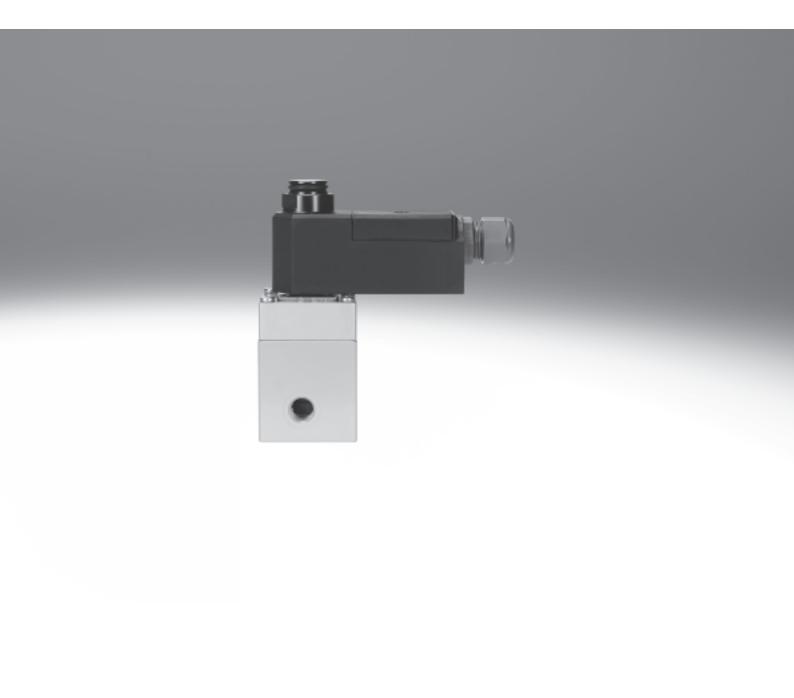
Valve series VOFC

FESTO



Key features

FESTO

General information

 The valves in the VOFC series are special 3/2-way and 5/2-way valves for process automation, for use within chemical and petrochemical systems, where they are frequently used as pilot valves for flaps 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 ventilation 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) report up to AK7/SIL-4.

Function, design

- 3/2-way or 5/2-way, single solenoid or double solenoid, depending on type.
- Piloted piston spool and piston poppet valves.

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 and gives the valves very high resistance to wear and abrasion as well as 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.

Flexible in function

- The valve is easily modified for internal or external pilot air using a screw.
- Depending on the required function, the pressure connection is established independently of the working pressure as a pressure or vacuum connection.

Economical

- One type, one part number for two functions.
- Internal and external pilot air function integrated in one valve.
- One valve, two connection options.
- Port pattern to Namur for direct mounting of a drive as well as G and NPT threaded connections.

VOFC - Basic valves



- 3/2-way, 5/2-way valves
- Connections G1/4, NPT1/4, G1/2
- Namur port pattern, optional with P channel

→ 6

VACC-S13 - Solenoid coils



- AC and DC voltage 24V, 110V, 230V
- Type of explosion protection Ex emb II, Ex ia IIC

→ 32

VOFC - Solenoid valves



- Combination of basic valve VOFD and S13 coil VACC
- 3/2-way, 5/2-way valves
- Type of explosion protection Ex emb II

→ 24

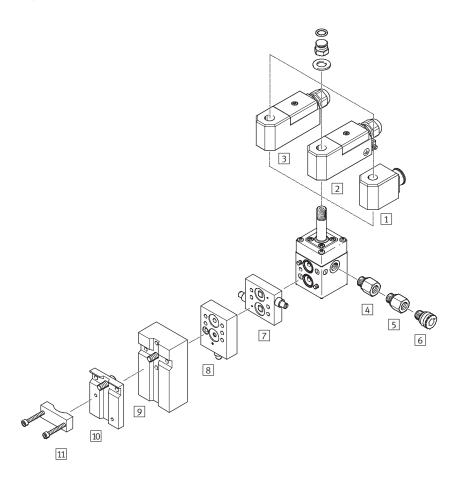
VOFC – Accessories



- Throttle plate
- Mounting plate
- Adapter with filter
- Hand lever

→ 37

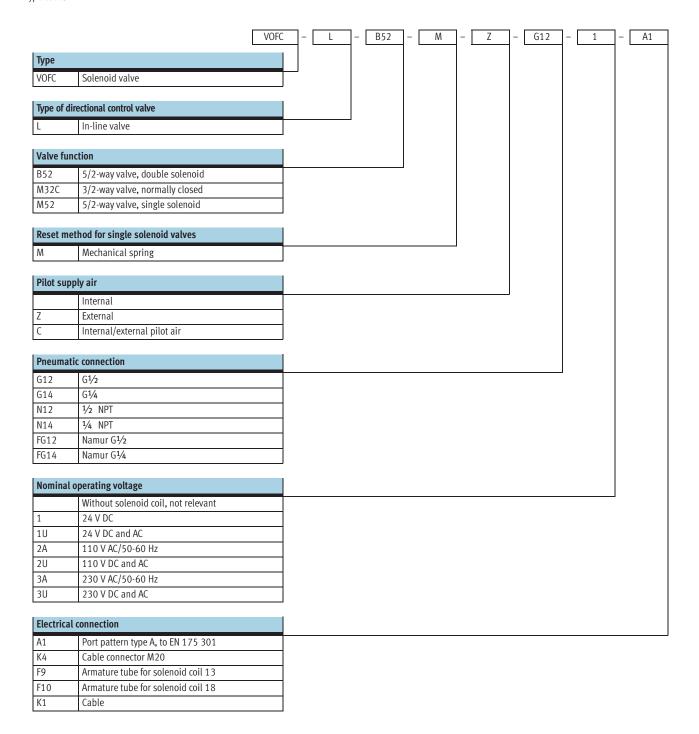
Peripherals overview



| Mou | inting attachments and access | ories | |
|-----|-------------------------------|--|-----------------|
| | | Brief description | → Page/Internet |
| 1 | Solenoid coil | Standard magnet | 32 |
| | VACC-S13 | | |
| 2 | Solenoid coil | Ex-me magnet | 33 |
| | VACC-S13-me | | |
| 3 | Solenoid coil | Ex-ia magnet | 35 |
| | VACC-S13-A | | |
| 4 | Adapter | Adapter from G1/4 to NPT 1/4, with filter | 39 |
| | NPFV-AF-G14-N14-MF | | |
| 5 | Adapter | Adapter from G1/4 to G1/4, with filter | 39 |
| | NPFV-AF-G14-G14-MF | | |
| 6 | Exhaust protection | Exhaust protection to IP65. The spring chamber of drive 8 solenoid valve is protected against | 40 |
| | VABD-D3-SN-G14 | the ingress of aggressive ambient air and water by the one-way flow control system | |
| 7 | Flow control plate | Exhaust air flow control plate for Namur interface for installation between the solenoid valve | 37 |
| | VABF-S7-F1B1P2-F | and double-acting drives | |
| 8 | Flow control plate | Exhaust air flow control plate for Namur interface for installation between the solenoid valve | 37 |
| | VABF-S7-F1B5P1-F | and single-acting drives | |
| 9 | Connection plate kit | Mounting plate for attaching the valve to a Namur rib | 38 |
| | VABF-S7-S-G14 | | |
| 10 | Mounting plate | Mounting plate for attaching the valve to a Namur rib | 38 |
| | VAME-S7-P | | |
| 11 | Mounting bracket | Alternative option (instead of screw) of attaching the valve to a Namur rib | 39 |
| | VAME-S7-Y | with the help of a mounting bracket | |

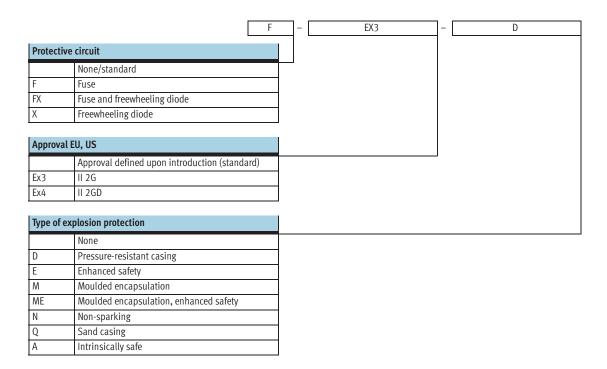
Solenoid valves VOFC FESTO

Type codes





Type codes

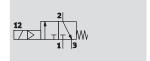


Basic valves VOFC

FESTO

Technical data – 3/2-way valves, G½ and Namur

Function 3/2-way valve Temperature range $-25 \dots +60 \, ^{\circ}\text{C}$



Flow rate 600 l/min



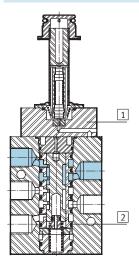
| General technical data | | | | | | |
|-----------------------------|---|---------------------|-------------------------|-----------------|---------------------|-------------------|
| | | | G1/4 basic valve, | G½ Exi variant, | G¹⁄4 basic valve, | G¹⁄4 basic valve, |
| | | | Namur | for low ratings | Namur, P connection | for low ratings |
| Valve function | | | 3/2-way closed, single | solenoid | | |
| Pneumatic connection | 1 | | G1/4 | | Namur port pattern | |
| | 2 | | G1/4 and Namur port pa | attern | | |
| | 3 | | G1/4 | | | |
| | 4 | | G1/4 and Namur port pa | attern | | |
| Design | | | Piloted piston poppet v | alve | | |
| Width | | [mm] | 51 | | | |
| Mounting position | | | Any | | | |
| Duty cycle | | | 100% | | | |
| Sealing principle | | | Soft | | | |
| Manual override | | | None | | | |
| Reset method | | | Mechanical spring | | | |
| Actuation type | | | Electrical | | | |
| Type of control | | | Piloted | | | |
| Pilot air supply | | | Internal | | | |
| Flow rate Kv pressurisation | | [m ³ /h] | 0.5 | | | |
| Flow rate Kv exhausting | | [m ³ /h] | 0.65 | | | |
| Direction of flow | | | Non-reversible | | | |
| Product weight | | [g] | 600 | | 550 | |
| Response time off | | [ms] | 12 | | | |
| Response time on | | [ms] | 20 | | | <u> </u> |
| Nominal size | | [mm] | 6 | | | |
| Standard nominal flow rate | | [l/min] | 600 | | | |

| Operating and environmental conditions | | | | | | |
|--|---|------------------------|---|--|--------------------------------------|--|
| | | | G ¹ / ₄ Exi variant, for low ratings | G1/4 basic valve, Namur, P connection | G1/4 basic valve, for low ratings | |
| Operating medium | Compressed air in accordance with ISO 8573-1:2010 [-:-:-] | | | | | |
| Protection class | | IP65 | | | | |
| Operating pressure range | [bar] | 2 8 | | | | |
| Temperature of medium | [°C] | -25 +60 | | | | |
| Ambient temperature | [°C] | -25 +60 | | | | |
| Safety integrity level | [SIL] | Up to SIL 4 Low Demand | l mode | | | |
| | | Up to SIL 4 High Deman | d mode | | | |
| Corrosion resistance class CRC ¹⁾ | | 4 | | | | |

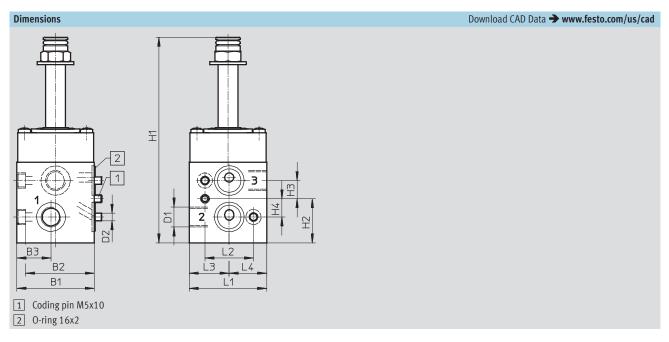
¹⁾ Corrosion resistance class 4 according to Festo standard 940 070 Components with very heavy corrosion exposure. Components in contact with aggressive media, e.g. in food or chemical industries. These applications must, if necessary, be verified by special tests with the media concerned.

Technical data – 3/2-way valves, G½ and Namur

Materials



| Sole | noid valves | | , | G½ basic valve, Namur, P connection | G½ basic valve, for low ratings | | |
|------|-------------------|---|---|--|------------------------------------|--|--|
| 1 | Housing | Hard Ematal-anodised aluminium | | | | | |
| 2 | Seals | Nitrile rubber | | | | | |
| - | Note on materials | Contains PWIS (paint-wetting impairment substances), RoHS-compliant | | | | | |



| Туре | B1 | B2 | В3 | D1 | D2 | H1 | H2 | Н3 | H4 | L1 | L2 | L3 | L4 |
|--|----|------|------|------|----|-------|----|----|----|----|----|------|------|
| VOFC-L-M32C-M-FG14-F9 VOFC-L-M32C-M-FG14-F9-A | 51 | 45.3 | 22.5 | G1/4 | M5 | 135.3 | 29 | 12 | 12 | 51 | 32 | 26.3 | 24.7 |

VOFC-L-M32C-M-FGP14-F9

VOFC-L-M32C-M-FGP14-F9-A

51

45.3

22.5

4.7

Namur G1/4

M5

133.4

29

12

12

51

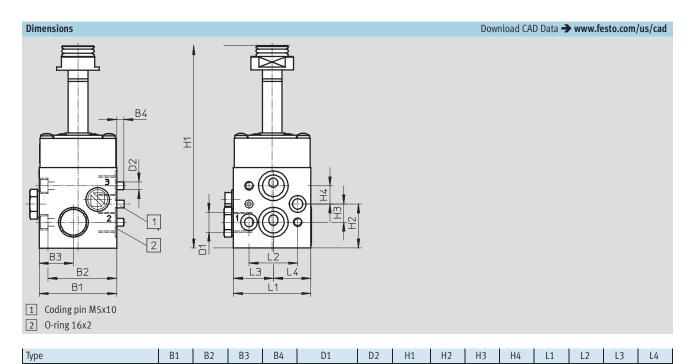
32

26.3

24.7

FESTO

Technical data – 3/2-way valves, G½ and Namur



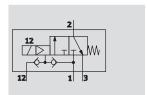
Basic valves VOFC

Technical data – 3/2-way valves, G½

FESTO

Function 3/2-way valve

Temperature range $-25 \dots +60 \, ^{\circ}\text{C}$



Flow rate 600 l/min



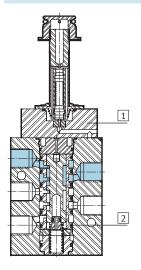
| General technical data | | | | | | | | |
|------------------------------|---------------|---------------------|----------------------|------------------|-----------------|------------------------|--|--|
| Туре | | | G1/4 basic valve | G1/4 Exi variant | NPT basic valve | NPT Exi variant | | |
| Valve function | | | 3/2-way closed, sing | le solenoid | | | | |
| Pneumatic connection 1 | | G1/4 | G1/4 | NPT1/4-18 | NPT1/4-18 | | | |
| | 2 | | G1/4 | G1/4 | - | - | | |
| | 2 | | - | - | NPT1/4-18 | NPT1/4-18 | | |
| | 3 | | G1/4 | G1/4 | NPT1/4-18 | NPT1/4-18 | | |
| | 4 | | G1/4 | G1/4 | - | - | | |
| | 4 | | - | - | NPT1/4-18 | NPT ¹ /4-18 | | |
| Design | | | Piloted piston poppe | et valve | | | | |
| Width | | [mm] | 51 | | | | | |
| Mounting position | | | Any | | | | | |
| Duty cycle | | | 100% | | | | | |
| Sealing principle | | | Soft | | | | | |
| Manual override | | | None | | | | | |
| Reset method | | | Mechanical spring | | | | | |
| Actuation type | | | Electrical | | | | | |
| Type of control | | | Piloted | | | | | |
| Pilot air supply | | | Internal, external | | | | | |
| Flow rate for piston valve p | ressurisation | [m ³ /h] | 0.72 | | | | | |
| | | | 1.38 | | | | | |
| Direction of flow | | | Non-reversible | | | | | |
| Product weight | | [g] | 550 | | | | | |
| Response time off | | [ms] | 12 | | | | | |
| Response time on [ms] | | | 20 | | | | | |
| Nominal size | | [mm] | 6 | | | | | |
| Standard nominal flow rate | 9 | [l/min] | 900 | | | | | |

| Operating and environmental conditions | | | | | |
|--|-------|---------------------|--------------------------|------------------|-----------------|
| Туре | | G1/4 basic valve | G1/4 Exi variant | NPT basic valve | NPT Exi variant |
| Operating medium | | Compressed air in a | accordance with ISO 8573 | 3-1:2010 [-:-:-] | |
| Protection class | | IP65 | | | |
| Operating pressure range | [bar] | 2 8 | | | |
| External operating pressure range | [bar] | 0 8 | | | |
| Temperature of medium | [°C] | -25 +60 | | | |
| Ambient temperature | [°C] | -25 +60 | | | |
| Safety integrity level | [SIL] | Up to SIL 4 Low Der | nand mode | | |
| | | Up to SIL 4 High De | mand mode | | |
| Corrosion resistance class CRC ¹⁾ | | 4 | | | |

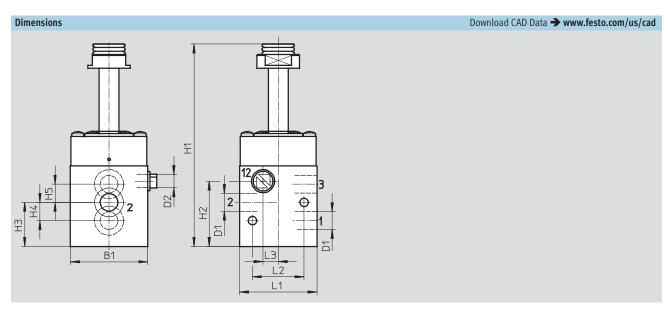
¹⁾ Corrosion resistance class 4 according to Festo standard 940 070 Components with very heavy corrosion exposure. Components in contact with aggressive media, e.g. in food or chemical industries. These applications must, if necessary, be verified by special tests with the media concerned.

Technical data – 3/2-way valves, G1/4

Materials



| Solenoid valves | G1/4 basic valve G1/4 Exi variant NPT basic valve NPT Exi variant | | | | | | |
|---------------------------------------|---|--|--|--|--|--|--|
| 1 Housing | Hard Ematal-anodised aluminium | | | | | | |
| 2 Seals | Nitrile rubber | | | | | | |
| Note on materials | Contains PWIS (paint-wetting impairment substances), RoHS-compliant | | | | | | |



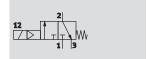
| Туре | B1 | D1 | D2 | H1 | H2 | Н3 | H4 | H5 | L1 | L2 | L3 |
|-------------------------|----|------|-------------------|-----|----|----|----|----|----|----|----|
| VOFC-L-M32C-MC-G14-F9 | | | | | | | | | | | |
| VOFC-L-M32C-MC-G14-F9-A | 51 | G1/4 | G ¹ /8 | 133 | 43 | 29 | 12 | 12 | 51 | 34 | 10 |
| VOFC-L-M32C-MC-N14-F9 |)1 | 0 /4 | 078 | 133 | 77 | 23 | 12 | 12 | 71 | 77 | 10 |
| VOFC-L-M32C-MC-N14-F9-A | | | | | | | | | | | |

Basic valves VOFC FESTO

Technical data − 3/2-way valves, G½ and Namur

Function 3/2-way valve

Temperature range $-25 \dots +60 \, ^{\circ}\text{C}$



Flow rate 3,000 l/min



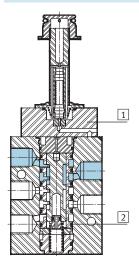
| General technical data | | | |
|---|---------------------|---------------------------------|----------------|
| | | G½ basic valve | G½ Exi variant |
| Valve function | | 3/2-way closed, single solenoid | |
| Pneumatic connection 1 | | G½ | |
| 2 | | G½ and Namur port pattern | |
| 3 | | G½ | |
| 4 | | G½ and Namur port pattern | |
| Design | | Piloted piston poppet valve | |
| Width | [mm] | 51 | |
| Mounting position | | Any | |
| Duty cycle | | 100% | |
| Sealing principle | | Soft | |
| Manual override | | None | |
| Reset method | | Mechanical spring | |
| Actuation type | | Electrical | |
| Type of control | | Piloted | |
| Pilot air supply | | Internal | |
| Flow rate for piston valve pressurisation | [m ³ /h] | 3.8 | |
| Direction of flow | | Non-reversible | |
| Product weight | [g] | 880 | |
| Response time off | [ms] | 14 | |
| Response time on | [ms] | 25 | |
| Nominal size | [mm] | 12 | |
| Standard nominal flow rate | [l/min] | 3,000 | <u> </u> |

| Operating and environmental conditions | | | | | | | |
|--|-------|--------------------------------|---|--|--|--|--|
| | | G½ basic valve | G¹∕₂ Exi variant | | | | |
| Operating medium | | Compressed air in accordance v | Compressed air in accordance with ISO 8573-1:2010 [-:-:-] | | | | |
| Protection class | | IP65 | | | | | |
| Operating pressure range | [bar] | 2 8 | | | | | |
| Temperature of medium | [°C] | -25 +60 | | | | | |
| Ambient temperature | [°C] | -25 +60 | | | | | |
| Corrosion resistance class CRC ¹⁾ | | 4 | | | | | |

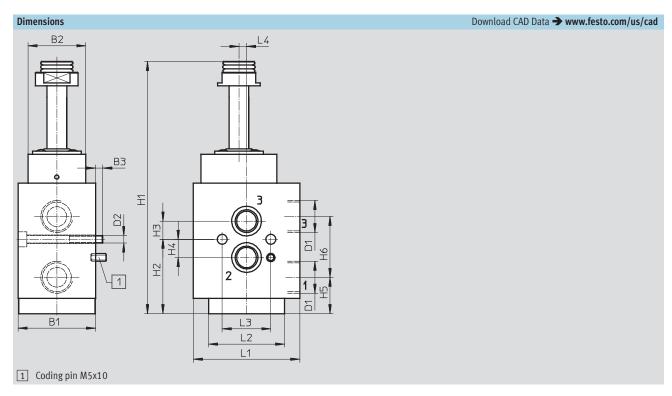
¹⁾ Corrosion resistance class 4 according to Festo standard 940 070 Components with very heavy corrosion exposure. Components in contact with aggressive media, e.g. in food or chemical industries. These applications must, if necessary, be verified by special tests with the media concerned.

Technical data – 3/2-way valves, G1∕2 and Namur

Materials



| Solenoid valves | G½ basic valve | G½ Exi variant | | | |
|---|--------------------------------|----------------|--|--|--|
| 1 Housing | Hard Ematal-anodised aluminium | | | | |
| 2 Seals | Nitrile rubber | | | | |
| - Note on materials Contains PWIS (paint-wetting impairment substances), RoHS-compliant | | | | | |



| Туре | B1 | B2 | В3 | D1 | D2 | H1 | H2 | Н3 | H4 | H5 | Н6 | L1 | L2 | L3 | L4 |
|-------------------------|----|----|-----|------|------|-----|----|-----|----|-----|----|----|----|----|----|
| VOFC-L-M32C-M-FG12-F9 | Г1 | 20 | 4.7 | G1/2 | M5 | 166 | 49 | 1.2 | 12 | 2.4 | 40 | 70 | Ε0 | 22 | - |
| VOFC-L-M32C-M-FG12-F9-A | 51 | 36 | 4./ | G-72 | INIO | 166 | 49 | 12 | 12 | 24 | 40 | 70 | 50 | 32 |) |

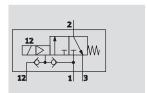
Basic valves VOFC

Technical data – 3/2-way valves, G½

FESTO

Function 3/2-way valve

Temperature range $-25 \dots +60 \, ^{\circ}\text{C}$



Flow rate 3,000 l/min



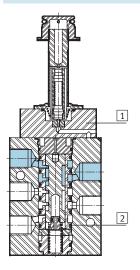
| General technical data | | | | | | | |
|---|---------------------|---------------------------------|----------------|--|--|--|--|
| | | G½ basic valve | G½ Exi variant | | | | |
| Valve function | | 3/2-way closed, single solenoid | | | | | |
| Pneumatic connection 1 | | G ¹ / ₂ | | | | | |
| 2 | | G1/2 | | | | | |
| 3 | | G1/2 | | | | | |
| 4 | | G1/2 | | | | | |
| Design | | Piloted piston poppet valve | | | | | |
| Width | [mm] | 51 | | | | | |
| Mounting position | | Any | | | | | |
| Duty cycle | | 100% | | | | | |
| Sealing principle | | Soft | | | | | |
| Manual override | | None | | | | | |
| Reset method | | Mechanical spring | | | | | |
| Actuation type | | Electrical | | | | | |
| Type of control | | Piloted | | | | | |
| Pilot air supply | | Internal, external | | | | | |
| Flow rate for piston valve pressurisation | [m ³ /h] | 3.8 | | | | | |
| Direction of flow | | Non-reversible | | | | | |
| Product weight | [g] | 880 | | | | | |
| Response time off | [ms] | 14 | | | | | |
| Response time on | [ms] | 25 | | | | | |
| Nominal size | [mm] | 12 | | | | | |
| Standard nominal flow rate | [l/min] | 3,000 | | | | | |

| Operating and environmental conditions | | | | | | | | |
|--|-------|---|-------------|--|--|--|--|--|
| | | Basic valve | Exi variant | | | | | |
| Operating medium | | Compressed air in accordance with ISO 8573-1:2010 [-:-:-] | | | | | | |
| Protection class | | IP65 | | | | | | |
| Operating pressure range | [bar] | 2 8 | | | | | | |
| External operating pressure range | [bar] | 0 8 | | | | | | |
| Temperature of medium | [°C] | -25 +60 | | | | | | |
| Ambient temperature | [°C] | -25 +60 | | | | | | |
| Corrosion resistance class CRC ¹⁾ | | 4 | | | | | | |

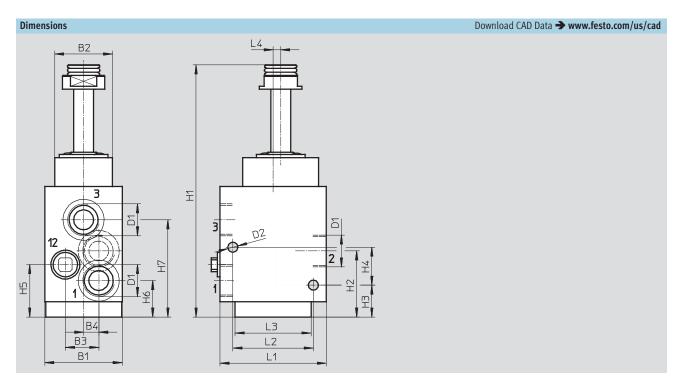
¹⁾ Corrosion resistance class 4 according to Festo standard 940 070 Components with very heavy corrosion exposure. Components in contact with aggressive media, e.g. in food or chemical industries. These applications must, if necessary, be verified by special tests with the media concerned.

Technical data -3/2-way valves, $G^{1/2}$

Materials



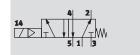
| Solenoid valves | G½ basic valve | G½ Exi variant | | | | | |
|---------------------------------------|---|----------------|--|--|--|--|--|
| 1 Housing | Hard Ematal-anodised aluminium | | | | | | |
| 2 Seals | Nitrile rubber | | | | | | |
| Note on materials | Contains PWIS (paint-wetting impairment substances), RoHS-compliant | | | | | | |



| Туре | B1 | B2 | В3 | B4 | D1 | D2 | H1 | H2 | Н3 | H4 | H5 | L1 | L2 | L3 | L4 |
|-------------------------|----|----|----|----|-------------------------------|-----|-----|------|----|----|------|----|----|----|----|
| VOFC-L-M32C-MC-G12-F9 | 51 | 37 | 22 | 10 | G ¹ / ₂ | 6.5 | 166 | 43.5 | 21 | 25 | 34.5 | 70 | 53 | 50 | 5 |
| VOFC-L-M32C-MC-G12-F9-A | 51 | 37 | 22 | 10 | 0-72 | 6.5 | 100 | 43.5 | 21 | 25 | 54.5 | 70 |)) | 50 |) |

Technical data -5/2-way valves, $G^{1}/4$ and Namur

Function 5/2-way valve Temperature range $-25 \dots +60 \, ^{\circ}\text{C}$



Flow rate 750 l/min



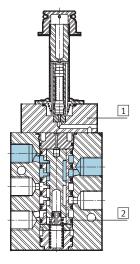
| General technical data | | | | | | | | |
|-------------------------------|------------------------|---------------------|--|------------------|--|--|--|--|
| | | | G1/4 basic valve | G¹⁄₄ Exi variant | | | | |
| Valve function | | | 5/2-way, single solenoid | | | | | |
| Pneumatic connection | Pneumatic connection 1 | | G ¹ / ₄ | | | | | |
| | 2 | | G¼ and Namur port pattern | | | | | |
| | 3 | | G1/4 | | | | | |
| | 4 | | G ¹ / ₄ and Namur port pattern | | | | | |
| Design | | | Hard piston spool valve | | | | | |
| Mounting position | | | Any | | | | | |
| Width | | [mm] | 40 | | | | | |
| Duty cycle | | | 100% | | | | | |
| Sealing principle | | | Hard | | | | | |
| Manual override | | | None | | | | | |
| Reset method | | | Mechanical spring | | | | | |
| Actuation type | | | Electrical | | | | | |
| Type of control | | | Piloted | | | | | |
| Pilot air supply | | | Internal | | | | | |
| Flow rate for piston valve pr | ressurisation | [m ³ /h] | 0.65 | | | | | |
| Direction of flow | | | Non-reversible | | | | | |
| Product weight | | [g] | 620 | | | | | |
| Response time off | Response time off [ms] | | 40 | | | | | |
| Response time on | | [ms] | 24 | | | | | |
| Nominal size | | [mm] | 6 | | | | | |
| Standard nominal flow rate | | [l/min] | 750 | | | | | |

| Operating and environmental conditions | | | | | | | | |
|--|-------|---|------------------|--|--|--|--|--|
| | | G1/4 basic valve | G1/4 Exi variant | | | | | |
| Operating medium | | Compressed air in accordance with ISO 8573-1:2010 [-:-:-] | | | | | | |
| Protection class | | IP65 | | | | | | |
| Operating pressure range | [bar] | 2 8 | 28 | | | | | |
| Temperature of medium | [°C] | -25 +60 | | | | | | |
| Ambient temperature | [°C] | -25 +60 | | | | | | |
| Corrosion resistance class CRC ¹⁾ | | 4 | | | | | | |

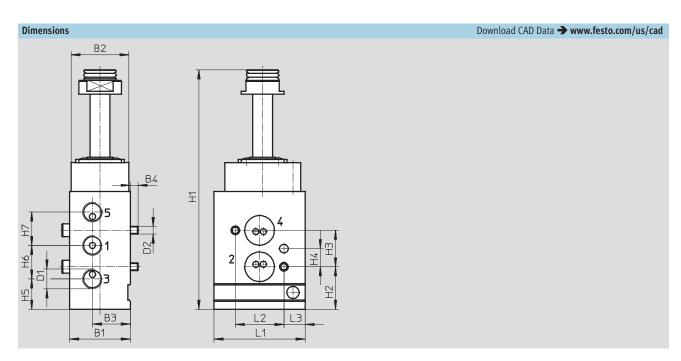
¹⁾ Corrosion resistance class 4 according to Festo standard 940 070 Components with very heavy corrosion exposure. Components in contact with aggressive media, e.g. in food or chemical industries. These applications must, if necessary, be verified by special tests with the media concerned.

Technical data – 5/2-way valves, G1/4 and Namur

Materials



| Solenoid valves | G1/4 basic valve | G1⁄4 Exi variant | | | | | |
|---------------------------------------|---|------------------|--|--|--|--|--|
| 1 Housing | Hard Ematal-anodised aluminium | | | | | | |
| 2 Seals | Nitrile rubber | | | | | | |
| Note on materials | Contains PWIS (paint-wetting impairment substances), RoHS-compliant | | | | | | |



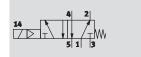
| Туре | B1 | B2 | В3 | B4 | D1 | D2 | H1 | H2 | Н3 | H4 | H5 | Н6 | H7 | L1 | L2 | L3 |
|------------------------|----|----|-----|----|-------|----|-----|----|-----|----|----|----|----|----|----|-----|
| VOFC-L-M52-M-FG14-F9 | 40 | 38 | 2.5 | г | G1/4 | ME | 158 | 20 | 2.6 | 12 | 20 | 22 | 22 | 60 | 22 | 1 / |
| VOFC-L-M52-M-FG14-F9-A | 40 | 20 | 25 |) | G 7/4 | M5 | 100 | 20 | 24 | 12 | 20 | 22 | 22 | 60 | 32 | 14 |

Basic valves VOFC

FESTO

Technical data – 5/2-way valves, G1/4

Function 5/2-way valve Temperature range $-25 \dots +60 \, ^{\circ}\text{C}$



Flow rate 850 l/min



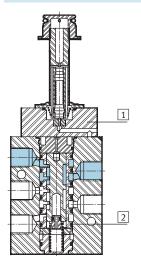
| General technical data | | | |
|---|---------------------|-------------------------|------------------|
| | | G1/4 basic valve | G1/4 Exi variant |
| Valve function | | 5/2-way single solenoid | |
| Pneumatic connection 1 | | G1/4 | |
| 2 | | G1/4 | |
| 3 | | G1/4 | |
| 4 | | G1/4 | |
| Design | | Hard piston spool valve | |
| Mounting position | | Any | |
| Width | [mm] | 40 | |
| Duty cycle | | 100% | |
| Sealing principle | | Hard | |
| Manual override | | None | |
| Reset method | | Mechanical spring | |
| Actuation type | | Electrical | |
| Type of control | | Piloted | |
| Pilot air supply | | Internal | |
| Flow rate for piston valve pressurisation | [m ³ /h] | 0.65 | |
| Direction of flow | | Non-reversible | |
| Product weight | [g] | 620 | |
| Response time off | [ms] | 40 | |
| Response time on | [ms] | 24 | |
| Nominal size | [mm] | 6 | · |
| Standard nominal flow rate | [l/min] | 850 | |

| Operating and environmental conditions | | | | | | | |
|--|-------|---|------------------|--|--|--|--|
| | | G1/4 basic valve | G¹⁄₄ Exi variant | | | | |
| Operating medium | | Compressed air in accordance with ISO 8573-1:2010 [-:-:-] | | | | | |
| Protection class | | IP65 | | | | | |
| Operating pressure range | [bar] | 2 8 | | | | | |
| Temperature of medium | [°C] | -25 +60 | | | | | |
| Ambient temperature | [°C] | -25 +60 | | | | | |
| Corrosion resistance class CRC ¹⁾ | | 4 | | | | | |

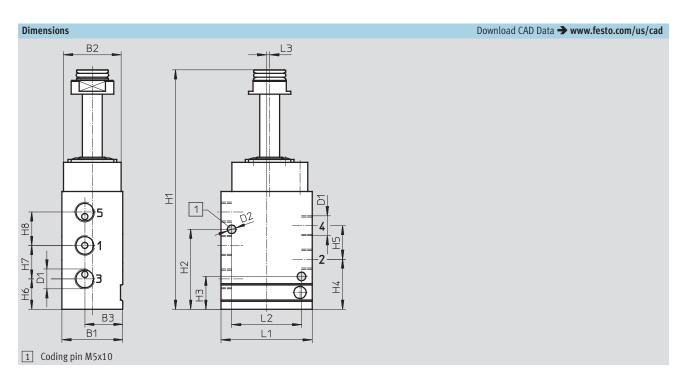
¹⁾ Corrosion resistance class 4 according to Festo standard 940 070 Components with very heavy corrosion exposure. Components in contact with aggressive media, e.g. in food or chemical industries. These applications must, if necessary, be verified by special tests with the media concerned.

Technical data – 5/2-way valves, G1/4

Materials



| Solenoid valves | G1/4 basic valve | G1⁄4 Exi variant | | | | | |
|---------------------------------------|---|------------------|--|--|--|--|--|
| 1 Housing | Hard Ematal-anodised aluminium | | | | | | |
| 2 Seals | Nitrile rubber | | | | | | |
| Note on materials | Contains PWIS (paint-wetting impairment substances), RoHS-compliant | | | | | | |



| Туре | B1 | B2 | В3 | D1 | D2 | H1 | H2 | Н3 | H4 | H5 | Н6 | H7 | Н8 | L1 | L2 |
|----------------------|----|----|----|------|------|-----|------|------|----|----|----|----|----|----|----|
| VOFC-L-M52M-G14-F9 | 40 | 20 | 25 | C1/4 | M5 | 158 | E2 6 | 21.6 | 22 | 22 | 20 | 22 | 22 | 60 | 46 |
| VOFC-L-M52M-G14-F9-A | 40 | 00 | 20 | G1/4 | INIO | 100 | 32.0 | 21.0 |)) | 22 | 20 | 22 | 22 | 00 | 40 |

Basic valves VOFC

FESTO

Technical data – 5/2-way valves, G½, NAMUR

Function 5/2-way valve

14 4 2 12 511 3

Temperature range $-25 \dots +60 \, ^{\circ}\text{C}$

Flow rate

750, 850 l/min



| General technical data | | | | | | |
|--------------------------------|--------------|---------------------|------------------------|-----------|----------|------|
| | | | G½, NAMUR | G½, NAMUR | G1/4 | G1/4 |
| Valve function | | | 5/2-way, double solen | oid | | |
| Pneumatic connection | 1 | | G1/4 | | | |
| | 2 | | NAMUR port pattern | | G1/4 | |
| | 3 | | G1/4 | | <u>.</u> | |
| | 4 | | NAMUR port pattern | | G1/4 | |
| Design | | | Hard piston spool valv | e | | |
| Mounting position | | | Any | | | |
| Width | | [mm] | 40 | | | |
| Duty cycle | | [%] | 100 | | | |
| Sealing principle | | | Hard | | | |
| Manual override | | | None | | | |
| Actuation type | | | Electric | | | |
| Type of control | | | Piloted | | | |
| Pilot air supply | | | Internal | | | |
| Flow rate for piston valve pre | essurisation | [m ³ /h] | 0.65 | | | |
| Flow rate for piston valve exh | nausting | [m ³ /h] | 0.65 | | | |
| Direction of flow | | | Non-reversible | | | |
| Product weight | | [g] | 790 | | | |
| Switching time off | | [ms] | 40 | | 20 | |
| Switching time on | | [ms] | 24 | | 20 | |
| Max. switching frequency | | [Hz] | 1 | | | |
| Nominal size | | [mm] | 6 | | | |
| Standard nominal flow rate | | [l/min] | 750 | | 850 | |

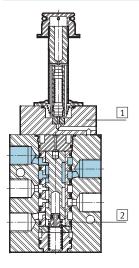
| Operating and environmental conditions | | | | | | | | | | | |
|--|-------|---|-----------|------|------|--|--|--|--|--|--|
| | | G½, NAMUR | G½, NAMUR | G1/4 | G1/4 | | | | | | |
| Operating medium | | Compressed air in accordance with ISO 8573-1:2010 [-:-:-] | | | | | | | | | |
| Protection class | | IP65 | | | | | | | | | |
| Operating pressure range | [bar] | 28 | | | | | | | | | |
| Temperature of medium | [°C] | -25 +60 | | | | | | | | | |
| Ambient temperature | [°C] | -25 +60 | | | | | | | | | |
| 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 VOFC FESTO

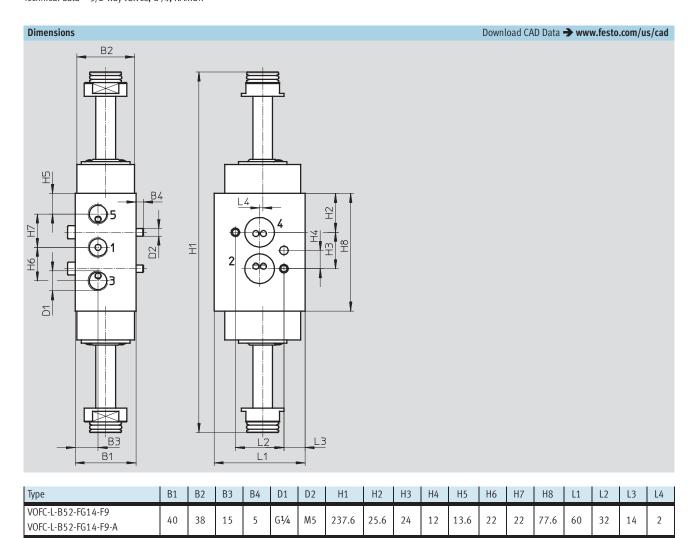
Technical data – 5/2-way valves, G1/4, NAMUR

Materials



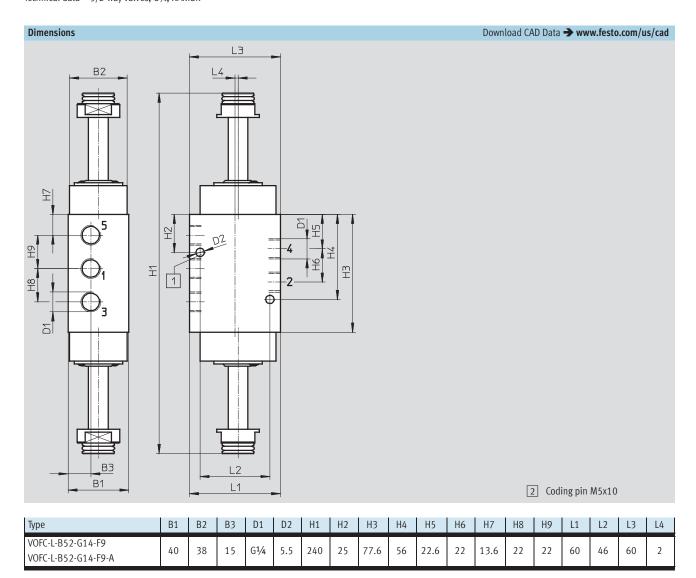
| Solenoi | d valves | G½, NAMUR | G½, NAMUR | G ¹ / ₄ | G ¹ / ₄ | | | | | | | | |
|---------|------------------|---|-----------------------------|-------------------------------|-------------------------------|--|--|--|--|--|--|--|--|
| 1 H | ousing | Hard Ematal-anodised alumin | l Ematal-anodised aluminium | | | | | | | | | | |
| 2 Se | eals | NBR | BR | | | | | | | | | | |
| - No | ote on materials | Contains PWIS (paint-wetting impairment substances), RoHS-compliant | | | | | | | | | | | |

Technical data – 5/2-way valves, G½, NAMUR



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Technical data – 5/2-way valves, G1/4, NAMUR



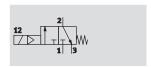
Technical data

| Ordering data | | | | | |
|---|------------------|---|--------------------|----------|--------------------------------|
| Circuit symbol | Function | Pneumatic connection | Pilot air supply | Part No. | Туре |
| In-line valve | | | | I | |
| | 3/2-way, closed, | G ¹ / ₄ and NAMUR | Internal | 562 857 | VOFC-L-M32C-M-FG14-F9 |
| 12 1 | single solenoid | | | 562 858 | VOFC-L-M32C-M-FG14-F9-A |
| 1 3 | | | | | |
| | | | | | |
| | | G½ and NAMUR, | | 570 787 | VOFC-L-M32C-M-FGP14-F9 |
| | | P connection | | | |
| | | G1/4 and NAMUR, | | 570 788 | VOFC-L-M32C-M-FGP14-F9-A |
| | | P connection | | | |
| | T-/ | Last | Transaction of | 1 | |
| •1 | 3/2-way, closed, | G ¹ / ₄ | Internal, external | 562 859 | VOFC-L-M32C-MC-G14-F9 |
| 2 | single solenoid | | Internal, external | 562 860 | VOFC-L-M32C-MC-G14-F9-A |
| | | | Internal, external | 562 861 | VOFC-L-M32C-MC-N14-F9 |
| | | | Internal, external | 562 862 | VOFC-L-M32C-Mc-N14-F9-A |
| 12 1 3 | | | | | |
| | | | | | |
| | 3/2-way, closed, | G½ and NAMUR | Internal | 562 863 | VOFC-L-M32C-M-FG12-F9 |
| 12 4 | single solenoid | 6 /2 and William | meemat | 562 864 | VOFC-L-M32C-M-FG12-F9-A |
| | Jangie setemora | | | 302 001 | VOICE I III JEE III 1012 17 /1 |
| - 1 IpP | | | | | |
| | | | | | |
| | 3/2-way, closed, | G1/2 | Internal, external | 562 865 | VOFC-L-M32C-MC-G12-F9 |
| 2 | single solenoid | | | 562 866 | VOFC-L-M32C-MC-G12-F9-A |
| 12 TT W | | | | | |
| | | | | | |
| 12 1 3 | | | | | |
| | | | | | |
| | | | | | |
| Al 21 | 5/2-way, single | G1/4 and NAMUR | Internal | 562 867 | VOFC-L-M52-M-FG14-F9 |
| 14 | solenoid | | | 562 868 | VOFC-L-M52-M-FG14-F9-A |
| 1 | | | | | |
| | | | | | |
| | | | | | |
| | 5/2-way, single | G1/4 | Internal | 562 071 | VOFC-L-M52-M-G14-F9 |
| 4 2 | solenoid | U 74 | Internal | 562 871 | VOFC-L-M52-M-G14-F9-A |
| 14 T T W | Solellolu | | | 302 6/2 | VOI C-L-INI 32-INI-014-F3-A |
| 5 1 3 | | | | | |
| | | | | | |
| | 1 | | | | |
| // 2 | 5/2-way, double | G½ and NAMUR | Internal | 562 869 | VOFC-L-B52-FG14-F9 |
| 14 12 12 12 | solenoid | G½ and NAMUR | | 562 870 | VOFC-L-B52-FG14-F9-A |
| 51 3 | | G1/4 | | 562 873 | |
| 2 ILIC Al 21 | | G1/4 | | 562 874 | VOFC-L-B52-G14-F9-A |
| | | | | | |
| 5 1 3 | | | | | |
| | • | 1 | 1 | | |

FESTO

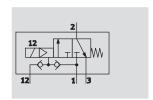
Technical data – 3/2-way valve with ignition protection type Ex-me

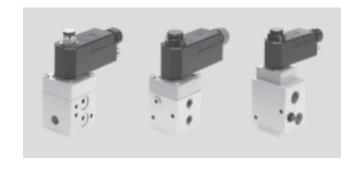
Function 3/2-way valve



Temperature range $-25 \dots +60 \, ^{\circ}\text{C}$ Flow rate $600 \, \text{l/min}$

Voltage 14 ... 32 V DC





| General technical data | | | | | | | | | | |
|---------------------------------|--------------------------|---------------------|-----------------------------|----------------------|--------------------|-------------------------------|--|--|--|--|
| | | | G½ and Namur | G1/4 | NPT¹/4 | G ¹ / ₂ | | | | |
| Valve function | | | 3/2-way closed, sing | le solenoid | | | | | | |
| Pneumatic connection | eumatic connection 1 | | G1/4 | NPT1/4-18 | G1/2 | | | | | |
| | 2 | | G1/4 | | - | G ¹ / ₂ | | | | |
| | 2 | | Namur port pattern | - | NPT1/4-18 | - | | | | |
| | 3 | | G1/4 | • | NPT1/4-18 | G½ | | | | |
| | 4 | | Namur port pattern | G1/4 | NPT1/4-18 | G ¹ / ₂ | | | | |
| Width | | | 51 mm | • | • | • | | | | |
| Design | | | Piloted piston poppet valve | | | | | | | |
| Mounting position | | | Any | | | | | | | |
| Duty cycle | | | 100% | | | | | | | |
| Sealing principle | | | Soft | | | | | | | |
| Manual override | | | None | | | | | | | |
| Reset method | | | Mechanical spring | | | | | | | |
| Actuation type | | | Electrical | | | | | | | |
| Type of control | | | Piloted | | | | | | | |
| Pilot air supply | | | Internal | Internal, external | Internal, external | Internal, external | | | | |
| Flow rate for piston valve pres | ssurisation | [m ³ /h] | 0.5 | 0.72 | 0.72 | 3.8 | | | | |
| | | | 0.65 | 1.38 | 1.38 | 3.8 | | | | |
| Direction of flow | | | Non-reversible | | | | | | | |
| Electrical connection | | | Terminal box, cable e | entry thread M20x1.5 | | | | | | |
| Reset method | | | Mechanical spring | | | | | | | |
| Product weight | | [g] | 930 | 880 | 880 | 1,210 | | | | |
| Response time off | | [ms] | 12 | | | | | | | |
| Response time on | <u>-</u> | [ms] | 20 | <u> </u> | <u> </u> | | | | | |
| Nominal size | | [mm] | 6 | | | 12 | | | | |
| Standard nominal flow rate | | [l/min] | 600 | 900 | 900 | 3,000 | | | | |



Technical data – 3/2-way valve with ignition protection type Ex-me

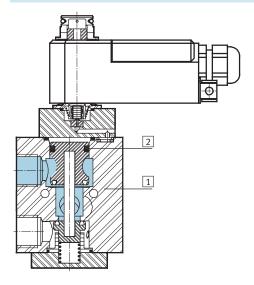
| Electrical data | | | G½ and Namur | G ¹ / ₄ | NPT¹/4 | G½ | | | | | |
|----------------------------|-----------------|------|--------------|-------------------------------|--------|----|--|--|--|--|--|
| Permissible voltage fluctu | ıations | [%] | -15 +10 | -15 +10 | | | | | | | |
| Max. input power | | [W] | - | | | | | | | | |
| Max. input voltage | | [V] | - | | | | | | | | |
| Max. input current | | [A] | - | | | | | | | | |
| Required current consum | ption | [mA] | - | | | | | | | | |
| Coil characteristics | DC voltage 24 V | [W] | 1.8 | | | | | | | | |
| | AC voltage 24 V | [VA] | 1.8 | | | | | | | | |

| Operating and environmental conditions | | | | | | | | | | |
|--|--------|---------------------|--------------------|------------------------|----|--|--|--|--|--|
| | | G1/4 and Namur | G1/4 | NPT¹/4 | G½ | | | | | |
| Operating medium | | Compressed air in a | accordance with IS | SO 8573-1:2010 [-:-:-] | | | | | | |
| Protection class | | IP65 | | | | | | | | |
| Operating pressure range | [bar] | 2 8 | | | | | | | | |
| External operating pressure range | [bar] | - | 0 8 | | | | | | | |
| Temperature of medium | [°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 | T5: | -20°C <= Ta <=+60 | | | | | | | | |
| | T6: | -20°C <= Ta <= +50° | °C | | | | | | | |
| TEX category for gas TEX category for dust xplosion ignition protection type for gas xplosion ignition protection type for dust xplosion-proof temperature rating | T80°C: | -20°C <= Ta <= +50° | °C | | | | | | | |
| | T95°C: | -20°C <= Ta <= +60° | °C | | | | | | | |
| Certificate issuing authority | | PTB 08 ATEX 2042 > | X | | | | | | | |
| CE mark (see declaration of conformity) | | To EU Explosion Pro | tection Directive | (ATEX) | | | | | | |
| Safety integrity level | [SIL] | Up to SIL 4 Low Den | nand mode | | - | | | | | |
| | | Up to SIL 4 High De | mand mode | | - | | | | | |
| Corrosion resistance class CRC ¹⁾ | | 4 | | | 1 | | | | | |

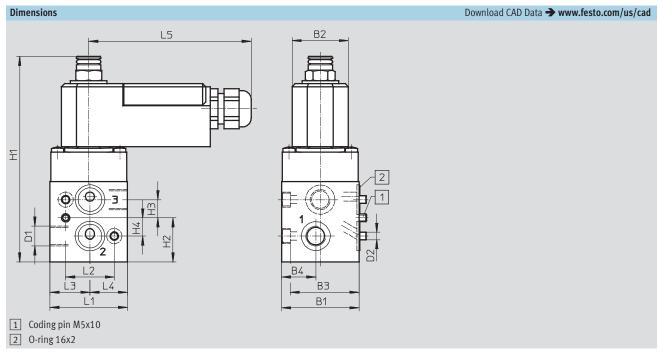
¹⁾ Corrosion resistance class 4 according to Festo standard 940 070 Components with very heavy corrosion exposure. Components in contact with aggressive media, e.g. in food or chemical industries. These applications must, if necessary, be verified by special tests with the media concerned.

Technical data – 3/2-way valve with ignition protection type Ex-me

Materials



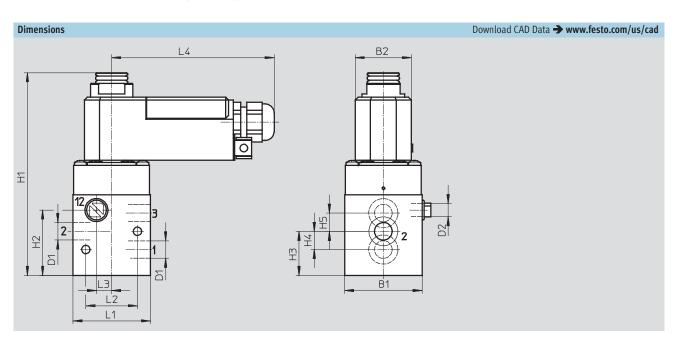
| Solenoid valves | G½ and Namur | G1/4 | NPT ¹ / ₄ | G½ | | | | | | | | |
|---------------------------------------|------------------------------|---|---------------------------------|----|--|--|--|--|--|--|--|--|
| 1 Housing | Hard Ematal-anodised alumin | d Ematal-anodised aluminium | | | | | | | | | | |
| 2 Seals | Nitrile rubber | itrile rubber | | | | | | | | | | |
| Note on materials | Contains PWIS (paint-wetting | Contains PWIS (paint-wetting impairment substances), RoHS-compliant | | | | | | | | | | |



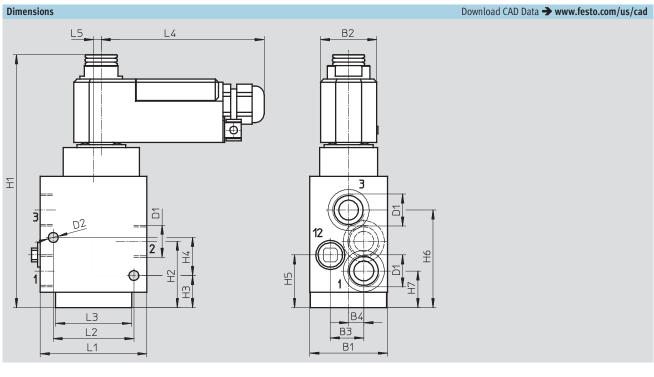
| Туре | B1 | B2 | В3 | B4 | D1 | D2 | H1 | H2 | Н3 | H4 | L1 | L2 | L3 | L4 | L5 |
|-------------------------------|----|----|------|------|------|----|-------|----|----|----|----|----|------|------|-----|
| VOFC-L-M32C-M-FG14-1UK4-Ex4me | 51 | 37 | 45.3 | 22.5 | G1/4 | M5 | 135.3 | 29 | 12 | 12 | 51 | 32 | 26.3 | 24.7 | 107 |

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Technical data – 3/2-way valve with ignition protection type Ex-me



| Туре | B1 | B2 | D1 | D2 | H1 | H2 | Н3 | H4 | H5 | L1 | L2 | L3 | L4 |
|-------------------------------|-----|----|------|-------------------|-----|-----|----|----|----|-----|----|----|-----|
| VOFC-L-M32C-MC-G14-1UK4-Ex4me | E 1 | 27 | G1/4 | G ¹ /8 | 122 | 4.2 | 20 | 12 | 12 | E 1 | 2/ | 10 | 107 |
| VOFC-L-M32C-MC-N14-1UK | 51 |)/ | G-74 | U-78 | 133 | 4) | 29 | 12 | 12 | 31 | 34 | 10 | 107 |

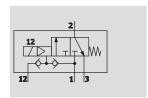


| Туре | B1 | B2 | В3 | B4 | D1 | D2 | H1 | H2 | НЗ | H4 | H5 | L1 | L2 | L3 | L4 | L5 |
|-------------------------------|----|----|----|----|------|-----|-----|------|----|----|------|----|----|----|-----|----|
| VOFC-L-M32C-MC-G12-1UK4-Ex4me | 51 | 37 | 22 | 10 | G1/2 | 6.5 | 166 | 43.5 | 21 | 25 | 34.5 | 70 | 53 | 50 | 107 | 5 |

FESTO

Technical data – 3/2-way valve with ignition protection type Ex-ia

Function 3/2-way valve



Temperature range

−25 ... +60 °C

Flow rate

600 ... 900 l/min

Voltage

14 ... 32 V DC



| General technical data | | | | | |
|----------------------------------|-----------|---------------------|--|--------------------|--|
| | | | G ¹ / ₄ and Namur | G1/4 | |
| Valve function | | | 3/2-way closed, single solenoid | | |
| Pneumatic connection | 1 | | G¹/4 | | |
| | 2 | | G ¹ / ₄ | | |
| | 2 | | Namur port pattern | - | |
| | 3 | | G¹/4 | | |
| Width | | [mm] | 51 | | |
| Design | | | Piloted piston poppet valve | | |
| Mounting position | | | Any | | |
| Duty cycle | | | 100% | | |
| Sealing principle | | | Soft | | |
| Manual override | | | None | | |
| Reset method | | | Mechanical spring | | |
| Actuation type | | | Electrical | | |
| Type of control | | | Piloted | | |
| Pilot air supply | | | Internal | Internal, external | |
| Flow rate for piston valve press | urisation | [m ³ /h] | 0.5 | 0.72 | |
| | | | 0.65 | 1.38 | |
| Direction of flow | | | Non-reversible Non-reversible | | |
| Electrical connection | | | Terminal box, cable entry thread M20x1.5 | | |
| Reset method | | | Mechanical spring | | |
| Product weight [g] | | 930 880 | | | |
| Response time off [ms] | | 12 | | | |
| Response time on [ms] | | 20 | | | |
| Nominal size | | [mm] | 6 | | |
| Standard nominal flow rate | | [l/min] | 600 | 900 | |

| Electrical data | | | G½ and Namur | G ¹ / ₄ |
|----------------------------------|--------------|------|--------------|-------------------------------|
| Permissible voltage fluctuations | | [%] | −15 +10 | - |
| Max. input power | | [W] | 1.2 | |
| Max. input voltage | | [V] | 32 | |
| Max. input current | | [A] | 0.2 | |
| Required current consumption | | [mA] | 16 | |
| Coil characteristics DC | Voltage 24 V | [V] | 14 32 | |

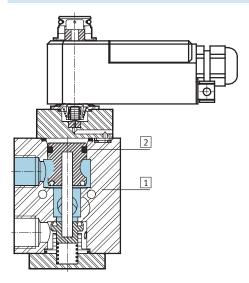


Technical data – 3/2-way valve with ignition protection type Ex-ia

| Operating and environmental conditions | | | | |
|--|--------|---|-------------------------------|--|
| | | G1/4 and Namur | G ¹ / ₄ | |
| Operating medium | | Compressed air in accordance | with ISO 8573-1:2010 [-:-:-] | |
| Protection class | | IP65 | | |
| Operating pressure range | [bar] | 2 8 | | |
| External operating pressure range | [bar] | - | 0 8 | |
| Temperature of medium | [°C] | -25 60 | · | |
| ATEX category for gas | | II 2G | | |
| Explosion ignition protection type for gas | | Ex ia IIC T6, T5 | | |
| Explosion-proof temperature rating | T5: | -30°C <= Ta <= +65°C | | |
| | T6: | -30°C <= Ta <= +50°C | | |
| | T80°C: | 30°C: -20°C <= Ta <= +50°C | | |
| | T95°C: | -20°C <= Ta <= +60°C | | |
| Certificate issuing authority | | PTB 08 ATEX 2038 | | |
| 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 with very heavy corrosion exposure. Components in contact with aggressive media, e.g. in food or chemical industries. These applications must, if necessary, be verified by special tests with the media concerned.

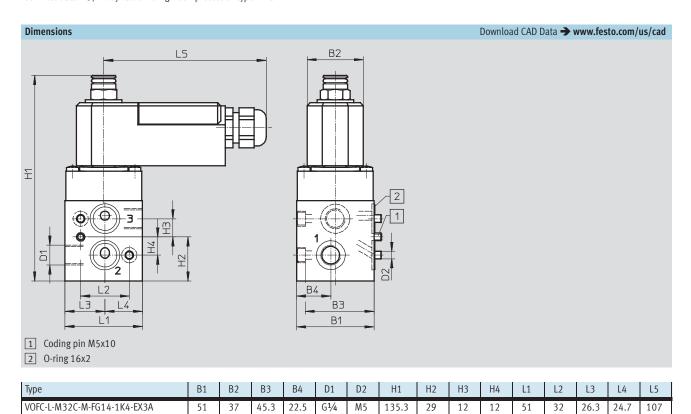
Materials

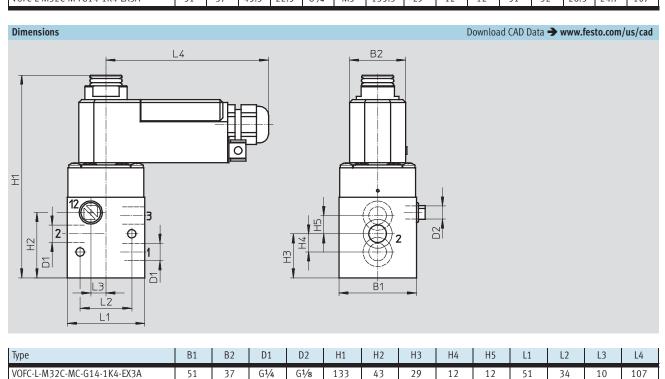


| Solei | noid valves | G½ and Namur | G1/4 | | | |
|-------|-------------------|---|------|--|--|--|
| 1 | Housing | Hard Ematal-anodised aluminium | | | | |
| 2 | Seals | Nitrile rubber | | | | |
| - | Note on materials | Contains PWIS (paint-wetting impairment substances), RoHS-compliant | | | | |

FESTO

Technical data – 3/2-way valve with ignition protection type Ex-ia







Solenoid valves VOFC Technical data – 3/2-way valve with ignition protection type Ex-ia

| Ordering data | | | | | | |
|----------------|-----------------|---|--|------------------|----------|-------------------------------|
| Circuit symbol | Function | Size | Explosion ignition protection type for gas | Pilot air supply | Part No. | Туре |
| | | | | | | |
| | 3/2-way closed, | G ¹ / ₄ | Ex emb II T6, T5 | Internal, | 562 877 | VOFC-L-M32C-MC-G14-1UK4-Ex4me |
| 2 | single solenoid | | | external | | |
| 12 | | G1/4 | Ex ia IIC T6, T5 | Internal, | 562 878 | VOFC-L-M32C-MC-G14-1K4-Ex3A |
| | | | | external | | |
| 12 1 3 | | NPT1/4 | Ex emb II T6, T5 | Internal | 562 879 | VOFC-L-M32C-M-N14-1UK4-Ex4me |
| 12 1 15 | | G ¹ / ₂ | Ex emb II T6, T5 | | 562 880 | VOFC-L-M32C-MC-G12-1UK4-Ex4me |
| | | | | | | |
| 2 | 3/2-way closed, | G1/4 and Namur | Ex emb II T6, T5 | Internal | 562 875 | VOFC-L-M32C-M-FG14-1UK4-Ex4me |
| 12 1 3 | single solenoid | G ¹ / ₄ and Namur | Ex ia IIC T6, T5 | | 562 876 | VOFC-L-M32C-M-FG14-1K4-Ex3A |

Technical data

Voltage

24 V AC

Temperature range

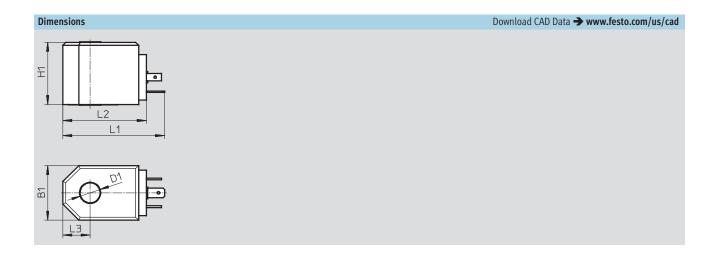
−20 ... +60 °C



| General technical data | | | | | | | |
|--|------------------|------|------------------------|--|----------------|----------------|--|
| Туре | | | VACC-S13-A1-1 | VACC-S13-A1-1U | VACC-S13-A1-2U | VACC-S13-A1-3U | |
| Actuation type | | | Electrical | | | | |
| Mounting position | | | Any | | | | |
| Duty cycle | | [%] | 100 | | | | |
| Electrical connection | | | Plug design to EN 17 | 75301-803, type A | | | |
| Manual override | | | None | | | | |
| Switching position display | | | None | | | | |
| Product weight [g] | | | 210 | | | | |
| Note on materials Contains PWIS (paint-wet | | | t-wetting impairment s | wetting impairment substances), RoHS-compliant | | | |
| Information on solenoid co | oil materials | | Polyamide, polyuret | hane | | | |
| Coil characteristics | DC voltage 24 V | [W] | 1.8 | 1.8 | - | - | |
| | AC voltage 24 V | [VA] | - | 3 | - | - | |
| | DC voltage 110 V | [W] | - | - | 1.8 | - | |
| | AC voltage 110 V | [VA] | - | - | 3 | - | |
| | DC voltage 230 V | [W] | - | - | - | 1.8 | |
| | AC voltage 230 V | [VA] | - | - | - | 3 | |

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

¹⁾ Corrosion resistance class 4 according to Festo standard 940 070 Components with very heavy corrosion exposure. Components in contact with aggressive media, e.g. in food or chemical industries. These applications must, if necessary, be verified by special tests with the media concerned.



Н1

41

67

D1

13.1

В1

36

Туре

VACC-S13-A1-1 ..

55

L3

18

Solenoid coils VACC-S13

FESTO

Technical data – Ignition protection type Ex-me

Voltage

24 V DC/AC

Temperature range

-20 ... +60 °C



| General technical data | | | | | | | |
|------------------------------|------------------|------|------------------------|------------------------|------------------------|------------------|--|
| Туре | | | VACC-S13-K4-1U-Ex | VACC-S13-K4-2U-Ex | VACC-S13-K4-3U-Ex | VACC- | |
| | | | 4me | 4me | 4me | S13-K4-1UF-Ex4me | |
| Actuation type | | | Electrical | | | | |
| Mounting position | | | Any | | | | |
| Duty cycle | | [%] | 100 | | | | |
| Electrical connection | | | Terminal box, cable er | ntry thread M20x1.5 | | | |
| Internal fuse protection | | | - | | | Fuse | |
| Manual override N | | | None | | | | |
| Switching position display | | | None | | | | |
| Product weight | | [g] | 330 | | | | |
| Note on materials | | | Contains PWIS (paint- | wetting impairment sub | stances), RoHS-complia | ant | |
| Information on solenoid coil | materials | | PA, PUR | | | | |
| Coil characteristics | DC voltage 24 V | [W] | 1.8 | _ | - | 1.8 | |
| | AC voltage 24 V | [VA] | 1.8 | _ | - | 1.8 | |
| | DC voltage 110 V | [W] | - | 1.8 | - | - | |
| | AC voltage 110 V | [VA] | - | 3 | - | - | |
| | DC voltage 230 V | [W] | - | - | 1.8 | - | |
| | AC voltage 230 V | [VA] | - | - | 3 | - | |

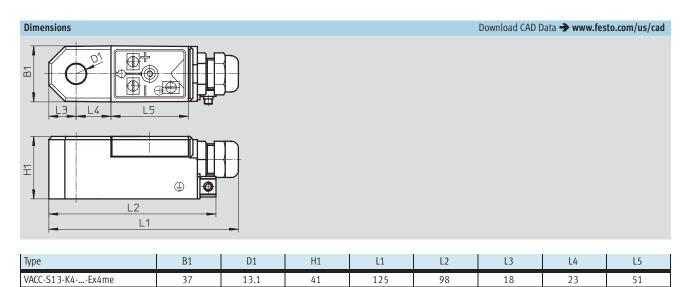
| Operating and environmental conditions | |
|--|--|
| Protection class | IP65 |
| Permissible voltage fluctuations [%] | -15 +10 |
| ATEX category for gas | II 2G |
| Explosion ignition protection type for gas | Ex emb IIC T6, T5 Gb |
| ATEX category for dust | II 2D |
| Explosion ignition protection type for dust | Ex tb IIIC T80°C, T95°C Db IP65 |
| Designated organisation for the quality inspection | 0344 |
| Explosion protection certification outside the EU | EPL Db (BR), EPL Dc (BR), EPL Gb (BR), EPL Gc (BR) |
| | EPL Db (CN), EPL Dc (CN), EPL Gb (CN), EPL Gc (CN) |
| | EPL Db (RU), EPL Dc (RU), EPL Gb (RU), EPL Gc (RU) |
| CE mark (see declaration of conformity) | To EU Explosion Protection Directive (ATEX) |
| Ambient temperature [°C] | -20 +60 |
| Corrosion resistance class CRC ¹⁾ | 4 |

¹⁾ Corrosion resistance class 4 according to Festo standard 940 070 Components with very heavy corrosion exposure. Components in contact with aggressive media, e.g. in food or chemical industries. These applications must, if necessary, be verified by special tests with the media concerned.

Solenoid coils VACC-S13

FESTO

Technical data – Ignition protection type Ex-me



Subject to change – 2013/05

Solenoid coils VACC-S13

FESTO

Technical data – Ignition protection type Ex-ia

Voltage

24 V DC/AC

Temperature range

-30 ... +60 °C

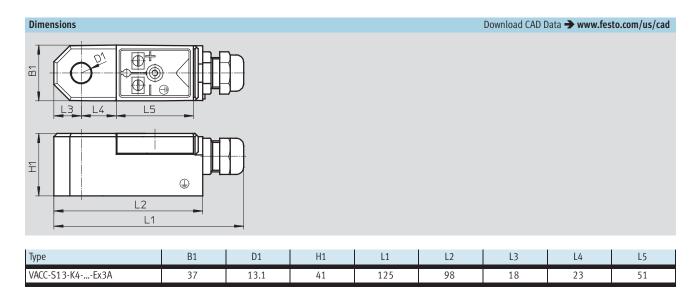


| General technical data | | |
|--|------|---|
| Туре | | VACC-S13-K4-Ex3A |
| Actuation type | | Electrical |
| Mounting position | | Any |
| Duty cycle | [%] | 100 |
| Electrical connection | | Terminal box, cable entry thread M20x1.5 |
| Manual override | | None |
| Switching position display | | None |
| Product weight | [g] | 330 |
| Note on materials | | Contains PWIS (paint-wetting impairment substances), RoHS-compliant |
| Information on solenoid coil materials | | Polyamide, polyurethane |
| Coil characteristics | [V] | 14 32 |
| Max. input power | [W] | 1.2 |
| Max. input voltage | [V] | 32 |
| Max. input current | [A] | 0.2 |
| Required current consumption | [mA] | 16 |

| Operating and environmental conditions | | | | |
|--|---|--|--|--|
| Protection class | IP65 | | | |
| ATEX category for gas | II 2G | | | |
| Explosion ignition protection type for gas | Ex ia IIC T6, T5 | | | |
| Explosion-proof temperature rating | T5: -30°C <=Ta <=+65°C | | | |
| | T6: -30°C <=Ta <=+50°C | | | |
| Certificate issuing authority | PTB 08 ATEX 2038 | | | |
| CE mark (see declaration of conformity) | To EU Explosion Protection Directive (ATEX) | | | |
| Ambient temperature [°C] | -30 +60 | | | |
| Corrosion resistance class CRC ¹⁾ | 4 | | | |

¹⁾ Corrosion resistance class 4 according to Festo standard 940 070 Components with very heavy corrosion exposure. Components in contact with aggressive media, e.g. in food or chemical industries. These applications must, if necessary, be verified by special tests with the media concerned.

Technical data – Ignition protection type Ex-ia



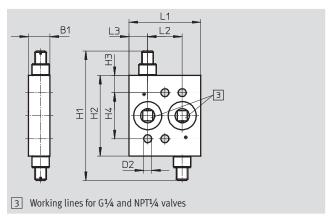
| Ordering data | | | |
|---------------|---|----------|-----------------------|
| | P | Part No. | Туре |
| Standard | | | |
| | 5 | 562 889 | VACC-S13-A1-1 |
| | 5 | 562 890 | VACC-S13-A1-1U |
|) | 5 | 562 891 | VACC-S13-A1-2U |
| | 5 | 562 892 | VACC-S13-A1-3U |
| | | • | |
| Ex-me coil | | | |
| | 5 | 562 893 | VACC-S13-K4-1U-Ex4me |
| | 5 | 562 894 | VACC-S13-K4-2U-Ex4me |
| | 5 | 562 895 | VACC-S13-K4-3U-Ex4me |
| | 5 | 570 784 | VACC-S13-K4-1UF-Ex4me |
| | | | |
| Ex-ia coil | | | |
| | 5 | 562 896 | VACC-S13-K4Ex3A |
| | | | |
| | | | |

Accessories

Flow control plate

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



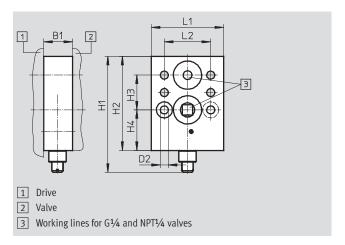


| Dimension | Dimensions [mm] and ordering data | | | | | | | | | | | |
|-----------|-----------------------------------|----|----|----|----|----|----|----|-------------------|----------|------------------|--|
| B1 | D2 | H1 | H2 | Н3 | H4 | L1 | L2 | L3 | CRC ¹⁾ | Part No. | Туре | |
| | | | | | | | | | | | | |
| 15 | 5.5 | 90 | 56 | 12 | 32 | 50 | 24 | 13 | 3 | 563 395 | VABF-S7-F1B1P2-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.

Flow control plate

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



| Dimensions | imensions [mm] and ordering data | | | | | | | | | | |
|------------|----------------------------------|----|----|----|----|----|----|-------------------|----------|------------------|--|
| B1 | D2 | H1 | H2 | Н3 | H4 | L1 | L2 | CRC ¹⁾ | Part No. | Туре | |
| | | | | | | | | | | | |
| 20 | 5.5 | 80 | 65 | 24 | 28 | 50 | 32 | 3 | 563 401 | VABF-S7-F1B5P1-F | |

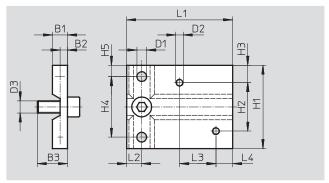
¹⁾ Corrosion resistance class 3 according to Festo standard 940 070 Components subject to high corrosion stress. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.

Accessories

Mounting plate

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





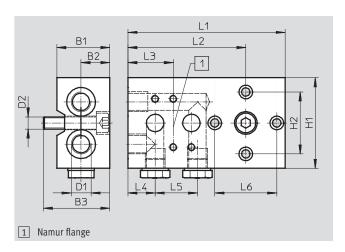
| Dimen | Dimensions [mm] and ordering data | | | | | | | | | | | | | | | | |
|-------|-----------------------------------|----|-----|----|----|----|----|------|----|-----|----|----|----|----|-------------------|----------|-----------|
| B1 | B2 | В3 | D1 | D2 | D3 | H1 | H2 | Н3 | H4 | H5 | L1 | L2 | L3 | L4 | CRC ¹⁾ | Part No. | Туре |
| 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.

Connection plate kit

Material:

Wrought aluminium alloy Contains paint-wetting impairment substances, RoHS-compliant



| Dimensi | Dimensions [mm] and ordering data | | | | | | | | | | | | | | |
|---------|-----------------------------------|----|------|----|----|----|-----|----|----|----|----|----|-------------------|----------|---------------|
| B1 | B2 | В3 | D1 | D2 | H1 | H2 | L1 | L2 | L3 | L4 | L5 | L6 | CRC ¹⁾ | Part No. | Туре |
| 35 | 19 | 44 | G1/4 | M8 | 60 | 41 | 104 | 78 | 30 | 18 | 28 | 41 | 3 | 563 396 | VABS-S7-S-G14 |

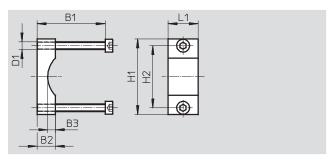
¹⁾ Corrosion resistance class 3 according to Festo standard 940 070 Components subject to high corrosion stress. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the current.

Accessories

Mounting bracket

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





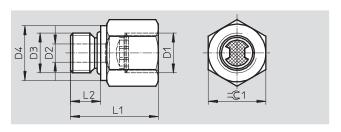
| Dimensions | Dimensions [mm] and ordering data | | | | | | | | | | |
|------------|-----------------------------------|----|----|----|----|----|-------------------|----------|-----------|--|--|
| B1 | B2 | В3 | D1 | H1 | H2 | L1 | CRC ¹⁾ | Part No. | Туре | | |
| | | | | | | | | | | | |
| 45/65 | 12 | 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.

Adapter with filter

Note on materials: Contains paint-wetting impairment substances, RoHS-compliant





| Dimensions [| imensions [mm] and ordering data | | | | | | | | | | | |
|--------------|----------------------------------|------|----|----|----|-------------|-------------------|----------|--------------------|--|--|--|
| D1 | D2 | D3 | D4 | L1 | L2 | = ©1 | CRC ¹⁾ | Part No. | Туре | | | |
| | | | | | | | | | | | | |
| NPT¹/4 | 6 | G1/4 | 18 | 29 | 10 | 19 | 1 | 563 397 | NPFV-AF-G14-N14-MF | | | |
| G1/4 | 6 | G1/4 | 18 | 29 | 10 | 19 | 1 | 563 398 | NPFV-AF-G14-G14-MF | | | |

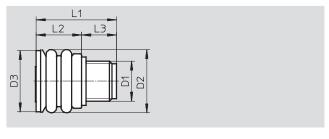
¹⁾ Corrosion resistance class 1 according to Festo standard 940 070 Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Accessories

Exhaust protection

Material: Ethylene propylene rubber Contains paint-wetting impairment substances, RoHS-compliant





| Dimensions [m | Dimensions [mm] and ordering data | | | | | | | | | | |
|---------------|-----------------------------------|------|------|----|------|-------------------|----------|----------------|--|--|--|
| D1 | D2 | D3 | L1 | L2 | L3 | CRC ¹⁾ | Part No. | Туре | | | |
| | | | | | | | | | | | |
| G1/4 | 21 | 20.5 | 26.5 | 15 | 11.5 | 3 | 563 400 | VABD-D3-SN-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.

| Ordering data | | |
|--|----------|---------------------------------|
| | Part No. | Туре |
| Cable | | Technical data → Internet: kmc |
| and the second s | 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 for screw terminal connection | | Technical data → Internet: mssd |
| | 34 583 | MSSD-C |

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