4		
	3	G1/4		
Pneumatic connection	1	M5 connection pattern to NAMUR		
VOFD-...-FGP14	2	Connection pattern to NAMUR, flange 1/4		
	3	G1/4		
Design		Directly actuated poppet valve		
Width	[mm]	51	50.5 (flange thread)	28 (stainless steel design)
Mounting position		Any		
Sealing principle		Soft		
Manual override		None		
Reset method		Mechanical spring		
Actuation type		Electric		
Suitable for vacuum		Yes		
Type of control		Direct		
Flow rate Kv for pressurisation	[m <sup>3</sup> /h]	0.36		
Flow rate Kv for exhausting	[m <sup>3</sup> /h]	0.36		
b value		0.25		
C value	[l/s bar]	2		
Flow direction		Reversible		
Product weight	[g]	560		
Switching time off	[ms]	60		
Switching time on	[ms]	40		
Nominal width	[mm]	5		
Standard nominal flow rate	[l/min]	493		
Standard nominal flow rate 2→3	[l/min]	429		

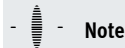
## Data sheet – Modular system NW 5 mm

**Selection of solenoid coils**

Suitable solenoid coils for the basic valves are available in the section on accessories.

The following solenoid coils can be selected:

- S18-25, nominal power: 2.5 watt at 24 V DC (Ex-D)
- S18-35, nominal power: 3.5 watt at 24 V DC (Ex-ME)

**Note**

Additional information and solenoid coils to fit basic valves can be found in the Festo online configurator.

- → Internet: VACC
- → [www.festo.com/sp](http://www.festo.com/sp)

**Operating and environmental conditions**

Operating medium		Compressed air to ISO 8573-1:2010 [7:2:2]
Operating pressure range	[bar]	0 ... 10
Temperature of medium	[°C]	-25 ... 60
Ambient temperature	[°C]	-25 ... 60
Extended ambient temperature, Low Demand mode	[°C]	-25 ... 60
Safety integrity level	[SIL]	To SIL 3 Low Demand mode
Corrosion resistance class CRC <sup>1)</sup>		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.

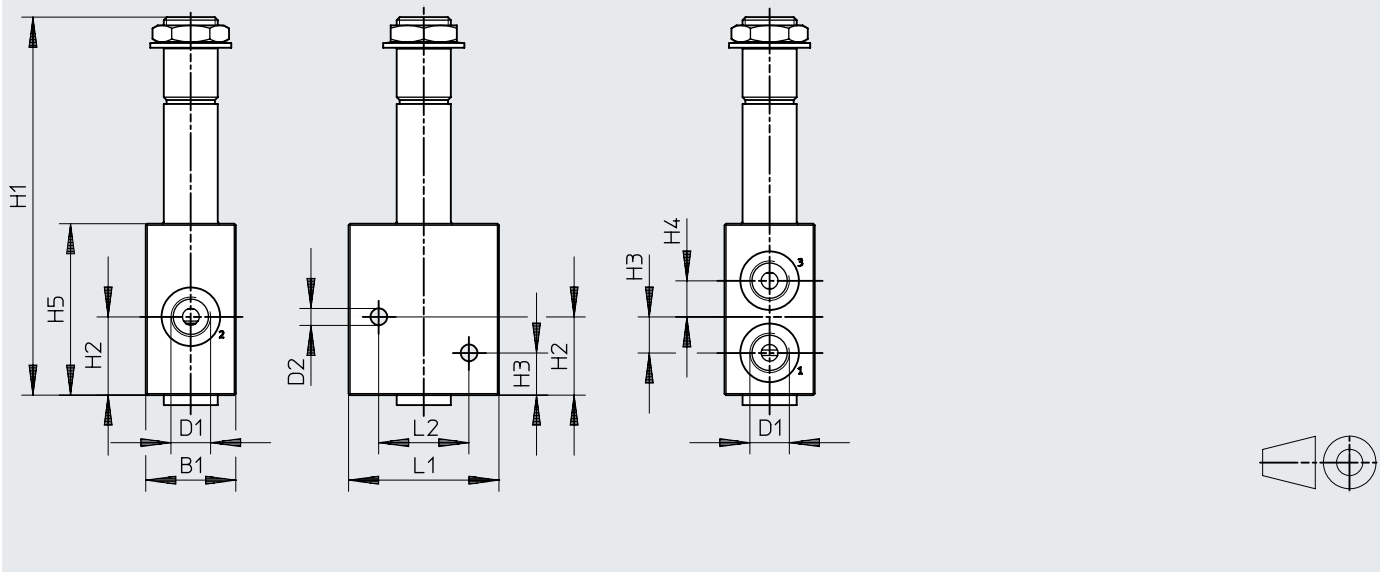
**Materials**

Housing	Ematal-coated aluminium
Stainless steel housing	High-alloy stainless steel
Seals	NBR
Note on materials	Contains paint-wetting impairment substances, RoHS-compliant

Data sheet – Modular system NW 5 mm

Dimensions

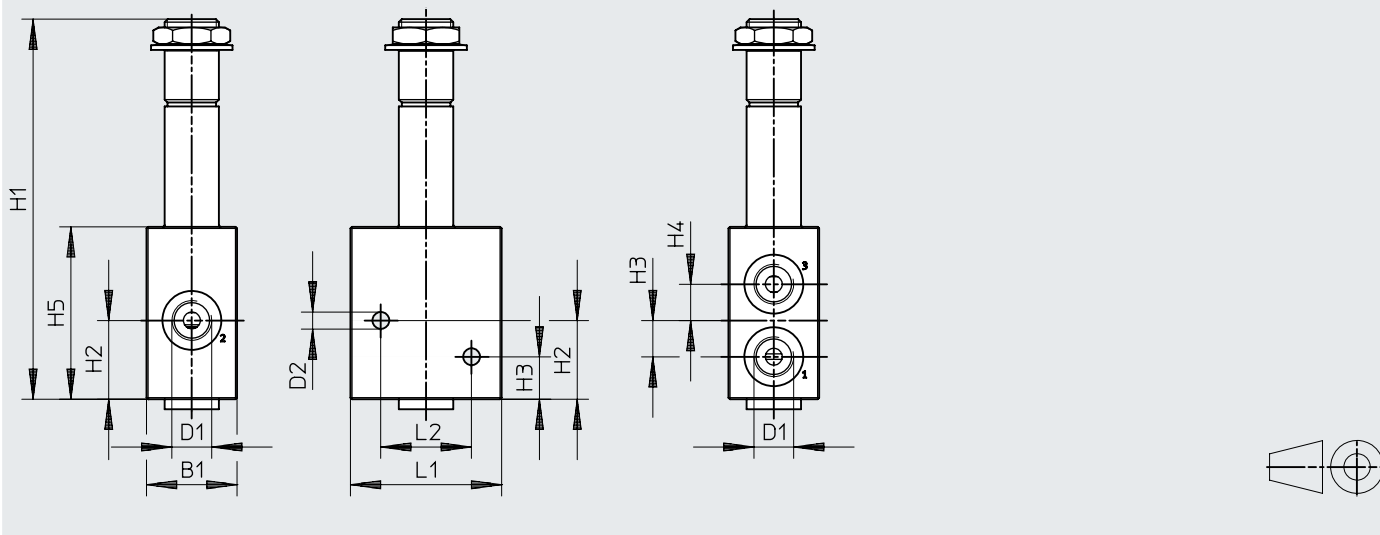
Download CAD data → [www.festo.com](http://www.festo.com)



Type of G thread	B1	D1	D2 ∅	H1	H2	H3	H4	H5	L1	L2
VOFD-L50T-M32-MN-G14-...-F10	30	G1/4	5.6	126	26	12	12	57	50	30
Type of NPT thread	B1	D1	D2 ∅	H1	H2	H3	H4	H5	L1	L2
VOFD-L50T-M32-MN-N14-...-F10	30	1/4 NPT	5.6	126	26	12	12	57	50	30

Dimensions

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

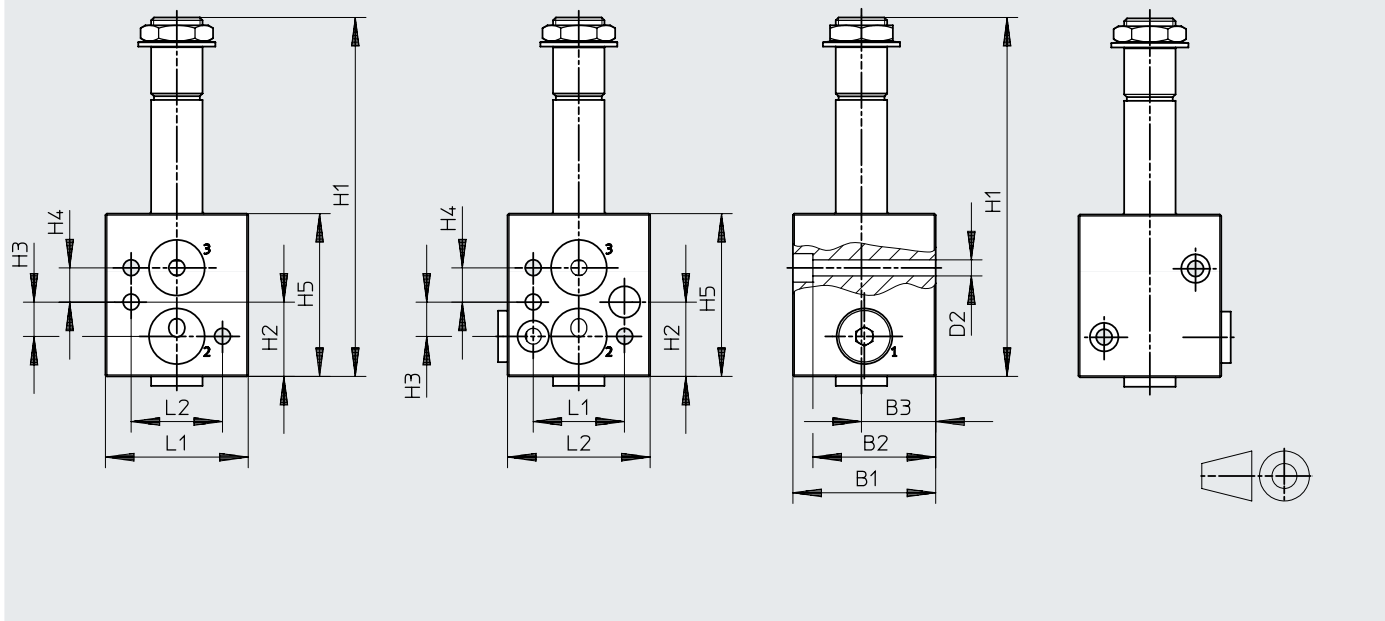


Type of G thread	B1	D1	D2 ∅	H1	H2	H3	H4	H5	L1	L2
VOFD-L50T-M32-MN-G14-...-R1-F10	30	G1/4	5.6	126	26	12	12	57	50	30
Type of NPT thread	B1	D1	D2 ∅	H1	H2	H3	H4	H5	L1	L2
VOFD-L50T-M32-MN-N14-...-R1-F10	30	1/4 NPT	5.6	126	26	12	12	57	50	30

Data sheet – Modular system NW 5 mm

Dimensions

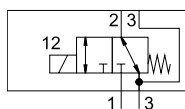
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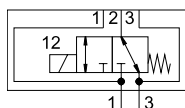
Type of flange thread	B1	B2	B3	D2 ∅	H1	H2	H3	H4	H5	L1	L2	L2
VOFD-L50T-M32-MN-FG14-F10	50	43	26	5.6	126	26	12	12	57	50	32	32
VOFD-L50T-M32-MN-FGP14-F10												

## Data sheet – Basic valve NW 5 mm, G1/4 NAMUR

Function  
3/2-way valve



-FG14-



-FGP14-

Flow rate  
450 l/min (-LT-M32-)  
493 l/min (-L50T-M32-)



General technical data		
Type VOFD-LT-M32-...	G1/4 basic valve and NAMUR	G1/4 basic valve and NAMUR, supply port
Valve function	3/2-way, single solenoid, closed	
Pneumatic connection	1	G1/4
	2	G1/4 and connection pattern to NAMUR
	3	G1/4
	4	G1/4 and connection pattern to NAMUR
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 Kv for pressurisation [m³/h]	0.36	
Flow rate Kv for exhausting [m³/h]	0.36	
Flow direction	Non-reversible	
Product weight [g]	560	
Switching time off [ms]	9	
Switching time on [ms]	45	
Nominal width [mm]	5	
Standard nominal flow rate [l/min]	450	

Operating and environmental conditions		
Operating medium	Compressed air to ISO 8573-1:2010 [7:2:2]	
Degree of protection	IP65	
Operating pressure range [bar]	0 ... 10	
Temperature of medium [°C]	-25 ... 60	
Ambient temperature [°C]	-25 ... 60	
Extended ambient temperature, Low Demand mode [°C]	-25 ... 60	
Safety integrity level [SIL]	To SIL 3 Low Demand mode	
	To SIL 3 high demand mode	
Corrosion resistance class CRC <sup>1)</sup>	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	Hard Ematal-anodised aluminium
Seals	NBR
Note on materials	Contains paint-wetting impairment substances, RoHS-compliant



## Data sheet – Basic valve NW 5 mm, G1/4 NAMUR

General technical data			
Type VOFD-L50T-M32-...		G1/4 basic valve and NAMUR	G1/4 basic valve and NAMUR, supply port
Valve function		3/2-way, single solenoid, closed	
Pneumatic connection	1	G1/4	M5 and connection pattern to NAMUR
	2	Flange 1/4 and connection pattern to NAMUR	
	3	G1/4	G1/4
Design		Directly actuated poppet valve	
Width	[mm]	50.5	
Mounting position		Any	
Sealing principle		Soft	
Manual override		None	
Reset method		Mechanical spring	
Actuation type		Electric	
Suitable for vacuum		Yes	
Type of control		Direct	
Flow rate Kv for pressurisation	[m <sup>3</sup> /h]	0.36	
Flow rate Kv for exhausting	[m <sup>3</sup> /h]	0.36	
b value		0.25	
C value	[l/s bar]	2	
Flow direction		Reversible	
Product weight	[g]	560	
Switching time off	[ms]	60	
Switching time on	[ms]	40	
Nominal width	[mm]	5	
Standard nominal flow rate	[l/min]	493	
Standard nominal flow rate 2→3	[l/min]	429	

Operating and environmental conditions			
Operating medium		Compressed air to ISO 8573-1:2010 [7:2:2]	
Degree of protection		IP65	
Operating pressure range	[bar]	0 ... 10	
Temperature of medium	[°C]	-25 ... 60	
Ambient temperature	[°C]	-25 ... 60	
Extended ambient temperature, Low Demand mode	[°C]	-25 ... 60	
Safety integrity level	[SIL]	To SIL 3 Low Demand mode	
		To SIL 3 high demand mode	
Corrosion resistance class CRC <sup>1)</sup>		4	

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

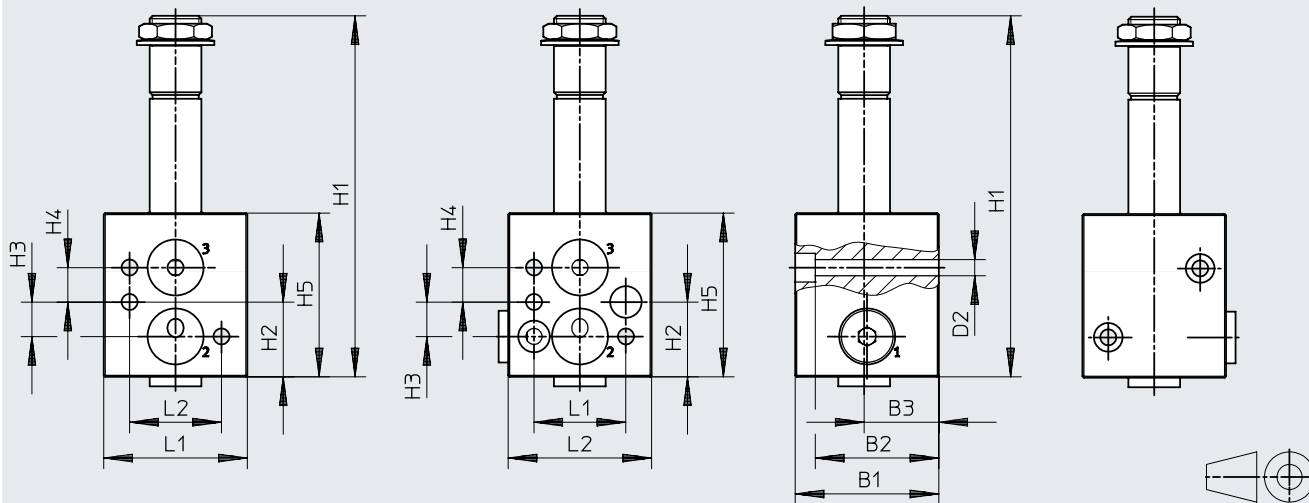
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests (→ also FN 940082), using appropriate media.

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

Data sheet – Basic valve NW 5 mm, G1/4 NAMUR

Dimensions – G1/4 basic valve and NAMUR

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

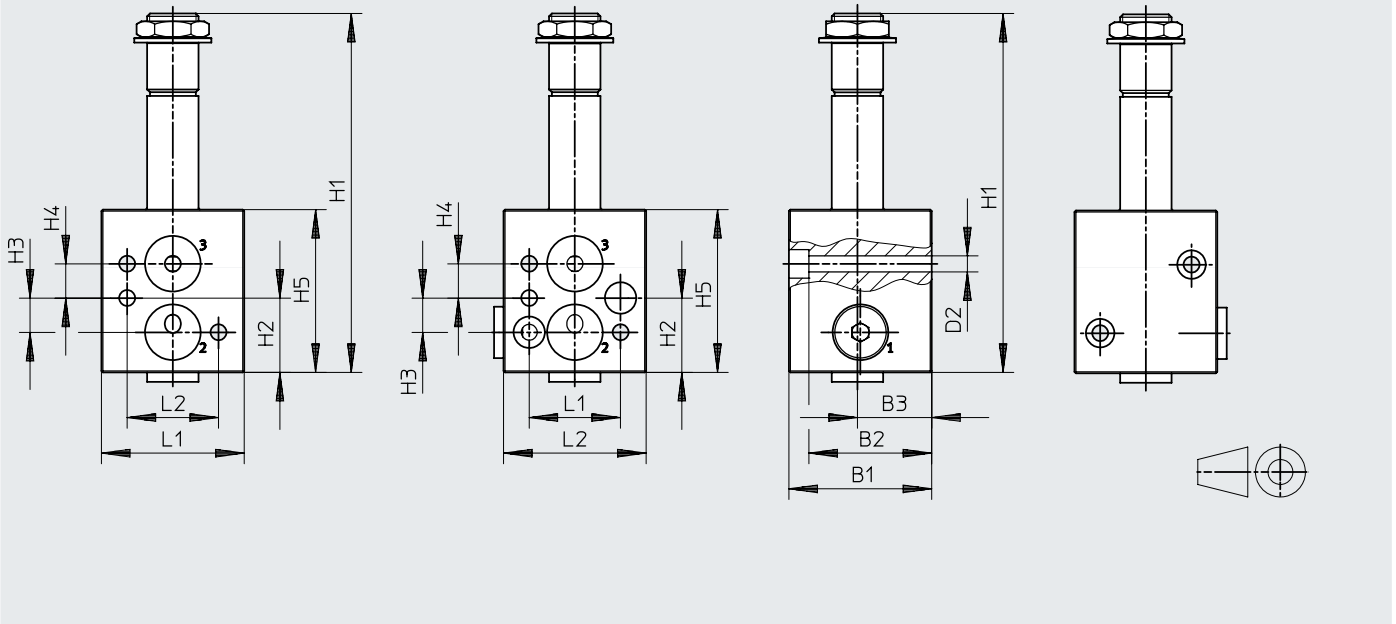


Type of flange thread	B1	B2	B3	D2 ∅	H1	H2	H3	H4	H5	L1	L2	L2
VOFD-L50T-M32-MN-FG14-F10	50	43	26	5.6	126	26	12	12	57	50	32	32
VOFD-L50T-M32-MN-FGP14-F10												

Data sheet – Basic valve NW 5 mm, G1/4 NAMUR

Dimensions – G1/4 basic valve and NAMUR, supply port

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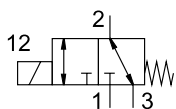
Type of flange thread	B1	B2	B3	D2 ∅	H1	H2	H3	H4	H5	L1	L2	L2
VOFD-LT-M32-MN-FGP14-F10	50	43	26	5.6	126	26	12	12	57	50	32	32
VOFD-L50T-M32-MN-FGP14-10-F10												

Ordering data				
Circuit symbol	Function	Pneumatic connection	Part no.	Type
<b>Directly actuated poppet valve</b>				
	3/2-way, single solenoid, closed	G1/4 and NAMUR	4514999	VOFD-L50T-M32-MN-FG14-10-F10
	3/2-way, single solenoid, closed	NAMUR with supply port	4515000	VOFD-L50T-M32-MN-FGP14-10-F10

## Data sheet – Basic valve NW 5 mm, G/NPT 1/4, in-line

**Function**

3/2-way valve



Flow rate  
450 l/min (-LT-M32-)  
493 l/min (-L50T-M32-)



General technical data		G1/4 basic valve	1/4 NPT basic valve
Type VOFD-LT-M32-...		G1/4 basic valve	1/4 NPT basic valve
Valve function		3/2-way, single solenoid, closed	
Pneumatic connection	1	G1/4	1/4 NPT
	2	G1/4	1/4 NPT
	3	G1/4	1/4 NPT
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 Kv for pressurisation	[m <sup>3</sup> /h]	0.36	
Flow rate Kv for exhausting	[m <sup>3</sup> /h]	0.36	
Flow direction		Reversible	
Product weight	[g]	560	
Switching time off	[ms]	9	
Switching time on	[ms]	45	
Nominal width	[mm]	5	
Standard nominal flow rate	[l/min]	450	

Operating and environmental conditions	
Operating medium	Compressed air to ISO 8573-1:2010 [7:2:2]
Degree of protection	IP65
Operating pressure range	[bar] 0 ... 10
Temperature of medium	[°C] -25 ... 60
Ambient temperature	[°C] -25 ... 60
Extended ambient temperature, Low Demand mode	[°C] -25 ... 60
Safety integrity level	[SIL] To SIL 3 Low Demand mode
	To SIL 3 high demand mode
Corrosion resistance class CRC <sup>1)</sup>	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	Hard Ematal-anodised aluminium
Seals	NBR
Note on materials	Contains paint-wetting impairment substances, RoHS-compliant

## Data sheet – Basic valve NW 5 mm, G/NPT 1/4, in-line

General technical data			
Type VOFD-L50T-M32-...	G1/4 basic valve		1/4 NPT basic valve
Valve function	3/2-way, single solenoid, closed		
Pneumatic connection	1	G1/4	1/4 NPT
	2	G1/4	1/4 NPT
	3	G1/4	1/4 NPT
Design	Directly actuated poppet valve		
Width	[mm]	51, 28 (stainless steel design)	
Mounting position	Any		
Sealing principle	Soft		
Manual override	None		
Reset method	Mechanical spring		
Actuation type	Electric		
Suitable for vacuum	Yes		
Type of control	Direct		
Flow rate Kv for pressurisation	[m <sup>3</sup> /h]	0.36	
Flow rate Kv for exhausting	[m <sup>3</sup> /h]	0.36	
b value	0.25		
C value	[l/s bar]	2	
Flow direction	Reversible		
Product weight	[g]	560	
Switching time off	[ms]	60	
Switching time on	[ms]	40	
Nominal width	[mm]	5	
Standard nominal flow rate	[l/min]	493	
Standard nominal flow rate 2→3	[l/min]	429	

Operating and environmental conditions			
Operating medium	Compressed air to ISO 8573-1:2010 [7:2:2]		
Degree of protection	IP65		
Operating pressure range	[bar]	0 ... 10	
Temperature of medium	[°C]	-25 ... 60	
Ambient temperature	[°C]	-25 ... 60	
Extended ambient temperature, Low Demand mode	[°C]	-25 ... 60	
Safety integrity level	[SIL]	To SIL 3 Low Demand mode	
		To SIL 3 high demand mode	
Corrosion resistance class CRC <sup>1)</sup>	4		

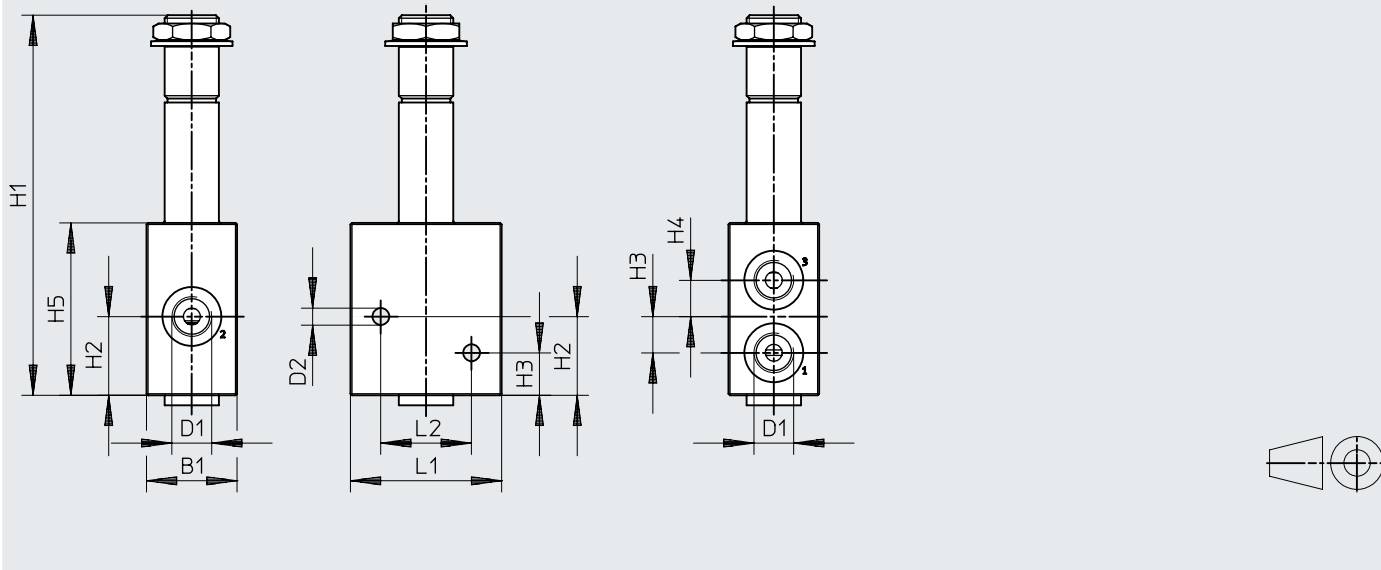
- 1) Corrosion resistance class CRC 4 to Festo standard FN 940070  
 Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests  
 (→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

Materials	
Housing	Ematal-coated aluminium
Stainless steel housing	High-alloy stainless steel
Seals	NBR
Note on materials	Contains paint-wetting impairment substances, RoHS-compliant

Data sheet – Basic valve NW 5 mm, G/NPT 1/4, in-line

Dimensions

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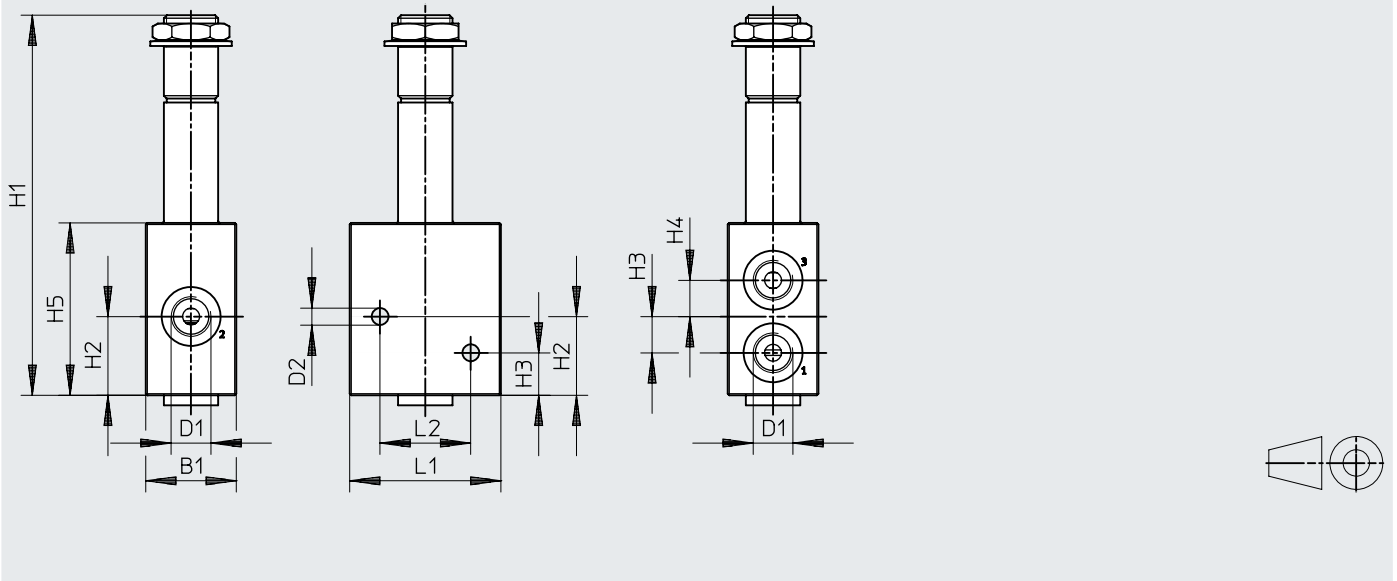


Type of G thread	B1	D1	D2 ∅	H1	H2	H3	H4	H5	L1	L2
VOFD-LT-M32-MN-G14-F10	30	G1/4	5.6	126	26	12	12	57	50	30
VOFD-L50T-M32-MN-G14-...-F10										
Type of NPT thread	B1	D1	D2 ∅	H1	H2	H3	H4	H5	L1	L2
VOFD-LT-M32-MN-N14-F10	30	1/4 NPT	5.6	126	26	12	12	57	50	30
VOFD-L50T-M32-MN-N14-...-F10										

Data sheet – Basic valve NW 5 mm, G/NPT 1/4, in-line

Dimensions

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Type of G thread	B1	D1	D2 ∅	H1	H2	H3	H4	H5	L1	L2
VOFD-L50T-M32-MN-G14-...-R1-F10	30	G1/4	5.6	126	26	12	12	57	50	30
Type of NPT thread	B1	D1	D2 ∅	H1	H2	H3	H4	H5	L1	L2
VOFD-L50T-M32-MN-N14-...-R1-F10	30	1/4 NPT	5.6	126	26	12	12	57	50	30


Ordering data

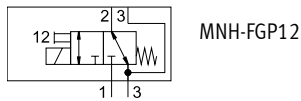
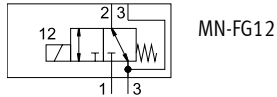
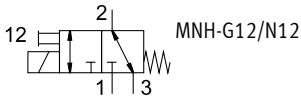
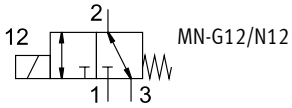
Circuit symbol	Function	Pneumatic connection	Part no.	Type
<b>Directly actuated poppet valve</b>				
	3/2-way, single solenoid, closed	G1/4	4514997	VOFD-L50T-M32-MN-G14-10-F10
			4515019	VOFD-L50T-M32-MN-G14-10-R1-F10
		1/4 NPT	4514998	VOFD-L50T-M32-MN-N14-10-F10
			4515018	VOFD-L50T-M32-MN-N14-10-R1-F10

Data sheet – Modular system NW 10 mm, G/NPT 1/2, NAMUR, and in-line

Function

3/2-way valve

 Flow rate  
up to 1900 l/min




General technical data		VOFD-L100T-M32-MN-...	VOFD-L100T-M32-MNH-...
Basic valve G1/2			
Valve function		3/2-way, single solenoid, closed	
Pneumatic connection	1	G1/2	
VOFD-...-G12	2	G1/2	
	3	G1/2	
Pneumatic connection	1	1/2 NPT	
VOFD-...-N12	2	1/2 NPT	
	3	1/2 NPT	
Pneumatic connection	1	G1/2	
VOFD-...-FG12	2	Connection pattern to NAMUR, flange 1/2	
	3	G1/2	
Design		Directly actuated poppet valve	
Width	[mm]	51	
Mounting position		Any	
Sealing principle		Soft	
Manual override		None	Non-detenting
Reset method		Mechanical spring	
Actuation type		Electric	
Suitable for vacuum		Yes	
Type of control		Direct	
Flow rate Kv for pressurisation	[m <sup>3</sup> /h]	1.68	
Flow rate Kv for exhausting	[m <sup>3</sup> /h]	1.68	
b value		0.22	
C value	[l/s bar]	7.6	
Flow direction		Reversible	
Product weight	[g]	950	
Switching time off	[ms]	60	
Switching time on	[ms]	40	
Nominal width	[mm]	10	
Standard nominal flow rate 1→2	[l/min]	1900	
Standard nominal flow rate 2→3	[l/min]	1888	

**Selection of solenoid coils**

Suitable solenoid coils for the basic valves are available in the section on accessories.

The following solenoid coils can be selected:

- S18-70, nominal power: 7 watt at 24 V DC (Ex-D)
- S18-120, nominal power: 12 watt at 24 V DC (Ex-ME)

 **Note**

Additional information and solenoid coils to fit basic valves can be found in the Festo online configurator.

- → Internet: VACC
- → [www.festo.com/sp](http://www.festo.com/sp)



Data sheet – Modular system NW 10 mm, G/NPT 1/2, NAMUR, and in-line

Operating and environmental conditions		
Operating medium		Compressed air to ISO 8573-1:2010 [7:2:2]
Operating pressure range	[bar]	0 ... 12
Temperature of medium	[°C]	-25 ... 60
Ambient temperature	[°C]	-25 ... 60
Corrosion resistance class CRC <sup>1)</sup>		4

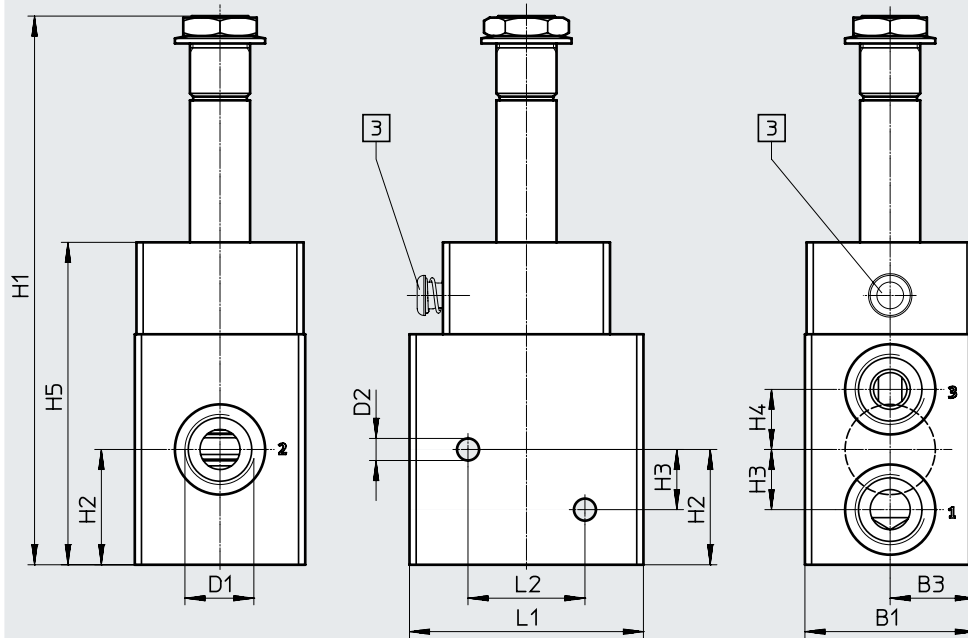
1) Corrosion resistance class CRC 4 to Festo standard FN 940070  
 Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests (→ also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

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

Dimensions

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

VOFD-L100T-M32-MN...



[3] MO manual override, non-detenting

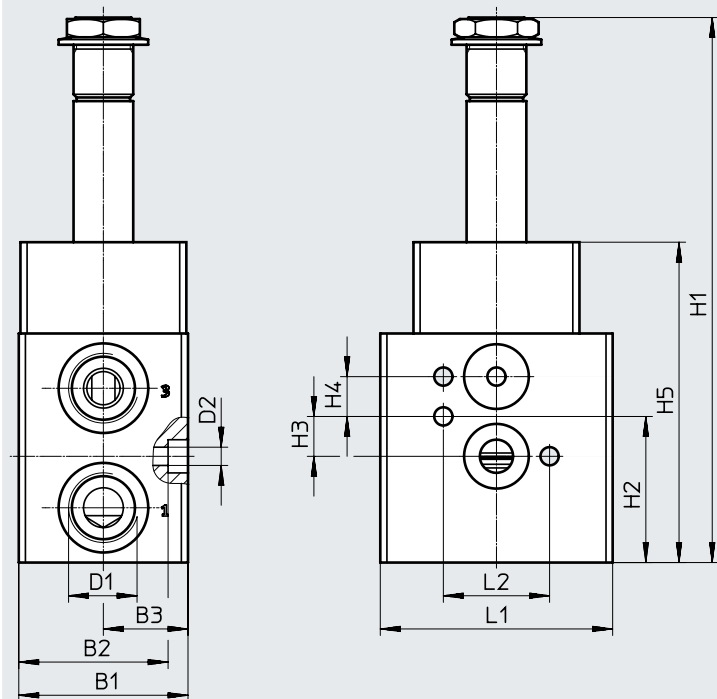
Type of G thread	B1	B3	D1	D2 ∅	H1	H2	H3	H4	H5	L1	L2
VOFD-L100T-M32-MN-G12-...-F10	51	25	G1/2	6.6	164	34.5	18	18	96.5	70	35
VOFD-L100T-M32-MNH-G12-...-F10											
Type of NPT thread	B1	B3	D1	D2 ∅	H1	H2	H3	H4	H5	L1	L2
VOFD-L100T-M32-MN-N12-...-F10	51	25	1/2 NPT	6.6	164	34.5	18	18	96.5	70	35
VOFD-L100T-M32-MNH-N12-...-F10											

Data sheet – Modular system NW 10 mm, G/NPT 1/2, NAMUR, and in-line

Dimensions

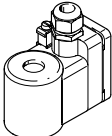
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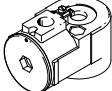
VOFD-L100T-...-FG12-...-F10

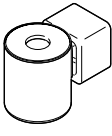


Type of flange thread	B1	B2	B3	D1	D2 ∅	H1	H2	H3	H4	H5	L1	L2
VOFD-L100T-...-FG12-...-F10	51	45	25.5	G1/2	5.5	164	44	12	12	96.5	70	32

## Accessories

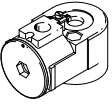
Solenoid coil EX4ME coil, VACC-S18-...-EX4ME				
	Nominal operating voltage	Characteristic coil data	Part no.	Type
	24 V DC and 24 V AC	24 V AC: 50/60 Hz, power 12.0 VA, 24 V DC: 12.0 W	8109395	VACC-S18-120-K4-1U-EX4ME
			8109394	VACC-S18-120-K4-1UF-EX4ME
		24 V DC: 3.5 W, 24 V AC: 50/60 Hz, power 3.5 VA	8109388	VACC-S18-35-K4-1UF-EX4ME
			8109389	VACC-S18-35-K4-1U-EX4ME
	110 V DC and 110 V AC	110 V AC: 50/60 Hz, power 12.0 VA, 110 V DC: 12.0 W	8109392	VACC-S18-120-K4-2U-EX4ME
			8109387	VACC-S18-35-K4-2U-EX4ME
	230 V DC and 230 V AC	230 V AC: 50/60 Hz, power 12.0 VA, 230 V DC: 12.0 W	8109391	VACC-S18-120-K4-3U-EX4ME
			8109386	VACC-S18-35-K4-3U-EX4ME
	48 V DC	48 V DC: 12.0 W	8109390	VACC-S18-120-K4-7-EX4ME
	60 V DC	60 V DC: 12.0 W	8109393	VACC-S18-120-K4-27-EX4ME

Solenoid coil EX4D coil, VACC-S18-...-EX4D				
	Nominal operating voltage	Characteristic coil data	Part no.	Type
	24 V DC and 24 V AC	24 V AC: 50/60 Hz, power 7.0 VA, 24 V DC: 7.0 W	3504563	VACC-S18-70-K4-1U-EX4D
			3546549	VACC-S18-70-K5-1U-EX4D
		24 V DC: 2.5 W, 24 V AC: 50/60 Hz, power 2.5 VA	562903	VACC-S18-25-K4-1U-EX4D
			562900	VACC-S18-25-K5-1U-EX4D
	110 V DC and 110 V AC	110 V AC: 50/60 Hz, power 2.5 VA, 110 V DC: 2.5 W	562901	VACC-S18-25-K5-2U-EX4D
			562904	VACC-S18-25-K4-2U-EX4D
	110 V AC: 50/60 Hz, power 7.0 VA, 110 V DC: 7.0 W	3546625	VACC-S18-70-K5-2U-EX4D	
		230 V AC, 50/60 Hz	230 V AC: 50/60 Hz, power 1.8 VA	3504741
	3546734			VACC-S18-18-K5-3A-EX4D
	230 V DC and 230 V AC	230 V AC: 50/60 Hz, power 2.5 VA, 230 V DC: 2.5 W	562902	VACC-S18-25-K5-3U-EX4D
			562905	VACC-S18-25-K4-3U-EX4D
		230 V AC: 50/60 Hz, power 7.0 VA, 230 V DC: 7.0 W	3546662	VACC-S18-70-K5-3U-EX4D
			3504639	VACC-S18-70-K4-3U-EX4D
	48 V DC and 48 V AC	48 V AC: 50/60 Hz, power 7.0 VA, 48 V DC: 7.0 W	3546588	VACC-S18-70-K5-7U-EX4D
3504574			VACC-S18-70-K4-7U-EX4D	
120 V DC and 120 V AC	120 V AC: 50/60 Hz, power 7.0 VA, 120 V DC: 7.0 W	3504609	VACC-S18-70-K4-16U-EX4D	

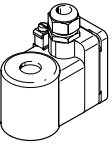
Solenoid coil A1 coil, VACC-S18-...-A1-1				
	Nominal operating voltage	Characteristic coil data	Part no.	Type
	24 V DC	24 V DC: 3.5 W	562906	VACC-S18-35-A1-1
		24 V DC: 12.0 W	8040580	VACC-S18-120-A1-1
	24 V AC, 50/60 Hz	24 V AC: 50/60 Hz, power 12.0 VA	8040890	VACC-S18-120-A1-1A
		24 V AC: 50/60 Hz, power 3.5 VA	562907	VACC-S18-35-A1-1A
	110 V AC, 50/60 Hz	110 V AC: 50/60 Hz, power 12.0 VA	8040582	VACC-S18-120-A1-2A
		110 V AC: 50/60 Hz, power 3.5 VA	562908	VACC-S18-35-A1-2A
	230 V AC, 50/60 Hz	230 V AC: 50/60 Hz, power 12.0 VA	8040584	VACC-S18-120-A1-3A
		230 V AC: 50/60 Hz, power 3.5 VA	562909	VACC-S18-35-A1-3A

## Accessories

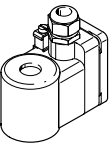
## Solenoid coil U2D coil, VACC-S18-...-U2D

	Nominal operating voltage	Characteristic coil data	Certification	Part no.	Type
	24 V DC	24 V DC: 7.0 W	cULus, hazardous environment, USA and Canada (NEC 500, Class 1 Div 2)	3546816	VACC-S18-70-K5-1-U2D
	230 V DC	220 V DC: 7.0 W		3546949	VACC-S18-70-K5-3-U2D
	48 V DC	48 V DC: 7.0 W		3546876	VACC-S18-70-K5-7-U2D
	120 V DC	125 V DC: 7.0 W		3546913	VACC-S18-70-K5-16-U2D

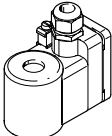
## Solenoid coil NEPSI, VACC-S18-...-NE4ME

	Nominal operating voltage	Characteristic coil data	Certification	Part no.	Type
	24 V DC and 24 V AC	24 V AC: 50/60 Hz, power 12.0 VA, 24 V DC: 12.0 W	CCC-Ex (Ex certification China, EPL Gb and Db)	8118262	VACC-S18-120-K4-1UF-NE4ME
		24 V DC: 3.5 W, 24 V AC: 50/60 Hz, power 3.5 VA		8118263	VACC-S18-120-K4-1U-NE4ME
				8118256	VACC-S18-35-K4-1UF-NE4ME
				8118257	VACC-S18-35-K4-1U-NE4ME
	110 V DC and 110 V AC	110 V AC: 50/60 Hz, power 12.0 VA, 110 V DC: 12.0 W		8118260	VACC-S18-120-K4-2U-NE4ME
		110 V AC: 50/60 Hz, power 3.5 VA, 110 V DC: 3.5 W		8118255	VACC-S18-35-K4-2U-NE4ME
	230 V DC and 230 V AC	230 V AC: 50/60 Hz, power 12.0 VA, 230 V DC: 12.0 W		8118259	VACC-S18-120-K4-3U-NE4ME
		230 V AC: 50/60 Hz, power 3.5 VA, 230 V DC: 3.5 W		8118254	VACC-S18-35-K4-3U-NE4ME
	48 V DC	48 V DC: 12.0 W		8118258	VACC-S18-120-K4-7-NE4ME
	60 V DC	60 V DC: 12.0 W		8118261	VACC-S18-120-K4-27-NE4ME

## Solenoid coil VACC-S18-...-KS4ME

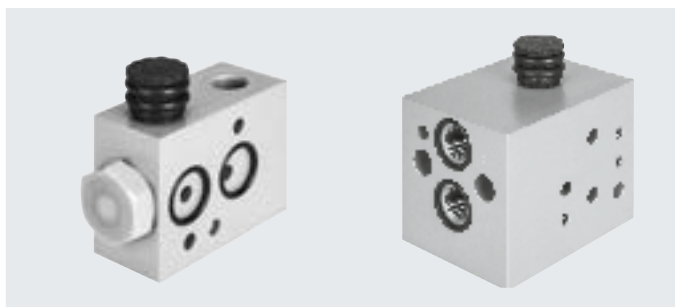
	Nominal operating voltage	Characteristic coil data	Certification	Part no.	Type
	-	48 V DC: 12.0 W	-	8118318	VACC-S18-120-K4-7-KS4ME
	24 V DC and 24 V AC	24 V AC: 50/60 Hz, power 12.0 VA, 24 V DC: 12.0 W	KOSHA (Ex certification Korea, EPL Gb and Db)	8118322	VACC-S18-120-K4-1UF-KS4ME
		24 V DC: 3.5 W, 24 V AC: 50/60 Hz, power 3.5 VA		8118323	VACC-S18-120-K4-1U-KS4ME
				8118316	VACC-S18-35-K4-1UF-KS4ME
				8118317	VACC-S18-35-K4-1U-KS4ME
	110 V DC and 110 V AC	110 V AC: 50/60 Hz, power 12.0 VA, 110 V DC: 12.0 W		8118320	VACC-S18-120-K4-2U-KS4ME
		110 V AC: 50/60 Hz, power 3.5 VA, 110 V DC: 3.5 W		8118315	VACC-S18-35-K4-2U-KS4ME
	230 V DC and 230 V AC	230 V AC: 50/60 Hz, power 12.0 VA, 230 V DC: 12.0 W		8118319	VACC-S18-120-K4-3U-KS4ME
		230 V AC: 50/60 Hz, power 3.5 VA, 230 V DC: 3.5 W		8118314	VACC-S18-35-K4-3U-KS4ME
	60 V DC	60 V DC: 12.0 W		8118321	VACC-S18-120-K4-27-KS4ME

## Accessories

Solenoid coil INMETRO, VACC-S18-...-NE4ME					
	Nominal operating voltage	Characteristic coil data	Certification	Part no.	Type
	24 V DC and 24 V AC	24 V AC: 50/60 Hz, power 12.0 VA, 24 V DC: 12.0 W	INMETRO (Ex certification Brazil, EPL Gb and Db)	<b>8118181</b>	<b>VACC-S18-120-K4-1U-NM4ME</b>
		24 V DC: 3.5 W, 24 V AC: 50/60 Hz, power 3.5 VA		<b>8118177</b>	<b>VACC-S18-120-K4-1UF-NM4ME</b>
	110 V DC and 110 V AC	110 V AC: 50/60 Hz, power 12.0 VA, 110 V DC: 12.0 W		<b>8118182</b>	<b>VACC-S18-35-K4-1U-NM4ME</b>
		110 V AC: 50/60 Hz, power 3.5 VA, 110 V DC: 3.5 W		<b>8118179</b>	<b>VACC-S18-35-K4-1UF-NM4ME</b>
	230 V DC and 230 V AC	230 V AC: 50/60 Hz, power 12.0 VA, 230 V DC: 12.0 W		<b>8118178</b>	<b>VACC-S18-120-K4-2U-NM4ME</b>
		230 V AC: 50/60 Hz, power 3.5 VA, 230 V DC: 3.5 W		<b>8118174</b>	<b>VACC-S18-35-K4-2U-NM4ME</b>
	48 V DC	48 V DC: 12.0 W		<b>8118173</b>	<b>VACC-S18-120-K4-3U-NM4ME</b>
	60 V DC	60 V DC: 12.0 W		<b>8118180</b>	<b>VACC-S18-35-K4-3U-NM4ME</b>
				<b>8118175</b>	<b>VACC-S18-120-K4-7-NM4ME</b>
				<b>8118176</b>	<b>VACC-S18-120-K4-27-NM4ME</b>

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

Connection pattern: NAMUR



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

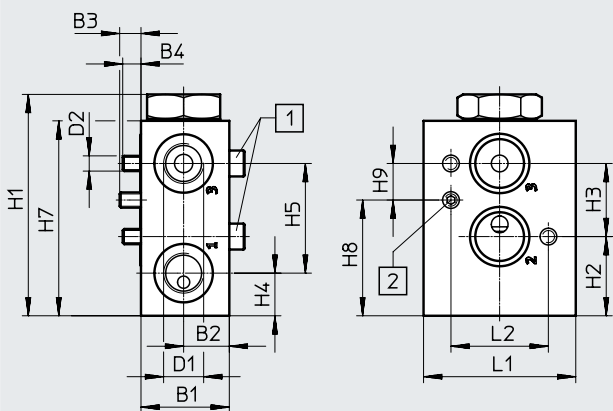
Operating and environmental conditions	VABS-S7-BE	VABS-S7-RB
Operating medium	Compressed air to ISO 8573-1:2010 [---:--]	
Operating pressure	[bar] 2 ... 8	0 ... 10
Pilot air supply	Internal	External/internal
Degree of protection	IP65	
Corrosion resistance class CRC <sup>1)</sup>	4	

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](http://www.festo.com)



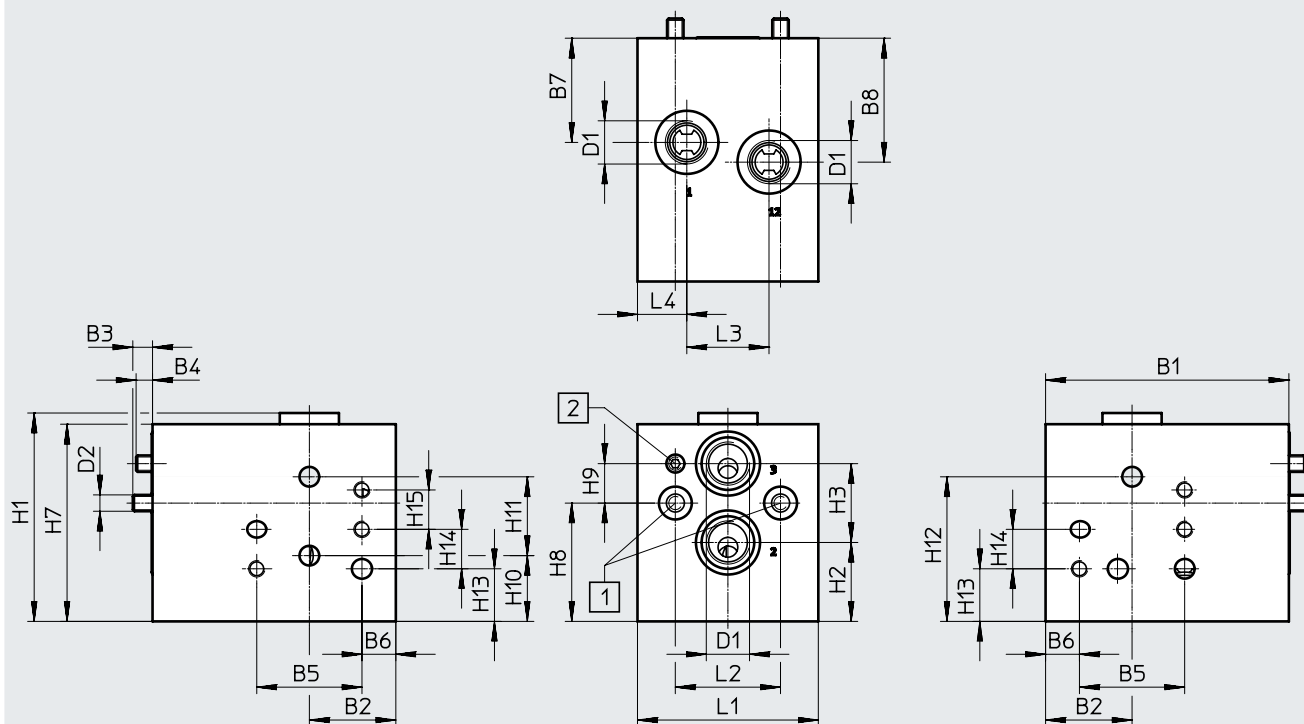
[1] Socket head screw M5x35      [2] Threaded pin M5x10

Type	B1	B2	B3	B4	D1	D2	H1	H2	H3	H4	H5	H7	H8	H9	L1	L2
VABS-S7-BE-B-G14-V14-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](http://www.festo.com)



[1] Socket head screw M5x70

[2] Threaded pin M5x10

Type	B1	B2	B3	B4	B5	B6	B7	B8	D1	D2	L1	L2	L3	L4
VABS-S7-RB-B-G14-V14-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.	<b>3580505</b>	<b>VABS-S7-RB-B-G14-V14-A</b>
	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.	<b>4727331</b>	<b>VABS-S7-RB-B-N14-V14-A</b>
	Sub-base as a pressurisation and exhaust block with G-thread connection, with flange 1/4, connection pattern to NAMUR	<b>2999476</b>	<b>VABS-S7-BE-B-G14-V14-A</b>
	Sub-base as a pressurisation and exhaust block with NPT-thread connection, with flange 1/4, connection pattern to NAMUR	<b>4727328</b>	<b>VABS-S7-BE-B-N14-V14-A</b>

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

### Sub-base

Sub-base material: Ematal-coated aluminium

Material of seals: NBR

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

Operating pressure: 0 ... 10 bar

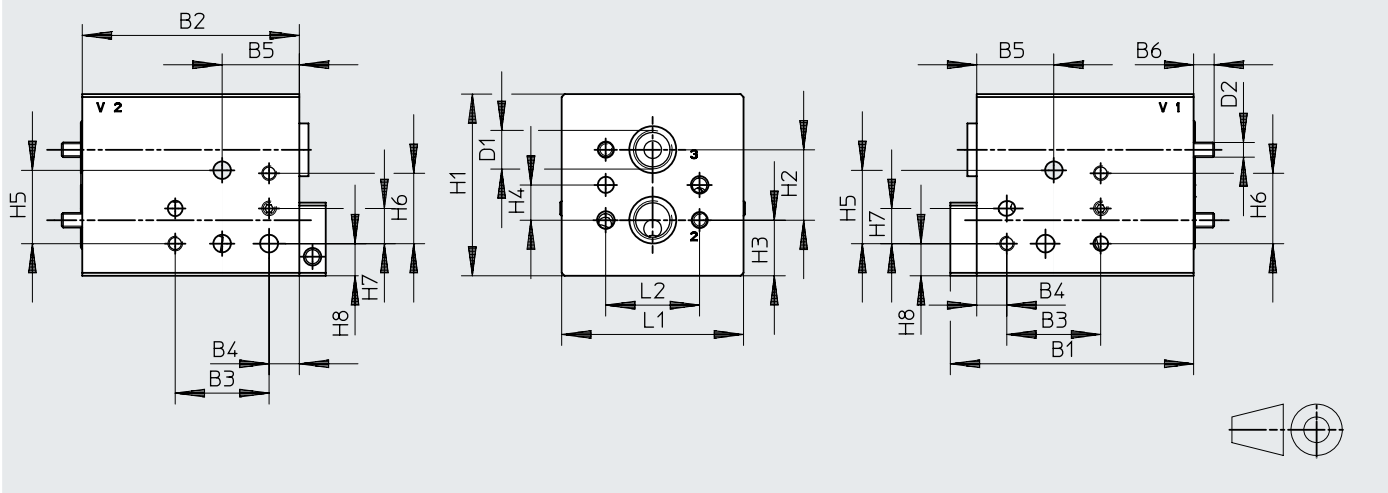
Mounting position: Any

Mounting: Via through-hole

Port pattern to NAMUR: VDI/VDE 3847

### Dimensions

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



### Dimensions [mm] and ordering data

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

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

1) 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 – Sub-base VABS-BE-BS-...

### Sub-base

Sub-base material: Ematal-coated aluminium

Material of seals: NBR

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

Operating pressure: 0 ... 10 bar

Mounting position: Any

Mounting: Via through-hole

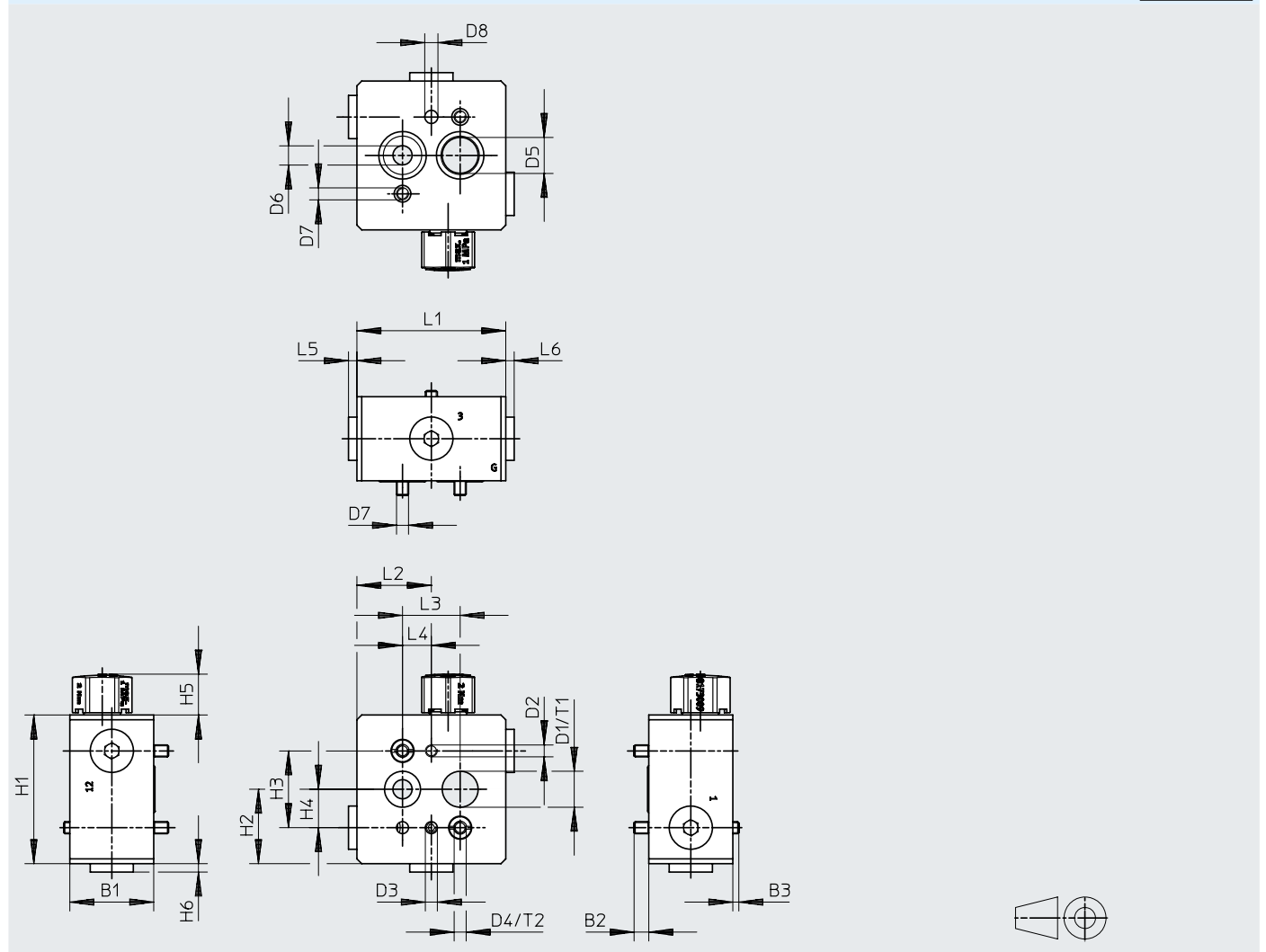
Port pattern to NAMUR: VDI/VDE 3845 for direct attachment

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

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

### Dimensions

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



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

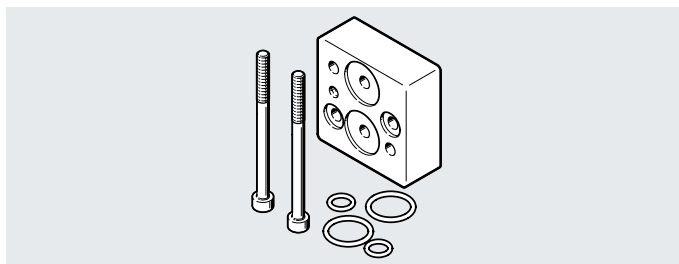
1) Corrosion resistance class CRC 4 to Festo standard FN 940070

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.

## Mounting plates

### Accessories – Mounting plate VAME-S7-P-N-...

Connection pattern: NAMUR



#### General technical data

Type of mounting	With through-hole		
Mounting position	Any		
Pneumatic connection	1	M5, connection pattern to NAMUR	
	2	Flange 1/4, connection pattern to NAMUR	
	3	G1/4	

#### Operating and environmental conditions

Operating medium	Compressed air to ISO 8573-1:2010 [---:--]		
Operating pressure range	[bar]	0 ... 10	
Operating pressure range	[psi]	0 ... 145	
Degree of protection	IP65 (in the installed state)		
Corrosion resistance class CRC <sup>1)</sup>	4		

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

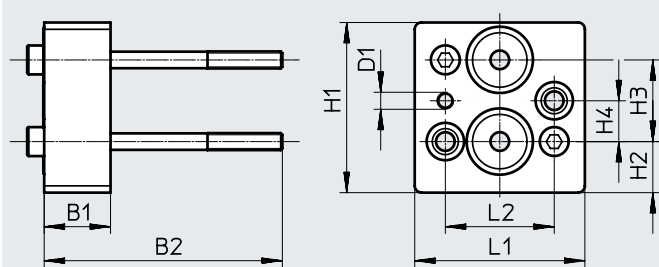
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests (→ also FN 940082), using appropriate media.

#### Materials

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

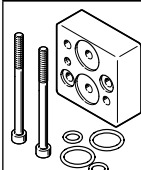
#### Dimensions

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



Type	B1	B2	D1	H1	H2	H3	H4	L1	L2
VAME-S7-P-N-V14-A	19.5	70	M5	50	15	24	12	50	32

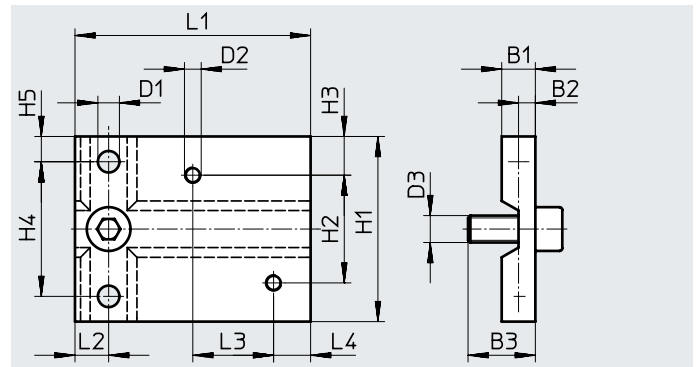
#### Ordering data

	Description	Part no.	Type
	Mounting/spacer plate for solenoid valves when combined with ATEX solenoid coils, with flange 1/4, connection pattern to NAMUR	<b>3581412</b>	<b>VAME-S7-P-N-V14-A</b>

## Accessories

### Mounting plate VAME-S7-P

Mounting plate material:  
Ematal-coated aluminium  
Seals material: NBR  
Contains paint-wetting impairment  
substances, RoHS-compliant  
Mounting: Via through-holes



#### Dimensions [mm] and ordering data

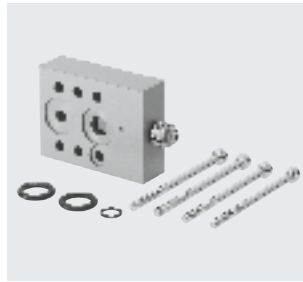
B1	B2	B3	D1	D2	D3	H1	H2	H3	H4	H5	L1	L2	L3	L4	CRC <sup>1)</sup>	Part no.	Type
10	5	20	6.4	M5	M8	55	32	11.5	40	7.5	70	10	24	11	4	563399	VAME-S7-P

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

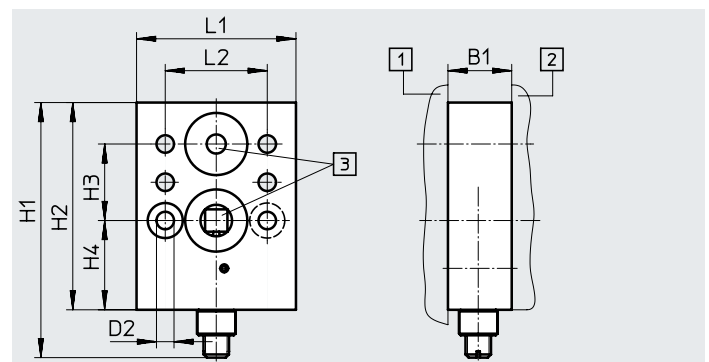
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests (→ also FN 940082), using appropriate media.

### 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-holes  
Degree of protection: IP65



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



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

#### Dimensions [mm] and ordering data

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

1) 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

### Sub-base

Mounting plate material: Ematal-coated aluminium

Seals material: NBR

Contains paint-wetting impairment substances, RoHS-compliant

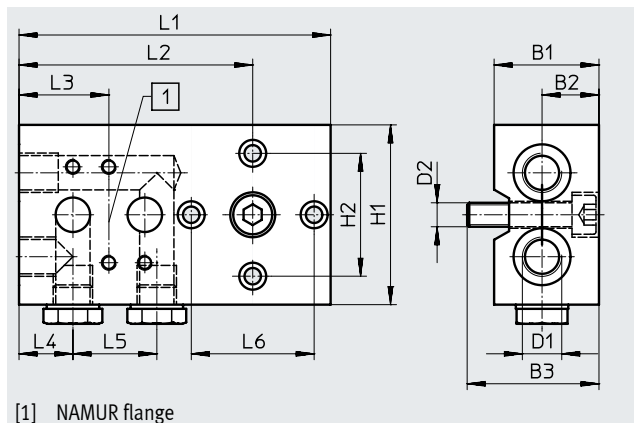
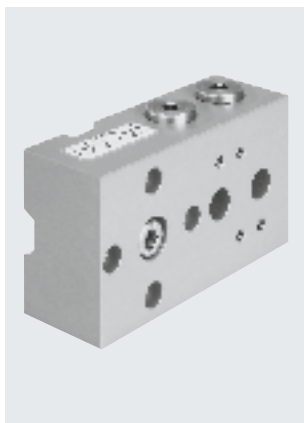
Operating medium: Compressed air to ISO 8573-1:2010 [7:-:-]

Operating pressure: 0 ... 10 bar

Mounting position: Any

Mounting: Via through-holes

Degree of protection: IP65



[1] NAMUR flange

#### Dimensions [mm] and ordering data

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

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

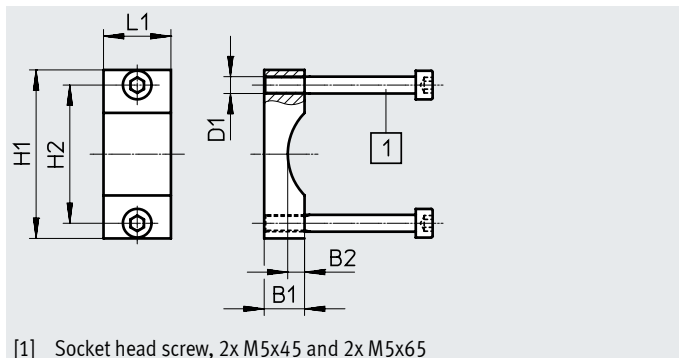
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by special tests (→ also FN 940082), using appropriate media.

### 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 <sup>1)</sup>	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.

## Accessories

### Adapter with filter

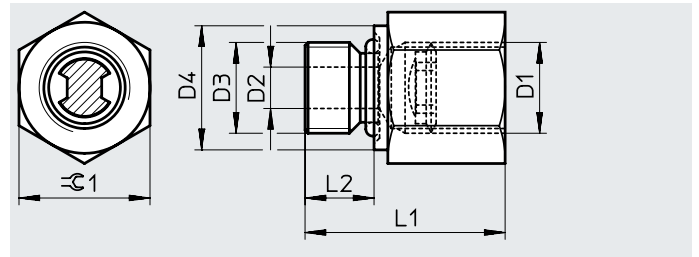
Adapter material: High-alloy stainless steel

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	$\varnothing 1$	CRC <sup>1)</sup>	Part no.	Type
1/4 NPT	6	G1/4	18	29	10	19	1	563397	NPFV-AF-G14-N14-MF
G1/4	6	G1/4	18	29	10	19	1	563398	NPFV-AF-G14-G14-MF
1/4 NPT	6	1/4 NPT	18	29	10	19	1	4727333	NPFV-AF-N14-N14-MF

1) 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

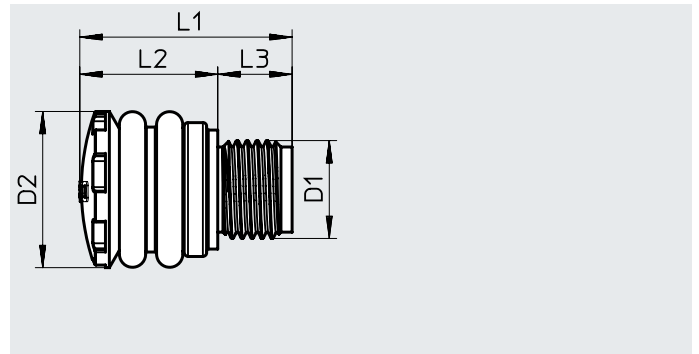
Contains paint-wetting impairment substances, RoHS-compliant

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

### Exhaust protection 1/2 NPT

Housing material: PA

Seals material: EPDM

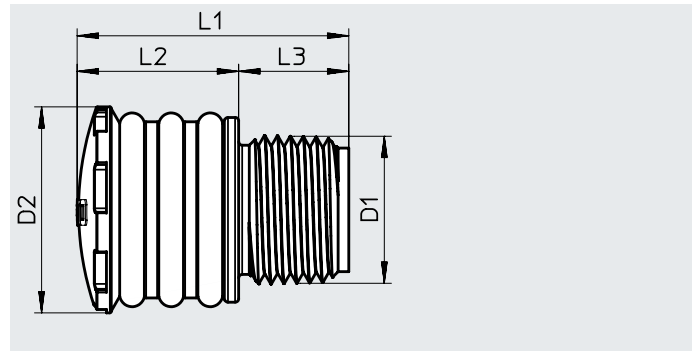
Contains paint-wetting impairment substances, RoHS-compliant

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



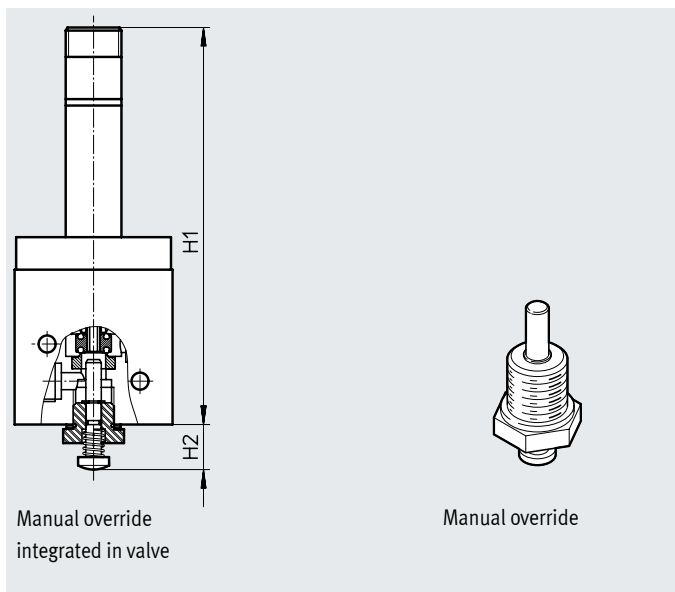
Dimensions [mm] and ordering data						
D1	D2	L1	L2	L3	Part no.	Type
G1/2, 1/2 NPT	29	38	23	15	3535104	VABD-D3-SN-N12

## Accessories

### Manual override

Housing material: Anodised aluminium  
 Contains paint-wetting impairment substances, RoHS-compliant  
 Actuation: Manual  
 Mounting position: Any

Function:  
 Manual override that can be retrofitted (VOFD-50T only) in version with spring return, acting directly on the valve seat.  
 The manual override can also be used only temporarily, e.g. during commissioning or inspections.

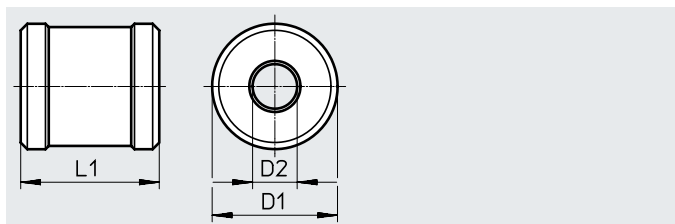


Dimensions [mm] and ordering data					
H1	H2	CRC <sup>1)</sup>	Part no.	Type	
128	14	3	563402	VAOH-S8	

1) Corrosion resistance class CRC 3 to Festo standard FN 940070  
 High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

### Manual override

Material: anodised aluminium  
 Contains paint-wetting impairment substances, RoHS-compliant  
 Function:  
 For manual override of basic valves in place of a solenoid coil.



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

1) 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	
<b>Connecting cable</b> <span style="float: right;">Data sheets → Internet: kmc</span>			
Operating voltage 24 V DC, switching status indication with LED Operating voltage up to 240 V AC	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
	Cable length 2.5 m	30932	KMC-1-230 AC-2,5
	Cable length 5 m	30934	KMC-1-230 AC-5
<b>Plug socket</b> <span style="float: right;">Data sheets → Internet: mssd</span>			
Cable connection using locking screws	34583	MSSD-C	