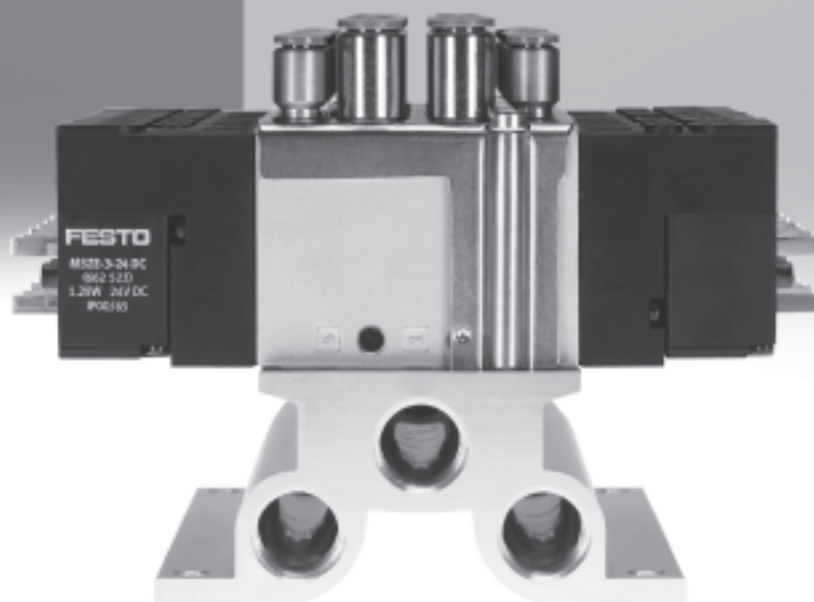


Universal valves CPE

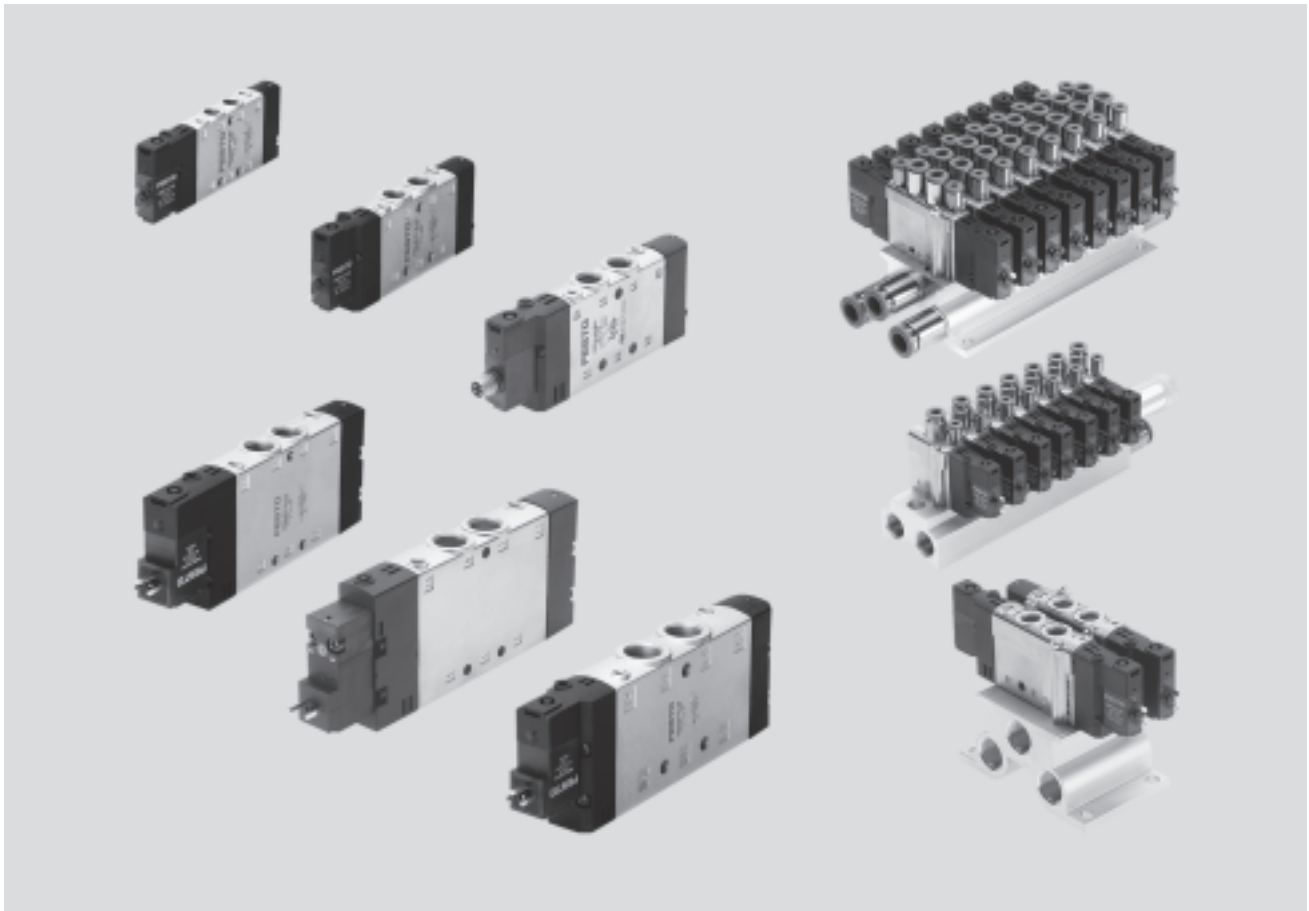
FESTO



Solenoid valves CPE, Compact Performance

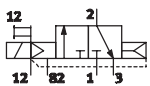
Key features

FESTO



Variants

Functions (selection)



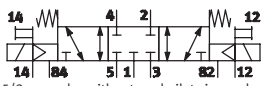
3/2-way valve with external pilot air supply, normally closed



5/2-way single solenoid valve with internal pilot air supply



5/2-way double solenoid valve with external pilot air supply



5/3-way valve with external pilot air supply, normally closed

Parameters

-  - Width
10 mm
14 mm
18 mm
24 mm
-  - Flow rate
180 ... 3,200 l/min

Advantages

Performance optimised sizes:

The solenoid valves CPE, Compact Performance are distinguished by their minimal width and low power consumption at high flow rates.

Can be mounted right in the "front line":

- On cylinders
- On moving system components
- Flexible installation through individual mounting

CPE10, CPE14 and CPE18:

Simple manifold structure consisting of fixed-grid manifold blocks made from stable aluminium with 2 to 10 valve positions or modular manifold blocks made from durable plastic.

Short tubing lengths requiring minimal air volume:

- Short switching times
- Short response times

Optimised installations:

- Shorter machine cycles
- Larger quantities
- Lower power consumption

Convenient manual override.

The sockets KMYZ-9 for sizes CPE10 and CPE14 feature integrated current reduction.

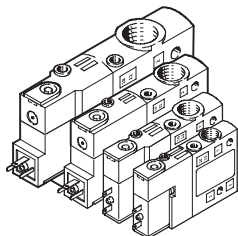
All CPE valves therefore have a duty cycle of 100%.

Solenoid valves CPE, Compact Performance

Key features

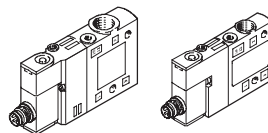
FESTO

Solenoid valves with square plug



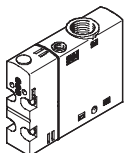
- Widths 10 mm, 14 mm, 18 mm and 24 mm
- 3/2, 5/2 and 5/3-way valves
- Internal or external pilot air supply available
- 24 V DC for all widths
- 110 or 220 V AC for widths 18 and 24
- Manual override, non-detenting and detenting using tool
- Width 10 mm available with M5 insert
- All widths available with QS fittings in 2 sizes

Solenoid valves with round plug



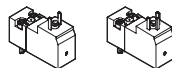
- Widths 10 mm and 14 mm
- 3/2, 5/2 and 5/3-way valves
- Internal or external pilot air supply available
- 24 V DC
- Manual override, non-detenting and detenting via tool
- Round plug, M8x1, 4-pin

CPE18 basic valves with interface to ISO 15218



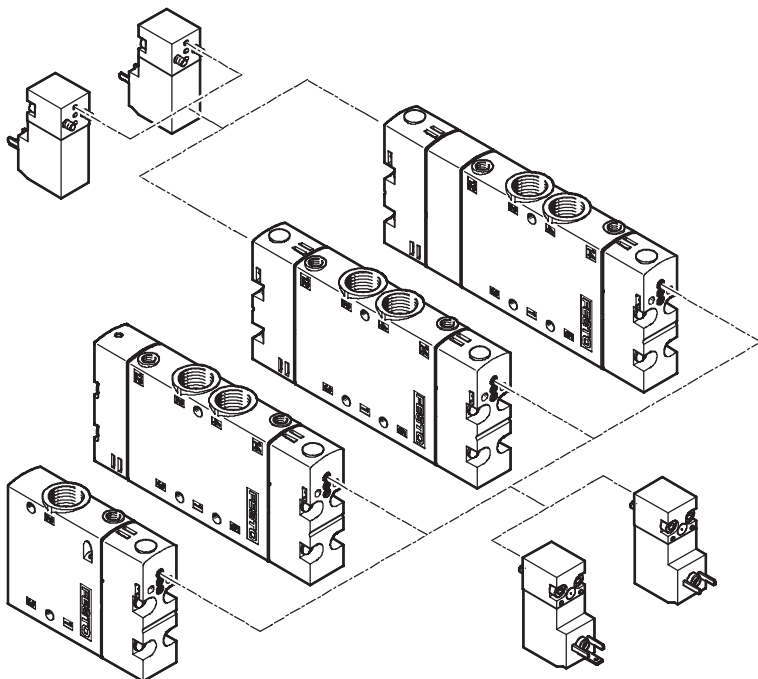
- Width 18 mm
- 3/2, 5/2 and 5/3-way valves
- Internal or external pilot air supply available

Pilot valve with interface to ISO 15218



- For 12, 24 V DC and 24 V AC without protective earth conductor
- For 110 and 220 V AC with protective earth conductor
- 3/2-way valve
- Manual override, non-detenting

Combination of basic valve CPE18 with pilot valve

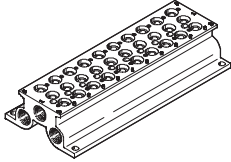


Solenoid valves CPE, Compact Performance

Key features

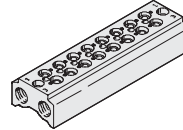
FESTO

Manifold block for fixed-grid manifold



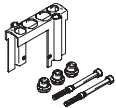
- For valve widths 10, 14 and 18 mm
- For 5/2 and 5/3-way valves
- 2 to 10 valve positions

Manifold block for fixed-grid manifold



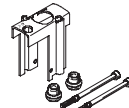
- For valve widths 10, 14 and 18 mm
- For 3/2-way valves
- 2 to 10 valve positions

Retainer set



- Retainer for 5/2 or 5/3-way valve

Retainer set



- Retainer for 3/2-way valve

Blanking plate for vacant positions



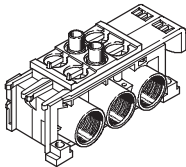
- Vacant position cover for 5/2 or 5/3-way valve

Blanking plate for vacant positions



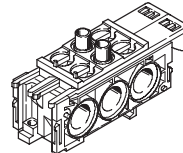
- Vacant position cover for 3/2-way valve

Manifold block with air supply



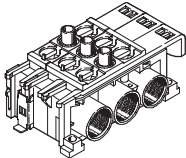
- 2 valve positions
- For CPE10, CPE14 or CPE18
- For 5/2 and 5/3-way valves
- Ducts 1, 3 and 5 can have closed or open ends
- Ducts closed when the manifold is full or when pressure zones are being used

Manifold block for expansion



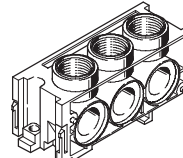
- 2 valve positions
- For CPE10, CPE14 or CPE18
- For 5/2 and 5/3-way valves
- Ducts 1, 3 and 5 can have closed or open ends

Manifold block with air supply



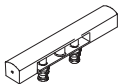
- 3 valve positions
- For CPE10, CPE14 or CPE18
- For 5/2 and 5/3-way valves
- Ducts 1, 3 and 5 can have closed or open ends
- Ducts closed when the manifold is full or when pressure zones are being used

End plate for additional air supply



- For CPE10, CPE14 or CPE18
- Required for manifolds with more than 6 valves or separate pressure zones
- Ports 1, 3 and 5 at rear and on top

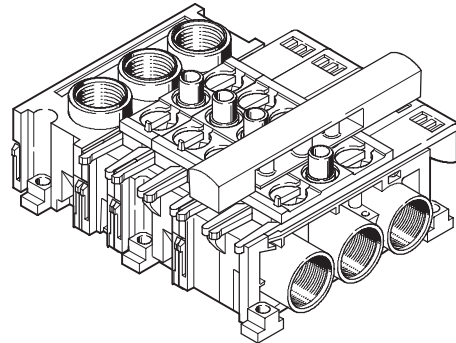
Blanking plate for vacant positions



Versions

- Vacant position cover for 5/2 or 5/3-way valve

Modular manifold with blanking plate

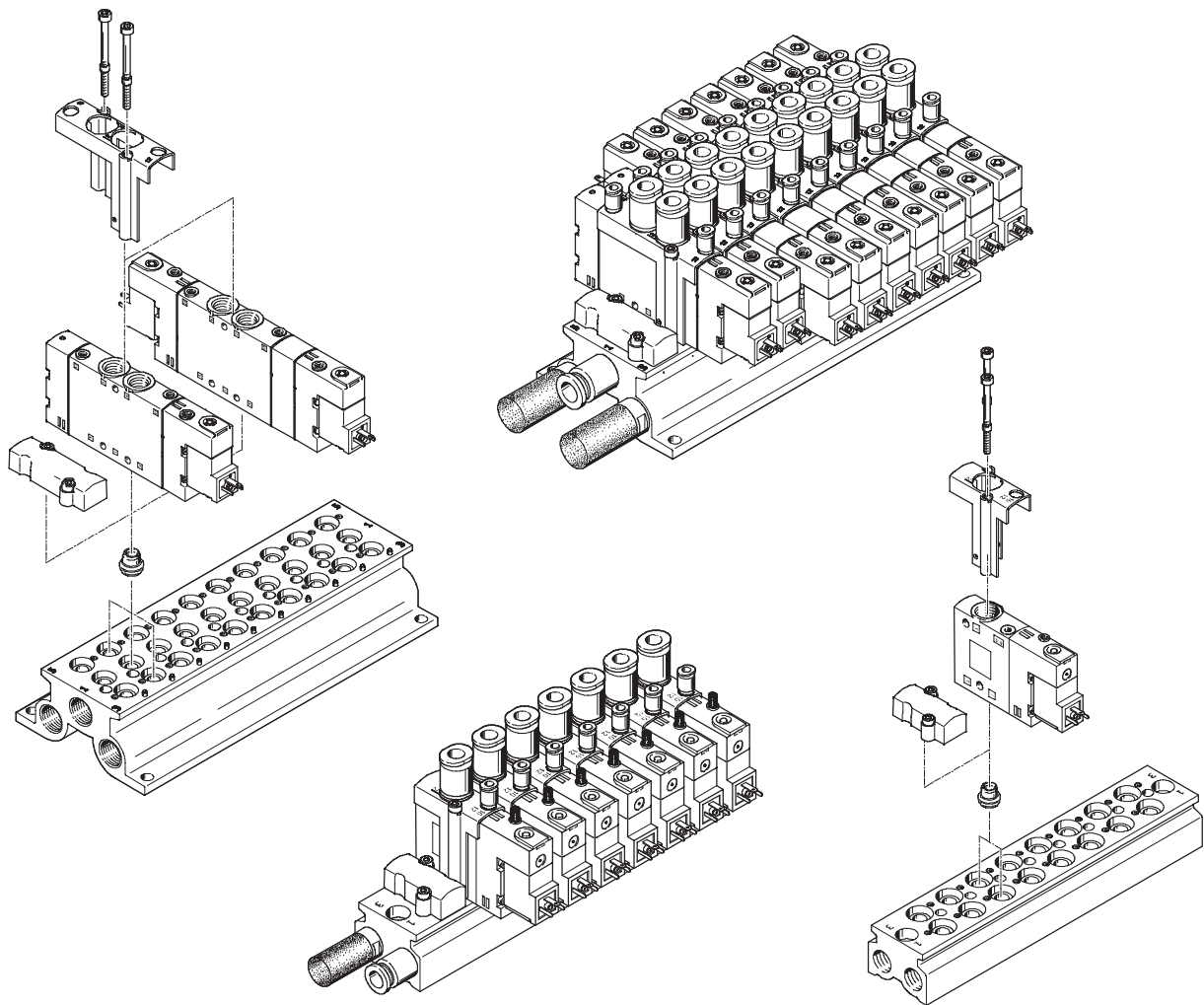


Solenoid valves CPE, Compact Performance

Key features

Mounting on fixed-grid manifold block for CPE10, CPE14 and CPE18

- Simple structure comprising compact valve manifolds with in-line valves
- 2 to 10 valve positions
- Aluminium mounting rail provides high stability
- High flow rates with air supply on both sides for duct 1
- High exhaust capacity with output on both sides for ducts 3 and 5
- Different pressure and exhaust zones can be created using separators, which are clamped at the separation points in ducts 1, 3 and 5



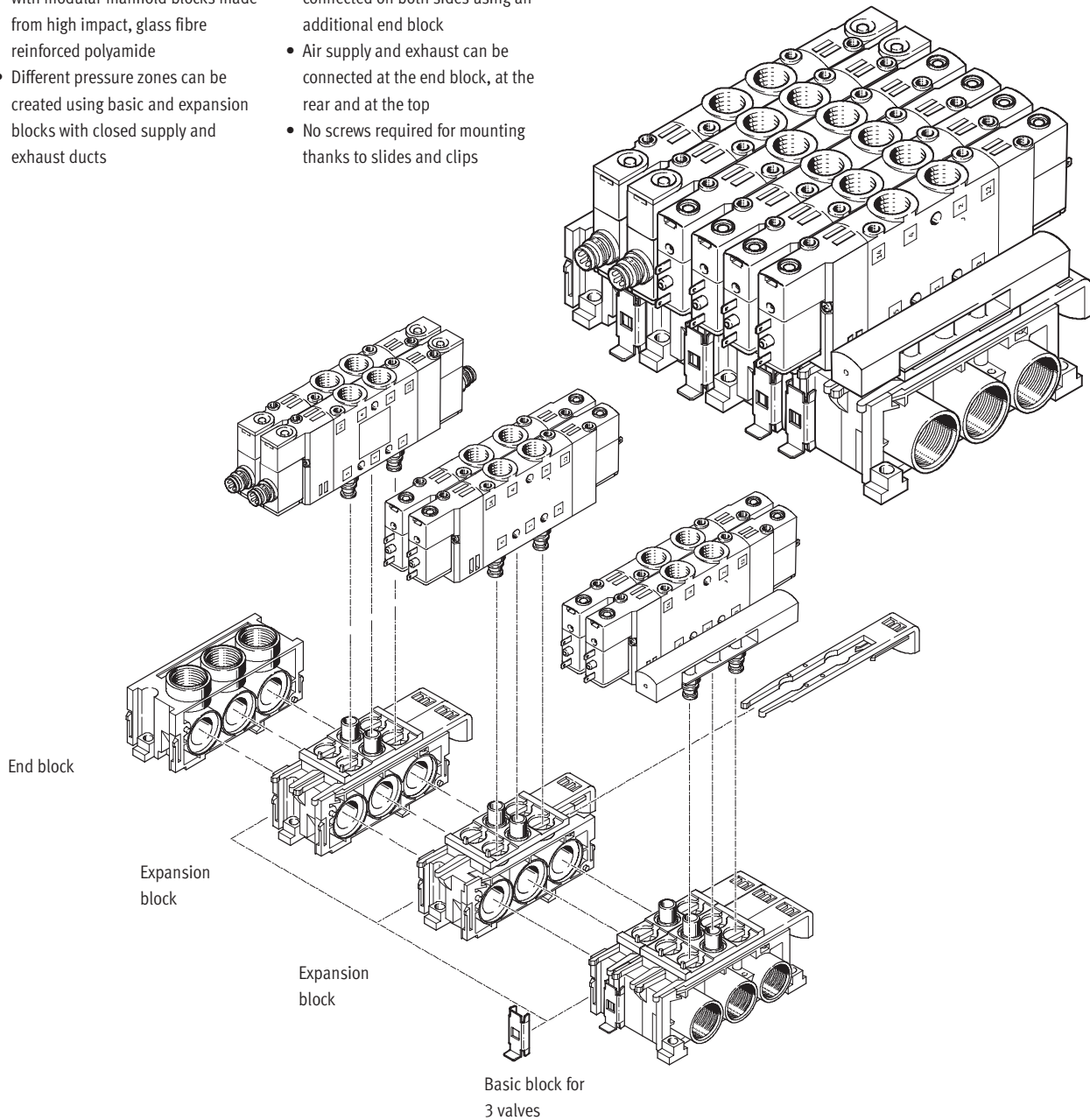
Solenoid valves CPE, Compact Performance

Key features

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Manifold assembly for CPE10, CPE14 and CPE18 with modular manifold blocks

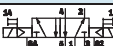
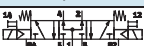
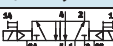
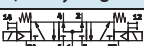
- Construction of a valve manifold with modular manifold blocks made from high impact, glass fibre reinforced polyamide
- Different pressure zones can be created using basic and expansion blocks with closed supply and exhaust ducts
- Air supply and exhaust can be connected on both sides using an additional end block
- Air supply and exhaust can be connected at the end block, at the rear and at the top
- No screws required for mounting thanks to slides and clips



Solenoid valves CPE, Compact Performance

FESTO

Product range overview – Widths 10 mm and 14 mm

Width	Circuit symbol	Type	Connector plug		Operating voltage		Working port										→ Page/ Internet
			Square	Round	[V DC]	[V AC]	M		G			QS					
							5	7	1/8	1/4	3/8	4	6	8	10	12	
10 mm	3/2-way single solenoid valve, normally closed																
		CPE10-M1BH-3GL...	■	–	24	–	■	■	–	–	–	■	■	–	–	–	22
		CPE10-M1CH-3GL...	–	■	24	–	■	■	–	–	–	■	■	–	–	–	
	3/2-way single solenoid valve, normally open																
		CPE10-M1BH-3OL...	■	–	24	–	■	■	–	–	–	■	■	–	–	–	22
		CPE10-M1CH-3OL...	–	■	24	–	■	■	–	–	–	■	■	–	–	–	
	5/2-way single solenoid valve																
		CPE10-M1BH-5L...	■	–	24	–	■	■	–	–	–	■	■	–	–	–	22
		CPE10-M1CH-5L...	–	■	24	–	■	■	–	–	–	■	■	–	–	–	
	5/2-way double solenoid valve																
		CPE10-M1BH-5J...	■	–	24	–	■	■	–	–	–	■	■	–	–	–	22
		CPE10-M1CH-5J...	–	■	24	–	■	■	–	–	–	■	■	–	–	–	
	5/3-way single solenoid valve, normally closed, mid-position valve																
		CPE10-M1BH-5/3G...	■	–	24	–	■	■	–	–	–	■	■	–	–	–	23
		CPE10-M1CH-5/3G...	–	■	24	–	■	■	–	–	–	■	■	–	–	–	
	5/3-way single solenoid valve, normally open, mid-position valve																
		CPE10-M1BH-5/3B...	■	–	24	–	■	■	–	–	–	■	■	–	–	–	23
		CPE10-M1CH-5/3B...	–	■	24	–	■	■	–	–	–	■	■	–	–	–	
5/3-way single solenoid valve, normally exhausted, mid-position valve																	
	CPE10-M1BH-5/3E...	■	–	24	–	■	■	–	–	–	■	■	–	–	–	23	
	CPE10-M1CH-5/3E...	–	■	24	–	■	■	–	–	–	■	■	–	–	–		
14 mm	3/2-way single solenoid valve, normally closed																
		CPE14-M1BH-3GL...	■	–	24	–	–	–	■	–	–	–	■	■	–	–	36
		CPE14-M1CH-3GL...	–	■	24	–	–	–	■	–	–	–	■	■	–	–	
	3/2-way single solenoid valve, normally open																
		CPE14-M1BH-3OL...	■	–	24	–	–	–	■	–	–	–	■	■	–	–	36
		CPE14-M1CH-3OL...	–	■	24	–	–	–	■	–	–	–	■	■	–	–	
	5/2-way single solenoid valve																
		CPE14-M1BH-5L...	■	–	24	–	–	–	■	–	–	–	■	■	–	–	36
		CPE14-M1CH-5L...	–	■	24	–	–	–	■	–	–	–	■	■	–	–	
	5/2-way double solenoid valve																
		CPE14-M1BH-5J...	■	–	24	–	–	–	■	–	–	–	■	■	–	–	36
		CPE14-M1CH-5J...	–	■	24	–	–	–	■	–	–	–	■	■	–	–	
	5/3-way single solenoid valve, normally closed, mid-position valve																
		CPE14-M1BH-5/3G...	■	–	24	–	–	–	■	–	–	–	■	■	–	–	37
		CPE14-M1CH-5/3G...	–	■	24	–	–	–	■	–	–	–	■	■	–	–	
	5/3-way single solenoid valve, normally open, mid-position valve																
		CPE14-M1BH-5/3B...	■	–	24	–	–	–	■	–	–	–	■	■	–	–	37
		CPE14-M1CH-5/3B...	–	■	24	–	–	–	■	–	–	–	■	■	–	–	
5/3-way single solenoid valve, normally exhausted, mid-position valve																	
	CPE14-M1BH-5/3E...	■	–	24	–	–	–	■	–	–	–	■	■	–	–	37	
	CPE14-M1CH-5/3E...	–	■	24	–	–	–	■	–	–	–	■	■	–	–		

Solenoid valves CPE, Compact Performance

Product range overview – Width 18 mm

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Width	Circuit symbol	Type	Operating voltage		Working port											→ Page/ Internet
			[V DC]	[V AC]	M		G			QS						
					5	7	1/8	1/4	3/8	4	6	8	10	12		
18 mm	3/2-way single solenoid valve, normally closed															
		CPE18-M1H-3GL...	24	–	–	–	–	■	–	–	–	–	■	■	–	49
		CPE18-M2H-3GL...	–	110	–	–	–	■	–	–	–	–	■	■	–	
		CPE18-M3H-3GL...	–	220	–	–	–	■	–	–	–	–	■	■	–	
		CPE18-P1-3GL...¼	χ ¹⁾	Υ ²⁾	–	–	–	■	–	–	–	–	–	–	–	56
	3/2-way single solenoid valve, normally open															
		CPE18-M1H-3OL...	24	–	–	–	–	■	–	–	–	–	■	■	–	49
		CPE18-M2H-3OL...	–	110	–	–	–	■	–	–	–	–	■	■	–	
		CPE18-M3H-3OL...	–	220	–	–	–	■	–	–	–	–	■	■	–	
		CPE18-P1-3OL...¼	χ ¹⁾	Υ ²⁾	–	–	–	■	–	–	–	–	–	–	–	56
	5/2-way single solenoid valve															
		CPE18-M1H-5L...	24	–	–	–	–	■	–	–	–	–	■	■	–	50
		CPE18-M2H-5L...	–	110	–	–	–	■	–	–	–	–	■	■	–	
		CPE18-M3H-5L...	–	220	–	–	–	■	–	–	–	–	■	■	–	
		CPE18-P1-5L...¼	χ ¹⁾	Υ ²⁾	–	–	–	■	–	–	–	–	–	–	–	56
	5/2-way double solenoid valve															
		CPE18-M1H-5J...	24	–	–	–	–	■	–	–	–	–	■	■	–	50
		CPE18-M2H-5J...	–	110	–	–	–	■	–	–	–	–	■	■	–	
		CPE18-M3H-5J...	–	220	–	–	–	■	–	–	–	–	■	■	–	
		CPE18-P1-5J...¼	χ ¹⁾	Υ ²⁾	–	–	–	■	–	–	–	–	–	–	–	56
	5/3-way single solenoid valve, normally closed, mid-position valve															
		CPE18-M1H-5/3G...	24	–	–	–	–	■	–	–	–	–	■	■	–	51
		CPE18-M2H-5/3G...	–	110	–	–	–	■	–	–	–	–	■	■	–	
		CPE18-M3H-5/3G...	–	220	–	–	–	■	–	–	–	–	■	■	–	
		CPE18-P1-5/3G...¼	χ ¹⁾	Υ ²⁾	–	–	–	■	–	–	–	–	–	–	–	56
	5/3-way single solenoid valve, normally open, mid-position valve															
		CPE18-M1H-5/3B...	24	–	–	–	–	■	–	–	–	–	■	■	–	51
		CPE18-M2H-5/3B...	–	110	–	–	–	■	–	–	–	–	■	■	–	
		CPE18-M3H-5/3B...	–	220	–	–	–	■	–	–	–	–	■	■	–	
		CPE18-P1-5/3B...¼	χ ¹⁾	Υ ²⁾	–	–	–	■	–	–	–	–	–	–	–	56
	5/3-way single solenoid valve, normally exhausted, mid-position valve															
		CPE18-M1H-5/3E...	24	–	–	–	–	■	–	–	–	–	■	■	–	51
		CPE18-M2H-5/3E...	–	110	–	–	–	■	–	–	–	–	■	■	–	
		CPE18-M3H-5/3E...	–	220	–	–	–	■	–	–	–	–	■	■	–	
		CPE18-P1-5/3E...¼	χ ¹⁾	Υ ²⁾	–	–	–	■	–	–	–	–	–	–	–	56

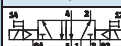
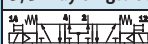
1) X = 12 V DC or 24 V DC pilot valve can be ordered

2) Y = 24 V AC, 110 V AC or 230 V AC pilot valve can be ordered

Solenoid valves CPE, Compact Performance

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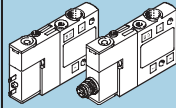
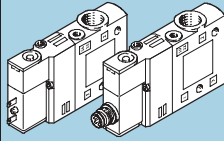
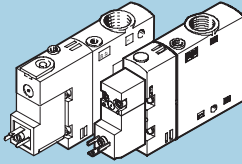
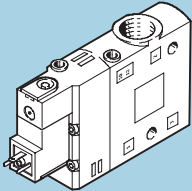
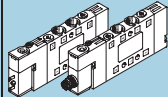
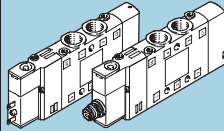
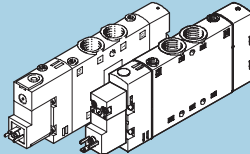
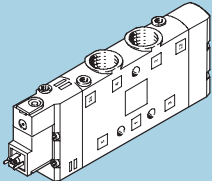
Product range overview – Width 24 mm

Width	Circuit symbol	Type	Operating voltage		Working port										→ Page/ Internet			
			[V DC]	[V AC]	M		G			QS								
					5	7	1/8	1/4	3/8	4	6	8	10	12				
24 mm	3/2-way single solenoid valve, normally closed																	
		CPE24-M1H-3GL...	24	–	–	–	–	–	■	–	–	–	–	■	■	68		
		CPE24-M2H-3GL...	–	110	–	–	–	–	–	■	–	–	–	–	■		■	
		CPE24-M3H-3GL...	–	220	–	–	–	–	–	■	–	–	–	–	■		■	
	3/2-way single solenoid valve, normally open																	
		CPE24-M1H-3OL...	24	–	–	–	–	–	–	■	–	–	–	–	■	■	68	
		CPE24-M2H-3OL...	–	110	–	–	–	–	–	–	■	–	–	–	–	■		■
		CPE24-M3H-3OL...	–	220	–	–	–	–	–	–	■	–	–	–	–	■		■
	5/2-way single solenoid valve																	
		CPE24-M1H-5L...	24	–	–	–	–	–	–	■	–	–	–	–	■	■	69	
		CPE24-M2H-5L...	–	110	–	–	–	–	–	■	–	–	–	–	■	■		
		CPE24-M3H-5L...	–	220	–	–	–	–	–	■	–	–	–	–	■	■		
	5/2-way double solenoid valve																	
		CPE24-M1H-5J...	24	–	–	–	–	–	–	■	–	–	–	–	■	■	69	
		CPE24-M2H-5J...	–	110	–	–	–	–	–	■	–	–	–	–	■	■		
		CPE24-M3H-5J...	–	220	–	–	–	–	–	■	–	–	–	–	■	■		
	5/3-way single solenoid valve, normally closed, mid-position valve																	
		CPE24-M1H-5/3G...	24	–	–	–	–	–	–	■	–	–	–	–	■	■	70	
		CPE24-M2H-5/3G...	–	110	–	–	–	–	–	■	–	–	–	–	■	■		
		CPE24-M3H-5/3G...	–	220	–	–	–	–	–	■	–	–	–	–	■	■		
	5/3-way single solenoid valve, normally open, mid-position valve																	
		CPE24-M1H-5/3B...	24	–	–	–	–	–	–	■	–	–	–	–	■	■	70	
		CPE24-M2H-5/3B...	–	110	–	–	–	–	–	■	–	–	–	–	■	■		
		CPE24-M3H-5/3B...	–	220	–	–	–	–	–	■	–	–	–	–	■	■		
	5/3-way single solenoid valve, normally exhausted, mid-position valve																	
		CPE24-M1H-5/3E...	24	–	–	–	–	–	–	■	–	–	–	–	■	■	70	
		CPE24-M2H-5/3E...	–	110	–	–	–	–	–	■	–	–	–	–	■	■		
		CPE24-M3H-5/3E...	–	220	–	–	–	–	–	■	–	–	–	–	■	■		

Solenoid valves CPE, Compact Performance

Product range overview – Functions

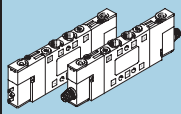
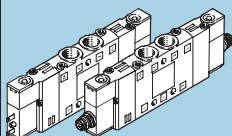
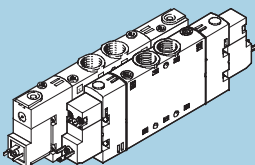
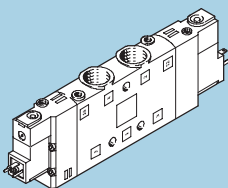
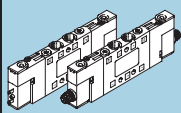
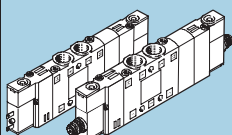
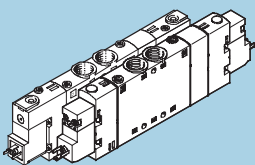
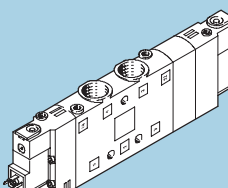
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3/2-way valves					
Type		CPE10	CPE14	CPE18	CPE24
Width		10 mm	14 mm	18 mm	24 mm
Standard nominal flow rate [l/min]					
Thread	M5	190	–	–	–
	M7	400	–	–	–
	G1/8	–	900	–	–
	G1/4	–	–	1,300	–
	G3/8	–	–	–	2,500
Plug connector	QS-4	190	–	–	–
	QS-6	300	510	–	–
	QS-8	–	810	850	–
	QS-10	–	–	1,000	1,250
	QS-12	–	–	–	1,650
5/2-way single solenoid valves					
					
Type		CPE10	CPE14	CPE18	CPE24
Width		10 mm	14 mm	18 mm	24 mm
Standard nominal flow rate [l/min]					
Thread	M5	180	–	–	–
	M7	350	–	–	–
	G1/8	–	800	–	–
	G1/4	–	–	1,300	–
	G3/8	–	–	–	2,900
Plug connector	QS-4	180	–	–	–
	QS-6	320	400	–	–
	QS-8	–	680	850	–
	QS-10	–	–	1,000	1,250
	QS-12	–	–	–	1,650
Operating voltage					
12 V DC		–	–	■	–
24 V DC/AC		■/–	■/–	■/■	■/–
110 V AC		–	–	■	■
230 V AC		–	–	■	■
Technical data →		18	31	45	64

Solenoid valves CPE, Compact Performance

FESTO

Product range overview – Functions

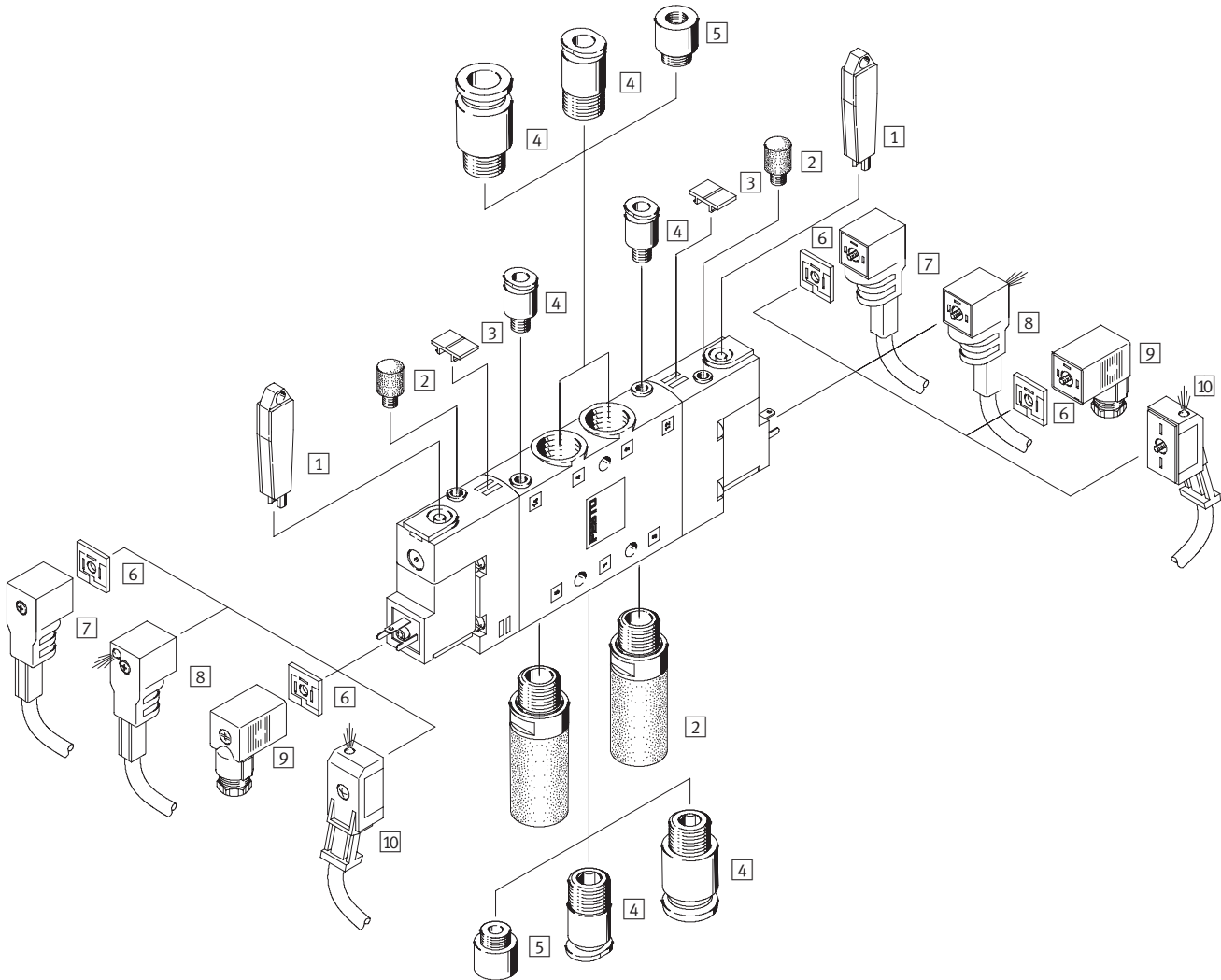
5/2-way double solenoid valves					
Type		CPE10	CPE14	CPE18	CPE24
Width		10 mm	14 mm	18 mm	24 mm
Standard nominal flow rate [l/min]					
Thread	M5	180	–	–	–
	M7	350	–	–	–
	G1/8	–	800	–	–
	G1/4	–	–	1,300	–
	G3/8	–	–	–	3,200
Plug connector	QS-4	180	–	–	–
	QS-6	320	400	–	–
	QS-8	–	680	850	–
	QS-10	–	–	1,000	1,250
	QS-12	–	–	–	1,650
5/3-way valves					
					
Type		CPE10	CPE14	CPE18	CPE24
Width		10 mm	14 mm	18 mm	24 mm
Standard nominal flow rate [l/min]					
Thread	M5	180	–	–	–
	M7	250 ... 350	–	–	–
	G1/8	–	700 ... 750	–	–
	G1/4	–	–	1,200 ... 1,450	–
	G3/8	–	–	–	2,600 ... 3,000
Plug connector	QS-4	180	–	–	–
	QS-6	250 ... 300	370 ... 410	–	–
	QS-8	–	570 ... 720	780 ... 850	–
	QS-10	–	–	1,000 ... 1,050	1,250
	QS-12	–	–	–	1,600 ... 1,650
Operating voltage					
12 V DC		–	–	■	–
24 V DC/AC		■/–	■/–	■/■	■/–
110 V AC		–	–	■	■
230 V AC		–	–	■	■
Technical data →		18	31	45	64

Solenoid valves CPE, Compact Performance

Peripherals overview

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Individual valve



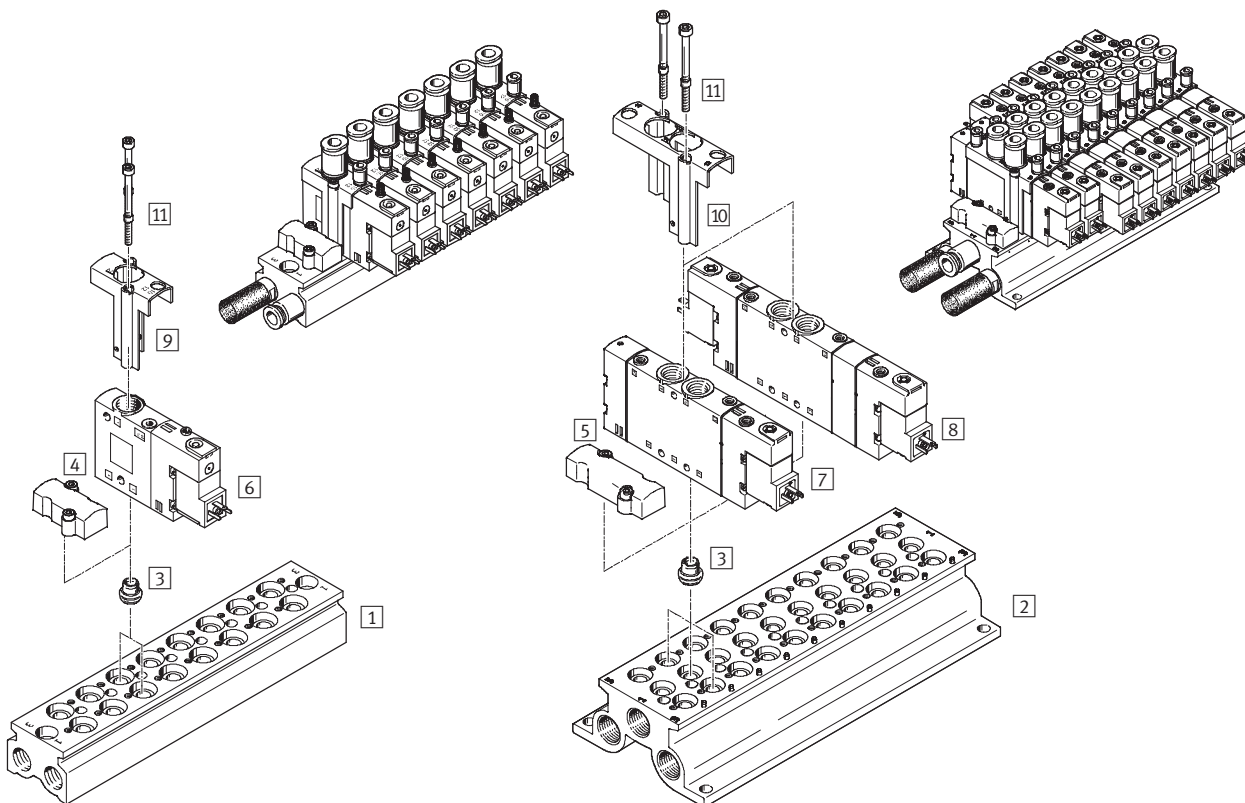
Accessories – Individual valve								
	Type	Brief description	CPE10	CPE14	CPE18	CPE24	→ Page/Internet	
1	Manual override tool	AHB...	■	■	■	■	74	
2	Silencer	U... or UC...	■	■	■	■	74	
3	Inscription labels	IBS-6x10	■	■	■	■	74	
4	Push-in fittings	QS...	■	■	■	■	–	
5	M7 to M5 reducer	–	■	–	–	–	–	
6	Illuminating seal	MEB...LD	–	–	■	■	73	
7	Plug socket with cable	KMEB...	–	–	■	■	73	
8	Plug socket with cable	KMEB...	–	–	■	■	73	
9	Standard plug socket	MSSD-EB...	–	–	■	■	73	
10	Plug socket with cable	KMYZ-9...	■	■	–	–	72	

Solenoid valves CPE, Compact Performance

System overview

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Fixed-grid manifold assembly



Example of manifold assembly – CPE18

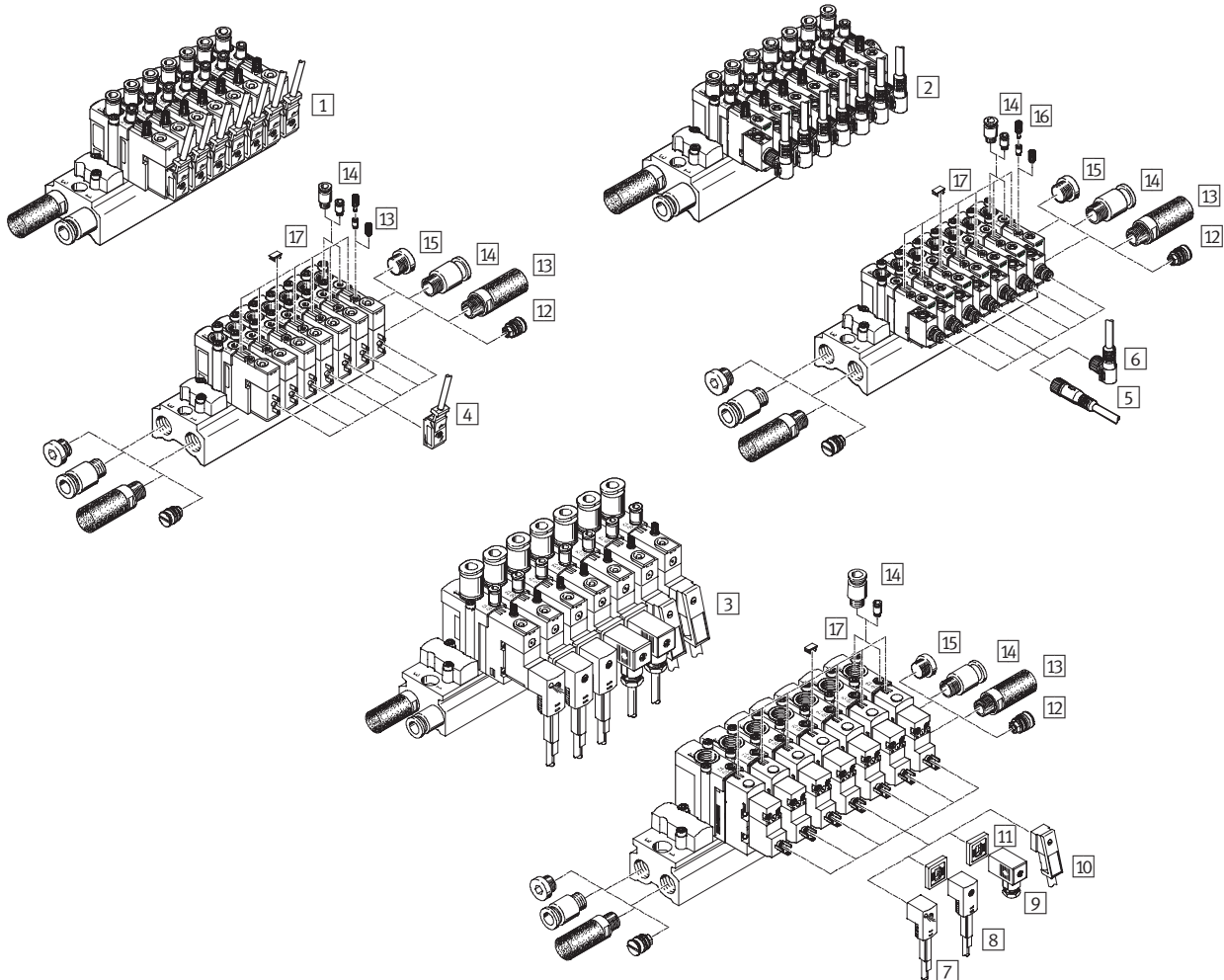
	Type	Brief description	→ Page/Internet
1	Manifold block	CPE18-3/2-PRS-3/8-8	Manifold block for 3/2-way valves
2	Manifold block	CPE18-PRS-3/8-10	Manifold block for 5/2 and 5/3-way valves
3	Seal	CPV18-VI-P.1/4-150	–
4	Blanking plate	CPE18-RP3	Blanking plate for unused/vacant position
5	Blanking plate	CPE18-RP	Blanking plate for unused/vacant position
6	3/2-way valve	CPE18...	–
7	5/2-way valve	CPE18...	–
8	5/3-way valve	CPE18...	–
9	Retainer	CPE18-H3-50	Retainer for 3/2-way valve
10	Retainer	CPE18-H5-50	Retainer for 5/2 and 5/3-way valve
11	Screw	M4X65-8.8-VS-100	–

Solenoid valves CPE, Compact Performance

Peripherals overview

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Accessories

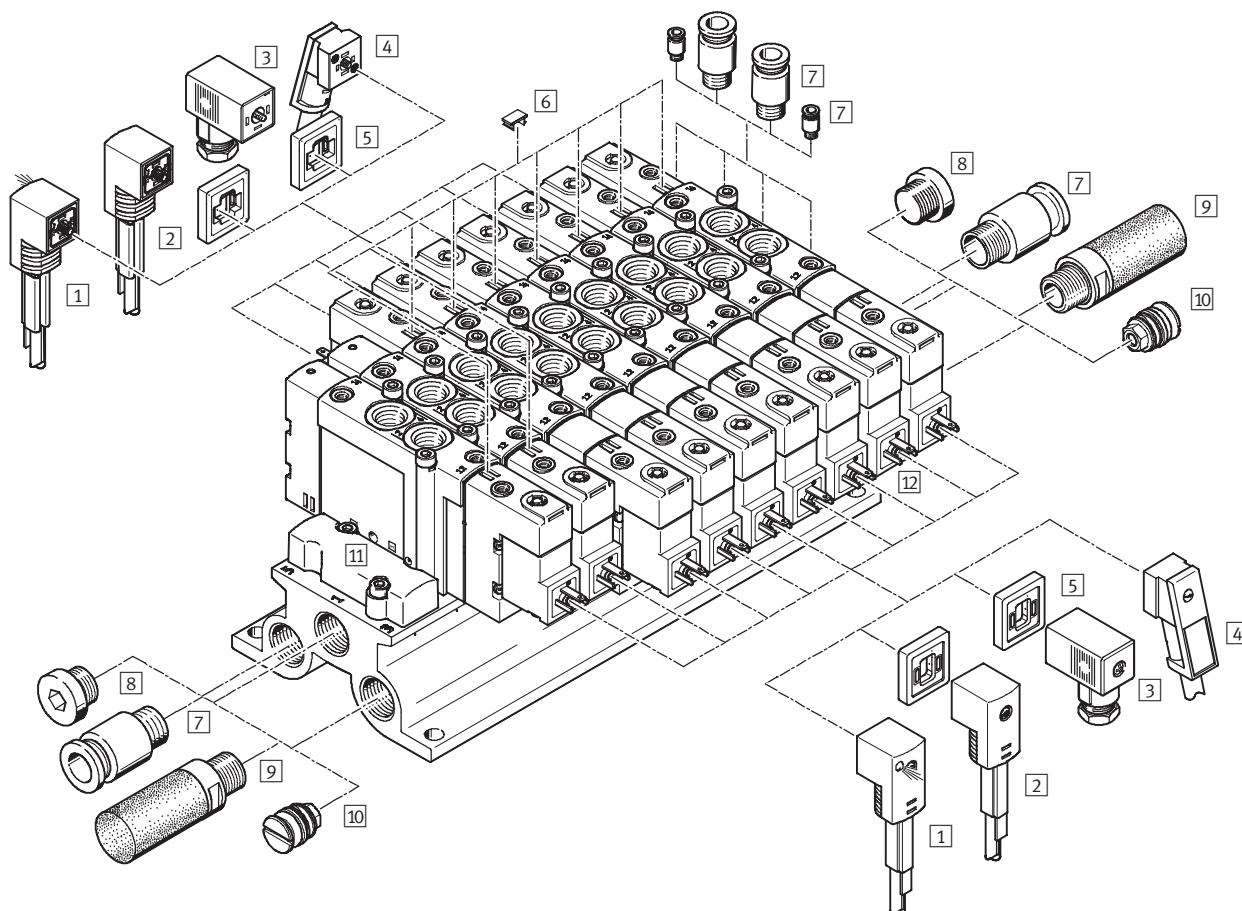


Accessories			
	Type	Brief description	→ Page/Internet
1	Valve manifold CPE10	Equipped with 3/2-way valves with square plug	–
2	Valve manifold CPE10	Equipped with 3/2-way valves with round plug	–
3	Valve manifold CPE18	Equipped with 3/2-way basic valves plus pilot valve with square plug as required	–
4	Plug socket with cable	KMYZ-9...-LED	For CPE10 and CPE14, integrated current reduction and LED
5	Plug socket with cable	SIM..., NEBU...	For CPE10 and CPE14 with round plug M8x1, straight
6	Plug socket with cable	SIM..., NEBU...	For CPE10 and CPE14 with round plug M8x1, straight
7	Plug socket with cable	KMEB-1...-LED	With PVC cable and integrated LED
8	Plug socket with cable	KMEB-1...	With PVC cable
9	Plug socket	MSSD-EB...	–
10	Plug socket with cable	KMEB-2...-LED	With PUR cable and integrated LED
11	Illuminating seal	MEB-LD...	For signal display with LED
12	Separator	VABD..., PRSV...	For pressure zones in aluminium manifold blocks
13	Silencer	U..., UC...	With thread
14	Push-in fittings	QS...	For tubing (included in scope of delivery for QS types)
15	Blanking plug	B...	–
16	Silencer	UC...-H	With push-in sleeve
17	Inscription label	IBS...	–

Solenoid valves CPE, Compact Performance

Peripherals overview

Accessories – CPE18 and CPE24



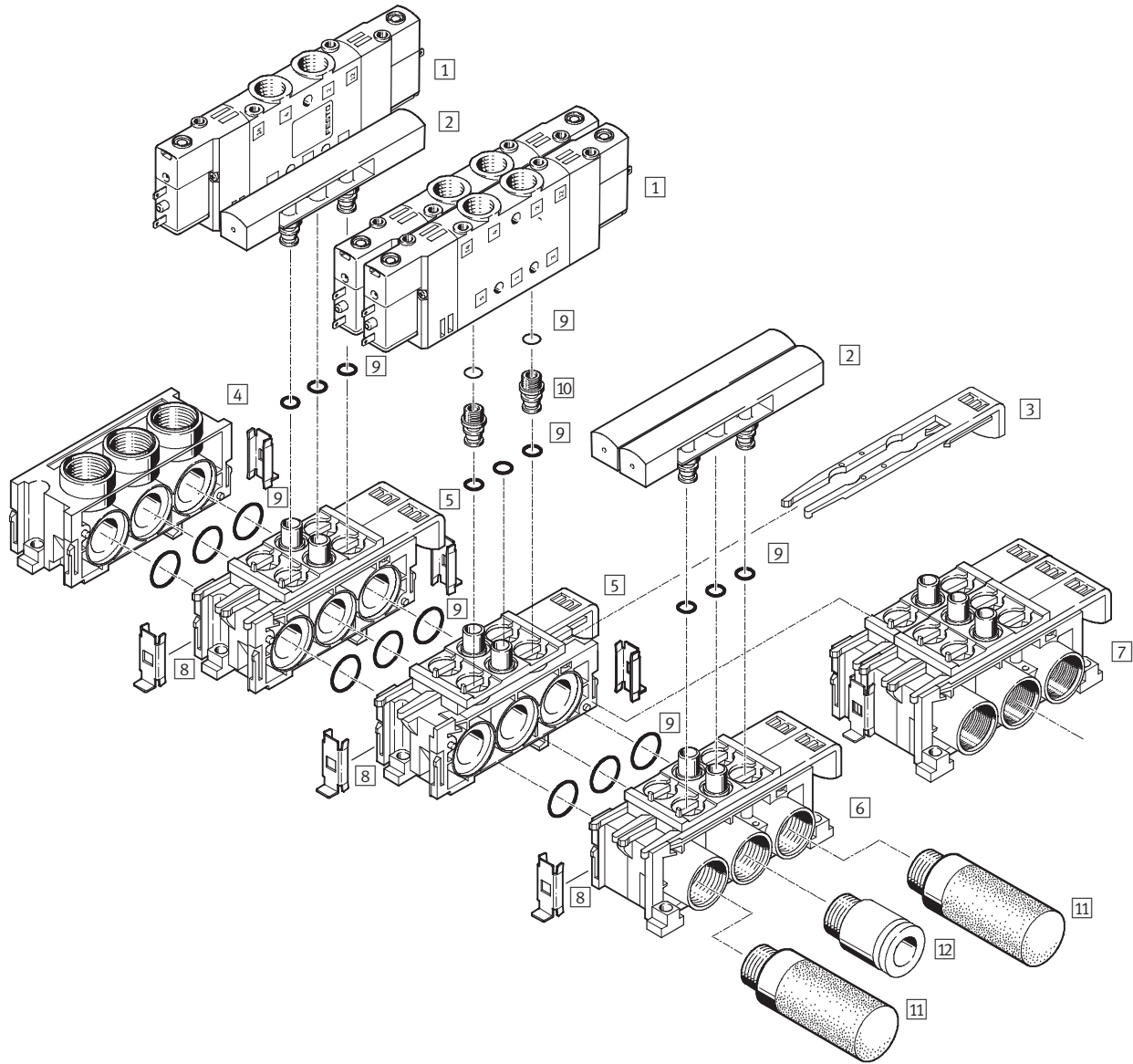
Accessories – Mounting on manifold block			
	Type	Brief description	→ Page/Internet
1	Plug socket with cable	KMEB-1...	With LED for 24 V DC
2	Plug socket with cable	KMEB-1...	For 0 ... 230 V AC
3	Standard plug socket	MSSD-EB...	–
4	Plug socket with cable	KMEB-2...	For 0 ... 230 V AC
5	Illuminating seal	MEB-LD...	–
6	Inscription label	IBS-6x10	–
7	Push-in fittings	QS...	For tubing
8	Blanking plug	B...	–
9	Silencer	U... or UC...	For fitting on exhaust ports
10	Separator for pressure zones	VABD..., PRSV...	For fitting on the manifold block
11	Blanking plate	CPE...-RP	For fitting on unused valve positions
12	Manifold block	CPE...-PRS	–

Solenoid valves CPE, Compact Performance

System overview

FESTO

Manifold assembly with modular manifold blocks



Accessories – Manifold assembly			
	Type	Brief description	→ Page/Internet
1	Solenoid valve	CPE...	–
2	Blanking plate	CPE...-RP	For sealing vacant positions
3	Slide	–	For attaching the valve
4	End plate	CPE...-PRS-EP	–
5	Expansion block	CPE...-PRSE-2	For 2 valves
6	Manifold block	CPE...-PRSG-2	For 2 valves
7	Manifold block	CPE...-PRSG-3	For 3 valves
8	Connecting piece	–	For connecting the blocks
9	Seal	–	Included in scope of delivery
10	Fitting	–	Included in scope of delivery
11	Silencer	U or UC	–
12	Push-in fitting	QS...	For tubing

Solenoid valves CPE, Compact Performance

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Order codes

		CPE		-	M	-				-		-	
Type													
CPE	Solenoid valve, Compact Performance												
Width													
10	10 mm												
14	14 mm												
18	18 mm												
24	24 mm												
Operating voltage													
Square plug													
M1BH	24 V DC for CPE10 and CPE14												
M1H	24 V DC for CPE18 and CPE24												
M2H	110 V AC for CPE18 and CPE24												
M3H	230 V AC for CPE18 and CPE24												
Round plug													
M1CH	24 V DC for CPE10 and CPE14												
Valve function													
3	3/2-way												
5L	5/2-way, single solenoid, pneumatic spring return												
5J	5/2-way, double solenoid												
5/3	5/3-way, single solenoid												
Normal position													
GL	Closed, pneumatic reset for 3/2												
OL	Open, pneumatic reset												
B	Open												
E	Exhausted												
G	Closed												
Pilot air supply													
	Internal												
S	External												
Pneumatic connection													
Female thread													
M5	M5 for CPE10, not with round plug												
M7	M7 for CPE10												
1/8	G1/8 for CPE14												
1/4	G1/4 for CPE18												
3/8	G3/8 for CPE24												
Plug connector for standard O.D. tubing, not with round plug CPE10 and CPE14													
QS-4	Tubing O.D. 4 mm for CPE10												
QS-6	Tubing O.D. 6 mm for CPE10 and CPE14												
QS-8	Tubing O.D. 8 mm for CPE14 and CPE18												
QS-10	Tubing O.D. 10 mm for CPE18 and CPE24												
QS-12	Tubing O.D. 12 mm for CPE24												
Generation													
B	B series for CPE10 5/3 way valve												

Solenoid valves CPE10

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Technical data

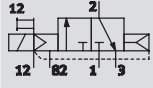
Function

3/2G, 3/2O

5/2-way single solenoid

5/2-way double solenoid

5/3G, 5/3B, 5/3E

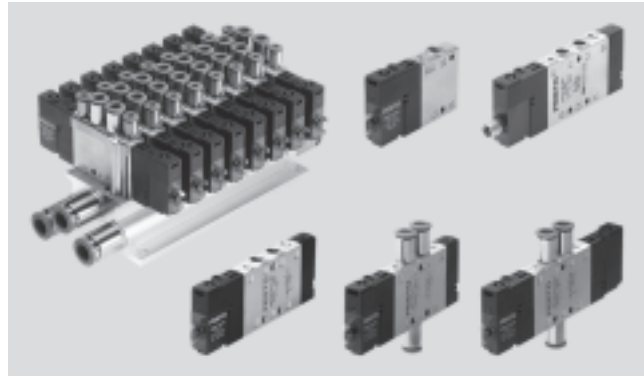


3/2-way valve with external pilot air supply, normally closed

-  - Width 10 mm

-  - Flow rate
180 ... 400 l/min

-  - Voltage
24 V DC



General technical data							
Valve function		3/2		5/2		5/3	
Normal position		G ¹⁾	O ²⁾	–	–	G ¹⁾	B ²⁾ E ³⁾
Memory stability		Single			Double	Single	
Pneumatic spring reset method		Yes			–	No	
Mechanical spring reset method		No			–	Yes	
Design		Piston spool					
Sealing principle		Soft					
Actuation type		Electric					
Control type		Piloted					
Pilot air supply		Internal or external					
Direction of flow		Reversible for external pilot air supply					
Exhaust function		Flow control					
Manual override		Non-detenting, detenting with accessory					
Type of mounting		Using through holes					
Mounting position		Any					
Pneumatic connection	1, 2, 4	Threaded connection: M5, M7; QS connection: Ø 4 or Ø 6 mm					
	3, 5	Threaded connection: M7					
	12, 14	Threaded connection: M3; QS connection: Ø 3					
	82, 84	Threaded connection: M3					
Nominal diameter		[mm]	4				
Standard nominal flow rate	M5	[l/min]	190		180		
Standard nominal flow rate	M7	[l/min]	400			350	300 250
Standard nominal flow rate	QS4	[l/min]	190		180		
Standard nominal flow rate	QS6	[l/min]	300		350	320	300 250
Switching time on/off		[ms]	14/14		20/16	–	20/16
Changeover time		[ms]	–			8	–
Duty cycle		[%]	100				
Width		[mm]	10				
Corrosion resistance class		CRC	2 ⁴⁾				

1) G = Normally closed

2) O, B = Normally open

3) E = Normally exhausted

4) Corrosion resistance class 2 as per Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Solenoid valves CPE10

Technical data

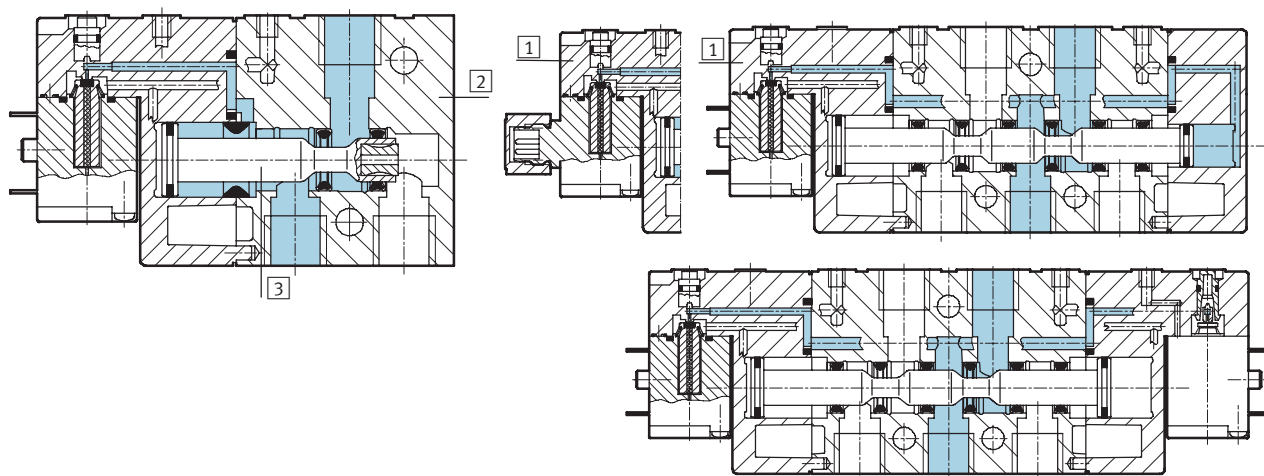
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Operating and environmental conditions						
Valve function			3/2	5/2 single	5/2 double	5/3
Operating medium			Filtered compressed air, lubricated or unlubricated, grade of filtration 40 µm, vacuum			
Operating pressure	Internal pilot air supply	[bar]	2.5 ... 8	3 ... 8		
	External pilot air supply	[bar]	−0.9 ... +10			
Pilot pressure		[bar]	2.5 ... 8	3 ... 8		
Ambient temperature		[°C]	−5 ... +50			
Temperature of medium		[°C]	−5 ... +50			
Certification for solenoid valves			c UL us - Recognised (OL), Germanischer Lloyd			

Electrical data				
Operating voltage	M1BH, M1CH	[V DC]	24 +10/-15%	
Power consumption	M1BH, M1CH	[W]	1.28	
Protection class with plug socket			IP65 (EN 60529)	
Max. tightening torque of plug socket M8x1	M1CH	[Nm]	0.4	

Materials

Sectional view



1	Cover	Polyamide	3	Piston spool	Steel
2	Housing	Die-cast aluminium	-	Seals	Nitrile rubber

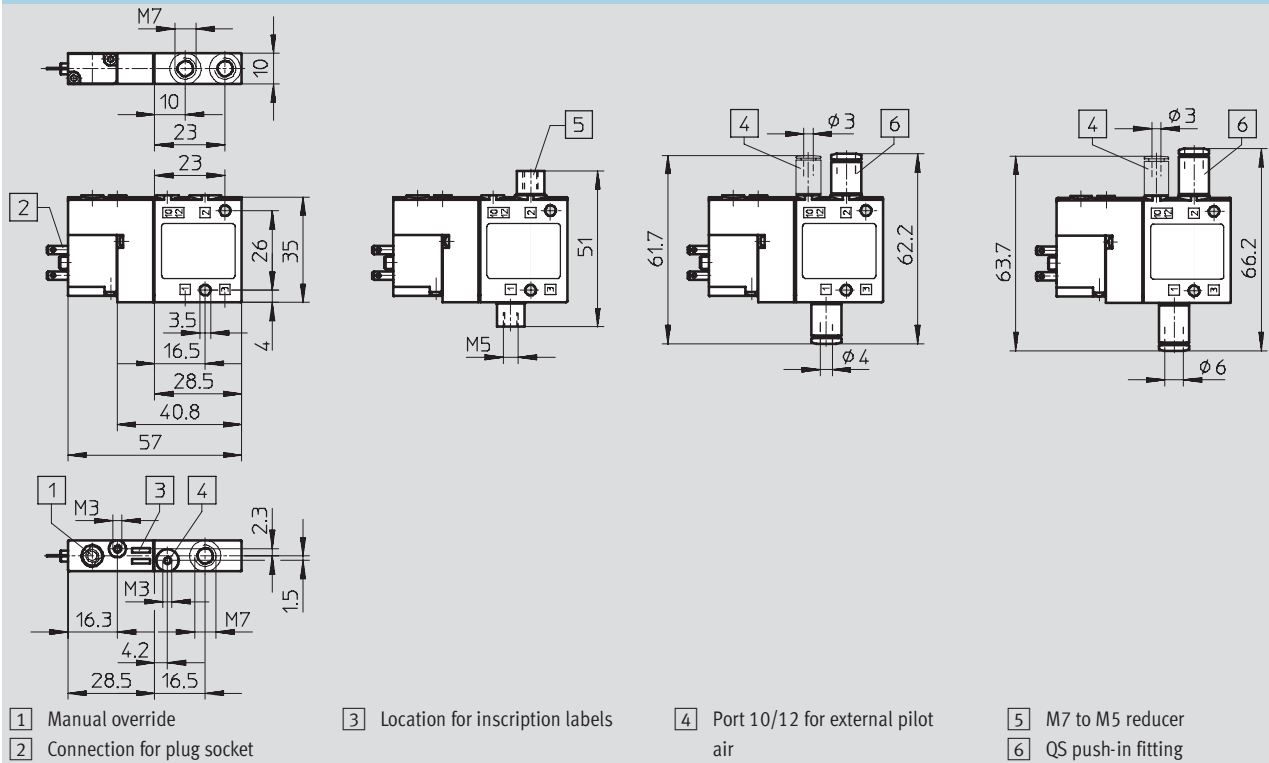
Solenoid valves CPE10

Technical data

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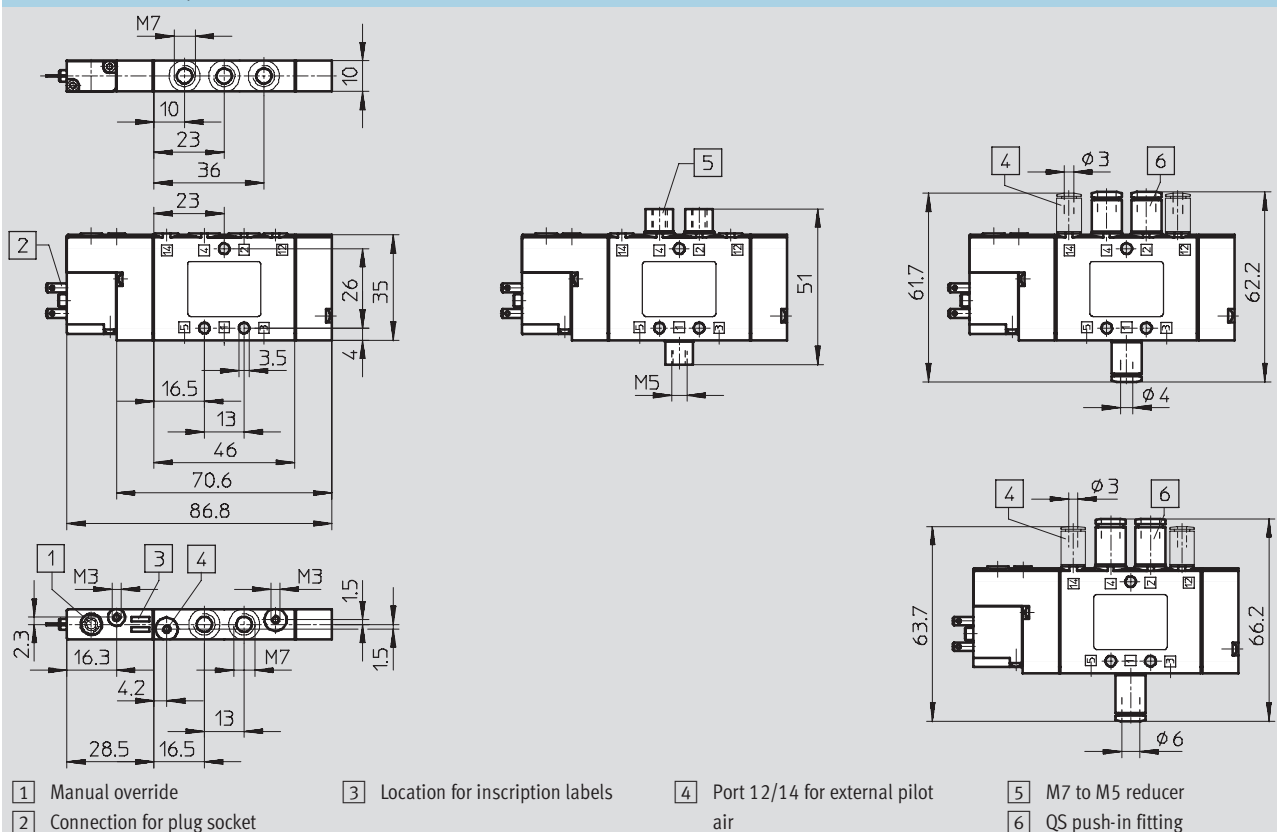
Dimensions – 3/2-way valve

Download CAD data → www.festo.com



Dimensions – 5/2-way single solenoid valve

Download CAD data → www.festo.com



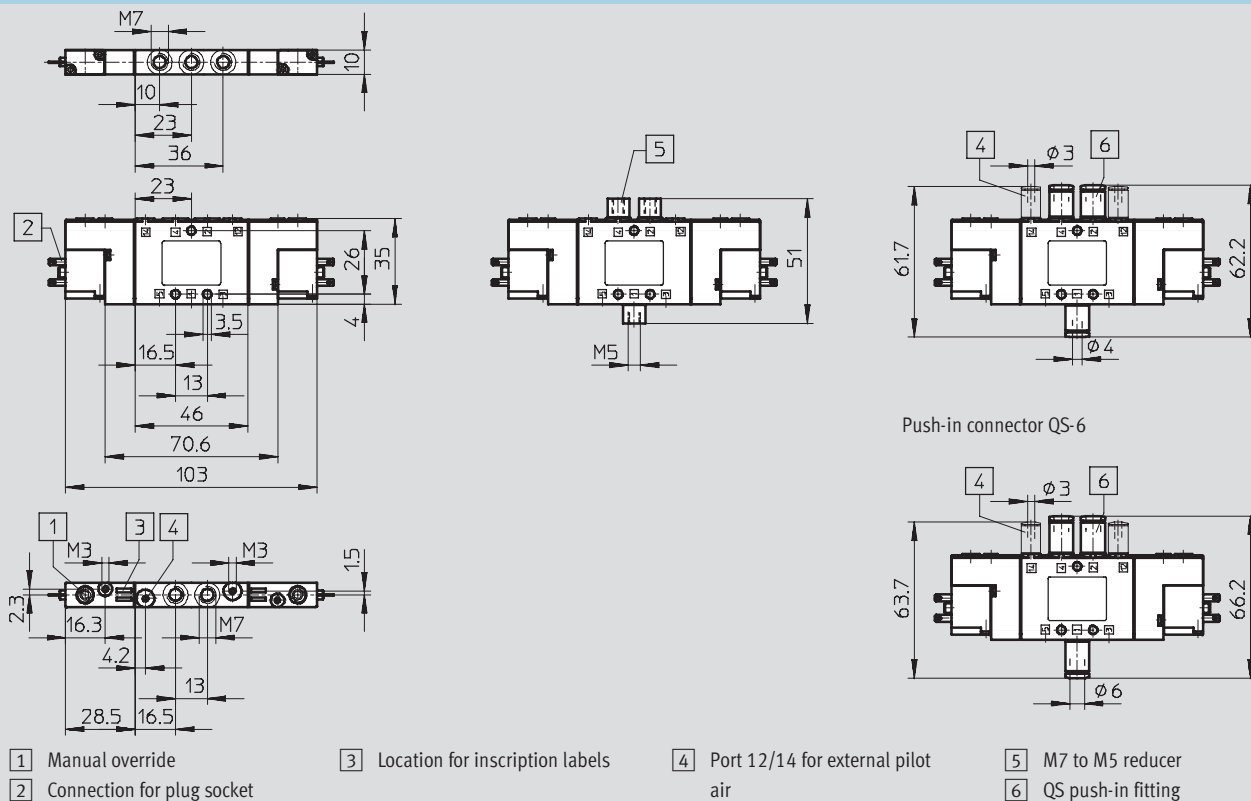
Solenoid valves CPE10

Technical data

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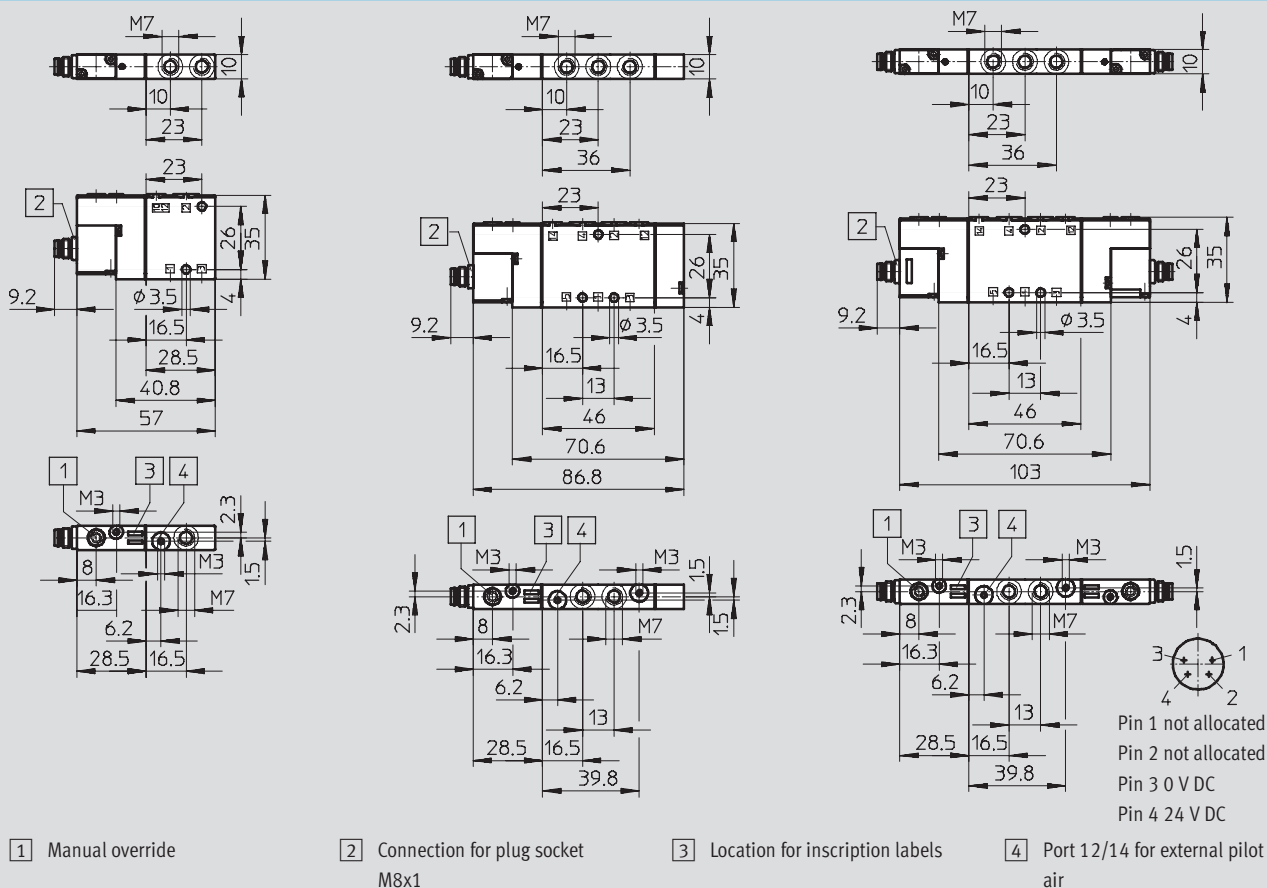
Dimensions – 5/2-way double solenoid valve and 5/3-way valve

Download CAD data → www.festo.com



Dimensions – Solenoid valves with round plug M8x1

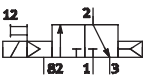
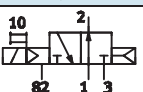
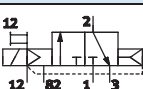
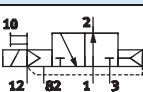
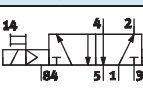
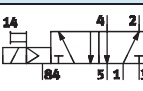
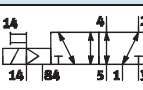
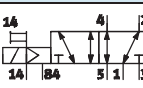
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Solenoid valves CPE10

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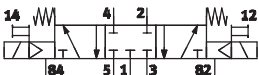
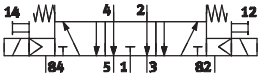
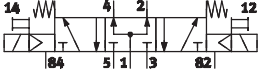
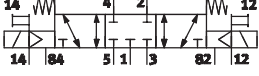
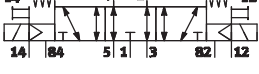
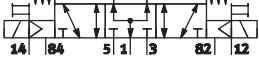
Ordering data

Ordering data							
Circuit symbol	Pilot air supply	Plug socket	Voltage	Connection	Weight [g]	Part No.	Type
3/2-way valve, normally closed							
	Internal	Square	24 V DC	M5	–	196 845	CPE10-M1BH-3GL-M5
				M7	40	196 915	CPE10-M1BH-3GL-M7
				QS-4	–	196 846	CPE10-M1BH-3GL-QS-4
				QS-6	–	196 847	CPE10-M1BH-3GL-QS-6
		M8x1		M7	40	550 233	CPE10-M1CH-3GL-M7
3/2-way valve, normally open							
	Internal	Square	24 V DC	M5	–	196 851	CPE10-M1BH-3OL-M5
				M7	40	196 917	CPE10-M1BH-3OL-M7
				QS-4	–	196 852	CPE10-M1BH-3OL-QS-4
				QS-6	–	196 853	CPE10-M1BH-3OL-QS-6
		M8x1		M7	40	550 235	CPE10-M1CH-3OL-M7
3/2-way valve, normally closed							
	External	Square	24 V DC	M5	–	196 848	CPE10-M1BH-3GLS-M5
				M7	40	196 916	CPE10-M1BH-3GLS-M7
				QS-4	–	196 849	CPE10-M1BH-3GLS-QS-4
				QS-6	–	196 850	CPE10-M1BH-3GLS-QS-6
		M8x1		M7	40	550 234	CPE10-M1CH-3GLS-M7
3/2-way valve, normally open							
	External	Square	24 V DC	M5	–	196 854	CPE10-M1BH-3OLS-M5
				M7	40	196 918	CPE10-M1BH-3OLS-M7
				QS-4	–	196 855	CPE10-M1BH-3OLS-QS-4
				QS-6	–	196 856	CPE10-M1BH-3OLS-QS-6
		M8x1		M7	40	550 236	CPE10-M1CH-3OLS-M7
5/2-way single solenoid valve							
	Internal	Square	24 V DC	M5	–	196 881	CPE10-M1BH-5L-M5
				M7	56	196 927	CPE10-M1BH-5L-M7
				QS-4	–	196 882	CPE10-M1BH-5L-QS-4
				QS-6	–	196 883	CPE10-M1BH-5L-QS-6
		M8x1		M7	56	550 223	CPE10-M1CH-5L-M7
5/2-way double solenoid valve							
	Internal	Square	24 V DC	M5	–	196 875	CPE10-M1BH-5J-M5
				M7	68	196 925	CPE10-M1BH-5J-M7
				QS-4	–	196 876	CPE10-M1BH-5J-QS-4
				QS-6	–	196 877	CPE10-M1BH-5J-QS-6
		M8x1		M7	68	550 225	CPE10-M1CH-5J-M7
5/2-way single solenoid valve							
	External	Square	24 V DC	M5	–	196 884	CPE10-M1BH-5LS-M5
				M7	56	196 928	CPE10-M1BH-5LS-M7
				QS-4	–	196 885	CPE10-M1BH-5LS-QS-4
				QS-6	–	196 886	CPE10-M1BH-5LS-QS-6
		M8x1		M7	56	550 224	CPE10-M1BH-5LS-M7
5/2-way double solenoid valve							
	External	Square	24 V DC	M5	–	196 878	CPE10-M1BH-5JS-M5
				M7	68	196 926	CPE10-M1BH-5JS-M7
				QS-4	–	196 879	CPE10-M1BH-5JS-QS-4
				QS-6	–	196 880	CPE10-M1BH-5JS-QS-6
		M8x1		M7	68	550 226	CPE10-M1CH-5JS-M7

Solenoid valves CPE10

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Ordering data

Ordering data							
Circuit symbol	Pilot air supply	Plug socket	Voltage	Connection	Weight [g]	Part No.	Type
5/3-way mid-position valve, normally closed							
	Internal	Square	24 V DC	M5	–	533 159	CPE10-M1BH-5/3G-M5-B
				M7	68	533 141	CPE10-M1BH-5/3G-M7-B
				QS-4	–	533 147	CPE10-M1BH-5/3G-QS-4-B
				QS-6	–	533 153	CPE10-M1BH-5/3G-QS-6-B
		M8x1		M7	68	550 227	CPE10-M1CH-5/3G-M7
5/3-way mid-position valve, normally exhausted							
	Internal	Square	24 V DC	M5	–	533 161	CPE10-M1BH-5/3E-M5-B
				M7	68	533 143	CPE10-M1BH-5/3E-M7-B
				QS-4	–	533 149	CPE10-M1BH-5/3E-QS-4-B
				QS-6	–	533 155	CPE10-M1BH-5/3E-QS-6-B
		M8x1		M7	68	550 229	CPE10-M1CH-5/3E-M7
5/3-way mid-position valve, normally open							
	Internal	Square	24 V DC	M5	–	533 163	CPE10-M1BH-5/3B-M5-B
				M7	68	533 145	CPE10-M1BH-5/3B-M7-B
				QS-4	–	533 151	CPE10-M1BH-5/3B-QS-4-B
				QS-6	–	533 157	CPE10-M1BH-5/3B-QS-6-B
		M8x1		M7	68	550 231	CPE10-M1CH-5/3B-M7
5/3-way mid-position valve, normally closed							
	External	Square	24 V DC	M5	–	533 160	CPE10-M1BH-5/3GS-M5-B
				M7	68	533 142	CPE10-M1BH-5/3GS-M7-B
				QS-4	–	533 148	CPE10-M1BH-5/3GS-QS-4-B
				QS-6	–	533 154	CPE10-M1BH-5/3GS-QS-6-B
		M8x1		M7	68	550 228	CPE10-M1CH-5/3GS-M7
5/3-way mid-position valve, normally exhausted							
	External	Square	24 V DC	M5	–	533 162	CPE10-M1BH-5/3ES-M5-B
				M7	68	533 144	CPE10-M1BH-5/3ES-M7-B
				QS-4	–	533 150	CPE10-M1BH-5/3ES-QS-4-B
				QS-6	–	533 156	CPE10-M1BH-5/3ES-QS-6-B
		M8x1		M7	68	550 230	CPE10-M1CH-5/3ES-M7
5/3-way mid-position valve, normally open							
	External	Square	24 V DC	M5	–	533 164	CPE10-M1BH-5/3BS-M5-B
				M7	68	533 146	CPE10-M1BH-5/3BS-M7-B
				QS-4	–	533 152	CPE10-M1BH-5/3BS-QS-4-B
				QS-6	–	533 158	CPE10-M1BH-5/3BS-QS-6-B
		M8x1		M7	68	550 232	CPE10-M1CH-5/3BS-M7

Manifold blocks CPE10

Technical data – Manifold block

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Manifold block CPE...-PRS

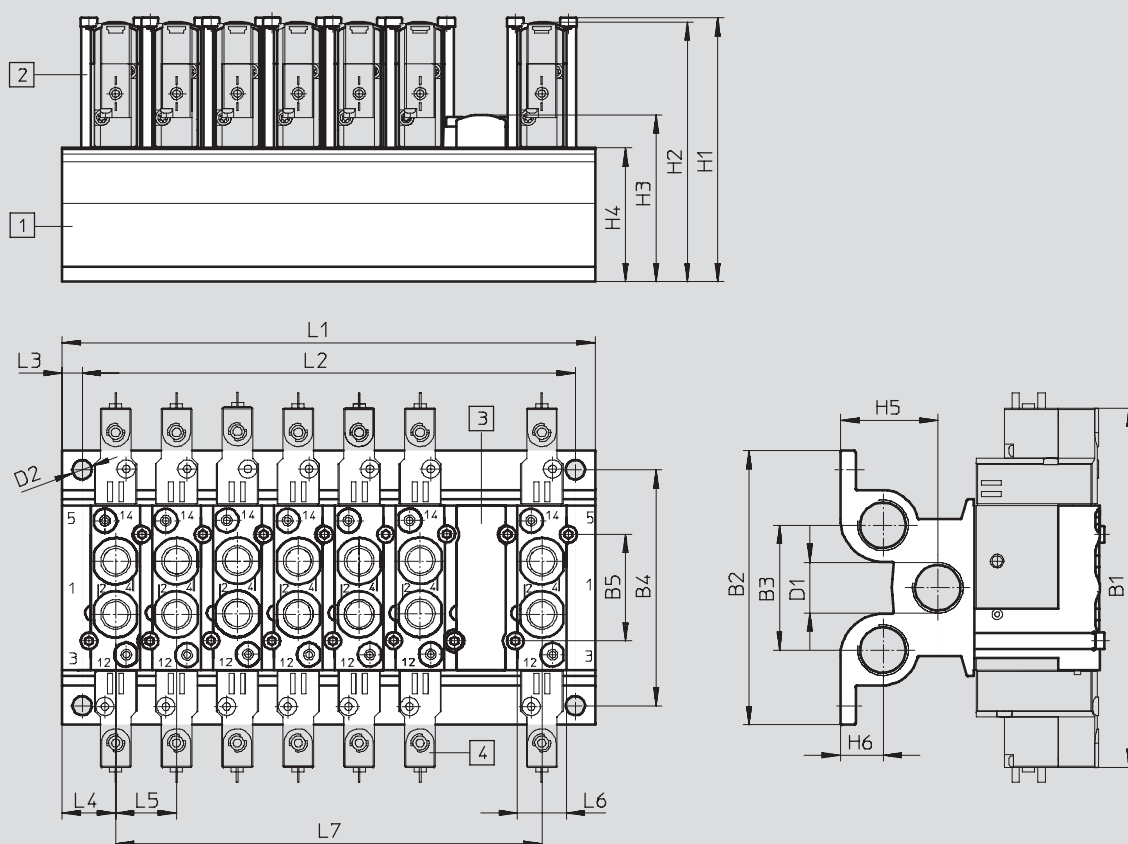
Material:

Wrought aluminium alloy



Dimensions – Fixed-grid manifold 5/2 and 5/3

Download CAD data → www.festo.com



1 Manifold block

2 Retainer

3 Blanking plate

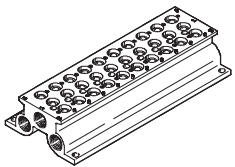
4 Valves

Type	B1	B2	B3	B4	B5	D1	D2	H1	H2	H3	H4	H5
CPE10-PRS...	103	79	35	67.5	26	G $\frac{1}{4}$	5.3	72	69.5	44.8	34	23.5

Type	H6	L1	L2	L3	L4	L5	L6	L7
CPE10-PRS...	11	28 + (n-1) x 16	L1 - 11 ± 0.1	5.5	14	16	13.4	(n-1) x 16

Manifold blocks CPE10

Ordering data – Fixed-grid manifold block

Ordering data						
	Valve positions	CRC	Max. tightening torque [Nm]	Weight [g]	Part No.	Type
Manifold block for 5/2 and 5/3-way valves						
	2	2 ¹⁾	1.2	131	543 821	CPE10-PRS-1/4-2
	3			179	543 822	CPE10-PRS-1/4-3
	4			227	543 823	CPE10-PRS-1/4-4
	5			275	543 824	CPE10-PRS-1/4-5
	6			323	543 825	CPE10-PRS-1/4-6
	7			371	543 826	CPE10-PRS-1/4-7
	8			419	543 827	CPE10-PRS-1/4-8
	9			467	543 828	CPE10-PRS-1/4-9
	10			515	543 829	CPE10-PRS-1/4-10

1) Corrosion resistance class 2 as per Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Ordering data			
	Material	Part No.	Type
Blanking plate for vacant positions			
	Polyamide	544 479	CPE10-RP
Retainer set			
	Retainer: High-alloy stainless steel Screws: Galvanised steel Seals: Nitrile rubber	544 394	CPE10-H5-SET

Ordering data			
	Material	Part No.	Type
Retainer			
	Retainer: High-alloy stainless steel (Packaging unit 50 pieces)	547 045	CPE10-H5-50
Screws			
	Galvanised steel (Packaging unit 100 pieces)	547 048	M3X40-8.8-VS-100
Seals			
	Nitrile rubber (Packaging unit 150 pieces)	547 051	CPV10-VI-PM7-150

Manifold blocks CPE10

Technical data – Fixed-grid manifold block

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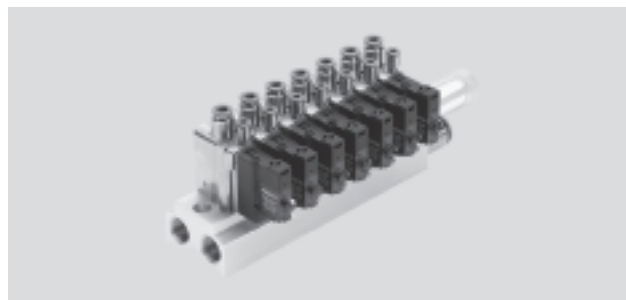
Manifold block

for CPE10 3/2

Material:

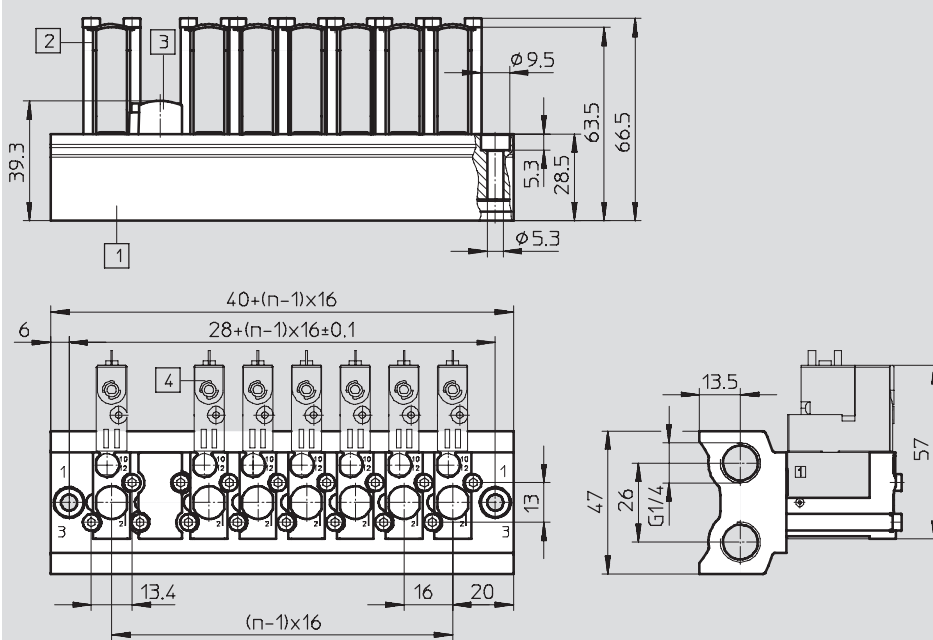
Wrought aluminium alloy

RoHS-compliant



Dimensions – Fixed-grid manifold 3/2

Download CAD data → www.festo.com



1 Manifold block
– Grid dimension 16 mm

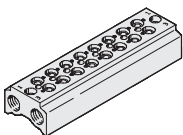
2 Retainer

3 Blanking plate

4 Valves

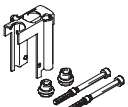
Manifold blocks CPE10

Ordering data – Fixed-grid manifold block

Ordering data						
	Valve positions	CRC	Max. tightening torque of valve mounting [Nm]	Weight [g]	Part No.	Type
Manifold block for 3/2-way valves						
	2	2 ¹⁾	1.2	128	550 550	CPE10-3/2-PRS-1/4-2
	3			164	550 551	CPE10-3/2-PRS-1/4-3
	4			201	550 552	CPE10-3/2-PRS-1/4-4
	5			237	550 553	CPE10-3/2-PRS-1/4-5
	6			274	550 554	CPE10-3/2-PRS-1/4-6
	7			310	550 555	CPE10-3/2-PRS-1/4-7
	8			347	550 556	CPE10-3/2-PRS-1/4-8
	9			383	550 557	CPE10-3/2-PRS-1/4-9
	10			420	550 558	CPE10-3/2-PRS-1/4-10

1) Corrosion resistance class 2 as per Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Ordering data			
	Material	Part No.	Type
Blanking plate			
	Polyamide RoHS-compliant	550 580	CPE10-RP3
Retainer set			
	Retainer: High-alloy stainless steel Screws: Galvanised steel Seals: Nitrile rubber RoHS-compliant	550 577	CPE10-H3-SET

Ordering data			
	Material	Part No.	Type
Retainer			
	Retainer: High-alloy stainless steel (Packaging unit 50 pieces)	551 490	CPE10-H3-50
Screws			
	Galvanised steel (Packaging unit 100 pieces)	547 048	M3X40-8.8-VS-100
Seals			
	Nitrile rubber (Packaging unit 150 pieces)	547 051	CPV10-VI-PM7-150

1) Packaging unit quantity

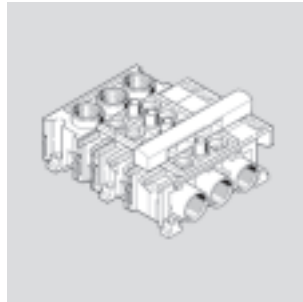
Manifold blocks CPE10

Technical data – Modular manifold

FESTO

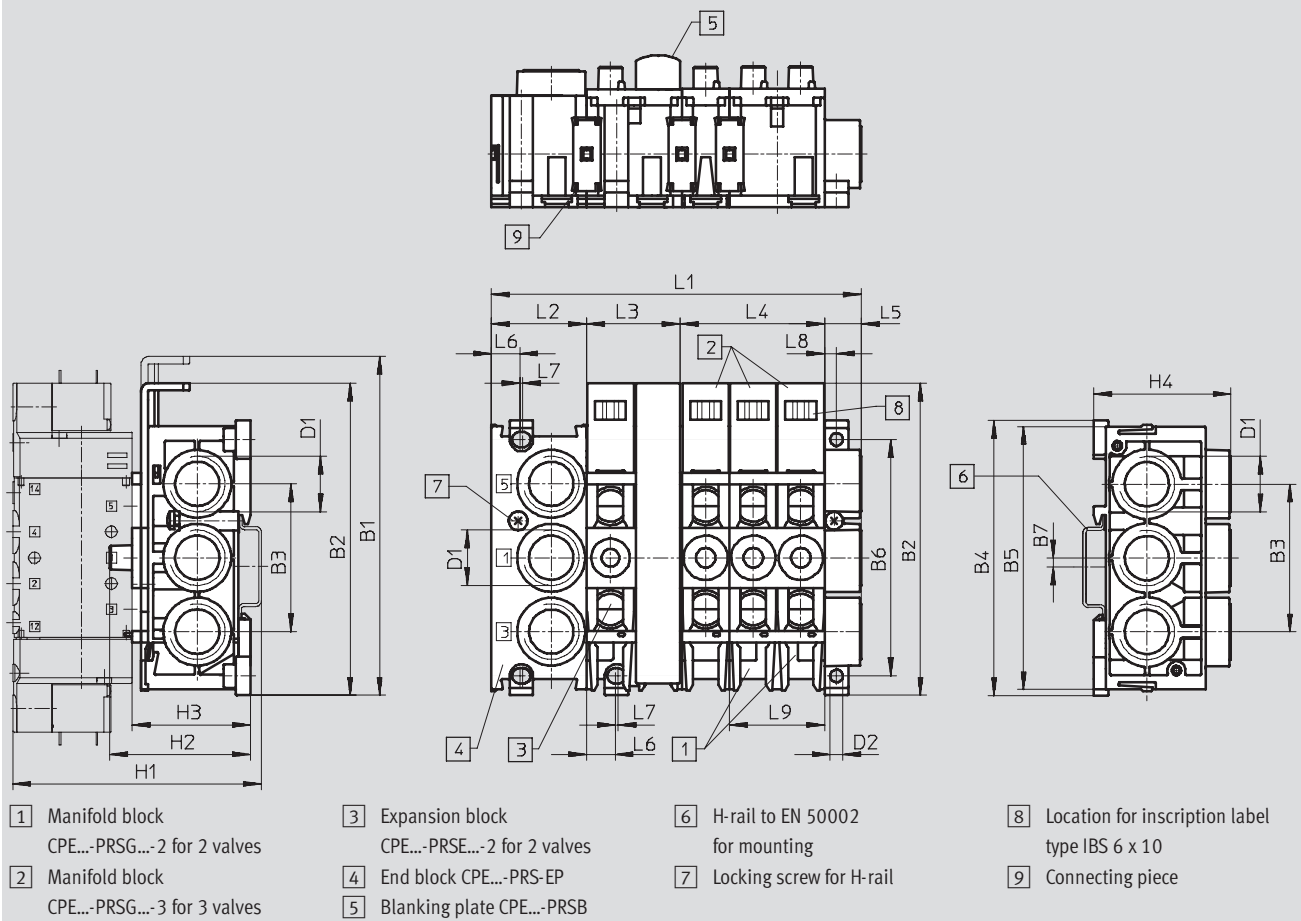
Modular manifold block
for CPE18 5/2 and 5/3

Material:
Reinforced polyamide



Dimensions – Modular manifold block

Download CAD data → www.festo.com



Size	B1	B2	B3	B4	B5	B6	B7	D1	D2 Ø	H1	H2	H3
CPE10	93.5	87	37	73	71	60	7	G¼	3.3	~72	~40	~34

Size	H4	L1 ¹⁾	L2	L3	L4	L5	L6	L7	L8	L9
CPE10	37	24+(nx12)+11.4	24	24	36	11.4	9.6	–	3.2	24

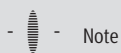
1) n = Number of valve positions

Manifold blocks CPE10

Technical data – Modular manifold

FESTO

Possible combinations			
Number of valve positions	One pressure zone	Two pressure zones	
		Variant 1	Variant 2
2	1x CPE...-PRSG-2	–	–
3	1x CPE...-PRSG-3	–	–
4	1x CPE...-PRSGO-2 1x CPE...-PRSE-2	1x CPE...-PRSG-2 1x CPE...-PRSEO-2 1x CPE...-PRS-EP	–
5	1x CPE...-PRSGO-3 1x CPE...-PRSE-2	1x CPE...-PRSG-3 1x CPE...-PRSEO-2 1x CPE...-PRS-EP	–
6	1x CPE...-PRSGO-2 1x CPE...-PRSEO-2 1x CPE...-PRSE-2	1x CPE...-PRSG-2 2x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-2 1x CPE...-PRSE-2 1x CPE...-PRSEO-2 1x CPE...-PRS-EP
7	1x CPE...-PRSGO-3 2x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSG-3 2x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-3 1x CPE...-PRSE-2 1x CPE...-PRSEO-2 1x CPE...-PRS-EP
8	1x CPE...-PRSGO-2 3x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSG-2 3x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-2 1x CPE...-PRSE-2 2x CPE...-PRSEO-2 1x CPE...-PRS-EP
9	1x CPE...-PRSGO-3 3x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSG-3 3x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-3 1x CPE...-PRSE-2 2x CPE...-PRSEO-2 1x CPE...-PRS-EP
10	1x CPE...-PRSGO-2 4x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSG-2 4x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-2 1x CPE...-PRSE-2 3x CPE...-PRSEO-2 1x CPE...-PRS-EP
11	1x CPE...-PRSGO-3 4x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSG-3 4x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-3 1x CPE...-PRSE-2 3x CPE...-PRSEO-2 1x CPE...-PRS-EP
12	1x CPE...-PRSGO-2 1x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSG-2 5x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-2 1x CPE...-PRSE-2 4x CPE...-PRSEO-2 1x CPE...-PRS-EP



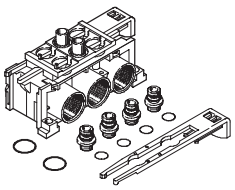
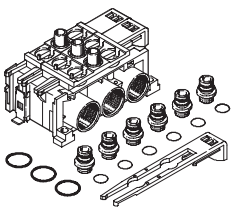
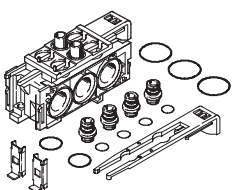
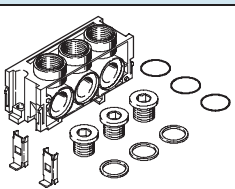
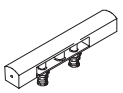
Note

A maximum of 6 valve positions are possible per air supply.
Use valve manifold blocks only in combination with 5/2-way and 5/3-way valves.

Manifold blocks CPE10

Ordering data – Modular manifold

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Ordering data					
	Ports 1, 3, 5	PRS ducts	Weight [g]	Part No.	Type
Manifold block PRSG for 2 valves					
	G $\frac{1}{4}$	Closed	50	164 960	CPE10-PRSG-2
	G $\frac{1}{4}$	Open	50	187 827	CPE10-PRSGO-2
Manifold block PRSG for 3 valves					
	G $\frac{1}{4}$	Closed	70	187 823	CPE10-PRSG-3
	G $\frac{1}{4}$	Open	70	187 819	CPE10-PRSGO-3
Manifold block PRSE for 2 valves					
	–	Closed	40	164 962	CPE10-PRSE-2
	–	Open	40	187 828	CPE10-PRSEO-2
End plate for manifold					
	G $\frac{1}{4}$	–	70	164 964	CPE10-PRS-EP
Blanking plate for vacant positions					
	–	–	10	164 963	CPE10-PRSB

Solenoid valves CPE14

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Technical data

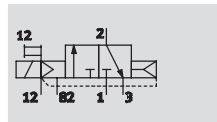
Function

3/2G, 3/2O

5/2-way single solenoid

5/2-way double solenoid

5/3G, 5/3B, 5/3E

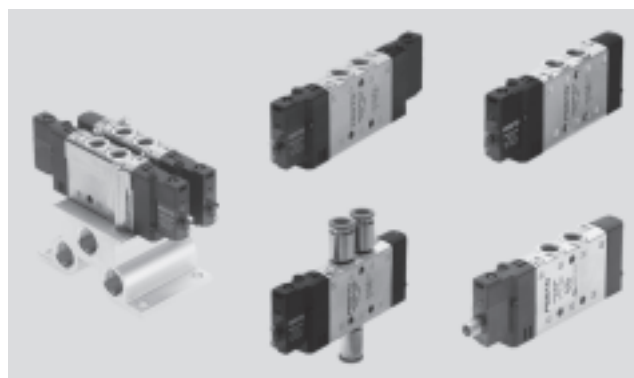


3/2-way valve with external pilot air supply, normally closed

-  - Width 14 mm

-  - Flow rate
370 ... 900 l/min

-  - Voltage
24 V DC



General technical data							
Valve function		3/2		5/2		5/3	
Normal position		G ¹⁾	O ²⁾	–	–	G ¹⁾	B ²⁾ E ³⁾
Memory stability		Single			Double	Single	
Pneumatic spring reset method		Yes			–	No	
Mechanical spring reset method		No			–	Yes	
Design		Piston spool					
Sealing principle		Soft					
Actuation type		Electric					
Control type		Piloted					
Pilot air supply		Internal or external					
Direction of flow		Reversible for external pilot air supply					
Exhaust function		Flow control					
Manual override		Non-detenting, detenting via accessory					
Type of mounting		Using through holes					
Mounting position		Any					
Pneumatic connection	1, 2, 4	Threaded connection: G1/8; QS connection: Ø 6 or Ø 8 mm					
	3, 5	Threaded connection: G1/8					
	12, 14	Threaded connection: M3; QS connection: Ø 3					
	82, 84	Threaded connection: M3					
Nominal diameter		[mm]	6				
Standard nominal flow rate	G1/8	[l/min]	900		800	750 700	
Standard nominal flow rate	QS6	[l/min]	510		400	410	370
Standard nominal flow rate	QS8	[l/min]	810		680	720	650 570
Switching time on/off		[ms]	16/27		24/32	–	20/42
Changeover time		[ms]	–			12	–
Duty cycle		[%]	100				
Width		[mm]	14				
Corrosion resistance class		CRC	2 ⁴⁾				

1) G = Normally closed

2) O, B = Normally open

3) E = Normally exhausted

4) Corrosion resistance class 2 as per Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Solenoid valves CPE14

Technical data

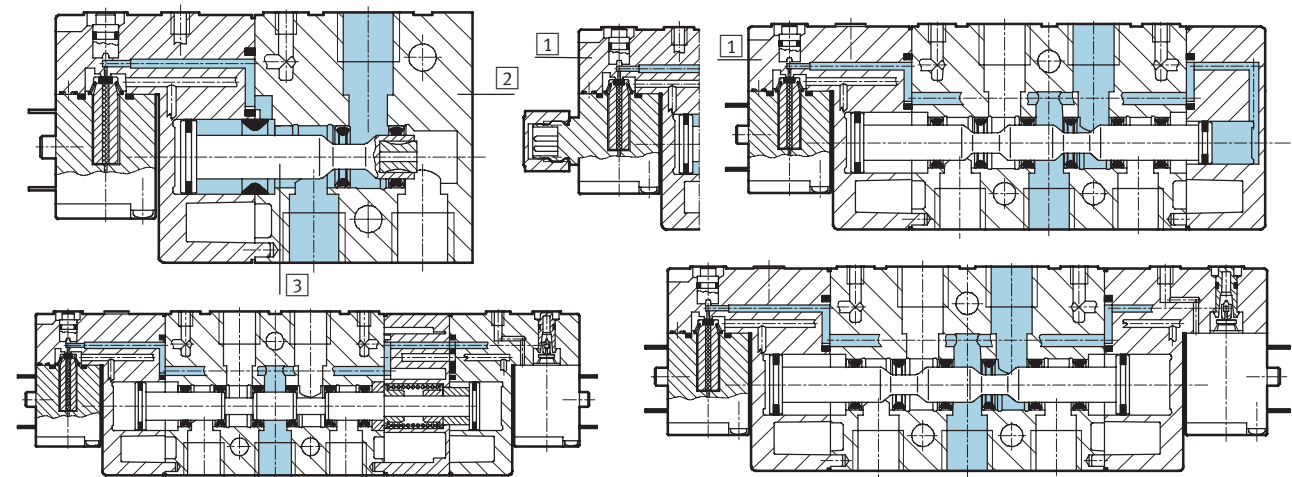
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Operating and environmental conditions						
Valve function			3/2	5/2 single	5/2 double	5/3
Operating medium			Filtered compressed air, lubricated or unlubricated, grade of filtration 40 µm, vacuum			
Operating pressure	Internal pilot air supply	[bar]	2.5 ... 8	3 ... 8	2 ... 8	3 ... 8
	External pilot air supply	[bar]	-0.9 ... +10			
Pilot pressure		[bar]	2.5 ... 8	3 ... 8	2 ... 8	3 ... 8
Ambient temperature		[°C]	-5 ... +50			
Temperature of medium		[°C]	-5 ... +50			
Certification for solenoid valves			c UL us - Recognised (OL), Germanischer Lloyd			

Electrical data			
Operating voltage	M1BH, M1CH	[V DC]	24 +10/-15%
Power consumption	M1BH, M1CH	[W]	1.28
Protection class with plug socket			IP65 (EN 60529)
Max. tightening torque of plug socket M8x1	M1CH	[Nm]	0.4

Materials

Sectional view



1	Cover	Polyamide	3	Piston spool	Steel
2	Housing	Die-cast aluminium	-	Seals	Nitrile rubber

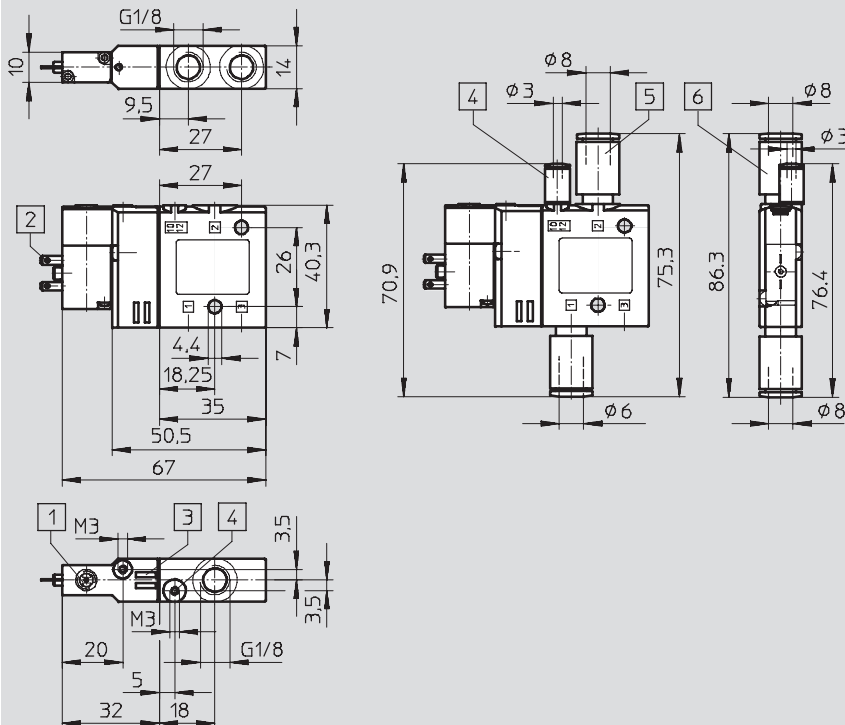
Solenoid valves CPE14

Technical data

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Dimensions – 3/2-way valve

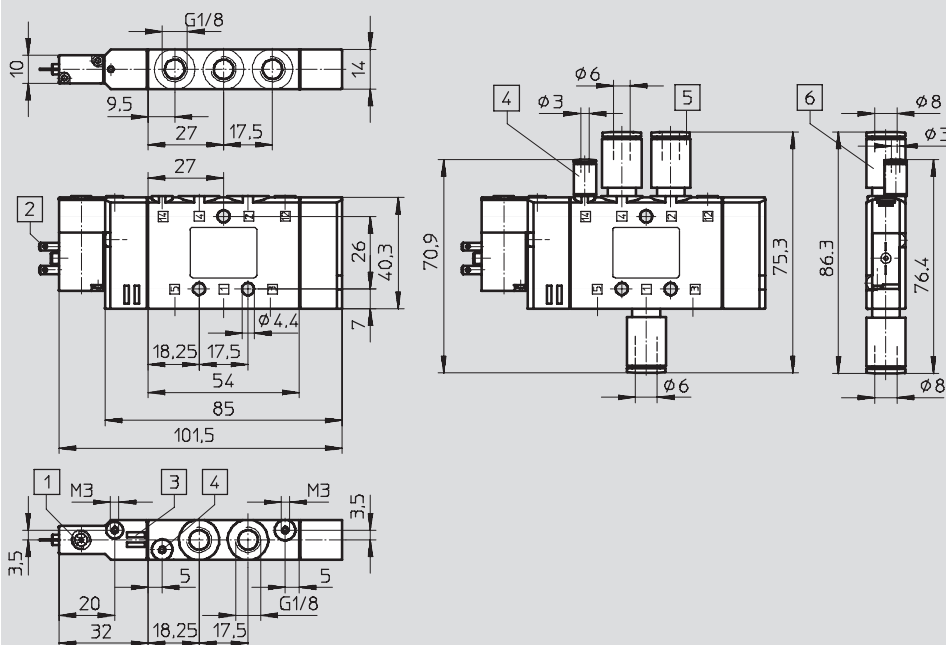
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- 1 Manual override facility
- 2 Connection for plug socket
- 3 Location for inscription labels
- 4 Port 10/12 for external pilot air
- 5 QS push-in fitting
- 6 QS push-in fitting

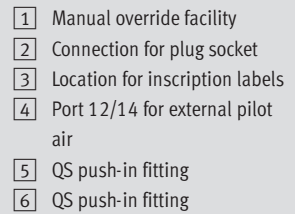
Dimensions – 5/2-way single solenoid valve

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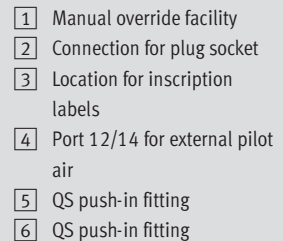


- 1 Manual override facility
- 2 Connection for plug socket
- 3 Location for inscription labels
- 4 Port 12/14 for external pilot air
- 5 QS push-in fitting
- 6 QS push-in fitting

Technical data



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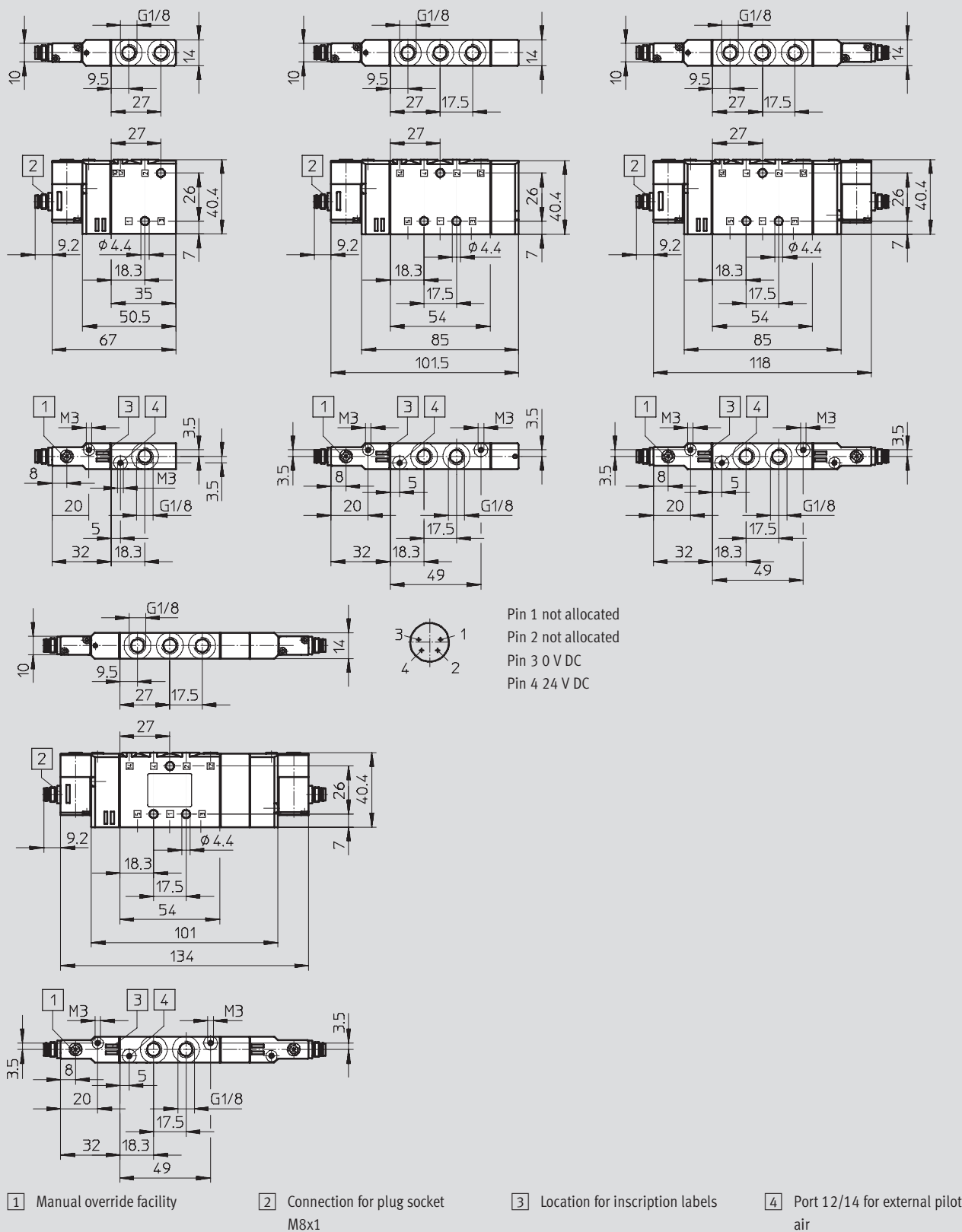
Solenoid valves CPE14

Technical data

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Dimensions – Solenoid valves with round plug M8x1

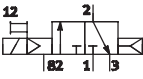
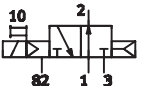
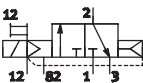
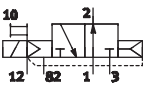
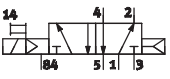
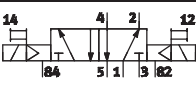
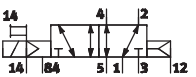
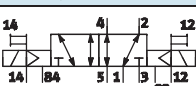
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Solenoid valves CPE14

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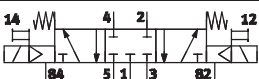
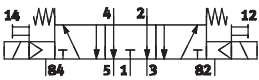
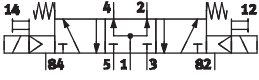
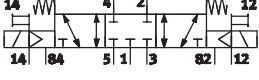
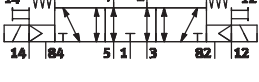
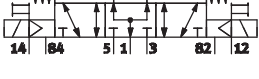
Ordering data

Ordering data							
Circuit symbol	Pilot air supply	Plug socket	Voltage	Connection	Weight [g]	Part No.	Type
3/2-way valve, normally closed							
	Internal	Square	24 V DC	G1/8	60	196 929	CPE14-M1BH-3GL-1/8
				QS-6	–	196 887	CPE14-M1BH-3GL-QS-6
				QS-8	–	196 888	CPE14-M1BH-3GL-QS-8
		M8x1		G1/8	60	550 247	CPE14-M1CH-3GL-1/8
3/2-way valve, normally open							
	Internal	Square	24 V DC	G1/8	60	196 931	CPE14-M1BH-3OL-1/8
				QS-6	–	196 891	CPE14-M1BH-3OL-QS-6
				QS-8	–	196 892	CPE14-M1BH-3OL-QS-8
		M8x1		G1/8	60	550 249	CPE14-M1CH-3OL-1/8
3/2-way valve, normally closed							
	External	Square	24 V DC	G1/8	60	196 930	CPE14-M1BH-3GLS-1/8
				QS-6	–	196 889	CPE14-M1BH-3GLS-QS-6
				QS-8	–	196 890	CPE14-M1BH-3GLS-QS-8
		M8x1		G1/8	60	550 248	CPE14-M1CH-3GLS-1/8
3/2-way valve, normally open							
	External	Square	24 V DC	G1/8	60	196 932	CPE14-M1BH-3OLS-1/8
				QS-6	–	196 893	CPE14-M1BH-3OLS-QS-6
				QS-8	–	196 894	CPE14-M1BH-3OLS-QS-8
		M8x1		G1/8	60	550 250	CPE14-M1CH-3OLS-1/8
5/2-way single solenoid valve							
	Internal	Square	24 V DC	G1/8	95	196 941	CPE14-M1BH-5L-1/8
				QS-6	–	196 911	CPE14-M1BH-5L-QS-6
				QS-8	–	196 912	CPE14-M1BH-5L-QS-8
		M8x1		G1/8	95	550 237	CPE14-M1CH-5L-1/8
5/2-way double solenoid valve							
	Internal	Square	24 V DC	G1/8	115	196 939	CPE14-M1BH-5J-1/8
				QS-6	–	196 907	CPE14-M1BH-5J-QS-6
				QS-8	–	196 908	CPE14-M1BH-5J-QS-8
		M8x1		G1/8	115	550 239	CPE14-M1CH-5J-1/8
5/2-way single solenoid valve							
	External	Square	24 V DC	G1/8	95	196 942	CPE14-M1BH-5LS-1/8
				QS-6	–	196 913	CPE14-M1BH-5LS-QS-6
				QS-8	–	196 914	CPE14-M1BH-5LS-QS-8
		M8x1		G1/8	95	550 238	CPE14-M1CH-5LS-1/8
5/2-way double solenoid valve							
	External	Square	24 V DC	G1/8	115	196 940	CPE14-M1BH-5JS-1/8
				QS-6	–	196 909	CPE14-M1BH-5JS-QS-6
				QS-8	–	196 910	CPE14-M1BH-5JS-QS-8
		M8x1		G1/8	115	550 240	CPE14-M1CH-5JS-1/8

Solenoid valves CPE14

Ordering data

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Ordering data							
Circuit symbol	Pilot air supply	Plug socket	Voltage	Connection	Weight [g]	Part No.	Type
5/3-way mid-position valve, normally closed							
	Internal	Square	24 V DC	G $\frac{1}{8}$	120	196 937	CPE14-M1BH-5/3G- $\frac{1}{8}$
				QS-6	–	196 903	CPE14-M1BH-5/3G-QS-6
				QS-8	–	196 904	CPE14-M1BH-5/3G-QS-8
		M8x1		G $\frac{1}{8}$	120	550 241	CPE14-M1BH-5/3G- $\frac{1}{8}$
5/3-way mid-position valve, normally exhausted							
	Internal	Square	24 V DC	G $\frac{1}{8}$	120	196 935	CPE14-M1BH-5/3E- $\frac{1}{8}$
				QS-6	–	196 899	CPE14-M1BH-5/3E-QS-6
				QS-8	–	196 900	CPE14-M1BH-5/3E-QS-8
		M8x1		G $\frac{1}{8}$	120	550 243	CPE14-M1CH-5/3E- $\frac{1}{8}$
5/3-way mid-position valve, normally open							
	Internal	Square	24 V DC	G $\frac{1}{8}$	120	196 933	CPE14-M1BH-5/3B- $\frac{1}{8}$
				QS-6	–	196 895	CPE14-M1BH-5/3B-QS-6
				QS-8	–	196 896	CPE14-M1BH-5/3B-QS-8
		M8x1		G $\frac{1}{8}$	120	550 245	CPE14-M1CH-5/3B- $\frac{1}{8}$
5/3-way mid-position valve, normally closed							
	External	Square	24 V DC	G $\frac{1}{8}$	120	196 938	CPE14-M1BH-5/3GS- $\frac{1}{8}$
				QS-6	–	196 905	CPE14-M1BH-5/3GS-QS-6
				QS-8	–	196 906	CPE14-M1BH-5/3GS-QS-8
		M8x1		G $\frac{1}{8}$	120	550 242	CPE14-M1BH-5/3GS- $\frac{1}{8}$
5/3-way mid-position valve, normally exhausted							
	External	Square	24 V DC	G $\frac{1}{8}$	120	196 936	CPE14-M1BH-5/3ES- $\frac{1}{8}$
				QS-6	–	196 901	CPE14-M1BH-5/3ES-QS-6
				QS-8	–	196 902	CPE14-M1BH-5/3ES-QS-8
		M8x1		G $\frac{1}{8}$	120	550 244	CPE14-M1CH-5/3ES- $\frac{1}{8}$
5/3-way mid-position valve, normally open							
	External	Square	24 V DC	G $\frac{1}{8}$	120	196 934	CPE14-M1BH-5/3BS- $\frac{1}{8}$
				QS-6	–	196 897	CPE14-M1BH-5/3BS-QS-6
				QS-8	–	196 898	CPE14-M1BH-5/3BS-QS-8
		M8x1		G $\frac{1}{8}$	120	550 246	CPE14-M1CH-5/3BS- $\frac{1}{8}$

Manifold blocks CPE14

Technical data – Manifold block

FESTO

Manifold block CPE...-PRS

Material:

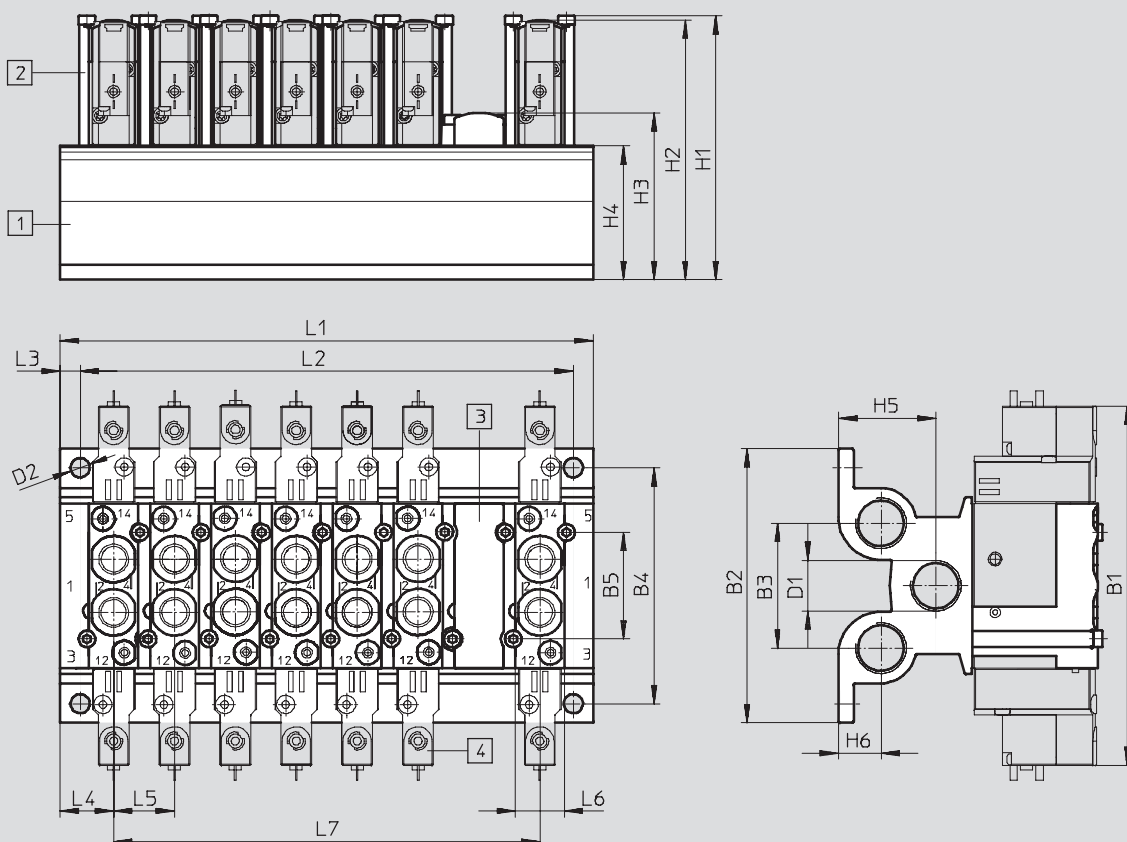
Wrought aluminium alloy

RoHS-compliant



Dimensions – Fixed-grid manifold 5/2 and 5/3

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1 Manifold block

2 Retainer

3 Blanking plate

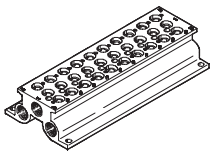
4 Valves

Type	B1	B2	B3	B4	B5	D1	D2	H1	H2	H3	H4	H5
CPE14-PRS...	108	90	41	77.5	35	G $\frac{3}{8}$	6.3	86.7	84.8	54.8	44	32

Type	H6	L1	L2	L3	L4	L5	L6	L7
CPE14-PRS...	14	35 + (n-1) x 20	L1 - 13 ± 0.1	6.5	17.5	20	17.4	(n-1) x 20

Manifold blocks CPE14

Ordering data – Fixed-grid manifold block

Ordering data						
	Valve positions	CRC	Max. tightening torque [Nm]	Weight [g]	Part No.	Type
Manifold block for 5/2-way and 5/3-way valves						
	2	2 ¹⁾	1.2	239	543 830	CPE14-PRS-3/8-2
	3			326	543 831	CPE14-PRS-3/8-3
	4			412	543 832	CPE14-PRS-3/8-4
	5			498	543 833	CPE14-PRS-3/8-5
	6			584	543 834	CPE14-PRS-3/8-6
	7			671	543 835	CPE14-PRS-3/8-7
	8			757	543 836	CPE14-PRS-3/8-8
	9			843	543 837	CPE14-PRS-3/8-9
	10			930	543 838	CPE14-PRS-3/8-10

1) Corrosion resistance class 2 as per Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Ordering data			
	Material	Part No.	Type
Blanking plate for vacant positions			
	Polyamide	544 480	CPE14-RP
Retainer set			
	Retainer: High-alloy stainless steel Screws: Galvanised steel Seals: Nitrile rubber	544 395	CPE14-H5-SET

Ordering data			
	Material	Part No.	Type
Retainer			
	Retainer: High-alloy stainless steel (Packaging unit 50 pieces)	547 046	CPE14-H5-50
Screws			
	Galvanised steel (Packaging unit 100 pieces)	547 049	M3X45-8.8-VS-100
Seals			
	Nitrile rubber (Packaging unit 150 pieces)	547 052	CPV14-VI-P1/8-150

Manifold blocks CPE14

Technical data – Fixed-grid manifold block

FESTO

Manifold block

for CPE14 3/2

Material:

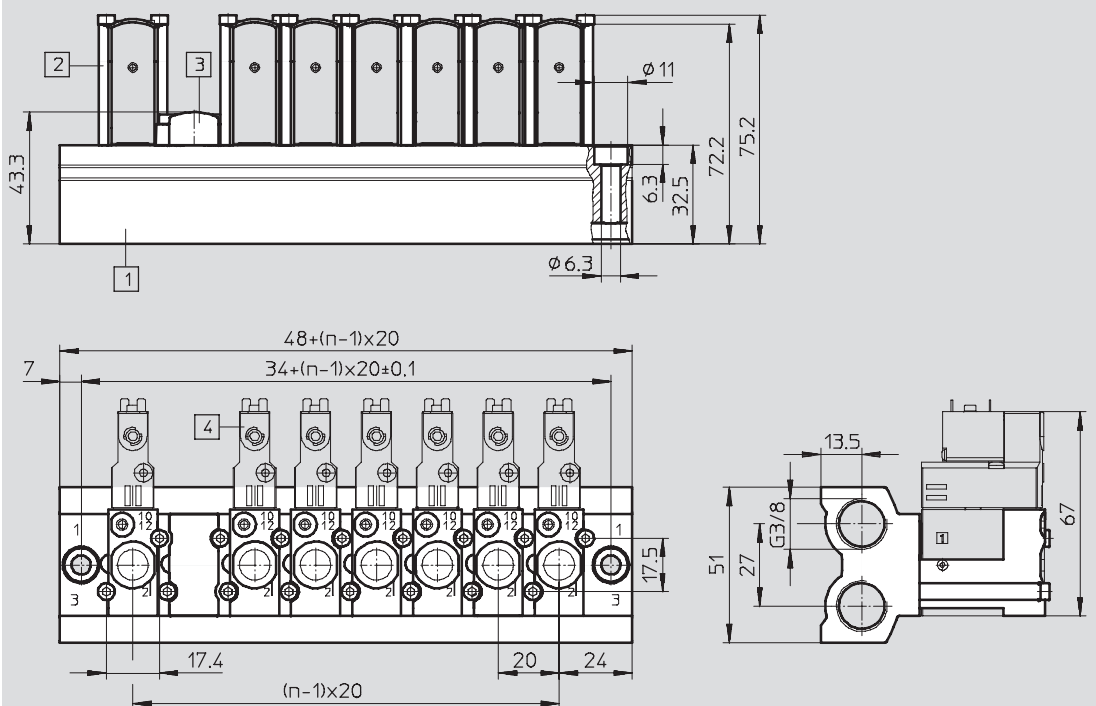
Wrought aluminium alloy

RoHS-compliant



Dimensions – Fixed-grid manifold 3/2

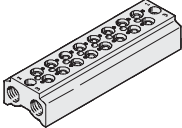
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- | | | | |
|--|--|--|--|
|  Manifold block |  Retainer |  Blanking plate |  Valves |
| – Grid dimension 20 mm | | | |

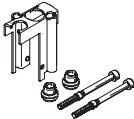
Manifold blocks CPE14

Ordering data – Fixed-grid manifold block

Ordering data						
	Valve positions	CRC	Max. tightening torque of valve mounting [Nm]	Weight [g]	Part No.	Type
Manifold block for 3/2-way valves						
	2	2 ¹⁾	1.2	176	550 559	CPE14-3/2-PRS-3/8-2
	3			228	550 560	CPE14-3/2-PRS-3/8-3
	4			280	550 561	CPE14-3/2-PRS-3/8-4
	5			332	550 562	CPE14-3/2-PRS-3/8-5
	6			384	550 563	CPE14-3/2-PRS-3/8-6
	7			436	550 564	CPE14-3/2-PRS-3/8-7
	8			488	550 565	CPE14-3/2-PRS-3/8-8
	9			540	550 566	CPE14-3/2-PRS-3/8-9
	10			592	550 567	CPE14-3/2-PRS-3/8-10

1) Corrosion resistance class 2 as per Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Ordering data			
	Material	Part No.	Type
Blanking plate			
	Polyamide	550 581	CPE14-RP3
Retainer set			
	Retainer: High-alloy stainless steel Screws: Galvanised steel Seals: Nitrile rubber	550 578	CPE14-H3-SET

Ordering data			
	Material	Part No.	Type
Retainer			
	Retainer: High-alloy stainless steel (Packaging unit 50 pieces)	551 491	CPE14-H3-50
Screws			
	Galvanised steel (Packaging unit 100 pieces)	547 049	M3X45-8.8-VS-100
Seals			
	Nitrile rubber (Packaging unit 150 pieces)	547 052	CPV14-VI-P1/8-150

1) Packaging unit quantity

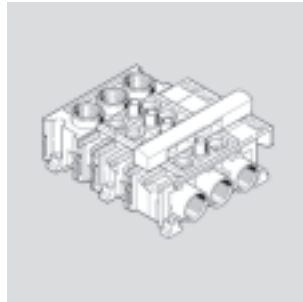
Manifold blocks CPE14

Technical data – Modular manifold

FESTO

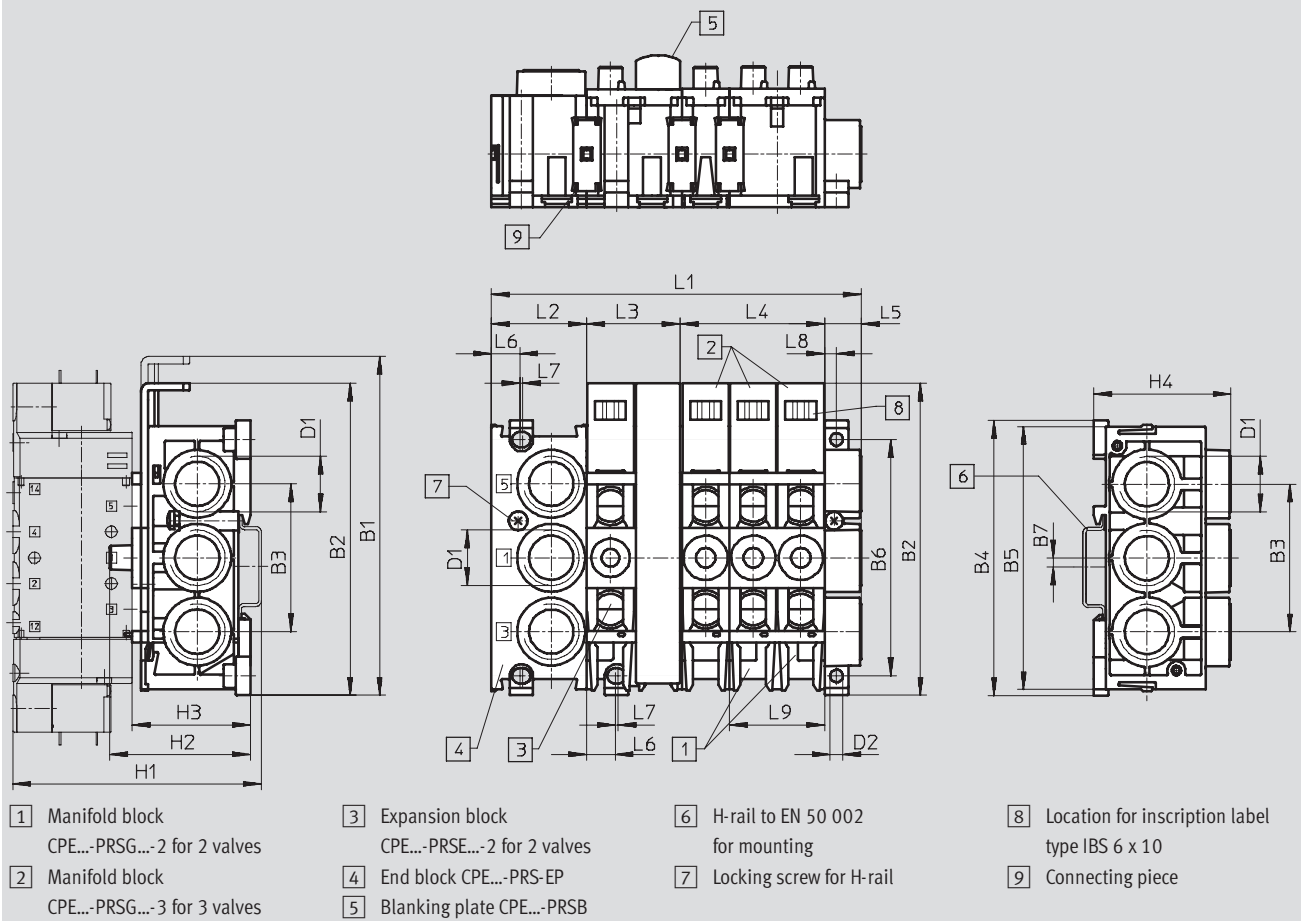
Modular manifold block
for CPE14 5/2 and 5/3

Material:
Reinforced polyamide



Dimensions – Modular manifold block

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Size	B1	B2	B3	B4	B5	B6	B7	D1	D2 Ø	H1	H2	H3
CPE14	114.6	105.6	50	93	89	80	3	G $\frac{3}{8}$	4.3	~84	~48	~40

Size	H4	L1 ¹⁾	L2	L3	L4	L5	L6	L7	L8	L9
CPE14	46.4	32+(nx16)+12.4	32	32	48	12.4	10.1	–	4	32

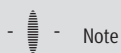
1) n = Number of valve positions

Manifold blocks CPE14

Technical data – Modular manifold

FESTO

Possible combinations			
Number of valve positions	One pressure zone	Two pressure zones	
		Variant 1	Variant 2
2	1x CPE...-PRSG-2	–	–
3	1x CPE...-PRSG-3	–	–
4	1x CPE...-PRSGO-2 1x CPE...-PRSE-2	1x CPE...-PRSG-2 1x CPE...-PRSEO-2 1x CPE...-PRS-EP	–
5	1x CPE...-PRSGO-3 1x CPE...-PRSE-2	1x CPE...-PRSG-3 1x CPE...-PRSEO-2 1x CPE...-PRS-EP	–
6	1x CPE...-PRSGO-2 1x CPE...-PRSEO-2 1x CPE...-PRSE-2	1x CPE...-PRSG-2 2x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-2 1x CPE...-PRSE-2 1x CPE...-PRSEO-2 1x CPE...-PRS-EP
7	1x CPE...-PRSGO-3 2x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSG-3 2x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-3 1x CPE...-PRSE-2 1x CPE...-PRSEO-2 1x CPE...-PRS-EP
8	1x CPE...-PRSGO-2 3x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSG-2 3x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-2 1x CPE...-PRSE-2 2x CPE...-PRSEO-2 1x CPE...-PRS-EP
9	1x CPE...-PRSGO-3 3x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSG-3 3x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-3 1x CPE...-PRSE-2 2x CPE...-PRSEO-2 1x CPE...-PRS-EP
10	1x CPE...-PRSGO-2 4x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSG-2 4x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-2 1x CPE...-PRSE-2 3x CPE...-PRSEO-2 1x CPE...-PRS-EP
11	1x CPE...-PRSGO-3 4x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSG-3 4x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-3 1x CPE...-PRSE-2 3x CPE...-PRSEO-2 1x CPE...-PRS-EP
12	1x CPE...-PRSGO-2 1x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSG-2 5x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-2 1x CPE...-PRSE-2 4x CPE...-PRSEO-2 1x CPE...-PRS-EP



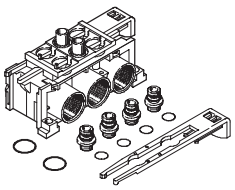
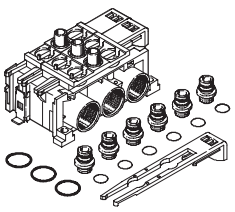
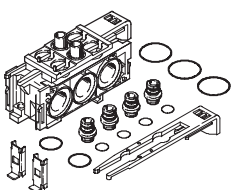
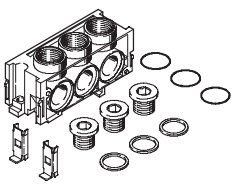
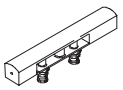
Note

A maximum of 6 valve positions are possible per air supply.
Use valve manifold blocks only in combination with 5/2-way and 5/3-way valves.

Manifold blocks CPE14

Ordering data – Modular manifold

FESTO

Ordering data					
	Ports 1, 3, 5	PRS ducts	Weight [g]	Part No.	Type
Manifold block PRSG for 2 valves					
	G $\frac{3}{8}$	Closed	95	164 965	CPE14-PRSG-2
	G $\frac{3}{8}$	Open	95	187 829	CPE14-PRSGO-2
Manifold block PRSG for 3 valves					
	G $\frac{3}{8}$	Closed	130	187 824	CPE14-PRSG-3
	G $\frac{3}{8}$	Open	130	187 820	CPE14-PRSGO-3
Manifold block PRSE for 2 valves					
	–	Closed	85	164 967	CPE14-PRSE-2
	–	Open	85	187 830	CPE14-PRSEO-2
End plate for manifold					
	G $\frac{3}{8}$	–	80	164 969	CPE14-PRS-EP
Blanking plate for vacant positions					
	–	–	15	164 968	CPE14-PRSB

Solenoid valves CPE18

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Technical data

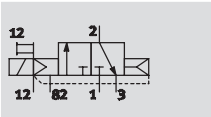
Functions:

3/2G, 3/2O

5/2-way single solenoid

5/2-way double solenoid

5/3G, 5/3B, 5/3E

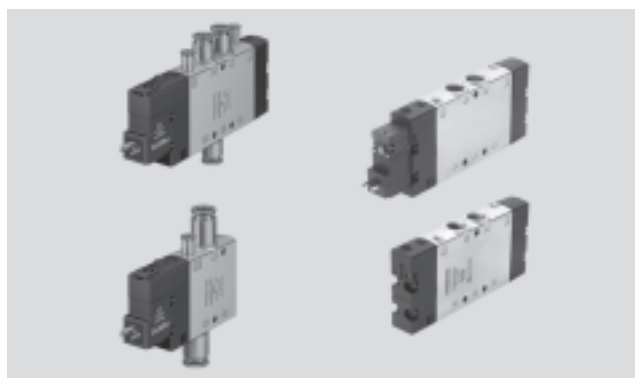


3/2G with external pilot air supply,
normally closed

-  - Width 18 mm

-  - Flow rate
850 ... 1,500 l/min

-  - Voltage for
Complete valves
24 V DC, 110, 230 V AC
Basic valves
12, 24 V DC, 24, 110,
230 V AC



General technical data									
Valve function		3/2		5/2		5/3			
Normal position		G ¹⁾	O ²⁾	–	–	G ¹⁾	B ²⁾ E ³⁾		
Memory stability		Single			Double	Single			
Pneumatic spring reset method		Yes			–	No			
Mechanical spring reset method		No			–	Yes			
Design		Piston spool							
Sealing principle		Soft							
Actuation type		Electric							
Control type		Piloted							
Pilot interface		To ISO 15218 or none in the case of integrated pilot valve							
Pilot air supply		Internal or external							
Direction of flow		Reversible for external pilot air supply							
Exhaust function		Flow control							
Manual override		Non-detenting, detenting via accessory							
Type of mounting		Using through holes							
Mounting position		Any							
Pneumatic connection	1, 2, 4	Threaded connection: G ¹ / ₄ ; QS connection: Ø 8 or Ø 10 mm							
	3, 5	Threaded connection: G ¹ / ₄							
	12, 14	Threaded connection: M5; QS connection: Ø 4							
	82, 84	Threaded connection: M5							
Nominal diameter		[mm]	8						
Standard nominal flow rate	G ¹ / ₄	[l/min]	1,300		1,300		1,450	1,200	1,300
Standard nominal flow rate	QS8	[l/min]	850						780
Standard nominal flow rate	QS10	[l/min]	1,000			1,050		1,000	
Switching time on/off		[ms]	28/18, 36/30 ⁵⁾		26/20, 32/30 ⁵⁾	–	20/38, 20/34 ⁵⁾		
Changeover time		[ms]	–			13, 15 ⁵⁾		–	
Duty cycle		[%]	100						
Width		[mm]	18						
Conforms to		ISO 15218 in the case of interface with pilot valve							
Corrosion resistance class		CRC	2 ⁴⁾						

1) G = Normally closed

2) O, B = Normally open

3) E = Normally exhausted

4) Corrosion resistance class 2 as per Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

5) Switching time for basic valve

Solenoid valves CPE18

Technical data

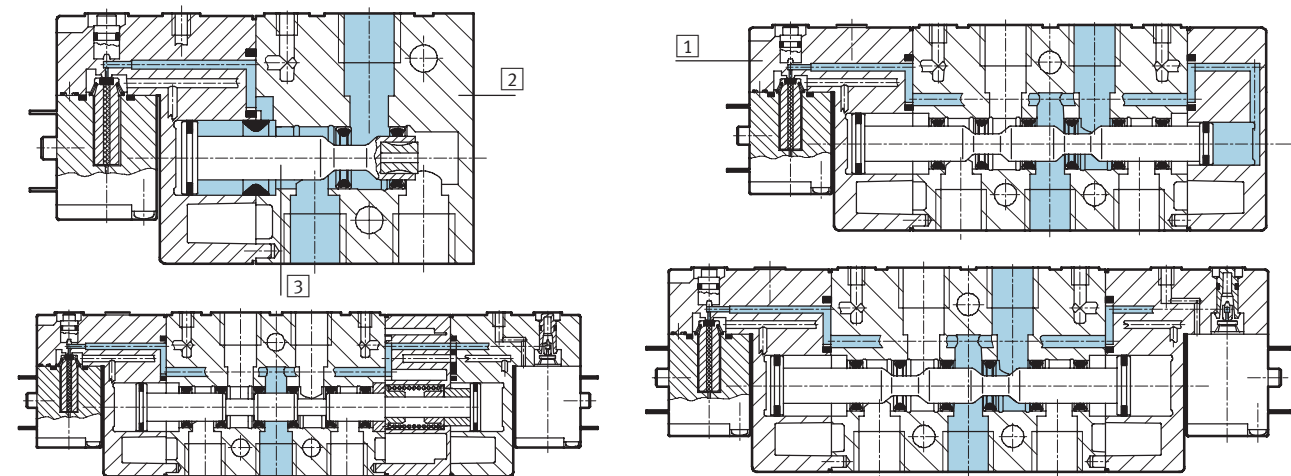
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Operating and environmental conditions				
Valve function		3/2	5/2 single	5/2 double
Operating medium		Filtered compressed air, lubricated or unlubricated, grade of filtration 40 µm, vacuum		
Operating pressure	Internal pilot air supply [bar]	2.5 ... 10		2 ... 10
	External pilot air supply [bar]	-0.9 ... +10		2.5 ... 10
Pilot pressure [bar]		2.5 ... 10		2 ... 10
Ambient temperature [°C]		-5 ... +50		
Temperature of medium [°C]		-5 ... +50		
Certification for solenoid valves		c UL us - Recognised (OL), Germanischer Lloyd		

Electrical data			
Operating voltage	M1H [V DC]	24 +10/-15%	
	M2H [V AC]	110 ±10% at 50 ... 60 Hz	
	M3H [V AC]	230 ±10% at 50 ... 60 Hz	
Power consumption	M1H [W]	1.5	
	M2H, M3H [VA]	Pull: 3, hold: 2.4	
Protection class with plug socket		IP65 (EN 60529)	

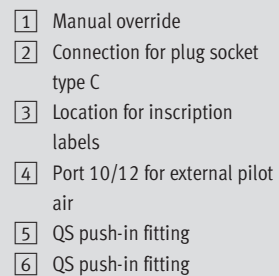
Materials

Sectional view

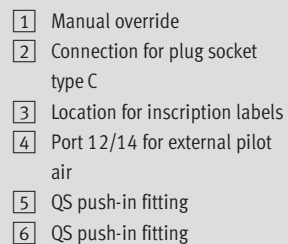


1	Cover	Polyamide	3	Piston spool	Steel
2	Housing	Die-cast aluminium	-	Seals	Nitrile rubber

Technical data



Dimensions – 5/2-way single solenoid valve



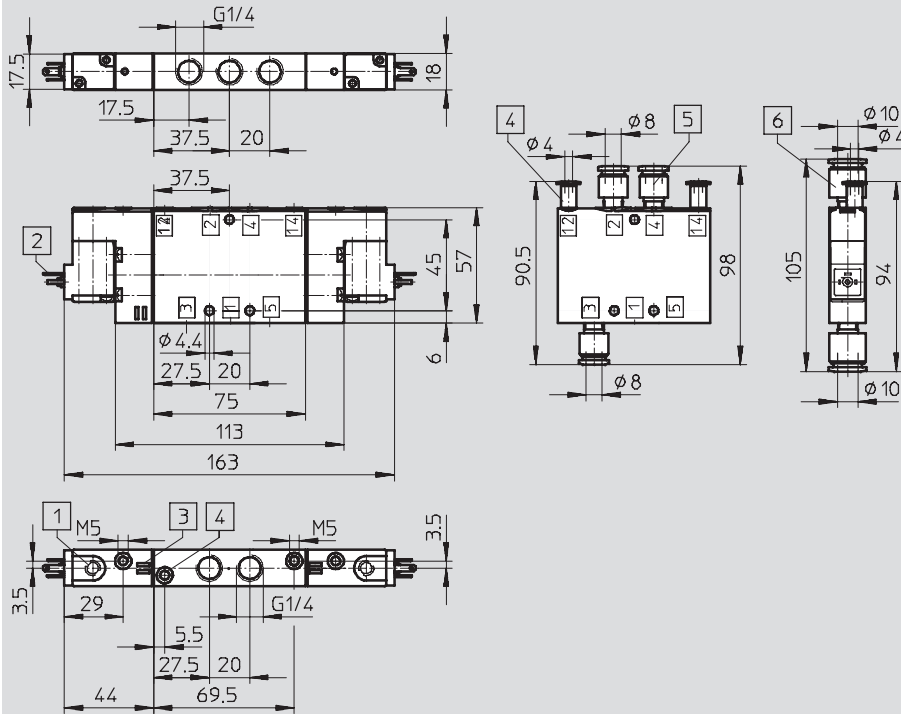
Solenoid valves CPE18

Technical data

FESTO

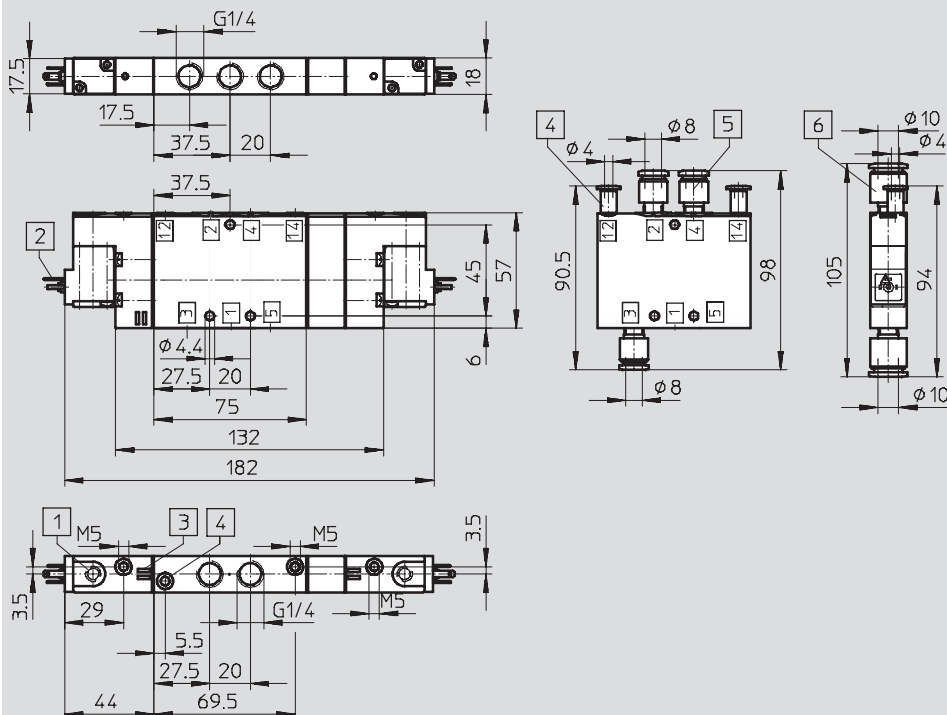
Dimensions – 5/2-way double solenoid valve

Download CAD data → www.festo.com



Dimensions – 5/3-way valve

Download CAD data → www.festo.com



Solenoid valves CPE18

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Ordering data

Ordering data – 3/2-way valve						
Circuit symbol	Pilot air supply	Voltage	Connection	Weight [g]	Part No.	Type
Normally closed						
	Internal	24 V DC	G¼	150	163 141	CPE18-M1H-3GL-¼
			QS-8	–	163 149	CPE18-M1H-3GL-QS-8
			QS-10	–	163 157	CPE18-M1H-3GL-QS-10
		110 V AC	G¼	150	163 761	CPE18-M2H-3GL-¼
			QS-8	–	163 769	CPE18-M2H-3GL-QS-8
			QS-10	–	163 777	CPE18-M2H-3GL-QS-10
		230 V AC	G¼	150	163 785	CPE18-M3H-3GL-¼
			QS-8	–	163 793	CPE18-M3H-3GL-QS-8
			QS-10	–	163 801	CPE18-M3H-3GL-QS-10
Normally open						
	Internal	24 V DC	G¼	150	163 140	CPE18-M1H-3OL-¼
			QS-8	–	163 148	CPE18-M1H-3OL-QS-8
			QS-10	–	163 156	CPE18-M1H-3OL-QS-10
		110 V AC	G¼	150	163 760	CPE18-M2H-3OL-¼
			QS-8	–	163 768	CPE18-M2H-3OL-QS-8
			QS-10	–	163 776	CPE18-M2H-3OL-QS-10
		230 V AC	G¼	150	163 784	CPE18-M3H-3OL-¼
			QS-8	–	163 792	CPE18-M3H-3OL-QS-8
			QS-10	–	163 800	CPE18-M3H-3OL-QS-10
Normally closed						
	External	24 V DC	G¼	150	163 145	CPE18-M1H-3GLS-¼
			QS-8	–	163 153	CPE18-M1H-3GLS-QS-8
			QS-10	–	163 161	CPE18-M1H-3GLS-QS-10
		110 V AC	G¼	150	163 765	CPE18-M2H-3GLS-¼
			QS-8	–	163 773	CPE18-M2H-3GLS-QS-8
			QS-10	–	163 781	CPE18-M2H-3GLS-QS-10
		230 V AC	G¼	150	163 789	CPE18-M3H-3GLS-¼
			QS-8	–	163 797	CPE18-M3H-3GLS-QS-8
			QS-10	–	163 805	CPE18-M3H-3GLS-QS-10
Normally open						
	External	24 V DC	G¼	150	163 144	CPE18-M1H-3OLS-¼
			QS-8	–	163 152	CPE18-M1H-3OLS-QS-8
			QS-10	–	163 160	CPE18-M1H-3OLS-QS-10
		110 V AC	G¼	150	163 764	CPE18-M2H-3OLS-¼
			QS-8	–	163 772	CPE18-M2H-3OLS-QS-8
			QS-10	–	163 780	CPE18-M2H-3OLS-QS-10
		230 V AC	G¼	150	163 788	CPE18-M3H-3OLS-¼
			QS-8	–	163 796	CPE18-M3H-3OLS-QS-8
			QS-10	–	163 804	CPE18-M3H-3OLS-QS-10

Solenoid valves CPE18

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Ordering data

Ordering data – 5/2-way valve						
Circuit symbol	Pilot air supply	Voltage	Connection	Weight [g]	Part No.	Type
5/2-way single solenoid valve						
	Internal	24 V DC	G¼	220	163 142	CPE18-M1H-5L-¼
			QS-8	–	163 150	CPE18-M1H-5L-QS-8
			QS-10	–	163 158	CPE18-M1H-5L-QS-10
		110 V AC	G¼	220	163 762	CPE18-M2H-5L-¼
			QS-8	–	163 770	CPE18-M2H-5L-QS-8
			QS-10	–	163 778	CPE18-M2H-5L-QS-10
		230 V AC	G¼	220	163 786	CPE18-M3H-5L-¼
			QS-8	–	163 794	CPE18-M3H-5L-QS-8
			QS-10	–	163 802	CPE18-M3H-5L-QS-10
5/2-way double solenoid valve						
	Internal	24 V DC	G¼	270	163 143	CPE18-M1H-5J-¼
			QS-8	–	163 151	CPE18-M1H-5J-QS-8
			QS-10	–	163 159	CPE18-M1H-5J-QS-10
		110 V AC	G¼	270	163 763	CPE18-M2H-5J-¼
			QS-8	–	163 771	CPE18-M2H-5J-QS-8
			QS-10	–	163 779	CPE18-M2H-5J-QS-10
		230 V AC	G¼	270	163 787	CPE18-M3H-5J-¼
			QS-8	–	163 795	CPE18-M3H-5J-QS-8
			QS-10	–	163 803	CPE18-M3H-5J-QS-10
5/2-way single solenoid valve						
	External	24 V DC	G¼	220	163 146	CPE18-M1H-5LS-¼
			QS-8	–	163 154	CPE18-M1H-5LS-QS-8
			QS-10	–	163 162	CPE18-M1H-5LS-QS-10
		110 V AC	G¼	220	163 766	CPE18-M2H-5LS-¼
			QS-8	–	163 774	CPE18-M2H-5LS-QS-8
			QS-10	–	163 782	CPE18-M2H-5LS-QS-10
		230 V AC	G¼	220	163 790	CPE18-M3H-5LS-¼
			QS-8	–	163 798	CPE18-M3H-5LS-QS-8
			QS-10	–	163 806	CPE18-M3H-5LS-QS-10
5/2-way double solenoid valve						
	External	24 V DC	G¼	270	163 147	CPE18-M1H-5JS-¼
			QS-8	–	163 155	CPE18-M1H-5JS-QS-8
			QS-10	–	163 163	CPE18-M1H-5JS-QS-10
		110 V AC	G¼	270	163 767	CPE18-M2H-5JS-¼
			QS-8	–	163 775	CPE18-M2H-5JS-QS-8
			QS-10	–	163 783	CPE18-M2H-5JS-QS-10
		230 V AC	G¼	270	163 791	CPE18-M3H-5JS-¼
			QS-8	–	163 799	CPE18-M3H-5JS-QS-8
			QS-10	–	163 807	CPE18-M3H-5JS-QS-10

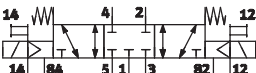
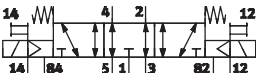
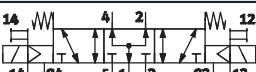
Ordering data

Ordering data – 5/3-way valve						
Circuit symbol	Pilot air supply	Voltage	Connection	Weight [g]	Part No.	Type
5/3-way mid-position valve, normally closed						
	Internal	24 V DC	G¼	280	170 247	CPE18-M1H-5/3G-¼
			QS-8	–	170 253	CPE18-M1H-5/3G-QS-8
			QS-10	–	170 259	CPE18-M1H-5/3G-QS-10
		110 V AC	G¼	280	170 283	CPE18-M2H-5/3G-¼
			QS-8	–	170 289	CPE18-M2H-5/3G-QS-8
			QS-10	–	170 295	CPE18-M2H-5/3G-QS-10
		230 V AC	G¼	280	170 319	CPE18-M3H-5/3G-¼
			QS-8	–	170 325	CPE18-M3H-5/3G-QS-8
			QS-10	–	170 331	CPE18-M3H-5/3G-QS-10
5/3-way mid-position valve, normally exhausted						
	Internal	24 V DC	G¼	280	170 249	CPE18-M1H-5/3E-¼
			QS-8	–	170 255	CPE18-M1H-5/3E-QS-8
			QS-10	–	170 261	CPE18-M1H-5/3E-QS-10
		110 V AC	G¼	280	170 285	CPE18-M2H-5/3E-¼
			QS-8	–	170 291	CPE18-M2H-5/3E-QS-8
			QS-10	–	170 297	CPE18-M2H-5/3E-QS-10
		230 V AC	G¼	280	170 321	CPE18-M3H-5/3E-¼
			QS-8	–	170 327	CPE18-M3H-5/3E-QS-8
			QS-10	–	170 333	CPE18-M3H-5/3E-QS-10
5/3-way mid-position valve, normally open						
	Internal	24 V DC	G¼	280	170 251	CPE18-M1H-5/3B-¼
			QS-8	–	170 257	CPE18-M1H-5/3B-QS8
			QS-10	–	170 263	CPE18-M1H-5/3B-QS10
		110 V AC	G¼	280	170 287	CPE18-M2H-5/3B-¼
			QS-8	–	170 293	CPE18-M2H-5/3B-QS-8
			QS-10	–	170 299	CPE18-M2H-5/3B-QS-10
		230 V AC	G¼	280	170 323	CPE18-M3H-5/3B-¼
			QS-8	–	170 329	CPE18-M3H-5/3B-QS-8
			QS-10	–	170 335	CPE18-M3H-5/3B-QS-10

Solenoid valves CPE18

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Ordering data

Ordering data – 5/3-way valve						
Circuit symbol	Pilot air supply	Voltage	Connection	Weight [g]	Part No.	Type
5/3-way mid-position valve, normally closed						
	External	24 V DC	G¼	280	170 248	CPE18-M1H-5/3GS-¼
			QS-8	–	170 254	CPE18-M1H-5/3GS-QS-8
			QS-10	–	170 260	CPE18-M1H-5/3GS-QS-10
		110 V AC	G¼	280	170 284	CPE18-M2H-5/3GS-¼
			QS-8	–	170 290	CPE18-M2H-5/3GS-QS-8
			QS-10	–	170 296	CPE18-M2H-5/3GS-QS10
		230 V AC	G¼	280	170 320	CPE18-M3H-5/3GS-¼
			QS-8	–	170 326	CPE18-M3H-5/3GS-QS-8
			QS-10	–	170 332	CPE18-M3H-5/3GS-QS10
5/3-way mid-position valve, normally exhausted						
	External	24 V DC	G¼	280	170 250	CPE18-M1H-5/3ES-¼
			QS-8	–	170 256	CPE18-M1H-5/3ES-QS-8
			QS-10	–	170 262	CPE18-M1H-5/3ES-QS-10
		110 V AC	G¼	280	170 286	CPE18-M2H-5/3ES-¼
			QS-8	–	170 292	CPE18-M2H-5/3ES-QS-8
			QS-10	–	170 298	CPE18-M2H-5/3ES-QS10
		230 V AC	G¼	280	170 322	CPE18-M3H-5/3ES-¼
			QS-8	–	170 328	CPE18-M3H-5/3ES-QS-8
			QS-10	–	170 334	CPE18-M3H-5/3ES-QS10
5/3-way mid-position valve, normally open						
	External	24 V DC	G¼	280	170 252	CPE18-M1H-5/3BS-¼
			QS-8	–	170 258	CPE18-M1H-5/3BS-QS-8
			QS-10	–	170 264	CPE18-M1H-5/3BS-QS-10
		110 V AC	G¼	280	170 288	CPE18-M2H-5/3BS-¼
			QS-8	–	170 294	CPE18-M2H-5/3BS-QS-8
			QS-10	–	170 300	CPE18-M2H-5/3BS-QS-10
		230 V AC	G¼	280	170 324	CPE18-M3H-5/3BS-¼
			QS-8	–	170 330	CPE18-M3H-5/3BS-QS-8
			QS-10	–	170 336	CPE18-M3H-5/3BS-QS-10

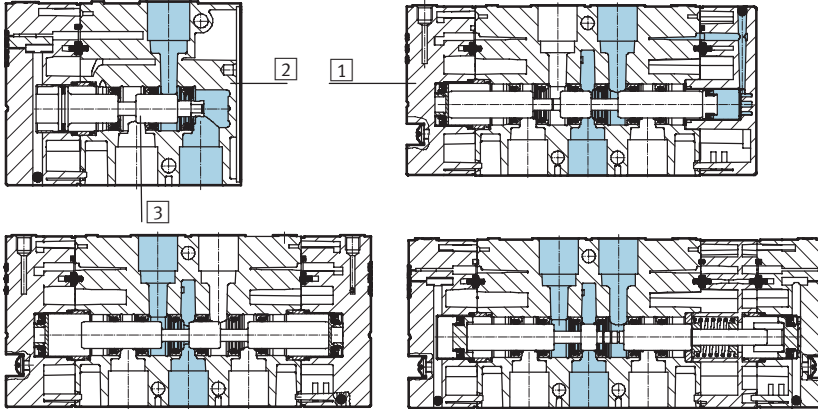
Basic valves CPE18

Technical data – Directional control valves without pilot valve

FESTO

Materials

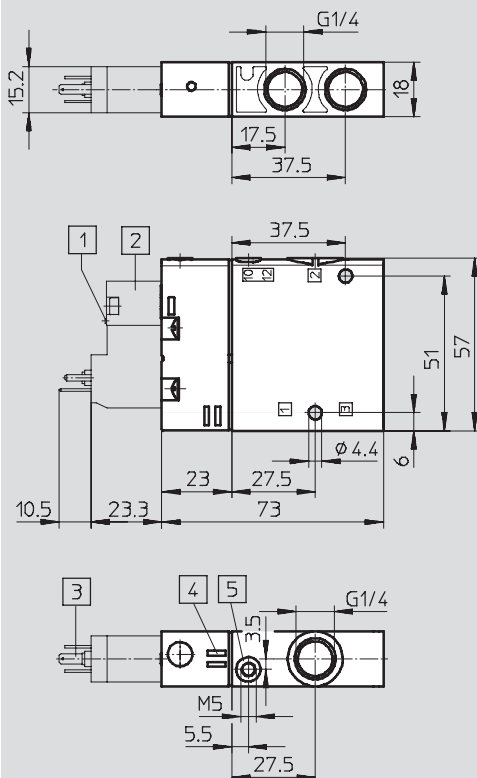
Sectional view



1	Cover	Polyamide	3	Piston spool	Steel
2	Housing	Die-cast aluminium	-	Seals	Nitrile rubber

Dimensions – 3/2-way valve

Download CAD data → www.festo.com



- 1 Manual override, non-detenting
- 2 Pilot valve with plug pattern to DIN EN 175301-803 type C
- 3 Pin only available for solenoid valve with 110 and 230 V (protective earth conductor)
- 4 Location for inscription label
- 5 Port 10/12 for external pilot air

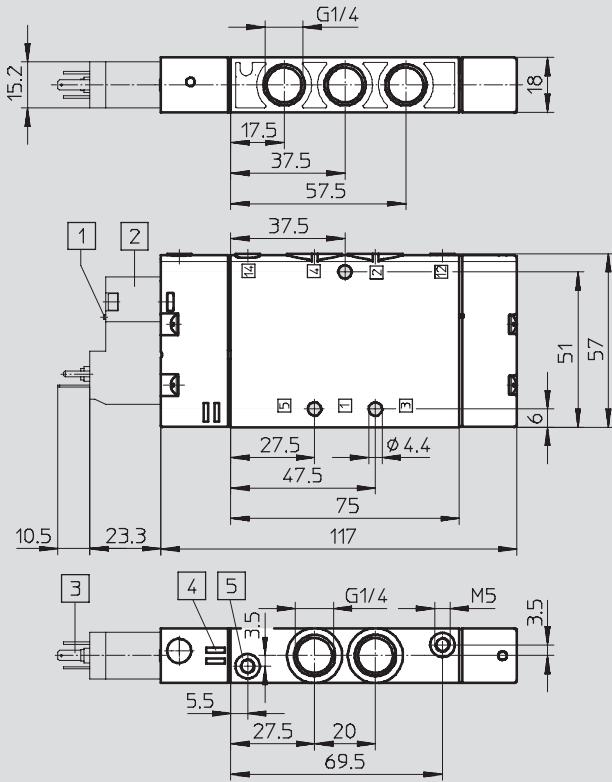
Basic valves CPE18

Technical data – Directional control valves without pilot valve

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Dimensions – 5/2-way valve

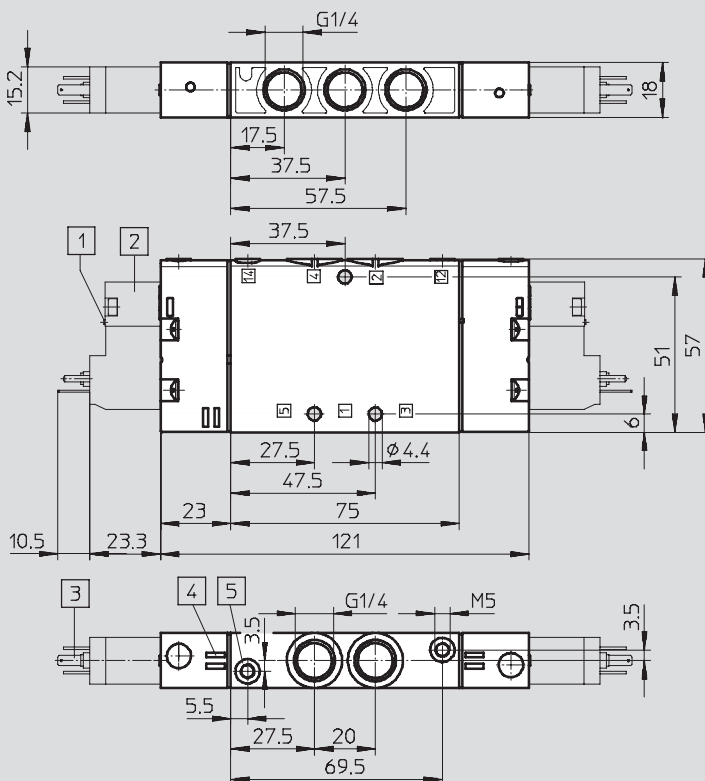
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- 1 Manual override, non-detenting
- 2 Pilot valve with plug pattern to DIN EN 175301-803 type C
- 3 Pin only available for solenoid valve with 110 and 230 V (protective earth conductor)
- 4 Location for inscription label
- 5 Port 10/12 for external pilot air

Dimensions – 5/2-way double solenoid valve

Download CAD data → www.festo.com



- 1 Manual override, non-detenting
- 2 Pilot valve with plug pattern to DIN EN 175301-803 type C
- 3 Pin only available for solenoid valve with 110 and 230 V (protective earth conductor)
- 4 Location for inscription label
- 5 Port 10/12 for external pilot air

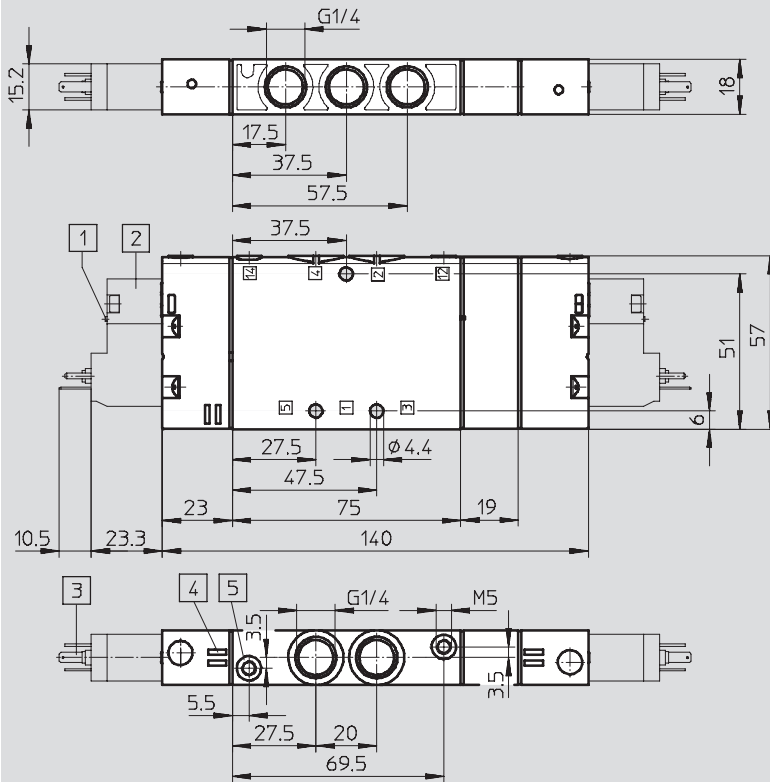
Basic valves CPE18

Technical data – Directional control valves without pilot valve

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Dimensions – 5/3-way valve

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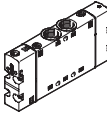
- 1 Manual override, non-detenting
- 2 Pilot valve with plug pattern to DIN EN 175301-803 type C
- 3 Pin only available for solenoid valve with 110 and 230 V (protective earth conductor)
- 4 Location for inscription label
- 5 Port 10/12 for external pilot air

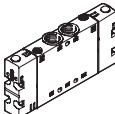
Basic valves CPE18

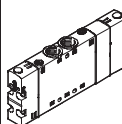
Ordering data

FESTO

Ordering data – 3/2-way valve without pilot valve					
Design	Normal position	Pilot air supply	Weight [g]	Part No.	Type
	Closed	Internal	110	550 163	CPE18-P1-3GL-1/4
	Open			550 165	CPE18-P1-3OL-1/4
	Closed	External		550 164	CPE18-P1-3GLS-1/4
	Open			550 166	CPE18-P1-3OLS-1/4

Ordering data – 5/2-way single solenoid valve without pilot valve					
Design		Pilot air supply	Weight [g]	Part No.	Type
		Internal	180	550 153	CPE18-P1-5L-1/4
		External		550 154	CPE18-P1-5LS-1/4

Ordering data – 5/2-way double solenoid valve without pilot valve					
Design		Pilot air supply	Weight [g]	Part No.	Type
		Internal	190	550 155	CPE18-P1-5J-1/4
		External		550 156	CPE18-P1-5JS-1/4

Ordering data – 5/3-way mid-position valve without pilot valve					
Design	Normal position	Pilot air supply	Weight [g]	Part No.	Type
	Closed	Internal	200	550 157	CPE18-P1-5/3G-¼
	Open			550 158	CPE18-P1-5/3E-¼
	Exhausted			550 159	CPE18-P1-5/3B-¼
	Closed	External		550 160	CPE18-P1-5/3GS-¼
	Open			550 161	CPE18-P1-5/3ES-¼
	Exhausted			550 162	CPE18-P1-5/3BS-¼

Ordering data – Pilot valve to ISO 15218							
Design	Plug, square design	Protective earth conductor	Output		Voltage		Part No. Type
			[W]	[VA]	[V DC]	[V AC]	
	DIN EN 175301-803, type C	No	1.8	–	24	–	546 256 VSCS-B-M32-MH-WA-1C1
		No	1.8	–	12	–	546 257 VSCS-B-M32-MH-WA-5C1
	DIN EN 175301-803, type C	Yes	–	2.1	–	230	546 260 VSCS-B-M32-MH-WA-3AC1
		Yes	–	2.1	–	110	546 259 VSCS-B-M32-MH-WA-2AC1
		No	–	2.3	–	24	546 258 VSCS-B-M32-MH-WA-1AC1

Manifold blocks CPE18

Technical data – Fixed-grid manifold block

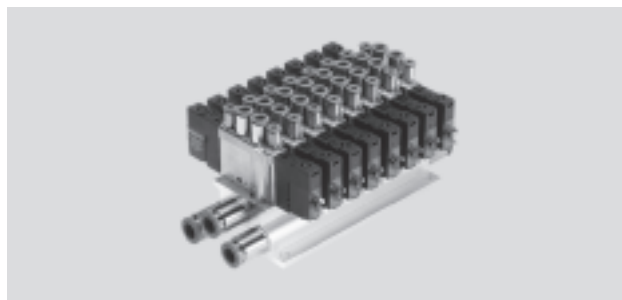
Manifold block

for CPE18 5/2 and 5/3

Material:

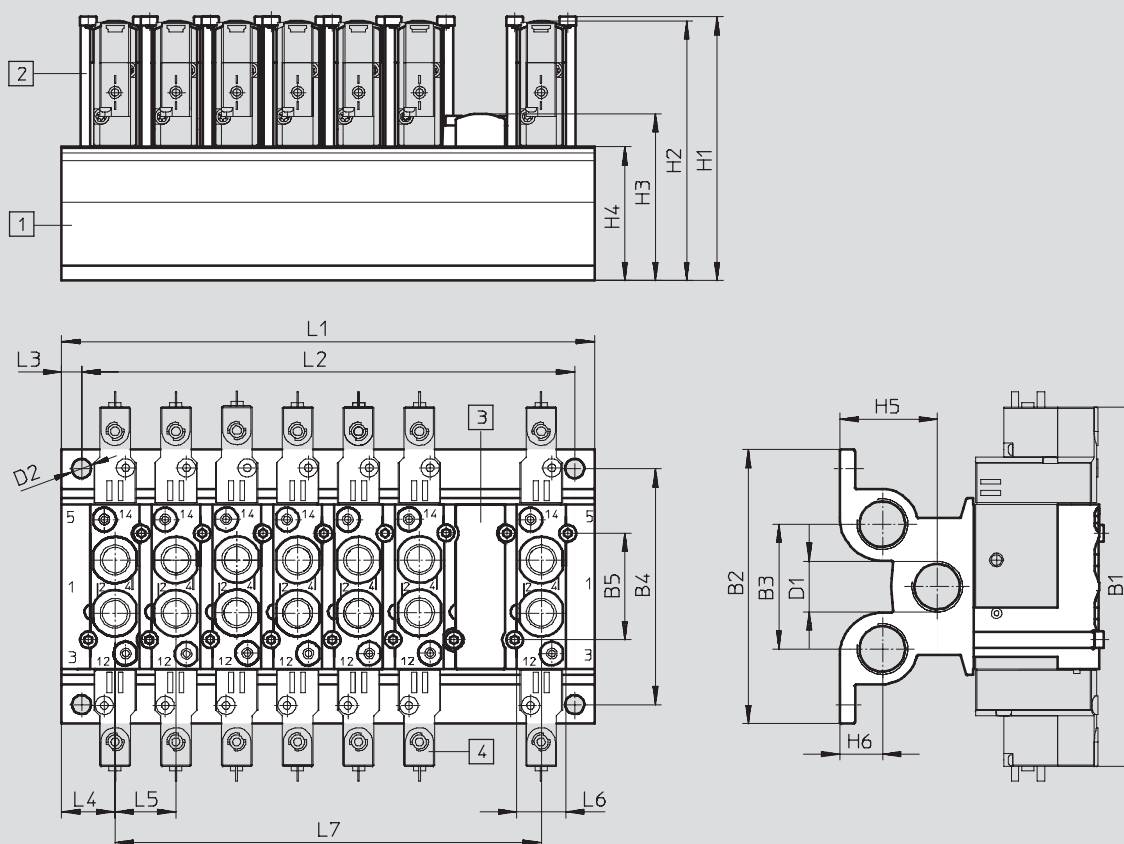
Wrought aluminium alloy

RoHS-compliant



Dimensions – Fixed-grid manifold 5/2 and 5/3

Download CAD data → www.festo.com



1 Manifold block 2 Retainer 3 Blanking plate 4 Valves

Type	B1	B2	B3	B4	B5	D1	D2	H1	H2	H3	H4	H5
CPE18-PRS...	155	102	46	85.6	40	G $\frac{3}{8}$	8.3	105	101.45	59.8	44	30.5

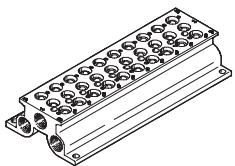
Type	H6	L1	L2	L3	L4	L5 ¹⁾	L6	L7
CPE18-PRS...	14	45 + (n-1) x 26	L1 - 17 ± 0.1	8.5	22.5	26	22.4	(n-1) x 26

1) Grid dimension

Manifold blocks CPE18

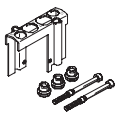
Ordering data – Fixed-grid manifold block

FESTO

Ordering data						
	Valve positions	CRC	Max. tightening torque of valve mounting [Nm]	Weight [g]	Part No.	Type
Manifold block for 5/2 and 5/3-way valves						
	2	2 ¹⁾	2	353	543 839	CPE18-PRS-3/8-2
	3			482	543 840	CPE18-PRS-3/8-3
	4			611	543 841	CPE18-PRS-3/8-4
	5			740	543 842	CPE18-PRS-3/8-5
	6			870	543 843	CPE18-PRS-3/8-6
	7			999	543 844	CPE18-PRS-3/8-7
	8			1128	543 845	CPE18-PRS-3/8-8
	9			1257	543 846	CPE18-PRS-3/8-9
	10			1386	543 847	CPE18-PRS-3/8-10

1) Corrosion resistance class 2 as per Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Ordering data			
	Material	Part No.	Type
Blanking plate for vacant positions			
	Polyamide	544 481	CPE18-RP
Retainer set			
	Retainer: High-alloy stainless steel Screws: Galvanised steel Seals: Nitrile rubber	544 396	CPE18-H5-SET

Ordering data			
	Material	Part No.	Type
Retainer			
	Retainer: High-alloy stainless steel (Packaging unit 50 pieces)	547 047	CPE18-H5-50
Screws			
	Galvanised steel (Packaging unit 100 pieces)	547 050	M4X65-8.8-VS-100
Seals			
	Nitrile rubber (Packaging unit 150 pieces)	547 053	CPV18-VI-P1/4-150

Manifold blocks CPE18

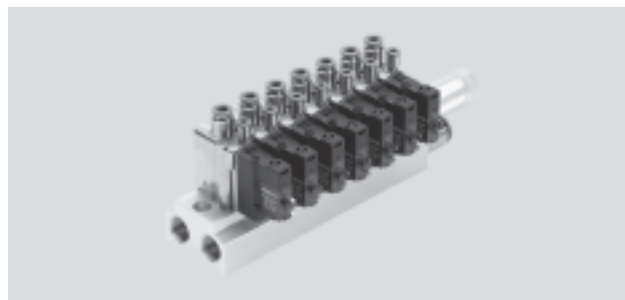
Technical data – Fixed-grid manifold block

Manifold block

for CPE18 3/2

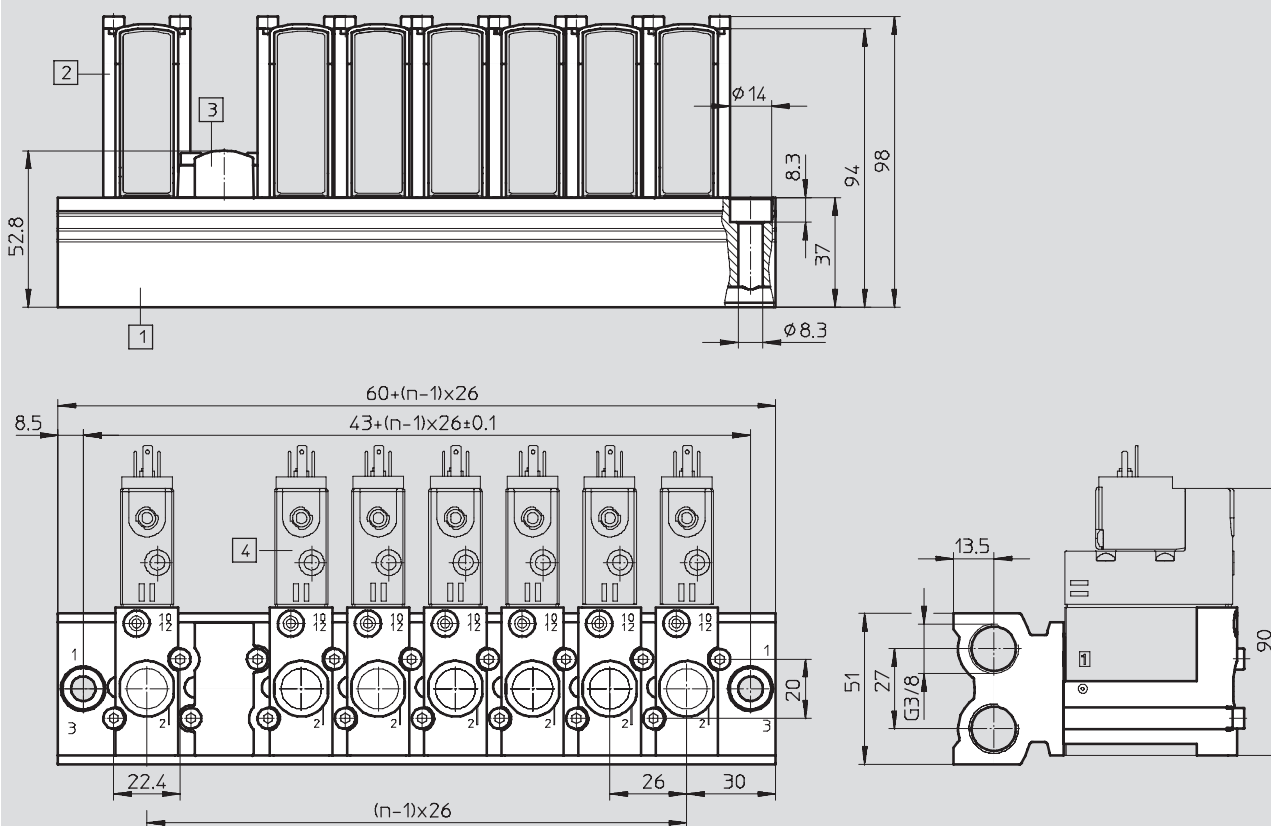
Material:

Wrought aluminium alloy



Dimensions – Fixed-grid manifold 3/2

Download CAD data → www.festo.com

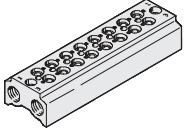


- 1 Manifold block
 – Grid dimension 26 mm
- 2 Retainer
- 3 Blanking plate
- 4 Valves

Manifold blocks CPE18

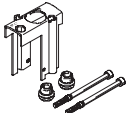
Ordering data – Fixed-grid manifold block

FESTO

Ordering data						
	Valve positions	CRC	Max. tightening torque of valve mounting [Nm]	Weight [g]	Part No.	Type
Manifold block for 3/2-way valves						
	2	2 ¹⁾	2	266	550 568	CPE18-3/2-PRS-3/8-2
	3			346	550 569	CPE18-3/2-PRS-3/8-3
	4			426	550 570	CPE18-3/2-PRS-3/8-4
	5			507	550 571	CPE18-3/2-PRS-3/8-5
	6			587	550 572	CPE18-3/2-PRS-3/8-6
	7			667	550 573	CPE18-3/2-PRS-3/8-7
	8			748	550 574	CPE18-3/2-PRS-3/8-8
	9			828	550 575	CPE18-3/2-PRS-3/8-9
	10			908	550 576	CPE18-3/2-PRS-3/8-10

1) Corrosion resistance class 2 as per Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Ordering data			
	Material	Part No.	Type
Blanking plate			
	Polyamide	550 582	CPE18-RP3
Retainer set			
	Retainer: High-alloy stainless steel Screws: Galvanised steel Seals: Nitrile rubber	550 579	CPE18-H3-SET

Ordering data			
	Material	Part No.	Type
Retainer			
	Retainer: High-alloy stainless steel (Packaging unit 50 pieces)	551 492	CPE18-H3-50
Screws			
	Galvanised steel (Packaging unit 100 pieces)	547 050	M4X65-8.8-VS-100
Seals			
	Nitrile rubber (Packaging unit 150 pieces)	547 053	CPV18-VI-P:1/4-150

1) Packaging unit quantity

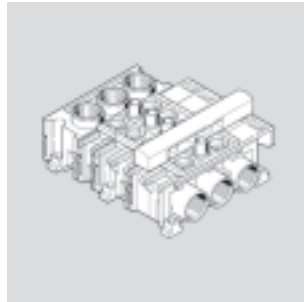
Manifold blocks CPE18

Technical data – Modular manifold

FESTO

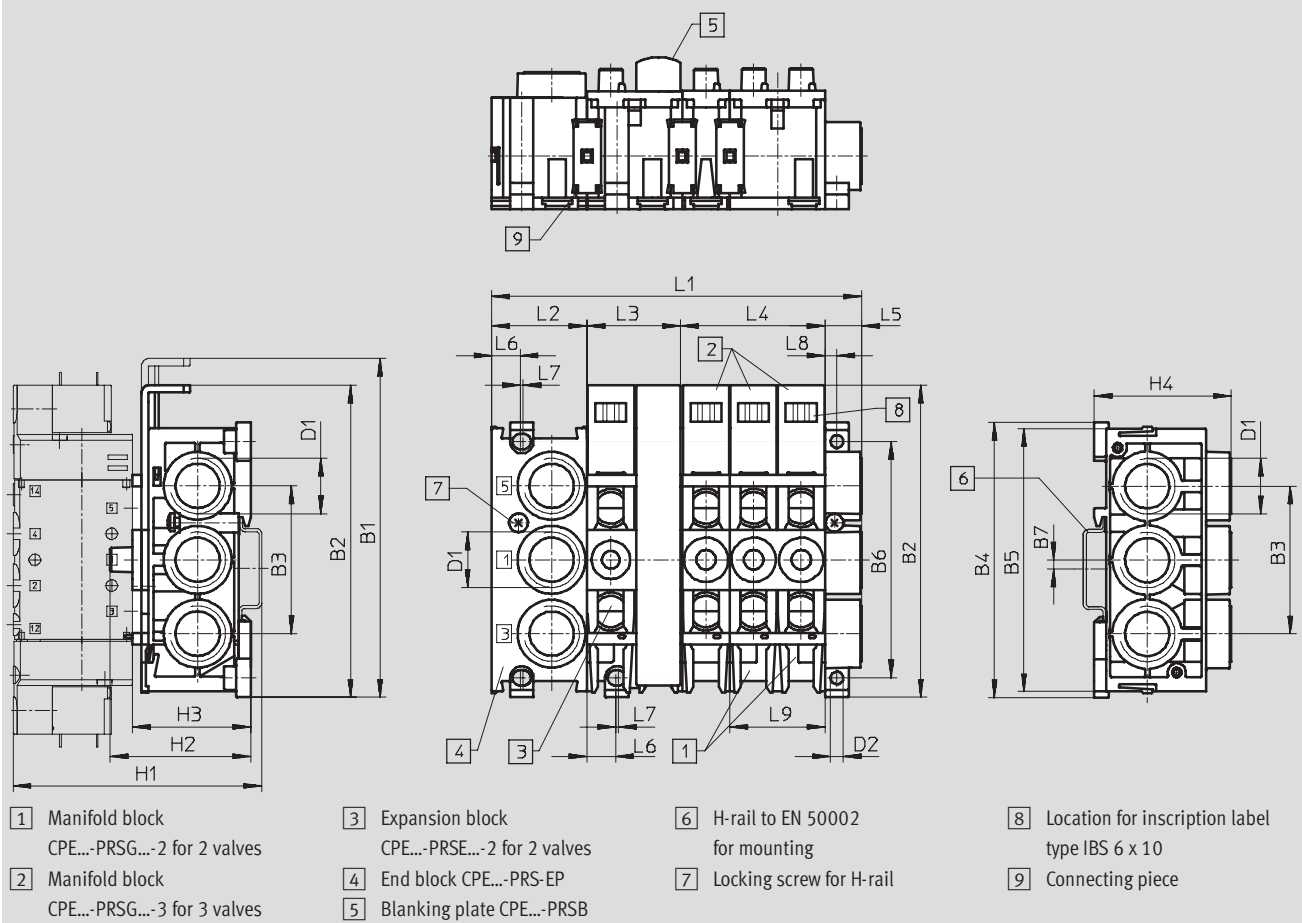
Modular manifold block
for CPE18 5/2 and 5/3

Material:
Reinforced polyamide



Dimensions – Modular manifold block

Download CAD data → www.festo.com



Size	B1	B2	B3	B4	B5	B6	B7	D1	D2	H1	H2	H3
CPE18	151.6	136.5	59	113	–	100	2.75	G½	5.3	~106	~58	~46

Size	H4	L1 ¹⁾	L2	L3	L4	L5	L6	L7	L8	L9
CPE18	51.4	40+(nx20)+16.4	40	40	60	16.4	12.6	1	5.2	40

1) n = Number of valve positions

Manifold blocks CPE18

Technical data – Modular manifold

FESTO

Possible combinations			
Number of valve positions	One pressure zone	Two pressure zones	
		Variant 1	Variant 2
2	1x CPE...-PRSG-2	–	–
3	1x CPE...-PRSG-3	–	–
4	1x CPE...-PRSGO-2 1x CPE...-PRSE-2	1x CPE...-PRSG-2 1x CPE...-PRSEO-2 1x CPE...-PRS-EP	–
5	1x CPE...-PRSGO-3 1x CPE...-PRSE-2	1x CPE...-PRSG-3 1x CPE...-PRSEO-2 1x CPE...-PRS-EP	–
6	1x CPE...-PRSGO-2 1x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSG-2 2x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-2 1x CPE...-PRSE-2 1x CPE...-PRSEO-2 1x CPE...-PRS-EP
7	1x CPE...-PRSGO-3 2x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSG-3 2x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-3 1x CPE...-PRSE-2 1x CPE...-PRSEO-2 1x CPE...-PRS-EP
8	1x CPE...-PRSGO-2 3x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSG-2 3x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-2 1x CPE...-PRSE-2 2x CPE...-PRSEO-2 1x CPE...-PRS-EP
9	1x CPE...-PRSGO-3 3x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSG-3 3x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-3 1x CPE...-PRSE-2 2x CPE...-PRSEO-2 1x CPE...-PRS-EP
10	1x CPE...-PRSGO-2 4x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSG-2 4x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-2 1x CPE...-PRSE-2 3x CPE...-PRSEO-2 1x CPE...-PRS-EP
11	1x CPE...-PRSGO-3 4x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSG-3 4x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-3 1x CPE...-PRSE-2 3x CPE...-PRSEO-2 1x CPE...-PRS-EP
12	1x CPE...-PRSGO-2 1x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSG-2 5x CPE...-PRSEO-2 1x CPE...-PRS-EP	1x CPE...-PRSGO-2 1x CPE...-PRSE-2 4x CPE...-PRSEO-2 1x CPE...-PRS-EP



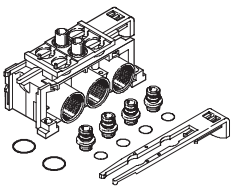
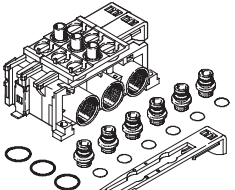
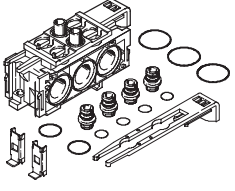
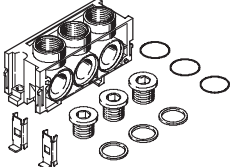
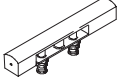
Note

A maximum of 6 valve positions are possible per air supply.
Use valve manifold blocks only in combination with 5/2- and 5/3-way valves.

Manifold blocks CPE18

Ordering data – Modular manifold

FESTO

Ordering data					
	Ports 1, 3, 5	PRS ducts	Weight [g]	Part No.	Type
Manifold block PRSG for 2 valves					
	G $\frac{1}{2}$	Closed	170	164 970	CPE18-PRSG-2
	G $\frac{1}{2}$	Open	170	187 831	CPE18-PRSGO-2
Manifold block PRSG for 3 valves					
	G $\frac{1}{2}$	Closed	225	187 825	CPE18-PRSG-3
	G $\frac{1}{2}$	Open	225	187 821	CPE18-PRSGO-3
Manifold block PRSE for 2 valves					
	–	Closed	145	164 972	CPE18-PRSE-2
	–	Open	145	187 832	CPE18-PRSEO-2
End plate for manifold					
	G $\frac{1}{2}$	–	125	164 973	CPE18-PRS-EP
Blanking plate for vacant positions					
	–	–	28	164 974	CPE18-PRSB

Solenoid valves CPE24

FESTO

Technical data

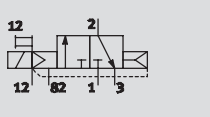
Functions:

3/2G, 3/2O

5/2-way single solenoid

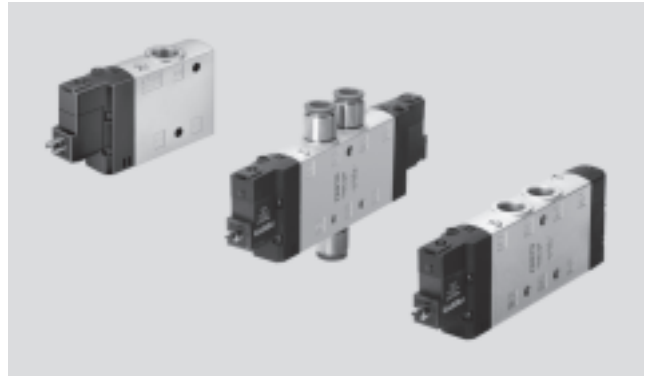
5/2-way double solenoid

5/3G, 5/3B, 5/3E



3/2G with external pilot air supply, normally closed

-  - Width 24 mm
-  - Flow rate
1,250 ... 3,200 l/min
-  - Voltage
24 V DC, 110, 230 V AC
Basic valve
12, 24 V DC, 24, 110,
230 V AC



General technical data								
Valve function		3/2		5/2		5/3		
Normal position		G ¹⁾	O ²⁾	–	–	G ¹⁾	B ²⁾	E ³⁾
Memory stability		Single			Double	Single		
Pneumatic spring reset method		Yes			–	No		
Mechanical spring reset method		No			–	Yes		
Design		Piston spool						
Sealing principle		Soft						
Actuation type		Electric						
Control type		Piloted						
Pilot air supply		Internal or external						
Direction of flow		Reversible for external pilot air supply						
Exhaust function		Flow control						
Manual override		Non-detenting, detenting via accessory						
Type of mounting		Using through holes						
Mounting position		Any						
Pneumatic connection	1, 2, 4	Threaded connection: G ³ / ₈ ; QS connection: Ø 10 or Ø 12 mm						
	3, 5	Threaded connection: G ³ / ₈						
	12, 14	Threaded connection: M5; QS connection: Ø 6						
	82, 84	Threaded connection: M5						
Nominal diameter		[mm]	11					
Standard nominal flow rate	G ¹ / ₄	[l/min]	2,500	2,900	3,200	3,000	2,600	2,650
Standard nominal flow rate	QS8	[l/min]	1,250				1,600	
Standard nominal flow rate	QS10	[l/min]	1,650					
Switching time on/off		[ms]	50/33	40/50	–	25/55		
Changeover time		[ms]	–			25	–	
Duty cycle		[%]	100					
Width		[mm]	24					
Corrosion resistance class		CRC	2 ⁴⁾					

1) G = Normally closed

2) O, B = Normally open

3) E = Normally exhausted

4) Corrosion resistance class 2 as per Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Solenoid valves CPE24

Technical data

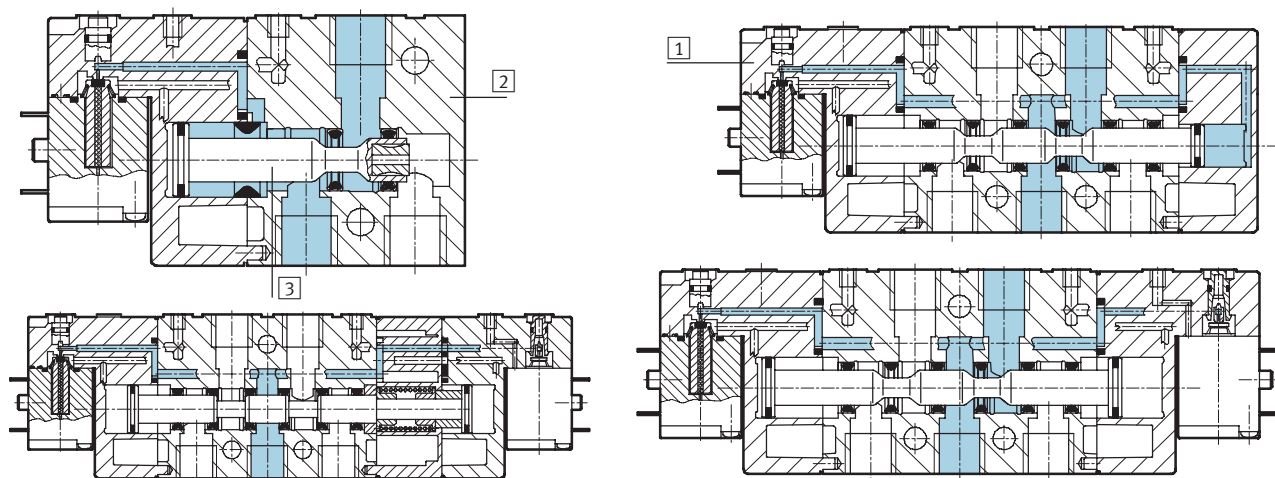
FESTO

Operating and environmental conditions				
Valve function		3/2	5/2 single	5/2 double
Operating medium		Filtered compressed air, lubricated or unlubricated, grade of filtration 40 µm, vacuum		
Operating pressure	Internal pilot air supply	[bar]	2.5 ... 10	2 ... 10
	External pilot air supply	[bar]	-0.9 ... +10	2.5 ... 10
Pilot pressure	[bar]	2.5 ... 10	2 ... 10	2.5 ... 10
Ambient temperature	[°C]	-5 ... +50		
Temperature of medium	[°C]	-5 ... +50		
Certification		c UL us - Recognised (OL), Germanischer Lloyd		

Electrical data			
Operating voltage	M1H	[V DC]	24 +10/-15%
	M2H	[V AC]	110 ±10% at 50 ... 60 Hz
	M3H	[V AC]	230 ±10% at 50 ... 60 Hz
Power consumption	M1H	[W]	1.5
	M2H, M3H	[VA]	Pull: 3, hold: 2,4
Protection class with plug socket		IP65 (EN 60529)	

Materials

Sectional view



1	Cover	Polyamide	3
2	Housing	Die-cast aluminium	-
			Seals
			Nitrile rubber

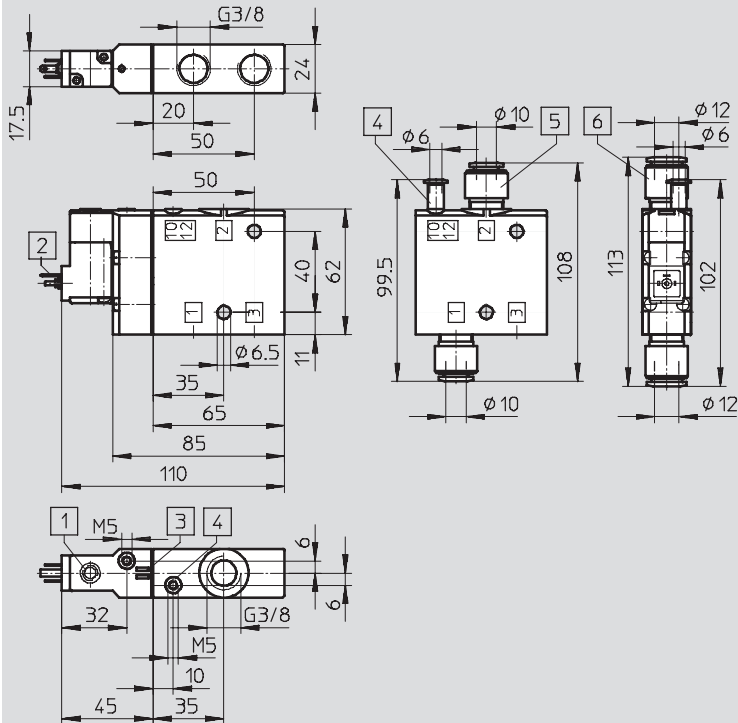
Solenoid valves CPE24

Technical data

FESTO

Dimensions – 3/2-way valve

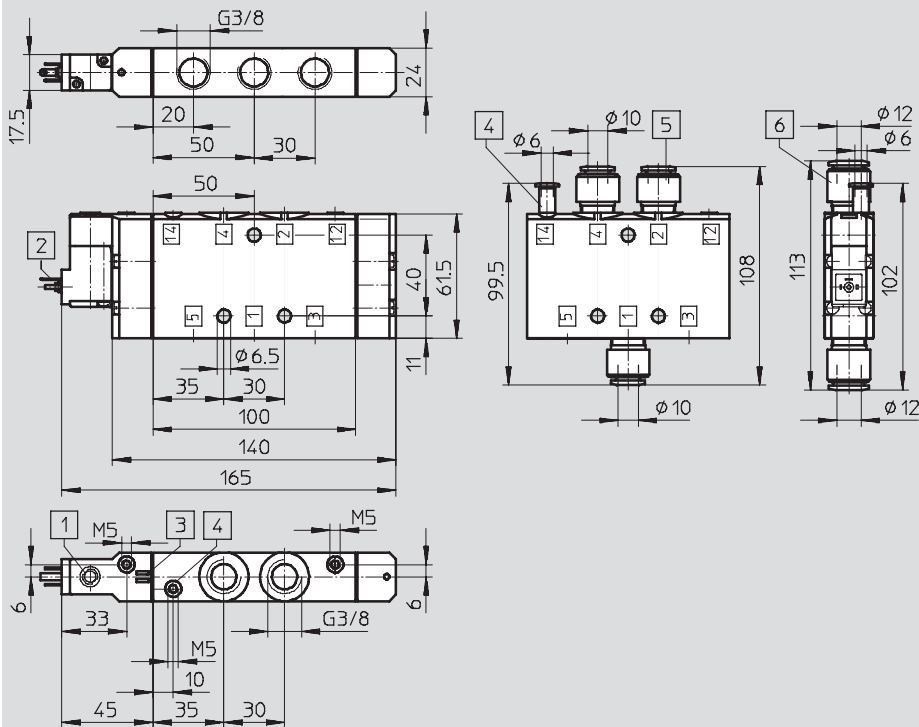
Download CAD data → www.festo.com



- 1 Manual override
- 2 Connection for plug socket
- 3 Location for inscription labels
- 4 Port 10/12 for external pilot air
- 5 QS push-in fitting
- 6 QS push-in fitting

Dimensions – 5/2-way single solenoid valve

Download CAD data → www.festo.com



- 1 Manual override
- 2 Connection for plug socket
- 3 Location for inscription labels
- 4 Port 14 for external pilot air
- 5 QS push-in fitting
- 6 QS push-in fitting

Solenoid valves CPE24

Technical data

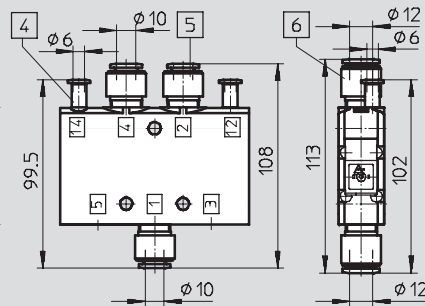
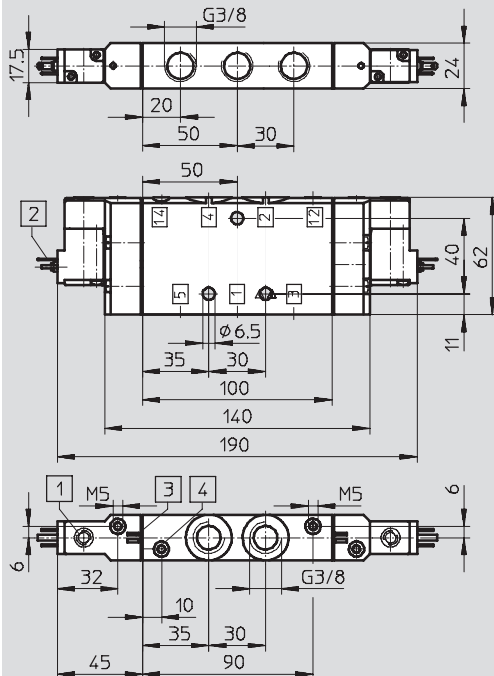
FESTO

Dimensions – 5/2-way double solenoid valve

Download CAD data → www.festo.com

Threaded connection

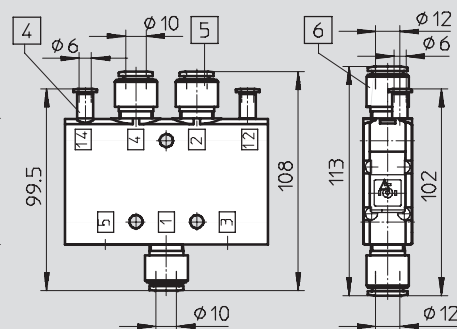
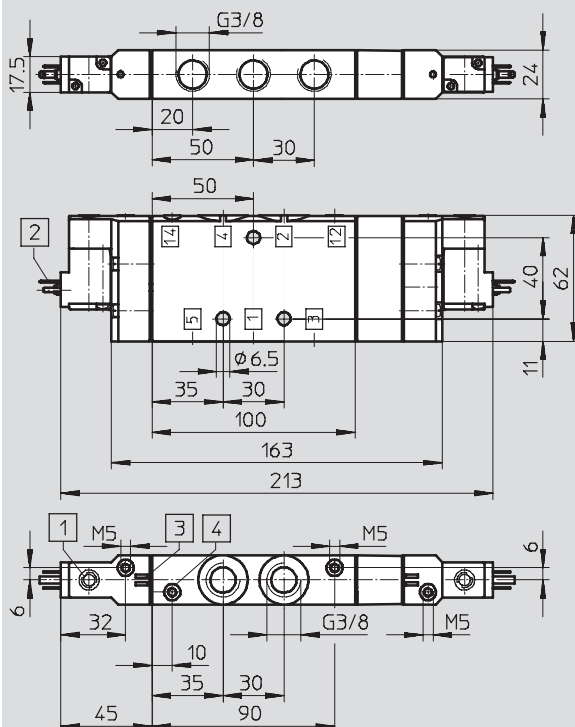
Plug connector



- 1 Manual override
- 2 Connection for plug socket
- 3 Location for inscription labels
- 4 Port 12/14 for external pilot air
- 5 QS push-in fitting
- 6 QS push-in fitting

Dimensions – 5/3-way valve

Download CAD data → www.festo.com

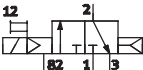
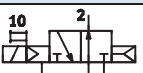
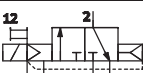
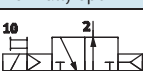


- 1 Manual override
- 2 Connection for plug socket
- 3 Location for inscription labels
- 4 Port 12/14 for external pilot air
- 5 QS push-in fitting
- 6 QS push-in fitting

Solenoid valves CPE24

Ordering data – 3/2-way valve

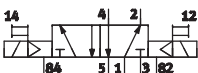
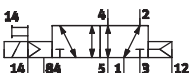
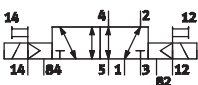
FESTO

Ordering data						
Circuit symbol	Pilot air supply	Voltage	Connection	Weight [g]	Part No.	Type
Normally closed						
	Internal	24 V DC	G $\frac{3}{8}$	220	163 165	CPE24-M1H-3GL- $\frac{3}{8}$
			QS-10	–	163 173	CPE24-M1H-3GL-QS-10
			QS-12	–	163 181	CPE24-M1H-3GL-QS-12
		110 V AC	G $\frac{3}{8}$	220	163 809	CPE24-M2H-3GL- $\frac{3}{8}$
			QS-10	–	163 817	CPE24-M2H-3GL-QS-10
			QS-12	–	163 825	CPE24-M2H-3GL-QS-12
		230 V AC	G $\frac{3}{8}$	220	163 833	CPE24-M3H-3GL- $\frac{3}{8}$
			QS-10	–	163 841	CPE24-M3H-3GL-QS-10
			QS-12	–	163 849	CPE24-M3H-3GL-QS-12
Normally open						
	Internal	24 V DC	G $\frac{3}{8}$	220	163 164	CPE24-M1H-3OL- $\frac{3}{8}$
			QS-10	–	163 172	CPE24-M1H-3OL-QS-10
			QS-12	–	163 180	CPE24-M1H-3OL-QS-12
		110 V AC	G $\frac{3}{8}$	220	163 808	CPE24-M2H-3OL- $\frac{3}{8}$
			QS-10	–	163 816	CPE24-M2H-3OL-QS-10
			QS-12	–	163 824	CPE24-M2H-3OL-QS-12
		230 V AC	G $\frac{3}{8}$	220	163 832	CPE24-M3H-3OL- $\frac{3}{8}$
			QS-10	–	163 840	CPE24-M3H-3OL-QS-10
			QS-12	–	163 848	CPE24-M3H-3OL-QS-12
Normally closed						
	External	24 V DC	G $\frac{3}{8}$	220	163 169	CPE24-M1H-3GLS- $\frac{3}{8}$
			QS-10	–	163 177	CPE24-M1H-3GLS-QS-10
			QS-12	–	163 185	CPE24-M1H-3GLS-QS-12
		110 V AC	G $\frac{3}{8}$	220	163 813	CPE24-M2H-3GLS- $\frac{3}{8}$
			QS-10	–	163 821	CPE24-M2H-3GLS-QS-10
			QS-12	–	163 829	CPE24-M2H-3GLS-QS-12
		230 V AC	G $\frac{3}{8}$	220	163 837	CPE24-M3H-3GLS- $\frac{3}{8}$
			QS-10	–	163 845	CPE24-M3H-3GLS-QS-10
			QS-12	–	163 853	CPE24-M3H-3GLS-QS-12
Normally open						
	External	24 V DC	G $\frac{3}{8}$	220	163 168	CPE24-M1H-3OLS- $\frac{3}{8}$
			QS-10	–	163 176	CPE24-M1H-3OLS-QS-10
			QS-12	–	163 184	CPE24-M1H-3OLS-QS-12
		110 V AC	G $\frac{3}{8}$	220	163 812	CPE24-M2H-3OLS- $\frac{3}{8}$
			QS-10	–	163 820	CPE24-M2H-3OLS-QS-10
			QS-12	–	163 828	CPE24-M2H-3OLS-QS-12
		230 V AC	G $\frac{3}{8}$	220	163 836	CPE24-M3H-3OLS- $\frac{3}{8}$
			QS-10	–	163 844	CPE24-M3H-3OLS-QS-10
			QS-12	–	163 852	CPE24-M3H-3OLS-QS-12

Solenoid valves CPE24

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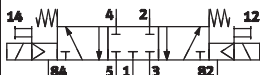
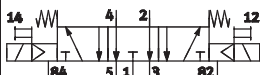
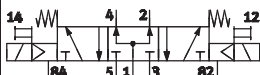
Ordering data – 5/2-way valve

Ordering data						
Circuit symbol	Pilot air supply	Voltage	Connection	Weight [g]	Part No.	Type
5/2-way single solenoid valve						
	Internal	24 V DC	G3/8	360	163 166	CPE24-M1H-5L-3/8
			QS-10	–	163 174	CPE24-M1H-5L-QS-10
			QS-12	–	163 182	CPE24-M1H-5L-QS-12
		110 V AC	G3/8	360	163 810	CPE24-M2H-5L-3/8
			QS-10	–	163 818	CPE24-M2H-5L-QS-10
			QS-12	–	163 826	CPE24-M2H-5L-QS-12
		230 V AC	G3/8	360	163 834	CPE24-M3H-5L-3/8
			QS-10	–	163 842	CPE24-M3H-5L-QS-10
			QS-12	–	163 850	CPE24-M3H-5L-QS-12
5/2-way double solenoid valve						
	Internal	24 V DC	G3/8	390	163 167	CPE24-M1H-5J-3/8
			QS-10	–	163 175	CPE24-M1H-5J-QS-10
			QS-12	–	163 183	CPE24-M1H-5J-QS-12
		110 V AC	G3/8	390	163 811	CPE24-M2H-5J-3/8
			QS-10	–	163 819	CPE24-M2H-5J-QS-10
			QS-12	–	163 827	CPE24-M2H-5J-QS-12
		230 V AC	G3/8	390	163 835	CPE24-M3H-5J-3/8
			QS-10	–	163 843	CPE24-M3H-5J-QS-10
			QS-12	–	163 851	CPE24-M3H-5J-QS-12
5/2-way single solenoid valve						
	External	24 V DC	G3/8	360	163 170	CPE24-M1H-5LS-3/8
			QS-10	–	163 178	CPE24-M1H-5LS-QS-10
			QS-12	–	163 186	CPE24-M1H-5LS-QS-12
		110 V AC	G3/8	360	163 814	CPE24-M2H-5LS-3/8
			QS-10	–	163 822	CPE24-M2H-5LS-QS-10
			QS-12	–	163 830	CPE24-M2H-5LS-QS-12
		230 V AC	G3/8	360	163 838	CPE24-M3H-5LS-3/8
			QS-10	–	163 846	CPE24-M3H-5LS-QS-10
			QS-12	–	163 854	CPE24-M3H-5LS-QS-12
5/2-way double solenoid valve						
	External	24 V DC	G3/8	390	163 171	CPE24-M1H-5JS-3/8
			QS-10	–	163 179	CPE24-M1H-5JS-QS-10
			QS-12	–	163 187	CPE24-M1H-5JS-QS-12
		110 V AC	G3/8	390	163 815	CPE24-M2H-5JS-3/8
			QS-10	–	163 823	CPE24-M2H-5JS-QS-10
			QS-12	–	163 831	CPE24-M2H-5JS-QS-12
		230 V AC	G3/8	390	163 839	CPE24-M3H-5JS-3/8
			QS-10	–	163 847	CPE24-M3H-5JS-QS-10
			QS-12	–	163 855	CPE24-M3H-5JS-QS-12

Solenoid valves CPE24

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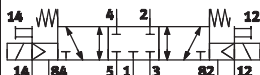
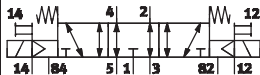
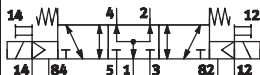
Ordering data – 5/3-way valve

Ordering data						
Circuit symbol	Pilot air supply	Voltage	Connection	Weight [g]	Part No.	Type
5/3-way mid-position valve, normally closed						
	Internal	24 V DC	G $\frac{3}{8}$	430	170 265	CPE24-M1H-5/3G- $\frac{3}{8}$
			QS-10	–	170 271	CPE24-M1H-5/3G-QS-10
			QS-12	–	170 277	CPE24-M1H-5/3G-QS-12
		110 V AC	G $\frac{3}{8}$	430	170 301	CPE24-M2H-5/3G- $\frac{3}{8}$
			QS-10	–	170 307	CPE24-M2H-5/3G-QS-10
			QS-12	–	170 313	CPE24-M2H-5/3G-QS-12
		230 V AC	G $\frac{3}{8}$	430	170 337	CPE24-M3H-5/3G- $\frac{3}{8}$
			QS-10	–	170 343	CPE24-M3H-5/3G-QS-10
			QS-12	–	170 349	CPE24-M3H-5/3G-QS-12
5/3-way mid-position valve, normally exhausted						
	Internal	24 V DC	G $\frac{3}{8}$	430	170 267	CPE24-M1H-5/3E- $\frac{3}{8}$
			QS-10	–	170 273	CPE24-M1H-5/3E-QS-10
			QS-12	–	170 279	CPE24-M1H-5/3E-QS-12
		110 V AC	G $\frac{3}{8}$	430	170 303	CPE24-M2H-5/3E- $\frac{3}{8}$
			QS-10	–	170 309	CPE24-M2H-5/3E-QS-10
			QS-12	–	170 315	CPE24-M2H-5/3E-QS-12
		230 V AC	G $\frac{3}{8}$	430	170 339	CPE24-M3H-5/3E- $\frac{3}{8}$
			QS-10	–	170 345	CPE24-M3H-5/3E-QS-10
			QS-12	–	170 351	CPE24-M3H-5/3E-QS-12
5/3-way mid-position valve, normally open						
	Internal	24 V DC	G $\frac{3}{8}$	430	170 269	CPE24-M1H-5/3B- $\frac{3}{8}$
			QS-10	–	170 275	CPE24-M1H-5/3B-QS-10
			QS-12	–	170 281	CPE24-M1H-5/3B-QS-12
		110 V AC	G $\frac{3}{8}$	430	170 305	CPE24-M2H-5/3B- $\frac{3}{8}$
			QS-10	–	170 311	CPE24-M2H-5/3B-QS-10
			QS-12	–	170 317	CPE24-M2H-5/3B-QS-12
		230 V AC	G $\frac{3}{8}$	430	170 341	CPE24-M3H-5/3B- $\frac{3}{8}$
			QS-10	–	170 347	CPE24-M3H-5/3B-QS-10
			QS-12	–	170 353	CPE24-M3H-5/3B-QS-12

Solenoid valves CPE24

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Ordering data – 5/3-way valve

Ordering data – 5/3-way valve						
Circuit symbol	Pilot air supply	Voltage	Connection	Weight [g]	Part No.	Type
5/3-way mid-position valve, normally closed						
	External	24 V DC	G $\frac{3}{8}$	430	170 266	CPE24-M1H-5/3GS- $\frac{3}{8}$
			QS-10	–	170 272	CPE24-M1H-5/3GS-QS-10
			QS-12	–	170 278	CPE24-M1H-5/3GS-QS-12
		110 V AC	G $\frac{3}{8}$	430	170 302	CPE24-M2H-5/3GS- $\frac{3}{8}$
			QS-10	–	170 308	CPE24-M2H-5/3GS-QS-10
			QS-12	–	170 314	CPE24-M2H-5/3GS-QS-12
		230 V AC	G $\frac{3}{8}$	430	170 338	CPE24-M3H-5/3GS- $\frac{3}{8}$
			QS-10	–	170 344	CPE24-M3H-5/3GS-QS-10
			QS-12	–	170 350	CPE24-M3H-5/3GS-QS-12
5/3-way mid-position valve, normally exhausted						
	External	24 V DC	G $\frac{3}{8}$	430	170 268	CPE24-M1H-5/3ES- $\frac{3}{8}$
			QS-10	–	170 274	CPE24-M1H-5/3ES-QS-10
			QS-12	–	170 280	CPE24-M1H-5/3ES-QS-12
		110 V AC	G $\frac{3}{8}$	430	170 304	CPE24-M2H-5/3ES- $\frac{3}{8}$
			QS-10	–	170 310	CPE24-M2H-5/3ES-QS-10
			QS-12	–	170 316	CPE24-M2H-5/3ES-QS-12
		230 V AC	G $\frac{3}{8}$	430	170 340	CPE24-M3H-5/3ES- $\frac{3}{8}$
			QS-10	–	170 346	CPE24-M3H-5/3ES-QS-10
			QS-12	–	170 352	CPE24-M3H-5/3ES-QS-12
5/3-way mid-position valve, normally open						
	External	24 V DC	G $\frac{3}{8}$	430	170 270	CPE24-M1H-5/3BS- $\frac{3}{8}$
			QS-10	–	170 276	CPE24-M1H-5/3BS-QS-10
			QS-12	–	170 282	CPE24-M1H-5/3BS-QS-12
		110 V AC	G $\frac{3}{8}$	430	170 306	CPE24-M2H-5/3BS- $\frac{3}{8}$
			QS-10	–	170 312	CPE24-M2H-5/3BS-QS-10
			QS-12	–	170 318	CPE24-M2H-5/3BS-QS-12
		230 V AC	G $\frac{3}{8}$	430	170 342	CPE24-M3H-5/3BS- $\frac{3}{8}$
			QS-10	–	170 348	CPE24-M3H-5/3BS-QS-10
			QS-12	–	170 354	CPE24-M3H-5/3BS-QS-12

Solenoid valves CPE, Compact Performance

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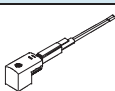
Ordering data – Accessories for CPE10 and CPE14

Ordering data – Connecting cables and plug sockets with cable for CPE10 and CPE14 with KMYZ solenoid coils					
	Voltage	Cable length [m]	Switching status display with LED	Part No.	Type
Plug socket with PUR cable				Technical data ➔ Internet: kmyz	
	24 V DC	2.5	■	193 687	KMYZ-9-24-2,5-LED-PUR-B
		5	■	193 689	KMYZ-9-24-5-LED-PUR-B
		10	■	196 063	KMYZ-9-24-10-LED-PUR-B
Plug socket with PVC cable and plug M8x1					
	24 V DC	0.5	■	196 064	KMYZ-9-24-M8-0,5-LED-B
		2.5	■	196 065	KMYZ-9-24-M8-2,5-LED-B
Connecting cable M8x1, 4-pin, straight socket/open end				Technical data ➔ Internet: nebu	
	24 V DC	2.5	–	541 342	NEBU-M8G4-K-2,5-LE4
		5	–	541 343	NEBU-M8G4-K-5-LE4
Connecting cable M8x1, 4-pin, straight angled socket/open end					
	24 V DC	2.5	–	541 344	NEBU-M8W4-K-2,5-LE4
		5	–	541 345	NEBU-M8W4-K-5-LE4
Plug socket with cable M8x1, 4-pin, straight socket/open end				Technical data ➔ Internet: sim	
	24 V DC	2.5	–	164 250	SIM-K-4GD-2,5-PU
		5	–	164 251	SIM-K-4GD-5-PU
Plug socket with cable M8x1, 4-pin, straight angled socket/open end					
	24 V DC	2.5	–	164 252	SIM-K-4WD-2,5-PU
		5	–	164 253	SIM-K-4WD-5-PU

Solenoid valves CPE, Compact Performance

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Ordering data – Accessories for CPE18 and CPE24

Ordering data – Plug sockets and plug sockets with cable for CPE18 and CPE24 with EB solenoid coils					
	Voltage	Cable length [m]	Switching status display with LED	Part No.	Type
Plug socket without cable Technical data → Internet: mssd					
	–	–	–	151 687	MSSD-EB
	–	–	–	539 712	MSSD-EB-M12
Plug socket without cable with insulation displacement technology					
	–	–	–	192 745	MSSD-EB-S-M14
Plug socket with PVC cable Technical data → Internet: kmeb					
	24 V DC	2.5	■	151 688	KMEB-1-24-2,5-LED
	24 V DC	5	■	151 689	KMEB-1-24-5-LED
	24 V DC	10	■	193 457	KMEB-1-24-10-LED
	Up to 240 V	2.5	–	151 690	KMEB-1-230-2,5
	Up to 240 V	5	–	151 691	KMEB-1-230-5
Plug socket with PUR cable					
	24 V DC	2.5	■	174 844	KMEB-2-24-2,5-LED
	24 V DC	5	■	174 845	KMEB-2-24-5-LED
	Up to 240 V	2.5	–	174 846	KMEB-2-230-2,5
	Up to 240 V	5	–	174 847	KMEB-2-230-5
Ordering data – Illuminating seal for EB solenoid coils Technical data → Internet: meb-ld					
	Voltage		Part No. Type		
	[V DC]	[V AC]			
	12 ... 24	–	151 717	MEB-LD-12-24DC	
	–	230	151 718	MEB-LD-230AC	

Solenoid valves CPE, Compact Performance

Accessories

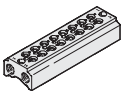
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Ordering data – General accessories			
		Part No.	Type
Blanking plugs		Technical data → Internet: b	
	For manifold block CPE10	3 569	B-1/4
	For manifold block CPE14, CPE18	3 570	B-3/8
Separator for pressure zones		Technical data → Internet: vabd	
	For manifold block CPE10	537 515	VABD-B6-14-P-C
	For manifold block CPE14, CPE18	160 997	PRSV-1/8
Silencer		Technical data → Internet: u	
	For M3 thread	163 978	U-M3
	For M5 thread	165 003	UC-M5
	For M7 thread	161 418	UC-M7
	For G1/8 thread	161 419	UC-1/8
	For G1/4 thread	165 004	UC-1/4
Manual override		Technical data → Internet: ahb	
	For KMYZ coils	157 600	AHB-MZB
	For EB coils	157 601	AHB-MEB
Inscription labels		Technical data → Internet: ibs	
	–	18 576	IBS-6x10

Solenoid valves CPE, Compact Performance

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Accessories

Ordering data – Connection block NPT							
	Valve positions	Part No.	Type	Part No.	Type	Part No.	Type
For 5/2- and 5/3-way valves							
	2	550 070	CPE10-PRS-1/4-2-NPT	550 079	CPE14-PRS-3/8-2-NPT	550 088	CPE18-PRS-3/8-2-NPT
	3	550 071	CPE10-PRS-1/4-3-NPT	550 080	CPE14-PRS-3/8-3-NPT	550 089	CPE18-PRS-3/8-3-NPT
	4	550 072	CPE10-PRS-1/4-4-NPT	550 081	CPE14-PRS-3/8-4-NPT	550 090	CPE18-PRS-3/8-4-NPT
	5	550 073	CPE10-PRS-1/4-5-NPT	550 082	CPE14-PRS-3/8-5-NPT	550 091	CPE18-PRS-3/8-5-NPT
	6	550 074	CPE10-PRS-1/4-6-NPT	550 083	CPE14-PRS-3/8-6-NPT	550 092	CPE18-PRS-3/8-6-NPT
	7	550 075	CPE10-PRS-1/4-7-NPT	550 084	CPE14-PRS-3/8-7-NPT	550 093	CPE18-PRS-3/8-7-NPT
	8	550 076	CPE10-PRS-1/4-8-NPT	550 085	CPE14-PRS-3/8-8-NPT	550 094	CPE18-PRS-3/8-8-NPT
	9	550 077	CPE10-PRS-1/4-9-NPT	550 086	CPE14-PRS-3/8-9-NPT	550 095	CPE18-PRS-3/8-9-NPT
	10	550 078	CPE10-PRS-1/4-10-NPT	550 087	CPE14-PRS-3/8-10-NPT	550 096	CPE18-PRS-3/8-10-NPT
For 3/2-way valves							
	2	550 601	CPE10-3/2-PRS-1/4-2-NPT	550 610	CPE14-3/2-PRS-3/8-2-NPT	550 619	CPE18-3/2-PRS-3/8-2-NPT
	3	550 602	CPE10-3/2-PRS-1/4-3-NPT	550 611	CPE14-3/2-PRS-3/8-3-NPT	550 620	CPE18-3/2-PRS-3/8-3-NPT
	4	550 603	CPE10-3/2-PRS-1/4-4-NPT	550 612	CPE14-3/2-PRS-3/8-4-NPT	550 621	CPE18-3/2-PRS-3/8-4-NPT
	5	550 604	CPE10-3/2-PRS-1/4-5-NPT	550 613	CPE14-3/2-PRS-3/8-5-NPT	550 622	CPE18-3/2-PRS-3/8-5-NPT
	6	550 605	CPE10-3/2-PRS-1/4-6-NPT	550 614	CPE14-3/2-PRS-3/8-6-NPT	550 623	CPE18-3/2-PRS-3/8-6-NPT
	7	550 606	CPE10-3/2-PRS-1/4-7-NPT	550 615	CPE14-3/2-PRS-3/8-7-NPT	550 624	CPE18-3/2-PRS-3/8-7-NPT
	8	550 607	CPE10-3/2-PRS-1/4-8-NPT	550 616	CPE14-3/2-PRS-3/8-8-NPT	550 625	CPE18-3/2-PRS-3/8-8-NPT
	9	550 608	CPE10-3/2-PRS-1/4-9-NPT	550 617	CPE14-3/2-PRS-3/8-9-NPT	550 626	CPE18-3/2-PRS-3/8-9-NPT
	10	550 609	CPE10-3/2-PRS-1/4-10-NPT	550 618	CPE14-3/2-PRS-3/8-10-NPT	550 627	CPE18-3/2-PRS-3/8-10-NPT