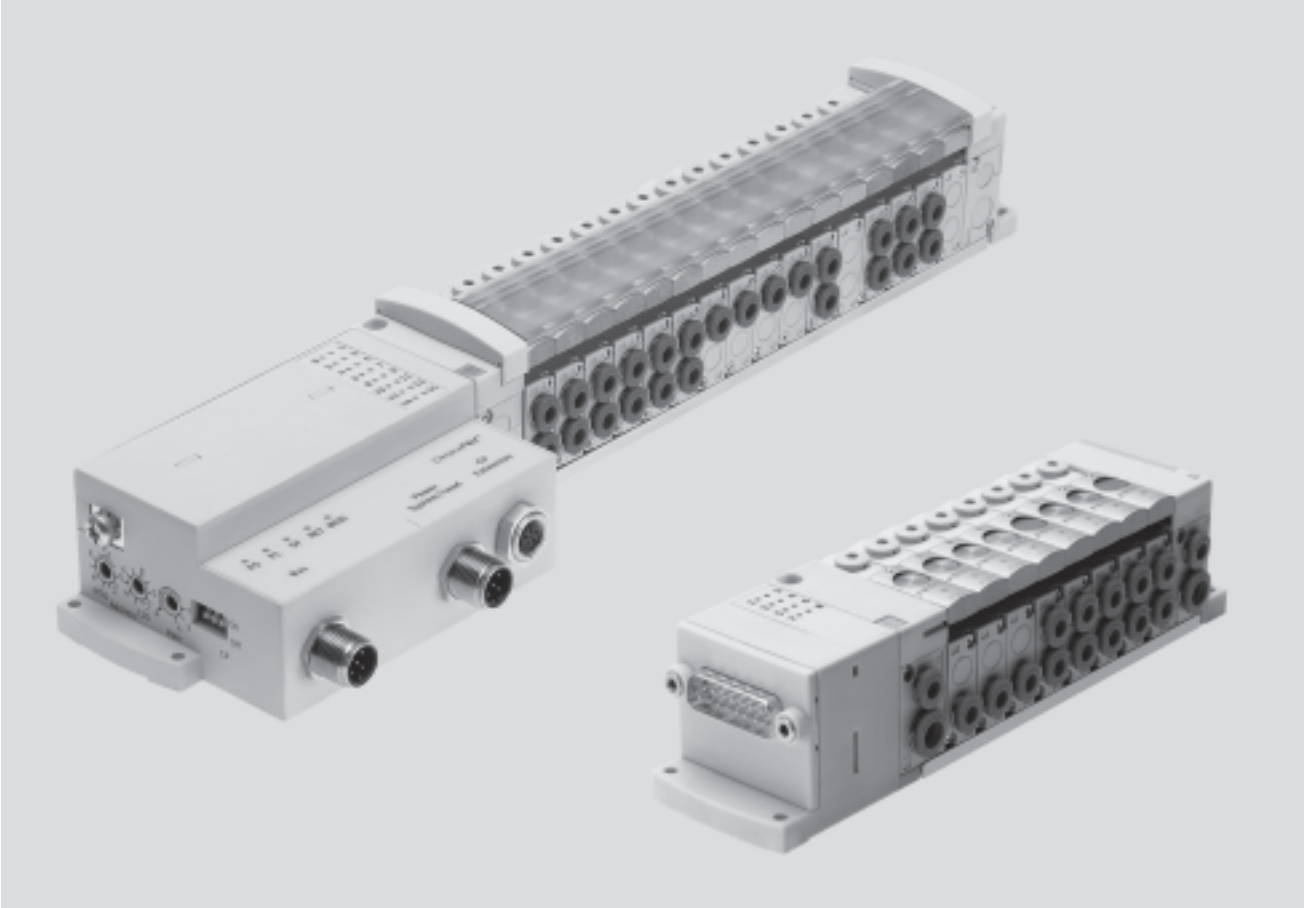
Valve terminals type 80 CPV-SC, Smart Cubic

Valve terminals type 80 CPV-SC, Smart Cubic

Key features



Innovative

- Small, compact valve terminal for a wide range of pneumatic applications
- Enormous flexibility during planning, assembly and operational use
- Multi-pin plug connection and fieldbus interface
- Wide range of selectable valve functions; 5/2-way, 3/2-way and 2/2-way functions
- With flow rates of up to 170 l/min, CPV-SC offers outstanding pneumatic performance for a wide range of applications
- Low weight

Versatile

- Provides 2 ... 16 valve positions on one terminal
- Ideally suited for operating small pneumatic drives in tight spaces
- The flexibility of the pneumatic working ports provides a practical solution to different requirements
- Round silencers, integrated flat plate silencers or screw/plug connection for ducted exhaust air
- Suitable for vacuum
- Enables multiple pressure zones on a single valve terminal

Reliable

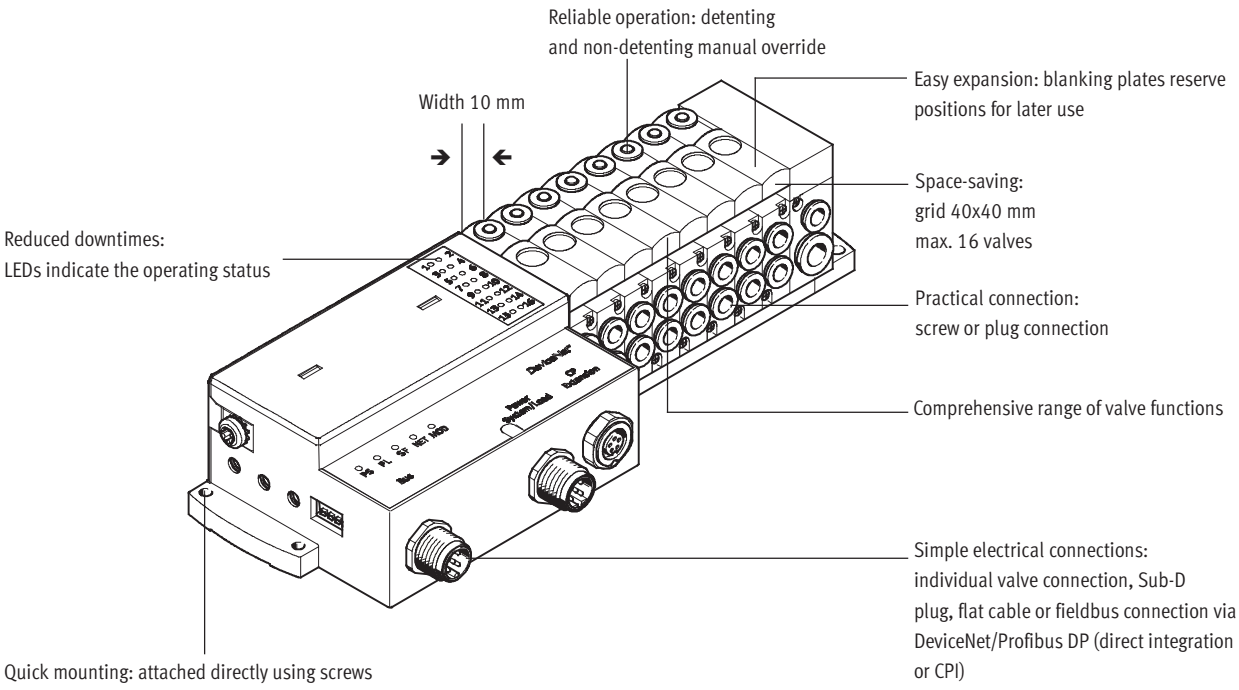
- Manual override
- Durable thanks to the use of tried and tested piston spool valves
- Sturdy thanks to metal housing and connecting thread
- Fast troubleshooting thanks to an LED on each valve and diagnostics via fieldbus

Easy to mount

- Fully assembled and tested valve terminal
- Less complicated when ordering, installing and commissioning
- Suitable for direct mounting even on moving system components

Valve terminals type 80 CPV-SC, Smart Cubic

Key features



Equipment options

Valve functions

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

Separator plate with additional compressed air supply

- Compressed air channel (1) closed
- Compressed air channel (1) and exhaust duct (3/5) closed

Blanking plate

- Plate without valve function for reserving a valve position

Electrical connection options

Individual connection

- 2 ... 16 valve positions/ max. 16 solenoid coils
- Individual connection, horizontal (H)
- Individual connection, vertical (T)

Multi-pin plug

- 4 ... 16 valve positions/ max. 16 solenoid coils
- Sub-D
- Flat cable

Fieldbus Direct

- 4 ... 16 valve positions/ max. 16 solenoid coils
- Profibus
- DeviceNet

CP string extension

- Further valve terminals CPV-SC-CPI or from the CPV/CPA range
- Electrical I/O modules

CPI interface

- 4 ... 16 valve positions/ max. 16 solenoid coils
- Further valve terminals CPV-SC-CPI or from the CPV/CPA range

Valve terminals type 80 CPV-SC, Smart Cubic

Key features

Valve terminal configurator

Online via: ➔ www.festo.com

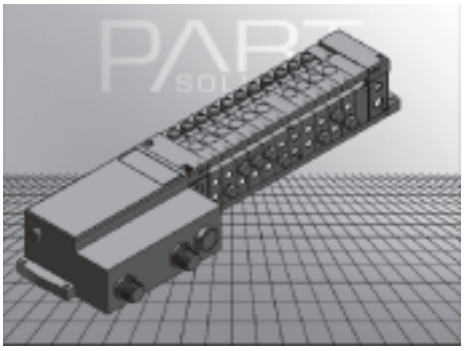
Selecting a CPV-SC valve terminal using the online catalogue is quick and easy thanks to the convenient valve terminal configurator provided. This makes it much easier to order the right product. The valve terminals are assembled according to your order specifications and are individually tested. This reduces the assembly and installation time to a minimum. The valve terminal type 80 is ordered using the order code.

Ordering system for type 80
➔ Internet: type 80

2D/3D CAD data

Online via: ➔ www.festo.com

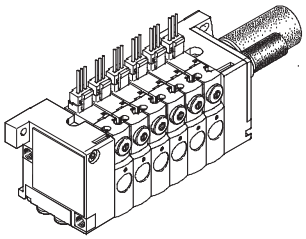
You can request the CAD data for a valve terminal you have configured. To do so, perform the product search as described above. Go to the shopping basket and click on the CAD icon (compass). On the next page you can generate a 3D preview or request another data format of your choice by e-mail.



Valve terminals type 80 CPV-SC, Smart Cubic

Key features

Individual connection

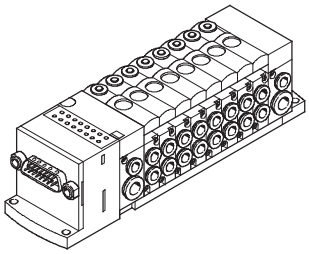


Connection is independent of the control technology used and is flexible thanks to ready to install cables. This ensures correct polarity during installation.

Valves with integrated LED (CPVSC1-M1LH- ...) are available as an option for switching status display. Individual connection permits the selection of 2 to 16 solenoid coils (divided between 2 to 16 valve positions).

Variants
- Individual connection, horizontal
- Individual connection, vertical
- 2 to 16 solenoid coils

Multi-pin plug connection

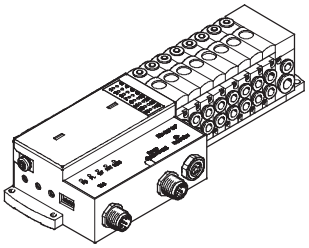


Control signals to the valve terminal are transmitted via a pre-assembled multi-core cable, which substantially reduces installation time.

The multi-pin plug connection enables the selection of 4 to 16 solenoid coils (divided between 4 to 16 valve positions).

Variants
- Sub-D connection
- Flat cable connection
- 4 to 16 solenoid coils

Fieldbus Direct

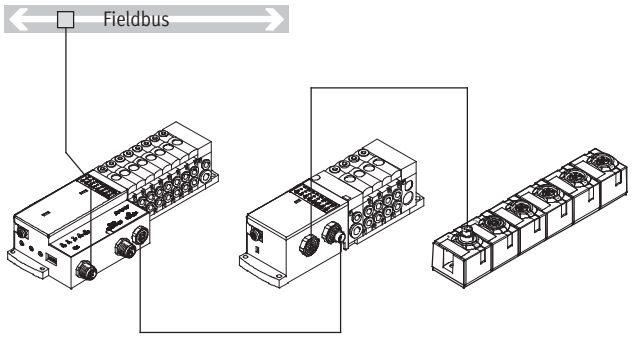


An integrated fieldbus node manages the communication connection to a higher-order PLC. This enables a space-saving pneumatic and electronic solution.

The fieldbus connection enables the selection of 4 to 16 solenoid coils (divided between 4 to 16 valve positions).

Variants
- DeviceNet connection (CP functionality)
- Profibus connection (CPI functionality)
- 4 to 16 solenoid coils

Fieldbus Direct with CP string extension



The optional string extension enables additional valve terminals and I/O modules to be connected to the field-bus node of the CPV-SC. A CP string of the CPI installation system is inte-grated in the fieldbus node as an extension. Different input and output modules as well as CPV, MPA, CPV-SC, CPA valve terminals can be connected. The maximum length of the CP string extension is 10 metres, which means that the extension modules can be mounted directly on-site. All of the required electrical signals are trans-mitted via the CP cable, which in turn means that no further installation is needed on the extension module.

The CP string interface offers:
- Logic and sensor supply for the input modules
- Load voltage supply for the valve terminals
- Logic supply for the output modules

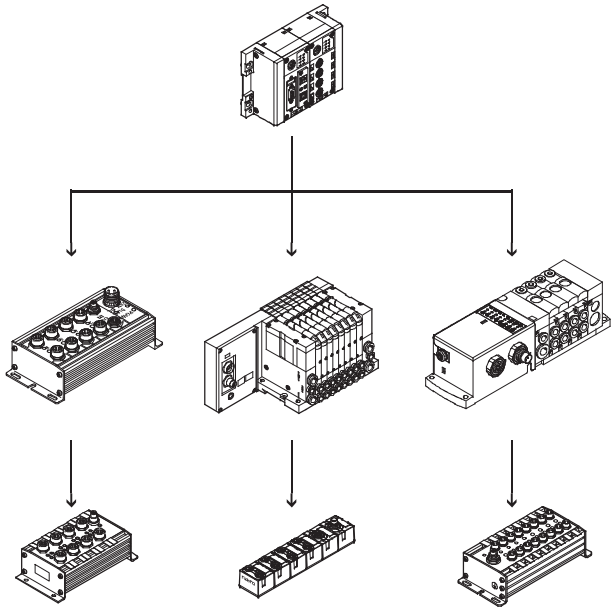
With CP functionality:
- 16 input signals
- 16 output signals for output modules 24 V DC or solenoid coils

With CPI functionality:
- 32 input signals
- 32 output signals for output modules 24 V DC or solenoid coils

Valve terminals type 80 CPV-SC, Smart Cubic

Key features

CPI installation system



Valve terminal for CPI installation system:
Valve terminals with CP connection are intended for connection to higher-order fieldbus nodes or to control blocks. A fieldbus node or control block also enables the connection of decentralised input/output units. The following fieldbus protocols are supported:

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

Four strings with up to 32 inputs and outputs can be connected to a field-bus node or control block. The connecting cables transmit the power supply for the input modules and the load voltage for the valves as well as control signals.

Further information
➔ Internet: ctec

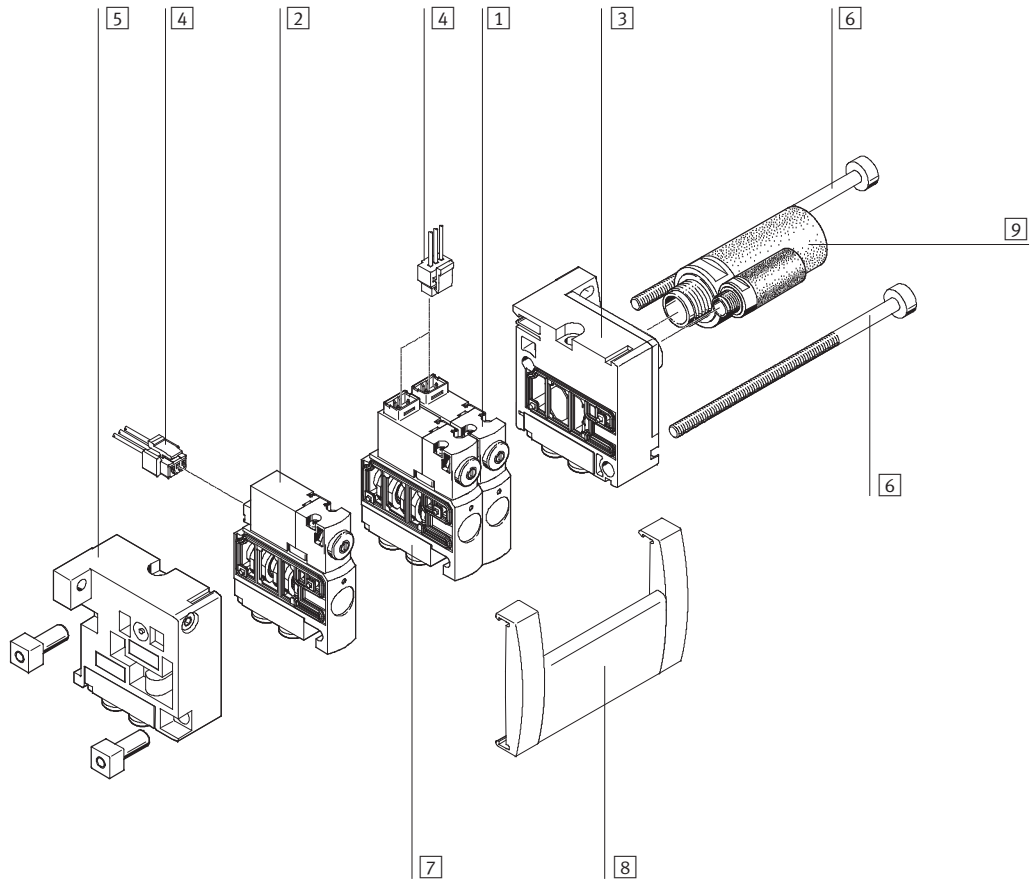
Overview – CPV-SC valve terminal

Valve terminal with individual electrical connections

- Vertical individual connection
  Code: T
- Horizontal individual connection
  Code: H

Valve terminals with individual electrical connection can be equipped with 2 to max. 16 valve positions.

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



1 Valve with vertical individual connection
2 Valve with horizontal individual connection
3 Right-hand end plate for unducted exhaust air
4 Plug socket with cable for individual electrical connection of valves
5 Left-hand end plate for compressed air supply 1 or 12/14
6 Tie rod
7 Sub-base for working ports (push-in fitting or threaded)
8 Inscription label holder
9 Silencer

Valve terminals type 80 CPV-SC, Smart Cubic

Peripherals overview

Valve terminal with electrical multi-pin plug connection

- 15- and 26-pin Sub-D multi-pin plug connection
  Code: MS, MH

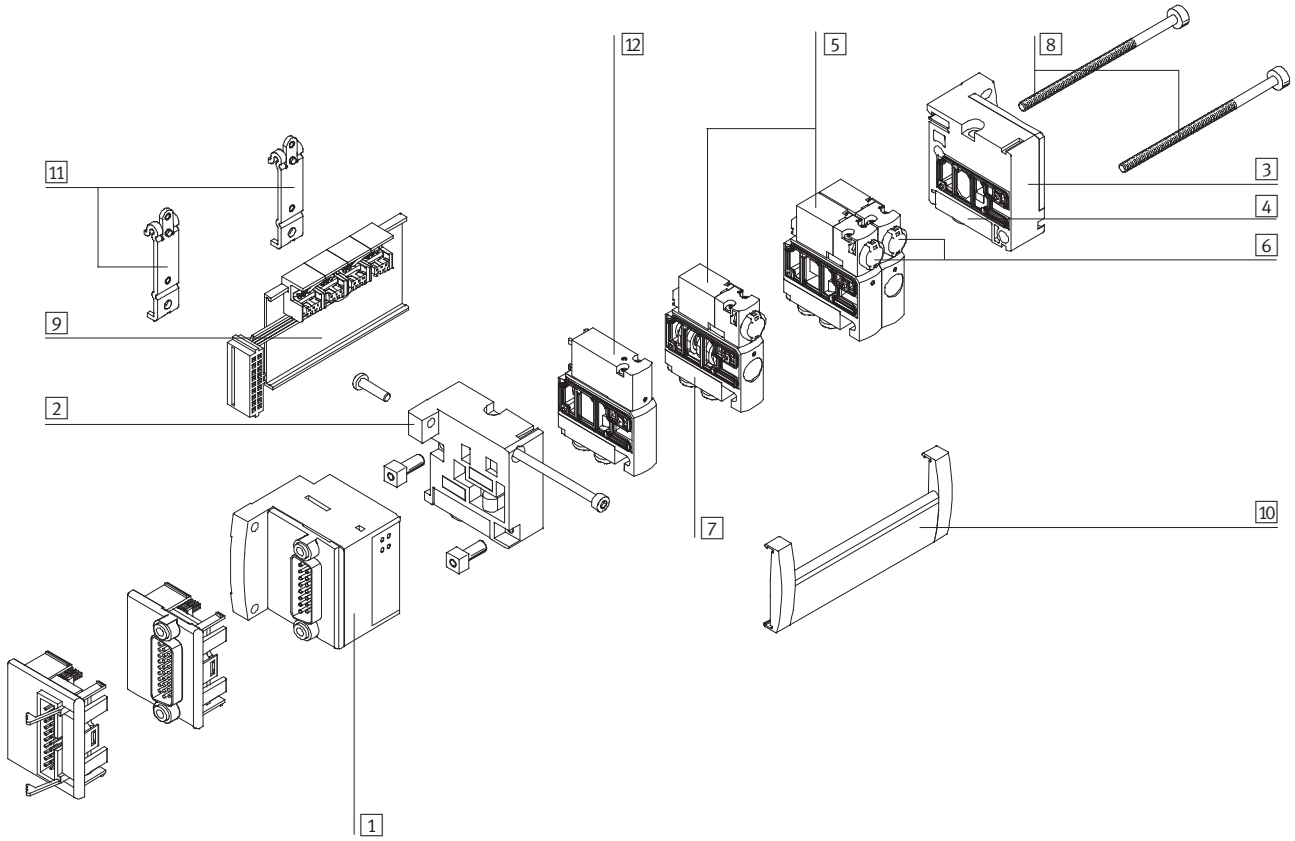
or

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

Valves and end plates are the basic pneumatic components of the valve terminal.
The valve terminals are connected to the end plates using tie rods.

Valve terminals with electrical multi-pin plug connection can be equipped with 4 to max. 16 valve positions.
Each valve position can either be equipped with a valve or a blanking plate.

The electrical connection is located on the left-hand side, thereby allowing flush mounting of the system.



1 Electrical control unit (with LED switching status displays) for Sub-D plug or flat cable
2 Left-hand end plate for compressed air supply 1 or 12/14
3 Right-hand end plate for ducted exhaust air or silencer (3/5 or 82/84)
4 Sub-base for ducted exhaust air (push-in fitting or threaded)
5 Valve
6 Cover for manual override (optional)
7 Sub-base for working ports (push-in fitting or threaded)
8 Tie rod
9 Electrical valve linking module
10 Inscription label holder
11 H-rail mounting
12 Blanking plate for vacant position

Valve terminals type 80 CPV-SC, Smart Cubic

Peripherals overview

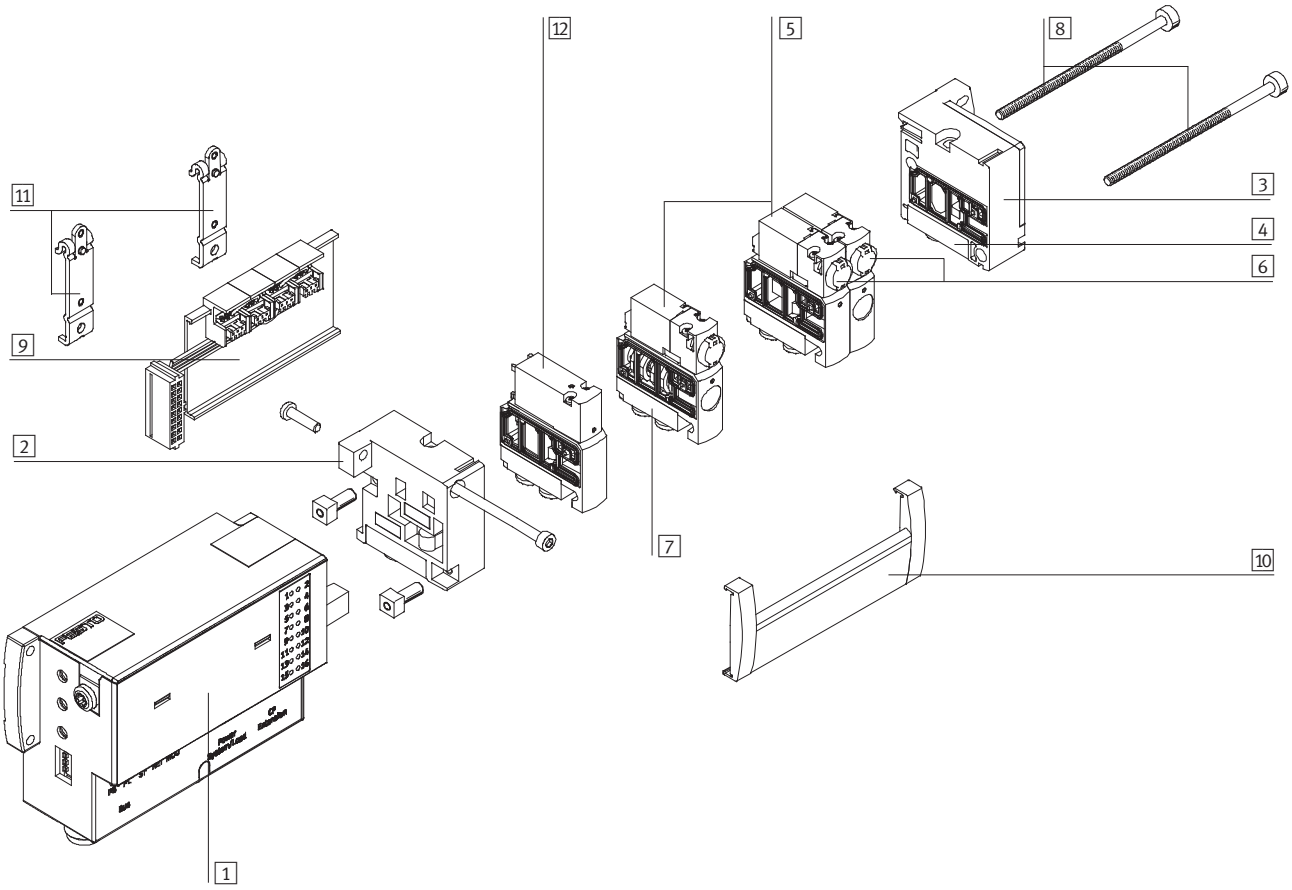
Valve terminal with Fieldbus Direct

- M12 A-coded DeviceNet connection
  Code: DN
  or
- 9-pin Sub-D connection for Profibus
  Code: DP

Valves and end plates are the basic pneumatic components of the valve terminal.
The valve terminals are connected to the end plates using tie rods.

Valve terminals with Fieldbus Direct DeviceNet/Profibus DP can be equipped with 4 to max. 16 valve positions. Each valve position can either be equipped with a valve or a blanking plate.

The electrical connection is in the same direction as the tubing in order to save space.



1 Fieldbus Direct
2 Left-hand end plate for compressed air supply 1 or 12/14
3 Right-hand end plate for ducted exhaust air or silencer (3/5 or 82/84)
4 Sub-base for ducted exhaust air (push-in fitting or threaded)
5 Valve
6 Cover for manual override (optional)
7 Sub-base for working ports (push-in fitting or threaded)
8 Tie rod
9 Electrical valve linking module
10 Inscription label holder
11 H-rail mounting
12 Blanking plate for vacant position

Valve terminals type 80 CPV-SC, Smart Cubic

Peripherals overview

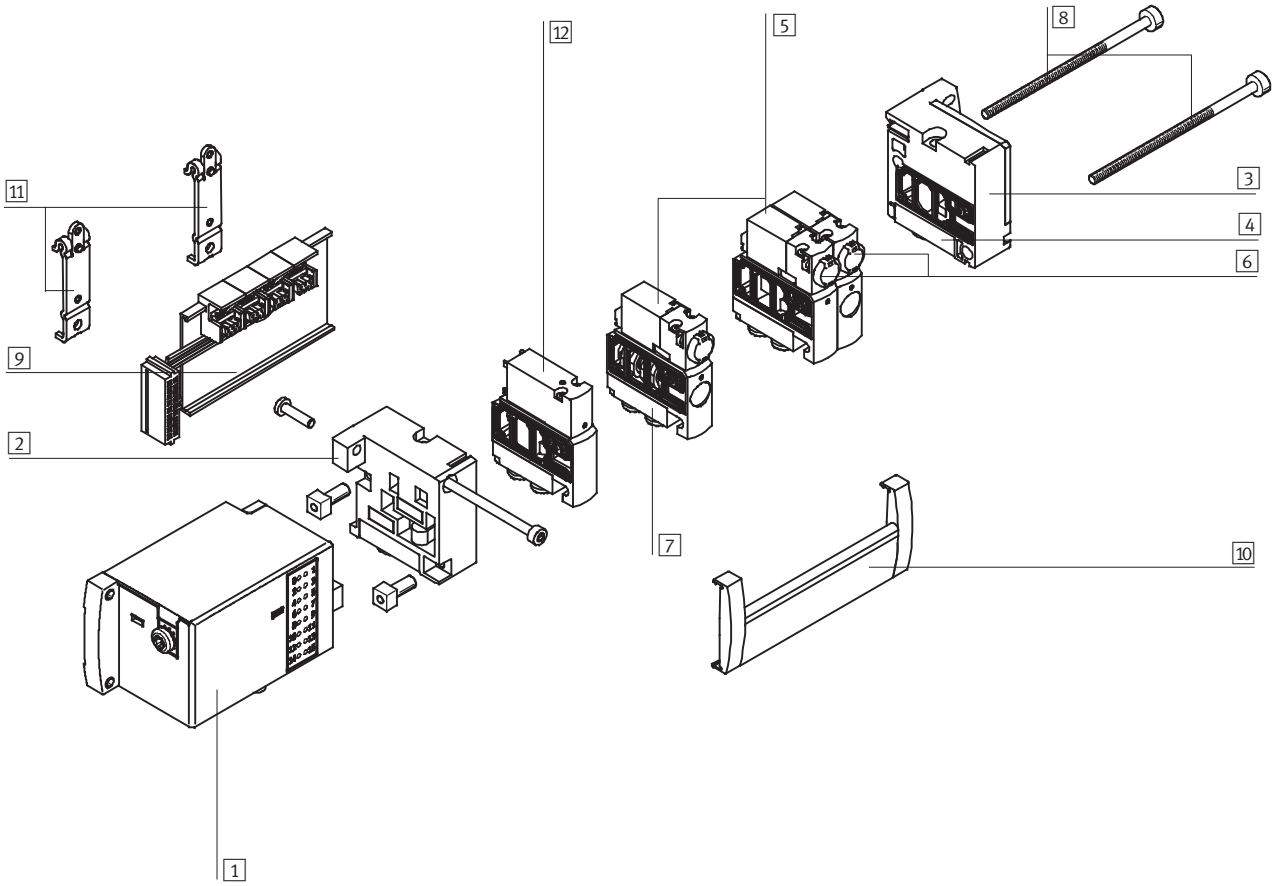
Valve terminal with CPI connection

CP interface M9, 5-pin
Code: CP

Valves and end plates are the basic pneumatic components of the valve terminal.
The valve terminals are connected to the end plates using tie rods.

Valve terminals with CPI interface can be equipped with 4 to max. 16 valve positions. Each valve position can either be equipped with a valve or a blanking plate.

The electrical connection is in the same direction as the tubing in order to save space.



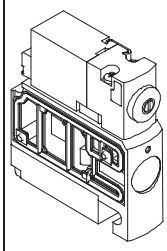
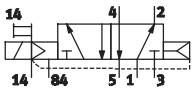
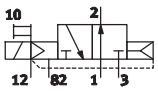
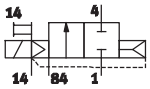
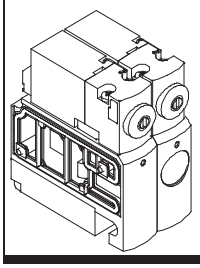
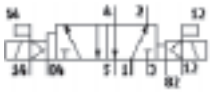
1 CPI connection
2 Left-hand end plate for compressed air supply 1 or 12/14
3 Right-hand end plate for ducted exhaust air or silencer (3/5 or 82/84)
4 Sub-base for ducted exhaust air (push-in fitting or threaded)
5 Valve
6 Cover for manual override (optional)
7 Sub-base for working ports (push-in fitting or threaded)
8 Tie rod
9 Electrical valve linking module
10 Inscription label holder
11 H-rail mounting
12 Blanking plate for vacant position

Valve terminals type 80 CPV-SC, Smart Cubic

Key features – Pneumatic components

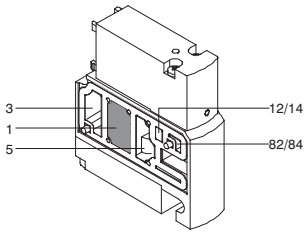
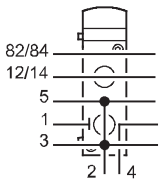
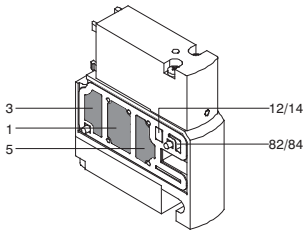
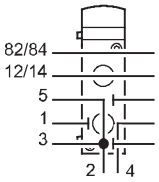
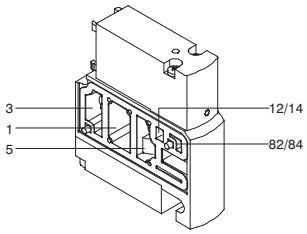
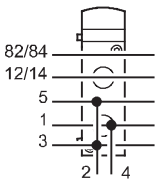
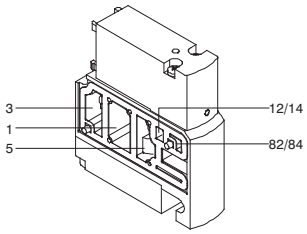
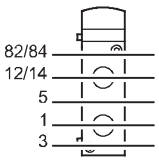
Valves

CPVSC1 valves are valves with integrated sub-base, i.e. in addition to the valve function they contain all of the ducts for supply, exhaust and the working ports. The supply ducts are a central component of the valve slices and enable a direct flow of air. 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.

Valve functions	Code	Circuit symbol	Width 10 mm	Description
	M		■	5/2-way single solenoid valve • Pneumatic spring return
	N		■	3/2-way single solenoid valve • Normally open • Pneumatic spring return
	K		■	3/2-way single solenoid valve • Normally closed • Pneumatic spring return
	D		■	2/2-way single solenoid valve • Normally closed • Pneumatic spring return
	J		■	5/2-way double solenoid valve This valve consists of two valve housing units and therefore occupies two valve positions. The pilot control with coil 12 is located on the left and labelled “J12”. If both coils are actuated, the signal at port “14” dominates in switching position.

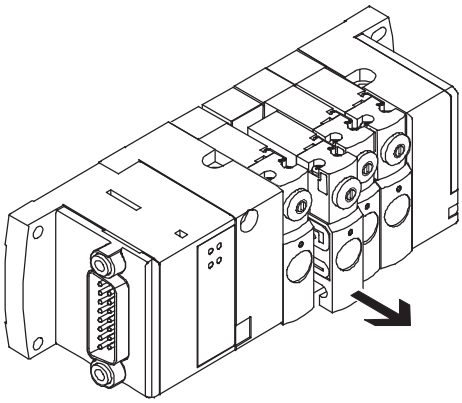
- Note

For vacuum operation valves require a filter. This is to avoid that foreign matter is drawn into the valve (e.g. when using a suction cup).

Valves				
Valve functions	Code	Circuit symbol	Width 10 mm	Description
Pneumatic supply plate with duct separation				
	T		■	Compressed air channel (1) closed For separating pressure zones with a common exhaust. (Using pressure zones ➔ 14) Pneumatic connection: QS-4, M5
	S		■	Compressed air channel (1) and exhaust duct (3/5) closed For separating pressure zones with a separate exhaust. (Using pressure zones ➔ 14) Pneumatic connection: QS-4, M5
Pneumatic supply plate without duct separation				
	U		■	Additional compressed air supply (1) and additional exhaust (3/5). Pneumatic connection: QS-4, M5
Blanking plate				
	L		■	Plate without valve function for reserving a valve position. No pneumatic connection

In the case of compressed air supply configuration code S or T (exhausting via flat plate silencer), a plug-in silencer UC-QS-4H is included with supply plates.

Constructional design



Valve replacement

Valves can be replaced quickly and easily in just a few movements. Separating seals between the valves are based on a metal support and are secured in place.

Extension

Valves can be ordered as accessories and are available with fully assembled sub-bases with QS or threaded connections. The functionality of the valve terminal can therefore be extended by equipping vacant positions.
For ordering purposes, valves have the valve code printed on the front and the product type on the back.

Materials

The valve housing and thread in the sub-bases are metallic, while other housing sections are made from robust plastic materials.

- Note

The valve with the working sub-base has been tested by Festo for leak tightness.

Pilot air supply

The port for the main pneumatic supply is located on the left-hand end plate.
The ports differ for the following types of pilot air supply:

- Internal
- External

Internal pilot air supply
An internal pilot air supply can be selected if the terminal is working in an operating pressure range between 3 and 7[1)] bar.
The pilot air supply in the left-hand end plate is then branched from the compressed air supply 1 using an internal connection. The port 12/14 is closed using a blanking plug.

External pilot air supply
If the terminal is working in an operating pressure range from –0.9 to 3 bar, you must operate your CPV-SC valve terminal using an external pilot air supply. The pilot air supply is also supplied via port 12/14 on the left-hand end plate in this case.

1) 8 bar upon request

Creation of pressure zones and separation of exhaust air

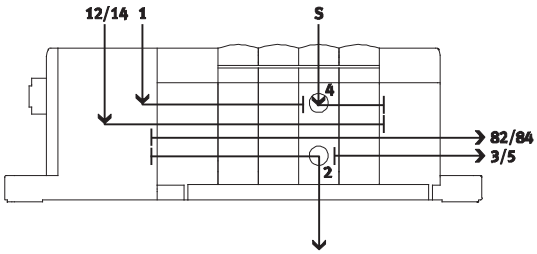
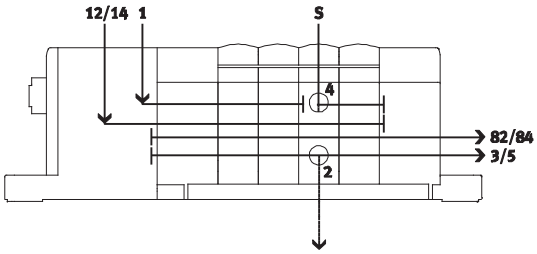
The CPV-SC valve terminal can be operated with multiple pressure zones. After two zones, a supply with duct separation is required for each subsequent pressure zone. It always occupies one valve position. An isolating disc T separates the compressed air supply of a valve group on the left from the compressed air supply of a valve group on the right. The right-hand pressure zone is supplied at port 4 of the supply plate. Port 2 also allows the left-hand pressure zone to be exhausted. All of the exhaust ducts of the valve are interconnected and are exhausted through the right-hand end plate. An isolating disc S also separates exhaust ducts 3 and 5 in addition to pressure duct 1.

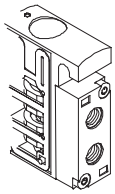
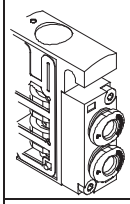
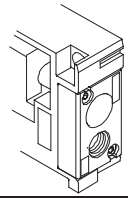
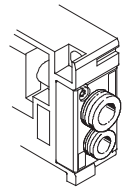
- Note

Larger or simultaneously operating cylinders generate a back pressure in the exhaust duct of the valve terminal, the level of which depends on the exhaust capacity of the silencer.

In order to prevent interaction with adjacent valves, valves can be separated by means of duct separation using isolating disc S. The pressure zone located to the left of an isolating disc S is exhausted using the supplied plug-in silencer. Where there are more than two valves in such a pressure zone, an additional supply with additional exhaust may be required.

It is therefore useful to meet the higher exhaust requirements in the pressure zone that is exhausted by the right-hand end plate.

Creating pressure zones	Code	Description
	S	Duct 1 and 3/5 separated
	T	Duct 1 separated

Pneumatic working ports	Code	Description
Working port		
	B	M5 threaded connection
	E	QS-3 push-in connector
	F	QS-4 push-in connector
Supply port, left-hand end plate		
	C	Threaded connection • M7 (internal pilot air supply) • M5 and M7 (external pilot air supply)
	G	Push-in connection • QS-6 (internal pilot air supply) • QS-4 and QS-6 (external pilot air supply)

Ports for supply and exhaust

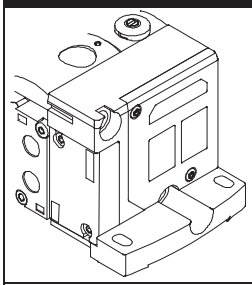
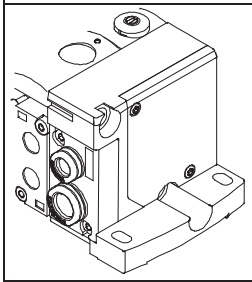
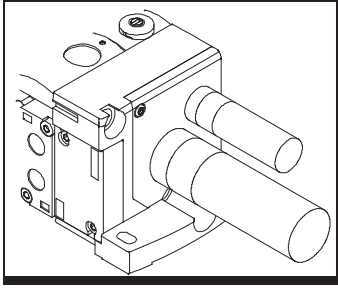
Supply and exhaust

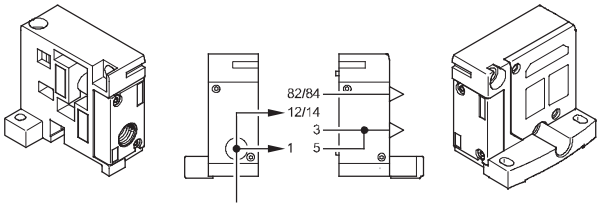
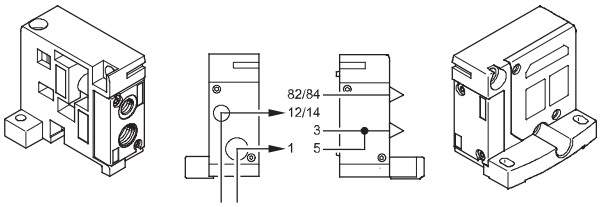
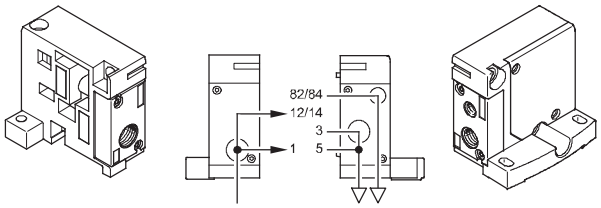
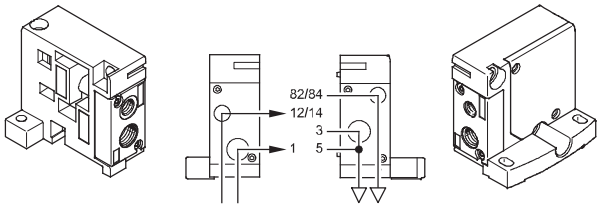
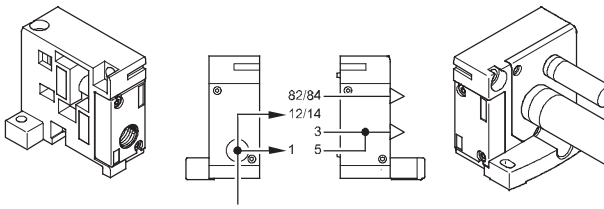
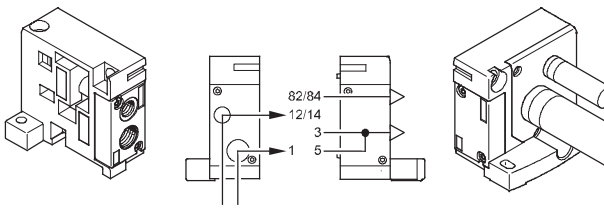
A basic feature of a CPV-SC valve terminal are the two end plates.

The left-hand end plate is used to supply compressed air, while the right-hand end plate is used to exhaust the valve terminal.

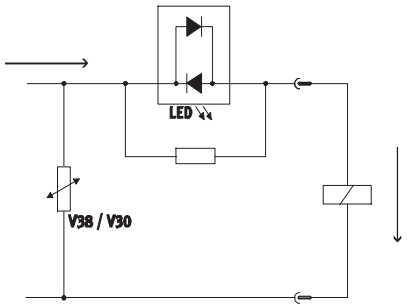
Exhaust air escapes either via an integrated flat plate silencer, round silencer or via a push-in or threaded connection.

Ports for exhaust

	Code	Description
	S	• Internal pilot air supply • Exhaust from duct 3/5 as well as 82/84 is via a flat plate silencer • Replacement part (insert) for flat plate silencer: Type CPVSC1-UA
	T	• External pilot air supply • Exhaust from duct 3/5 as well as 82/84 is via a flat plate silencer • Replacement part (insert) for flat plate silencer: Type CPVSC1-UA
	V	• Internal pilot air supply • Exhaust from duct 3/5 as well as 82/84 is via ducted exhaust air
	X	• External pilot air supply • Exhaust from duct 3/5 as well as 82/84 is via ducted exhaust air
	Y	• Internal pilot air supply • Exhaust from duct 3/5 as well as 82/84 is via a round silencer
	Z	• External pilot air supply • Exhaust from duct 3/5 as well as 82/84 is via a round silencer

Pneumatic supply		
End plate combination	Code	Description
	S	Internal pilot air supply, flat plate silencer For operating pressure in the range 3 ... 7 bar
	T	External pilot air supply, flat plate silencer For operating pressure in the range –0.9 ... +7 bar
	V	Internal pilot air supply, ducted exhaust air For operating pressure in the range 3 ...7 bar
	X	External pilot air supply, ducted exhaust air For operating pressure in the range –0.9 ... +7 bar
	Y	Internal pilot air, round silencer For operating pressure in the range 3 ... 7 bar
	Z	External pilot air supply, round silencer For operating pressure in the range –0.9 ... +7 bar

Protective circuit



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

Electrical multi-pin plug connection

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

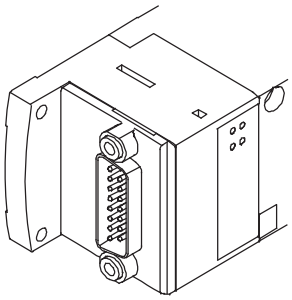
- Sub-D multi-pin plug connection (15- and 26-pin) or
- Multi-pin plug connection with connector for flat cable (20-pin)

CPV-SC is connected via a multi-pin plug connection with Sub-D or flat cable. Each pin of the multi-pin plug is assigned a maximum of one valve position and therefore one coil or one address.

Double solenoid valves "J" occupy two valve positions. The left-hand valve position with pilot control 12 is actuated by the less significant of the two addresses.

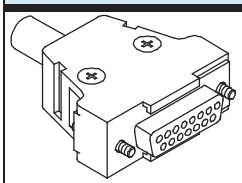
Electrical multi-pin plug connection – Sub-D

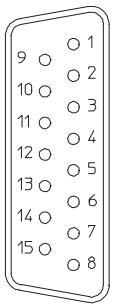
Code MS, MH



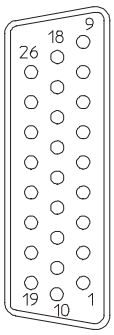
With this electrical connection variant, all valves are centrally actuated via the 15 and 26-pin connector plug. The electrical connection is located on the left-hand side.

Ordering data – Connecting cable Sub-D

	Code	Description	Cable length [m]	Part No.	Type
	CP	15-pin for 12 coils (code MS)	2.5	**527543**	**KMP6-15P-12-2,5**
	CQ	Material: PVC	5	**527544**	**KMP6-15P-12-5**
	CR		10	**527545**	**KMP6-15P-12-10**
	CP	26-pin for 16 coils (code MH)	2.5	**527546**	**KMP6-26P-16-2,5**
	CQ	Material: PVC	5	**527547**	**KMP6-26P-16-5**
	CR		10	**527548**	**KMP6-26P-16-10**

Pin allocation for 15-pin Sub-D (code MS)				
KMP6-15P-12-...	Description	Pin	Core colour	Address/coil
	Plug socket with cable for the CPV-SC valve terminal with max. 12 valve positions	1	White	Coil 0
		2	Brown	Coil 1
		3	Green	Coil 2
		4	Yellow	Coil 3
		5	Grey	Coil 4
		6	Pink	Coil 5
		7	Blue	Coil 6
		8	Red	Coil 7
		9	Black	Coil 8
	- - Note The drawing shows a plan view of the Sub-D socket on the multi-pin cable KMP6-15P-12-....	10	Purple	Coil 9
		11	Grey-pink	Coil 10
		12	Red-blue	Coil 11
		13	White-green	n.c.
		14	Brown-green	0 V[1)]
		15	White-yellow	0 V[1)]

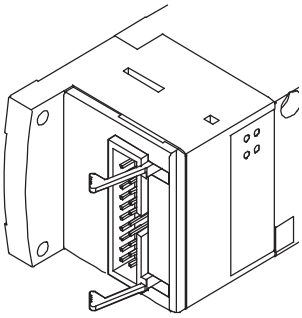
1) Pin 14 to pin 15 are bridged in the valve terminal.
0 V for positive switching control signals; 24 V can be connected for negative switching control signals.

Pin allocation for 26-pin Sub-D (code MH)				
KMP6-26P-16-...	Description	Pin	Core colour	Allocation
	Plug socket with cable for the CPV-SC valve terminal with 16 valve positions	1	White	Coil 0
		2	Brown	Coil 1
		3	Green	Coil 2
		4	Yellow	Coil 3
		5	Grey	Coil 4
		6	Pink	Coil 5
		7	Blue	Coil 6
		8	Red	Coil 7
		9	Black	Coil 8
		10	Purple	Coil 9
		11	Grey-pink	Coil 10
		12	Red-blue	Coil 11
		13	White-green	Coil 12
		14	Brown-green	Coil 13
		15	White-yellow	Coil 14
		16	Yellow-brown	Coil 15
		17	–	n.c.
		18	–	n.c.
		19	–	n.c.
		20	–	n.c.
	- - Note The drawing shows a plan view of the Sub-D socket on the multi-pin cable KMP6-26P-12-....	21	–	n.c.
		22	–	n.c.
		23	White-grey	0 V[1)]
		24	Grey-brown	0 V[1)]
		25	White-pink	0 V[1)]
		26	Pink-brown	0 V[1)]

1) Pin 17 to pin 22 are bridged in the valve terminal.
0 V for positive switching control signals; 24 V can be connected for negative switching control signals.

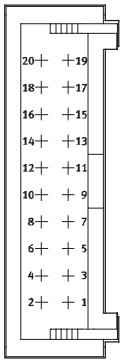
Electrical multi-pin plug connection – Connector for flat cable

Code MF



With this electrical connection variant, all valves are centrally actuated via the 20-pin connector plug.
The electrical connection is located on the left-hand side.

Pin allocation – Connector for flat cable (code MF)



CPV-SC valve terminal with up to 16 valve positions and 20-pin multi-pin socket for flat cables to DIN 41561-1, -2 or IEC 60603-13-C020FD-7C1E-2G

Contact surface gold
Flat cable grid 1.27 mm
Conductor cross section 0.13 mm^2

Pin	Allocation
1	Coil 0
2	Coil 1
3	Coil 2
4	Coil 3
5	Coil 4
6	Coil 5
7	Coil 6
8	Coil 7
9	Coil 8
10	Coil 9
11	Coil 10
12	Coil 11
13	Coil 12
14	Coil 13
15	Coil 14
16	Coil 15
17	0 V[1)]
18	0 V[1)]
19	0 V[1)]
20	0 V[1)]

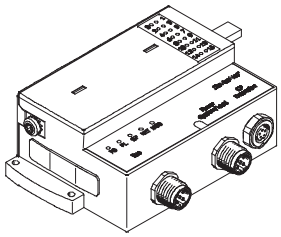
1) Pin 17 to pin 20 are bridged in the valve terminal.

Valve terminals type 80 CPV-SC, Smart Cubic

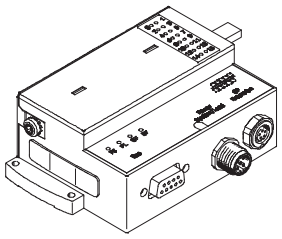
Key features – Electrical components

Fieldbus Direct

DeviceNet



Profibus DP



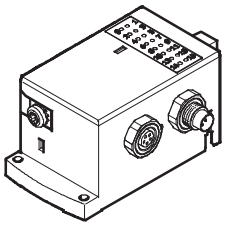
Properties

Fieldbus Direct is a system for the compact connection of a valve terminal of various sizes to different fieldbus standards.
The CP string extension option allows the functions and components of the CPI installation system to be used.

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

➔ Internet: ctec

Fieldbus connection CP



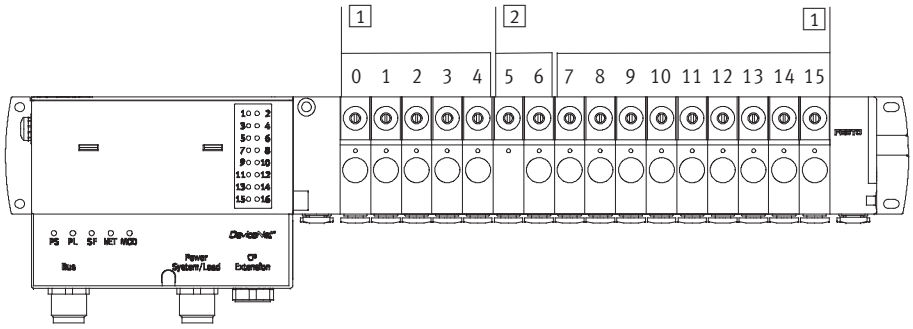
All CP valve terminals and CP modules are connected using a ready to install CP cable, and are attached to the CP interface. Four modules, for example one CPV-SC valve terminal and one to three CP input modules, make up an installation string that ends at the CP interface. The installation system supports a maximum of 4 installation strings, which can be connected to a CP fieldbus node.
The CP interface of CPV-SC is represented in the CP/CPI system by a module with 16 outputs.

- Note

Further information can be found in

➔ Internet: ctec

Address allocation – Solenoid coils



1 Single solenoid valves occupy one valve position

2 Double solenoid valves occupy two valve positions

The addresses of the valve positions on the CPV-SC-DN/CPV-SC-DP are assigned from left to right. Each valve position has an address, regardless of whether or not a valve is mounted there.

Double solenoid valves "J" occupy two valve positions. The left-hand valve position with pilot control 12 is actuated by the less significant of the two addresses.

Example:
Valve terminal where valve positions 5 and 6 are prepared for double solenoid valves.

Display and operation

The switching status of every solenoid coil is displayed on the control unit LED. Inscription labels (type MH-BZ-80x) can be applied to each valve for labelling purposes.

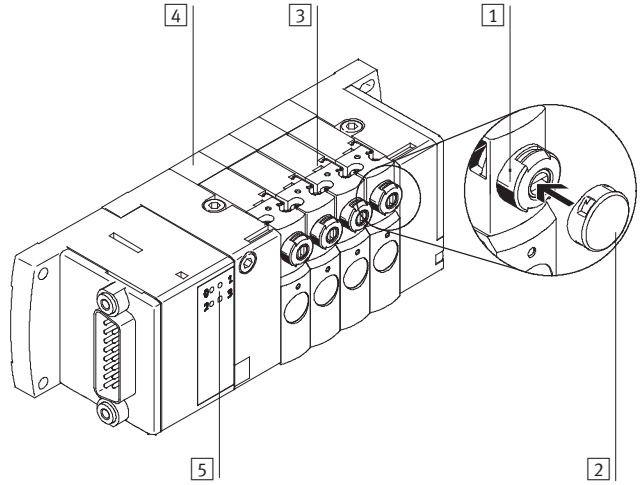
The manual override (MO) allows the valve to be activated without electronic control or power supply. The valve is activated by pushing the manual override. The set switching status can also be secured by rotating the manual override.

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

- Note

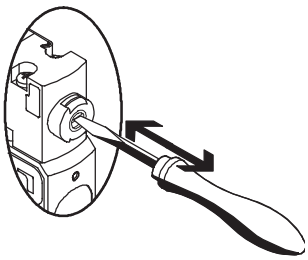
A manually activated valve (manual override) cannot be reset electrically. Conversely, an electrically activated valve cannot be reset using the manual override facility.

Manual override (MO)



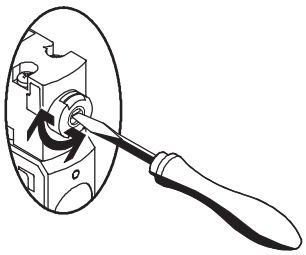
1 Manual override (non-detenting or detenting via turning using a screwdriver)
2 Cover for manual override (code V)
3 Location for valve position inscription label (type MH-BZ-80x)
4 Numbering of valve positions
5 LED signal status display per valve position

Manual override with automatic return (non-detenting)



Manual override is actuated by pushing it with a pointed object or screwdriver and reset by spring force.

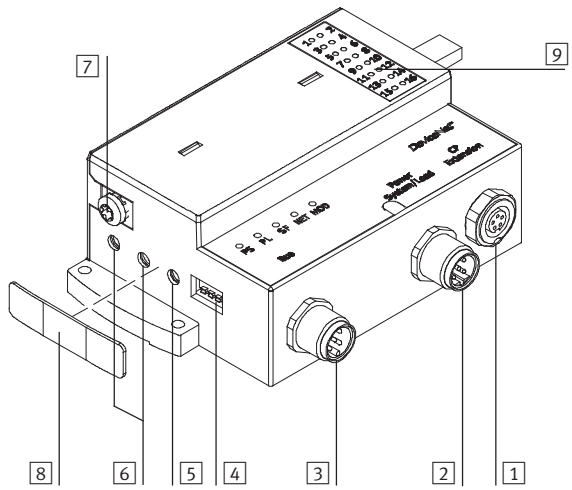
Manual override set via turning (detenting)



Manual override remains active until it is reset with a screwdriver.

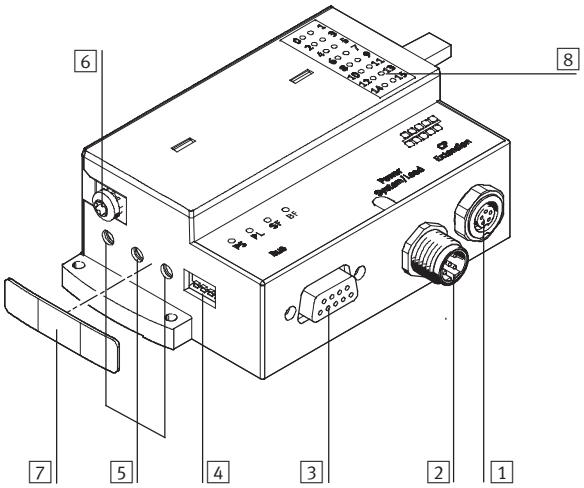
Display and operation

Fieldbus Direct – DeviceNet



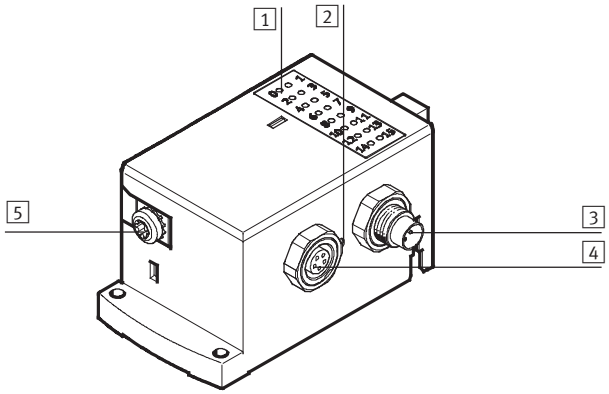
1 Connection for CP extension (with CP functionality)
2 Connection for power supply
3 Connection for fieldbus
4 DIL switch for CP extension
5 Rotary switch for baud rate
6 Rotary switch for station number
7 Earth terminal
8 Cover (for IP40 protection)
9 Switching status display per valve

Fieldbus Direct – Profibus DP



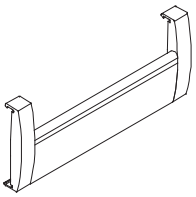
1 Connection for CP extension (with CPI functionality)
2 Connection for power supply
3 Connection for fieldbus
4 DIL switch for CP extension
5 Rotary switch for station number
6 Earth terminal
7 Cover (for IP40 protection)
8 Switching status display per valve

CP interface



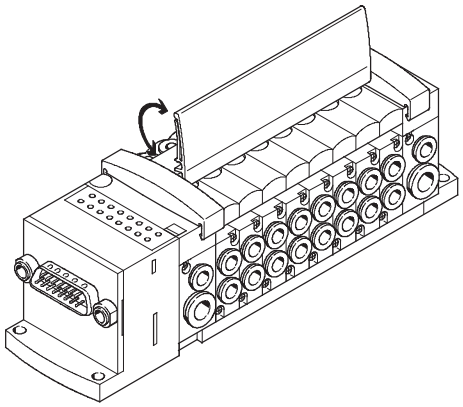
1 Status LEDs for valves
2 Status LED for CP communication
3 CP connection, incoming
4 CP connection, outgoing
5 Earth terminal

Inscription label holder



The transparent inscription label holder provides sufficient space for individually created labels on paper or foil.

Labelling templates are available on
➔ www.festo.com



Valve terminals type 80 CPV-SC, Smart Cubic

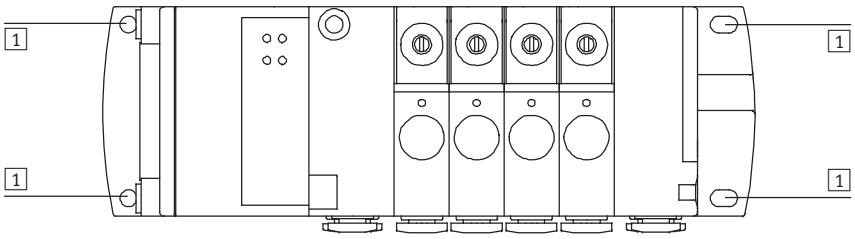
Key features – Mounting types

Mounting – Valve terminal

Sturdy terminal mounting thanks to:

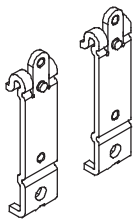
- Four through-holes for wall mounting
- H-rail mounting

Wall mounting

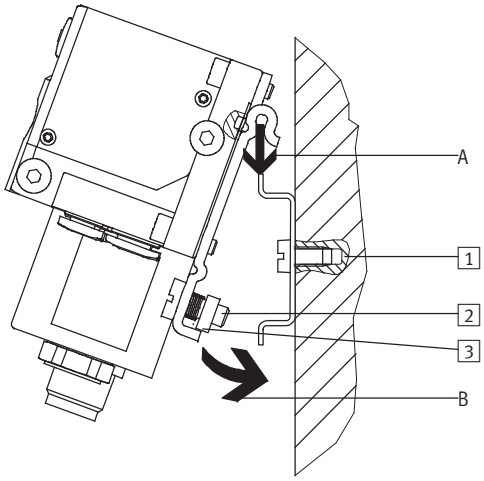


1 Mounting holes for screws M3

H-rail mounting



The mounting CPVSC1-HS35 facilitates mounting on a H-rail to EN 60715.



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

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

Valve terminals type 80 CPV-SC, Smart Cubic

Technical data

FESTO

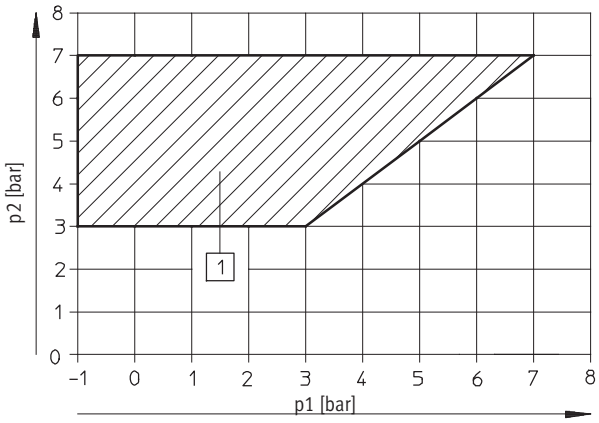
- Flow rate
  170 l/min

- Valve width
  10 mm

- Voltage
  5, 12, 24 V DC

General technical data						
Valve		5/2-way valve		3/2-way valve		2/2-way valve
		Single solenoid	Double solenoid	Normally open	Normally closed	Normally closed
Valve function order code		M	J	N	K	D
Constructional design		Electromagnetically actuated piston spool valve				
Width	[mm]	10		10		10
Nominal diameter	[mm]	2.5		2.5		2.5
Standard nominal flow rate	[l/min]	170		170		150
Lubrication		Life-time lubrication				
Type of mounting		Wall mounting				
Mounting position		Any				
Manual override		Non-detenting/detenting/blocked				
Pneumatic connections						
Supply	1	M7, QS-6				
Exhaust port	3/5	M7, QS-6, round silencer or integrated flat plate silencer				
Working ports	2/4	Depending on the connection type selected • M5 • QS-3 • QS-4				
Pilot air port	12/14	M5, QS-4				
Pilot exhaust air port	82/84	M5, QS-4, round silencer or integrated flat plate silencer				

Pilot pressure p2 as a function of operating pressure p1



1 Operating range for valves with external pilot air

Valve response times [ms]						
Valve function order code		M	J	N	K	D
Response times	on	10	10	10	10	10
	off	10	–	10	10	10
	changeover	–	8	–	–	–

Operating and environmental conditions						
Valve function order code		M	J	N	K	D
Operating medium		Filtered compressed air, lubricated or unlubricated, inert gases permissible ➔ 28				
Grade of filtration	[µm]	40				
Paint-wetting impairment substances criterion		Yes (free of paint-wetting impairment substances)				
CE certification		Yes, with control unit to EMC regulations				
Certification		c UL us recognized (OL)				
Operating pressure	bar]	−9 ... +7				
Operating pressure for valve terminal with internal pilot air supply	bar]	3 ... 7				
Pilot pressure	bar]	3 ... 7				
Ambient temperature	[°C]	−5 ... +50				
Temperature of medium	[°C]	−5 ... +50				
Corrosion resistance class CRC[1)]		1				
CE mark (see declaration of conformity)		To EU EMC Directive[2)] for 538509 (valve terminal with fieldbus)				
Note on materials		RoHS-compliant				

1) Corrosion resistance class 1 according to Festo standard 940 070
Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.
2) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: www.festo.com ➔ Support ➔ User documentation.
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

Electrical data									
Valve function order code			M	J	N	K	D		
Electromagnetic compatibility of the CPV-SC valve terminal with Sub-D or flat cable connection			Interference emission tested to DIN EN 61000-6-4, industry						
			Interference immunity[1] tested to DIN EN 61000-6-2, industry						
Protection against electric shock (protection against direct and indirect contact to EN 60204-1/IEC 204)			By means of PELV power supply unit						
Nominal operating voltage of valve terminal	Multi-pin plug connection	[V DC]	24						
	Individual sub-base	[V]	5 , 12, 24						
Permissible voltage fluctuations		[%]	±10						
Coil characteristics	Nominal voltage	[V DC]	5 , 12, 22, 24						
	Electrical power consumption	[W]	1						
Duty cycle			100% at 40°C ambient temperature						
Protection class to EN 60529			IP40 (in assembled state and with detenting plug)						
Relative air humidity		[%]	90 at 40 °C, non-condensing						

1) The maximum signal line length is 10 m

Materials						
Valve function order code	M	J	N	K	D	
Electrical interface	Polymer					
End plate, electrical sub-base	Polymer					
Seals	Elastomer					
Valve slice	Die-cast aluminium					
Sub-base for working ports	Polyamide					

Product weight [g]						
Valve function order code	M	J	N	K	D	
5/2-way, 3/2-way valve	30.5					
5/2-way double solenoid valve	56.5					
Blanking plate	22.5					
Right-hand end plate	42.5					
Left-hand end plate	28					
Actuator housing	43					
Tie rod, 16-fold	29.6					
Electrical manifold module, 16-fold	64					
Control unit (fieldbus)	200					
Electrical interface CPI	150					

Equipment

Operate your equipment with unlubricated compressed air if possible.
Festo valves and cylinders are designed so that, if used as designated, they will not require additional lubrication and will still achieve a long service life.
The quality of compressed air downstream from the compressor must correspond to that of unlubricated compressed air. If possible, do not operate all of your equipment with lubricated compressed air. The lubricators should, where possible, always be installed directly upstream of the cylinders used.

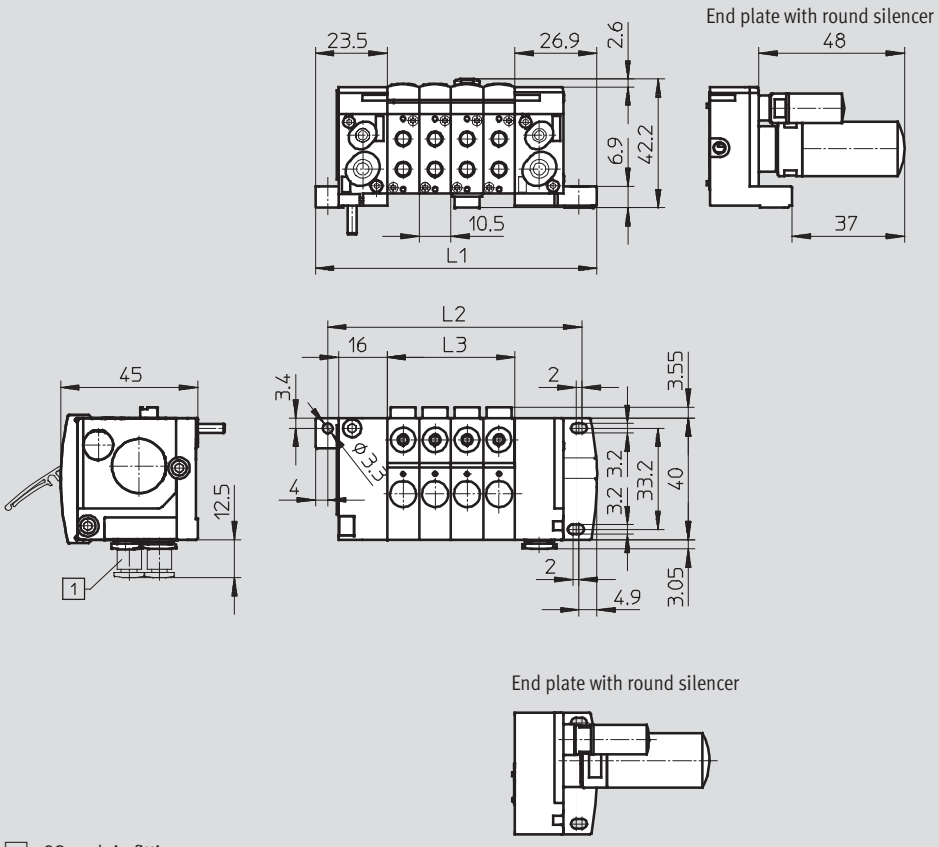
Incorrect additional oil and too high an oil content in the compressed air reduces the service life of a valve terminal.
Use Festo special oil OFSW-32 or the alternatives listed in the Festo catalogue (as specified in DIN 51524 HLP32; basic oil viscosity 32 CST at 40°C).

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 51524, Parts 1 to 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.

Dimensions Download CAD data ➔ **www.festo.com**

With individual connection

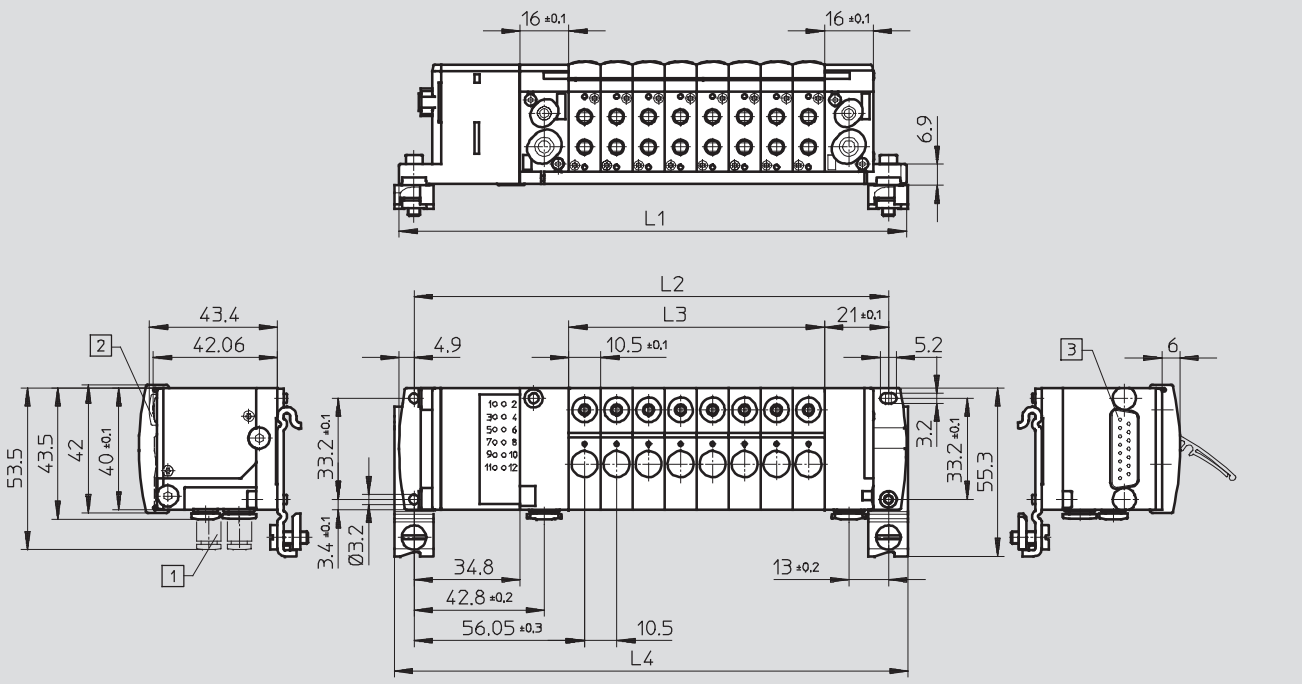


1 QS push-in fitting

Valve positions n	L1	L2	L3
2	71.4	62.5	21
3	81.9	73	31.5
4	92.4	83.5	42
5	102.9	94	52.5
6	113.4	104.5	63
7	123.9	115	73.5
8	134	125.1	84
9	144.9	136	94.5
10	155.4	146.5	105
11	165.9	157	115.5
12	176.4	167.5	126
13	186.9	178	136.5
14	197.4	188.5	147
15	207.9	199	157.5
16	218.4	209.5	168

Dimensions Download CAD data ➔ **www.festo.com**

With multi-pin plug connection



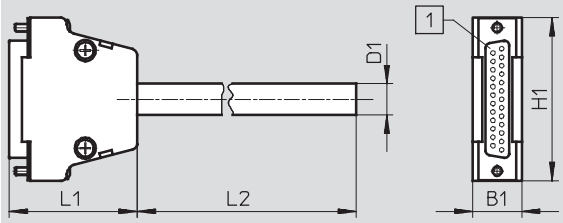
1 QS push-in fitting

2 Cover cap

3 Multi-pin plug connection with 20-pin flat cable or 15/26-pin Sub-D multi-pin plug connection

Valve positions n	L1	L2	L3
4	125	114	42
5	135.5	124.5	52.5
6	146	135	63
7	146.5	145.5	73.5
8	167	156	84
9	177.5	166.5	94.5
10	188	177	105
11	198.5	187.5	115.5
12	209	198	126
13	219.5	208.5	136.5
14	230	219	147
15	240.5	229.5	157.5
16	251	240	168

Dimensions – Sub-D plug with cable Download CAD data ➔ **www.festo.com**

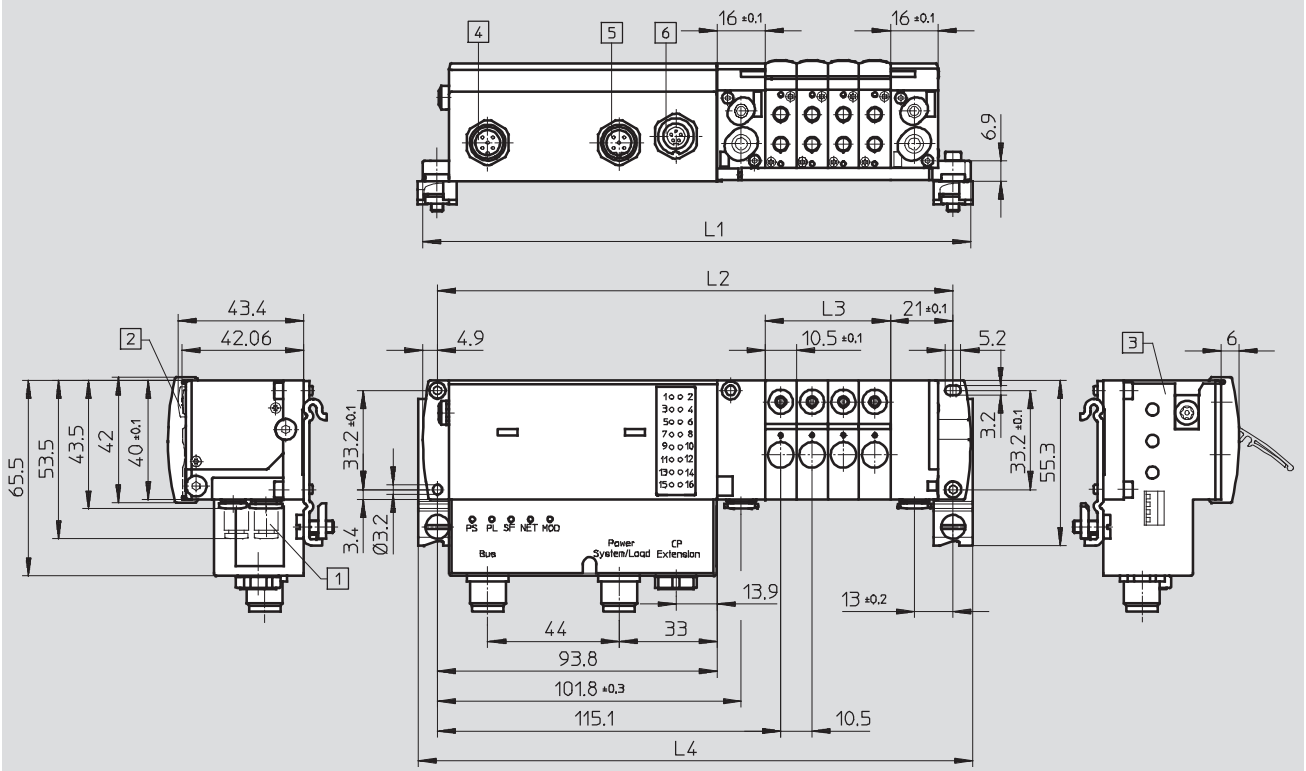


1 15-/26-pin plug

Type	B1	D1	H1	L1	L2			Number of pins
KMP6-15P-12-...	16	8.5	40	34.5	2,500	5,000	10,000	15
KMP6-26P-16-...	16	8.6	40	34.5	2,500	5,000	10,000	26

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

With fieldbus connection

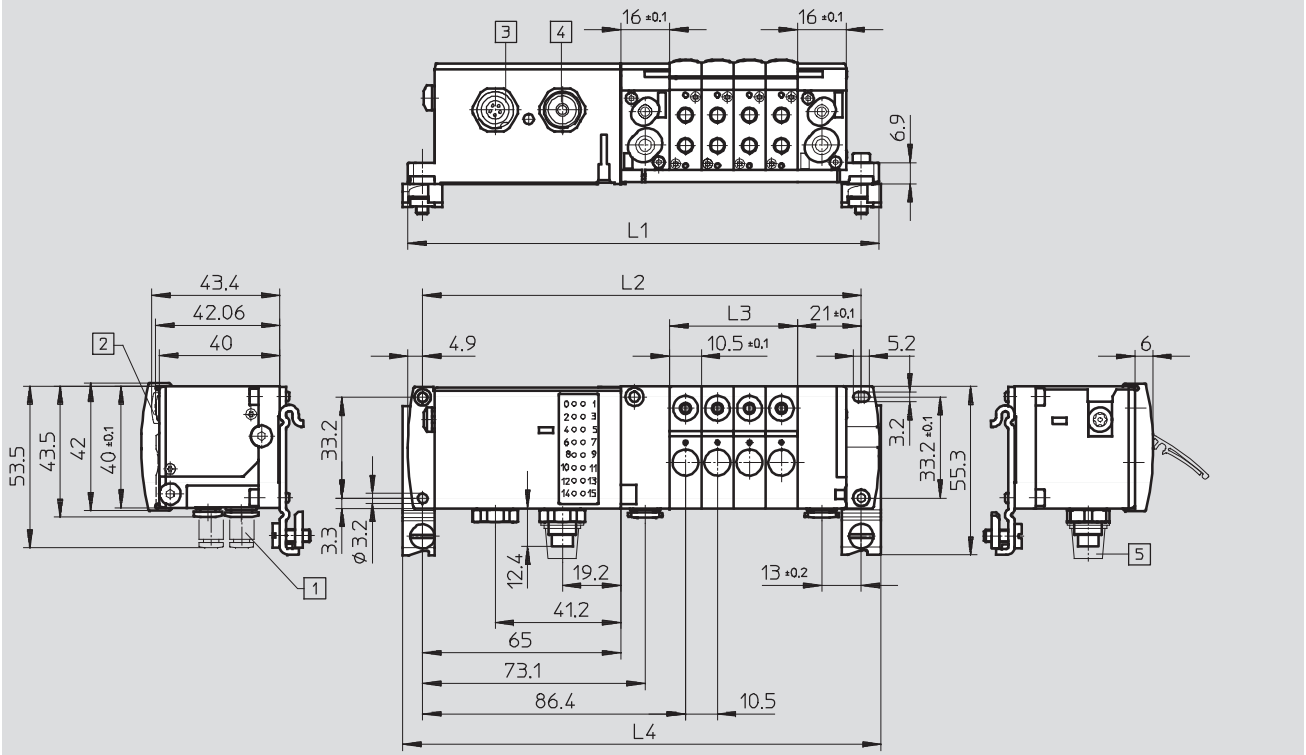


1 QS push-in fitting
2 Cover cap
3 DeviceNet fieldbus connection (dimensions for Profibus DP are identical with the exception of the bus connection)
4 Bus connection M12
5 Power supply M12
6 CP connection M9

Valve positions n	L1	L2	L3	L4
4	183.6	172.8	42	185.4
5	194.1	183.3	52.5	195.9
6	204.6	193.8	63	206.4
7	215.1	204.3	73.5	216.9
8	225.6	214.8	84	227.4
9	236.1	225.3	94.5	237.9
10	246.6	235.8	105	248.4
11	257.1	246.3	115.5	258.9
12	267.6	256.8	126	269.4
13	278.1	267.3	136.5	279.9
14	288.6	277.8	147	290.4
15	299.1	288.3	157.5	300.9
16	309.6	298.8	168	311.4

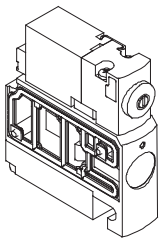
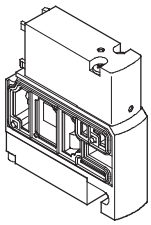
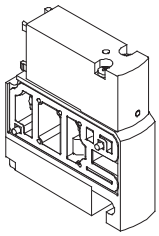
Dimensions – Valve terminal Download CAD data ➔ **www.festo.com**

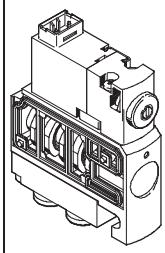
With CPI interface

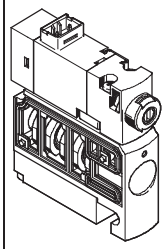


1 QS push-in fitting
2 Cover cap for manual override
3 CP connection M9, outgoing
4 CP connection M9, incoming
5 Cover cap for CP connection

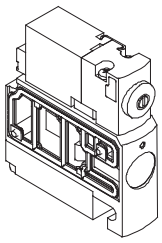
Valve positions n	L1	L2	L3	L4
4	154.9	144.1	42	156.7
5	165.4	154.6	52,5	167.2
6	175.9	165.1	63	177.7
7	186.4	175.6	73,5	188.2
8	196.9	186.1	84	198.7
9	207.4	196.6	94,5	209.2
10	217.9	207.1	105	219.7
11	228.4	217.6	115,5	230.2
12	238.9	228.1	126	240.7
13	249.4	238.6	136,5	251.2
14	259.9	249.1	147	261.7
15	270.4	259.6	157,5	272.2
16	280.9	270.1	168	282.7

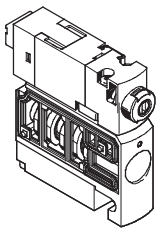
Ordering data – Valves with electrical plug-in connection		
Designation	Part No.	Type
		
Solenoid valve with M5 connections		
5/2-way single solenoid valve	**527550**	**CPVSC1-M1H-M-P-M5**
5/2-way double solenoid valve	**527553**	**CPVSC1-M1H-J-P-M5**
3/2-way valve, normally open	**527551**	**CPVSC1-M1H-N-P-M5O**
3/2-way valve, normally closed	**527552**	**CPVSC1-M1H-K-P-M5C**
2/2-way valve, normally closed	**527554**	**CPVSC1-M1H-D-P-M5C**
Solenoid valve with QS-3 push-in connectors		
5/2-way single solenoid valve	**527555**	**CPVSC1-M1H-M-P-Q3**
5/2-way double solenoid valve	**527558**	**CPVSC1-M1H-J-P-Q3**
3/2-way valve, normally open	**527556**	**CPVSC1-M1H-N-P-Q3O**
3/2-way valve, normally closed	**527557**	**CPVSC1-M1H-K-P-Q3C**
2/2-way valve, normally closed	**527559**	**CPVSC1-M1H-D-P-Q3C**
Solenoid valve with QS-4 push-in connectors		
5/2-way single solenoid valve	**527560**	**CPVSC1-M1H-M-P-Q4**
5/2-way double solenoid valve	**527563**	**CPVSC1-M1H-J-P-Q4**
3/2-way valve, normally open	**527561**	**CPVSC1-M1H-N-P-Q4O**
3/2-way valve, normally closed	**527562**	**CPVSC1-M1H-K-P-Q4C**
2/2-way valve, normally closed	**527564**	**CPVSC1-M1H-D-P-Q4C**
		
Blanking plates with integrated connections		
Vacant position, with blanking plate	**527527**	**CPVSC1-RP-B**
		
Supply plate M5		
Duct 1 separated	**527528**	**CPVSC1-SP-P-M5**
Duct 1/3/5 separated	**527530**	**CPVSC1-SP-PRS-M5**
Without duct separation	**527532**	**CPVSC1-SP-M5**
Supply plate, QS-4 push-in connector		
Duct 1 separated	**527529**	**CPVSC1-SP-P-Q4**
Duct 1/3/5 separated	**527531**	**CPVSC1-SP-PRS-Q4**
Without duct separation	**527533**	**CPVSC1-SP-Q4**
		
Cover for manual override		
Non-detenting, 10 pieces	**540897**	**VMPA-HBT-B**
		
Covered, 10 pieces	**540898**	**VMPA-HBV-B**





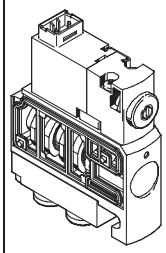
Ordering data – Valves with individual electrical connection, detenting manual override, vertical plug, 24 V DC		
Designation	Part No.	Type
Solenoid valve with M5 connections		
5/2-way single solenoid valve	547276	CPVSC1-M1H-M-T-M5
5/2-way double solenoid valve	547277	CPVSC1-M1H-J-T-M5
3/2-way valve, normally open	547275	CPVSC1-M1H-N-T-M5O
3/2-way valve, normally closed	547274	CPVSC1-M1H-K-T-M5C
2/2-way valve, normally closed	547273	CPVSC1-M1H-D-T-M5C
Solenoid valve with M5 connections and LED		
5/2-way single solenoid valve	547306	CPVSC1-M1LH-M-T-M5
5/2-way double solenoid valve	547307	CPVSC1-M1LH-J-T-M5
3/2-way valve, normally open	547305	CPVSC1-M1LH-N-T-M5O
3/2-way valve, normally closed	547304	CPVSC1-M1LH-K-T-M5C
2/2-way valve, normally closed	547303	CPVSC1-M1LH-D-T-M5C
Solenoid valve with QS-3 push-in connectors		
5/2-way single solenoid valve	547281	CPVSC1-M1H-M-T-Q3
5/2-way double solenoid valve	547282	CPVSC1-M1H-J-T-Q3
3/2-way valve, normally open	547280	CPVSC1-M1H-N-T-Q3O
3/2-way valve, normally closed	547279	CPVSC1-M1H-K-T-Q3C
2/2-way valve, normally closed	547278	CPVSC1-M1H-D-T-Q3C
Solenoid valve with QS-3 push-in connectors and LED		
5/2-way single solenoid valve	547311	CPVSC1-M1LH-M-T-Q3
5/2-way double solenoid valve	547312	CPVSC1-M1LH-J-T-Q3
3/2-way valve, normally open	547310	CPVSC1-M1LH-N-T-Q3O
3/2-way valve, normally closed	547309	CPVSC1-M1LH-K-T-Q3C
2/2-way valve, normally closed	547308	CPVSC1-M1LH-D-T-Q3C
Solenoid valve with QS-4 push-in connectors		
5/2-way single solenoid valve	547286	CPVSC1-M1H-M-T-Q4
5/2-way double solenoid valve	547287	CPVSC1-M1H-J-T-Q4
3/2-way valve, normally open	547285	CPVSC1-M1H-N-T-Q4O
3/2-way valve, normally closed	547284	CPVSC1-M1H-K-T-Q4C
2/2-way valve, normally closed	547283	CPVSC1-M1H-D-T-Q4C
Solenoid valve with QS-4 push-in connectors and LED		
5/2-way single solenoid valve	547316	CPVSC1-M1LH-M-T-Q4
5/2-way double solenoid valve	547317	CPVSC1-M1LH-J-T-Q4
3/2-way valve, normally open	547315	CPVSC1-M1LH-N-T-Q4O
3/2-way valve, normally closed	547314	CPVSC1-M1LH-K-T-Q4C
2/2-way valve, normally closed	547313	CPVSC1-M1LH-D-T-Q4C





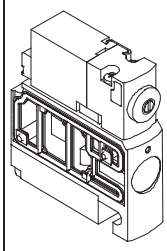
Ordering data – Valves with individual electrical connection, detenting manual override, horizontal plug, 24 V DC		
Designation	Part No.	Type
Solenoid valve with M5 connections		
5/2-way single solenoid valve	**547291**	**CPVSC1-M1H-M-H-M5**
5/2-way double solenoid valve	**547292**	**CPVSC1-M1H-J-H-M5**
3/2-way valve, normally open	**547290**	**CPVSC1-M1H-N-H-M5O**
3/2-way valve, normally closed	**547289**	**CPVSC1-M1H-K-H-M5C**
2/2-way valve, normally closed	**547288**	**CPVSC1-M1H-D-H-M5C**
Solenoid valve with M5 connections and LED		
5/2-way single solenoid valve	**547322**	**CPVSC1-M1LH-M-H-M5**
5/2-way double solenoid valve	**547323**	**CPVSC1-M1LH-J-H-M5**
3/2-way valve, normally open	**547321**	**CPVSC1-M1LH-N-H-M5O**
3/2-way valve, normally closed	**547320**	**CPVSC1-M1LH-K-H-M5C**
2/2-way valve, normally closed	**547318**	**CPVSC1-M1LH-D-H-M5C**
Solenoid valve with QS-3 push-in connectors		
5/2-way single solenoid valve	**547296**	**CPVSC1-M1H-M-H-Q3**
5/2-way double solenoid valve	**547297**	**CPVSC1-M1H-J-H-Q3**
3/2-way valve, normally open	**547295**	**CPVSC1-M1H-N-H-Q3O**
3/2-way valve, normally closed	**547294**	**CPVSC1-M1H-K-H-Q3C**
2/2-way valve, normally closed	**547293**	**CPVSC1-M1H-D-H-Q3C**
Solenoid valve with QS-3 push-in connectors and LED		
5/2-way single solenoid valve	**547327**	**CPVSC1-M1LH-M-H-Q3**
5/2-way double solenoid valve	**547328**	**CPVSC1-M1LH-J-H-Q3**
3/2-way valve, normally open	**547326**	**CPVSC1-M1LH-N-H-Q3O**
3/2-way valve, normally closed	**547325**	**CPVSC1-M1LH-K-H-Q3C**
2/2-way valve, normally closed	**547324**	**CPVSC1-M1LH-D-H-Q3C**
Solenoid valve with QS-4 push-in connectors		
5/2-way single solenoid valve	**547301**	**CPVSC1-M1H-M-H-Q4**
5/2-way double solenoid valve	**547302**	**CPVSC1-M1H-J-H-Q4**
3/2-way valve, normally open	**547300**	**CPVSC1-M1H-N-H-Q4O**
3/2-way valve, normally closed	**547299**	**CPVSC1-M1H-K-H-Q4C**
2/2-way valve, normally closed	**547298**	**CPVSC1-M1H-D-H-Q4C**
Solenoid valve with QS-4 push-in connectors and LED		
5/2-way single solenoid valve	**547332**	**CPVSC1-M1LH-M-H-Q4**
5/2-way double solenoid valve	**547333**	**CPVSC1-M1LH-J-H-Q4**
3/2-way valve, normally open	**547331**	**CPVSC1-M1LH-N-H-Q4O**
3/2-way valve, normally closed	**547330**	**CPVSC1-M1LH-K-H-Q4C**
2/2-way valve, normally closed	**547329**	**CPVSC1-M1LH-D-H-Q4C**

Ordering data – Valves with individual electrical connection, pushing manual override, vertical plug, 24 V DC



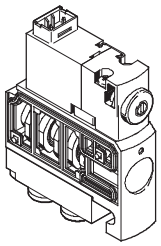
Designation	Part No.	Type
Solenoid valve with M5 connections		
5/2-way single solenoid valve	548037	CPVSC1-M1HT-M-T-M5
5/2-way double solenoid valve	548038	CPVSC1-M1HT-J-T-M5
3/2-way valve, normally open	548036	CPVSC1-M1HT-N-T-M5O
3/2-way valve, normally closed	548035	CPVSC1-M1HT-K-T-M5C
2/2-way valve, normally closed	548034	CPVSC1-M1HT-D-T-M5C
Solenoid valve with QS-3 push-in connectors		
5/2-way single solenoid valve	548043	CPVSC1-M1HT-M-T-Q3
5/2-way double solenoid valve	548044	CPVSC1-M1HT-J-T-Q3
3/2-way valve, normally open	548042	CPVSC1-M1HT-N-T-Q3O
3/2-way valve, normally closed	548041	CPVSC1-M1HT-K-T-Q3C
2/2-way valve, normally closed	548040	CPVSC1-M1HT-D-T-Q3C
Solenoid valve with QS-4 push-in connectors		
5/2-way single solenoid valve	548048	CPVSC1-M1HT-M-T-Q4
5/2-way double solenoid valve	548049	CPVSC1-M1HT-J-T-Q4
3/2-way valve, normally open	548047	CPVSC1-M1HT-N-T-Q4O
3/2-way valve, normally closed	548046	CPVSC1-M1HT-K-T-Q4C
2/2-way valve, normally closed	548045	CPVSC1-M1HT-D-T-Q4C

Ordering data – Valves with individual electrical connection, pushing manual override, horizontal plug, 24 V DC



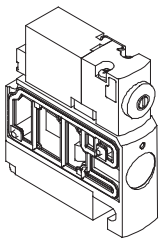
Designation	Part No.	Type
Solenoid valve with M5 connections		
5/2-way single solenoid valve	548053	CPVSC1-M1HT-M-H-M5
5/2-way double solenoid valve	548054	CPVSC1-M1HT-J-H-M5
3/2-way valve, normally open	548052	CPVSC1-M1HT-N-H-M5O
3/2-way valve, normally closed	548051	CPVSC1-M1HT-K-H-M5C
2/2-way valve, normally closed	548050	CPVSC1-M1HT-D-H-M5C
Solenoid valve with QS-3 push-in connectors		
5/2-way single solenoid valve	548058	CPVSC1-M1HT-M-H-Q3
5/2-way double solenoid valve	548059	CPVSC1-M1HT-J-H-Q3
3/2-way valve, normally open	548057	CPVSC1-M1HT-N-H-Q3O
3/2-way valve, normally closed	548056	CPVSC1-M1HT-K-H-Q3C
2/2-way valve, normally closed	548055	CPVSC1-M1HT-D-H-Q3C
Solenoid valve with QS-4 push-in connectors		
5/2-way single solenoid valve	548063	CPVSC1-M1HT-M-H-Q4
5/2-way double solenoid valve	548064	CPVSC1-M1HT-J-H-Q4
3/2-way valve, normally open	548062	CPVSC1-M1HT-N-H-Q4O
3/2-way valve, normally closed	548061	CPVSC1-M1HT-K-H-Q4C
2/2-way valve, normally closed	548060	CPVSC1-M1HT-D-H-Q4C

Ordering data – Valves with individual electrical connection, detenting manual override, vertical plug, 12 V DC



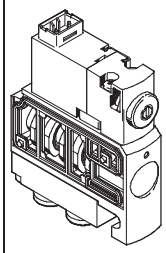
Designation	Part No.	Type
Solenoid valve with M5 connections		
5/2-way single solenoid valve	547367	CPVSC1-M5H-M-T-M5
5/2-way double solenoid valve	547368	CPVSC1-M5H-J-T-M5
3/2-way valve, normally open	547366	CPVSC1-M5H-N-T-M5O
3/2-way valve, normally closed	547365	CPVSC1-M5H-K-T-M5C
2/2-way valve, normally closed	547364	CPVSC1-M5H-D-T-M5C
Solenoid valve with QS-3 push-in connectors		
5/2-way single solenoid valve	547372	CPVSC1-M5H-M-T-Q3
5/2-way double solenoid valve	547373	CPVSC1-M5H-J-T-Q3
3/2-way valve, normally open	547371	CPVSC1-M5H-N-T-Q3O
3/2-way valve, normally closed	547370	CPVSC1-M5H-K-T-Q3C
2/2-way valve, normally closed	547369	CPVSC1-M5H-D-T-Q3C
Solenoid valve with QS-4 push-in connectors		
5/2-way single solenoid valve	547377	CPVSC1-M5H-M-T-Q4
5/2-way double solenoid valve	547378	CPVSC1-M5H-J-T-Q4
3/2-way valve, normally open	547376	CPVSC1-M5H-N-T-Q4O
3/2-way valve, normally closed	547375	CPVSC1-M5H-K-T-Q4C
2/2-way valve, normally closed	547374	CPVSC1-M5H-D-T-Q4C

Ordering data – Valves with individual electrical connection, pushing manual override, horizontal plug, 12 V DC



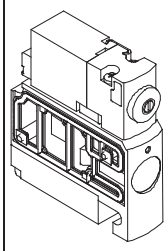
Designation	Part No.	Type
Solenoid valve with M5 connections		
5/2-way single solenoid valve	547382	CPVSC1-M5H-M-H-M5
5/2-way double solenoid valve	547383	CPVSC1-M5H-J-H-M5
3/2-way valve, normally open	547381	CPVSC1-M5H-N-H-M5O
3/2-way valve, normally closed	547380	CPVSC1-M5H-K-H-M5C
2/2-way valve, normally closed	547379	CPVSC1-M5H-D-H-M5C
Solenoid valve with QS-3 push-in connectors		
5/2-way single solenoid valve	547387	CPVSC1-M5H-M-H-Q3
5/2-way double solenoid valve	547388	CPVSC1-M5H-J-H-Q3
3/2-way valve, normally open	547386	CPVSC1-M5H-N-H-Q3O
3/2-way valve, normally closed	547385	CPVSC1-M5H-K-H-Q3C
2/2-way valve, normally closed	547384	CPVSC1-M5H-D-H-Q3C
Solenoid valve with QS-4 push-in connectors		
5/2-way single solenoid valve	547392	CPVSC1-M5H-M-H-Q4
5/2-way double solenoid valve	547393	CPVSC1-M5H-J-H-Q4
3/2-way valve, normally open	547391	CPVSC1-M5H-N-H-Q4O
3/2-way valve, normally closed	547390	CPVSC1-M5H-K-H-Q4C
2/2-way valve, normally closed	547389	CPVSC1-M5H-D-H-Q4C

Ordering data – Valves with individual electrical connection, detenting manual override, vertical plug, 5 V DC

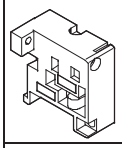
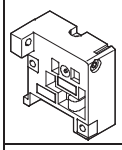
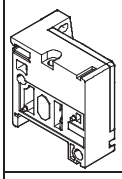
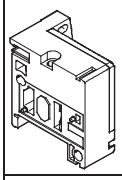
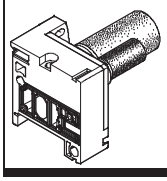


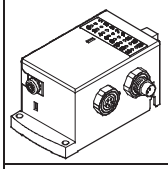
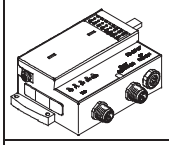
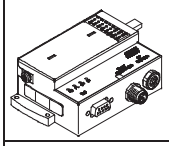
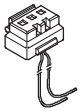
Designation	Part No.	Type
Solenoid valve with M5 connections		
5/2-way single solenoid valve	547337	CPVSC1-M4H-M-T-M5
5/2-way double solenoid valve	547338	CPVSC1-M4H-J-T-M5
3/2-way valve, normally open	547336	CPVSC1-M4H-N-T-M5O
3/2-way valve, normally closed	547335	CPVSC1-M4H-K-T-M5C
2/2-way valve, normally closed	547334	CPVSC1-M4H-D-T-M5C
Solenoid valve with QS-3 push-in connectors		
5/2-way single solenoid valve	547342	CPVSC1-M4H-M-T-Q3
5/2-way double solenoid valve	547343	CPVSC1-M4H-J-T-Q3
3/2-way valve, normally open	547341	CPVSC1-M4H-N-T-Q3O
3/2-way valve, normally closed	547340	CPVSC1-M4H-K-T-Q3C
2/2-way valve, normally closed	547339	CPVSC1-M4H-D-T-Q3C
Solenoid valve with QS-4 push-in connectors		
5/2-way single solenoid valve	547347	CPVSC1-M4H-M-T-Q4
5/2-way double solenoid valve	547348	CPVSC1-M4H-J-T-Q4
3/2-way valve, normally open	547346	CPVSC1-M4H-N-T-Q4O
3/2-way valve, normally closed	547345	CPVSC1-M4H-K-T-Q4C
2/2-way valve, normally closed	547344	CPVSC1-M4H-D-T-Q4C

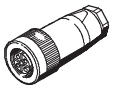
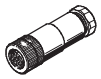
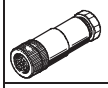
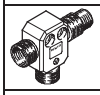
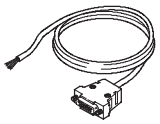
Ordering data – Valves with individual electrical connection, pushing manual override, horizontal plug, 5 V DC

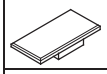
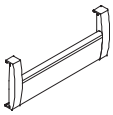
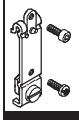


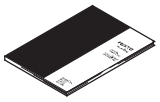
Designation	Part No.	Type
Solenoid valve with M5 connections		
5/2-way single solenoid valve	547352	CPVSC1-M4H-M-H-M5
5/2-way double solenoid valve	547353	CPVSC1-M4H-J-H-M5
3/2-way valve, normally open	547351	CPVSC1-M4H-N-H-M5O
3/2-way valve, normally closed	547350	CPVSC1-M4H-K-H-M5C
2/2-way valve, normally closed	547349	CPVSC1-M4H-D-H-M5C
Solenoid valve with QS-3 push-in connectors		
5/2-way single solenoid valve	547357	CPVSC1-M4H-M-H-Q3
5/2-way double solenoid valve	547358	CPVSC1-M4H-J-H-Q3
3/2-way valve, normally open	547356	CPVSC1-M4H-N-H-Q3O
3/2-way valve, normally closed	547355	CPVSC1-M4H-K-H-Q3C
2/2-way valve, normally closed	547354	CPVSC1-M4H-D-H-Q3C
Solenoid valve with QS-4 push-in connectors		
5/2-way single solenoid valve	547362	CPVSC1-M4H-M-H-Q4
5/2-way double solenoid valve	547363	CPVSC1-M4H-J-H-Q4
3/2-way valve, normally open	547361	CPVSC1-M4H-N-H-Q4O
3/2-way valve, normally closed	547360	CPVSC1-M4H-K-H-Q4C
2/2-way valve, normally closed	547359	CPVSC1-M4H-D-H-Q4C

Ordering data – End plates			
Designation		Part No.	Type
Left-hand end plates			
	With external pilot air supply	**527585**	**CPVSC1-EPL-E**
	With internal pilot air supply	**527583**	**CPVSC1-EPL-I**
Right-hand end plates			
	With ducted exhaust air	**527587**	**CPVSC1-EPR-G**
	With unducted exhaust air and flat plate silencer	**527589**	**CPVSC1-EPR-U**
	With unducted exhaust air and round silencer	**536060**	**CPVSC1-EPR-UC**

Ordering data – Accessories				
Designation			Part No.	Type
CPI interface				
	Electrical connection		**541975**	**CPVSC1-AE16-CPI**
Control unit				
	Fieldbus Direct – DeviceNet		**538654**	**CPVSC1-AE16-DN**
	Fieldbus Direct – Profibus DP		**541919**	**CPVSC1-AE16-DP**
Individual electrical connection				
	Plug socket with cable, IP40	0.5 m	**197263**	**KMH-0,5**
		1 m	**197264**	**KMH-1**
		2.5 m	**527400**	**KMH-2,5**
		5 m	**527401**	**KMH-5**

Ordering data – Accessories				
Designation			Part No.	Type
Power supply				
	Micro Style M12, 5-pin socket (B-coded) for DeviceNet	for 0.75 mm^2	**538999**	**NTSD-GD-9-M12-5POL-RK**
	M12, 5-pin socket (A-coded) for Profibus DP	for 0.75 mm^2	**18324**	**FBSD-GD-9-5POL**
Fieldbus connection				
	Fieldbus socket for Micro Style connection, M12, 5-pin socket (A-coded)		**18324**	**FBSD-GD-9-5POL**
	Straight plug, 5-pin, screw terminal		**175380**	**FBS-M12-5GS-PG9**
	T-adapter, 5-pin, for DH-485/DeviceNet		**171175**	**FB-TA-M12-5POL**
Connecting cable, IP40, for multi-pin plug connection				
	Sub-D, 15-pin, up to 12 valve positions for code MS Material: PVC	2.5 m	**527543**	**KMP6-15P-12-2,5**
		5 m	**527544**	**KMP6-15P-12-5**
		10 m	**527545**	**KMP6-15P-12-10**
	Sub-D, 26-pin, up to 16 valve positions for code MH Material: PVC	2.5 m	**527546**	**KMP6-26P-16-2,5**
		5 m	**527547**	**KMP6-26P-16-5**
		10 m	**527548**	**KMP6-26P-16-10**
Valve terminal connection				
	Angled plug-angled socket	0.25 m	**540327**	**KVI-CP-3-WS-WD-0,25**
	Angled plug-angled socket	0.5 m	**540328**	**KVI-CP-3-WS-WD-0,5**
	Angled plug-angled socket	2 m	**540329**	**KVI-CP-3-WS-WD-2**
	Angled plug-angled socket	5 m	**540330**	**KVI-CP-3-WS-WD-5**
	Angled plug-angled socket	8 m	**540331**	**KVI-CP-3-WS-WD-8**
	GS-GD, straight plug-straight socket	2 m	**540332**	**KVI-CP-3-GS-GD-2**
	Straight plug-straight socket	5 m	**540333**	**KVI-CP-3-GS-GD-5**
	Straight plug-straight socket	8 m	**540334**	**KVI-CP-3-GS-GD-8**

Ordering data – Accessories				
Designation			Part No.	Type
Inscription labels for valve identification				
	80 pieces, 9x4.5 mm		**197259**	**MH-BZ-80x**
Inscription label holder				
	1 piece	for 2 valve positions	**547395**	**CPVSC1-ST-2**
		for 3 valve positions	**547396**	**CPVSC1-ST-3**
		for 4 valve positions	**527631**	**CPVSC1-ST-4**
		for 5 valve positions	**547397**	**CPVSC1-ST-5**
		for 6 valve positions	**547398**	**CPVSC1-ST-6**
		for 7 valve positions	**547399**	**CPVSC1-ST-7**
		for 8 valve positions	**527633**	**CPVSC1-ST-8**
		for 9 valve positions	**547400**	**CPVSC1-ST-9**
		for 10 valve positions	**547401**	**CPVSC1-ST-10**
		for 11 valve positions	**547402**	**CPVSC1-ST-11**
		for 12 valve positions	**527635**	**CPVSC1-ST-12**
		for 13 valve positions	**547403**	**CPVSC1-ST-13**
		for 14 valve positions	**547404**	**CPVSC1-ST-14**
		for 15 valve positions	**547405**	**CPVSC1-ST-15**
		for 16 valve positions	**527637**	**CPVSC1-ST-16**
Tie rod				
	1 piece	for 2 valve positions	**547416**	**CPVSC1-ZA-2**
		for 3 valve positions	**547417**	**CPVSC1-ZA-3**
		for 4 valve positions	**532807**	**CPVSC1-ZA-4**
		for 5 valve positions	**547418**	**CPVSC1-ZA-5**
		for 6 valve positions	**547419**	**CPVSC1-ZA-6**
		for 7 valve positions	**547420**	**CPVSC1-ZA-7**
		for 8 valve positions	**532808**	**CPVSC1-ZA-8**
		for 9 valve positions	**547421**	**CPVSC1-ZA-9**
		for 10 valve positions	**547422**	**CPVSC1-ZA-10**
		for 11 valve positions	**547423**	**CPVSC1-ZA-11**
		for 12 valve positions	**532809**	**CPVSC1-ZA-12**
		for 13 valve positions	**547424**	**CPVSC1-ZA-13**
		for 14 valve positions	**547425**	**CPVSC1-ZA-14**
		for 15 valve positions	**547426**	**CPVSC1-ZA-15**
		for 16 valve positions	**532810**	**CPVSC1-ZA-16**
Mounting				
	Screw for additional terminal mounting		**527643**	**M3x45**
	Mounting		**527639**	**CPVSC-HS35**

Ordering data – Accessories				
Designation			Part No.	Type
User documentation				
	User documentation – Pneumatics, valve terminal CPV-SC	German	530925	P.BE-CPVSC-DE
		English	530926	P.BE-CPVSC-EN
		French	530927	P.BE-CPVSC-FR
		Spanish	530928	P.BE-CPVSC-ES
		Italian	530929	P.BE-CPVSC-IT
		Swedish	530930	P.BE-CPVSC-SV
	User documentation – DeviceNet fieldbus	German	539008	P.BE-CPASC-CPVSC-DN-DE
		English	539009	P.BE-CPASC-CPVSC-DN-EN
		French	539010	P.BE-CPASC-CPVSC-DN-FR
		Spanish	539011	P.BE-CPASC-CPVSC-DN-ES
		Italian	539012	P.BE-CPASC-CPVSC-DN-IT
		Swedish	539013	P.BE-CPASC-CPVSC-DN-SV
	User documentation – Profibus DP fieldbus	German	548725	P.BE-CPASC-CPVSC-DP-DE
		English	548726	P.BE-CPASC-CPVSC-DP-EN
		French	548728	P.BE-CPASC-CPVSC-DP-FR
		Spanish	548727	P.BE-CPASC-CPVSC-DP-ES
		Italian	548729	P.BE-CPASC-CPVSC-DP-IT
		Swedish	548730	P.BE-CPASC-CPVSC-DP-SV