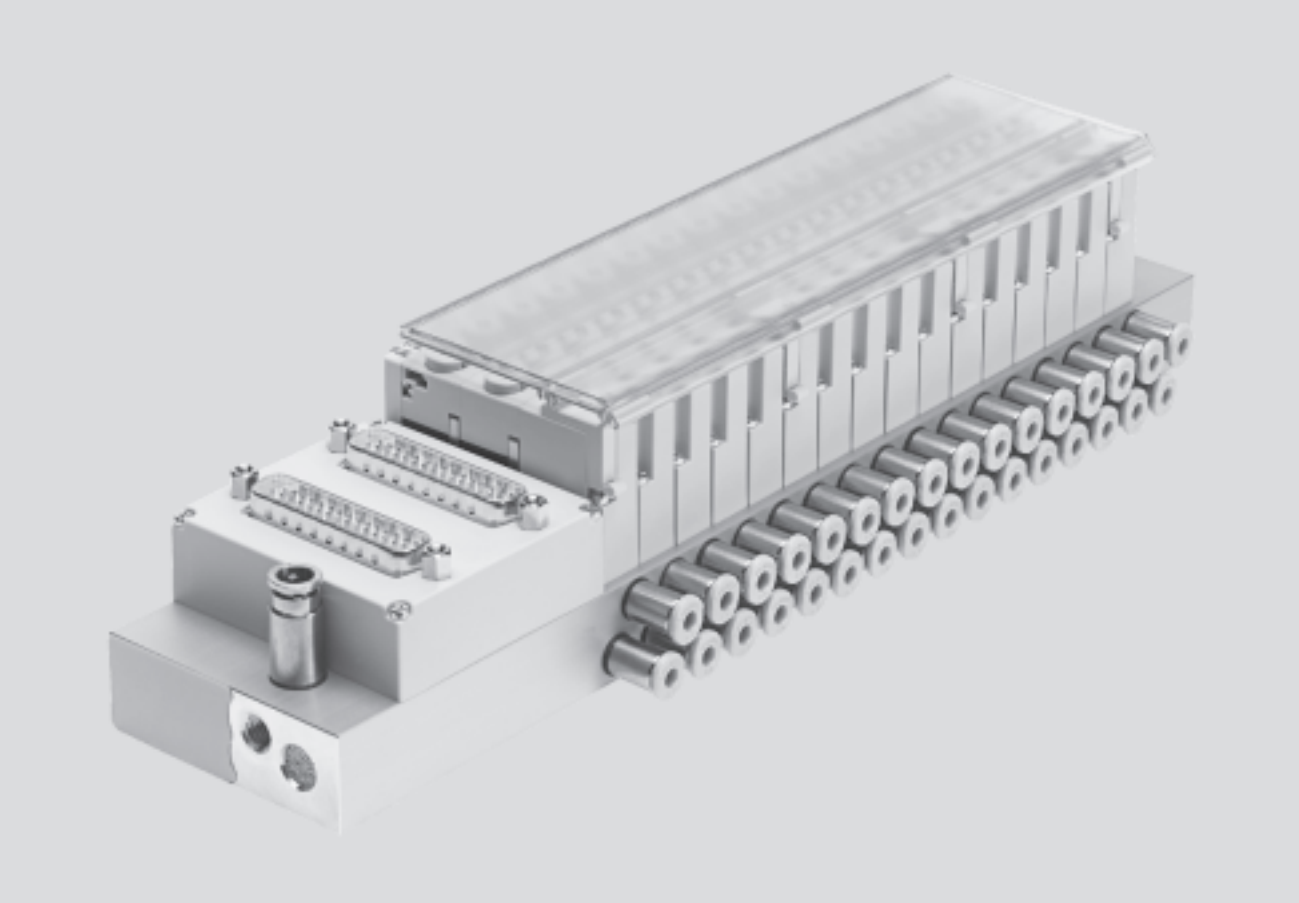
Valve terminals type 84 VTOC

FESTO

New

Valve terminals type 84 VTOC

Key features



Innovative

- Valve terminal for a wide range of pneumatic applications
- Weight-optimised metal manifold rail
- Space-saving thanks to 2x3/2-way valves on one valve position
- Great flexibility during planning, assembly and operation
- Configurable manifold rails (pneumatic and electric connections)

Versatile

- Provides 2 ... 24 valve positions on one terminal
- Flexibility of the pneumatic working lines provides a practical solution to different requirements
- Wide range of electrical outlet directions
- Multi-pin plug connection with Sub-D plug or flat cable

Reliable

- Manual override
- Durable
- Sturdy thanks to simple structure

Easy to mount

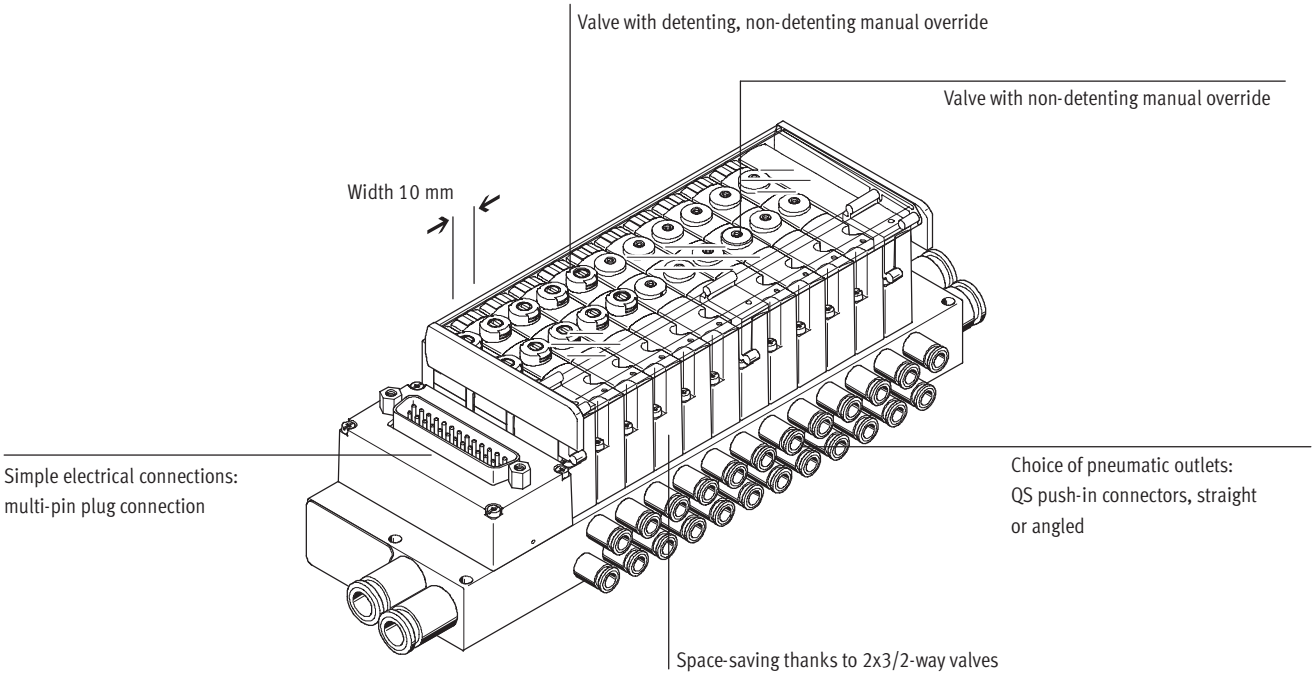
- Ready-to-install and tested unit
- Lower ordering, installation and commissioning costs
- Easy valve assembly

Note

Ordering system for valve terminal type 84 VTOC
➔ Internet: vtoc

Valve terminals type 84 VTOC

Key features



Equipment options

Valve functions

- 2x3/2-way valve, single solenoid, normally closed
- Valve with non-detenting manual override
- Valve with detenting, non-detenting manual override

Electrical connection options

- Multi-pin plug
- 2 ... 24 valve positions/ max. 48 solenoid coils
- Sub-D/flat cable

Valve terminals type 84 VTOC

Peripherals overview

FESTO

Overview of valve terminals type 84 VTOC

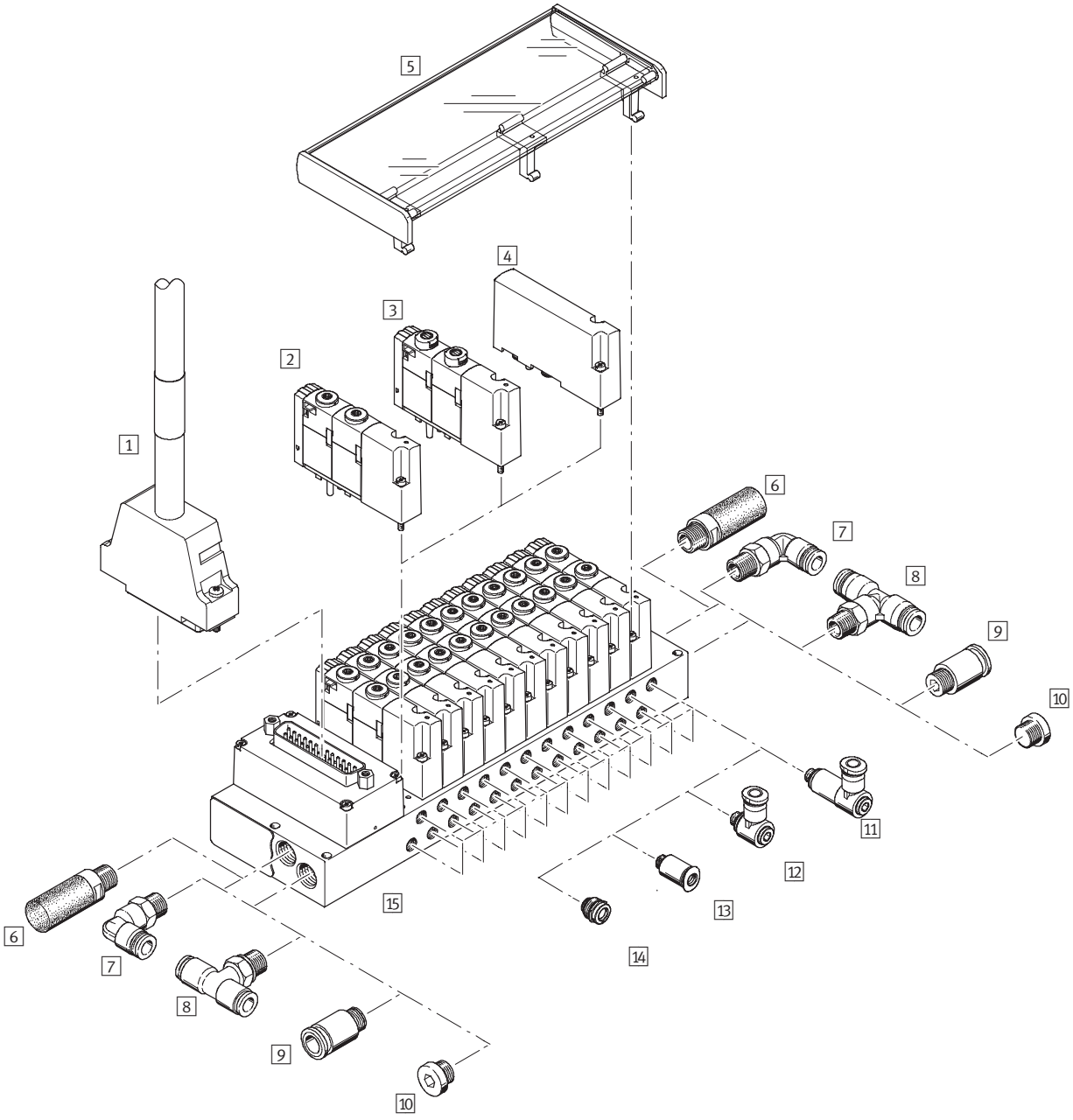
Valve terminal with electrical multi-pin plug connection

- Up to 24 valve positions/ 48 solenoid coils
- Flat cable connection type, code: RC
- Sub-D plug connection type, code: SD

Valve terminals with electrical multi-pin plug connection are available in gradations from 2 to max. 24 valve positions. Each valve position can either be equipped with a valve body or a blanking plate.

Only valve bodies containing two single solenoid 3/2-way valves are available.

A maximum of 48 valve solenoid coils can be actuated via the electrical multi-pin plug connection.



Valve terminals type 84 VTOC

Peripherals overview

FESTO

Accessories				
		Type	Brief description	➔ Page/ Internet
1	Connecting cable	KMP6	Connecting cable for multi-pin plug connection, with Sub-D plug, 25-pin	25
2	Single solenoid valve	VOVC	Solenoid valve with non-detenting manual override	25
3	Single solenoid valve	VOVC	Solenoid valve with detenting, non-detenting manual override	25
4	Blanking plate	VABB	Blanking plate for vacant position	25
5	Inscription label holder	ASCF	For labelling the valves/manual override cover	25
6	Silencer	U	For fitting in exhaust ports	26
7	Push-in L-fitting	QSL	For connecting to the air supply or exhaust	26
8	T-fitting	QST	For connecting to the air supply or exhaust	26
9	Straight fitting	OS	For connecting to the air supply or exhaust	26
10	Blanking plug	B	For sealing the port for the air supply or exhaust	25
11	Push-in L-fitting, long	QSMLLV	Long elbow connector for working lines	26
12	Push-in L-fitting	QSMLV	Elbow connector for working lines	26
13	Push-in fitting	QS	Straight push-in fitting for working lines	26
14	Push-in fitting	QSIMG	Straight countersunk push-in fitting for working lines (compact)	–
15	Manifold rail	VABB	With multi-pin plug connection for max. 24 valve positions	–

New

Valve terminals type 84 VTOC

Peripherals overview

FESTO

Overview of electrical connections

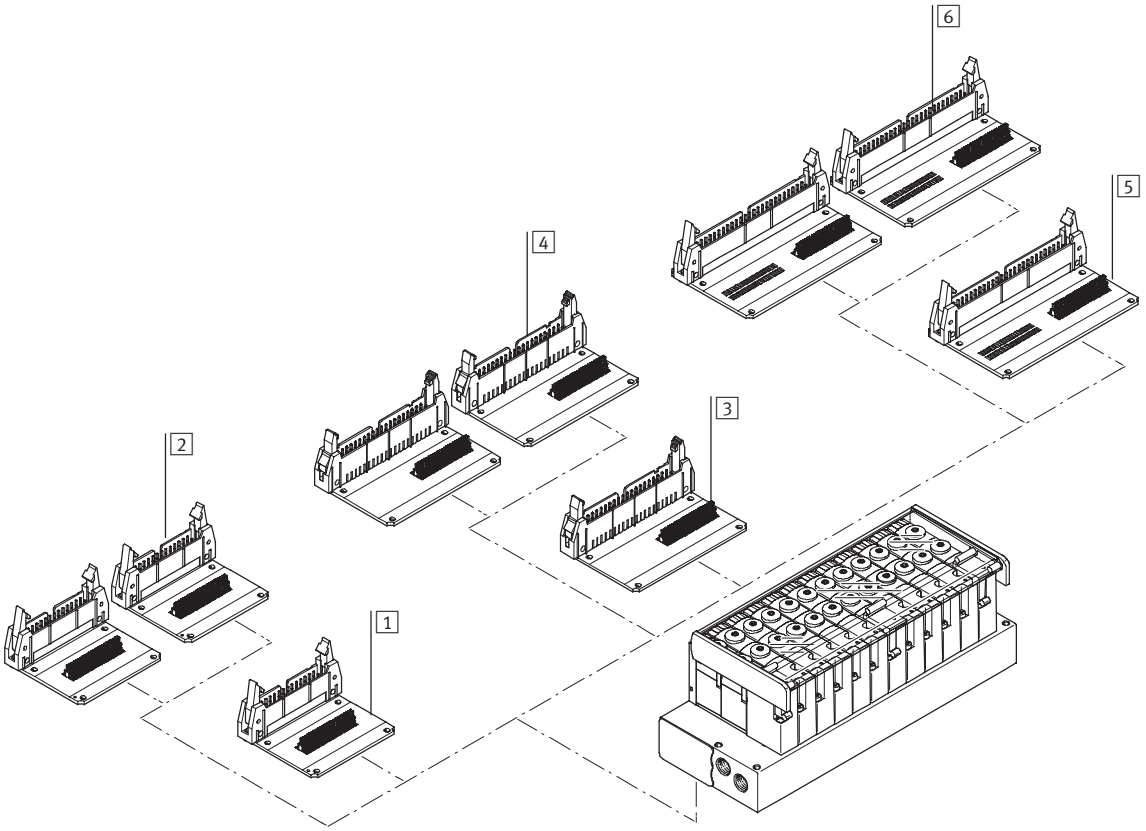
Valve terminal with flat cable connection on top

- Flat cable connection type, code: RC
- Connection direction:
  - Left (code LT)
  - Right (code RT)

VTOC valve terminals with electrical multi-pin plug connection are available in gradations from 2 to max. 24 valve positions. A valve body occupies one valve position and contains two single solenoid 3/2-way valves.

A maximum of 48 solenoid coils can therefore be actuated via the electrical multi-pin plug connection.

A total of 19 pin allocation variants are available.



Accessories

	Code	Brief description
1 Flat cable, 26-pin	LT	1-way, top left
2 Flat cable, 26-pin		2-way, top left
3 Flat cable, 40-pin	RT	1-way, top right
4 Flat cable, 40-pin		2-way, top right
5 Flat cable, 50-pin	RT/LT	1-way, top right/left
6 Flat cable, 50-pin		2-way, top right/left

Valve terminals type 84 VTOC

Peripherals overview

FESTO

Overview of electrical connections

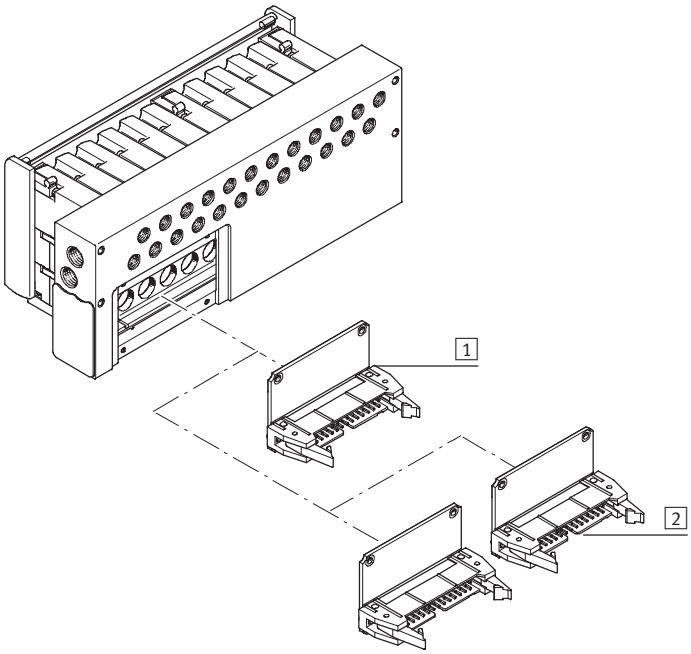
Valve terminal with flat cable connection underneath

- Flat cable connection type, code: RC
- Connection direction:
  - Left (code LB)

VTOC valve terminals with electrical multi-pin plug connection are available in gradations from 2 to max. 24 valve positions. A valve body occupies one valve position and contains two single solenoid 3/2-way valves.

A maximum of 48 solenoid coils can therefore be actuated via the electrical multi-pin plug connection.

A total of 19 pin allocation variants are available.



Accessories

	Code	Brief description
1 Flat cable, 26-pin	LB	1-way, bottom left
2 Flat cable, 26-pin		2-way, bottom left

Valve terminals type 84 VTOC

Peripherals overview

FESTO

Overview of electrical connections

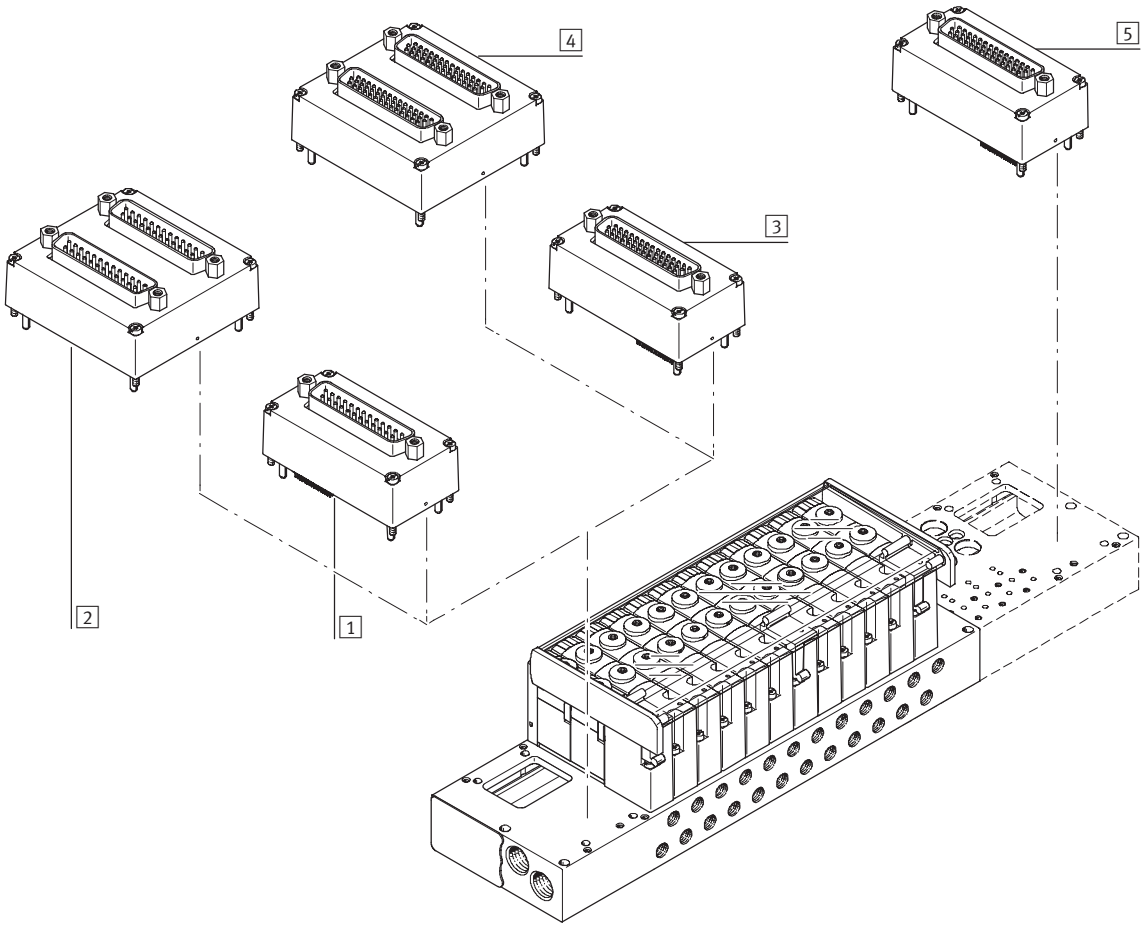
Valve terminal with Sub-D connection on top

- Sub-D connection type, code: SD
- Connection direction:
  - Left (code LT)
  - Right (code RT)

VTOC valve terminals with electrical multi-pin plug connection are available in gradations from 2 to max. 24 valve positions. A valve body occupies one valve position and contains two single solenoid 3/2-way valves.

A maximum of 48 solenoid coils can therefore be actuated via the electrical multi-pin plug connection.

A total of 19 pin allocation variants are available.



Accessories

	Code	Brief description
1 Sub-D, 25-pin	LT	1-way, top left
2 Sub-D, 25-pin		2-way, top left
3 Sub-D, 44-pin	LT	1-way, top left
4 Sub-D, 44-pin		2-way, top left
5 Sub-D, 44-pin	RT	1-way, top right

Valve terminals type 84 VTOC

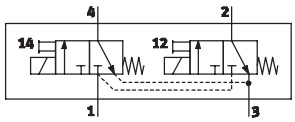
Key features – Pneumatic components

FESTO

Design

The valves are mounted on the metal manifold rail using two screws. The use of 2x3/2 directional control valves per valve position guarantees optimum use of space with maximum performance. The valves only differ in the type of manual override. The assembled and tested units or individual components as modules enable a custom configuration. Blanking plates can be replaced by valves at a later date. The dimensions, mounting points and existing pneumatic and electrical installations remain unchanged during this process.

Valve function

Code	Circuit symbol	Width 10 mm	Description
K		■	2x3/2-way valve, single solenoid • Mechanical spring return • Non-reversible

Valve terminals type 84 VTOC

Key features – Pneumatic components

FESTO

Fittings

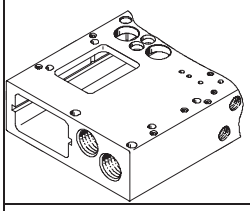
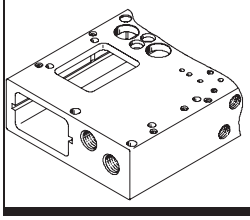
Port 1/3

Wide range of connection sizes:
- Threaded connection M7, G⅛, ⅛ NPT
- Push-in connector QS-6-, QS-8, QS- ⅜ or QS-¼ (compressed air supply)
- Push-in connector QS6, QS-¼ or silencer (exhaust air)

Variable connection types for port 1, compressed air supply and port 3, exhaust air:
- Straight
- Push-in L-fitting
- T-fitting

Flexible connection positions for the compressed air supply and exhaust:
- Both sides
- Left-hand
- Right-hand

Port 1/3

Connection direction: front	Code	Description
	-G18	Manifold block G⅛ (diagram shows example of Sub-D electrical connection on left) Basis for design: • Push-in connector QS8 • Push-in connector QS-⅜"
	-M7	Manifold block M7 (diagram shows example of Sub-D electrical connection on left) Basis for design: • Push-in connector QS6 • Push-in connector QS-¼" • Exhaust port via push-in fitting or silencer

Valve terminals type 84 VTOC

Key features – Pneumatic components

FESTO

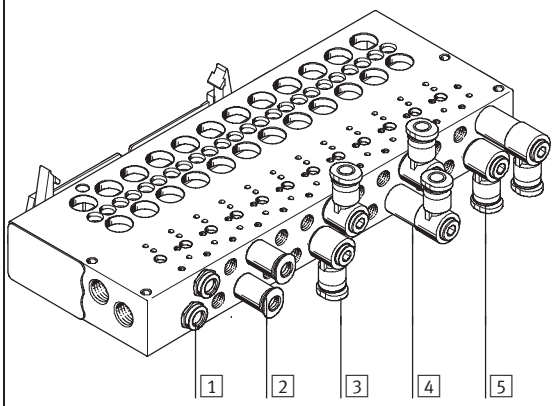
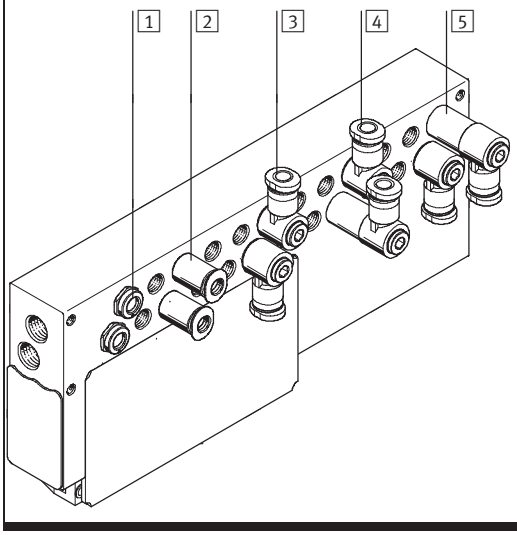
Fittings

Port 2/4

Wide range of connection sizes:
- Threaded connection M5
- 10-32 UNF
- Push-in connector QS-3, QS-4 or 1/8"

Outlet direction:
- Front
- Underneath

Connection on the valve (port 2/4)

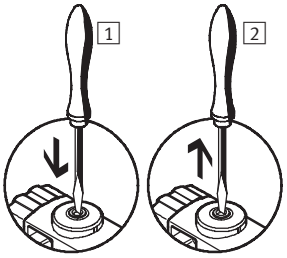
Outlet direction to the front		Code	Description
	1	X	Straight countersunk outlet (compact)
	2	–	Straight outlet
	3	FB	Angled output, upwards/downwards
	4	FA	Angled outlet, upwards
	5	FC	Angled outlet, downwards
Outlet direction underneath			
	1	X	Straight countersunk outlet (compact)
	2	U	Straight outlet
	3	UB	Angled outlet, to the front/rear
	4	UA	Angled outlet, to the front
	5	UC	Angled outlet, to the rear

Valve terminals type 84 VTOC

Key features – Display and operation

Manual override (MO)

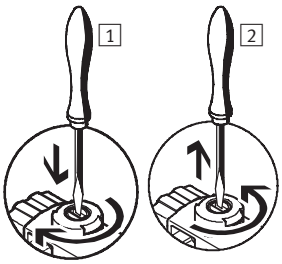
Manual override with automatic return (non-detenting)



1 Press in the stem of the manual override with a pointed object or screwdriver.
The valve switches.

2 Remove the pointed object or screwdriver.
Spring force pushes the manual override back.
Valve returns to normal position.

Manual override with lock (non-detenting/detenting)



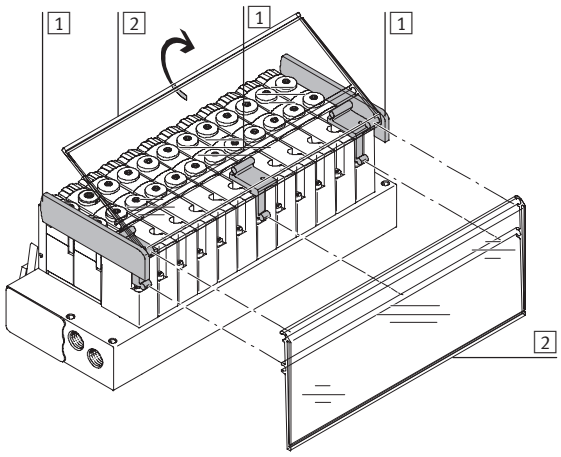
1 Press in the stem of the manual override with a screwdriver until the valve switches and then turn the stem clockwise by 90° until the stop is reached.
The valve remains switched.

2 Turn the stem anti-clockwise by 90° until the stop is reached and then remove the screwdriver.
Spring force pushes the manual override back.
Valve returns to normal position.

Note

VTOC provides two valves with the same valve function but different types of manual override. There is no provision for subsequent modification of the type of manual override (e.g. by attaching a cover).

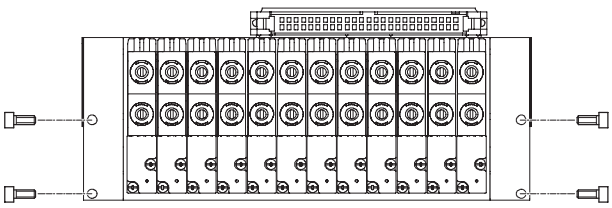
Identification system



1 Retainer for inscription label holder
The retainer for the inscription label holder is fastened to the valves with one screw and enables the inscription label holder to be mounted in two different directions. The retainers at the side are flanged to prevent the inscription label sliding out.

2 Inscription label holder
A transparent inscription label holder ASCF-H-L2 (code F/T in the order code) can be mounted for labelling the valves.
Inscription labels can be inserted in the holders for labelling purposes. Templates for printing the inscription label are available on request.

Mounting – Valve terminal



Sturdy terminal mounting thanks to:

- Four through-holes for wall mounting (hole ∅: 3.3 mm)
- Four holes with thread on the reverse side:
  - Thread M3
  - Thread M4
  - Thread 8-32 UNC
  - Thread 10-32 UNC-2B

Valve terminals type 84 VTOC

Key features – Electrical components

FESTO

Electrical multi-pin plug connection

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

- Sub-D multi-pin plug connection (25-pin, 1-way or 2-way)
- Sub-D multi-pin plug connection (44-pin, 1-way or 2-way)
- Flat cable plug (26-pin, 1-way or 2-way)
- Flat cable plug (40-pin, 1-way or 2-way)
- Flat cable plug (50-pin, 1-way or 2-way)

Connection directions:

- Sub-D connection (top left/right)
- Flat cable (top/bottom left, top/bottom right)

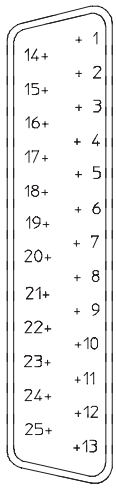
Control signals from the controller to the valve terminal are transmitted via the multi-core pre-assembled cable, which substantially reduces installation time.

The valves are switched by means of positive or negative logic (positive switching or negative switching). Mixed operation is not permitted. Each pin on the multi-pin plug can actuate exactly one solenoid coil. If the maximum configurable number of valve positions is 24, then 48 valves can be addressed with one solenoid coil (single solenoid).

The multi-pin plug connection is available with 19 different pin allocation variants.

Other variants on request.

Pin allocation – Sub-D plug, 25-pin



Pin	-V2		-V3		-V1		-V4				-V12			
							Sub-D A[1]		Sub-D B[2]		Sub-D A[1]		Sub-D B[2]	
1	VP1	14	VP1	14-	VP1	12	VP1	14	VP13	14	VP1	14	VP1	14
2	VP2	14	VP2	14-	VP1	14	VP1	12	VP13	12	VP1	12	VP1	12
3	VP3	14	VP3	14-	VP2	12	VP2	14	VP14	14	VP2	14	VP2	14
4	VP4	14	VP4	14-	VP2	14	VP2	12	VP14	12	VP2	12	VP2	12
5	VP5	14	VP5	14-	VP3	12	VP3	14	VP15	14	VP3	14	VP3	14
6	VP6	14	VP6	14-	VP3	14	VP3	12	VP15	12	VP3	12	VP3	12
7	VP7	14	VP7	14-	VP4	12	VP4	14	VP16	14	VP4	14	VP4	14
8	VP8	14	VP8	14-	VP4	14	VP4	12	VP16	12	VP4	12	VP4	12
9	VP9	14	VP9	14-	VP5	12	VP5	14	VP17	14	VP5	14	VP5	14
10	VP10	14	VP10	14-	VP5	14	VP5	12	VP17	12	VP5	12	VP5	12
11	VP11	14	VP11	14-	VP6	12	VP6	14	VP18	14	VP6	14	VP6	14
12	VP12	14	VP12	14-	VP6	14	VP6	12	VP18	12	VP6	12	VP6	12
13	Com		Com+		VP7	12	VP7	14	VP19	14	VP7	14	VP7	14
14	VP1	12	VP1	12-	VP7	14	VP7	12	VP19	12	VP7	12	VP7	12
15	VP2	12	VP2	12-	VP8	12	VP8	14	VP20	14	VP8	14	VP8	14
16	VP3	12	VP3	12-	VP8	14	VP8	12	VP20	12	VP8	12	VP8	12
17	VP4	12	VP4	12-	VP9	12	VP9	14	VP21	14	VP9	14	VP9	14
18	VP5	12	VP5	12-	VP9	14	VP9	12	VP21	12	VP9	12	VP9	12
19	VP6	12	VP6	12-	VP10	12	VP10	14	VP22	14	VP10	14	VP10	14
20	VP7	12	VP7	12-	VP10	14	VP10	12	VP22	12	VP10	12	VP10	12
21	VP8	12	VP8	12-	VP11	12	VP11	14	VP23	14	VP11	14	VP11	14
22	VP9	12	VP9	12-	VP11	14	VP11	12	VP23	12	VP11	12	VP11	12
23	VP10	12	VP10	12-	VP12	12	VP12	14	VP24	14	VP12	14	VP12	14
24	VP11	12	VP11	12-	VP12	14	VP12	12	VP24	12	VP12	12	VP12	12
25	VP12	12	VP12	12-	Com		Com 1-12		Com 13-24		–	–	–	–

Note

The drawing shows the view onto the Sub-D plug on the valve terminal.

VP Valve position

1) Sub-D A, first Sub-D plug

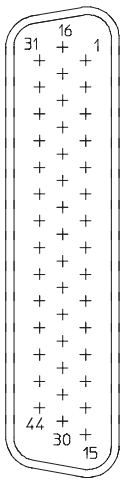
2) Sub-D B, second Sub-D plug

Valve terminals type 84 VTOC

Key features – Electrical components

FESTO

Pin allocation – Sub-D plug, 44-pin



Pin	-V5		-V7				-V6				-V13	
			Sub-D A[1]		Sub-D B[2]		Sub-D A[1]		Sub-D B[2]			
1	VP1	14	VP1	14	VP1	14	VP1	14+	VP1	14-	VP1	12
2	VP1	12	VP1	12	VP1	12	VP1	12+	VP1	12-	VP1	14
3	VP2	14	VP2	14	VP2	14	VP2	14+	VP2	14-	VP2	12
4	VP2	12	VP2	12	VP2	12	VP2	12+	VP2	12-	VP2	14
5	VP3	14	VP3	14	VP3	14	VP3	14+	VP3	14-	VP3	12
6	VP3	12	VP3	12	VP3	12	VP3	12+	VP3	12-	VP3	14
7	VP4	14	VP4	14	VP4	14	VP4	14+	VP4	14-	VP4	12
8	VP4	12	VP4	12	VP4	12	VP4	12+	VP4	12-	VP4	14
9	VP5	14	VP5	14	VP5	14	VP5	14+	VP5	14-	VP5	12
10	VP5	12	VP5	12	VP5	12	VP5	12+	VP5	12-	VP5	14
11	VP6	14	VP6	14	VP6	14	VP6	14+	VP6	14-	VP6	12
12	VP6	12	VP6	12	VP6	12	VP6	12+	VP6	12-	VP6	14
13	VP7	14	VP7	14	VP7	14	VP7	14+	VP7	14-	VP7	12
14	VP7	12	VP7	12	VP7	12	VP7	12+	VP7	12-	VP7	14
15	VP8	14	VP8	14	VP8	14	VP8	14+	VP8	14-	VP8	12
16	VP8	12	VP8	12	VP8	12	VP8	12+	VP8	12-	VP8	14
17	VP9	14	VP9	14	VP9	14	VP9	14+	VP9	14-	VP9	12
18	VP9	12	VP9	12	VP9	12	VP9	12+	VP9	12-	VP9	14
19	VP10	14	VP10	14	VP10	14	VP10	14+	VP10	14-	VP10	12
20	VP10	12	VP10	12	VP10	12	VP10	12+	VP10	12-	VP10	14
21	VP11	14	VP11	14	VP11	14	VP11	14+	VP11	14-	VP11	12
22	VP11	12	VP11	12	VP11	12	VP11	12+	VP11	12-	VP11	14
23	VP12	14	VP12	14	VP12	14	VP12	14+	VP12	14-	VP12	12
24	VP12	12	VP12	12	VP12	12	VP12	12+	VP12	12-	VP12	14
25	VP13	14	VP13	14	VP13	14	VP13	14+	VP13	14-	VP13	12
26	VP13	12	VP13	12	VP13	12	VP13	12+	VP13	12-	VP13	14
27	VP14	14	VP14	14	VP14	14	VP14	14+	VP14	14-	VP14	12
28	VP14	12	VP14	12	VP14	12	VP14	12+	VP14	12-	VP14	14
29	VP15	14	VP15	14	VP15	14	VP15	14+	VP15	14-	VP15	12
30	VP15	12	VP15	12	VP15	12	VP15	12+	VP15	12-	VP15	14
31	VP16	14	VP16	14	VP16	14	VP16	14+	VP16	14-	VP16	12
32	VP16	12	VP16	12	VP16	12	VP16	12+	VP16	12-	VP16	14
33	VP17	14	VP17	14	VP17	14	VP17	14+	VP17	14-	VP17	12
34	VP17	12	VP17	12	VP17	12	VP17	12+	VP17	12-	VP17	14
35	VP18	14	VP18	14	VP18	14	VP18	14+	VP18	14-	VP18	12
36	VP18	12	VP18	12	VP18	12	VP18	12+	VP18	12-	VP18	14
37	VP19	14	VP19	14	VP19	14	VP19	14+	VP19	14-	VP19	12
38	VP19	12	VP19	12	VP19	12	VP19	12+	VP19	12-	VP19	14
39	VP20	14	VP20	14	VP20	14	VP20	14+	VP20	14-	VP20	12
40	VP20	12	VP20	12	VP20	12	VP20	12+	VP20	12-	VP20	14
41	VP21	14	VP21	14	VP21	14	VP21	14+	VP21	14-	Com	
42	VP21	12	VP21	12	VP21	12	VP21	12+	VP21	12-	Com	
43	Com		VP22	14	VP22	14	VP22	14+	VP22	14-	Com	
44	Com		VP22	12	VP22	12	VP22	12+	VP22	12-	Com	

Note

The drawing shows the view onto the Sub-D plug on the valve terminal.

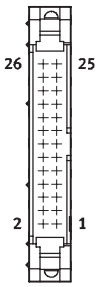
VP Valve position
1) Sub-D A, first Sub-D plug
2) Sub-D B, second Sub-D plug

Valve terminals type 84 VTOC

Key features – Electrical components

FESTO

Pin allocation – Flat cable, 26-pin

	Pin	-V14		-V15				-V8		-V17			
				Plug 1		Plug 2				Plug 1		Plug 2	
	1	VP1	14	VP1	14	VP13	14	VP1	14	VP12	14	VP24	14
	2	VP1	12	VP1	12	VP13	12	VP1	12	VP12	12	VP24	12
	3	VP2	14	VP2	14	VP14	14	VP2	14	VP11	14	VP23	14
	4	VP2	12	VP2	12	VP14	12	VP2	12	VP11	12	VP23	12
	5	VP3	14	VP3	14	VP15	14	VP3	14	VP10	14	VP22	14
	6	VP3	12	VP3	12	VP15	12	VP3	12	VP10	12	VP22	12
	7	VP4	14	VP4	14	VP16	14	VP4	14	VP9	14	VP21	14
	8	VP4	12	VP4	12	VP16	12	VP4	12	VP9	12	VP21	12
	9	VP5	14	VP5	14	VP17	14	VP5	14	VP8	14	VP20	14
	10	VP5	12	VP5	12	VP17	12	VP5	12	VP8	12	VP20	12
	11	VP6	14	VP6	14	VP18	14	VP6	14	VP7	14	VP19	14
	12	VP6	12	VP6	12	VP18	12	VP6	12	VP7	12	VP19	12
	13	VP7	14	VP7	14	VP19	14	VP7	14	VP6	14	VP18	14
	14	VP7	12	VP7	12	VP19	12	VP7	12	VP6	12	VP18	12
	15	VP8	14	VP8	14	VP20	14	VP8	14	VP5	14	VP17	14
	16	VP8	12	VP8	12	VP20	12	VP8	12	VP5	12	VP17	12
	17	VP9	14	VP9	14	VP21	14	VP9	14	VP4	14	VP16	14
	18	VP9	12	VP9	12	VP21	12	VP9	12	VP4	12	VP16	12
	19	VP10	14	VP10	14	VP22	14	VP10	14	VP3	14	VP15	14
	20	VP10	14	VP10	14	VP22	12	VP10	14	VP3	12	VP15	12
	21	VP11	14	VP11	14	VP23	14	VP11	14	VP2	14	VP14	14
Note	22	VP11	12	VP21	12	VP23	12	VP11	12	VP2	12	VP14	12
	23	VP12	14	VP12	14	VP24	14	VP12	14	VP1	14	VP13	14
	24	VP12	12	VP12	12	VP24	12	VP12	12	VP1	12	VP13	12
The drawing shows the view onto the flat cable plug on the valve terminal.	25	Com		Com		Com		Com		Com		Com	
	26	Com		Com		Com		Com		Com		Com	

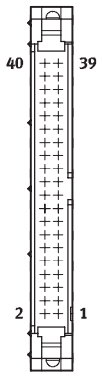
VP Valve position

Valve terminals type 84 VTOC

Key features – Electrical components

FESTO

Pin allocation – Flat cable, 40-pin



Pin	-V9		-V18			
			Plug 1		Plug 2	
1	VP10	12+	VP10	12+	VP11	14+
2	VP10	12-	VP10	12-	VP11	14-
3	VP10	14+	VP10	14+	VP11	12+
4	VP10	14-	VP10	14-	VP11	12-
5	VP9	12+	VP9	12+	VP12	14+
6	VP9	12-	VP9	12-	VP12	14-
7	VP9	14+	VP9	14+	VP12	12+
8	VP9	14-	VP9	14-	VP12	12-
9	VP8	12+	VP8	12+	VP13	14+
10	VP8	12-	VP8	12-	VP13	14-
11	VP8	14+	VP8	14+	VP13	12+
12	VP8	14-	VP8	14-	VP13	12-
13	VP7	12+	VP7	12+	VP14	14+
14	VP7	12-	VP7	12-	VP14	14-
15	VP7	14+	VP7	14+	VP14	12+
16	VP7	14-	VP7	14-	VP14	12-
17	VP6	12+	VP6	12+	VP15	14+
18	VP6	12-	VP6	12-	VP15	14-
19	VP6	14+	VP6	14+	VP15	12+
20	VP6	14-	VP6	14-	VP15	12-
21	VP5	12+	VP5	12+	VP16	14+
22	VP5	12-	VP5	12-	VP16	14-
23	VP5	14+	VP5	14+	VP16	12+
24	VP5	14-	VP5	14-	VP16	12-
25	VP4	12+	VP4	12+	VP17	14+
26	VP4	12-	VP4	12-	VP17	14-
27	VP4	14+	VP4	14+	VP17	12+
28	VP4	14-	VP4	14-	VP17	12-
29	VP3	12+	VP3	12+	VP18	14+
30	VP3	12-	VP3	12-	VP18	14-
31	VP3	14+	VP3	14+	VP18	12+
32	VP3	14-	VP3	14-	VP18	12-
33	VP2	12+	VP2	12+	VP19	14+
34	VP2	12-	VP2	12-	VP19	14-
35	VP2	14+	VP2	14+	VP19	12+
36	VP2	14-	VP2	14-	VP19	12-
37	VP1	12+	VP1	12+	VP20	14+
38	VP1	12-	VP1	12-	VP20	14-
39	VP1	14+	VP1	14+	VP20	12+
40	VP1	14-	VP1	14-	VP20	12-

Note

The drawing shows the view onto the flat cable plug on the valve terminal.

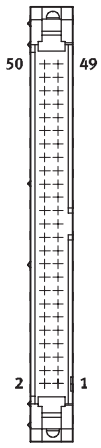
VP Valve position

Valve terminals type 84 VTOC

Key features – Electrical components

FESTO

Pin allocation – Flat cable, 50-pin



Pin	-V11		-V16				-V10		-V19			
			Plug 1		Plug 2				Plug 1		Plug 2	
1	VP1	12	VP1	12	VP24	12	VP12	12	VP12	12	VP13	12
2	VP1	12	VP1	12	VP24	12	VP12	12	VP12	12	VP13	12
3	VP1	14	VP1	14	VP24	14	VP12	14	VP12	14	VP13	14
4	VP1	14	VP1	14	VP24	14	VP12	14	VP12	14	VP13	14
5	VP2	12	VP2	12	VP23	12	VP11	12	VP11	12	VP14	12
6	VP2	12	VP2	12	VP23	12	VP11	12	VP11	12	VP14	12
7	VP2	14	VP2	14	VP23	14	VP11	14	VP11	14	VP14	14
8	VP2	14	VP2	14	VP23	14	VP11	14	VP11	14	VP14	14
9	VP3	12	VP3	12	VP22	12	VP10	12	VP10	12	VP15	12
10	VP3	12	VP3	12	VP22	12	VP10	12	VP10	12	VP15	12
11	VP3	14	VP3	14	VP22	14	VP10	14	VP10	14	VP15	14
12	VP3	14	VP3	14	VP22	14	VP10	14	VP10	14	VP15	14
13	VP4	12	VP4	12	VP21	12	VP9	12	VP9	12	VP16	12
14	VP4	12	VP4	12	VP21	12	VP9	12	VP9	12	VP16	12
15	VP4	14	VP4	14	VP21	14	VP9	14	VP9	14	VP16	14
16	VP4	14	VP4	14	VP21	14	VP9	14	VP9	14	VP16	14
17	VP5	12	VP5	12	VP20	12	VP8	12	VP8	12	VP17	12
18	VP5	12	VP5	12	VP20	12	VP8	12	VP8	12	VP17	12
19	VP5	14	VP5	14	VP20	14	VP8	14	VP8	14	VP17	14
20	VP5	14	VP5	14	VP20	14	VP8	14	VP8	14	VP17	14
21	VP6	12	VP6	12	VP19	12	VP7	12	VP7	12	VP18	12
22	VP6	12	VP6	12	VP19	12	VP7	12	VP7	12	VP18	12
23	VP6	14	VP6	14	VP19	14	VP7	14	VP7	14	VP18	14
24	VP6	14	VP6	14	VP19	14	VP7	14	VP7	14	VP18	14
25	VP7	12	VP7	12	VP18	12	VP6	12	VP6	12	VP19	12
26	VP7	12	VP7	12	VP18	12	VP6	12	VP6	12	VP19	12
27	VP7	14	VP7	14	VP18	14	VP6	14	VP6	14	VP19	14
28	VP7	14	VP7	14	VP18	14	VP6	14	VP6	14	VP19	14
29	VP8	12	VP8	12	VP17	12	VP5	12	VP5	12	VP20	12
30	VP8	12	VP8	12	VP17	12	VP5	12	VP5	12	VP20	12
31	VP8	14	VP8	14	VP17	14	VP5	14	VP5	14	VP20	14
32	VP8	14	VP8	14	VP17	14	VP5	14	VP5	14	VP20	14
33	VP9	12	VP9	12	VP16	12	VP4	12	VP4	12	VP21	12
34	VP9	12	VP9	12	VP16	12	VP4	12	VP4	12	VP21	12
35	VP9	14	VP9	14	VP16	14	VP4	14	VP4	14	VP21	14
36	VP9	14	VP9	14	VP16	14	VP4	14	VP4	14	VP21	14
37	VP10	12	VP10	12	VP15	12	VP3	12	VP3	12	VP22	12
38	VP10	12	VP10	12	VP15	12	VP3	12	VP3	12	VP22	12
39	VP10	14	VP10	14	VP15	14	VP3	14	VP3	14	VP22	14
40	VP10	14	VP10	14	VP15	14	VP3	14	VP3	14	VP22	14
41	VP11	12	VP11	12	VP14	12	VP2	12	VP2	12	VP23	12
42	VP11	12	VP11	12	VP14	12	VP2	12	VP2	12	VP23	12
43	VP11	14	VP11	14	VP14	14	VP2	14	VP2	14	VP23	14
44	VP11	14	VP11	14	VP14	14	VP2	14	VP2	14	VP23	14
45	VP12	12	VP12	12	VP13	12	VP1	12	VP1	12	VP24	12
46	VP12	12	VP12	12	VP13	12	VP1	12	VP1	12	VP24	12
47	VP12	14	VP12	14	VP13	14	VP1	14	VP1	14	VP24	14
48	VP12	14	VP12	14	VP13	14	VP1	14	VP1	14	VP24	14
49	–	–	–	–	–	–	–	–	–	–	–	–
50	–	–	–	–	–	–	–	–	–	–	–	–

Note

The drawing shows the view onto the flat cable plug on the valve terminal.

VP Valve position

New

Valve terminals type 84 VTOC

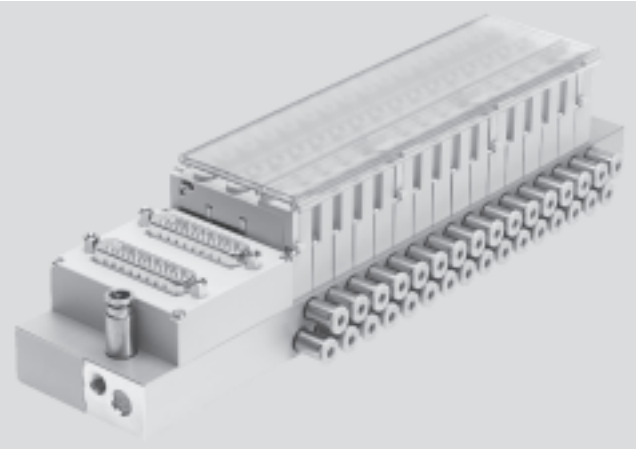
Technical data

FESTO

Voltage
24 V DC

Pressure
0 ... +8 bar

Temperature range
−5 ... +50 °C



General technical data			
Valve function			2x3/2-way valve, single solenoid, closed
Design			Poppet valve with spring return
Sealing principle			Soft
Actuation type			Electrical
Reset method			Mechanical spring
Type of control			Direct
Direction of flow			Non-reversible
Exhaust function			No flow control
Manual override			Non-detenting, detenting and non-detenting
Type of mounting			Via through-hole or thread
Width		[mm]	10
Nominal size		[mm]	0.65
Max. number of valve positions			24
Standard nominal flow rate	qnN	[l/min]	10

Operating and environmental conditions		
Operating medium		Dried and filtered compressed air, lubricated or unlubricated, grade of filtration 40 µm
Operating pressure	[bar]	0 ... +8
Ambient temperature	[°C]	−5 ... +50
Temperature of medium	[°C]	+5 ... +50
Note on materials		RoHS-compliant

Product weight	
Approx. weight	[g]
Valve	30
Blanking plate for vacant position	20

Valve terminals type 84 VTOC

Technical data

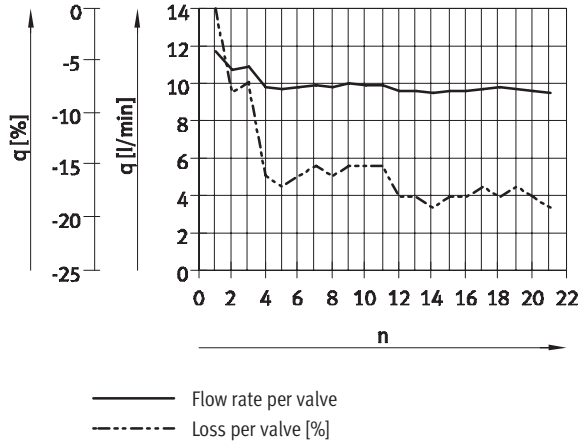
FESTO

Electrical data		
Electrical actuation		Multi-pin plug (Sub-D/flat cable)
Nominal operating voltage	[V DC]	24
Permissible voltage fluctuations	[%]	±10
Protection class to EN 60529		IP40
Duty cycle	[%]	100

Valve switching times	
	[ms]
On	4.7
Off	5.2

Flow rate with multiple valves switched simultaneously (tolerance ± 20%)

Flow rate q per valve n

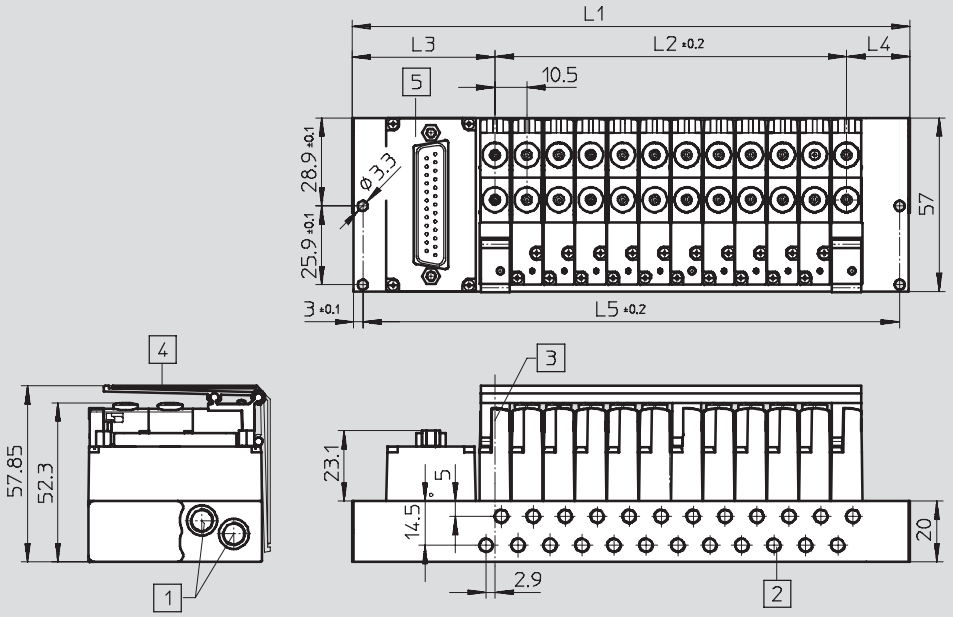


Valve terminals type 84 VTOC

Technical data

FESTO

Dimensions – Sub-D, single or double Download CAD data ➔ **www.festo.com**



1 Ports 1 and 3, left and right, M7 or G1⁄8
2 Ports 2 and 4, front or underneath, M5 or 10-32 UNF
3 Centre of first valve position
4 Inscription label
5 Electrical connection via Sub-D, single or double (left or right)

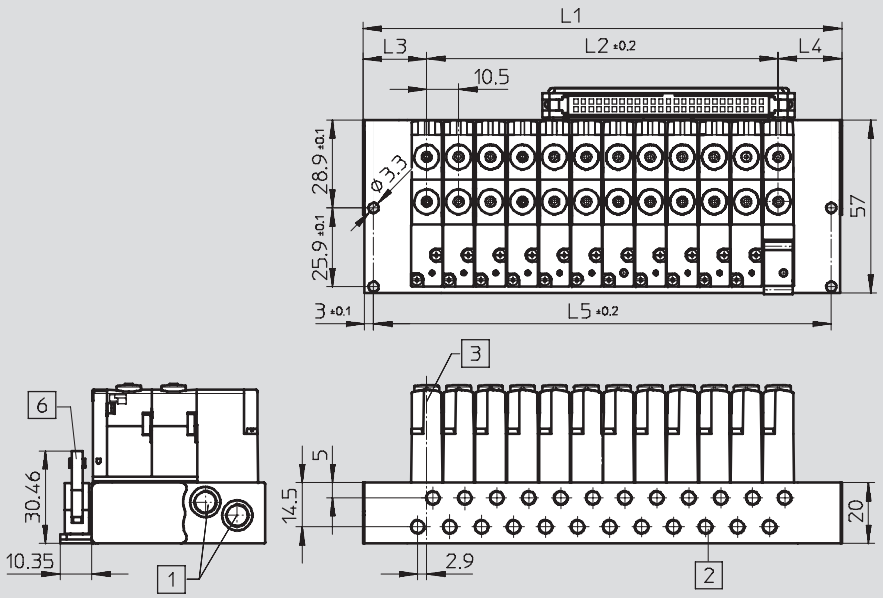
	Comment	Electrical connection on top, single			Electrical connection on top, double		
Pneumatic connection	–	M7	G1⁄8	G1⁄8	M7	G1⁄8	G1⁄8
Through-hole	–	∅ 3.3	∅ 3.3	M4	∅ 3.3	∅ 3.3	M4
L1	–	L2+L3+L4	L2+L3+L4	L2+L3+L4	L2+L3+L4	L2+L3+L4	L2+L3+L4
L2	–	(n-1)x10.5	(n-1)x10.5	(n-1)x10.5	(n-1)x10.5	(n-1)x10.5	(n-1)x10.5
L3	Distance from centre of first valve position to outer edge on left-hand side	41.4	46.4	36.9	66.4	71.4	66.4
	Sub-D connection, 44-pin, top right, 1-way: Distance from centre of first valve position to outer edge on left-hand side	14.4	20.4	20.4	–	–	–
L4	Distance from centre of last valve position to outer edge on right-hand side	14.4	20.4	20.4	–	–	–
	Sub-D connection, 44-pin, top right, 1-way: Distance from centre of last valve position to outer edge on right-hand side	41.4	46.4	36.9	–	–	–
L5	–	(L1-6)	(L1-6)	(L1-6)	(L1-6)	(L1-6)	(L1-6)

Valve terminals type 84 VTOC

Technical data

FESTO

Dimensions – Flat cable on top Download CAD data ➔ **www.festo.com**



1 Ports 1 and 3, left and right, M7 or G1⁄8
2 Ports 2 and 4, front or underneath, M5 or 10-32 UNF
3 Centre of first valve position
6 Electrical connection via flat cable

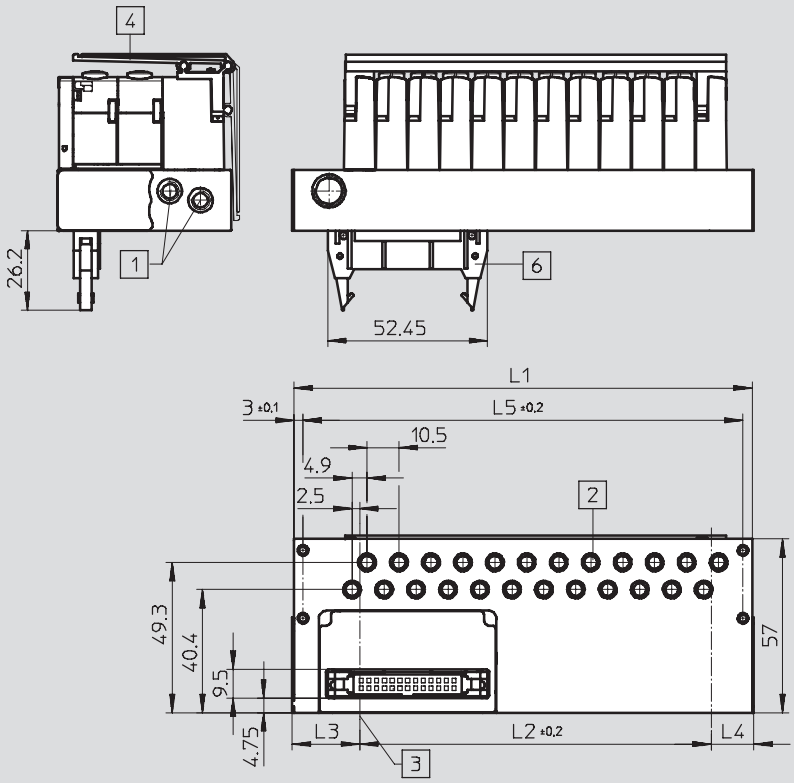
	Comment			
Pneumatic connection	–	M7	G1⁄8	G1⁄8
Through-hole	–	∅ 3.3	∅ 3.3	M4
L1	–	L2+L3+L4	L2+L3+L4	L2+L3+L4
L2	–	(n-1)x10.5	(n-1)x10.5	(n-1)x10.5
L3	Distance from centre of first valve position to outer edge on left-hand side	41.4	46.4	36.9
L4	Distance from centre of last valve position to outer edge on right-hand side	14.4	20.4	20.4
L5	–	(L1-6)	(L1-6)	(L1-6)

Valve terminals type 84 VTOC

Technical data

FESTO

Dimensions – Flat cable underneath Download CAD data ➔ **www.festo.com**



1 Ports 1 and 3, left and right, M7 or G1/8
2 Ports 2 and 4, front or underneath, M5 or 10-32 UNF
3 Centre of first valve position
4 Inscription label
6 Electrical connection via flat cable underneath

	Comment					
Pneumatic connection	–	M7 left	M7 front	G1/8 front	G1/8 left	G1/8 left
Through-hole	–	∅ 3.3	∅ 3.3	∅ 3.3	∅ 3.3	M4
L1	–	L2+L3+L4	L2+L3+L4	L2+L3+L4		
L2	–	(n-1)x10.5	(n-1)x10.5	(n-1)x10.5		
L3	Distance from centre of first valve position to outer edge on left-hand side	14.4	25.55	21.6	20.4	20.4
L4	Distance from centre of last valve position to outer edge on right-hand side	14.4	28.55	20.4	20.4	20.4
L5	–	(L1-6)	(L1-6)	(L1-6)	(L1-6)	(L1-6)

Valve terminals type 84 VTOC

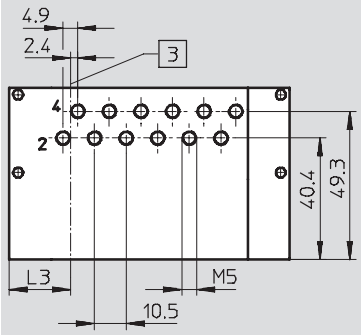
Technical data

FESTO

Dimensions – Pneumatic connections

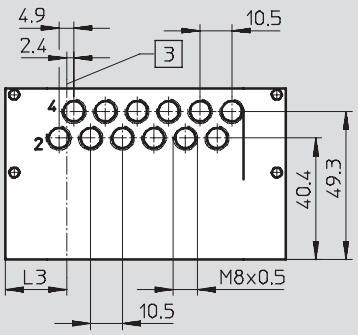
Download CAD Data ➔ **www.festo.com/us/cad**

Ports 2 and 4 underneath, M5 (10-32 UNF)



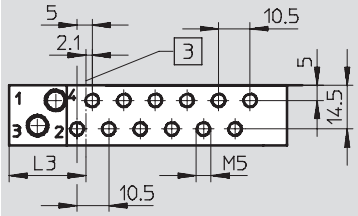
3 Centre of first valve position

Ports 2 and 4 underneath, compact



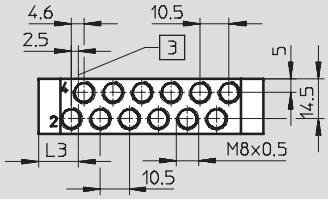
3 Centre of first valve position

Ports 2 and 4 at front, M5 (10-32 UNF)



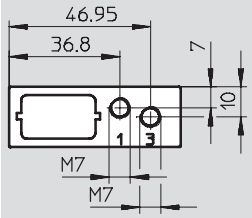
3 Centre of first valve position

Ports 2 and 4 at front, compact

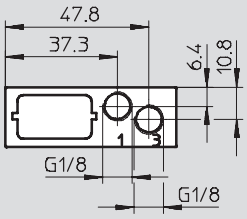


3 Centre of first valve position

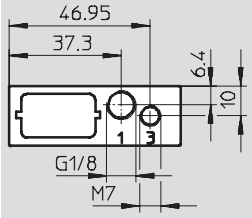
Ports 1 and 3, M7 left



Ports 1 and 3, G⅛ left



Ports 1 and 3, G⅛, left with mounting hole M4



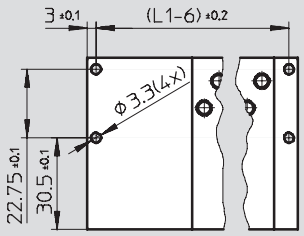
Valve terminals type 84 VTOC

Technical data

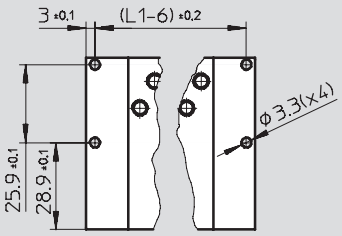
FESTO

Dimensions – Mounting hole Download CAD Data ➔ **www.festo.com/us/cad**

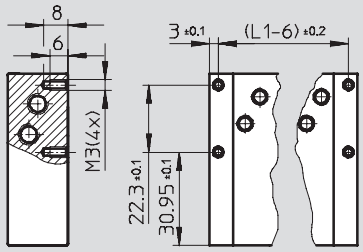
∅ 3.3 underneath, ports 1 and 3, M7



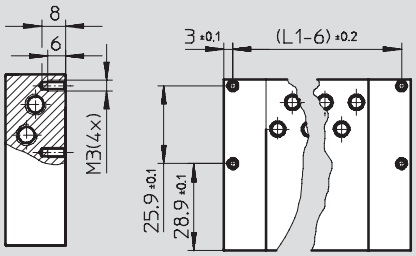
∅ 3.3 underneath, ports 1 and 3, G1/8



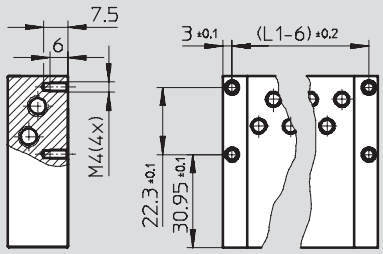
M3 underneath, ports 1 and 3, M7



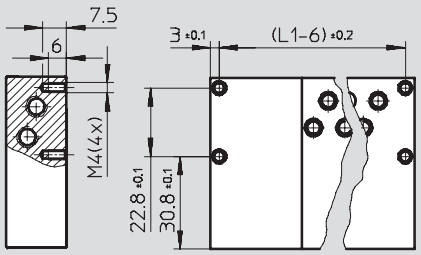
M3 underneath, ports 1 and 3, G1/8



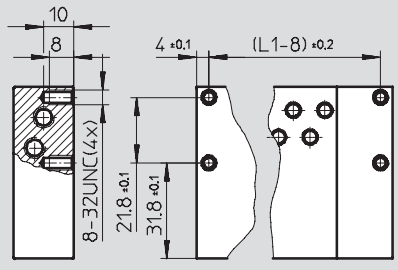
M4 underneath, ports 1 and 3, M7



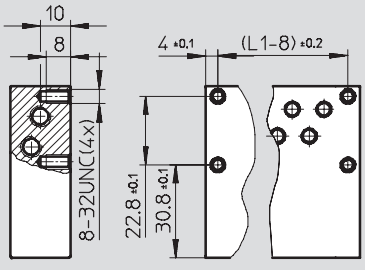
M4 or 8-32UNC underneath, ports 1 and 3, G1/8



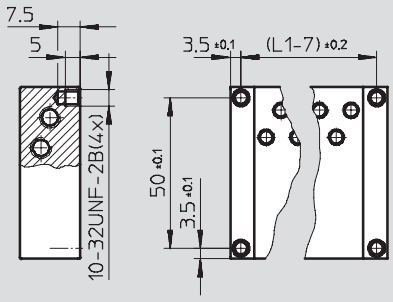
8-32UNC underneath, ports 1 and 3, M7



8-32UNC underneath, ports 1 and 3, G1/8



10-32UNF-2B underneath, ports 1 and 3, M7 or G1/8



Valve terminals type 84 VTOC

Accessories

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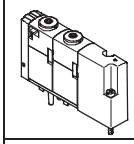
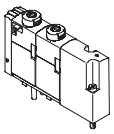
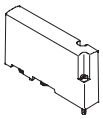
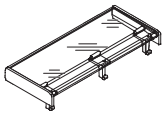
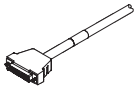
Ordering data					
	Code	Valve function		Part No.	Type
Solenoid valves					
	K	2x3/2-way valve, single solenoid, normally closed, non-detenting manual override		**565450**	**VOVC-BT-T32C-MT-F-1T1**
	K	2x3/2-way valve, single solenoid, normally closed, detenting, non-detenting/detenting manual override		**565449**	**VOVC-BT-T32C-MH-F-1T1**
Blanking plate					
	L	Blanking plate for vacant position		**565451**	**VABB-L2-P3**
Blanking plug					
	–	For sealing the air supply or exhaust port		**3568**	**B-1/8**
				174309	**B-M7**
Inscription label holder					
	–	Inscription label holder for identifying the valves	3 valve positions	**565571**	**ASCF-H-L2-3V**
			4 valve positions	**565572**	**ASCF-H-L2-4V**
			5 valve positions	**565573**	**ASCF-H-L2-5V**
			6 valve positions	**565574**	**ASCF-H-L2-6V**
			7 valve positions	**565575**	**ASCF-H-L2-7V**
			8 valve positions	**565576**	**ASCF-H-L2-8V**
			9 valve positions	**565577**	**ASCF-H-L2-9V**
			10 valve positions	**565578**	**ASCF-H-L2-10V**
			11 valve positions	**565579**	**ASCF-H-L2-11V**
			12 valve positions	**565580**	**ASCF-H-L2-12V**
			13 valve positions	**565581**	**ASCF-H-L2-13V**
			14 valve positions	**565582**	**ASCF-H-L2-14V**
			15 valve positions	**565583**	**ASCF-H-L2-15V**
			16 valve positions	**565584**	**ASCF-H-L2-16V**
			17 valve positions	**565585**	**ASCF-H-L2-17V**
			18 valve positions	**565586**	**ASCF-H-L2-18V**
			19 valve positions	**565587**	**ASCF-H-L2-19V**
			20 valve positions	**565588**	**ASCF-H-L2-20V**
			21 valve positions	**565589**	**ASCF-H-L2-21V**
			22 valve positions	**565590**	**ASCF-H-L2-22V**
			23 valve positions	**565591**	**ASCF-H-L2-23V**
			24 valve positions	**565592**	**ASCF-H-L2-24V**
Connecting cable					Technical data ➔ Internet: kmp6
	–	Sub-D, 25-pin, 15-wire cable	2.5 m	**530049**	**KMP6-25P-12-2,5**
			5 m	**530050**	**KMP6-25P-12-5**
			10 m	**530051**	**KMP6-25P-12-10**
		Sub-D, 25-pin, 25-wire cable	2.5 m	**530046**	**KMP6-25P-20-2,5**
			5 m	**530047**	**KMP6-25P-20-5**
			10 m	**530048**	**KMP6-25P-20-10**

Valve terminals type 84 VTOC

Accessories

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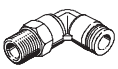
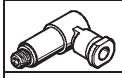
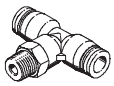
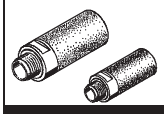
Ordering data						
	Code	Description	Tubing O.D.	Packaging unit	Part No.	Type
Push-in fittings						Technical data ➔ Internet: quick star
	–	QS push-in fitting	¼"	1 piece	**183741**	**QS-1/8-1/4-I-U-M**
			⅜"	1 piece	**190679**	**QS-1/8-3/8-U**
			8 mm	10 pieces	**153015**	**QS-1/8-8-I**
			6 mm	10 pieces	**153321**	**QSM-M7-6-I**
			¼"	1 piece	**183740**	**QSM-M7-1/4-I-U-M**
			⅛"	10 pieces	**183749**	**QSM-M5-1/8-I-U-M**
			5⁄32"	10 pieces	**130593**	**QSM-M5-5⁄32-I-U-M**
			3 mm	10 pieces	**153313**	**QSM-M5-3-I**
			4 mm	10 pieces	**153315**	**QSM-M5-4-I**
	–	Push-in L-fitting	¼	1 piece	**533235**	**QSL-H-1/8-1/4-U-M**
			3⁄16	1 piece	**533234**	**QSL-H-1/8-3/16-U-M**
			3 mm	10 pieces	**130830**	**QSMLV-M5-3-I**
			4 mm	10 pieces	**130831**	**QSMLV-M5-4-I**
	–	Push-in L-fitting, long	3 mm	10 pieces	**130834**	**QSMLLV-M5-3-I**
			4 mm	10 pieces	**130835**	**QSMLLV-M5-4-I**
	–	T-fitting	⅜	1 piece	**562579**	**QST-H-1/8-3/8-U-M**
					132412	**QST-H-1/8-3/8-U-MP**
Silencer						Technical data ➔ Internet: quick star
	U	Silencer	–	1 piece	**161418**	**UC-M7**
				50 pieces	**534218**	**UC-M7-50**

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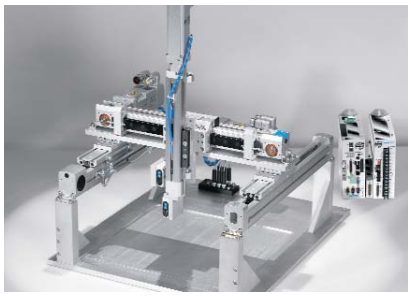

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Festo North America

Festo Regional Contact Center

5300 Explorer Drive
Mississauga, Ontario L4W 5G4
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USA Customers:

For ordering assistance,
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USA Headquarters

Festo Corporation
395 Moreland Road
P.O. Box 18023
Hauppauge, NY 11788, USA
www.festo.com/us

USA Sales Offices

Appleton
North 922 Tower View Drive, Suite N
Greenville, WI 54942, USA

Boston
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Chicago
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Auburn Hills, MI 48326, USA

New York
395 Moreland Road
Hauppauge, NY 11788, USA

Silicon Valley
4935 Southfront Road, Suite F
Livermore, CA 94550, USA

United States

USA Headquarters, East: Festo Corp., 395 Moreland Road, Hauppauge, NY 11788
Phone: 1.631.435.0800; Fax: 1.631.435.8026;
Email: info@festo-usa.com **www.festo.com/us**

Canada

Headquarters: Festo Inc., 5300 Explorer Drive, Mississauga, Ontario L4W 5G4
Phone: 1.905.624.9000; Fax: 1.905.624.9001;
Email: festo.canada@ca.festo.com **www.festo.ca**

Mexico

Headquarters: Festo Pneumatic, S.A., Av. Ceylán 3, Col. Tequesquinahuac,
54020 Tlalnepantla, Edo. de México
Phone: 011 52 [55] 53 21 66 00; Fax: 011 52 [55] 53 21 66 65;
Email: festo.mexico@mx.festo.com **www.festo.com/mx**

Central USA
Festo Corporation
1441 East Business
Center Drive
Mt. Prospect, IL 60056, USA
Phone: 1.847.759.2600
Fax: 1.847.768.9480

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