Universal valve CPE

Key features

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 pilot valve with external pilot air supply

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

Parameter

- Width
  10 mm
  14 mm
  18 mm
  24 mm
- Flow rate
  180 ... 3200 l/min

Note

The 5/3-way solenoid valve remains in the previous switching position if both solenoid coils are energised simultaneously.

If neither solenoid coil is energised, the spring force moves the valve to its mid-position.

Advantages

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

They can be mounted directly on site:
- On the cylinder
- On moving system components
- Flexible installation through individual mounting

Short tubing lengths requiring minimal air volume:
- Short switching times
- Very short reaction times

Optimised installations:
- Shorter machine cycles
- Larger quantities
- Low power consumption

Convenient manual override.

CPE10, CPE14 and CPE18:
Simple manifold design consisting of fixed-grid manifold blocks made from stable aluminium with 2 to 10 valve positions or modular manifold blocks made from durable polymer.

The connecting cables NEBV for sizes CPE10 and CPE14 have integrated current reduction.
All CPE valves therefore have a duty cycle of 100%.

Key features

Solenoid valves with plug pins

- Width 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 via 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 valve 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 PE conductor
- For 110 and 220 V AC with PE conductor
- 3/2-way valve
- Manual override non-detenting

Adapter VAVE

Fits plug pins with plug pattern ZC for CPE10/CPE14

Combination of basic valve CPE18 with pilot valve

Key features

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

Retaining bracket set

- Retaining bracket for 5/2 or 5/3-way valve

Retaining bracket set

- Retaining bracket for 3/2-way valve

Cover plate for vacant position

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

Cover plate for vacant position

- Reserved 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

Cover plate for vacant position

Versions
- Reserved position cover for 5/2- or 5/3-way valve

Modular manifold block with cover plate

Key features

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

- Simple design comprising compact valve manifold assemblies with in-line valves
- Mounting with stable retaining bracket and special moulded seal guarantee leak-free assembly
- 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

Key features

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

- Creating 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 to the end block, at the rear and at the top
- No screws required for mounting thanks to slides and clips

Key features – Mounting

Individual valve mounting CPE

Cylinder mounting

For mounting individual valves directly on a drive.
The solenoid valves are provided with two through-holes for attaching to the cylinder mounting DAVM-MW-V1...-V.
Mounting is only possible on the side on which the pneumatic connections are located.

The relevant screw set is included when the cylinder mounting DAVM-MW-V1...-V is ordered.

Product range overview – Widths 10 mm and 14 mm

Width	Circuit symbol	Type	Electrical connection		Operating voltage	Working port						→ Page/ Internet
			Plug pattern ZC	M8x1	[V DC]	M5	M7	G1/8	QS4	QS6	QS8	
10 mm	**3/2-way single solenoid valve, normally closed**											
		CPE10-M1BH-3GL...	■	–	24	■	■	–	■	■	–	26
		CPE10-M1CH-3GL...	–	■	24	–	■	–	–	–	–	
	3/2-way single solenoid valve, normally open											
		CPE10-M1BH-3OL...	■	–	24	■	■	–	■	■	–	26
		CPE10-M1CH-3OL...	–	■	24	–	■	–	–	–	–	
	5/2-way single solenoid valve											
		CPE10-M1BH-5L...	■	–	24	■	■	–	■	■	–	26
		CPE10-M1CH-5L...	–	■	24	–	■	–	–	–	–	
	5/2-way double solenoid valve											
		CPE10-M1BH-5J...	■	–	24	■	■	–	■	■	–	26
		CPE10-M1CH-5J...	–	■	24	–	■	–	–	–	–	
	5/3-way solenoid valve, normally closed, mid-position valve											
		CPE10-M1BH-5/3G...	■	–	24	■	■	–	■	■	–	27
		CPE10-M1CH-5/3G...	–	■	24	–	■	–	–	–	–	
	5/3-way solenoid valve, normally open, mid-position valve											
		CPE10-M1BH-5/3B...	■	–	24	■	■	–	■	■	–	27
		CPE10-M1CH-5/3B...	–	■	24	–	■	–	–	–	–	
	5/3-way solenoid valve, normally exhausted, mid-position valve											
		CPE10-M1BH-5/3E...	■	–	24	■	■	–	■	■	–	27
		CPE10-M1CH-5/3E...	–	■	24	–	■	–	–	–	–	
14 mm	**3/2-way single solenoid valve, normally closed**											
		CPE14-M1BH-3GL...	■	–	24	–	–	■	–	■	■	43
		CPE14-M1CH-3GL...	–	■	24	–	–	■	–	–	–	
	3/2-way single solenoid valve, normally open											
		CPE14-M1BH-3OL...	■	–	24	–	–	■	–	■	■	43
		CPE14-M1CH-3OL...	–	■	24	–	–	■	–	–	–	
	5/2-way single solenoid valve											
		CPE14-M1BH-5L...	■	–	24	–	–	■	–	■	■	43
		CPE14-M1CH-5L...	–	■	24	–	–	■	–	–	–	
	5/2-way double solenoid valve											
		CPE14-M1BH-5J...	■	–	24	–	–	■	–	■	■	43
		CPE14-M1CH-5J...	–	■	24	–	–	■	–	–	–	
	5/3-way solenoid valve, normally closed, mid-position valve											
		CPE14-M1BH-5/3G...	■	–	24	–	–	■	–	■	■	44
		CPE14-M1CH-5/3G...	–	■	24	–	–	■	–	–	–	
	5/3-way solenoid valve, normally open, mid-position valve											
		CPE14-M1BH-5/3B...	■	–	24	–	–	■	–	■	■	44
		CPE14-M1CH-5/3B...	–	■	24	–	–	■	–	–	–	
	5/3-way solenoid valve, normally exhausted, mid-position valve											
		CPE14-M1BH-5/3E...	■	–	24	–	–	■	–	■	■	44
		CPE14-M1CH-5/3E...	–	■	24	–	–	■	–	–	–	

Product range overview – Width 18 mm

Width	Circuit symbol	Type	Operating voltage		Working port			→ Page/ Internet
			[V DC]	[V AC]	G1/4	QS8	QS10	
18 mm	**3/2-way single solenoid valve, normally closed**							
		CPE18-M1H-3GL...	24	–	■	■	■	59
		CPE18-M2H-3GL...	–	110	■	■	■	
		CPE18-M3H-3GL...	–	220	■	■	■	
		CPE18-P1-3GL...1/4	12[1)]	110[1)]	■	–	–	66
			24[1)]	230[1)]	■	–	–	
	3/2-way single solenoid valve, normally open							
		CPE18-M1H-3OL...	24	–	■	■	■	59
		CPE18-M2H-3OL...	–	110	■	■	■	
		CPE18-M3H-3OL...	–	220	■	■	■	
		CPE18-P1-3OL...1/4	12[1)]	110[1)]	■	–	–	66
			24[1)]	230[1)]	■	–	–	
	5/2-way single solenoid valve							
		CPE18-M1H-5L...	24	–	■	■	■	60
		CPE18-M2H-5L...	–	110	■	■	■	
		CPE18-M3H-5L...	–	220	■	■	■	
		CPE18-P1-5L...1/4	12[1)]	110[1)]	■	–	–	66
			24[1)]	230[1)]	■	–	–	
	5/2-way double solenoid valve							
		CPE18-M1H-5J...	24	–	■	■	■	60
		CPE18-M2H-5J...	–	110	■	■	■	
		CPE18-M3H-5J...	–	220	■	■	■	
		CPE18-P1-5J...1/4	12[1)]	110[1)]	■	–	–	66
			24[1)]	230[1)]	■	–	–	
	5/3-way solenoid valve, normally closed, mid-position valve							
		CPE18-M1H-5/3G...	24	–	■	■	■	61
		CPE18-M2H-5/3G...	–	110	■	■	■	
		CPE18-M3H-5/3G...	–	220	■	■	■	
		CPE18-P1-5/3G...1/4	12[1)]	110[1)]	■	–	–	66
			24[1)]	230[1)]	■	–	–	
	5/3-way solenoid valve, normally open, mid-position valve							
		CPE18-M1H-5/3B...	24	–	■	■	■	61
		CPE18-M2H-5/3B...	–	110	■	■	■	
		CPE18-M3H-5/3B...	–	220	■	■	■	
		CPE18-P1-5/3B...1/4	12[1)]	110[1)]	■	–	–	66
			24[1)]	230[1)]	■	–	–	
	5/3-way solenoid valve, normally exhausted, mid-position valve							
		CPE18-M1H-5/3E...	24	–	■	■	■	61
		CPE18-M2H-5/3E...	–	110	■	■	■	
		CPE18-M3H-5/3E...	–	220	■	■	■	
		CPE18-P1-5/3E...1/4	12[1)]	110[1)]	■	–	–	66
			24[1)]	230[1)]	■	–	–	

1) Operating voltage dependent on separately ordered pilot valve

Product range overview – Width 24 mm

Width	Circuit symbol	Type	Operating voltage		Working port			→ Page/ Internet
			[V DC]	[V AC]	G3/8	QS10	QS12	
24 mm	**3/2-way single solenoid valve, normally closed**							
		CPE24-M1H-3GL...	24	–	■	■	■	81
		CPE24-M2H-3GL...	–	110	■	■	■	
		CPE24-M3H-3GL...	–	220	■	■	■	
	3/2-way single solenoid valve, normally open							
		CPE24-M1H-3OL...	24	–	■	■	■	81
		CPE24-M2H-3OL...	–	110	■	■	■	
		CPE24-M3H-3OL...	–	220	■	■	■	
	5/2-way single solenoid valve							
		CPE24-M1H-5L...	24	–	■	■	■	82
		CPE24-M2H-5L...	–	110	■	■	■	
		CPE24-M3H-5L...	–	220	■	■	■	
	5/2-way double solenoid valve							
		CPE24-M1H-5J...	24	–	■	■	■	82
		CPE24-M2H-5J...	–	110	■	■	■	
		CPE24-M3H-5J...	–	220	■	■	■	
	5/3-way solenoid valve, normally closed, mid-position valve							
		CPE24-M1H-5/3G...	24	–	■	■	■	83
		CPE24-M2H-5/3G...	–	110	■	■	■	
		CPE24-M3H-5/3G...	–	220	■	■	■	
	5/3-way solenoid valve, normally open, mid-position valve							
		CPE24-M1H-5/3B...	24	–	■	■	■	83
		CPE24-M2H-5/3B...	–	110	■	■	■	
		CPE24-M3H-5/3B...	–	220	■	■	■	
	5/3-way solenoid valve, normally exhausted, mid-position valve							
		CPE24-M1H-5/3E...	24	–	■	■	■	83
		CPE24-M2H-5/3E...	–	110	■	■	■	
		CPE24-M3H-5/3E...	–	220	■	■	■	

Product range overview – Functions

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	–	–	1300	–
	G3/8	–	–	–	2500
Push-in connector	QS-4	190	–	–	–
	QS-6	300	510	–	–
	QS-8	–	810	850	–
	QS-10	–	–	1000	1250
	QS-12	–	–	–	1650

5/2-way valves, single solenoid					
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	–	–	1300	–
	G3/8	–	–	–	2900
Push-in connector	QS-4	180	–	–	–
	QS-6	320	400	–	–
	QS-8	–	680	850	–
	QS-10	–	–	1000	1250
	QS-12	–	–	–	1650
Operating voltage					
12 V DC		–	–	■	–
24 V DC/AC		■/–	■/–	■/■	■/–
110 V AC		–	–	■	■
230 V AC		–	–	■	■
Datasheet → Page		20	35	53	75

Product range overview – Functions

5/2-way valves, double solenoid					
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	–	–	1300	–
	G3/8	–	–	–	3200
Push-in connector	QS-4	180	–	–	–
	QS-6	320	400	–	–
	QS-8	–	680	850	–
	QS-10	–	–	1000	1250
	QS-12	–	–	–	1650

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	–	–	1200 … 1450	–
	G3/8	–	–	–	2600 … 3000
Push-in connector	QS-4	180	–	–	–
	QS-6	250 … 300	370 … 410	–	–
	QS-8	–	570 … 720	780 … 850	–
	QS-10	–	–	1000 … 1050	1250
	QS-12	–	–	–	1600 … 1650
Operating voltage					
12 V DC		–	–	■	–
24 V DC/AC		■/–	■/–	■/■	■/–
110 V AC		–	–	■	■
230 V AC		–	–	■	■
Datasheet → Page		20	35	53	75

Peripherals overview

Individual valve – CPE10 and CPE14

Accessories – Individual valve

		Type	Description	CPE10	CPE14	→ Page/Internet
[1]	Manual override tool	AHB...	–	■	■	86
[2]	Silencer	U... or UC...	For port 3, 5, 82 or 84	■	■	86
[3]	Inscription label	IBS-6x10	–	■	■	86
[4]	Push-in fittings	QS...	For tubing	■	■	qs
[5]	M7 to M5 reducer	–	Included in the scope of delivery	■	–	–
[6]	Connecting cable	NEBU-M8G...	Socket M8x1, straight	■	■	85
[7]	Connecting cable	NEBU-M8W...	Socket M8x1, angled	■	■	85
[8]	Adapter	VAVE-C8...	Plug pattern ZC to M8, with signal status indication	■	■	85
[9]	Connecting cable	NEBV-Z4...	Plug pattern ZC with holding current reduction, protective circuit, signal status indication	■	■	85
–	2 to 1 distributor	NEDY...	2x socket plug pattern ZC on 1x plug, M8x1 or M12x1	■	■	85

Peripherals overview

Individual valve – CPE18 and CPE24

Accessories – Individual valve

		Type	Description	CPE18	CPE24	→ Page/Internet
[1]	Manual override tool	AHB...	–	■	■	86
[2]	Silencer	U... or UC...	For port 3, 5, 82 or 84	■	■	86
[3]	Inscription label	IBS-6x10	–	■	■	86
[4]	Push-in fittings	QS...	For tubing	■	■	qs
[5]	Illuminating seal	MEB...LD	For 0 ... 230 V AC	■	■	86
[6]	Plug socket with cable	KMEB-1...	Cable sheath PVC, up to 240 V, without signal status indication	■	■	86
[7]	Plug socket with cable	KMEB-1...	Cable sheath PVC, 24 V DC, with signal status indication	■	■	86
[8]	Plug socket	MSSD-EB...	Without signal status indication	■	■	86
[9]	Plug socket with cable	KMEB-2...	Cable sheath PUR	■	■	86

System overview

Fixed-grid manifold assembly

Example of manifold assembly – CPE18

		Type	Description	➔ Page/Internet		
				CPE10	CPE14	CPE18
[1]	Manifold block	CPE18-3/2-PRS...	For 3/2-way valves	31	48	70
[2]	Manifold block	CPE18-PRS...	For 5/2-way and 5/3-way valves	29	46	68
[3]	Seal	CPV18-VI-P.1/4-150	–	29	46	70
[4]	Cover plate	CPE18-RP3	For fitting on vacant positions for 3/2-way valves	31	48	70
[5]	Cover plate	CPE18-RP	For fitting on vacant positions for 5/2- and 5/3-way valves	29	46	68
[6]	3/2-way valve	CPE18...	–	26	43	59
[7]	5/2-way valve	CPE18...	–	26	43	60
[8]	5/3-way valve	CPE18...	–	27	44	61
[9]	Retaining bracket	CPE18-H3-50	Retaining bracket for 3/2-way valve	31	48	70
[10]	Retaining bracket	CPE18-H5-50	Retaining bracket for 5/2- and 5/3-way valve	29	46	68
[11]	Screw	M4X65-8.8-VS-100	–	29	46	70

Peripherals overview

Accessories – Fixed-grid manifold assembly CPE10 and CPE14

Accessories		Type	Description	CPE10	CPE14	→ Page/Internet
[1]	Inscription label	IBS-6x10	–	■	■	86
[2]	Push-in fittings	QS...	For tubing	■	■	qs
[3]	M7 to M5 reducer	–	Included in the scope of delivery	■	–	–
[4]	Silencer	U... or UC...	For port 3, 5, 82 or 84	■	■	86
[5]	Blanking plug	B...	–	■	■	86
[6]	Separator	VABD..., PRSV...	For fitting on the manifold block	■	■	86
[7]	Connecting cable	NEBV-Z4...	Plug pattern ZC with holding current reduction, protective circuit, signal status indication	■	■	85
[8]	Connecting cable	NEBU-M8W...	Socket M8x1, angled	■	■	85
[9]	Connecting cable	NEBU-M8G...	Socket M8x1, straight	■	■	85
–	2 to 1 distributor	NEDY...	2x socket plug pattern ZC on 1x plug, M8x1 or M12x1	■	■	85

Peripherals overview

Accessories – Fixed-grid manifold assembly CPE18

Accessories – Mounting on manifold block

	Type	Description	→ Page/Internet
[1] Plug socket with cable	KMEB-1...	Cable sheath PVC, 24 V DC, with signal status indication	86
[2] Plug socket with cable	KMEB-1...	Cable sheath PVC, to 240 V, without signal status indication	86
[3] Plug socket	MSSD-EB...	Without signal status indication	86
[4] Plug socket with cable	KMEB-2...	Cable sheath PUR	86
[5] Illuminating seal	MEB-LD...	For 12 ... 24 V DC and 0 ... 230 V AC	86
[6] Inscription label	IBS-6x10	–	86
[7] Push-in fittings	QS...	For tubing	qs
[8] Blanking plug	B...	–	86
[9] Silencer	U... or UC...	For mounting in exhaust ports	86
[10] Separator for pressure zones	VABD..., PRSV...	For fitting on the manifold block	86
[11] Cover plate	CPE18-RP	For fitting on vacant positions for 5/2- and 5/3-way valves	68
	CPE18-RP3	For fitting on vacant positions for 3/2-way valves	70
[12] Manifold block	CPE18-PRS...	For 5/2-way and 5/3-way valves	68
	CPE18-3/2-PRS...	For 3/2-way valves	70

System overview

Manifold assembly with modular manifold blocks

Accessories – Manifold assembly

		Type	Description	→ Page/Internet
[1]	Solenoid valve	CPE...	–	–
[2]	Cover plate	CPE...-RP	For sealing vacant positions	–
[3]	Spool	_	For mounting the valve	–
[4]	End plate	CPE...-PRS-EP	–	–
[5]	Extension 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 component	–	For connecting the blocks	–
[9]	Seal	–	Included in the scope of delivery	–
[10]	Fitting	–	Included in the scope of delivery	–
[11]	Silencer	U or UC	–	–
[12]	Push-in fitting	QS...	For tubing	–

Type codes

001	Series	
CPE	Solenoid valve, Compact Performance	

002	Width	
10	10 mm	

003	Nominal operating voltage	
M1	24 V DC	

004	Electrical connection	
BH	Plug pattern ZC	
CH	Plug M8x1	

005	Valve function	
5L	5/2-way valve, monostable	
5J	5/2-way valve, bistable	
3GL	3/2-way valve, normally closed	
3OL	3/2-way valve, normally open	
5/3G	5/3-way valve, mid-position closed	
5/3E	5/3-way valve, mid-position exhausted	
5/3B	5/3-way valve, mid-position pressurised	

006	Pilot air	
	Internal	
S	External	

007	Pneumatic connection	
M5	M5	
M7	M7	
QS-4	Push-in connector 4 mm	
QS-6	Push-in connector 6 mm	

008	Generation	
	None	
B	Series B	

Datasheet

Function
3/2G, 3/2O,
5/2-way single solenoid
5/2-way double pilot valve
5/3G, 5/3B, 5/3E

e.g. 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]
Stable position			Monostable			Bistable	Monostable		
Pneumatic spring reset			Yes			–	No		
Mechanical spring reset			No			–	Yes		
Design			Piston spool						
Sealing principle			Soft						
Overlap			Positive overlap						
Actuation type			Electrical						
Type of control			Piloted						
Pilot air supply			Internal or external						
Flow direction			–		Reversible with external pilot air supply				
Exhaust function			–		Can be throttled				
Manual override			Non-detenting, detenting via accessory						
Type of mounting			Via 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 mm						
	82, 84		Threaded connection: M3						
Nominal width		[mm]	4						
Standard nominal flow rate	M5	[l/min]	190		180				
	M7	[l/min]	400		350			300	250
	QS4	[l/min]	190		180				
	QS6	[l/min]	300		350	320	300		250
Switching time	On/Off	[ms]	1 4/14		1 6/20	–	1 6/20		
	Reverse	[ms]	–			8	–		
Duty cycle		[%]	100						
Width		[mm]	10						
Corrosion resistance class CRC[4]			2						

1) G = normally closed
2) O,B = normally open
3) E = normally exhausted
4) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Datasheet

Operating and environmental conditions						
Valve function			3/2	5/2-way, single solenoid	5/2-way, double solenoid	5/3
Operating medium			Compressed air to ISO 8573-1:2010 [7:4:4]			
Pilot medium			Compressed air to ISO 8573-1:2010 [7:4:4]			
Note on the operating/pilot medium			Lubricated operation possible (in which case lubricated operation will always be required)			
Operating pressure	Internal pilot air supply	[MPa]	0.25 ... 0.8	0.3 ... 0.8		
		[bar]	2.5 ... 8	3 ... 8		
	External pilot air supply	[MPa]	−0.09 ... 1			
		[bar]	−0.9 ... 10			
Pilot pressure		[MPa]	0.25 ... 0.8	0.3 ... 0.8		
		[bar]	2.5 ... 8	3 ... 8		
Ambient temperature		[°C]	−5 ... +50			
Temperature of medium		[°C]	−5 ... +50			
Certification for solenoid valves			c UL us - Recognized (OL) (not with M1CH-...)			
Maritime classification[1)]			See certificate			

1) Additional information: www.festo.com/sp → Certificates.

Electrical data			
Operating voltage	M1BH, M1CH	[V DC]	24 +10/−15%
Power consumption	M1BH, M1CH	[W]	1.28
Degree of protection with plug socket			IP65 to IEC 60529 M1CH: IP65/IP67 to IEC 60529
Max. tightening torque of plug socket M8x1	M1CH	[Nm]	0.4

Materials

Sectional view

[1]	Cover	PA
[2]	Housing	Die-cast aluminium
[3]	Piston spool	Steel
–	Seals	NBR
	Note on materials	RoHS-compliant

Datasheet

Dimensions – 3/2-way valve Download CAD data ➔ www.festo.com

[1] Manual override, push to reset
[2] Plug pins, plug pattern ZC
[3] Space for inscription labels
[4] Port 10/12 for external pilot air
[5] M7 to M5 reducer
[6] QS push-in fitting

Type	B1	B3	B4	D1	D2	D3 ⌀	D4	D5 ⌀	D6 ⌀	D7 ⌀	H1	H2	H3	H4	H5	H6	H7	H8
CPE10-M1BH-3...	10	1.5	2.3	M7	M3	3.5	M5	4	6	3	35	26	4	51	62.2	61.7	66.2	63.7

Type	L1	L2	L3	L4	L6	L7	L9	L10	L12	L13
CPE10-M1BH-3...	57	40.8	28.5	16.5	23	10	28.5	16.5	4.2	16.3

Datasheet

Dimensions – 5/2-way single solenoid valve

Download CAD data ➔ www.festo.com

[1] Manual override, push to reset
[2] Plug pins, plug pattern ZC
[3] Space for inscription labels
[4] Port 12/14 for external pilot air
[5] M7 to M5 reducer
[6] QS push-in fitting

Type	B1	B3	B4	B5	D1	D2	D3 ø	D4	D5 ø	D6ø	D7ø	H1	H2	H3	H4	H5	H6	H7	H8
CPE10-M1BH-5L...	10	1.5	1.5	2.3	M7	M3	3.5	M5	4	6	3	35	26	4	51	62.2	61.7	66.2	63.7

Type	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14
CPE10-M1BH-5L...	86.8	70.6	46	16.5	13	23	10	36	28.5	16.5	13	4.2	16.3	39.8

Datasheet

Dimensions – 5/2-way double pilot valve and 5/3-way valve Download CAD data ➔ www.festo.com

[1] Manual override, push to reset
[2] Plug pins, plug pattern ZC
[3] Space for inscription labels
[4] Port 12/14 for external pilot air
[5] M7 to M5 reducer
[6] QS push-in fitting

Type	B1	B3	B5	D1	D2	D3 ⌀	D4	D5 ⌀	D6 ⌀	D7 ⌀	H1	H2	H3	H4	H5	H6	H7	H8
CPE-10-...-5J	10	1.5	2.3	M7	M3	3.5	M5	4	6	3	35	26	4	51	62.2	61.7	66.2	63.7
CPE-10-...-5/3																		

Type	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14
CPE-10-...-5J	103	70.6	46	16.5	13	23	10	36	28.5	16.5	13	4.2	16.3	39.8
CPE-10-...-5/3	115.6	83.2												

Datasheet

Dimensions – Solenoid valves with round plug M8x1

Download CAD data ➔ www.festo.com

[1] Manual override, push to reset [2] Plug M8x1 [3] Space for inscription labels [4] Port 12/14 for external pilot air

Type	B1	B3	B4	B5	D1	D2	D3 ø	H1	H2	H3
CPE-10-M1CH-3...	10	1.5	2.3	–	M7	M3	3.5	35	26	4
CPE-10-M1CH-5L...			1.5	2.3						
CPE-10-M1CH-5J...			–							

Type	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15
CPE-10-M1CH-3...	57	40.8	28.5	16.5	–	23	10	–	28.5	16.5	–	6.2	16.3	9.2	–
CPE-10-M1CH-5L...	86.8	70.6	46		13			36			13			39.82	9.2
CPE-10-M1CH-5J...	103														

Ordering data

Ordering data Circuit symbol	Pilot air supply	Electrical connection	Operating voltage	Pneumatic connection	Weight [g]	Part no.	Type
3/2-way valve, normally closed							
	Internal	Plug pins, plug pattern ZC	24 V DC	M5	–	**196845**	**CPE10-M1BH-3GL-M5**
				M7	40	**196915**	**CPE10-M1BH-3GL-M7**
				QS-4	–	**196846**	**CPE10-M1BH-3GL-QS-4**
				QS-6	–	**196847**	**CPE10-M1BH-3GL-QS-6**
		Plug M8x1		M7	40	**550233**	**CPE10-M1CH-3GL-M7**
3/2-way valve, normally open							
	Internal	Plug pins, plug pattern ZC	24 V DC	M5	–	**196851**	**CPE10-M1BH-3OL-M5**
				M7	40	**196917**	**CPE10-M1BH-3OL-M7**
				QS-4	–	**196852**	**CPE10-M1BH-3OL-QS-4**
				QS-6	–	**196853**	**CPE10-M1BH-3OL-QS-6**
		Plug M8x1		M7	40	**550235**	**CPE10-M1CH-3OL-M7**
3/2-way valve, normally closed							
	External	Plug pins, plug pattern ZC	24 V DC	M5	–	**196848**	**CPE10-M1BH-3GLS-M5**
				M7	40	**196916**	**CPE10-M1BH-3GLS-M7**
				QS-4	–	**196849**	**CPE10-M1BH-3GLS-QS-4**
				QS-6	–	**196850**	**CPE10-M1BH-3GLS-QS-6**
		Plug M8x1		M7	40	**550234**	**CPE10-M1CH-3GLS-M7**
3/2-way valve, normally open							
	External	Plug pins, plug pattern ZC	24 V DC	M5	–	**196854**	**CPE10-M1BH-3OLS-M5**
				M7	40	**196918**	**CPE10-M1BH-3OLS-M7**
				QS-4	–	**196855**	**CPE10-M1BH-3OLS-QS-4**
				QS-6	–	**196856**	**CPE10-M1BH-3OLS-QS-6**
		Plug M8x1		M7	40	**550236**	**CPE10-M1CH-3OLS-M7**
5/2-way valve, single solenoid							
	Internal	Plug pins, plug pattern ZC	24 V DC	M5	–	**196881**	**CPE10-M1BH-5L-M5**
				M7	56	**196927**	**CPE10-M1BH-5L-M7**
				QS-4	–	**196882**	**CPE10-M1BH-5L-QS-4**
				QS-6	–	**196883**	**CPE10-M1BH-5L-QS-6**
		Plug M8x1		M7	56	**550223**	**CPE10-M1CH-5L-M7**
5/2-way double pilot valve							
	Internal	Plug pins, plug pattern ZC	24 V DC	M5	–	**196875**	**CPE10-M1BH-5J-M5**
				M7	68	**196925**	**CPE10-M1BH-5J-M7**
				QS-4	–	**196876**	**CPE10-M1BH-5J-QS-4**
				QS-6	–	**196877**	**CPE10-M1BH-5J-QS-6**
		Plug M8x1		M7	68	**550225**	**CPE10-M1CH-5J-M7**
5/2-way valve, single solenoid							
	External	Plug pins, plug pattern ZC	24 V DC	M5	–	**196884**	**CPE10-M1BH-5LS-M5**
				M7	56	**196928**	**CPE10-M1BH-5LS-M7**
				QS-4	–	**196885**	**CPE10-M1BH-5LS-QS-4**
				QS-6	–	**196886**	**CPE10-M1BH-5LS-QS-6**
		Plug M8x1		M7	56	**550224**	**CPE10-M1CH-5LS-M7**

Ordering data

Ordering data Circuit symbol	Pilot air supply	Electrical connection	Operating voltage	Pneumatic connection	Weight [g]	Part no.	Type
5/2-way double pilot valve							
	External	Plug pins, plug pattern ZC	24 V DC	M5	–	**196878**	**CPE10-M1BH-5JS-M5**
				M7	68	**196926**	**CPE10-M1BH-5JS-M7**
				QS-4	–	**196879**	**CPE10-M1BH-5JS-QS-4**
				QS-6	–	**196880**	**CPE10-M1BH-5JS-QS-6**
		Plug M8x1		M7	68	**550226**	**CPE10-M1CH-5JS-M7**
5/3-way mid-position valve, normally closed							
	Internal	Plug pins, plug pattern ZC	24 V DC	M5	–	**533159**	**CPE10-M1BH-5/3G-M5-B**
				M7	68	**533141**	**CPE10-M1BH-5/3G-M7-B**
				QS-4	–	**533147**	**CPE10-M1BH-5/3G-QS-4**
				QS-6	–	**533153**	**CPE10-M1BH-5/3G-QS-6**
		Plug M8x1		M7	68	**550227**	**CPE10-M1CH-5/3G-M7**
5/3-way mid-position valve, normally exhausted							
	Internal	Plug pins, plug pattern ZC	24 V DC	M5	–	**533161**	**CPE10-M1BH-5/3E-M5-B**
				M7	68	**533143**	**CPE10-M1BH-5/3E-M7-B**
				QS-4	–	**533149**	**CPE10-M1BH-5/3E-QS-4-B**
				QS-6	–	**533155**	**CPE10-M1BH-5/3E-QS-6-B**
		Plug M8x1		M7	68	**550229**	**CPE10-M1CH-5/3E-M7**
5/3-way mid-position valve, normally open							
	Internal	Plug pins, plug pattern ZC	24 V DC	M5	–	**533163**	**CPE10-M1BH-5/3B-M5-B**
				M7	68	**533145**	**CPE10-M1BH-5/3B-M7-B**
				QS-4	–	**533151**	**CPE10-M1BH-5/3B-QS-4-B**
				QS-6	–	**533157**	**CPE10-M1BH-5/3B-QS-6-B**
		Plug M8x1		M7	68	**550231**	**CPE10-M1CH-5/3B-M7**
5/3-way mid-position valve, normally closed							
	External	Plug pins, plug pattern ZC	24 V DC	M5	–	**533160**	**CPE10-M1BH-5/3GS-M5-B**
				M7	68	**533142**	**CPE10-M1BH-5/3GS-M7-B**
				QS-4	–	**533148**	**CPE10-M1BH-5/3GS-QS-4-B**
				QS-6	–	**533154**	**CPE10-M1BH-5/3GS-QS-6-B**
		Plug M8x1		M7	68	**550228**	**CPE10-M1CH-5/3GS-M7**
5/3-way mid-position valve, normally exhausted							
	External	Plug pins, plug pattern ZC	24 V DC	M5	–	**533162**	**CPE10-M1BH-5/3ES-M5-B**
				M7	68	**533144**	**CPE10-M1BH-5/3ES-M7-B**
				QS-4	–	**533150**	**CPE10-M1BH-5/3ES-QS-4-B**
				QS-6	–	**533156**	**CPE10-M1BH-5/3ES-QS-6-B**
		Plug M8x1		M7	68	**550230**	**CPE10-M1CH-5/3ES-M7**
5/3-way mid-position valve, normally open							
	External	Plug pins, plug pattern ZC	24 V DC	M5	–	**533164**	**CPE10-M1BH-5/3BS-M5-B**
				M7	68	**533146**	**CPE10-M1BH-5/3BS-M7-B**
				QS-4	–	**533152**	**CPE10-M1BH-5/3BS-QS-4-B**
				QS-6	–	**533158**	**CPE10-M1BH-5/3BS-QS-6-B**
		Plug M8x1		M7	68	**550232**	**CPE10-M1CH-5/3BS-M7**

Datasheet – Manifold block

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] Retaining bracket [3] Cover plate [4] Valves

Type	B1	B2	B3	B4	B5	D1	D2 ø	H1	H2	H3	H4	H5	H6
CPE10-PRS...	103	79	35	67.5	26	G1/4	5.3	72	69.5	44.8	34	23.5	11

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

Ordering data – Fixed-grid manifold block

Ordering data	Valve positions	CRC[1]	Max. tightening torque [Nm]	Weight [g]	Part no.	Type
Manifold block for 5/2- and 5/3-way valves						
	2	2	1.2	131	**543821**	**CPE10-PRS-1/4-2**
	3			179	**543822**	**CPE10-PRS-1/4-3**
	4			227	**543823**	**CPE10-PRS-1/4-4**
	5			275	**543824**	**CPE10-PRS-1/4-5**
	6			323	**543825**	**CPE10-PRS-1/4-6**
	7			371	**543826**	**CPE10-PRS-1/4-7**
	8			419	**543827**	**CPE10-PRS-1/4-8**
	9			467	**543828**	**CPE10-PRS-1/4-9**
	10			515	**543829**	**CPE10-PRS-1/4-10**

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Ordering data	Material	Part no.	Type
Cover plate for vacant position			
	PA	**544479**	**CPE10-RP**
Retaining bracket set			
	Retaining bracket: high-alloy stainless steel Screws: galvanised steel Seals: NBR	**544394**	**CPE10-H5-SET**

Ordering data	Material	Part no.	Type
Retaining bracket			
	Retaining bracket: high-alloy stainless steel (packaging unit 50 pieces)	**547045**	**CPE10-H5-50**
Screws			
	Galvanised steel (packaging unit 100 pieces)	**547048**	**M3X40-8.8-VS-100**
Seals			
	NBR (packaging unit 150 pieces)	**547051**	**CPV10-VI-P.M7-150**

Technical data – Fixed-grid manifold block

Manifold block
For CPE10 3/2

Material:
Wrought aluminium alloy
RoHS-compliant

Dimensions – Fixed-grid manifold block 3/2

Download CAD data ➔ www.festo.com

[1] Manifold block [2] Retaining bracket [3] Cover plate [4] Valves

Type	B1	B2	B3	B5	D1	D2 ø	D3 ø	H1	H2	H3	H4	H6
CPE10-3/2-PRS...	57	47	26	13	G1/4	5.3	9.5	66.5	63.5	39.3	28.5	13.5

Type	L1	L2	L3	L4	L5	L6	L7	T1
CPE10-3/2-PRS...	40 + (n–1) x 16	28 + (n–1) x 16	6	20	16	13.4	(n–1) x 16	5.3

Ordering data – Fixed-grid manifold block

Ordering data	Valve positions	CRC[1]	Max. tightening torque for valve mounting [Nm]	Weight [g]	Part no.	Type
Manifold block for 3/2-way valves						
	2	2	1.2	128	**550550**	**CPE10-3/2-PRS-1/4-2**
	3			164	**550551**	**CPE10-3/2-PRS-1/4-3**
	4			201	**550552**	**CPE10-3/2-PRS-1/4-4**
	5			237	**550553**	**CPE10-3/2-PRS-1/4-5**
	6			274	**550554**	**CPE10-3/2-PRS-1/4-6**
	7			310	**550555**	**CPE10-3/2-PRS-1/4-7**
	8			347	**550556**	**CPE10-3/2-PRS-1/4-8**
	9			383	**550557**	**CPE10-3/2-PRS-1/4-9**
	10			420	**550558**	**CPE10-3/2-PRS-1/4-10**

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Ordering data	Material	Part no.	Type
Cover plate			
	PA RoHS-compliant	**550580**	**CPE10-RP3**
Retaining bracket set			
	Retaining bracket: high-alloy stainless steel Screws: galvanised steel Seals: NBR RoHS-compliant	**550577**	**CPE10-H3-SET**

Ordering data	Material	Part no.	Type
Retaining bracket			
	Retaining bracket: high-alloy stainless steel (packaging unit 50 pieces)	**551490**	**CPE10-H3-50**
Screws			
	Galvanised steel (packaging unit 100 pieces)	**547048**	**M3X40-8.8-VS-100**
Seals			
	NBR (packaging unit 150 pieces)	**547051**	**CPV10-VI-P.M7-150**

Technical data – Modular manifold

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

Material:
Reinforced PA

Dimensions – Modular manifold block

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[1] Manifold block CPE...-PRSG...-2 for 2 valves
[2] Manifold block CPE...-PRSG...-3 for 3 valves
[3] Expansion block CPE...-PRSE...-2 for 2 valves
[4] End block CPE...-PRS-EP
[5] Cover plate CPE...-PRSB
[6] H-rail to EN 50002 for mounting
[7] Clamping screw for H-rail
[8] Location for inscription label type IBS 6 x 10
[9] Connecting component

Size	B1	B2	B3	B4	B5	B6	B7	D1	D2 ø	H1	H2	H3	H4
CPE10	93.5	87	37	73	71	60	7	G1/4	3.3	~72	~40	~34	37

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

1) n = number of valve positions

Technical data – Modular manifold

Combination options			
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 5x 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

Each air supply can support a maximum of 6 valve positions. Use valve manifold blocks only in combination with 5/2- and 5/3-way valves.

Type codes

001	Series	
CPE	Solenoid valve, Compact Performance	

002	Width	
14	14 mm	

003	Nominal operating voltage	
M1	24 V DC	

004	Electrical connection	
BH	Plug pattern ZC	
CH	Plug M8x1	

005	Valve function	
5L	5/2-way valve, monostable	
5J	5/2-way valve, bistable	
3GL	3/2-way valve, normally closed	
3OL	3/2-way valve, normally open	
5/3G	5/3-way valve, mid-position closed	
5/3E	5/3-way valve, mid-position exhausted	
5/3B	5/3-way valve, mid-position pressurised	

006	Pilot air	
	Internal	
S	External	

007	Pneumatic connection	
1/8	G1/8	
QS-6	Push-in connector 6 mm	
QS-8	Push-in connector 8 mm	

Datasheet

Function
3/2G, 3/2O,
5/2-way single solenoid
5/2-way double pilot valve
5/3G, 5/3B, 5/3E

e.g. 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]
Stable position			Monostable			Bistable	Monostable		
Pneumatic spring reset			Yes			–	No		
Mechanical spring reset			No			–	Yes		
Design			Piston spool						
Sealing principle			Soft						
Overlap			Positive overlap						
Actuation type			Electrical						
Type of control			Piloted						
Pilot air supply			Internal or external						
Flow direction			–		Reversible with external pilot air supply				
Exhaust function			–		Can be throttled				
Manual override			Non-detenting, detenting via accessory						
Type of mounting			Via through-holes						
Mounting position			Any						
Pneumatic connection	1, 2, 4		Threaded connection: G1/8 QS connection: ⌀ 6 or ⌀ 8 mm						
	3, 5		Threaded connection: G1/8						
	12, 14		Threaded connection: M3, QS connection: ⌀ 3 mm						
	82, 84		Threaded connection: M3						
Nominal width		[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]	1 6/27		2 4/32	–	2 0/42		
Changeover time		[ms]	–			12	–		
Duty cycle		[%]	100						
Width		[mm]	14						
Corrosion resistance class CRC[4]			2						

1) G = normally closed
2) O,B = normally open
3) E = normally exhausted
4) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Datasheet

Operating and environmental conditions						
Valve function			3/2	5/2-way, single solenoid	5/2-way, double solenoid	5/3
Operating medium			Compressed air to ISO 8573-1:2010 [7:4:4]			
Pilot medium			Compressed air to ISO 8573-1:2010 [7:4:4]			
Note on the operating/pilot medium			Lubricated operation possible (in which case lubricated operation will always be required)			
Operating pressure	Internal pilot air supply	[MPa]	0.25 ... 0.8	0.3 ... 0.8	0.2 ... 0.8	0.3 ... 0.8
		[bar]	2.5 ... 8	3 ... 8	2 ... 8	3 ... 8
	External pilot air supply	[MPa]	−0.09 ... 1			
		[bar]	−0.9 ... 10			
Pilot pressure		[MPa]	0.25 ... 0.8	0.3 ... 0.8	0.2 ... 0.8	0.3 ... 0.8
		[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 - Recognized (OL) (not with M1CH-...)			
Maritime classification[1)]			See certificate			

1) Additional information: www.festo.com/sp → Certificates.

Electrical data			
Operating voltage	M1BH, M1CH	[V DC]	24 +10/−15%
Power consumption	M1BH, M1CH	[W]	1.28
Degree of protection with plug socket			IP65 to IEC 60529 M1CH: IP65/IP67 to IEC 60529
Max. tightening torque of plug socket M8x1	M1CH	[Nm]	0.4

Materials

Sectional view

[1]	Cover	PA
[2]	Housing	Die-cast aluminium
[3]	Piston spool	Steel
–	Seals	NBR
	Note on materials	RoHS-compliant

Datasheet

Dimensions – 3/2-way valve Download CAD data ➔ www.festo.com

[1] Manual override
[2] Plug pins, plug pattern ZC
[3] Space for inscription labels
[4] Port 10/12 for external pilot air supply
[5] QS push-in fitting

Type	B1	B2	B3	B4	D1	D2	D3 ⌀	D4 ⌀	D5 ⌀	D6 ⌀	H1	H2	H3	H4	H5	H6	H7
CPE14-M1BH-3...	14	10	3.5	3.5	G1/8	M3	4.4	6	8	3	40.3	26	7	75.3	70.9	86.3	76.4

Type	L1	L2	L3	L4	L6	L7	L9	L10	L12	L13
CPE14-M1BH-3...	67	50.5	35	18.3	27	9.5	32	18	5	20

Datasheet

Dimensions – 5/2-way single solenoid valve

Download CAD data ➔ www.festo.com

[1] Manual override
[2] Plug pins, plug pattern ZC
[3] Space for inscription labels
[4] Port 12/14 for external pilot air supply
[5] QS push-in fitting

Type	B1	B2	B3	B4	D1	D2	D3 ⌀	D4 ⌀	D5 ⌀	D6 ⌀	H1	H2	H3	H4	H5	H6	H7
CPE14-M1BH-5L...	14	10	3.5	3.5	G1/8	M3	4.4	6	8	3	40.3	26	7	75.3	70.9	86.3	76.4

Type	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13
CPE14-M1BH-5L...	101.5	85	54	18.3	17.5	27	9.5	44.5	32	18.3	17.5	5	20

Datasheet

Dimensions – 5/2-way double solenoid valve

Download CAD data ➔ www.festo.com

[1] Manual override, push to reset
[2] Plug pins, plug pattern ZC
[3] Space for inscription labels
[4] Port 12/14 for external pilot air supply
[5] QS push-in fitting

Type	B1	B2	B3	B4	D1	D2	D3 ⌀	D4 ⌀	D5 ⌀	D6 ⌀	H1	H2	H3	H4	H5	H6	H7
CPE14-...-5J-1/8	14	10	3.5	3.5	G1/8	M3	4.4	6	8	3	40.3	26	7	75.3	70.9	86.3	76.4

Type	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13
CPE14-...-5J-1/8	118	85	54	18.3	17.5	27	9.5	44.5	32	18.3	17.5	5	20

Datasheet

Dimensions – 5/3-way valve Download CAD data ➔ www.festo.com

[1] Manual override
[2] Plug pins, plug pattern ZC
[3] Space for inscription labels
[4] Port 12/14 for external pilot air supply
[5] QS push-in fitting

Type	B1	B2	B3	B4	D1	D2	D3 ⌀	D4 ⌀	D5 ⌀	D6 ⌀	H1	H2	H3	H4	H5	H6	H7
CPE14-M1BH...-5J	14	10	3.5	3.5	G1/8	M3	4.4	6	8	3	40.3	26	7	75.3	70.9	86.3	76.4
CPE14-M1BH...-5/3																	

Type	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13
CPE14-M1BH...-5J	118	85	46	18.3	17.5	27	9.5	44.5	32	18.3	17.5	5	20
CPE14-M1BH...-5/3	134	101											

Datasheet

Dimensions – Solenoid valves with round plug M8x1

Download CAD data ➔ www.festo.com

[1] Manual override

[2] Plug M8x1

[3] Space for inscription labels

[4] Port 12/14 for external pilot air

Datasheet

Type	B1	B2	B3	B4	D1	D2	D3 ø	H1	H2	H3
CPE14-M1CH-3...	14	10	3.5	3.5	G1/8	M3	4.4	40.3	26	7
CPE14-M1CH-5L...										
CPE14-M1CH-5J...								40.4		
CPE14-M1BH-5J								40.3		
CPE14-M1BH-5/3										

Type	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14
CPE14-M1CH-3...	67	50.5	35	18.3	–	27	9.5	–	32	18.3	–	5	20	9.2
CPE14-M1CH-5L...	101.5	85	54		17.5			44.5			17.5			
CPE14-M1CH-5J...	118													
CPE14-M1BH-5J...														
CPE14-M1BH-5/3...	134	101												

Ordering data

Ordering data Circuit symbol	Pilot air supply	Electrical connection	Operating voltage	Pneumatic connection	Weight [g]	Part no.	Type
3/2-way valve, normally closed							
	Internal	Plug pins, plug pattern ZC	24 V DC	G1/8	60	**196929**	**CPE14-M1BH-3GL-1/8**
				QS-6	–	**196887**	**CPE14-M1BH-3GL-QS-6**
				QS-8	–	**196888**	**CPE14-M1BH-3GL-QS-8**
		Plug M8x1		G1/8	60	**550247**	**CPE14-M1CH-3GL-1/8**
3/2-way valve, normally open							
	Internal	Plug pins, plug pattern ZC	24 V DC	G1/8	60	**196931**	**CPE14-M1BH-3OL-1/8**
				QS-6	–	**196891**	**CPE14-M1BH-3OL-QS-6**
				QS-8	–	**196892**	**CPE14-M1BH-3OL-QS-8**
		Plug M8x1		G1/8	60	**550249**	**CPE14-M1CH-3OL-1/8**
3/2-way valve, normally closed							
	External	Plug pins, plug pattern ZC	24 V DC	G1/8	60	**196930**	**CPE14-M1BH-3GLS-1/8**
				QS-6	–	**196889**	**CPE14-M1BH-3GLS-QS-6**
				QS-8	–	**196890**	**CPE14-M1BH-3GLS-QS-8**
		Plug M8x1		G1/8	60	**550248**	**CPE14-M1CH-3GLS-1/8**
3/2-way valve, normally open							
	External	Plug pins, plug pattern ZC	24 V DC	G1/8	60	**196932**	**CPE14-M1BH-3OLS-1/8**
				QS-6	–	**196893**	**CPE14-M1BH-3OLS-QS-6**
				QS-8	–	**196894**	**CPE14-M1BH-3OLS-QS-8**
		Plug M8x1		G1/8	60	**550250**	**CPE14-M1CH-3OLS-1/8**
5/2-way valve, single solenoid							
	Internal	Plug pins, plug pattern ZC	24 V DC	G1/8	95	**196941**	**CPE14-M1BH-5L-1/8**
				QS-6	–	**196911**	**CPE14-M1BH-5L-QS-6**
				QS-8	–	**196912**	**CPE14-M1BH-5L-QS-8**
		Plug M8x1		G1/8	95	**550237**	**CPE14-M1CH-5L-1/8**
5/2-way double pilot valve							
	Internal	Plug pins, plug pattern ZC	24 V DC	G1/8	115	**196939**	**CPE14-M1BH-5J-1/8**
				QS-6	–	**196907**	**CPE14-M1BH-5J-QS-6**
				QS-8	–	**196908**	**CPE14-M1BH-5J-QS-8**
		Plug M8x1		G1/8	115	**550239**	**CPE14-M1CH-5J-1/8**
5/2-way valve, single solenoid							
	External	Plug pins, plug pattern ZC	24 V DC	G1/8	95	**196942**	**CPE14-M1BH-5LS-1/8**
				QS-6	–	**196913**	**CPE14-M1BH-5LS-QS-6**
				QS-8	–	**196914**	**CPE14-M1BH-5LS-QS-8**
		Plug M8x1		G1/8	95	**550238**	**CPE14-M1CH-5LS-1/8**
5/2-way double pilot valve							
	External	Plug pins, plug pattern ZC	24 V DC	G1/8	115	**196940**	**CPE14-M1BH-5JS-1/8**
				QS-6	–	**196909**	**CPE14-M1BH-5JS-QS-6**
				QS-8	–	**196910**	**CPE14-M1BH-5JS-QS-8**
		Plug M8x1		G1/8	115	**550240**	**CPE14-M1CH-5JS-1/8**

Ordering data

Ordering data Circuit symbol	Pilot air supply	Electrical connection	Operating voltage	Pneumatic connection	Weight [g]	Part no.	Type
5/3-way mid-position valve, normally closed							
	Internal	Plug pins, plug pattern ZC	24 V DC	G1/8	120	**196937**	**CPE14-M1BH-5/3G-1/8**
				QS-6	–	**196903**	**CPE14-M1BH-5/3G-QS-6**
				QS-8	–	**196904**	**CPE14-M1BH-5/3G-QS-8**
		Plug M8x1		G1/8	120	**550241**	**CPE14-M1CH-5/3G-1/8**
5/3-way mid-position valve, normally exhausted							
	Internal	Plug pins, plug pattern ZC	24 V DC	G1/8	120	**196935**	**CPE14-M1BH-5/3E-1/8**
				QS-6	–	**196899**	**CPE14-M1BH-5/3E-QS-6**
				QS-8	–	**196900**	**CPE14-M1BH-5/3E-QS-8**
		Plug M8x1		G1/8	120	**550243**	**CPE14-M1CH-5/3E-1/8**
5/3-way mid-position valve, normally open							
	Internal	Plug pins, plug pattern ZC	24 V DC	G1/8	120	**196933**	**CPE14-M1BH-5/3B-1/8**
				QS-6	–	**196895**	**CPE14-M1BH-5/3B-QS-6**
				QS-8	–	**196896**	**CPE14-M1BH-5/3B-QS-8**
		Plug M8x1		G1/8	120	**550245**	**CPE14-M1CH-5/3B-1/8**
5/3-way mid-position valve, normally closed							
	External	Plug pins, plug pattern ZC	24 V DC	G1/8	120	**196938**	**CPE14-M1BH-5/3GS-1/8**
				QS-6	–	**196905**	**CPE14-M1BH-5/3GS-QS-6**
				QS-8	–	**196906**	**CPE14-M1BH-5/3GS-QS-8**
		Plug M8x1		G1/8	120	**550242**	**CPE14-M1CH-5/3GS-1/8**
5/3-way mid-position valve, normally exhausted							
	External	Plug pins, plug pattern ZC	24 V DC	G1/8	120	**196936**	**CPE14-M1BH-5/3ES-1/8**
				QS-6	–	**196901**	**CPE14-M1BH-5/3ES-QS-6**
				QS-8	–	**196902**	**CPE14-M1BH-5/3ES-QS-8**
		Plug M8x1		G1/8	120	**550244**	**CPE14-M1CH-5/3ES-1/8**
5/3-way mid-position valve, normally open							
	External	Plug pins, plug pattern ZC	24 V DC	G1/8	120	**196934**	**CPE14-M1BH-5/3BS-1/8**
				QS-6	–	**196897**	**CPE14-M1BH-5/3BS-QS-6**
				QS-8	–	**196898**	**CPE14-M1BH-5/3BS-QS-8**
		Plug M8x1		G1/8	120	**550246**	**CPE14-M1CH-5/3BS-1/8**

Datasheet – Manifold block

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
Grid dimension 16 mm

[2] Retaining bracket

[3] Cover plate

[4] Valves

Type	B1	B2	B3	B4	B5	D1	D2	H1	H2	H3	H4	H5	H6
CPE14-PRS...	118	90	41	77.5	35	G3/8	6.3	86.7	84.8	54.8	44	32	14

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

Ordering data – Fixed-grid manifold block

Ordering data	Valve positions	CRC[1]	Max. tightening torque [Nm]	Weight [g]	Part no.	Type
Manifold block for 5/2- and 5/3-way valves						
	2	2	1.2	239	**543830**	**CPE14-PRS-3/8-2**
	3			326	**543831**	**CPE14-PRS-3/8-3**
	4			412	**543832**	**CPE14-PRS-3/8-4**
	5			498	**543833**	**CPE14-PRS-3/8-5**
	6			584	**543834**	**CPE14-PRS-3/8-6**
	7			671	**543835**	**CPE14-PRS-3/8-7**
	8			757	**543836**	**CPE14-PRS-3/8-8**
	9			843	**543837**	**CPE14-PRS-3/8-9**
	10			930	**543838**	**CPE14-PRS-3/8-10**

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Ordering data	Material	Part no.	Type
Cover plate for vacant position			
	PA	**544480**	**CPE14-RP**
Retaining bracket set			
	Retaining bracket: high-alloy stainless steel Screws: galvanised steel Seals: NBR	**544395**	**CPE14-H5-SET**

Ordering data	Material	Part no.	Type
Retaining bracket			
	Retaining bracket: high-alloy stainless steel (packaging unit 50 pieces)	**547046**	**CPE14-H5-50**
Screws			
	Galvanised steel (packaging unit 100 pieces)	**547049**	**M3X45-8.8-VS-100**
Seals			
	NBR (packaging unit 150 pieces)	**547052**	**CPV14-VI-P.1/8-150**

Technical data – Fixed-grid manifold block

Manifold block
For CPE14 3/2

Material:
Wrought aluminium alloy
RoHS-compliant

Dimensions for fixed-grid manifold 3/2

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[1] Manifold block
– Grid dimension 20 mm

[2] Retaining bracket

[3] Cover plate

[4] Valves

Type	B1	B2	B3	B5	D1	D2	D3	H1	H2	H3	H4	H6
CPE14-3/2-PRS...	67	51	27	17.5	G3/8	6.3	11	75.2	72.2	43.3	32.5	13.5

Type	L1	L2	L3	L4	L5	L6	L7	T1
CPE14-3/2-PRS...	48 + (n–1) x 20	34 + (n–1) x 20	7	24	20	17.4	(n–1) x 20	6.3

Ordering data – Fixed-grid manifold block

Ordering data	Valve positions	CRC[1]	Max. tightening torque for valve mounting [Nm]	Weight [g]	Part no.	Type
Manifold block for 3/2-way valves						
	2	2	1.2	176	**550559**	**CPE14-3/2-PRS-3/8-2**
	3			228	**550560**	**CPE14-3/2-PRS-3/8-3**
	4			280	**550561**	**CPE14-3/2-PRS-3/8-4**
	5			332	**550562**	**CPE14-3/2-PRS-3/8-5**
	6			384	**550563**	**CPE14-3/2-PRS-3/8-6**
	7			436	**550564**	**CPE14-3/2-PRS-3/8-7**
	8			488	**550565**	**CPE14-3/2-PRS-3/8-8**
	9			540	**550566**	**CPE14-3/2-PRS-3/8-9**
	10			592	**550567**	**CPE14-3/2-PRS-3/8-10**

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Ordering data	Material	Part no.	Type
Cover plate			
	PA	**550581**	**CPE14-RP3**
Retaining bracket set			
	Retaining bracket: high-alloy stainless steel Screws: galvanised steel Seals: NBR	**550578**	**CPE14-H3-SET**

Ordering data	Material	Part no.	Type
Retaining bracket			
	Retaining bracket: high-alloy stainless steel (packaging unit 50 pieces)	**551491**	**CPE14-H3-50**
Screws			
	Galvanised steel (packaging unit 100 pieces)	**547049**	**M3X45-8.8-VS-100**
Seals			
	NBR (packaging unit 150 pieces)	**547052**	**CPV14-VI-P.1/8-150**

Technical data – Modular manifold

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

Material:
Reinforced PA

Dimensions – Modular manifold block

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[1] Manifold block CPE...-PRSG...-2 for 2 valves
[2] Manifold block CPE...-PRSG...-3 for 3 valves
[3] Expansion block CPE...-PRSE...-2 for 2 valves
[4] End block CPE...-PRS-EP
[5] Cover plate CPE...-PRSB
[6] H-rail to EN 50002 for mounting
[7] Clamping screw for H-rail
[8] Location for inscription label type IBS 6 x 10
[9] Connecting component

Size	B1	B2	B3	B4	B5	B6	B7	D1	D2 ø	H1	H2	H3	H4
CPE14	114.6	105.6	50	93	89	80	3	G3/8	4.3	~84	~48	~40	46.4

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

1) n = number of valve positions

Technical data – Modular manifold

Combination options			
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 5x 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

Each air supply can support a maximum of 6 valve positions. Use valve manifold blocks only in combination with 5/2- and 5/3-way valves.

Ordering data – Modular manifold

Ordering data	Port 1, 3, 5	PRS ducts	Weight [g]	Part no.	Type
Manifold block PRSG for 2 valves					
	G3/8	Closed	95	**164965**	**CPE14-PRSG-2**
	G3/8	Open	95	**187829**	**CPE14-PRSGO-2**
Manifold block PRSG for 3 valves					
	G3/8	Closed	130	**187824**	**CPE14-PRSG-3**
	G3/8	Open	130	**187820**	**CPE14-PRSGO-3**
Manifold block PRSE for 2 valves					
	–	Closed	85	**164967**	**CPE14-PRSE-2**
	–	Open	85	**187830**	**CPE14-PRSEO-2**
End plate for manifold					
	G3/8	–	80	**164969**	**CPE14-PRS-EP**
Cover plate for vacant position					
	–	–	15	**164968**	**CPE14-PRSB**

Type codes

001	Series	
CPE	Solenoid valve, Compact Performance	

002	Width	
18	18 mm	

003	Nominal operating voltage	
	None	
M1	24 V DC	
M2	110 V AC	
M3	230 V AC	

004	Electrical connection	
H	Plug pattern ZC	
P1	Interface for pilot valve size 15 mm to ISO 15218 (CNOMO)	

005	Valve function	
5L	5/2-way valve, monostable	
5J	5/2-way valve, bistable	
3GL	3/2-way valve, normally closed	
3OL	3/2-way valve, normally open	
5/3G	5/3-way valve, mid-position closed	
5/3E	5/3-way valve, mid-position exhausted	
5/3B	5/3-way valve, mid-position pressurised	

006	Pilot air	
	Internal	
S	External	

007	Pneumatic connection	
1/4	G1/4	
QS-8	Push-in connector 8 mm	
QS-10	Push-in connector 10 mm	

Datasheet

Functions:
3/2G, 3/2O,
5/2-way single solenoid
5/2-way double pilot valve
5/3G, 5/3B, 5/3E

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

- Width 18 mm
- Flow rate 850 ... 1500 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]
Stable position			Monostable			Bistable	Monostable		
Pneumatic spring reset			Yes			–	No		
Mechanical spring reset			No			–	Yes		
Design			Piston spool						
Sealing principle			Soft						
Overlap			Positive overlap						
Actuation type			Electrical						
Type of control			Piloted						
Pilot interface			To ISO 15218 or none for integrated pilot valve						
Pilot air supply			Internal or external						
Flow direction			–		Reversible with external pilot air supply				
Exhaust function			–		Can be throttled				
Manual override			Non-detenting, detenting via accessory						
Type of mounting			Via through-holes						
Mounting position			Any						
Pneumatic connection	1, 2, 4		Threaded connection: G1/4, QS connection: ⌀ 8 or ⌀ 10 mm						
	3, 5		Threaded connection: G1/4						
	12, 14		Threaded connection: M5, QS connection: ⌀ 4 mm						
	82, 84		Threaded connection: M5						
Nominal width		[mm]	8						
Standard nominal flow rate	G1/4	[l/min]	1300		1300		1450	1200	1300
	QS8	[l/min]	850					780	
	QS10	[l/min]	1000				1050	1000	
Switching time	On/Off	[ms]	28/18, 36/30[5]		26/20, 32/30[5]	–	20/38, 20/34[5]		
	Reverse	[ms]	–			13, 15[5]	–		
Duty cycle		[%]	100						
Width		[mm]	18						
Conforms to standard			ISO 15218 in the case of interface with pilot valve						
Corrosion resistance class CRC[4]			2						
CE marking (see declaration of conformity)[6]			To EU Low Voltage Directive[7]						
UKCA marking (see declaration of conformity)[6]			To UK regulations for electrical equipment[7]						

1) G = normally closed
2) O,B = normally open
3) E = normally exhausted
4) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.
5) Switching time for basic valve
6) For information about the area of use, see the EC declaration of conformity at: www.festo.com/catalogue/... ➔ Support/Downloads.
If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.
7) Only for CPE18-M2H-... and CPE18-M3H-...

Datasheet

Operating and environmental conditions						
Valve function			3/2	5/2-way, single solenoid	5/2-way, double solenoid	5/3
Operating medium			Compressed air to ISO 8573-1:2010 [7:4:4]			
Pilot medium			Compressed air to ISO 8573-1:2010 [7:4:4]			
Note on the operating/pilot medium			Lubricated operation possible (in which case lubricated operation will always be required)			
Operating pressure	Internal pilot air supply	[bar]	2.5 ... 10		2 ... 10	2.5 ... 10
	External pilot air supply	[MPa]	−0.09 ... 1			
		[bar]	−0.9 ... 10			
Pilot pressure		[MPa]	0.25 ... 1		0.2 ... 1	0.25 ... 1
		[bar]	2.5 ... 10		2 ... 10	2.5 ... 10
Ambient temperature		[°C]	−5 ... +50			
Temperature of medium		[°C]	−5 ... +50			
Certification for solenoid valves			c UL us - Recognized (OL) (not with CPE18-P1-...)			
Maritime classification[1)]			See certificate			

1) Additional information: www.festo.com/sp → Certificates.

Electrical data			
Operating voltage	M1H	[V DC]	24 +10/−15%
	M2H	[V AC]	110 ±10% with 50 ... 60 Hz
	M3H	[V AC]	230 ±10% with 50 ... 60 Hz
Power consumption	M1H	[W]	1.5
	M2H, M3H	[VA]	Pull: 3, hold: 2.4
Degree of protection with plug socket			IP65 to IEC 60529

Materials

Sectional view

[1]	Cover	PA
[2]	Housing	Die-cast aluminium
[3]	Piston spool	Steel
–	Seals	NBR
	Note on materials	RoHS-compliant

Datasheet

Dimensions – 3/2-way valve Download CAD data ➔ www.festo.com

[1] Manual override
[2] Plug type C, to EN 175301-803
[3] Space for inscription labels
[4] Port 10/12 for external pilot air supply
[5] QS push-in fitting

Type	B1	B2	B3	D1	D2	D3 ⌀	D4 ⌀	D5 ⌀	D6 ⌀	H1	H2	H3	H4	H5	H6	H7
CPE18-M1H-3...	18	17.5	3.5	G1/4	M5	4.4	8	10	4	57	45	6	98	90.5	105	94

Type	L1	L2	L3	L4	L6	L7	L9	L10	L12	L13
CPE18-M1H-3...	94	69	50	28	38	18	44	28	5.5	29

Datasheet

Dimensions – 5/2-way single solenoid valve Download CAD data ➔ www.festo.com

[1] Manual override
[2] Plug type C, to EN 175301-803
[3] Space for inscription labels
[4] Port 12/14 for external pilot air supply
[5] QS push-in fitting

Type	B1	B2	B3	D1	D2	D3 ø	D4 ø	D5 ø	D6 ø	H1	H2	H3	H4	H5	H6	H7
CPE18-M1H-5...	18	17.5	3.5	G1/4	M5	4.4	8	10	4	57	45	6	98	90.5	105	94

Type	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13
CPE18-M1H-5...	138	113	75	27.5	20	37.5	17.5	57.5	44	27.5	20	5.5	29

Datasheet

Dimensions – 5/2-way double solenoid valve

Download CAD data ➔ www.festo.com

[1] Manual override
[2] Plug type C, to EN 175301-803
[3] Space for inscription labels
[4] Port 12/14 for external pilot air supply
[5]/[6] QS push-in fitting

Type	B1	B2	B3	D1	D2	D3 ø	D4 ø	D5 ø	D6 ø	H1	H2	H3	H4	H5	H6	H7
CPE18-...-5J-1/4	18	17.5	3.5	G1/4	M5	4.4	8	10	4	57	45	6	98	90.5	105	94

Type	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13
CPE18-...-5J-1/4	163	113	75	27.5	20	37.5	17.5	57.5	44	27.5	20	5.5	29

Datasheet

Dimensions – 5/3-way valve Download CAD data ➔ www.festo.com

[1] Manual override
[2] Plug type C, to EN 175301-803
[3] Space for inscription labels
[4] Port 12/14 for external pilot air supply
[5] QS push-in fitting

Type	B1	B2	B3	D1	D2	D3 ø	D4 ø	D5 ø	D6 ø	H1	H2	H3	H4	H5	H6	H7
CPE18-M1H...-5L	18	17.5	3.5	G1/4	M5	4.4	8	10	4	57	45	6	98	90.5	105	94
CPE18-M1H...-5/3																

Type	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13
CPE18-M1H...-5J	163	113	75	27.5	20	37.5	17.5	57.5	44	27.5	20	5.5	29
CPE18-M1H...-5/3	182	132											

Ordering data

Ordering data – 3/2-way valve

Circuit symbol	Pilot air supply	Voltage	Pneumatic connection	Weight [g]	Part no.	Type
Normally closed						
	Internal	24 V DC	G1/4	150	**163141**	**CPE18-M1H-3GL-1/4**
			QS-8	–	**163149**	**CPE18-M1H-3GL-QS-8**
			QS-10	–	**163157**	**CPE18-M1H-3GL-QS-10**
		110 V AC	G1/4	150	**163761**	**CPE18-M2H-3GL-1/4**
			QS-8	–	**163769**	**CPE18-M2H-3GL-QS-8**
			QS-10	–	**163777**	**CPE18-M2H-3GL-QS-10**
		230 V AC	G1/4	150	**163785**	**CPE18-M3H-3GL-1/4**
			QS-8	–	**163793**	**CPE18-M3H-3GL-QS-8**
			QS-10	–	**163801**	**CPE18-M3H-3GL-QS-10**
Normally open						
	Internal	24 V DC	G1/4	150	**163140**	**CPE18-M1H-3OL-1/4**
			QS-8	–	**163148**	**CPE18-M1H-3OL-QS-8**
			QS-10	–	**163156**	**CPE18-M1H-3OL-QS-10**
		110 V AC	G1/4	150	**163760**	**CPE18-M2H-3OL-1/4**
			QS-8	–	**163768**	**CPE18-M2H-3OL-QS-8**
			QS-10	–	**163776**	**CPE18-M2H-3OL-QS-10**
		230 V AC	G1/4	150	**163784**	**CPE18-M3H-3OL-1/4**
			QS-8	–	**163792**	**CPE18-M3H-3OL-QS-8**
			QS-10	–	**163800**	**CPE18-M3H-3OL-QS-10**
Normally closed						
	External	24 V DC	G1/4	150	**163145**	**CPE18-M1H-3GLS-1/4**
			QS-8	–	**163153**	**CPE18-M1H-3GLS-QS-8**
			QS-10	–	**163161**	**CPE18-M1H-3GLS-QS-10**
		110 V AC	G1/4	150	**163765**	**CPE18-M2H-3GLS-1/4**
			QS-8	–	**163773**	**CPE18-M2H-3GLS-QS-8**
			QS-10	–	**163781**	**CPE18-M2H-3GLS-QS-10**
		230 V AC	G1/4	150	**163789**	**CPE18-M3H-3GLS-1/4**
			QS-8	–	**163797**	**CPE18-M3H-3GLS-QS-8**
			QS-10	–	**163805**	**CPE18-M3H-3GLS-QS-10**
Normally open						
	External	24 V DC	G1/4	150	**163144**	**CPE18-M1H-3OLS-1/4**
			QS-8	–	**163152**	**CPE18-M1H-3OLS-QS-8**
			QS-10	–	**163160**	**CPE18-M1H-3OLS-QS-10**
		110 V AC	G1/4	150	**163764**	**CPE18-M2H-3OLS-1/4**
			QS-8	–	**163772**	**CPE18-M2H-3OLS-QS-8**
			QS-10	–	**163780**	**CPE18-M2H-3OLS-QS-10**
		230 V AC	G1/4	150	**163788**	**CPE18-M3H-3OLS-1/4**
			QS-8	–	**163796**	**CPE18-M3H-3OLS-QS-8**
			QS-10	–	**163804**	**CPE18-M3H-3OLS-QS-10**

Ordering data

Ordering data – 5/2-way valve

Circuit symbol	Pilot air supply	Voltage	Pneumatic connection	Weight [g]	Part no.	Type
5/2-way valve, single solenoid						
	Internal	24 V DC	G1/4	220	**163142**	**CPE18-M1H-5L-1/4**
			QS-8	–	**163150**	**CPE18-M1H-5L-QS-8**
			QS-10	–	**163158**	**CPE18-M1H-5L-QS-10**
		110 V AC	G1/4	220	**163762**	**CPE18-M2H-5L-1/4**
			QS-8	–	**163770**	**CPE18-M2H-5L-QS-8**
			QS-10	–	**163778**	**CPE18-M2H-5L-QS-10**
		230 V AC	G1/4	220	**163786**	**CPE18-M3H-5L-1/4**
			QS-8	–	**163794**	**CPE18-M3H-5L-QS-8**
			QS-10	–	**163802**	**CPE18-M3H-5L-QS-10**
5/2-way double pilot valve						
	Internal	24 V DC	G1/4	270	**163143**	**CPE18-M1H-5J-1/4**
			QS-8	–	**163151**	**CPE18-M1H-5J-QS-8**
			QS-10	–	**163159**	**CPE18-M1H-5J-QS-10**
		110 V AC	G1/4	270	**163763**	**CPE18-M2H-5J-1/4**
			QS-8	–	**163771**	**CPE18-M2H-5J-QS-8**
			QS-10	–	**163779**	**CPE18-M2H-5J-QS-10**
		230 V AC	G1/4	270	**163787**	**CPE18-M3H-5J-1/4**
			QS-8	–	**163795**	**CPE18-M3H-5J-QS-8**
			QS-10	–	**163803**	**CPE18-M3H-5J-QS-10**
5/2-way valve, single solenoid						
	External	24 V DC	G1/4	220	**163146**	**CPE18-M1H-5LS-1/4**
			QS-8	–	**163154**	**CPE18-M1H-5LS-QS-8**
			QS-10	–	**163162**	**CPE18-M1H-5LS-QS-10**
		110 V AC	G1/4	220	**163766**	**CPE18-M2H-5LS-1/4**
			QS-8	–	**163774**	**CPE18-M2H-5LS-QS-8**
			QS-10	–	**163782**	**CPE18-M2H-5LS-QS-10**
		230 V AC	G1/4	220	**163790**	**CPE18-M3H-5LS-1/4**
			QS-8	–	**163798**	**CPE18-M3H-5LS-QS-8**
			QS-10	–	**163806**	**CPE18-M3H-5LS-QS-10**
5/2-way double pilot valve						
	External	24 V DC	G1/4	270	**163147**	**CPE18-M1H-5JS-1/4**
			QS-8	–	**163155**	**CPE18-M1H-5JS-QS-8**
			QS-10	–	**163163**	**CPE18-M1H-5JS-QS-10**
		110 V AC	G1/4	270	**163767**	**CPE18-M2H-5JS-1/4**
			QS-8	–	**163775**	**CPE18-M2H-5JS-QS-8**
			QS-10	–	**163783**	**CPE18-M2H-5JS-QS-10**
		230 V AC	G1/4	270	**163791**	**CPE18-M3H-5JS-1/4**
			QS-8	–	**163799**	**CPE18-M3H-5JS-QS-8**
			QS-10	–	**163807**	**CPE18-M3H-5JS-QS-10**

Ordering data

Ordering data – 5/3-way valve

Circuit symbol	Pilot air supply	Voltage	Pneumatic connection	Weight [g]	Part no.	Type
5/3-way mid-position valve, normally closed						
	Internal	24 V DC	G1/4	280	**170247**	**CPE18-M1H-5/3G-1/4**
			QS-8	–	**170253**	**CPE18-M1H-5/3G-QS-8**
			QS-10	–	**170259**	**CPE18-M1H-5/3G-QS-10**
		110 V AC	G1/4	280	**170283**	**CPE18-M2H-5/3G-1/4**
			QS-8	–	**170289**	**CPE18-M2H-5/3G-QS-8**
			QS-10	–	**170295**	**CPE18-M2H-5/3G-QS-10**
		230 V AC	G1/4	280	**170319**	**CPE18-M3H-5/3G-1/4**
			QS-8	–	**170325**	**CPE18-M3H-5/3G-QS-8**
			QS-10	–	**170331**	**CPE18-M3H-5/3G-QS-10**
5/3-way mid-position valve, normally exhausted						
	Internal	24 V DC	G1/4	280	**170249**	**CPE18-M1H-5/3E-1/4**
			QS-8	–	**170255**	**CPE18-M1H-5/3E-QS-8**
			QS-10	–	**170261**	**CPE18-M1H-5/3E-QS-10**
		110 V AC	G1/4	280	**170285**	**CPE18-M2H-5/3E-1/4**
			QS-8	–	**170291**	**CPE18-M2H-5/3E-QS-8**
			QS-10	–	**170297**	**CPE18-M2H-5/3E-QS-10**
		230 V AC	G1/4	280	**170321**	**CPE18-M3H-5/3E-1/4**
			QS-8	–	**170327**	**CPE18-M3H-5/3E-QS-8**
			QS-10	–	**170333**	**CPE18-M3H-5/3E-QS-10**
5/3-way mid-position valve, normally open						
	Internal	24 V DC	G1/4	280	**170251**	**CPE18-M1H-5/3B-1/4**
			QS-8	–	**170257**	**CPE18-M1H-5/3B-QS8**
			QS-10	–	**170263**	**CPE18-M1H-5/3B-QS10**
		110 V AC	G1/4	280	**170287**	**CPE18-M2H-5/3B-1/4**
			QS-8	–	**170293**	**CPE18-M2H-5/3B-QS-8**
			QS-10	–	**170299**	**CPE18-M2H-5/3B-QS-10**
		230 V AC	G1/4	280	**170323**	**CPE18-M3H-5/3B-1/4**
			QS-8	–	**170329**	**CPE18-M3H-5/3B-QS-8**
			QS-10	–	**170335**	**CPE18-M3H-5/3B-QS-10**

Ordering data

Ordering data – 5/3-way valve

Circuit symbol	Pilot air supply	Voltage	Pneumatic connection	Weight [g]	Part no.	Type
5/3-way mid-position valve, normally closed						
	External	24 V DC	G1/4	280	**170248**	**CPE18-M1H-5/3GS-1/4**
			QS-8	–	**170254**	**CPE18-M1H-5/3GS-QS-8**
			QS-10	–	**170260**	**CPE18-M1H-5/3GS-QS-10**
		110 V AC	G1/4	280	**170284**	**CPE18-M2H-5/3GS-1/4**
			QS-8	–	**170290**	**CPE18-M2H-5/3GS-QS-8**
			QS-10	–	**170296**	**CPE18-M2H-5/3GS-QS10**
		230 V AC	G1/4	280	**170320**	**CPE18-M3H-5/3GS-1/4**
			QS-8	–	**170326**	**CPE18-M3H-5/3GS-QS-8**
			QS-10	–	**170332**	**CPE18-M3H-5/3GS-QS10**
5/3-way mid-position valve, normally exhausted						
	External	24 V DC	G1/4	280	**170250**	**CPE18-M1H-5/3ES-1/4**
			QS-8	–	**170256**	**CPE18-M1H-5/3ES-QS-8**
			QS-10	–	**170262**	**CPE18-M1H-5/3ES-QS-10**
		110 V AC	G1/4	280	**170286**	**CPE18-M2H-5/3ES-1/4**
			QS-8	–	**170292**	**CPE18-M2H-5/3ES-QS-8**
			QS-10	–	**170298**	**CPE18-M2H-5/3ES-QS10**
		230 V AC	G1/4	280	**170322**	**CPE18-M3H-5/3ES-1/4**
			QS-8	–	**170328**	**CPE18-M3H-5/3ES-QS-8**
			QS-10	–	**170334**	**CPE18-M3H-5/3ES-QS10**
5/3-way mid-position valve, normally open						
	External	24 V DC	G1/4	280	**170252**	**CPE18-M1H-5/3BS-1/4**
			QS-8	–	**170258**	**CPE18-M1H-5/3BS-QS-8**
			QS-10	–	**170264**	**CPE18-M1H-5/3BS-QS-10**
		110 V AC	G1/4	280	**170288**	**CPE18-M2H-5/3BS-1/4**
			QS-8	–	**170294**	**CPE18-M2H-5/3BS-QS-8**
			QS-10	–	**170300**	**CPE18-M2H-5/3BS-QS-10**
		230 V AC	G1/4	280	**170324**	**CPE18-M3H-5/3BS-1/4**
			QS-8	–	**170330**	**CPE18-M3H-5/3BS-QS-8**
			QS-10	–	**170336**	**CPE18-M3H-5/3BS-QS-10**

Technical data – Directional control valves without pilot valve

Materials

Sectional view

[1]	Cover	PA
[2]	Housing	Die-cast aluminium
[3]	Piston spool	Steel
–	Seals	NBR
	Note on materials	RoHS-compliant

Dimensions – 3/2-way valve

Download CAD data ➔ www.festo.com

[1] Manual override
[2] Pilot valve, plug type C to EN 175301-803
[3] Space for inscription label
[4] Port 10/12 for external pilot air supply

Type	B1	B2	B3	D1	D2	D3 ø	H1	H2	H3	L1	L2	L3	L4	L6	L7	L9	L10	L12	L13
CPE18-P1-3	18	15.2	3.5	G1/4	M5	4.4	57	45	6	73	23.3	50	27.5	37.5	17.5	23	27.5	5.5	10.5

Technical data – Directional control valves without pilot valve

Dimensions – 5/2-way valve

Download CAD data ➔ www.festo.com

[1] Manual override
[2] Pilot valve, plug type C to EN 175301-803
[3] Space for inscription label
[4] Port 12/14 for external pilot air supply

Type	B1	B2	B3	D1	D2	D3 ø	H1	H2	H3	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13
CPE18-P1-5L	18	15.2	3.5	G1/4	M5	4.4	57	45	6	117	23.3	75	27.5	20	37.5	17.5	57.5	23	27.5	20	5.5	10.5

Dimensions – 5/2-way double pilot valve

Download CAD data ➔ www.festo.com

[1] Manual override
[2] Pilot valve, plug type C to EN 175301-803
[3] Space for inscription label
[4] Port 12/14 for external pilot air supply

Type	B1	B2	B3	D1	D2	D3 ø	H1	H2	H3	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13
CPE18-P1-5J	18	15.2	3.5	G1/4	M5	4.4	57	45	6	121	23.3	75	27.5	20	37.5	17.5	57.5	23	27.5	20	5.5	10.5

Technical data – Directional control valves without pilot valve

Dimensions – 5/3-way valve

Download CAD data ➔ www.festo.com

[1] Manual override
[2] Pilot valve, plug type C to EN 175301-803
[3] Space for inscription label
[4] Port 12/14 for external pilot air supply

Type	B1	B2	B3	D1	D2	D3 ø	H1	H2	H3	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13
CPE18-P1-5J	18	15.2	3.5	G1/4	M5	4.4	57	45	6	121	23.3	75	27.5	20	37.5	17.5	57.5	23	27.5	20	5.5	10.5
CPE18-P1-5/3										140												

Ordering data

Ordering data – 3/2-way valve without pilot valve

Design type	Normal position	Pilot air supply	Weight [g]	Part no.	Type
	Closed	Internal	110	**550163**	**CPE18-P1-3GL-1/4**
	Open			**550165**	**CPE18-P1-3OL-1/4**
	Closed	External		**550164**	**CPE18-P1-3GLS-1/4**
	Open			**550166**	**CPE18-P1-3OLS-1/4**

Ordering data – 5/2-way single solenoid valve without pilot valve

Design type		Pilot air supply	Weight [g]	Part no.	Type
	–	Internal	180	**550153**	**CPE18-P1-5L-1/4**
		External		**550154**	**CPE18-P1-5LS-1/4**

Ordering data – 5/2-way double pilot valve without pilot valve

Design type		Pilot air supply	Weight [g]	Part no.	Type
	–	Internal	190	**550155**	**CPE18-P1-5J-1/4**
		External		**550156**	**CPE18-P1-5JS-1/4**

Ordering data – 5/3-way monostable mid-position valve without pilot valve

Design type	Normal position	Pilot air supply	Weight [g]	Part no.	Type
	Closed	Internal	200	**550157**	**CPE18-P1-5/3G-1/4**
	Open			**550159**	**CPE18-P1-5/3E-1/4**
	Exhausted			**550161**	**CPE18-P1-5/3B-1/4**
	Closed	External		**550158**	**CPE18-P1-5/3GS-1/4**
	Open			**550160**	**CPE18-P1-5/3ES-1/4**
	Exhausted			**550162**	**CPE18-P1-5/3BS-1/4**

Ordering data – Pilot valve to ISO 15218

Design type	Plug, square design	PE conductor	Power		Voltage		Part no.	Type
			[W]	[VA]	[V DC]	[V AC]		
	Type C to EN 175301-803	No	1.8	–	24	–	**546256**	**VSCS-B-M32-MH-WA-1C1**
					12	–	**546257**	**VSCS-B-M32-MH-WA-5C1**
	Type C to EN 175301-803	Yes	–	2.1	–	230	**546260**	**VSCS-B-M32-MH-WA-3AC1**
		Yes	–	2.1	–	110	**546259**	**VSCS-B-M32-MH-WA-2AC1**
	Type C to EN 175301-803	No	–	2.3	–	24	**546258**	**VSCS-B-M32-MH-WA-1AC1**

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
Grid dimension 26 mm

[2] Retaining bracket

[3] Cover plate

[4] Valves

Type	B1	B2	B3	B4	B5	D1	D2	H1	H2	H3	H4	H5	H6
CPE18-PRS...	155	102	46	86.5	40	G3/8	8.3	105	101.45	59.8	44	30.5	14

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

Ordering data – Fixed-grid manifold block

Ordering data	Valve positions	CRC[1)]	Max. tightening torque for valve mounting [Nm]	Weight [g]	Part no.	Type
Manifold block for 5/2- and 5/3-way valves						
	2	2	2	353	**543839**	**CPE18-PRS-3/8-2**
	3			482	**543840**	**CPE18-PRS-3/8-3**
	4			611	**543841**	**CPE18-PRS-3/8-4**
	5			740	**543842**	**CPE18-PRS-3/8-5**
	6			870	**543843**	**CPE18-PRS-3/8-6**
	7			999	**543844**	**CPE18-PRS-3/8-7**
	8			1128	**543845**	**CPE18-PRS-3/8-8**
	9			1257	**543846**	**CPE18-PRS-3/8-9**
	10			1386	**543847**	**CPE18-PRS-3/8-10**

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Ordering data	Material	Part no.	Type
Cover plate for vacant position			
	PA	**544481**	**CPE18-RP**
Retaining bracket set			
	Retaining bracket: high-alloy stainless steel Screws: galvanised steel Seals: NBR	**544396**	**CPE18-H5-SET**

Ordering data	Material	Part no.	Type
Retaining bracket			
	Retaining bracket: high-alloy stainless steel (packaging unit 50 pieces)	**547047**	**CPE18-H5-50**
Screws			
	Galvanised steel (packaging unit 100 pieces)	**547050**	**M4X65-8.8-VS-100**
Seals			
	NBR (packaging unit 150 pieces)	**547053**	**CPV18-VI-P.1/4-150**

Technical data – Fixed-grid manifold block

Manifold block
For CPE18 3/2

Material:
Wrought aluminium alloy

Dimensions – Fixed-grid manifold block 3/2

Download CAD data ➔ www.festo.com

[1] Manifold block
Grid dimension 26 mm

[2] Retaining bracket

[3] Cover plate

[4] Valves

Type	B1	B2	B3	B5	D1	D2	H1	H2	H3	H4	H6
CPE18-3/2-PRS...	90	51	27	200	G3/8	8.3	98	94	52.8	37	13.5

Type	L1	L2	L3	L4	L5	L6	L7	T1
CPE18-3/2-PRS...	60 + (n–1) x 26	43 + (n–1) x 26	8.5	24	26	22.4	(n–1) x 26	8.3

Ordering data – Fixed-grid manifold block

Ordering data	Valve positions	CRC[1]	Max. tightening torque for valve mounting [Nm]	Weight [g]	Part no.	Type
Manifold block for 3/2-way valves						
	2	2	2	266	**550568**	**CPE18-3/2-PRS-3/8-2**
	3			346	**550569**	**CPE18-3/2-PRS-3/8-3**
	4			426	**550570**	**CPE18-3/2-PRS-3/8-4**
	5			507	**550571**	**CPE18-3/2-PRS-3/8-5**
	6			587	**550572**	**CPE18-3/2-PRS-3/8-6**
	7			667	**550573**	**CPE18-3/2-PRS-3/8-7**
	8			748	**550574**	**CPE18-3/2-PRS-3/8-8**
	9			828	**550575**	**CPE18-3/2-PRS-3/8-9**
	10			908	**550576**	**CPE18-3/2-PRS-3/8-10**

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Ordering data	Material	Part no.	Type
Cover plate			
	PA	**550582**	**CPE18-RP3**
Retaining bracket set			
	Retaining bracket: high-alloy stainless steel Screws: galvanised steel Seals: NBR	**550579**	**CPE18-H3-SET**

Ordering data	Material	Part no.	Type
Retaining bracket			
	Retaining bracket: high-alloy stainless steel (packaging unit 50 pieces)	**551492**	**CPE18-H3-50**
Screws			
	Galvanised steel (packaging unit 100 pieces)	**547050**	**M4X65-8.8-VS-100**
Seals			
	NBR (packaging unit 150 pieces)	**547053**	**CPV18-VI-P.1/4-150**

Technical data – Modular manifold

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

Material:
Reinforced PA

Dimensions – Modular manifold block

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[1] Manifold block CPE...-PRSG...-2 for 2 valves
[2] Manifold block CPE...-PRSG...-3 for 3 valves
[3] Expansion block CPE...-PRSE...-2 for 2 valves
[4] End block CPE...-PRS-EP
[5] Cover plate CPE...-PRSB
[6] H-rail to EN 50002 for mounting
[7] Clamping screw for H-rail
[8] Location for inscription label type IBS 6 x 10
[9] Connecting component

Size	B1	B2	B3	B4	B5	B6	B7	D1	D2 ø	H1	H2	H3	H4
CPE18	151.6	136.5	59	113	–	100	2.75	G1/2	5.3	~106	~58	~46	51.4

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

1) n = number of valve positions

Technical data – Modular manifold

Combination options			
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 5x 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

Each air supply can support a maximum of 6 valve positions. Use valve manifold blocks only in combination with 5/2- and 5/3-way valves.

Ordering data – Modular manifold

Ordering data	Port 1, 3, 5	PRS ducts	Weight [g]	Part no.	Type
Manifold block PRSG for 2 valves					
	G1/2	Closed	170	**164970**	**CPE18-PRSG-2**
	G1/2	Open	170	**187831**	**CPE18-PRSGO-2**
Manifold block PRSG for 3 valves					
	G1/2	Closed	225	**187825**	**CPE18-PRSG-3**
	G1/2	Open	225	**187821**	**CPE18-PRSGO-3**
Manifold block PRSE for 2 valves					
	–	Closed	145	**164972**	**CPE18-PRSE-2**
	–	Open	145	**187832**	**CPE18-PRSEO-2**
End plate for manifold					
	G1/2	–	125	**164973**	**CPE18-PRS-EP**
Cover plate for vacant position					
	–	–	28	**164974**	**CPE18-PRSB**

Type codes

001	Series	
CPE	Solenoid valve, Compact Performance	

002	Width	
24	24 mm	

003	Nominal operating voltage	
M1	24 V DC	
M2	110 V AC	
M3	230 V AC	

004	Electrical connection	
H	Plug pattern ZC	

005	Valve function	
5L	5/2-way valve, monostable	
5J	5/2-way valve, bistable	
3GL	3/2-way valve, normally closed	
3OL	3/2-way valve, normally open	
5/3G	5/3-way valve, mid-position closed	
5/3E	5/3-way valve, mid-position exhausted	
5/3B	5/3-way valve, mid-position pressurised	

006	Pilot air	
	Internal	
S	External	

007	Pneumatic connection	
3/8	G3/8	
QS-10	Push-in connector 10 mm	
QS-12	Push-in connector 12 mm	

Datasheet

Functions:
3/2G, 3/2O,
5/2-way single solenoid
5/2-way double pilot valve
5/3G, 5/3B, 5/3E

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

- Width 24 mm
- Flow rate
  1250 ... 3200 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]
Stable position			Monostable			Bistable	Monostable		
Pneumatic spring reset			Yes			–	No		
Mechanical spring reset			No			–	Yes		
Design			Piston spool						
Sealing principle			Soft						
Overlap			Positive overlap						
Actuation type			Electrical						
Type of control			Piloted						
Pilot air supply			Internal or external						
Flow direction			–		Reversible with external pilot air supply				
Exhaust function					Can be throttled				
Manual override			Non-detenting, detenting via accessory						
Type of mounting			Via through-holes						
Mounting position			Any						
Pneumatic connection	1, 2, 4		Threaded connection: G3/8, QS connection: ⌀ 10 or ⌀ 12 mm						
	3, 5		Threaded connection: G3/8						
	12, 14		Threaded connection: M5, QS connection: ⌀ 6 mm						
	82, 84		Threaded connection: M5						
Nominal width		[mm]	11						
Standard nominal flow rate	G3/8	[l/min]	2500		2900	3200	3000	2600	2650
	QS10	[l/min]	1250						
	QS12	[l/min]	1650					1600	
Switching time	On/Off	[ms]	50/33		40/50	–	25/55		
	Reverse	[ms]	–			25	–		
Duty cycle		[%]	100						
Width		[mm]	24						
Corrosion resistance class CRC[4]			2						
CE marking (see declaration of conformity)[5]			To EU Low Voltage Directive[6]						
UKCA marking (see declaration of conformity)[5]			To UK regulations for electrical equipment[6]						

1) G = normally closed
2) O,B = normally open
3) E = normally exhausted
4) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.
5) For information about the area of use, see the EC declaration of conformity at: www.festo.com/catalogue/... → Support/Downloads.
If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.
6) Only for CPE24-M2H-... and CPE24-M3H-...

Datasheet

Operating and environmental conditions						
Valve function			3/2	5/2-way, single solenoid	5/2-way, double solenoid	5/3
Operating medium			Compressed air to ISO 8573-1:2010 [7:4:4]			
Pilot medium			Compressed air to ISO 8573-1:2010 [7:4:4]			
Note on the operating/pilot medium			Lubricated operation possible (in which case lubricated operation will always be required)			
Operating pressure	Internal pilot air supply	[MPa]	0.25 ... 1		0.2 ... 1	0.25 ... 1
		[bar]	2.5 ... 10		2 ... 10	2.5 ... 10
	External pilot air supply	[MPa]	−0.09 ... 1			
		[bar]	−0.9 ... 10			
Pilot pressure		[MPa]	0.25 ... 1		0.2 ... 1	0.25 ... 1
		[bar]	2.5 ... 10		2 ... 10	2.5 ... 10
Ambient temperature		[°C]	−5 ... +50			
Temperature of medium		[°C]	−5 ... +50			
Certification			c UL us - Recognized (OL)			
Maritime classification[1)]			See certificate			

1) Additional information: www.festo.com/sp → Certificates.

Electrical data			
Operating voltage	M1H	[V DC]	24 +10/−15%
	M2H	[V AC]	110 ±10% with 50 ... 60 Hz
	M3H	[V AC]	230 ±10% with 50 ... 60 Hz
Power consumption	M1H	[W]	1.5
	M2H, M3H	[VA]	Pull: 3, hold: 2.4
Degree of protection with plug socket			IP65 to IEC 60529

Materials

Sectional view

[1]	Cover	PA
[2]	Housing	Die-cast aluminium
[3]	Piston spool	Steel
–	Seals	NBR
	Note on materials	RoHS-compliant

Datasheet

Dimensions – 3/2-way valve Download CAD data ➔ www.festo.com

[1] Manual override
[2] Plug type C, to EN 175301-803
[3] Space for inscription labels
[4] Port 10/12 for external pilot air supply
[5] QS push-in fitting

Type	B1 ±0.1	B2 - 0.5	B3	D1	D2	D3 ø	D4 ø	D5 ø	D6 ø	H1 ±0.25	H2	H3 ±0.1	H4	H5	H6	H7
CPE24-M1H-3...	24	17.5	6	G3/8	M5	6.5	10	12	6	62	40	11	108	99.5	113	102

Type	L1	L2	L3 ±0.2	L4 ±0.12	L6 ±0.15	L7 ±0.12	L9	L10	L12 ±0.12	L13
CPE124-M1H-3...	110	85	65	35	50	20	45	35	10	32

Datasheet

Dimensions – 5/2-way single solenoid valve Download CAD data ➔ www.festo.com

[1] Manual override
[2] Plug type C, to EN 175301-803
[3] Space for inscription labels
[4] Port 12/14 for external pilot air supply
[5] QS push-in fitting

Type	B1	B2	B3	D1	D2	D3 ø	D4 ø	D5 ø	D6 ø	H1	H2	H3	H4	H5	H6	H7
CPE24-M1H-5L...	24	17.5	6	G3/8	M5	6.5	10	12	6	62	40	11	108	99.5	113	102

Type	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13
CPE24-M1H-5L...	165	140	100	35	30	50	20	80	45	35	30	10	32

Datasheet

Dimensions – 5/2-way double solenoid valve

Download CAD data ➔ www.festo.com

Threaded connection

Push-in connector

[1] Manual override
[2] Plug type C, to EN 175301-803
[3] Space for inscription labels
[4] Port 12/14 for external pilot air supply
[5] QS push-in fitting

Type	B1	B2	B3	D1	D2	D3 ⌀	D4 ⌀	D5 ⌀	D6 ⌀	H1	H2	H3	H4	H5	H6	H7
CPE24-...-5J-3/8	24	17.5	6	G3/8	M5	6.5	10	12	6	62	40	11	108	99.5	113	102

Type	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13
CPE24-...-5J-3/8	190	140	100	35	30	50	20	80	45	35	30	10	32

Datasheet

Dimensions – 5/3-way valve Download CAD data ➔ www.festo.com

[1] Manual override
[2] Plug type C, to EN 175301-803
[3] Space for inscription labels
[4] Port 12/14 for external pilot air supply
[5] QS push-in fitting

Type	B1 ±0.1	B2 - 0.5	B3	D1	D2	D3 ø	D4 ø	D5 ø	D6 ø	H1 ±0.25	H2	H3 ±0.1	H4	H5	H6	H7
CPE24-M1H...-5	24	17.5	6	G3/8	M5	6.5	10	12	6	62	40	11	108	99.5	113	102
CPE24-M1H...-5/3																

Type	L1	L2	L3 ±0.2	L4 ±0.2	L5	L6	L7 ±0.12	L8 ±0.2	L9	L10 ±0.12	L11	L12 ±0.12	L13
CPE24-M1H...-5J	190	140	100	35	30	50	20	80	45	35	30	10	32
CPE24-M1H...-5/3	213	163											

Ordering data – 3/2-way valve

Ordering data Circuit symbol	Pilot air supply	Voltage	Pneumatic connection	Weight [g]	Part no.	Type
Normally closed						
	Internal	24 V DC	G3/8	220	**163165**	**CPE24-M1H-3GL-3/8**
			QS-10	–	**163173**	**CPE24-M1H-3GL-QS-10**
			QS-12	–	**163181**	**CPE24-M1H-3GL-QS-12**
		110 V AC	G3/8	220	**163809**	**CPE24-M2H-3GL-3/8**
			QS-10	–	**163817**	**CPE24-M2H-3GL-QS-10**
			QS-12	–	**163825**	**CPE24-M2H-3GL-QS-12**
		230 V AC	G3/8	220	**163833**	**CPE24-M3H-3GL-3/8**
			QS-10	–	**163841**	**CPE24-M3H-3GL-QS-10**
			QS-12	–	**163849**	**CPE24-M3H-3GL-QS-12**
Normally open						
	Internal	24 V DC	G3/8	220	**163164**	**CPE24-M1H-3OL-3/8**
			QS-10	–	**163172**	**CPE24-M1H-3OL-QS-10**
			QS-12	–	**163180**	**CPE24-M1H-3OL-QS-12**
		110 V AC	G3/8	220	**163808**	**CPE24-M2H-3OL-3/8**
			QS-10	–	**163816**	**CPE24-M2H-3OL-QS-10**
			QS-12	–	**163824**	**CPE24-M2H-3OL-QS-12**
		230 V AC	G3/8	220	**163832**	**CPE24-M3H-3OL-3/8**
			QS-10	–	**163840**	**CPE24-M3H-3OL-QS-10**
			QS-12	–	**163848**	**CPE24-M3H-3OL-QS-12**
Normally closed						
	External	24 V DC	G3/8	220	**163169**	**CPE24-M1H-3GLS-3/8**
			QS-10	–	**163177**	**CPE24-M1H-3GLS-QS-10**
			QS-12	–	**163185**	**CPE24-M1H-3GLS-QS-12**
		110 V AC	G3/8	220	**163813**	**CPE24-M2H-3GLS-3/8**
			QS-10	–	**163821**	**CPE24-M2H-3GLS-QS-10**
			QS-12	–	**163829**	**CPE24-M2H-3GLS-QS-12**
		230 V AC	G3/8	220	**163837**	**CPE24-M3H-3GLS-3/8**
			QS-10	–	**163845**	**CPE24-M3H-3GLS-QS-10**
			QS-12	–	**163853**	**CPE24-M3H-3GLS-QS-12**
Normally open						
	External	24 V DC	G3/8	220	**163168**	**CPE24-M1H-3OLS-3/8**
			QS-10	–	**163176**	**CPE24-M1H-3OLS-QS-10**
			QS-12	–	**163184**	**CPE24-M1H-3OLS-QS-12**
		110 V AC	G3/8	220	**163812**	**CPE24-M2H-3OLS-3/8**
			QS-10	–	**163820**	**CPE24-M2H-3OLS-QS-10**
			QS-12	–	**163828**	**CPE24-M2H-3OLS-QS-12**
		230 V AC	G3/8	220	**163836**	**CPE24-M3H-3OLS-3/8**
			QS-10	–	**163844**	**CPE24-M3H-3OLS-QS-10**
			QS-12	–	**163852**	**CPE24-M3H-3OLS-QS-12**

Ordering data – 5/2-way valve

Ordering data Circuit symbol	Pilot air supply	Voltage	Pneumatic connection	Weight [g]	Part no.	Type
5/2-way valve, single solenoid						
	Internal	24 V DC	G3/8	360	**163166**	**CPE24-M1H-5L-3/8**
			QS-10	–	**163174**	**CPE24-M1H-5L-QS-10**
			QS-12	–	**163182**	**CPE24-M1H-5L-QS-12**
		110 V AC	G3/8	360	**163810**	**CPE24-M2H-5L-3/8**
			QS-10	–	**163818**	**CPE24-M2H-5L-QS-10**
			QS-12	–	**163826**	**CPE24-M2H-5L-QS-12**
		230 V AC	G3/8	360	**163834**	**CPE24-M3H-5L-3/8**
			QS-10	–	**163842**	**CPE24-M3H-5L-QS-10**
			QS-12	–	**163850**	**CPE24-M3H-5L-QS-12**
5/2-way double pilot valve						
	Internal	24 V DC	G3/8	390	**163167**	**CPE24-M1H-5J-3/8**
			QS-10	–	**163175**	**CPE24-M1H-5J-QS-10**
			QS-12	–	**163183**	**CPE24-M1H-5J-QS-12**
		110 V AC	G3/8	390	**163811**	**CPE24-M2H-5J-3/8**
			QS-10	–	**163819**	**CPE24-M2H-5J-QS-10**
			QS-12	–	**163827**	**CPE24-M2H-5J-QS-12**
		230 V AC	G3/8	390	**163835**	**CPE24-M3H-5J-3/8**
			QS-10	–	**163843**	**CPE24-M3H-5J-QS-10**
			QS-12	–	**163851**	**CPE24-M3H-5J-QS-12**
5/2-way valve, single solenoid						
	External	24 V DC	G3/8	360	**163170**	**CPE24-M1H-5LS-3/8**
			QS-10	–	**163178**	**CPE24-M1H-5LS-QS-10**
			QS-12	–	**163186**	**CPE24-M1H-5LS-QS-12**
		110 V AC	G3/8	360	**163814**	**CPE24-M2H-5LS-3/8**
			QS-10	–	**163822**	**CPE24-M2H-5LS-QS-10**
			QS-12	–	**163830**	**CPE24-M2H-5LS-QS-12**
		230 V AC	G3/8	360	**163838**	**CPE24-M3H-5LS-3/8**
			QS-10	–	**163846**	**CPE24-M3H-5LS-QS-10**
			QS-12	–	**163854**	**CPE24-M3H-5LS-QS-12**
5/2-way double pilot valve						
	External	24 V DC	G3/8	390	**163171**	**CPE24-M1H-5JS-3/8**
			QS-10	–	**163179**	**CPE24-M1H-5JS-QS-10**
			QS-12	–	**163187**	**CPE24-M1H-5JS-QS-12**
		110 V AC	G3/8	390	**163815**	**CPE24-M2H-5JS-3/8**
			QS-10	–	**163823**	**CPE24-M2H-5JS-QS-10**
			QS-12	–	**163831**	**CPE24-M2H-5JS-QS-12**
		230 V AC	G3/8	390	**163839**	**CPE24-M3H-5JS-3/8**
			QS-10	–	**163847**	**CPE24-M3H-5JS-QS-10**
			QS-12	–	**163855**	**CPE24-M3H-5JS-QS-12**

Ordering data – 5/3-way valve

Ordering data Circuit symbol	Pilot air supply	Voltage	Pneumatic connection	Weight [g]	Part no.	Type
5/3-way mid-position valve, normally closed						
	Internal	24 V DC	G3/8	430	**170265**	**CPE24-M1H-5/3G-3/8**
			QS-10	–	**170271**	**CPE24-M1H-5/3G-QS-10**
			QS-12	–	**170277**	**CPE24-M1H-5/3G-QS-12**
		110 V AC	G3/8	430	**170301**	**CPE24-M2H-5/3G-3/8**
			QS-10	–	**170307**	**CPE24-M2H-5/3G-QS-10**
			QS-12	–	**170313**	**CPE24-M2H-5/3G-QS-12**
		230 V AC	G3/8	430	**170337**	**CPE24-M3H-5/3G-3/8**
			QS-10	–	**170343**	**CPE24-M3H-5/3G-QS-10**
			QS-12	–	**170349**	**CPE24-M3H-5/3G-QS-12**
5/3-way mid-position valve, normally exhausted						
	Internal	24 V DC	G3/8	430	**170267**	**CPE24-M1H-5/3E-3/8**
			QS-10	–	**170273**	**CPE24-M1H-5/3E-QS-10**
			QS-12	–	**170279**	**CPE24-M1H-5/3E-QS-12**
		110 V AC	G3/8	430	**170303**	**CPE24-M2H-5/3E-3/8**
			QS-10	–	**170309**	**CPE24-M2H-5/3E-QS-10**
			QS-12	–	**170315**	**CPE24-M2H-5/3E-QS-12**
		230 V AC	G3/8	430	**170339**	**CPE24-M3H-5/3E-3/8**
			QS-10	–	**170345**	**CPE24-M3H-5/3E-QS-10**
			QS-12	–	**170351**	**CPE24-M3H-5/3E-QS-12**
5/3-way mid-position valve, normally open						
	Internal	24 V DC	G3/8	430	**170269**	**CPE24-M1H-5/3B-3/8**
			QS-10	–	**170275**	**CPE24-M1H-5/3B-QS-10**
			QS-12	–	**170281**	**CPE24-M1H-5/3B-QS-12**
		110 V AC	G3/8	430	**170305**	**CPE24-M2H-5/3B-3/8**
			QS-10	–	**170311**	**CPE24-M2H-5/3B-QS-10**
			QS-12	–	**170317**	**CPE24-M2H-5/3B-QS-12**
		230 V AC	G3/8	430	**170341**	**CPE24-M3H-5/3B-3/8**
			QS-10	–	**170347**	**CPE24-M3H-5/3B-QS-10**
			QS-12	–	**170353**	**CPE24-M3H-5/3B-QS-12**

Ordering data – 5/3-way valves

Ordering data – 5/3-way valve

Circuit symbol	Pilot air supply	Voltage	Pneumatic connection	Weight [g]	Part no.	Type
5/3-way mid-position valve, normally closed						
	External	24 V DC	G3/8	430	**170266**	**CPE24-M1H-5/3GS-3/8**
			QS-10	–	**170272**	**CPE24-M1H-5/3GS-QS-10**
			QS-12	–	**170278**	**CPE24-M1H-5/3GS-QS-12**
		110 V AC	G3/8	430	**170302**	**CPE24-M2H-5/3GS-3/8**
			QS-10	–	**170308**	**CPE24-M2H-5/3GS-QS-10**
			QS-12	–	**170314**	**CPE24-M2H-5/3GS-QS-12**
		230 V AC	G3/8	430	**170338**	**CPE24-M3H-5/3GS-3/8**
			QS-10	–	**170344**	**CPE24-M3H-5/3GS-QS-10**
			QS-12	–	**170350**	**CPE24-M3H-5/3GS-QS-12**
5/3-way mid-position valve, normally exhausted						
	External	24 V DC	G3/8	430	**170268**	**CPE24-M1H-5/3ES-3/8**
			QS-10	–	**170274**	**CPE24-M1H-5/3ES-QS-10**
			QS-12	–	**170280**	**CPE24-M1H-5/3ES-QS-12**
		110 V AC	G3/8	430	**170304**	**CPE24-M2H-5/3ES-3/8**
			QS-10	–	**170310**	**CPE24-M2H-5/3ES-QS-10**
			QS-12	–	**170316**	**CPE24-M2H-5/3ES-QS-12**
		230 V AC	G3/8	430	**170340**	**CPE24-M3H-5/3ES-3/8**
			QS-10	–	**170346**	**CPE24-M3H-5/3ES-QS-10**
			QS-12	–	**170352**	**CPE24-M3H-5/3ES-QS-12**
5/3-way mid-position valve, normally open						
	External	24 V DC	G3/8	430	**170270**	**CPE24-M1H-5/3BS-3/8**
			QS-10	–	**170276**	**CPE24-M1H-5/3BS-QS-10**
			QS-12	–	**170282**	**CPE24-M1H-5/3BS-QS-12**
		110 V AC	G3/8	430	**170306**	**CPE24-M2H-5/3BS-3/8**
			QS-10	–	**170312**	**CPE24-M2H-5/3BS-QS-10**
			QS-12	–	**170318**	**CPE24-M2H-5/3BS-QS-12**
		230 V AC	G3/8	430	**170342**	**CPE24-M3H-5/3BS-3/8**
			QS-10	–	**170348**	**CPE24-M3H-5/3BS-QS-10**
			QS-12	–	**170354**	**CPE24-M3H-5/3BS-QS-12**

Accessories

Ordering data – Accessories for CPE10 and CPE14

					Part no.	Type
Connecting cable, socket plug pattern ZC						Datasheets ➔ Internet: nebv
	Open cable end 2-wire	PUR cable, degree of protection IP65	Holding current reduction, protective circuit, signal status indication with LED	Length 2.5 m	**8047679**	**NEBV-Z4WA2L-R-E-2.5-N-LE2-S1**
				Length 5 m	**8047680**	**NEBV-Z4WA2L-R-E-5-N-LE2-S1**
				Length 10 m	**8047678**	**NEBV-Z4WA2L-R-E-10-N-LE2-S1**
		PVC cable, degree of protection IP40	Without signal status indication	Length 0.5 m	**193690**	**KMYZ-4-24-0.5-B**
				Length 2.5 m	**193691**	**KMYZ-4-24-2.5-B**
	Plug M8x1 3-pin	PUR cable, degree of protection IP65	Holding current reduction, protective circuit, signal status indication with LED	Length 0.5 m	**8047683**	**NEBV-Z4WA2L-R-E-0.5-N-M8G3-S1**
				Length 2.5 m	**8047684**	**NEBV-Z4WA2L-R-E-2.5-N-M8G3-S1**
2 to 1 distributor						Datasheet ➔ Internet: neby
	2x plug socket plug pattern ZC	Holding current reduction, protective circuit, signal status indication with LED	1x plug, straight, M8x1	Length 2.8 m	**8035789**	**NEDY-L2R1-V1-Z4W2Z-U-0.3L-M8G4-2.5R**
				Length 5.3 m	**8035790**	**NEDY-L2R1-V1-Z4W2Z-U-0.3L-M8G4-5R**
			1x plug, straight, M12x1	Length 2.8 m	**8035787**	**NEDY-L2R1-V1-Z4W2Z-U-0.3L-M8G4-2.5R**
				Length 5.3 m	**8035788**	**NEDY-L2R1-V1-Z4W2Z-U-0.3L-M12G4-5R**
	Modular system for any 2 to 1 distributor			Length 0.3 ... 30 m	**8032867**	**NEDY-...** ➔ Internet: nedy
Adapter						
	Plug socket, plug pattern ZC	Signal status indication with LED	Plug M8, 3-pin		**571686**	**VAVE-C8-1R8**
			Plug M8, 4-pin		**573194**	**VAVE-C8-1R1**
Connecting cable, socket M8x1						Datasheet ➔ Internet: nebu
	Socket M8x1, 3-pin	Straight	Open cable end 3-wire	Length 2.5 m	**541333**	**NEBU-M8G3-K-2.5-LE3**
				Length 5 m	**541334**	**NEBU-M8G3-K-5-LE3**
			Plug M8x1, 3-pin	Length 2.5 m	**541348**	**NEBU-M8G3-K-2.5-M8G3**
				Length 5 m	**541349**	**NEBU-M8G3-K-5-M8G3**
				Length 10 m	**569844**	**NEBU-M8G3-K-10-M8G3**
		Angled	Open cable end 3-wire	Length 2.5 m	**541338**	**NEBU-M8W3-K-2.5-LE3**
				Length 5 m	**541341**	**NEBU-M8W3-K-5-LE3**
	Socket M8x1, 4-pin	Straight	Open cable end 4-wire	Length 2.5 m	**541342**	**NEBU-M8G4-K-2.5-LE4**
				Length 5 m	**541343**	**NEBU-M8G4-K-5-LE4**
		Angled	Open cable end 4-wire	Length 5 m	**541345**	**NEBU-M8W4-K-5-LE4**
				Length 2.5 m	**541344**	**NEBU-M8W4-K-2.5-LE4**
	Modular system for a choice of connecting cables			Length 0.1 ... 30 m	**539052**	**NEBU-...** ➔ Internet: nebu

Accessories

Ordering data – Accessories for CPE18 and CPE24

					Part no.	Type
Plug socket with cable, socket type C to EN 175301-803						Datasheet ➔ Internet: kmeb
	Cable sheath PVC	Signal status indication with LED	24 V DC	Length 2.5 m	**151688**	**KMEB-1-24-2.5-LED**
			24 V DC	Length 5 m	**151689**	**KMEB-1-24-5-LED**
			24 V DC	Length 10 m	**193457**	**KMEB-1-24-10-LED**
		Without indication	Up to 240 V	Length 2.5 m	**151690**	**KMEB-1-230-2.5**
			Up to 240 V	Length 5 m	**151691**	**KMEB-1-230-5**
	Cable sheath PUR	Signal status indication with LED	24 V DC	Length 2.5 m	**174844**	**KMEB-2-24-2.5-LED**
			24 V DC	Length 5 m	**174845**	**KMEB-2-24-5-LED**
		Without indication	Up to 240 V	Length 2.5 m	**174846**	**KMEB-2-230-2.5**
			Up to 240 V	Length 5 m	**174847**	**KMEB-2-230-5**
Plug socket						Datasheet ➔ Internet: mssd
	Socket 3-pin, type C to EN 175301-803	Screw terminal	Up to 240 V		**151687**	**MSSD-EB**
			Up to 240 V		**539712**	**MSSD-EB-M12**
		Insulation displacement connector	Up to 240 V		**192745**	**MSSD-EB-S-M14**
Illuminating seal						Datasheets ➔ Internet: meb-ld
	Type C to EN 175301-803		12 ... 24 V DC		**151717**	**MEB-LD-12-24DC**
			230 V AC		**151718**	**MEB-LD-230AC**

Ordering data – General accessories

				Part no.	Type	PU[1]
Blanking plug						Datasheet ➔ Internet: b
	For manifold block CPE10	G1/4 thread		**3569**	**B-1/4**	**10**
	For manifold block CPE14, CPE18	G3/8 thread		**3570**	**B-3/8**	**10**
Separator for pressure zones						Datasheet ➔ Internet: vabd
	For manifold block CPE14, CPE18			**160997**	**PRSV-1/8**	**1**
Silencer						Datasheet ➔ Internet: uc
	Thread		M3	**1231120**	**AMTE-M-LH-M3**	**20**
			M5	**165003**	**UC-M5**	**1**
			M7	**161418**	**UC-M7**	**1**
			G1/8	**161419**	**UC-1/8**	**1**
			G1/4	**165004**	**UC-1/4**	**1**
Manual override						Datasheet ➔ Internet: ahb
	For CPE10 and CPE14 with plug pattern ZC			**157600**	**AHB-MZB**	**1**
	For CPE18 and CPE24 with plug type C			**157601**	**AHB-MEB**	**1**
Inscription labels						Datasheet ➔ Internet: ibs
	Inscription label, 6x10 mm			**18576**	**IBS-6x10**	**64**
Mounting kit						Datasheet ➔ Internet: davm
	With mounting bracket for lateral valve mounting	For standards-based cylinders DSBC-32...40	For CPE14	**2568514**	**DAVM-MW-V1-32-V**	**1**
		For standards-based cylinders DSBC-50...125	For CPE18, CPE24	**2612128**	**DAVM-MW-V1-50-V**	**1**

1) Packaging unit.