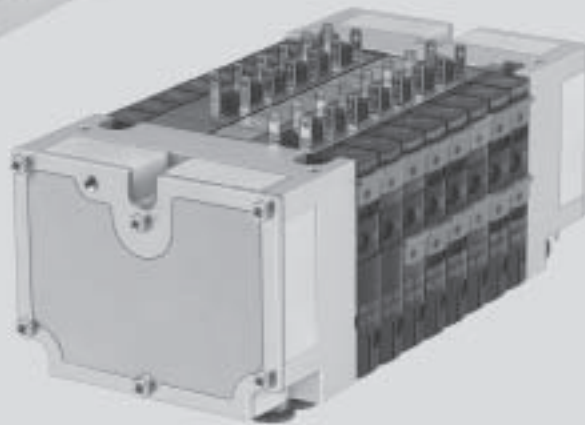


- **Compact Performance:**
Maximum flow with minimum
space requirement
- **Mounted on-site**
- **Short tubing lengths, short
cycle times**
- **Huge range of valve functions**
- **Comprehensive electrical
connection concept**
- **Integrated assembly and
installation concept**
- **Pneumatic multi-connector
plate**
- **24-hour delivery service**

Valve terminal type 10 CPV, Compact Performance

Key features

FESTO



Innovative

- Cubic design for exceptional performance and low weight
- Low installation and bus connection costs
- Decentralised machines and system structures, for example
 - in handling technology
 - in conveyor technology
 - in the packaging industry
 - in sorting systems
 - in upstream machine functions
- Integrated diagnosis, condition monitoring (Fieldbus Direct)

Flexible

- Flexible and cost-effective connection of 2 to 8 valve slices
- Highly flexible thanks to:
 - various pneumatic functions (valve variants)
 - different pressure ranges
 - vacuum switches
 - integrated vacuum generation
 - relay plates with floating electrical outputs
- Separator plates for the formation of pressure zones
- Blanking plates for future expansion

Reliable

- LED displays
- Manual valve overrides
- Protection class to IP65
- CE, UL symbol
- Ex certification for Zone 2, 22 and Zone 1 (intrinsically safe)

Easy to mount

- Ready-to-install unit, pre-assembled and tested
- Lower costs for selection, ordering, assembly and commissioning
- Secure wall mounting or H-rail mounting
- Pneumatic multi-connector plate – fast assembly without the need to replace the fixed tubing
- Assembly optimised for control cabinets

The pneumatic part as well as individual and multi-pin plug connections are described in detail on the following pages.

Information on the electrical functions can be found in the chapters

- ➔ CPV with Fieldbus Direct
4 / 4.7-2
- ➔ AS-interface components
4 / 4.9-2
- ➔ CP installation system
4 / 4.6-2

Valve terminal type 10 CPV, Compact Performance

Key features

Simple electrical connections:

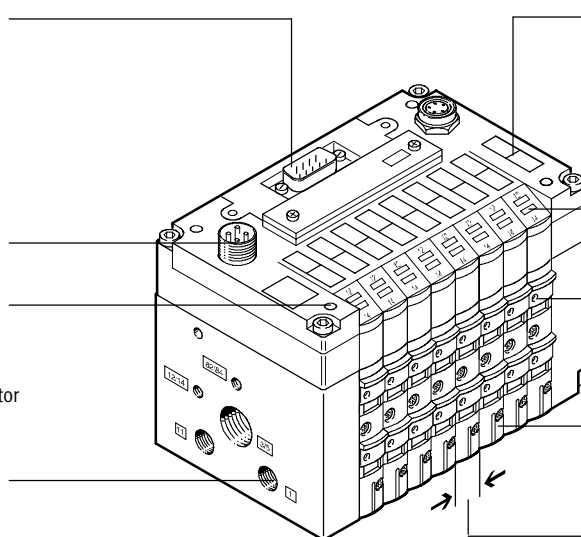
- Individual connection/ET200X
- Multi-pin plug
- AS-interface
- CP installation system
- Fieldbus Direct

Operating voltage connection

Quick mounting:

- Directly using screws
- On a H-rail
- Via the pneumatic multi-connector plate

Robust metal thread or pre-assembled QS connections



Inscription labels

Reduced downtimes: LED diagnosis on the spot

Reliable operation: Manual override, non-detenting, detenting or blocked

Comprehensive range of valve functions, pressure zone formation, blanking plates

Width

- 10 mm
- 14 mm
- 18 mm

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
- 2x 3/2-way valve, 1x normally open, 1x closed

- 5/3-way valve, mid-position closed
- 5/3G function, mid-position closed
- 5/3E function, mid-position exhausted
- 5/3B function, mid-position pressurised

- 2x 2/2-way valve, normally closed
- 2x 2/2-way valve, 1x normally open, 1x closed
- 5/2-way valve, single solenoid, fast-switching
- Vacuum generator
- Vacuum generator and 2/2-way valve with ejector pulse

Certain terminals allow the choice of a relay plate with two floating contacts in place of a valve sub-base.

Special features

Individual connection

- 2 ... 8 valve positions, max. 16 solenoid coils

Multi-pin plug connection

- 4, 6 or 8 valve positions, max. 16 solenoid coils

AS-interface

- 2, 4 or 8 valve positions, max. 8 solenoid coils

CP installation system

- 4, 6 or 8 valve positions, max. 16 solenoid coils

Fieldbus Direct

- 8 valve positions, max. 16 solenoid coils

Electrical connection for ET200X

- 8 valve positions, max. 16 solenoid coils

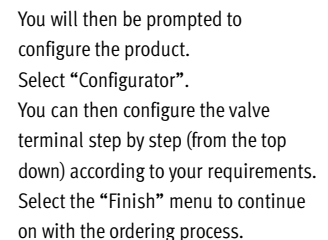
FESTO

Valve terminal configurator

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

You order a valve terminal type 10 using the order code.

→ 4 / 2.1-57

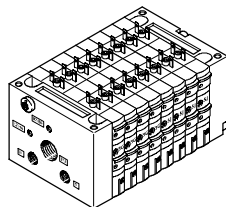


Valve terminal type 10 CPV, Compact Performance

Key features

Electrical connections

Individual connection

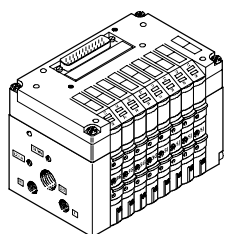


Connection is independent of the control technology used. This ensures correct polarity during installation. The connector plug is equipped with

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 16 solenoid coils (divided between two to eight valve slices, including in uneven stages).

Multi-pin plug connection

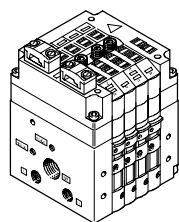
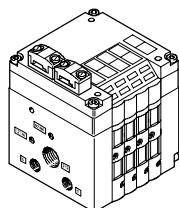


Control signals from the controller to the valve terminal are transmitted via a pre-assembled multi-wire cable, which substantially reduces

installation time. The current reduction circuit for the valves is also integrated in the multi-pin plug connection.

This valve terminal can be equipped with 4 to 16 solenoid coils (4, 6 or 8 valve slices).

AS-interface connection



A special feature of the AS-interface is its ability to simultaneously transmit data and supply power via a two-wire cable. The encoded cable profile prevents connection with incorrect polarity. If the valves have to be disconnected from mains power in an emergency, they can also be supplied with electrical power via a separate connection.

The valve terminal with AS-interface can be configured as follows:

- without inputs with two or four valve slices (max. 4 solenoid coils) and additional power supply set using DIL switch
- with four inputs and four valve slices (max. 8 solenoid coils)

- with four or eight inputs and four or eight valve slices (max. 8 solenoid coils) and additional power supply
- with four or eight inputs and four or eight valve slices incl. vacant position or positions (max. 6 solenoid coils) and additional power supply for A/B operation to SPEC. 2.1

Further information

➔ 4 / 4.9-2

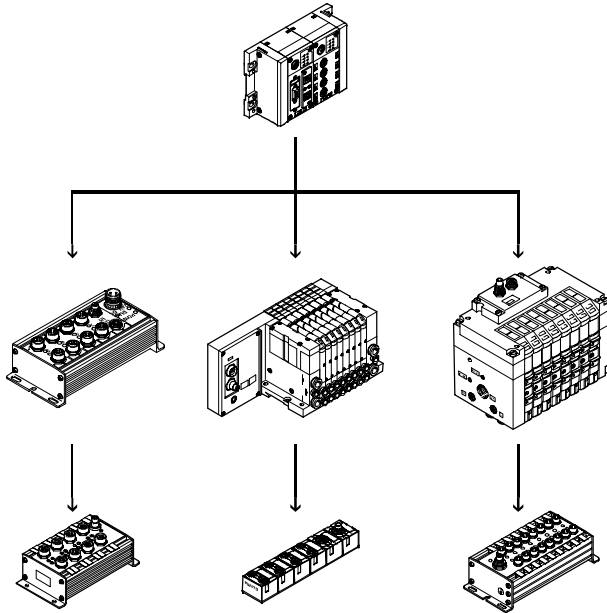
Valve terminal type 10 CPV, Compact Performance

Key features

FESTO

Electrical connections

CP/CPI installation system



Valve terminals with fieldbus connection are intended for connection to higher-order fieldbus nodes or to control blocks. A fieldbus node or control block also allows the connection of decentralised input/output modules. The following fieldbus protocols are supported:

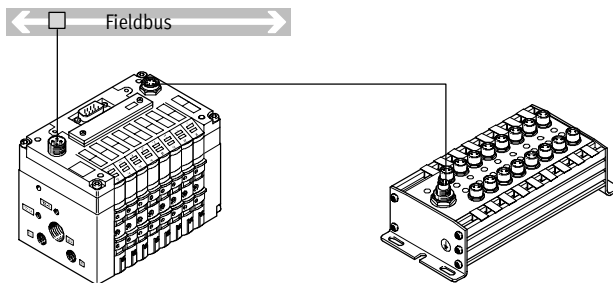
- Festo fieldbus, ABB CS31, Moeller Suconet K
- Interbus
- Allen Bradley (1771 RIO)
- DeviceNet
- Profibus DP, 12 MBd
- CANopen
- CC-Link

Four strings with up to 32 inputs and outputs can be connected to a fieldbus node or control block. The CPV valve terminal is treated like an output module with up to 8 outputs (4, 6 or 8 valve slices/4 to 16 solenoid coils per terminal) here. The connector cables transmit the power supply for the input modules and the load voltage for the valves as well as control signals.

Further information

→ 4 / 4.6-2

Fieldbus Direct



Fieldbus Direct is a system for the compact connection of a CPV, CPV-SC, CPA-SC or CDVI valve terminal to different fieldbus standards such as Profibus and DeviceNet.

The fieldbus node is directly integrated in the electrical interface of the valve terminal and therefore takes up only a minimal amount of space.

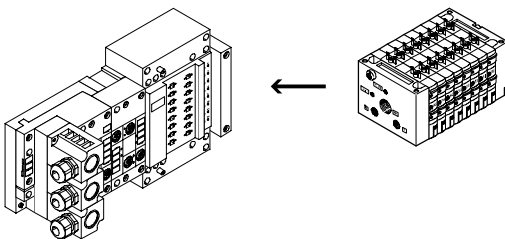
The CP string extension option allows the functions and components of the CP system to be used.

Instead of an output module with 8 digital outputs, a valve terminal with 4, 6 or 8 valve slices (4 to 16 solenoid coils per terminal) can be used.

Further information

→ 4 / 4.7-2

ET200X pneumatic interface for CPV10 and CPV14



Adaptation of the CPV valve terminal to the input/output module ET200X from Siemens:

The combination of the ET200X functional modules and the pneumatic functions of the CPV valve terminal provides a highly integrateable automation solution for systems using electrical and pneumatic drives with

- 8 valve slices for up to 16 CPV valves
- Fast and secure contacting to IP65
- CPV10 and CPV14 valve terminals
- High degree of protection IP65/IP67
- Modular design

Valve terminal type 10 CPV, Compact Performance

Peripherals overview

FESTO

CPV – The benefits at a glance

The CPV valve terminal is of unique design. It permits the flexible combination of pneumatic performance, electrical connection technologies and a wide range of mounting options. The generously sized flow ducts and powerful flat plate silencers ensure high flow rates. This means that even comparatively large pneumatic cylinders can be driven with ease. All valves are in the form of valve slices. They are optimised for flow

performance and are also extremely compact. Two functions per valve slice (e.g. 2x 3/2-way valves) mean that twice the component density can be achieved. This saves space and reduces costs. The cubic design permits exceptional performance yet a comparatively low weight. The benefits of this design are obvious when the valve terminal is used on a moving installation. However robustness must not be

sacrificed in favour of compactness. The connecting thread and mounting attachments are metallic. The manual override for the valves can be adapted for different operating situations. If, for example, a detenting manual override is required for setting-up mode, the manual override can be easily converted for that application in a way that rules out operational errors. The clear, large labelling system also contributes to

the safe operation of the valve terminal. A particular plus is the range of electrical connection technologies supported. All types of valve actuation are possible, from individual valve connections up to bus systems with versatile expansion options. The integration of electrical input and output modules permits cost-effective solutions within the different installation concepts.




The design principle

The cubic design provides a clearly assigned function on each side. Thus, for example, the electrical connection is mounted on the top surface.

An optional inscription label holder can be placed on the front of the valve terminal. The different combination options ensure the optimum solution for the task at hand.

- Pneumatic supply connections on the left, right or underneath
- Pneumatic working lines and functional modules (vertical linkage) from underneath

- Manual operation/identification on the front
- Electrical connection surface on the top
- Mounting surface at the back or even at the front via a pneumatic multi-connector plate

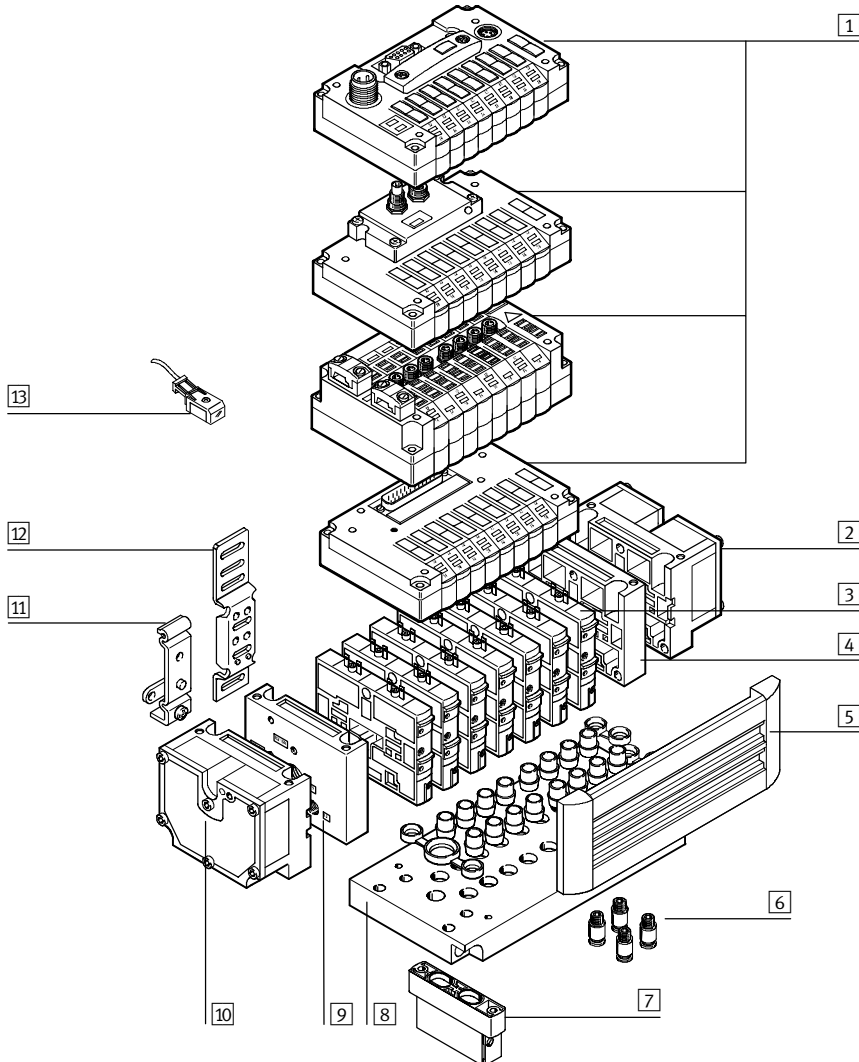
Certification		
		Certified variants
	Certification to UL 429 Certification to CSA 22.2 No. 139	All
	Use in hazardous locations Class I, Division 2, Groups A,B,C and D Certification to UL 1604 Certification to CSA 22.2 No. 213	Multi-pin plug connection, individual connection
	In accordance with EU directive 94/9/EC (ATEX directive) Use in hazardous locations II 3G/D EEx nA II T5 X -5°C ≤ Ta ≤ 50°C T 80°C IP65	All, other than individual connection
	In accordance with EU directive 89/336/EEC (EMC directive) Interference emission tested to EN 61 000-6-4 Interference immunity tested to EN 61 000-6-2	All

Valve terminal type 10 CPV, Compact Performance

Peripherals overview

FESTO

Overview – CPV valve terminal



- | | | | |
|--|--|--|---|
| <p>1 Basic electrical unit (Fieldbus Direct, CP installation system, AS-interface, multi-pin plug connection, individual connection)</p> <p>2 Right-hand end plate (threaded connection not in conjunction with pneumatic multi-connector plate)</p> | <p>3 Comprehensive range of valve functions</p> <p>4 Right-hand end plate (threaded connection not in conjunction with pneumatic multi-connector plate)</p> <p>5 Holder for inscription label</p> <p>6 QS push-in fittings</p> | <p>7 Functional module (vertical linkage)</p> <p>8 Pneumatic multi-connector plate</p> <p>9 Left-hand end plate (threaded connection not in conjunction with pneumatic multi-connector plate)</p> | <p>10 Left-hand end plate with flat plate silencer</p> <p>11 H-rail mounting</p> <p>12 Wall mounting</p> <p>13 Plug socket with cable for individual connection</p> |
|--|--|--|---|

Valve terminal type 10 CPV, Compact Performance

FESTO

Key features – Pneumatic components

Valves

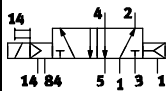

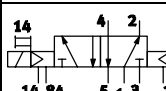
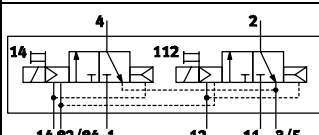
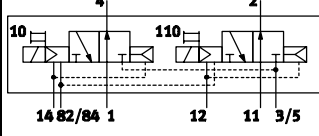
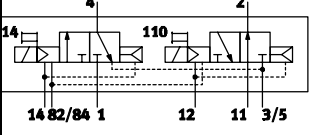
CPV valves are series manifold valves, i.e. in addition to the valve function they contain all of the pneumatic ducts for supply, exhaust and the working lines. The supply ducts are a central component of the valve slices

and allow a direct flow of air through the valve slices.

This helps achieve maximum flow rates. All valves have a pneumatic pilot control for optimising performance. The valve function is based on a

piston spool system with a patented sealing principle that guarantees its suitability for a wide range of applications as well as a long service life. The pneumatic components and

functions are always identical for all actuator types. Most functions are also available in the various valve sizes (spacing). Restrictions are noted where applicable.

Valve function					
Code	Circuit symbol	Size			Description
		10	14	18	
M		■	■	■	5/2-way valve, single solenoid ■ Pneumatic spring return
F		■	–	–	The valve slice F has a modified pilot system that permits quicker on/off switching times. ■ Only available for size 10 mm ■ Fast switching ■ Pneumatic spring return
J		■	■	■	5/2-way valve, double solenoid
C		■	■	■	2x 3/2-way valve, single solenoid ■ Normally closed ■ Pneumatic spring return
N		■	■	■	2x 3/2-way valve, single solenoid ■ Normally open ■ Pneumatic spring return ■ The function of a 5/3-way valve pressurised in mid-position can be realised with these valves in the open initial position
H		■	■	■	2x 3/2-way valve, single solenoid ■ Normally 1x open (pilot control 12) 1x closed (pilot control 14) For optimised cylinder movement. Corresponds to valve function M with simultaneous actuation of both solenoid coils (5/2-way, single solenoid). Since the piston area on each side can be pressurised or exhausted separately, it means that the cylinder can move faster. ■ Pneumatic spring return

Valve terminal type 10 CPV, Compact Performance

Key features – Pneumatic components

FESTO

Valve terminals for standard applications
Compact Performance

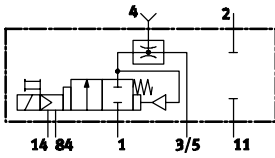
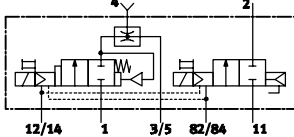
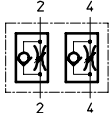
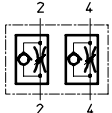

2.1

Valve function					
Code	Circuit symbol	Size			Description
		10	14	18	
G		–	–	■	5/3-way valve, mid-position closed Only available for size 18 mm ■ Double solenoid ■ Spring force return
		■	■	–	5/3G function, mid-position closed For size 10 and 14 The valve function “mid-position closed” is created from one 2x 3/2-way valve, normally closed (code C). The valve kit CPV10-BS-5/3G-M7 or CPV14-BS-5/3G-1/8 (incorporates a double piloted non-return function) is used for this. This valve kit is intended for applications with one working pressure level per valve slice, i.e. it may not be used in dual-pressure applications (where there are different pressure levels at port 1 and 11). If other valve slices are to be used in dual-pressure mode, then the valve slice equipped with the 5/3G valve kit must be separated from compressed air duct 1 and 11 by means of a separator plate (code T). Not in first or last valve position.
		■	■	■	5/3E function, mid-position exhausted The valve function “mid-position exhausted” is created from one 2x 3/2-way valve, normally closed (code C). ■ Pneumatic spring return
		■	■	■	5/3B function, mid-position pressurised The valve function “mid-position pressurised” is created from one 2x 3/2-way valve, normally open (code N). ■ Pneumatic spring return
D		■	■	■	2x 2/2-way valve, single solenoid ■ Normally closed ■ Pneumatic spring return
I		■	■	■	2x 2/2-way valve, single solenoid ■ Normally 1x open 1x closed ■ Control side 14 normally closed ■ Control side 12 normally open ■ Pneumatic spring return

Valve terminal type 10 CPV, Compact Performance

Key features – Pneumatic components

FESTO

Additional pneumatic functions					
Code	Circuit symbol	Size			Description
		10	14	18	
A	Vacuum generator 	■	■	■	Vacuum generation according to the ejector principle. Vacuum slices of different widths for different suction capacities. Combinations with a number of vacuum slices and/or directional control function slices are possible on the same valve terminal. In principle, an open connection is formed between the exhaust duct 3/5 and the working line 4. When the nozzle is not switched, the resulting back pressure in the exhaust duct flows back into the working line. When the nozzle is switched, the vacuum can be greatly reduced by resulting back pressure. This effect is improved through optimised exhausting. This effect does not occur where there is only one vacuum generator per valve terminal and where separator plates (code S) are used for separation. <ul style="list-style-type: none"> ■ Vacuum generator on control side 14 ■ Reset via mechanical spring and pneumatic spring ■ Ejector pulse on control side 12 (code E) ■ Note air supply and exhaust when using more than two vacuum generators
E	Vacuum generator with ejector pulse 	■	■	■	Vacuum generation according to the ejector principle. Vacuum slices of different widths for different suction capacities. Combinations with a number of vacuum slices and/or directional control function slices are possible on the same valve terminal. In principle, an open connection is formed between the exhaust duct 3/5 and the working line 4. When the nozzle is not switched, the resulting back pressure in the exhaust duct flows back into the working line. When the nozzle is switched, the vacuum can be greatly reduced by resulting back pressure. This effect is improved through optimised exhausting. This effect does not occur where there is only one vacuum generator per valve terminal and where separator plates (code S) are used for separation. <ul style="list-style-type: none"> ■ Vacuum generator on control side 14 ■ Reset via mechanical spring and pneumatic spring ■ Ejector pulse on control side 12 (code E) ■ Note air supply and exhaust when using more than two vacuum generators
P	2x one-way flow control valve, supply air 	■	■	–	Module (actuator) for direct flange mounting on the CPV valves. Also suitable for pneumatic multi-connector plates. Different valve actuators cannot be combined. <ul style="list-style-type: none"> ■ Not with valve function G ■ Not in first or last valve position with accessories M, P, V (pneumatic multi-connector plate)
Q	2x one-way flow control valve, exhaust air 	■	■	–	Module (actuator) for direct flange mounting on the CPV valves. Also suitable for pneumatic multi-connector plates. Different valve actuators cannot be combined. <ul style="list-style-type: none"> ■ Not with valve function G ■ Not in first or last valve position with accessories M, P, V (pneumatic multi-connector plate)
V	One-way flow control valve for vacuum 	■	■	–	The module CPV-...-BS-GRZ-V-... has a built-in non-return valve as well as a throttle function for adjusting the ejector pulse. The non-return valve serves to temporarily maintain the vacuum, even if the vacuum generator is switched off. The module is suitable for vacuum generators (code A, E). <ul style="list-style-type: none"> ■ Not in first or last valve position with accessories M, P, V (pneumatic multi-connector plate)

Valve terminal type 10 CPV, Compact Performance

Key features – Pneumatic components

FESTO

Creating pressure zones

Different pressures at port 1 and 11 result in two pressure levels per valve. This means, for example, that a cylinder drive can be extended with high pressure and retracted with low pressure to save energy.

The maximum number of pressure zones possible is determined by the combination of the following components:

- Use of a separator plate
- End plate pair type
- Valve slice type

You can divide the CPV valve terminal into 2 to 4 pressure zones by using separator plates.

Separator plates					
Code	Graphical symbol	Size			Note
		10	14	18	
T	Separator plate (for formation of pressure zones), supply duct 1 separated 	■	■	■	A separator plate (code T) is used to separate the duct for the air supply (port 1 and 11) to provide two pressure zones. ■ Not in first or last valve position ■ Not with compressed air supply A, B, C, D, U, V, W, X
S	Separator plate (for formation of pressure zones), supply duct 1 and exhaust 3/5 separated 	■	■	■	The separator plate (code S) interrupts the exhaust duct 3/5 as well as the supply duct 1 and 11. This plate should be used if one of the pressure zones is under vacuum to avoid any effects on the vacuum or to prevent backpressure on neighbouring valve functions. ■ Not in first or last valve position ■ Not with compressed air supply A, B, C, D, U, V, W, X (single-side compressed air supply)
L	Vacant position (spare position) 	■	■	■	A vacant position is formed by using a blanking plate (code L) and a valve can be positioned here at a later date.
R	Relay plate (2 floating contacts) 	■	■	–	A relay plate (code R) with (normally open contact) can also be used instead of a valve slice. Each relay plate has two relays for actuating two electrically isolated outputs. Load capacity: 24 V DC, 1 A. ■ Connecting cable KRP-1-24-... ■ An inscription label holder cannot be used

Valve terminal type 10 CPV, Compact Performance

FESTO

Key features – Pneumatic components

Examples: Pneumatic supply

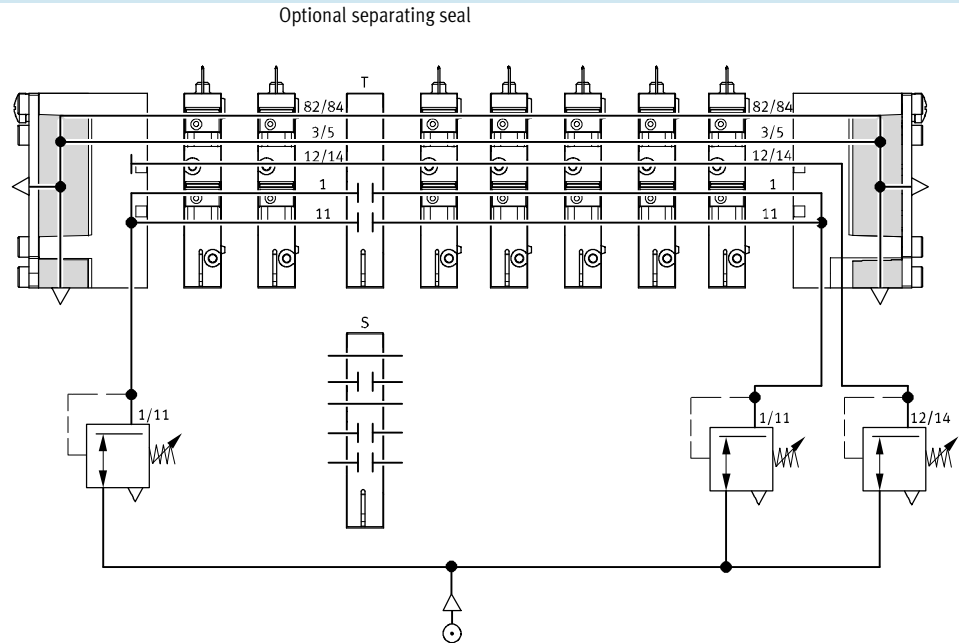
External pilot supply air, flat plate silencer at both ends

Pneumatic supply via pneumatic multi-connector plate

Code H

The diagram opposite shows an example for the configuration and connection of the compressed air supply with external pilot supply air. Port 12/14 on the pneumatic multi-connector plate is equipped with a fitting for this purpose. Ports 3/5 and 82/84 are drawn off via the flat plate silencer.

One separating seal each can be used optionally to create pressure zones.



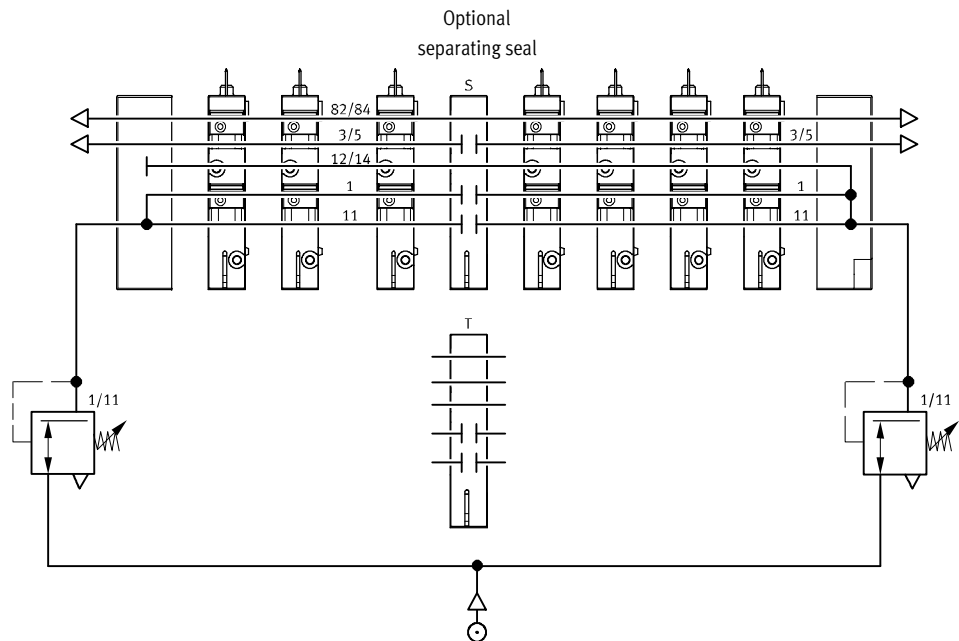
Internal pilot supply air, ducted exhaust air or screw-in silencer

Pneumatic supply via end plates:

Code Z

The diagram opposite shows an example for the configuration and connection of the compressed air supply with internal pilot supply air. Here the pilot supply air is branched at the left-hand end plate of port 1 or 11. Ports 3/5 and 82/84 are drawn off via the screw-in silencer.

One separating seal each can be used optionally to create pressure zones.



Valve terminal type 10 CPV, Compact Performance

Key features – Pneumatic components

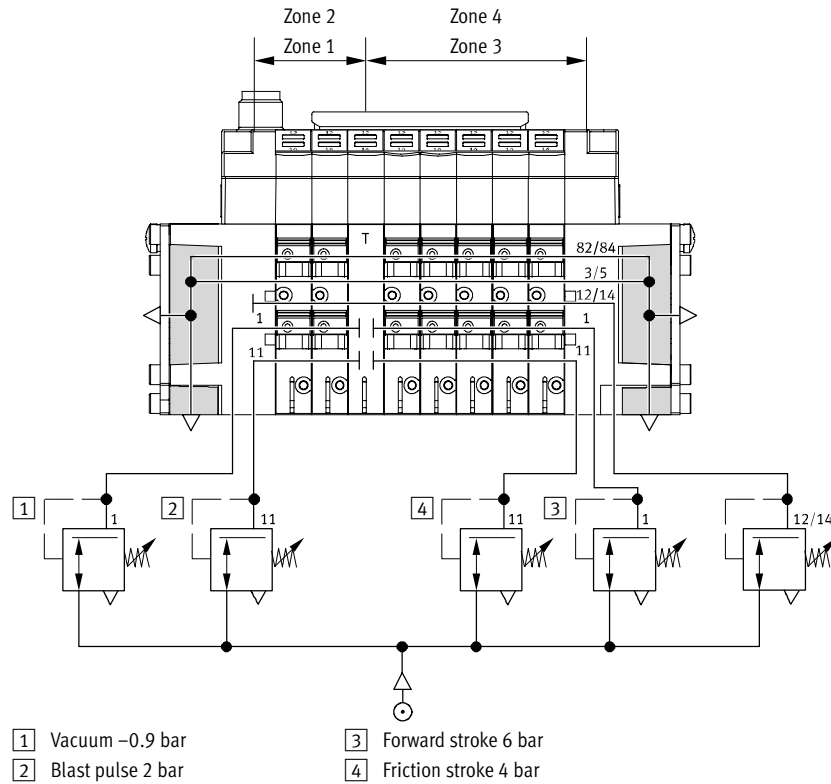
FESTO

Example: Creating pressure zones

CPV with separator plate T

The valve terminal CPV facilitates the creation of up to 4 pressure zones.

The diagram shows an example for the configuration and connection of four pressure zones using separator plate code T – with external pilot supply air.



Valve terminal type 10 CPV, Compact Performance

Key features – Pneumatic components

FESTO

Compressed air supply and exhaust

The two end plates which supply the valve slices with pressure and exhaust them are a characteristic feature of a CPV valve terminal.

- Large duct cross sections ensure maximum flow rates even when multiple valves are switched in parallel

- Large flat plate silencers in the end plates
- Internal/external pilot supply air

Each individual valve is supplied with compressed air from two individual ducts (supply ports 1/11) and exhausted via a large, integrated

exhaust duct (exhaust 3/5). This design permits unique flexibility and functionality. It is the easiest way of realising a number of pressure zones per terminal or combinations of vacuum applications.

The valve terminal is supplied via end plates, either on the left, on the right,

or on both sides. End plate combinations other than those listed are possible (on request).

Pilot supply air

Internal pilot supply air:

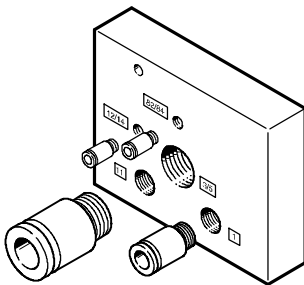
Internal pilot supply air can be selected if the supply pressure at pneumatic port 1 is 3 ... 8 bar. With internal pilot supply air, the branch line is located in the right-hand end plate. There is no port 12/14.

External pilot supply air:

External pilot supply air is required if the supply pressure at pneumatic port 1 is ≤ 3 bar or ≥ 8 bar. In this case, pressure of 3 ... 8 bar is applied at port 12/14.

If a gradual pressure build-up in the system using a pressurised on-off valve is required, external pilot supply air should be selected whereby the control pressure applied during switch-on is already very high.

End plates

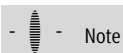


Example of an end plate:

The figure shows a left-hand end plate with external pilot supply air. The exhaust ports 3/5 and 82/84 can be

fitted with threaded connections or silencers. Ports 12/14 and 11 are not provided in end plates used for internal pilot supply air. Port 82/84 is

always present and should be fitted with a silencer. Port 12/14 is internally connected with port 1.



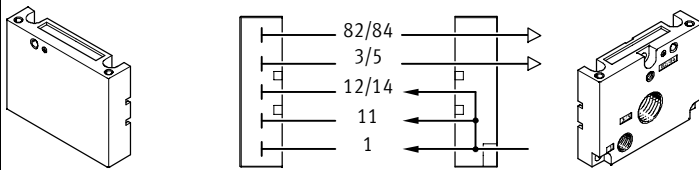
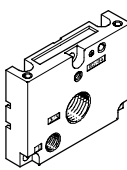
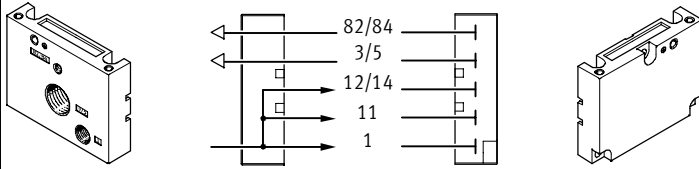
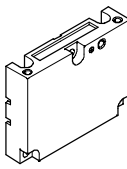
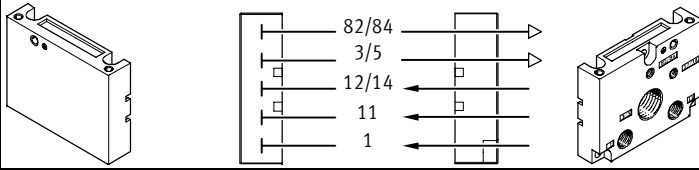
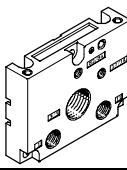
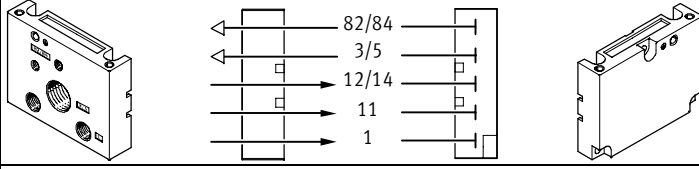
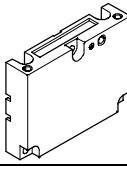
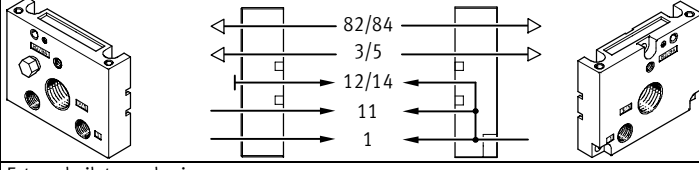
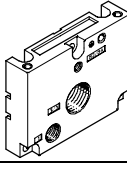
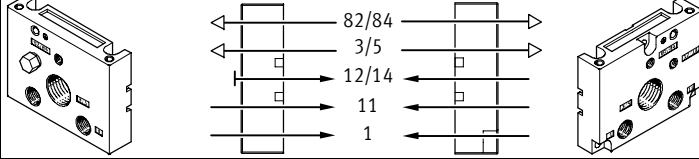
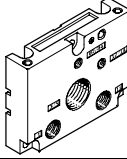
Note

When using a separator plate to form two pressure zones, pilot supply air at both sides is always required.

Valve terminal type 10 CPV, Compact Performance

Key features – Pneumatic components

FESTO

End plate combination for compressed air supply via end plate						
Code	Graphical symbol Type of pilot air supply (pilot supply air)			Size		
				10	14	18
U	Internal pilot supply air			■	■	■
				<ul style="list-style-type: none"> ■ Ports in right-hand end plate only ■ No pressure zone separation permissible ■ Not suitable for vacuum 		
V	Internal pilot supply air			■	■	■
				<ul style="list-style-type: none"> ■ Ports in left-hand end plate only ■ No pressure zone separation permissible ■ Not suitable for vacuum 		
W	External pilot supply air			■	■	■
				<ul style="list-style-type: none"> ■ Ports in right-hand end plate only ■ No pressure zone separation permissible ■ Suitable for vacuum 		
X	External pilot supply air			■	■	■
				<ul style="list-style-type: none"> ■ Ports in left-hand end plate only ■ No pressure zone separation permissible ■ Suitable for vacuum 		
Y	Internal pilot supply air			■	■	■
				<ul style="list-style-type: none"> ■ Ports in left-hand and right-hand end plate ■ Max. 3 pressure zones ■ Valves to the left of the separator plate suitable for vacuum 		
Z	External pilot supply air			■	■	■
				<ul style="list-style-type: none"> ■ Ports in left-hand and right-hand end plate ■ Max. 4 pressure zones ■ Suitable for vacuum 		

Valve terminal type 10 CPV, Compact Performance

Key features – Pneumatic components

FESTO

Valve terminals for standard applications
Compact Performance

2.1

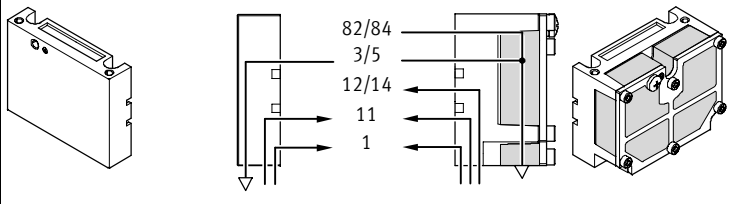
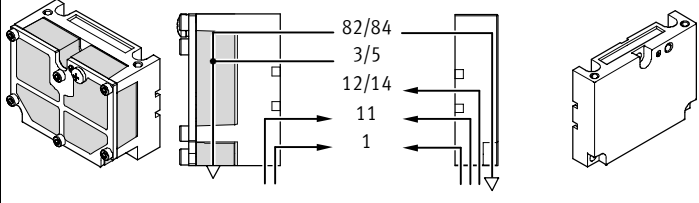
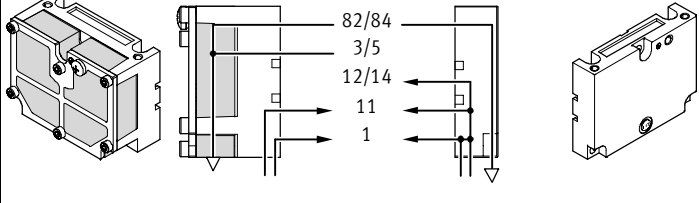
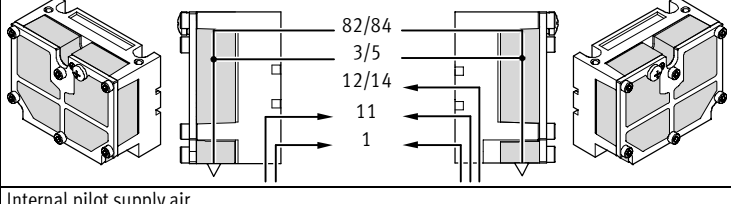
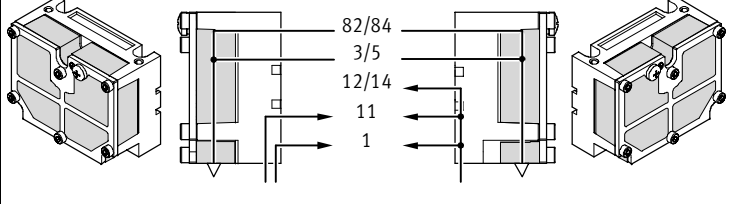
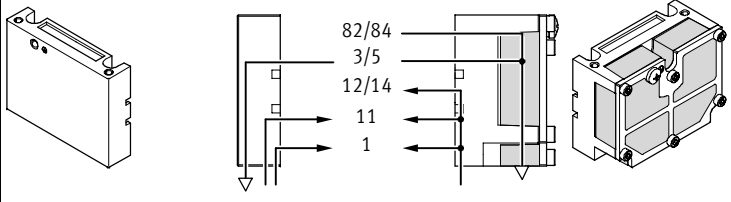
End plate combination for compressed air supply via pneumatic multi-connector plate						
Code	Graphical symbol		Size			Note
	Type of pilot air supply (pilot supply air)		10	14	18	
Y	Internal pilot supply air		■	■	■	<ul style="list-style-type: none"> ■ Ports on pneumatic multi-connector plate ■ Pressure zone separation only permissible with separator plate (code T) ■ Maximum number of pressure zones: 2 ■ Valves to the left of the separator plate suitable for vacuum ■ Only for accessories M, P, V (pneumatic multi-connector plate)
Z	External pilot supply air		■	■	■	<ul style="list-style-type: none"> ■ Ports on pneumatic multi-connector plate ■ Pressure zone separation only permissible with separator plate (code T) ■ Maximum number of pressure zones: 3 ■ Suitable for vacuum ■ Only for accessories M, P, V (pneumatic multi-connector plate)

End plate combination for compressed air supply via end plates with flat plate silencer						
Code	Graphical symbol		Size			Note
	Type of pilot air supply (pilot supply air)		10	14	18	
A	Internal pilot supply air		■	■	■	<ul style="list-style-type: none"> ■ Ports in right-hand end plate ■ No pressure zone separation permissible ■ Not suitable for vacuum
B	Internal pilot supply air		■	■	■	<ul style="list-style-type: none"> ■ Ports in left-hand end plate ■ No pressure zone separation permissible ■ Not suitable for vacuum
C	External pilot supply air		■	■	■	<ul style="list-style-type: none"> ■ Ports in right-hand end plate ■ No pressure zone separation permissible ■ Suitable for vacuum
D	External pilot supply air		■	■	■	<ul style="list-style-type: none"> ■ Ports in left-hand end plate ■ No pressure zone separation permissible ■ Suitable for vacuum

Valve terminal type 10 CPV, Compact Performance

Key features – Pneumatic components

FESTO

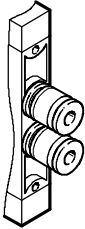
End plate combination for compressed air supply via pneumatic multi-connector plate with flat plate silencer					
Code	Graphical symbol Type of pilot air supply (pilot supply air)	Size			Note
		10	14	18	
E	External pilot supply air 	■	■	■	<ul style="list-style-type: none"> Ports on pneumatic multi-connector plate Exhaust air vented via flat plate silencers at right Pressure zone separation only permissible with separator plate (code T) Maximum number of pressure zones: 4 Suitable for vacuum Only for accessories M, P, V (pneumatic multi-connector plate)
F	External pilot supply air 	■	■	■	<ul style="list-style-type: none"> Ports on pneumatic multi-connector plate Exhaust air vented via flat plate silencers at left Pressure zone separation only permissible with separator plate (code T) Maximum number of pressure zones: 4 Suitable for vacuum Only for accessories M, P, V (pneumatic multi-connector plate)
G	Internal pilot supply air 	■	■	■	<ul style="list-style-type: none"> Ports on pneumatic multi-connector plate Exhaust air vented via flat plate silencers at left Pressure zone separation only permissible with separator plate (code T) Maximum number of pressure zones: 3 Not suitable for vacuum Only for accessories M, P, V (pneumatic multi-connector plate)
H	External pilot supply air 	■	■	■	<ul style="list-style-type: none"> Ports on pneumatic multi-connector plate Exhaust air vented via flat plate silencers at both ends Pressure zone separation permissible Suitable for vacuum Only for accessories M, P, V (pneumatic multi-connector plate)
J	Internal pilot supply air 	■	■	■	<ul style="list-style-type: none"> Ports on pneumatic multi-connector plate Exhaust air vented via flat plate silencers at both ends Pressure zone separation permissible Maximum number of pressure zones: 3 Valves to the left of the separator plate suitable for vacuum Only for accessories M, P, V (pneumatic multi-connector plate)
K	Internal pilot supply air 	■	■	■	<ul style="list-style-type: none"> Ports on pneumatic multi-connector plate Exhaust air vented via flat plate silencers at right Pressure zone separation permissible Maximum number of pressure zones: 3 Suitable for vacuum in combination with separator plate Only for accessories M, P, V (pneumatic multi-connector plate)

Valve terminal type 10 CPV, Compact Performance

Key features – Pneumatic components

FESTO

Pneumatic connection



The working lines are located directly in the valve slices. Threaded connections and Quick Star push-in fittings (QS) are available for different tubing sizes. The supply ports are located in the end plates or in the pneumatic

multi-connector plate.

Push-in fittings are available fully assembled.

The following working lines can be selected:

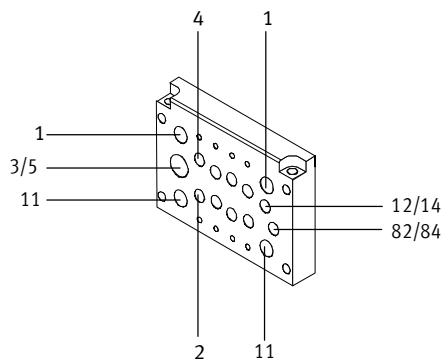
– Large push-in fittings: Code A

– Small push-in fittings: Code B

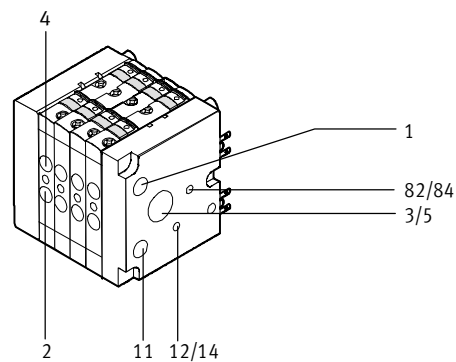
– Threaded connections: Code C

Connection sizes for the threaded and QS push-in fittings can be found in the table below.

Pneumatic multi-connector plate



CPV valve terminal



Connection sizes

Connection to ISO 5599	CPV10	CPV14	CPV18	Remarks
1/11 Main air	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{3}{8}$	Fitting in end plate or pneumatic multi-connector plate
2/4 Working line	M7 (QS6/QS4)	G $\frac{1}{8}$ (QS8/QS6)	G $\frac{1}{4}$ (QS10/QS8)	Connection in valve slice, connection for push-in fitting in brackets
3/5 Exhaust air right-hand/left-hand end plate or pneumatic multi-connector plate	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{2}$	For ducted exhaust air
	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	For silencer
12/14 Pilot supply air connection/pilot exhaust air connection	M5	G $\frac{1}{8}$	G $\frac{1}{4}$	For ducted exhaust air
82/84 Exhaust air right-hand/left-hand end plate or pneumatic multi-connector plate	M5	G $\frac{1}{8}$	G $\frac{1}{4}$	For ducted exhaust air
	M7 (M5) ¹⁾	G $\frac{1}{8}$	G $\frac{1}{4}$	For silencer

1) with pneumatic multi-connector plate with flange

Valve terminal type 10 CPV, Compact Performance

Key features – Pneumatic components

FESTO

Pneumatic multi-connector plate

One-piece “sub-bases” which contain both working lines and supply ports are available in the form of a pneumatic multi-connector plate. These sub-bases allow the valve terminal as a pneumatic “function” to be

separated from the tubing connections.

The pneumatic multi-connector plate permits different mounting options from wall mounting to direct passage through a housing wall.

Service-friendly and flexible connection technology thanks to the following:

- Common connection via the pneumatic multi-connector plate with all connections on one side
- The valve terminal can be removed/

fitted using only 4 screws, whereby the pneumatics remain fully connected

- Quick removal/fitting
- No errors upon recommissioning as a result of incorrect connection of tubing

Variants

The pneumatic multi-connector plate is available in two variants as standard. Special multi-connector plate variants on request.

■ Without mounting flange:

This pneumatic multi-connector plate locks flush with the end plates. The mounting holes for wall or foot mounting are on the connection side of the pneumatic multi-connector plate.

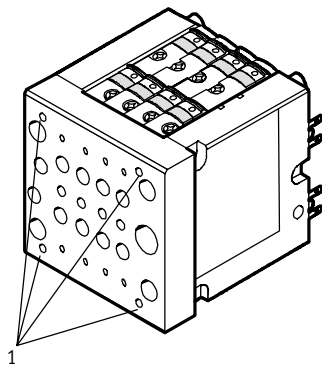
■ With mounting flange:

This pneumatic multi-connector plate projects past the end plates. The mounting holes are located in the flange for ease of mounting. Two additional holes running crossways through this multi-connector plate also allow rear mounting of the CPV valve terminal.

- - Note

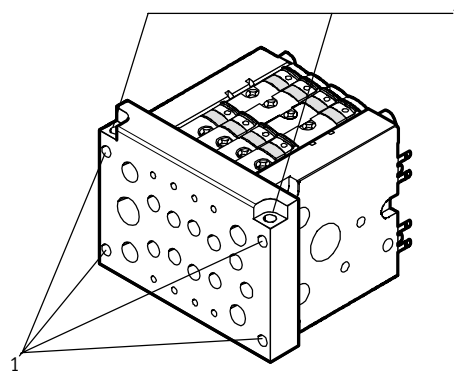
The outer valve slices cannot be equipped with valve extensions (e.g. one-way flow control valve) when using the pneumatic multi-connector plate with mounting flange. CPV valve terminals with flat plate silencers are only suitable for wall mounting.

Pneumatic multi-connector plate (without flange)



1 Mounting holes

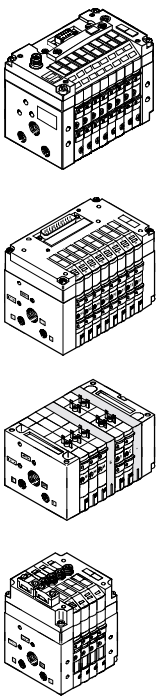
Pneumatic multi-connector plate (with flange)



Valve terminal type 10 CPV, Compact Performance

Key features – Pneumatic components

FESTO

Pneumatic connection: Fitting set for pneumatic supply						
	Code Pneumatic supply	Port	Designation	Size 10 QS6 Type	Size 14 QS8 Type	Size 18 QS10 Type
	Without pneumatic multi-connector plate					
	U, V	82/84	Silencer	U-M5	U-1/8-B	U-1/4-B
		3/5	Silencer	U-3/8-B	U-1/2-B	U-1/2-B
		1	Push-in fitting	QS-1/8-8-I	QS-1/4-10-I	QS-3/8-12-I
	W, X	82/84	Silencer	U-M5	U-1/8-B	U-1/4-B
		3/5	Silencer	U-3/8-B	U-1/2-B	U-1/2-B
		1	Push-in fitting	QS-1/8-8-I	QS-1/4-10-I	QS-3/8-12-I
		12/14	Push-in fitting	QSM-M5-6-I	QS-1/8-8-I	QS-1/4-10-I
	Y	82/84 on right	Silencer	U-M5	U-1/8-B	U-1/4-B
		82/84 on left	Blanking plug	B-M5	B-1/8	B-1/4
		3/5 on right	Silencer	U-3/8-B	U-1/2-B	U-1/2-B
		3/5 on left	Blanking plug	B-3/8	B-1/2	B-1/2
		1/11 on left	Push-in fitting	QS-1/8-8-I	QS-1/4-10-I	QS-3/8-12-I
	Z	82/84 on right	Silencer	U-M5	U-1/8-B	U-1/4-B
		82/84 on left	Blanking plug	B-M5	B-1/8	B-1/4
		3/5 on right	Silencer	U-3/8-B	U-1/2-B	U-1/2-B
		3/5 on left	Blanking plug	B-3/8	B-1/2	B-1/2
		12/14 on right	Push-in fitting	QSM-M5-6-I	QS-1/8-8-I	QS-1/4-10-I
		12/14 on left	Blanking plug	B-M5	B-1/8	B-1/4
		1/11	Push-in fitting	QS-1/8-8-I	QS-1/4-10-I	QS-3/8-12-I
	With pneumatic standard multi-connector plate code: M					
	Y	82/84	Silencer	UC-M7	U-1/8-B	U-1/4-B
		12/14	Blanking plug	B-M7	B-1/8	B-1/4
		3/5	Silencer	U-1/4-B	U-3/8-B	U-1/2-B
		1/11 on left	Push-in fitting	QS-1/8-8-I	QS-1/4-10-I	QS-3/8-12-I
		11 on right	Blanking plug	B-1/8	B-1/4	B-3/8
	Z	82/84	Silencer	UC-M7	U-1/8-B	U-1/4-B
		3/5	Silencer	U-1/4-B	U-3/8-B	U-1/2-B
		12/14	Push-in fitting	QSM-M7-6-I	QS-1/8-8-I	QS-1/4-10-I
		1/11 on left	Push-in fitting	QS-1/8-8-I	QS-1/4-10-I	QS-3/8-12-I
	With pneumatic special multi-connector plate code: P					
	Y	82/84	Silencer	U-M5	U-1/8-B	U-1/4-B
		12/14	Blanking plug	B-M5	B-1/8	B-1/4
		3/5	Silencer	U-1/4-B	U-3/8-B	U-1/2-B
		1/11 on left	Push-in fitting	QS-1/8-8-I	QS-1/4-10-I	QS-3/8-12-I
		11 on right	Blanking plug	B-1/8	B-1/4	B-3/8
	Z	82/84	Silencer	U-M5	U-1/8-B	U-1/4-B
		3/5	Silencer	U-1/4-B	U-3/8-B	U-1/2-B
		12/14	Push-in fitting	QSM-M5-6-I	QS-1/8-8-I	QS-1/4-10-I
		1/11 on left	Push-in fitting	QS-1/8-8-I	QS-1/4-10-I	QS-3/8-12-I

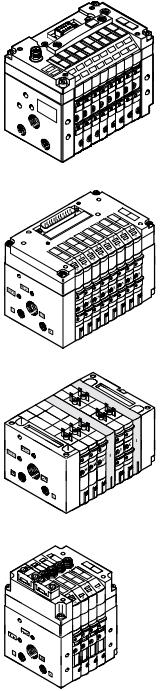
Valve terminals for standard applications
Compact Performance

2.1

Valve terminal type 10 CPV, Compact Performance

Key features – Pneumatic components

FESTO

Pneumatic connection: Fitting set for pneumatic supply						
	Code Pneumatic supply	Port	Designation	Size 10 QS6 Type	Size 14 QS8 Type	Size 18 QS10 Type
	Without pneumatic multi-connector plate					
	A, B	82/84	Blanking plug	B-M5	B-1/8	B-1/4
		3/5	Blanking plug	B-3/8	B-1/2	B-1/2
		1	Push-in fitting	QS-1/8-8-l	QS-1/4-10-l	QS-3/8-12-l
	C, D	82/84	Blanking plug	B-M5	B-1/8	B-1/4
		3/5	Blanking plug	B-3/8	B-1/2	B-1/2
		1	Push-in fitting	QS-1/8-8-l	QS-1/4-10-l	QS-3/8-12-l
		12/14	Push-in fitting	QSM-M5-6-l	QS-1/8-8-l	QS-1/4-10-l
	With pneumatic standard multi-connector plate code: M					
	E, F, H	82/84	Blanking plug	B-M7	B-1/8	B-1/4
		3/5	Blanking plug	B-1/4	B-3/8	B-1/2
		1/11	Push-in fitting	QS-1/8-8-l	QS-1/4-10-l	QS-3/8-12-l
		12/14	Push-in fitting	QSM-M7-6-l	QS-1/8-8-l	QS-1/4-10-l
	G, J, K	82/84	Blanking plug	B-M7	B-1/8	B-1/4
		3/5	Blanking plug	B-1/4	B-3/8	B-1/2
		on right in 1, left	Push-in fitting	QS-1/8-8-l	QS-1/4-10-l	QS-3/8-12-l
		on right in 11	Blanking plug	B-1/8	B-1/4	B-3/8
		12/14	Blanking plug	B-M7	B-1/8	B-1/4
	With pneumatic special multi-connector plate code: P					
	E, F, H	82/84	Blanking plug	B-M5	B-1/8	B-1/4
		3/5	Blanking plug	B-1/4	B-3/8	B-1/2
		1/11	Push-in fitting	QS-1/8-8-l	QS-1/4-10-l	QS-3/8-12-l
		12/14	Push-in fitting	QSM-M5-6-l	QS-1/8-8-l	QS-1/4-10-l
	G, J, K	82/84	Blanking plug	B-M5	B-1/8	B-1/4
		3/5	Blanking plug	B-1/4	B-3/8	B-1/2
		on right in 1, left	Push-in fitting	QS-1/8-8-l	QS-1/4-10-l	QS-3/8-12-l
		on right in 11	Blanking plug	B-1/8	B-1/4	B-3/8
		12/14	Blanking plug	B-M5	B-1/8	B-1/4

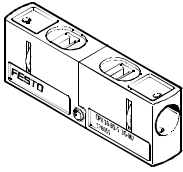
Valve terminal type 10 CPV, Compact Performance

Key features – Pneumatic components

FESTO

CPV valve terminal size 10 and 14 with valve extensions

Functional modules



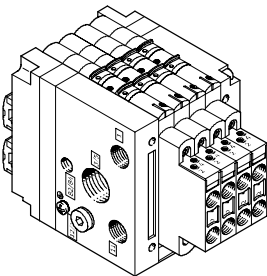
CPV10-BS-5/3G-M7
CPV14-BS-5/3G-1/8

Valve kit 5/3G for creating a 5/3-way function, mid-position closed, for size 10 and 14:
The valve function “mid-position closed” is created from one valve slice with 2x 3/2-way valve, normally closed (valve function code C).

The valve kit CPV10-BS-5/3G-M7 or CPV14-BS-5/3G-1/8 (which incorporates a double piloted non-return function) is used for this.

This valve kit is intended for applications with one working pressure level per valve slice, i.e. it may not be used in dual-pressure applications (where there are different pressure levels at port 1 and 11).

Additional functions for valve positions

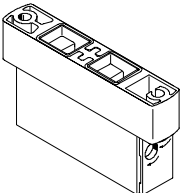


These valve extensions (vertical linkage) can be used to add further pneumatic functions to CPV valve terminals size 10 and 14:

- Two one-way flow control valves for flow regulation directly at the valve terminal for
 - supply air flow control
 - exhaust air flow control
- The vacuum flow control module must be used with the vacuum generator with or without ejector pulse and provides a non-return function and adjustable ejector pulse.

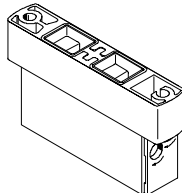
The additional functions cannot be used in the first or last valve position in combination with the pneumatic multi-connector plate.

2x one-way flow control valve for supply air flow control
Additional function code P



CPV10-BS-2xGRZZ-M7
CPV14-BS-2xGRZZ-1/8

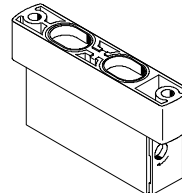
2x one-way flow control valve for exhaust air flow control
Additional function code Q



CPV10-BS-2xGRAZ-M7
CPV14-BS-2xGRAZ-1/8

Vacuum flow control module

Additional function code V



CPV10-BS-GRZ-V-M7
CPV14-BS-GRZ-V-1/8

Valve terminal type 10 CPV, Compact Performance

Key features – Assembly

FESTO

Mounting options

The valve terminals have holes for four mounting screws, the mounting side is the pneumatic threaded connector side. These holes are also used to mount a valve terminal on the pneumatic multi-connector plate.

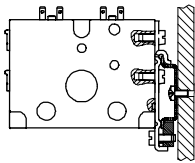
There are other mounting options in addition to this mounting method:

- H-rail mounting
- Wall mounting
- Wall mounting via flanged multi-connector plate
- On rear side via wall mounting
- On head side (CPV10/14 with IC connection only)
- Mounting via through-hole in wall

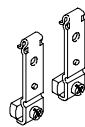
The attachments are mounted with a screw and fixing bolt on the left-hand and right-hand end plates.

Examples of mounting options

H-rail: Mounting code H



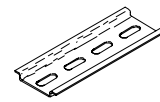
for valve terminal CPV10/14:
CPV10/14-VI-BG-NRH-35
(mounting code H)



for valve terminal CPV18:
CPV18-VI-BG-NRH-35
(mounting code H)

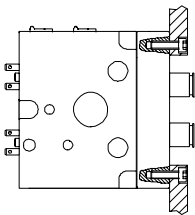


H-rail to EN 60715, not for accessories M, P, V (pneumatic multi-connector plate)

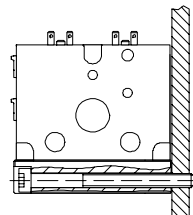


Wall mountings

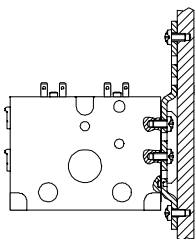
Through-hole in wall, for example on the machine



Wall mounting via pneumatic multi-connector plate



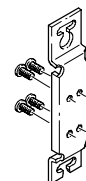
Attachment for wall mounting



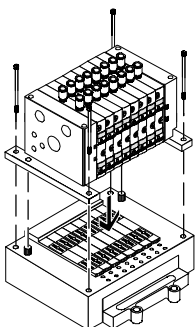
for valve terminal CPV10/14:
CPV10/14-VI-BG-RWL-B
(mounting code U)



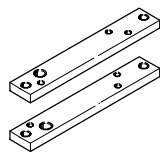
for valve terminal CPV18:
CPV18-VI-BG-RW
(mounting code W)



Attachment for individual connection (mounting code X) and ET200X (included in the scope of delivery)



for valve terminal CPV10/14:
CPV...-VI-BG-ET200X



Valve terminal type 10 CPV, Compact Performance

FESTO

Key features – Display and operation


Manual override tool

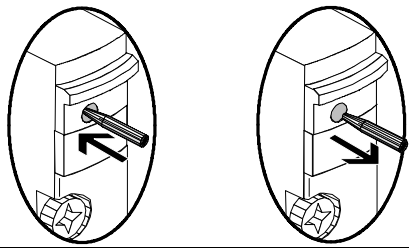
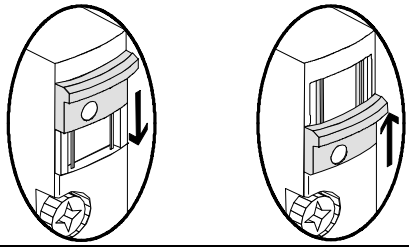
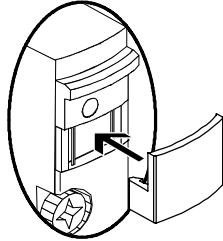
Three types of manual override are available:

- Non-detenting with slide
- Detenting
- Blocked

A subsequent conversion of the manual override (MO) from non-detenting to detenting or blocked is possible at any time.

The locking clip on the valve must be removed to this end. This is only possible after the individual valve has been removed or the tie rod of the valve terminal has been released.

 **Note**
See the user documentation for instructions.

Code	Graphical symbol	Size			Note
		10	14	18	
N	Manual override, non-detenting 	■	■	■	In the “non-detenting” version, the blue slide is held via a locking clip. A pointed object (e.g. pen, etc.) can be used to activate the MO through the opening.
R	Manual override, detenting 	■	■	■	In the “detenting” version, the manual override is activated by pushing the slide. The non-locking function can be realised by re-installing the locking clip.
V	Manual override, blocked 	■	■	■	In the “blocked” version, non-detenting or detenting activation of the MO is prevented by means of a cover. Like the push-in locking clip, the cover can be added subsequently, but cannot be detached from the valve once this has been done.

Valve terminal type 10 CPV, Compact Performance

Key features – Display and operation

FESTO

Display and operation

You will find the following LEDs for displaying the switching status on the electrical connections of the CPV valve terminal:

- Display of the switching status of the pilot solenoid coil 12 for output 2
- Display of the switching status of the pilot solenoid coil 14 for output 4

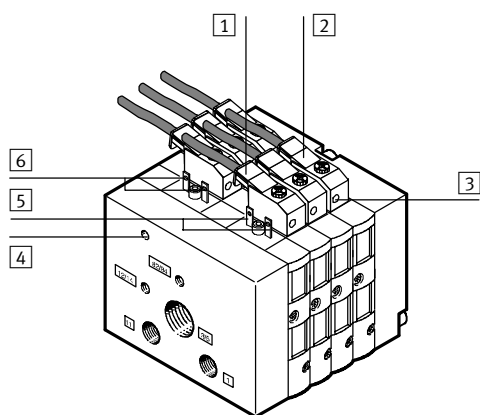
- Readable from the “top” as well as from the “front”

With an individual connection the LED is located in the connector plug.

Inscription labels

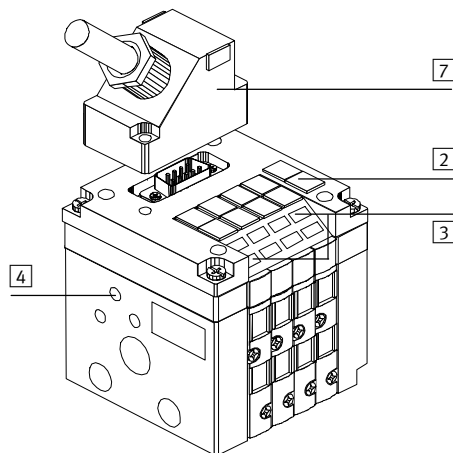
- Clip with inscription field on cable socket (with individual connection)
- Inscription clips on connection node (multi-pin plug, AS-interface, CP installation system, Fieldbus Direct)

CPV valve terminal with individual connection



- 1 Pre-assembled connection socket for each pilot solenoid coil
- 2 Inscription label (for each connection socket)
- 3 Yellow LED, signal status display for pilot solenoid coils (for each connection socket)
- 4 Earth terminal

CPV valve terminal with multi-pin plug connection



- 5 Terminal lug for pilot solenoid coil 14
- 6 Terminal lug for pilot solenoid coil 12
- 7 Sub-D multi-pin plug (9-pin for valve terminals with 4 valves, 25-pin for valve terminals with 6 or 8 valves)

Valve terminal type 10 CPV, Compact Performance

Key features – Display and operation

FESTO

Inscription system

Inscription labels can be affixed as follows:

■ On the top of the electrical interface unit

■ On the inscription label holder
The inscription label holder permits the addition of inscription labels, protects the manual overrides and prevents them from being accidentally activated. The inscription labels are used to record additional information regarding the valves.

The inscription label holders can be ordered together with the valve terminal using the order code. The relevant inscription labels are supplied in a frame and are ordered separately using part numbers.

Transparent inscription label holder

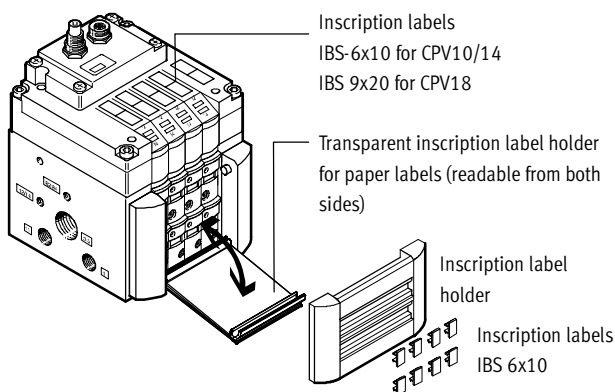
The transparent inscription label holder CPV...-VI-ST-... offers a further labelling option, for example for large paper labels that can be read from both sides.

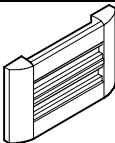
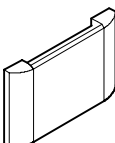

The inscription label holder cannot be used together with relay plate.



Note

The Word templates for CPV label holders can be found at:
www.festo.com/en/engineering



Ordering data				
	Code	Designation	Type	Part No.
Inscription label holder				
	Z	Holder for inscription labels	CPV...-VI-BZ-T...	Dependent on the number of valve positions ➔ 4 / 2.1-57
	T	Holder for inscription labels, transparent	CPV...-VI-ST-T...	
Inscription labels				
	–	6x10 mm, 64 pieces in frames	IBS-6x10	18 576
	–	9x20 mm, 20 pieces in frames	IBS-9x20	18 182

Valve terminal type 10 CPV, Compact Performance

Key features – Electrical components

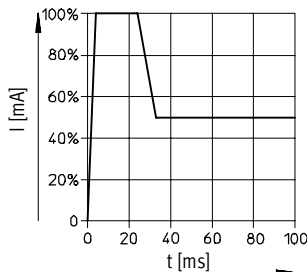
FESTO

Electrical connection

Contacts which are fitted on the top of the valve slice form the interface for various electrical connection options. The electrical connection is attached from above using four screws. This

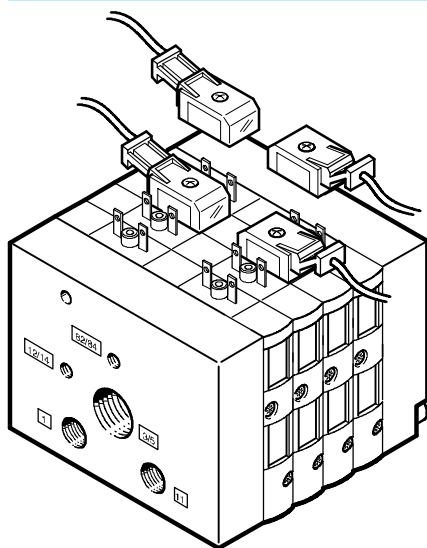
means that the valve terminal can be adapted to different electrical requirements or fieldbus protocols using the same pneumatic part.

Electrical power



CPV10/14 valves are actuated by means of an integrated current reduction circuit, which reduces power consumption and heat build-up. This current reduction circuit is integrated in the electrical interface unit (multi-pin plug or fieldbus connection) or in the individual connecting cable. During switch-off, the voltage peaks are limited to 38 V DC.

Individual connection



Integration is only carried out in the pneumatic part with individual connection whereby the solenoid valves are connected with individual cables.

Ordering data					
	Code	Designation		Type	Part No.
Plug socket with cable for individual connection, electrical, for CPV10/14					
	D	Plug socket with cable (suitable for chain link trunking)	2.5 m	KMYZ-7-24-2,5-LED-PUR	193 683
	E	Plug socket with cable (suitable for chain link trunking)	5 m	KMYZ-7-24-5-LED-PUR	193 685
	F	Plug socket with cable (suitable for chain link trunking)	10 m	KMYZ-7-24-10-LED-PUR	196 070
Plug socket with cable for individual connection, electrical, for CPV18					
	D	Plug socket with cable	2.5 m	KMEB-2-24-2,5-LED	174 844
	E		5 m	KMEB-2-24-5-LED	174 845

Note
Connecting cables are pre-assembled. They include a protective circuit and an LED indicating the operating status.

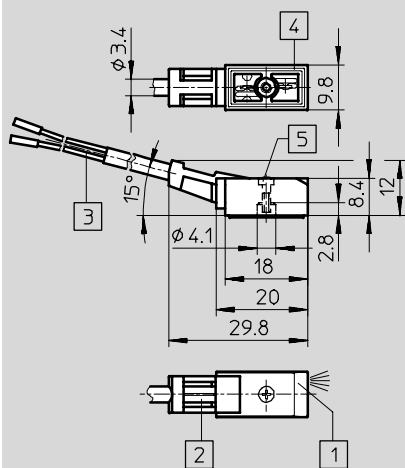
FESTO

Key features – Electrical components

Dimensions – Connecting cable for individual connection

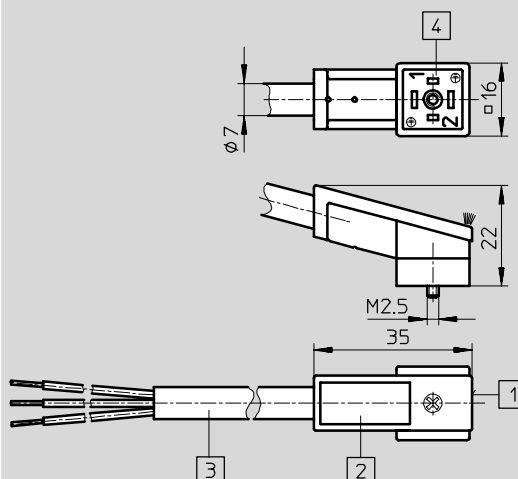
Download CAD data → www.festo.com/en/engineering

KMYZ-7-24-...



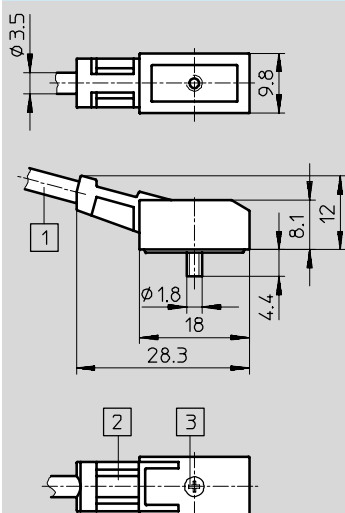
- | | | | |
|----------|---|----------|--|
| 1 | LED illuminated area | 4 | Connection pattern for MZC |
| 2 | Location for inscription label | 5 | Mounting screw
max. tightening torque 0.35 Nm
(self-tapping KB 18x7) |
| 3 | 2-wire cable 2.5 m, 5 m or 10 m
(2x 0.25 mm ²) | | |

KMEB-2-24-...-LED



- | | |
|--|---|
| <p>1 LED illuminated area</p> <p>2 Inscription label IBS-9x20 Part No. 18 182</p> <p>3 3-wire cable 2.5 or 5 m (3x 0.75 mm²)</p> | <p>4 Connection pattern to DIN 43 650 type C</p> |
|--|---|

KRP-1-24-...¹⁾



- 1 Cable 2x 0.25 mm²
 2 Location for inscription labels
 (order code IBS 6x10,
 Part No. 18 576)
 3 Mounting screw
 (self-tapping KB 1.8x9)

1) not for IC connection

Valve terminals for standard applications
Compact Performance

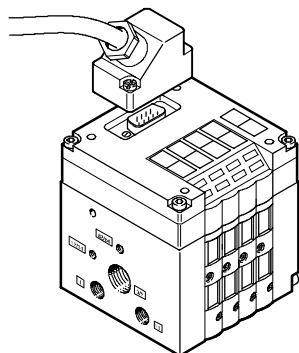
2.1

Valve terminal type 10 CPV, Compact Performance

Key features – Electrical components

FESTO

Multi-pin plug connection



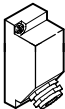
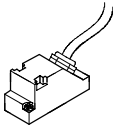
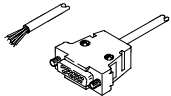
In addition to pneumatic integration, multi-pin plug connection results in integration of the electrical side as well, and facilitates connection from the control cabinet to the valve terminal via a single cable. Sub-D 9-pin and 25-pin plugs are used for connection. The plug housing of the KMP-... cable provides the Sub-D connectors with IP65 protection.

The following sizes of plug connector are used:

- 4-fold valve terminal: 9-pin
- 6-fold valve terminal: 25-pin
- 8-fold valve terminal: 25-pin

The cable KMP6-... can alternatively be used for applications with IP40 protection.

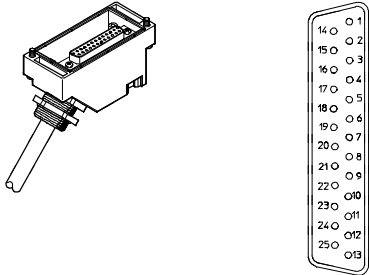
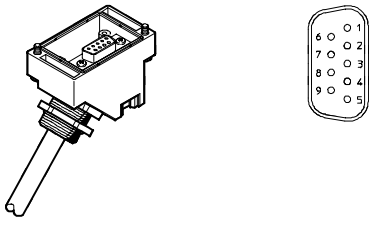
Pre-assembled connecting cables are available for easy connection. Standard lengths of 5 m and 10 m can be supplied. The pre-assembled connecting cables are also available in a design suitable for chain link trunking.

Ordering data							
	Code	Designation			Type	Part No.	
Multi-pin cable							
	Y	Plug socket (Sub-D plug can be crimped), for self-assembly	9-pin		SD-SUB-D-BU9	18 708	
			25-pin		SD-SUB-D-BU25	18 709	
	R	Connecting cable, IP65, polyvinyl chloride	9-pin	5 m	KMP3-9P-08-5	18 698	
			25-pin		KMP3-25P-16-5	18 624	
			S	9-pin	10 m	KMP3-9P-08-10	18 579
				25-pin		KMP3-25P-16-10	18 625
	–	Connecting cable, IP65, polyurethane (suitable for chain link trunking)	9-pin	5 m	KMP4-9P-5-PUR	193 014	
			25-pin		KMP4-25P-5-PUR	193 018	
			–	9-pin	10 m	KMP4-9P-10-PUR	193 015
				25-pin		KMP4-25P-10-PUR	193 019
	–	Connecting cable, IP65, polyvinyl chloride (suitable for chain link trunking)	9-pin	5 m	KMP4-9P-5-PVC	193 012	
			25-pin		KMP4-25P-5-PVC	193 016	
			–	9-pin	10 m	KMP4-9P-10-PVC	193 013
				25-pin		KMP4-25P-10-PVC	193 017
		Connecting cable, IP40, polyvinyl chloride Only for CPV10/14	9-pin	2.5 m	KMP6-09P-8-2,5	531 184	
			25-pin		KMP6-25P-20-2,5	530046	
			9-pin	5 m	KMP6-09P-8-5	531 185	
			25-pin		KMP6-25P-20-5	530 047	
			9-pin	10 m	KMP6-09P-8-10	531 186	
			25-pin		KMP6-25P-20-10	530 048	

Valve terminal type 10 CPV, Compact Performance

Key features – Electrical components

FESTO

Pin allocation – Pre-assembled multi-pin cable (viewed from plug-in direction)				
Plug view	Pin	Core colour	Valve 24 V DC	
Cable with 25-pin Sub-D plug for 6-fold and 8-fold valve terminal				
	1	White	1	14
	2	Green		12
	3	Yellow	2	14
	4	Grey		12
	5	Pink	3	14
	6	Blue		12
	7	Red	4	14
	8	Magenta		12
	9	Grey-pink	5	14
	10	Red-blue		12
	11	White-green	6	14
	12	Brown-green		12
	13	White-yellow	7	14
	14	Yellow-brown		12
	15	White-grey	8	14
	16	Grey-brown		12
	17			
	18			
	19			
	20			
	21			
	22			
	23			
	24	Brown	(0 V) ¹⁾	
	25	Black	(0 V) ¹⁾	
Cable with 9-pin Sub-D plug for 4-fold valve terminal				
	1	White	1	14
	2	Green		12
	3	Yellow	2	14
	4	Grey		12
	5	Pink	3	14
	6	Blue		12
	7	Red	4	14
	8	Magenta		12
	9	Black	Common	

1) 0 V for positive switching control signals; connect 24 V for negative switching control signals; mixed operation is not permitted.

Valve terminals for standard applications
Compact Performance

2.1

Valve terminal type 10 CPV, Compact Performance

Key features – Electrical components

FESTO

Valve terminal type 10 – AS-interface valve terminal

The AS-interface permits the spatial distribution of individual components or small component groups.

The AS-interface connection of valve terminal type 10 can be used to control 3, 4, 6 or 8 solenoid coils.

The valve terminal cover contains the LEDs which indicate the operating status and the protective circuit for the valves. The standard AS-interface protocol permits a maximum of

4 inputs and 4 outputs in one unit.

The use of 2 AS-interface slaves in one valve terminal means that 8 inputs and 8 outputs can be controlled in an 8-fold valve terminal (8 solenoid coils).

All CPV valve terminals can be operated using additional functions, e.g. relay plates or vacuum generators.

Valve terminals CPV with inputs are also available for A/B operation to SPEC 2.1.

AS-interface control

- For 2, 4 or 8 valves
- Great variety thanks to the wide range of modules in the system

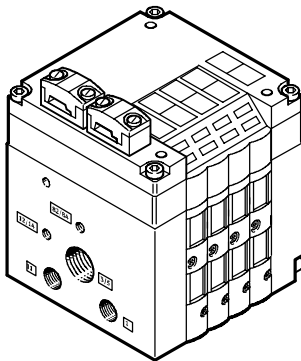
AS-interface with A/B operation

- For 3 or 6 valves
- All of the benefits of the simple installation system are retained
- 100% more inputs/master

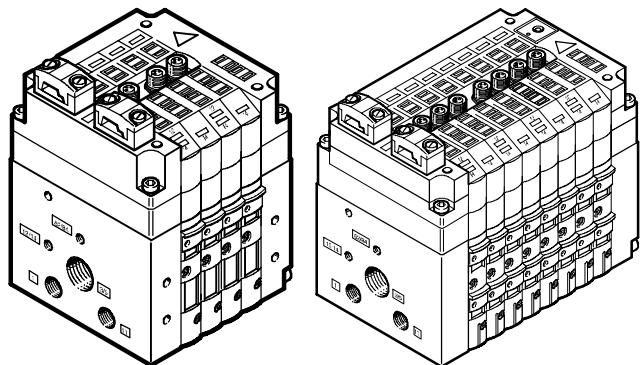
- 50% more outputs/master
- Improved diagnosis of peripheral errors
- More AS-interface functions in Specifications 2.1 and 3.0.

➔ AS-interface components
Info 220
4 / 4.9-2

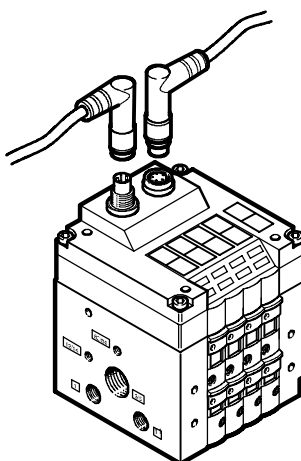
AS-interface valve terminal with auxiliary power supply



AS-interface valve terminal with auxiliary power supply and inputs



CP installation system, valve terminal



Integration of valve terminal type 10 into a fieldbus system or independent control system is accomplished by connecting the terminals to the corresponding fieldbus node or control block with simple, pre-assembled terminal connectors.

The installation system integrates the valve terminal CPV and various I/O modules, etc. into a single installation concept.

The 5-pin connecting cables carry the supply power and control signals. The valve terminal cover contains the LEDs which indicate the operating status and the protective circuits for the valves.

■ Max. 8 valve slices for up to 16 CPV valves

The CP string is used to exchange the input and output states of the connected modules with the CP fieldbus node.

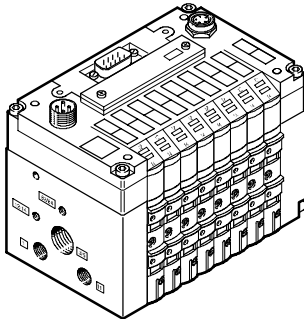
➔ CP installation system
4 / 4.6-2

Valve terminal type 10 CPV, Compact Performance

Key features – Electrical components

FESTO

Fieldbus Direct valve terminal



Fieldbus Direct is a system for the connection of one valve terminal to nine different fieldbus standards. The most important systems including Profibus, Interbus, DeviceNet and CANopen are supported.

The CP string extension option allows

the functions and components of the CP installation system to be used.

The optional string extension allows an additional valve terminal and I/O modules to be connected to the Fieldbus Direct fieldbus node.

The valve terminals are available in all three sizes, 10, 14 and 18 mm, each with 8 valve slices.

➔ CPV with Fieldbus Direct
4 / 4.7-2

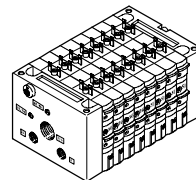
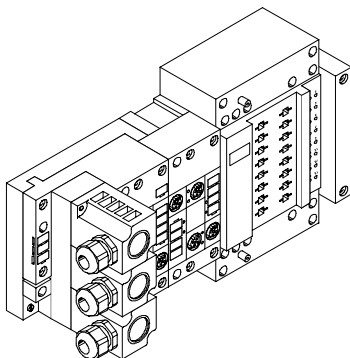
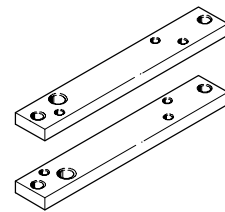
ET200X pneumatic interface for CPV10 and CPV14

Adaptation of CPV valve terminal to Siemens ET200X I/O module. The combination of the ET200X functional modules and the pneumatic functions of the CPV valve terminal provides a highly integrateable automation solution for systems using electrical and pneumatic drives with

- 8 valve slices for up to 16 CPV valves
- Fast and secure contacting to IP65
- CPV 10 and CPV 14 valve terminals
- High degree of protection IP65/IP67
- Modular design

- Large number of I/O modules
 - digital I/O
 - analogue I/O
 - supply branching for activation of AC motors
- PROFIBUS DP interface

Mounting kit for ET200X
CPV-...-VI-BG-ET200X (included in the scope of delivery)



Specific data on the ET200X pneumatic interface can be found in Siemens product catalogues.

Valve terminal type 10 CPV, Compact Performance

Instructions for use


FESTO


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 actuator used.	Incorrect additional oil and too high an oil content in the compressed air reduce the service life of the valve terminal. Use Festo special oil OFSW-32 or the alternatives listed in the Festo catalogue (as specified in DIN 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 10 CPV, Compact Performance

FESTO

Technical data

-  - Flow rates of up to
CPV10: 400 l/min
CPV14: 800 l/min
CPV18: 1600 l/min

-  - Valve width
CPV10: 10 mm
CPV14: 14 mm
CPV18: 18 mm

-  - Voltage
24 V DC



Valve terminals for standard applications
Compact Performance

2.1

General technical data				
		CPV10	CPV14	CPV18
Constructional design		Electromagnetically actuated piston spool valve		
Lubrication		Lubrication for life, PWIS-free (free of paint-wetting impairment substances)		
Type of mounting		Via pneumatic multi-connector plate		
		Via backwall		
		On H-rail		
Mounting position		Any		
Manual override		Non-detenting/detenting/blocked		
Width	[mm]	10	14	18
Nominal size	[mm]	4	6	8
Nominal flow rate without fitting	[l/min]	400	800	1600
Pneumatic connections ¹⁾				
Pneumatic connection		Via end plate		
Supply port	1/11	G ¹ / ₈	G ¹ / ₄	G ³ / ₈
Exhaust port	3/5	G ³ / ₈ (G ¹ / ₄)	G ¹ / ₂ (G ³ / ₈)	G ¹ / ₂
Working lines	2/4	M7	G ¹ / ₈	G ¹ / ₄
Pilot supply air port	12/14	M5 (M7)	G ¹ / ₄	G ¹ / ₄
Pilot exhaust air port	82/84	M5 (M7)	G ¹ / ₈	G ¹ / ₄

1) Connection dimensions in brackets for pneumatic multi-connector plate

Valve terminal type 10 CPV, Compact Performance

Technical data

FESTO

Operating and environmental conditions													
Valve function order code			M	F	J	N	C	H	G	D	I	A	E
Operating medium			Filtered compressed air, lubricated or unlubricated, inert gases → 4 / 2.1-34										
Grade of filtration			[µm]	40 (average pore size)									
Operating pressure	With internal pilot supply air		[bar]	3 ... 8									
	With external pilot supply air		[bar]	-0.9 ... +10									
	P ₁ =P ₁₁												
	Pilot supply air P ₁₂ =P ₁₄		[bar]	3 ... 8									
Ambient temperature			[°C]	-5 ... +50 (vacuum generators: 0 ... +50)									
Temperature of medium			[°C]	-5 ... +50 (vacuum generators: 0 ... +50)									
Storage temperature			[°C]	-20 ... +40									
Relative air humidity at 25 °C			[%]	95 with no condensation									
Corrosion resistance class CRC ¹⁾				2 (vacuum generators 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.
 Corrosion resistance class 2 according to Festo standard 940 070
 Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Valve response times [ms]													
Valve function order code			M	F	J	N	C	H	G	D	I	A	E
CPV10													
Response times	on	17	13	–	17	17	17	20	15	15	–	15	
	off	27	17	–	25	25	25	30	17	17	–	17	
	change-over	–	–	10	–	–	–	–	–	–	–	–	
CPV14													
Response times	on	25	–	–	24	24	24	22	13	13	–	13	
	off	35	–	–	30	30	30	30	16	16	–	16	
	change-over	–	–	12	–	–	–	–	–	–	–	–	
CPV18													
Response times	on	18	–	–	18	18	18	14	14	14	–	14	
	off	26	–	–	24	24	24	32	20	20	–	20	
	change-over	–	–	12	–	–	–	–	–	–	–	–	

Valve terminal type 10 CPV, Compact Performance

Technical data

FESTO

Valve terminals for standard applications
Compact Performance

2.1

Electrical data				
		CPV10	CPV14	CPV18
Operating voltage	[V]	24 DC (+10/–15%)		
Edge gradient (IC and MP only)	[V/ms]	> 0.4 minimum voltage increase time to reach the high-current phase		
Limitation of the voltage peaks when switching off	[V]	38 DC		
Residual ripple	[Vss]	4		
Electrical power consumption	[W]	0.6 (0.45 at 21 V); (with CPV10-M11H... 0.65)	0.9 (0.65 at 21 V)	1.5 (0.95 at 21 V)
Duty cycle	[%]	100%		
with pilot supply air P ₁ =P ₁₁	[bar]	–0.9 ... +10		
Electromagnetic compatibility of CP valve terminal with CP connection		Interference emission tested to EN 61 000-6-4, “Interference emission in industrial areas” Interference immunity ¹⁾ tested to EN 61 000-6-2, “Interference immunity in industrial areas”		
Protection against electric shock (protection against direct and indirect contact to EN 60204-1/IEC 204)		By means of PELV power supply unit		
Explosion protection class ²⁾		In accordance with EU directive (ATEX directive) 94/9/EC, II 3G/D EEx nA II T5 X –5°C ≤ Ta ≤ 50°C T 80°C IP65		
UL ²⁾		Certification to UL 429, CSA 22.2 No. 139		
CE certification ²⁾		In accordance with EU directive 89/336/EEC (EMC directive)		
Protection class to EN 60 529		IP65 (for all types of signal transmission in assembled state)		

1) The maximum signal line length is 30 m

2) → Page 4 / 2.1-7

Relay plate				
		CPV10	CPV14	CPV18
Operating voltage	[V]	20.4 ... 26.4 DC		–
Electrical power consumption		1.2 W		–
No. of relays		2 with electrically isolated outputs		–
Load current circuit		Each 1 A/24 V DC +10%		–
Relay response times	on	5 ms		–
	off	2 ms		–

Data on vibrations and shock in accordance with DIN/EC68				
		CPV10	CPV14	CPV18
Vibration resistance		Tested to DIN/IEC 68/EN 60 068, Parts 2-6		
	Transport	3.5 mm travel at 2 ... 9 Hz 1 g acceleration at 9 ... 200 Hz		
	Operation/use	0.35 mm travel at 10 ... 60 Hz 5 g acceleration at 60 ... 150 Hz		
Shock resistance		Tested to DIN/IEC 68, Parts 2-27 30 g acceleration with 11 ms duration		
Continuous shock resistance		Tested to DIN/IEC 68, Parts 2-29		

Valve terminal type 10 CPV, Compact Performance

Technical data

FESTO

Materials			
	CPV10	CPV14	CPV18
Basic electrical unit	Die-cast aluminium, polyamide, nitrile rubber		
Valve slices	Die-cast aluminium		
Valve module 5/3G	Cast aluminium, polyacetate		
Relay plate	Polyamide, brass		
Blanking plate/separator plate	Polyamide		
End plates	Die-cast aluminium		
Flat plate silencer	Die-cast aluminium, polyethylene		
Pneumatic multi-connector plate	Wrought aluminium alloy		
Inscription label holder	Polyacetate, polyvinyl chloride		
Seal	Nitrile rubber, hydrogenated nitrile rubber		

Product weight					
Approx. weights		[g]	CPV10	CPV14	CPV18
Electrical connection plates with AS-i connection					
■ on CP valve terminals with 2 valve positions		85	130	275	
■ on CP valve terminals with 4 valve positions		110	175	355	
■ on CP valve terminals with 8 valve positions		400	460	–	
Electrical connection plates with CP connection					
■ on CP valve terminals with 4 valve positions		145	230	375	
■ on CP valve terminals with 6 valve positions		180	250	450	
■ on CP valve terminals with 8 valve positions		200	300	540	
Electrical connection plates with MP connection					
■ on CP valve terminals with 4 valve positions		110	170	400	
■ on CP valve terminals with 6 valve positions		140	230	425	
■ on CP valve terminals with 8 valve positions		165	275	515	
End plates (2 pieces)		160	280	740	
Pneumatic multi-connector plate					
■ on CP valve terminals with 2 valve positions		120	270	520	
■ on CP valve terminals with 4 valve positions		165	390	750	
■ on CP valve terminals with 6 valve positions		225	510	870	
■ on CP valve terminals with 8 valve positions		270	630	1300	
Flat plate silencer		147	234	–	
Relay plate		35	55	–	
Blanking plate		25	45	90	
Separator plate		25	45	90	
Valve sub-bases, vacuum generators		65	110	260	
Functional module: 5/3G function		46	105	–	
Functional module: One-way flow control valves		25	54	125	

Valve terminal type 10 CPV, Compact Performance

Technical data

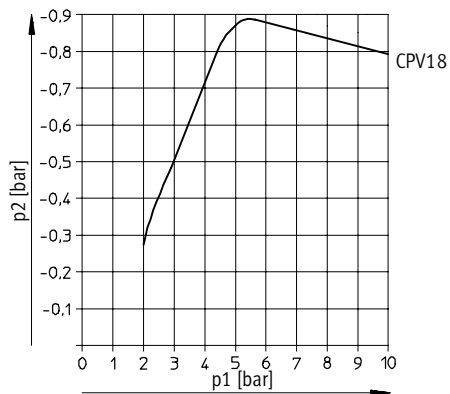
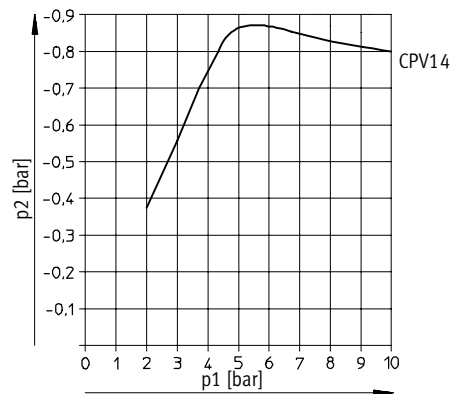
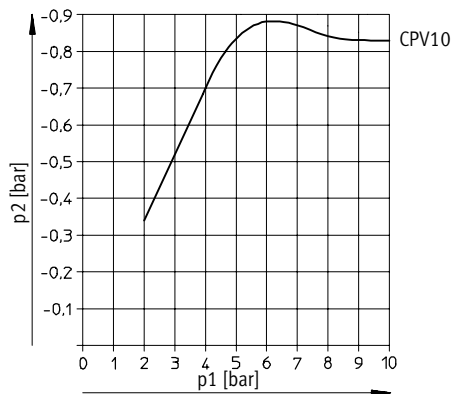
FESTO

Valve terminals for standard applications
Compact Performance

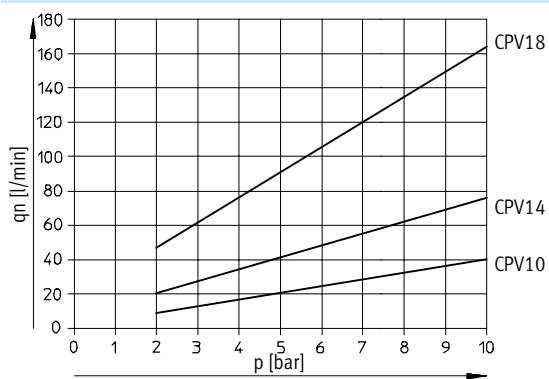
2.1

Vacuum generators

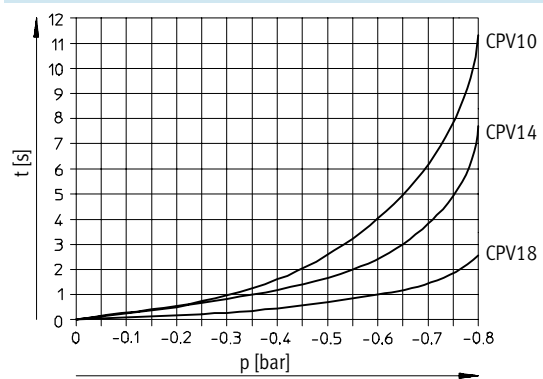
Vacuum as a function of operating pressure



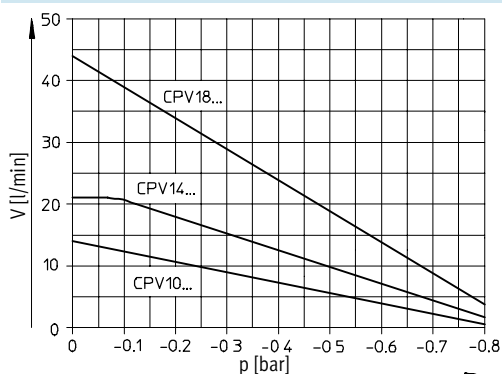
Air consumption as a function of operating pressure



Evacuation time for a volume of 1 litre at P_{nominal}



Suction capacity as a function of partial vacuum at P_{nominal}



Valve terminal type 10 CPV, Compact Performance

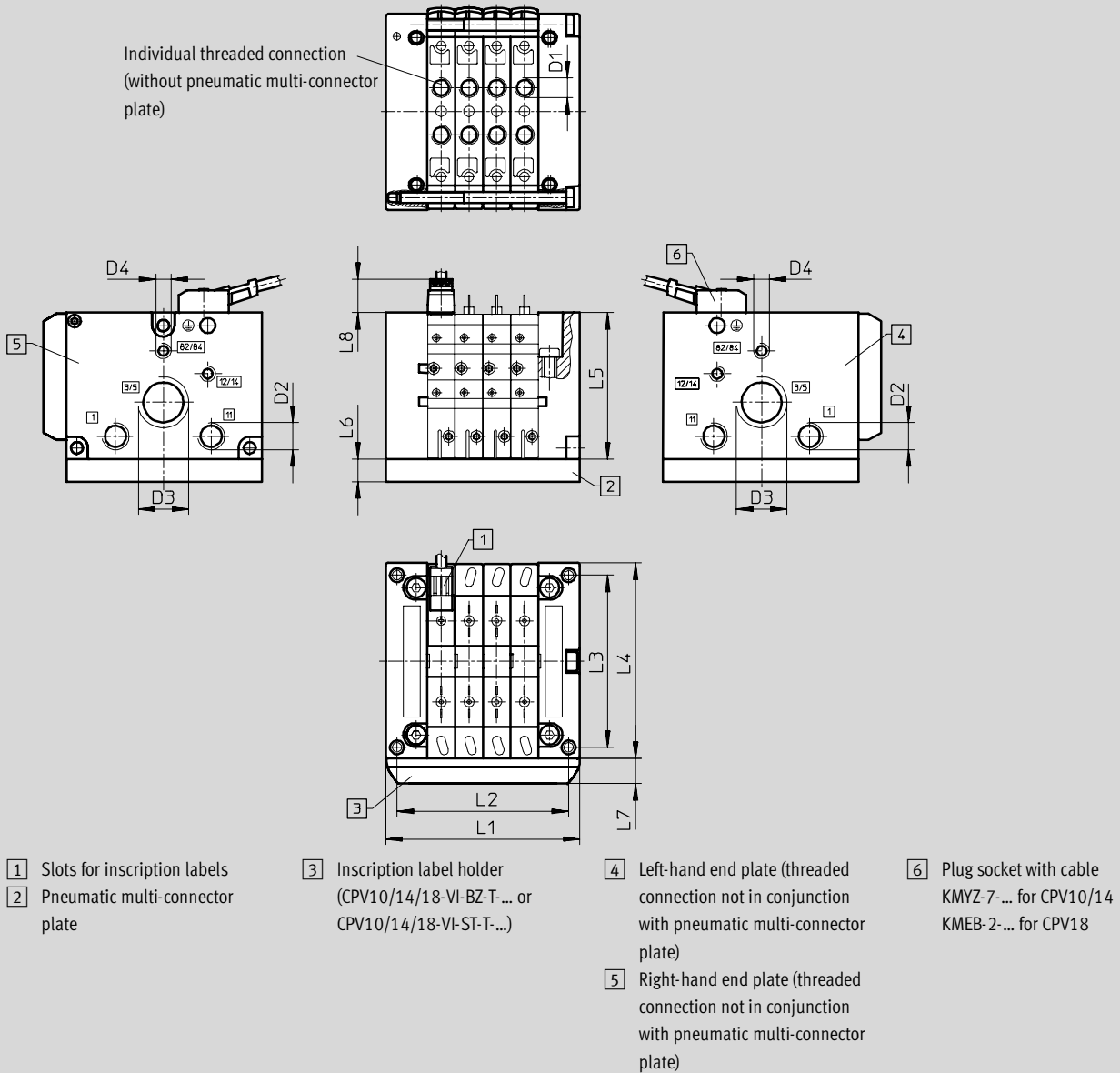
Technical data

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Dimensions

Download CAD data → www.festo.com/en/engineering

Valve terminal with individual connections – CPV10/14/18



Valve terminal type 10 CPV, Compact Performance

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Technical data

		L1	L2	L3	L4	L5	L6	L7	L8	D1	D2	D3	D4
CPV10	2-fold	50	41.8	62	71	52.8	15	9.5	11.8	M7	G $\frac{1}{8}$	G $\frac{3}{8}$	M5
	3-fold	60	51.8										
	4-fold	70	61.8										
	5-fold	80	71.8										
	6-fold	90	81.8										
	7-fold	100	91.8										
	8-fold	110	101.8										
CPV14	2-fold	68	58	78	89	58.8	20	9.5	11.8	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{2}$	G $\frac{1}{8}$
	3-fold	82	72										
	4-fold	96	86										
	5-fold	110	100										
	6-fold	124	114										
	7-fold	138	128										
	8-fold	152	142										
CPV18	2-fold	96	85.5	106.5	118	73	20	9.5	21.6	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{4}$
	3-fold	114	103.5										
	4-fold	132	121.5										
	5-fold	150	139.5										
	6-fold	168	157.5										
	7-fold	186	175.5										
	8-fold	204	193.5										

Valve terminals for standard applications
Compact Performance

2.1

Valve terminal type 10 CPV, Compact Performance

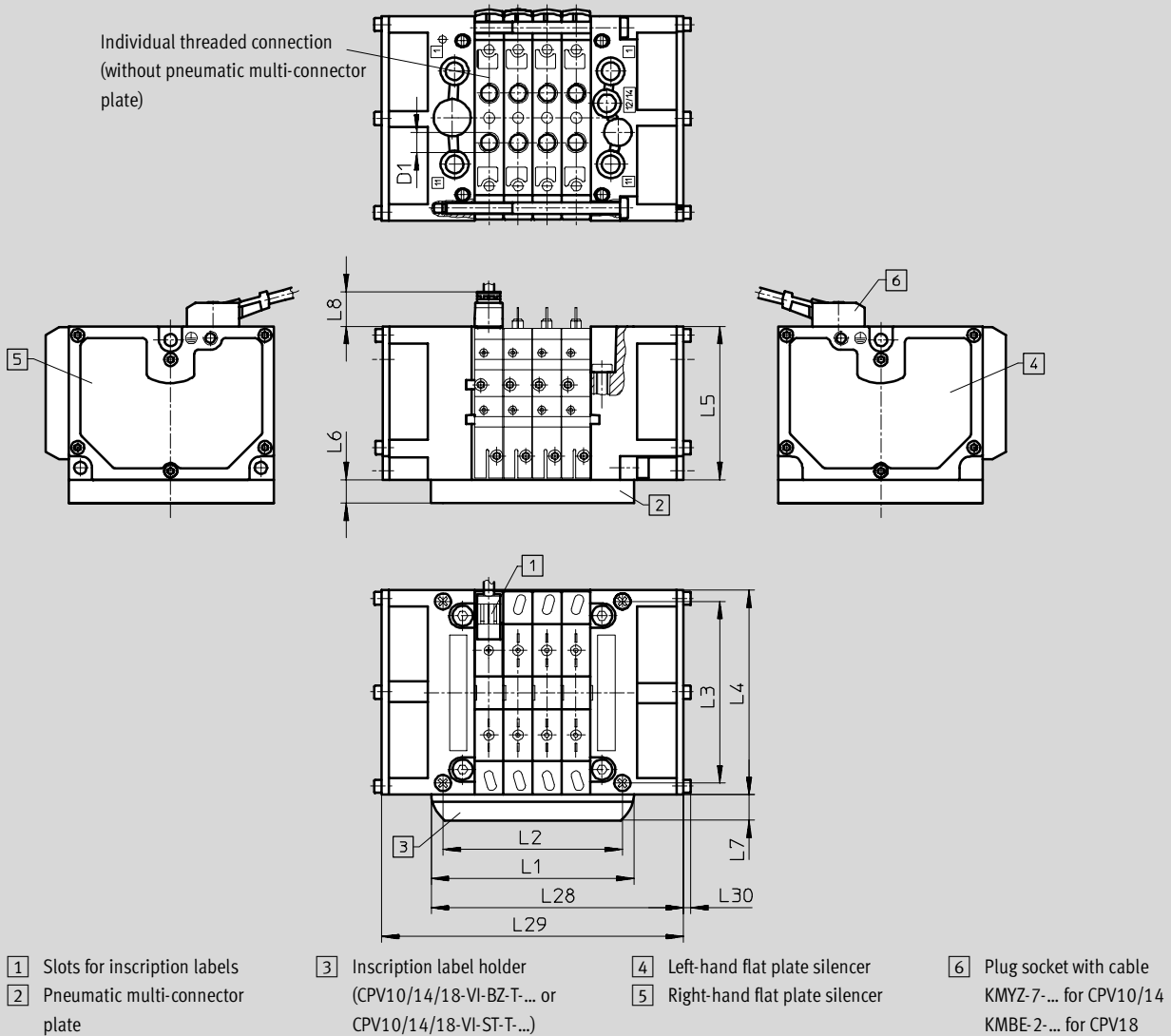
Technical data

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Dimensions

Download CAD data → www.festo.com/en/engineering

Valve terminal with individual connections and flat plate silencer– CPV10/14/18



Valve terminal type 10 CPV, Compact Performance

FESTO

Technical data

		L1	L2	L3	L4	L5	L6	L7	L8	L28	L29	L30	D1
CPV10	2-fold	50	41.8	62	71	52.8	15	9.5	11.8	67	84	2.5	M7
	3-fold	60	51.8							77	94		
	4-fold	70	61.8							87	104		
	5-fold	80	71.8							97	114		
	6-fold	90	81.8							107	124		
	7-fold	100	91.8							117	134		
	8-fold	110	101.8							127	144		
CPV14	2-fold	68	58	78	89	58.8	20	9.5	11.8	85	102	3	G $\frac{1}{8}$
	3-fold	82	72							99	116		
	4-fold	96	86							113	130		
	5-fold	110	100							127	144		
	6-fold	124	114							141	158		
	7-fold	138	128							155	172		
	8-fold	152	142							169	186		
CPV18	2-fold	96	85.5	106.5	118	73	20	9.5	21.6	127	158	4.55	G $\frac{1}{4}$
	3-fold	114	105.5							145	176		
	4-fold	132	121.5							163	194		
	5-fold	150	139.5							181	212		
	6-fold	168	157.5							199	230		
	7-fold	186	175.5							217	248		
	8-fold	204	193.5							235	266		

Valve terminals for standard applications
Compact Performance

2.1

Valve terminal type 10 CPV, Compact Performance

Technical data

FESTO

Dimensions

Valve terminal with multi-pin plug connection – CPV10/14/18

1 Slots for inscription labels 2 Pneumatic multi-connector plate 3 Inscription label holder
(CPV10/14/18-VI-BZ-T-... or CPV10/14/18-VI-ST-T-...)

Download CAD data → www.festo.com/en/engineering

		L1	L2	L3	L4	L5	L6	L7	L9	L10	L11	L12	L13
CPV10	4-fold	70	61.8	62	71	52.8	15	9.5	39.5	10	50	23.5	58.8
	6-fold	90	81.8							10	70		
	8-fold	110	101.8							20	70		
CPV14	4-fold	96	86	78	89	58.8	20	9.5	61.8	23	50	23.5	58.8
	6-fold	124	114							27	70		
	8-fold	152	142							41	70		
CPV18	4-fold	132	121.5	106.5	118	73	20	9.5	88.4	41	50	28	63
	6-fold	168	157.5							49	70		
	8-fold	204	193.5							67	70		

Valve terminal type 10 CPV, Compact Performance

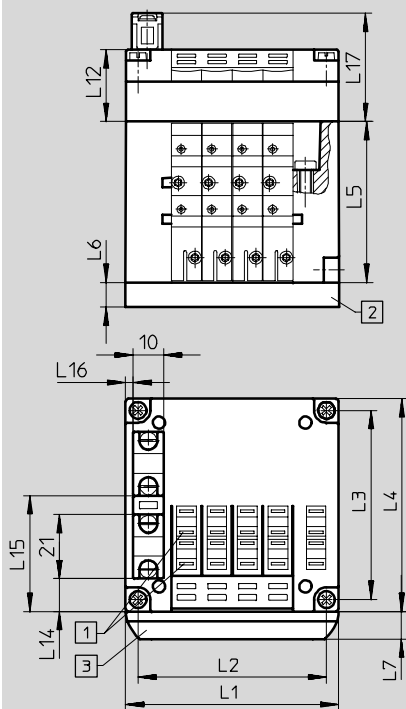
Technical data

FESTO

Dimensions

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Valve terminal with AS-interface connection – CPV10/14/18



1 Slots for inscription labels

2 Pneumatic multi-connector plate

3 Inscription label holder
(CPV10/14/18-VI-BZ-T... or
CPV10/14/18-VI-ST-T...)

		L1	L2	L3	L4	L5	L6	L7	L12	L14	L15	L16	L17
CPV10	2-fold	50	41.8	62	71	52.8	15	9.5	–	10.9	38.1	2.5	35.5
	4-fold	70	61.8						23.5				
	8-fold	110	101.8						–				
CPV14	2-fold	68	58	78	89	58.8	20	9.5	–	14	52	5	35.5
	4-fold	96	86						23.5				
	8-fold	152	142						–				
CPV18	2-fold	96	85.5	106.5	118	73	20	9.5	–	27.4	68.2	10.4	40
	4-fold	132	121.5						28				
	8-fold	204	193.5						–				

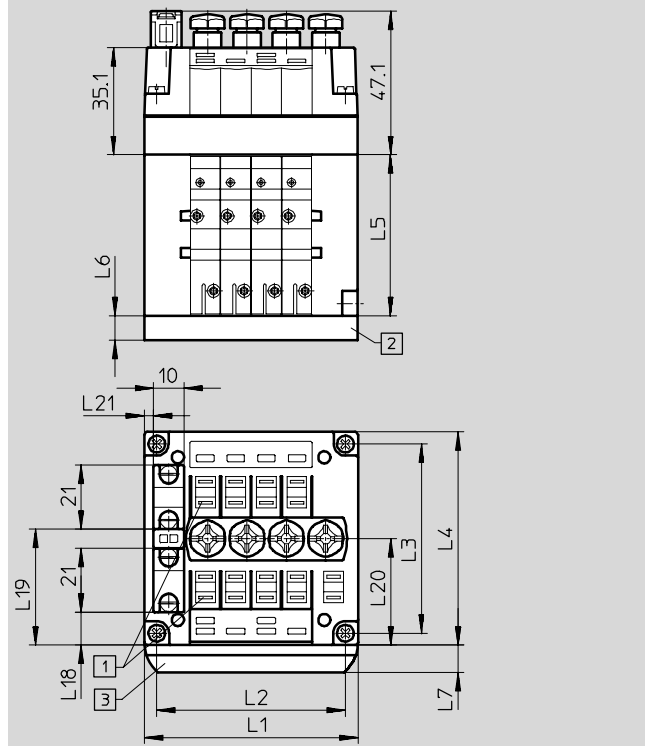
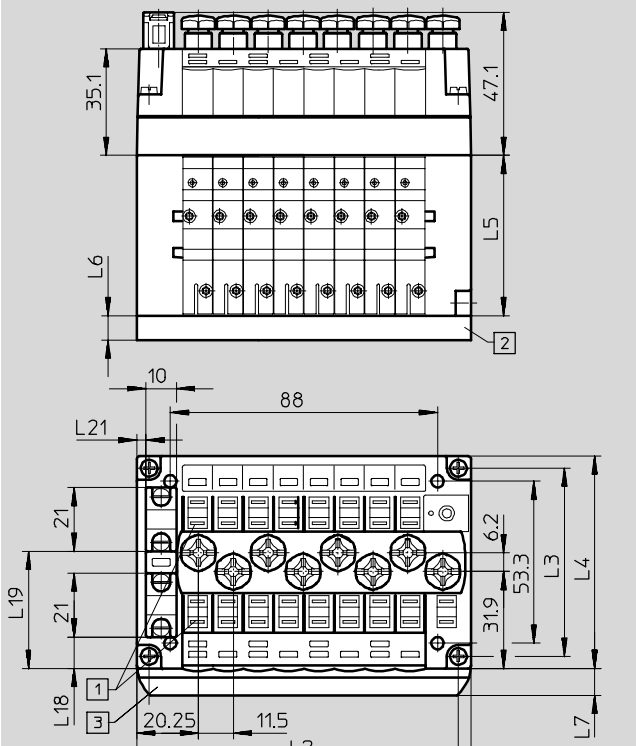
Valve terminal type 10 CPV, Compact Performance

Technical data

FESTO

Valve terminals for standard applications
Compact Performance

2.1

Dimensions											
Valve terminal with AS-interface connection and additional inputs – CPV10/14						Download CAD data → www.festo.com/en/engineering					
Valve terminal with AS-interface connection and additional inputs – CPV10/14						Valve terminal with AS-interface connection and additional inputs – CPV10					
											
<div> <div>1</div> Slots for inscription labels <div>2</div> Pneumatic multi-connector plate </div>						<div> <div>1</div> Slots for inscription labels <div>2</div> Pneumatic multi-connector plate </div>					
<div> <div>3</div> Inscription label holder (CPV10/14/18-VI-BZ-T... or CPV10/14/18-VI-ST-T...) </div>						<div> <div>3</div> Inscription label holder (CPV10/14/18-VI-BZ-T... or CPV10/14/18-VI-ST-T...) </div>					
		L1	L2	L3	L4	L5	L6	L7	L18	L19	L21
CPV10	2-fold	50	41.8	62	71	52.8	15	9.5	–	–	–
	4-fold	70	61.8						10.9	38.1	35
	8-fold	110	101.8						10.4	38.6	31.9
CPV14	2-fold	68	58	78	89	58.8	20	9.5	–	–	–
	4-fold	96	86						18.8	46.8	43.3
	8-fold	152	142						18.8	46.8	46.3

Valve terminal type 10 CPV, Compact Performance

Technical data

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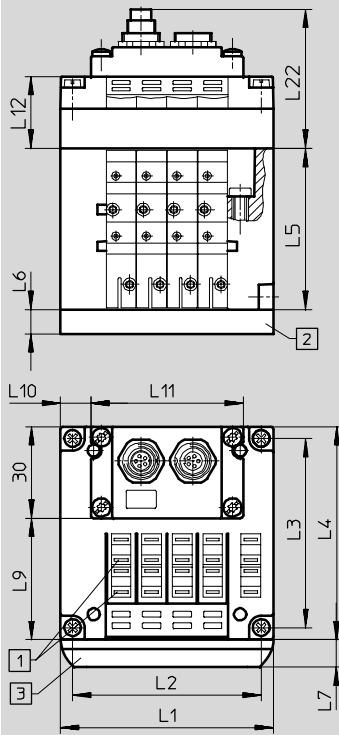
Valve terminals for standard applications
Compact Performance

2.1

Dimensions

Download CAD data → www.festo.com/en/engineering

Valve terminal with CP installation system – CPV10/14/18



1 Slots for inscription labels

2 Pneumatic multi-connector plate

3 Inscription label holder
(CPV10/14/18-VI-BZ-T... or
CPV10/14/18-VI-ST-T...)

		L1	L2	L3	L4	L5	L6	L7	L9	L10	L11	L12	L22
CPV10	4-fold	70	61.8	62	71	52.8	15	9.5	39.5	10	50	23.5	46
	6-fold	90	81.8							10	70		
	8-fold	110	101.8							20	70		
CPV14	4-fold	96	86	78	89	58.8	20	9.5	61.8	23	50	23.5	46
	6-fold	124	114							27	70		
	8-fold	152	142							41	70		
CPV18	4-fold	132	121.5	106.5	118	73	20	9.5	88.4	41	50	28	50.5
	6-fold	168	157.5							49	70		
	8-fold	204	193.5							67	70		

Valve terminal type 10 CPV, Compact Performance

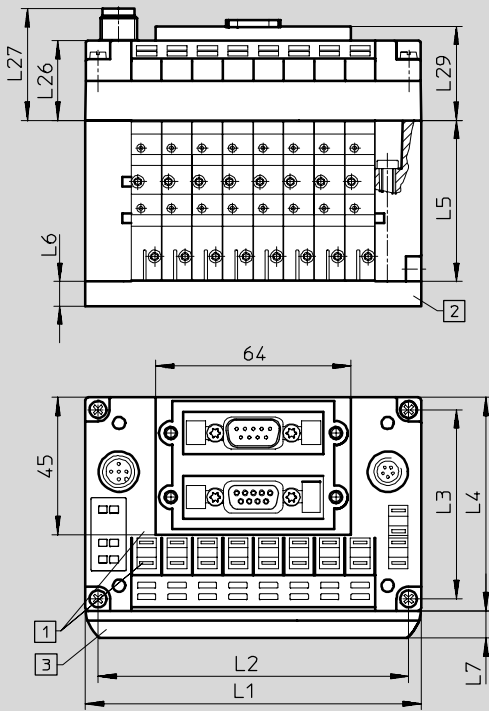
Technical data

FESTO

Dimensions

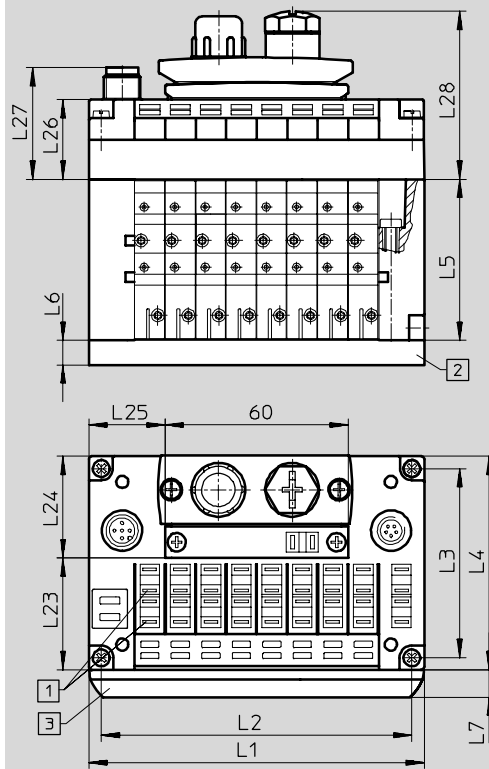
Download CAD data → www.festo.com/en/engineering

Valve terminal with Fieldbus Direct – CPV10/14/18
Interbus



- 1 Slots for inscription labels
- 2 Pneumatic multi-connector plate
- 3 Inscription label holder (CPV10/14/18-VI-BZ-T... or CPV10/14/18-VI-ST-T...)

Valve terminal with Fieldbus Direct – CPV10/14/18
DeviceNet, CANopen, CC-Link



- 1 Slots for inscription labels
- 2 Pneumatic multi-connector plate
- 3 Inscription label holder (CPV10/14/18-VI-BZ-T... or CPV10/14/18-VI-ST-T...)

		L1	L2	L3	L4	L5	L6	L7	L23	L24	L25	L26	L27	L28	L29
CPV10	8-fold	110	101.8	62	71	52.8	15	9.5	35.8	34.6	25	26.2	36.7	55.1	30.9
CPV14	8-fold	152	142	78	89	58.8	20	9.5	52.8	34.6	46	26.2	36.7	55.1	30.9
CPV18	8-fold	204	193.5	106.5	118	7	20	9.5	79.8	36.6	72	31.2	41.7	59.6	35.9

Valve terminal type 10 CPV, Compact Performance

Technical data



Dimensions

Download CAD data → www.festo.com/en/engineering

Valve terminal with Fieldbus Direct – CPV10/14/18

Profibus DP including Festo fieldbus, ABB CS31, Moeller Suconet K

1 Slots for inscription labels

2 Pneumatic multi-connector plate

3 Inscription label holder
(CPV10/14/18-VI-BZ-T-... or
CPV10/14/18-VI-ST-T-...)

		L1	L2	L3	L4	L5	L6	L7	L23	L24	L25	L26	L27
CPV10	8-fold	110	101.8	62	71	52.8	15	9.5	35.5	34.6	25	26.2	36.7
CPV14	8-fold	152	142	78	89	58.8	20	9.5	52.8	34.6	46	26.2	36.7
CPV18	8-fold	204	193.5	106.5	118	7	20	9.5	79.8	36.6	72	31.2	41.7

Valve terminal type 10 CPV, Compact Performance

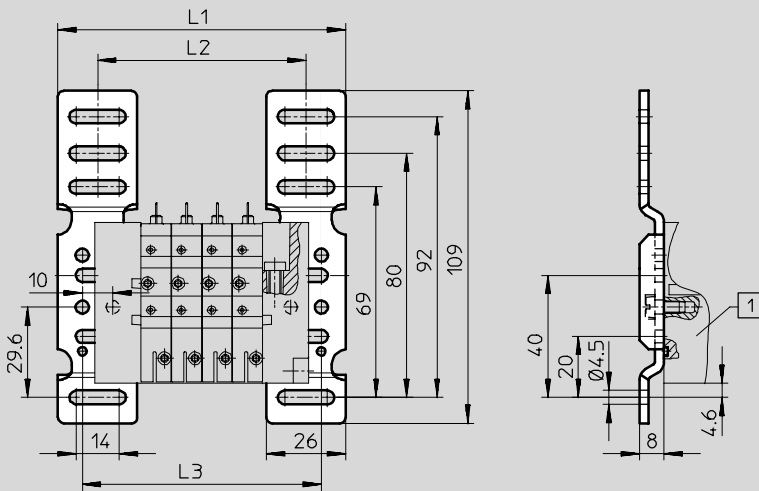
Technical data

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Dimensions

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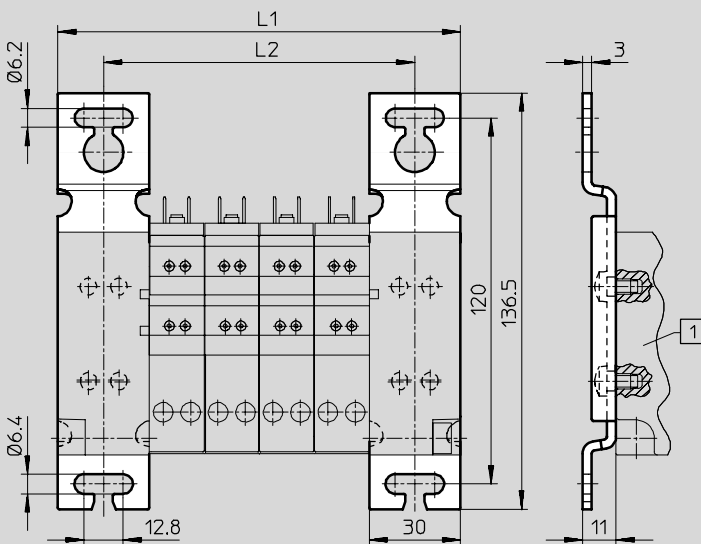
Wall mounting CPV10/14-VI-BG-RWL-B for CPV10/14



1 Valve terminal CPV-...

	CPV10							CPV14						
	2-fold	3-fold	4-fold	5-fold	6-fold	7-fold	8-fold	2-fold	3-fold	4-fold	5-fold	6-fold	7-fold	8-fold
L1	74	84	94	104	114	124	134	90	104	118	132	146	160	174
L2	48	58	68	78	88	98	108	64	78	92	106	120	134	148
L3	68	78	88	98	108	118	128	74	88	102	116	130	144	158

Wall mounting CPV18-VI-BG-RW for CPV18



1 Valve terminal CPV-...

	CPV18						
	2-fold	3-fold	4-fold	5-fold	6-fold	7-fold	8-fold
L1	96	114	132	150	168	186	204
L2	66	84	102	120	138	156	174

Valve terminal type 10 CPV, Compact Performance

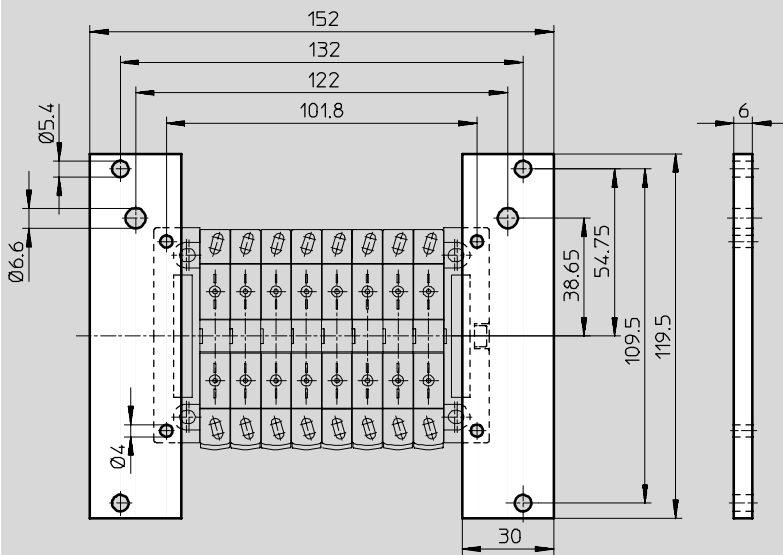
Technical data

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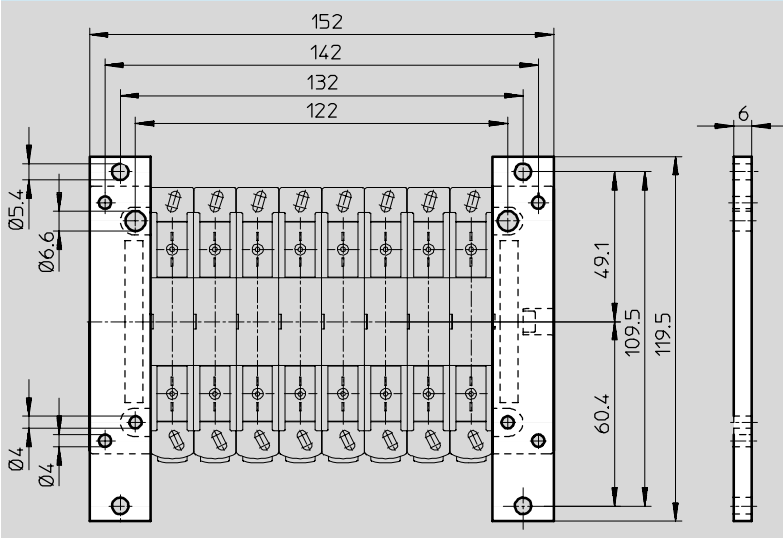
Dimensions

Download CAD data → www.festo.com/en/engineering

Attachment CPV10-VI-BG-ET200X for individual connection and ET200X



Attachment CPV14-VI-BG-ET200X for individual connection and ET200X



Valve terminals for standard applications
Compact Performance

2.1

Valve terminal type 10 CPV, Compact Performance

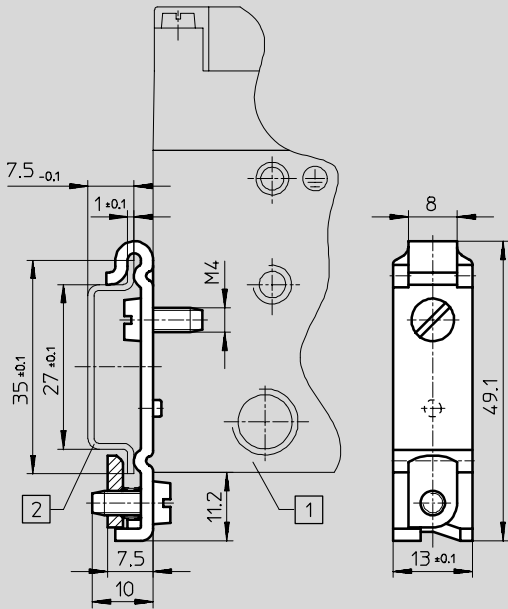
Technical data

FESTO

Dimensions

Download CAD data → www.festo.com/en/engineering

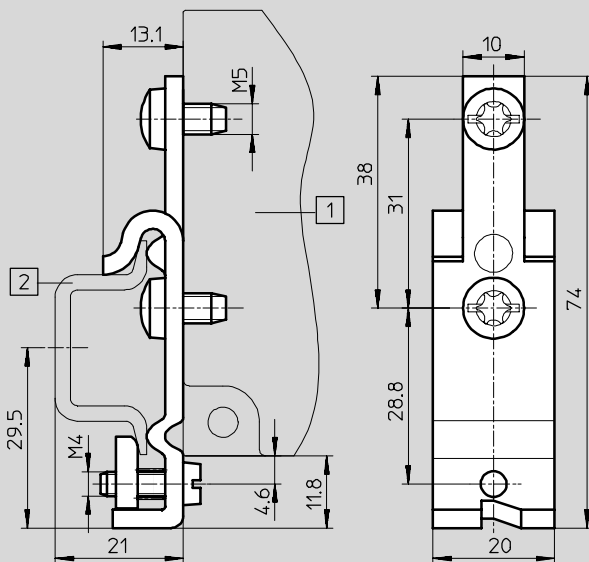
Attachment for H-rail mounting CPV10/14-VI-BG-NRH-35



1 Valve terminal CPV10/14

2 H-rail to EN 60715

Attachment for H-rail mounting CPV18-VI-BG-NRH-35



1 Valve terminal CPV18

2 H-rail to EN 60715

Valve terminal type 10 CPV, Compact Performance

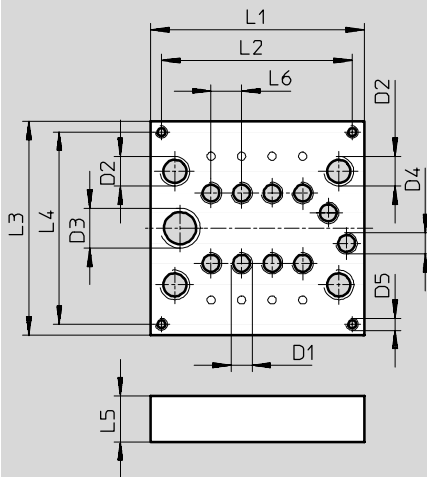
Technical data

FESTO

Dimensions

Download CAD data → www.festo.com/en/engineering

Pneumatic multi-connector plate – CPV10/14/18



		L1	L2	L3	L4	L5	L6	D1	D2	D3	D4	D5
CPV10	2-fold	49.5	42.5	70	63	15	10	M7	G $\frac{1}{8}$	G $\frac{1}{4}$	M7	M4
	4-fold	69.5	62.5									
	6-fold	89.5	82.5									
	8-fold	109.5	102.5									
CPV14	2-fold	67.5	53.5	86.6	76.6	20	14	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{8}$	M4
	4-fold	95.5	81.5									
	6-fold	123.5	109.5									
	8-fold	151.5	137.5									
CPV18	2-fold	95.5	87.5	119.6	108	20	18	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{4}$	M5
	4-fold	131	123									
	6-fold	167	159									
	8-fold	203	195									

Valve terminals for standard applications
Compact Performance

2.1

Valve terminal type 10 CPV, Compact Performance

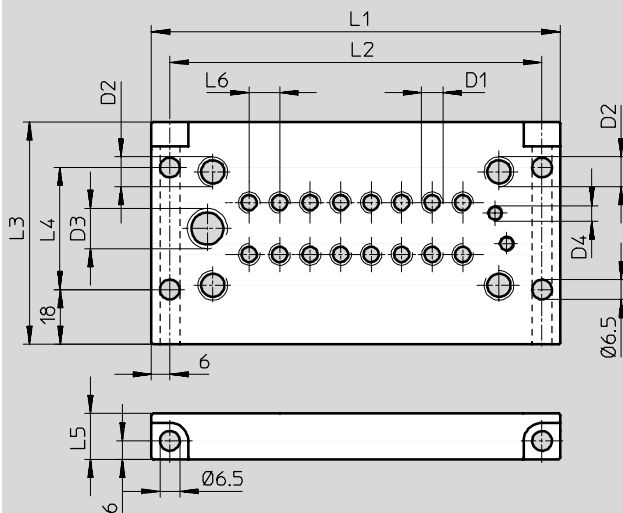
Technical data

FESTO

Dimensions

Download CAD data → www.festo.com/en/engineering

Pneumatic multi-connector plate with flange – CPV10/14/18



		L1	L2	L3	L4	L5	L6	D1	D2	D3	D4
CPV10	2-fold	74	62	73	40	15	10	M7	G $\frac{1}{8}$	G $\frac{1}{4}$	M5
	4-fold	94	82								
	6-fold	114	102								
	8-fold	134	122								
CPV14	2-fold	92	80	89	59	20	14	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{8}$
	4-fold	120	108								
	6-fold	148	136								
	8-fold	176	164								
CPV18	2-fold	119	107	118	88	20	18	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{4}$
	4-fold	155	143								
	6-fold	191	179								
	8-fold	227	215								

Valve terminal type 10 CPV, Compact Performance

Technical data

FESTO

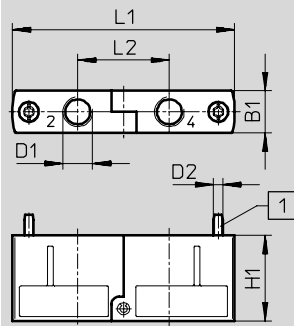
Valve terminals for standard applications
Compact Performance

2.1

Dimensions

Download CAD data → www.festo.com/en/engineering

Valve kit for 5/3 function – CPV10/14

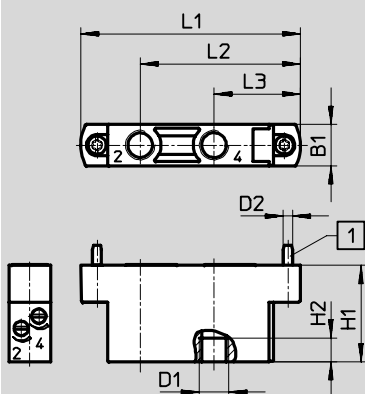


1 Mounting screws supplied loose

Type	B1	D1	D2	H1	L1	L2
CPV10-BS-5/3G-M7	9.9	M7	M2.5	22	55.8	23
CPV14-BS-5/3G-1/8	13.8	G1/8	M3	28	72.8	30

Additional one-way flow control valve function – CPV10/14

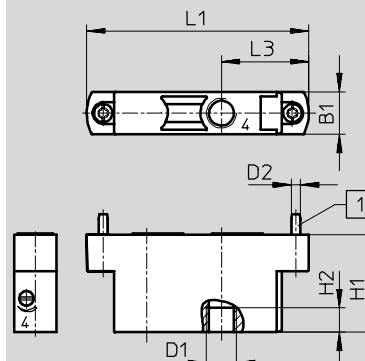
CPV10/14-...-BS-2xGR-...-



1 Mounting screws supplied loose

Additional one-way flow control valve function for vacuum – CPV10/14

CPV-...-BS-2xGRZ-V-...



Type	B1	D1	D2	H1	H2	L1	L2	L3
CPV10-BS-2xGR-...-M7	9.9	M7	M2.5	26	6	55.8	41.4	22.9
CPV10-BS-2xGRZ-V-...-M7							-	
CPV14-BS-2xGR-...-1/8	13.8	G1/8	M3	32	8	72.8	53.15	28.65
CPV14-BS-2xGRZ-V-...-1/8							-	

Valve terminal type 10 CPV, Compact Performance

Technical data



Download CAD data → www.festo.com/en/engineering

Dimensions

Fieldbus connection FBS-SUB-9-BU-2x4PIN

1 Valve terminal with Fieldbus
Direct CPV10/14/18 and
fieldbus node for DeviceNet and
CANopen

2 Sub-D socket, 9-pin

	CPV10 8-fold	CPV14 8-fold	CPV18 8-fold
L1	24.5	45.5	71.5

Fieldbus connection FBSD-KL-2x5PIN

1 Valve terminal with Fieldbus
Direct CPV10/14/18 and
fieldbus node for DeviceNet and
CANopen

2 Sub-D socket, 9-pin

3 Fieldbus connection
FBSD-KL-2x5pin

	CPV10 8-fold	CPV14 8-fold	CPV18 8-fold
L1	24	45	71

Valve terminal type 10 CPV, Compact Performance – Individual connection

FESTO

Ordering data – Modular products

Mandatory data							
Module No.	Valve terminal, pneumatic part	Size	No. of valve positions	Working lines	Electrical connection	Manual override	Pneumatic supply
18 200	10P	10	2 ... 8	A, B, C	IC	N, R	U, V, W, X, Y, Z, A, B, C, D, E, F, G, H, I, K
18 210		14					
18 220		18					
Ordering example							
18 200	10P	10	8	C	IC	N	U
1	2	3	4	5	6	7	8

Ordering table							
Size		10	14	18	Condi- tions	Code	Enter code
M	1	Module No.	18 200	18 210	18 220		
		Basic configuration					
	2	Valve terminal, pneumatic part	Valve terminal type 10, CPV			10P	10P
	3	Size	10	14	18	...	
	4	No. of valve positions	2, 3, 4, 5, 6, 7, 8			...	
	5	Working lines	Large push-in connectors in working line (QS6) (QS8) (QS10)			1 A	
			Small push-in connectors in working line (QS4) (QS6) (QS8)			1 B	
			None, threaded connection only			C	
	6	Electrical connection	Electrical individual connection			-IC	-IC
	7	Manual override	Non-detenting			-N	
			Detenting			-R	
	8	Pneumatic supply	Internal pilot supply air, supply at right, ducted exhaust air			-U	
			Internal pilot supply air, supply at left, ducted exhaust air			-V	
			External pilot supply air, supply at right, ducted exhaust air			-W	
			External pilot supply air, supply at left, ducted exhaust air			-X	
		Compressed air supply via end plates or pneumatic multi-connector plate	Internal pilot supply air, supply at both ends, ducted exhaust air			-Y	
			External pilot supply air, supply at both ends, ducted exhaust air			-Z	
		Compressed air supply via end plates, with flat plate silencer	Internal pilot supply air, supply at right, flat plate silencer			-A	
			Internal pilot supply air, supply at left, flat plate silencer			-B	
			External pilot supply air, supply at right, flat plate silencer			-C	
			External pilot supply air, supply at left, flat plate silencer			-D	
		Compressed air supply via pneumatic multi-connector plate with flat plate silencer	External pilot supply air, supply at both ends, flat plate silencer at right			2 -E	
			External pilot supply air, supply at both ends, flat plate silencer at left			2 -F	
			Internal pilot supply air, supply at both ends, flat plate silencer at left			2 -G	
			External pilot supply air, supply at both ends, flat plate silencers at both ends			2 -H	
			Internal pilot supply air, supply at both ends, flat plate silencers at both ends			2 -J	
			Internal pilot supply air, supply at both ends, flat plate silencer at right			2 -K	

1 A, B Not if the other equipment consists solely of plate T, S and vacant position L.

2 E, F, G, H, J, K

Only with pneumatic multi-connector plate M, P, V and an even number of valve positions.

Transfer order code

	10P	-		-	IC	-		-	
1	2	3	4	5	6	7	8		

Valve terminal type 10 CPV, Compact Performance – Individual connection

Ordering data – Modular products

FESTO

Mandatory data

Equipment at valve position 0 ... 7

9 Valve functions: M, J, N, C, H, G, D, I, F, A, E, T, S, L

Options

10 Additional functions at pneumatic valve position 0 ... 7: P, Q, V

Valve position

0 1 2 3 4 5 6 7

- M M M M M M M J

9 + 10

Ordering table								
Size		10	14	18	Condi- tions	Code	Enter code	
<div><div>↓</div><div>M</div><div>9</div></div>	Equipment at valve position 0 ... 7				3	-	- Enter the pneu- matic equip- ment selected in the order code	
	Valve functions	5/2-way valve, single solenoid				M		
		5/2-way valve, double solenoid				J		
		2x 3/2-way valve, normally open				N		
		2x 3/2-way valve, normally closed				C		
		2x 3/2-way valve, 1x normally open, 1x closed				H		
		5/3-way valve, mid-position closed			4	G		
		2x 2/2-way valve, normally closed				D		
		2x 2/2-way valve, 1x normally open, 1x closed				I		
		5/2-way valve, single solenoid, fast-switching	–	–		F		
		Vacuum generator			5	A		
		Vacuum generator with ejector pulse			5	E		
		Plate with duct separation 1/11 closed			6	T		
		Plate with duct separation 1/11 and 3/5 closed			6 7	S		
	Vacant position				L			
	<div><div>0</div><div>↓</div><div>10</div></div>	Additional function at valve position 0 ... 7	2x one-way flow control valve, supply air		–	8		P
			2x one-way flow control valve, exhaust air		–	8		Q
			Vacuum flow control module		–	9		V

3 Equipment at valve position 0 ... 7

The valve positions must be equipped throughout without any gaps.

4 G

Not in first or last valve position.

5 A, E

Note air supply and exhaust when using more than 2 vacuum generators.

6 T, S

Only one plate T or S possible per valve terminal,

but not in first or last valve position

and only with compressed air supply Y, Z, E, F, G, H, J, K (supply air at both ends);

the equipment to the right must not consist exclusively of vacant position L.

7 S

If the equipment to the right of S consists exclusively of valve function D, I, vacant position L, then only with compressed air supply Y, Z, F, G.

8 P, Q

Cannot be combined with valve function G (5/3-way valve).

Not in first or last valve position with pneumatic multi-connector plate M, P, V.

Must be combined with valve function A, E (vacuum generator).

9 V

Not in first or last valve position with pneumatic multi-connector plate M, P, V.

Transfer order code

0 1 2 3 4 5 6 7

-

9 + 10

Valve terminal type 10 CPV, Compact Performance – Individual connection

Ordering data – Modular products

FESTO

0 Options						
Accessories	Pneumatic multi-connector plate	Inscription label holder	Mounting	Connecting cable for individual connection	Fitting set for end plates	User documentation
	M, P, V	Z, T	H, W, U, X	...D, ...E, ...F	A	D, E, F, I, S, V
+ 11						- 12

Ordering table						
Size	10	14	18	Condi- tions	Code	Enter code
↓	Accessories				+	+
0 11	Pneumatic multi-connector plate	Pneumatic standard multi-connector plate		10	M	
		Pneumatic special multi-connector plate		10	P	
		Preparation for pneumatic multi-connector plate		10 11	V	
		Inscription label holder				
		for inscription labels			Z	
		transparent			T	
	Mounting	H-rail mounting		12	H	
		– – Wall mounting			W	
		Wall mounting		–	U	
		Mounting kit for ET200X		–	X	
	Connecting cable for individual connection	2.5 m	1 ... 99		...D	
		5 m	1 ... 99		...E	
		10 m	1 ... 99	–	...F	
	Fitting set for end plates	Connector and silencer		13	A	
12	User documentation	German			-D	
		English			-E	
		French			-F	
		Italian			-I	
		Spanish			-S	
		Swedish			-V	

- 10 **M, P, V** Only with an even number of valve positions and only with compressed air supply Y, Z, E, F, G, H, J, K (supply air at both ends).
 11 **V** Only with working line C (threaded connection).

- 12 **H** Not with accessory pneumatic multi-connector plate M, P, V.
 13 **A** Not with accessory V (preparation for pneumatic multi-connector plate).

Transfer order code

+ 11 _____ - 12 _____

Valve terminal type 10 CPV, Compact Performance – Multi-pin plug connection

FESTO

Ordering data – Modular products

Valve terminals for standard applications
Compact Performance

2.1

Mandatory data

Module No.	Valve terminal, pneumatic part	Size	No. of valve positions	Working lines	Electrical connection	Manual override	Pneumatic supply
18 200 18 210 18 220	10P	10 14 18	4, 6, 8	A, B, C	MP	N, R, V	U, V, W, X, Y, Z, A, B, C, D, E, F, G, H, J, K
Ordering example							
18 200	10P	- 10	- 8	C	- MP	- N	- U
1	2	3	4	5	6	7	8

Ordering table

Size	10	14	18	Condi- tions	Code	Enter code
M 1 Module No.	18 200	18 210	18 220			
Basic configuration						
2 Valve terminal, pneumatic part	Valve terminal type 10, CPV					10P
3 Size	10	14	18		...	
4 No. of valve positions	4, 6, 8				...	
5 Working lines	Large push-in connectors in working line (QS6) (QS8) (QS10)			1	A	
	Small push-in connectors in working line (QS4) (QS6) (QS8)			1	B	
	None, threaded connection only				C	
6 Electrical connection	Electrical multi-pin plug connection				-MP	-MP
7 Manual override	Non-detenting				-N	
	Detenting				-R	
	Blocked				-V	
8 Pneumatic supply	Internal pilot supply air, supply at right, ducted exhaust air				-U	
	Internal pilot supply air, supply at left, ducted exhaust air				-V	
	External pilot supply air, supply at right, ducted exhaust air				-W	
	External pilot supply air, supply at left, ducted exhaust air				-X	
	Compressed air supply via end plates or pneumatic multi-connector plate				-Y	
	External pilot supply air, supply at both ends, ducted exhaust air				-Z	
	Compressed air supply via end plates, with flat plate silencer				-A	
	Internal pilot supply air, supply at right, flat plate silencer				-B	
	Internal pilot supply air, supply at left, flat plate silencer				-C	
	External pilot supply air, supply at right, flat plate silencer				-D	
	External pilot supply air, supply at left, flat plate silencer				-E	
	Compressed air supply via pneumatic multi-connector plate with flat plate silencer			2	-F	
	External pilot supply air, supply at both ends, flat plate silencer at right			2	-G	
	External pilot supply air, supply at both ends, flat plate silencer at left			2	-H	
	Internal pilot supply air, supply at both ends, flat plate silencer at left			2	-I	
	Internal pilot supply air, supply at both ends, flat plate silencers at both ends			2	-J	
	Internal pilot supply air, supply at both ends, flat plate silencers at both ends			2	-K	

1 A, B Not if the other equipment consists solely of plate T, S, vacant position L and relay plate R.

2 E, F, G, H, J, K

Only with pneumatic multi-connector plate M, P, V.

Transfer order code

	10P	-		-	MP	-		-	
1	2	3	4	5	6	7	8		

Valve terminal type 10 CPV, Compact Performance – Multi-pin plug connection

FESTO

Ordering data – Modular products

→ [M] Mandatory data →

Equipment at valve position 0 ... 7

9 Valve functions: M, J, N, C, H, G, D, I, F, A, E, T, S, L, R

[O] Options

10 Additional functions at pneumatic valve position 0 ... 7: P, Q, V

Valve position

0	1	2	3	4	5	6	7
M	M	M	M	M	M	M	J

9 + 10

Ordering table		10	14	18	Condi- tions	Code	Enter code
↓ [M] 9	Equipment at valve position 0 ... 7				[3]	-	-
	Valve functions	5/2-way valve, single solenoid				M	Enter the pneumatic equipment selected in the order code
		5/2-way valve, double solenoid				J	
		2x 3/2-way valve, normally open				N	
		2x 3/2-way valve, normally closed				C	
		2x 3/2-way valve, 1x normally open, 1x closed				H	
		5/3-way valve, mid-position closed			[4]	G	
		2x 2/2-way valve, normally closed				D	
		2x 2/2-way valve, 1x normally open, 1x closed				I	
		5/2-way valve, single solenoid, fast-switching	-	-		F	
		Vacuum generator			[5]	A	
		Vacuum generator with ejector pulse			[5]	E	
		Plate with duct separation 1/11 closed			[6]	T	
		Plate with duct separation 1/11 and 3/5 closed			[6] [7]	S	
		Vacant position				L	
		Relay plate				R	
	[O] 10 Additional function at valve position 0 ... 7	2x one-way flow control valve, supply air	-		[8]	P	
		2x one-way flow control valve, exhaust air	-		[8]	Q	
		Vacuum flow control module	-		[9]	V	

[3] Equipment at valve position 0 ... 7

The valve positions must be equipped throughout without any gaps.

[4] G

Not in first or last valve position.

[5] A, E

Note air supply and exhaust when using more than 2 vacuum generators.

[6] T, S

Only one plate T or S possible per valve terminal, but not in first or last valve position and only with compressed air supply Y, Z, E, F, G, H, I, K (supply air at both ends); the equipment to the right must not consist exclusively of vacant position L, relay plate R.

[7] S

If the equipment to the right of S consists exclusively of valve function D, I, vacant position L, relay plate R, then only with compressed air supply Y, Z, F, G.

[8] P, Q

Cannot be combined with valve function G (5/3-way valve).

Not in first or last valve position with pneumatic multi-connector plate M, P, V.

Must be combined with valve function A, E (vacuum generator).

[9] V

Not in first or last valve position with pneumatic multi-connector plate M, P, V.

Transfer order code

0	1	2	3	4	5	6	7
-							

9 + 10

Valve terminal type 10 CPV, Compact Performance – Multi-pin plug connection

FESTO

Ordering data – Modular products

Options

Accessories	Pneumatic multi-connector plate	Inscription label holder	Mounting	Electrical connection	Fitting set for end plates	User documentation
	M, P, V	Z, T	H, W, U	Y, R, S, ...K, ...L	A	D, E, F, I, S, V
+						-
	11					12

Ordering table						
Size	10	14	18	Condi- tions	Code	Enter code
0	Accessories				+	+
11	Pneumatic multi-connector plate	Pneumatic standard multi-connector plate		10	M	
		Pneumatic special multi-connector plate		10	P	
		Preparation for pneumatic multi-connector plate		10 11	V	
	Inscription label holder	for inscription labels		12	Z	
		transparent		12	T	
	Mounting	H-rail mounting		13	H	
		– – Wall mounting			W	
		Wall mounting –			U	
	Electrical connection	9-pin with 4-fold, 25-pin with 6-/8-fold		Straight socket, IP65, Sub-D, 9-/25-pin, for multi-pin plug connection		Y
				Pre-assembled multi-pin cable, 5 m		R
				Pre-assembled multi-pin cable, 10 m		S
		Connecting cable for relay plate	2.5 m	1 ... 99	–	...K
			5 m	1 ... 99	–	...L
		Fitting set for end plates		14	A	
12	User documentation	German			-D	
		English			-E	
		French			-F	
		Italian			-I	
		Spanish			-S	
		Swedish			-V	

- 10

M, P, V

Only with compressed air supply Y, Z, E, F, G, H, J, K (supply at both ends).
- 11

V

Only with working line C (threaded connection).
- 12

Z, T

Not with relay plate R.

- 13

H

Not with accessory pneumatic multi-connector plate M, P, V.
- 14

A

Not with accessory V (preparation for pneumatic multi-connector plate).

Transfer order code

+

11

–

12

Valve terminal type 10 CPV, Compact Performance – AS-interface

FESTO

Ordering data – Modular products

Mandatory data						
Module No.	Valve terminal, pneumatic part	Size	No. of valve positions	Working lines	Electrical connection	Manual override
18 200	10P	10	2, 4, 8	A, B, C	AS, AZ, AE, AO, BE	N, R, V
18 210		14				
18 220		18				
Ordering example						
18 200	10P	10	8	C	AE	N
1	2	3	4	5	6	7

Ordering table						
Size	10	14	18	Condi- tions	Code	Enter code
M 1 Module No.	18 200	18 210	18 220			
Basic configuration						
2 Valve terminal, pneumatic part	Valve terminal type 10, CPV					10P
3 Size	10	14	18		-...	
4 No. of valve positions	2, 4, 8		2, 4		-...	
5 Working lines	Large push-in connectors in working line (QS6) (QS8) (QS10)			1	A	
	Small push-in connectors in working line (QS4) (QS6) (QS8)			1	B	
	None, threaded connection only				C	
6 Electrical connection	AS-interface node without additional power supply - 1			2	-AS	
	AS-interface node			2	-AZ	
	AS-interface node electrical inputs			2	-AE	
	AS-interface node electrical inputs without additional power supply			2	-AO	
	AS-interface node electrical inputs, A/B slave			2	-BE	
7 Manual override	Non-detenting				-N	
	Detenting				-R	
	Blocked				-V	

1 A, B

Not if the other equipment consists exclusively of plate T, S, vacant position L and relay plate R.

2 AS, AZ, AE, AO, BE

Note maximum number of coils and valve position equipment → Table on page 4 / 2.1-67.

- 1 -

Type to be discontinued, do not use for new designs.

Transfer order code

	10P	-		-		-	
1	2	3	4	5	6	7	

Valve terminal type 10 CPV, Compact Performance – AS-interface

Ordering data – Modular products

FESTO

→ [M] Mandatory data →

Pneumatic supply

U, V, W, X, Y, Z, A, B, C, D, E, F, G, H, J, K

– **U**
8

Ordering table						
Size	10	14	18	Condi- tions	Code	Enter code
↓ 8 [M] ↓	Pneumatic supply	Internal pilot supply air, supply at right, ducted exhaust air			-U	
		Internal pilot supply air, supply at left, ducted exhaust air			-V	
		External pilot supply air, supply at right, ducted exhaust air			-W	
		External pilot supply air, supply at left, ducted exhaust air			-X	
	Compressed air supply via end plates or pneu- matic multi-connector plate	Internal pilot supply air, supply at both ends, ducted exhaust air			-Y	
		External pilot supply air, supply at both ends, ducted exhaust air			-Z	
	Compressed air supply via end plates, with flat plate silencer	Internal pilot supply air, supply at right, flat plate silencer			-A	
		Internal pilot supply air, supply at left, flat plate silencer			-B	
		External pilot supply air, supply at right, flat plate silencer			-C	
		External pilot supply air, supply at left, flat plate silencer			-D	
	Compressed air supply via pneumatic multi- connector plate with flat plate silencer	External pilot supply air, supply at both ends, flat plate silencer at right		[3]	-E	
		External pilot supply air, supply at both ends, flat plate silencer at left		[3]	-F	
		Internal pilot supply air, supply at both ends, flat plate silencer at left		[3]	-G	
		External pilot supply air, supply at both ends, flat plate silencers at both ends		[3]	-H	
		Internal pilot supply air, supply at both ends, flat plate silencers at both ends		[3]	-J	
		Internal pilot supply air, supply at both ends, flat plate silencer at right		[3]	-K	

[3] E, F, G, H, J, K

Only with pneumatic multi-connector plate M, P, V.

Transfer order code

–
8

Valve terminal type 10 CPV, Compact Performance – AS-interface

Ordering data – Modular products

FESTO

→ [M] Mandatory data →

Equipment at valve position 0 ... 7

9 Valve functions: M, J, N, C, H, G, D, I, F, A, E, T, S, L, R

[O] Options

10 Additional functions at pneumatic valve position 0 ... 7: P, Q, V

Valve position

0	1	2	3	4	5	6	7
M	M	M	M	M	M	M	F

9 + 10

Ordering table						
Size	10	14	18	Condi- tions	Code	Enter code
↓ [M] 9	Equipment at valve position 0 ... 7			[4]	-	-
	Valve functions	5/2-way valve, single solenoid			M	Enter the pneu- matic equip- ment selected in the order code
		5/2-way valve, double solenoid			J	
		2x 3/2-way valve, normally open			N	
		2x 3/2-way valve, normally closed			C	
		2x 3/2-way valve, 1x normally open, 1x closed			H	
		5/3-way valve, mid-position closed		[5]	G	
		2x 2/2-way valve, normally closed			D	
		2x 2/2-way valve, 1x normally open, 1x closed			I	
		5/2-way valve, single solenoid, fast-switching	-	-	F	
		Vacuum generator		[6]	A	
		Vacuum generator with ejector pulse		[6]	E	
		Plate with duct separation 1/11 closed		[7]	T	
		Plate with duct separation 1/11 and 3/5 closed		[7] [8]	S	
		Vacant position			L	
		Relay plate	-	-	R	
	[O] 10 Additional function at valve position 0 ... 7	2x one-way flow control valve, supply air	-	[9]	P	
		2x one-way flow control valve, exhaust air	-	[9]	Q	
		Vacuum flow control module	-	[10]	V	

[4] Equipment at valve position 0 ... 7

The valve positions must be equipped throughout without any gaps.

Note valve position equipment → Table on page 4 / 2.1-67.

[5] G

Not in first or last valve position.

[6] A, E

Note air supply and exhaust when using more than 2 vacuum generators.

[7] T, S

Only one plate T or S possible per valve terminal,
but not in first or last valve position
and only with compressed air supply Y, Z, E, F, G, H, J, K (supply air at both ends);
the equipment to the right must not consist exclusively of vacant position L, relay plate R.

[8] S

If the equipment to the right of S consists exclusively of valve function D, I,
vacant position L, relay plate R, then only with compressed air supply Y, Z, F,
G.

[9] P, Q

Cannot be combined with valve function G (5/3-way valve).

Not in first or last valve position with pneumatic multi-connector plate M, P, V.

Must be combined with valve function A, E (vacuum generator).

[10] V

Not in first or last valve position with pneumatic multi-connector plate M, P, V.

Transfer order code

0	1	2	3	4	5	6	7
-							

9

Valve terminal type 10 CPV, Compact Performance – AS-interface

Ordering data – Modular products

FESTO

0 Options						
Accessories	Pneumatic multi-connector plate	Inscription label holder	Mounting	Connecting cable for relay plate	Fitting set for end plates	User documentation
	M, P, V	Z, T	H, W, U	...K, ...L	A	D, E, F, I, S, V
+ 11						- 12

Ordering table						
Size	10	14	18	Condi- tions	Code	Enter code
↓	Accessories				+	+
0 11	Pneumatic multi-connector plate	Pneumatic standard multi-connector plate		[11]	M	
		Pneumatic special multi-connector plate		[11]	P	
		Preparation for pneumatic multi-connector plate		[11] [12]	V	
	Inscription label holder	for inscription labels		[13]	Z	
		transparent		[13]	T	
	Mounting	H-rail mounting		[14]	H	
		–		–	W	
		Wall mounting		–	U	
	Connecting cable for relay plate	2.5 m	1 ... 99	–	–	...K
		5 m	1 ... 99	–	–	...L
12	Fitting set for end plates			Connector and silencer	[15]	A
	User documentation	German			-D	
		English			-E	
		French			-F	
		Italian			-I	
		Spanish			-S	
		Swedish			-V	

[11] M, P, V Only with compressed air supply Y, Z, E, F, G, H, I, K (supply at both ends).

[12] V Only with working line C (threaded connection).

[13] Z, T Not with relay plate R.

[14] H Not with accessory pneumatic multi-connector plate M, P, V.

[15] A Not with accessory V (preparation for pneumatic multi-connector plate).

Transfer order code

+ 11 – 12

Valve terminal type 10 CPV, Compact Performance – AS-interface

FESTO

Ordering data – Modular products

Electrical connection with permissible equipment for valve positions																					
Electrical connec- tion	Size	No. of valve positions/max. no. of solenoid coils	Permissible valve position																		
			Valve function																		
			M	J	N	C	H	G	5	D	I	F	A	6	E	6	T	7	8	L	R
			No. of solenoid coils																		
			1	2	2	2	2	2	2	2	2	1	1	2	0	0	0	2			
AS	10 · 7	2-fold/4	■	■	■	■	■	–	■	■	■	■	■	–	–	■	■				
	14 · 7		■	■	■	■	■	–	■	■	–	■	■	–	–	■	–				
	18 · 7		■	■	■	■	■	–	■	■	–	■	■	–	–	■	–				
	10	4-fold/4	■	0, 2	0, 2	0, 2	0, 2	2	0, 2	0, 2	■	■	0, 2	1, 2	1, 2	■	0, 2				
	14		■	0, 2	0, 2	0, 2	0, 2	2	0, 2	0, 2	–	■	0, 2	1, 2	1, 2	■	–				
	18 · 7		■	–	–	–	–	–	–	–	–	■	–	1, 2	1, 2	■	–				
AZ	10	2-fold/4	■	■	■	■	■	–	■	■	■	■	■	–	–	■	■				
	14		■	■	■	■	■	–	■	■	–	■	■	–	–	■	–				
	18		■	■	■	■	■	–	■	■	–	■	■	–	–	■	–				
	10	4-fold/4	■	0, 2	0, 2	0, 2	0, 2	2	0, 2	0, 2	■	■	0, 2	1, 2	1, 2	■	0, 2				
	14		■	0, 2	0, 2	0, 2	0, 2	2	0, 2	0, 2	–	■	0, 2	1, 2	1, 2	■	–				
	18		■	–	–	–	–	–	–	–	–	■	–	1, 2	1, 2	■	–				
AE	10	4-fold/4	■	0, 2	0, 2	0, 2	0, 2	2	0, 2	0, 2	■	■	0, 2	1, 2	1, 2	■	0, 2				
	14		■	0, 2	0, 2	0, 2	0, 2	2	0, 2	0, 2	–	■	0, 2	1, 2	1, 2	■	–				
	10	8-fold/8	■	0, 2, 4, 6	0, 2, 4, 6	0, 2, 4, 6	0, 2, 4, 6	2, 4, 6	0, 2, 4, 6	0, 2, 4, 6	■	■	0, 2, 4, 6	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6	■	0, 2, 4, 6				
	14		■	0, 2, 4, 6	0, 2, 4, 6	0, 2, 4, 6	0, 2, 4, 6	2, 4, 6	0, 2, 4, 6	0, 2, 4, 6	–	■	0, 2, 4, 6	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6	■	–				
AO	10	4-fold/4	■	0, 2	0, 2	0, 2	0, 2	2	0, 2	0, 2	■	■	0, 2	1, 2	1, 2	■	0, 2				
	14		■	0, 2	0, 2	0, 2	0, 2	2	0, 2	0, 2	–	■	0, 2	1, 2	1, 2	■	–				
BE	10	4-fold/3	0, 1, 2	0	0	0	0	–	0	0	0, 1, 2	0, 1, 2	0	1, 2	1, 2	■ 3	0				
	14		0, 1, 2	0	0	0	0	–	0	0	–	0, 1, 2	0	1, 2	1, 2	■ 3	–				
	10	8-fold/6	0, 1, 2, 4, 5, 6	0, 4	0, 4	0, 4	0, 4	4	0, 4	0, 4	0, 1, 2, 4, 5, 6	0, 1, 2, 4, 5, 6	0, 4	1, 2, 4, 5, 6	1, 2, 4, 5, 6	■ 3, 7	0, 4				
	14		0, 1, 2, 4, 5, 6	0, 4	0, 4	0, 4	0, 4	4	0, 4	0, 4	–	0, 1, 2, 4, 5, 6	0, 4	1, 2, 4, 5, 6	1, 2, 4, 5, 6	■ 3, 7	–				

■ No restriction

■ Must be selected at this valve position

· ⁷ Type to be discontinued, do not use for new designs.

^[5] G Not in first or last valve position.

^[6] A, E Note air supply and exhaust when using more than 2 vacuum generators.

^[7] T, S Only one plate T or S possible per valve terminal,

but not in first or last valve position

and only with compressed air supply Y, Z, E, F, G, H, J, K (supply air at both ends);

the equipment to the right must not consist exclusively of vacant position L, relay plate R.

^[8] S If the equipment to the right of S consists exclusively of valve function D, I, vacant position L, replay plate R, then only with compressed air supply Y, Z, F, G.

Valve terminals for standard applications
Compact Performance

2.1

Valve terminal type 10 CPV, Compact Performance – Fieldbus

Ordering data – Modular products

FESTO

Mandatory data

Module No.	Valve terminal, pneumatic part	Size	No. of valve positions	Working lines	Electrical connection	Manual override	Pneumatic supply
18 200 18 210 18 220	10P	10 14 18	4, 6, 8	A, B, C	FB	N, R, V	U, V, W, X, Y, Z, A, B, C, D, E, F, G, H, J, K
Ordering example							
18 200	10P	10	8	C	FB	N	U
1	2	3	4	5	6	7	8

Ordering table		Size	10	14	18	Condi- tions	Code	Enter code
M	1	Module No.	18 200	18 210	18 220			
		Basic configuration						
	2	Valve terminal, pneumatic part	Valve terminal type 10, CPV				10P	10P
	3	Size	10	14	18		...	
	4	No. of valve positions	4, 6, 8				...	
	5	Working lines	Large push-in connectors in working line (QS6) (QS8) (QS10) 1 A Small push-in connectors in working line (QS4) (QS6) (QS8) 1 B None, threaded connection only C					
	6	Electrical connection	Festo CP bus node				-FB	-FB
	7	Manual override	Non-detenting -N Detenting -R Blocked -V					
	8	Pneumatic supply	Internal pilot supply air, supply at right, ducted exhaust air -U Internal pilot supply air, supply at left, ducted exhaust air -V External pilot supply air, supply at right, ducted exhaust air -W External pilot supply air, supply at left, ducted exhaust air -X Compressed air supply via end plates or pneumatic multi-connector plate Internal pilot supply air, supply at both ends, ducted exhaust air -Y External pilot supply air, supply at both ends, ducted exhaust air -Z Compressed air supply via end plates, with flat plate silencer Internal pilot supply air, supply at right, flat plate silencer -A Internal pilot supply air, supply at left, flat plate silencer -B External pilot supply air, supply at right, flat plate silencer -C External pilot supply air, supply at left, flat plate silencer -D Compressed air supply via pneumatic multi-connector plate with flat plate silencer External pilot supply air, supply at both ends, flat plate silencer at right 2 -E External pilot supply air, supply at both ends, flat plate silencer at left 2 -F Internal pilot supply air, supply at both ends, flat plate silencer at left 2 -G External pilot supply air, supply at both ends, flat plate silencers at both ends 2 -H Internal pilot supply air, supply at both ends, flat plate silencers at both ends 2 -J Internal pilot supply air, supply at both ends, flat plate silencer at right 2 -K					

1 A, B Not if the other equipment consists exclusively of plate T, S, vacant position L and relay plate 2 E, F, G, H, J, K

R.

Only with pneumatic multi-connector plate M, P, V.

Transfer order code

1	2	3	4	5	6	7	8
	10P	-			FB	-	

Valve terminal type 10 CPV, Compact Performance – Fieldbus

Ordering data – Modular products

FESTO

→ [M] Mandatory data →

Equipment at valve position 0 ... 7

9 Valve functions: M, J, N, C, H, G, D, I, F, A, E, T, S, L, R

[O] Options

10 Additional functions at pneumatic valve position 0 ... 7: P, Q, V

Valve position

0 1 2 3 4 5 6 7

- M M M M M M M F

9 + 10

Ordering table						
Size	10	14	18	Condi- tions	Code	Enter code
↓ [M] 9	Equipment at valve position 0 ... 7			[3]	-	-
	Valve functions	5/2-way valve, single solenoid			M	Enter the pneumatic equipment selected in the order code
		5/2-way valve, double solenoid			J	
		2x 3/2-way valve, normally open			N	
		2x 3/2-way valve, normally closed			C	
		2x 3/2-way valve, 1x normally open, 1x closed			H	
		5/3-way valve, mid-position closed		[4]	G	
		2x 2/2-way valve, normally closed			D	
		2x 2/2-way valve, 1x normally open, 1x closed			I	
		5/2-way valve, single solenoid, fast-switching	-	-	F	
		Vacuum generator		[5]	A	
		Vacuum generator with ejector pulse		[5]	E	
		Plate with duct separation 1/11 closed		[6]	T	
		Plate with duct separation 1/11 and 3/5 closed		[6] [7]	S	
		Vacant position			L	
		Relay plate	-		R	
	[O] 10 Additional function at valve position 0 ... 7	2x one-way flow control valve, supply air	-	[8]	P	
		2x one-way flow control valve, exhaust air	-	[8]	Q	
		Vacuum flow control module	-	[9]	V	

[3] Equipment at valve position 0 ... 7

The valve positions must be equipped throughout without any gaps.

[4] G Not in first or last valve position.

[5] A, E Note air supply and exhaust when using more than 2 vacuum generators.

[6] T, S Only one plate T or S possible per valve terminal, but not in first or last valve position and only with compressed air supply Y, Z, E, F, G, H, I, K (supply air at both ends); the equipment to the right must not consist exclusively of vacant position L, relay plate R.

[7] S

If the equipment to the right of S consists exclusively of valve function D, I, vacant position L, relay plate R, then only with compressed air supply Y, Z, F, G.

[8] P, Q

Cannot be combined with valve function G (5/3-way valve).

Not in first or last valve position with pneumatic multi-connector plate M, P, V.

Must be combined with valve function A, E (vacuum generator).

[9] V

Not in first or last valve position with pneumatic multi-connector plate M, P, V.

Transfer order code

0 1 2 3 4 5 6 7

-

9 + 10

Valve terminal type 10 CPV, Compact Performance – Fieldbus

Ordering data – Modular products

FESTO

Options						
Accessories	Pneumatic multi-connector plate	Inscription label holder	Mounting	Connecting cable for relay plate	Fitting set for end plates	User documentation
	M, P, V	Z, T	H, W, U	...K, ...L	A	D, E, F, I, S, V
+ 11						- 12

Ordering table							
Size	10	14	18	Condi- tions	Code	Enter code	
↓	Accessories				+	+	
0 11	Pneumatic multi-connector plate	Pneumatic standard multi-connector plate		[10]	M		
		Pneumatic special multi-connector plate		[10]	P		
		Preparation for pneumatic multi-connector plate		[10] [11]	V		
	Inscription label holder	for inscription labels		[12]	Z		
		transparent		[12]	T		
	Mounting	H-rail mounting		[13]	H		
		– – Wall mounting			W		
		Wall mounting		–	U		
	Connecting cable for relay plate	2.5 m	1 ... 99	–	...K		
		5 m	1 ... 99	–	...L		
	Fitting set for end plates	Connector and silencer		[14]	A		
	12 User documentation	German			-D		
		English			-E		
		French			-F		
		Italian			-I		
		Spanish			-S		
		Swedish			-V		

[10] **M, P, V** Only with compressed air supply Y, Z, E, F, G, H, I, K (supply at both ends).

[11] **V** Only with working line C (threaded connection).

[12] **Z, T** Not with relay plate R.

[13] **H** Not with accessory pneumatic multi-connector plate M, P, V.

[14] **A** Not with accessory V (preparation for pneumatic multi-connector plate).

Transfer order code

+ 11 – 12

Valve terminal type 10 CPV, Compact Performance – Direct Link

Ordering data – Modular products

FESTO

Valve terminals for standard applications
Compact Performance

2.1

Mandatory data →						
Module No.	Valve terminal, pneumatic part	Size	No. of valve positions	Working lines	Electrical connection	Manual override
18 200	10P	10	8	A, B, C	IP, D1, I1, N2, C2, CC	N, R, V
18 210		14				
18 220		18				
Ordering example						
18 200	10P	- 10	- 8	C	- IP	- N
1	2	3	4	5	6	7

Ordering table						
Size		10	14	18	Condi- tions	Code
Enter code						
M	1	Module No.	18 200	18 210	18 220	
		Basic configuration				
	2	Valve terminal, pneumatic part	Valve terminal type 10, CPV			10P
	3	Size	10	14	18	-...
	4	No. of valve positions	8			-8
	5	Working lines	Large push-in connectors in working line (QS6) (QS8) (QS10)			1 A
			Small push-in connectors in working line (QS4) (QS6) (QS8)			1 B
			None, threaded connection only			C
	6	Electrical connection	Fieldbus node for IP-Link (without connection accessories)			-IP
			Fieldbus node for Profibus DP including Festo fieldbus, ABB CS31, Moeller Suconet K, with extension string			2 -D1
			Fieldbus node for Interbus with extension string			2 -I1
			Fieldbus node for DeviceNet with extension string			2 -N2
			Fieldbus node for CANopen with extension string			2 -C2
			Fieldbus node for CC-Link with extension string			2 -CC
	7	Manual override	Non-detenting			-N
			Detenting			-R
			Blocked			-V

1 A, B

Not if the other equipment consists exclusively of plate T, S, vacant position L and relay plate R.

2 D1, I1, N2, C2, CC

Only with selectable connection technology for fieldbus node GA, GB, GC, GD, GE, GF, GI, GL or GM.

Transfer order code

1	2	3	4	5	6	7
	10P	-	8		-	

Valve terminal type 10 CPV, Compact Performance – Direct Link

Ordering data – Modular products



→

M

Mandatory data

→

Pneumatic supply

U, V, W, X, Y, Z, A, B, C, D, E, F, G, H, J, K

U

8

Ordering table							
Size	Size	10	14	18	Condi- tions	Code	Enter code
<div>↓</div> <div>8</div> <div>M</div> <div>↓</div>	Pneumatic supply	Internal pilot supply air, supply at right, ducted exhaust air				-U	
		Internal pilot supply air, supply at left, ducted exhaust air				-V	
		External pilot supply air, supply at right, ducted exhaust air				-W	
		External pilot supply air, supply at left, ducted exhaust air				-X	
	Compressed air supply via end plates or pneu- matic multi-connector plate	Internal pilot supply air, supply at both ends, ducted exhaust air				-Y	
		External pilot supply air, supply at both ends, ducted exhaust air				-Z	
	Compressed air supply via end plates, with flat plate silencer	Internal pilot supply air, supply at right, flat plate silencer				-A	
		Internal pilot supply air, supply at left, flat plate silencer				-B	
		External pilot supply air, supply at right, flat plate silencer				-C	
		External pilot supply air, supply at left, flat plate silencer				-D	
	Compressed air supply via pneumatic multi- connector plate with flat plate silencer	External pilot supply air, supply at both ends, flat plate silencer at right			3	-E	
		External pilot supply air, supply at both ends, flat plate silencer at left			3	-F	
		Internal pilot supply air, supply at both ends, flat plate silencer at left			3	-G	
		External pilot supply air, supply at both ends, flat plate silencers at both ends			3	-H	
		Internal pilot supply air, supply at both ends, flat plate silencers at both ends			3	-J	
		Internal pilot supply air, supply at both ends, flat plate silencer at right			3	-K	

3 E, F, G, H, J, K
 Only with pneumatic multi-connector plate M, P, V.

Transfer order code

→

8

Valve terminal type 10 CPV, Compact Performance – Direct Link

Ordering data – Modular products

FESTO

Valve terminals for standard applications
Compact Performance

2.1

→ [M] Mandatory data →

Equipment at valve position 0 ... 7

9 Valve functions: M, J, N, C, H, G, D, I, F, A, E, T, S, L, R

[O] Options

10 Additional functions at pneumatic valve position 0 ... 7: P, Q, V

Valve position

0 1 2 3 4 5 6 7

- M M M M M M M F

9 + 10

Ordering table						
Size	10	14	18	Condi- tions	Code	Enter code
↓ [M] 9	Equipment at valve position 0 ... 7			[4]	-	-
	Valve functions	5/2-way valve, single solenoid			M	Enter the pneu- matic equip- ment selected in the order code
		5/2-way valve, double solenoid			J	
		2x 3/2-way valve, normally open			N	
		2x 3/2-way valve, normally closed			C	
		2x 3/2-way valve, 1x normally open, 1x closed			H	
		5/3-way valve, mid-position closed		[5]	G	
		2x 2/2-way valve, normally closed			D	
		2x 2/2-way valve, 1x normally open, 1x closed			I	
		5/2-way valve, single solenoid, fast-switching	-		F	
		Vacuum generator		[6]	A	
		Vacuum generator with ejector pulse		[6]	E	
		Plate with duct separation 1/11 closed		[7]	T	
		Plate with duct separation 1/11 and 3/5 closed		[7] [8]	S	
		Vacant position			L	
		Relay plate	-		R	
	[O] 10 Additional function at valve position 0 ... 7	2x one-way flow control valve, supply air	-	[9]	P	
		2x one-way flow control valve, exhaust air	-	[9]	Q	
		Vacuum flow control module	-	[10]	V	
↓						

[4] Equipment at valve position 0 ... 7

The valve positions must be equipped throughout without any gaps.

[5] G

Not in first or last valve position.

[6] A, E

Note air supply and exhaust when using more than 2 vacuum generators.

[7] T, S

Only one plate T or S possible per valve terminal,
but not in first or last valve position
and only with compressed air supply Y, Z, E, F, G, H, J, K (supply air at both ends);
the equipment to the right must not consist exclusively of vacant position L, relay plate R.

[8] S

If the equipment to the right of S consists exclusively of valve function D, I,
vacant position L, relay plate R, then only with compressed air supply Y, Z, F,
G.

[9] P, Q

Cannot be combined with valve function G (5/3-way valve).

Not in first or last valve position with pneumatic multi-connector plate M, P, V.

Must be combined with valve function A, E (vacuum generator).

[10] V

Not in first or last valve position with pneumatic multi-connector plate M, P, V.

Transfer order code

0 1 2 3 4 5 6 7

-

9 + 10

Valve terminal type 10 CPV, Compact Performance – Direct Link

Ordering data – Modular products

FESTO

0 Options							
Accessories	Selectable connection technology for fieldbus nodes	Pneumatic multi-connector plate	Inscription label holder	Mounting	Connecting cable for relay plate	Fitting set for end plates	User documentation
	GA, GB, GC, GD, GE, GF, GI, GL, GM	M, P, V	Z, T	H, W, U	...K, ...L	A	D, E, F, I, S, V
+							- D
	11						12

Ordering table							
Size	10	14	18	Condi- tions	Code	Enter code	
0	Accessories				+	+	
11	Selectable connection technology for fieldbus nodes	Adapter, 2x M12, 5-pin, for DeviceNet/CANopen		11	GA		
		Connection set, 5-pin screw terminal, for DeviceNet/CANopen		11	GB		
		Without accessories for fieldbus connection		12	GC		
		Straight plug, IP65, Sub-D, 9-pin, for DeviceNet/CANopen		11	GD		
		Straight plug, IP65, Sub-D, 9-pin, for Profibus DP		13	GE		
		Adapter, 2x M12 B-coded, for Profibus DP		13	GF		
		Connection set, IP65, 2xSub-D, 9-pin, for Interbus		14	GI		
		Adapter, 5-pin screw terminal, for CC-Link		15	GL		
		Straight plug, IP65 Sub-D, 9-pin, for CC-Link		15	GM		
	Pneumatic multi-connector plate	Pneumatic standard multi-connector plate		16	M		
		Pneumatic special multi-connector plate		16	P		
		Preparation for pneumatic multi-connector plate		16 17	V		
	Inscription label holder	for inscription labels		18	Z		
		transparent		18	T		
	Mounting	H-rail mounting		19	H		
		– – Wall mounting			W		
		Wall mounting			U		
	Connecting cable for relay plate	2.5 m	1 ... 99	–	...K		
		5 m	1 ... 99	–	...L		
	Fitting set for end plates	Connector and silencer		20	A		
12	User documentation	German			-D		
		English			-E		
		French			-F		
		Italian			-I		
		Spanish			-S		
		Swedish			-V		

- 11 GA, GB, GD Only with electrical connection N2, C2.
 12 GC Only with electrical connection D1, I1, N2, C2, CC.
 13 GE, GF Only with electrical connection D1.
 14 GI Only with electrical connection I1.
 15 GL, GM Only with electrical connection CC.

- 16 M, P, V Only with compressed air supply Y, Z, E, F, G, H, J, K (supply at both ends).
 17 V Only with working line C (threaded connection).
 18 Z, T Not with relay plate R.
 19 H Not with accessory pneumatic multi-connector plate M, P, V.
 20 A Not with accessory V (preparation for pneumatic multi-connector plate).

Transfer order code

+		-	
	11		12

Valve terminal type 10 CPV, Compact Performance – ET200X

Ordering data – Modular products

FESTO

Valve terminals for standard applications
Compact Performance

2.1

Mandatory data

Module No.	Valve terminal, pneumatic part	Size	No. of valve positions	Working lines	Electrical connection	Manual override	Pneumatic supply
18 200 18 210	10P	10 14	8	A, B, C	ET	N, R, V	U, V, W, X, Y, Z, A, B, C, D, E, F, G, H, I, K
Ordering example							
18 200	10P	- 10	- 8	C	- ET	- N	- U
1	2	3	4	5	6	7	8

Ordering table

Size	10	14	Condi- tions	Code	Enter code
M 1 Module No.	18 200	18 210			
	Basic configuration				
2 Valve terminal, pneumatic part	Valve terminal type 10, CPV			10P	10P
3 Size	10	14		-...	
4 No. of valve positions	8			-8	-8
5 Working lines	Large push-in connectors in working line (QS6) (QS8)			[1] A	
	Small push-in connectors in working line (QS4) (QS6)			[1] B	
	None, threaded connection only			C	
6 Electrical connection	Electrical connection for ET200X			-ET	-ET
7 Manual override	Non-detenting			-N	
	Detenting			-R	
	Blocked			-V	
8 Pneumatic supply	Internal pilot supply air, supply at right, ducted exhaust air			-U	
	Internal pilot supply air, supply at left, ducted exhaust air			-V	
	External pilot supply air, supply at right, ducted exhaust air			-W	
	External pilot supply air, supply at left, ducted exhaust air			-X	
	Compressed air supply via end plates or pneumatic multi-connector plate			-Y	
	Internal pilot supply air, supply at both ends, ducted exhaust air				
	External pilot supply air, supply at both ends, ducted exhaust air			-Z	
	Compressed air supply via end plates, with flat plate silencer				
	Internal pilot supply air, supply at right, flat plate silencer			-A	
	Internal pilot supply air, supply at left, flat plate silencer			-B	
	External pilot supply air, supply at right, flat plate silencer			-C	
	External pilot supply air, supply at left, flat plate silencer			-D	
	Compressed air supply via pneumatic multi-connector plate with flat plate silencer				
	External pilot supply air, supply at both ends, flat plate silencer at right			[2] -E	
	External pilot supply air, supply at both ends, flat plate silencer at left			[2] -F	
	Internal pilot supply air, supply at both ends, flat plate silencer at left			[2] -G	
	External pilot supply air, supply at both ends, flat plate silencers at both ends			[2] -H	
	Internal pilot supply air, supply at both ends, flat plate silencers at both ends			[2] -J	
	Internal pilot supply air, supply at both ends, flat plate silencer at right			[2] -K	

[1] **A, B** Not if the other equipment consists exclusively of plate T, S and vacant position L.

[2] **E, F, G, H, J, K**

Only with pneumatic multi-connector plate M, P, V.

Transfer order code

	10P	-		-	8		-	ET	-		-	
1	2		3		4		5	6		7		8

Valve terminal type 10 CPV, Compact Performance – ET200X

Ordering data – Modular products

FESTO

→ [M] Mandatory data →

Equipment at valve position 0 ... 7

9 Valve functions: M, J, N, C, H, G, D, I, A, E, T, S, L

[O] Options

10 Additional functions at pneumatic valve position 0 ... 7: P, Q, V

Valve position

0	1	2	3	4	5	6	7
M	M	M	M	M	M	M	J

9 + 10

Ordering table					
Size	10	14	Condi- tions	Code	Enter code
↓ [M] 9	Equipment at valve position 0 ... 7		[3]	-	-
	Valve functions	5/2-way valve, single solenoid		M	Enter the pneu- matic equip- ment selected in the order code
		5/2-way valve, double solenoid		J	
		2x 3/2-way valve, normally open		N	
		2x 3/2-way valve, normally closed		C	
		2x 3/2-way valve, 1x normally open, 1x closed		H	
		5/3-way valve, mid-position closed	[4]	G	
		2x 2/2-way valve, normally closed		D	
		2x 2/2-way valve, 1x normally open, 1x closed		I	
		Vacuum generator	[5]	A	
		Vacuum generator with ejector pulse	[5]	E	
		Plate with duct separation 1/11 closed	[6]	T	
		Plate with duct separation 1/11 and 3/5 closed	[6] [7]	S	
		Vacant position		L	
[O] 10	Additional function at valve position 0 ... 7	2x one-way flow control valve, supply air	[8]	P	
		2x one-way flow control valve, exhaust air	[8]	Q	
		Vacuum flow control module	[9]	V	

[3] Equipment at valve position 0 ... 7

The valve positions must be equipped throughout without any gaps.

[4] G Not in first or last valve position.

[5] A, E Note air supply and exhaust when using more than 2 vacuum generators.

[6] T, S Only one plate T or S possible per valve terminal,
but not in first or last valve position
and only with compressed air supply Y, Z, E, F, G, H, J, K (supply air at both ends);
the equipment to the right must not consist exclusively of vacant position L.

[7] S

If the equipment to the right of S consists exclusively of valve function D, I,
vacant position L, then only with compressed air supply Y, Z, F, G.

[8] P, Q

Cannot be combined with valve function G (5/3-way valve).

Not in first or last valve position with pneumatic multi-connector plate M, P, V.

Must be combined with valve function A, E (vacuum generator).

[9] V

Not in first or last valve position with pneumatic multi-connector plate M, P, V.

Transfer order code

0	1	2	3	4	5	6	7
-							

9 + 10

Valve terminal type 10 CPV, Compact Performance – ET200X

Ordering data – Modular products



→ 0 Options

Accessories	Pneumatic multi-connector plate	Inscription label holder	Fitting set for end plates	User documentation
	M, P, V	Z, T	A	D, E, F, I, S, V
+	11			- 12

Ordering table						
Size		10	14	Condi- tions	Code	Enter code
0		Accessories			+	+
	11	Pneumatic multi-connector plate	Pneumatic standard multi-connector plate	10	M	
			Pneumatic special multi-connector plate	10	P	
			Preparation for pneumatic multi-connector plate	10 11	V	
			Inscription label holder	for inscription labels		
			transparent		T	
		Fitting set for end plates	Connector and silencer	12	A	
	12	User documentation	German		-D	
			English		-E	
			French		-F	
			Italian		-I	
			Spanish		-S	
			Swedish		-V	

10 M, P, V Only with compressed air supply Y, Z, E, F, G, H, J, K (supply at both ends).

11 V Only with working line C (threaded connection).

12 A Not with accessory V (preparation for pneumatic multi-connector plate).

Transfer order code

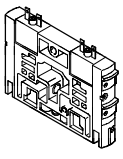
+ 11

- 12

Valve terminal type 10 CPV, Compact Performance

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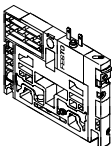
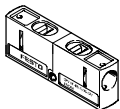
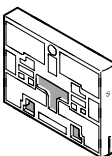
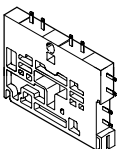
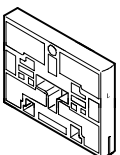
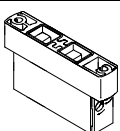
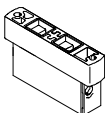
Accessories

Ordering data				
	Code	Valve function	Type	Part No.
Individual valve slice, size 10/14/18				
	M	5/2-way valve, single solenoid	CPV10-M1H-5LS-M7	161 414
			CPV14-M1H-5LS-1/8	161 360
			CPV18-M1H-5LS-1/4	163 190
	F	5/2-way valve, single solenoid, fast-switching	CPV10-M1H-5LS-M7	187 439
	J	5/2-way valve, double solenoid	CPV10-M1H-5JS-M7	161 415
			CPV14-M1H-5JS-1/8	161 361
			CPV18-M1H-5JS-1/4	163 191
	N	2x 3/2-way valve, normally open	CPV10-M1H-2x3-OLS-M7	161 417
			CPV14-M1H-2x3-OLS-1/8	161 363
			CPV18-M1H-2x3-OLS-1/4	163 188
	C	2 x 3/2-way valve, normally closed	CPV10-M1H-2x3-GLS-M7	161 416
			CPV14-M1H-2x3-GLS-1/8	161 362
			CPV18-M1H-2x3-GLS-1/4	163 189
	H	2x 3/2-way valve, 1x normally open, 1x closed	CPV10-M1H-30LS-3GLS-M7	176 064
			CPV14-M1H-30LS-3GLS-1/8	176 067
			CPV18-M1H-30LS-3GLS-1/4	176 070
	G	5/3-way valve, mid-position closed	CPV18-M1H-5/3GS-1/4	176 061
	D	2x 2/2-way valve, normally closed	CPV10-M1H-2x2-GLS-M7	185 880
			CPV14-M1H-2x2-GLS-1/8	185 883
			CPV18-M1H-2x2-GLS-1/4	185 886
	I	2x 2/2-way valve, 1x normally open, 1x closed	CPV10-M1H-20LS-2GLS-M7	187 843
			CPV14-M1H-20LS-2GLS-1/8	187 846
			CPV18-M1H-20LS-2GLS-1/4	187 849

Valve terminal type 10 CPV, Compact Performance

Accessories

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Ordering data				
	Code	Designation	Type	Part No.
Vacuum generator				
	A	Vacuum generator	CPV10-M1H-V70-M7	185 862
			CPV14-M1H-V95-1/8	185 868
			CPV18-M1H-V140-1/4	185 874
	E	Vacuum generator with ejector pulse	CPV10-M1H-VI70-2GLS-M7	185 865
			CPV14-M1H-VI95-2GLS-1/8	185 871
			CPV18-M1H-VI140-2GLS-1/4	185 877
Functional module				
	G	Valve kit for 5/3-way valve function, closed (in combination with valve slice C) for size 10 and 14	CPV10-BS-5/3G-M7	176 055
			CPV14-BS-5/3G-1/8	176 057
Separator plates				
	T	Separator plate, duct 1/11 closed	CPV10-DZP	161 369
			CPV14-DZP	162 551
			CPV18-DZP	163 282
	S	Separator plate, duct 1/11, 3/5 closed	CPV10-DZPR	178 678
			CPV14-DZPR	178 680
			CPV18-DZPR	184 543
Relay plate				
	R	Relay plate	CPV10-RP2	174 478
			CPV14-RP2	174 480
Blanking plate				
	L	Blanking plate	CPV10-RZP	161 368
			CPV14-RZP	162 550
			CPV18-RZP	163 283
Additional functions for valve positions				
	P	One-way flow control valve, 2x supply air	CPV-10-BS-2xGRZZ-M7	184 140
			CPV-14-BS-2xGRZZ-1/8	184 142
	Q	One-way flow control valve, 2x exhaust air	CPV-10-BS-2xGRAZ-M7	184 141
			CPV-14-BS-2xGRAZ-1/8	184 143
	V	One-way flow control valve for vacuum	CPV-10-BS-2xGRZ-V-M7	185 889
			CPV-14-BS-2xGRZ-V-1/8	185 891

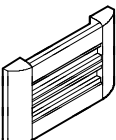
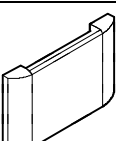

Valve terminal type 10 CPV, Compact Performance

Accessories

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Valve terminals for standard applications
Compact Performance

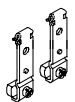
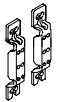



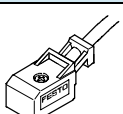
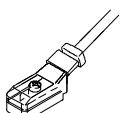
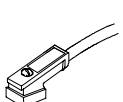
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Ordering data				
	Code	Designation	Type	Part No.
Inscription label holder				
	Z	Holder for inscription labels	CPV10-VI-BZ-T-2	162 560
			CPV10-VI-BZ-T-3	162 561
			CPV10-VI-BZ-T-4	162 562
			CPV10-VI-BZ-T-5	162 563
			CPV10-VI-BZ-T-6	162 564
			CPV10-VI-BZ-T-7	162 565
			CPV10-VI-BZ-T-8	162 566
			CPV14-VI-BZ-T-2	162 567
			CPV14-VI-BZ-T-3	162 568
			CPV14-VI-BZ-T-4	162 569
			CPV14-VI-BZ-T-5	162 570
			CPV14-VI-BZ-T-6	162 571
			CPV14-VI-BZ-T-7	162 572
			CPV14-VI-BZ-T-8	162 573
			CPV18-VI-BZ-T-2	163 293
			CPV18-VI-BZ-T-3	163 294
			CPV18-VI-BZ-T-4	163 295
			CPV18-VI-BZ-T-5	163 296
			CPV18-VI-BZ-T-6	163 297
			CPV18-VI-BZ-T-7	163 298
			CPV18-VI-BZ-T-8	163 299
	T	Holder for inscription labels, transparent	CPV10-VI-ST-T-2	194 066
			CPV10-VI-ST-T-3	194 067
			CPV10-VI-ST-T-4	194 068
			CPV10-VI-ST-T-5	194 069
			CPV10-VI-ST-T-6	194 070
			CPV10-VI-ST-T-7	194 071
			CPV10-VI-ST-T-8	194 072
			CPV14-VI-ST-T-2	194 073
			CPV14-VI-ST-T-3	194 074
			CPV14-VI-ST-T-4	194 075
			CPV14-VI-ST-T-5	194 076
			CPV14-VI-ST-T-6	194 077
			CPV14-VI-ST-T-7	194 078
			CPV14-VI-ST-T-8	194 079
			CPV18-VI-ST-T-2	194 080
			CPV18-VI-ST-T-3	194 081
			CPV18-VI-ST-T-4	194 082
			CPV18-VI-ST-T-5	194 083
			CPV18-VI-ST-T-6	194 084
			CPV18-VI-ST-T-7	194 085
			CPV18-VI-ST-T-8	194 086
Inscription labels				
	-	6x10 mm in frames, 64 pieces	IBS 6x10	18 576
		9x20 mm in frames, 20 pieces (CPV18 only)	IBS 9x20	18 182

Valve terminal type 10 CPV, Compact Performance

Accessories

FESTO

Ordering data					
	Code	Designation	Type	Part No.	
Mounting					
	H	Attachment for H-rail	CPV10/14-VI-BG-NRH-35	162 556	
			CPV18-VI-BG-NRH-35	163 291	
	W	Attachment for wall mounting	CPV18-VI-BG-RW	163 292	
	U		CPV10/14-VI-BG-RWL-B	189 541	
	X	Attachment for individual connection and ET200X (included in the scope of delivery)	CPV10-VI-BG-ET200X	165 801	
			CPV14-VI-BG-ET200X	165 803	
Manual override					
	–	Locking clip (for manual override)	CPV10/14-HS	526 203	
			CPV18-HS	526 204	
	V	Locking clip (cover for manual override)	CPV10/14-HV	530 055	
			CPV18-HV	530 056	
Relay plate					
	K	Connecting cable for relay plate	2.5 m	KRP-1-24-2,5	165 612
	L		5 m	KRP-1-24-5	165 613
Cable for individual connection, electrical					
	D	Plug socket with cable (CPV10/14), suitable for chain link trunking	2.5 m	KMYZ-7-24-2,5-LED-PUR	193 683
	E		5 m	KMYZ-7-24-5-LED-PUR	193 685
	F		10 m	KMYZ-7-24-10-LED-PUR	196 070
	D	Plug socket with cable (CPV18)	2.5 m	KMEB-2-24-2,5-LED	174 844
	E		5 m	KMEB-2-24-5-LED	174 845

Valve terminals for standard applications
Compact Performance

2.1

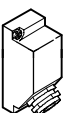
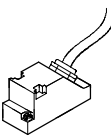


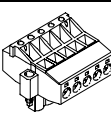
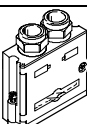

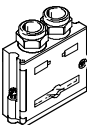
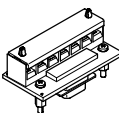
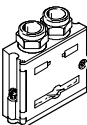
Valve terminal type 10 CPV, Compact Performance

Accessories

FESTO

Valve terminals for standard applications
Compact Performance





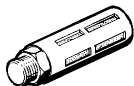


2.1

Ordering data					
	Code	Designation		Type	Part No.
Multi-pin plug connection, electrical					
	Y	Plug socket, 9-pin		SD-SUB-D-BU9	18 708
		Plug socket, 25-pin		SD-SUB-D-BU25	18 709
	R	Connecting cable, 9-pin, polyvinyl chloride	5 m	KMP3-9P-08-5	18 698
		Connecting cable, 25-pin, polyvinyl chloride		KMP3-25P-16-5	18 624
	S	Connecting cable, 9-pin, polyvinyl chloride	10 m	KMP3-9P-08-10	18 579
		Connecting cable, 25-pin, polyvinyl chloride		KMP3-25P-16-10	18 625
	–	Connecting cable, 9-pin, polyurethane	5 m	KMP4-9P-5-PUR	193 014
		Connecting cable, 25-pin, polyurethane		KMP4-25P-5-PUR	193 018
	–	Connecting cable, 9-pin, polyurethane	10 m	KMP4-9P-10-PUR	193 015
		Connecting cable, 25-pin, polyurethane		KMP4-25P-10-PUR	193 019
	–	Connecting cable, for chain link trunking, with 9-pin Sub-D plug, IP20, polyvinyl chloride cable	2.5 m	KMP6-09P-8-2,5	531 184
			5 m	KMP6-09P-8-5	531 185
			10 m	KMP6-09P-8-10	531 186
	–	Connecting cable, for chain link trunking, with 25-pin Sub-D plug, IP20, polyvinyl chloride cable	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
Fieldbus connection for Fieldbus Direct					
	GA	Straight socket, Sub-D 9-pin for DeviceNet/CANopen, plug/socket M12 5-pin, IP65		FBA-2-M12-5POL	525 632
	GB	Straight socket, Sub-D 9-pin for DeviceNet/CANopen, plug 5-pin, IP40		FBA-1-SL-5POL	525 634
		Angled socket 5-pin for DeviceNet/CANopen, screw terminal 5-pin, IP20		FBSD-KL-2x5POL	525 635
	GD	Plug 9-pin, Sub-D for DeviceNet/CANopen, IP65		FBS-SUB-9-BU-2x4POL	197 960
	GE	Plug Sub-D, IP65, 9-pin for Profibus DP		FBS-SUB-9-GS-DP-B	532 216
	GF	Bus connection 2x M12 adapter plug (B-coded, ReverseKey) for Profibus DP		FBA-2-M12-5POL-RK	533 118
	GI	Plug socket 9-pin, Sub-D for Interbus nodes CPX and CPV		FBS-SUB-9-BU-IB-B	532 218
		Plug 9-pin, Sub-D for Interbus nodes CPX and CPV		FBS-SUB-9-GS-IB-B	532 217
	GL	Straight socket, Sub-D 9-pin, screw terminal 5-pin, IP20		FBA-1-KL-5POL	197 962
	GM	Plug 9-pin, Sub-D, for CC-Link CPX and CPV, IP65		FBS-SUB-9-GS-2x4POL-B	532 220

Valve terminal type 10 CPV, Compact Performance

Accessories

FESTO

Ordering data				
Designation			Type	Part No.
Operating voltage connection for Fieldbus Direct				
	Straight socket	M12, 4-pin, PG7, IP65	FBSD-GD-7	18 497
		M12, 4-pin, PG9, IP65	FBSD-GD-9	18 495
	Angled plug socket	M12, 4-pin, PG7, IP65	FBSD-WD-7	18 524
		M12, 4-pin, PG9, IP65	FBSD-WD-9	18 525
Blanking plug				
	Blanking plug		B-M5	3 843
			B-M7	174 309
			B-1/8	3 568
			B-1/4	3 569
			B-3/8	3 570
			B-1/2	3 571
Push-in fitting				
	Push-in fitting		QS-1/8-8-I	153 015
			QS-1/4-10-I	153 018
			QS-3/8-12-I	153 020
			QSM-M5-6-I	153 317
			QSM-M7-6-I	153 321
Silencer				
	Silencer		U-M5	4 645
			U-1/8-B	6 841
			U-1/4-B	6 842
			U-3/8-B	6 843
			U-1/2-B	6 844
			UC-M7	161 418
User documentation				
	CPV Pneumatics Description	German	P.BE-CPV-DE	165 100
		English	P.BE-CPV-EN	165 200
		French	P.BE-CPV-FR	165 130
		Italian	P.BE-CPV-IT	165 160
		Spanish	P.BE-CPV-ES	165 230
		Swedish	P.BE-CPV-SV	165 260
Software				
	CD-ROM	Valve terminals user documentation (PDF)	P.CD-VALVE-T	183 350
		Utilities	P.CD-VI-UTILITIES-2	533 500