# Valve terminal type 82 CPASC1, Smart Cubic

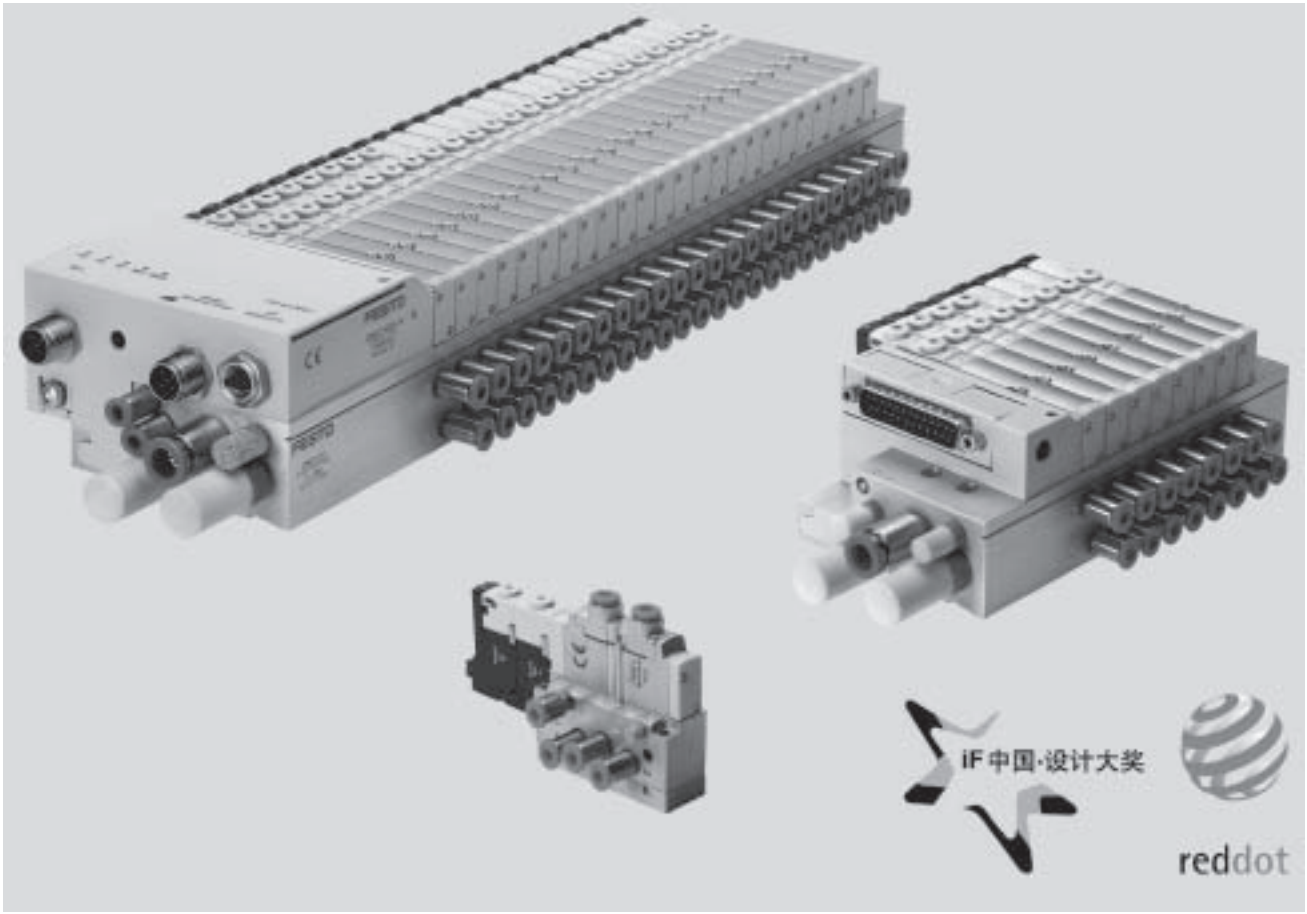
FESTO



- Modular valve terminal for a wide range of applications
- Space-saving thanks to smaller valve dimensions
- Easy valve replacement
- Manual override and LED operating status display
- Flow rates of up to 150 l/min
- Variety of pneumatic and electrical connection options

# Valve terminal type 82 CPASC1, Smart Cubic

Key features




**Innovative**

- Compact valve terminal for a wide range of pneumatic applications
- Standardised from the individual valve up to multi-pin plug and fieldbus connections
- Highly versatile during the planning and assembly stages as well as in operational use
- Wide range of selectable valve functions, including valve functions for customised pressure supplies or vacuum application solutions
- Comprehensive, optimally harmonised range of accessories for flow rates of up to 180 l/min

**Versatile**

- Room for expansion with 2 ... 24 valve positions on one terminal
- Use of individual valves in combination with an individual block
- The flexibility of the pneumatic working connections facilitates a practical solution to different requirements
- Tubing lines can be connected horizontally to the valve or vertically on the sub-base
- High pressure range –0.9 ... 10 bar
- Wide range of electrical connections for 24 V DC operating voltage

**Reliable**

- Manual override facility
- Durable thanks to the use of tried-and-tested piston spool valves
- Sturdy thanks to metal housing and connecting thread
- Fast troubleshooting thanks to LEDs on the valves and diagnosis via fieldbus

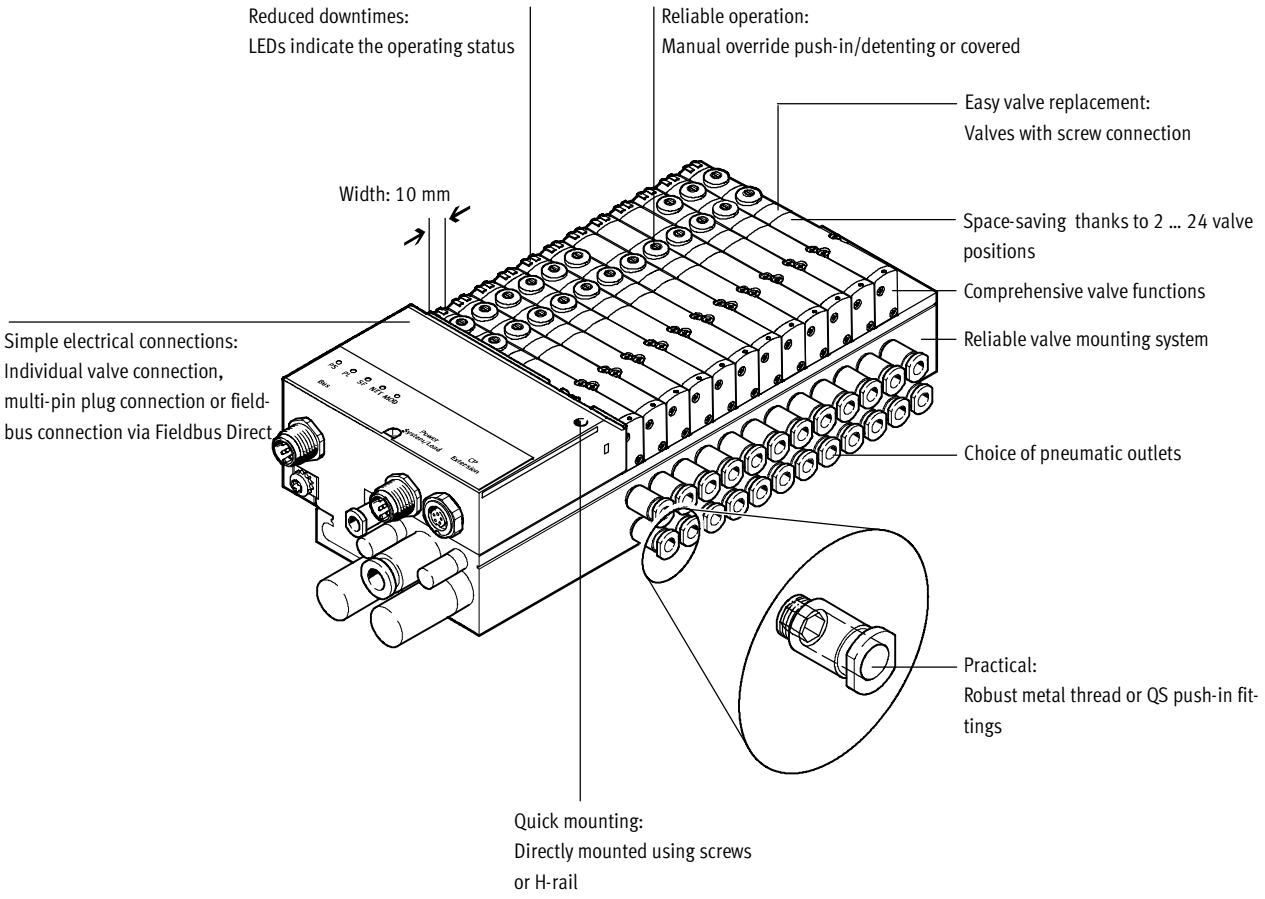
**Easy-to-mount**

- Ready-to-install unit, already assembled and tested
- Minimised expenditure with regard to ordering, installation and commissioning
- Secure wall mounting or via H-rail

# Valve terminal type 82 CPASC1, Smart Cubic

Key features






**Equipment options**

Valve functions

- 5/2-way valve, single solenoid
- 5/2-way valve, double solenoid
- 2x 3/2-way valve, normally open
- 2x 3/2-way valve, normally closed
- 5/3-way valve, mid-position pressurised
- 5/3-way valve, mid-position closed
- 5/3-way valve, mid-position exhausted
- 1x 3/2-way valve, normally closed, external compressed air supply
- 2x 2/2-way valve, normally closed, dual compressed air supply

All valves have the same compact dimensions with an overall length of 91 mm and a width of 10 mm. Valves with a height of 40 mm are available for applications requiring particularly flat variants.

Electrical connection options

**Individual connection**
- Plug-in (PI)
- Horizontal connection (HC)

**Individual sub-base valve**
- Plug-in (PI)
- Horizontal connection (HC)

**Multi-pin**
- Max. 20 valve positions/max. 20 solenoid coils
- Sub-D
- Flat cable

**Fieldbus**
- Max. 24 valve positions/max. 32 solenoid coils

# Valve terminal type 82 CPASC1, Smart Cubic

Key features

**Valve terminal configurator** **Online via:** ➔ www.festo.com/en/engineering

A valve terminal configurator is available to help you select a suitable CPASC valve terminal. This makes it much easier for you to find the right product.

The valve terminals are fully assembled according to your order specifications and individually tested. This reduces the amount of assembly and installation required to a minimum.
A type 82 valve terminal is ordered via a modular order code.

Ordering system for type 82
➔ 4 / 3.1-72


The illustration above provides an example of a valve terminal configuration.
And this is how you arrive at the order code:

Once you have called up the Festo home page, select the online version of the digital product catalogue from the “Products” submenu: this will bring you directly to the home page for the Pneumatic Catalogue. Activate the “Product Search” menu.

Here you can specify a “Part No.” (e.g. 529045), “Type” (e.g. CPASC1) or “Article designation” (e.g. valve terminal) to find your “Search result”. Click on the blue shopping basket to complete the selected product according to your specifications (this does not initiate an order). You will then be prompted to configure the product.

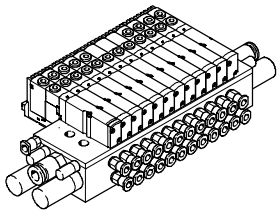
Select “Configurator”.
You can then configure the valve terminal step by step (from the top down) according to your requirements.
Select the “Finish” menu to continue on with the ordering process.

# Valve terminal type 82 CPASC1, Smart Cubic

Key features



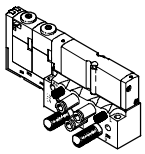
## Individual connection



Connection is independent of the control technology used. This ensures correct polarity during installation.

The valve is equipped with an LED which indicates switching status, and an overvoltage protective circuit. It also features a built-in current reduction circuit.

Individual connection permits the selection of 2 to 32 solenoid coils (divided between 2 to 16 valve positions, including in uneven gradations).



Valves can also be used on an individual block for actuators further away from the valve terminal.

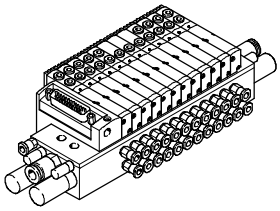
With an individual electrical connection, the plug is connected directly to the valve. Two electrical connection types are available for the valve terminal and for the individual block:

- Horizontal connection (HC) or
- Plug-in (PI)

Version SH:
The electrical connection can be plugged in directly on the valve.

Version SP, SQ:
The connector plug is mounted on an adapter. This adapter is then attached to the manifold block.

## Multi-pin plug connection



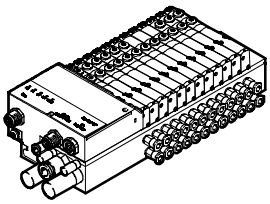
Control signals from the controller to the valve terminal are transmitted via a pre-assembled multi-core cable, which substantially reduces installation time.

These valve terminals can be fitted with 2 to 20 solenoid coils.

Variants

- Sub-D connection
- Flat cable connection

## Fieldbus Direct



An integrated fieldbus node manages the communication connection to a higher-order PLC. This enables a space-saving pneumatic and electronic solution.
The fieldbus node is directly integrated in the electrical interface of the valve terminal and therefore takes up only a minimal amount of space.
The CP string extension option allows the functions and components of the CP installation system to be used.

Valve terminals with fieldbus interfaces can be equipped with 4 to 24 valve positions and 4 to 32 solenoid coils.

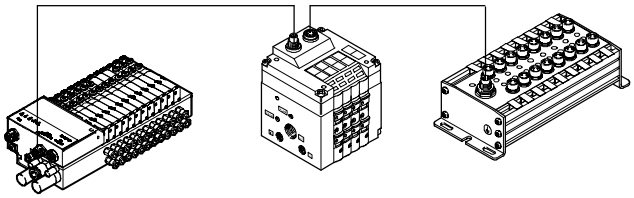
Variants

- DeviceNet connection
- 4 to 32 solenoid coils

# Valve terminal type 82 CPASC1, Smart Cubic

Key features

## CP string extension



The optional string extension allows an additional valve terminal and I/O modules to be connected to Fieldbus Direct. A CP string of the CP installation system is integrated in the fieldbus node as an extension. Different input and output modules as well as CPV and CPA valve terminals can be connected.
The max. length of the CP string extends to 10 metres, which means that the extension modules can be mounted directly on-site. All of the required electrical signals are transmitted via the CP cable, which in turn means that no further installation is needed on the extension module.

The CP string interface offers:
- 16 input signals
- 16 output signals for output modules 24 V DC or solenoid coils
- Logic and sensor supply for the input modules
- Logic and sensor supply for the output modules
- Load voltage supply for the valve terminals
- Logic supply for the output module

➔ 4 / 4.7-2

# Valve terminal type 82 CPASC1, Smart Cubic

Peripherals overview

**Overview – CPASC valve terminal**

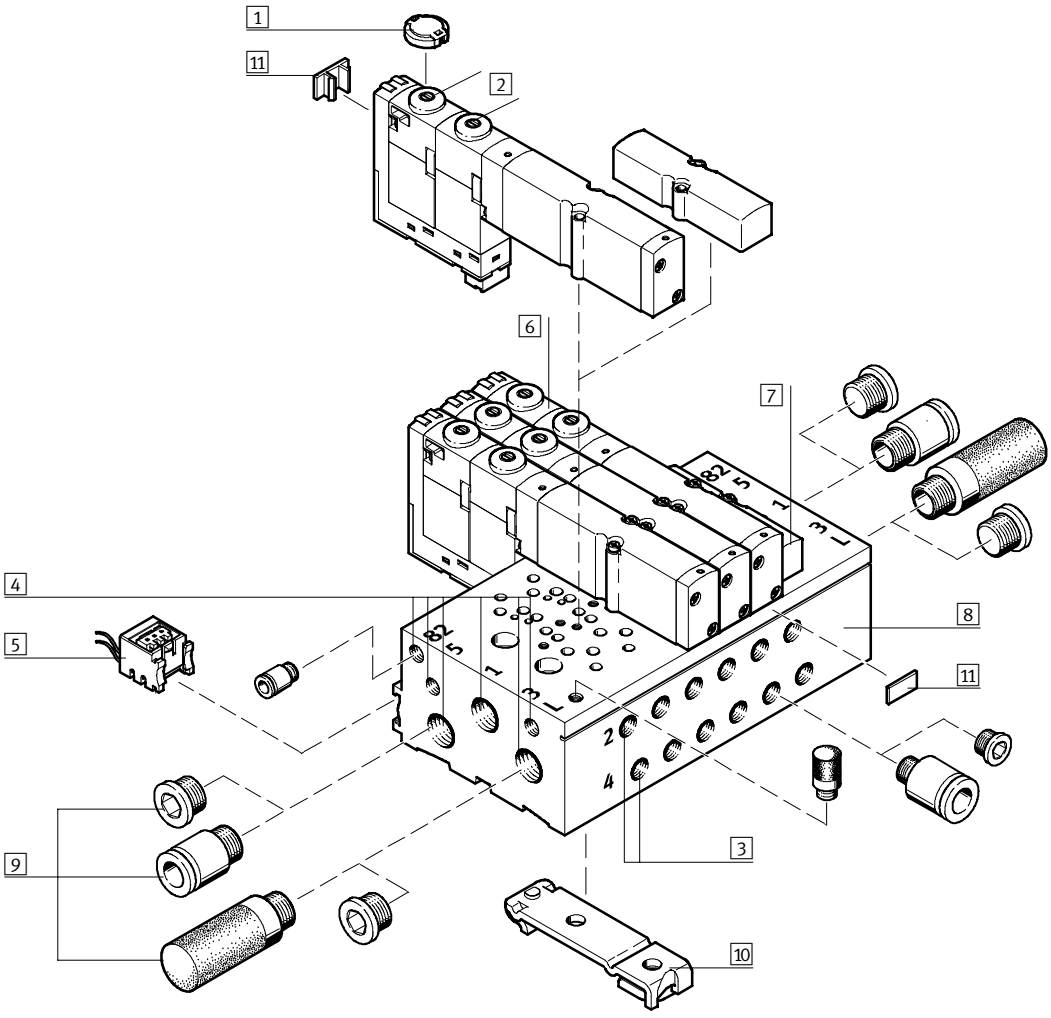
Valve terminal with individual plug-in (PI) electrical connections

Code: IP, IQ

Valve terminals with individual plug-in (PI) electrical connections are available in sizes for 2 to max. 16 valve positions. Each valve position can either be equipped with a valve or a blanking plate.

With an individual PI connection, the connector plug remains on the manifold block. This avoids the valve being connected incorrectly in the event of a recommissioning.

**CPASC valve terminal with sub-base valves**




1 Cover for manual override (optional)
2 Manual override (per solenoid coil, push-in/rotary-detenting)
3 Working lines (2, 4) on the manifold block (per valve position)
4 Supply ports (1, 12/14), exhaust ports (3, 5, 82/84) and pressure compensating port (L) on the left-hand and right-hand side of the manifold block
5 Individual plug-in (PI) connection
6 Valve
7 Cover for vacant position (blanking plate)
8 Manifold block for sub-base valves
9 Connectors, silencers and blanking plugs
10 H-rail mounting
11 Inscription labels

# Valve terminal type 82 CPASC1, Smart Cubic

Peripherals overview

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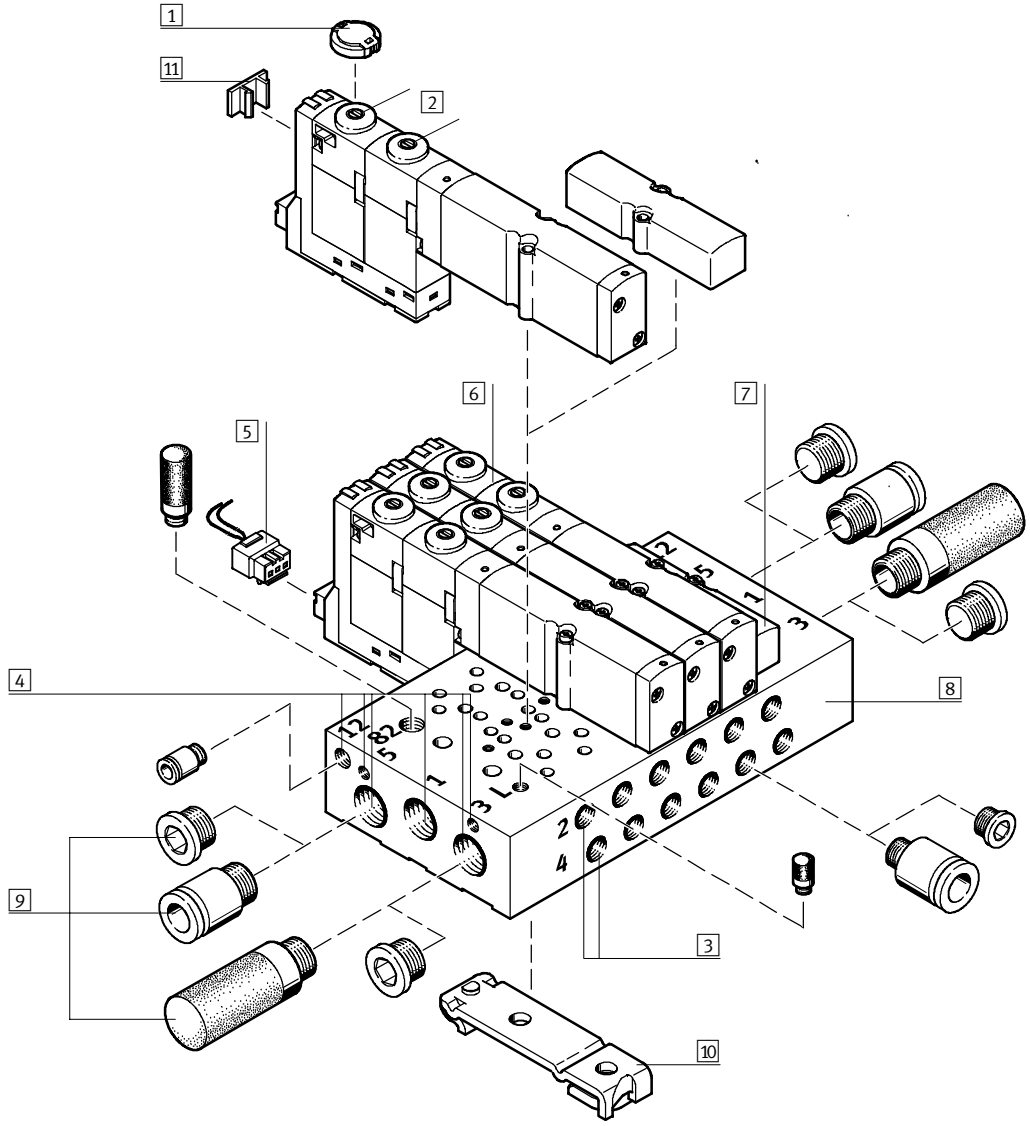
## Valve terminal with individual horizontal (HC) electrical connections

Code: IH

Valve terminals with individual horizontal electrical connections (HC) are available in sizes for 2 to max. 16 valve positions. Each valve position can either be equipped with a valve or a blanking plate.

With an individual horizontal connection, the electrical connection for a valve must be removed when the valve is being replaced.

**CPASC valve terminal with sub-base valves**




1 Cover for manual override (optional)
2 Manual override (per solenoid coil, push-in/rotary-detenting)
3 Working lines (2, 4) on the manifold block (per valve position)
4 Supply ports (1, 12/14), exhaust ports (3, 5, 82/84) and pressure compensating port (L) on the left-hand and right-hand side of the manifold block
5 Individual horizontal connection (HC)
6 Valve
7 Cover for vacant position (blanking plate)
8 Manifold block for sub-base valves
9 Connectors, silencers and blanking plugs
10 H-rail mounting
11 Inscription labels

# Valve terminal type 82 CPASC1, Smart Cubic

Peripherals overview

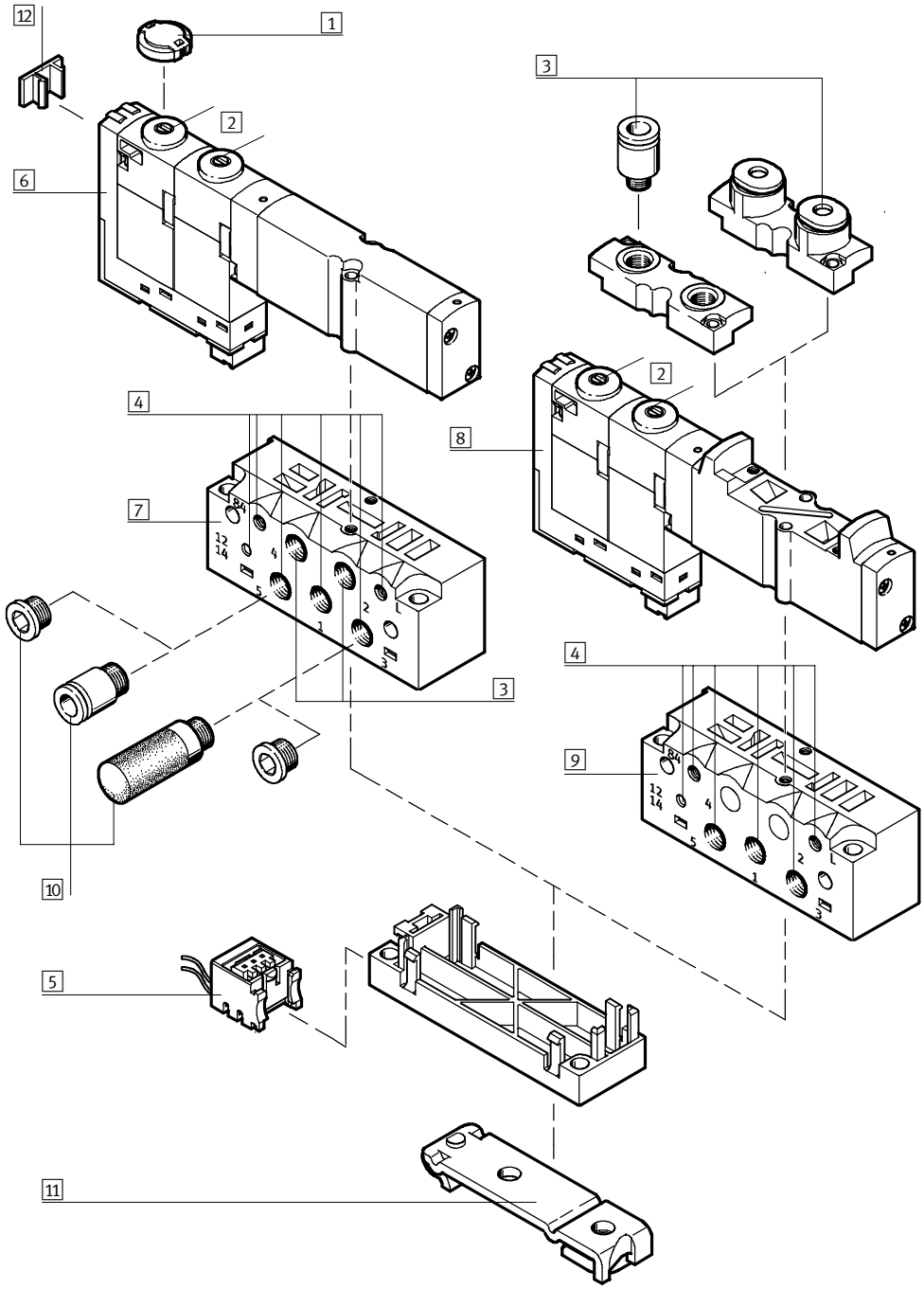
## Overview – CPASC individual block

Individual block with individual plug-in (PI) electrical connection

Code: SP, SQ

With an individual PI connection, the connector plug remains on the manifold block.

**CPASC individual block with sub-base valve or semi in-line valve**




1 Cover for manual override (optional)
2 Manual override (per solenoid coil, push-in/rotary-detenting)
3 Working lines (2, 4) on the individual block or on the valve (semi in-line version)
4 Supply ports (1, 12/14), exhaust ports (3, 5, 82/84) and pressure compensating port (L) on the individual block
5 Individual plug-in (PI) connection
6 Sub-base valve
7 Individual block for sub-base valve
8 Semi in-line valve
9 Individual block for semi in-line valve
10 Connectors, silencers and blanking plugs
11 H-rail mounting
12 Inscription label

# Valve terminal type 82 CPASC1, Smart Cubic

Peripherals overview

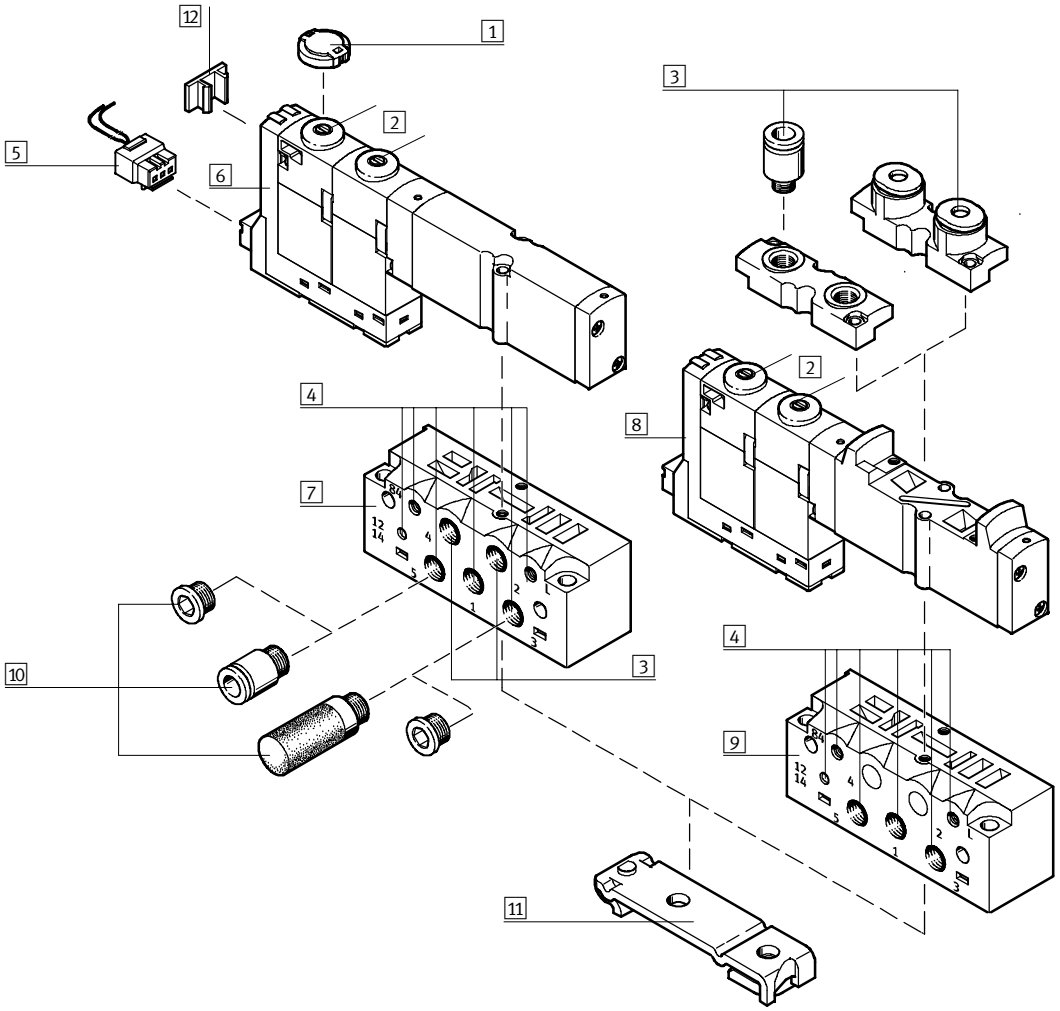
FESTO

## Individual block with individual horizontal electrical connection (HC)

Code: SH

With an individual horizontal connection, the electrical connection for a valve must be removed when the valve is being replaced.

**CPASC individual block with sub-base valve or semi in-line valve**




1 Cover for manual override (optional)
2 Manual override (per solenoid coil, push-in/rotary-detenting)
3 Working lines (2, 4) on the individual block or on the valve (semi in-line version)
4 Supply ports (1, 12/14), exhaust ports (3, 5, 82/84) and pressure compensating port (L) on the individual block
5 Individual horizontal connection (HC)
6 Sub-base valve
7 Individual block for sub-base valve
8 Semi in-line valve
9 Individual block for semi in-line valve
10 Connectors, silencers and blanking plugs
11 H-rail mounting
12 Inscription label

# Valve terminal type 82 CPASC1, Smart Cubic

Peripherals overview



**Overview – CPASC valve terminal**

Valve terminal with electrical multi-pin plug connection

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

or

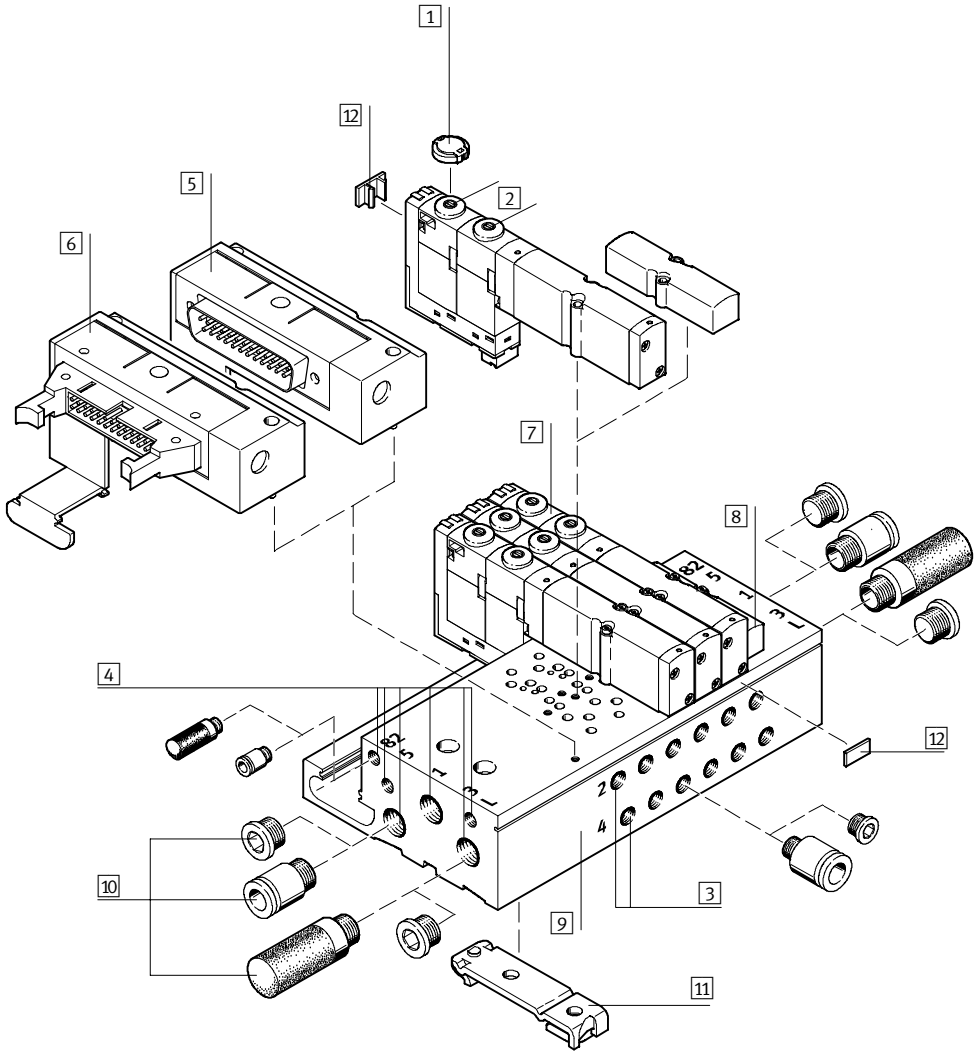
- 26-pin multi-pin plug connection with connector for flat cable
  Code: MF

Valve terminals with electrical multi-pin plug connection are available in sizes for 2 to max. 20 valve positions (code: MS) or for 4 to max. 20 valve positions (code: MF). Each valve position can either be equipped with a valve or a blanking plate.

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

The electrical connection is located on the left-hand side. It can be rotated by 90°, thereby allowing flush mounting of the system.

**CPASC valve terminal with sub-base valves**

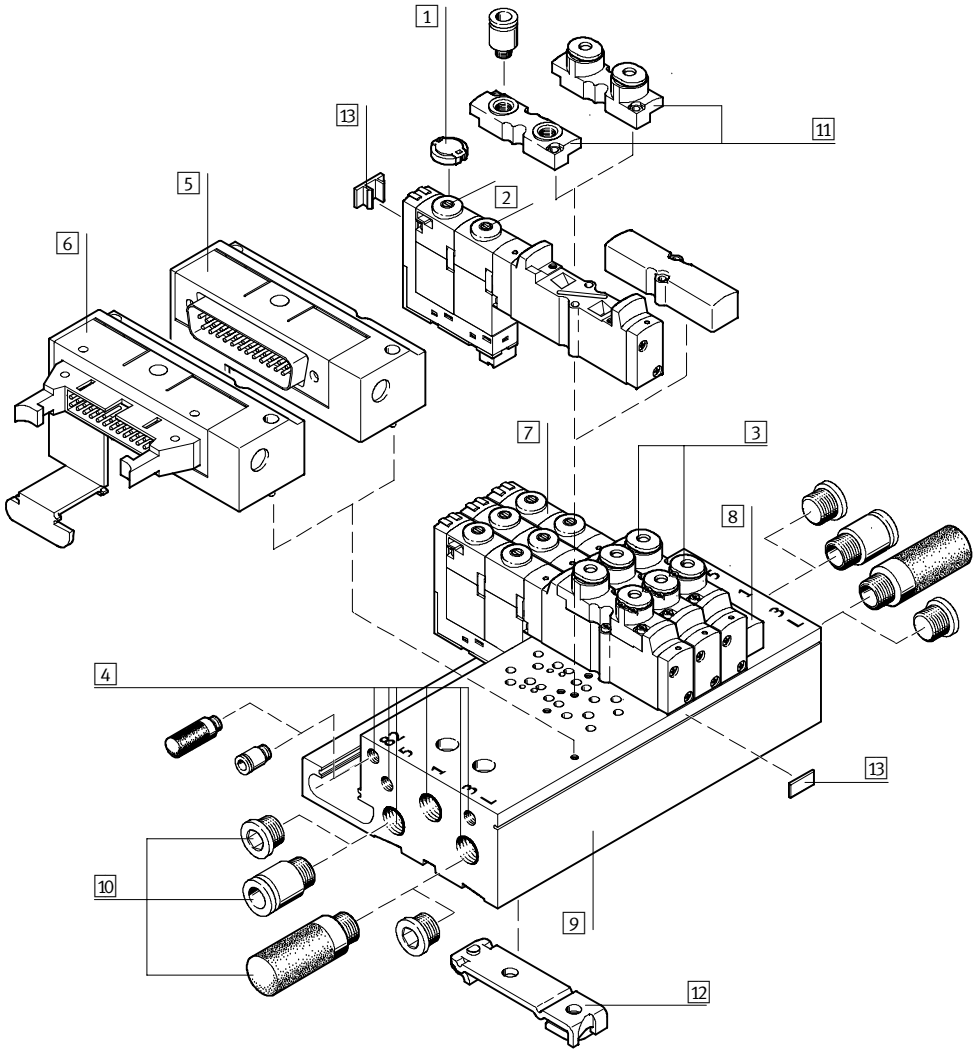



1 Cover for manual override (optional)
2 Manual override (per solenoid coil, push-in/rotary-detenting)
3 Working lines (2, 4) on the manifold block (per valve position)
4 Supply ports (1, 12/14), exhaust ports (3, 5, 82/84) and pressure compensating port (L) on the left-hand and right-hand side of the manifold block
5 Multi-pin plug connection Sub-D
6 Multi-pin plug connection with connector for flat cable
7 Valve
8 Cover for vacant position (blanking plate)
9 Manifold block for sub-base valves
10 Connectors, silencers and blanking plugs
11 H-rail mounting
12 Inscription labels

# Valve terminal type 82 CPASC1, Smart Cubic

Peripherals overview

**CPASC valve terminal with semi in-line valves**




1 Cover for manual override (optional)
2 Manual override (per solenoid coil, push-in/rotary-detenting)
3 Working lines (2, 4) on the valve
4 Supply ports (1, 12/14), exhaust ports (3, 5, 82/84) and pressure compensating port (L) on the left-hand and right-hand side of the manifold block
5 Multi-pin plug connection Sub-D
6 Multi-pin plug connection with connector for flat cable
7 Valve
8 Cover for vacant position (blanking plate)
9 Manifold block for semi in-line valves
10 Connectors, silencers and blanking plugs
11 Pneumatic connection plates for semi in-line valves
12 H-rail mounting
13 Inscription labels

# Valve terminal type 82 CPASC1, Smart Cubic

Peripherals overview

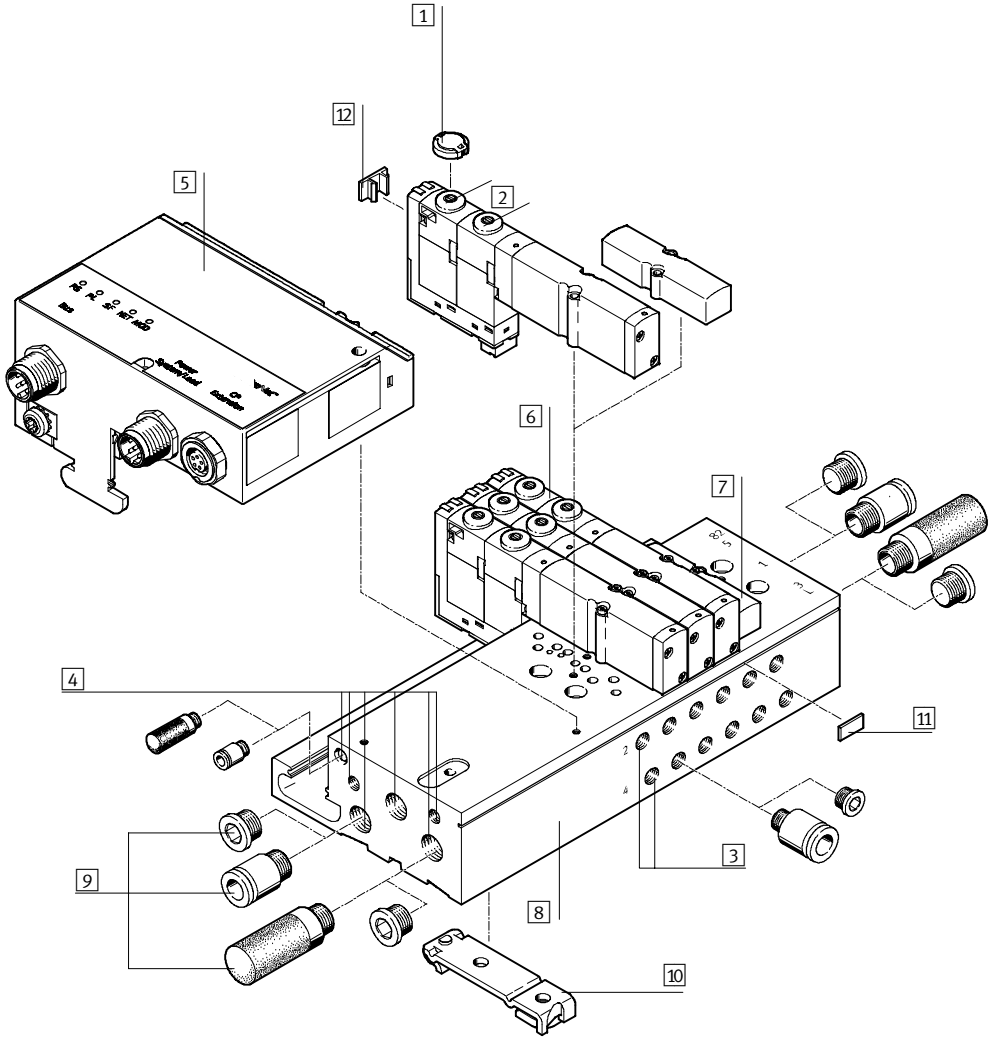
## Overview – CPASC valve terminal

Valve terminal with Fieldbus Direct

Valve terminals with fieldbus connection are available in sizes for 4 to max. 24 valve positions. Each valve position can either be equipped with a valve or a blanking plate.

A maximum of 32 valve solenoid coils can be actuated via the fieldbus connection.

**CPASC valve terminal with sub-base valves**

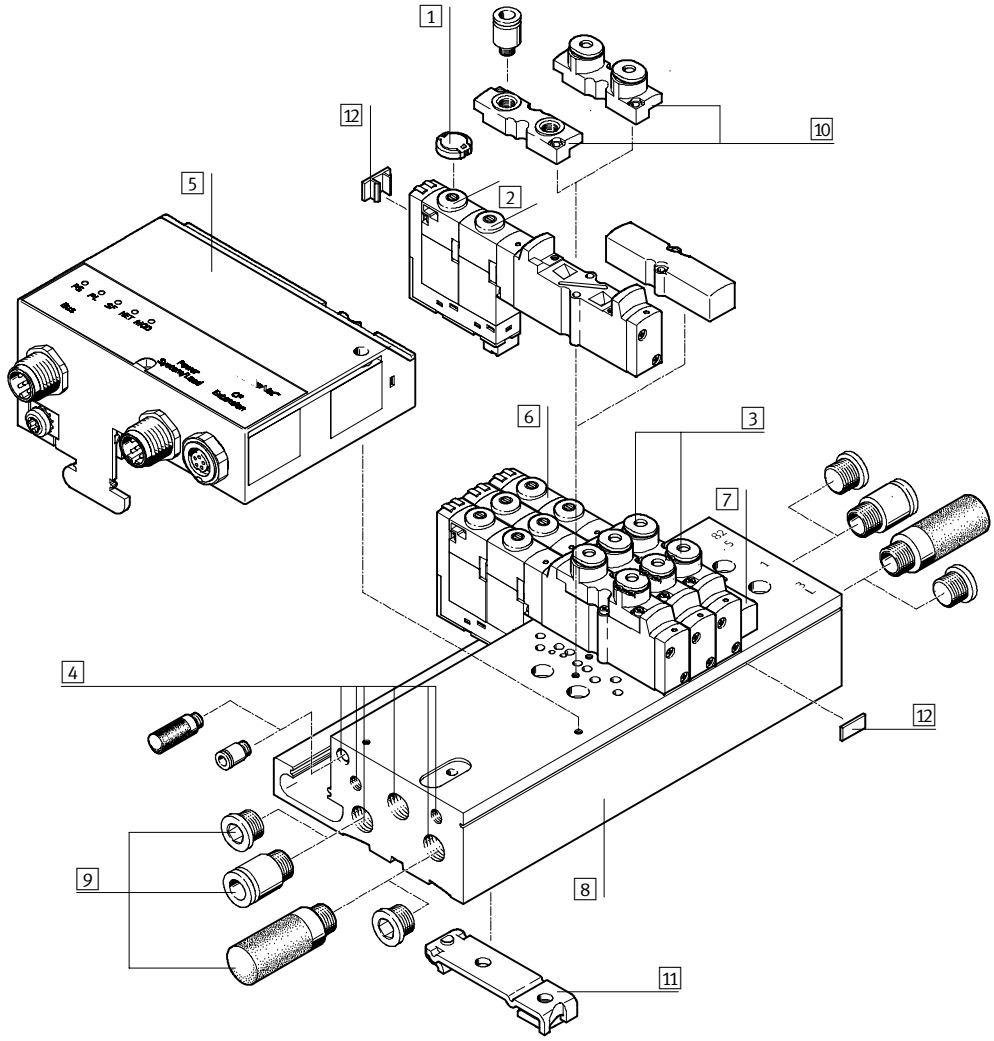



1 Cover for manual override (optional)
2 Manual override (per solenoid coil, push-in/rotary-detenting)
3 Working lines (2, 4) on the manifold block (per valve position)
4 Supply ports (1, 12/14), exhaust ports (3, 5, 82/84) and pressure compensating port (L) on the left-hand and right-hand side of the manifold block
5 Fieldbus Direct
6 Valve
7 Cover for vacant position (blanking plate)
8 Manifold block for sub-base valves
9 Connectors, silencers and blanking plugs
10 H-rail mounting
11 Inscription labels

# Valve terminal type 82 CPASC1, Smart Cubic

Peripherals overview

**CPASC valve terminal with semi in-line valves**




1 Cover for manual override (optional)
2 Manual override (per solenoid coil, push-in/rotary-detenting)
3 Working lines (2, 4) on the valve
4 Supply ports (1, 12/14), exhaust ports (3, 5, 82/84) and pressure compensating port (L) on the left-hand and right-hand side of the manifold block
5 Fieldbus Direct
6 Valve
7 Cover for vacant position (blanking plate)
8 Manifold block for semi in-line valves
9 Connectors, silencers and blanking plugs
10 Pneumatic connection plates for semi in-line valves
11 H-rail mounting
12 Inscription labels

# Valve terminal type 82 CPASC1, Smart Cubic

Key features – Pneumatic components

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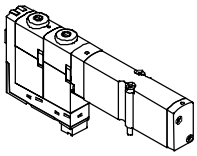
## Valves

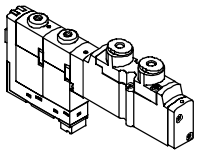
### Sub-base valve



Sub-base valves can be quickly replaced since the pipe connection remains on the manifold block.

This design is also particularly flat.

### Semi in-line valve (with working ports on the valve)



With semi in-line valves the pneumatic connection are on the top. This means that elbow connectors are not needed.

There are sub-base valves and semi in-line valves with one solenoid coil (single solenoid) or with two solenoid coils (double solenoid) irrespective of the valve function.

## Blanking plate

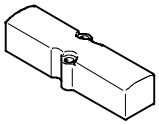


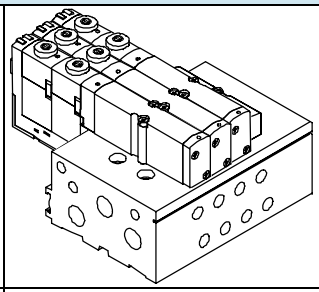
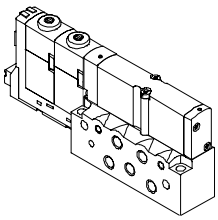
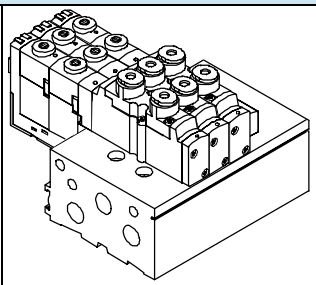
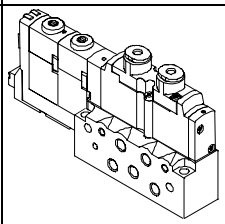
Plate without valve function for reserving valve positions on a valve terminal.

Valve sub-bases and blanking plates are attached to the manifold block using two screws.

# Valve terminal type 82 CPASC1, Smart Cubic

Key features – Pneumatic components

FESTO

| Manifold blocks | | | |
|---|---|---|---|
| Manifold block | | Number of valve positions | Manifold block connections |
| Code A – Working lines (2, 4) on the manifold block | | | |
| Manifold block for sub-base valves and blanking plates |  | 2 ... 20 | ■ With working lines (2, 4), M5 threaded hole<br>■ With ports for supply air (1, 12/14) and exhaust air (3, 5, 82/84)<br>■ With pressure compensating port (L) |
| Individual block for sub-base valve |  | 1 | |
| | | | |
| Code P – Working lines (2, 4) on the valve | | | |
| Manifold block for semi in-line valves and blanking plates |  | 2 ... 20 | ■ No working lines<br>■ With ports for supply air (1, 12/14) and exhaust air (3, 5, 82/84)<br>■ With pressure compensating port (L) |
| Individual block for semi in-line valve |  | 1 | |

Note

Semi in-line valves can also be mounted on manifold blocks for sub-base valves. In this case the corresponding working ports on the manifold block must be sealed using blanking plugs.

The compressed air supply and exhaust air supply for the valve terminal can either be on the left-hand side or the right-hand side of the valve terminal. Supply at both sides is also possible. Ports that are not required must be sealed with a blanking plug.

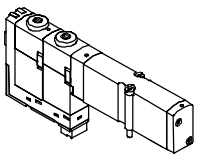
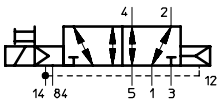
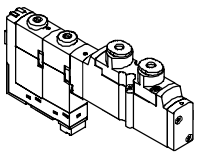
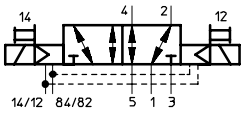
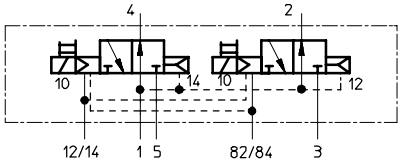
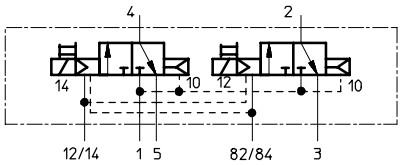
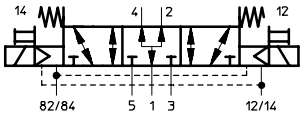
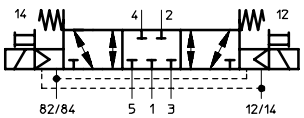
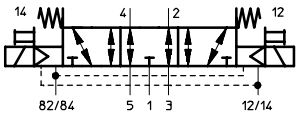
An individual block is the ideal solution in cramped space conditions. All available valve types can be used with this block type.

# Valve terminal type 82 CPASC1, Smart Cubic

Key features – Pneumatic components



**Valves**

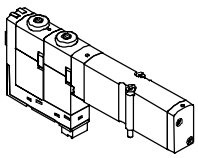
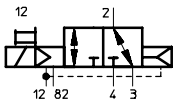
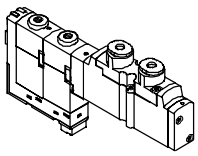
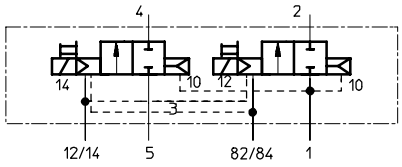
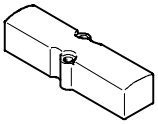
| | Code | Circuit symbol | Size 10 | Description |
|---|---|---|---|---|
|  | M |  | ■ | 5/2-way valve, single solenoid<br>Pneumatic spring return |
|  | J |  | ■ | 5/2-way valve, double solenoid |
| | N |  | ■ | 2x 3/2-way valve, single solenoid<br>Normally open<br>Pneumatic spring return |
| | K |  | ■ | 2x 3/2-way valve, single solenoid<br>Normally closed<br>Pneumatic spring return |
| | B |  | ■ | 5/3-way valve<br>Mid-position pressurised<br>Spring force return<br>The piston rod of a connected cylinder advances when the valve is in the normal position due to the differential piston areas. |
| | G |  | ■ | 5/3-way valve<br>Mid-position closed<br>Spring force return<br>The piston rod side of a cylinder remains held under pressure in the normal valve position. |
| | E |  | ■ | 5/3-way valve<br>Mid-position exhausted<br>Spring force return<br>In the normal valve position, the piston rod can be moved freely. |

# Valve terminal type 82 CPASC1, Smart Cubic

Key features – Pneumatic components

FESTO

**Valves**

| | Code | Circuit symbol | Size 10 | Description |
|---|---|---|---|---|
|  | X |   | ■ | 1x 3/2-way valve<br>Normally closed, external compressed air supply<br>Pneumatic spring return<br>Compressed air (–0.9 ... +10 bar) supplied at working port 4 can be switched. |
|  | I |   | ■ | 2x 2/2-way valve<br>Normally closed (operating pressure at 1 or 5), dual compressed air supply (e.g. for vacuum switching with ejector pulse)<br>Pneumatic spring return<br>■ The vacuum is connected at port 5<br>■ Port 14 switches the vacuum<br>■ Port 12 switches the ejector pulse<br>■ An external T-connection must be established between port 2, 4 and the vacuum generator |
|  | L | | ■ | For valve terminal only<br>Blanking plate for vacant position |

**Design**

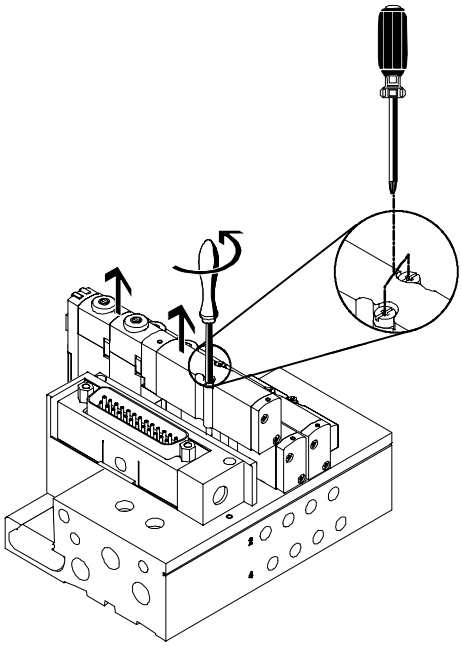
**Valve replacement**

The valves are attached to the metal manifold block using two screws. This means that they can be easily replaced. The mechanical robustness of the manifold block guarantees good long-term sealing tightness.

**Extension**

Vacant positions can be replaced by valves at a later date. The dimensions, mounting points and existing pneumatic installations remain unchanged by this.

The valve code (M, J, N, K, B, G, E, X, I) is located on the front of the valve beneath the manual override.

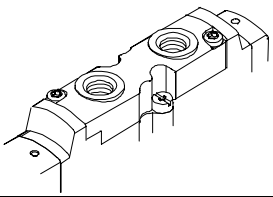
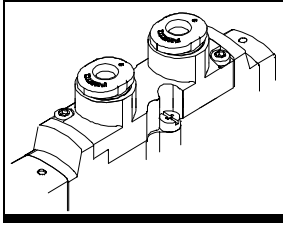


Note

**Plug-in versions**

If a vacant position is replaced by a valve, a plug-in socket must also be ordered and inserted into the slot.

When ordering a HC terminal, you must determine the number and lengths of connecting cable you need and specify them in the order code.

| Working port | | |
|---|---|---|
| | Code | Description |
|  | B | M5 threaded connection |
|  | E | QS-3 push-in fitting |
| | F | QS-4 push-in fitting |

## Pneumatic connection

### Supply and exhaust

The valves are supplied with compressed air via various valve terminal manifold blocks or individual blocks.

These contain common lines for compressed air supply, exhausting and pilot exhausts from all valves.

The common lines on a CPASC valve terminal can be connected

- at the left (code L)
- at the right (code R) or
- at both ends (code B)

### Pilot supply air

The CPASC valve terminal is suitable for internal or external pilot air supply.

Graphs ➔ 4 / 3.1-59

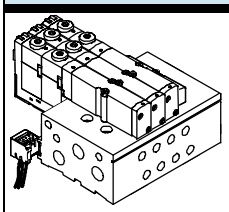
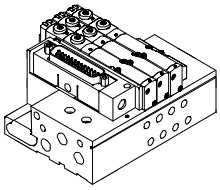
**Internal pilot supply air**

If the supply pressure for your CPASC valve terminal is between 3 and 8 bar, it can be operated with internally distributed pilot air. Pilot air supply is branched at the left-hand end plate of port 1 for this purpose.

**External pilot supply air**

If the supply pressure for your CPASC valve terminal is between -0.9 and +10 bar, it must be operated with external pilot air. The pilot air is supplied externally via port 12/14 in this case.

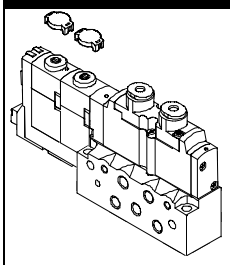
**Pneumatic supply**

| With CPASC valve terminal | Code | Connection | | Ports for supply and exhaust | | |
|---|---|---|---|---|---|---|
| | | | | Designation | Code H<br>QS connection<br>metric, 8 mm<br>Type | Code D<br>Threaded connection<br>G1/8<br>Type |
|  | Compressed air supplied by means of internal pilot air supply, exhausting via silencer | | | | | |
| | S | 1 | Compressed air/vacuum supply | Push-in fitting | QS-G1/8-8-I | – |
| | | 3/5 | Exhaust | Silencer | UC-1/8 | – |
| | | 12/14 | Pilot supply air | – | – | – |
| | | 82/84 | Exhaust for pilot supply air | Silencer | UC-M5 | – |
| | | L | Pressure compensation | Silencer | UC-M5 | – |
|  | Compressed air supplied via external pilot air supply, exhausting via silencer | | | | | |
| | T | 1 | Compressed air/vacuum supply | Push-in fitting | QS-G1/8-8-I | – |
| | | 3/5 | Exhaust | Silencer | UC-1/8 | – |
| | | 12/14 | Pilot supply air | Push-in fitting | QSM-M5-4-I | – |
| | | 82/84 | Exhaust for pilot supply air | Silencer | UC-M5 | – |
| | | L | Pressure compensation | Silencer | UC-M5 | – |
| | Compressed air supplied by means of internal pilot air supply, ducted exhaust | | | | | |
| | V | 1 | Compressed air/vacuum supply | Push-in fitting | QS-G1/8-8-I | – |
| | | 3/5 | Exhaust | Push-in fitting | QS-G1/8-8-I | – |
| | | 12/14 | Pilot supply air | – | – | – |
| | | 82/84 | Exhaust for pilot supply air | Push-in fitting | QSM-M5-4-I | – |
| | | L | Pressure compensation | Silencer | UC-M5 | – |
| | Compressed air supplied via external pilot air supply, ducted exhaust | | | | | |
| | X | 1 | Compressed air/vacuum supply | Push-in fitting | QS-G1/8-8-I | – |
| | | 3/5 | Exhaust | Push-in fitting | QS-G1/8-8-I | – |
| | | 12/14 | Pilot supply air | Push-in fitting | QSM-M5-4-I | – |
| | | 82/84 | Exhaust for pilot supply air | Push-in fitting | QSM-M5-4-I | – |
| | | L | Pressure compensation | Silencer | UC-M5 | – |

# Valve terminal type 82 CPASC1, Smart Cubic

Key features – Pneumatic components



| Pneumatic supply | | | | | | |
|---|---|---|---|---|---|---|
| With CPASC individual block | Code | Connection | | Ports for supply and exhaust | | |
| | | | | Designation | Code B Threaded connection M5 Type | Code F Push-in fitting QS4 Type |
|  | Compressed air supplied by means of internal pilot air supply, exhausting via silencer | | | | | |
| | S | 1 | Compressed air/vacuum supply | Push-in fitting | – | QSM-M5-4-I |
| | | 3/5 | Exhaust | Silencer | – | UC-M5 |
| | | 12/14 | Pilot supply air | – | – | – |
| | | 82/84 | Exhaust for pilot supply air | Silencer | – | U-M3 |
| | | L | Pressure compensation | Silencer | – | U-M3 |
| | Compressed air supplied via external pilot air supply, exhausting via silencer | | | | | |
| | T | 1 | Compressed air/vacuum supply | Push-in fitting | – | QSM-M5-4-I |
| | | 3/5 | Exhaust | Silencer | – | UC-M5 |
| | | 12/14 | Pilot supply air | Push-in fitting | – | QSM-M3-3-I |
| | | 82/84 | Exhaust for pilot supply air | Silencer | – | U-M3 |
| | | L | Pressure compensation | Silencer | – | U-M3 |
| | Compressed air supplied by means of internal pilot air supply, ducted exhaust | | | | | |
| | V | 1 | Compressed air/vacuum supply | Push-in fitting | – | QSM-M5-4-I |
| | | 3/5 | Exhaust | Push-in fitting | – | QSM-M5-4-I |
| | | 12/14 | Pilot supply air | – | – | – |
| | | 82/84 | Exhaust for pilot supply air | Push-in fitting | – | QSM-M3-3-I |
| | | L | Pressure compensation | Silencer | – | U-M3 |
| | Compressed air supplied via external pilot air supply, ducted exhaust | | | | | |
| | X | 1 | Compressed air/vacuum supply | Push-in fitting | – | QSM-M5-4-I |
| | | 3/5 | Exhaust | Push-in fitting | – | QSM-M5-4-I |
| | | 12/14 | Pilot supply air | Push-in fitting | – | QSM-M3-3-I |
| | | 82/84 | Exhaust for pilot supply air | Push-in fitting | – | QSM-M3-3-I |
| | | L | Pressure compensation | Silencer | – | U-M3 |

**Note**

The port L compensates the pressure between moving parts inside the valve and the surrounding environment.

A silencer protects against contamination.
The port L must not be sealed by blanking plugs at both ends.

# Valve terminal type 82 CPASC1, Smart Cubic

Key features – Pneumatic components

FESTO

## Using pressure zones

The CPASC valve terminal can be operated with a maximum of 2 pressure zones, supplied either from the left or from the right.

Pressure zones are created by means of separator elements that can be used in the following ducts:

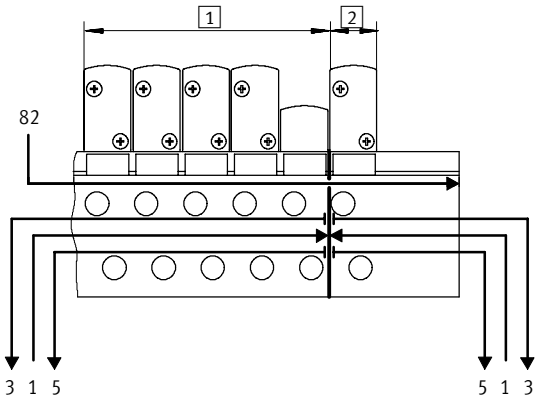
– Supply duct 1 (code T)
and
– Exhaust duct 3 (code V) or
– Exhaust duct 5 (code W) or
– Exhaust duct 3 and 5 (code R)

**Note**

The addition of a separator element results in the following valve sub-bases being supplied with less compressed air:

– Valve sub-base at the valve position in which the locating pin is inserted
– Valve sub-bases on the two adjacent valve positions

## Duct separation



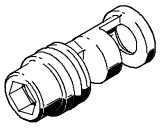

1 Pressure zone 1
2 Pressure zone 2

| Code | Description |
|---|---|
| T | Duct 1 closed |
| V | Duct 3 closed |
| W | Duct 5 closed |
| R | Duct 3/5 closed |

**Note**

The separator element can also be mounted subsequently using an Allen key. An assembly tool for long terminals is available as an accessory.

Separator element CPASC1-KT



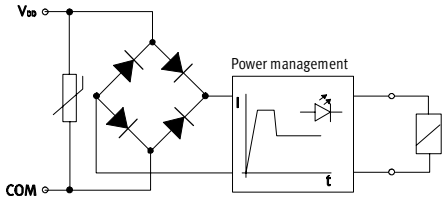
# Valve terminal type 82 CPASC1, Smart Cubic

Key features – Electrical components

## Electrical power as a result of current reduction

Each valve solenoid coil is protected with a spark arresting protective circuit as well as against polarity reversal.

All valve types are additionally equipped with integrated current reduction.




## Individual electrical connection

With an individual electrical connection, the plug is connected directly to the valve.

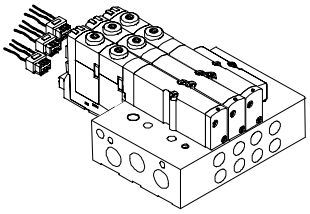
Two individual electrical connection types are available for the valve terminal and for the individual block:
- Horizontal connection (HC) or
- Plug-in (PI)

**Note**

Connecting cables with 2- or 3-wires are available for single solenoid valves with one solenoid coil or double solenoid valves with two solenoid coils.

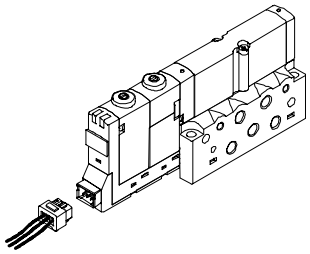
## Individual electrical connection – Horizontal connection (HC)

Valve on valve terminal
Code IH



The valve terminal can be configured with 2 to max. 16 valve positions. This means that max. 32 valve solenoid coils can be actuated with this type of electrical connection.
The horizontal connection (HC) must be removed when replacing the valve.

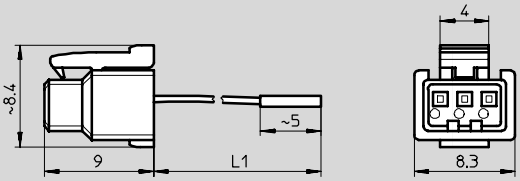
Valve on individual block
Code SH



With the individual block, the electrical connection can be plugged in directly on the valve.

## Dimensions – Horizontal connection (HC)

Download CAD data ➔ **www.festo.com/en/engineering**




| Type | Code | L1 | Number of valve solenoid coils | Cable colour | | |
|---|---|---|---|---|---|---|
| | | | | Pin 1 Common | Pin 2 Solenoid coil 12 | Pin 3 Solenoid coil 14 |
| KMH-0,5 | CH | 500 | 1 coil | black | – | red |
| KMH-1 | CI | 1000 | 1 coil | black | – | red |
| KMH-2,5 | CJ | 2500 | 1 coil | black | – | red |
| KMH-5 | CK | 5000 | 1 coil | black | – | red |
| KMH-D-0,5 | CD | 500 | 2 coils | black | blue | red |
| KMH-D-1 | CE | 1000 | 2 coils | black | blue | red |
| KMH-D-2,5 | CF | 2500 | 2 coils | black | blue | red |
| KMH-D-5 | CG | 5000 | 2 coils | black | blue | red |

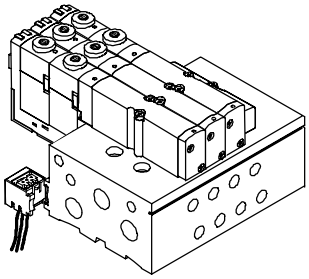
# Valve terminal type 82 CPASC1, Smart Cubic

Key features – Electrical components

FESTO

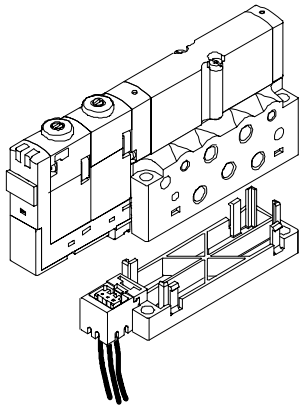
## Individual electrical connection – Plug-in (PI)

Valve on valve terminal
Code IP, IQ



The valve terminal can be configured with 2 to max. 16 valve positions. This means that max. 32 valve solenoid coils can be actuated with this type of electrical connection.
The connector plug is inserted into the slot on the manifold block.
To replace a valve or extend the terminal (vacant position), all you need do is loosen two screws; the connector plug remains in the slot.

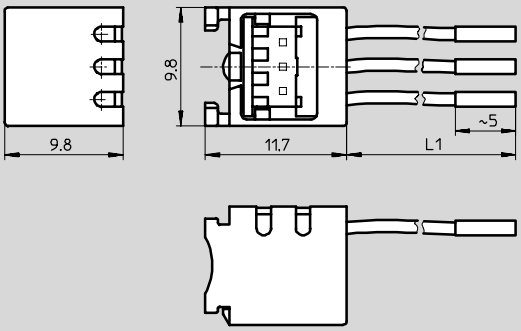
Valve on individual block
Code SP, SQ



With this electrical connection variant, the connector plug is mounted on an adapter. This adapter is then attached to the individual block.

## Dimensions – Plug-in (PI) connection

Download CAD data ➔ **www.festo.com/en/engineering**




| Type | Code | L1 | Number of valve solenoid coils | Cable colour | | |
|---|---|---|---|---|---|---|
| | | | | Pin 1<br>Common | Pin 2<br>Solenoid coil 12 | Pin 3<br>Solenoid coil 14 |
| MHAP-PI | – | 500 | 1 coil | black | – | red |
| MHAP-PI-1 | – | 1000 | 1 coil | black | – | red |
| MHAP-PI-D-0,5 | – | 500 | 2 coils | black | blue | red |
| MHAP-PI-D-1 | – | 1000 | 2 coils | black | blue | red |

## Electrical multi-pin plug connection

The following multi-pin plug connection types are offered for the valve terminal CPASC:

- Sub-D multi-pin plug connection (25-pin) or
- Multi-pin plug connection with connector for flat cable (26-pin)

Pins 1 ... 20 are used for coils 1 ... 20 in order. If there are fewer than 20 coils on the valve terminal, the remaining pins up to 20 are left free. Pins 21 and up are reserved for neutral conductors. Four solenoid coils are always combined on one neutral conductor.
This means that individual valve groups can be switched off separately or a mixture of NPN- and PNP-switching valves achieved.

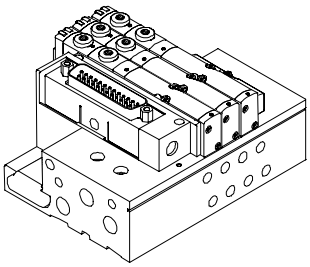
Each pin on the multi-pin plug can activate just one valve solenoid coil. If the maximum configurable number of valve positions is 20, this means that 20 valves each with a single solenoid can be addressed.
With 10 or less valve positions, 2 valve solenoid coils per valve can be addressed. With 12 or more valve positions, the number of available valve positions for valves with two solenoid coils decreases (➔ table below).

**Example:**
With 16 valve positions, valves with one or two solenoid coils can be actuated on the first four (0 ... 3) positions. Valves with just one solenoid coil are permissible at positions 4 ... 15.

| Address/ solenoid coil | Number of the valve position | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 20 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | | | | | | | | |
| 20 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | |
| 16 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | |
| 12 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | |
| 8 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | |

## Electrical multi-pin plug connection – Sub-D

Code MS



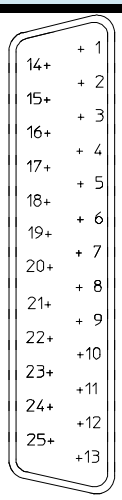
With this electrical connection variant, all valves are centrally actuated via the 25-pin connector plug.
The electrical connection is located on the left-hand side and can be rotated by 90°.

# Valve terminal type 82 CPASC1, Smart Cubic

Key features – Electrical components

FESTO

**Pin allocation – Connector for Sub-D, 25-pin cable**

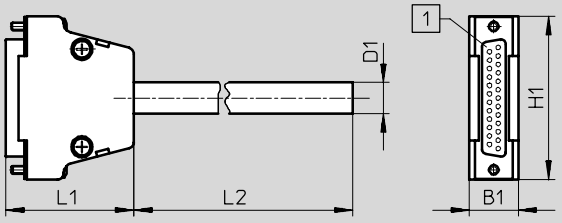



| Pin | Address/ solenoid coil | Core colour KMP6-25P-12 | Core colour KMP6-25P-25 | Valve positions[1] 4 | 6 | 8 | 10 | 12 | 16 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Valve position no./coil designation | | | | | | |
| 1 | 0 | white | white | 0/14 | 0/14 | 0/14 | 0/14 | 0/14 | 0/14 | 0/14 |
| 2 | 1 | brown | brown | 0/12 | 0/12 | 0/12 | 0/12 | 0/12 | 0/12 | 1/14 |
| 3 | 2 | green | green | 1/14 | 1/14 | 1/14 | 1/14 | 1/14 | 1/14 | 2/14 |
| 4 | 3 | yellow | yellow | 1/12 | 1/12 | 1/12 | 1/12 | 1/12 | 1/12 | 3/14 |
| 5 | 4 | grey | grey | 2/14 | 2/14 | 2/14 | 2/14 | 2/14 | 2/14 | 4/14 |
| 6 | 5 | pink | pink | 2/12 | 2/12 | 2/12 | 2/12 | 2/12 | 2/12 | 5/14 |
| 7 | 6 | blue | blue | 3/14 | 3/14 | 3/14 | 3/14 | 3/14 | 3/14 | 6/14 |
| 8 | 7 | red | red | 3/12 | 3/12 | 3/12 | 3/12 | 3/12 | 3/12 | 7/14 |
| 9 | 8 | black | black | | 4/14 | 4/14 | 4/14 | 4/14 | 4/14 | 8/14 |
| 10 | 9 | purple | purple | | 4/12 | 4/12 | 4/12 | 4/12 | 5/14 | 9/14 |
| 11 | 10 | grey-pink | grey-pink | | 5/14 | 5/14 | 5/14 | 5/14 | 6/14 | 10/14 |
| 12 | 11 | red-blue | red-blue | | 5/12 | 5/12 | 5/12 | 5/12 | 7/14 | 11/14 |
| 13 | 12 | – | white-green | | | 6/14 | 6/14 | 6/14 | 8/14 | 12/14 |
| 14 | 13 | – | brown-green | | | 6/12 | 6/12 | 6/12 | 9/14 | 13/14 |
| 15 | 14 | – | white-yellow | | | 7/14 | 7/14 | 7/14 | 10/14 | 14/14 |
| 16 | 15 | – | yellow-brown | | | 7/12 | 7/12 | 7/12 | 11/14 | 15/14 |
| 17 | 16 | – | white-grey | | | | 8/14 | 8/14 | 12/14 | 16/14 |
| 18 | 17 | – | grey-brown | | | | 8/12 | 9/14 | 13/14 | 17/14 |
| 19 | 18 | – | white-pink | | | | 9/14 | 10/14 | 14/14 | 18/14 |
| 20 | 19 | – | pink-brown | | | | 9/12 | 11/14 | 15/14 | 19/14 |
| 21 | com | – | white-blue | Coil 16 ... 19 | | | | | | |
| 22 | com | – | brown-blue | Coil 12 ... 15 | | | | | | |
| 23 | com | white-green | white-red | Coil 8 ... 11 | | | | | | |
| 24 | com | brown-green | brown-red | Coil 4 ... 7 | | | | | | |
| 25 | com | white-yellow | white-black | Coil 0 ... 3 | | | | | | |
| No. of solenoid coils | | | | 8 | 12 | 16 | 20 | 20 | 20 | 20 |

1) Shown against a grey background: Valve positions for actuation of 2 coils

**Dimensions – Sub-D plug with cable**

Download CAD data ➔ **www.festo.com/en/engineering**




1 25-pin plug

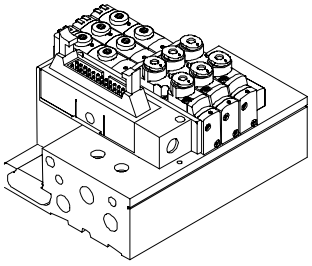
| Type | Code | B1 | D1 | H1 | L1 | L2 |
|---|---|---|---|---|---|---|
| KMP6-25P-20-2,5 | CP | 16 | 10.3 | 53.4 | 37.7 | 2500 |
| KMP6-25P-20-5 | CQ | 16 | 10.3 | 53.4 | 37.7 | 5000 |
| KMP6-25P-20-10 | CR | 16 | 10.3 | 53.4 | 37.7 | 10000 |
| KMP6-25P-12-2,5 | CV | 16 | 8.5 | 53.4 | 37.7 | 2500 |
| KMP6-25P-12-5 | CW | 16 | 8.5 | 53.4 | 37.7 | 5000 |
| KMP6-25P-12-10 | CX | 16 | 8.5 | 53.4 | 37.7 | 10000 |

# Valve terminal type 82 CPASC1, Smart Cubic

Key features – Electrical components

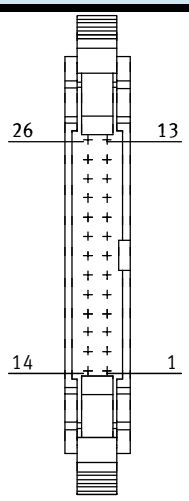
## Electrical multi-pin plug connection – Connector for flat cable

Code MF



With this electrical connection variant, all valves are centrally actuated via the 26-pin connector plug.
The electrical connection is located on the left-hand side and can be rotated by 90°.

## Pin allocation – Connector for flat cable




| Pin | Address/ solenoid coil | Valve positions[1] | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 4 | 6 | 8 | 10 | 12 | 16 | 20 |
| | | Valve position no./coil designation | | | | | | |
| 1 | 0 | 0/14 | 0/14 | 0/14 | 0/14 | 0/14 | 0/14 | 0/14 |
| 2 | 1 | 0/12 | 0/12 | 0/12 | 0/12 | 0/12 | 0/12 | 1/14 |
| 3 | 2 | 1/14 | 1/14 | 1/14 | 1/14 | 1/14 | 1/14 | 2/14 |
| 4 | 3 | 1/12 | 1/12 | 1/12 | 1/12 | 1/12 | 1/12 | 3/14 |
| 5 | 4 | 2/14 | 2/14 | 2/14 | 2/14 | 2/14 | 2/14 | 4/14 |
| 6 | 5 | 2/12 | 2/12 | 2/12 | 2/12 | 2/12 | 2/12 | 5/14 |
| 7 | 6 | 3/14 | 3/14 | 3/14 | 3/14 | 3/14 | 3/14 | 6/14 |
| 8 | 7 | 3/12 | 3/12 | 3/12 | 3/12 | 3/12 | 3/12 | 7/14 |
| 9 | 8 | | 4/14 | 4/14 | 4/14 | 4/14 | 4/14 | 8/14 |
| 10 | 9 | | 4/12 | 4/12 | 4/12 | 4/12 | 5/14 | 9/14 |
| 11 | 10 | | 5/14 | 5/14 | 5/14 | 5/14 | 6/14 | 10/14 |
| 12 | 11 | | 5/12 | 5/12 | 5/12 | 5/12 | 7/14 | 11/14 |
| 13 | 12 | | | 6/14 | 6/14 | 6/14 | 8/14 | 12/14 |
| 14 | 13 | | | 6/12 | 6/12 | 6/12 | 9/14 | 13/14 |
| 15 | 14 | | | 7/14 | 7/14 | 7/14 | 10/14 | 14/14 |
| 16 | 15 | | | 7/12 | 7/12 | 7/12 | 11/14 | 15/14 |
| 17 | 16 | | | | 8/14 | 8/14 | 12/14 | 16/14 |
| 18 | 17 | | | | 8/12 | 9/14 | 13/14 | 17/14 |
| 19 | 18 | | | | 9/14 | 10/14 | 14/14 | 18/14 |
| 20 | 19 | | | | 9/12 | 11/14 | 15/14 | 19/14 |
| 21 (free) | – | – | | | | | | |
| 22 | com | Coil 16 ... 19 | | | | | | |
| 23 | com | Coil 12 ... 15 | | | | | | |
| 24 | com | Coil 8 ... 11 | | | | | | |
| 25 | com | Coil 4 ... 7 | | | | | | |
| 26 | com | Coil 0 ... 3 | | | | | | |
| No. of solenoid coils | | 8 | 12 | 16 | 20 | 20 | 20 | 20 |

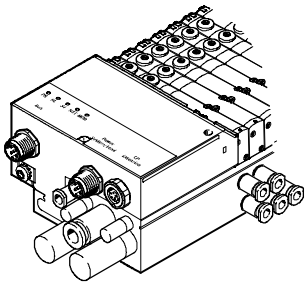
1) Shown against a grey background: Valve positions for actuation of 2 coils

# Valve terminal type 82 CPASC1, Smart Cubic

Key features – Electrical components

FESTO

## Fieldbus Direct



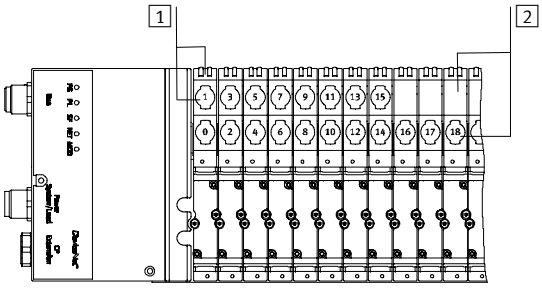
Fieldbus Direct is a system for the compact connection of a valve terminal of various sizes to different fieldbus standards.

The CP string extension option allows the functions and components of the CP installation system to be used.

The I/O modules and cables for the CP string extension are ordered using the order code for the CP installation system.

➔ Info 221 CP installation system

## Address allocation – Solenoid coils




1 Valve solenoid coils 12
2 Valve solenoid coils 14

The addresses of the valve solenoids on the CPASC-DN are allocated from left to right, while the addresses of the individual valve positions are allocated from front to back.

**Example:**
Valve terminal where the first 8 valve positions are prepared for 2 solenoids each.

Each valve position can actuate one or two solenoid coils depending on the configuration (number of valve positions and internal wiring). It then occupies one or two addresses. The internal wiring cannot be changed subsequently.

The number of addresses each valve position occupies has nothing to do with what is actually mounted on the valve position (valve, blanking plate).

If a valve position for 2 addresses is actually equipped with two solenoid coils, the following allocation applies:

- Pilot solenoid coil 14 occupies the less significant address
- Pilot solenoid coil 12 occupies the more significant address

If a valve position for 2 addresses is equipped with only one solenoid coil, the more significant address remains unused. The valve position occupies two addresses nonetheless.

| Address/ solenoid coil | Number of the valve position | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 32 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 32 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | – | – | – | – |
| 32 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | – | – | – | – | – | – | – | – |
| 24 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | – | – | – | – | – | – | – | – | – | – | – | – |
| 20 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| 16 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| 12 | 2 | 2 | 2 | 2 | 2 | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| 8 | 2 | 2 | 2 | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |

## Display and operation – Multi-pin plug and individual valve connection

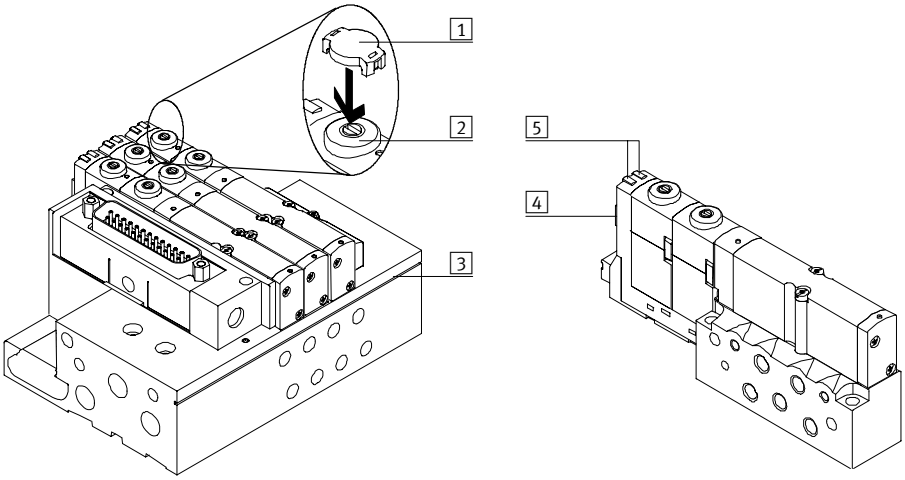
Each valve solenoid coil is allocated an LED which indicates its operating status. Inscription labels (type IBS-6x10) can be applied to each valve for labelling purposes. Alternatively inscription labels (type MH-BZ-80x) can also be affixed to the slot of the manifold block.

The manual override (MO) allows the valve to be switched when in the electrically non-activated or de-energised status. The valve is switched by pushing the manual override. The set switching status can also be secured by rotating the manual override.

A cover can be fitted over the manual override to prevent it from being actuated accidentally (code V).

- Note

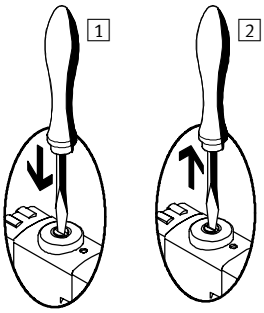
A manually actuated valve (manual override) cannot be reset electrically. Conversely, an electrically actuated valve cannot be reset using the mechanical manual override.




1 Cover for manual override (code V or accessory CPASC1-MO-V)
2 Optional manual override (pushing and detenting via turning using a screwdriver)
3 Slot for inscription labels type MH-BZ-80x
4 Location for valve inscription label type ISB-6x10
5 LED signal status display per valve position

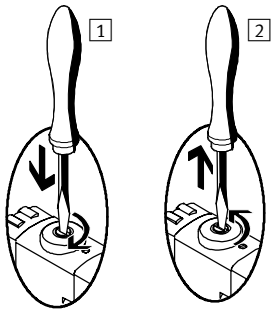
## Manual override MO

### Manual override with automatic return (push-in)




1 Press in the stem of the MO with a pin or screwdriver .
⇢ Valve is in switching position
2 Remove the blade of the screwdriver.
Spring force pushes the stem of the MO back.
⇢ Valve returns to initial position (not with double solenoid valve code J).

### Manual override with lock (detenting)




1 Press in the stem of the MO using a screwdriver until the valve switches and then turn the stem clockwise by 90° until the stop is reached.
⇢ Valve remains in switching position
2 Turn the stem anti-clockwise by 90° until the stop is reached and then remove the screwdriver.
Spring force pushes the stem of the MO back.
⇢ Valve returns to initial position (not with double solenoid valve code J).

# Valve terminal type 82 CPASC1, Smart Cubic

Key features – Mounting types

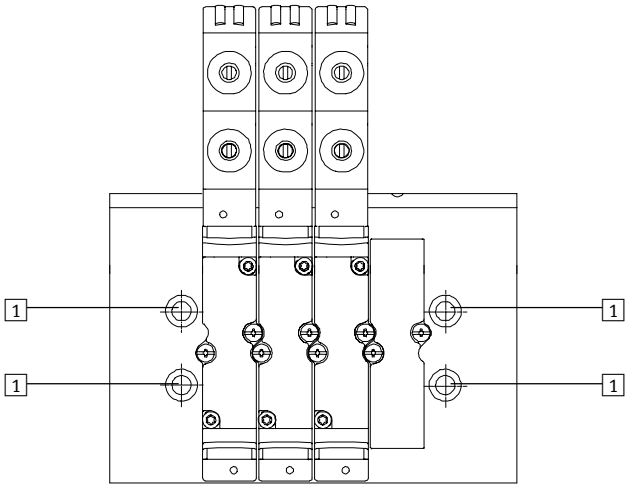
FESTO

## Mounting – Valve terminal

Sturdy terminal assembly thanks to:

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

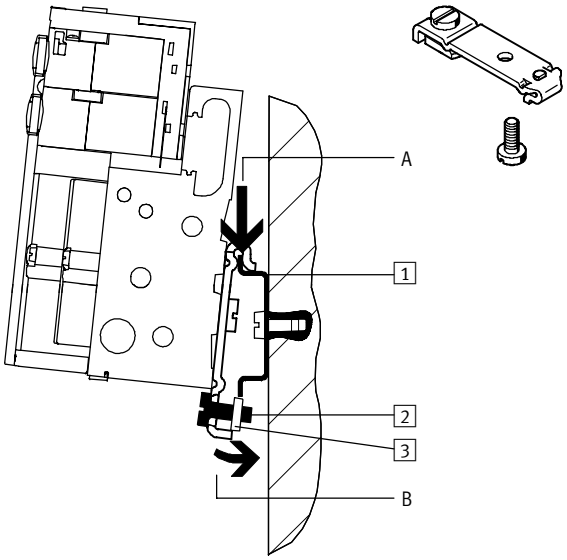
### Wall mounting




The CPASC valve terminal is screwed onto the mounting surface using four M4 screws.

1 Holes for wall mounting

### H-rail mounting




The CPASC valve terminal is attached to the H-rail (see arrow A).
The CPASC valve terminal is then hinged on the H-rail and secured in place with the clamping component (see arrow B).

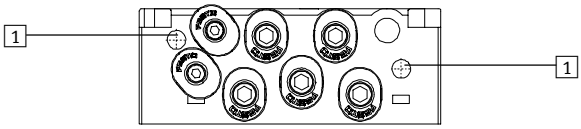
For H-rail mounting of the CPA valve terminal, you will need the mounting kit CPA-BG-NRH. This permits mounting of the valve terminal on an H-rail to DIN EN 50 022.

1 Holes for wall mounting
2 Self-tapping M4x10 screw of the H-rail clamping unit
3 Clamping component of the H-rail clamping unit

## Mounting – Individual block

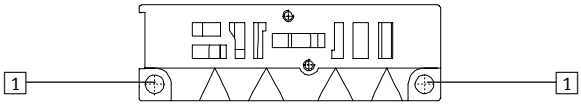
The individual block for wall mounting is designed for integration into a system or machine.

### Wall mounting – Horizontal




1 Mounting holes

### Wall mounting – Vertical



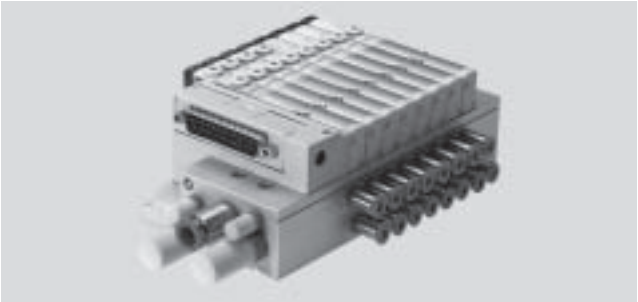

1 Mounting holes

# Valve terminal type 82 CPASC1, Smart Cubic

Technical data

FESTO

- Flow rate
  150 l/min
- Width
  10 mm
- Voltage
  24 V DC



| General technical data | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Valve | | 5/2-way valve | | 2x 3/2-way valve | | 5/3-way valve | | | 1x 3/2-way valve | 2x 2/2-way valve |
| | | | | Normally | | Mid-position | | | Normally | |
| | | Single solenoid | Double solenoid | open | closed | pressur-ised | closed | exhausted | closed | closed |
| Valve function ordering code | | M | J | N | K | B | G | E | X | I |
| Design | | Electromagnetically actuated piston spool valve | | | | | | | | |
| Width | [mm] | 10 | | | | | | | | |
| Nominal diameter | [mm] | 2.5 | | | | | | | | |
| Lubrication | | Lubricated for life, PWIS-free (free of paint-wetting impairment substances) | | | | | | | | |
| Type of mounting | | Wall mounting | | | | | | | | |
| | | On H-rail to DIN EN 50 022 | | | | | | | | |
| Assembly position | | Any | | | | | | | | |
| Manual override | | Pushing/detented by turning | | | | | | | | |
| | | | | | | | | | | |
| Pneumatic connections | | | | | | | | | | |
| Pneumatic connection | | Via manifold block, PRS manifold or individual connection | | | | | | | | |
| Supply port | 1 | G1⁄8 (M5 with individual block) | | | | | | | | |
| Exhaust port | 3/5 | G1⁄8 (M5 with individual block) | | | | | | | | |
| Working lines | 2/4 | Depending on the connection type selected<br>■ M5<br>■ QS-3<br>■ QS-4 | | | | | | | | |
| Pilot air port | 12/14 | M5 (M3 with individual block) | | | | | | | | |
| Pilot exhaust air port | 82/84 | M5 (M3 with individual block) | | | | | | | | |
| Pressure compensating port | L | M5, M3 | | | | | | | | |

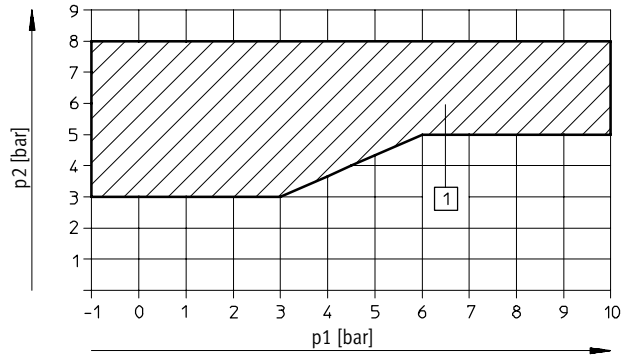
# Valve terminal type 82 CPASC1, Smart Cubic

Technical data

| Operating pressure [bar] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Valve function ordering code | M | J | N | K | B | G | E | X | I |
| With internal pilot air supply | +3 ... +8 | | | | | | | | |
| With external pilot air supply | –0.9 ... +10 | | +3 ... +10 | | –0.9 ... +10 | | | | +3 ... +10 |

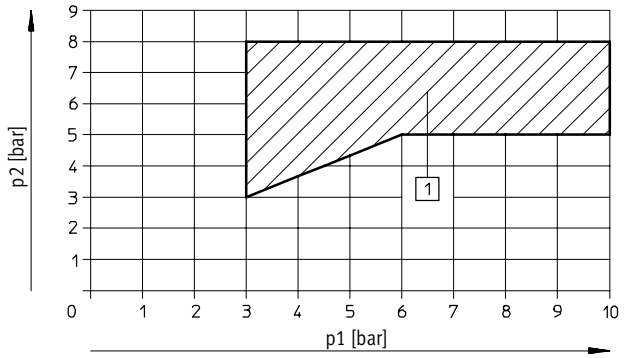
**Pilot pressure p2 as a function of working pressure p1 with external pilot air supply**

for valve sub-bases with code M, J, B, G, E, X




1 Operating range for valves with external pilot air supply

for valve sub-bases with code N, K, I




1 Operating range for valves with external pilot air supply

| Valve response times [ms] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Valve function ordering code | | M | J | N | K | B | G | E | X | I |
| Response times | on | 10 | – | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| | off | 20 | – | 20 | 20 | 25 | 25 | 25 | 20 | 20 |
| | change-over | – | 10 | – | – | – | – | – | – | – |

| Operating and environmental conditions | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Valve function ordering code | | M | J | N | K | B | G | E | X | I |
| Operating medium | | Filtered compressed air, lubricated or unlubricated, inert gases ➔ 4 / 3.1-63 | | | | | | | | |
| Grade of filtration | [µm] | 40 | | | | | | | | |
| Ambient temperature | [°C] | –5 ... +60 | | –5 ... +40[2] | | –5 ... +60 | | | | –5 ... +40[2] |
| Storage temperature | [°C] | –20 ... +40 | | | | | | | | |
| Corrosion resistance class CRC[1] | | 1 | | | | | | | | |

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

2) Restricted ambient temperature in case of fieldbus connection, otherwise same temperature range as ordering code M.

# Valve terminal type 82 CPASC1, Smart Cubic

Technical data

FESTO

| Electrical data | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Valve function ordering code | | M | J | N | K | B | G | E | X | I |
| Electromagnetic compatibility of the CPASC valve terminal (Sub-D or flat cable connection) | | Interference emission tested to EN 61 000-6-4, industry | | | | | | | | |
| | | Interference immunity[1] tested to EN 61 000-6-2, industry | | | | | | | | |
| Protection against electric shock (protection against direct and indirect contact to EN 60204-1/IEC 204) | | By means of PELV power supply unit | | | | | | | | |
| | | | | | | | | | | |
| Operating voltage of valves and electronic components | | | | | | | | | | |
| Nominal operating voltage | [V] | 24 DC | | | | | | | | |
| Operating voltage range | [V] | 20.4 ... 26.4 DC | | | | | | | | |
| | | | | | | | | | | |
| Electrical power consumption | | | | | | | | | | |
| Electronic components | [mA] | 200 and current consumption of sensors | | | | | | | | |
| Valves | [W] | Pull: 1, hold: 0.3 | | | | | | | | |
| | | | | | | | | | | |
| Residual ripple | [Vss] | 4 | | | | | | | | |
| Cut-off pause | [ms] | Min. 10 | | | | | | | | |
| Switching frequency | [Hz] | Max. 10 | | | | | | | | |
| Duty cycle | | 100% at 40°C ambient temperature | | | | | | | | |
| Protection class to EN 60 529 | | IP40 (in assembled state and with detenting plug) | | | | | | | | |
| Relative air humidity | | 90% at 40°C, non-condensing | | | | | | | | |
| Vibration resistance | | To DIN/IEC 68/EN 60 068, Parts 2-6, severity level 2 | | | | | | | | |
| Continuous shock resistance | | To DIN/IEC 68/EN 60 068, Parts 2-27, severity level 2 | | | | | | | | |

1) The maximum signal line length is 10 m

| Materials | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Valve function ordering code | M | J | N | K | B | G | E | X | I |
| Manifold block | Wrought aluminium alloy | | | | | | | | |
| Valve sub-base | Die-cast aluminium | | | | | | | | |
| Seal | Nitrile rubber | | | | | | | | |

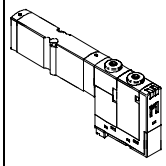
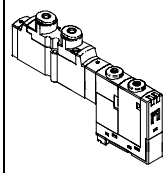
| Product weight [g] | Approx. weights | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Valve function ordering code | M | J | N | K | B | G | E | X | I |
| Basic manifold block weight | 125 | | | | | | | | |
| Additional manifold block weight per valve position | 40 | | | | | | | | |
| Individual block | 45 | | | | | | | | |
| per valve sub-base | 40 | | | | | | | | |
| Fieldbus connection | 150 | | | | | | | | |

# Valve terminal type 82 CPASC1, Smart Cubic

Technical data

FESTO

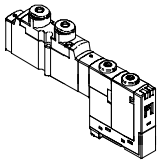


| Standard nominal flow rate [l/min] | | | | | | |
|---|---|---|---|---|---|---|
| | Code | Valve function | Valve | Individual block | CPASC valve terminal with multi-pin plug connection/individual PI connections | CPASC valve terminal with individual horizontal connections |
|  | **Sub-base valve** | | | | | |
| | M | 5/2-way valve, single solenoid | 220 | 170 | 150 | 120 |
| | J | 5/2-way valve, double solenoid | 220 | 170 | 150 | 120 |
| | N | 2x 3/2-way valve, normally open | 220 | 170 | 150 | 120 |
| | K | 2x 3/2-way valve, normally closed | 180 | 150 | 120 | 120 |
| | B | 5/3-way valve, mid-position pressurised | 220 | 150 | 120 | 120 |
| | G | 5/3-way valve, mid-position closed | 180 | 150 | 120 | 120 |
| | E | 5/3-way valve, mid-position exhausted | 180 | 150 | 120 | 120 |
| | X | 1x 3/2-way valve | 120 | – | 100 | 85 |
| | I | 2x 2/2-way valve | 150 | 140 | 140 | 120 |
|  | **Semi in-line valve with working port M5** | | | | | |
| | M | 5/2-way valve, single solenoid | 200 | 180 | 180 | 180 |
| | J | 5/2-way valve, double solenoid | 200 | 180 | 180 | 180 |
| | N | 2x 3/2-way valve, normally open | 200 | 180 | 180 | 180 |
| | K | 2x 3/2-way valve, normally closed | 150 | 150 | 150 | 150 |
| | B | 5/3-way valve, mid-position pressurised | 180 | 180 | 180 | 180 |
| | G | 5/3-way valve, mid-position closed | 150 | 150 | 150 | 150 |
| | E | 5/3-way valve, mid-position exhausted | 180 | 170 | 180 | 170 |
| | X | 1x 3/2-way valve | 120 | – | 120 | 120 |
| | I | 2x 2/2-way valve | 150 | 150 | 150 | 150 |

# Valve terminal type 82 CPASC1, Smart Cubic

Technical data

FESTO

| Standard nominal flow rate [l/min] | | | | | | |
|---|---|---|---|---|---|---|
| | Code | Valve function | Valve | Individual block | CPASC valve terminal with multi-pin plug connection/individual PI connections | CPASC valve terminal with individual horizontal connections |
|  | **Semi in-line valve, working port with QS-3 fitting** | | | | | |
| | M | 5/2-way valve, single solenoid | 140 | 140 | 140 | 140 |
| | J | 5/2-way valve, double solenoid | 140 | 140 | 140 | 140 |
| | N | 2x 3/2-way valve, normally open | 140 | 140 | 140 | 140 |
| | K | 2x 3/2-way valve, normally closed | 130 | 130 | 130 | 130 |
| | B | 5/3-way valve, mid-position pressurised | 140 | 140 | 140 | 140 |
| | G | 5/3-way valve, mid-position closed | 130 | 130 | 130 | 130 |
| | E | 5/3-way valve, mid-position exhausted | 140 | 140 | 140 | 140 |
| | X | 1x 3/2-way valve | 100 | – | 100 | 100 |
| | I | 2x 2/2-way valve | 130 | 130 | 130 | 130 |
| | | | | | | |
| | **Semi in-line valve, working port with QS-4 fitting** | | | | | |
| | M | 5/2-way valve, single solenoid | 180 | 170 | 180 | 180 |
| | J | 5/2-way valve, double solenoid | 180 | 170 | 180 | 180 |
| | N | 2x 3/2-way valve, normally open | 180 | 170 | 180 | 180 |
| | K | 2x 3/2-way valve, normally closed | 150 | 150 | 150 | 150 |
| | B | 5/3-way valve, mid-position pressurised | 180 | 170 | 180 | 170 |
| | G | 5/3-way valve, mid-position closed | 150 | 150 | 150 | 150 |
| | E | 5/3-way valve, mid-position exhausted | 170 | 170 | 170 | 170 |
| | X | 1x 3/2-way valve | 120 | – | 120 | 120 |
| | I | 2x 2/2-way valve | 150 | 140 | 150 | 150 |

## Pneumatic equipment

Operate your equipment with unlubricated compressed air if possible. Festo valves and cylinders are designed for operation under normal use without any additional lubrication, yet still have a long service life. The quality of compressed air downstream from the compressor must correspond to that of unlubricated compressed air. If possible, do not operate all of your equipment with lubricated compressed air. The lubricators should, where possible, always be installed directly upstream of the cylinders used.

Incorrect additional oil and too high an oil content in the compressed air reduces the service life of a valve terminal.
Use Festo special oil OFSW-32 or the alternatives listed in the Festo catalogue (as specified in DIN 51 524-HLP32; basic oil viscosity 32 CST at 40 °C).

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

**Mineral oils**
When using mineral oils (e.g. HLP oils to DIN 51 524, parts 1 through 3) or similar oils based on poly-alpha-olefins (PAO), the maximum residual oil content of 5 mg/m$^3$ must not be exceeded (see ISO 8573-1 Class 4).
A higher residual oil content irrespective of the compressor oil cannot be permitted, as the basic lubricant would be flushed out over time.

# Valve terminal type 82 CPASC1, Smart Cubic

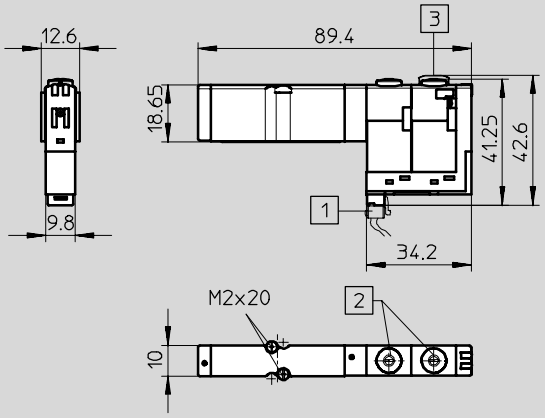
Technical data

FESTO

## Dimensions – Sub-base valve

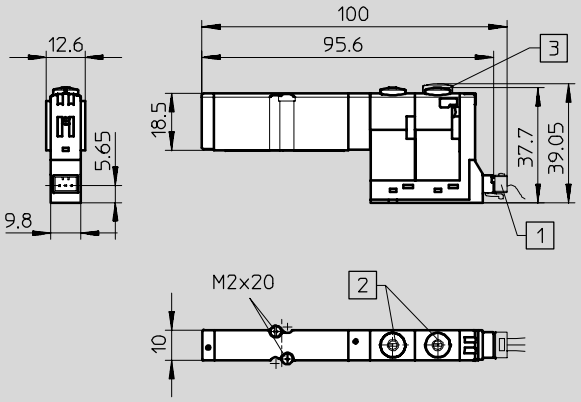
Download CAD data ➔ **www.festo.com/en/engineering**

With individual plug-in (PI) connection




1 Individual PI connection
2 Manual override (MO)
3 Manual override cover

With individual horizontal connection (HC)

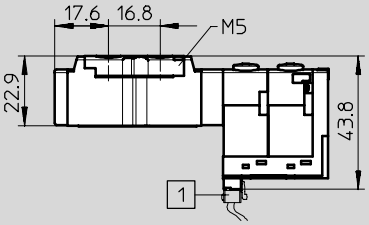



1 Individual horizontal connection
2 Manual override (MO)
3 Manual override cover

## Dimensions – Semi in-line valve with working port M5

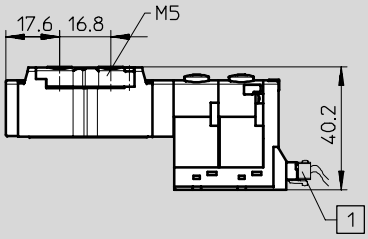
Download CAD data ➔ **www.festo.com/en/engineering**

With individual plug-in (PI) connection




1 Individual PI connection

With individual horizontal connection (HC)

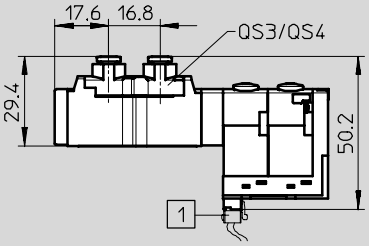



1 Individual horizontal connection

## Dimensions – Semi in-line valve with working port QS-3/QS-4

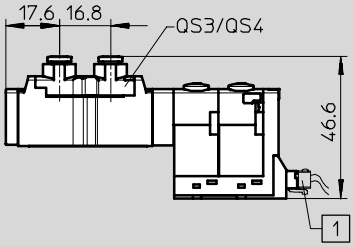
Download CAD data ➔ **www.festo.com/en/engineering**

With individual plug-in (PI) connection




1 Individual PI connection

With individual horizontal connection (HC)



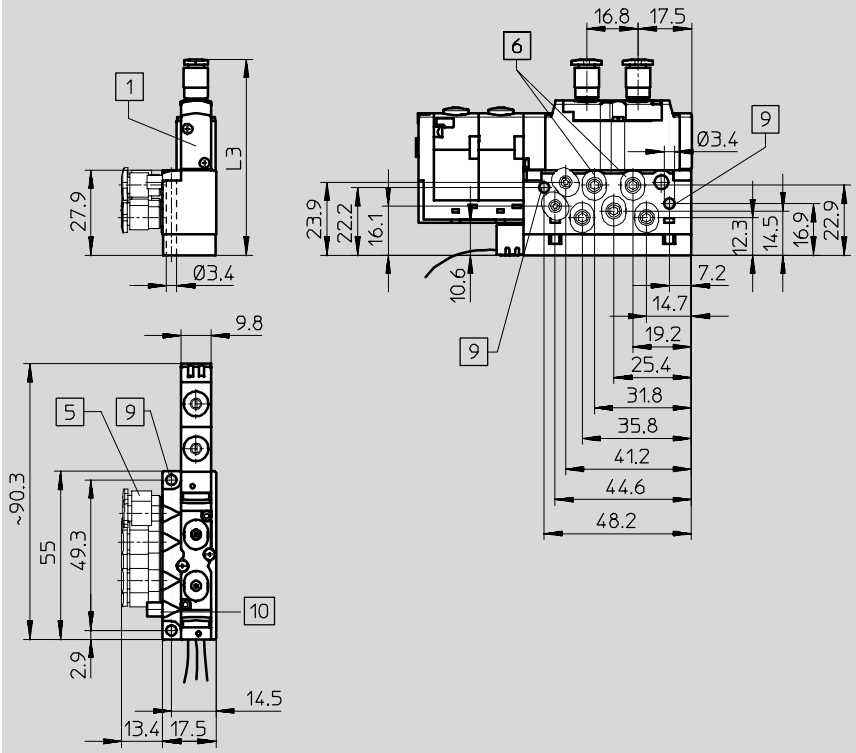

1 Individual horizontal connection

# Valve terminal type 82 CPASC1, Smart Cubic

Technical data

**Dimensions – Individual sub-base** Download CAD data ➔ **www.festo.com/en/engineering**

With individual plug-in (PI) connection




1 Semi in-line valve with M5 threaded connections
5 Push-in fitting
6 Working lines for sub-base valve (not required with semi in-line valves)
9 4x mounting holes
10 Silencer for exhaust air

| Valve type | | L3 |
|---|---|---|
| Semi in-line valve | with working port M5 | 50.8 |
| | with working port QS-3 | 57.2 |
| | with working port QS-4 | 57.2 |
| Sub-base valve | | 48.3 |
| Blanking plate | | 37.1 |

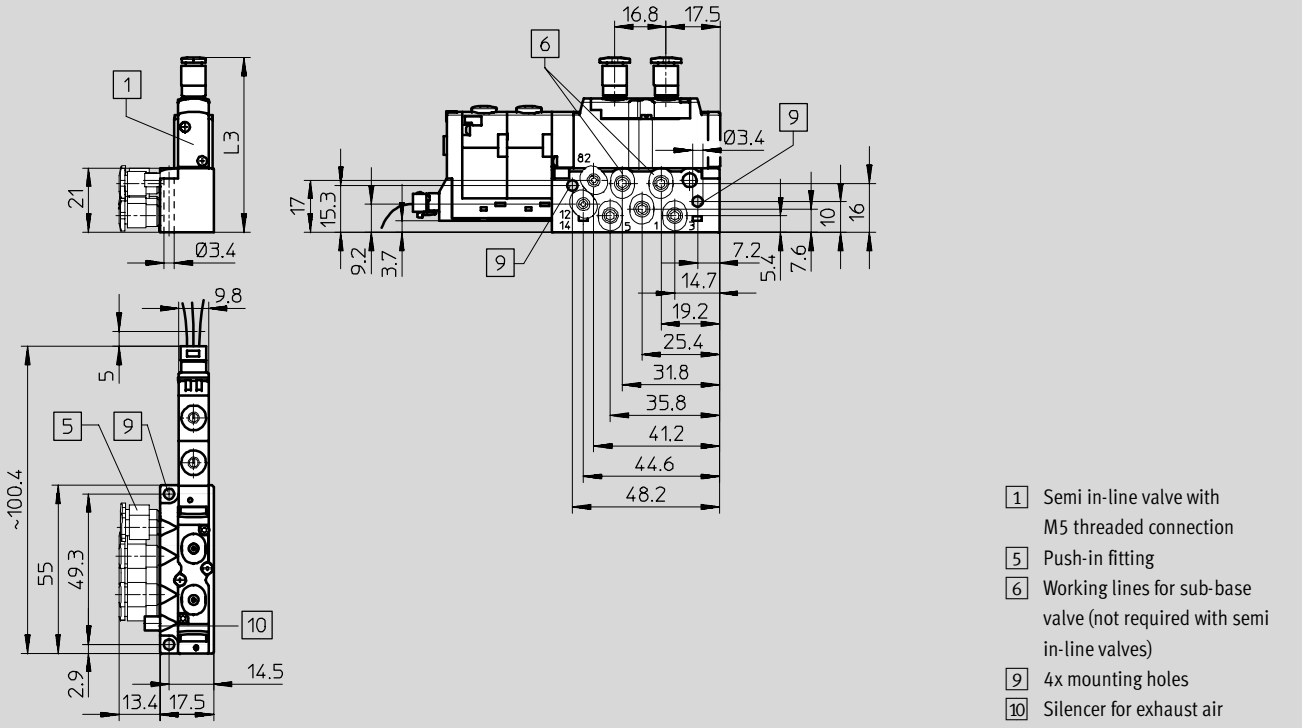
# Valve terminal type 82 CPASC1, Smart Cubic

Technical data

FESTO

**Dimensions – Individual sub-base** Download CAD data ➔ **www.festo.com/en/engineering**

With individual horizontal connection (HC)




1 Semi in-line valve with M5 threaded connection
5 Push-in fitting
6 Working lines for sub-base valve (not required with semi in-line valves)
9 4x mounting holes
10 Silencer for exhaust air

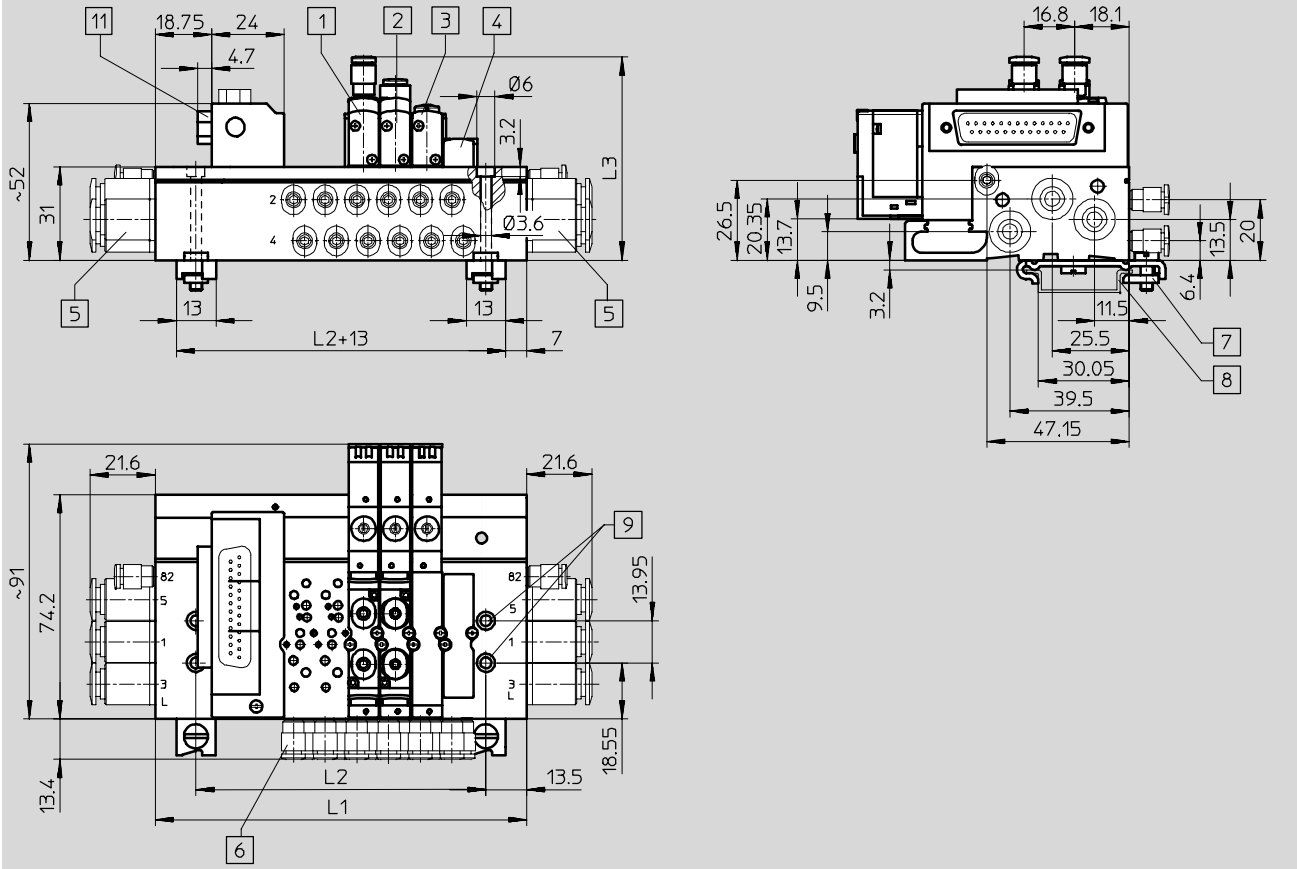
| Valve type | | L3 |
|---|---|---|
| Semi in-line valve | with working port M5 | 43.9 |
| | with working port QS-3 | 50.3 |
| | with working port QS-4 | 50.3 |
| Sub-base valve | | 41.4 |
| Blanking plate | | 30.2 |

# Valve terminal type 82 CPASC1, Smart Cubic

Technical data

**Dimensions – Valve terminal** Download CAD data ➔ **www.festo.com/en/engineering**

With Sub-D multi-pin plug connection




1 Semi in-line valve with M5 threaded connection
2 Semi in-line valve with integrated push-in fitting
3 Sub-base valve
4 Blanking plate for vacant position
5 Push-in fitting
6 Working lines for sub-base valves (not required with semi in-line valves)
7 Mounting for H-rail TH 35-7.5 EN60 715
8 H-rail
9 4x mounting holes
11 Sub-D multi-pin plug connection, 25-pin, 90° rotatable

| Valve positions | L1 | L2 |
|---|---|---|
| 4 | 102 | 75 |
| 6 | 123 | 96 |
| 8 | 144 | 117 |
| 10 | 165 | 138 |
| 12 | 186 | 159 |
| 16 | 228 | 201 |
| 20 | 270 | 243 |

| Valve type | | L3 |
|---|---|---|
| Semi in-line valve | with working port M5 | 53.9 |
| | with working port QS-3 | 60.3 |
| | with working port QS-4 | 60.3 |
| Sub-base valve | | 51.4 |
| Blanking plate | | 40.2 |

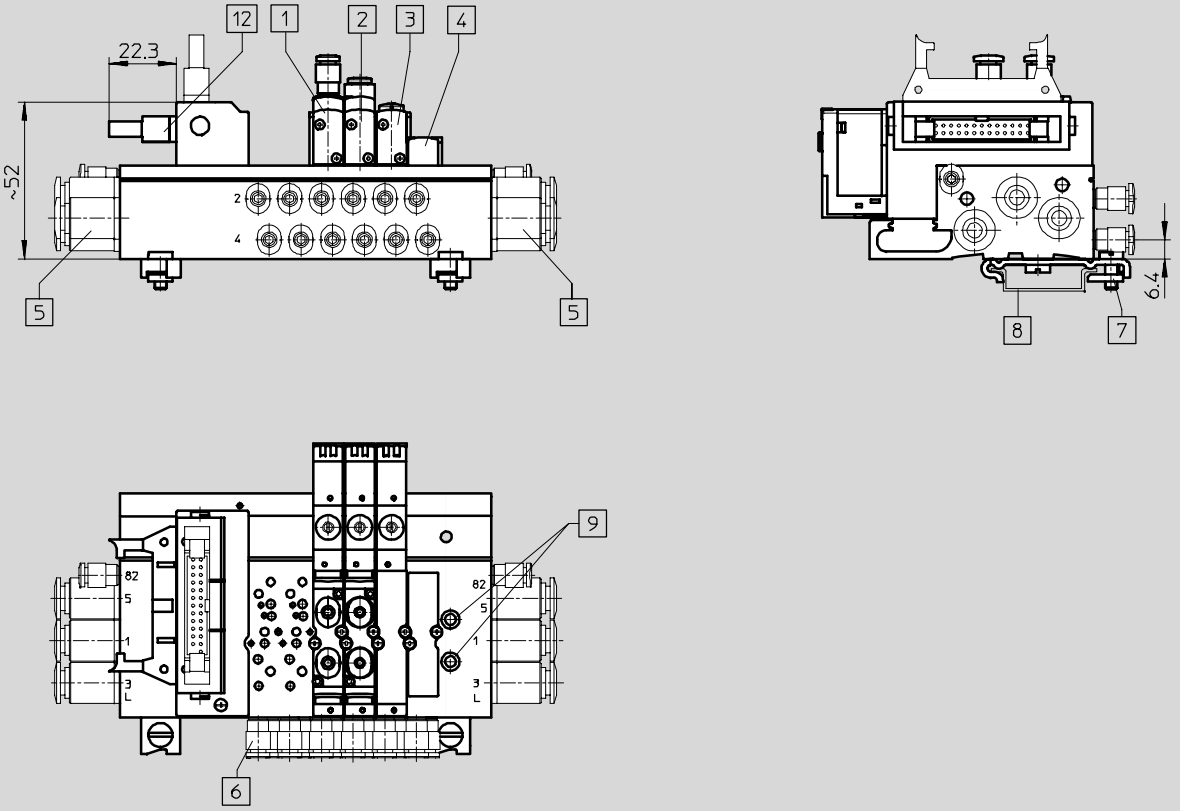
# Valve terminal type 82 CPASC1, Smart Cubic

Technical data

FESTO

**Dimensions – Valve terminal** Download CAD data ➔ **www.festo.com/en/engineering**

With multi-pin connector for flat cable




1 Semi in-line valve with M5 threaded connection
2 Semi in-line valve with integrated push-in fitting
3 Sub-base valve
4 Blanking plate for vacant position
5 Push-in fitting
6 Working lines for sub-base valves (not required with semi in-line valves)
7 Mounting for H-rail TH 35-7.5 EN60 715
8 H-rail
9 4x mounting holes
12 Connector for flat cable, 26-pin, 90° rotatable

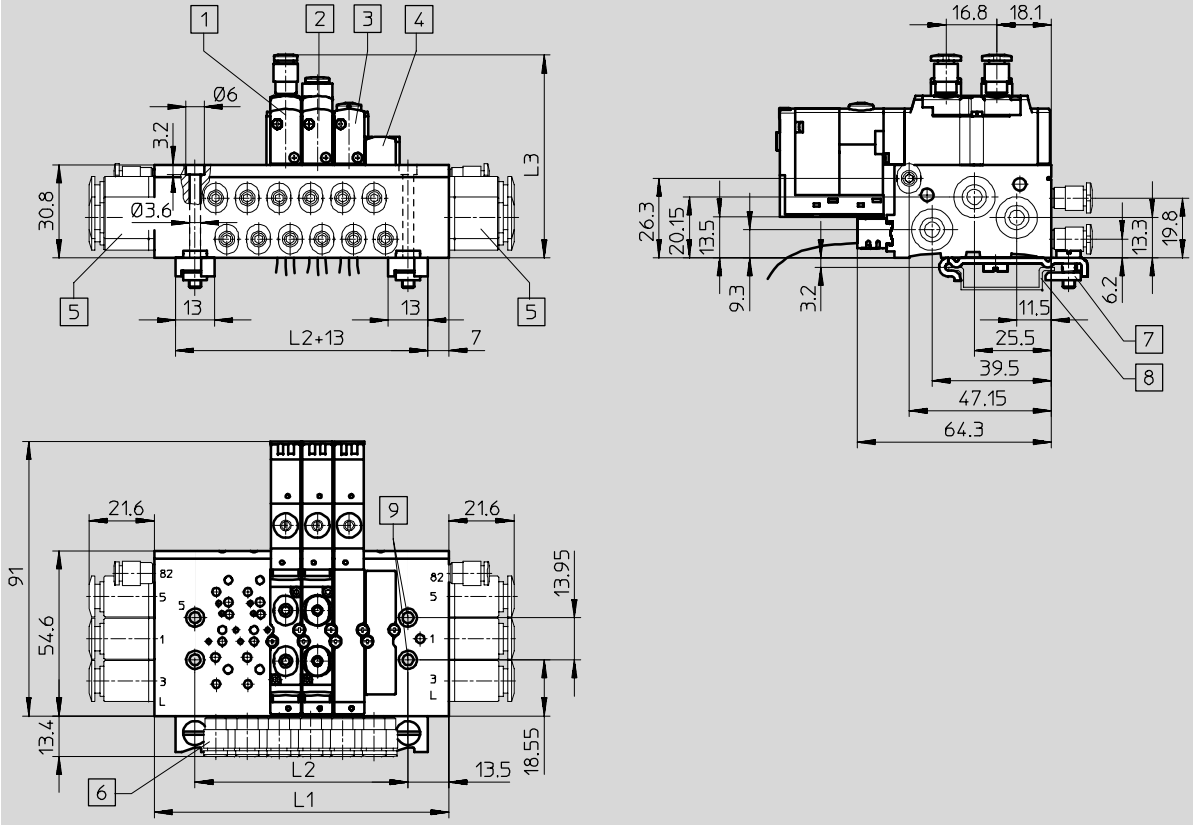
# Valve terminal type 82 CPASC1, Smart Cubic

Technical data

FESTO

**Dimensions – Valve terminal** Download CAD data ➔ **www.festo.com/en/engineering**

With individual plug-in (PI) connection




1 Semi in-line valve with M5 threaded connection
2 Semi in-line valve with integrated push-in fitting
3 Sub-base valve
4 Blanking plate for vacant position
5 Push-in fitting
6 Working lines for sub-base valves (not required with semi in-line valves)
7 Mounting for H-rail TH 35-7.5 EN60 715
8 H-rail
9 4x mounting holes

| Valve positions | L1 | L2 |
|---|---|---|
| 2 | 55 | 28.5 |
| 4 | 76.5 | 49.5 |
| 6 | 97.5 | 70.5 |
| 8 | 118.5 | 91.5 |
| 10 | 139.5 | 112.5 |
| 12 | 160.5 | 133.5 |
| 16 | 202.5 | 175.5 |

| Valve type | | L3 |
|---|---|---|
| Semi in-line valve | with working port M5 | 53.7 |
| | with working port QS-3 | 60.1 |
| | with working port QS-4 | 60.1 |
| Sub-base valve | | 51.2 |
| Blanking plate | | 40 |

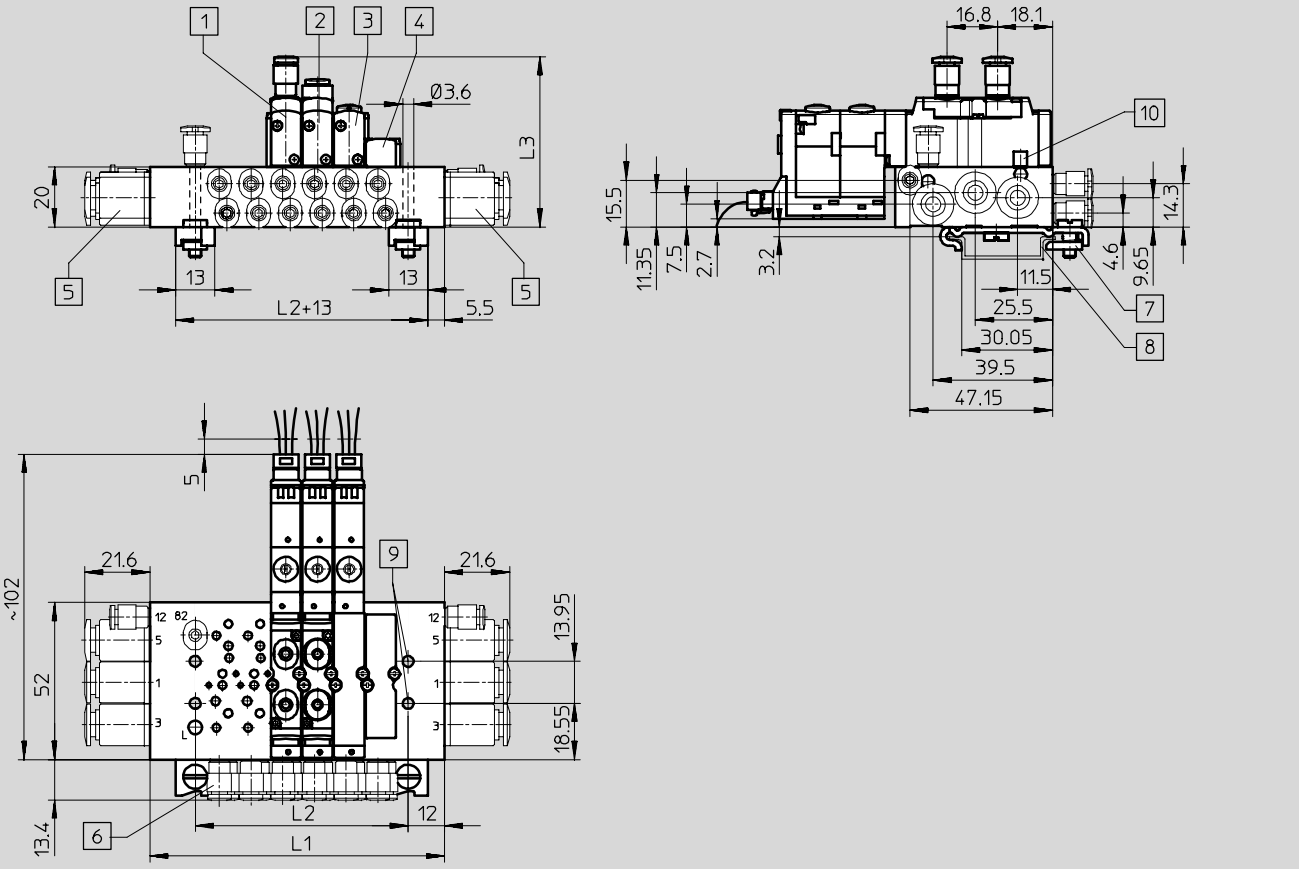
# Valve terminal type 82 CPASC1, Smart Cubic

Technical data

FESTO

**Dimensions – Valve terminal** Download CAD data ➔ **www.festo.com/en/engineering**

With individual horizontal connection (HC)




1 Semi in-line valve with M5 threaded connection
2 Semi in-line valve with integrated push-in fitting
3 Sub-base valve
4 Blanking plate for vacant position
5 Push-in fitting
6 Working lines for sub-base valves (not required with semi in-line valves)
7 Mounting for H-rail TH 35-7.5 EN60 715
8 H-rail
9 4x mounting holes
10 Silencer for exhaust air

| Valve positions | L1 | L2 |
|---|---|---|
| 2 | 54.5 | 29 |
| 4 | 75.5 | 50 |
| 6 | 96.5 | 71 |
| 8 | 117.5 | 92 |
| 10 | 138.5 | 113 |
| 12 | 159.5 | 134 |
| 16 | 201.5 | 176 |

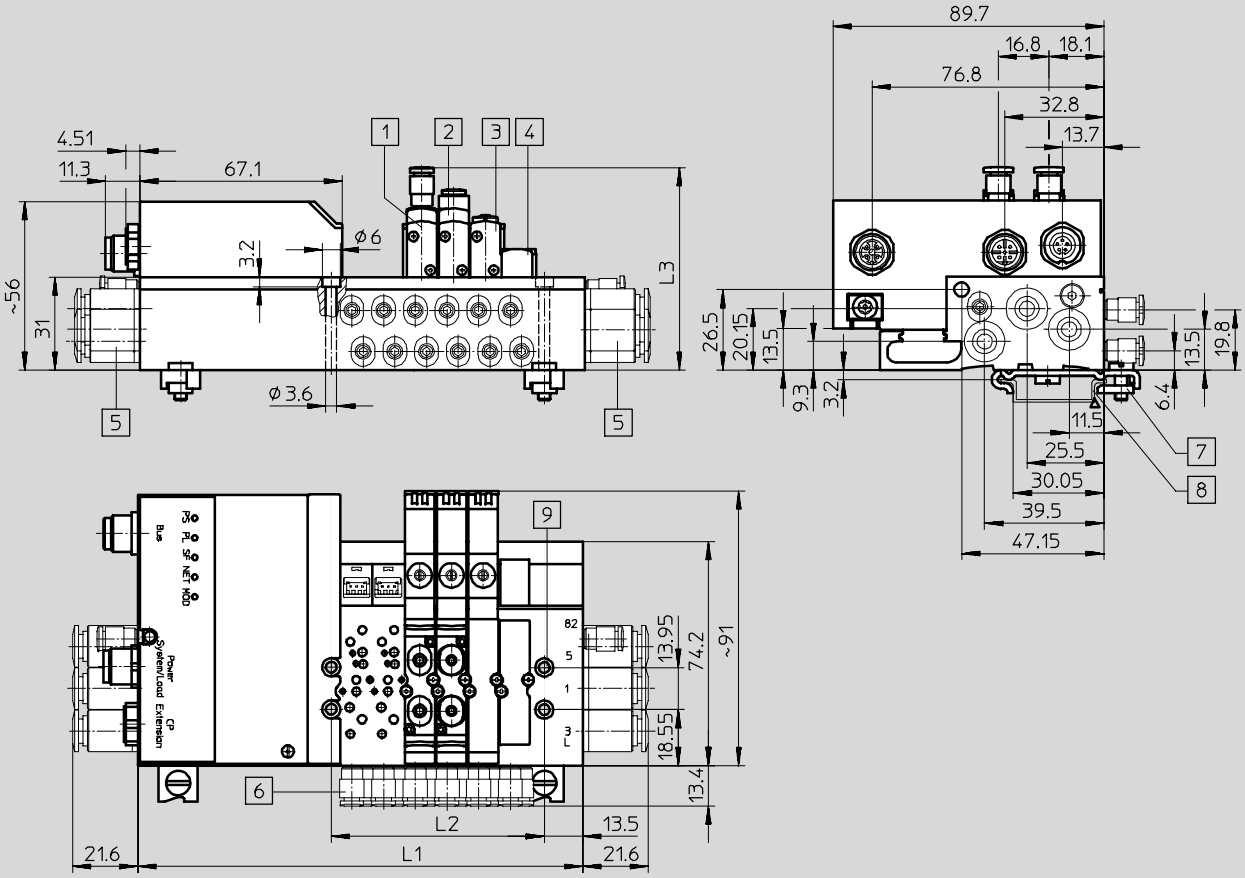
| Valve type | | L3 |
|---|---|---|
| Semi in-line valve | with working port M5 | 42.9 |
| | with working port QS-3 | 49.3 |
| | with working port QS-4 | 49.3 |
| Sub-base valve | | 40.4 |
| Blanking plate | | 29.2 |

# Valve terminal type 82 CPASC1, Smart Cubic

Technical data

FESTO

**Dimensions – Fieldbus** Download CAD data ➔ **www.festo.com/en/engineering**




1 Semi in-line valve with M5 threaded connection
2 Semi in-line valve with integrated push-in fitting
3 Sub-base valve
4 Blanking plate for vacant position
5 Push-in fitting
6 Working lines for sub-base valves (not required with semi in-line valves)
7 Mounting for H-rail TH 35-7.5 EN60 715
8 H-rail
9 4x mounting holes

| Valve positions | L1 | L2 |
|---|---|---|
| 4 | 127.2 | 49.5 |
| 6 | 148.2 | 70.5 |
| 8 | 169.2 | 91.5 |
| 10 | 190.2 | 112.5 |
| 12 | 211.2 | 133.5 |
| 16 | 253.2 | 175.5 |
| 20 | 295.2 | 217.5 |
| 24 | 337.2 | 259.5 |

| Valve type | | L3 |
|---|---|---|
| Semi in-line valve | with working port M5 | 53.9 |
| | with working port QS-3 | 60.3 |
| | with working port QS-4 | 67.3 |
| Sub-base valve | | 51.4 |
| Blanking plate | | 40.2 |

# Valve terminal 82 CPASC1, Smart Cubic – Multi-pin

Ordering data – Modular products

FESTO

M **Mandatory data** →

| Module No. | Valve terminal | | Size | | Power supply | Electrical connection | | Position of working ports | Type of working ports | | Manual override | | Pneumatic supply | Pneumatic supply connection | Type of connections |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 529 045 | 82P | | 10 | | 1 | MS<br>MF | | P<br>A | B<br>E<br>F | | N<br>V | | S<br>T<br>V<br>X | L<br>R<br>B | H<br>D |
| **Ordering example** | | | | | | | | | | | | | | | |
| **529 045** | **82P** | – | **10** | – | **1** | | – | | | – | | – | | | |
| **1** | **2** | | **3** | | **4** | **5** | | **6** | **7** | | **8** | | **9** | **10** | **11** |

**Ordering table**

| Size | | | 10 | Conditions | Code | | Enter code |
|---|---|---|---|---|---|---|---|
| M | **1** | Module No. | **529 045** | | | | |
| | **2** | Valve terminal | Valve terminal type 82, Smart Cubic, CPASC1 | | **82P** | | 82P |
| | **3** | Size [mm] | 10 | | **-10** | | -10 |
| | **4** | Power supply [V] | Power supply for valves 24 DC | | **-1** | | -1 |
| | **5** | Electrical connection | Multi-pin plug connection for Sub-D, 25-pin | 1 | **MS** | | |
| | | | Multi-pin plug connection for flat cable, 26-pin | 2 | **MF** | | |
| | **6** | Position of working ports | Working ports on valve | | **-P** | | |
| | | | Working ports on sub-base | | **-A** | | |
| | **7** | Type of working ports | Threaded connection M5 | | **B** | | |
| | | | Push-in fitting QS-3 | | **E** | | |
| | | | Push-in fitting QS-4 | | **F** | | |
| | **8** | Manual override | Manual override, push-in/detenting | | **-N** | | |
| | | | Manual override blocked | | **-V** | | |
| | **9** | Pneumatic supply | Internal pilot air supply, exhausting via silencer | | **-S** | | |
| | | | External pilot air supply, exhausting via silencer | | **-T** | | |
| | | | Internal pilot air supply, ducted exhaust air | | **-V** | | |
| | | | External pilot air supply, ducted exhaust air | | **-X** | | |
| | **10** | Pneumatic supply connection | Supply at left | | **L** | | |
| | | | Supply at right | | **R** | | |
| | | | Supply at both ends | | **B** | | |
| | **11** | Type of connections | Push-in fitting QS-8 | | **H** | | |
| ↓ | | | Threaded connection G1⁄8 | | **D** | | |

1 **MS** At least 2 valve positions must be equipped.

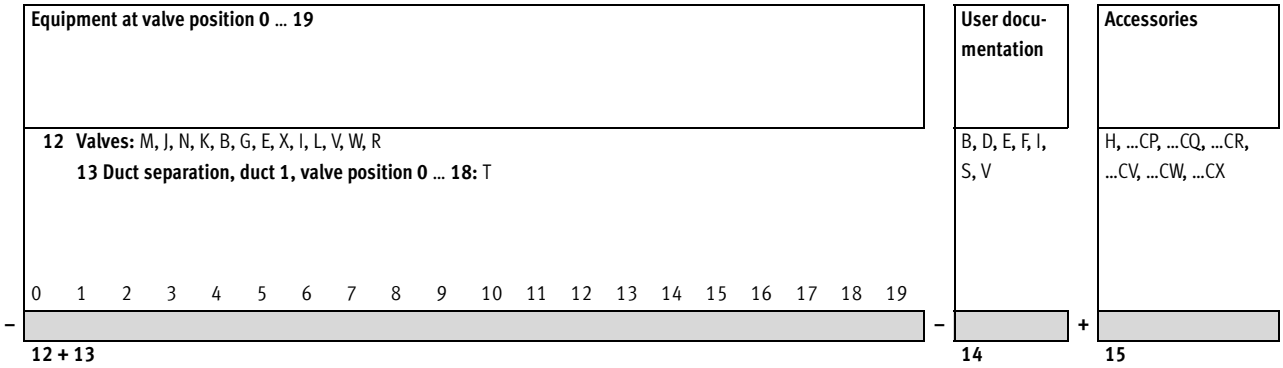
2 **MF** At least 4 valve positions must be equipped.

# Valve terminal 82 CPASC1, Smart Cubic – Multi-pin

Ordering data – Modular products

FESTO

M **Mandatory data** | O **Options**




**Ordering table**

| Size | | | 10 | Conditions | Code | | Enter code |
|---|---|---|---|---|---|---|---|
| ↓ | **12** | Equipment at valve position 0 ... 19 | | 3 | **-** | | - |
| M | | Valves | 5/2-way valve, single solenoid | | **M** | | Enter equipment selection for valve positions in order code |
| | | | 5/2-way valve, double solenoid | | **J** | | |
| | | | 2x 3/2-way valve, normally open | | **N** | | |
| | | | 2x 3/2-way valve, normally closed | | **K** | | |
| | | | 5/3-way valve, mid-position pressurised | | **B** | | |
| | | | 5/3-way valve, mid-position closed | | **G** | | |
| | | | 5/3-way valve, mid-position exhausted | | **E** | | |
| | | | 3/2-way valve, normally closed, external supply air | | **X** | | |
| | | | 2x 2/2-way valve, normally closed, dual compressed air supply | | **I** | | |
| | | | Vacant position | | **L** | | |
| | | | Duct separation, duct 3 separate | 4 | **V** | | |
| | | | Duct separation, duct 5 separate | 4 | **W** | | |
| | | | Duct separation, duct 3/5 separate | 4 | **R** | | |
| | **13** | Duct separation, duct 1, valve position 0 ... 18 | Duct 1 separate | 4 | **T** | | |
| | **14** | User documentation | Express waiver - no manual to be included (already available) | | **-B** | | |
| | | | Manuals, German | | **-D** | | |
| | | | Manuals, English | | **-E** | | |
| | | | Manuals, French | | **-F** | | |
| | | | Manuals, Italian | | **-I** | | |
| | | | Manuals, Spanish | | **-S** | | |
| | | | Manuals, Swedish | | **-V** | | |
| O | **15** | Accessories | | | **+** | | + |
| | | H-rail mounting | 1 | | **H** | | |
| | | Connecting cable, Sub-D, 25-pin (25-strand) 2.5 m | 1 ... 99 | 5 | **...CP** | | |
| | | Connecting cable, Sub-D, 25-pin (25-strand) 5 m | 1 ... 99 | 5 | **...CQ** | | |
| | | Connecting cable, Sub-D, 25-pin (25-strand) 10 m | 1 ... 99 | 5 | **...CR** | | |
| | | Connecting cable, Sub-D, 25-pin (12-strand) 2.5 m | 1 ... 99 | 5 | **...CV** | | |
| | | Connecting cable, Sub-D, 25-pin (12-strand) 5 m | 1 ... 99 | 5 | **...CW** | | |
| | | Connecting cable, Sub-D, 25-pin (12-strand) 10 m | 1 ... 99 | 5 | **...CX** | | |

3 **Equipment at valve position 0 ... 19**
Max. number of coils: 20
Coil usage of the valves: I, J, K, L, N, B, E, G: 2 coils
M, X: 1 coil
With 4 ... 12 valve positions: Only with valve M, N, K, X, I, L from position 9
With 4 ... 16 valve positions: Only with valve M, N, K, X, I, L from position 5
With 4 ... 20 valve positions: Only with valve M, N, K, X, I, L

4 **V, W, R, T** Only with pneumatic supply connection B (pneumatic supply connection at both ends).
Only one duct separation per valve terminal can be selected for the supply and for the exhaust.
Duct separation T only is permissible at the first valve position.
Duct separation is not permissible at the last valve position.

5 **CP, CQ, CR, CV, CW, CX**
Only in combination with electrical connection MS, whereby CV, CW and CX is only permissible with 2, 4 or 6 valve positions.

# Valve terminal type 82 CPASC1, with individual plug-in connection

Ordering data – Modular products

FESTO

M **Mandatory data** →

| Module No. | Valve terminal | Size | Power supply | Electrical connection | Position of working ports | Type of working ports | Manual override | Pneumatic supply | Pneumatic supply connection | Type of connections |
|---|---|---|---|---|---|---|---|---|---|---|
| 529 045 | 82P | 10 | 1 | IP<br>IQ | P<br>A | B<br>E<br>F | N<br>V | S<br>T<br>V<br>X | L<br>R<br>B | H<br>D |
| **Ordering example** | | | | | | | | | | |
| **529 045** | **82P** | **10** | **1** | | | | | | | |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |

**Ordering table**

| Size | | | 10 | Conditions | Code | Enter code |
|---|---|---|---|---|---|---|
| M | **1** | Module No. | **529 045** | | | |
| | **2** | Valve terminal | Valve terminal type 82, Smart Cubic, CPA-SC | | **82P** | 82P |
| | **3** | Size [mm] | 10 | | **-10** | -10 |
| | **4** | Power supply [V] | Power supply for valves 24 DC | | **-1** | -1 |
| | **5** | Electrical connection | Connecting cable 0.5 m, for individual plug-in connection, 2 coils | 1 | **IP** | |
| | | | Connecting cable 1 m, for individual plug-in connection, 2 coils | 1 | **IQ** | |
| | **6** | Position of working ports | Working ports on valve | | **-P** | |
| | | | Working ports on sub-base | | **-A** | |
| | **7** | Type of working ports | Threaded connection M5 | | **B** | |
| | | | Push-in fitting QS-3 | | **E** | |
| | | | Push-in fitting QS-4 | | **F** | |
| | **8** | Manual override | Manual override, push-in/detenting | | **-N** | |
| | | | Manual override blocked | | **-V** | |
| | **9** | Pneumatic supply | Internal pilot air supply, exhausting via silencer | | **-S** | |
| | | | External pilot air supply, exhausting via silencer | | **-T** | |
| | | | Internal pilot air supply, ducted exhaust air | | **-V** | |
| | | | External pilot air supply, ducted exhaust air | | **-X** | |
| | **10** | Pneumatic supply connection | Supply at left | | **L** | |
| | | | Supply at right | | **R** | |
| | | | Supply at both ends | | **B** | |
| | **11** | Type of connections | Push-in fitting QS-8 | | **H** | |
| ↓ | | | Threaded connection G1⁄8 | | **D** | |

1 **IP, IQ** Number of valve positions: 2, 4, 6, 8, 10, 12, 16.

**Transfer order code**

| 529 045 | 82P | – | 10 | – | 1 | | – | | | – | | | – | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | **2** | | **3** | | **4** | **5** | | **6** | **7** | | **8** | | | **9** | **10** | **11** |

# Valve terminal type 82 CPASC1, with individual plug-in connection

Ordering data – Modular products

FESTO

| M Mandatory data | | O Options |
|---|---|---|
| Equipment at valve position 0 ... 15 | User documentation | Accessories |
| **12 Valves:** M, J, N, K, B, G, E, X, I, L, V, W, R<br>**13 Duct separation, duct 1, valve position 0 ... 14:** T | B, D, E, F, I, S, V | H |
| 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 | | |
| – **12 + 13** | – **14** | + **15** |

**Ordering table**

| Size | | | 10 | Condi-tions | Code | | Enter code |
|---|---|---|---|---|---|---|---|
| ↓ | **12** | Equipment at valve position 0 ... 15 | | | **-** | | - |
| M | | Valves | 5/2-way valve, single solenoid | | **M** | | Enter equip-ment selection for valve positions in order code |
| | | | 5/2-way valve, double solenoid | | **J** | | |
| | | | 2x 3/2-way valve, normally open | | **N** | | |
| | | | 2x 3/2-way valve, normally closed | | **K** | | |
| | | | 5/3-way valve, mid-position pressurised | | **B** | | |
| | | | 5/3-way valve, mid-position closed | | **G** | | |
| | | | 5/3-way valve, mid-position exhausted | | **E** | | |
| | | | 3/2-way valve, normally closed, external supply air | | **X** | | |
| | | | 2x 2/2-way valve, normally closed, dual compressed air supply | | **I** | | |
| | | | Vacant position | | **L** | | |
| | | | Duct separation, duct 3 separate | 2 | **V** | | |
| | | | Duct separation, duct 5 separate | 2 | **W** | | |
| | | | Duct separation, duct 3/5 separate | 2 | **R** | | |
| | **13** | Duct separation, duct 1, valve position 0 ... 14 | Duct 1 separate | 2 | **T** | | |
| | **14** | User documentation | Express waiver - no manual to be included (already available) | | **-B** | | |
| | | | Manuals, German | | **-D** | | |
| | | | Manuals, English | | **-E** | | |
| | | | Manuals, French | | **-F** | | |
| | | | Manuals, Italian | | **-I** | | |
| | | | Manuals, Spanish | | **-S** | | |
| | | | Manuals, Swedish | | **-V** | | |
| O | **15** | Accessories | | | **+** | | + |
| | | H-rail mounting | 1 | | **H** | | |

2 **V, W, R, T** Only with pneumatic supply connection B (pneumatic supply at both ends).
Only one duct separation per valve terminal can be selected for the supply and for the exhaust.
Duct separation T only is permissible at the first valve position.
Duct separation is not permissible at the last valve position.

**Transfer order code**

| 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 | | |
|---|---|---|
| – **12 + 13** | – **14** | + **15** |

# Valve terminal type 82 CPASC1, with individual horizontal connection

Ordering data – Modular products

FESTO

M **Mandatory data** →

| Module No. | Valve terminal | Size | | Power supply | Electrical connection | | Position of working ports | Type of working ports | | Manual override | | Pneumatic supply | Pneumatic supply connection | Type of connections |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 529 045 | 82P | 10 | | 1 | IH | | P<br>A | B<br>E<br>F | | N<br>V | | S<br>T<br>V<br>X | L<br>R<br>B | H<br>D |
| **Ordering example** | | | | | | | | | | | | | | |
| **529 045** | **82P** | **10** | – | **1** | **IH** | – | | | – | | – | | | |
| **1** | **2** | **3** | | **4** | **5** | | **6** | **7** | | **8** | | **9** | **10** | **11** |

**Ordering table**

| Size | | | 10 | Conditions | Code | | Enter code |
|---|---|---|---|---|---|---|---|
| M | **1** | Module No. | **529 045** | | | | |
| | **2** | Valve terminal | Valve terminal type 82, Smart Cubic, CPA-SC | | **82P** | | 82P |
| | **3** | Size [mm] | 10 | | **-10** | | -10 |
| | **4** | Power supply [V] | Power supply for valves 24 DC | | **-1** | | -1 |
| | **5** | Electrical connection | Individual horizontal electrical connection | 1 | **IH** | | IH |
| | **6** | Position of working ports | Working ports on valve | | **-P** | | |
| | | | Working ports on sub-base | | **-A** | | |
| | **7** | Type of working ports | Threaded connection M5 | | **B** | | |
| | | | Push-in fitting QS-3 | | **E** | | |
| | | | Push-in fitting QS-4 | | **F** | | |
| | **8** | Manual override | Manual override, push-in/detenting | | **-N** | | |
| | | | Manual override blocked | | **-V** | | |
| | **9** | Pneumatic supply | Internal pilot air supply, exhausting via silencer | | **-S** | | |
| | | | External pilot air supply, exhausting via silencer | | **-T** | | |
| | | | Internal pilot air supply, ducted exhaust air | | **-V** | | |
| | | | External pilot air supply, ducted exhaust air | | **-X** | | |
| | **10** | Pneumatic supply connection | Supply at left | | **L** | | |
| | | | Supply at right | | **R** | | |
| | | | Supply at both ends | | **B** | | |
| ↓ | **11** | Type of connections | Push-in fitting QS-8 | | **H** | | |
| | | | Threaded connection G1⁄8 | | **D** | | |

1 **IH** Number of valve positions: 2, 4, 6, 8, 10, 12, 16.

**Transfer order code**

| 529 045 | 82P | – | 10 | – | 1 | IH | – | | | – | | – | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | **2** | | **3** | | **4** | **5** | | **6** | **7** | | **8** | | **9** | **10** | **11** |

# Valve terminal type 82 CPASC1, with individual horizontal connection

Ordering data – Modular products

FESTO

| M Mandatory data | | | O Options |
|---|---|---|---|
| Equipment at valve position 0 ... 15 | | User documentation | Accessories |
| 12 **Valves:** M, J, N, K, B, G, E, X, I, L | | B, D, E, F, I, S, V | H, ...CD, ...CE, ...CF, ...CG, ...CH, ...CI, ...CJ, ...CK |
| 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 | | | |
| – | – | | + |
| 12 | | 13 | 14 |

**Ordering table**

| Size | | | 10 | Conditions | Code | | Enter code |
|---|---|---|---|---|---|---|---|
| ↓ | 12 | Equipment at valve position 0 ... 15 | | | - | | - |
| M | | Valves | 5/2-way valve, single solenoid | | **M** | | Enter equipment selection for valve positions in order code |
| | | | 5/2-way valve, double solenoid | | **J** | | |
| | | | 2x 3/2-way valve, normally open | | **N** | | |
| | | | 2x 3/2-way valve, normally closed | | **K** | | |
| | | | 5/3-way valve, mid-position pressurised | | **B** | | |
| | | | 5/3-way valve, mid-position closed | | **G** | | |
| | | | 5/3-way valve, mid-position exhausted | | **E** | | |
| | | | 3/2-way valve, normally closed, external supply air | | **X** | | |
| | | | 2x 2/2-way valve, normally closed, dual compressed air supply | | **I** | | |
| | | | Vacant position | | **L** | | |
| | 13 | User documentation | Express waiver - no manual to be included (already available) | | **-B** | | |
| | | | Manuals, German | | **-D** | | |
| | | | Manuals, English | | **-E** | | |
| | | | Manuals, French | | **-F** | | |
| | | | Manuals, Italian | | **-I** | | |
| | | | Manuals, Spanish | | **-S** | | |
| | | | Manuals, Swedish | | **-V** | | |
| O | 14 | Accessories | | | + | | + |
| | | H-rail mounting | 1 | | **H** | | |
| | | Connecting cable for individual connection, 2 coils, 0.5 m | 1 ... 99 | | **...CD** | | |
| | | Connecting cable for individual connection, 2 coils, 1 m | 1 ... 99 | | **...CE** | | |
| | | Connecting cable for individual connection, 2 coils, 2.5 m | 1 ... 99 | | **...CF** | | |
| | | Connecting cable for individual connection, 2 coils, 5 m | 1 ... 99 | | **...CG** | | |
| | | Connecting cable for individual connection, 1 coil, 0.5 m | 1 ... 99 | | **...CH** | | |
| | | Connecting cable for individual connection, 1 coil, 1 m | 1 ... 99 | | **...CI** | | |
| | | Connecting cable for individual connection, 1 coil, 2.5 m | 1 ... 99 | | **...CJ** | | |
| | | Connecting cable for individual connection, 1 coil, 5 m | 1 ... 99 | | **...CK** | | |

**Transfer order code**

| 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 | | | |
|---|---|---|---|
| – | – | | + |
| 12 | | 13 | 14 |

# Valve terminal type 82 CPASC1, with individual sub-base

Ordering data – Modular products

FESTO

M **Mandatory data** →

| Module No. | Valve terminal | Size | | Power supply | Electrical connection | | Position of working ports | Type of working ports | | Manual override | | Pneumatic supply | Pneumatic supply connection | Type of connections |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 529 045 | 82P | 10 | | 1 | SP<br>SQ<br>SH | | P<br>A | B<br>E<br>F | | N<br>V | | S<br>T<br>V<br>X | L | B<br>F |
| **Ordering example** | | | | | | | | | | | | | | |
| **529 045** | **82P** | **10** | – | **1** | | – | | | – | | – | | **L** | |
| **1** | **2** | **3** | | **4** | **5** | | **6** | **7** | | **8** | | **9** | **10** | **11** |

**Ordering table**

| Size | | | 10 | Conditions | Code | | Enter code |
|---|---|---|---|---|---|---|---|
| M | **1** | Module No. | **529 045** | | | | |
| | **2** | Valve terminal | Valve terminal type 82, Smart Cubic, CPA-SC | | **82P** | | 82P |
| | **3** | Size [mm] | 10 | | **-10** | | -10 |
| | **4** | Power supply [V] | Power supply for valves 24 DC | | **-1** | | -1 |
| | **5** | Electrical connection | Individual plug-in sub-base, connecting cable 0.5 m | 1 | **SP** | | |
| | | | Individual plug-in sub-base, connecting cable 1 m | 1 | **SQ** | | |
| | | | Individual sub-base, horizontal connection | 1 | **SH** | | |
| | **6** | Position of working ports | Working ports on valve | | **-P** | | |
| | | | Working ports on sub-base | | **-A** | | |
| | **7** | Type of working ports | Threaded connection M5 | | **B** | | |
| | | | Push-in fitting QS-3 | | **E** | | |
| | | | Push-in fitting QS-4 | | **F** | | |
| | **8** | Manual override | Manual override, push-in/detenting | | **-N** | | |
| | | | Manual override blocked | | **-V** | | |
| | **9** | Pneumatic supply | Internal pilot air supply, exhausting via silencer | | **-S** | | |
| | | | External pilot air supply, exhausting via silencer | | **-T** | | |
| | | | Internal pilot air supply, ducted exhaust air | | **-V** | | |
| | | | External pilot air supply, ducted exhaust air | | **-X** | | |
| | **10** | Pneumatic supply connection | Supply at left | | **L** | | L |
| | **11** | Type of connections | Threaded connection M5 | | **B** | | |
| ↓ | | | Push-in fitting QS-4 | | **F** | | |

1 **SP, SQ, SH** No user documentation selectable.

**Transfer order code**

| 529 045 | 82P | – | 10 | – | 1 | | – | | | – | | – | | L | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | **2** | | **3** | | **4** | **5** | | **6** | **7** | | **8** | | **9** | **10** | **11** |

# Valve terminal type 82 CPASC1, with individual sub-base

Ordering data – Modular products

FESTO

| M Mandatory data | O Options |
|---|---|
| **Equipment for valve positions** | **Accessories** |
| **12 Valves:** M, J, N, K, B, G, E, I | ...CD, ...CE, ...CF, ...CG, ...CH, ...CI, ...CJ, ...CK |
| – 12 | + 13 |

**Ordering table**

| Size | | | 10 | Condi-tions | Code | | Enter code |
|---|---|---|---|---|---|---|---|
| ↓ | 12 | Equipment for valve positions | | | - | | - |
| M | | Valves | 5/2-way valve, single solenoid | | M | | Enter equipment selection for valve positions in order code |
| | | | 5/2-way valve, double solenoid | | J | | |
| | | | 2x 3/2-way valve, normally open | | N | | |
| | | | 2x 3/2-way valve, normally closed | | K | | |
| | | | 5/3-way valve, mid-position pressurised | | B | | |
| | | | 5/3-way valve, mid-position closed | | G | | |
| | | | 5/3-way valve, mid-position exhausted | | E | | |
| | | | 2x 2/2-way valve, normally closed, dual compressed air supply | | I | | |
| O | 13 | Accessories | | | + | | + |
| | | Connecting cable for individual connection, 2 coils 0.5 m | 1 ... 99 | 2 | ...CD | | |
| | | 1 m | 1 ... 99 | 2 | ...CE | | |
| | | 2.5 m | 1 ... 99 | 2 | ...CF | | |
| | | 5 m | 1 ... 99 | 2 | ...CG | | |
| | | Connecting cable for individual connection, 1 coil 0.5 m | 1 ... 99 | 2 | ...CH | | |
| | | 1 m | 1 ... 99 | 2 | ...CI | | |
| | | 2.5 m | 1 ... 99 | 2 | ...CJ | | |
| | | 5 m | 1 ... 99 | 2 | ...CK | | |

2 **CD, CE, CF, CG, CH, CI, CJ, CK**
Only in combination with electrical connection SH.

**Transfer order code**

| – | | + |
|---|---|---|
| 12 | | 13 |

# Valve terminal 82 CPASC1, Smart Cubic – DeviceNet

Ordering data – Modular products

FESTO

M **Mandatory data** →

| Module No. | Valve terminal | Size | Electrical connection | Position of working ports | Type of working ports | Manual over-ride | Pneumatic supply | Pneumatic supply connec-tion | Type of connec-tions |
|---|---|---|---|---|---|---|---|---|---|
| 538 509 | 82P | 10 | DN | P<br>A | B<br>E<br>F | N<br>V | S<br>T<br>V<br>X | L<br>R<br>B | B<br>F<br>H<br>D |
| **Ordering example** | | | | | | | | | |
| **538 509** | **82P** | **10** | **DN** | **P** | **E** | **N** | **S** | **B** | **D** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |

**Ordering table**

| Size | | | 10 | Condi-tions | Code | Enter code |
|---|---|---|---|---|---|---|
| M | **1** | Module No. | **538 509** | | | |
| | **2** | Valve terminal | Valve terminal type 82, Smart Cubic, CPA-SC | | **82P** | 82P |
| | **3** | Size [mm] | 10 | | **-10** | -10 |
| | **4** | Electrical connection | DeviceNet | | **-DN** | -DN |
| | **5** | Position of working ports | Working ports on valve | | **-P** | |
| | | | Working ports on sub-base | | **-A** | |
| | **6** | Type of working ports | Threaded connection M5 | | **B** | |
| | | | Push-in fitting QS-3 | | **E** | |
| | | | Push-in fitting QS-4 | | **F** | |
| | **7** | Manual override | Manual override, push-in/detenting | | **-N** | |
| | | | Manual override blocked | | **-V** | |
| | **8** | Pneumatic supply | Internal pilot air supply, exhausting via silencer | | **-S** | |
| | | | External pilot air supply, exhausting via silencer | | **-T** | |
| | | | Internal pilot air supply, ducted exhaust air | | **-V** | |
| | | | External pilot air supply, ducted exhaust air | | **-X** | |
| | **9** | Pneumatic supply connection | Supply at left | | **L** | |
| | | | Supply at right | | **R** | |
| | | | Supply at both ends | | **B** | |
| | **10** | Type of connections | Threaded connection M5 | | **B** | |
| | | | Push-in fitting QS-4 | | **F** | |
| | | | Push-in fitting QS-8 | | **H** | |
| ↓ | | | Threaded connection G1⁄8 | | **D** | |

**Transfer order code**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **538 509** | **82P** | **10** | **DN** | | | | | | |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |

# Valve terminal 82 CPASC1, Smart Cubic – DeviceNet

Ordering data – Modular products

FESTO

| M Mandatory data | | | O Options |
|---|---|---|---|
| Equipment at valve position 0 ... 23 | | User documentation | Accessories |
| **11 Valves:** M, J, N, K, B, G, E, X, I, L, V, W, R<br>**12 Duct separation, duct 1, valve position 0 ... 22:** T | | D, E, F, I, S, V | H, ...D, ...M |
| Valve position<br>0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 | | | |
| – | | – | + |
| **11 + 12** | | **13** | **14** |

**Ordering table**

| Size | | | 10 | Conditions | Code | | Enter code |
|---|---|---|---|---|---|---|---|
| ↓ | **11** | Equipment at valve position 0 ... 23 | | 1 | - | | - |
| M | | Valves | 5/2-way valve, single solenoid | | **M** | | Enter equipment selection for valve positions in order code |
| | | | 5/2-way valve, double solenoid | | **J** | | |
| | | | 2x 3/2-way valve, normally open | | **N** | | |
| | | | 2x 3/2-way valve, normally closed | | **K** | | |
| | | | 5/3-way valve, mid-position pressurised | | **B** | | |
| | | | 5/3-way valve, mid-position closed | | **G** | | |
| | | | 5/3-way valve, mid-position exhausted | | **E** | | |
| | | | 3/2-way valve, normally closed, external supply air | | **X** | | |
| | | | 2x 2/2-way valve, normally closed, dual compressed air supply | | **I** | | |
| | | | Vacant position | | **L** | | |
| | | | Duct separation, duct 3 separate | 2 | **V** | | |
| | | | Duct separation, duct 5 separate | 2 | **W** | | |
| | | | Duct separation, duct 3/5 separate | 2 | **R** | | |
| | **12** | Duct separation, duct 1, valve position 0 ... 22 | Duct 1 separate | 2 | **T** | | |
| | **13** | User documentation | Manuals, German | | **-D** | | |
| | | | Manuals, English | | **-E** | | |
| | | | Manuals, French | | **-F** | | |
| | | | Manuals, Italian | | **-I** | | |
| | | | Manuals, Spanish | | **-S** | | |
| | | | Manuals, Swedish | | **-V** | | |
| O | **14** | Accessories | | | **+** | | + |
| | | H-rail mounting | 1 | | **H** | | |
| | | Connector plug DeviceNet straight | 1 ... 99 | | **...D** | | |
| | | Connector plug DeviceNet B-coded | 1 ... 99 | | **...M** | | |

1 **Equipment at valve position 0 ... 23**
Max. number of coils: 32
Coil usage of the valves: I, J, K, L, N, B, E, G: 2 coils
M, X: 1 coil

2 **V, W, R, T** Only with pneumatic supply connection B (pneumatic supply connection at both ends).
Only one duct separation per valve terminal can be selected for the supply and for the exhaust.
Duct separation T only is permissible at the first valve position. Duct separation is not permissible at the last valve position.

**Transfer order code**

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

– | | – | +

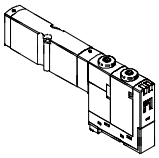
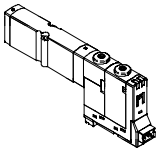
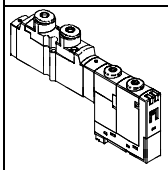
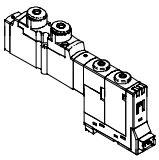
**11 + 12** **13** **14**

# Valve terminal type 82 CPASC1, Smart Cubic

Ordering data

FESTO

**Ordering data – Valves**

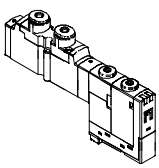
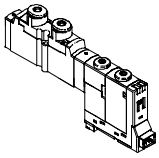
| | Code | Valve function | Electrical plug-in connection | | | Electrical horizontal connection | |
|---|---|---|---|---|---|---|---|
| | | | Type | Part No. | | Type | Part No. |
|  | **Sub-base valve** | | | | | | |
| | M | 5/2-way valve, single solenoid | **CPASC1-M1H-M-P-2,5** | **526 990** | | **CPASC1-M1H-M-H-2,5** | **527 008** |
| | J | 5/2-way valve, double solenoid | **CPASC1-M1H-J-P-2,5** | **526 992** | | **CPASC1-M1H-J-H-2,5** | **527 010** |
| | N | 2x 3/2-way valve, normally open | **CPASC1-M1H-N-P-2,5** | **526 994** | | **CPASC1-M1H-N-H-2,5** | **527 012** |
| | K | 2x 3/2-way valve, normally closed | **CPASC1-M1H-K-P-2,5** | **526 996** | | **CPASC1-M1H-K-H-2,5** | **527 014** |
|  | B | 5/3-way valve, mid-position pressurised | **CPASC1-M1H-B-P-2,5** | **526 998** | | **CPASC1-M1H-B-H-2,5** | **527 016** |
| | G | 5/3-way valve, mid-position closed | **CPASC1-M1H-G-P-2,5** | **527 000** | | **CPASC1-M1H-G-H-2,5** | **527 018** |
| | E | 5/3-way valve, mid-position exhausted | **CPASC1-M1H-E-P-2,5** | **527 002** | | **CPASC1-M1H-E-H-2,5** | **527 020** |
| | X | 1x 3/2-way valve | **CPASC1-M1H-X-P-2,5** | **527 004** | | **CPASC1-M1H-X-H-2,5** | **527 022** |
| | I | 2x 2/2-way valve | **CPASC1-M1H-I-P-2,5** | **527 006** | | **CPASC1-M1H-I-H-2,5** | **527 024** |
| | | | | | | | |
|  | **Semi in-line valve with M5 working ports** | | | | | | |
| | M | 5/2-way valve, single solenoid | **CPPSC1-M1H-M-P-M5** | **527 294** | | **CPPSC1-M1H-M-H-M5** | **527 303** |
| | J | 5/2-way valve, double solenoid | **CPPSC1-M1H-J-P-M5** | **527 295** | | **CPPSC1-M1H-J-H-M5** | **527 304** |
| | N | 2x 3/2-way valve, normally open | **CPPSC1-M1H-N-P-M5** | **527 296** | | **CPPSC1-M1H-N-H-M5** | **527 305** |
| | K | 2x 3/2-way valve, normally closed | **CPPSC1-M1H-K-P-M5** | **527 297** | | **CPPSC1-M1H-K-H-M5** | **527 306** |
|  | B | 5/3-way valve, mid-position pressurised | **CPPSC1-M1H-B-P-M5** | **527 298** | | **CPPSC1-M1H-B-H-M5** | **527 307** |
| | G | 5/3-way valve, mid-position closed | **CPPSC1-M1H-G-P-M5** | **527 299** | | **CPPSC1-M1H-G-H-M5** | **527 308** |
| | E | 5/3-way valve, mid-position exhausted | **CPPSC1-M1H-E-P-M5** | **527 300** | | **CPPSC1-M1H-E-H-M5** | **527 309** |
| | X | 1x 3/2-way valve | **CPPSC1-M1H-X-P-M5** | **527 301** | | **CPPSC1-M1H-X-H-M5** | **527 310** |
| | I | 2x 2/2-way valve | **CPPSC1-M1H-I-P-M5** | **527 302** | | **CPPSC1-M1H-I-H-M5** | **527 311** |
| | | | | | | | |
| | **Semi in-line valve with QS-3 working ports** | | | | | | |
| | M | 5/2-way valve, single solenoid | **CPPSC1-M1H-M-P-Q3** | **527 330** | | **CPPSC1-M1H-M-H-Q3** | **527 339** |
| | J | 5/2-way valve, double solenoid | **CPPSC1-M1H-J-P-Q3** | **527 331** | | **CPPSC1-M1H-J-H-Q3** | **527 340** |
| | N | 2x 3/2-way valve, normally open | **CPPSC1-M1H-N-P-Q3** | **527 332** | | **CPPSC1-M1H-N-H-Q3** | **527 341** |
| | K | 2x 3/2-way valve, normally closed | **CPPSC1-M1H-K-P-Q3** | **527 333** | | **CPPSC1-M1H-K-H-Q3** | **527 342** |
| | B | 5/3-way valve, mid-position pressurised | **CPPSC1-M1H-B-P-Q3** | **527 334** | | **CPPSC1-M1H-B-H-Q3** | **527 343** |
| | G | 5/3-way valve, mid-position closed | **CPPSC1-M1H-G-P-Q3** | **527 335** | | **CPPSC1-M1H-G-H-Q3** | **527 344** |
| | E | 5/3-way valve, mid-position exhausted | **CPPSC1-M1H-E-P-Q3** | **527 336** | | **CPPSC1-M1H-E-H-Q3** | **527 345** |
| | X | 1x 3/2-way valve | **CPPSC1-M1H-X-P-Q3** | **527 337** | | **CPPSC1-M1H-X-H-Q3** | **527 346** |
| | I | 2x 2/2-way valve | **CPPSC1-M1H-I-P-Q3** | **527 338** | | **CPPSC1-M1H-I-H-Q3** | **527 347** |

# Valve terminal type 82 CPASC1, Smart Cubic

Ordering data



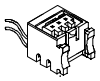
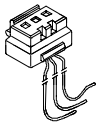
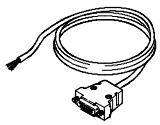
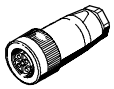
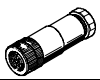
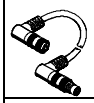
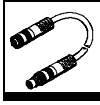
**Ordering data – Valves**

| | Code | Valve function | Electrical plug-in connection | | Electrical horizontal connection | |
|---|---|---|---|---|---|---|
| | | | Type | Part No. | Type | Part No. |
|   | **Semi in-line valve with QS-4 working ports** | | | | | |
| | M | 5/2-way valve, single solenoid | **CPPSC1-M1H-M-P-Q4** | **527 312** | **CPPSC1-M1H-M-H-Q4** | **527 321** |
| | J | 5/2-way valve, double solenoid | **CPPSC1-M1H-J-P-Q4** | **527 313** | **CPPSC1-M1H-J-H-Q4** | **527 322** |
| | N | 2x 3/2-way valve, normally open | **CPPSC1-M1H-N-P-Q4** | **527 314** | **CPPSC1-M1H-N-H-Q4** | **527 323** |
| | K | 2x 3/2-way valve, normally closed | **CPPSC1-M1H-K-P-Q4** | **527 315** | **CPPSC1-M1H-K-H-Q4** | **527 324** |
| | B | 5/3-way valve, mid-position pressurised | **CPPSC1-M1H-B-P-Q4** | **527 316** | **CPPSC1-M1H-B-H-Q4** | **527 325** |
| | G | 5/3-way valve, mid-position closed | **CPPSC1-M1H-G-P-Q4** | **527 317** | **CPPSC1-M1H-G-H-Q4** | **527 326** |
| | E | 5/3-way valve, mid-position exhausted | **CPPSC1-M1H-E-P-Q4** | **527 318** | **CPPSC1-M1H-E-H-Q4** | **527 327** |
| | X | 1x 3/2-way valve | **CPPSC1-M1H-X-P-Q4** | **527 319** | **CPPSC1-M1H-X-H-Q4** | **527 328** |
| | I | 2x 2/2-way valve | **CPPSC1-M1H-I-P-Q4** | **527 320** | **CPPSC1-M1H-I-H-Q4** | **527 329** |

# Valve terminal type 82 CPASC1, Smart Cubic

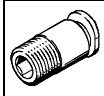
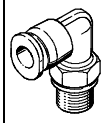
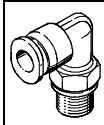
Ordering data

FESTO

| Ordering data – Accessories | | | | |
|---|---|---|---|---|
| Designation | | | Type | Part No. |
| **Plug socket with cable for plug-in connection** | | | | |
|  | For 1 coil | 0.5 m | **MHAP-PI** | **197 260** |
| | | 1 m | **MHAP-PI-1** | **532 182** |
| | For 2 coils | 0.5 m | **MHAP-PI-D-0,5** | **529 116** |
| | | 1 m | **MHAP-PI-D-1** | **527 395** |
| **Plug socket with cable for horizontal connection** | | | | |
|  | For 1 coil, 2-wire | 0.5 m | **KMH-0,5** | **197 263** |
| | | 1 m | **KMH-1** | **197 264** |
| | | 2.5 m | **KMH-2,5** | **527 400** |
| | | 5 m | **KMH-5** | **527 401** |
| | For 2 coils, 3-wire | 0.5 m | **KMH-D-0,5** | **527 396** |
| | | 1 m | **KMH-D-1** | **527 397** |
| | | 2.5 m | **KMH-D-2,5** | **527 398** |
| | | 5 m | **KMH-D-5** | **527 399** |
| **Connecting cable IP20** | | | | |
|  | Sub-D, 25-pin, up to 20 coils | 2.5 m | **KMP6-25P-20-2,5** | **530 046** |
| | | 5 m | **KMP6-25P-20-5** | **530 047** |
| | | 10 m | **KMP6-25P-20-10** | **530 048** |
| | Sub-D, 25-pin, up to 12 coils | 2.5 m | **KMP6-25P-12-2,5** | **530 049** |
| | | 5 m | **KMP6-25P-12-5** | **530 050** |
| | | 10 m | **KMP6-25P-12-10** | **530 051** |
| **Power supply** | | | | |
|  | MicroStyle M12, 5-pin socket (B-coded) | for 0.75 mm$^2$ | **NTSD-GD-9-M12-5POL-RK** | **538 999** |
| **Fieldbus connection** | | | | |
|  | Fieldbus socket for MicroStyle connection, M12, socket (A-coded) | | **FBSD-GD-9-5POL** | **18 324** |
| **Valve terminal connection** | | | | |
|  | Angled plug – angled socket WS-WD | 0.5 m | **KVI-CP-1-WS-WD-0,5** | **178 564** |
| | | 2 m | **KVI-CP-1-WS-WD-2** | **163 139** |
| | | 5 m | **KVI-CP-1-WS-WD-5** | **163 138** |
|  | Plug straight GS-WD | 5 m | **KVI-CP-1-GS-WD-5** | **163 137** |
| | | 8 m | **KVI-CP-1-GS-WD-8** | **163 136** |
|  | Plug straight GS-GD | 2 m, for chain link trunking | **KVI-CP-2-GS-GD-2** | **170 234** |
| | | 5 m, for chain link trunking | **KVI-CP-2-GS-GD-5** | **170 235** |
| | | 8 m, for chain link trunking | **KVI-CP-2-GS-GD-8** | **165 616** |

# Valve terminal type 82 CPASC1, Smart Cubic

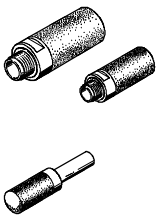
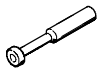
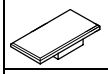
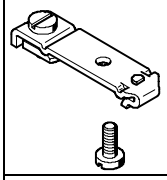
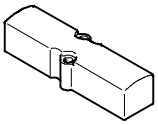
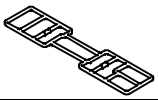
Ordering data

| Ordering data – Accessories | | | | |
|---|---|---|---|---|
| Designation | | | Type | Part No. |
| **Push-in fitting for working ports** | | | | |
|  | Connecting thread M5 for tubing O.D. | 3 mm | **QSM-M5-3** | **153 302** |
| | | 4 mm | **QSM-M5-4** | **153 304** |
| | | 3 mm | **QSM-M5-3-I** | **153 313** |
| | | 4 mm | **QSM-M5-4-I** | **153 315** |
| **Push-in L-fitting for working ports** | | | | |
|  | Connecting thread M5 for tubing O.D. | 3 mm | **QSML-M5-3** | **153 331** |
| | | 4 mm | **QSML-M5-4** | **153 333** |
| | | 6 mm | **QSML-M5-6** | **153 335** |
| | | 4 mm | **QSMLL-M5-4** | **153 339** |
| | | 6 mm | **QSMLL-M5-6** | **153 341** |
| **Push-in fitting for manifold block** | | | | |
|  | Connecting thread M3 for tubing O.D. | 3 mm | **QSM-M3-3** | **153 301** |
| | | 4 mm | **QSM-M3-4** | **153 303** |
| | | 3 mm | **QSM-M3-3-I** | **153 312** |
| | | 4 mm | **QSM-M3-4-I** | **153 314** |
| | Connecting thread M5 for tubing O.D. | 3 mm | **QSM-M5-3** | **153 302** |
| | | 4 mm | **QSM-M5-4** | **153 304** |
| | | 6 mm | **QSM-M5-6** | **153 306** |
| | | 3 mm | **QSM-M5-3-I** | **153 313** |
| | | 4 mm | **QSM-M5-4-I** | **153 315** |
| | | 6 mm | **QSM-M5-6-I** | **153 317** |
| | Connecting thread G1/8 for tubing O.D. | 4 mm | **QSM-G1/8-4-I** | **186 266** |
| | | 6 mm | **QSM-G1/8-6-I** | **186 267** |
| | | 8 mm | **QS-G1/8-8-I** | **186 109** |
| | Connecting thread R1/8 for tubing O.D. | 4 mm | **QSM-1/8-4** | **153 305** |
| | | 6 mm | **QSM-1/8-6** | **153 307** |
| | | 4 mm | **QSM-1/8-4-I** | **153 316** |
| | | 6 mm | **QSM-1/8-6-I** | **153 318** |
| **Push-in L-fitting for manifold block** | | | | |
|  | Connecting thread M3 for tubing O.D. | 3 mm | **QSML-M3-3** | **153 330** |
| | | 4 mm | **QSML-M3-4** | **153 332** |
| | | 3 mm | **QSMLL-M3-3** | **153 337** |
| | | 4 mm | **QSMLL-M3-4** | **153 338** |
| | Connecting thread M5 for tubing O.D. | 3 mm | **QSML-M5-3** | **153 331** |
| | | 4 mm | **QSML-M5-4** | **153 333** |
| | | 6 mm | **QSML-M5-6** | **153 335** |
| | | 4 mm | **QSMLL-M5-4** | **153 339** |
| | | 6 mm | **QSMLL-M5-6** | **153 341** |
| | Connecting thread R1/8 for tubing O.D. | 4 mm | **QSML-1/8-4** | **153 334** |
| | | 6 mm | **QSML-1/8-6** | **153 336** |
| | | 4 mm | **QSMLL-1/8-4** | **153 340** |
| | | 6 mm | **QSMLL-1/8-6** | **153 342** |

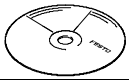
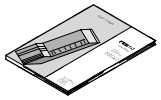
# Valve terminal type 82 CPASC1, Smart Cubic

Ordering data

FESTO

| Ordering data – Accessories | | | | |
|---|---|---|---|---|
| Designation | | | Type | Part No. |
| **Silencers** | | | | |
|  | Connecting thread | M3 | **U-M3** | **163 978** |
| | | M5 | **U-M5** | **4 645** |
| | | M5 | **UC-M5** | **165 003** |
| | | G⅛ | **UC-⅛** | **161 419** |
| | Connection type, push-in sleeve | 3 mm | **UC-QS-3H** | **165 005** |
| | | 4 mm | **UC-QS-4H** | **165 006** |
| | | 6 mm | **UC-QS-6H** | **165 007** |
| | | 8 mm | **UC-QS-8H** | **175 611** |
| **Blanking plugs** | | | | |
|  | Thread M5 | | **B-M5** | **3 843** |
| | Thread M5 | | **B-M5-B** | **174 308** |
| | Thread G⅛ | | **B-⅛** | **3 568** |
| **Plugs** | | | | |
|  | Blanking plug for tubing O.D. | 4 mm | **QSC-4H** | **153 267** |
| | | 6 mm | **QSC-6H** | **153 268** |
| | | 8 mm | **QSC-8H** | **153 269** |
| | | 3 mm | **QSMC-3H** | **153 382** |
| **Inscription labels** | | | | |
|  | 6x10 in frames, 64 pieces for valve identification | | **IBS-6x10** | **18 576** |
| | 4.5x9 mm, 80 pieces for manifold block identification | | **MH-BZ-80x** | **197 259** |
| **Mounting** | | | | |
|  | For H-rail | | **CPASC1-BG-NRH** | **527 392** |
| **Cover** | | | | |
|  | Cover for vacant position[1)] | | **CPASC1-RP** | **527 062** |
| | Cover for manual override | | **CPASC1-MO-V** | **527 393** |
| **Valve seal** | | | | |
|  | For manifold block | | **CPASC1-SEAL-A** | **527 394** |
| **Separator element and assembly tool** | | | | |
|  | Separator element | | **CPASC1-KT** | **536 942** |
| | Assembly tool for separator element | | **CPASC1-MWKT** | **536 943** |

1) One self-adhesive label supplied.

| Ordering data – Accessories | | | | |
|---|---|---|---|---|
| Designation | | | Type | Part No. |
| **User documentation** | | | | |
| **Software** | | | | |
|  | CD-ROM | Valve terminals | **P.CD-VALVE-T** | **183 350** |
| | | Utilities | **P.CD-VI-UTILITIES-2** | **533 500** |
| | | | | |
|  | User documentation – CPASC | German | **P.BE-CPASC-DE** | **530 932** |
| | | English | **P.BE-CPASC-EN** | **530 933** |
| | | French | **P.BE-CPASC-FR** | **530 934** |
| | | Spanish | **P.BE-CPASC-ES** | **530 935** |
| | | Italian | **P.BE-CPASC-IT** | **530 936** |
| | | Swedish | **P.BE-CPASC-SV** | **530 937** |
| | | | | |
|  | User documentation – Fieldbus DeviceNet | German | **P.BE-CPASC-CPVSC-DN-DE** | **539 008** |
| | | English | **P.BE-CPASC-CPVSC-DN-EN** | **539 009** |
| | | French | **P.BE-CPASC-CPVSC-DN-FR** | **539 010** |
| | | Spanish | **P.BE-CPASC-CPVSC-DN-ES** | **539 011** |
| | | Italian | **P.BE-CPASC-CPVSC-DN-IT** | **539 012** |
| | | Swedish | **P.BE-CPASC-CPVSC-DN-SV** | **539 013** |