

Valve terminals VTUB-12

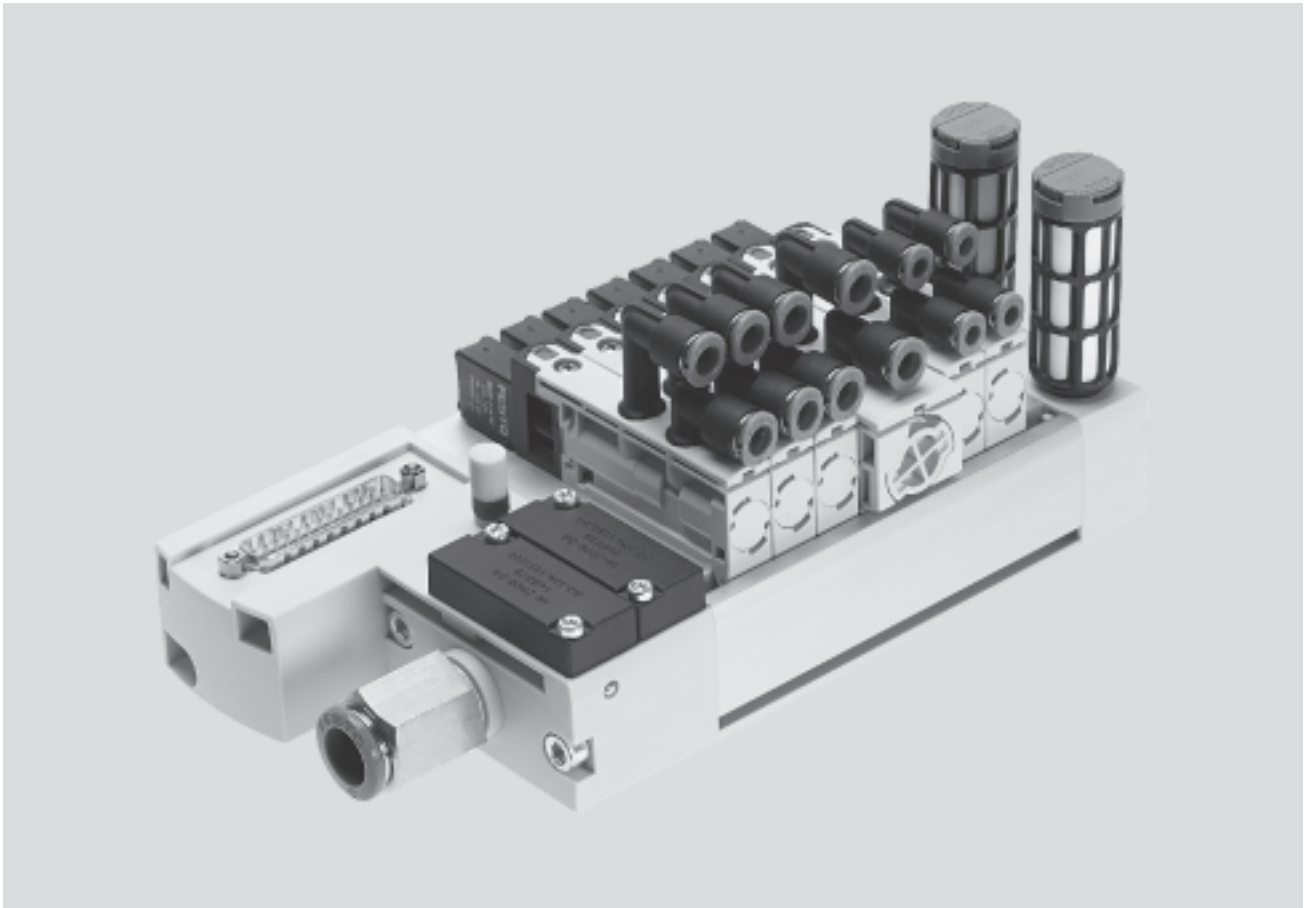
FESTO



Valve terminals VTUB-12

Key features

FESTO



Innovative

- Cost-effective I-Port interface for fieldbus nodes (CTEU)
- IO-Link mode for direct connection to a higher-level IO-Link master
- Lower installation costs thanks to multi-pin plug connection
- Valve terminal for a wide range of pneumatic applications
- Minimal space requirement
- Great flexibility during planning, assembly and operation
- Pneumatic distributor integrated on the valve terminal
- Suitable for use in dusty environments

Versatile

- Room for expansion with up to 35 valve positions on one valve terminal
- Flexibility of the pneumatic working ports provides a practical solution to different requirements
- Quick and easy replacement of fittings
- Optional manifold rail variant with LED signal status display
- Wall or H-rail mounting
- Subsequently expandable to up to 18 pressure zones
- Additional supply possible when an increased air rate is required

Reliable

- Manual override
- Durable
- Sturdy thanks to the polymer housing and metal manifold rail

Easy to mount

- Ready-to-install and tested unit
- Lower ordering, installation and commissioning costs
- Wall or H-rail mounting
- Quick and secure installation thanks to integrated QS push-in connectors
- Easy valve assembly with just one screw

 Note

Ordering system for valve terminal VTUB-12

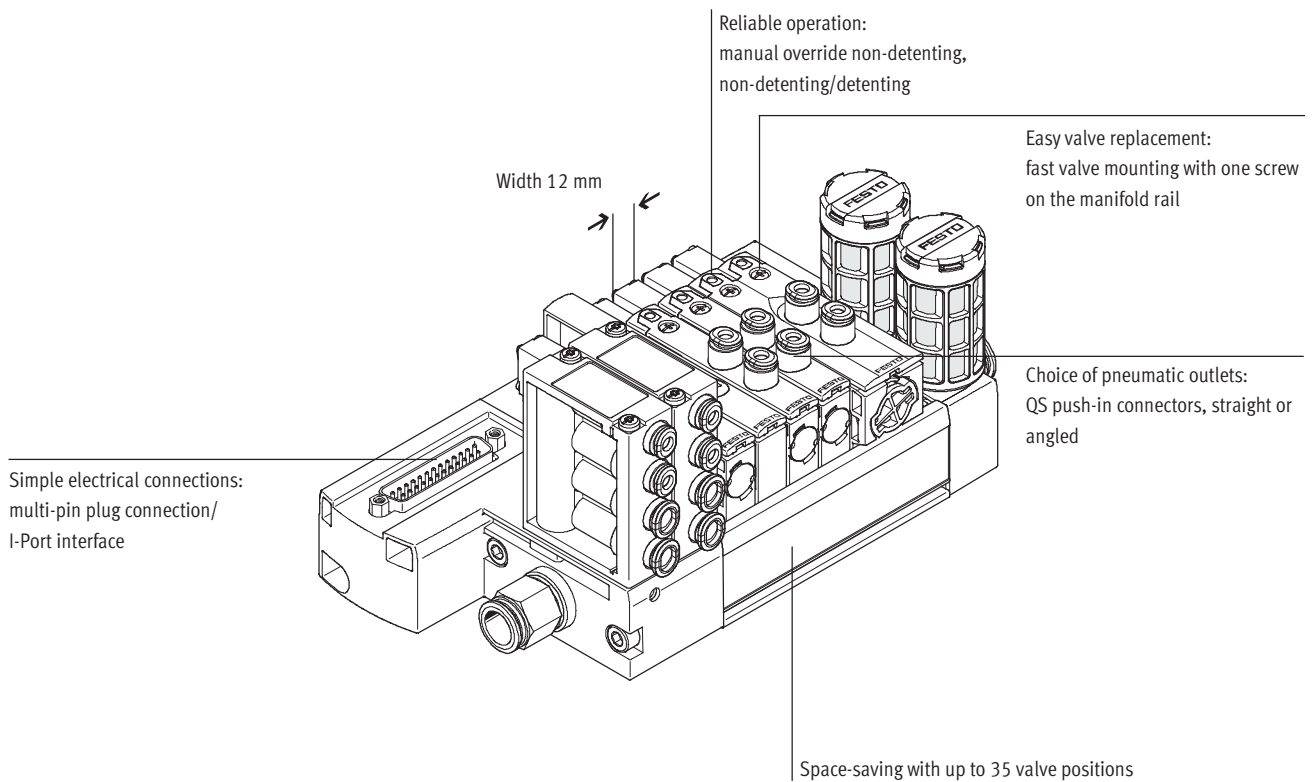
➔ Internet: vtub-12

Fieldbus CTEU

➔ Internet: cteu

Valve terminals VTUB-12

Key features



Equipment options

Valve functions

- 5/2-way valve, single solenoid
- 5/2-way valve, double solenoid
- 3/2-way valve, closed
- 3/2-way valve, open

Electrical connection options

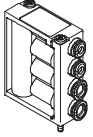
- | | |
|---|---|
| <p>Multi-pin plug</p> <ul style="list-style-type: none"> • Sub-D, 25-pin • Sub-D, 44-pin • 2 ... 35 valve positions/ max. 35 solenoid coils | <p>I-Port</p> <ul style="list-style-type: none"> • Fieldbus connection (CTEU) • IO-Link mode • 3 ... 35 valve positions/ max. 35 solenoid coils |
|---|---|

Valve terminals VTUB-12

Key features

FESTO

Pneumatic distributor



The pneumatic distributor supplies the operating pressure from port 1 to up to four other ports. The pneumatic

distributor has integrated QS4 or QS6 connections.



Note

Number of pneumatic distributors that can be used

→ P. 34 Pilot air supply

Selector plate/pilot control with external pilot air (optional)

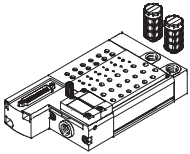


The VTUB-12 is intended for use with internal pilot air. It can be operated with external pilot air by mounting the

selector plate VABF-C8-12-P6-...-Z instead of the blanking

plate. The pilot air is then supplied via port 12/14 on the selector plate.

Manifold rail with multi-pin plug connection

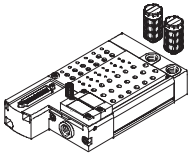


The manifold rail features a groove into which the semi in-line valves are latched and secured with just one screw.

The valve functions 3/2-way normally open or closed, 5/2-way single solenoid and 5/2-way double solenoid are available.

The valves can be supplied as semi in-line valves with cartridges QSP for tubing diameters 4 and 6 mm.

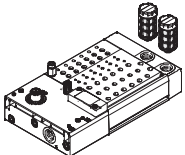
Manifold rail with optional LED signal status display



The manifold rail with multi-pin plug can optionally be ordered with LEDs (code L).

These indicate the signal states of the solenoid coils.

Manifold rail with I-Port interface



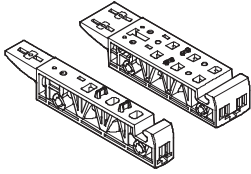
The manifold rail can be ordered with I-Port interface (code PT) and IO-Link (code LK) as a basis for fieldbus

nodes (CTEU) or in IO-Link mode for direct connection to a higher-level IO-Link master.

Valve terminals VTUB-12

Key features

Sub-base for semi in-line valve



The valve VUVB-12 can be operated as an individual valve using an individual sub-base (single width for single solenoid valves or double width

for double solenoid valves). The power is supplied via the plug socket with cable KMYZ and the adapter (M8x1

with corresponding connecting cable (→ accessories, p. 34).

Blanking plate

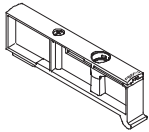
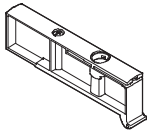


Plate without valve function for reserving valve positions on a valve terminal.

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

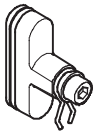
Pressure zone supply module



The pressure zone supply module occupies one valve position and can be used as an additional supply or for supplying a pressure zone.

The pressure zone supply module is attached to the manifold rail using one screw.

Separator for duct separation



Pressure zone separation can be realised in duct 1 in the manifold rail. Up to 18 pressure zones can be created on the valve terminal in this way.

There must be at least 2 valve positions between 2 separators.

Valve terminals VTUB-12

Key features

Integration of the I-Port interface/IO-Link

Different fieldbus nodes are used for integration into the control systems of various manufacturers.

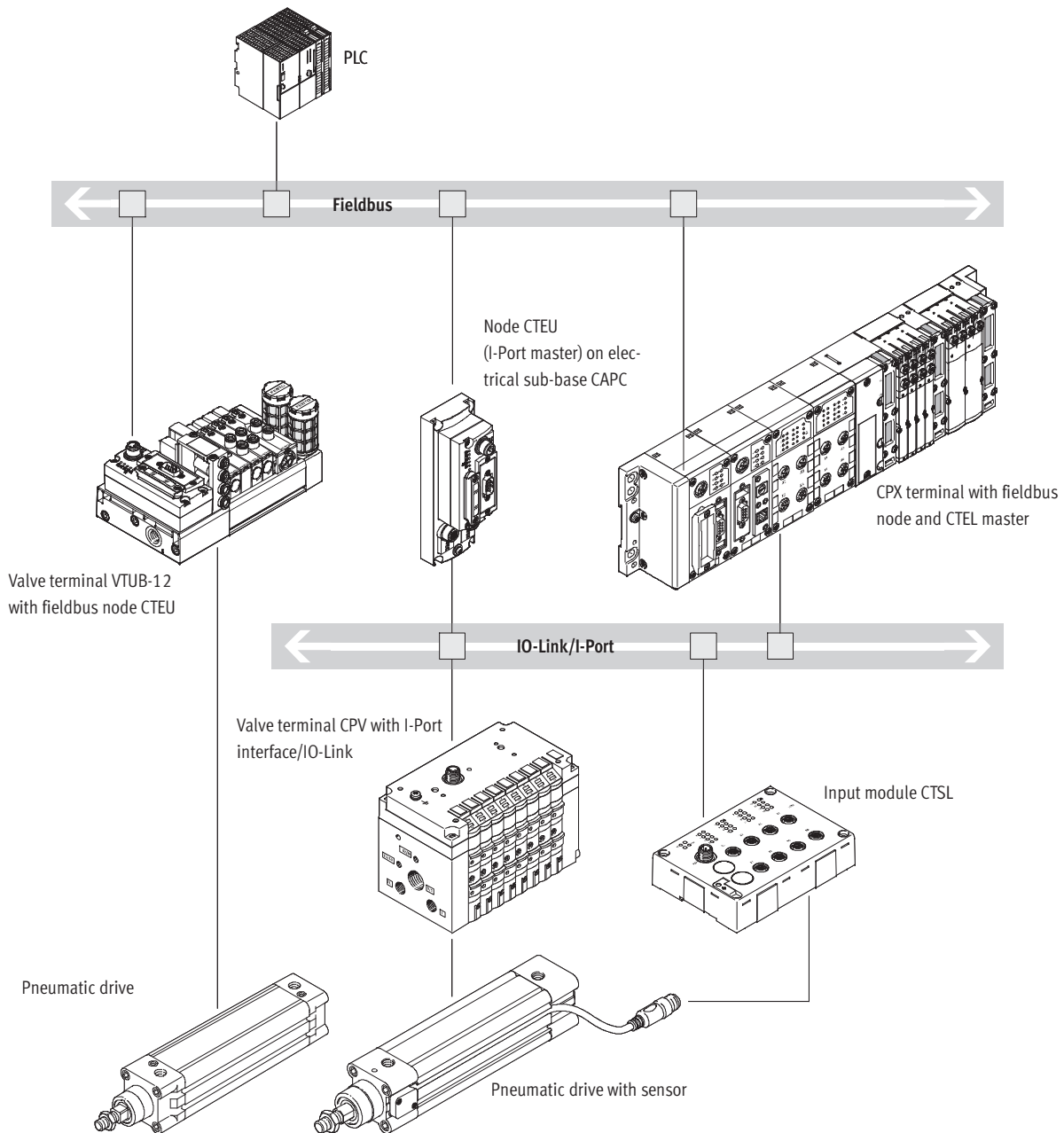
The following protocols are supported with the compatible fieldbus node CTEU:

- CANopen
- DeviceNet

- EtherCAT
- CC-Link
- PROFIBUS

Use of the electrical sub-base CAPC permits decentralised installation of fieldbus nodes CTEU on a further valve terminal or input modules with I-Port interfaces (→ installation system CTEU/CTEL)

System overview, example



- Communication with higher-order controller via fieldbus
- Use fieldbus node CTEU compatible with the fieldbus protocol
- Up to 64 inputs/outputs (solenoid coils), depending on the valve terminal

Valve terminals VTUB-12

Peripherals overview

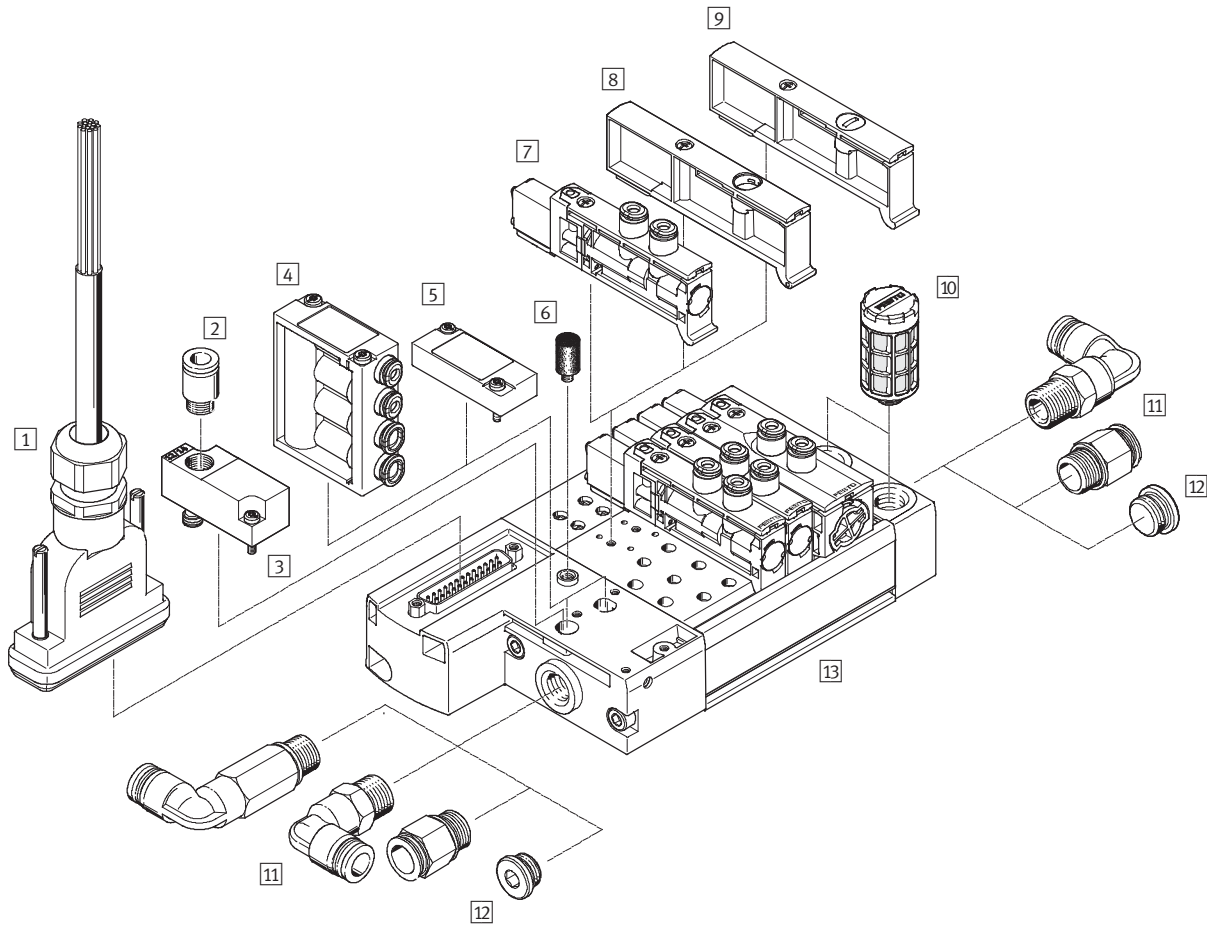
Overview – Valve terminal VTUB-12 with multi-pin plug connection, Sub-D

- Up to 20 valve positions/solenoid coils, 25-pin Sub-D multi-pin plug connection, code: M
- From 21 valve positions/solenoid coils, 44-pin Sub-D multi-pin plug connection, code: M

Valve terminals with electrical multi-pin plug connection are available with 2 to max. 35 valve positions.

Each valve position can either be equipped with a valve, a pressure zone supply module or a blanking plate. Double solenoid valves occupy two valve positions.

A maximum of 35 solenoid coils can be actuated via the electrical multi-pin plug connection. Up to 18 pressure zones are possible.



| Accessories | | | Brief description | → Page/Internet |
|-------------|-----------------------------|---------|---|-----------------|
| 1 | Connecting cable | NEBV | Connecting cable for multi-pin plug connection, with Sub-D plug | 36 |
| 2 | Push-in fitting | QS | For connecting compressed air tubing with standard O.D. | 37 |
| 3 | Selector plate | VABF | Pilot control with external pilot air (optional) | 35 |
| 4 | Pneumatic distributor | VABF | For connecting additional distributors to the air supply (port 1) | 34 |
| 5 | Blanking plate | VABB | Blanking plate for vacant position (pneumatic distributor) | 34 |
| 6 | Silencer | U | For venting hole | 37 |
| 7 | Solenoid valve | VUVB-12 | – | 33 |
| 8 | Pressure zone supply module | VABF | For supplying pressure zones or for additional air supply | 34 |
| 9 | Blanking plate | VABB | Blanking plate for vacant position (solenoid valve) | 34 |
| 10 | Silencer | U | For fitting in exhaust ports | 37 |
| 11 | Fittings | QS | For connecting compressed air tubing with standard O.D. | 37 |
| 12 | Blanking plug | B | For sealing the air supply port | 35 |
| 13 | Manifold rail | VABM | With multi-pin plug connection, for connecting max. 35 valves | 33 |
| | Separator | VABD | For duct separation in duct 1, for creating pressure zones | 35 |

Valve terminals VTUB-12

Peripherals overview

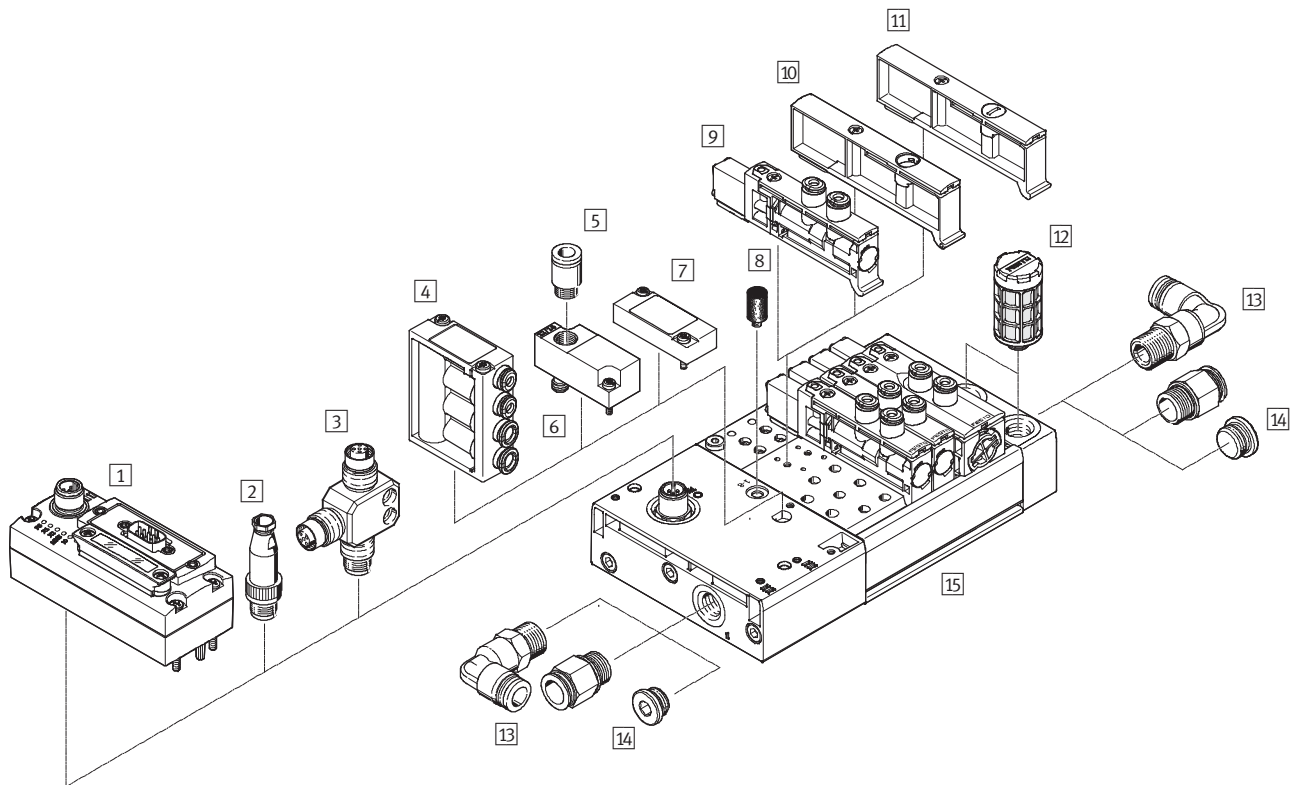
Overview – Valve terminal VTUB-12 with I-Port interface/IO-Link

- Up to 35 valve positions/solenoid coils
- I-Port interface connection type, code: PT
- IO-Link connection type, code: LK

The electrical supply/transmission of communication data takes place via an M12 plug. The valve terminal can be equipped with 3 ... 35 valves. Up to 18 pressure zones are possible.

Each valve position can either be equipped with a valve, a pressure zone supply module or a blanking plate. Double solenoid valves occupy two valve positions.

- The following protocols are supported when using the associated fieldbus node CTEU:
- DeviceNet
 - CANopen
 - PROFIBUS DP
 - EtherCAT
 - CC-Link



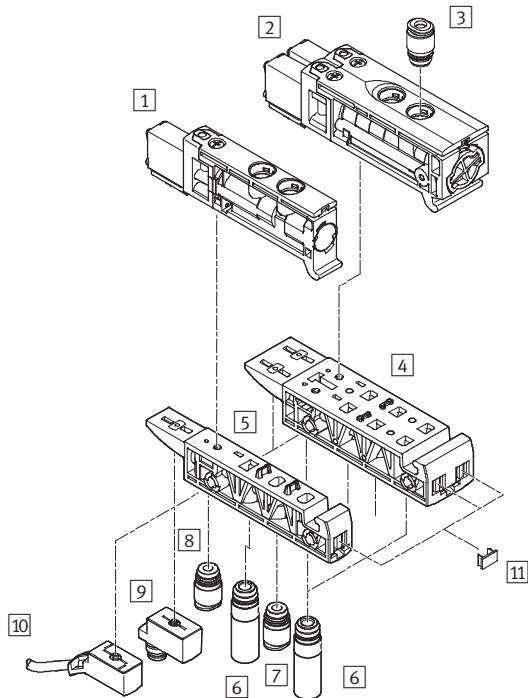
| Accessories | | Brief description | → Page/Internet |
|-------------|-----------------------------|-------------------|---|
| 1 | Bus node | CTEU | – |
| 2 | Plug | SEA | For IO-Link and load voltage |
| 3 | T-adaptor | FB | For IO-Link and load voltage (in combination with plug SEA for separate load voltage) |
| 4 | Pneumatic distributor | VABF | For connecting additional distributors to the air supply (port 1) |
| 5 | Push-in fitting | QS | – |
| 6 | Selector plate | VABF | Pilot control with external pilot air (optional) |
| 7 | Blanking plate | VABB | Blanking plate for vacant position (pneumatic distributor) |
| 8 | Silencer | U | For venting hole |
| 9 | Solenoid valve | VUVB-12 | – |
| 10 | Pressure zone supply module | VABF | For supplying pressure zones or for additional air supply |
| 11 | Blanking plate | VABB | Blanking plate for vacant position (solenoid valve) |
| 12 | Silencer | U | For fitting in exhaust ports |
| 13 | Fittings | QS | For connecting compressed air tubing with standard O.D. |
| 14 | Blanking plug | B | For sealing the air supply port |
| 15 | Manifold rail | VABM | With I-Port interface, for connecting max. 35 valves |
| | Separator | VABD | For duct separation in duct 1, for creating pressure zones |

Valve terminals VTUB-12

Peripherals overview

Sub-base for semi in-line valve

- Single design for single solenoid valves
 - Double design for double solenoid valves
- Electrical connection via plug socket with cable KMYZ and adapter (M8x1) with corresponding connecting cable.

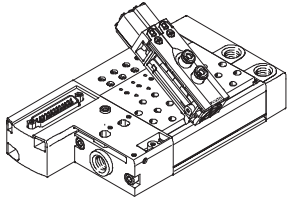


| Accessories | | Brief description | | → Page/Internet |
|-------------|--------------------------|-------------------|--|-----------------|
| 1 | Single solenoid valve | VUVB-12 | – | 33 |
| 2 | Double solenoid valve | VUVB-12 | – | 33 |
| 3 | Push-in fitting | QS | For port 2, 4: cartridge with push-in connector | 37 |
| 4 | Sub-base | VABS | Double design for individual double solenoid valve | 34 |
| 5 | Sub-base | VABS | Single design for individual single solenoid valve | 34 |
| 6 | Silencer | AMTC | For port 3, 5 (optional) | 37 |
| 7 | Push-in fitting | QS | For port 1: cartridge with push-in connector | 37 |
| 8 | Push-in fitting | QS | For port 12, 14: cartridge with push-in connector (optional) | 37 |
| 9 | Adapter | VAVE | M8x1 (optional), LED | 38 |
| 10 | Plug socket with cable | KMYZ | Connecting cable (optional) | 36 |
| 11 | Inscription label holder | IBS-6x10 | – | 35 |

Valve terminals VTUB-12

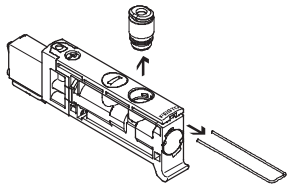
Key features – Pneumatic components

Wide range of pneumatic components



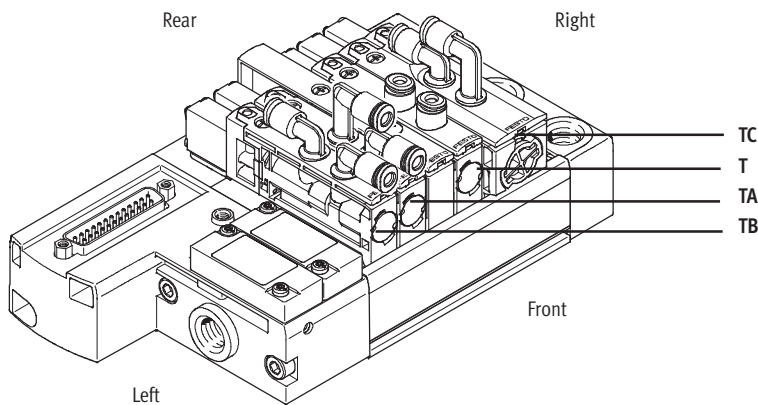
- The use of the same basic valves for the 3/2-way and 5/2-way valve function permits fast and flexible conversion and multiple use of parts.
- Flexible construction thanks to assembled and tested units or individual components as modules for individual configurations.
- Flow rates from 230 ... 400 l/min depending on the valve used and appropriate QS connections.

Changing fittings on port 2/4



The cartridges (port 2/4) can be changed quickly and easily by removing the spring clip. The ports can be sealed by inserting a blanking plug (→ 35).

Connection to the valve



- T (on top, inline)
- 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:

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

Pilot air supply

Internal

The port for the pneumatic main supply is located on the left-hand sub-base (multi-pin plug connection/ I-Port interface).

The internal pilot air (duct 12/14) is branched from duct 1 in the left-hand sub-base.

External

The air is branched using a pneumatic distributor or a blanking plate on the left-hand pneumatic distributor port. The multi-pin plug connection provides two pneumatic distributor ports and the I-Port interface provides one.

External pilot air is supplied via the selector plate on the left-hand pneumatic distributor port. It enables the pilot air and main supply to the valve terminal to be separated.

The multi-pin plug connection provides one pneumatic distributor port and the I-Port interface does not provide any.

Valve terminals VTUB-12

Key features – Pneumatic components


Creating pressure zones

Up to 18 pressure zones can be created using the separator VABD-C8 ... if different working pressures are required. The separators are inserted at the required location in duct 1 in the manifold rail and screwed into place. The following rules apply:

- Two pressure zones can be realised without an additional pressure zone supply module (VABF-C8 ...) if

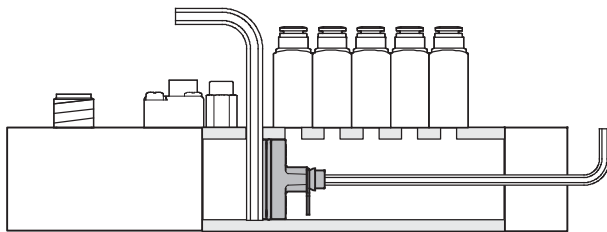
there is a compressed air supply at both ends. Only one separator in duct 1 is required for this.

- A pressure zone supply module (VABF-C8 ...) is additionally required after the third pressure zone; this module occupies one valve position.
- There must be at least 2 valve positions between 2 separators.

 Note

- Pressure zones can be freely configured with the VTUB-12.
- Duct separation does not result in any valve positions being lost, however valve positions will be lost if an additional supply is required.
- If a valve terminal with duct separation is ordered via the configurator, the duct separation comes already labelled.
- Older manifold rails predating approx. mid-2013 cannot be retrofitted for the purpose of creating pressure zones.
- Further information on assembly → Assembly instructions for VABD-C8-P1-D2

Duct separation



Description

Duct separation and creation of pressure zones

- Remove the end plate.
- Insert an Allen key (size 4) from above at the required position in duct 1 in the manifold rail as a stop.
- Using another Allen key, push separator VABD-C8 ... into duct 1 as far as it will go until it is in the appropriate position and then turn the Allen key to secure in place.
- Fit the end plate.
- Affix the enclosed symbol labels to the duct separation.

Design

Valve replacement

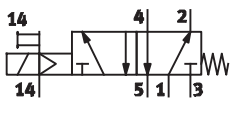
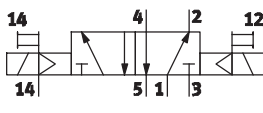
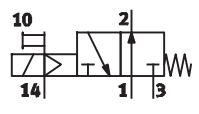
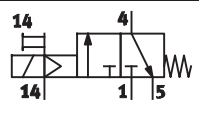
The valves are attached to the aluminium manifold rail using one screw, which means that they can be easily

replaced. Use of high-quality plastics guarantees minimum weight and maximum performance.

Expansion

Blanking plates can be replaced by valves at a later date. The dimensions, mounting points and the pneumatic

installation already carried out do not change.

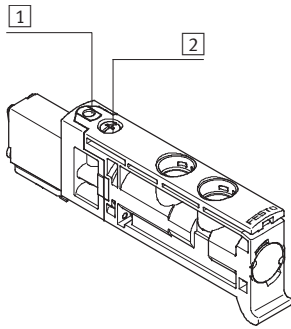
| Valve function | | | | |
|----------------|---|-------|-------|---|
| Code | Circuit symbol | Width | | Description |
| | | 12 mm | 24 mm | |
| M |  | ■ | – | 5/2-way valve, single solenoid <ul style="list-style-type: none"> • Mechanical spring return • Non-reversible • Not suitable for vacuum |
| J |  | – | ■ | 5/2-way valve, double solenoid <ul style="list-style-type: none"> • Non-reversible • Not suitable for vacuum |
| N |  | ■ | – | 3/2-way valve, single solenoid <ul style="list-style-type: none"> • Normally open • Mechanical spring return • Non-reversible • Not suitable for vacuum |
| K |  | ■ | – | 3/2-way valve, single solenoid <ul style="list-style-type: none"> • Normally closed • Mechanical spring return • Non-reversible • Not suitable for vacuum |

Valve terminals VTUB-12

Key features – Display and operation

FESTO

Display and operation

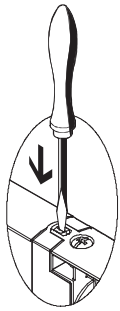


- 1 Manual override (non-detenting, non-detenting/detenting)
- 2 Screw for valve assembly

The manual override enables the valve to be switched without electronic control or power supply.

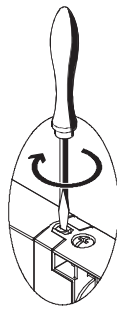
Manual override

Manual override with automatic reset (non-detenting)




Press in the stem of the manual override with a pointed object or screwdriver.
→ The valve is switched.
Remove the pointed object or screwdriver.
Spring force pushes the stem of the manual override back.
→ Valve returns to normal position.

Manual override with lock (non-detenting/detenting)



Press in the stem of the manual override with a pointed object or screwdriver until the valve switches and then turn the stem clockwise by 90° until the stop is reached.
→ The valve remains switched.
Turn the stem anti-clockwise by 90° until the stop is reached and then remove the pointed object or screwdriver. Spring force pushes the stem of the manual override back.
→ Valve returns to normal position.

-  - Note

A manually operated valve (manual override) cannot be reset electrically. Conversely, a solenoid actuated valve

cannot be reset using the mechanical manual override.

Valve terminals VTUB-12

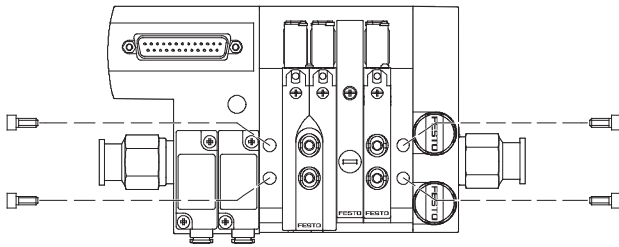
Key features – Assembly

Valve terminal assembly

Sturdy valve terminal assembly thanks to:

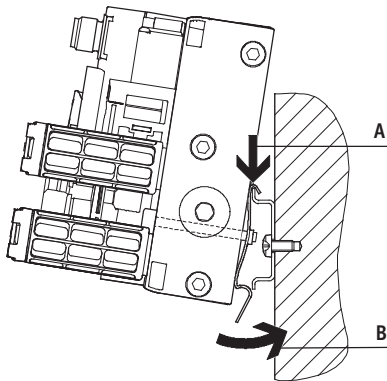
- Through-holes for wall mounting
- H-rail mounting

Wall mounting



Sturdy terminal assembly thanks to four through-holes for wall mounting (M5 screws).

H-rail mounting



The H-rail mounting VAME-T-M5 consists of two mounting clips. These are attached to the manifold rail on the left and right (M5 screws). The lower through-holes on the manifold rail are used for this.

The valve terminal VTUB-12 prepared in this way is lowered onto the H-rail from above (arrow A) and clipped into the H-rail at the bottom (arrow B).



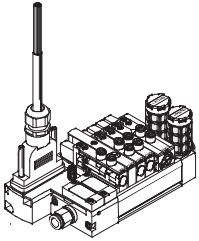
Note

- Note the max. tightening torque of 2 Nm ($\pm 25\%$) for the screws for mounting the H-rail.
- Only horizontal H-rail mounting is permissible.
- Mounting only possible on H-rail TH 35-15 to EN 50022.
- Vibration/shock loads are not permissible with H-rail mounting.

Valve terminals VTUB-12

Key features – Electrical components

Multi-pin plug connection



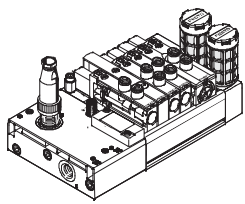
Control signals from the controller to the valve terminal are transmitted via a pre-assembled multi-core cable, which substantially reduces installation time.

This valve terminal can be equipped with 2 ... 35 valves.

Versions

- Sub-D connection

I-Port interface/IO-Link



IO-Link

IO-Link is an interface that supplies data for communication in addition to the power supply. An IO-Link system consists of an IO-Link master and IO-Link devices. The IO-Link master offers the interface to the higher-order controller (PLC) and controls communication with the connected IO-Link devices.

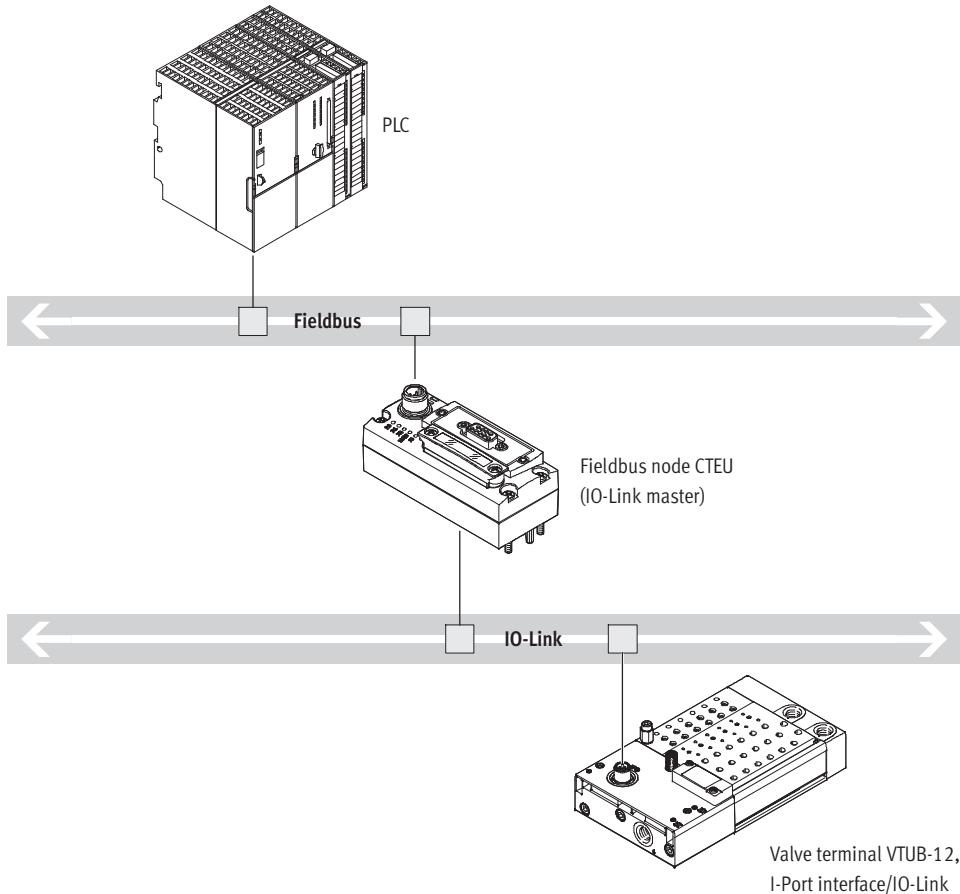
One device with IO-Link (e.g. an IO-Link valve terminal from Festo) can be connected to each port on an IO-Link master.

I-Port

The Festo-specific I-Port interface based on IO-Link offers the following connection options:

- Directly at the fieldbus, by mounting a fieldbus node CTEU
- Connection to a higher-order I-Port master from Festo

Overview

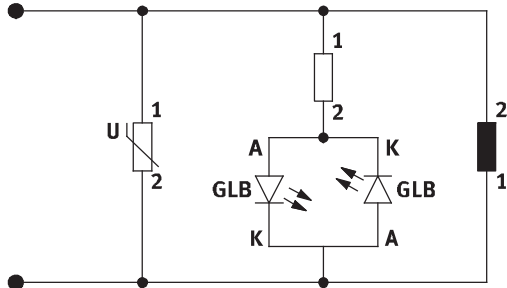


Valve terminals VTUB-12

Key features – Electrical components

Protective circuit

Manifold rail with LED signal status display, multi-pin plug connection



Note

The electrical protective circuit only relates to the optional LED variant with the multi-pin plug connection.

Electrical multi-pin plug connection

The following multi-pin plug connections are available for the valve terminal VTUB-12:

- Sub-D multi-pin plug connection (25-pin)
- Sub-D multi-pin plug connection (44-pin)

Pins 1 ... 44 are used for addresses 0 ... 43 in order.

If fewer than 44 addresses are used for the valve terminal, the remaining pins are left free. Pins 22 ... 25 or 41 ... 44 are reserved for the neutral conductor or 24 V respectively.

The valves are switched by means of positive or negative logic (positive switching or negative switching). Mixed operation is not permitted.

Each pin on the multi-pin plug can actuate exactly one solenoid coil. If the maximum configurable number of valve positions is 35, then 35 valves can be addressed with one solenoid coil (single solenoid).

Note

A double solenoid valve occupies two valve positions. With 17 or more valve positions, the number of available valve positions for double solenoid valves decreases.

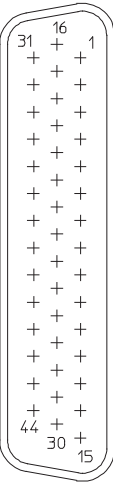

Pin allocation – Sub-D plug, 25-pin

| | Pin | Address/coil | 15-wire, NEBV-S1...25-K-...-LE15 | 25-wire, NEBV-S1...25-K-...-LE25 |
|---|-----|--------------|---|----------------------------------|
| | | | Wire colour ¹⁾ of connecting cable | |
| | 1 | 0 | WH | WH |
| | 2 | 1 | BN | BN |
| | 3 | 2 | GN | GN |
| | 4 | 3 | YE | YE |
| | 5 | 4 | GY | GY |
| | 6 | 5 | PK | PK |
| | 7 | 6 | BU | BU |
| | 8 | 7 | RD | RD |
| | 9 | 8 | BK | BK |
| | 10 | 9 | VT | VT |
| | 11 | 10 | GY PK | GY PK |
| | 12 | 11 | RD BU | RD BU |
| | 13 | 12 | – | GN WH |
| 14 | 13 | – | BN GN | |
| 15 | 14 | – | YE WH | |
| 16 | 15 | – | BN YE | |
| 17 | 16 | – | GY WH | |
| 18 | 17 | – | BN GY | |
| 19 | 18 | – | WH PK | |
| 20 | 19 | – | BN PK | |
| Note The drawing shows the view onto the pins of the Sub-D plug. | 21 | – | – | BU WH |
| | 22 | 0 V/24 V | – | BN BU |
| | 23 | 0 V/24 V | GN WH | RD WH |
| | 24 | 0 V/24 V | BN GN | BN RD |
| | 25 | 0 V/24 V | YE WH | BK WH |

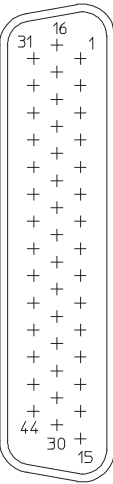

1) To IEC 757

Valve terminals VTUB-12

Key features – Electrical components

| Pin allocation – Sub-D plug, 44-pin | | | | | | | |
|---|----|----|-------|---|-----|-------|--|
| NEBV-S1...44-K...-LE39 | | | | | | | |
| Pin | | | | Pin | | | |
| Address | | | | Address | | | |
| Wire colour ¹⁾ Connecting cable | | | | Wire colour ¹⁾ Connecting cable | | | |
|  <p>-  - Note The drawing shows the view onto the pins of the Sub-D plug.</p> | 1 | 0 | WH | 23 | 22 | WH RD | |
| | 2 | 1 | BN | 24 | 23 | BN RD | |
| | 3 | 2 | GN | 25 | 24 | WH BK | |
| | 4 | 3 | YE | 26 | 25 | BN BK | |
| | 5 | 4 | GY | 27 | 26 | GY GN | |
| | 6 | 5 | PK | 28 | 27 | YE GY | |
| | 7 | 6 | BU | 29 | 28 | PK GN | |
| | 8 | 7 | RD | 30 | 29 | YE PK | |
| | 9 | 8 | BK | 31 | 30 | GN BU | |
| | 10 | 9 | VT | 32 | 31 | YE BU | |
| | 11 | 10 | GY PK | 33 | 32 | GN RD | |
| | 12 | 11 | RD BU | 34 | 33 | YE RD | |
| | 13 | 12 | WH GN | 35 | 34 | GN BK | |
| | 14 | 13 | BN GN | 36 | - | - | |
| | 15 | 14 | WH YE | 37 | - | - | |
| | 16 | 15 | YE BN | 38 | - | - | |
| | 17 | 16 | WH GY | 39 | - | - | |
| | 18 | 17 | GY BN | 40 | - | - | |
| | 19 | 18 | WH PK | 41 | 0 V | YE BK | |
| | 20 | 19 | PK BN | 42 | 0 V | GY BU | |
| | 21 | 20 | WH BU | 43 | 0 V | PK BU | |
| | 22 | 21 | BN BU | 44 | 0 V | GY RD | |

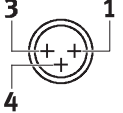
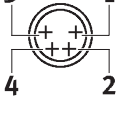
1) To IEC 757

| Pin allocation – Sub-D plug, 44-pin | | | | | | | |
|---|----|----|-------|---|-----|-------|--|
| NEBV-S1...44-K...-LE44 | | | | | | | |
| Pin | | | | Pin | | | |
| Address | | | | Address | | | |
| Wire colour ¹⁾ Connecting cable | | | | Wire colour ¹⁾ Connecting cable | | | |
|  <p>-  - Note The drawing shows the view onto the pins of the Sub-D plug.</p> | 1 | 0 | WH | 23 | 22 | WH RD | |
| | 2 | 1 | BN | 24 | 23 | BN RD | |
| | 3 | 2 | GN | 25 | 24 | WH BK | |
| | 4 | 3 | YE | 26 | 25 | BN BK | |
| | 5 | 4 | GY | 27 | 26 | GY GN | |
| | 6 | 5 | PK | 28 | 27 | YE GY | |
| | 7 | 6 | BU | 29 | 28 | PK GN | |
| | 8 | 7 | RD | 30 | 29 | YE PK | |
| | 9 | 8 | BK | 31 | 30 | GN BU | |
| | 10 | 9 | VT | 32 | 31 | YE BU | |
| | 11 | 10 | GY PK | 33 | 32 | GN RD | |
| | 12 | 11 | RD BU | 34 | 33 | YE RD | |
| | 13 | 12 | WH GN | 35 | 34 | GN BK | |
| | 14 | 13 | BN GN | 36 | 35 | YE BK | |
| | 15 | 14 | WH YE | 37 | 35 | GY BU | |
| | 16 | 15 | YE BN | 38 | 37 | PK BU | |
| | 17 | 16 | WH GY | 39 | 38 | GY RD | |
| | 18 | 17 | GY BN | 40 | 39 | PK RD | |
| | 19 | 18 | WH PK | 41 | 0 V | GY BK | |
| | 20 | 19 | PK BN | 42 | 0 V | PK BK | |
| | 21 | 20 | WH BU | 43 | 0 V | BU BK | |
| | 22 | 21 | BN BU | 44 | 0 V | RD BK | |

1) To IEC 757

Valve terminals VTUB-12

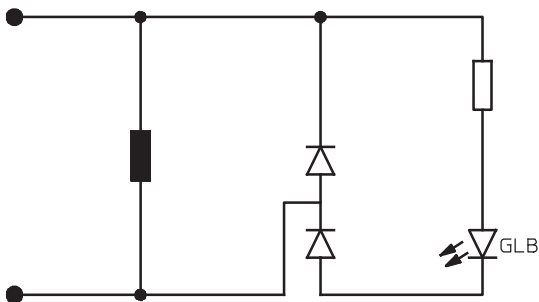
Key features – Electrical components

| Pin allocation – Adapter M8x1 with LED | | |
|---|-------------|----------|
| | Pin | |
| Round plug, M8, 3-pin | | |
|  | VAVE-C8-1R8 | |
| | 1 | Not used |
| | 3 | 0 V |
| 4 | 24 V | |
| Round plug, M8, 4-pin | | |
|  | VAVE-C8-1R1 | |
| | 1 | Not used |
| | 2 | Not used |
| | 3 | 0 V |
| 4 | 24 V | |

1) To DIN EN 61076-2-101

Protective circuit

Manifold rail with I-Port interface



I-Port interface/IO-Link


The valve terminal VTUB-12 can be connected as follows via the I-Port connection:

- Directly to the fieldbus by mounting the CTEU bus node on the valve terminal
- To an IO-Link master (in IO-Link mode) via a cable

Up to 35 solenoid coils can be actuated. A valve position always occupies one address. The following assignment applies in this case:

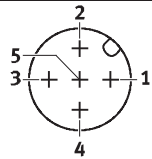
- Less significant valve position (address) for coil 14
- More significant valve position (address) for coil 12

Addresses are allocated in ascending order without gaps, from left to right. The address allocation is independent of whether blanking plates or valves are used.

 Note

More information on CTEU
 → [cteu](#)

Additionally required IODD for IO-Link mode
 → www.festo.com

| Pin allocation of the I-Port/IO-Link cable ¹⁾ | | |
|---|-----|----------------------------------|
| | Pin | Allocation |
|  | 1 | 24 V electronics (logic voltage) |
| | 2 | 24 V valves (load voltage) |
| | 3 | 0 V electronics (logic) |
| | 4 | COM I-Port communication signal |
| | 5 | 0 V valves (load) |

1) 5-pin socket, M12, A-coded

Valve terminals VTUB-12

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 intended, they will not require additional lubrication and will still achieve a long service life.

The compressed air prepared with the compressor must correspond in quality to 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/m³ 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/m³ 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-12

FESTO

Technical data – Valve terminal VTUB-12 with multi-pin plug connection

-  Voltage
24 V DC
-  Pressure
+2.8 ... +8 bar
-  Temperature range
-5 ... +60 °C



| General technical data | | | | | |
|--------------------------------|--|-----------------|-----------------|---|--------------------------|
| Valve function | 3/2C | | 3/2U | 5/2-way, single solenoid | 5/2-way, double solenoid |
| Design | Poppet valve with spring return | | | Poppet valve with self-holding function | |
| Valve function | Closed | Open | Single solenoid | Double solenoid | |
| Sealing principle | Soft | | | | |
| Actuation type | Electric | | | | |
| Reset method | Mechanical spring | | | | – |
| Type of control | Piloted | | | | |
| Pilot air supply | Internal | | | | |
| | External | | | | |
| Direction of flow | Non-reversible | | | | |
| Exhaust function | No flow control | | | | |
| Manual override | Non-detenting, non-detenting/detenting | | | | |
| Type of mounting | Via through-hole | | | | |
| Width | [mm] | 12 | | | 24 |
| Nominal size | [mm] | 4 | | | |
| Max. number of valve positions | 35 | | 35 | 17 | |
| Max. number of pressure zones | 18 | | | | |
| Standard nominal flow rate | q _{nN} | [l/min] 400 | | | |
| Pneumatic connection | 1, 3, 5 | G $\frac{1}{4}$ | | | |
| | 2, 4 | QS-4 or QS-6 | | | |
| | 12, 14 | G $\frac{1}{8}$ | | | |

| Operating and environmental conditions | | | | | |
|--|--|------------|-------------|--------------------------|--------------------------|
| Valve function | 3/2C | | 3/2U | 5/2-way, single solenoid | 5/2-way, double solenoid |
| Operating medium | Compressed air to ISO 8573-1:2010 [7:4:4] | | | | |
| Note on operating/pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) | | | | |
| Operating pressure | Internal pilot air | [bar] | +2 ... +8 | +2.8 ... +8 | |
| | External pilot air | [bar] | 0 ... +8 | | |
| Pilot pressure | [bar] | +2 ... +8 | +2.8 ... +8 | | |
| Ambient temperature | [°C] | -5 ... +60 | | | |
| Temperature of medium | [°C] | -5 ... +60 | | | |
| CE marking | To EU EMC Directive | | | | |

Valve terminals VTUB-12

Technical data – Valve terminal VTUB-12 with multi-pin plug connection

| Product weight | | | |
|---|--|--------------------|-------|
| Approx. weight | | [g] | |
| Valves | | | |
| • 5/2-way single solenoid (code M), ducted solenoid exhaust | | 27.8 | |
| • 5/2way double solenoid (code J), ducted solenoid exhaust | | 57.4 | |
| • 5/2-way single solenoid (code M), unducted solenoid exhaust | | 27.5 | |
| • 5/2-way double solenoid (code J), unducted solenoid exhaust | | 57.1 | |
| • 3/2-way closed (code K), ducted/unducted solenoid exhaust | | 26.3 | |
| • 3/2-way open (code N), unducted solenoid exhaust | | 28.1 | |
| • 3/2-way open (code N), ducted solenoid exhaust | | 29.4 | |
| Manifold rail | | | |
| • Multi-pin plug with Sub-D plug, 25-pin | 2 valve positions | 382 | |
| | 4 valve positions | 484 | |
| | 6 valve positions | 585 | |
| | 8 valve positions | 687 | |
| | 10 valve positions | 788 | |
| | 12 valve positions | 890 | |
| | 14 valve positions | 992 | |
| | 16 valve positions | 1,093 | |
| | 18 valve positions | 1,195 | |
| | • Multi-pin plug with Sub-D plug, 44-pin | 20 valve positions | 1,296 |
| 24 valve positions | | 1,500 | |
| 28 valve positions | | 1,704 | |
| 32 valve positions | | 1,907 | |
| 35 valve positions | | 2,060 | |
| Blanking plate for vacant position | | 13.8 | |
| Pressure zone supply module for pressure zones or additional supply | | 13.8 | |
| Separator for duct separation | | 9.8 | |
| Pneumatic distributor Q4, Q6, Q4-Q6 | | 65.6, 59, 62.3 | |
| Blanking plate for pneumatic distributor | | 8.4 | |
| Selector plate | | 38.8 | |
| Sub-base for individual valve, single width | | 15 | |
| Sub-base for individual valve, double width | | 30 | |




| Electrical data | | |
|--|--------|--------------------------------|
| Nominal operating voltage | [V DC] | 24, reverse polarity protected |
| Permissible voltage fluctuations | | ±10% |
| Electrical power consumption per solenoid coil | [W] | 1 |
| Protection class to EN 60529 | | IP65 |
| Duty cycle | [%] | 100 |

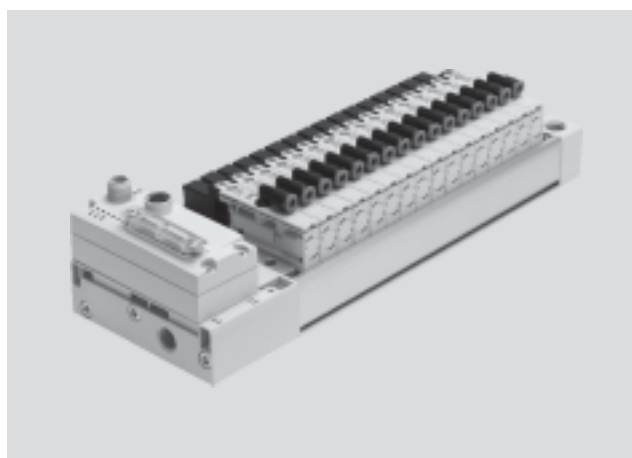
| Materials | |
|---|-------------------------|
| Manifold rail | Wrought aluminium alloy |
| Solenoid valve housing | PA reinforced |
| Solenoid valve seals | NBR, TPE-U |
| Solenoid valve piston spool | Wrought aluminium alloy |
| Blanking plate housing, additional supply housing | PA reinforced |
| Separator for duct separation | Beryllium bronze, brass |
| Pneumatic distributor, pneumatic distributor blanking plate | PA reinforced |
| Selector plate | Wrought aluminium alloy |
| Sub-base for individual valve | PA reinforced |
| Note on materials | RoHS-compliant |

Valve terminals VTUB-12

FESTO

Technical data – Valve terminal VTUB-12 with I-Port interface, IO-Link

-  Voltage
24 V DC
-  Pressure
+2.8 ... +8 bar
-  Temperature range
-5 ... +60 °C



| General technical data | | | | | |
|--------------------------------|--|-----------------|------|---|--------------------------|
| Valve function | | 3/2C | 3/2U | 5/2-way, single solenoid | 5/2-way, double solenoid |
| Design | Poppet valve with spring return | | | Poppet valve with self-holding function | |
| Valve function | | Closed | Open | Single solenoid | Double solenoid |
| Sealing principle | Soft | | | | |
| Actuation type | Electric | | | | |
| Reset method | Mechanical spring | | | | – |
| Type of control | Piloted | | | | |
| Pilot air supply | Internal | | | | |
| | External | | | | |
| Direction of flow | Non-reversible | | | | |
| Exhaust function | No flow control | | | | |
| Manual override | Non-detenting, non-detenting/detenting | | | | |
| Type of mounting | Via through-hole | | | | |
| Width | [mm] | 12 | | | 24 |
| Nominal size | [mm] | 4 | | | |
| Max. number of valve positions | | 35 | | 35 | 17 |
| Max. number of pressure zones | | 18 | | | |
| Standard nominal flow rate | qnN | [l/min] 400 | | | |
| Pneumatic connection | 1, 3, 5 | G $\frac{1}{4}$ | | | |
| | 2, 4 | QS-4 or QS-6 | | | |
| | 12, 14 | G $\frac{1}{8}$ | | | |

| Operating and environmental conditions | | | | | |
|--|--|-------|------------|--------------------------|--------------------------|
| Valve function | | 3/2C | 3/2U | 5/2-way, single solenoid | 5/2-way, double solenoid |
| Operating medium | Compressed air to ISO 8573-1:2010 [7:4:4] | | | | |
| Note on operating/pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) | | | | |
| Operating pressure | Internal pilot air | [bar] | +2 ... +8 | +2.8 ... +8 | |
| | External pilot air | [bar] | 0 ... +8 | | |
| Pilot pressure | | [bar] | +2 ... +8 | +2.8 ... +8 | |
| Ambient temperature | | [°C] | -5 ... +50 | | |
| Temperature of medium | | [°C] | -5 ... +50 | | |
| CE marking | To EU EMC Directive | | | | |

-  Note

The CE marking for the valve terminal with I-Port interface applies up to a maximum connecting cable length of 30 m.

Valve terminals VTUB-12

Technical data – Valve terminal VTUB-12 with I-Port interface, IO-Link

| Product weight | | |
|---|--------------------|----------------|
| Approx. weight | | [g] |
| Valves | | |
| • 5/2-way single solenoid (code M), ducted solenoid exhaust | | 27.8 |
| • 5/2way double solenoid (code J), ducted solenoid exhaust | | 57.4 |
| • 5/2-way single solenoid (code M), unducted solenoid exhaust | | 27.5 |
| • 5/2-way double solenoid (code J), unducted solenoid exhaust | | 57.1 |
| • 3/2-way closed (code K), ducted/unducted solenoid exhaust | | 26.3 |
| • 3/2-way open (code N), unducted solenoid exhaust | | 28.1 |
| • 3/2-way open (code N), ducted solenoid exhaust | | 29.4 |
| • I-Port interface with M12 plug | 4 valve positions | 521 |
| | 6 valve positions | 627 |
| | 8 valve positions | 727 |
| | 10 valve positions | 834 |
| | 12 valve positions | 940 |
| | 14 valve positions | 1,040 |
| | 16 valve positions | 1,145 |
| | 18 valve positions | 1,251 |
| | 20 valve positions | 1,358 |
| | 24 valve positions | 1,562 |
| | 28 valve positions | 1,775 |
| 32 valve positions | 1,982 | |
| 35 valve positions | 2,138 | |
| Blanking plate for vacant position | | 13.8 |
| Pressure zone supply module for pressure zones or additional supply | | 13.8 |
| Separator for duct separation | | 9.8 |
| Pneumatic distributor Q4, Q6, Q4-Q6 | | 65.6, 59, 62.3 |
| Blanking plate for pneumatic distributor | | 8.4 |
| Selector plate | | 38.8 |
| Sub-base for individual valve, single width | | 15 |
| Sub-base for individual valve, double width | | 30 |

| Electrical data | | |
|--|--------------------|--------------------------------|
| Nominal operating voltage | [V DC] | 24, reverse polarity protected |
| Permissible voltage fluctuations | | ±10% |
| Electrical power consumption per solenoid coil | [W] | 1 |
| Protection class to EN 60529 | | IP65 |
| Duty cycle | [%] | 100 |
| Intrinsic current consumption, logic supply | [mA] | 30 |
| Intrinsic current consumption, valve supply | [mA] | 30 |
| Max. cable length | [m] | 20 |
| Min. cable cross section | [mm ²] | 1 |
| Baud rate | COM3 | [kbps] 230.4 |
| | COM2 | [kbps] 38.4 |

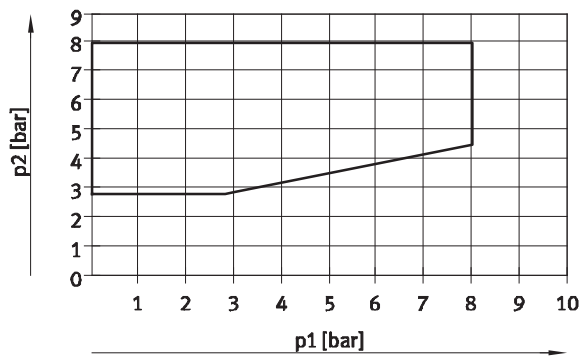
| Materials | |
|---|-------------------------|
| Manifold rail | Wrought aluminium alloy |
| Solenoid valve housing | PA reinforced |
| Solenoid valve seals | NBR, TPE-U |
| Solenoid valve piston spool | Wrought aluminium alloy |
| Blanking plate housing, additional supply housing | PA reinforced |
| Separator for duct separation | Beryllium bronze, brass |
| Pneumatic distributor, pneumatic distributor blanking plate | PA reinforced |
| Selector plate | Wrought aluminium alloy |
| Sub-base for individual valve | PA reinforced |
| Note on materials | RoHS-compliant |

Valve terminals VTUB-12

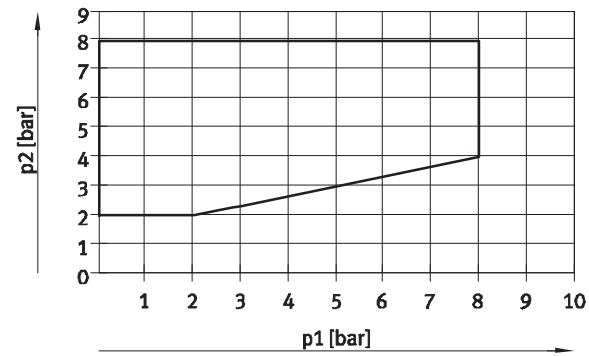
Technical data

| Valve switching times [ms] | | | |
|----------------------------|---------|--------------------------|--------------------------|
| Valve function | 3/2-way | 5/2-way, single solenoid | 5/2-way, double solenoid |
| On | 6 | 6 | – |
| Off | 14 | 14 | – |
| Changeover | – | – | 10 |

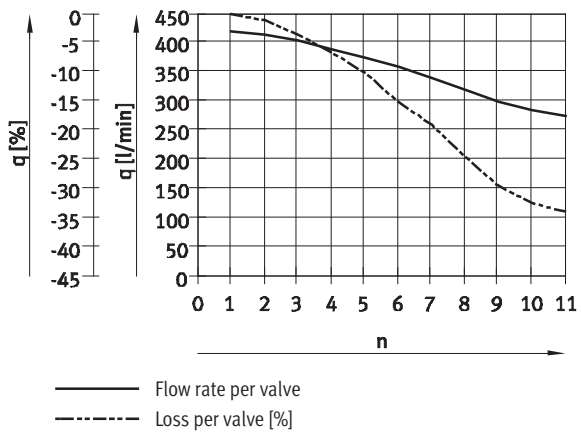
Pilot pressure as a function of operating pressure (operating pressure with external pilot air), pilot pressure 5/2 and 3/2U



Pilot pressure as a function of operating pressure (operating pressure with external pilot air), pilot pressure 3/2C



Flow rate q per valve with multiple (n) valves switched simultaneously (tolerance ± 20%)



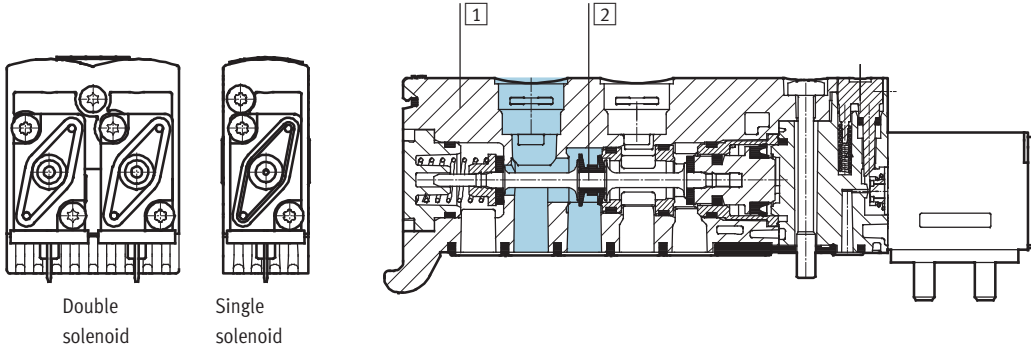
Valve terminals VTUB-12

Technical data

FESTO

Materials

Sectional view – Valves



| | | |
|---|------------------------------------|-------------------------|
| 1 | Housing | PA reinforced |
| 2 | Piston spool | Wrought aluminium alloy |
| - | Seals | NBR, PUR |
| - | Manifold rail with multi-pin plug | Wrought aluminium alloy |
| - | Pressure zone supply module | PA reinforced |
| - | Blanking plate for vacant position | PA reinforced |
| - | Selector plate | Wrought aluminium alloy |

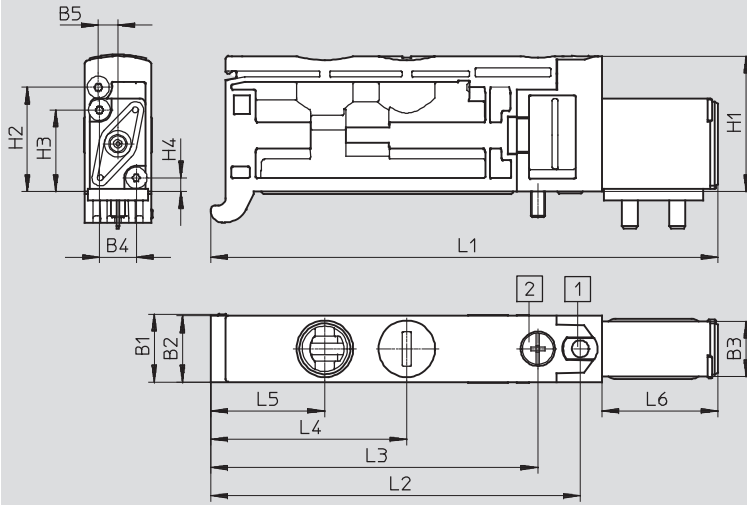
Valve terminals VTUB-12

Technical data

FESTO

Dimensions – 3/2-way valve, single solenoid, normally open

Download CAD data → www.festo.com

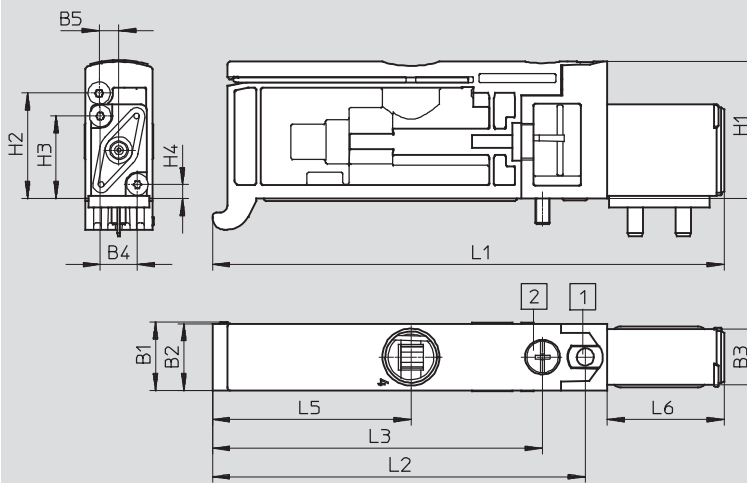


- 1 Manual override non-detenting or non-detenting/detenting
- 2 M2.5 mounting screw

| Type | B1 | B2 | B3 | B4 | B5 | H1 | H2 | H3 | H4 | L1 | L2 | L3 | L4 | L5 | L6 |
|-----------------------------|----|------|-----|-----|-----|----|------|------|-----|------|------|------|------|------|------|
| VUVB-ST12-M32U-...-QX-1T1 | 12 | 11.7 | 9.8 | 6.5 | 3.5 | 24 | 18.4 | 14.5 | 2.5 | 89.6 | 65.3 | 57.8 | 34.7 | 20.2 | 20.5 |
| VUVB-ST12-M32U-...-QX-D-1T1 | | | | | | | | | | 89.9 | | | | | 20.8 |

Dimensions – 3/2-way valve, single solenoid, normally closed

Download CAD data → www.festo.com



- 1 Manual override non-detenting or non-detenting/detenting
- 2 M2.5 mounting screw

| Type | B1 | B2 | B3 | B4 | B5 | H1 | H2 | H3 | H4 | L1 | L2 | L3 | L5 | L6 |
|-----------------------------|----|------|-----|-----|-----|----|------|------|-----|------|------|------|------|------|
| VUVB-ST12-M32C-...-QX-1T1 | 12 | 11.7 | 9.8 | 6.5 | 3.5 | 24 | 18.5 | 14.5 | 2.5 | 89.6 | 65.3 | 57.8 | 34.8 | 20.5 |
| VUVB-ST12-M32C-...-QX-D-1T1 | | | | | | | | | | 89.9 | | | | 20.8 |

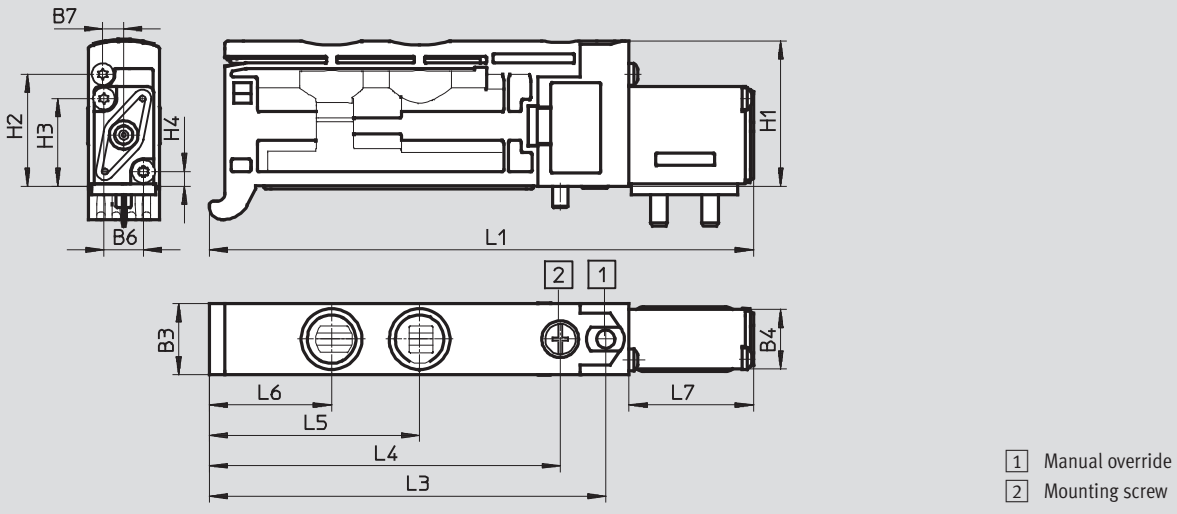
Valve terminals VTUB-12

Technical data

FESTO

Dimensions – 5/2-way valve, single solenoid

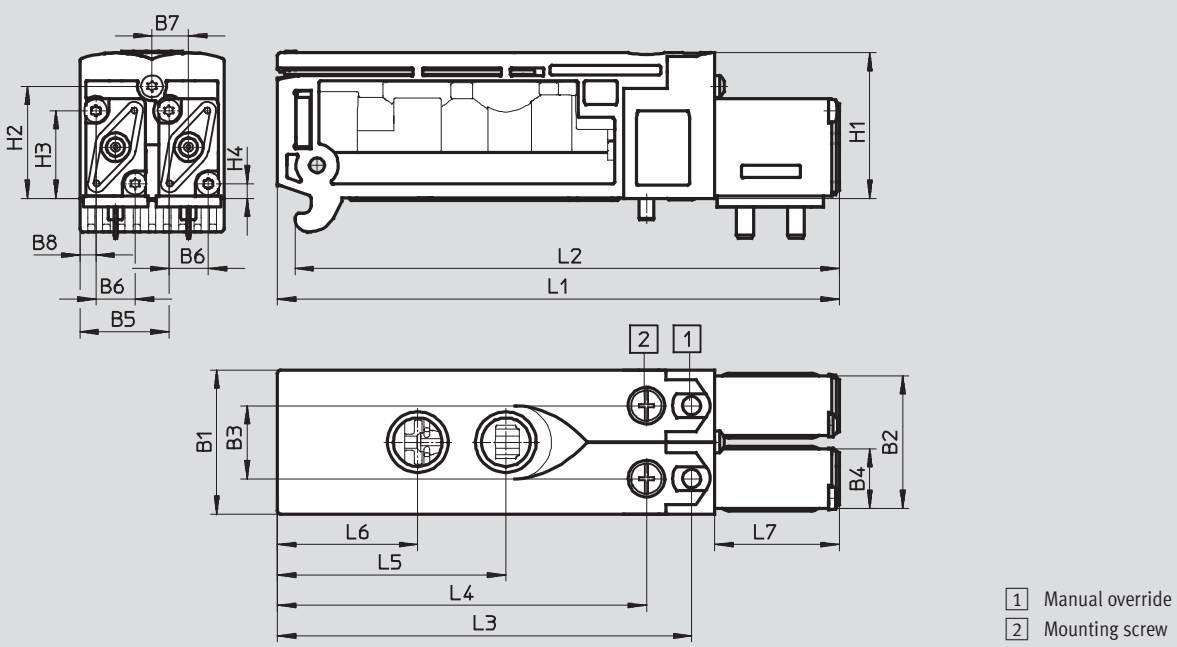
Download CAD data → www.festo.com



| Type | B1 | B2 | B3 | B4 | B5 | B6 | B7 | H1 | H2 | H3 | H4 | L1 | L2 | L3 | L4 | L5 | L6 | L7 |
|----------------------------|----|----|----|-----|----|-----|-----|----|------|------|-----|------|----|------|------|------|------|------|
| VUVB-ST12-M52-MZH-QX-1T1 | - | - | 12 | 9.8 | - | 6.5 | 3.5 | 24 | 18.5 | 14.5 | 2.5 | 89.6 | - | 65.3 | 57.8 | 34.7 | 20.2 | 20.5 |
| VUVB-ST12-M52-MZH-QX-D-1T1 | | | | | | | | | | | | 89.9 | | | | | | 20.8 |

Dimensions – 5/2-way valve, double solenoid

Download CAD data → www.festo.com



| Type | B1 | B2 | B3 | B4 | B5 | B6 | B7 | H1 | H2 | H3 | H4 | L1 | L2 | L3 | L4 | L5 | L6 | L7 |
|---------------------------|------|------|----|-----|------|-----|----|----|------|------|-----|------|------|------|------|------|------|------|
| VUVB-ST12-B52-ZH-QX-1T1 | 23.7 | 21.8 | 12 | 9.8 | 14.6 | 6.5 | 6 | 24 | 18.5 | 14.5 | 2.5 | 92.4 | 89.5 | 68.1 | 60.7 | 37.6 | 23.1 | 20.5 |
| VUVB-ST12-B52-ZH-QX-D-1T1 | | | | | | | | | | | | 92.7 | 89.8 | | | | | 20.8 |

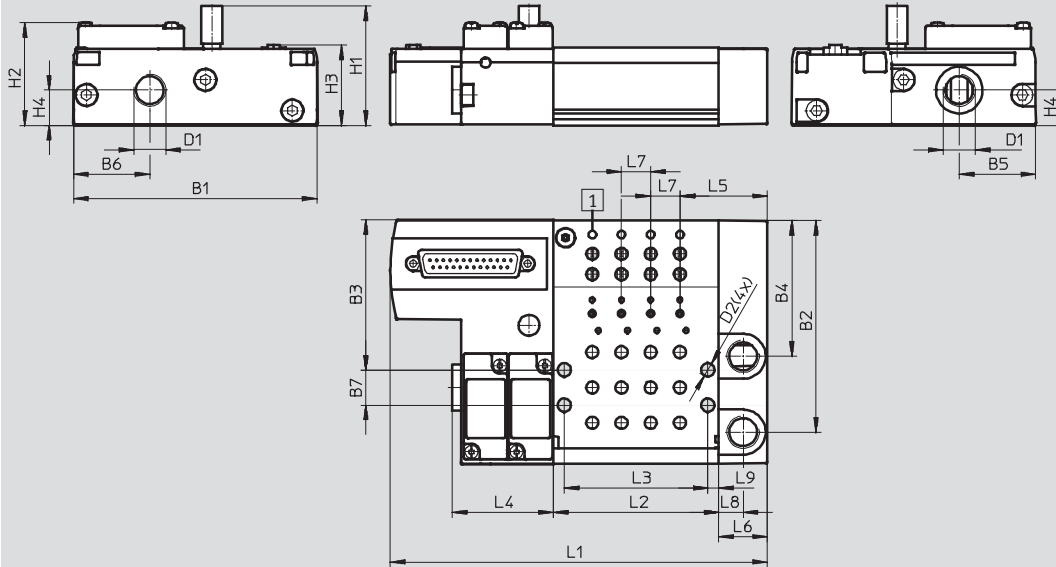
Valve terminals VTUB-12

Technical data

FESTO

Dimensions – Manifold rail with multi-pin plug

Download CAD data → www.festo.com



1 LED signal status display (optional)

n Number of valve positions (2 ... 35)

| Type | B1 | B2 | B3 | B4 | B5 | B6 | B7 | D1 | D2 | H1 | H2 | H3 | H4 |
|-------------|-----|----|------|------|------|------|------|------|-----|----|------|----|------|
| VABM-C8-12E | 100 | 87 | 61.4 | 55.9 | 31.5 | 31.3 | 14.5 | G1/4 | 5.5 | 49 | 42.2 | 33 | 14.5 |

| Type | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L8 | L9 |
|-------------|-----------------------|----------------------|----------------------|------|----|----|----|----|-----|
| VABM-C8-12E | $(n \times 12) + 107$ | $(n \times 12) + 20$ | $(n \times 12) + 11$ | 41.5 | 36 | 20 | 12 | 10 | 4.5 |

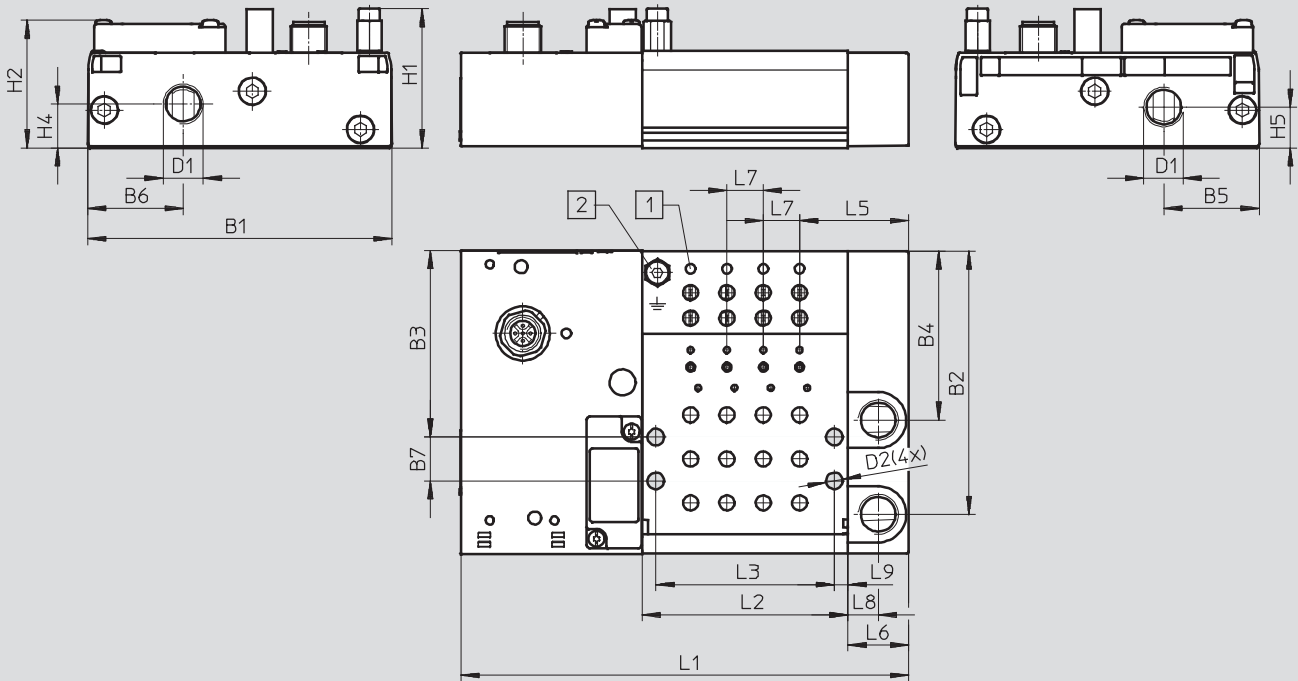
Valve terminals VTUB-12

Technical data

FESTO

Dimensions – Manifold rail with I-Port interface

Download CAD data → www.festo.com



- 1 LED signal status display
 - 2 M4 earthing screw
- n Number of valve positions (3 ... 35)

| Type | B1 | B2 | B3 | B4 | B5 | B6 | B7 | D1 | D2-σ | H1 | H2 | H4 | H5 |
|---------|-----|----|------|------|------|------|------|-----------------|------|----|------|------|------|
| VTUB-12 | 100 | 87 | 61.5 | 55.9 | 31.5 | 31.3 | 14.5 | G $\frac{1}{4}$ | 5.5 | 48 | 42.2 | 14.5 | 13.5 |

| Type | L1 | L2 | L3 | L5 | L6 | L7 | L8 | L9 |
|---------|------------|-----------|-----------|----|----|----|----|-----|
| VTUB-12 | (nx12)+100 | (nx12)+20 | (nx12)+11 | 36 | 20 | 12 | 10 | 4.5 |

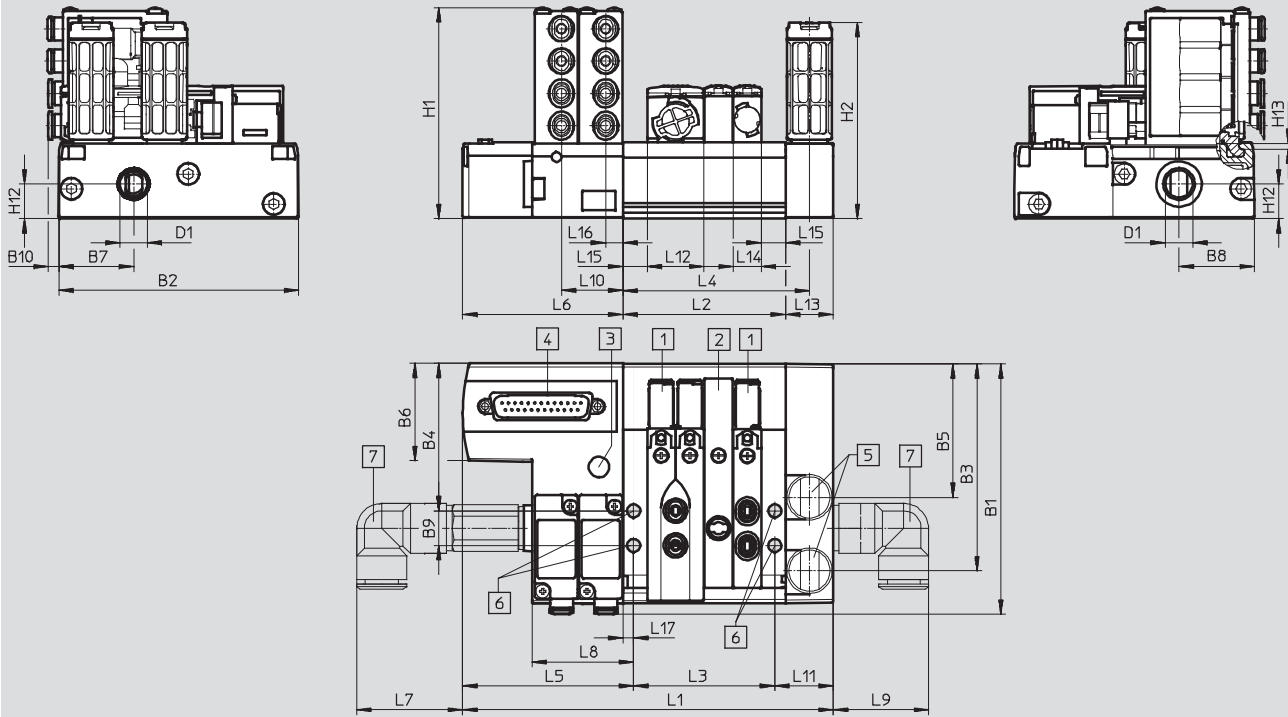
Valve terminals VTUB-12

Technical data

Dimensions – Valve terminal

Download CAD data → www.festo.com

With electrical multi-pin plug



- 1 5/2-way valve
- 2 Blanking plate for vacant position
- 3 Silencer, threaded connection M5
- 4 Sub-D plug, 25-pin or 44-pin with 21 or more solenoid coils
- 5 Silencer, threaded connection G $\frac{1}{4}$
- 6 Hole for wall mounting, \varnothing 5.5 mm
- 7 Fittings for air supply port
n Number of valve positions (2 ... 35)

| Type | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L8 | L9 | L10 | L11 | L12 | L13 | L14 | L15 | L16 | L17 |
|---------|------------------------------------|----------------------|----------------------|----|------|----|-----------------|------|---------------|------|------|------|-----|------|------|-----|-----|
| VTUB-12 | $(n \times 12) + 107$ ± 1.5 | $(n \times 12) + 20$ | $(n \times 12) + 11$ | 78 | 71.5 | 67 | 32.4 ± 1 | 42.5 | 40 ± 1 | 25.7 | 24.5 | 23.7 | 20 | 11.7 | 10.2 | 7.2 | 4.5 |

| Type | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | B10 | D1 | H1 | H2 | H12 | H13 |
|---------|----------------|--------------------|------|------|------|------|------|------|------|-----|-----------------|-----------------|---------------|------|-----|
| VTUB-12 | 103 ± 2 | 100.4 ± 1.1 | 86.5 | 61.5 | 55.9 | 40.5 | 31.5 | 31.5 | 14.5 | 2.8 | G $\frac{1}{4}$ | 88.2 ± 1 | 82 ± 1 | 14.5 | 2.5 |

Valve terminals VTUB-12

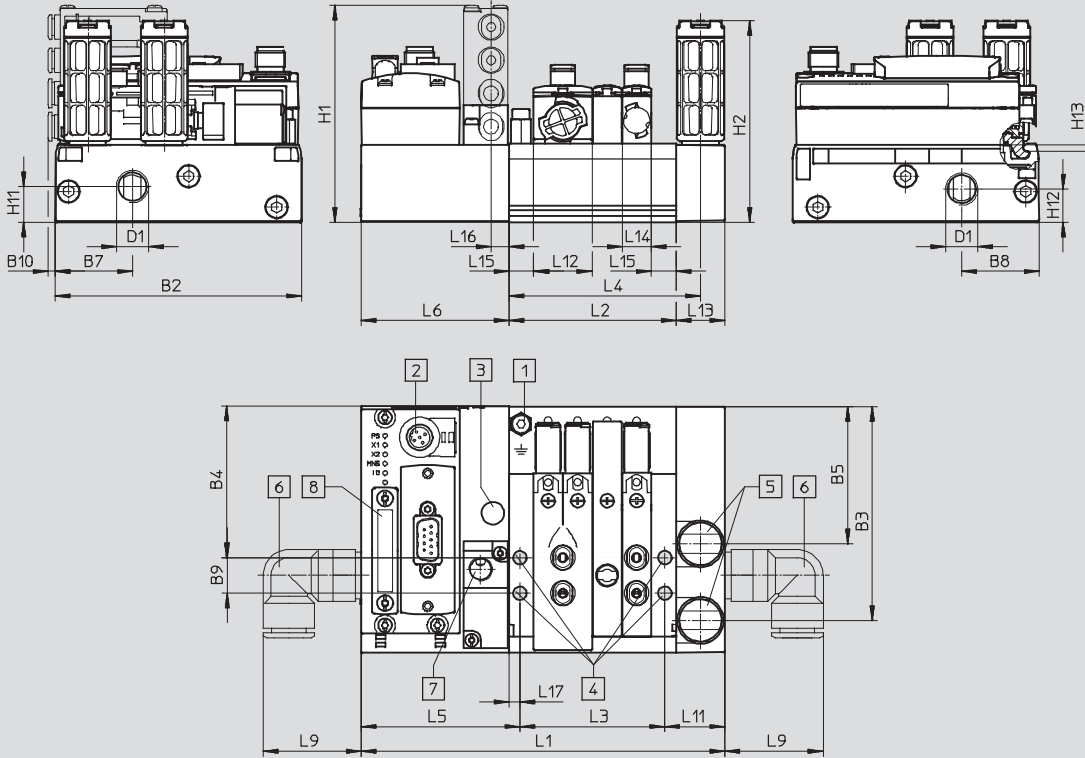
Technical data

FESTO

Dimensions – Valve terminal

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With I-Port interface, fieldbus node CTEU



- | | | | |
|--|---|-----------------|---|
| 1 M4 earthing screw | 5 Silencer, threaded connection G $\frac{1}{4}$ | 8 Bus node CTEU | n Number of valve positions (3 ... 35) |
| 2 M12 plug, 5-pin | 6 Fittings for air supply port M5 | | |
| 3 Silencer, threaded connection M5 | 7 External pilot air port 12/14, G $\frac{1}{8}$ | | |
| 4 Holes for mounting \varnothing 5.5 | | | |

| Type | B2 | B3 | B4 | B5 | B7 | B8 | B9 | B10 | D1 | H1 | H2 | H11 | H12 | H13 |
|---------|-----|----|------|------|------|------|------|-----|-----------------|------|----|------|------|-----|
| VTUB-12 | 100 | 87 | 61.5 | 55.9 | 31.3 | 31.5 | 14.5 | 3 | G $\frac{1}{4}$ | 88.2 | 82 | 14.5 | 13.5 | 2.5 |

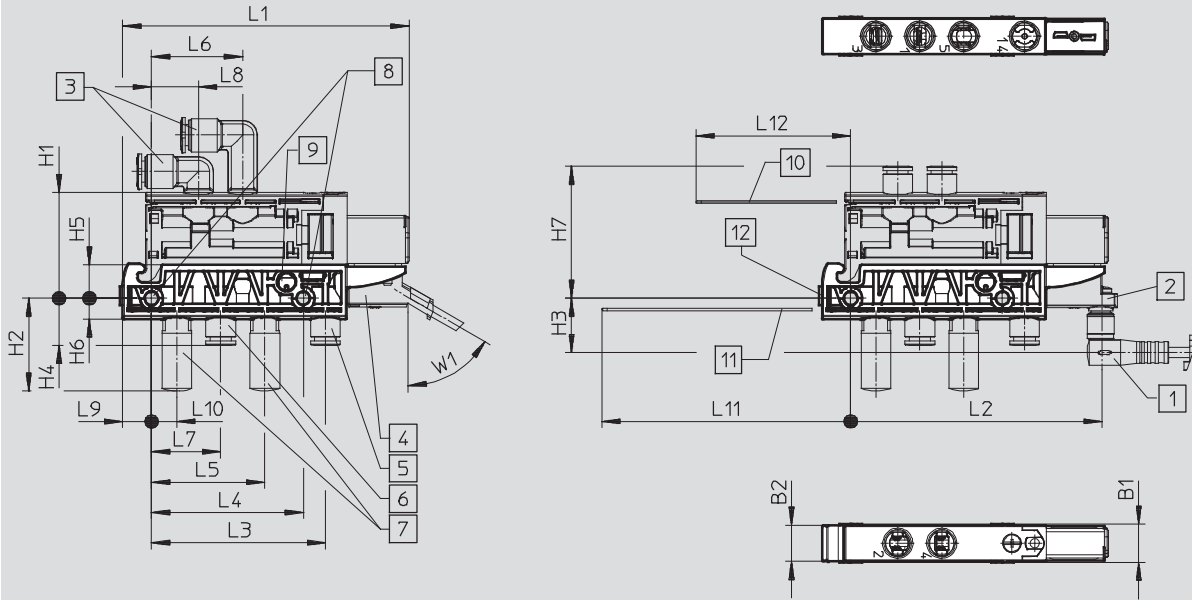
| Type | L1 | L2 | L3 | L4 | L5 | L6 | L9 | L11 | L12 | L13 | L14 | L15 | L16 | L17 |
|---------|------------|-----------|-----------|----|------|----|----|------|------|-----|------|------|-----|-----|
| VTUB-12 | (nx12)+100 | (nx12)+20 | (nx12)+11 | 78 | 64.5 | 60 | 40 | 24.5 | 23.7 | 20 | 11.7 | 10.2 | 7.2 | 4.5 |

Valve terminals VTUB-12

Technical data

Dimensions – Sub-base for semi in-line valve (single solenoid)

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- 1 Connecting cable (optional)
- 2 Adapter M8x1 (optional)
- 3 Port 2, 4: cartridge with push-in connector
- 4 Plug socket with cable KMYZ (optional)
- 5 Port 12, 14: cartridge with push-in connector (optional)
- 6 Port 1: cartridge with push-in connector
- 7 Port 3, 5: silencer AMTC-P-PC10 (optional)
- 8 Holes for M4 mounting
- 9 Exhaust port 82/84
- 10 Mounting space for spring clips for solenoid valve
- 11 Mounting space for spring clips for sub-base
- 12 Slot for inscription label IBS6x10 (not included in the scope of delivery)

| Type | B1 | B2 | H1 | H2 | H3 | H4 | H5 | H6 | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L8 | L9 | L10 | L11 | L12 | W1 | |
|-------------------|------|------|------|------|------|------|----|-----|------|------|------|----|------|----|------|------|-----|-----|-----|-----|-----|--|
| VABS-C8-12XB-QX-B | 12.6 | 11.9 | 34.9 | 30.6 | 17.9 | 15.5 | 11 | 6.9 | 94.5 | 82.9 | 57.3 | 50 | 37.3 | 30 | 22.8 | 15.5 | 9.5 | 8.3 | 82 | 51 | 60° | |
| VABS-C8-12XB-QX | | | | | | | | | | | | | | | | | | | | | | |

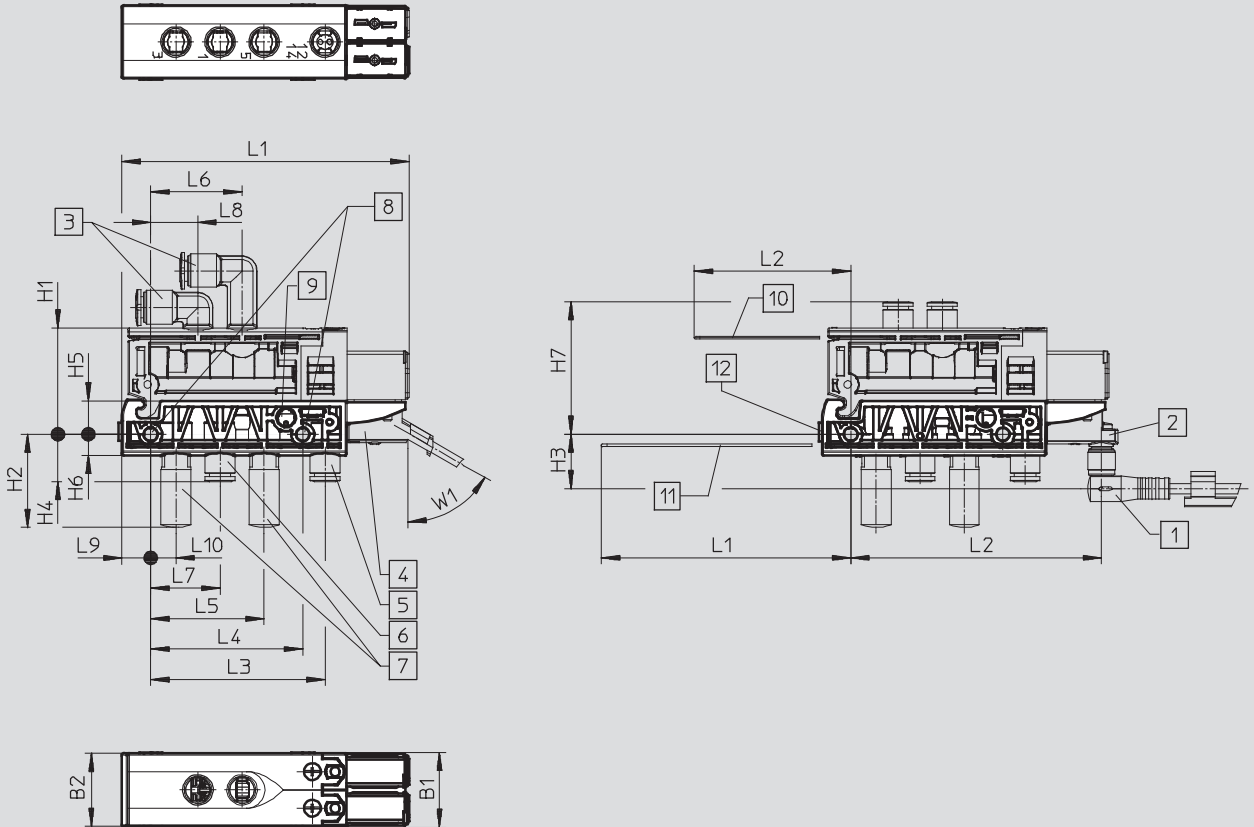
Valve terminals VTUB-12

Technical data

FESTO

Dimensions – Sub-base for semi in-line valve (double solenoid)

Download CAD data → www.festo.com



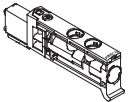
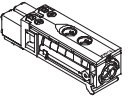
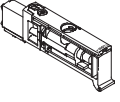
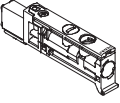
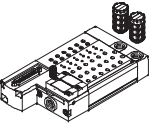
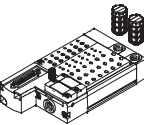
- | | | | |
|---|--|--|---|
| 1 Connecting cable (optional) | 4 Plug socket with cable KMYZ (optional) | 7 Port 3, 5: silencer AMTC-P-PC10 (optional) | 9 Exhaust port 82/84 |
| 2 Adapter M8x1 (optional) | 5 Port 12, 14: cartridge with push-in connector (optional) | 8 Holes for M4 mounting | 10 Mounting space for spring clips for solenoid valve |
| 3 Port 2, 4: cartridge with push-in connector | 6 Port 1: cartridge with push-in connector | | 11 Mounting space for spring clips for sub-base |
| | | | 12 Slot for inscription label IBS6x10 (not included in the scope of delivery) |

| Type | B1 | B2 | H1 | H2 | H3 | H4 | H5 | H6 | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L8 | L9 | L10 | L11 | L12 | W1 | |
|-------------------|------|------|------|------|------|------|----|-----|------|------|------|----|------|----|------|------|-----|-----|-----|-----|-----|--|
| VABS-C8-12XB-QX-B | 24.6 | 23.9 | 34.9 | 30.6 | 17.9 | 15.5 | 11 | 6.9 | 94.5 | 82.9 | 57.3 | 50 | 37.3 | 30 | 22.8 | 15.5 | 9.5 | 8.3 | 82 | 51 | 60° | |
| VABS-C8-12XB-QX | | | | | | | | | | | | | | | | | | | | | | |

Valve terminals VTUB-12

Accessories

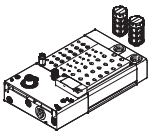
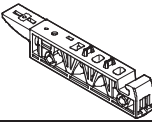
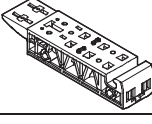
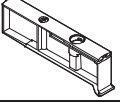
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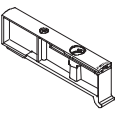
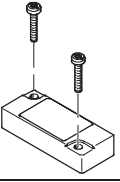
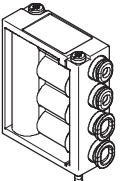
| Ordering data | | | | | | | |
|---|------|---|----------------------|----------|-----------------------------|--|--|
| | Code | Valve function | Solenoid exhaust air | Part No. | Type | | |
| Solenoid valves | | | | | | | |
|  | M | 5/2-way valve, single solenoid, manual override non-detenting | Unducted | 557649 | VUVB-ST12-M52-MZH-QX-1T1 | | |
| | | | Ducted | 558369 | VUVB-ST12-M52-MZH-QX-D-1T1 | | |
| | | 5/2-way valve, single solenoid, manual override non-detenting/detenting | Unducted | 570908 | VUVB-ST12-M52-MZD-QX-1T1 | | |
| | | | Ducted | 570909 | VUVB-ST12-M52-MZD-QX-D-1T1 | | |
|  | Y | 5/2-way valve, double solenoid, manual override non-detenting | Unducted | 557650 | VUVB-ST12-B52-ZH-QX-1T1 | | |
| | | | Ducted | 558370 | VUVB-ST12-B52-ZH-QX-D-1T1 | | |
| | | 5/2-way valve, double solenoid, manual override non-detenting/detenting | Unducted | 570910 | VUVB-ST12-B52-ZD-QX-1T1 | | |
| | | | Ducted | 570911 | VUVB-ST12-B52-ZD-QX-D-1T1 | | |
|  | K | 3/2-way valve, single solenoid, closed, manual override non-detenting | Unducted | 575997 | VUVB-ST12-M32C-MZH-QX-1T1 | | |
| | | | Ducted | 575998 | VUVB-ST12-M32C-MZH-QX-D-1T1 | | |
| | | 3/2-way valve, single solenoid, closed, manual override non-detenting/detenting | Unducted | 576001 | VUVB-ST12-M32C-MZD-QX-1T1 | | |
| | | | Ducted | 576002 | VUVB-ST12-M32C-MZD-QX-D-1T1 | | |
|  | N | 3/2-way valve, single solenoid, open, manual override non-detenting | Unducted | 575999 | VUVB-ST12-M32U-MZH-QX-1T1 | | |
| | | | Ducted | 576000 | VUVB-ST12-M32U-MZH-QX-D-1T1 | | |
| | | 3/2-way valve, single solenoid, open, manual override non-detenting/detenting | Unducted | 576003 | VUVB-ST12-M32U-MZD-QX-1T1 | | |
| | | | Ducted | 576004 | VUVB-ST12-M32U-MZD-QX-D-1T1 | | |
| Manifold rail | | | | | | | |
|  | - | Multi-pin plug with Sub-D plug, 25-pin | 2 | 557651 | VABM-C8-12E-G14-2-M1 | | |
| | | | 4 | 557653 | VABM-C8-12E-G14-4-M1 | | |
| | | | 6 | 557655 | VABM-C8-12E-G14-6-M1 | | |
| | | | 8 | 557657 | VABM-C8-12E-G14-8-M1 | | |
| | | | 10 | 557659 | VABM-C8-12E-G14-10-M1 | | |
| | | | 12 | 557661 | VABM-C8-12E-G14-12-M1 | | |
| | | | 14 | 557663 | VABM-C8-12E-G14-14-M1 | | |
| | | | 16 | 557665 | VABM-C8-12E-G14-16-M1 | | |
| | | | 18 | 557667 | VABM-C8-12E-G14-18-M1 | | |
| | | | 20 | 557669 | VABM-C8-12E-G14-20-M1 | | |
| | | | 24 | 557673 | VABM-C8-12E-G14-24-M1 | | |
| | | | 28 | 557677 | VABM-C8-12E-G14-28-M1 | | |
| | | | 32 | 557681 | VABM-C8-12E-G14-32-M1 | | |
| | | | 35 | 557684 | VABM-C8-12E-G14-35-M1 | | |
|  | L | Multi-pin plug with Sub-D plug, 25-pin, LED signal status display | 2 | 1361863 | VABM-C8-12E-G14-2-M1-L | | |
| | | | 4 | 1361865 | VABM-C8-12E-G14-4-M1-L | | |
| | | | 6 | 1361867 | VABM-C8-12E-G14-6-M1-L | | |
| | | | 8 | 1361868 | VABM-C8-12E-G14-8-M1-L | | |
| | | | 10 | 1361869 | VABM-C8-12E-G14-10-M1-L | | |
| | | | 12 | 1361870 | VABM-C8-12E-G14-12-M1-L | | |
| | | | 14 | 1361871 | VABM-C8-12E-G14-14-M1-L | | |
| | | | 16 | 1361873 | VABM-C8-12E-G14-16-M1-L | | |
| | | | 18 | 1361874 | VABM-C8-12E-G14-18-M1-L | | |
| | | | 20 | 1361875 | VABM-C8-12E-G14-20-M1-L | | |
| | | | 24 | 1361876 | VABM-C8-12E-G14-24-M1-L | | |
| | | | 28 | 1361877 | VABM-C8-12E-G14-28-M1-L | | |
| | | | 32 | 1361878 | VABM-C8-12E-G14-32-M1-L | | |
| | | | 35 | 1361879 | VABM-C8-12E-G14-35-M1-L | | |
| | | Multi-pin plug with Sub-D plug, 44-pin, LED signal status display | 24 | 1361876 | VABM-C8-12E-G14-24-M1-L | | |
| | | | 28 | 1361877 | VABM-C8-12E-G14-28-M1-L | | |
| | | | 32 | 1361878 | VABM-C8-12E-G14-32-M1-L | | |
| | | | 35 | 1361879 | VABM-C8-12E-G14-35-M1-L | | |
| | | | | | | | |
| | | | | | | | |

Valve terminals VTUB-12

Accessories

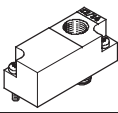
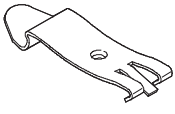
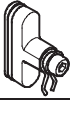



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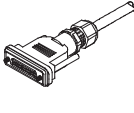

| Ordering data | | | | | |
|---|-------|---|--------------------------------------|----------|-------------------------|
| | Code | Description | Valve positions | Part No. | Type |
| Manifold rail | | | | | |
|  | PT/LK | Manifold rail with I-Port interface | 4 | 1247975 | VABM-C8-12E-G14-4-PT-L |
| | | | 6 | 1247976 | VABM-C8-12E-G14-6-PT-L |
| | | | 8 | 1247977 | VABM-C8-12E-G14-8-PT-L |
| | | | 10 | 1247978 | VABM-C8-12E-G14-10-PT-L |
| | | | 12 | 1247979 | VABM-C8-12E-G14-12-PT-L |
| | | | 14 | 1247980 | VABM-C8-12E-G14-14-PT-L |
| | | | 16 | 1247981 | VABM-C8-12E-G14-16-PT-L |
| | | | 18 | 1247982 | VABM-C8-12E-G14-18-PT-L |
| | | | 20 | 1247983 | VABM-C8-12E-G14-20-PT-L |
| | | | 24 | 1247984 | VABM-C8-12E-G14-24-PT-L |
| | | | 28 | 1247985 | VABM-C8-12E-G14-28-PT-L |
| | | | 32 | 1247986 | VABM-C8-12E-G14-32-PT-L |
| | | | 35 | 1247987 | VABM-C8-12E-G14-35-PT-L |
| | | | Sub-base for individual valve | | |
|  | - | Internal pilot air supply | 1 (M52/M32) | 1236025 | VABS-C8-12XB-QX-B |
| | | External pilot air supply | 1 (M52/M32) | 1236027 | VABS-C8-12XB-QX |
|  | - | Internal pilot air supply | 1 (B52) | 1236028 | VABS-C8-12XB-QX-DB |
| | | External pilot air supply | 1 (B52) | 1236029 | VABS-C8-12XB-QX-D |
| Pressure zone supply module | | | | | |
|  | S | For additional air supply or for supplying pressure zones | 1 | 1894888 | VABF-C8-12-P3A5-QX |

| Ordering data | | | | | |
|---|------|---|----------|-----------------------|--|
| | Code | Description | Part No. | Type | |
| Blanking plate | | | | | |
|  | L | Blanking plate for vacant valve position | 562461 | VABB-C8-12-ET | |
|  | - | Blanking plate for pneumatic distributor position | 562460 | VABB-C8-12-A | |
| Pneumatic distributor | | | | | |
|  | AL | Push-in connector 4 mm | 562457 | VABF-C8-12-V1P4-Q4 | |
| | BL | Push-in connector 6 mm | 562458 | VABF-C8-12-V1P4-Q6 | |
| | CL | Push-in connector 4 and 6 mm | 562459 | VABF-C8-12-V1P4-Q4-Q6 | |

Valve terminals VTUB-12

Accessories




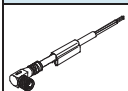
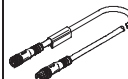
| Ordering data | | | | | |
|---|------|---|----------------|----------|---------------------|
| | Code | Description | Packaging unit | Part No. | Type |
| Selector plate | | | | | |
|  | SL | Pneumatic connection G1/8 | 1 piece | 1210305 | VABF-C8-12-P6-G18-Z |
| H-rail mounting | | | | | |
|  | H | For mounting the valve terminal VTUB-12 on a standard H-rail TH 35-15 to EN 50022. (Use the following screws for mounting: M5x40 to DIN 912, 2 pieces) | 2 pieces | 2636436 | VAME-T-M5 |
| Separator | | | | | |
|  | SP | For creating pressure zones (duct separation in duct 1) | 1 piece | 1877936 | VABD-C8-P1 |
| Blanking plug | | | | | |
|  | - | Connection Ø 10 mm | 1 piece | 562243 | QSPC10 |
|  | - | For thread G1/4 | 10 pieces | 3569 | B-1/4 |
| Inscription labels | | | | | |
|  | - | Inscription labels 6x10mm, 64 pieces, in frames | 1 piece | 18576 | IBS-6x10 |

| Ordering data | | | | | |
|---|--|--|------------------|----------------------------|-----------------------------|
| | Code | Description | Cable length [m] | Part No. | Type |
| Connecting cables for multi-pin plug | | | | | |
|  | M1 | • Sub-D, 15-pin, straight socket, up to 12 coils, IP65 | 2.5 | 538222 | NEBV-S1G25-K-2,5-N-LE15 |
| | M2 | | 5 | 538223 | NEBV-S1G25-K-5-N-LE15 |
| | M3 | | 10 | 538224 | NEBV-S1G25-K-10-N-LE15 |
| | M1 | • Sub-D, 25-pin, straight socket, up to 24 coils, IP65 | 2.5 | 538225 | NEBV-S1G25-K-2,5-N-LE25 |
| | M2 | | 5 | 538226 | NEBV-S1G25-K-5-N-LE25 |
| | M3 | | 10 | 538227 | NEBV-S1G25-K-10-N-LE25 |
| | M1 | • Sub-D, 44-pin, straight socket, up to 35 coils, IP65 | 2.5 | 565289 | NEBV-S1G44-K-2.5-N-LE39 |
| | M2 | | 5 | 565290 | NEBV-S1G44-K-5-N-LE39 |
| | M3 | | 10 | 565291 | NEBV-S1G44-K-10-N-LE39 |
| | M1L | • Sub-D, 25-pin, straight socket, up to 24 coils, IP40 | 2.5 | 575417 | NEBV-S1G25-K-2.5-N-LE25-S6 |
| | M2L | | 5 | 575418 | NEBV-S1G25-K-5-N-LE25-S6 |
| | M3L | | 10 | 575419 | NEBV-S1G25-K-10-N-LE25-S6 |
| M1L | • Sub-D, 44-pin, straight socket, up to 35 coils, IP40 | 2.5 | 575113 | NEBV-S1G44-K-2.5-N-LE44-S6 | |
| M2L | | 5 | 575114 | NEBV-S1G44-K-5-N-LE44-S6 | |
| M3L | | 10 | 575115 | NEBV-S1G44-K-10-N-LE44-S6 | |
|  | MA1 | • Sub-D, 25-pin, angled socket, up to 24 coils, IP65 | 2.5 | 575423 | NEBV-S1WA25-K-2.5-N-LE25-S8 |
| | MA2 | | 5 | 575424 | NEBV-S1WA25-K-5-N-LE25-S8 |
| | MA3 | | 10 | 575425 | NEBV-S1WA25-K-10-N-LE25-S8 |
| | MA1 | • Sub-D, 44-pin, angled socket, up to 35 coils, IP65 | 2.5 | 575420 | NEBV-S1WA44-K-2.5-N-LE44-S8 |
| | MA2 | | 5 | 575421 | NEBV-S1WA44-K-5-N-LE44-S8 |
| | MA3 | | 10 | 575422 | NEBV-S1WA44-K-10-N-LE44-S8 |

Valve terminals VTUB-12

Accessories



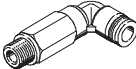






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| Ordering data | | | | |
|---|---|------------------|---------------------|-------------------------|
| | Description | Cable length [m] | Part No. | Type |
| Plug socket with cable for individual valve | | | | |
|  | Angled socket, square design, 2-pin, cable open at one end, 2-wire, with LED, IP65 | 2.5 | 193687 | KMYZ-9-24-2,5-LED-PUR-B |
| | | 5 | 193689 | KMYZ-9-24-5-LED-PUR-B |
| | | 10 | 196063 | KMYZ-9-24-10-LED-PUR-B |
|  | Angled socket, square design, 2-pin, straight plug, M8x1, 3-pin, with LED, IP65 | 0.5 | 196064 | KMYZ-9-24-M8-0,5-LED-B |
| | | 2.5 | 196065 | KMYZ-9-24-M8-2,5-LED-B |
|  | Angled socket, square design, 2-pin, cable with open end, 2-wire, without LED, IP40 | 0.5 | 193690 | KMYZ-4-24-0,5-B |
| | | 2.5 | 193691 | KMYZ-4-24-2,5-B |
| Connecting cables | | | | |
|  | Open cable end, 3-wire | | | |
| | Socket M8x1, straight, 3-pin | 2.5 | 541333 | NEBU-M8G3-K-2.5-LE3 |
| | | 5 | 541334 | NEBU-M8G3-K-5-LE3 |
| | | 10 | 541332 | NEBU-M8G3-K-10-LE3 |
| | | 2.5 | 159420 | SIM-M8-3GD-2,5-PU |
| | | 5 | 159421 | SIM-M8-3GD-5-PU |
| | | 10 | 192964 | SIM-M8-3GD-10-PU |
| | Socket M8x1, angled, 3-pin | 2.5 | 541338 | NEBU-M8W3-K-2.5-LE3 |
| | | 5 | 541341 | NEBU-M8W3-K-5-LE3 |
| | | 10 | 541335 | NEBU-M8W3-K-10-LE3 |
| | | 2.5 | 159422 | SIM-M8-3WD-2,5-PU |
| | | 5 | 159423 | SIM-M8-3WD-5-PU |
| | | 10 | 192965 | SIM-M8-3WD-10-PU |
| | Open cable end, 4-wire | | | |
| Socket M8x1, straight, 4-pin | 2.5 | 541342 | NEBU-M8G4-K-2.5-LE4 | |
| | 5 | 541343 | NEBU-M8G4-K-5-LE4 | |
| | 2.5 | 158960 | SIM-M8-4GD-2,5-PU | |
| | 5 | 158961 | SIM-M8-4GD-5-PU | |
| Socket M8x1, angled, 4-pin | 2.5 | 541344 | NEBU-M8W4-K-2.5-LE4 | |
| | 5 | 541345 | NEBU-M8W4-K-5-LE4 | |
| | 2.5 | 158962 | SIM-M8-4WD-2,5-PU | |
| | 5 | 158963 | SIM-M8-4WD-5-PU | |
|  | Straight plug, 3-pin | | | |
| | Socket M8x1, straight, 3-pin | 0.5 | 541346 | NEBU-M8G3-K-0.5-M8G3 |
| | | 1 | 541347 | NEBU-M8G3-K-1-M8G3 |
| | | 2.5 | 541348 | NEBU-M8G3-K-2.5-M8G3 |
| | | 5 | 541349 | NEBU-M8G3-K-5-M8G3 |
| | | 10 | 569844 | NEBU-M8G3-K-10-M8G3 |
| | Straight plug, 4-pin | | | |
| | Socket M8x1, straight, 3-pin | 2.5 | 554037 | NEBU-M8G3-K-2.5-M8G4 |
| | Socket M8x1, straight, 4-pin | 2.5 | 554035 | NEBU-M8G4-K-2.5-M8G4 |

Valve terminals VTUB-12

Accessories


FESTO


| Ordering data | | | | | |
|---|---|-------------|----------------|----------------|---|
| | Description | Tubing O.D. | Packaging unit | Part No. | Type |
| Push-in fitting Technical data → Internet: quick star | | | | | |
|  | With sealing ring Connection G $\frac{1}{4}$ | 8 mm | 10 pieces | 186099 | QS-G$\frac{1}{4}$-8 |
| | | 10 mm | 10 pieces | 186101 | QS-G$\frac{1}{4}$-10 |
| | | 12 mm | 10 pieces | 186350 | QS-G$\frac{1}{4}$-12 |
| Push-in L-fitting Technical data → Internet: quick star | | | | | |
|  | With sealing ring Connection G $\frac{1}{4}$ | 8 mm | 10 pieces | 186120 | QSL-G$\frac{1}{4}$-8 |
| | | 10 mm | 10 pieces | 186122 | QSL-G$\frac{1}{4}$-10 |
| | | 12 mm | 10 pieces | 186351 | QSL-G$\frac{1}{4}$-12 |
| Push-in L-fitting, long Technical data → Internet: quick star | | | | | |
|  | With sealing ring Connection G $\frac{1}{4}$ | 8 mm | 10 pieces | 186131 | QSL-L-G$\frac{1}{4}$-8 |
| | | 10 mm | 10 pieces | 186133 | QSL-L-G$\frac{1}{4}$-10 |
| | | 12 mm | 10 pieces | 132596 | QSL-L-G$\frac{1}{4}$-12 |
| Cartridge with push-in connector | | | | | |
|  | Straight Connection \varnothing 10 mm | 4 mm | 10 pieces | 172972 | QSP10-4 |
| | | 6 mm | 10 pieces | 172973 | QSP10-6 |
|  | L-shape Connection \varnothing 10 mm | 4 mm | 10 pieces | 132601 | QSPLK10-4 |
| | | 6 mm | 10 pieces | 132602 | QSPLK10-6 |
|  | L-shape, long Connection \varnothing 10 mm | 4 mm | 10 pieces | 132603 | QSPLLK10-4 |
| | | 6 mm | 10 pieces | 132604 | QSPLLK10-6 |
| Silencer Technical data → Internet: u | | | | | |
|  | For thread M5 | | 1 piece | 4645 | U-M5 |
|  | For thread G $\frac{1}{4}$ | | 1 piece | 2316 | U-$\frac{1}{4}$ |
|  | For individual sub-base, QSP10 | | 1 piece | 1224460 | AMTC-P-P10 |

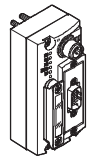
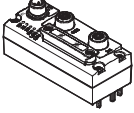
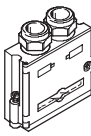
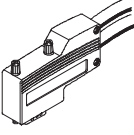



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

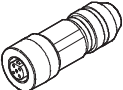
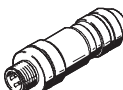
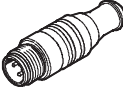

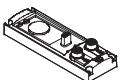
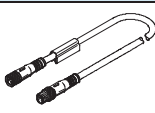


| Ordering data | | | | |
|---|------|----------------------------|----------|-------------|
| | Code | Description | Part No. | Type |
| Adapter M8x1 | | | | |
|  | - | Plug M8x1, 3-pin, with LED | 571686 | VAVE-C8-1R8 |
| | - | Plug M8x1, 4-pin, with LED | 573194 | VAVE-C8-1R1 |

| Ordering data – I-Port interface/IO-Link | | | | | |
|---|------|---|------------------|----------|-----------------|
| | Code | Description | Cable length [m] | Part No. | Type |
| Connection technology for IO-Link | | | | | |
|  | XM | T-adaptor M12, 5-pin | 2.5 | 171175 | FB-TA-M12-5POL |
| | XN | Straight plug, M12, 5-pin (in combination with adapter for separate load voltage) | 2.5 | 175487 | SEA-M12-5GS-PG7 |

| Ordering data – CTEU | | | | |
|---|---|--|----------|-----------------------|
| | | | Part No. | Type |
| Bus node | | | | |
|  | - | CANopen fieldbus node | 570038 | CTEU-CO |
| | - | DeviceNet fieldbus node | 570039 | CTEU-DN |
| | - | CC-Link fieldbus node | 1544198 | CTEU-CC |
| | - | PROFIBUS fieldbus node | 570040 | CTEU-PB |
|  | - | EtherCAT fieldbus node | 572556 | CTEU-EC |
| Bus connection | | | | |
|  | - | Sub-D plug, straight, for DeviceNet/CANopen | 532219 | FBS-SUB-9-BU-2x5POL-B |
| | - | Sub-D plug, straight, for CC-Link | 532220 | FBS-SUB-9-GS-2x4POL-B |
| | - | Sub-D plug, straight, for PROFIBUS | 532216 | FFBS-SUB-9-GS-DP-B |
|  | - | Sub-D plug, angled, for CANopen, 9-pin | 533783 | FBS-SUB-9-WS-CO-K |
| | - | Sub-D plug, angled, for PROFIBUS, 9-pin | 533780 | FBS-SUB-9-WS-PB-K |
|  | - | M12x1, 5-pin, A-coded, for DeviceNet/CANopen | 525632 | FBA-2-M12-5POL |
| | - | M12x1, 5-pin, B-coded, for PROFIBUS | 533118 | FBA-2-M12-5POL-RK |
|  | - | For 5-pin terminal strip for DeviceNet/CANopen | 525634 | FBA-1-SL-5POL |
|  | - | Terminal strip, 5-pin, for DeviceNet/CANopen | 525635 | FBSD-KL-2x5POL |

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| Ordering data – CTEU | | Part No. | Type |
|---|---|----------------------|----------------------------|
| Bus connection | | | |
|  | Screw terminal for CC-Link | 197962 | FBA-1-KL-5POL |
|  | Fieldbus socket, M12x1, 5-pin, for DeviceNet/CANopen | 18324 | FBSD-GD-9-5POL |
| | Plug, M12x1, 5-pin, for DeviceNet/CANopen | 175380 | FBS-M12-5GS-PG9 |
|  | Straight socket, M12x1, 5-pin, for assembling a connecting cable compatible with FBA-2-M12-5POL-RK for PROFIBUS | 1067905 | NECU-M-B12G5-C2-PB |
|  | Straight plug, M12x1, 5-pin, for assembling a connecting cable compatible with FBA-2-M12-5POL-RK for PROFIBUS | 1066354 | NECU-M-S-B12G5-C2-PB |
|  | Terminating resistor, M12, B-coded for PROFIBUS | 1072128 | CACR-S-B12G5-220-PB |
|  | Plug M12x1, 4-pin, D-coded for EtherCAT | 543109 | NECU-M-S-D12G4-C2-ET |
| Electrical sub-base | | | |
|  | – | 570042 | CAPC-F1-E-M12 |
| Connecting cables | | | |
|  | Straight socket, M12x1, 5-pin | 574321 | NEBU-M12G5-E-5-Q8N-M12G5 |
| | Straight plug, M12x1, 5-pin | 574322 | NEBU-M12G5-E-7.5-Q8N-M12G5 |
| | Nominal conductor cross section 1 mm ² | 574323 | NEBU-M12G5-E-10-Q8N-M12G5 |
| | Angled socket, M12x1, 5-pin | 570733 | NEBU-M12W5-K-0.5-M12W5 |
| | Angled plug, M12x1, 5-pin | 570734 | NEBU-M12W5-K-2-M12W5 |
| | Straight socket, M12x1, 5-pin | 8003617 | NEBU-M12G5-K-0.5-M12W5 |
| Angled plug, M12x1, 5-pin | 8003618 | NEBU-M12G5-K-2-M12W5 | |
| Plug socket | | | |
|  | For power supply, M12x1, 5-pin, B-coded for CANopen/DeviceNet | 538999 | NTSD-GD-9-M12-5POL-RK |
| | For power supply, M12x1, 5-pin for CC-Link, PROFIBUS, EtherCAT | 18324 | FBSD-GD-9-5POL |
| Inscription label | | | |
|  | For bus node | 565306 | ASLR-C-E4 |