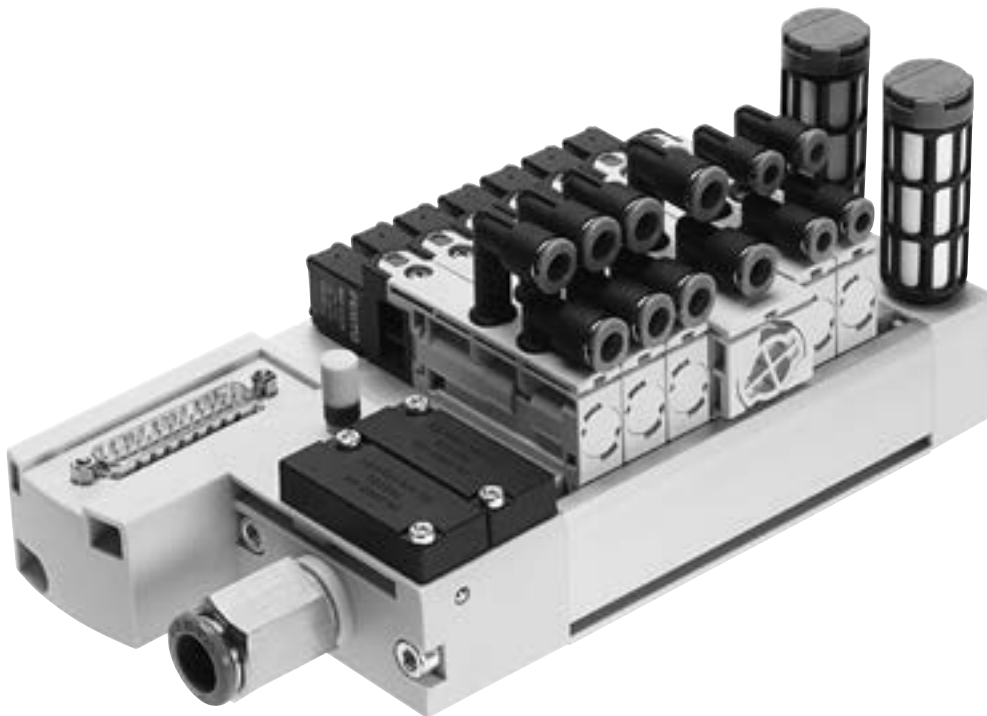


## Valve terminal VTUB-12

**FESTO**



## Key features



### Innovative

- Cost-effective I-Port interface for bus 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
- Long service life
- 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

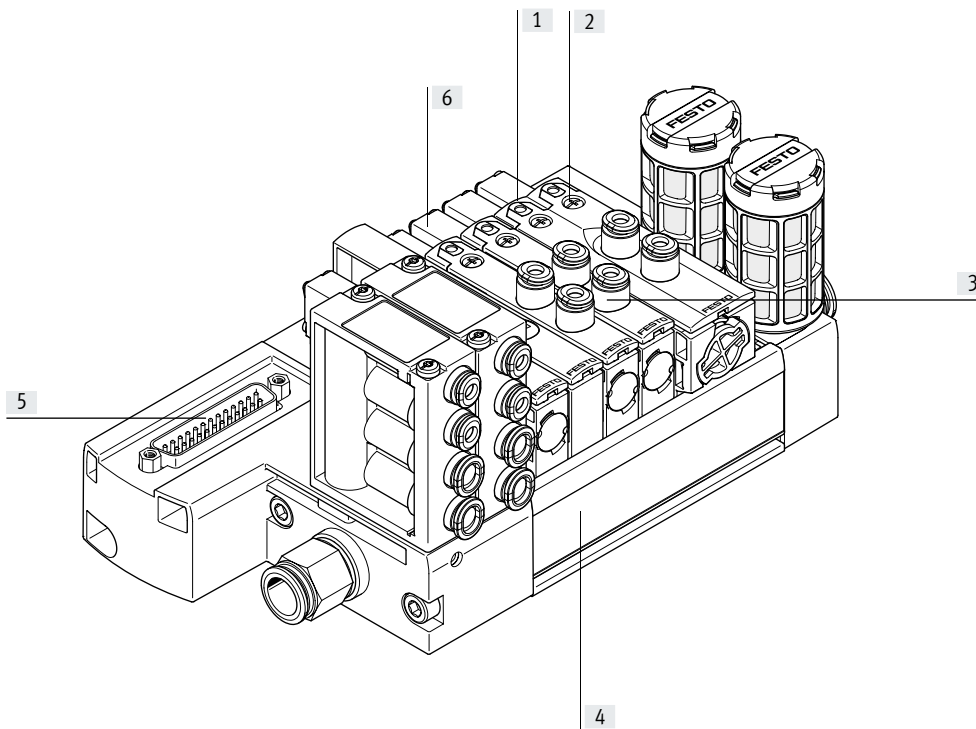
Ordering system for valve terminal VTUB-12

→ Internet: vtub-12

Fieldbus CTEU

→ Internet: cteu

## Key features



- [1] Safe operation:  
manual override non-detenting,  
non-detenting/detenting
- [2] Valve replacement made easy  
Fast valve mounting with one  
screw on the manifold rail
- [3] Choice of pneumatic outlets:  
QS push-in connectors, straight  
or angled
- [4] Space-saving with up to 35 valve  
positions
- [5] Simple electrical connections  
Multi-pin plug connection/I-Port  
interface
- [6] Width 12 mm

## 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

## Multi-pin plug

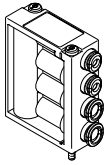
- Sub-D 25-pin
- Sub-D 44-pin
- 2 ... 35 valve positions/  
max. 35 solenoid coils

## I-Port

- Fieldbus interface (CTEU)
- IO-Link mode
- 3 ... 35 valve positions/  
max. 35 solenoid coils

## Key features

### Compressed air distributor



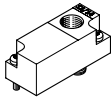
The compressed air distributor supplies the operating pressure from port 1 to up to four other ports. The compressed air distributor has integrated QS4 or QS6 connections.



**Note**

Number of compressed air distributors that can be used  
→ p. 36 Pilot air supply

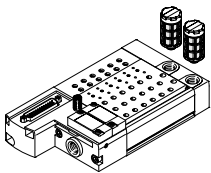
### Selector plate/pilot control with external pilot air (optional)



The VTUB-12 is intended for use with pilot air as standard. The valve terminal can be operated with external pilot air by mounting the selector plate VABF-C8-12-P6-...-Z instead of the

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

### Manifold rail with multi-pin plug connection

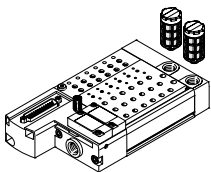


The manifold rail features a groove into which the semi in-line valves are latched and secured with just one screw.

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.

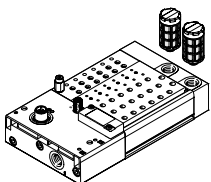
### Manifold rail with optional LED signal status display



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

These indicate the signal states of the solenoid coils.

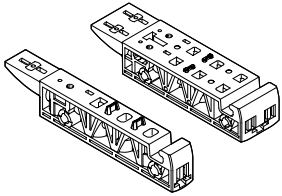
### Manifold rail with I-Port interface



The manifold rail can be ordered with I-Port interface (code PT) and IO-Link (code LK) as a basis for bus nodes (CTEU) or in IO-Link mode for direct connection to a higher-level IO-Link master.

## 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 connecting cable NEBV and KMYZ and the adapter (M8x1)

with corresponding connecting cable (→ accessories, p. 36)

### Cover plate

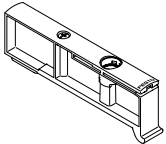
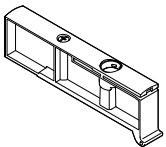


Plate without valve function for reserving valve positions on a valve terminal.

Valve and cover plate are attached to the manifold rail using one screw.

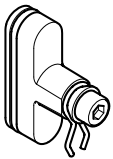
### Power supply module



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

The power 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.

## Key features

### Integration of the I-Port interface/IO-Link

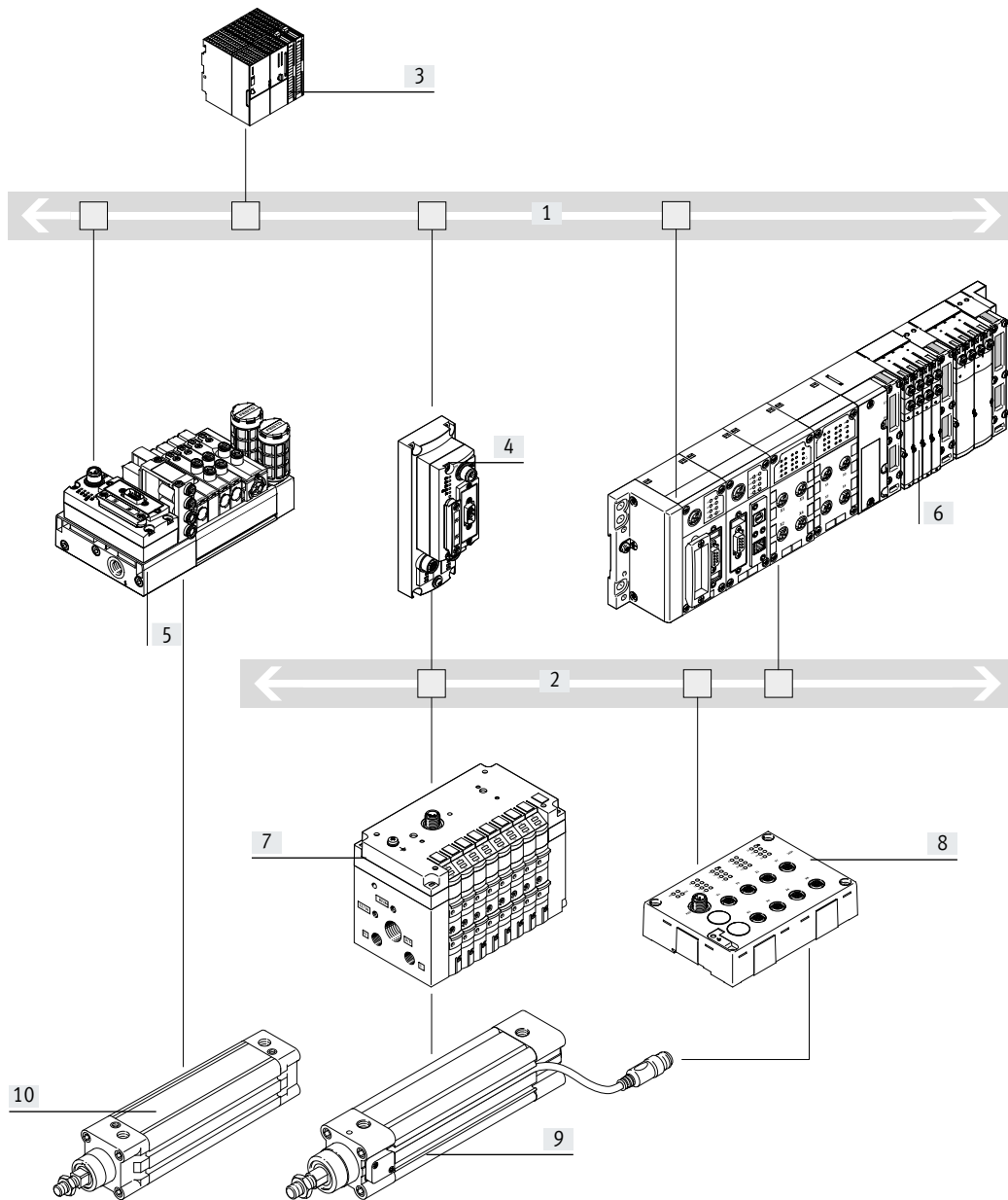
Different bus nodes are used for integration in the control systems of various manufacturers.

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

- CANopen
- DeviceNet
- EtherCAT
- CC-Link
- PROFIBUS DP
- AS-Interface
- PROFINET
- EtherNet/IP
- VARAN

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

### System overview, example



- [1] Fieldbus
- [2] IO-Link/ I-Port
- [3] PLC
- [4] Bus node CTEU (I-Port master) on electrical connection block CAPC
- [5] Valve terminal VTUB-12 with bus node CTEU
- [6] CPX terminal with bus node and CTCL master
- [7] Valve terminal CPV with I-Port interface/IO-Link
- [8] Input module CTSL
- [9] Pneumatic drive with sensor
- [10] Pneumatic drive

• Communication with the higher-level controller via fieldbus

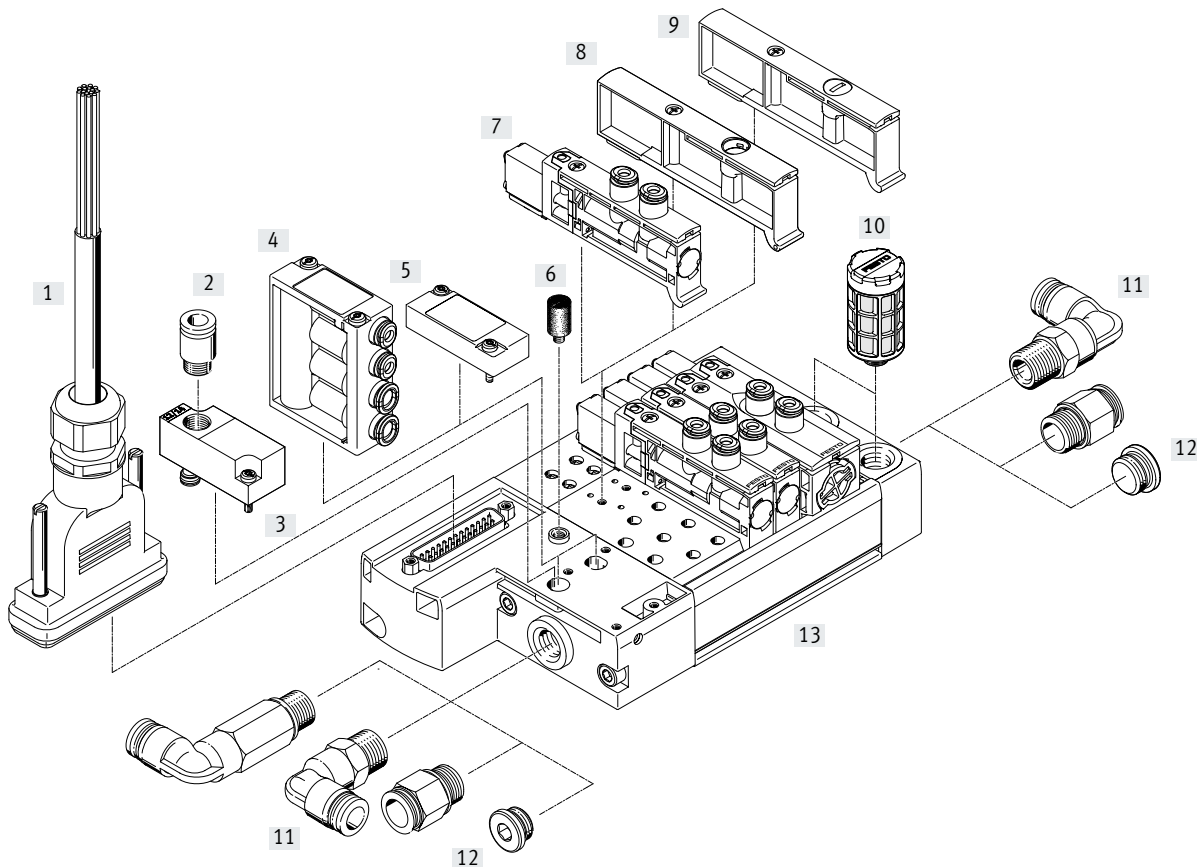
• Use a bus node CTEU compatible with the fieldbus protocol

• Up to 64 inputs/outputs (solenoid coils), depending on the valve terminal

## 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 power supply module or a cover 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 |                            |         | Description   | → Page/Internet |
|-------------|----------------------------|---------|---|-----------------|
| [1]         | Connecting cable           | NEBV    | For multi-pin plug connection, with Sub-D plug                    | 38              |
| [2]         | Push-in fitting            | QS      | For connecting tubing with standard O.D.                          | 39              |
| [3]         | Selector plate             | VABF    | Pilot control with external pilot air (optional)                  | 37              |
| [4]         | Compressed air distributor | VABF    | For connecting additional distributors to the air supply (port 1) | 36              |
| [5]         | Cover plate                | VABB    | For vacant position (compressed air distributor)                  | 36              |
| [6]         | Silencer                   | U       | For venting hole  | 39              |
| [7]         | Solenoid valve             | VUVB-12 | –   | 35              |
| [8]         | Power supply module        | VABF    | For supplying pressure zones or for additional air supply         | 36              |
| [9]         | Cover plate                | VABB    | For vacant position (solenoid valve)                              | 39              |
| [10]        | Silencer                   | U       | For mounting in exhaust ports                                     | 39              |
| [11]        | Fittings                   | QS      | For connecting tubing with standard O.D.                          | 39              |
| [12]        | Blanking plug              | B       | For sealing the air supply port                                   | 37              |
| [13]        | Manifold rail              | VABM    | With multi-pin plug connection, for connecting max. 35 valves     | 35              |
| –           | Separator                  | VABD    | For duct separation in duct 1, for creating pressure zones        | 37              |

## Peripherals overview

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

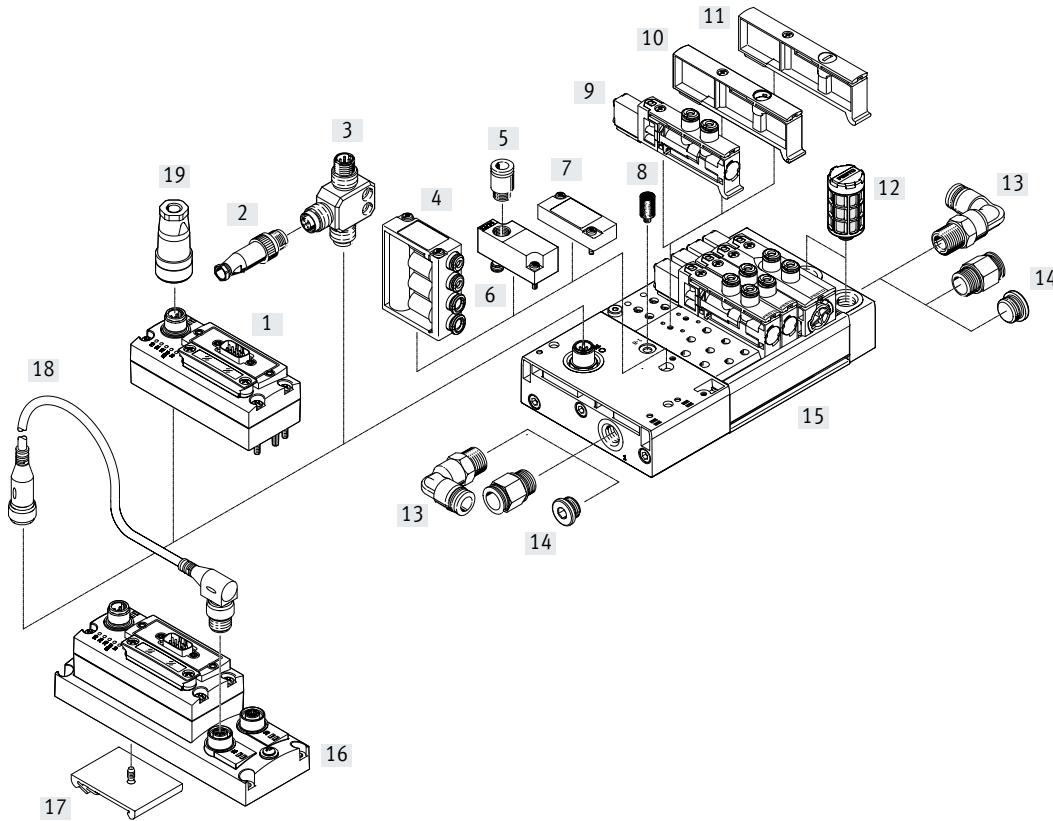
- Up to 35 valve positions/solenoid coils
  - I-Port interface connection type, code: PT
  - IO-Link connection type, code: LK
- Each valve position can either be equipped with a valve, a power supply module or a cover plate.

Double solenoid valves occupy two valve positions.  
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.

The following protocols are supported when using the associated bus node CTEU:

- DeviceNet
- CANopen
- PROFIBUS DP

- EtherCAT
- CC-Link
- AS-Interface
- PROFINET
- EtherNet/IP
- VARAN



#### Accessories

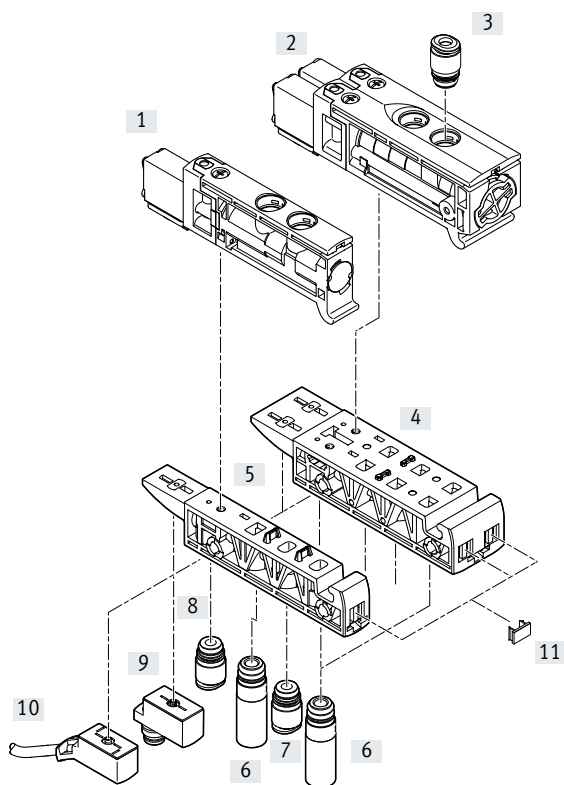
| Accessories |                             |               | Description   | → Page/Internet |
|-------------|-----------------------------|---------------|---|-----------------|
| [1]         | Bus node                    | CTEU          | –   | 40              |
| [2]         | Plug                        | SEA-M12       | Straight, for T-adapter FB-TA                                     | 40              |
| [3]         | T adapter                   | FB-TA         | For IO-Link and load supply                                       | 40              |
| [4]         | Compressed air distributor  | VABF          | For connecting additional distributors to the air supply (port 1) | 36              |
| [5]         | Push-in fitting             | QS            | –   | 39              |
| [6]         | Selector plate              | VABF          | Pilot control with external pilot air (optional)                  | 37              |
| [7]         | Cover plate                 | VABB          | For vacant position (compressed air distributor)                  | 36              |
| [8]         | Silencer                    | U             | For venting hole  | 39              |
| [9]         | Solenoid valve              | VUVB-12       | –   | 35              |
| [10]        | Power supply module         | VABF          | For supplying pressure zones or for additional air supply         | 37              |
| [11]        | Cover plate                 | VABB          | For vacant position (solenoid valve)                              | 36              |
| [12]        | Silencer                    | U             | For mounting in exhaust ports                                     | 39              |
| [13]        | Fittings                    | QS            | For connecting tubing with standard O.D.                          | 39              |
| [14]        | Blanking plug               | B             | For sealing the air supply port                                   | 37              |
| [15]        | Manifold rail               | VABM          | With I-Port interface, for connecting max. 35 valves              | 36              |
| [16]        | Electrical connection block | CAPC-F1-E-M12 | For connecting a second device with I-Port interface              | 41              |
| [17]        | H-rail mounting             | CAFM-F1-H     | For electrical connection block CAPC                              | 41              |
| [18]        | Connecting cable            | NEBU          | –   | 41              |
| [19]        | Power supply socket         | NTSD/FBSD     | Power supply for CTEU bus nodes                                   | 41              |
| –           | Separator                   | VABD          | For duct separation in duct 1, for creating pressure zones        | 37              |



## Peripherals overview

### Sub-base for semi in-line valve

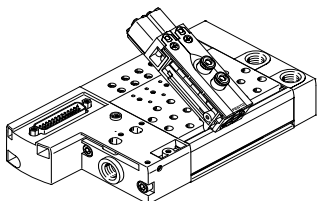
- Single design for single solenoid valves
  - Double design for double solenoid valves
- Electrical connection via connecting cable NEBV or KMYZ, and adapter (M8x1) with corresponding connecting cable.



| Accessories |                                 |            | Description  | → Page/Internet |
|-------------|---------------------------------|------------|--|-----------------|
| [1]         | Solenoid valve, single solenoid | VUVB-12    | -  | 35              |
| [2]         | Double solenoid valve           | VUVB-12    | -  | 35              |
| [3]         | Push-in fitting                 | QS         | For port 2, 4: cartridge with push-in connector              | 39              |
| [4]         | Sub-base                        | VABS       | Double design for individual double solenoid valve           | 36              |
| [5]         | Sub-base                        | VABS       | Single design for individual single solenoid valve           | 36              |
| [6]         | Silencer                        | AMTC       | For port 3, 5 (optional)                                     | 39              |
| [7]         | Push-in fitting                 | QS         | For port 1: cartridge with push-in connector                 | 39              |
| [8]         | Push-in fitting                 | QS         | For port 12, 14: cartridge with push-in connector (optional) | 39              |
| [9]         | Adapter                         | VAVE       | M8x1 (optional), LED   | 40              |
| [10]        | Connecting cable                | NEBV, KMYZ | Connecting cable (optional)                                  | 38              |
| [11]        | Inscription label holder        | IBS-6x10   | -  | 37              |

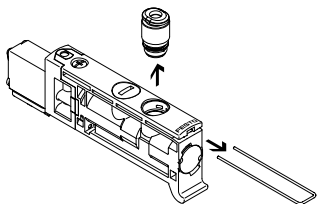
## Key features – Pneumatic components

### Wide range of pneumatic components



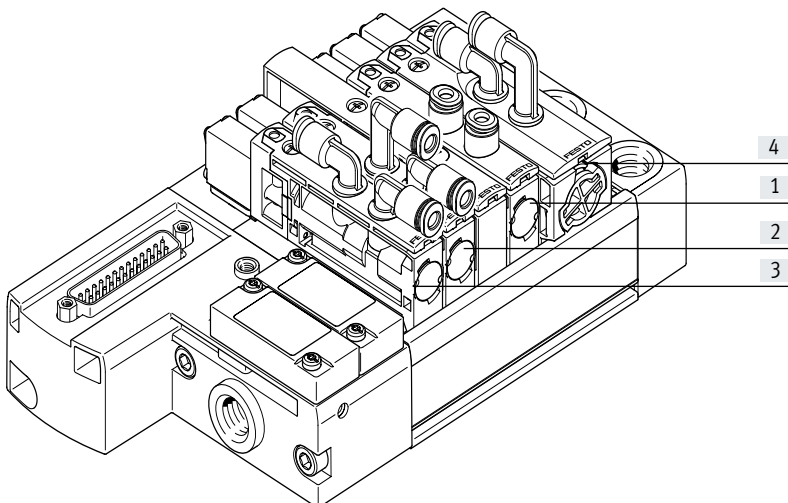
- The use of the same basic valves for the 3/2-way and 5/2-way valve function permits fast and flexible conversion and multiple use of parts.
- Flexible construction thanks to assembled and tested units or individual components as modules for individual configurations.
- Flow rates from 230 ... 400 l/min 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 (→ p. 37).

### Connection to the valve



- [1] T (on top, inline)
- [2] TA (on top, angled outlet to the front)
- [3] TB (on top, angled outlet to the front/rear)
- [4] 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.

The air is branched using a compressed air distributor or a cover plate on the left-hand compressed air distributor port.

The multi-pin plug connection provides two compressed air distributor ports and the I-Port interface provides one.

#### External

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

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

## 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:

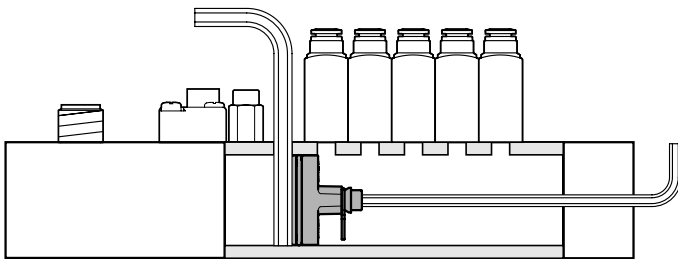
- Two pressure zones can be realised without an additional power supply module (VABF-C8 ...) if there is a compressed air supply at both ends. Only one separator in duct 1 is required for this.
- A power supply module (VABF-C8...) is additionally required after the third pressure zone; this module occupies 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.
- Additional information on assembly → Assembly instructions for VABD-C8-P1-D2

### Duct separation



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 at the appropriate position as far as the stop 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. This means that the valves can be easily replaced. Use of high-quality

polymer guarantees minimum weight and maximum performance.

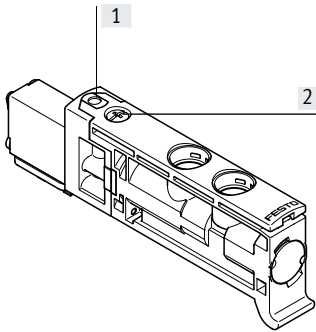
#### Extension

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

## Key features – Display and operation

### Display and operation

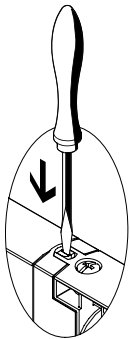


- [1] Manual override (non-detenting, non-detenting/detenting)
- [2] Screw for valve assembly

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

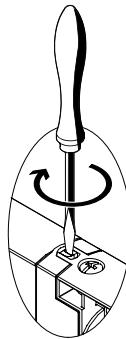
### Manual override

#### Manual override with automatic return (non-detenting)



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

### Note

A manually operated valve (manual override) cannot be reset electrically.

Conversely, an electrically actuated valve cannot be reset using the mechanical manual override.

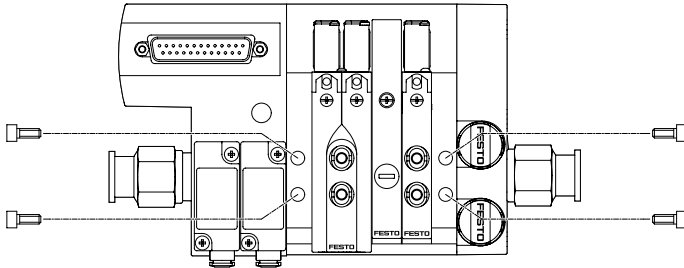
## Key features – Mounting

### Valve terminal mounting

Sturdy valve terminal mounting thanks to:

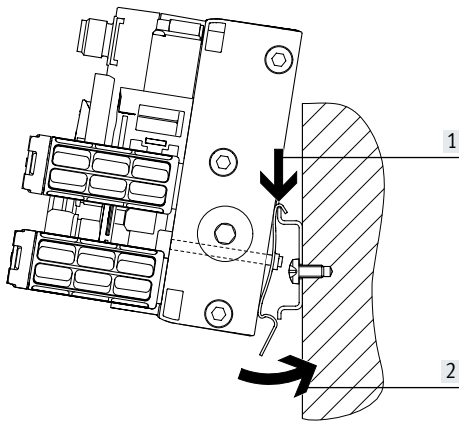
- Through-holes for wall mounting
- H-rail mounting

#### Wall mounting



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

#### H-rail mounting



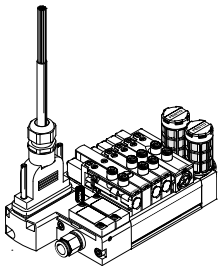
The H-rail mounting VAME-T-M5 consists of two mounting clips. These are attached to the manifold rail on the left and right (M5 screws). The lower through-holes on the manifold rail are used for this.

The valve terminal VTUB-12 is then lowered onto the H-rail from above → arrow [1] and clipped into the H-rail at the bottom → arrow [2].

- 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 permissible on H-rail TH 35-15 to EN 50022
  - Vibration/shock loads are not permissible with H-rail mounting.

## Key features – Electrical components

### Multi-pin plug connection



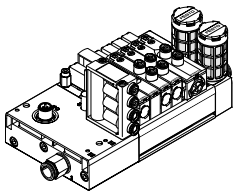
Control signals from the controller to the valve terminal are transmitted via a pre-assembled multi-core cable, which substantially reduces installation time.

The 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 acts as the interface to the higher-level controller (PLC) and controls communication with the connected IO-Link devices.

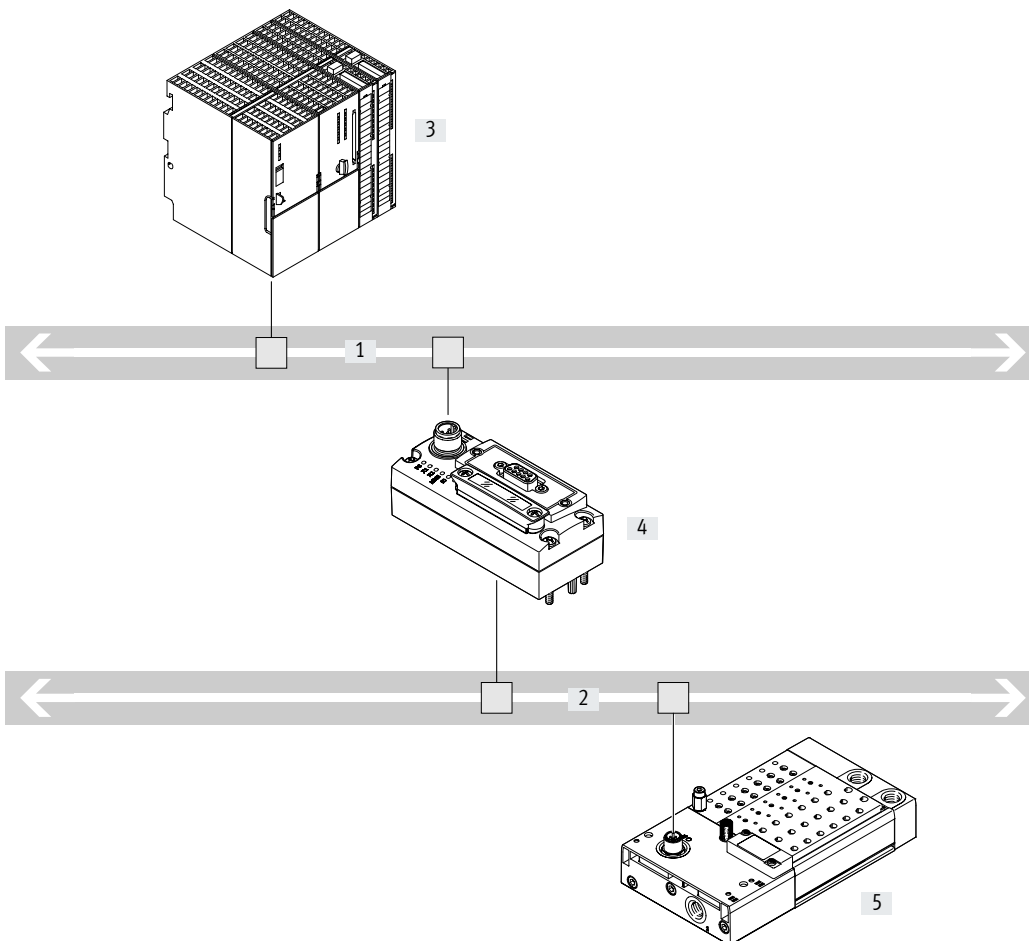
One device with IO-Link (e.g. an IO-Link valve terminal from Festo) can be connected to each port on an IO-Link master.

#### I-Port

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

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

### Overview

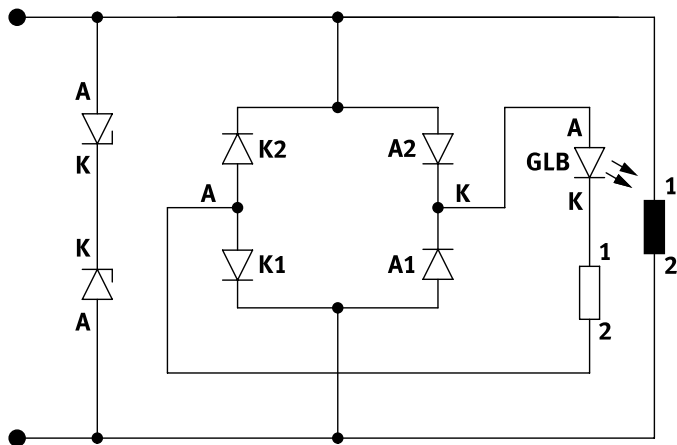


- [1] Fieldbus
- [2] IO-Link
- [3] PLC
- [4] CTEU bus node  
IO-Link master
- [5] Valve terminal VTUB-12 with  
I-Port interface/IO-Link

## Key features – Electrical components

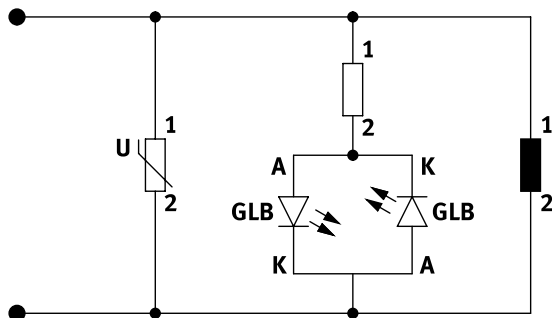
### Protective circuit

Manifold rail with LED signal status display, multi-pin plug, 2-20 valve positions



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

Manifold rail with LED signal status display, multi-pin plug, 21-35 valve positions



### 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 using 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.

Key features – Electrical components

| Pin allocation – Sub-D plug, 25-pin  |    | Pin      | Address/coil | 15-wire, NEBV-S1...25-K...-LE15<br>Wire colour <sup>1)</sup> of connecting cable | 25-wire, NEBV-S1...25-K...-LE25 |
|--|----|----------|--------------|--|---------------------------------|
|  | 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  |                                 |
| <p><b>Note</b><br/>The drawing shows the view onto the pins of the Sub-D plug.</p> | 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



### Key features – Electrical components

| Pin allocation – Sub-D plug, 44-pin |    | NEBV-S1...44-K...-LE39 |         |   |    |     |         |   |
|-------------------------------------|----|------------------------|---------|---|----|-----|---------|---|
|                                     |    | Pin                    | Address | Wire colour <sup>1)</sup><br>Connecting cable |    | Pin | Address | Wire colour <sup>1)</sup><br>Connecting cable |
|                                     | 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   |   |

**Note**  
The drawing shows the view onto the pins of the Sub-D plug.

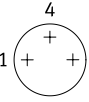

1) To IEC 757

| Pin allocation – Sub-D plug, 44-pin |    | NEBV-S1...44-K...-LE44 |         |   |    |     |         |   |
|-------------------------------------|----|------------------------|---------|---|----|-----|---------|---|
|                                     |    | Pin                    | Address | Wire colour <sup>1)</sup><br>Connecting cable |    | Pin | Address | Wire colour <sup>1)</sup><br>Connecting cable |
|                                     | 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   |   |

**Note**  
The drawing shows the view onto the pins of the Sub-D plug.

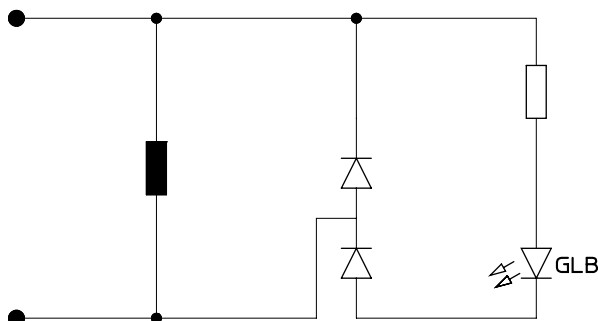
1) To IEC 757

## Key features – Electrical components

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

### 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:

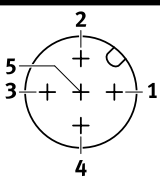
- Directly to the fieldbus by mounting the CTEU bus node on the valve terminal
- To an IO-Link master (in IO-Link mode) via a cable

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 – I-Port interface/IO-Link <sup>1)</sup>                            |   | 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) Plug, 5-pin, M12, A-coded

## Instructions for use

### System equipment

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

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 esters, 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).

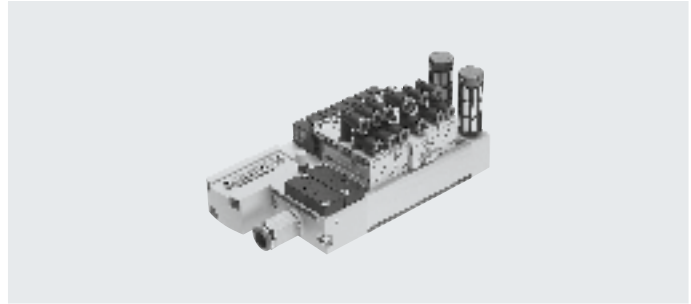
### Mineral oils

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 is not permitted, regardless of the compressor oil, because the permanent lubrication would otherwise be flushed out over a period of time.

Data sheet – Valve terminal VTUB-12 with multi-pin plug connection

-  Voltage  
24 V DC
-  Pressure  
0.28 ... 0.8 MPa  
2.8 ... 8 bar
-  Temperature range  
-5 ... 60°C



| General technical data        |     |         | 3/2C                                   | 3/2U | 5/2-way, single solenoid | 5/2-way, double solenoid                |
|-------------------------------|-----|---------|--|------|--------------------------|---|
| Valve function                |     |         |  |      |                          |   |
| 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                |     |         | Electrical                             |      |                          |   |
| Reset method                  |     |         | Mechanical spring                      |      |                          | –                                       |
| Type of control               |     |         | Piloted                                |      |                          |   |
| Pilot air supply              |     |         | Internal                               |      |                          |   |
|                               |     |         | External                               |      |                          |   |
| Flow direction                |     |         | Non-reversible                         |      |                          |   |
| Exhaust air function          |     |         | Cannot be throttled                    |      |                          |   |
| Manual override               |     |         | Non-detenting, non-detenting/detenting |      |                          |   |
| Type of mounting              |     |         | With through-hole                      |      |                          |   |
| Width                         |     | [mm]    | 12                                     |      |                          | 24                                      |
| Nominal width                 |     | [mm]    | 4                                      |      |                          |   |
| Max. no. 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                                |      | G1/4                     |   |
|                               |     |         | 2; 4                                   |      | QS-4 or QS-6             |   |
|                               |     |         | 12; 14                                 |      | G1/8                     |   |

| Operating and environmental conditions |                    |       | 3/2C   | 3/2U         | 5/2-way, single solenoid | 5/2-way, double solenoid |
|--|--------------------|-------|--|--------------|--------------------------|--------------------------|
| Valve function                         |                    |       |  |              |                          |                          |
| Operating medium                       |                    |       | Compressed air to ISO 8573-1:2010 [7:4:4]  |              |                          |                          |
| Note on the operating/pilot medium     |                    |       | Lubricated operation possible (in which case lubricated operation will always be required) |              |                          |                          |
| Operating pressure                     | Internal pilot air | [MPa] | 0.2 ... 0.8  | 0.28 ... 0.8 |                          |                          |
|  |                    | [bar] | 2 ... 8  | 2.8 ... 8    |                          |                          |
|  | External pilot air | [MPa] | 0 ... 0.8  |              |                          |                          |
|  |                    | [bar] | 0 ... 8  |              |                          |                          |
| Pilot pressure                         |                    | [MPa] | 0.2 ... 0.8  | 0.28 ... 0.8 |                          |                          |
|  |                    | [bar] | 2 ... 8  | 2.8 ... 8    |                          |                          |
| Ambient temperature                    |                    | [°C]  | -5 ... 60  |              |                          |                          |
| Temperature of medium                  |                    | [°C]  | -5 ... 60  |              |                          |                          |

| Safety characteristics                     |  |
|--|--|
| CE marking (see declaration of conformity) | To EU EMC Directive  |
| KC mark                                    | KC EMC   |
| Max. positive test pulse with 0 signal     | [µs] 800   |
| Max. negative test pulse with 1 signal     | [µs] 300   |
| Shock resistance                           | Shock test with severity level 1 to FN 942017-5 and EN 60068-2-27                |
| Vibration resistance                       | Transport application test with severity level 1 to FN 942017-4 and EN 60068-2-6 |
| Well-tried component                       | Yes  |




## Data sheet – Valve terminal VTUB-12 with multi-pin plug connection

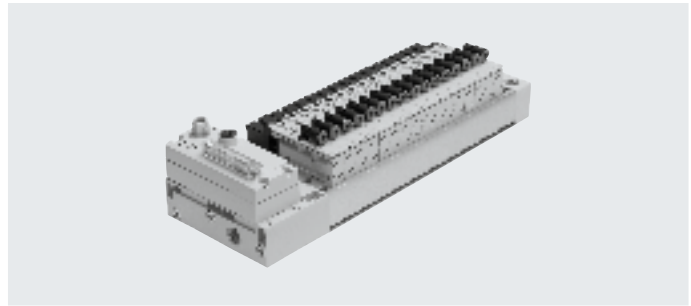
| <b>Product weight</b>   |                    |      |
|---|--------------------|------|
| Approx. weights   | [g]                |      |
| <b>Valves</b>   |                    |      |
| • 5/2-way single solenoid (code M), ducted solenoid exhaust air   | 27.8               |      |
| • 5/2-way double solenoid (code J), ducted solenoid exhaust air   | 57.4               |      |
| • 5/2-way single solenoid (code M), unducted solenoid exhaust air | 27.5               |      |
| • 5/2-way double solenoid (code J), unducted solenoid exhaust air | 57.1               |      |
| • 3/2-way closed (code K), ducted/unducted solenoid exhaust air   | 26.3               |      |
| • 3/2-way open (code N), unducted solenoid exhaust air            | 28.1               |      |
| • 3/2-way open (code N), ducted solenoid exhaust air              | 29.4               |      |
| <b>Manifold rail</b>  |                    |      |
| • 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 | 1093 |
|   | 18 valve positions | 1195 |
|   | 20 valve positions | 1296 |
| • Multi-pin plug with Sub-D plug, 44-pin                          | 24 valve positions | 1500 |
|   | 28 valve positions | 1704 |
|   | 32 valve positions | 1907 |
|   | 35 valve positions | 2060 |
|   |                    |      |
| Cover plate for vacant position                                   | 13.8               |      |
| Power supply module for pressure zones or additional supply       | 13.8               |      |
| Separator for duct separation                                     | 9.8                |      |
| Compressed air distributor Q4, Q6, Q4-Q6                          | 65.6, 59, 62.3     |      |
| Cover plate for compressed air distributor                        | 8.4                |      |
| Selector plate  | 38.8               |      |
| Sub-base for individual valve, single width                       | 15                 |      |
| Sub-base for individual valve, double width                       | 30                 |      |

| <b>Electrical data</b>                         |        |                                |
|--|--------|--------------------------------|
| Nominal operating voltage                      | [V DC] | 24, reverse polarity protected |
| Permissible voltage fluctuations               |        | ±10%                           |
| Electrical power consumption per solenoid coil | [W]    | 1                              |
| Degree of protection to EN 60529               |        | IP65                           |
| Duty cycle                                     | [%]    | 100                            |

| <b>Materials</b>   |   |
|--|---|
| Manifold rail  | Wrought aluminium alloy                 |
| Solenoid valve housing   | PA-reinforced                           |
| Solenoid valve seals   | NBR, TPE-U                              |
| Solenoid valve piston spool  | Wrought aluminium alloy                 |
| Cover plate housing, additional supply housing                     | PA-reinforced                           |
| Separator for duct separation                                      | Beryllium bronze, brass                 |
| Compressed air distributor, compressed air distributor cover plate | PA-reinforced                           |
| Selector plate   | Wrought aluminium alloy                 |
| Sub-base for individual valve                                      | PA-reinforced                           |
| Note on materials  | RoHS-compliant                          |
| Note on materials, power supply module                             | RoHS-compliant, free of copper and PTFE |


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

-  Voltage  
24 V DC
-  Pressure  
0.28 ... 0.8 MPa  
2.8 ... 8 bar
-  Temperature range  
-5 ... 60°C



| General technical data        |                 | 3/2C                                   | 3/2U | 5/2-way, single solenoid | 5/2-way, double solenoid                |
|-------------------------------|-----------------|--|------|--------------------------|---|
| Valve function                |                 |  |      |                          |   |
| 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                |                 | Electrical                             |      |                          |   |
| Reset method                  |                 | Mechanical spring                      |      |                          | -                                       |
| Type of control               |                 | Piloted                                |      |                          |   |
| Pilot air supply              |                 | Internal                               |      |                          |   |
|                               |                 | External                               |      |                          |   |
| Flow direction                |                 | Non-reversible                         |      |                          |   |
| Exhaust air function          |                 | Cannot be throttled                    |      |                          |   |
| Manual override               |                 | Non-detenting, non-detenting/detenting |      |                          |   |
| Type of mounting              |                 | With through-hole                      |      |                          |   |
| Width                         | [mm]            | 12                                     |      |                          | 24                                      |
| Nominal width                 | [mm]            | 4                                      |      |                          |   |
| Max. no. of valve positions   |                 | 35                                     |      | 35                       | 17                                      |
| Max. number of pressure zones |                 | 18                                     |      |                          |   |
| Standard nominal flow rate    | q <sub>nN</sub> | 400                                    |      |                          |   |
| Pneumatic connection          |                 | 1; 3; 5                                |      | G1/4                     |   |
|                               |                 | 2; 4                                   |      | QS-4 or QS-6             |   |
|                               |                 | 12; 14                                 |      | G1/8                     |   |

| Operating and environmental conditions |                    | 3/2C   | 3/2U        | 5/2-way, single solenoid | 5/2-way, double solenoid |
|--|--------------------|--|-------------|--------------------------|--------------------------|
| Valve function                         |                    |  |             |                          |                          |
| Operating medium                       |                    | Compressed air to ISO 8573-1:2010 [7:4:4]  |             |                          |                          |
| Note on the operating/pilot medium     |                    | Lubricated operation possible (in which case lubricated operation will always be required) |             |                          |                          |
| Operating pressure                     | Internal pilot air | [MPa]  | 0.2 ... 0.8 | 0.28 ... 0.8             |                          |
|  |                    | [bar]  | 2 ... 8     | 2.8 ... 8                |                          |
|  | External pilot air | [MPa]  | 0 ... 0.8   |                          |                          |
|  |                    | [bar]  | 0 ... 8     |                          |                          |
| Pilot pressure                         |                    | [MPa]  | 0.2 ... 0.8 | 0.28 ... 0.8             |                          |
|  |                    | [bar]  | 2 ... 8     | 2.8 ... 8                |                          |
| Ambient temperature                    |                    | [°C]   | -5 ... 50   |                          |                          |
| Temperature of medium                  |                    | [°C]   | -5 ... 50   |                          |                          |

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

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

| Safety characteristics                     |      |  |
|--|------|--|
| CE marking (see declaration of conformity) |      | To EU EMC Directive  |
| KC mark                                    |      | KC EMC   |
| Max. positive test pulse with 0 signal     | [μs] | 800  |
| Max. negative test pulse with 1 signal     | [μs] | 300  |
| Shock resistance                           |      | Shock test with severity level 1 to FN 942017-5 and EN 60068-2-27                |
| Vibration resistance                       |      | Transport application test with severity level 1 to FN 942017-4 and EN 60068-2-6 |
| Well-tried component                       |      | Yes  |

| Product weight  |                    |                |
|---|--------------------|----------------|
| Approx. weights   |                    | [g]            |
| <b>Valves</b>   |                    |                |
| • 5/2-way single solenoid (code M), ducted solenoid exhaust air   |                    | 27.8           |
| • 5/2-way double solenoid (code J), ducted solenoid exhaust air   |                    | 57.4           |
| • 5/2-way single solenoid (code M), unducted solenoid exhaust air |                    | 27.5           |
| • 5/2-way double solenoid (code J), unducted solenoid exhaust air |                    | 57.1           |
| • 3/2-way closed (code K), ducted/unducted solenoid exhaust air   |                    | 26.3           |
| • 3/2-way open (code N), unducted solenoid exhaust air            |                    | 28.1           |
| • 3/2-way open (code N), ducted solenoid exhaust air              |                    | 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 | 1040           |
|   | 16 valve positions | 1145           |
|   | 18 valve positions | 1251           |
|   | 20 valve positions | 1358           |
|   | 24 valve positions | 1562           |
|   | 28 valve positions | 1775           |
|   | 32 valve positions | 1982           |
|   | 35 valve positions | 2138           |
| Cover plate for vacant position                                   |                    | 13.8           |
| Power supply module for pressure zones or additional supply       |                    | 13.8           |
| Separator for duct separation                                     |                    | 9.8            |
| Compressed air distributor Q4, Q6, Q4-Q6                          |                    | 65.6, 59, 62.3 |
| Cover plate for compressed air distributor                        |                    | 8.4            |
| Selector plate  |                    | 38.8           |
| Sub-base for individual valve, single width                       |                    | 15             |
| Sub-base for individual valve, double width                       |                    | 30             |

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

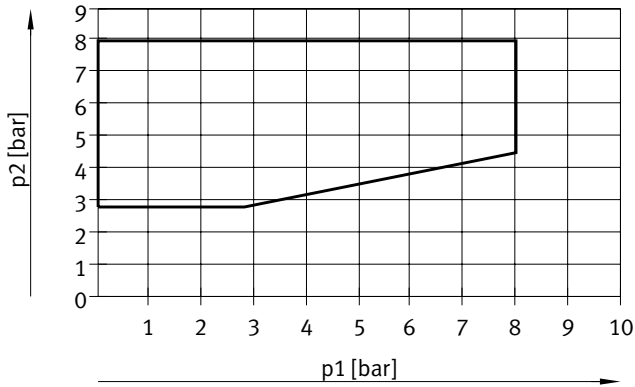
| Electrical data  |                    |                                |
|--|--------------------|--------------------------------|
| Nominal operating voltage  | [V DC]             | 24, reverse polarity protected |
| Permissible voltage fluctuations                                   |                    | ±10%                           |
| Electrical power consumption per solenoid coil                     | [W]                | 1                              |
| Degree of protection 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 <sup>2</sup> ] | 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        |
| Cover plate housing, additional supply housing                     |                    | PA-reinforced                  |
| Separator for duct separation                                      |                    | Beryllium bronze, brass        |
| Compressed air distributor, compressed air distributor cover plate |                    | PA-reinforced                  |
| Selector plate   |                    | Wrought aluminium alloy        |
| Sub-base for individual valve                                      |                    | PA-reinforced                  |
| Note on materials  |                    | RoHS-compliant                 |



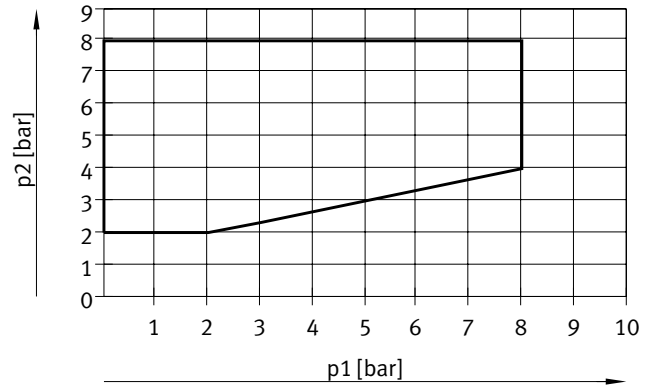
Data sheet

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

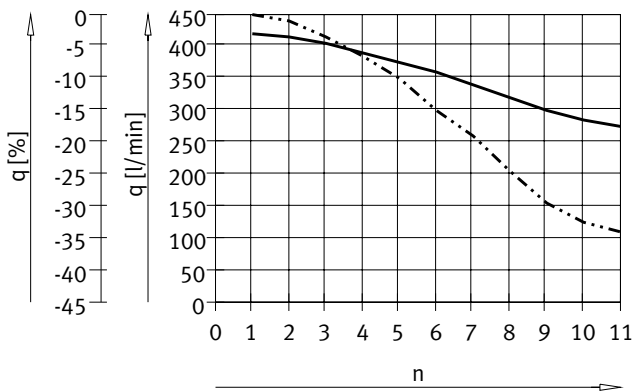
**Pilot pressure as a function of operating pressure**  
(operating pressure with external pilot air),  
pilot pressure 5/2 and 3/2U



**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%)

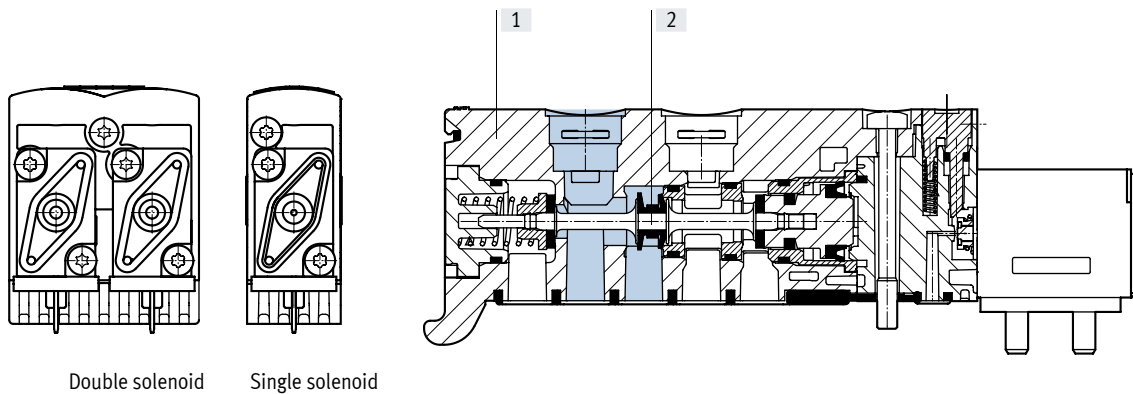


— Flow rate per valve  
- - - - - Loss per valve [%]

Data sheet

Materials

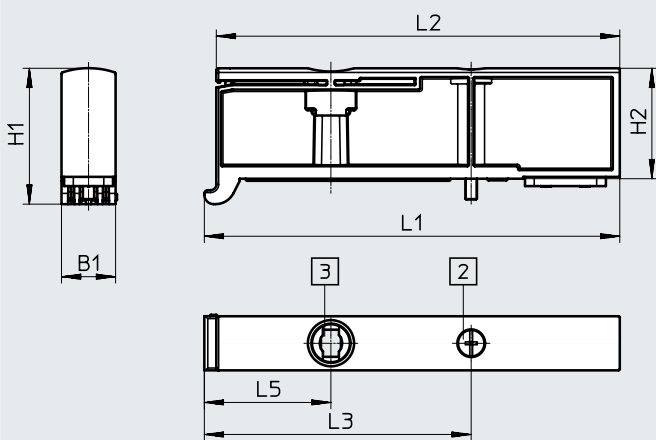
Sectional view – Valves



|     |                                   |                         |
|-----|-----------------------------------|-------------------------|
| [1] | Housing                           | PA-reinforced           |
| [2] | Piston slide                      | Wrought aluminium alloy |
| -   | Seals                             | NBR, PUR                |
| -   | Manifold rail with multi-pin plug | Wrought aluminium alloy |
| -   | Power supply module               | PA-reinforced           |
| -   | Cover plate for vacant position   | PA-reinforced           |
| -   | Selector plate                    | Wrought aluminium alloy |

Dimensions – Power supply module

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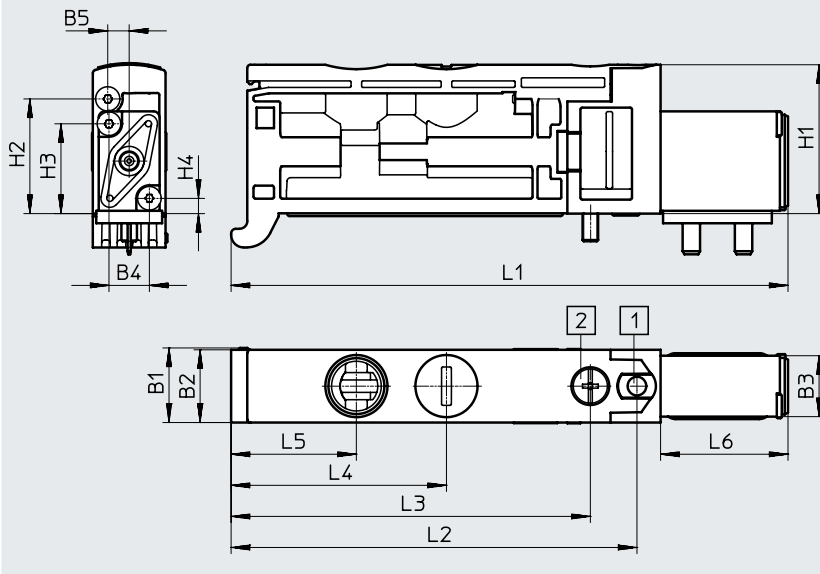
- [2] Retaining screw M2.5
- [3] Push-in connector QSP...10...-

| Type               | B1   | H1   | H2   | L1   | L2   | L3   | L5   |
|--------------------|------|------|------|------|------|------|------|
| VABF-C8-12-P3A5-QX | 11.7 | 29.4 | 23.9 | 89.9 | 87.3 | 57.8 | 27.1 |

Data sheet

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

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

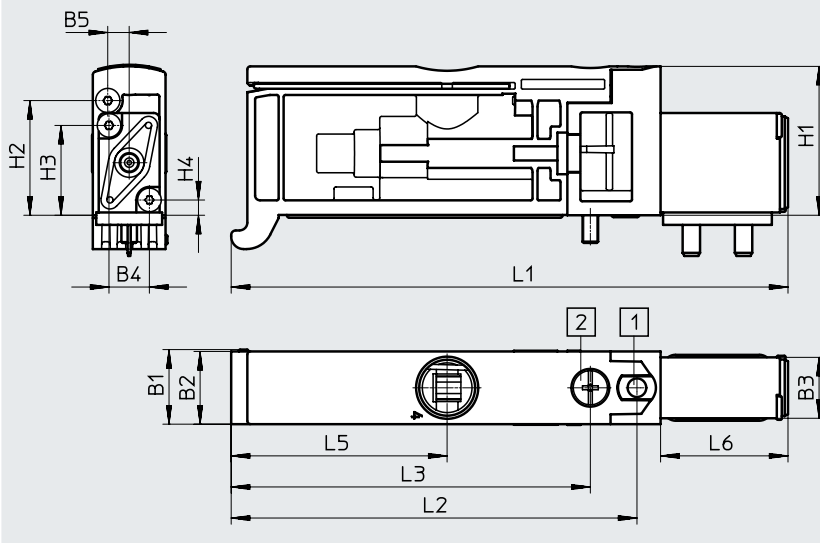


- [1] Manual override non-detenting or non-detenting/detenting
- [2] Retaining screw M2.5

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



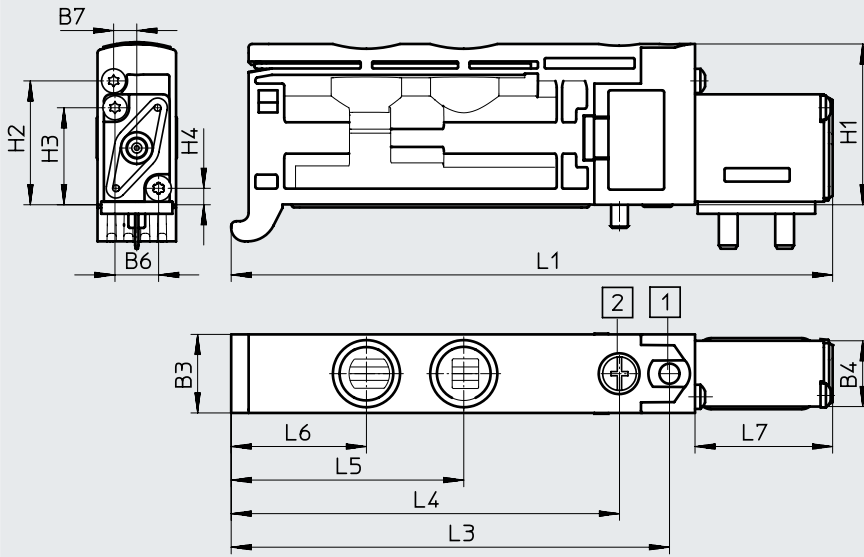
- [1] Manual override non-detenting or non-detenting/detenting
- [2] Retaining screw M2.5

| 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 |

Data sheet

Dimensions – 5/2-way valve, single solenoid

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

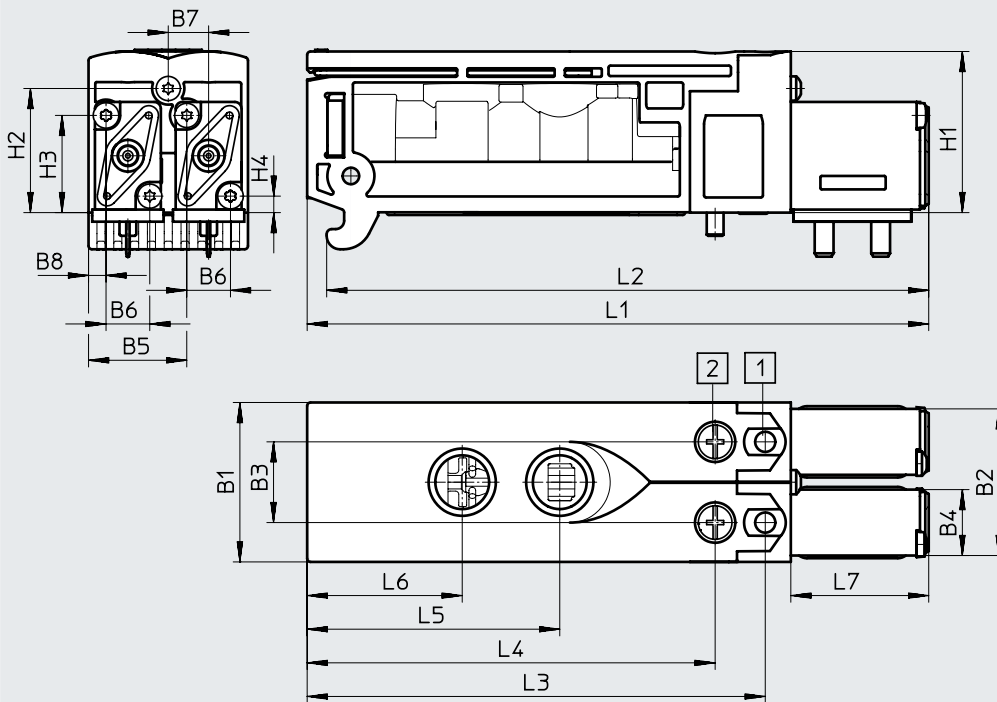


- [1] Manual override
- [2] Retaining screw

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



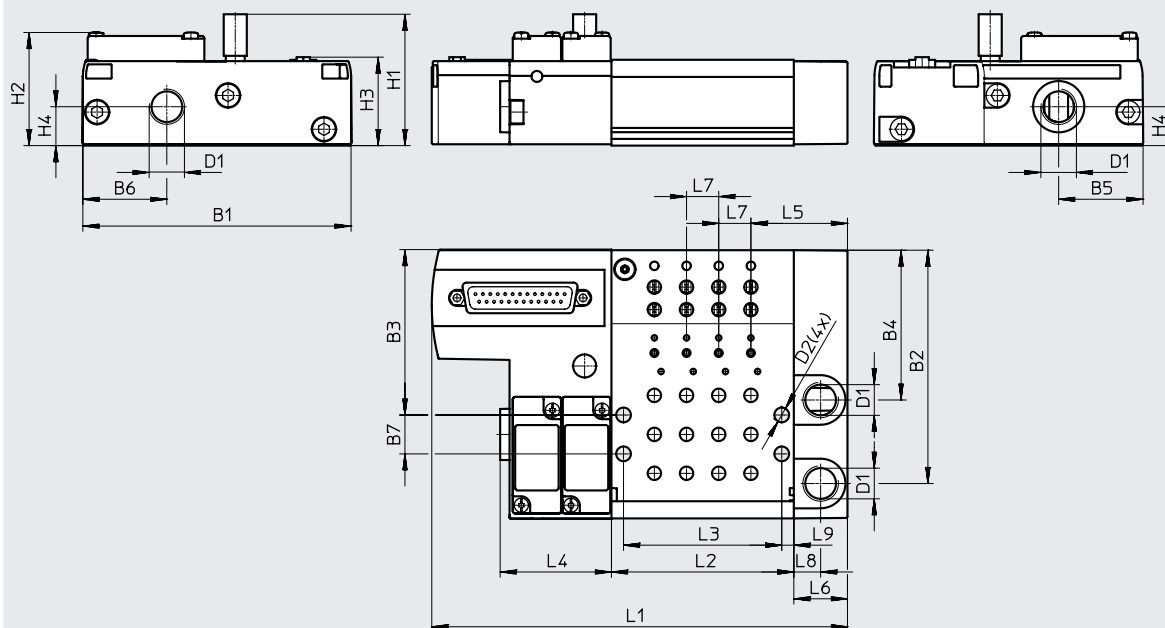
- [1] Manual override
- [2] Retaining screw

| 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 |

Data sheet

Dimensions – Manifold rail with multi-pin plug

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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 | 61.5 | 55.9 | 31.5 | 31.5 | 14.5 | G1/4 | 5.5 | 49.3 | 42.2 | 33 | 14.5 |

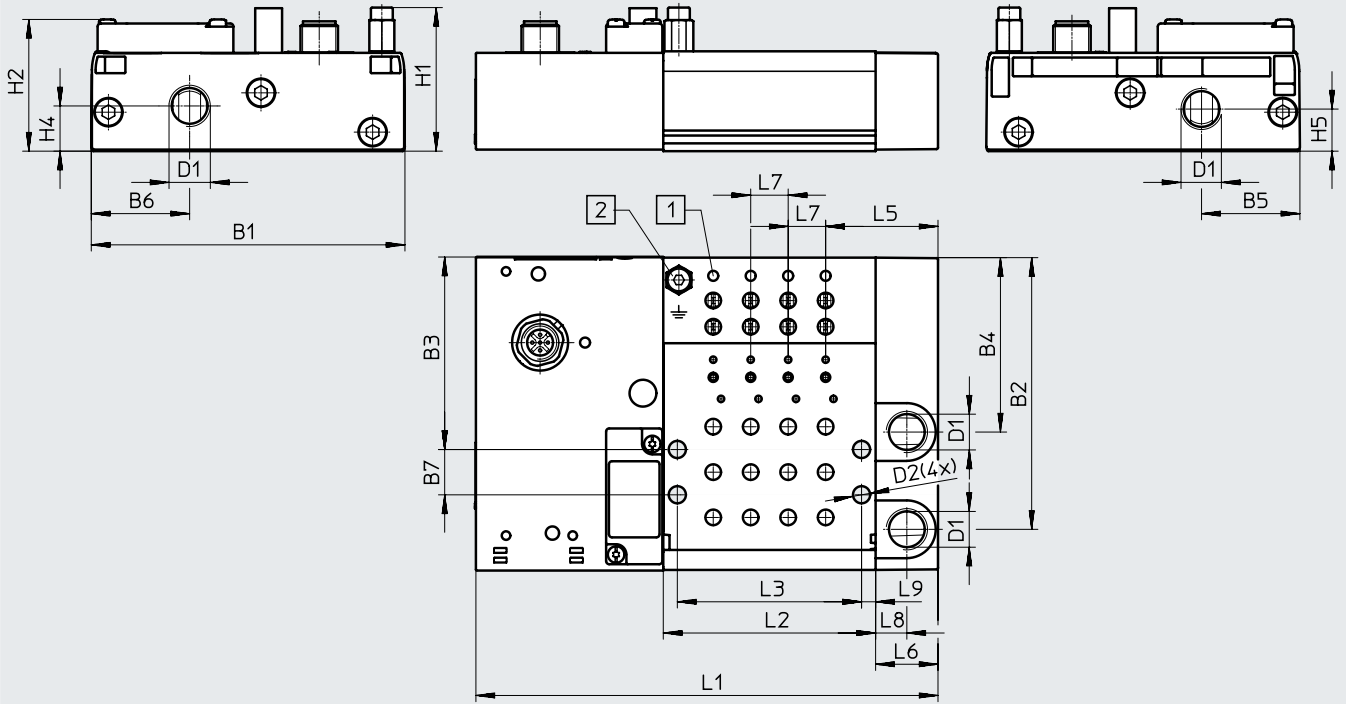
  

| Type        | L1         | L2        | L3        | L4   | L5 | L6 | L7 | L8 | L9  |
|-------------|------------|-----------|-----------|------|----|----|----|----|-----|
| VABM-C8-12E | (nx12)+107 | (nx12)+20 | (nx12)+11 | 41.5 | 36 | 20 | 12 | 10 | 4.5 |

Data sheet

Dimensions – Manifold rail with I-Port interface

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

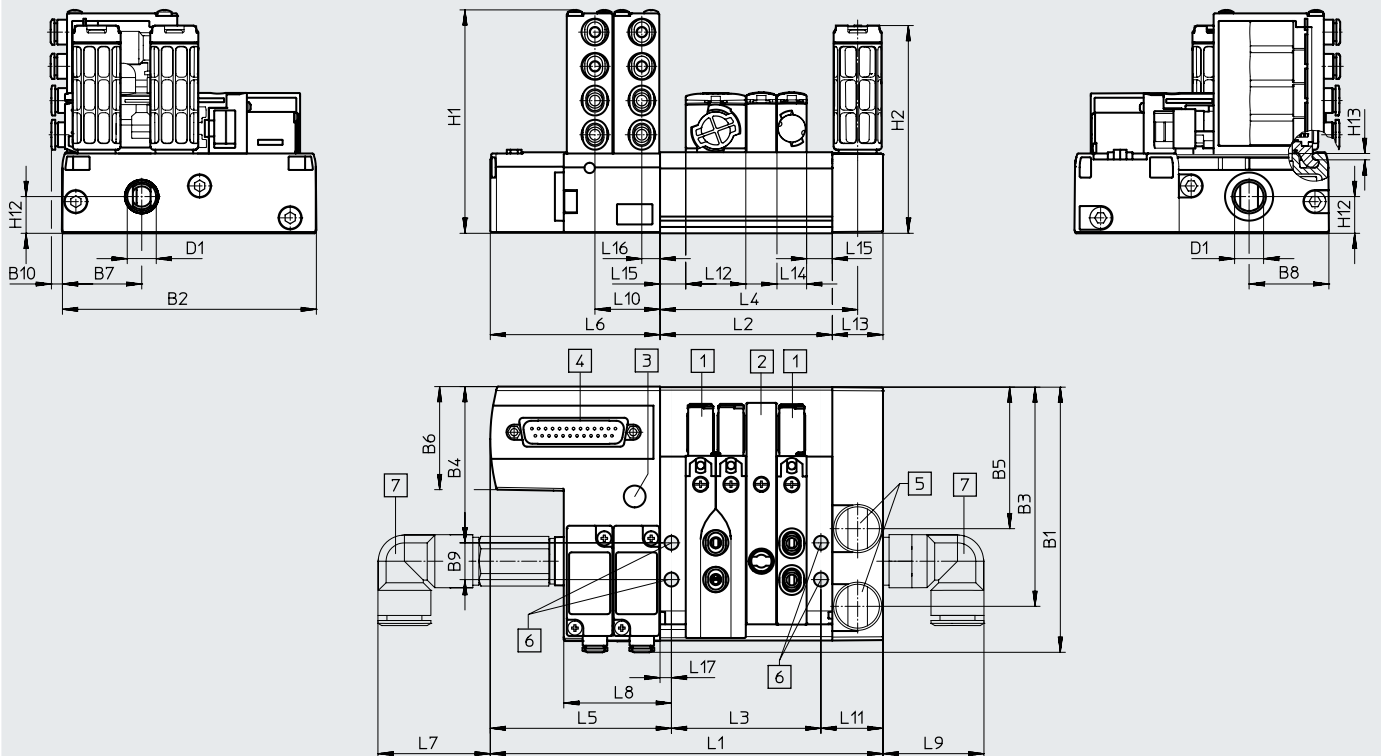
| Type    | B1  | B2 | B3   | B4   | B5   | B6   | B7   | D1   | D2-∅ | H1   | H2   | H4   | H5   |
|---------|-----|----|------|------|------|------|------|------|------|------|------|------|------|
| VTUB-12 | 100 | 87 | 61.5 | 55.9 | 31.5 | 31.5 | 14.5 | G1/4 | 5.5  | 46.1 | 42.2 | 14.5 | 13.5 |

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

Data sheet

Dimensions – Valve terminal with electrical multi-pin plug

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- [1] 5/2-way valve
- [2] Cover 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 G1/4
- [6] Hole for wall mounting,  $\varnothing$  5.5 mm
- [7] Fittings for air supply port  
n Number of valve positions (2...35)

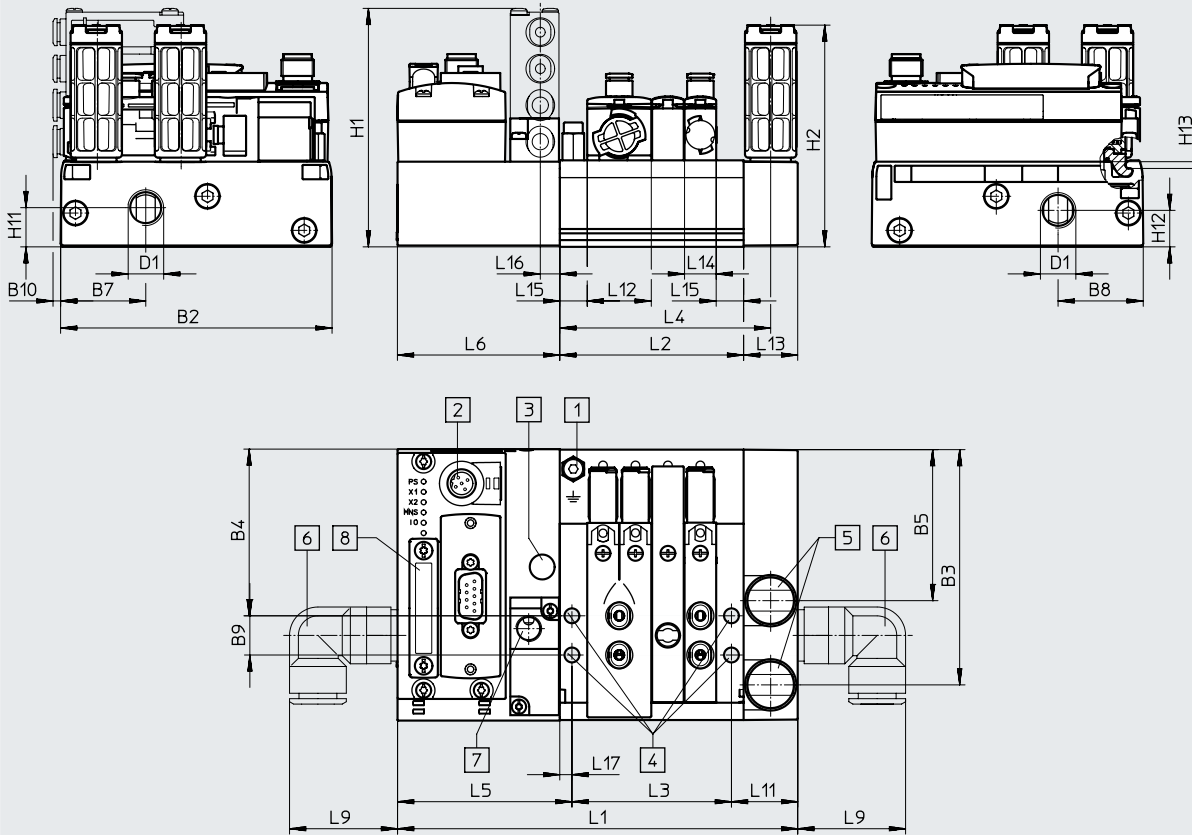
| Type    | L1                                 | L2                   | L3                   | L4 | L5   | L6 | L7              | L8   | L9            | L10  | L11  | L12  | L13 | L14  | L15  | L16 | L17 |
|---------|------------------------------------|----------------------|----------------------|----|------|----|-----------------|------|---------------|------|------|------|-----|------|------|-----|-----|
| VTUB-12 | $(n \times 12) + 107$<br>$\pm 1.5$ | $(n \times 12) + 20$ | $(n \times 12) + 11$ | 78 | 71.5 | 67 | 32.4<br>$\pm 1$ | 42.5 | 40<br>$\pm 1$ | 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<br>$\pm 2$ | 100.4<br>$\pm 1.1$ | 86.5 | 61.5 | 55.9 | 40.5 | 31.5 | 31.5 | 14.5 | 2.8 | G1/4 | 88.2<br>$\pm 1$ | 82<br>$\pm 1$ | 14.5 | 2.5 |

Data sheet

Dimensions – Valve terminal with I-Port interface, CTEU bus node

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- [1] Earthing screw, M4
- [2] M12 plug, 5-pin
- [3] Silencer, threaded connection
- [4] Holes for mounting,  $\varnothing$  5.5
- [5] Silencer, threaded connection G1/4
- [6] Fittings for air supply port M5
- [7] External pilot air 12/14, G1/8
- [8] Bus node CTEU
- n Number of valve positions (3...35)

| 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   | G1/4 | 88.2 | 82 | 14.5 | 13.5 | 2.5 |

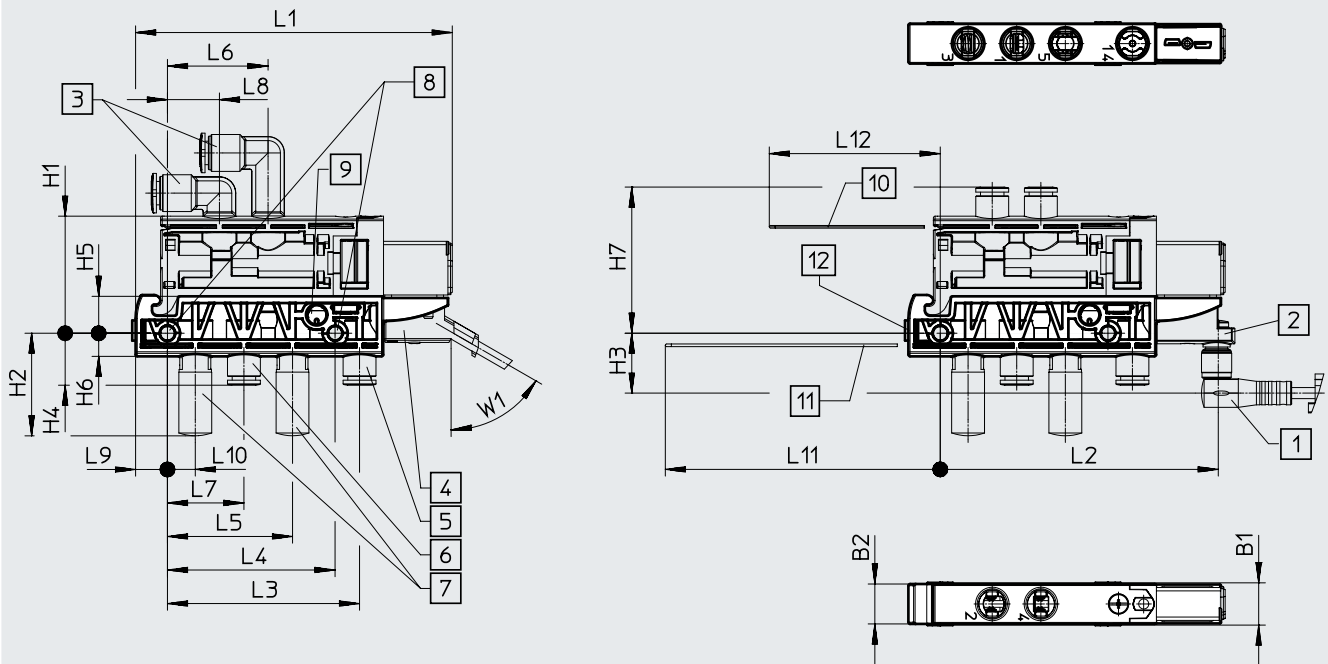
| Type    | L1         | L2        | L3        | L4 | L5   | L6 | L9 | L11  | L12  | L13 | L14  | L15  | L16 | L17 |
|---------|------------|-----------|-----------|----|------|----|----|------|------|-----|------|------|-----|-----|
| VTUB-12 | (nx12)+100 | (nx12)+20 | (nx12)+11 | 78 | 64.5 | 60 | 40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



Data sheet

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

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



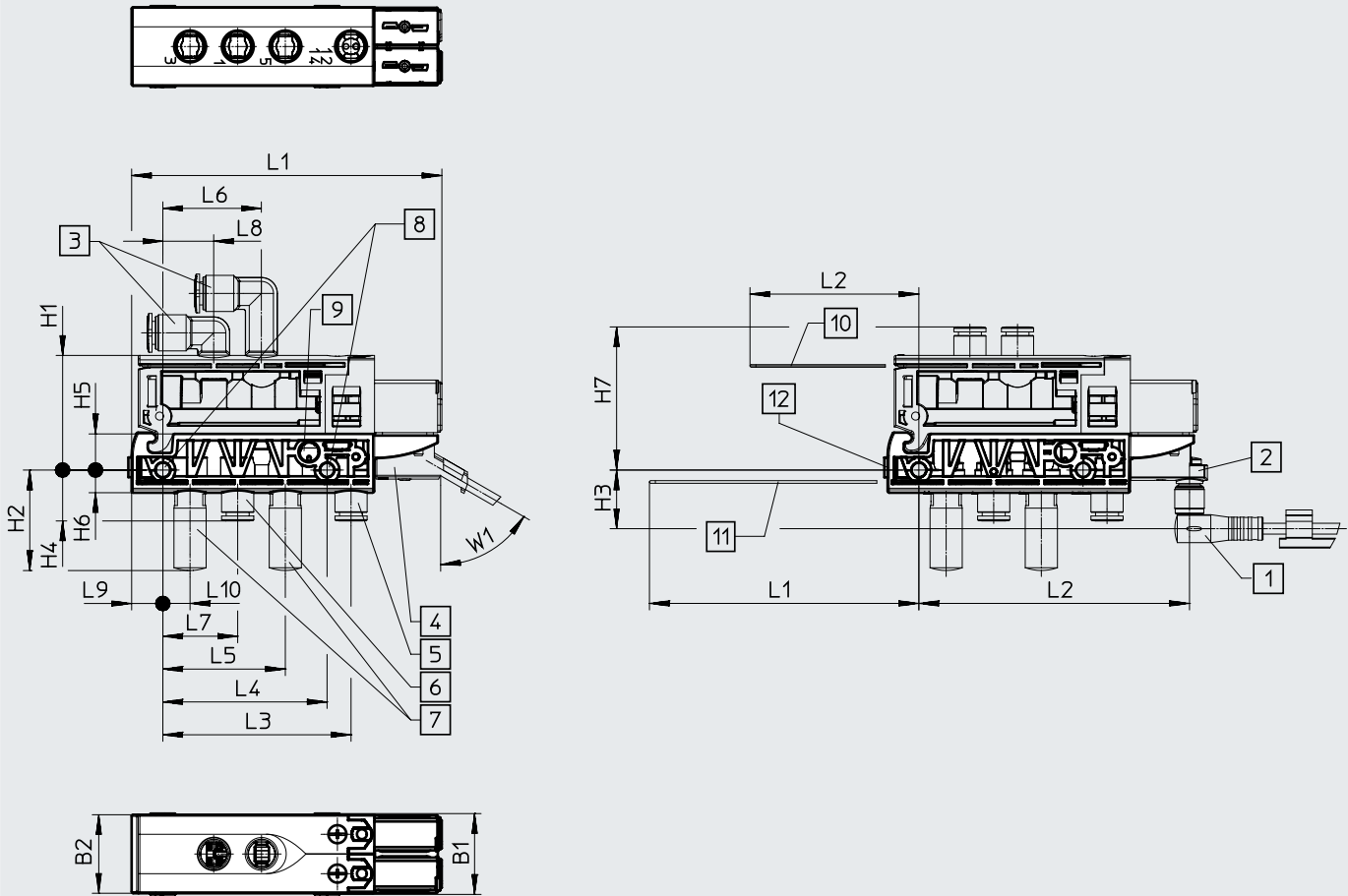
- [1] Connecting cable (optional)
- [2] Adapter M8x1 (optional)
- [3] Port 2, 4: Cartridge with push-in connector
- [4] Connecting cable NEBV or KMYZ (optional)
- [5] Port 12, 14: Cartridge with push-in connector (optional)
- [6] Port 1: Cartridge with push-in connector
- [7] Port 3, 5: Silencer AMTC-P-PC10 (optional)
- [8] Holes for M4 mounting
- [9] Exhaust air 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 IBS-6x10 (not included in 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   |      |      |      |      |      |      |    |     |      |      |      |    |      |    |      |      |     |     |     |     |     |  |

Data sheet

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

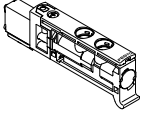
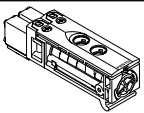
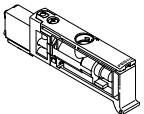
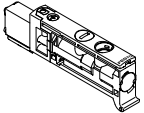
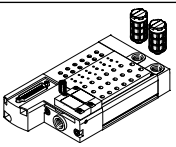
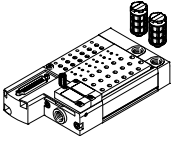
Download CAD data → [www.festo.com](http://www.festo.com)



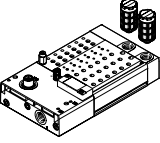
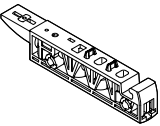
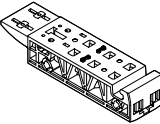
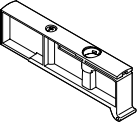
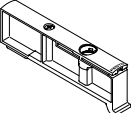
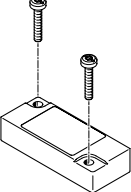
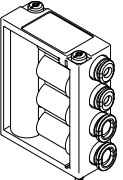
- [1] Connecting cable (optional)
- [2] Adapter M8x1 (optional)
- [3] Port 2, 4: Cartridge with push-in connector
- [4] Connecting cable NEBV or KMYZ (optional)
- [5] Port 12, 14: Cartridge with push-in connector (optional)
- [6] Port 1: Cartridge with push-in connector
- [7] Port 3, 5: Silencer AMTC-P-PC10 (optional)
- [8] Holes for M4 mounting
- [9] Exhaust air 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 IBS-6x10 (not included in 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-DB | 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-D  |      |      |      |      |      |      |    |     |      |      |      |    |      |    |      |      |     |     |     |     |     |

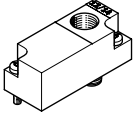
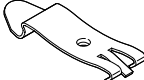
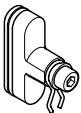



## Accessories

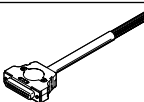
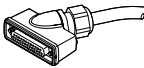
| Ordering data   |   | Code  | Valve function                | Part no. | Type                        |
|---|---|---|-------------------------------|----------|-----------------------------|
| <b>Solenoid valves</b>  |   |   |                               |          |                             |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

## Accessories

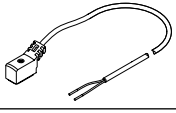
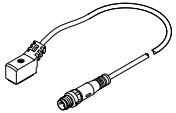
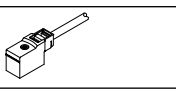
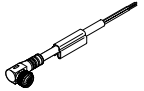
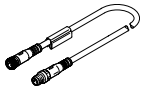
| Ordering data  |       | Code  | Description               | Part no. | Type                    |
|--|-------|---|---------------------------|----------|-------------------------|
| <b>Manifold rail</b>   |       |   |                           |          |                         |
|    | PT/LK | Manifold rail with I-Port interface   | 4 valve positions         | 1247975  | VABM-C8-12E-G14-4-PT-L  |
|  |       |   | 6 valve positions         | 1247976  | VABM-C8-12E-G14-6-PT-L  |
|  |       |   | 8 valve positions         | 1247977  | VABM-C8-12E-G14-8-PT-L  |
|  |       |   | 10 valve positions        | 1247978  | VABM-C8-12E-G14-10-PT-L |
|  |       |   | 12 valve positions        | 1247979  | VABM-C8-12E-G14-12-PT-L |
|  |       |   | 14 valve positions        | 1247980  | VABM-C8-12E-G14-14-PT-L |
|  |       |   | 16 valve positions        | 1247981  | VABM-C8-12E-G14-16-PT-L |
|  |       |   | 18 valve positions        | 1247982  | VABM-C8-12E-G14-18-PT-L |
|  |       |   | 20 valve positions        | 1247983  | VABM-C8-12E-G14-20-PT-L |
|  |       |   | 24 valve positions        | 1247984  | VABM-C8-12E-G14-24-PT-L |
|  |       |   | 28 valve positions        | 1247985  | VABM-C8-12E-G14-28-PT-L |
|  |       |   | 32 valve positions        | 1247986  | VABM-C8-12E-G14-32-PT-L |
|  |       |   | 35 valve positions        | 1247987  | VABM-C8-12E-G14-35-PT-L |
| <b>Sub-base for individual valve</b>   |       |   |                           |          |                         |
|    | -     | For single solenoid valves  | Internal pilot air supply | 1236025  | VABS-C8-12XB-QX-B       |
|  |       |   | External pilot air supply | 1236027  | VABS-C8-12XB-QX         |
|   | -     | For double solenoid valves  | Internal pilot air supply | 1236028  | VABS-C8-12XB-QX-DB      |
|  |       |   | External pilot air supply | 1236029  | VABS-C8-12XB-QX-D       |
| <b>Power supply module</b>   |       |   |                           |          |                         |
|  | S     | For additional air supply or for supplying pressure zones (operating pressure 0 ... 0.8 MPa), pneumatic connection prepared for cartridge |                           | 1894888  | VABF-C8-12-P3A5-QX      |
| <b>Cover plate</b>   |       |   |                           |          |                         |
|  | L     | Cover plate for vacant valve position   |                           | 562461   | VABB-C8-12-ET           |
|  | -     | Cover plate for compressed air distributor position   |                           | 562460   | VABB-C8-12-A            |
| <b>Compressed air distributor</b>  |       |   |                           |          |                         |
|  | 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   |

## Accessories



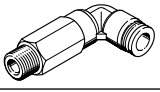



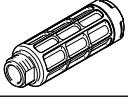
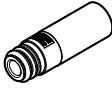
| Ordering data   |      |  |                |          |                     |
|---|------|--|----------------|----------|---------------------|
|   | Code | Description  | Packaging unit | Part no. | Type                |
| <b>Selector plate</b>   |      |  |                |          |                     |
|    | SL   | Pneumatic connection G1/8  | 1 piece        | 1210305  | VABF-C8-12-P6-G18-Z |
| <b>H-rail mounting</b>  |      |  |                |          |                     |
|    | H    | For mounting the valve terminal VTUB-12 on a standard H-rail TH 35-15 to EN 50022.<br>(Use the following screws for mounting:<br>M5x40 to DIN 912, 2 pieces) | 2 pieces       | 2636436  | VAME-T-M5           |
| <b>Separator</b>  |      |  |                |          |                     |
|    | TP   | For creating pressure zones (duct separation in duct 1)  | 1 piece        | 1877936  | VABD-C8-P1          |
| <b>Blanking plug</b>  |      |  |                |          |                     |
|    | -    | For cartridge connection $\varnothing$ 10 mm   | 1 piece        | 562243   | QSPC10              |
|    | -    | For thread G1/4  | 10 pieces      | 3569     | B-1/4               |
|   | -    | For thread G1/2  | 10 pieces      | 3571     | B-1/2               |
| <b>Inscription labels</b>   |      |  |                |          |                     |
|  | -    | Inscription labels 6x10mm, 64 pieces, in frames  | 1 piece        | 18576    | IBS-6x10            |

| Ordering data   |      |  |                  |          |                             |
|---|------|--|------------------|----------|-----------------------------|
|   | Code | Description  | Cable length [m] | Part no. | Type                        |
| <b>Connecting cable for multi-pin plug</b>  |      |  |                  |          |                             |
|  | M1   | • Sub-D socket, straight, 15-pin, up to 12 coils, IP65/IP67<br>• Open cable end, 15-wire | 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 socket, straight, 25-pin, up to 20 coils, IP65/IP67<br>• Open cable end, 25-wire | 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 socket, straight, 44-pin, up to 35 coils, IP65/IP67<br>• Open cable end, 40-wire | 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 socket, straight, 25-pin, up to 20 coils, IP40<br>• Open cable end, 25-wire      | 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 socket, straight, 44-pin, up to 35 coils, IP40<br>• Open cable end, 44-wire      | 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 socket, angled, 25-pin, up to 20 coils, IP65/IP67<br>• Open cable end, 25-wire   | 2.5              | 575423   | NEBV-S1WA25-K-2.5-N-LE25-S9 |
|   | MA2  |  | 5                | 575424   | NEBV-S1WA25-K-5-N-LE25-S9   |
|   | MA3  |  | 10               | 575425   | NEBV-S1WA25-K-10-N-LE25-S9  |
|   | MA1  | • Sub-D socket, angled, 44-pin, up to 35 coils, IP65/IP67<br>• Open cable end, 44-wire   | 2.5              | 575420   | NEBV-S1WA44-K-2.5-N-LE44-S9 |
|   | MA2  |  | 5                | 575421   | NEBV-S1WA44-K-5-N-LE44-S9   |
|   | MA3  |  | 10               | 575422   | NEBV-S1WA44-K-10-N-LE44-S9  |




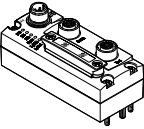
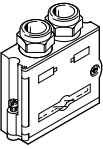
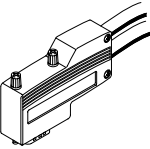
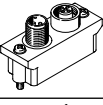
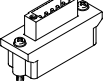
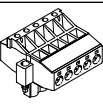
Accessories

| Ordering data  | Description   | Cable length [m]             | Part no. | Type                          |                      |
|--|---|------------------------------|----------|-------------------------------|----------------------|
| <b>Connecting cable for individual valve</b>                                       |   |                              |          |                               |                      |
|    | <ul style="list-style-type: none"> <li>• Angled socket, plug pattern ZC, 2-pin, with LED</li> <li>• Open cable end, 2-wire</li> <li>• Holding current reduction, protective circuit</li> <li>• IP65</li> </ul>    | 2.5                          | 8047679  | NEBV-Z4WA2L-R-E-2.5-N-LE2-S1  |                      |
|  |   | 5                            | 8047680  | NEBV-Z4WA2L-R-E-5-N-LE2-S1    |                      |
|  |   | 10                           | 8047678  | NEBV-Z4WA2L-R-E-10-N-LE2-S1   |                      |
|    | <ul style="list-style-type: none"> <li>• Angled socket, plug pattern ZC, 2-pin, with LED</li> <li>• Straight plug M8x1, 3-pin</li> <li>• Holding current reduction, protective circuit</li> <li>• IP65</li> </ul> | 0.5                          | 8047683  | NEBV-Z4WA2L-R-E-0.5-N-M8G3-S1 |                      |
|  |   | 2.5                          | 8047684  | NEBV-Z4WA2L-R-E-2.5-N-M8G3-S1 |                      |
|    | <ul style="list-style-type: none"> <li>• Angled socket, square design, 2-pin</li> <li>• Open cable end, 2-wire, no LED</li> <li>• IP50</li> </ul>   | 0.5                          | 193690   | KMYZ-4-24-0.5-B               |                      |
|  |   | 2.5                          | 193691   | KMYZ-4-24-2.5-B               |                      |
| <b>Connecting cable</b>  |   |                              |          |                               |                      |
|    | Open cable end, 3-wire  | Straight socket, M8x1, 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   |
|  |   | Socket M8x1, angled, 3-pin   | 2.5      | 159420                        | SIM-M8-3GD-2.5-PU    |
|  |   |                              | 5        | 159421                        | SIM-M8-3GD-5-PU      |
|  |   |                              | 10       | 192964                        | SIM-M8-3GD-10-PU     |
|  | Open cable end, 4-wire  | Straight socket, M8x1, 4-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    |
|  |   | Socket M8x1, angled, 4-pin   | 5        | 159423                        | SIM-M8-3WD-5-PU      |
|  |   |                              | 10       | 192965                        | SIM-M8-3WD-10-PU     |
|  |   |                              | 2.5      | 541342                        | NEBU-M8G4-K-2.5-LE4  |
|  |   |                              | 5        | 541343                        | NEBU-M8G4-K-5-LE4    |
| Straight plug, 3-pin   | Straight socket, M8x1, 4-pin  | 2.5                          | 158960   | SIM-M8-4GD-2.5-PU             |                      |
|  |   | 5                            | 158961   | SIM-M8-4GD-5-PU               |                      |
|  |   | 10                           | 158962   | SIM-M8-4GD-10-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             |                      |
|  | Straight plug, 3-pin  | Straight socket, M8x1, 3-pin | 5        | 158963                        | SIM-M8-4WD-5-PU      |
|  |   |                              | 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 |
|  | Straight plug, 4-pin  | Straight socket, M8x1, 3-pin | 5        | 541349                        | NEBU-M8G3-K-5-M8G3   |
|  |   |                              | 10       | 569844                        | NEBU-M8G3-K-10-M8G3  |
|  |   |                              | 2.5      | 554037                        | NEBU-M8G3-K-2.5-M8G4 |
|  |   | Straight socket, M8x1, 4-pin | 2.5      | 554035                        | NEBU-M8G4-K-2.5-M8G4 |

## Accessories


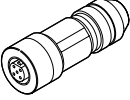
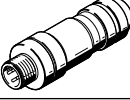
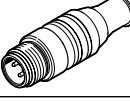
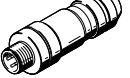
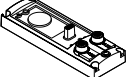
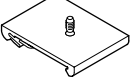
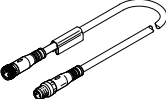
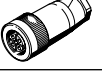
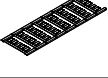
| Ordering data  |   |             |                |                |                    |
|--|---|-------------|----------------|----------------|--------------------|
|  | Description   | Tubing O.D. | Packaging unit | Part no.       | Type               |
| <b>Push-in fitting</b> <span style="float: right;">Data sheets → Internet: quick star</span>         |   |             |                |                |                    |
|                     | With sealing ring<br>Connection G1/4                      | 8 mm        | 10 pieces      | <b>186099</b>  | <b>QS-G1/4-8</b>   |
|  |   | 10 mm       | 10 pieces      | <b>186101</b>  | <b>QS-G1/4-10</b>  |
|  |   | 12 mm       | 10 pieces      | <b>186350</b>  | <b>QS-G1/4-12</b>  |
| <b>Push-in L-fitting</b> <span style="float: right;">Data sheets → Internet: quick star</span>       |   |             |                |                |                    |
|                     | With sealing ring<br>Connection G1/4                      | 8 mm        | 10 pieces      | <b>186120</b>  | <b>QSL-G1/4-8</b>  |
|  |   | 10 mm       | 10 pieces      | <b>186122</b>  | <b>QSL-G1/4-10</b> |
|  |   | 12 mm       | 10 pieces      | <b>186351</b>  | <b>QSL-G1/4-12</b> |
| <b>Push-in L-fitting, long</b> <span style="float: right;">Data sheets → Internet: quick star</span> |   |             |                |                |                    |
|                     | With sealing ring<br>Connection G1/4                      | 8 mm        | 10 pieces      | <b>186131</b>  | <b>QSL-G1/4-8</b>  |
|  |   | 10 mm       | 10 pieces      | <b>186133</b>  | <b>QSL-G1/4-10</b> |
|  |   | 12 mm       | 10 pieces      | <b>132596</b>  | <b>QSL-G1/4-12</b> |
| <b>Cartridge with push-in connector</b>  |   |             |                |                |                    |
|                     | Straight<br>Connection Ø 10 mm                            | 4 mm        | 10 pieces      | <b>172972</b>  | <b>QSP10-4</b>     |
|  |   | 6 mm        | 10 pieces      | <b>172973</b>  | <b>QSP10-6</b>     |
|                     | L-shape<br>Connection Ø 10 mm                             | 4 mm        | 10 pieces      | <b>132601</b>  | <b>QSPLK10-4</b>   |
|  |   | 6 mm        | 10 pieces      | <b>132602</b>  | <b>QSPLK10-6</b>   |
|                    | L-shape, long<br>Connection Ø 10 mm                       | 4 mm        | 10 pieces      | <b>132603</b>  | <b>QSPLLK10-4</b>  |
|  |   | 6 mm        | 10 pieces      | <b>132604</b>  | <b>QSPLLK10-6</b>  |
| <b>Silencer</b> <span style="float: right;">Data sheets → Internet: u</span>                         |   |             |                |                |                    |
|                   | For thread G1/4   |             | 1 piece        | <b>2316</b>    | <b>U-1/4</b>       |
|                   | For individual sub-base, for cartridge connection Ø 10 mm |             | 1 piece        | <b>1224460</b> | <b>AMTC-P-P10</b>  |

## Accessories

| Ordering data  |  |   |         |                       |                 |
|--|--|---|---------|-----------------------|-----------------|
|  | Code   | Description                                       |         | Part no.              | Type            |
| <b>Adapter M8x1</b>  |  |   |         |                       |                 |
|    | -  | Plug M8x1 with LED                                | 3-pin   | 571686                | VAVE-C8-1R8     |
|  |  |   | 4-pin   | 573194                | VAVE-C8-1R1     |
| <b>Connection technology for I-Port interface/IO-Link</b>                          |  |   |         |                       |                 |
|    | XM   | T-adapter M12, 5-pin, for IO-Link and load supply |         | 171175                | FB-TA-M12-5POL  |
|    | XN   | Straight plug, M12, 5-pin for T-adapter FB-TA     |         | 175487                | SEA-M12-5GS-PG7 |
| <b>Ordering data – CTEU</b>  |  |   |         |                       |                 |
|  |  |   |         | Part no.              | Type            |
| <b>Bus node</b>  |  |   |         |                       |                 |
|    | CANopen bus node                               |   |         | 570038                | CTEUCO          |
|  | DeviceNet bus node                             |   |         | 570039                | CTEUDN          |
|  | EtherCAT bus node                              |   |         | 572556                | CTEUEC          |
|  | CC-Link bus node                               |   |         | 1544198               | CTEUCO          |
|  | PROFIBUS bus node                              |   |         | 570040                | CTEUPB          |
|  | AS-Interface bus node                          |   |         | 572555                | CTEUCO          |
|  | PROFINET bus node                              |   |         | 2201471               | CTEUPN          |
|  | EtherNet/IP bus node                           |   |         | 2798071               | CTEUEP          |
|  | VARAN bus node                                 |   |         | 8087559               | CTEUVN          |
| Interface for installation system CPI  |  |   | 2149714 | CTEUCP                |                 |
| <b>Bus connection</b>  |  |   |         |                       |                 |
|  | Sub-D plug, straight                           | For DeviceNet/CANopen                             | 532219  | FBS-SUB-9-BU-2x5POL-B |                 |
|  |  | For CC-Link                                       | 532220  | FBS-SUB-9-GS-2x4POL-B |                 |
|  |  | For PROFIBUS                                      | 532216  | FBS-SUB-9-GS-DP-B     |                 |
|  | Sub-D plug, angled                             | For CANopen, 9-pin                                | 533783  | FBS-SUB-9-WS-CO-K     |                 |
|  |  | For PROFIBUS, 9-pin                               | 533780  | FBS-SUB-9-WS-PB-K     |                 |
|  | M12x1, 5-pin                                   | A-coded, for DeviceNet/CANopen                    | 525632  | FBA-2-M12-5POL        |                 |
|  |  | 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        |                 |



## Accessories

| Ordering data – CTEU  |  | Part no.             | Type                  |                            |
|---|--|----------------------|-----------------------|----------------------------|
| <b>Bus connection</b>   |  |                      |                       |                            |
|    | 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  |                            |
| <b>Electrical connection block</b>  |  |                      |                       |                            |
|   | For connecting a second device with I-Port interface   | 570042               | CAPC-F1-E-M12         |                            |
| <b>H-rail mounting</b>  |  |                      |                       |                            |
|  | For electrical connection block CAPC   | 570043               | CAFM-F1-H             |                            |
| <b>Connecting cables</b>  |  |                      |                       |                            |
|  | <ul style="list-style-type: none"> <li>• Straight socket, M12x1, 5-pin</li> <li>• Straight plug, M12x1, 5-pin</li> <li>• Nominal conductor cross section 1 mm<sup>2</sup></li> </ul> | 5 m                  | 574321                | NEBU-M12G5-E-5-Q8N-M12G5   |
|   |  | 7.5 m                | 574322                | NEBU-M12G5-E-7.5-Q8N-M12G5 |
|   |  | 10 m                 | 574323                | NEBU-M12G5-E-10-Q8N-M12G5  |
|   | <ul style="list-style-type: none"> <li>• Angled socket, M12x1, 5-pin</li> <li>• Angled plug, M12x1, 5-pin</li> </ul>   | 0.5 m                | 570733                | NEBU-M12W5-K-0.5-M12W5     |
|   |  | 2 m                  | 570734                | NEBU-M12W5-K-2-M12W5       |
|   |  | 0.5 m                | 8003617               | NEBU-M12G5-K-0.5-M12W5     |
| 2 m   | 8003618  | NEBU-M12G5-K-2-M12W5 |                       |                            |
| <b>Plug socket</b>  |  |                      |                       |                            |
|  | 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        |                            |
| <b>Inscription label</b>  |  |                      |                       |                            |
|  | For bus node, pack of 200 (5 frames each with 40 labels)   | 565306               | ASLR-C-E4             |                            |