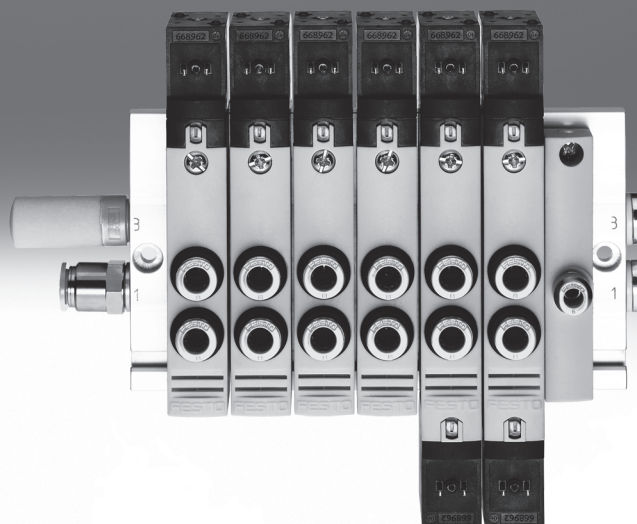


## Solenoid valves VUVB/valve terminals VTUB, NPT

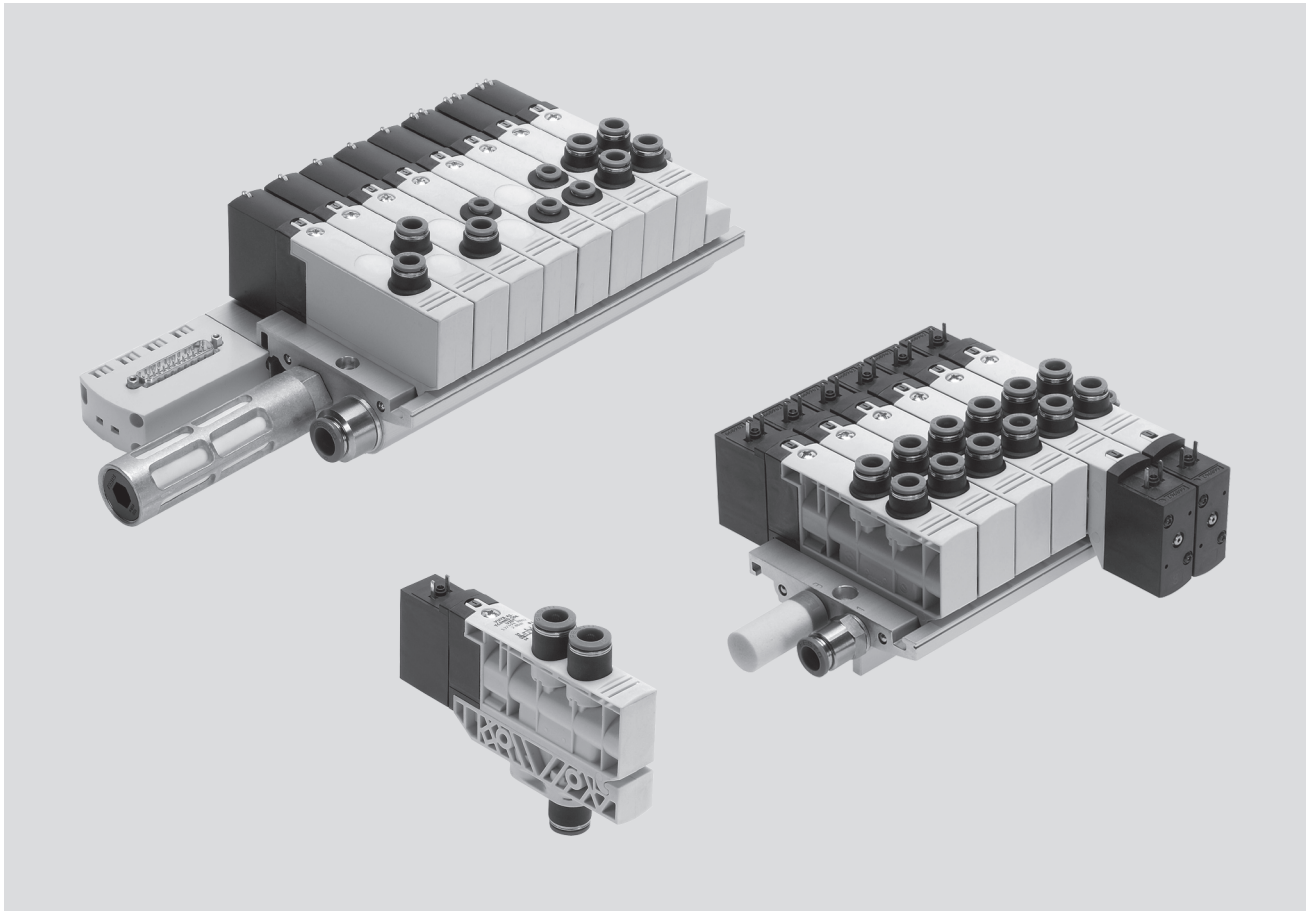
**FESTO**



# Solenoid valves VUVB/valve terminals VTUB, NPT

Key features

**FESTO**



## Innovative

- Valve terminal for a wide range of pneumatic applications
- Standardised from the individual valve to the multi-pin plug
- Great flexibility during planning, assembly and operation
- Selectable valve functions; 3/2- and 4/2-way function also suitable for vacuum applications
- Wide selection of optimally tailored accessories for flow rates from 200 to 1,000 l/min

## Versatile

- Room for expansion with 2 ... 10 valve positions on one valve terminal
- Use of individual valves in combination with an individual sub-base
- Flexibility of the pneumatic working lines provides a practical solution to different requirements
- Two pressure zones (additional zones on request)
- High pressure range –0.9 ... 8 bar
- Extensive operating voltage range from 12 V DC to 230 V AC

## Reliable

- Manual override
- Durable thanks to tried-and-tested piston spool valves
- Sturdy thanks to the polymer housing and metal manifold rail
- Fast troubleshooting thanks to an LED signal status display in the plug socket with cable or on the valve in the case of the design with multi-pin plug

## Easy to mount

- Ready-to-install and tested unit
- Lower ordering, installation and commissioning costs
- Secure mounting on wall or H-rail



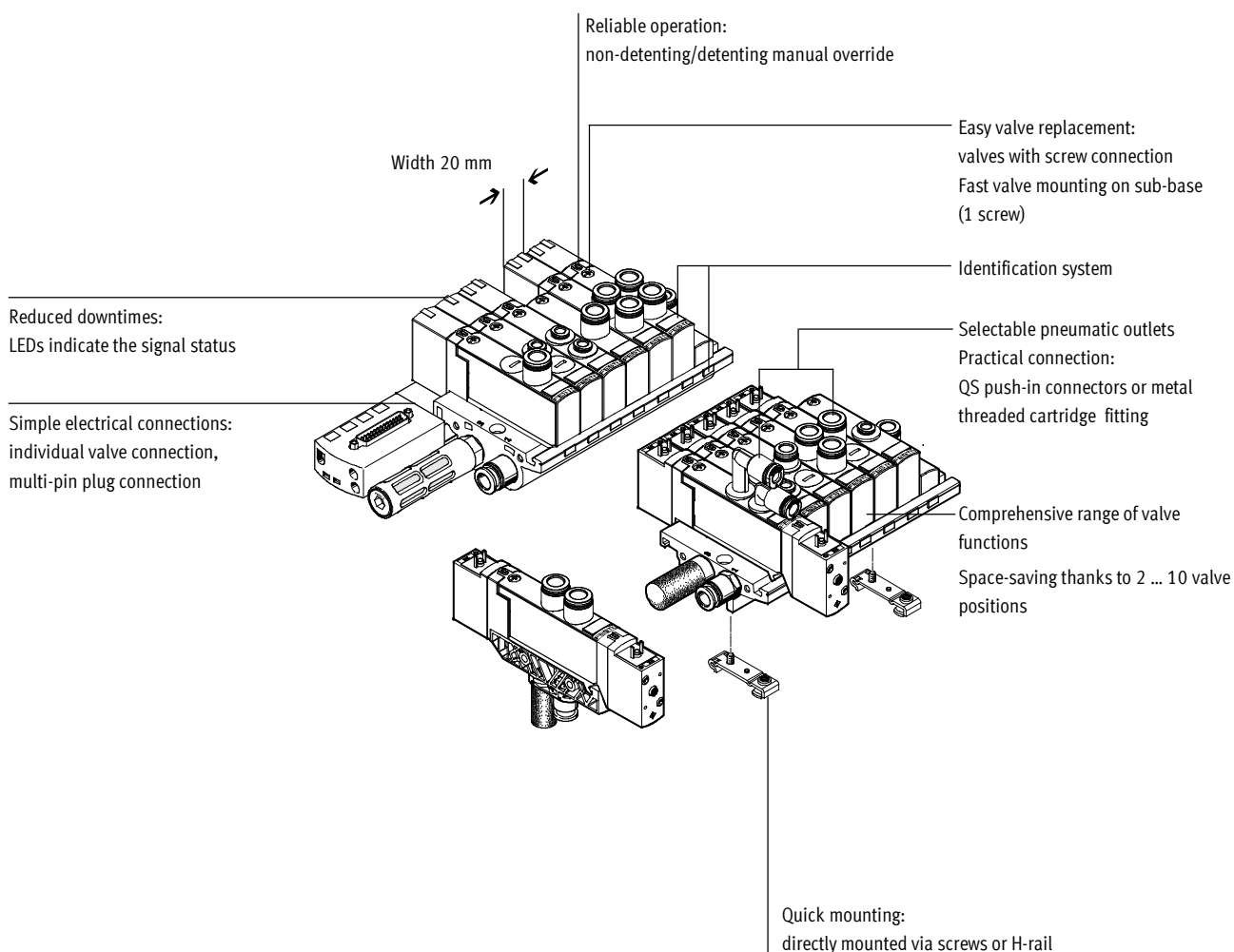
Note

Valve terminals are available for 4, 6, 8 and 10 valve positions in connection sizes 1/2 NPT and 1/4 NPT.

# Solenoid valves VUVB/valve terminals VTUB, NPT

FESTO

Key features



## Equipment options

### Valve functions

- 3/2-way valve, normally open
- 3/2-way valve, normally closed
- 4/2-way valve, single solenoid
- 4/2-way valve, double solenoid

### Electrical connection options

#### Individual connection/individual valve connection

- 2 ... 10 valve positions with manifold rail
- 2 ... 20 solenoid coils
- Via plug socket with cable with either LED or illuminating seal

#### Multi-pin plug

- 4 ... 10 valve positions/  
max. 20 solenoid coils
- Sub-D

## Valve terminal configurator

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

A valve terminal configurator is available to help you select a suitable valve terminal VTUB, which makes it much easier to order the right product. Valve terminals VTUB are ordered via an ident. code.

All valve terminals are supplied fully assembled and individually tested. This reduces assembly and installation time to a minimum.

Ordering system for valve terminal VTUB

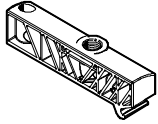
- Individual electrical connection
  - Electrical multi-pin plug connection
- Internet: vtub

# Solenoid valves VUVB/valve terminals VTUB, NPT

FESTO

Key features

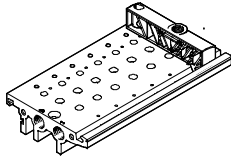
## Pressure zone supply module



The pressure zone supply module for pilot air supply is included in the scope of delivery of the manifold rail.

The pressure zone supply module for internal or external pilot air supply ensures even greater flexibility.

## Manifold rail

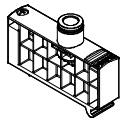


The manifold rail features a groove into which the semi in-line valves are latched and secured with just one screw.

The valve functions 4/2-way single solenoid, 4/2-way double solenoid, 3/2-way normally closed and 3/2-way normally open are available. All semi in-line valves are available with the cartridges QSP for the tubing

diameters 1/4, 5/16, and 3/8. 4/2-way valves are also supplied without cartridges, allowing users to fit cartridges of their choice or blanking plugs.

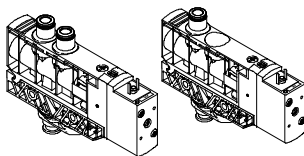
## Pressure zone supply module



The pressure zone supply module occupies one valve position and can

be used as an additional supply or for supplying a pressure zone.

## Individual valve



An individual valve can be ordered as an in-line valve (comprising semi in-line valve and sub-base ready assembled) in all functions. The tubing

diameters 1/4 and 5/16 are available in this case. The in-line valve, however, can also be assembled using an individual

sub-base and semi in-line valve. All tubing diameters and the variant without cartridge are available in this case.

## Blanking plate

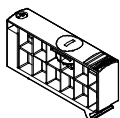
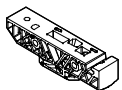


Plate without valve function for reserving valve positions on a valve terminal.

Valves and blanking plates are attached to the manifold rail using one screw.

## Sub-base



Individual sub-bases can be equipped with any valve.

Electrical connection is by means of a standardised connector plug, square design to EN 175301-803, type C.

Pre-assembled plug sockets with cable or plugs for self-assembly are offered for this.

# Solenoid valves VUVB/valve terminals VTUB, NPT

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Key features – Pneumatic components

## Pneumatic connection

### Supply and exhaust

The valves are supplied pneumatically via manifold rails or individual sub-bases.

The manifold rails contain common lines for compressed air supply, exhaust and pilot exhaust for all valves.

The common lines can be connected

- at the left (code L),
- at the right (code R) or
- at both ends (no code).

## Pilot air supply

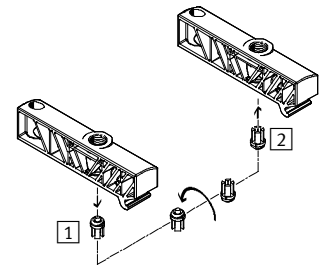
In-line valves are available with internal and external pilot air supply. With semi in-line valves the mounting position of the insert in the sub-base determines whether the valves are actuated internally or externally.

### Internal pilot air supply

An internal pilot air supply can be selected if the supply pressure is between 2 and 8 bar. The pilot air supply is branched from duct 1 in the pressure zone supply module in this case.

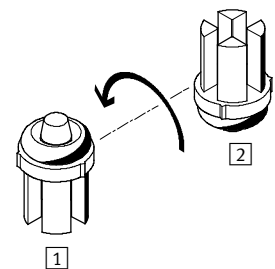
### External pilot air supply

An external pilot air supply must be used if the supply pressure is between  $-0.9$  and  $+2$  bar. The pilot air supply is supplied via duct 12/14 of the pressure zone supply module in this case.



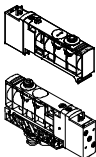
If the selector is installed as shown in position **1**, it means that the pilot air supply will be branched internally from duct 1.

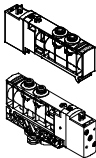
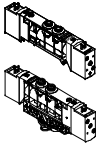
If the selector is turned 180° and installed as shown in position **2**, it means that the valve manifold is set to external pilot air supply.



## Solenoid valves VUVB/valve terminals VTUB, NPT

Product range overview – Individual valves and manifold valves

| Function       | Version                                                                           | Type             | Nominal flow rate [l/min] | Pneumatic connection | Operating voltage [V]                    | Semi in-line valve | In-line valve | Pilot air supply |          | → Page/ Internet |
|----------------|-----------------------------------------------------------------------------------|------------------|---------------------------|----------------------|------------------------------------------|--------------------|---------------|------------------|----------|------------------|
|                |                                                                                   |                  |                           |                      |                                          |                    |               | Internal         | External |                  |
| 3/2-way valves | Single solenoid valve for individual connection and valve manifold                |                  |                           |                      |                                          |                    |               |                  |          |                  |
|                |  | VUVB-...-M32-... | 500                       | QS-1/4               | 24 DC<br>110 AC                          | ■                  | ■             | ■                | ■        | 14               |
|                |                                                                                   |                  | 800                       | QS-5/16              |                                          | ■                  | ■             | –                | ■        |                  |
|                |                                                                                   |                  | 1000                      | QS-3/8               |                                          | ■                  | –             | ■                | ■        |                  |
|                |                                                                                   |                  | 1000                      | QX <sup>1)</sup>     | 24 DC<br>110 AC<br>230 AC<br>12 DC/24 AC | ■                  | –             | –                | ■        |                  |

| Function       | Version                                                                             | Type             | Nominal flow rate [l/min] | Pneumatic connection | Operating voltage [V]                    | Semi in-line valve | In-line valve | Pilot air supply |          | → Page/ Internet |
|----------------|-------------------------------------------------------------------------------------|------------------|---------------------------|----------------------|------------------------------------------|--------------------|---------------|------------------|----------|------------------|
|                |                                                                                     |                  |                           |                      |                                          |                    |               | Internal         | External |                  |
| 4/2-way valves | Single solenoid valve for individual connection and valve manifold                  |                  |                           |                      |                                          |                    |               |                  |          |                  |
|                |   | VUVB-...-M42-... | 500                       | QS-1/4               | 24 DC<br>110 AC                          | ■                  | ■             | ■                | ■        | 14               |
|                |                                                                                     |                  | 800                       | QS-5/16              |                                          | ■                  | ■             | ■                | ■        |                  |
|                |                                                                                     |                  | 1000                      | QS-3/8               |                                          | ■                  | -             | -                | ■        |                  |
|                |                                                                                     |                  | 1000                      | QX <sup>1)</sup>     | 24 DC<br>110 AC<br>230 AC<br>12 DC/24 AC | ■                  | -             | -                | ■        |                  |
|                | Double solenoid valve for individual connection and valve manifold                  |                  |                           |                      |                                          |                    |               |                  |          |                  |
|                |  | VUVB-...-B42-... | 500                       | QS-1/4               | 24 DC<br>110 AC                          | ■                  | ■             | ■                | ■        | 14               |
|                |                                                                                     |                  | 800                       | QS-5/16              |                                          | ■                  | ■             | ■                | ■        |                  |
|                |                                                                                     |                  | 1000                      | QS-3/8               |                                          | ■                  | -             | -                | ■        |                  |
|                |                                                                                     |                  | 1000                      | QX <sup>1)</sup>     | 24 DC<br>110 AC<br>230 AC<br>12 DC/24 AC | ■                  | -             | -                | ■        |                  |

1) Cartridge not included

# Solenoid valves VUVB/valve terminals VTUB, NPT

Product range overview – Terminal valves

| Function       | Version                                                                            | Type             | Nominal flow rate<br>[l/min] | Pneumatic connection | Operating voltage<br>[V] | Semi in-line valve       | Pilot air supply<br>External | → Page/<br>Internet |
|----------------|------------------------------------------------------------------------------------|------------------|------------------------------|----------------------|--------------------------|--------------------------|------------------------------|---------------------|
| 3/2-way valves | Single solenoid valve for valve terminal with electrical multi-pin plug connection |                  |                              |                      |                          |                          |                              |                     |
|                |   | VUVB-...-M32-... | 500                          | QS-1/4               | 24 DC                    | <input type="checkbox"/> | <input type="checkbox"/>     | 34                  |
|                |                                                                                    |                  | 800                          | QS-5/16              |                          | <input type="checkbox"/> | <input type="checkbox"/>     |                     |
|                |                                                                                    |                  | 1000                         | QS-3/8               |                          | <input type="checkbox"/> | <input type="checkbox"/>     |                     |
|                |                                                                                    |                  | 1000                         | QX <sup>1)</sup>     |                          | <input type="checkbox"/> | <input type="checkbox"/>     |                     |

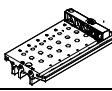
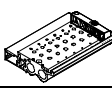
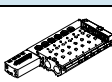
| Function       | Version                                                                             | Type             | Nominal flow rate<br>[l/min] | Pneumatic connection | Operating voltage<br>[V] | Semi in-line valve       | Pilot air supply<br>External | → Page/<br>Internet |
|----------------|-------------------------------------------------------------------------------------|------------------|------------------------------|----------------------|--------------------------|--------------------------|------------------------------|---------------------|
| 4/2-way valves | Single solenoid valve for valve terminal with electrical multi-pin plug connection  |                  |                              |                      |                          |                          |                              |                     |
|                |    | VUVB-...-M42-... | 500                          | QS-1/4               | 24 DC                    | <input type="checkbox"/> | <input type="checkbox"/>     | 34                  |
|                |                                                                                     |                  | 800                          | QS-5/16              |                          | <input type="checkbox"/> | <input type="checkbox"/>     |                     |
|                |                                                                                     |                  | 1000                         | QS-3/8               |                          | <input type="checkbox"/> | <input type="checkbox"/>     |                     |
|                |                                                                                     |                  | 1000                         | QX <sup>1)</sup>     |                          | <input type="checkbox"/> | <input type="checkbox"/>     |                     |
|                | Double solenoid valve for valve terminal with electrical multi-pin plug connection  |                  |                              |                      |                          |                          |                              |                     |
|                |  | VUVB-...-B42-... | 500                          | QS-1/4               | 24 DC                    | <input type="checkbox"/> | <input type="checkbox"/>     | 34                  |
|                |                                                                                     |                  | 800                          | QS-5/16              |                          | <input type="checkbox"/> | <input type="checkbox"/>     |                     |
|                |                                                                                     |                  | 1000                         | QS-3/8               |                          | <input type="checkbox"/> | <input type="checkbox"/>     |                     |
|                |                                                                                     |                  | 1000                         | QX <sup>1)</sup>     |                          | <input type="checkbox"/> | <input type="checkbox"/>     |                     |

1) Cartridge not included

## Solenoid valves VUVB/valve terminals VTUB, NPT

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Product range overview

| Function      | Version                                                                           | Type        | Pneumatic connection | Valve positions |   |   |   |    | Pilot air supply |          | → Page/<br>Internet |
|---------------|-----------------------------------------------------------------------------------|-------------|----------------------|-----------------|---|---|---|----|------------------|----------|---------------------|
|               |                                                                                   |             |                      | 2               | 4 | 6 | 8 | 10 | Internal         | External |                     |
| Manifold rail | For valve manifold with individual electrical connection                          |             |                      |                 |   |   |   |    |                  |          |                     |
|               |  | VABM        | 1/2 NPT              | ■               | ■ | ■ | ■ | ■  | ■                | ■        | 22                  |
|               |  | VABM        | 1/4 NPT              | ■               | ■ | ■ | ■ | ■  | ■                | ■        | 23                  |
|               | For valve terminal with electrical multi-pin plug connection                      |             |                      |                 |   |   |   |    |                  |          |                     |
|               |  | VABM-...-M1 | 1/2 NPT              | —               | ■ | ■ | ■ | ■  | ■                | ■        | 40                  |

| Function | Version                                                                           | Type | Pilot air supply |          | → Page/<br>Internet |
|----------|-----------------------------------------------------------------------------------|------|------------------|----------|---------------------|
|          |                                                                                   |      | Internal         | External |                     |
| Sub-base | Individual valve                                                                  |      |                  |          |                     |
|          |  | VABS | ■                | ■        | 24                  |

| Function                    | Version                                                                             | Type | Pneumatic connection | Use                                        | → Page/<br>Internet |
|-----------------------------|-------------------------------------------------------------------------------------|------|----------------------|--------------------------------------------|---------------------|
| Pressure zone supply module |  | VABF | QS-3/8               | For additional supply to the manifold rail | 42                  |

| Function       | Version                                                                             | Type | Use                           | → Page/<br>Internet |
|----------------|-------------------------------------------------------------------------------------|------|-------------------------------|---------------------|
| Blanking plate |  | VABB | For covering vacant positions | 43                  |

| Function  | Version                                                                             | Type | Use                 | → Page/<br>Internet |
|-----------|-------------------------------------------------------------------------------------|------|---------------------|---------------------|
| Separator |  | VABD | For duct separation | 43                  |

| Function            | Version                                                                             | Type | Use                                    | → Page/<br>Internet |
|---------------------|-------------------------------------------------------------------------------------|------|----------------------------------------|---------------------|
| H-rail mounting kit |  | VAME | For mounting on the H-rail NRH-35-2000 | 48                  |

| Function  | Version                                                                             | Type   | → Page/<br>Internet |
|-----------|-------------------------------------------------------------------------------------|--------|---------------------|
| Cartridge |  | QSP... | 47                  |

# Solenoid valves VUVB, NPT

FESTO

Peripherals overview

## Overview – Solenoid valve VUVB

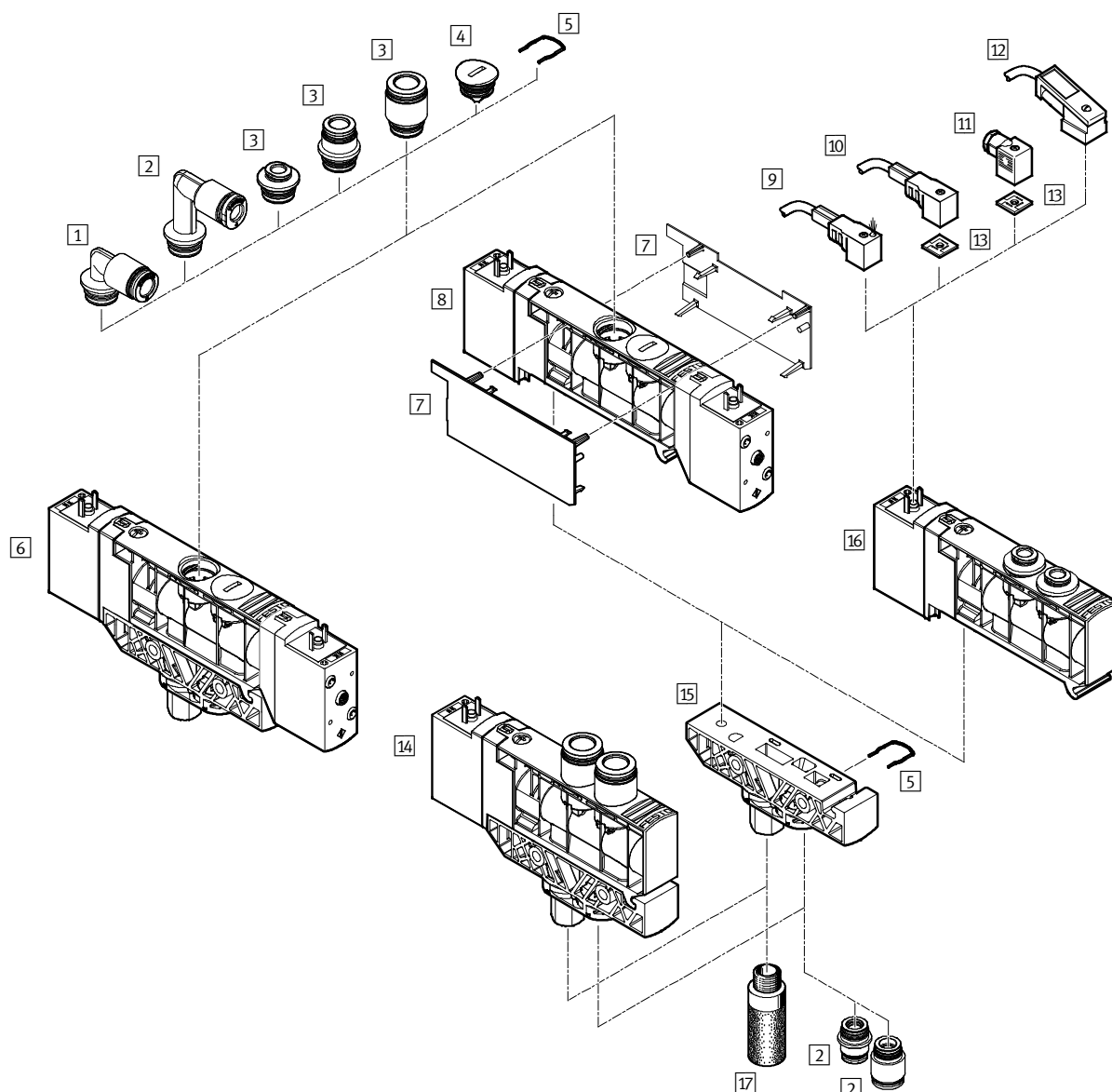
### Individual position with individual electrical connection

These peripherals are ordered via individual parts/accessories.

An individual valve can be ordered as an in-line valve or as a fully assembled semi in-line valve on a sub-base.

The in-line valve is available with 1/4NPT or 5/16NPT push-in connectors. The semi in-line valve on sub-base is

available with 1/4, 5/16 or 3/8NPT push-in connectors or as a variant without a cartridge.



# Solenoid valves VUVB, NPT

Peripherals overview

**FESTO**

| Accessories                                      |                                                                                                                            |                 |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------|
|                                                  | Brief description                                                                                                          | → Page/Internet |
| 1 Cartridge QSPL                                 | For connecting compressed air tubing with standard O.D.                                                                    | 47              |
| 2 Cartridge QSPLL                                | For connecting compressed air tubing with standard O.D.                                                                    | 47              |
| 3 Cartridge QSP                                  | For connecting compressed air tubing with standard O.D.                                                                    | 47              |
| 4 Blanking plug QSPC18                           | For sealing the pneumatic connections on the valve                                                                         | 48              |
| 5 Retaining clip                                 | For fitting cartridges and blanking plugs (included in the scope of delivery of cartridge QSP... and blanking plug QSPC18) | –               |
| 6 Double solenoid valve VUVB-L-...-B-...         | In-line valve with adapter for NPT                                                                                         | 20              |
| 7 Cover for valve housing VAMC                   | –                                                                                                                          | 45              |
| 8 Double solenoid valve VUVB-S-...-B-...         | Semi in-line valve                                                                                                         | 14              |
| 9 Plug socket with cable with LED KMEB-1-...-LED | For indicating the signal status                                                                                           | 49              |
| 10 Plug socket with cable KMEB-1-230AC-...       | Can be used up to 230 V                                                                                                    | 49              |
| 11 Plug socket MSSD-EB                           | –                                                                                                                          | 49              |
| 12 Plug socket with cable with LED KMEB-2-24-... | For indicating the signal status                                                                                           | 49              |
| 13 Illuminating seal MEB-LD                      | For indicating the signal status                                                                                           | 49              |
| 14 Single solenoid valve VUVB-L-...-M-...        | In-line valve with adapter for NPT                                                                                         | 20              |
| 15 Sub-base VABS-B6-P-...                        | For individual valve with adapter for NPT                                                                                  | 46              |
| 16 Single solenoid valve VUVB-S-...-M-...        | Semi in-line valve                                                                                                         | 20              |
| 17 Silencer U                                    | For fitting in exhaust ports                                                                                               | 48              |

# Solenoid valves VUVB, NPT

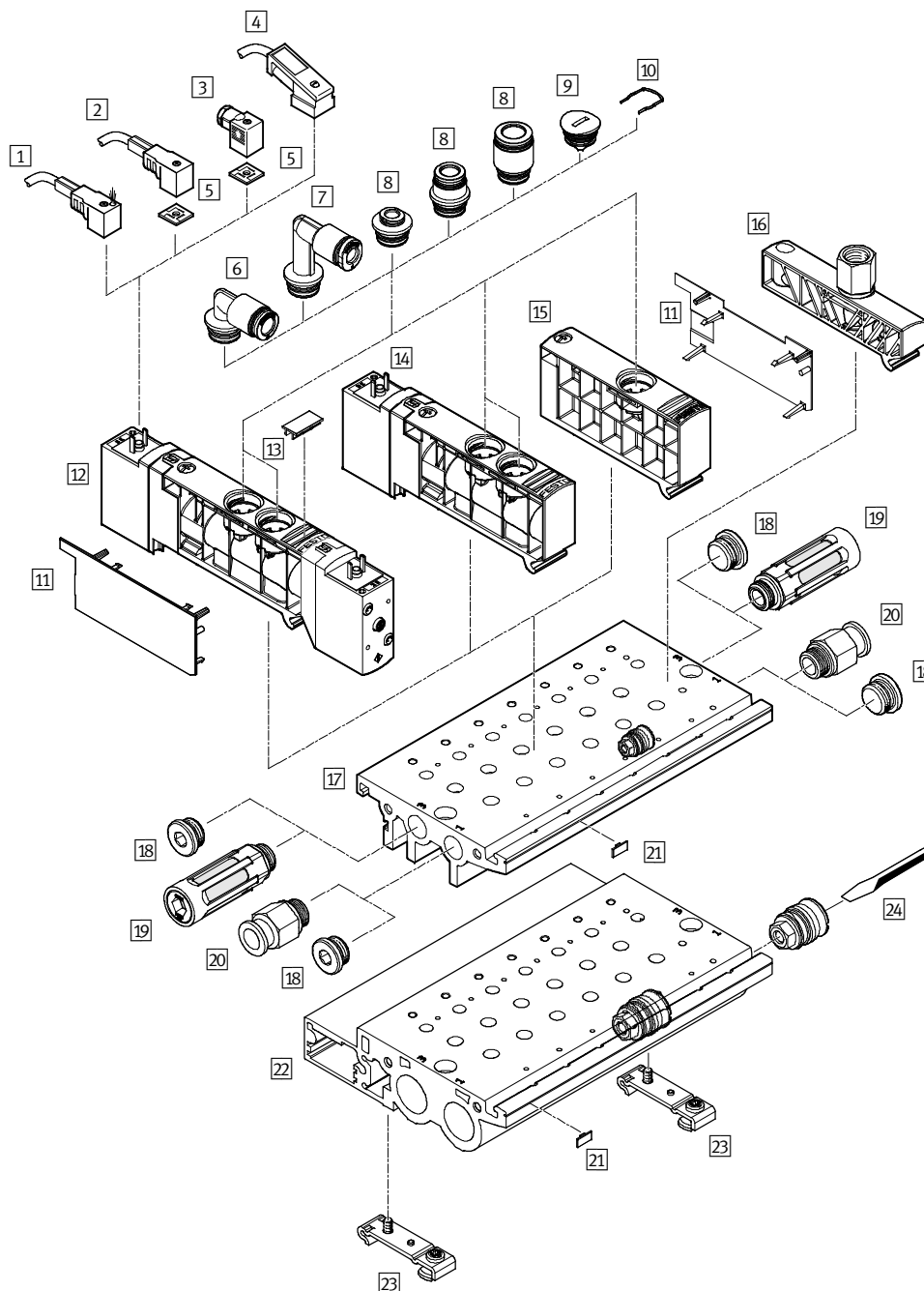
Peripherals overview

FESTO

## Overview – Solenoid valve VUVB

Manifold assembly/valve terminal with individual electrical connections

- "Individual connection" code: ET  
Valve terminals with individual electrical connections are available in gradations from 2 to max. 10 valve positions.  
Valve positions can either be fitted with a valve or a blanking plate for future expansions.  
In total up to 20 solenoid valves can be actuated.



# Solenoid valves VUVB, NPT

Peripherals overview

FESTO

| Accessories                                                   |                                                                                                                                       |                 |
|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------------|
|                                                               | Brief description                                                                                                                     | → Page/Internet |
| 1 Plug socket with cable with LED<br>KMEB-1-...-LED           | For indicating the signal status                                                                                                      | 49              |
| 2 Plug socket with cable<br>KMEB-1-230AC-...                  | Can be used up to 230 V                                                                                                               | 49              |
| 3 Plug socket<br>MSSD-EB                                      | –                                                                                                                                     | 49              |
| 4 Plug socket with cable with LED<br>KMEB-2-24-...            | For indicating the signal status                                                                                                      | 49              |
| 5 Illuminating seal<br>MEB-LD                                 | For indicating the signal status                                                                                                      | 49              |
| 6 Cartridge<br>QSPL-...                                       | For connecting compressed air tubing with standard O.D.                                                                               | 47              |
| 7 Cartridge<br>QSPL-...                                       | For connecting compressed air tubing with standard O.D.                                                                               | 47              |
| 8 Cartridge<br>QSP-...                                        | For connecting compressed air tubing with standard O.D.                                                                               | 47              |
| 9 Blanking plug<br>QSPC18                                     | For sealing the pneumatic connections on the valve                                                                                    | 48              |
| 10 Retaining clip                                             | For fitting cartridges and blanking plugs<br>(included in the scope of delivery of the cartridge QSP... and the blanking plug QSPC18) |                 |
| 11 Cover for valve housing<br>VAMC                            | –                                                                                                                                     | 45              |
| 12 Double solenoid valve<br>VUVB-...-B                        | –                                                                                                                                     | 20              |
| 13 Inscription label<br>IBS-9x17                              | For identifying the valves                                                                                                            | 48              |
| 14 Single solenoid valve<br>VUVB-...-M                        | –                                                                                                                                     | 20              |
| 15 Blanking plate/pressure zone supply<br>module<br>VABF/VABB | Pressure zone supply module VABF: with cartridge<br>Blanking plate VABB: for vacant position, with blanking plug                      | 42/43           |
| 16 Pressure zone supply module                                | For pilot air supply with adapter for NPT<br>(included in the scope of delivery of the manifold rail VABM)                            | –               |
| 17 Manifold rail<br>VABM-B6-E-N14-...                         | Pneumatic connection ¼ NPT,<br>for connecting max. 10 valves                                                                          | 22              |
| 18 Blanking plug<br>B                                         | –                                                                                                                                     | 48              |
| 19 Silencer<br>U                                              | For fitting in exhaust ports                                                                                                          | 48              |
| 20 Push-in fitting<br>QS                                      | For connecting compressed air tubing with standard O.D.                                                                               | 47              |
| 21 Inscription label<br>MH-BZ-80X                             | For identifying the manifold rail                                                                                                     | 48              |
| 22 Manifold rail<br>VABM-B6-E-N12-...                         | Pneumatic connection ½ NPT,<br>for connecting max. 10 valves                                                                          | 23              |
| 23 H-rail mounting kit<br>VAME                                | For mounting on the H-rail NRH-35-2000                                                                                                | 48              |
| 24 Separator for pressure zones<br>VABD                       | For mounting in the manifold rail                                                                                                     | 43              |

# Solenoid valves VUVB, NPT

Type codes – Individual valves and manifold valves

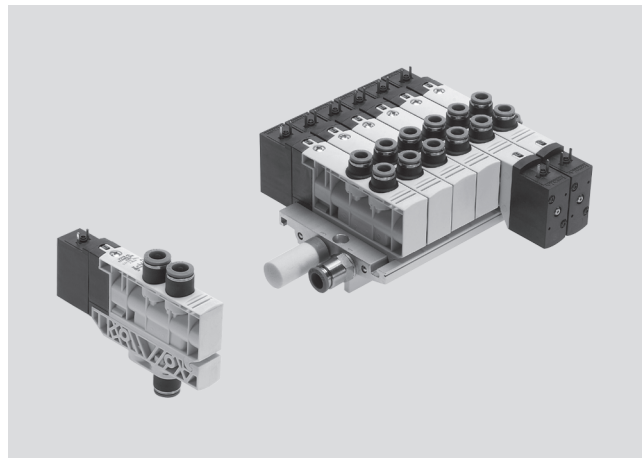
|                              |                                                         |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
|------------------------------|---------------------------------------------------------|------|---|---|---|------|---|---|---|---|---|-----|---|---|----|
|                              |                                                         | VUVB | - | L | - | M32C | - | A | Z | D | - | T14 | - | 1 | C1 |
| <b>Valve series</b>          |                                                         |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| VUVB                         | Solenoid valve                                          |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| <b>Constructional design</b> |                                                         |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| L                            | In-line valve                                           |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| S                            | Semi in-line valve                                      |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| <b>Valve function</b>        |                                                         |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| M32C                         | 3/2-way valve, normally closed                          |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| M32U                         | 3/2-way valve, normally open                            |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| M42                          | 4/2-way valve, single solenoid                          |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| B42                          | 4/2-way valve, double solenoid                          |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| <b>Reset method</b>          |                                                         |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| -                            | None (double solenoid)                                  |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| A                            | Pneumatic reset                                         |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| <b>Pilot air supply</b>      |                                                         |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| -                            | Internal                                                |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| Z                            | External                                                |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| <b>Manual override</b>       |                                                         |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| D                            | Non-detenting/detenting                                 |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| <b>Pneumatic connection</b>  |                                                         |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| T532                         | For tubing O.D. 5/32                                    |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| T14                          | For tubing O.D. 1/4                                     |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| T516                         | For tubing O.D. 5/16                                    |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| T38                          | For tubing O.D. 3/8                                     |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| QX                           | Without push-in connector                               |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| <b>Operating voltage</b>     |                                                         |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| 1                            | 24 V DC                                                 |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| 2A                           | 110 V AC                                                |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| 3A                           | 230V                                                    |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| 5W                           | 12 V DC/24 V AC                                         |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| <b>Electrical connection</b> |                                                         |      |   |   |   |      |   |   |   |   |   |     |   |   |    |
| C1                           | Plug socket connection pattern to EN 175301-803, type C |      |   |   |   |      |   |   |   |   |   |     |   |   |    |

# Solenoid valves VUVB, NPT

Technical data – Individual valves and manifold valves

FESTO

-  Voltage  
12, 24 V DC  
24, 110 V AC
-  Pressure  
–0.9 ... +8 bar
-  Temperature range  
–5 ... +50 °C



| General technical data     |                    |                          |                                                           |                          |
|----------------------------|--------------------|--------------------------|-----------------------------------------------------------|--------------------------|
| Valve function             |                    | 3/2-way, single solenoid | 4/2-way, single solenoid                                  | 4/2-way, double solenoid |
| Design                     |                    | Piston spool valve       |                                                           |                          |
| Sealing principle          |                    | Soft                     |                                                           |                          |
| Actuation type             |                    | Electric                 |                                                           |                          |
| Reset method               |                    | Pneumatic spring         |                                                           | –                        |
| Type of control            |                    | Piloted                  |                                                           |                          |
| Pilot air supply           |                    | Internal or external     |                                                           |                          |
| Direction of flow          |                    | Non-reversible           |                                                           |                          |
| Exhaust function           |                    | No flow control          |                                                           |                          |
| Manual override            |                    | Non-detenting, detenting |                                                           |                          |
| Type of mounting           |                    | Via through-hole         |                                                           |                          |
| Mounting position          |                    | Any                      |                                                           |                          |
| Nominal size               |                    | [mm]                     | 7                                                         |                          |
| Standard nominal flow rate |                    | qnN                      | [l/min]                                                   |                          |
|                            |                    |                          | 200 (5/32NPT), 500 (1/4NPT), 800 (5/16NPT), 1000 (3/8NPT) |                          |
| Width                      |                    | [mm]                     | 20                                                        |                          |
| Product weight             | In-line valve      | [g]                      | 170                                                       | 240                      |
|                            | Semi in-line valve | [g]                      | 150                                                       | 220                      |

| Operating and environmental conditions                               |       |                                                                                                        |
|----------------------------------------------------------------------|-------|--------------------------------------------------------------------------------------------------------|
| Operating medium                                                     |       | Compressed air in accordance with ISO 8573-1:2010 [7:4:4]                                              |
| Note on operating/pilot medium                                       |       | Operation with lubricated medium possible (in which case lubricated operation will always be required) |
| Operating pressure                                                   | [bar] | −0.9 ... +8                                                                                            |
| Operating pressure for valve terminal with internal pilot air supply | [bar] | 2 ... 8                                                                                                |
| Pilot pressure                                                       | [bar] | 2 ... 8                                                                                                |
| Ambient temperature                                                  | [°C]  | −5 ... +50                                                                                             |
| Temperature of medium                                                | [°C]  | −5 ... +50                                                                                             |
| Corrosion resistance class CRC                                       |       | 1 <sup>1)</sup>                                                                                        |
| Note on materials                                                    |       | RoHS-compliant                                                                                         |

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.

-  - Note  
A filter must be installed upstream of valves operated in vacuum mode.  
This prevents any foreign matter in the intake air getting into the valve (e.g. when operating a suction cup).

# Solenoid valves VUVB, NPT

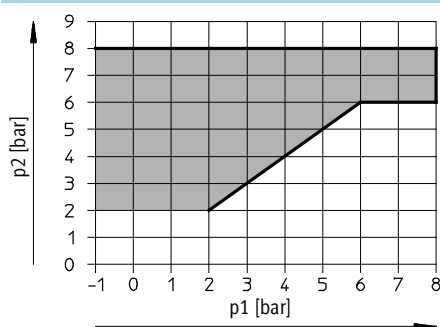
FESTO

Technical data – Individual valves and manifold valves

| Electrical data                  |          |                                              |                      |
|----------------------------------|----------|----------------------------------------------|----------------------|
| Electrical connection            |          | Plug, square design to EN 175301-803, type C |                      |
| Nominal operating voltage        | DC       | [V]                                          | 12, 24               |
|                                  | AC       | [V]                                          | 24, 110, 230         |
| Permissible voltage fluctuations |          | [%]                                          | ±10                  |
| Electrical power consumption     | 24 V DC  | [W]                                          | 1.5                  |
|                                  | 110 V AC | [VA]                                         | Pull: 3.1, hold: 2.2 |
| Protection class to EN 60529     |          | IP65 (in combination with plug socket)       |                      |

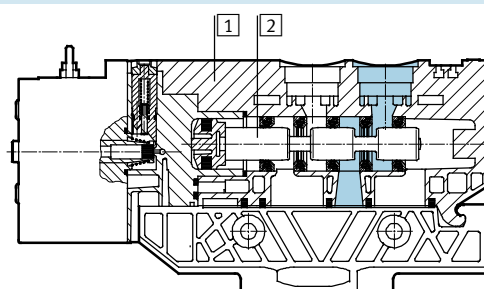
| Valve switching times [ms] |                          |                          |                          |
|----------------------------|--------------------------|--------------------------|--------------------------|
| Valve function             | 3/2-way, single solenoid | 4/2-way, single solenoid | 4/2-way, double solenoid |
| On                         | 20                       | 20                       | –                        |
| Off                        | 20                       | 20                       | –                        |
| Changeover                 | –                        | –                        | 15                       |

Pilot pressure p2 as a function of operating pressure p1

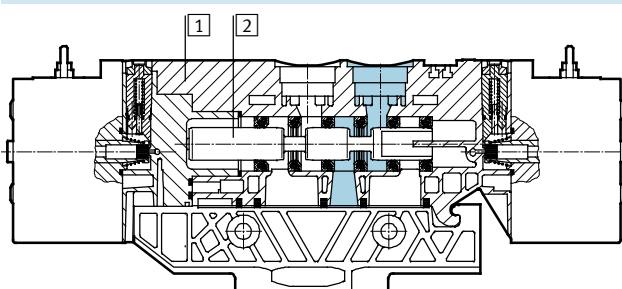


## Materials

Sectional view – Single solenoid valve



Sectional view – Double solenoid valve



|     |              |                                                               |
|-----|--------------|---------------------------------------------------------------|
| [1] | Housing      | Reinforced polyamide                                          |
| [2] | Piston spool | Wrought aluminium alloy                                       |
| –   | Seals        | Nitrile rubber, hydrogenated nitrile rubber, fluoro elastomer |

# Solenoid valves VUVB, NPT

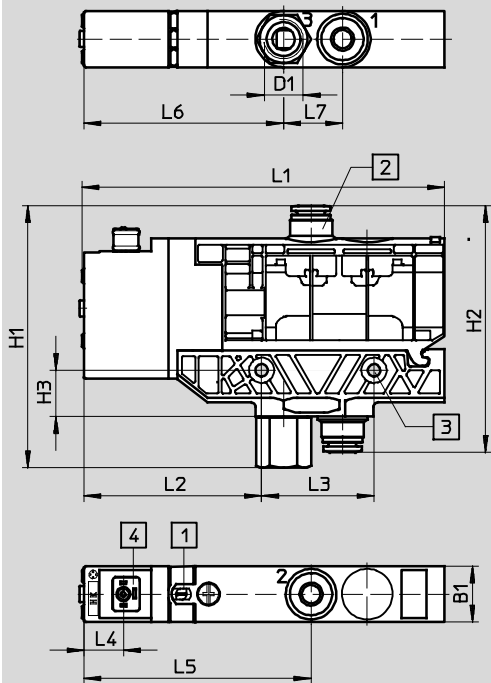
Technical data – Individual valves and manifold valves

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## Dimensions – 3/2-way and 4/2-way valve, single solenoid

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

### In-line valve



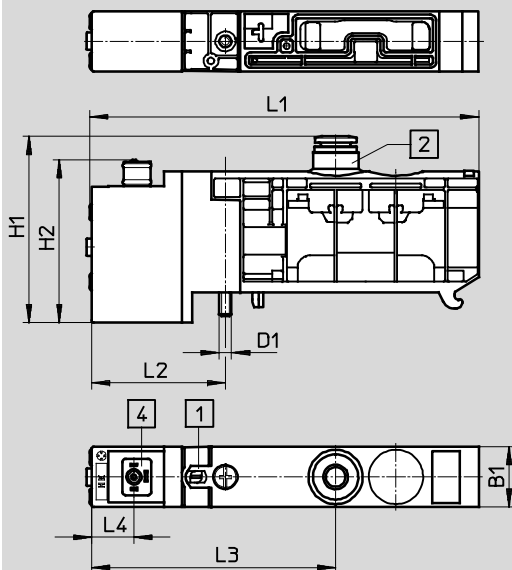
- 1 Manual override
- 2 Fitting QS
- 3 Through-hole for screw M4
- 4 Plug socket connection pattern to EN 175301-803

| Type               | B1 | D1      | H1 | H2   | H3   | L1  | L2   | L3 | L4 | L5   | L6 | L7 |
|--------------------|----|---------|----|------|------|-----|------|----|----|------|----|----|
| VUVB-L-M32...-T14  | 20 | 1/4 NPT | 87 | 83.1 | 16.5 | 129 | 63.2 | 40 | 14 | 80.8 | 71 | 21 |
| VUVB-L-M32...-T516 |    |         | 93 | 89.9 |      |     |      |    |    |      |    |    |

## Dimensions – 3/2-way and 4/2-way valve, single solenoid

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

### Semi in-line valve



- 1 Manual override
- 2 Fitting QS
- 4 Plug socket connection pattern to EN 175301-803, type C

| Type               | B1 | D1 | H1 | H2   | L1  | L2   | L3   | L4 |
|--------------------|----|----|----|------|-----|------|------|----|
| VUVB-S-M32...-T14  | 20 | M4 | 54 | 53.9 | 129 | 44.3 | 80.8 | 14 |
| VUVB-S-M32...-T516 |    |    | 61 |      |     |      |      |    |
| VUVB-S-M32...-T38  |    |    | 65 |      |     |      |      |    |

# Solenoid valves VUVB, NPT

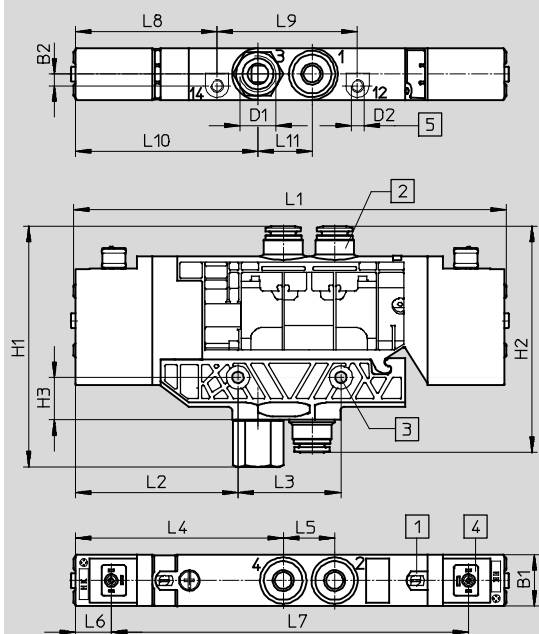
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Technical data – Individual valves and manifold valves

## Dimensions – 4/2-way valve, double solenoid

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

### In-line valve



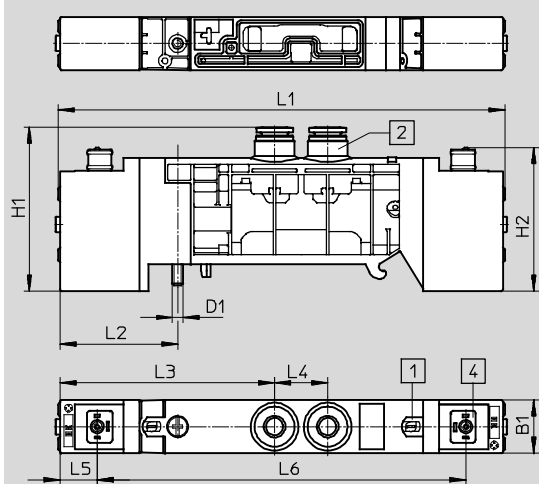
- 1 Manual override
- 2 Fitting QS
- 3 Through-hole for screw M4
- 4 Plug socket connection pattern to EN 175301-803, type C
- 5 Port for external pilot air

| Type               | B1 | B2  | D1      | D2 | H1 | H2   | H3   | L1    | L2   | L3 | L4   | L5 | L6 | L7    | L8   | L9    | L10 | L11 |
|--------------------|----|-----|---------|----|----|------|------|-------|------|----|------|----|----|-------|------|-------|-----|-----|
| VUVB-L-B42...-T14  | 20 | 4.6 | 1/4 NPT | M5 | 87 | 83.1 | 16.5 | 168.2 | 63.2 | 40 | 80.8 | 20 | 14 | 140.2 | 55.1 | 54.55 | 71  | 21  |
| VUVB-L-B42...-T516 |    |     |         |    | 93 | 89.9 |      |       |      |    |      |    |    |       |      |       |     |     |

## Dimensions – 4/2-way valve, double solenoid

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

### Semi in-line valve



- 1 Manual override
- 2 Fitting QS
- 4 Plug socket connection pattern to EN 175301-803, type C

| Type               | B1 | D1 | H1 | H2   | L1    | L2   | L3   | L4 | L5 | L6    |
|--------------------|----|----|----|------|-------|------|------|----|----|-------|
| VUVB-S-B42...-T14  | 20 | M4 | 54 | 53.9 | 168.2 | 44.3 | 80.8 | 20 | 14 | 138.8 |
| VUVB-S-B42...-T516 |    |    | 61 |      |       |      |      |    |    |       |
| VUVB-S-B42...-T38  |    |    | 65 |      |       |      |      |    |    |       |

# Solenoid valves VUVB, NPT

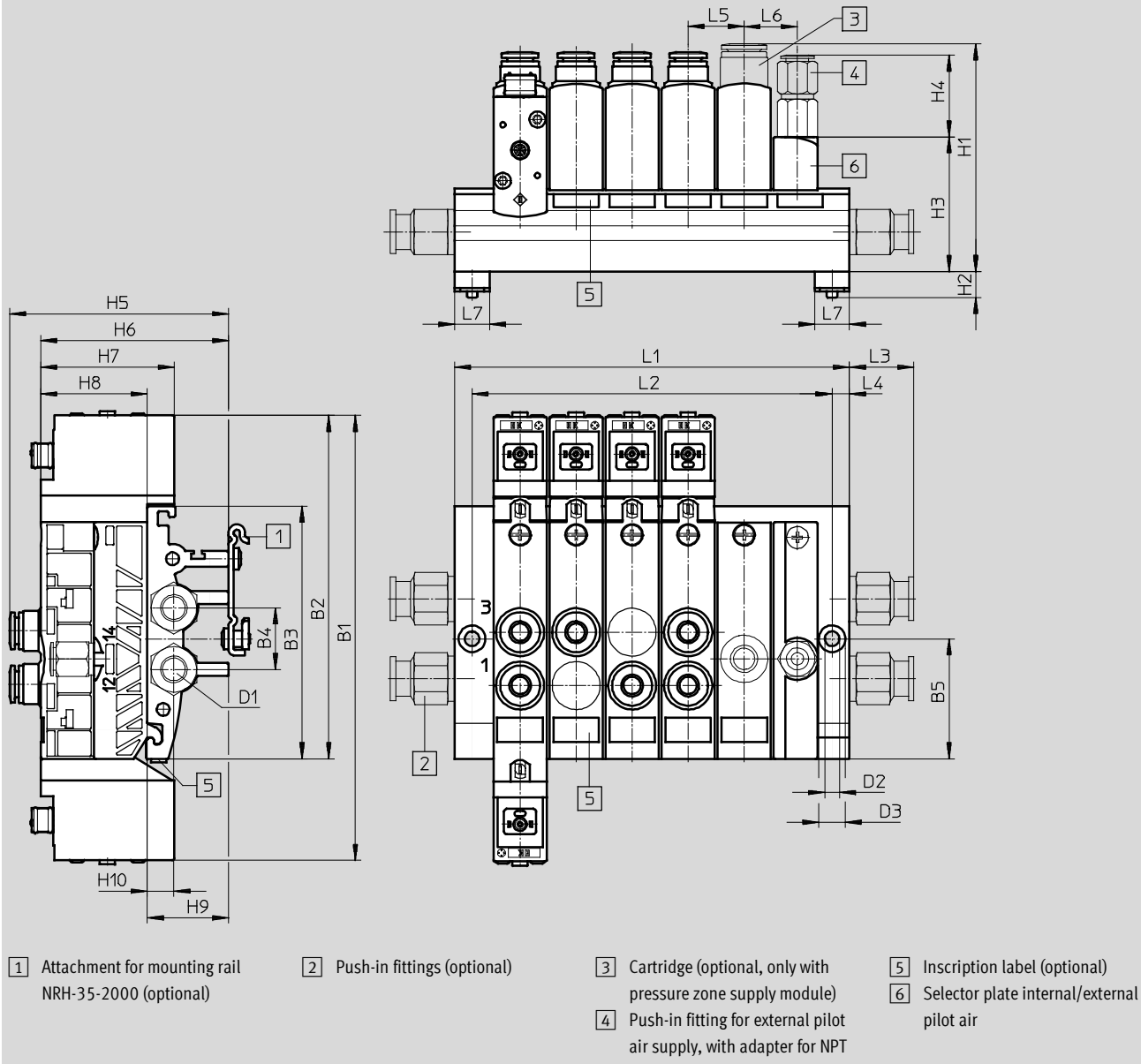
Technical data – Individual valves and manifold valves

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## Dimensions – Manifold assembly

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

Manifold rail 1/4 NPT



| Type       | B1    | B2    | B3   | B4 | B5 | D1     | D2<br>H13 | D3<br>H13 | H1   | H2 | H3   | H4   | H6   | H7   | H8 | H9 | H10 | L1<br>±0.1 | L2<br>±0.1 | L3   | L4  | L5 | L6 | L7 |
|------------|-------|-------|------|----|----|--------|-----------|-----------|------|----|------|------|------|------|----|----|-----|------------|------------|------|-----|----|----|----|
| VTUB-2...  | 166.8 | 128.3 | 94.7 | 23 | 45 | 1/4NPT | 5.5       | 10        | 88.4 | 10 | 50.5 | 30.6 | 70.5 | 50.1 | 40 | 31 | 10  | 85         | 72         | 24.1 | 6.5 | 21 | 20 | 13 |
| VTUB-4...  |       |       |      |    |    |        |           |           |      |    |      |      |      |      |    |    |     | 127        | 114        |      |     |    |    |    |
| VTUB-6...  |       |       |      |    |    |        |           |           |      |    |      |      |      |      |    |    |     | 169        | 156        |      |     |    |    |    |
| VTUB-8...  |       |       |      |    |    |        |           |           |      |    |      |      |      |      |    |    |     | 211        | 198        |      |     |    |    |    |
| VTUB-10... |       |       |      |    |    |        |           |           |      |    |      |      |      |      |    |    |     | 253        | 240        |      |     |    |    |    |

| Type              | H5   |
|-------------------|------|
| QSPK18-1/4-U-100  | 74.9 |
| QSPK18-5/16-U-100 | 81.7 |
| QSPK18-3/8-U-100  | 85.5 |

# Solenoid valves VUVB, NPT

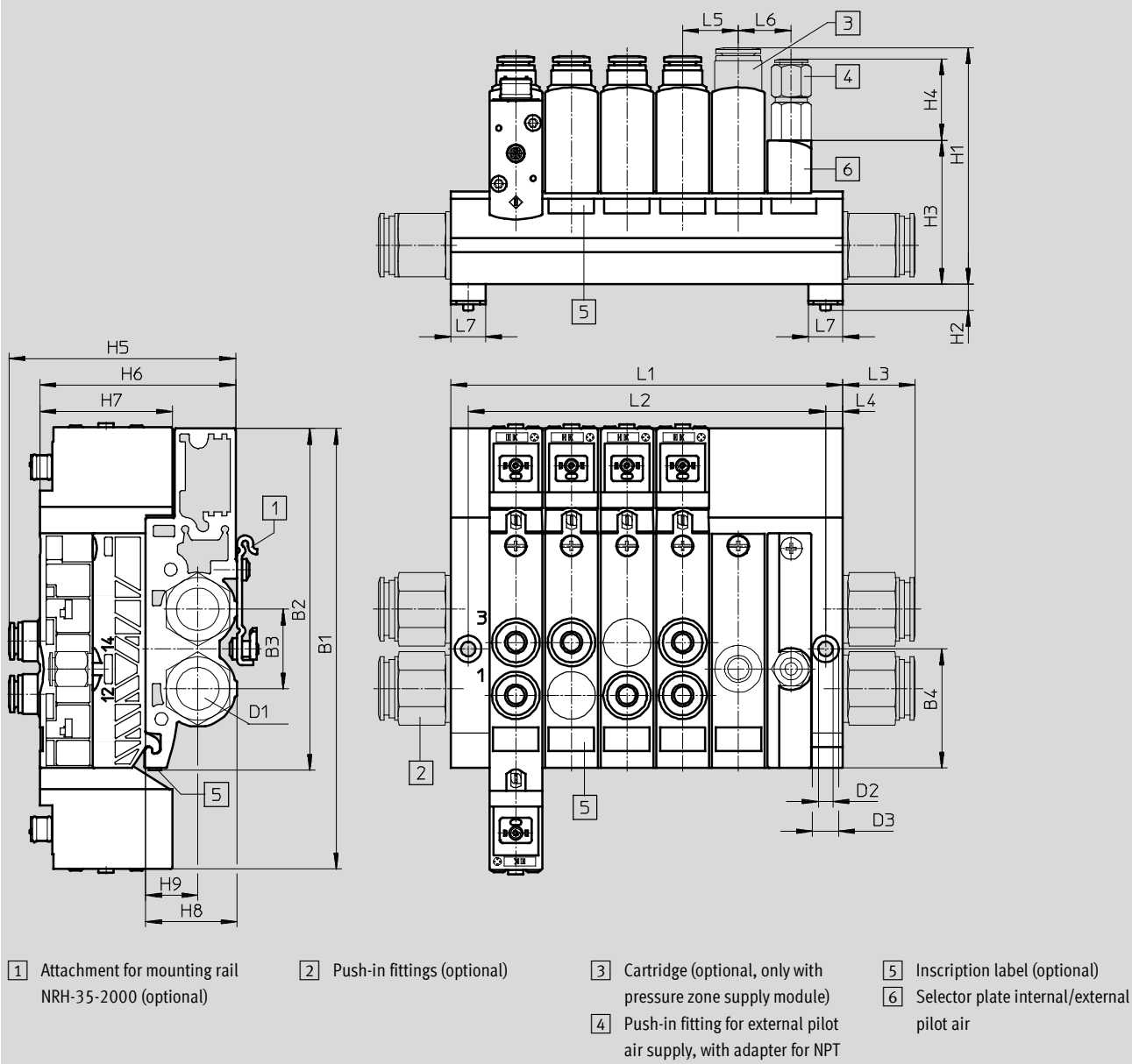
Technical data – Individual valves and manifold valves

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## Dimensions – Manifold assembly

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

Manifold rail 1/2 NPT



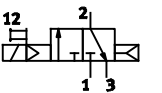
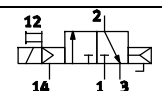
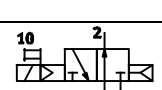
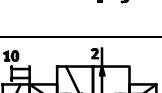
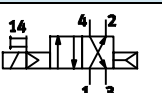
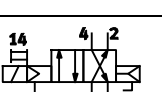
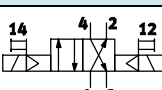
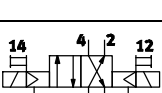
| Type       | B1    | B2    | B3 | B4 | D1      | D2<br>H13 | D3<br>H13 | H1   | H2 | H3   | H4   | H6 | H7   | H8   | H9   | L1<br>±0.1 | L2<br>±0.1 | L3   | L4  | L5 | L6 | L7 |
|------------|-------|-------|----|----|---------|-----------|-----------|------|----|------|------|----|------|------|------|------------|------------|------|-----|----|----|----|
| VTUB-2...  | 166.8 | 129.5 | 30 | 45 | 1/2 NPT | 5.5       | 10        | 89.4 | 10 | 54.5 | 30.6 | 74 | 50.1 | 34.5 | 19.7 | 85         | 72         | 27.3 | 6.5 | 21 | 20 | 13 |
| VTUB-4...  |       |       |    |    |         |           |           |      |    |      |      |    |      |      |      | 127        | 114        |      |     |    |    |    |
| VTUB-6...  |       |       |    |    |         |           |           |      |    |      |      |    |      |      |      | 169        | 156        |      |     |    |    |    |
| VTUB-8...  |       |       |    |    |         |           |           |      |    |      |      |    |      |      |      | 211        | 198        |      |     |    |    |    |
| VTUB-10... |       |       |    |    |         |           |           |      |    |      |      |    |      |      |      | 253        | 240        |      |     |    |    |    |

| Type              | H5   |
|-------------------|------|
| QSPK18-1/4-U-100  | 78.9 |
| QSPK18-5/16-U-100 | 85.7 |
| QSPK18-3/8-U-100  | 89.5 |

# Solenoid valves VUVB, NPT

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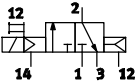
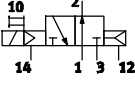
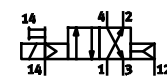
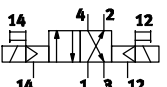
Technical data – Individual valves and manifold valves

| Ordering data – In-line valves                                                      |      |                                                                           |          |                      |          |                           |
|-------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------|----------|----------------------|----------|---------------------------|
| Circuit symbol                                                                      | Code | Description                                                               | Voltage  | Pneumatic connection | Part No. | Type                      |
| 3/2-way valves, single solenoid                                                     |      |                                                                           |          |                      |          |                           |
|    | K    | Normally closed,<br>internal pilot air supply,<br>pneumatic spring return | 24 V DC  | QS-1/4               | 568280   | VUVB-L-M32C-AD-T14-1C1    |
|                                                                                     |      |                                                                           |          | QS-5/16              | 568281   | VUVB-L-M32C-AD-T516-1C1   |
|                                                                                     |      |                                                                           | 110 V AC | QS-1/4               | 568296   | VUVB-L-M32C-AD-T14-2AC1   |
|                                                                                     |      |                                                                           |          | QS-5/16              | 568297   | VUVB-L-M32C-AD-T516-2AC1  |
|    | K    | Normally closed,<br>external pilot air supply,<br>pneumatic spring return | 24 V DC  | QS-1/4               | 568288   | VUVB-L-M32C-AZD-T14-1C1   |
|                                                                                     |      |                                                                           |          | QS-5/16              | 568289   | VUVB-L-M32C-AZD-T516-1C1  |
|                                                                                     |      |                                                                           | 110 V AC | QS-1/4               | 568304   | VUVB-L-M32C-AZD-T14-2AC1  |
|                                                                                     |      |                                                                           |          | QS-5/16              | 568305   | VUVB-L-M32C-AZD-T516-2AC1 |
|    | N    | Normally open,<br>internal pilot air supply,<br>pneumatic spring return   | 24 V DC  | QS-1/4               | 568282   | VUVB-L-M32U-AD-T14-1C1    |
|                                                                                     |      |                                                                           |          | QS-5/16              | 568283   | VUVB-L-M32U-AD-T516-1C1   |
|                                                                                     |      |                                                                           | 110 V AC | QS-1/4               | 568298   | VUVB-L-M32U-AD-T14-2AC1   |
|                                                                                     |      |                                                                           |          | QS-5/16              | 568299   | VUVB-L-M32U-AD-T516-2AC1  |
|    | N    | Normally open,<br>external pilot air supply,<br>pneumatic spring return   | 24 V DC  | QS-1/4               | 568290   | VUVB-L-M32U-AZD-T14-1C1   |
|                                                                                     |      |                                                                           |          | QS-5/16              | 568291   | VUVB-L-M32U-AZD-T516-1C1  |
|                                                                                     |      |                                                                           | 110 V AC | QS-1/4               | 568306   | VUVB-L-M32U-AZD-T14-2AC1  |
|                                                                                     |      |                                                                           |          | QS-5/16              | 568307   | VUVB-L-M32U-AZD-T516-2AC1 |
| 4/2-way valves, single solenoid                                                     |      |                                                                           |          |                      |          |                           |
|   | M    | Normally open,<br>internal pilot air supply,<br>pneumatic spring return   | 24 V DC  | QS-1/4               | 568284   | VUVB-L-M42-AD-T14-1C1     |
|                                                                                     |      |                                                                           |          | QS-5/16              | 568285   | VUVB-L-M42-AD-T516-1C1    |
|                                                                                     |      |                                                                           | 110 V AC | QS-1/4               | 568300   | VUVB-L-M42-AD-T14-2AC1    |
|                                                                                     |      |                                                                           |          | QS-5/16              | 568301   | VUVB-L-M42-AD-T516-2AC1   |
|  | M    | Normally open,<br>external pilot air supply,<br>pneumatic spring return   | 24 V DC  | QS-1/4               | 568292   | VUVB-L-M42-AZD-T14-1C1    |
|                                                                                     |      |                                                                           |          | QS-5/16              | 568293   | VUVB-L-M42-AZD-T516-1C1   |
|                                                                                     |      |                                                                           | 110 V AC | QS-1/4               | 568308   | VUVB-L-M42-AZD-T14-2AC1   |
|                                                                                     |      |                                                                           |          | QS-5/16              | 568309   | VUVB-L-M42-AZD-T516-2AC1  |
| 4/2-way valves, double solenoid                                                     |      |                                                                           |          |                      |          |                           |
|  | J    | Normally open,<br>internal pilot air supply                               | 24 V DC  | QS-1/4               | 568286   | VUVB-L-B42-D-T14-1C1      |
|                                                                                     |      |                                                                           |          | QS-5/16              | 568287   | VUVB-L-B42-D-T516-1C1     |
|                                                                                     |      |                                                                           | 110 V AC | QS-1/4               | 568302   | VUVB-L-B42-D-T14-2AC1     |
|                                                                                     |      |                                                                           |          | QS-5/16              | 568303   | VUVB-L-B42-D-T516-2AC1    |
|  | J    | Normally open,<br>external pilot air supply                               | 24 V DC  | QS-1/4               | 568294   | VUVB-L-B42-ZD-T14-1C1     |
|                                                                                     |      |                                                                           |          | QS-5/16              | 568295   | VUVB-L-B42-ZD-T516-1C1    |
|                                                                                     |      |                                                                           | 110 V AC | QS-1/4               | 568310   | VUVB-L-B42-ZD-T14-2AC1    |
|                                                                                     |      |                                                                           |          | QS-5/16              | 568311   | VUVB-L-B42-ZD-T516-2AC1   |

# Solenoid valves VUVB, NPT

FESTO

Technical data – Individual valves and manifold valves

| Ordering data – Semi in-line valves for sub-base or manifold rail                   |      |                                                                           |                      |                              |          |                           |
|-------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------|----------------------|------------------------------|----------|---------------------------|
| Circuit symbol                                                                      | Code | Description                                                               | Voltage              | Pneumatic connection         | Part No. | Type                      |
| 3/2-way valves, single solenoid                                                     |      |                                                                           |                      |                              |          |                           |
|    | K    | Normally closed,<br>external pilot air supply,<br>pneumatic spring return | 24 V DC              | QS-1/4                       | 568312   | VUVB-S-M32C-AZD-T14-1C1   |
|                                                                                     |      |                                                                           |                      | QS-5/16                      | 568313   | VUVB-S-M32C-AZD-T516-1C1  |
|                                                                                     |      |                                                                           |                      | QS-3/8                       | 568314   | VUVB-S-M32C-AZD-T38-1C1   |
|                                                                                     |      |                                                                           |                      | Without push-in<br>connector | 573993   | VUVB-S-M32C-AZD-QX-1C1    |
|                                                                                     |      |                                                                           | 110 V AC             | QS-1/4                       | 658324   | VUVB-S-M32C-AZD-T14-2AC1  |
|                                                                                     |      |                                                                           |                      | QS-5/16                      | 568325   | VUVB-S-M32C-AZD-T516-2AC1 |
|                                                                                     |      |                                                                           |                      | QS-3/8                       | 568326   | VUVB-S-M32C-AZD-T38-2AC1  |
|                                                                                     |      |                                                                           |                      | Without push-in<br>connector | 573995   | VUVB-S-M32C-AZD-QX-2AC1   |
|                                                                                     |      |                                                                           | 230 V AC             | Without push-in<br>connector | 573997   | VUVB-S-M32C-AZD-QX-3AC1   |
|                                                                                     |      |                                                                           | 12 V DC /<br>24 V AC |                              | 573999   | VUVB-S-M32C-AZD-QX-5WC1   |
|    | N    | Normally open,<br>external pilot air supply,<br>pneumatic spring return   | 24 V DC              | QS-1/4                       | 568315   | VUVB-S-M32U-AZD-T14-1C1   |
|                                                                                     |      |                                                                           |                      | QS-5/16                      | 568316   | VUVB-S-M32U-AZD-T516-1C1  |
|                                                                                     |      |                                                                           |                      | QS-3/8                       | 568317   | VUVB-S-M32U-AZD-T38-1C1   |
|                                                                                     |      |                                                                           |                      | Without push-in<br>connector | 573994   | VUVB-S-M32U-AZD-QX-1C1    |
|                                                                                     |      |                                                                           | 110 V AC             | QS-1/4                       | 568327   | VUVB-S-M32U-AZD-T14-2AC1  |
|                                                                                     |      |                                                                           |                      | QS-5/16                      | 568328   | VUVB-S-M32U-AZD-T516-2AC1 |
|                                                                                     |      |                                                                           |                      | QS-3/8                       | 568604   | VUVB-S-M32U-AZD-T38-2AC1  |
|                                                                                     |      |                                                                           |                      | Without push-in<br>connector | 573996   | VUVB-S-M32U-AZD-QX-2AC1   |
|                                                                                     |      |                                                                           | 230 V AC             | Without push-in<br>connector | 573998   | VUVB-S-M32U-AZD-QX-3AC1   |
|                                                                                     |      |                                                                           | 12 V DC /<br>24 V AC |                              | 574000   | VUVB-S-M32U-AZD-QX-5WC1   |
| 4/2-way valves, single solenoid                                                     |      |                                                                           |                      |                              |          |                           |
|  | M    | Normally open,<br>external pilot air supply,<br>pneumatic spring return   | 24 V DC              | QS-1/4                       | 568318   | VUVB-S-M42-AZD-T14-1C1    |
|                                                                                     |      |                                                                           |                      | QS-5/16                      | 568319   | VUVB-S-M42-AZD-T516-1C1   |
|                                                                                     |      |                                                                           |                      | QS-3/8                       | 568320   | VUVB-S-M42-AZD-T38-1C1    |
|                                                                                     |      |                                                                           | 110 V AC             | QS-1/4                       | 568605   | VUVB-S-M42-AZD-T14-2AC1   |
|                                                                                     |      |                                                                           |                      | QS-5/16                      | 568606   | VUVB-S-M42-AZD-T516-2AC1  |
|                                                                                     |      |                                                                           |                      | QS-3/8                       | 568607   | VUVB-S-M42-AZD-T38-2AC1   |
|                                                                                     |      |                                                                           | 24 V DC              | Without push-in<br>connector | 537534   | VUVB-S-M42-AZD-QX-1C1     |
|                                                                                     |      |                                                                           | 110 V AC             |                              | 537632   | VUVB-S-M42-AZD-QX-2AC1    |
|                                                                                     |      |                                                                           | 230 V AC             |                              | 537636   | VUVB-S-M42-AZD-QX-3AC1    |
|                                                                                     |      |                                                                           | 12 V DC/<br>24 V AC  |                              | 545376   | VUVB-S-M42-AZD-QX-5WC1    |
| 4/2-way valves, double solenoid                                                     |      |                                                                           |                      |                              |          |                           |
|  | J    | Normally open,<br>external pilot air supply                               | 24 V DC              | QS-1/4                       | 568321   | VUVB-S-B42-ZD-T14-1C1     |
|                                                                                     |      |                                                                           |                      | QS-5/16                      | 568322   | VUVB-S-B42-ZD-T516-1C1    |
|                                                                                     |      |                                                                           |                      | QS-3/8                       | 568323   | VUVB-S-B42-ZD-T38-1C1     |
|                                                                                     |      |                                                                           | 110 V AC             | QS-1/4                       | 568608   | VUVB-S-B42-ZD-T14-2AC1    |
|                                                                                     |      |                                                                           |                      | QS-5/16                      | 568609   | VUVB-S-B42-ZD-T516-2AC1   |
|                                                                                     |      |                                                                           |                      | QS-3/8                       | 568610   | VUVB-S-B42-ZD-T38-2AC1    |
|                                                                                     |      |                                                                           | 24 V DC              | Without push-in<br>connector | 537535   | VUVB-S-B42-ZD-QX-1C1      |
|                                                                                     |      |                                                                           | 110 V AC             |                              | 537633   | VUVB-S-B42-ZD-QX-2AC1     |
|                                                                                     |      |                                                                           | 230 V AC             |                              | 537637   | VUVB-S-B42-ZD-QX-3AC1     |
|                                                                                     |      |                                                                           | 12 V DC/<br>24 V AC  |                              | 545377   | VUVB-S-B42-ZD-QX-5WC1     |

# Solenoid valves VUVB, NPT

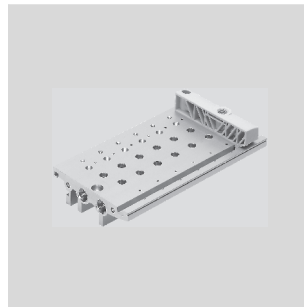
Technical data – Manifold rail

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## Manifold rail 1/4 NPT VABM

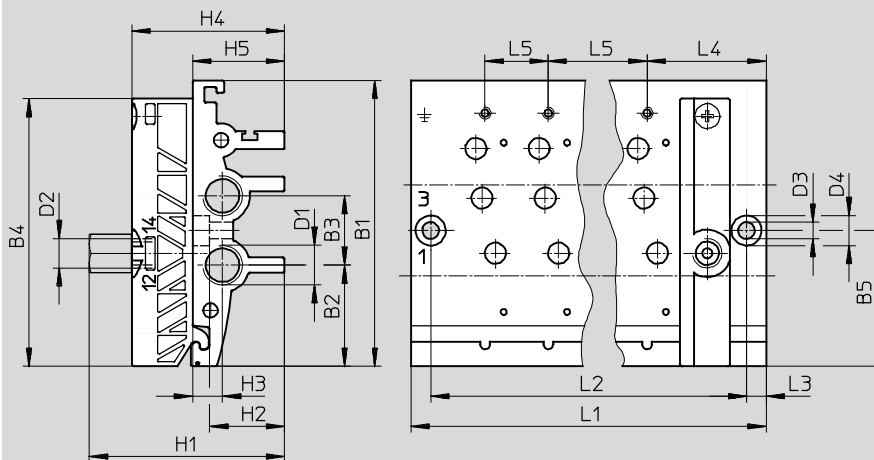
Material:

Wrought aluminium alloy



## Dimensions

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



Note

The manifold rail is supplied with an adapter for NPT.

| Type             | L1<br>±0.1 | L2<br>±0.1 | L3<br>±0.1 | L4<br>±0.1 | L5<br>±0.1 | B1<br>±0.1 | B2<br>±0.1 | B3<br>±0.1 | B4   | B5 | D1     | D2     | D3<br>H13 | D4<br>H13 | H1   | H2   | H3<br>±0.2 | H4   | H5<br>±0.2 |
|------------------|------------|------------|------------|------------|------------|------------|------------|------------|------|----|--------|--------|-----------|-----------|------|------|------------|------|------------|
| VABM-B6-E-N14-2  | 85         | 72         | 6.5        | 39.5       | 21         | 94.7       | 33.5       | 23         | 88.7 | 45 | 1/4NPT | 1/8NPT | 5.5       | 10        | 64.7 | 24.8 | 10         | 50.5 | 30.5       |
| VABM-B6-E-N14-4  | 127        | 114        |            |            |            |            |            |            |      |    |        |        |           |           |      |      |            |      |            |
| VABM-B6-E-N14-6  | 169        | 156        |            |            |            |            |            |            |      |    |        |        |           |           |      |      |            |      |            |
| VABM-B6-E-N14-8  | 211        | 198        |            |            |            |            |            |            |      |    |        |        |           |           |      |      |            |      |            |
| VABM-B6-E-N14-10 | 253        | 240        |            |            |            |            |            |            |      |    |        |        |           |           |      |      |            |      |            |

## Ordering data

| Valve positions | CRC             | Part No. | Type             |
|-----------------|-----------------|----------|------------------|
| 2               | 2 <sup>1)</sup> | 568185   | VABM-B6-E-N14-2  |
| 4               | 2 <sup>1)</sup> | 568186   | VABM-B6-E-N14-4  |
| 6               | 2 <sup>1)</sup> | 568187   | VABM-B6-E-N14-6  |
| 8               | 2 <sup>1)</sup> | 568188   | VABM-B6-E-N14-8  |
| 10              | 2 <sup>1)</sup> | 568189   | VABM-B6-E-N14-10 |

1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

# Solenoid valves VUVB, NPT

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Technical data – Manifold rail

## Manifold rail 1/2 NPT VABM

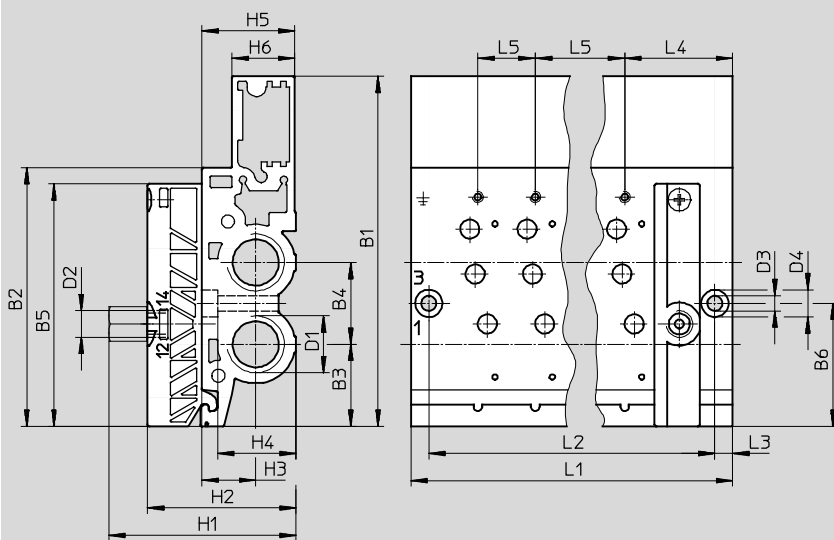
Material:

Wrought aluminium alloy



## Dimensions

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



Note

The manifold rail is supplied with an adapter for NPT.

| Type             | L1   | L2   | L3   | L4   | L5   | B1     | B2   | B3   | B4   | B5   | B6 | D1         | D2         | D3  | D4  | H1   | H2   | H3   | H4   | H5   | H6 |
|------------------|------|------|------|------|------|--------|------|------|------|------|----|------------|------------|-----|-----|------|------|------|------|------|----|
|                  | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.25  | ±0.2 | ±0.2 | ±0.2 |      |    |            |            | H13 | H13 |      |      | ±0.2 |      | ±0.2 |    |
| VABM-B6-E-N12-2  | 85   | 72   | 6.5  | 39.5 | 21   | 128.25 | 94.7 | 30   | 30   | 88.7 | 45 | 1/2<br>NPT | 1/8<br>NPT | 5.5 | 10  | 68.7 | 54.8 | 19.7 | 28.8 | 34   | 23 |
| VABM-B6-E-N12-4  | 127  | 114  |      |      |      |        |      |      |      |      |    |            |            |     |     |      |      |      |      |      |    |
| VABM-B6-E-N12-6  | 169  | 156  |      |      |      |        |      |      |      |      |    |            |            |     |     |      |      |      |      |      |    |
| VABM-B6-E-N12-8  | 211  | 198  |      |      |      |        |      |      |      |      |    |            |            |     |     |      |      |      |      |      |    |
| VABM-B6-E-N12-10 | 253  | 240  |      |      |      |        |      |      |      |      |    |            |            |     |     |      |      |      |      |      |    |

## Ordering data

| Valve positions | CRC             | Part No. | Type             |
|-----------------|-----------------|----------|------------------|
| 2               | 2 <sup>1)</sup> | 570725   | VABM-B6-E-N12-2  |
| 4               | 2 <sup>1)</sup> | 570726   | VABM-B6-E-N12-4  |
| 6               | 2 <sup>1)</sup> | 570727   | VABM-B6-E-N12-6  |
| 8               | 2 <sup>1)</sup> | 570728   | VABM-B6-E-N12-8  |
| 10              | 2 <sup>1)</sup> | 570729   | VABM-B6-E-N12-10 |

1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

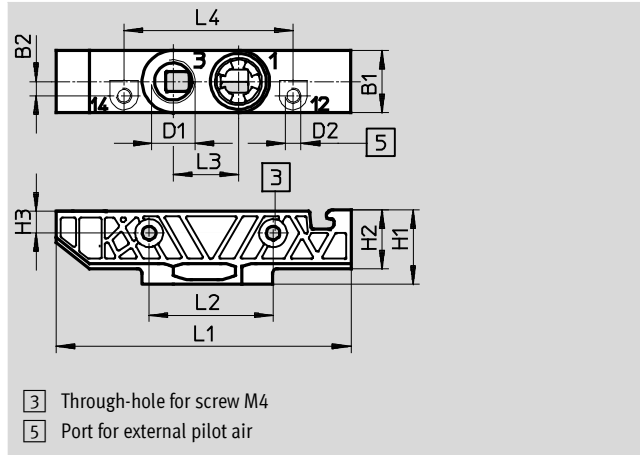
# Solenoid valves VUVB, NPT

Technical data – Sub-base

FESTO

## Sub-base VABS

Material:  
Reinforced polyamide



- Note

Sub-base has G-thread.

Adapter for NPT thread (9396) must be ordered separately.

➔ Page 48

| Type         | D1              | D2 | B1 | B2  | H1   | H2   | H3 | L1 | L2 | L3 | L4    |
|--------------|-----------------|----|----|-----|------|------|----|----|----|----|-------|
| VABS-B6-PB-Q | G $\frac{1}{4}$ | M5 | 20 | 4.6 | 23.5 | 18.5 | 7  | 95 | 40 | 21 | 54.55 |

| Ordering data   |                           |                                  |            |                 |          |                |
|-----------------|---------------------------|----------------------------------|------------|-----------------|----------|----------------|
| Valve positions | Description               | Compressed air supply connection | Weight [g] | CRC             | Part No. | Type           |
| 1               | Internal pilot air supply | Cartridge                        | 22         | 2 <sup>1)</sup> | 537518   | VABS-B6-PB-Q-B |
| 1               | External pilot air supply | Cartridge                        | 22         | 2 <sup>1)</sup> | 537519   | VABS-B6-PB-Q   |

1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

# Valve terminals VTUB, NPT

Peripherals overview

FESTO

## Overview – Valve terminal VTUB

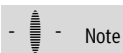
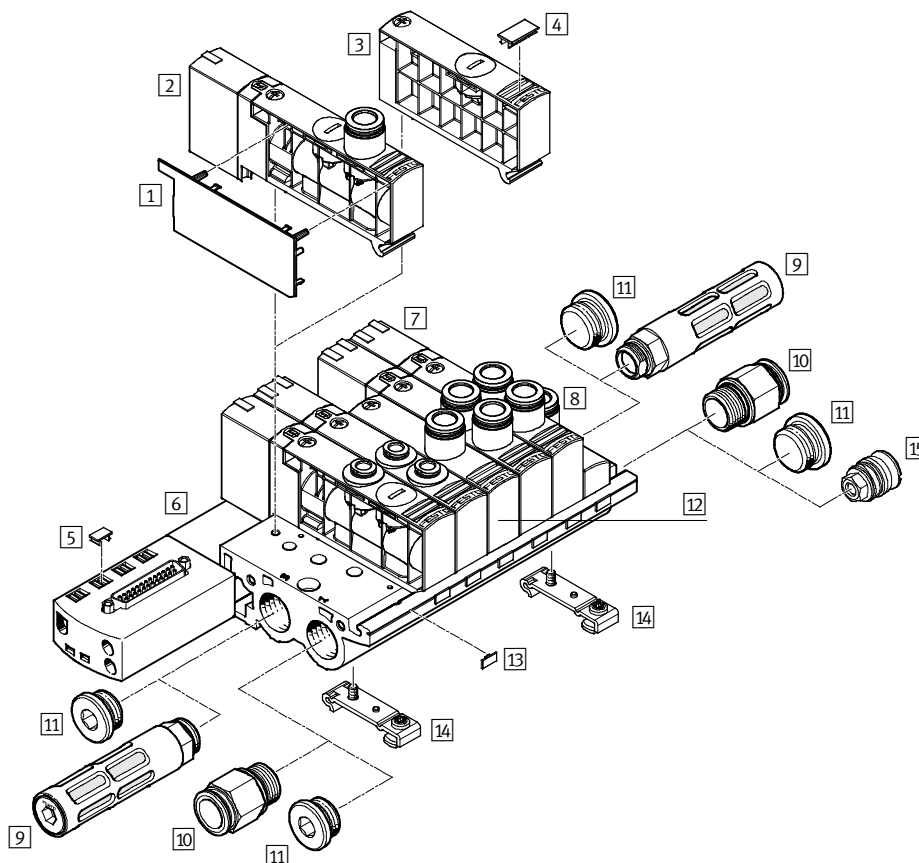
Valve terminal with electrical multi-pin plug connection

- 25-pin Sub-D multi-pin plug connection  
Code: SD

Valve terminals with electrical multi-pin plug connection are available in gradations from 2 to max. 10 valve positions.

Each valve position can either be equipped with a valve or a blanking plate.

A maximum of 20 solenoid coils can be actuated via the electrical multi-pin plug connection.



Note

Valve terminals are available for 4, 6, 8 and 10 valve positions in connection size 1/2 NPT.

## Valve terminals VTUB, NPT

Peripherals overview

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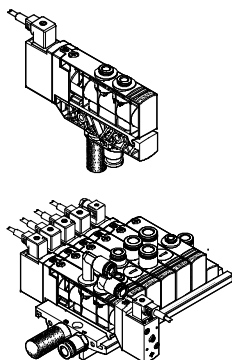
| Accessories                             |                                                                                       |                 |
|-----------------------------------------|---------------------------------------------------------------------------------------|-----------------|
|                                         | Brief description                                                                     | → Page/Internet |
| 1 Cover for valve housing<br>VAMC       | –                                                                                     | 45              |
| 2 Single solenoid valve<br>VUVB-...-M-- | –                                                                                     | 34              |
| 3 Blanking plate<br>VABB                | Blanking plate VABB: for vacant position, with blanking plug                          | 43              |
| 4 Inscription label<br>IBS-9x17         | For identifying the valves                                                            | 48              |
| 5 Inscription label<br>IBS-6x10         | –                                                                                     | 48              |
| 6 Manifold rail<br>VABM-B6-E-N...-M1    | With multi-pin plug connection, for connecting max. 16 valves                         | 40              |
| 7 Double solenoid valve<br>VUVB-...-B-- | –                                                                                     | 34              |
| 8 Pressure zone supply module           | For pilot air supply<br>(included in the scope of delivery of the manifold rail VABM) | –               |
| 9 Silencer<br>U                         | For fitting in exhaust ports                                                          | 48              |
| 10 Push-in fitting<br>QS                | For connecting compressed air tubing with standard O.D.                               | 47              |
| 11 Blanking plug<br>B                   | –                                                                                     | 48              |
| 12 Pressure zone supply module<br>VABF  | Pressure zone supply module VABF: with cartridge                                      | 42              |
| 13 Inscription label<br>MH-BZ-80X       | For identifying the manifold rail                                                     | 48              |
| 14 H-rail mounting kit<br>VAME          | For mounting on the H-rail NRH-35-2000                                                | 48              |
| 15 Separator for pressure zones<br>VABD | For mounting in the manifold rail                                                     | 43              |

# Valve terminals VTUB, NPT

Key features

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## Individual connection

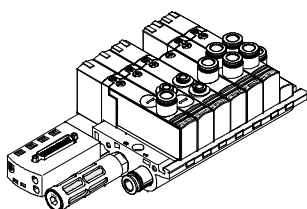


Connection is independent of the control technology used and is flexible thanks to pre-assembled cables. There are two different valve types; in-line valves and semi in-line valves for manifold rails or individual sub-bases. Between 2 ... 20 solenoid coils (divided between 2 ... 10 valve positions) can be selected with individual connection.

Valves can be used on individual sub-bases for actuators further away from the valve terminal. With an individual electrical connection, the plug is connected directly to the valve. A number of plug sockets/plug sockets with cable can be selected for the valve terminal and for the individual sub-base:

- KMEB-1-...-LED with signal status display
- KMEB-1-230AC-... can be used up to 230 V AC
- MSSD-EB for self-assembly
- KMEB-2-24-... with signal status display
- Illuminating seal MEB-LD for signal status display

## Multi-pin plug connection



Control signals from the controller to the valve terminal are transmitted via a pre-assembled multi-core cable, which substantially reduces installation time.

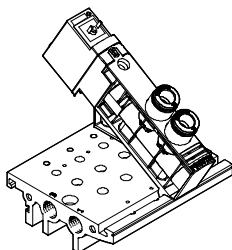
This valve terminal can be equipped with 4 ... 10 valves.

Versions

- Sub-D connection

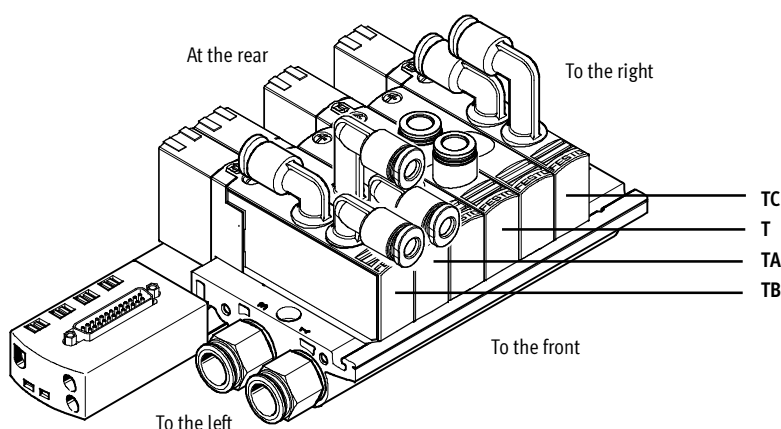
Double solenoid drive with multi-pin plug connection. The valve is equipped with an LED for signal status display.

## Wide range of pneumatic components



- Using the same basic valves for both the individual valves and the valve manifold permits fast and flexible conversion and multiple use of parts.
- Flexible construction thanks to assembled and tested units or individual components as modules for individual configurations.
- Flow rates from 200 ... 1,000 l/min depending on the respective application through the selection of appropriate QS connections.

## Connection to the valve



Connection positions on valve:

- T (on top, straight)
- TA (on top, angled outlet to the front)
- TB (on top, angled outlet to the front/rear)
- TC (on top, angled outlet to the rear)

Connection sizes for connection position T:

- Push-in connector 4 mm (code P4)
- Push-in connector 6 mm (code P6)
- Push-in connector 8 mm (code P8)
- Push-in connector 10 mm (code P10)

Connection sizes for connection position TB/TA/TC:

- Push-in connector 4 mm (code P4)
- Push-in connector 6 mm (code P6)
- Push-in connector 8 mm (code P8)

# Valve terminals VTUB, NPT

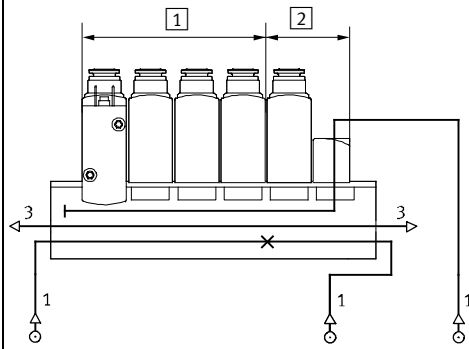
Key features – Pneumatic components

FESTO

## Instructions for using pressure zones

The valve terminal VTUB can be operated with 2 pressure zones, supplied either from the left or from the right. Pressure zones are created by means of separators that can be used in the following ducts:

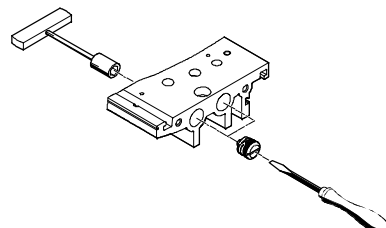
- Supply duct 1 (code TP)
- or
- Supply duct 1 and exhaust duct 3 (code TS) or
- Exhaust duct 3 (code TR)

| Duct separation                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                 | Code | Description     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------------|
|  <div style="position: absolute; top: 305px; left: 400px;"> <div style="border: 1px solid black; width: 20px; height: 10px; margin-bottom: 2px;"></div> 1 Pressure zone 1         </div> <div style="position: absolute; top: 315px; left: 400px;"> <div style="border: 1px solid black; width: 20px; height: 10px; margin-bottom: 2px;"></div> 2 Pressure zone 2         </div> | <div style="position: absolute; top: 305px; left: 400px;"> <div style="border: 1px solid black; width: 20px; height: 10px; margin-bottom: 2px;"></div> 1 Pressure zone 1         </div> <div style="position: absolute; top: 315px; left: 400px;"> <div style="border: 1px solid black; width: 20px; height: 10px; margin-bottom: 2px;"></div> 2 Pressure zone 2         </div> | TP   | Duct 1 closed   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                 | TS   | Duct 1/3 closed |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                 | TR   | Duct 3 closed   |

## Separator VABD-B6

-  Note

The separator can also be fitted subsequently using a screwdriver/ socket spanner.

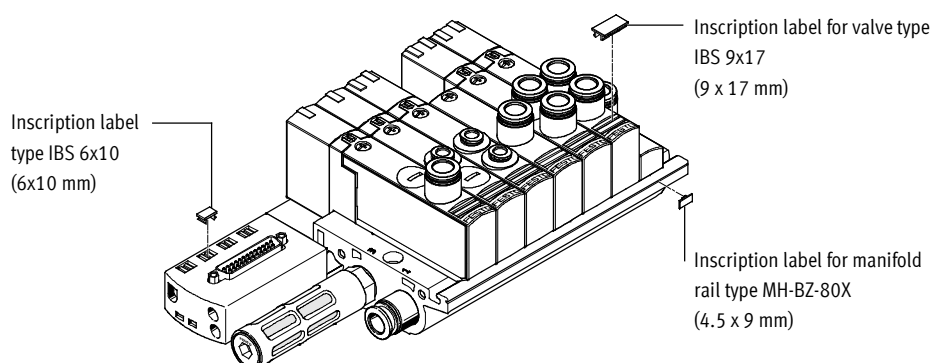


# Valve terminals VTUB, NPT

Key features – Display and operation

**FESTO**

## Identification system



Inscription labels can be applied to the valves and manifold rails to identify them.

- Inscription labels for valve type IBS-9x17  
Part No. 161937
- Inscription labels for manifold rail type MH-BZ-80X  
Part No. 197259

## Display and operation

Each solenoid coil can be allocated an LED which indicates its signal status. Suitable plug sockets with cable can be found on page 49. On the multi-pin variant the LED is integrated in the valve.

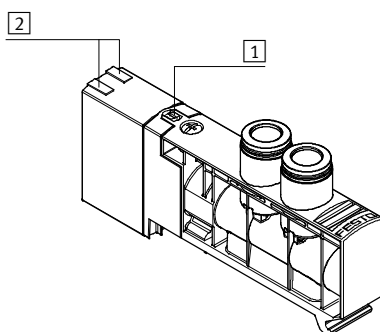
The manual override (MO) enables the valve to be activated without electronic control or power supply.

The valve is activated by pushing the manual override. The set switching status can be secured by rotating the manual override.



**Note**

A manually actuated valve (manual override) cannot be reset electrically. Conversely, an electrically actuated valve cannot be reset using the mechanical manual override.



- 1** Optional manual override (pushing and detenting via turning using a screwdriver)
- 2** LED signal status display per solenoid coil

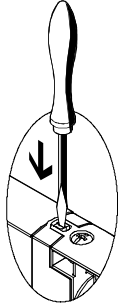
# Valve terminals VTUB, NPT

Key features – Display and operation

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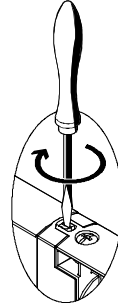
## Manual override (MO)

### MO with automatic return (non-detenting)



Press in the stem of the MO with a pin or screwdriver.  
 → Valve is in switching position  
 Remove the pointed object or screwdriver.  
 Spring force pushes the stem of the MO back.  
 → Valve returns to normal position.

### MO with detent (turning with detent)<sup>1)</sup>



Press in the stem of the MO using a pin or screwdriver until the valve switches and then turn the stem clockwise by 90° until the stop is reached.  
 → Valve remains in switching position.  
 Turn the stem anti-clockwise by 90° until the stop is reached and then remove the pin or screwdriver.  
 Spring force pushes the stem of the MO back.  
 → Valve returns to normal position.

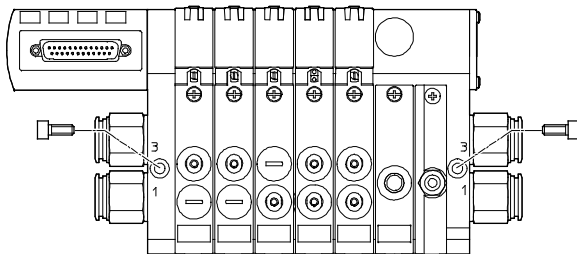
1) Not with double solenoid valve code J for electrical multi-pin plug connection (double solenoid valve)

## Mounting – Valve terminal

Sturdy terminal mounting thanks to:

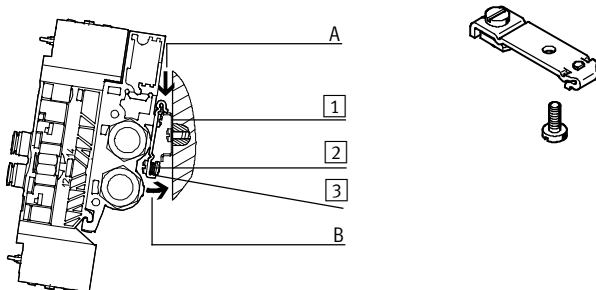
- Two through-holes for wall mounting
- Integrated attachment for H-rail mounting

### Wall mounting



The VTUB valve terminal is screwed onto the mounting surface using two M5 screws.

### H-rail mounting



The valve terminal VTUB is hooked onto the H-rail (see arrow A). The valve terminal VTUB is then swivelled on the H-rail and secured in place with the clamping component (see arrow B).

- 1 H-rail
- 2 Self-tapping M4x8 screw of the H-rail clamping unit
- 3 Clamping component of the H-rail clamping unit

For H-rail mounting of the valve terminal you will need the mounting kit VAME-B6-T. This permits mounting of the valve terminal on an H-rail to EN 60715.

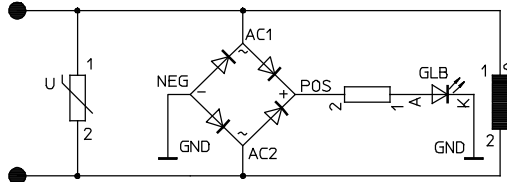
# Valve terminals VTUB, NPT

Key features – Electrical components

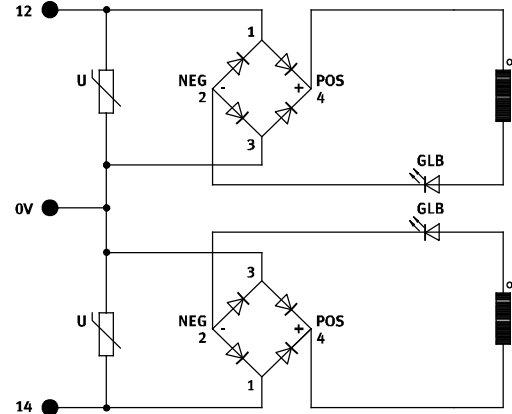
FESTO

## Protective circuits for plug-in valves for multi-pin terminals

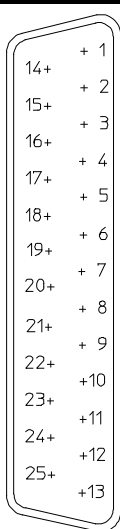
### 24 V DC version for single solenoid valve



### 24 V DC version for double solenoid valve



## Pin allocation – Sub-D plug

|                                                                                     | Connecting cable, 25-wire |              |                           | Connecting cable, 15-wire |              |                           |
|-------------------------------------------------------------------------------------|---------------------------|--------------|---------------------------|---------------------------|--------------|---------------------------|
|                                                                                     | Pin                       | Address/coil | Wire colour <sup>1)</sup> | Pin                       | Address/coil | Wire colour <sup>1)</sup> |
|  | 1                         | 0            | WH                        | 1                         | 0            | WH                        |
|                                                                                     | 2                         | 1            | BN                        | 2                         | 1            | BN                        |
|                                                                                     | 3                         | 2            | GN                        | 3                         | 2            | GN                        |
|                                                                                     | 4                         | 3            | YE                        | 4                         | 3            | YE                        |
|                                                                                     | 5                         | 4            | GY                        | 5                         | 4            | GY                        |
|                                                                                     | 6                         | 5            | PK                        | 6                         | 5            | PK                        |
|                                                                                     | 7                         | 6            | BU                        | 7                         | 6            | BU                        |
|                                                                                     | 8                         | 7            | RD                        | 8                         | 7            | RD                        |
|                                                                                     | 9                         | 8            | BK                        | 9                         | 8            | BK                        |
|                                                                                     | 10                        | 9            | VT                        | 10                        | 9            | VT                        |
|                                                                                     | 11                        | 10           | GY PK                     | 11                        | 10           | GY PK                     |
|                                                                                     | 12                        | 11           | RD BU                     | 12                        | 11           | RD BU                     |
|                                                                                     | 13                        | 12           | GN WH                     | 13                        | –            | –                         |
|                                                                                     | 14                        | 13           | BN GN                     | 14                        | –            | –                         |
|                                                                                     | 15                        | 14           | YE WH                     | 15                        | –            | –                         |
|                                                                                     | 16                        | 15           | BN YE                     | 16                        | –            | –                         |
|                                                                                     | 17                        | 16           | GY WH                     | 17                        | –            | –                         |
|                                                                                     | 18                        | 17           | BN GY                     | 18                        | –            | –                         |
|                                                                                     | 19                        | 18           | WH PK                     | 19                        | –            | –                         |
|                                                                                     | 20                        | 19           | BN PK                     | 20                        | –            | –                         |
|                                                                                     | 21                        | 20           | BU WH                     | 21                        | –            | –                         |
|                                                                                     | 22                        | 21           | BN BU                     | 22                        | –            | –                         |
|                                                                                     | 23                        | 22           | RD WH                     | 23                        | –            | WH GN                     |
|                                                                                     | 24                        | 23           | BN RD                     | 24                        | –            | BN GN                     |
|                                                                                     | 25                        | 0 V          | BK WH                     | 25                        | 0 V          | WH YE                     |

1) To IEC 757

# Valve terminals VTUB, NPT

Key features – Applications

FESTO

## Equipment

Operate system equipment with unlubricated compressed air if possible. Festo valves and cylinders are designed so that, if used as designated, they will not require additional lubrication and will still achieve a long service life.

The quality of compressed air downstream of the compressor must correspond to that of unlubricated compressed air. If possible, do not operate all of your system equipment with lubricated compressed air. The lubricators should, where possible, always be installed directly upstream of the actuator used.

Incorrect additional oil and too high an oil content in the compressed air reduce the service life of the valve terminal.

Use Festo special oil OFSW-32 or the alternatives listed in the Festo catalogue (as specified in DIN 51524 HLP32; basic oil viscosity 32 CST at 40 °C).

### Bio-oils

When using bio-oils (oils which are based on synthetic or native ester, e.g. rapeseed oil methyl ester), the maximum residual oil content of 0.1 mg/m<sup>3</sup> must not be exceeded (see ISO 8573-1 Class 2).

### Mineral oils

When using mineral oils (e.g. HLP oils to DIN 51524, parts 1 to 3) or similar oils based on poly-alpha-olefins (PAO), the maximum residual oil content of 5 mg/m<sup>3</sup> must not be exceeded (see ISO 8573-1 Class 4).

A higher residual oil content irrespective of the compressor oil cannot be permitted, as the basic lubricant would be flushed out over time.

# Valve terminals VTUB, NPT

Type codes – Terminal valves

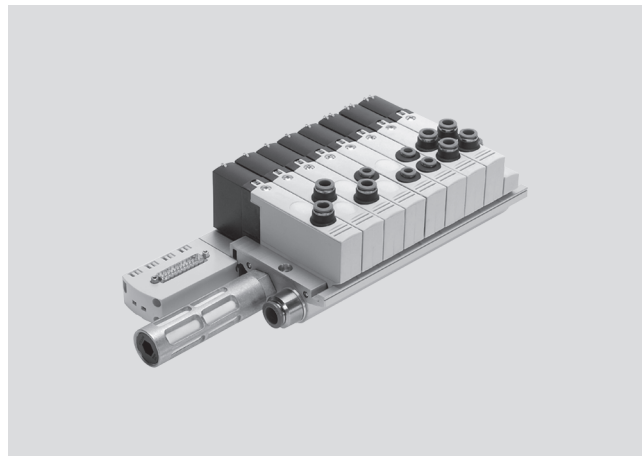
|                              |                                        |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
|------------------------------|----------------------------------------|------|---|---|---|------|---|---|---|---|---|-----|---|---|----|---|
|                              |                                        | VUVB | - | S | - | M32C | - | A | Z | D | - | T14 | - | 1 | T1 | L |
| <b>Valve series</b>          |                                        |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| VUVB                         | Solenoid valve                         |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| <b>Constructional design</b> |                                        |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| S                            | Semi in-line valve                     |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| <b>Valve function</b>        |                                        |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| M32C                         | 3/2-way valve, normally closed         |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| M32U                         | 3/2-way valve, normally open           |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| M42                          | 4/2-way valve, single solenoid         |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| B42                          | 4/2-way valve, double solenoid         |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| <b>Reset method</b>          |                                        |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| -                            | None (double solenoid)                 |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| A                            | Pneumatic reset                        |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| <b>Pilot air supply</b>      |                                        |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| -                            | Internal                               |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| Z                            | External                               |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| <b>Manual override</b>       |                                        |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| D                            | Non-detenting/detenting                |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| <b>Pneumatic connection</b>  |                                        |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| T532                         | For tubing O.D. 5/32                   |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| T14                          | For tubing O.D. 1/4                    |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| T516                         | For tubing O.D. 5/16                   |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| T38                          | For tubing O.D. 3/8                    |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| QX                           | Without push-in connector              |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| <b>Operating voltage</b>     |                                        |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| 1                            | 24 V DC                                |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| <b>Electrical connection</b> |                                        |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| T1                           | Plug-in, connection for multi-pin plug |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| <b>Signal status display</b> |                                        |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |
| L                            | LED                                    |      |   |   |   |      |   |   |   |   |   |     |   |   |    |   |

# Valve terminals VTUB, NPT

Technical data – Terminal valves

FESTO

-  Voltage  
24 V DC
-  Pressure  
-0.9 ... +8 bar
-  Temperature range  
-5 ... +50 °C



| General technical data        |       |                            |                                                     |                          |
|-------------------------------|-------|----------------------------|-----------------------------------------------------|--------------------------|
| Valve function                |       | 3/2-way, single solenoid   | 4/2-way, single solenoid                            | 4/2-way, double solenoid |
| Design                        |       | Piston spool valve         |                                                     |                          |
| Sealing principle             |       | Soft                       |                                                     |                          |
| Actuation type                |       | Electric                   |                                                     |                          |
| Reset method                  |       | Pneumatic spring           |                                                     | –                        |
| Type of control               |       | Piloted                    |                                                     |                          |
| Pilot air supply              |       | Internal or external       |                                                     |                          |
| Direction of flow             |       | Non-reversible             |                                                     |                          |
| Exhaust function              |       | No flow control            |                                                     |                          |
| Manual override               |       | Non-detenting, detenting   |                                                     | Non-detenting            |
| Type of mounting              |       | Via through-hole           |                                                     |                          |
| Mounting position             |       | Any                        |                                                     |                          |
| Width                         | [mm]  | 20                         |                                                     |                          |
| Nominal size                  | [mm]  | 7                          |                                                     |                          |
|                               |       |                            |                                                     |                          |
| Pneumatic connections         |       |                            |                                                     |                          |
| Supply port                   | 1     | ½ NPT (sub-base)           |                                                     |                          |
| Exhaust port                  | 3     | ½ NPT (sub-base)           |                                                     |                          |
| Working lines                 | 2/4   | ⅝ NPT, ¼ NPT, ⅜ NPT, ⅜ NPT |                                                     |                          |
| External pilot air connection | 12/14 | ⅛ NPT                      |                                                     |                          |
| Standard nominal flow rate    | qnN   | [l/min]                    | 200 (⅝ NPT) 500 (¼ NPT), 800 (⅜ NPT), 1,000 (⅜ NPT) |                          |

| Operating and environmental conditions                               |                                                                                                        |
|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Operating medium                                                     | Compressed air in accordance with ISO 8573-1:2010 [7:4:4]                                              |
| Note on operating/pilot medium                                       | Operation with lubricated medium possible (in which case lubricated operation will always be required) |
| Operating pressure                                                   | [bar] -0.9 ... +8                                                                                      |
| Operating pressure for valve terminal with internal pilot air supply | [bar] 2 ... 8                                                                                          |
| Pilot pressure                                                       | [bar] 2 ... 8                                                                                          |
| Ambient temperature                                                  | [°C] -5 ... +50                                                                                        |
| Temperature of medium                                                | [°C] -5 ... +50                                                                                        |
| Storage temperature <sup>1)</sup>                                    | [°C] -20 ... +40                                                                                       |
| Note on materials                                                    | RoHS-compliant                                                                                         |

1) Long-term storage

-  - Note

A filter must be installed upstream of valves operated in vacuum mode. This prevents any foreign matter in the intake air getting into the valve (e.g. when operating a suction cup).

## Valve terminals VTUB, NPT

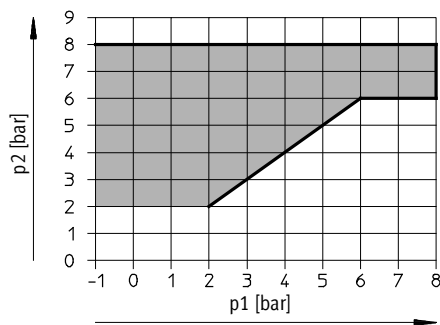
Technical data – Terminal valves

**FESTO**

| Electrical data                  |                           |                          |                                         |
|----------------------------------|---------------------------|--------------------------|-----------------------------------------|
| Valve function                   | 3/2-way, single solenoid  | 4/2-way, single solenoid | 4/2-way, double solenoid                |
| Electrical connection            | Socket for multi-pin plug |                          |                                         |
| Nominal operating voltage [V DC] | 24                        |                          |                                         |
| Permissible voltage fluctuations | ±10%                      |                          |                                         |
| Electrical power consumption [W] | 1.5                       | 1.5                      | 3.3 (following a current reduction 0.1) |
| Protection class to EN 60529     | IP65                      |                          |                                         |

| Valve switching times [ms] |                          |                          |                          |
|----------------------------|--------------------------|--------------------------|--------------------------|
| Valve function             | 3/2-way, single solenoid | 4/2-way, single solenoid | 4/2-way, double solenoid |
| On                         | 20                       | 20                       | –                        |
| Off                        | 20                       | 20                       | –                        |
| Changeover                 | –                        | –                        | 20                       |

Pilot pressure p2 as a function of operating pressure p1

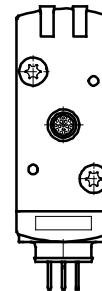
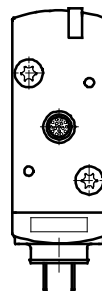
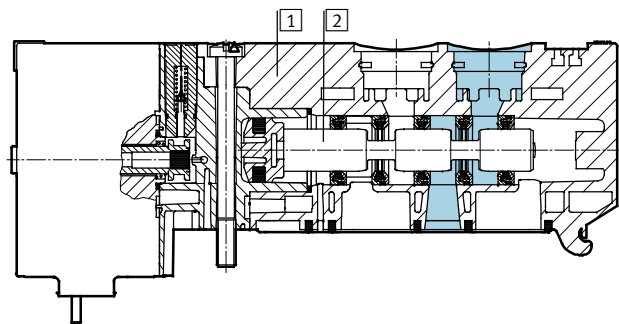


### Materials – Valves

Sectional view

Single solenoid

Double solenoid



|   |              |                                                               |
|---|--------------|---------------------------------------------------------------|
| 1 | Housing      | Reinforced polyamide                                          |
| 2 | Piston spool | Wrought aluminium alloy                                       |
| – | Seals        | Nitrile rubber, hydrogenated nitrile rubber, fluoro elastomer |

### Materials

|                                    |                         |
|------------------------------------|-------------------------|
| Manifold rail with multi-pin plug  | Wrought aluminium alloy |
| Pressure zone supply module        | Reinforced polyamide    |
| Blanking plate for vacant position | Reinforced polyamide    |

# Valve terminals VTUB, NPT

FESTO

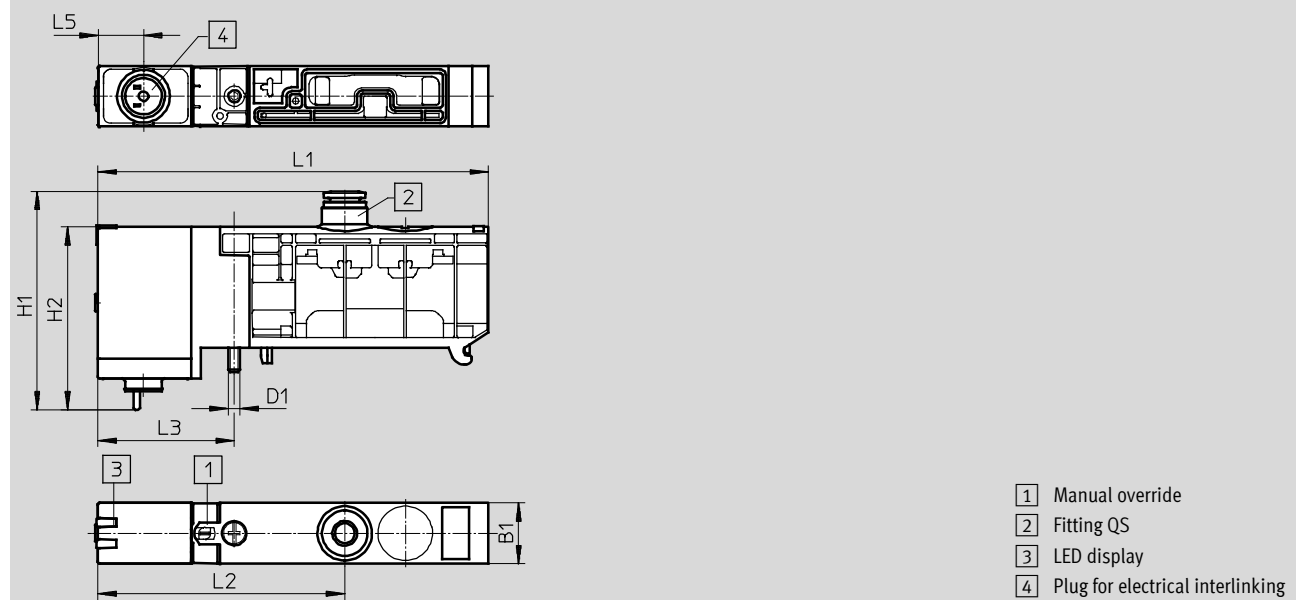
Technical data – Terminal valves

| Product weight                     |      |
|------------------------------------|------|
| Approx. weight                     | [g]  |
| Manifold rail with multi-pin plug  |      |
| • 4 valve positions                | 700  |
| • 6 valve positions                | 925  |
| • 8 valve positions                | 1160 |
| • 10 valve positions               | 1390 |
| Pressure zone supply module        | 30   |
| Valves                             |      |
| • Single solenoid (code K, N, M)   | 150  |
| • Double solenoid (code J)         | 220  |
| Blanking plate for vacant position | 25   |

## Dimensions – 3/2-way and 4/2-way valve, single solenoid

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

For electrical multi-pin plug



| Type               | B1 | D1 | H1 | H2   | L1     | L2   | L3 | L5 |
|--------------------|----|----|----|------|--------|------|----|----|
| VUVB-S-M32...-T14  | 20 | M4 | 54 | 60.3 | 128.95 | 81.5 | 45 | 15 |
| VUVB-S-M32...-T516 |    |    | 61 |      |        |      |    |    |
| VUVB-S-M32...-T38  |    |    | 65 |      |        |      |    |    |

# Valve terminals VTUB, NPT

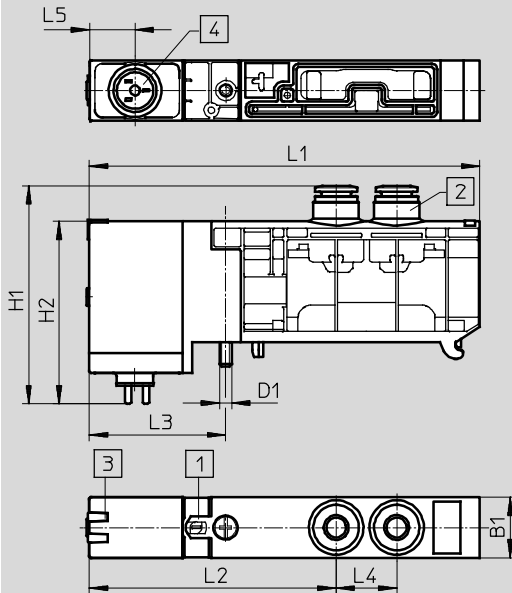
Technical data – Terminal valves

**FESTO**

Dimensions – 4/2-way valve, double solenoid

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

For electrical multi-pin plug



| Type               | B1 | D1 | H1 | H2   | L1     | L2   | L3 | L4 | L5 |
|--------------------|----|----|----|------|--------|------|----|----|----|
| VUVB-S-B42...-T14  | 20 | M4 | 54 | 60.3 | 128.95 | 81.5 | 45 | 20 | 15 |
| VUVB-S-B42...-T516 |    |    | 61 |      |        |      |    |    |    |
| VUVB-S-B42...-T38  |    |    | 65 |      |        |      |    |    |    |

# Valve terminals VTUB, NPT

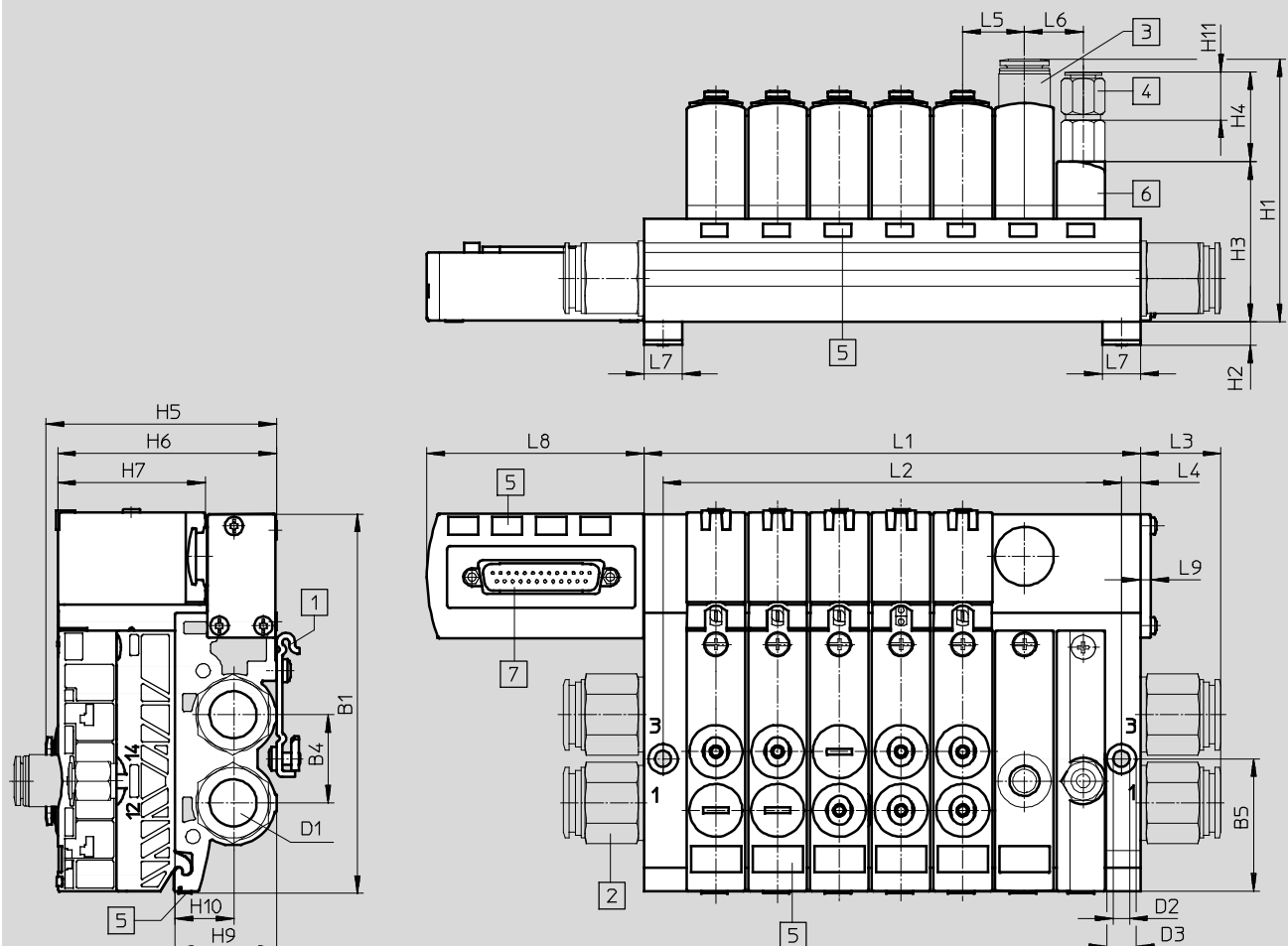
Technical data – Terminal valves

FESTO

## Dimensions – Valve terminal

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

With electrical multi-pin plug



- 1 Attachment VAME-B6-T (optional) for mounting rail
- 2 Push-in fittings (optional)
- 3 Push-in fittings (optional, only with pressure zone supply module; blanking plate only with blanking plug)
- 4 Push-in fitting for external pilot air supply, with adapter for NPT
- 5 Inscription label (optional)
- 6 Selector plate for internal/external pilot air
- 7 Sub-D plug

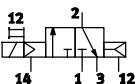
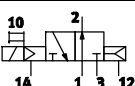
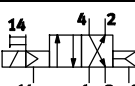
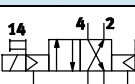
| Type      | B1    | B4 | B5 | D1  | D2<br>Ø<br>H13 | D3<br>Ø<br>H13 | H1   | H2 | H3   | H4   | H6   | H7   | H9   | H10  | L1<br>±<br>0.2 | L2<br>±<br>0.2 | L3   | L4  | L5 | L6 | L7 | L8   | L9  |
|-----------|-------|----|----|-----|----------------|----------------|------|----|------|------|------|------|------|------|----------------|----------------|------|-----|----|----|----|------|-----|
| VTUB-4--  | 129.1 | 30 | 4  | NPT | 5.5            | 10             | 89.4 | 8  | 54.5 | 30.6 | 74.5 | 50.1 | 34.5 | 19.7 | 127            | 114            | 27.4 | 6.5 | 21 | 20 | 13 | 73.8 | 3.5 |
| VTUB-6--  |       |    |    | 1/2 |                |                |      |    |      |      |      |      |      |      | 169            | 156            |      |     |    |    |    |      |     |
| VTUB-8--  |       |    |    |     |                |                |      |    |      |      |      |      |      |      | 211            | 198            |      |     |    |    |    |      |     |
| VTUB-10-- |       |    |    |     |                |                |      |    |      |      |      |      |      |      | 253            | 240            |      |     |    |    |    |      |     |

| Type              | H5   |
|-------------------|------|
| QSPK18-1/4-U-100  | 78.9 |
| QSPK18-3/16-U-100 | 85.7 |
| QSPK18-3/8-U-100  | 89.5 |

## Valve terminals VTUB, NPT

Technical data – Terminal valves

**FESTO**

| Ordering data – Valves for valve terminal                                           |      |                                                                           |         |                           |          |                           |
|-------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------|---------|---------------------------|----------|---------------------------|
| Circuit symbol                                                                      | Code | Description                                                               | Voltage | Pneumatic connection      | Part No. | Type                      |
| 3/2-way valves                                                                      |      |                                                                           |         |                           |          |                           |
|    | K    | Normally closed,<br>external pilot air supply,<br>pneumatic spring return | 24 V DC | QS-1/4                    | 568611   | VUVB-S-M32C-AZD-T14-1T1L  |
|                                                                                     |      |                                                                           |         | QS-5/16                   | 568612   | VUVB-S-M32C-AZD-T516-1T1L |
|                                                                                     |      |                                                                           |         | QS-3/8                    | 568613   | VUVB-S-M32C-AZD-T38-1T1L  |
|                                                                                     |      |                                                                           |         | Without push-in connector | 574001   | VUVB-S-M32C-AZD-QX-1T1L   |
|    | N    | Normally open,<br>external pilot air supply,<br>pneumatic spring return   | 24 V DC | QS-1/4                    | 568614   | VUVB-S-M32U-AZD-T14-1T1L  |
|                                                                                     |      |                                                                           |         | QS-5/16                   | 568615   | VUVB-S-M32U-AZD-T516-1T1L |
|                                                                                     |      |                                                                           |         | QS-3/8                    | 568616   | VUVB-S-M32U-AZD-T38-1T1L  |
|                                                                                     |      |                                                                           |         | Without push-in connector | 574002   | VUVB-S-M32U-AZD-QX-1T1L   |
| 4/2-way valves, single solenoid                                                     |      |                                                                           |         |                           |          |                           |
|    | M    | External pilot air supply,<br>pneumatic spring return                     | 24 V DC | QS-1/4                    | 568617   | VUVB-S-M42-AZD-T14-1T1L   |
|                                                                                     |      |                                                                           |         | QS-5/16                   | 568618   | VUVB-S-M42-AZD-T516-1T1L  |
|                                                                                     |      |                                                                           |         | QS-3/8                    | 568619   | VUVB-S-M42-AZD-T38-1T1L   |
|                                                                                     |      |                                                                           |         | Without push-in connector | 537640   | VUVB-S-M42-AZD-QX-1T1L    |
| 4/2-way valves, double solenoid                                                     |      |                                                                           |         |                           |          |                           |
|  | J    | External pilot air supply                                                 | 24 V DC | QS-1/4                    | 568620   | VUVB-S-B42-ZD-T14-1T1L    |
|                                                                                     |      |                                                                           |         | QS-5/16                   | 568621   | VUVB-S-B42-ZD-T516-1T1L   |
|                                                                                     |      |                                                                           |         | QS-3/8                    | 568622   | VUVB-S-B42-ZD-T38-1T1L    |
|                                                                                     |      |                                                                           |         | Without push-in connector | 537641   | VUVB-S-B42-ZD-QX-1T1L     |

# Valve terminals VTUB, NPT

Technical data – Manifold rail

FESTO

Manifold rail with electrical multi-pin plug

VABM-...-M1

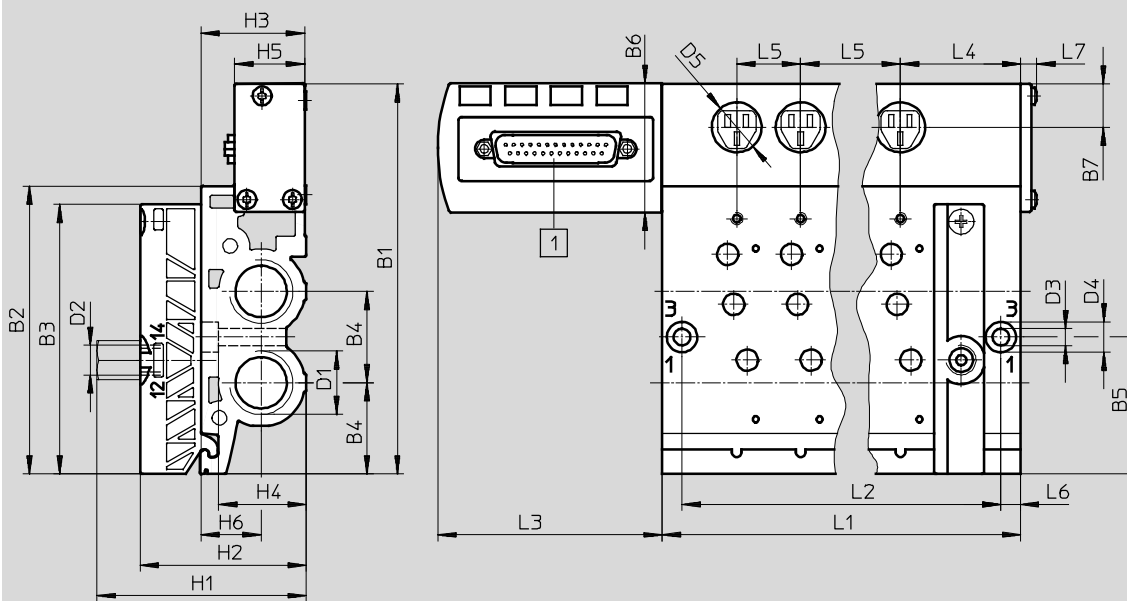
Material:

Wrought aluminium alloy



## Dimensions

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



1 Sub-D plug



Note

The manifold rail is supplied with an adapter for NPT.

| Type                | B1    | B2   | B3   | B4<br>±<br>0.2 | B5 | B6   | B7   | D1     | D2     | D3<br>Ø<br>H13 | D4<br>Ø<br>H13 | D5<br>Ø | H1   | H2   | H3 | H4   | H5 | H6<br>±0.2 |
|---------------------|-------|------|------|----------------|----|------|------|--------|--------|----------------|----------------|---------|------|------|----|------|----|------------|
| VABM-B6-E-N12-4-M1  | 128.3 | 94.7 | 88.7 | 30             | 45 | 42.2 | 14.3 | 1/2NPT | 1/8NPT | 5.5            | 10             | 16.4    | 68.7 | 54.5 | 34 | 28.8 | 23 | 19.7       |
| VABM-B6-E-N12-6-M1  |       |      |      |                |    |      |      |        |        |                |                |         |      |      |    |      |    |            |
| VABM-B6-E-N12-8-M1  |       |      |      |                |    |      |      |        |        |                |                |         |      |      |    |      |    |            |
| VABM-B6-E-N12-10-M1 |       |      |      |                |    |      |      |        |        |                |                |         |      |      |    |      |    |            |

| Type                | L1  | L2  | L3   | L4<br>±0.1 | L5<br>±0.1 | L6<br>±0.1 | L7  |
|---------------------|-----|-----|------|------------|------------|------------|-----|
| VABM-B6-E-N12-4-M1  | 127 | 114 | 73.8 | 39.5       | 21         | 6.5        | 5.4 |
| VABM-B6-E-N12-6-M1  | 169 | 156 |      |            |            |            |     |
| VABM-B6-E-N12-8-M1  | 211 | 198 |      |            |            |            |     |
| VABM-B6-E-N12-10-M1 | 253 | 240 |      |            |            |            |     |

## Valve terminals VTUB, NPT

Technical data – Manifold rail

**FESTO**

| Ordering data   |          |                     |
|-----------------|----------|---------------------|
| CRC             | Part No. | Type                |
| 2 <sup>1)</sup> | 568181   | VABM-B6-E-N12-4-M1  |
| 2 <sup>1)</sup> | 568182   | VABM-B6-E-N12-6-M1  |
| 2 <sup>1)</sup> | 568183   | VABM-B6-E-N12-8-M1  |
| 2 <sup>1)</sup> | 568184   | VABM-B6-E-N12-10-M1 |

- 1) Corrosion resistance class 2 according to Festo standard 940 070  
Components subject to medium corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

## Solenoid valves VUVB/valve terminals VTUB, NPT

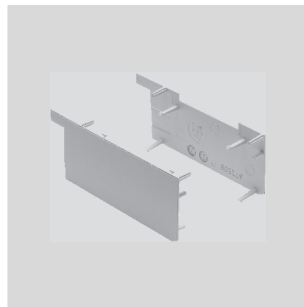
Accessories

**FESTO**

### Cover for valve housing VAMC

Material:

Polyamide



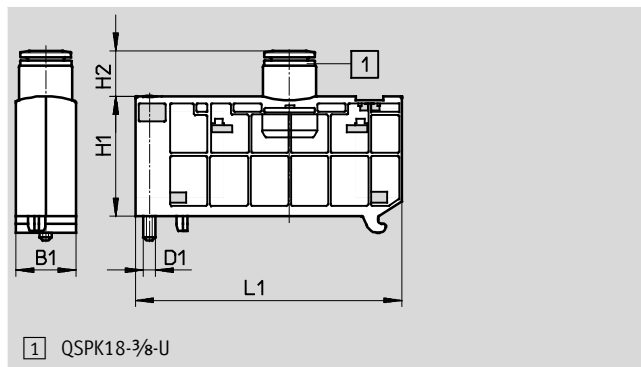
| Ordering data   |          |           |
|-----------------|----------|-----------|
| CRC             | Part No. | Type      |
| 2 <sup>1)</sup> | 537512   | VAMC-B6-C |

- 1) Corrosion resistance class 2 according to Festo standard 940 070  
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

### Pressure zone supply module VABF

Material:

Reinforced polyamide



| Type        | D1 | B1 | H1 | H2 | L1   |
|-------------|----|----|----|----|------|
| VABF-B6-... | M4 | 20 | 40 | 15 | 88.5 |

| Ordering data                        |                                                                         |                 |          |                  |
|--------------------------------------|-------------------------------------------------------------------------|-----------------|----------|------------------|
|                                      |                                                                         | CRC             | Part No. | Type             |
| For individual electrical connection | With cartridge QSPK18-3/8-U                                             | 2 <sup>1)</sup> | 568624   | VABF-B6-P1A5-T38 |
| For multi-pin plug connection        | With cartridge QSPK18-3/8-U and cover cap for multi-pin plug connection | 2 <sup>1)</sup> | 568623   | VABF-B6-P1A9-T38 |

- 1) Corrosion resistance class 2 according to Festo standard 940 070  
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

# Solenoid valves VUVB/valve terminals VTUB, NPT

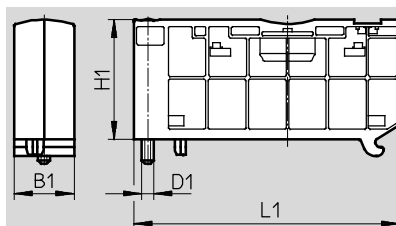
FESTO

Accessories

## Blanking plate VABB

Material:

Reinforced polyamide



| Type       | B1 | D1 | H1 | L1   |
|------------|----|----|----|------|
| VABB-B-6-E | 20 | M4 | 40 | 88.5 |

| Ordering data                        |                                              | CRC             | Part No. | Type       |
|--------------------------------------|----------------------------------------------|-----------------|----------|------------|
| For individual electrical connection | –                                            | 2 <sup>1)</sup> | 537513   | VABB-B6-E  |
| For multi-pin plug connection        | With cover cap for multi-pin plug connection | 2 <sup>1)</sup> | 537623   | VABB-B6-ET |

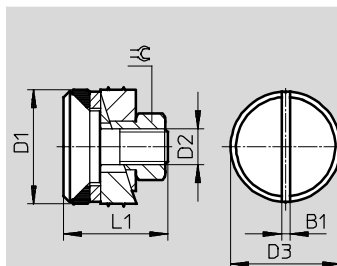
1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

## Separator for pressure zones VABD

Material:

Steel



| Type           | B1  | D1   | D2 | D3   | L1   | ≡C |
|----------------|-----|------|----|------|------|----|
| VABD-B6-14-P-C | 1.6 | 11.7 | M4 | 11.3 | 13.9 | 7  |
| VABD-B6-12-P-C | 1.4 | 19   | M6 | 18.3 | 17.3 | 10 |

| Ordering data |  | CRC             | Part No. | Type           |
|---------------|--|-----------------|----------|----------------|
| Manifold rail |  |                 |          |                |
| 1/4 NPT       |  | 2 <sup>1)</sup> | 537515   | VABD-B6-14-P-C |
| 1/2 NPT       |  | 2 <sup>1)</sup> | 537516   | VABD-B6-12-P-C |

1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

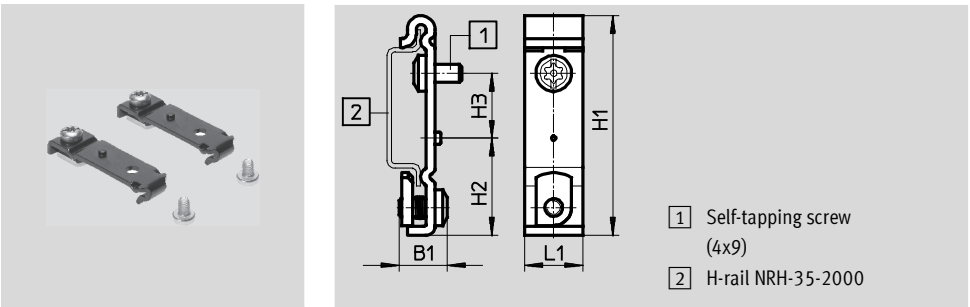
# Solenoid valves VUVB/valve terminals VTUB, NPT



Accessories

## H-rail mounting kit VAME

Material:  
Steel



| Type      | B1   | H1   | H2   | H3   | L1 |
|-----------|------|------|------|------|----|
| VAME-B6-T | 10.7 | 49.1 | 21.7 | 14.5 | 13 |

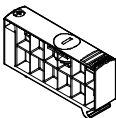
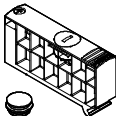
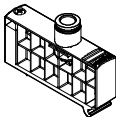
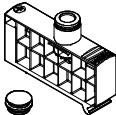
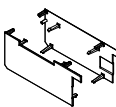
| Ordering data   |          |           |
|-----------------|----------|-----------|
| CRC             | Part No. | Type      |
| 2 <sup>1)</sup> | 537514   | VAME-B6-T |

1) Corrosion resistance class 2 according to Festo standard 940 070  
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

## Solenoid valves VUVB/valve terminals VTUB, NPT

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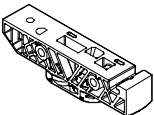
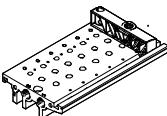
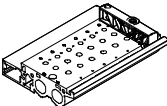
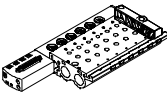
Accessories

| Ordering data                                                                       |      |                                                                                                         |                           |          |                  |
|-------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------------------------|---------------------------|----------|------------------|
|                                                                                     | Code | Valve function                                                                                          | Pneumatic connection      | Part No. | Type             |
| Blanking plate for vacant position                                                  |      |                                                                                                         |                           |          |                  |
|    | L    | For individual electrical connection                                                                    | –                         | 537513   | VABB-B6-E        |
|    | L    | For multi-pin plug connection with cover cap for electrical multi-pin plug connection                   | –                         | 537623   | VABB-B6-ET       |
| Pressure zone supply module                                                         |      |                                                                                                         |                           |          |                  |
|    | S    | Additional supply for individual electrical connection                                                  | QS-3/8                    | 568623   | VABF-B6-P1A5-Q38 |
|   | S    | Additional supply for multi-pin plug connection with cover cap for electrical multi-pin plug connection | QS-3/8                    | 568624   | VABF-B6-P1A9-Q38 |
|                                                                                     |      |                                                                                                         | Without push-in connector | 537532   | VABF-B6-P1A5-QX  |
| Cover plate for valve housing                                                       |      |                                                                                                         |                           |          |                  |
|  | C    | Valve design with cover                                                                                 | –                         | 537512   | VAMC-B6-C        |

# Solenoid valves VUVB/valve terminals VTUB, NPT

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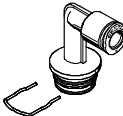
Accessories

| Ordering data                                                                       |            |                           |                 |                                  |          |                     |
|-------------------------------------------------------------------------------------|------------|---------------------------|-----------------|----------------------------------|----------|---------------------|
|                                                                                     | Code       | Description               | Valve positions | Compressed air supply connection | Part No. | Type                |
| Sub-base for individual valve                                                       |            |                           |                 |                                  |          |                     |
|    | –          | Internal pilot air supply | 1               | Cartridge                        | 537518   | VABS-B6-PB-Q-B      |
|                                                                                     | –          | External pilot air supply | 1               | Cartridge                        | 537519   | VABS-B6-PB-Q        |
| Adapter for individual sub-base                                                     |            |                           |                 |                                  |          |                     |
|    | –          | For thread 1/4 NPT        | 1               | 1/4 NPT                          | 9396     | AD-G1/4-1/4NPT-I    |
| Manifold rail for individual electrical connection                                  |            |                           |                 |                                  |          |                     |
|    | –          |                           | 2               | 1/4 NPT                          | 568185   | VABM-B6-E-N14-2     |
|                                                                                     |            |                           | 4               |                                  | 568186   | VABM-B6-E-N14-4     |
|                                                                                     |            |                           | 6               |                                  | 568187   | VABM-B6-E-N14-6     |
|                                                                                     |            |                           | 8               |                                  | 568188   | VABM-B6-E-N14-8     |
|                                                                                     |            |                           | 10              |                                  | 568189   | VABM-B6-E-N14-10    |
|   | –          |                           | 2               | 1/2 NPT                          | 570725   | VABM-B6-E-N12-2     |
|                                                                                     |            |                           | 4               |                                  | 570726   | VABM-B6-E-N12-4     |
|                                                                                     |            |                           | 6               |                                  | 570727   | VABM-B6-E-N12-6     |
|                                                                                     |            |                           | 8               |                                  | 570728   | VABM-B6-E-N12-8     |
|                                                                                     |            |                           | 10              |                                  | 570729   | VABM-B6-E-N12-10    |
| Manifold rail for valve terminal with multi-pin plug connection                     |            |                           |                 |                                  |          |                     |
|  | –          |                           | 4               | 1/2 NPT                          | 568181   | VABM-B6-E-N12-4-M1  |
|                                                                                     |            |                           | 6               |                                  | 568182   | VABM-B6-E-N12-6-M1  |
|                                                                                     |            |                           | 8               |                                  | 568183   | VABM-B6-E-N12-8-M1  |
|                                                                                     |            |                           | 10              |                                  | 568184   | VABM-B6-E-N12-10-M1 |
| Separator                                                                           |            |                           |                 |                                  |          |                     |
|  | TP, TS, TR | For duct separation       | –               | 1/4 NPT                          | 537515   | VABD-B6-14-P-C      |
|                                                                                     |            |                           | –               | 1/2 NPT                          | 537516   | VABD-B6-12-P-C      |

# Solenoid valves VUVB/valve terminals VTUB, NPT

FESTO

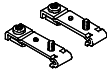
Accessories

| Ordering data                                                                     |      |                    |             |                |                                       |                 |
|-----------------------------------------------------------------------------------|------|--------------------|-------------|----------------|---------------------------------------|-----------------|
|                                                                                   | Code | Description        | Tubing O.D. | Packaging unit | Part No.                              | Type            |
| Cartridge with push-in connector                                                  |      |                    |             |                |                                       |                 |
|  | –    | Straight           | 5/32        | 10 pieces      | 132171                                | QSPK18-5/32-U   |
|                                                                                   | –    |                    | 1/4         | 10 pieces      | 132172                                | QSPK18-1/4-U    |
|                                                                                   | –    |                    | 5/16        | 10 pieces      | 132173                                | QSPK18-5/16-U   |
|                                                                                   | –    |                    | 3/8         | 10 pieces      | 132174                                | QSPK18-3/8-U    |
|  | –    | L-shape            | 5/32        | 10 pieces      | 132175                                | QSPLK18-5/32-U  |
|                                                                                   | –    |                    | 1/4         | 10 pieces      | 132176                                | QSPLK18-1/4-U   |
|                                                                                   | –    |                    | 5/16        | 10 pieces      | 132177                                | QSPLK18-5/16-U  |
|  | –    | Extra-long L-shape | 5/32        | 10 pieces      | 132178                                | QSPLLK18-5/32-U |
|                                                                                   | –    |                    | 1/4         | 10 pieces      | 132179                                | QSPLLK18-1/4-U  |
|                                                                                   | –    |                    | 5/16        | 10 pieces      | 132180                                | QSPLLK18-5/16-U |
|                                                                                   |      |                    |             |                |                                       |                 |
| Push-in fitting                                                                   |      |                    |             |                | Technical data ➔ Internet: quick star |                 |
|  | –    | Connection 1/4 NPT | 3/8         | 1 piece        | 533278                                | QB-1/4-3/8-U    |
|                                                                                   | –    |                    | 1/2         | 1 piece        | 567771                                | QB-1/4-1/2-U    |
|                                                                                   | –    | Connection 1/2 NPT | 3/8         | 1 piece        | 533283                                | QB-1/2-3/8-U    |
|                                                                                   | –    |                    | 1/2         | 1 piece        | 533284                                | QB-1/2-1/2-U    |
|                                                                                   | –    | Connection 1/8 NPT | 1/4         | 1 piece        | 533273                                | QB-1/8-1/4-U    |

# Solenoid valves VUVB/valve terminals VTUB, NPT

**FESTO**

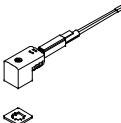
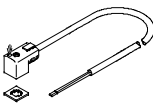
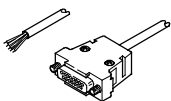
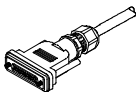
Accessories

| Ordering data                                                                       |      |                                                              |                              |          |                  |
|-------------------------------------------------------------------------------------|------|--------------------------------------------------------------|------------------------------|----------|------------------|
|                                                                                     | Code | Description                                                  | Packaging unit               | Part No. | Type             |
| Blanking plug                                                                       |      |                                                              |                              |          |                  |
|    | –    | Connection Ø 18 mm                                           | 10 pieces                    | 537533   | QSPC18           |
|    | –    | For thread 1/4 NPT                                           | 10 pieces                    | 174165   | B-1/4-NPT        |
|                                                                                     | –    | For thread 1/2 NPT                                           | 10 pieces                    | 31785    | B-1/2-NPT        |
| Adapter                                                                             |      |                                                              |                              |          |                  |
|    | –    | For thread 1/8 NPT                                           | 1 piece                      | 9395     | AD-G1/8-1/8NPT-I |
| Silencer                                                                            |      |                                                              |                              |          |                  |
|                                                                                     |      |                                                              | Technical data → Internet: u |          |                  |
|    | –    | For thread 1/4 NPT                                           | 1 piece                      | 12639    | U-1/4-B-NPT      |
|                                                                                     | –    | For thread 1/2 NPT                                           | 1 piece                      | 12741    | U-1/2-B-NPT      |
| Inscription label                                                                   |      |                                                              |                              |          |                  |
|    | –    | Scope of delivery 24 labels in frame                         |                              | 161937   | IBS-9x17         |
|                                                                                     | –    | Scope of delivery 80 labels in frame                         |                              | 197259   | MH-BZ-80X        |
|                                                                                     | –    | Scope of delivery 64 labels in frame                         |                              | 18576    | IBS-6x10         |
| H-rail mounting kit                                                                 |      |                                                              |                              |          |                  |
|  | H    | Attachment of the manifold rails to H-rails to EN 60715-TH35 | 1 piece                      | 537514   | VAME-B6-T        |

# Solenoid valves VUVB/valve terminals VTUB, NPT

FESTO

Accessories

| Ordering data                                                                       |      |                                                            |              |                  |                                    |                         |
|-------------------------------------------------------------------------------------|------|------------------------------------------------------------|--------------|------------------|------------------------------------|-------------------------|
|                                                                                     | Code | Description                                                | Voltage [V]  | Cable length [m] | Part No.                           | Type                    |
| Plug socket                                                                         |      |                                                            |              |                  | Technical data ➔ Internet: mssd-eb |                         |
|    | –    | With screw terminals, for self-assembly                    | Up to 250 AC | –                | 151687                             | MSSD-EB                 |
|                                                                                     | C    |                                                            | Up to 250 AC | –                | 539712                             | MSSD-EB-M12             |
|    | –    | With insulation displacement connection, for self-assembly | Up to 250 AC | –                | 192745                             | MSSD-EB-S-M14           |
| Plug socket with cable for individual electrical connection                         |      |                                                            |              |                  | Technical data ➔ Internet: kmeb    |                         |
|    | –    | Switching status display via LED<br>Polyvinyl chloride     | 24 DC        | 2.5              | 151688                             | KMEB-1-24-2,5-LED       |
|                                                                                     |      |                                                            | 24 DC        | 5                | 151689                             | KMEB-1-24-5-LED         |
|                                                                                     |      | Polyvinyl chloride                                         | Up to 240 AC | 2.5              | 151690                             | KMEB-1-230AC-2,5        |
|                                                                                     |      |                                                            | Up to 240 AC | 5                | 151691                             | KMEB-1-230AC-5          |
|    | C1   | Switching status display via LED, polyurethane             | 24 DC        | 2.5              | 174844                             | KMEB-2-24-2,5-LED       |
|                                                                                     | C2   | Switching status display via LED, polyurethane             | 24 DC        | 5                | 174845                             | KMEB-2-24-5-LED         |
|                                                                                     | C1   | Polyurethane                                               | Up to 230 AC | 2.5              | 174846                             | KMEB-2-230AC-2,5        |
|                                                                                     | C2   |                                                            | Up to 230 AC | 5                | 174847                             | KMEB-2-230AC-5          |
|   | –    | Switching status display via LED<br>Polyvinyl chloride     | 24 DC        | 2.5              | 547268                             | KMEB-3-24-2,5-LED       |
|                                                                                     |      |                                                            | 24 DC        | 5                | 547269                             | KMEB-3-24-5-LED         |
|                                                                                     |      | Polyvinyl chloride                                         | 24 DC        | 2.5              | 547270                             | KMEB-3-24-2,5           |
|                                                                                     |      |                                                            | 24 DC        | 5                | 547271                             | KMEB-3-24-5             |
| Connecting cable for multi-pin plug to IP40                                         |      |                                                            |              |                  |                                    |                         |
|  | –    | Sub-D, 25-pin, up to 20 coils<br>Polyvinyl chloride        | 24 DC        | 2.5              | 530046                             | KMP6-25P-20-2,5         |
|                                                                                     | –    |                                                            | 24 DC        | 5                | 530047                             | KMP6-25P-20-5           |
|                                                                                     | –    |                                                            | 24 DC        | 10               | 530048                             | KMP6-25P-20-10          |
|                                                                                     | –    | Sub-D, 25-pin, up to 12 coils<br>Polyvinyl chloride        | 24 DC        | 2.5              | 530049                             | KMP6-25P-12-2,5         |
|                                                                                     | –    |                                                            | 24 DC        | 5                | 530050                             | KMP6-25P-12-5           |
|                                                                                     | –    |                                                            | 24 DC        | 10               | 530051                             | KMP6-25P-12-10          |
| Connecting cable for multi-pin plug to IP65                                         |      |                                                            |              |                  |                                    |                         |
|  | M1   | Sub-D, 25-pin, up to 12 coils<br>Polyvinyl chloride        | 24 DC        | 2.5              | 538222                             | NEBV-S1G25-K-2,5-N-LE15 |
|                                                                                     | M2   |                                                            | 24 DC        | 5                | 538223                             | NEBV-S1G25-K-5-N-LE15   |
|                                                                                     | M3   |                                                            | 24 DC        | 10               | 538224                             | NEBV-S1G25-K-10-N-LE15  |
|                                                                                     | M1   | Sub-D, 25-pin, up to 24 coils<br>Polyvinyl chloride        | 24 DC        | 2.5              | 538225                             | NEBV-S1G25-K-2,5-N-LE25 |
|                                                                                     | M2   |                                                            | 24 DC        | 5                | 538226                             | NEBV-S1G25-K-5-N-LE25   |
|                                                                                     | M3   |                                                            | 24 DC        | 10               | 538227                             | NEBV-S1G25-K-10-N-LE25  |
| Illuminating seal                                                                   |      |                                                            |              |                  |                                    |                         |
|  | –    | For indicating the signal status                           | 12 ... 24 DC | –                | 151717                             | MEB-LD-12-24DC          |
|                                                                                     | –    |                                                            | Up to 230 AC | –                | 151718                             | MEB-LD-230AC            |