

Solenoid Valves CPE, Compact Performance – Metric Series



Performance optimized, compact valves for “on board” installation.

- Width 10/14/18/24 mm, flow rates up to 3,200 l/min
- Minimal flow resistance
- Minimal power consumption
- Small and powerful
- Rapid response times
- Assembly as individual valves or aluminum manifold rail

Product Range Overview				
Actuation type	Valve function		qnN [l/min]	Pilot air supply
			Threaded connection M5, M7, G $\frac{1}{8}$, G $\frac{1}{4}$, G $\frac{3}{8}$	
Solenoid coil 1 ¹⁾ 24 V DC	3/2	Normally closed	400 ... 2,500	Internal/external
		Normally open		
Solenoid coil 2 110 V AC	5/2	Single solenoid	350 ... 2,900	
		Double solenoid	350 ... 3,200	
Solenoid coil 3 230 V AC	5/3	Mid-position closed	350 ... 3,000	
		Mid-position pressurised		
		Mid-position exhausted		

1) CPE10 (M7) and CPE14 (G $\frac{1}{8}$) valves are only supplied with solenoid coil 1/24 V DC.

Features	
Performance optimized sizes: The solenoid valves CPE, Compact Performance are distinguished by their minimal width and low power consumption at high flow rates. Can be mounted right in the “front line”: – on cylinders, – on moving system components. – Choice of installation either individual, H-rail or wall mounted. Micro CPE10, Mini CPE14 and Midi CPE18 and CPE24: Simple structure comprising compact valve manifolds.	Shorter tubing lengths with minimal air volumes: – fast switching times, – short response times. Optimized installations: – shorter machine cycles, – larger quantities, – low power consumption. Convenient manual override. A current reduction function has been integrated in the KMYZ-9 plug socket for sizes Micro CPE10 and Mini CPE14.

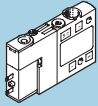
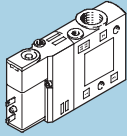
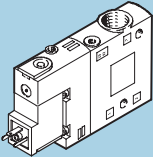
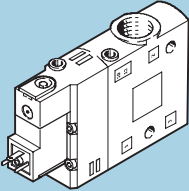
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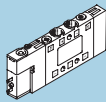
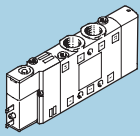
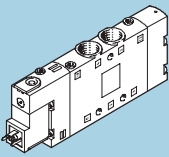
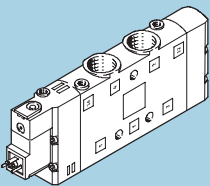
→ www.festo.com/catalog/cpe

Product Overview

Solenoid Valves CPE, Compact Performance – Metric Series



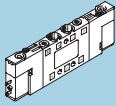
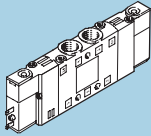
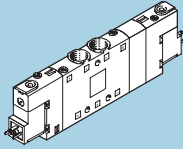
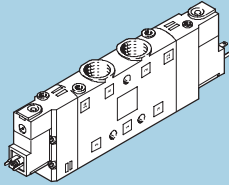
3/2-Way Valves					
Type		Micro CPE10	Mini CPE14	Midi CPE18	Maxi CPE24
Grid dimension		10 mm	14 mm	18 mm	24 mm
Nominal flow rate [l/min]					
Thread	M5	190	–	–	–
	M7	400	–	–	–
	G1/8	–	900	–	–
	G1/4	–	–	1,300	–
	G3/8	–	–	–	2,500
Push-in connector	QS-4	190	–	–	–
	QS-6	300	510	–	–
	QS-8	–	810	850	–
	QS-10	–	–	1,000	1,250
	QS-12	–	–	–	1,650
Operating voltage					
24 V DC		■	■	■	■
110 V AC		–	–	■	■
230 V AC		–	–	■	■
Technical data →		6	7	8	9

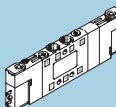
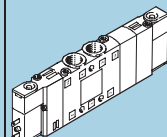
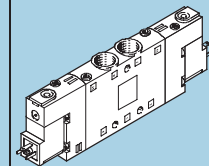
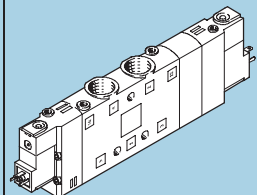
5/2-Way Valves					
Type		Micro CPE10	Mini CPE14	Midi CPE18	Maxi CPE24
Grid dimension		10 mm	14 mm	18 mm	24 mm
Nominal flow rate [l/min]					
Thread	M5	180	–	–	–
	M7	350	–	–	–
	G1/8	–	800	–	–
	G1/4	–	–	1,500	–
	G3/8	–	–	–	2,900
Push-in connector	QS-4	180	–	–	–
	QS-6	320	400	–	–
	QS-8	–	680	850	–
	QS-10	–	–	1,000	1,250
	QS-12	–	–	–	1,650
Operating voltage					
24 V DC		■	■	■	■
110 V AC		–	–	■	■
230 V AC		–	–	■	■
Technical data →		16	17	18	19

Product Overview



Solenoid Valves CPE, Compact Performance – Metric Series

5/2-Way Valves, Double Solenoid Valves					
Type		Micro CPE10	Mini CPE14	Midi CPE18	Maxi CPE24
Grid dimension		10 mm	14 mm	18 mm	24 mm
Nominal flow rate [l/min]					
Thread	M5	180	–	–	–
	M7	350	–	–	–
	G1/8	–	800	–	–
	G1/4	–	–	1,500	–
	G3/8	–	–	–	3,200
Push-in connector	QS-4	180	–	–	–
	QS-6	320	400	–	–
	QS-8	–	680	850	–
	QS-10	–	–	1,000	1,250
	QS-12	–	–	–	1,650
Operating voltage					
24 V DC		■	■	■	■
110 V AC		–	–	■	■
230 V AC		–	–	■	■
Technical data →		26	27	28	29

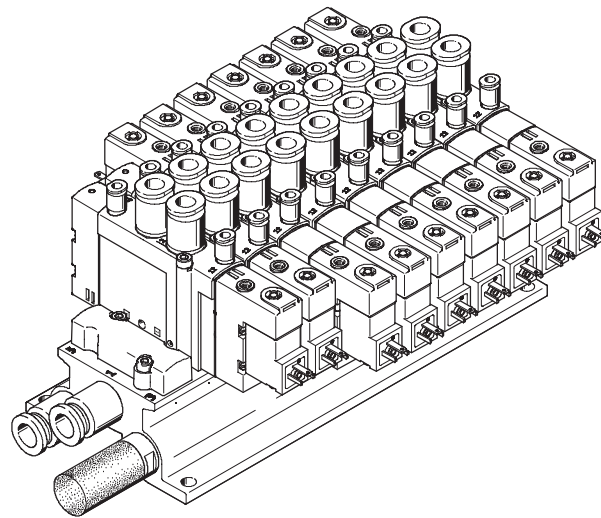
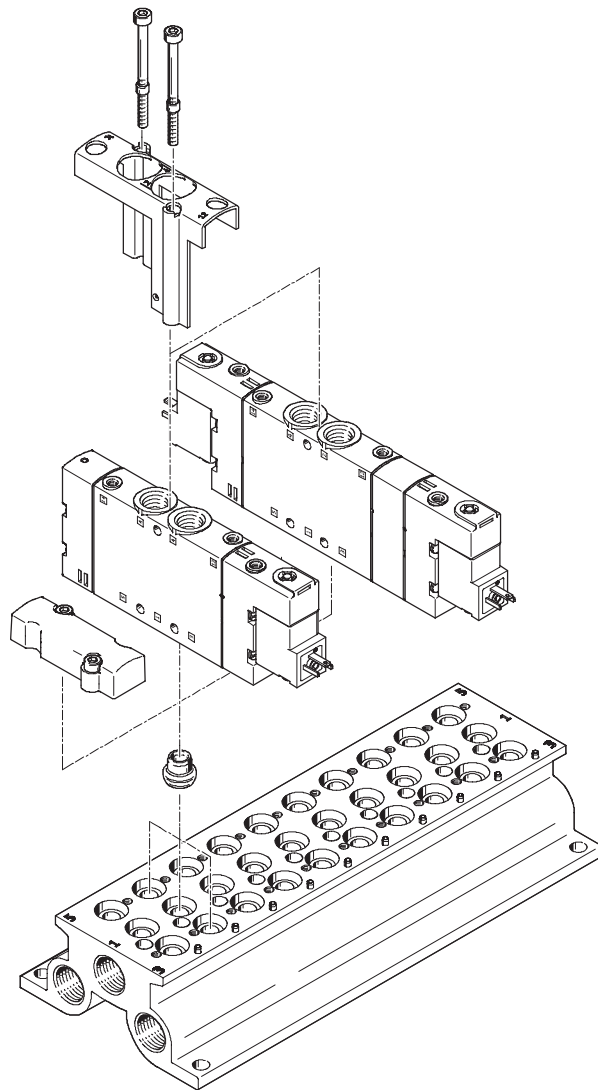
5/3-Way Valves					
Type		Micro CPE10	Mini CPE14	Midi CPE18	Maxi CPE24
Grid dimension		10 mm	14 mm	18 mm	24 mm
Nominal flow rate [l/min]					
Thread	M5	180	–	–	–
	M7	250 ... 350	–	–	–
	G1/8	–	700 ... 750	–	–
	G1/4	–	–	1,200 ... 1,450	–
	G3/8	–	–	–	2,600 ... 3,000
Push-in connector	QS-4	180	–	–	–
	QS-6	250 ... 300	370 ... 410	–	–
	QS-8	–	570 ... 720	780 ... 850	–
	QS-10	–	–	1,000 ... 1,050	1,250
	QS-12	–	–	–	1,600 ... 1,650
Operating voltage					
24 V DC		■	■	■	■
110 V AC		–	–	■	■
230 V AC		–	–	■	■
Technical data →		36	37	38	39

Key Features

Solenoid Valves CPE, Compact Performance – Metric Series

Manifold Block Mounting of Micro CPE10, Mini CPE14 and Midi CPE18

- Simple structure comprising compact valve manifolds
- 2 to 10 valve positions
- Sturdy
- High flow rates thanks to supply and exhaust ports at both ends
- Different pressure zones can be implemented by means of separators



Order Code

Solenoid Valves CPE, Compact Performance – Metric Series

CPE		–		–		–		–		–	
Type											
CPE	Solenoid valve, Compact Performance										
Width											
10	10 mm										
14	14 mm										
18	18 mm										
24	24 mm										
Operating Voltage											
M1BH	24 V DC for width 10 and 14										
M1H	24 V DC for width 18 and 24										
M2H	110 V AC for width 18 and 24										
M3H	230 V AC for width 18 and 24										
Valve Function											
3GL	3/2-way valve, normally closed										
3OL	3/2-way valve, normally open										
5L	5/2-way valve, single solenoid										
5J	5/2-way valve, double solenoid										
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 pressurized										
Pilot Air Supply											
–	Internal										
S	External										
Pneumatic Connection											
Threaded connection											
M5	M5 for width 10										
M7	M7 for width 10										
1/8	G1/8 for width 14										
1/4	G1/4 for width 18										
3/8	G3/8 for width 24										
Push-in connector											
QS-4	QS-4 for width 10										
QS-6	QS-6 for width 10 and 14										
QS-8	QS-8 for width 14 and 18										
QS10-	QS-10 for width 18 and 24										
QS-12	QS-12 for width 24										
Generation											
B	Series B (for CPE10-M1BH-5/3...)										

Ordering example:

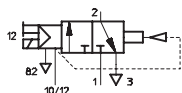
CPE10-M1BH-3OLS-M7

Technical Data, 3/2-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series



ISO Symbol



e.g. with external pilot air,
normally closed



General Technical Data – Micro CPE10			
		Threaded connection	Push-in connector
Valve function		3/2-way, single solenoid	
Constructional design		Piston spool valve	
Sealing principle		Soft	
Type of actuation		Electrical	
Type of reset		Pneumatic	
Type of pilot control		Pilot	
Pilot air supply		Internal or external	
Direction of flow		Reversible for external pilot air supply	
Exhaust function		Flow control	
Manual override		Non-detenting, detenting via accessory	
Mounting position		Any	
Width		10 mm	
Grid dimension		12 mm	
Nominal diameter		4 mm	4 mm
Standard nominal flow rate		M5: 190 l/min	QS-4: 190 l/min
		M7: 400 l/min	QS-6: 300 l/min
Type of mounting		Via through-holes	
Pneumatic connection	1, 2	M5 or M7	∅ 4 or ∅ 6 mm
	3	M7	M7
	10, 12	M3	∅ 3 mm
	82	M3	M3
Switching time on/off		14/14 ms	
Product weight		45 g	

Operating and Environmental Conditions			
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases	
Filtration grade		40 µm	
Operating pressure	Internal pilot air	2.5 ... 8 bar	
	External pilot air	-0.9 ... +10 bar	
Pilot pressure		2.5 ... 8 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	
Certification		c UL us - Recognized (OL)	

Electrical Data	
Operating voltage	24 V DC +10/-15%
Power consumption	1.28 W
Protection class with plug socket	IP65 (EN 60529)

Technical Data, 3/2-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series

FESTO

General Technical Data – Mini CPE14			
		Threaded connection	Push-in connector
Valve function		3/2-way, single solenoid	
Constructional design		Piston spool valve	
Sealing principle		Soft	
Type of actuation		Electrical	
Type of reset		Pneumatic	
Type of pilot control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Reversible for external pilot air supply	
Exhaust function		Flow control	
Manual override		Non-detenting, detenting via accessory	
Mounting position		Any	
Width		14 mm	
Grid dimension		16 mm	
Nominal diameter		6 mm	6 mm
Standard nominal flow rate		G $\frac{1}{8}$: 900 l/min	QS-6: 510 l/min
			QS-8: 810 l/min
Type of mounting		Via through-holes	
Pneumatic connection	1, 2	G $\frac{1}{8}$	∅ 6 or ∅ 8 mm
	3	G $\frac{1}{8}$	G $\frac{1}{8}$
	10, 12	M3	∅ 3 mm
	82	M3	M3
Switching time on/off		16/27 ms	
Product weight		60 g	95 g

Operating and Environmental Conditions			
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases	
Filtration grade		40 μm	
Operating pressure	Internal pilot air	2.5 ... 8 bar	
	External pilot air	-0.9 ... +10 bar	
Pilot pressure		2.5 ... 8 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	
Certification		c UL us - Recognized (OL)	

Electrical Data	
Operating voltage	24 V DC +10/-15%
Power consumption	1.28 W
Protection class with plug socket	IP65 (EN 60529)

Technical Data, 3/2-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series

FESTO

General Technical Data – Midi CPE18			
		Threaded connection	Push-in connector
Valve function		3/2-way, single solenoid	
Constructional design		Piston spool valve	
Sealing principle		Soft	
Type of actuation		Electrical	
Type of reset		Pneumatic	
Type of pilot control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Reversible for external pilot air supply	
Exhaust function		Flow control	
Manual override		Non-detenting, detenting via accessory	
Mounting position		Any	
Width		18 mm	
Grid dimension		20 mm	
Nominal diameter		8 mm	8 mm
Standard nominal flow rate		G $\frac{1}{4}$: 1,300 l/min	QS-8: 850 l/min
			QS-10: 1,000 l/min
Type of mounting		Via through-holes	
Pneumatic connection	1, 2	G $\frac{1}{4}$	∅ 8 or ∅ 10 mm
	3	G $\frac{1}{4}$	G $\frac{1}{4}$
	10, 12	M5	∅ 4 mm
	82	M5	M5
Switching time on/off		14/18 ms	
Product weight		150 g	

Operating and Environmental Conditions			
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases	
Filtration grade		40 µm	
Operating pressure	Internal pilot air	2.5 ... 10 bar	
	External pilot air	-0.9 ... +10 bar	
Pilot pressure		2.5 ... 10 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	
Certification		c UL us - Recognized (OL)	

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

Technical Data, 3/2-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series

FESTO

General Technical Data – Maxi CPE24			
		Threaded connection	Push-in connector
Valve function		3/2-way, single solenoid	
Constructional design		Piston spool valve	
Sealing principle		Soft	
Type of actuation		Electrical	
Type of reset		Pneumatic	
Type of pilot control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Reversible for external pilot air supply	
Exhaust function		Flow control	
Manual override		Non-detenting, detenting via accessory	
Mounting position		Any	
Width		24 mm	
Nominal diameter		11 mm	11 mm
Standard nominal flow rate		G $\frac{3}{8}$: 2,500 l/min	QS-10 1,250 l/min
			QS-12: 1,650 l/min
Type of mounting		Via through-holes	
Pneumatic connection	1, 2	G $\frac{3}{8}$	∅ 10 or ∅ 12 mm
	3	G $\frac{3}{8}$	G $\frac{3}{8}$
	10, 12	M5	∅ 6 mm
	82	M5	M5
Switching time on/off		50/33 ms	
Product weight		220 g	

Operating and Environmental Conditions			
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases	
Filtration grade		40 µm	
Operating pressure	Internal pilot air	2.5 ... 10 bar	
	External pilot air	-0.9 ... +10 bar	
Pilot pressure		2.5 ... 10 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	
Certification		c UL us - Recognized (OL)	

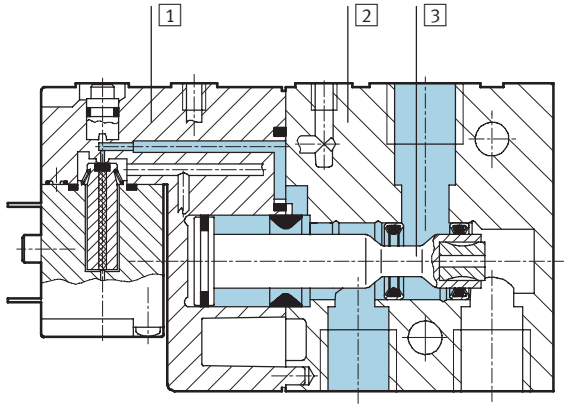
Electrical Data			
Operating voltage	M1H	24 V DC +10/-15%	
	M2H	110 V AC ±10% at 50 ... 60 Hz	
	M3H	230 V AC ±10% at 50 ... 60 Hz	
Power consumption	M1H	1.5 W	
	M2H, M3H	Pull: 3 VA	
		Hold: 2.4 VA	
Protection class with plug socket		IP65 (EN 60529)	

Technical Data, 3/2-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series

Materials

Sectional view



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

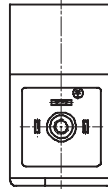
Connection Diagrams

Micro CPE10, Mini CPE14



Suitable for plug socket
KMYZ-9-...

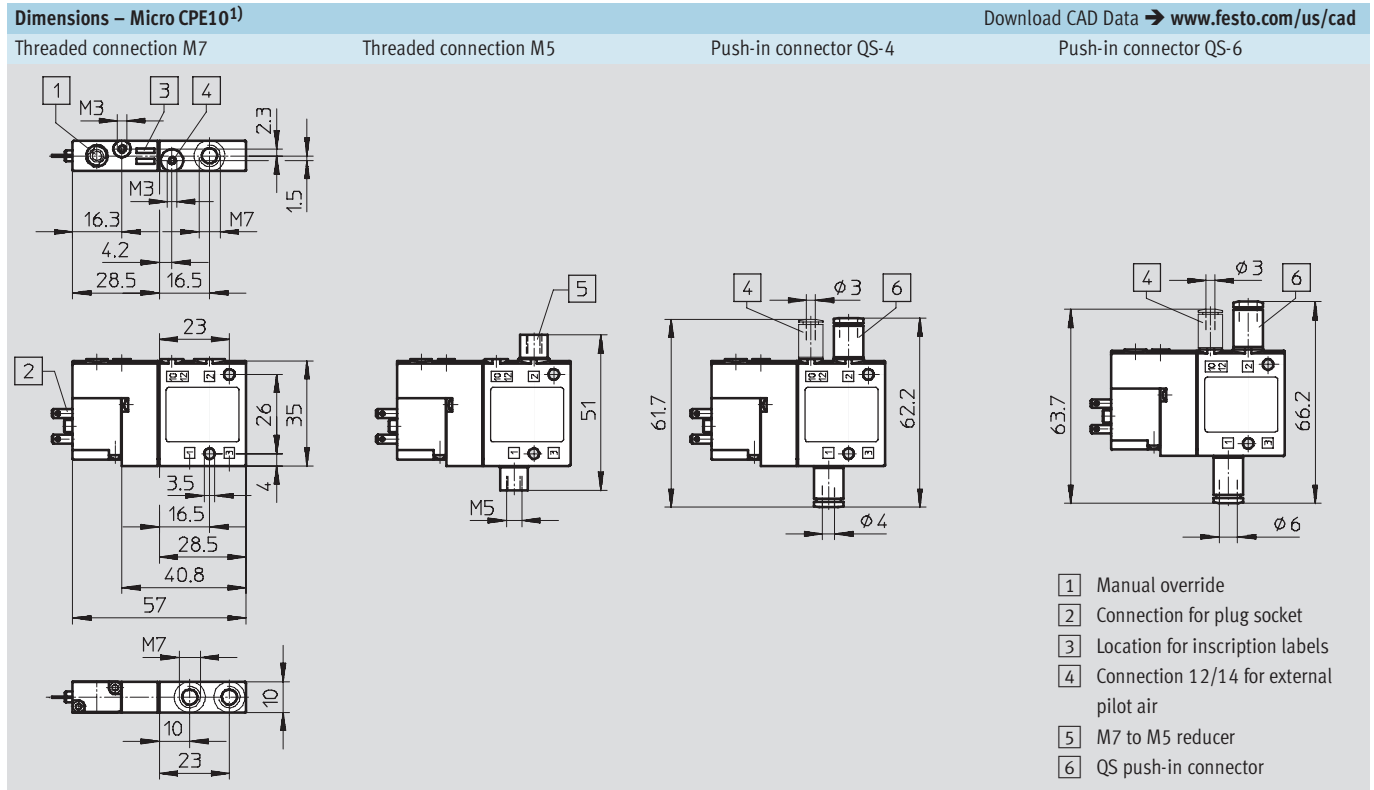
Midi CPE18, Maxi CPE24



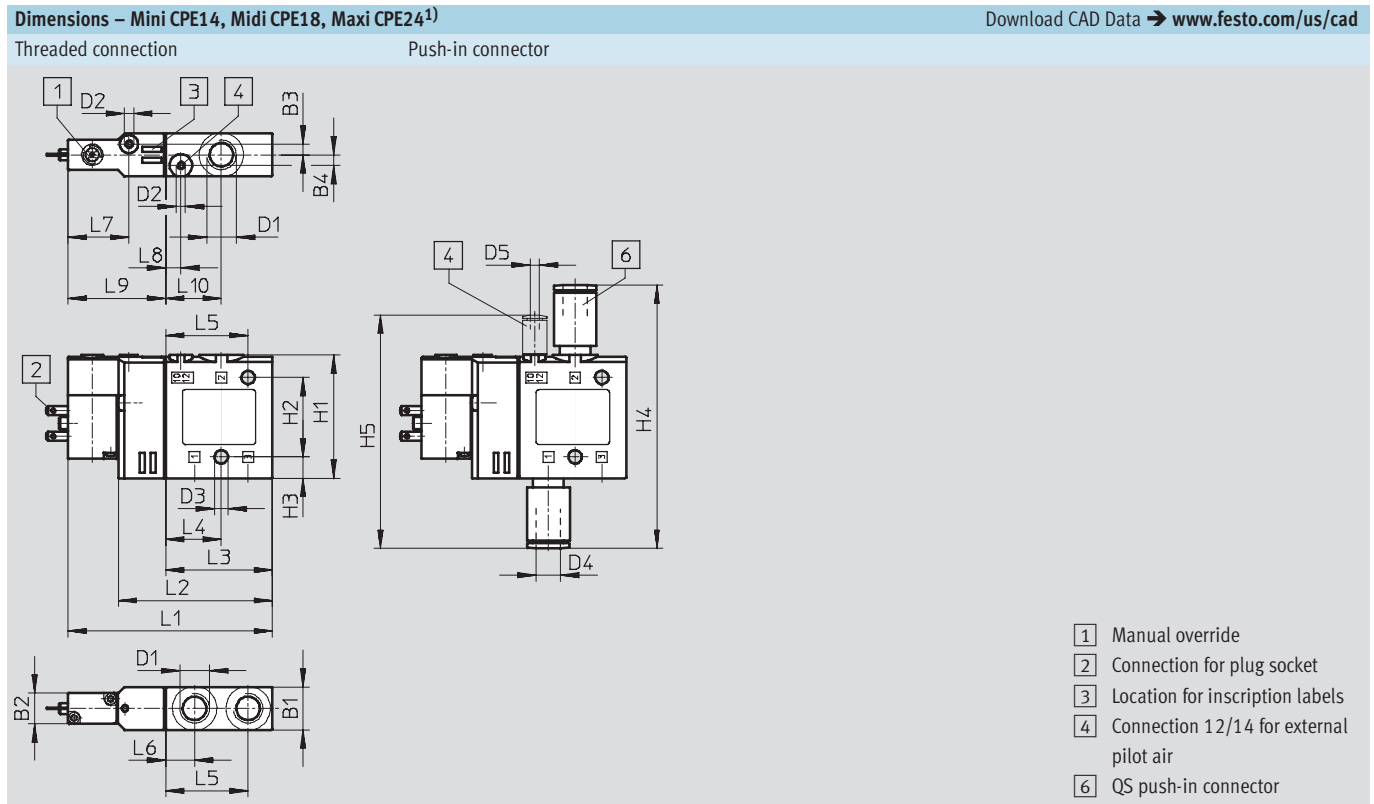
Suitable for plug sockets to
DIN 43650, type C
KMEB-1-...
KMEB-2-...
MSSD-EB

Dimensional Drawings, 3/2-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series



1) Dimensions are in millimeters, unless otherwise noted.



Dimensional Drawings, 3/2-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series



Dimensions – Mini CPE14, Midi CPE18, Maxi CPE24 ¹⁾											Download CAD Data → www.festo.com/us/cad		
Pneumatic connection	B1	B2	B3	B4	D1	D2	D3 ∅	D4 ∅	D5 ∅	H1	H2	H3	
Mini CPE14													
G $\frac{1}{8}$	14	10	3.5	3.5	G $\frac{1}{8}$	M3	4.4	–	–	40.3	26	7	
QS-6								6	3				
QS-8								8					
Midi CPE18													
G $\frac{1}{4}$	18	17.5	3.5	3.5	G $\frac{1}{4}$	M5	4.4	–	–	57	45	6	
QS-8								8	6				
QS-10								10					
Maxi CPE24													
G $\frac{3}{8}$	24	17.5	6	6	G $\frac{3}{8}$	M5	6.5	–	–	62	40	11	
QS-10								10	6				
QS-12								12					
Pneumatic connection	H4	H5	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	
Mini CPE14													
G $\frac{1}{8}$	–	–	67	50.5	35	18.3	27	9.5	20	5	32	18.3	
QS-6	75.3	70.9											
QS-8	86.3	76.4											
Midi CPE18													
G $\frac{1}{4}$	–	–	94	69	50	28	38	17.5	29	5.5	44	27.5	
QS-8	98	90.5											
QS-10	105	94											
Maxi CPE24													
G $\frac{3}{8}$	–	–	110	85	65	35	50	20	33	10	45	35	
QS-10	108	99.5											
QS-12	113	102											

1) Dimensions are in millimeters, unless otherwise noted.

Ordering Data – Pre-configured Products, 3/2-Way Valves



Solenoid Valves CPE, Compact Performance – Metric Series

Ordering Data – Micro CPE10					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	M5	196845	CPE10-M1BH-3GL-M5	1D
		M7	196915	CPE10-M1BH-3GL-M7	1D
		QS-4	196846	CPE10-M1BH-3GL-QS-4	Q
		QS-6	196847	CPE10-M1BH-3GL-QS-6	1D
	<ul style="list-style-type: none"> Normally closed External pilot air 	M5	196848	CPE10-M1BH-3GLS-M5	1D
		M7	196916	CPE10-M1BH-3GLS-M7	Q
		QS-4	196849	CPE10-M1BH-3GLS-QS-4	Q
	<ul style="list-style-type: none"> Normally open Internal pilot air 	M5	196851	CPE10-M1BH-3OL-M5	1D
		M7	196917	CPE10-M1BH-3OL-M7	Q
		QS-4	196852	CPE10-M1BH-3OL-QS-4	Q
	<ul style="list-style-type: none"> Normally open External pilot air 	QS-6	196853	CPE10-M1BH-3OL-QS-6	Q
		M5	196854	CPE10-M1BH-3OLS-M5	1D
		M7	196918	CPE10-M1BH-3OLS-M7	Q
		QS-4	196855	CPE10-M1BH-3OLS-QS-4	Q
	<ul style="list-style-type: none"> Normally open External pilot air 	QS-6	196856	CPE10-M1BH-3OLS-QS-6	Q

Ordering Data – Mini CPE14					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	G $\frac{1}{8}$	196929	CPE14-M1BH-3GL- $\frac{1}{8}$	1D
		QS-6	196887	CPE14-M1BH-3GL-QS-6	Q
		QS-8	196888	CPE14-M1BH-3GL-QS-8	Q
	<ul style="list-style-type: none"> Normally closed External pilot air 	G $\frac{1}{8}$	196930	CPE14-M1BH-3GLS- $\frac{1}{8}$	1D
		QS-6	196889	CPE14-M1BH-3GLS-QS-6	Q
		QS-8	196890	CPE14-M1BH-3GLS-QS-8	Q
	<ul style="list-style-type: none"> Normally open Internal pilot air 	G $\frac{1}{8}$	196931	CPE14-M1BH-3OL- $\frac{1}{8}$	1D
		QS-6	196891	CPE14-M1BH-3OL-QS-6	Q
		QS-8	196892	CPE14-M1BH-3OL-QS-8	Q
	<ul style="list-style-type: none"> Normally open External pilot air 	G $\frac{1}{8}$	196932	CPE14-M1BH-3OLS- $\frac{1}{8}$	1D
		QS-6	196893	CPE14-M1BH-3OLS-QS-6	Q
		QS-8	196894	CPE14-M1BH-3OLS-QS-8	Q

LT = Lead time

1D typically ships same day/next day

1W typically ships within 1 week

Q request a quote for lead time

Ordering Data – Pre-configured Products, 3/2-Way Valves



Solenoid Valves CPE, Compact Performance – Metric Series

Ordering Data – Midi CPE18					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	<ul style="list-style-type: none"> • Normally closed • Internal pilot air 	G $\frac{1}{4}$	163141	CPE18-M1H-3GL- $\frac{1}{4}$	1D
		QS-8	163149	CPE18-M1H-3GL-QS-8	Q
		QS-10	163157	CPE18-M1H-3GL-QS-10	Q
	<ul style="list-style-type: none"> • Normally closed • External pilot air 	G $\frac{1}{4}$	163145	CPE18-M1H-3GLS- $\frac{1}{4}$	1D
		QS-8	163153	CPE18-M1H-3GLS-QS-8	Q
		QS-10	163161	CPE18-M1H-3GLS-QS-10	Q
	<ul style="list-style-type: none"> • Normally open • Internal pilot air 	G $\frac{1}{4}$	163140	CPE18-M1H-3OL- $\frac{1}{4}$	1D
		QS-8	163148	CPE18-M1H-3OL-QS-8	Q
		QS-10	163156	CPE18-M1H-3OL-QS-10	Q
	<ul style="list-style-type: none"> • Normally open • External pilot air 	G $\frac{1}{4}$	163144	CPE18-M1H-3OLS- $\frac{1}{4}$	Q
		QS-8	163152	CPE18-M1H-3OLS-QS-8	Q
		QS-10	163160	CPE18-M1H-3OLS-QS-10	Q
Operating voltage 110 V AC					
	<ul style="list-style-type: none"> • Normally closed • Internal pilot air 	G $\frac{1}{4}$	163761	CPE18-M2H-3GL- $\frac{1}{4}$	1D
		QS-8	163769	CPE18-M2H-3GL-QS-8	Q
		QS-10	163777	CPE18-M2H-3GL-QS-10	Q
	<ul style="list-style-type: none"> • Normally closed • External pilot air 	G $\frac{1}{4}$	163765	CPE18-M2H-3GLS- $\frac{1}{4}$	Q
		QS-8	163773	CPE18-M2H-3GLS-QS-8	Q
		QS-10	163781	CPE18-M2H-3GLS-QS-10	Q
	<ul style="list-style-type: none"> • Normally open • Internal pilot air 	G $\frac{1}{4}$	163760	CPE18-M2H-3OL- $\frac{1}{4}$	Q
		QS-8	163768	CPE18-M2H-3OL-QS-8	Q
		QS-10	163776	CPE18-M2H-3OL-QS-10	Q
	<ul style="list-style-type: none"> • Normally open • External pilot air 	G $\frac{1}{4}$	163764	CPE18-M2H-3OLS- $\frac{1}{4}$	Q
		QS-8	163772	CPE18-M2H-3OLS-QS-8	Q
		QS-10	163780	CPE18-M2H-3OLS-QS-10	Q
Operating voltage 230 V AC					
	<ul style="list-style-type: none"> • Normally closed • Internal pilot air 	G $\frac{1}{4}$	163785	CPE18-M3H-3GL- $\frac{1}{4}$	Q
		QS-8	163793	CPE18-M3H-3GL-QS-8	Q
		QS-10	163801	CPE18-M3H-3GL-QS-10	Q
	<ul style="list-style-type: none"> • Normally closed • External pilot air 	G $\frac{1}{4}$	163789	CPE18-M3H-3GLS- $\frac{1}{4}$	Q
		QS-8	163797	CPE18-M3H-3GLS-QS-8	Q
		QS-10	163805	CPE18-M3H-3GLS-QS-10	Q
	<ul style="list-style-type: none"> • Normally open • Internal pilot air 	G $\frac{1}{4}$	163784	CPE18-M3H-3OL- $\frac{1}{4}$	Q
		QS-8	163792	CPE18-M3H-3OL-QS-8	Q
		QS-10	163800	CPE18-M3H-3OL-QS-10	Q
	<ul style="list-style-type: none"> • Normally open • External pilot air 	G $\frac{1}{4}$	163788	CPE18-M3H-3OLS- $\frac{1}{4}$	Q
		QS-8	163796	CPE18-M3H-3OLS-QS-8	Q
		QS-10	163804	CPE18-M3H-3OLS-QS-10	Q

LT = Lead time

1D typically ships same day/next day

1W typically ships within 1 week

Q request a quote for lead time

Ordering Data – Pre-configured Products, 3/2-Way Valves



Solenoid Valves CPE, Compact Performance – Metric Series

Ordering Data – Maxi CPE24					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	G $\frac{3}{8}$	163165	CPE24-M1H-3GL- $\frac{3}{8}$	1D
		QS-10	163173	CPE24-M1H-3GL-QS-10	Q
		QS-12	163181	CPE24-M1H-3GL-QS-12	Q
	<ul style="list-style-type: none"> Normally closed External pilot air 	G $\frac{3}{8}$	163169	CPE24-M1H-3GLS- $\frac{3}{8}$	1D
		QS-10	163177	CPE24-M1H-3GLS-QS-10	Q
		QS-12	163185	CPE24-M1H-3GLS-QS-12	Q
	<ul style="list-style-type: none"> Normally open Internal pilot air 	G $\frac{3}{8}$	163164	CPE24-M1H-3OL- $\frac{3}{8}$	Q
		QS-10	163172	CPE24-M1H-3OL-QS-10	Q
		QS-12	163180	CPE24-M1H-3OL-QS-12	Q
	<ul style="list-style-type: none"> Normally open External pilot air 	G $\frac{3}{8}$	163168	CPE24-M1H-3OLS- $\frac{3}{8}$	Q
		QS-10	163176	CPE24-M1H-3OLS-QS-10	Q
		QS-12	163184	CPE24-M1H-3OLS-QS-12	Q
Operating voltage 110 V AC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	G $\frac{3}{8}$	163809	CPE24-M2H-3GL- $\frac{3}{8}$	Q
		QS-10	163817	CPE24-M2H-3GL-QS-10	Q
		QS-12	163825	CPE24-M2H-3GL-QS-12	Q
	<ul style="list-style-type: none"> Normally closed External pilot air 	G $\frac{3}{8}$	163813	CPE24-M2H-3GLS- $\frac{3}{8}$	Q
		QS-10	163821	CPE24-M2H-3GLS-QS-10	Q
		QS-12	163829	CPE24-M2H-3GLS-QS-12	Q
	<ul style="list-style-type: none"> Normally open Internal pilot air 	G $\frac{3}{8}$	163808	CPE24-M2H-3OL- $\frac{3}{8}$	Q
		QS-10	163816	CPE24-M2H-3OL-QS-10	Q
		QS-12	163824	CPE24-M2H-3OL-QS-12	Q
	<ul style="list-style-type: none"> Normally open External pilot air 	G $\frac{3}{8}$	163812	CPE24-M2H-3OLS- $\frac{3}{8}$	Q
		QS-10	163820	CPE24-M2H-3OLS-QS-10	Q
		QS-12	163828	CPE24-M2H-3OLS-QS-12	Q
Operating voltage 230 V AC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	G $\frac{3}{8}$	163833	CPE24-M3H-3GL- $\frac{3}{8}$	Q
		QS-10	163841	CPE24-M3H-3GL-QS-10	Q
		QS-12	163849	CPE24-M3H-3GL-QS-12	Q
	<ul style="list-style-type: none"> Normally closed External pilot air 	G $\frac{3}{8}$	163837	CPE24-M3H-3GLS- $\frac{3}{8}$	Q
		QS-10	163845	CPE24-M3H-3GLS-QS-10	Q
		QS-12	163853	CPE24-M3H-3GLS-QS-12	Q
	<ul style="list-style-type: none"> Normally open Internal pilot air 	G $\frac{3}{8}$	163832	CPE24-M3H-3OL- $\frac{3}{8}$	Q
		QS-10	163840	CPE24-M3H-3OL-QS-10	Q
		QS-12	163848	CPE24-M3H-3OL-QS-12	Q
	<ul style="list-style-type: none"> Normally open External pilot air 	G $\frac{3}{8}$	163836	CPE24-M3H-3OLS- $\frac{3}{8}$	Q
		QS-10	163844	CPE24-M3H-3OLS-QS-10	Q
		QS-12	163852	CPE24-M3H-3OLS-QS-12	Q

LT = Lead time

1D typically ships same day/next day

1W typically ships within 1 week

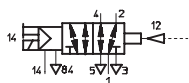
Q request a quote for lead time

Technical Data, 5/2-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series



ISO Symbol



e.g. with external pilot air



General Technical Data – Micro CPE10			
		Threaded connection	Push-in connector
Valve function		5/2-way, single solenoid	
Constructional design		Piston spool valve	
Sealing principle		Soft	
Type of actuation		Electrical	
Type of reset		Pneumatic	
Type of pilot control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Reversible for external pilot air supply	
Exhaust function		Flow control	
Manual override		Non-detenting, detenting via accessory	
Mounting position		Any	
Width		10 mm	
Grid dimension		12 mm	
Nominal diameter		4 mm	4 mm
Standard nominal flow rate		M5: 180 l/min	QS-4: 180 l/min
		M7: 350 l/min	QS-6: 320 l/min
Type of mounting		Via through-holes	
Pneumatic connection	1, 2, 4	M5 or M7	∅ 4 or ∅ 6 mm
	3, 5	M7	M7
	12, 14	M3	∅ 3 mm
	84	M3	M3
Switching time on/off		16/16 ms	
Product weight		56 g	100 g

Operating and Environmental Conditions			
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases	
Filtration grade		40 µm	
Operating pressure	Internal pilot air	3 ... 8 bar	
	External pilot air	-0.9 ... +10 bar	
Pilot pressure		3 ... 8 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	
Certification		c UL us - Recognized (OL)	

Electrical Data	
Operating voltage	24 V DC +10/-15%
Power consumption	1.28 W
Protection class with plug socket	IP65 (EN 60529)

Technical Data, 5/2-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series

FESTO

General Technical Data – Mini CPE14			
		Threaded connection	Push-in connector
Valve function		5/2-way, single solenoid	
Constructional design		Piston spool valve	
Sealing principle		Soft	
Type of actuation		Electrical	
Type of reset		Pneumatic	
Type of pilot control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Reversible for external pilot air supply	
Exhaust function		Flow control	
Manual override		Non-detenting, detenting via accessory	
Mounting position		Any	
Width		14 mm	
Grid dimension		16 mm	
Nominal diameter		6 mm	6 mm
Standard nominal flow rate		G $\frac{1}{8}$: 800 l/min	QS-6: 400 l/min
			QS-8: 680 l/min
Type of mounting		Via through-holes	
Pneumatic connection	1, 2, 4	G $\frac{1}{8}$	∅ 6 or ∅ 8 mm
	3, 5	G $\frac{1}{8}$	G $\frac{1}{8}$
	12, 14	M3	∅ 3 mm
	84	M3	M3
Switching time on/off		24/32 ms	
Product weight		95 g	143 g

Operating and Environmental Conditions			
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases	
Filtration grade		40 µm	
Operating pressure	Internal pilot air	3 ... 8 bar	
	External pilot air	-0.9 ... +10 bar	
Pilot pressure		3 ... 8 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	
Certification		c UL us - Recognized (OL)	

Electrical Data	
Operating voltage	24 V DC +10/-15%
Power consumption	1.28 W
Protection class with plug socket	IP65 (EN 60529)

Technical Data, 5/2-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series

FESTO

General Technical Data – Midi CPE18			
		Threaded connection	Push-in connector
Valve function		5/2-way, single solenoid	
Constructional design		Piston spool valve	
Sealing principle		Soft	
Type of actuation		Electrical	
Type of reset		Pneumatic	
Type of pilot control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Reversible for external pilot air supply	
Exhaust function		Flow control	
Manual override		Non-detenting, detenting via accessory	
Mounting position		Any	
Width		18 mm	
Grid dimension		20 mm	
Nominal diameter		8 mm	8 mm
Standard nominal flow rate		G $\frac{1}{4}$: 1,500 l/min	QS-8: 850 l/min
			QS-10: 1,000 l/min
Type of mounting		Via through-holes	
Pneumatic connection	1, 2, 4	G $\frac{1}{4}$	∅ 8 or ∅ 10 mm
	3, 5	G $\frac{1}{4}$	G $\frac{1}{4}$
	12, 14	M5	∅ 4 mm
	84	M5	M5
Switching time on/off		26/20 ms	
Product weight		220 g	

Operating and Environmental Conditions			
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases	
Filtration grade		40 μm	
Operating pressure	Internal pilot air	2.5 ... 10 bar	
	External pilot air	-0.9 ... +10 bar	
Pilot pressure		2.5 ... 10 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	
Certification		c UL us - Recognized (OL)	

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

Technical Data, 5/2-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series

FESTO

General Technical Data – Maxi CPE24			
		Threaded connection	Push-in connector
Valve function		5/2-way, single solenoid	
Constructional design		Piston spool valve	
Sealing principle		Soft	
Type of actuation		Electrical	
Type of reset		Pneumatic	
Type of pilot control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Reversible for external pilot air supply	
Exhaust function		Flow control	
Manual override		Non-detenting, detenting via accessory	
Mounting position		Any	
Width		24 mm	
Nominal diameter		11 mm	11 mm
Standard nominal flow rate		G $\frac{3}{8}$: 2,900 l/min	QS-10: 1,250 l/min
			QS-12: 1,650 l/min
Type of mounting		Via through-holes	
Pneumatic connection	1, 2, 4	G $\frac{3}{8}$	Ø 10 or Ø 12 mm
	3, 5	G $\frac{3}{8}$	G $\frac{3}{8}$
	12, 14	M5	Ø 6 mm
	84	M5	M5
Switching time on/off		40/50 ms	
Product weight		360 g	

Operating and Environmental Conditions			
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases	
Filtration grade		40 µm	
Operating pressure	Internal pilot air	2.5 ... 10 bar	
	External pilot air	-0.9 ... +10 bar	
Pilot pressure		2.5 ... 10 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	
Certification		c UL us - Recognized (OL)	

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

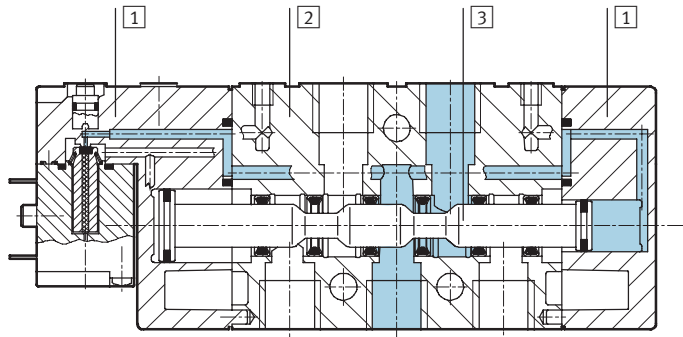
Technical Data, 5/2-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series



Materials

Sectional view



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

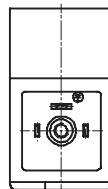
Connection Diagrams

Micro CPE10, Mini CPE14



Suitable for plug socket
KMYZ-9-...

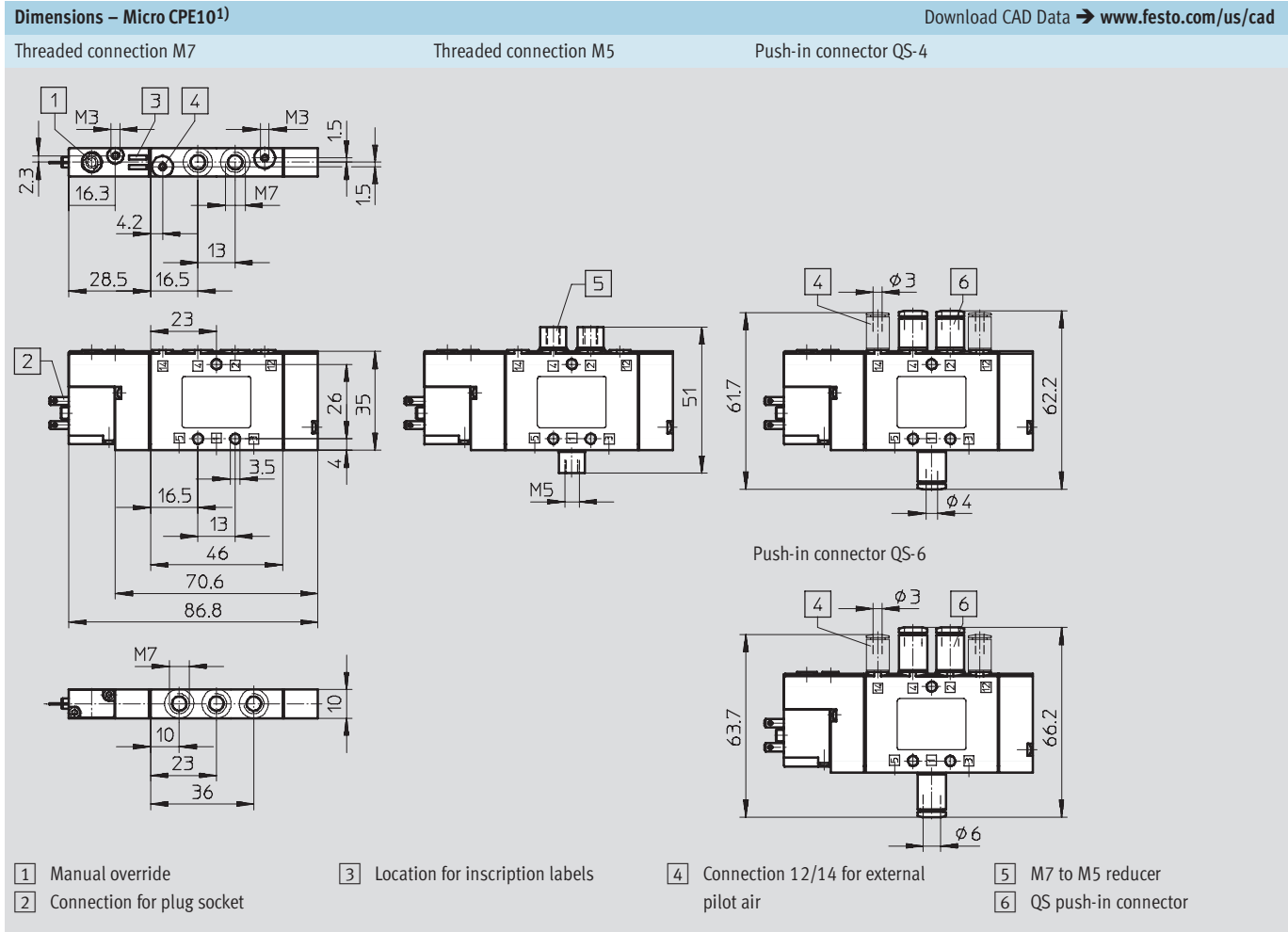
Midi CPE18, Maxi CPE24



Suitable for plug sockets to
DIN 43650, type C
KMEB-1-...
KMEB-2-...
MSSD-EB

Dimensional Drawings, 5/2-Way Valves

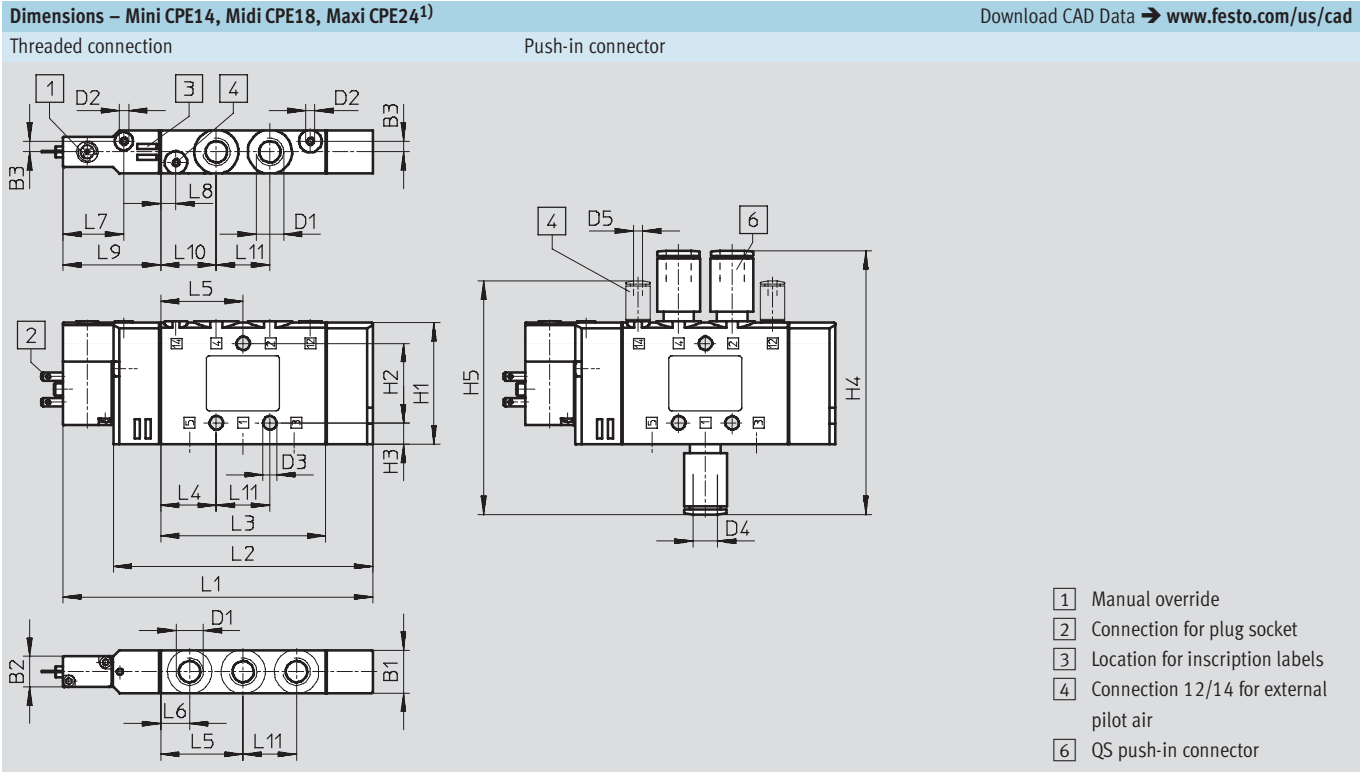
Solenoid Valves CPE, Compact Performance – Metric Series



1) Dimensions are in millimeters, unless otherwise noted.

Dimensional Drawings, 5/2-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series



Dimensional Drawings, 5/2-Way Valves



Solenoid Valves CPE, Compact Performance – Metric Series

Dimensions – Mini CPE14, Midi CPE18, Maxi CPE24 ¹⁾										Download CAD Data → www.festo.com/us/cad		
Pneumatic connection	B1	B2	B3	D1	D2	D3 ∅	D4 ∅	D5 ∅	H1	H2	H3	H4
Mini CPE14												
G $\frac{1}{8}$	14	10	3.5	G $\frac{1}{8}$	M3	4.4	–	–	40.3	26	7	–
QS-6							6	3				75.3
QS-8							8	86.3				
Midi CPE18												
G $\frac{1}{4}$	18	17.5	3.5	G $\frac{1}{4}$	M5	4.4	–	–	57	45	6	–
QS-8							8	6				98
QS-10							10	105				
Maxi CPE24												
G $\frac{3}{8}$	24	17.5	6	G $\frac{3}{8}$	M5	6.5	–	–	62	40	11	–
QS-10							10	6				108
QS-12							12	113				

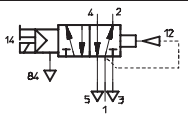
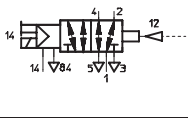
Pneumatic connection	H5	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11
Mini CPE14												
G $\frac{1}{8}$	–	101.5	85	54	18.3	27	9.5	20	5	32	18.3	17.5
QS-6	70.9											
QS-8	76.4											
Midi CPE18												
G $\frac{1}{4}$	–	138	113	75	28	38	17.5	29	5.5	44	27.5	20
QS-8	90.5											
QS-10	94											
Maxi CPE24												
G $\frac{3}{8}$	–	165	140	100	35	50	20	33	10	45	35	30
QS-10	99.5											
QS-12	102											

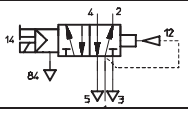
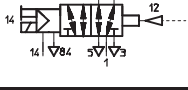
1) Dimensions are in millimeters, unless otherwise noted.

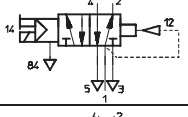
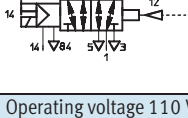
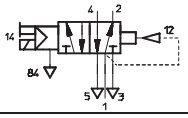
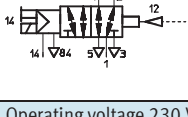
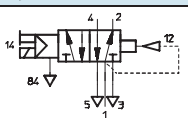
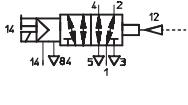
Ordering Data – Pre-configured Products, 5/2-Way Valves



Solenoid Valves CPE, Compact Performance – Metric Series

Ordering Data – Micro CPE10					
ISO Symbol	Pilot air supply	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	Internal	M5	196881	CPE10-M1BH-5L-M5	1D
		M7	196927	CPE10-M1BH-5L-M7	1D
		QS-4	196882	CPE10-M1BH-5L-QS-4	Q
		QS-6	196883	CPE10-M1BH-5L-QS-6	1D
	External	M5	196884	CPE10-M1BH-5LS-M5	1D
		M7	196928	CPE10-M1BH-5LS-M7	Q
		QS-4	196885	CPE10-M1BH-5LS-QS-4	Q
		QS-6	196886	CPE10-M1BH-5LS-QS-6	Q

Ordering Data – Mini CPE14					
ISO Symbol	Pilot air supply	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	Internal	G $\frac{1}{8}$	196941	CPE14-M1BH-5L- $\frac{1}{8}$	1D
		QS-6	196911	CPE14-M1BH-5L-QS-6	1D
		QS-8	196912	CPE14-M1BH-5L-QS-8	1D
	External	G $\frac{1}{8}$	196942	CPE14-M1BH-5LS- $\frac{1}{8}$	1D
		QS-6	196913	CPE14-M1BH-5LS-QS-6	Q
		QS-8	196914	CPE14-M1BH-5LS-QS-8	Q

Ordering Data – Midi CPE18					
ISO Symbol	Pilot air supply	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	Internal	G $\frac{1}{4}$	163142	CPE18-M1H-5L- $\frac{1}{4}$	1D
		QS-8	163150	CPE18-M1H-5L-QS-8	Q
		QS-10	163158	CPE18-M1H-5L-QS-10	Q
	External	G $\frac{1}{4}$	163146	CPE18-M1H-5LS- $\frac{1}{4}$	1D
		QS-8	163154	CPE18-M1H-5LS-QS-8	Q
		QS-10	163162	CPE18-M1H-5LS-QS-10	Q
Operating voltage 110 V AC					
	Internal	G $\frac{1}{4}$	163762	CPE18-M2H-5L- $\frac{1}{4}$	1D
		QS-8	163770	CPE18-M2H-5L-QS-8	Q
		QS-10	163778	CPE18-M2H-5L-QS-10	Q
	External	G $\frac{1}{4}$	163766	CPE18-M2H-5LS- $\frac{1}{4}$	Q
		QS-8	163774	CPE18-M2H-5LS-QS-8	Q
		QS-10	163782	CPE18-M2H-5LS-QS-10	Q
Operating voltage 230 V AC					
	Internal	G $\frac{1}{4}$	163786	CPE18-M3H-5L- $\frac{1}{4}$	Q
		QS-8	163794	CPE18-M3H-5L-QS-8	Q
		QS-10	163802	CPE18-M3H-5L-QS-10	Q
	External	G $\frac{1}{4}$	163790	CPE18-M3H-5LS- $\frac{1}{4}$	Q
		QS-8	163798	CPE18-M3H-5LS-QS-8	Q
		QS-10	163806	CPE18-M3H-5LS-QS-10	Q

LT = Lead time 1D typically ships same day/next day 1W typically ships within 1 week Q request a quote for lead time

Ordering Data – Pre-configured Products, 5/2-Way Valves



Solenoid Valves CPE, Compact Performance – Metric Series

Ordering Data – Maxi CPE24					
ISO Symbol	Pilot air supply	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	Internal	G $\frac{3}{8}$	163166	CPE24-M1H-5L- $\frac{3}{8}$	1D
		QS-10	163174	CPE24-M1H-5L-QS-10	Q
		QS-12	163182	CPE24-M1H-5L-QS-12	Q
	External	G $\frac{3}{8}$	163170	CPE24-M1H-5LS- $\frac{3}{8}$	Q
		QS-10	163178	CPE24-M1H-5LS-QS-10	Q
		QS-12	163186	CPE24-M1H-5LS-QS-12	Q
Operating voltage 110 V AC					
	Internal	G $\frac{3}{8}$	163810	CPE24-M2H-5L- $\frac{3}{8}$	1D
		QS-10	163818	CPE24-M2H-5L-QS-10	Q
		QS-12	163826	CPE24-M2H-5L-QS-12	Q
	External	G $\frac{3}{8}$	163814	CPE24-M2H-5LS- $\frac{3}{8}$	Q
		QS-10	163822	CPE24-M2H-5LS-QS-10	Q
		QS-12	163830	CPE24-M2H-5LS-QS-12	Q
Operating voltage 230 V AC					
	Internal	G $\frac{3}{8}$	163834	CPE24-M3H-5L- $\frac{3}{8}$	Q
		QS-10	163842	CPE24-M3H-5L-QS-10	Q
		QS-12	163850	CPE24-M3H-5L-QS-12	Q
	External	G $\frac{3}{8}$	163838	CPE24-M3H-5LS- $\frac{3}{8}$	Q
		QS-10	163846	CPE24-M3H-5LS-QS-10	Q
		QS-12	163854	CPE24-M3H-5LS-QS-12	Q

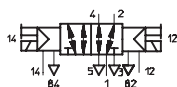
LT = Lead time 1D typically ships same day/next day 1W typically ships within 1 week Q request a quote for lead time

Technical Data, 5/2-Way Valves, Double Solenoid

Solenoid Valves CPE, Compact Performance – Metric Series



ISO Symbol



e.g. with external pilot air



General Technical Data – Micro CPE10			
		Threaded connection	Push-in connector
Valve function		5/2-way, double solenoid	
Constructional design		Piston spool valve	
Sealing principle		Soft	
Type of actuation		Electrical	
Type of pilot control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Reversible for external pilot air supply	
Exhaust function		Flow control	
Manual override		Non-detenting, detenting via accessory	
Mounting position		Any	
Width		10 mm	
Grid dimension		12 mm	
Nominal diameter		4 mm	4 mm
Standard nominal flow rate		M5: 180 l/min	QS-4: 180 l/min
		M7: 350 l/min	QS-6: 320 l/min
Type of mounting		Via through-holes	
Pneumatic connection	1, 2, 4	M5 or M7	∅ 4 or ∅ 6 mm
	3, 5	M7	M7
	12, 14	M3	∅ 3 mm
	84	M3	M3
Changeover time		8 ms	
Product weight		68 g	95 g

Operating and Environmental Conditions			
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases	
Filtration grade		40 µm	
Operating pressure	Internal pilot air	2.5 ... 8 bar	
	External pilot air	-0.9 ... +10 bar	
Pilot pressure		2.5 ... 8 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	
Certification		c UL us - Recognized (OL)	

Electrical Data	
Operating voltage	24 V DC +10/-15%
Power consumption	1.28 W
Protection class with plug socket	IP65 (EN 60529)

Technical Data, 5/2-Way Valves, Double Solenoid

Solenoid Valves CPE, Compact Performance – Metric Series

FESTO

General Technical Data – Mini CPE14			
		Threaded connection	Push-in connector
Valve function		5/2-way, double solenoid	
Constructional design		Piston spool valve	
Sealing principle		Soft	
Type of actuation		Electrical	
Type of pilot control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Reversible for external pilot air supply	
Exhaust function		Flow control	
Manual override		Non-detenting, detenting via accessory	
Mounting position		Any	
Width		14 mm	
Grid dimension		16 mm	
Nominal diameter		6 mm	6 mm
Standard nominal flow rate		G $\frac{1}{8}$: 800 l/min	QS-6: 400 l/min
			QS-8: 680 l/min
Type of mounting		Via through-holes	
Pneumatic connection	1, 2, 4	G $\frac{1}{8}$	∅ 6 or ∅ 8 mm
	3, 5	G $\frac{1}{8}$	G $\frac{1}{8}$
	12, 14	M3	∅ 3 mm
	84	M3	M3
Changeover time		12 ms	
Product weight		115 g	144 g

Operating and Environmental Conditions			
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases	
Filtration grade		40 µm	
Operating pressure	Internal pilot air	2 ... 8 bar	
	External pilot air	-0.9 ... +10 bar	
Pilot pressure		2 ... 8 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	
Certification		c UL us - Recognized (OL)	

Electrical Data	
Operating voltage	24 V DC +10/-15%
Power consumption	1.28 W
Protection class with plug socket	IP65 (EN 60529)

Technical Data, 5/2-Way Valves, Double Solenoid

Solenoid Valves CPE, Compact Performance – Metric Series

FESTO

General Technical Data – Midi CPE18			
		Threaded connection	Push-in connector
Valve function		5/2-way, double solenoid	
Constructional design		Piston spool valve	
Sealing principle		Soft	
Type of actuation		Electrical	
Type of pilot control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Reversible for external pilot air supply	
Exhaust function		Flow control	
Manual override		Non-detenting, detenting via accessory	
Mounting position		Any	
Width		18 mm	
Grid dimension		20 mm	
Nominal diameter		8 mm	8 mm
Standard nominal flow rate		G $\frac{1}{4}$: 1,500 l/min	QS-8: 850 l/min
			QS-10: 1,000 l/min
Type of mounting		Via through-holes	
Pneumatic connection	1, 2, 4	G $\frac{1}{4}$	∅ 8 or ∅ 10 mm
	3, 5	G $\frac{1}{4}$	G $\frac{1}{4}$
	12, 14	M5	∅ 4 mm
	84	M5	M5
Changeover time		13 ms	
Product weight		270 g	

Operating and Environmental Conditions			
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases	
Filtration grade		40 µm	
Operating pressure	Internal pilot air	2 ... 10 bar	
	External pilot air	-0.9 ... +10 bar	
Pilot pressure		2 ... 10 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	
Certification		c UL us - Recognized (OL)	

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

Technical Data, 5/2-Way Valves, Double Solenoid

Solenoid Valves CPE, Compact Performance – Metric Series

FESTO

General Technical Data – Maxi CPE24			
		Threaded connection	Push-in connector
Valve function		5/2-way, double solenoid	
Constructional design		Piston spool valve	
Sealing principle		Soft	
Type of actuation		Electrical	
Type of pilot control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Reversible for external pilot air supply	
Exhaust function		Flow control	
Manual override		Non-detenting, detenting via accessory	
Mounting position		Any	
Width		24 mm	
Nominal diameter		11 mm	11 mm
Standard nominal flow rate		G $\frac{3}{8}$: 3,200 l/min	QS-10: 1,250 l/min
			QS-12: 1,650 l/min
Type of mounting		Via through-holes	
Pneumatic connection	1, 2, 4	G $\frac{3}{8}$	∅ 10 or ∅ 12 mm
	3, 5	G $\frac{3}{8}$	G $\frac{3}{8}$
	12, 14	M5	∅ 6 mm
	84	M5	M5
Changeover time		25 ms	
Product weight		390 g	

Operating and Environmental Conditions			
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases	
Filtration grade		40 µm	
Operating pressure	Internal pilot air	2 ... 10 bar	
	External pilot air	−0.9 ... +10 bar	
Pilot pressure		2 ... 10 bar	
Ambient temperature		−5 ... +50 °C	
Temperature of medium		−5 ... +50 °C	
Certification		c UL us - Recognized (OL)	

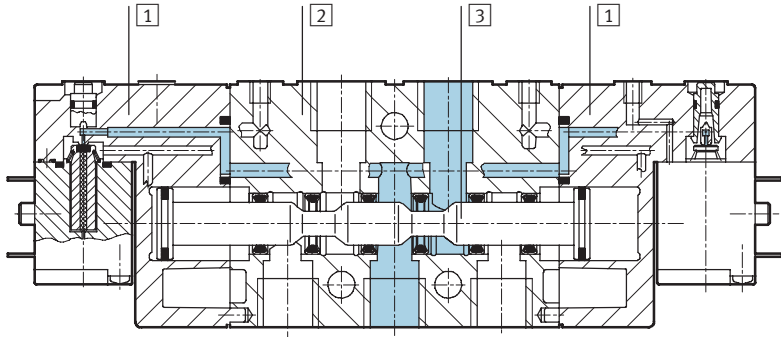
Electrical Data			
Operating voltage	M1H	24 V DC +10/−15%	
	M2H	110 V AC ±10% at 50 ... 60 Hz	
	M3H	230 V AC ±10% at 50 ... 60 Hz	
Power consumption	M1H	1.5 W	
	M2H, M3H	Pull: 3 VA Hold: 2.4 VA	
Protection class with plug socket		IP65 (EN 60529)	

Technical Data, 5/2-Way Valves, Double Solenoid

Solenoid Valves CPE, Compact Performance – Metric Series

Materials

Sectional view



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

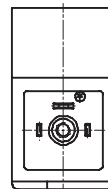
Connection Diagrams

Micro CPE10, Mini CPE14



Suitable for plug socket
KMYZ-9-...

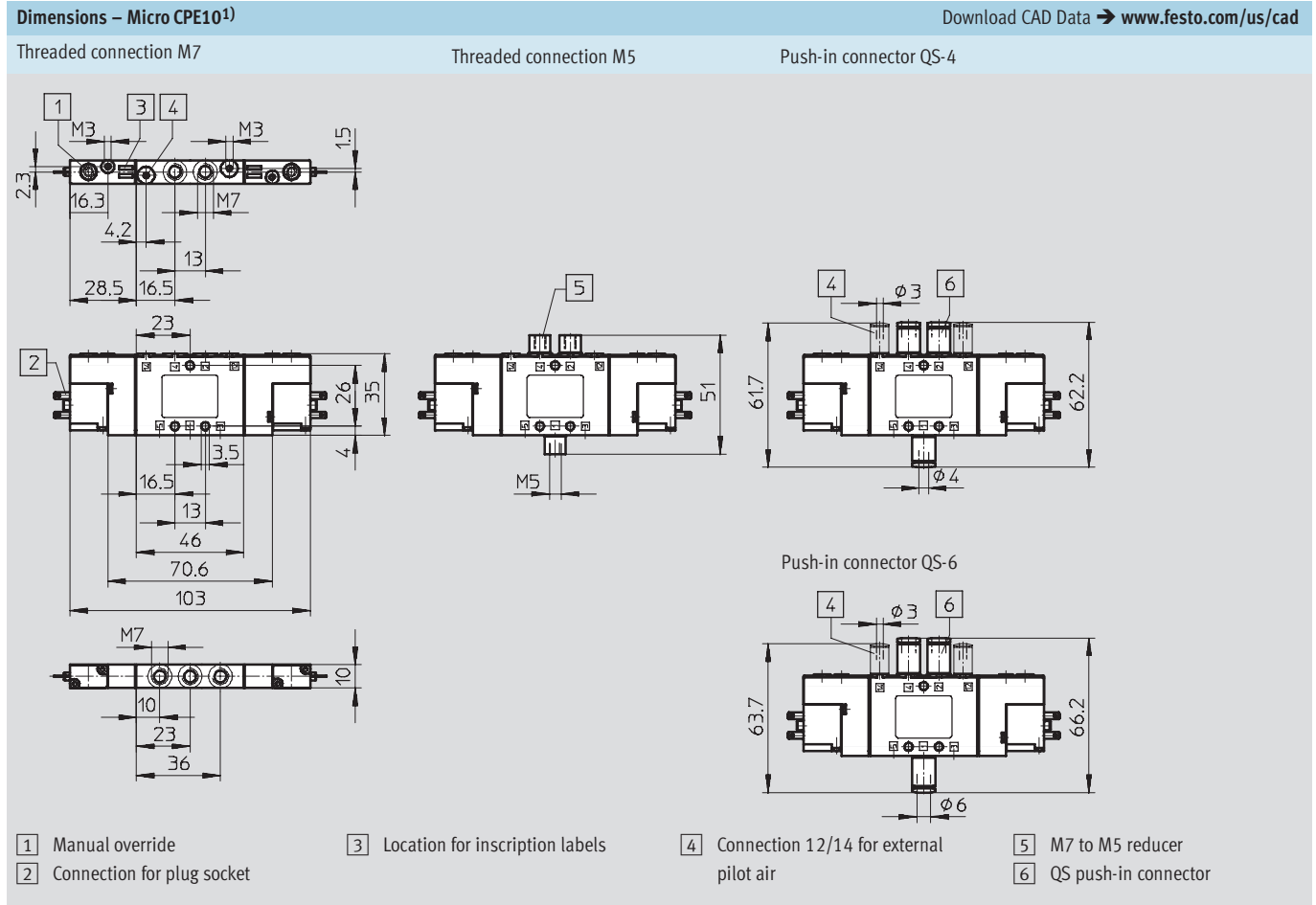
Midi CPE18, Maxi CPE24



Suitable for plug sockets to
DIN 43650, type C
KMEB-1-...
KMEB-2-...
MSSD-EB

Dimensional Drawings, 5/2-Way Valves, Double Solenoid

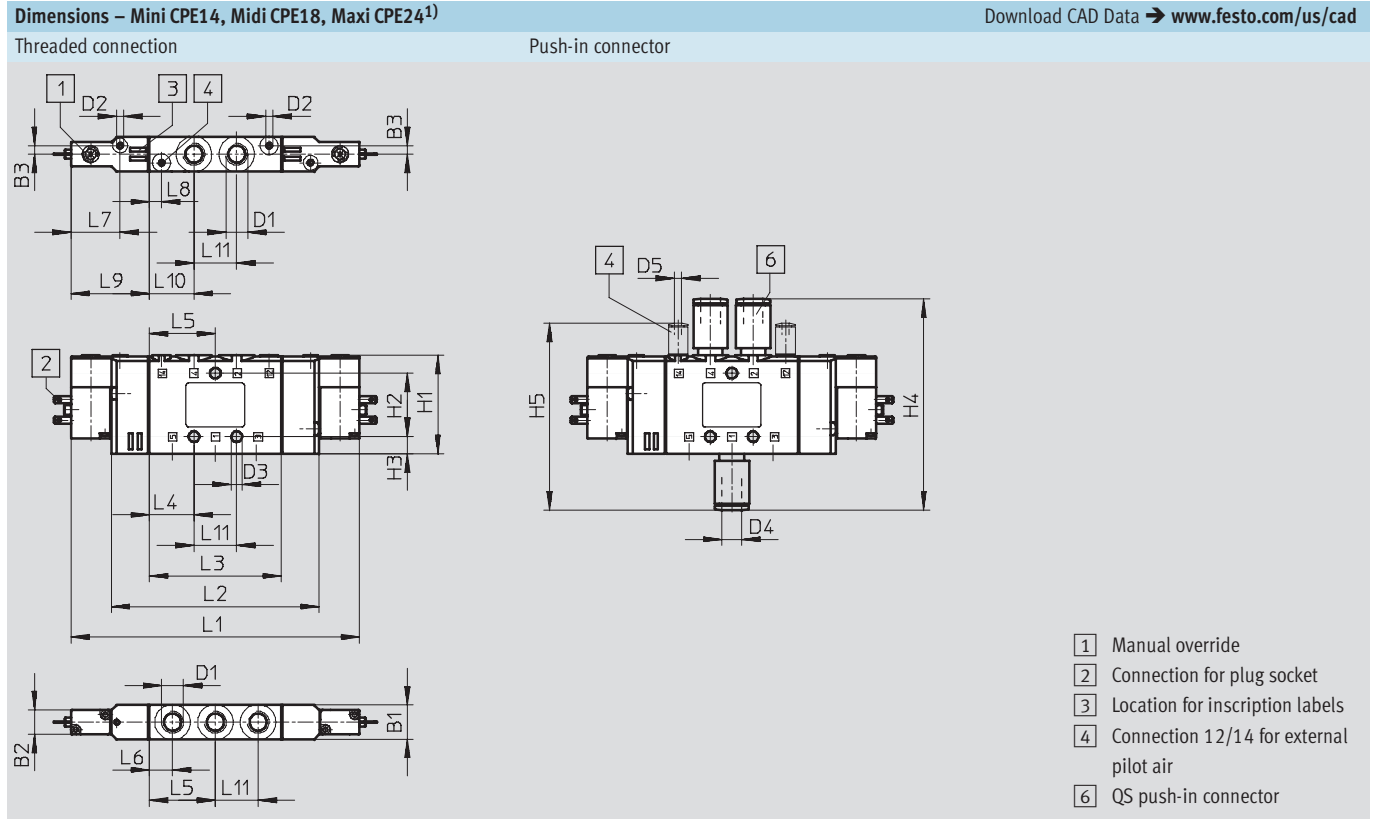
Solenoid Valves CPE, Compact Performance – Metric Series



1) Dimensions are in millimeters, unless otherwise noted.

Dimensional Drawings, 5/2-Way Valves, Double Solenoid

Solenoid Valves CPE, Compact Performance – Metric Series



1) Dimensions are in millimeters, unless otherwise noted.

Dimensional Drawings, 5/2-Way Valves, Double Solenoid



Solenoid Valves CPE, Compact Performance – Metric Series

Dimensions – Mini CPE14, Midi CPE18, Maxi CPE24 ¹⁾										Download CAD Data → www.festo.com/us/cad		
Pneumatic connection	B1	B2	B3	D1	D2	D3 ∅	D4 ∅	D5 ∅	H1	H2	H3	H4
Mini CPE14												
G $\frac{1}{8}$	14	10	3.5	G $\frac{1}{8}$	M3	4.4	–	–	40.3	26	7	–
QS-6							6	3				75.3
QS-8							8	86.3				
Midi CPE18												
G $\frac{1}{4}$	18	17.5	3.5	G $\frac{1}{4}$	M5	4.4	–	–	57	45	6	–
QS-8							8	6				98
QS-10							10	105				
Maxi CPE24												
G $\frac{3}{8}$	24	17.5	6	G $\frac{3}{8}$	M5	6.5	–	–	62	40	11	–
QS-10							10	6				108
QS-12							12	113				

Pneumatic connection	H5	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11
Mini CPE14												
G $\frac{1}{8}$	–	118	85	54	18.3	27	9.5	20	5	32	18.3	17.5
QS-6	70.9											
QS-8	76.4											
Midi CPE18												
G $\frac{1}{4}$	–	163	113	75	28	38	17.5	29	5.5	44	27.5	20
QS-8	90.5											
QS-10	94											
Maxi CPE24												
G $\frac{3}{8}$	–	190	140	100	35	50	20	33	10	45	35	30
QS-10	99.5											
QS-12	102											

Ordering Data – Pre-configured Products, 5/2-Way Valves, Double Solenoid



Solenoid Valves CPE, Compact Performance – Metric Series

Ordering Data – Micro CPE10					
ISO Symbol	Pilot air supply	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	Internal	M5	196875	CPE10-M1BH-5J-M5	1D
		M7	196925	CPE10-M1BH-5J-M7	1D
		QS-4	196876	CPE10-M1BH-5J-QS-4	Q
		QS-6	196877	CPE10-M1BH-5J-QS-6	Q
	External	M5	196878	CPE10-M1BH-5JS-M5	1D
		M7	196926	CPE10-M1BH-5JS-M7	Q
		QS-4	196879	CPE10-M1BH-5JS-QS-4	Q
		QS-6	196880	CPE10-M1BH-5JS-QS-6	Q

Ordering Data – Mini CPE14					
ISO Symbol	Pilot air supply	Pneumatic connection	Type	Part No.	LT
Operating voltage 24 V DC					
	Internal	G $\frac{1}{8}$	CPE14-M1BH-5J- $\frac{1}{8}$	196939	1D
		QS-6	CPE14-M1BH-5J-QS-6	196907	Q
		QS-8	CPE14-M1BH-5J-QS-8	196908	Q
	External	G $\frac{1}{8}$	CPE14-M1BH-5JS- $\frac{1}{8}$	196940	1D
		QS-6	CPE14-M1BH-5JS-QS-6	196909	Q
		QS-8	CPE14-M1BH-5JS-QS-8	196910	Q

Ordering Data – Midi CPE18					
ISO Symbol	Pilot air supply	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	Internal	G $\frac{1}{4}$	163143	CPE18-M1H-5J- $\frac{1}{4}$	1D
		QS-8	163151	CPE18-M1H-5J-QS-8	Q
		QS-10	163159	CPE18-M1H-5J-QS-10	Q
	External	G $\frac{1}{4}$	163147	CPE18-M1H-5JS- $\frac{1}{4}$	Q
		QS-8	163155	CPE18-M1H-5JS-QS-8	Q
		QS-10	163163	CPE18-M1H-5JS-QS-10	Q
Operating voltage 110 V AC					
	Internal	G $\frac{1}{4}$	163763	CPE18-M2H-5J- $\frac{1}{4}$	1D
		QS-8	163771	CPE18-M2H-5J-QS-8	Q
		QS-10	163779	CPE18-M2H-5J-QS-10	Q
	External	G $\frac{1}{4}$	163767	CPE18-M2H-5JS- $\frac{1}{4}$	Q
		QS-8	163775	CPE18-M2H-5JS-QS-8	Q
		QS-10	163783	CPE18-M2H-5JS-QS-10	Q
Operating voltage 230 V AC					
	Internal	G $\frac{1}{4}$	163787	CPE18-M3H-5J- $\frac{1}{4}$	Q
		QS-8	163795	CPE18-M3H-5J-QS-8	Q
		QS-10	163803	CPE18-M3H-5J-QS-10	Q
	External	G $\frac{1}{4}$	163791	CPE18-M3H-5JS- $\frac{1}{4}$	Q
		QS-8	163799	CPE18-M3H-5JS-QS-8	Q
		QS-10	163807	CPE18-M3H-5JS-QS-10	Q

LT = Lead time 1D typically ships same day/next day 1W typically ships within 1 week Q request a quote for lead time

Ordering Data – Pre-configured Products, 5/2-Way Valves, Double Solenoid



Solenoid Valves CPE, Compact Performance – Metric Series

Ordering Data – Maxi CPE24					
ISO Symbol	Pilot air supply	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	Internal	G $\frac{3}{8}$	163167	CPE24-M1H-5J- $\frac{3}{8}$	1D
		QS-10	163175	CPE24-M1H-5J-QS-10	Q
		QS-12	163183	CPE24-M1H-5J-QS-12	Q
	External	G $\frac{3}{8}$	163171	CPE24-M1H-5JS- $\frac{3}{8}$	Q
		QS-10	163179	CPE24-M1H-5JS-QS-10	Q
		QS-12	163187	CPE24-M1H-5JS-QS-12	Q
Operating voltage 110 V AC					
	Internal	G $\frac{3}{8}$	163811	CPE24-M2H-5J- $\frac{3}{8}$	Q
		QS-10	163819	CPE24-M2H-5J-QS-10	Q
		QS-12	163827	CPE24-M2H-5J-QS-12	Q
	External	G $\frac{3}{8}$	163815	CPE24-M2H-5JS- $\frac{3}{8}$	Q
		QS-10	163823	CPE24-M2H-5JS-QS-10	Q
		QS-12	163831	CPE24-M2H-5JS-QS-12	Q
Operating voltage 230 V AC					
	Internal	G $\frac{3}{8}$	163835	CPE24-M3H-5J- $\frac{3}{8}$	Q
		QS-10	163843	CPE24-M3H-5J-QS-10	Q
		QS-12	163851	CPE24-M3H-5J-QS-12	Q
	External	G $\frac{3}{8}$	163839	CPE24-M3H-5JS- $\frac{3}{8}$	Q
		QS-10	163847	CPE24-M3H-5JS-QS-10	Q
		QS-12	163855	CPE24-M3H-5JS-QS-12	Q

LT = Lead time

1D typically ships same day/next day

1W typically ships within 1 week

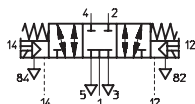
Q request a quote for lead time

Technical Data, 5/3-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series

FESTO

ISO Symbol



e.g. with external pilot air



General Technical Data – Micro CPE10			Threaded connection	Push-in connector
Valve function			5/3-way, single solenoid	
Constructional design			Piston spool valve	
Sealing principle			Soft	
Type of actuation			Electrical	
Type of reset			Mechanical spring	
Type of pilot control			Piloted	
Pilot air supply			Internal or external	
Direction of flow			Reversible for external pilot air supply	
Exhaust function			Flow control	
Manual override			Non-detenting, detenting via accessory	
Mounting position			Any	
Width			10 mm	
Grid dimension			12 mm	
Nominal diameter			4 mm	4 mm
Standard nominal flow rate	closed		M5: 180 l/min	QS-4: 180 l/min
			M7: 350 l/min	QS-6: 300 l/min
	exhausted		M5: 180 l/min	QS-4: 180 l/min
			M7: 250 l/min	QS-6: 250 l/min
	pressurised		M5: 180 l/min	QS-4: 180 l/min
			M7: 300 l/min	QS-6: 300 l/min
Type of mounting			Via through-holes	
Pneumatic connection	1, 2, 4		M5 or M7	∅ 4 or ∅ 6 mm
	3, 5		M7	M7
	12, 14		M3	∅ 3 mm
	82, 84		M3	M3
Switching time on/off			16/20 ms	
Product weight			73 g	

Operating and Environmental Conditions			
Operating medium			Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases
Filtration grade			40 µm
Operating pressure	Internal pilot air		3 ... 8 bar
	External pilot air		-0.9 ... +10 bar
Pilot pressure			3 ... 8 bar
Ambient temperature			-5 ... +50 °C
Temperature of medium			-5 ... +50 °C
Certification			c UL us - Recognized (OL)

Electrical Data			
Operating voltage			24 V DC +10/-15%
Power consumption			1.28 W
Protection class with plug socket			IP65 (EN 60529)

Technical Data, 5/3-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series

FESTO

General Technical Data – Mini CPE14			
		Threaded connection	Push-in connector
Valve function		5/3-way, single solenoid	
Constructional design		Piston spool valve	
Sealing principle		Soft	
Type of actuation		Electrical	
Type of reset		Mechanical spring	
Type of pilot control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Reversible for external pilot air supply	
Exhaust function		Flow control	
Manual override		Non-detenting, detenting via accessory	
Mounting position		Any	
Width		14 mm	
Grid dimension		16 mm	
Nominal diameter		6 mm	6 mm
Standard nominal flow rate	closed	G $\frac{1}{8}$: 750 l/min	QS-6: 410 l/min QS-8: 720 l/min
	exhausted	G $\frac{1}{8}$: 700 l/min	QS-6: 370 l/min QS-8: 570 l/min
	pressurised	G $\frac{1}{8}$: 750 l/min	QS-6: 370 l/min QS-8: 650 l/min
Type of mounting		Via through-holes	
Pneumatic connection	1, 2, 4	G $\frac{1}{8}$	Ø 6 or Ø 8 mm
	3, 5	G $\frac{1}{8}$	G $\frac{1}{8}$
	12, 14	M3	Ø 3 mm
	82, 84	M3	M3
Switching time on/off		20/42 ms	
Product weight		120 g	170 g

Operating and Environmental Conditions			
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases	
Filtration grade		40 µm	
Operating pressure	Internal pilot air	3 ... 8 bar	
	External pilot air	-0.9 ... +10 bar	
Pilot pressure		3 ... 8 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	
Certification		c UL us - Recognized (OL)	

Electrical Data	
Operating voltage	24 V DC +10/-15%
Power consumption	1.28 W
Protection class with plug socket	IP65 (EN 60529)

Technical Data, 5/3-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series

FESTO

General Technical Data – Midi CPE18			
		Threaded connection	Push-in connector
Valve function		5/3-way, single solenoid	
Constructional design		Piston spool valve	
Sealing principle		Soft	
Type of actuation		Electrical	
Type of reset		Mechanical spring	
Type of pilot control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Reversible for external pilot air supply	
Exhaust function		Flow control	
Manual override		Non-detenting, detenting via accessory	
Mounting position		Any	
Width		18 mm	
Grid dimension		20 mm	
Nominal diameter		8 mm	8 mm
Standard nominal flow rate	closed	G $\frac{1}{4}$: 1,450 l/min	QS-8: 850 l/min QS-10: 1,050 l/min
	exhausted	G $\frac{1}{4}$: 1,200 l/min	QS-8: 780 l/min QS-10: 1,000 l/min
	pressurised	G $\frac{1}{4}$: 1,300 l/min	QS-8: 780 l/min QS-10: 1,000 l/min
Type of mounting		Via through-holes	
Pneumatic connection	1, 2, 4	G $\frac{1}{4}$	Ø 8 or Ø 10 mm
	3, 5	G $\frac{1}{4}$	G $\frac{1}{4}$
	12, 14	M5	Ø 4 mm
	82, 84	M5	M5
Switching time on/off		20/38 ms	
Product weight		280 g	300 g

Operating and Environmental Conditions			
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases	
Filtration grade		40 µm	
Operating pressure	Internal pilot air	2.5 ... 10 bar	
	External pilot air	-0.9 ... +10 bar	
Pilot pressure		2.5 ... 10 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	
Certification		c UL us - Recognized (OL)	

Electrical Data			
Operating voltage	M1H	24 V DC +10/-15%	
	M2H	110 V AC ±10% at 50 ... 60 Hz	
	M3H	230 V AC ±10% at 50 ... 60 Hz	
Power consumption	M1H	1 W	
	M2H, M3H	Pull: 3 VA Hold: 2.4 VA	
Protection class with plug socket		IP65 (EN 60529)	

Technical Data, 5/3-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series

FESTO

General Technical Data – Maxi CPE24			
		Threaded connection	Push-in connector
Valve function		5/3-way, single solenoid	
Constructional design		Piston spool valve	
Sealing principle		Soft	
Type of actuation		Electrical	
Type of reset		Mechanical spring	
Type of pilot control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Reversible for external pilot air supply	
Exhaust function		Flow control	
Manual override		Non-detenting, detenting via accessory	
Mounting position		Any	
Width		24 mm	
Nominal diameter		11 mm	11 mm
Standard nominal flow rate	closed	G $\frac{3}{8}$: 3,000 l/min	QS-10: 1,250 l/min QS-12: 1,650 l/min
	exhausted	G $\frac{3}{8}$: 2,650 l/min	QS-10: 1,250 l/min QS-12: 1,600 l/min
	pressurised	G $\frac{3}{8}$: 2,600 l/min	QS-10: 1,250 l/min QS-12: 1,600 l/min
Type of mounting		Via through-holes	
Pneumatic connection	1, 2, 4	G $\frac{3}{8}$	Ø 10 or Ø 12 mm
	3, 5	G $\frac{3}{8}$	G $\frac{3}{8}$
	12, 14	M5	Ø 6 mm
	82, 84	M5	M5
Switching time on/off		25/55 ms	
Product weight		430 g	450 g

Operating and Environmental Conditions			
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases	
Filtration grade		40 µm	
Operating pressure	Internal pilot air	2.5 ... 10 bar	
	External pilot air	-0.9 ... +10 bar	
Pilot pressure		2.5 ... 10 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	
Certification		c UL us - Recognized (OL)	

Electrical Data			
Operating voltage	M1H	24 V DC +10/-15%	
	M2H	110 V AC ±10% at 50 ... 60 Hz	
	M3H	230 V AC ±10% at 50 ... 60 Hz	
Power consumption	M1H	1 W	
	M2H, M3H	Pull: 3 VA Hold: 2.4 VA	
Protection class with plug socket		IP65 (EN 60529)	

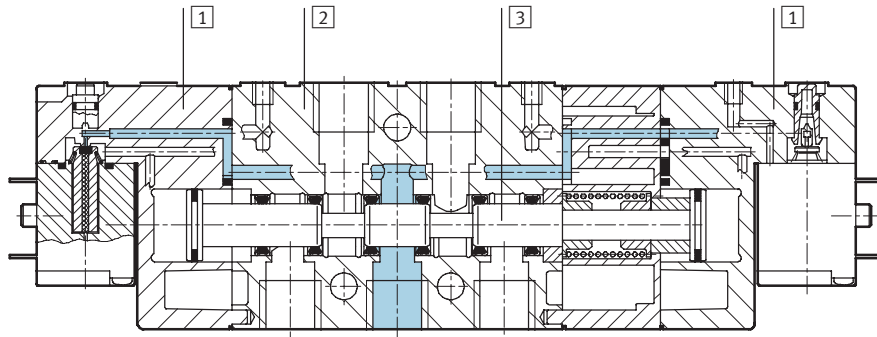
Technical Data, 5/3-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series



Materials

Sectional view



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

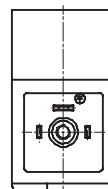
Connection Diagrams

Micro CPE10, Mini CPE14



Suitable for plug socket
KMYZ-9-...

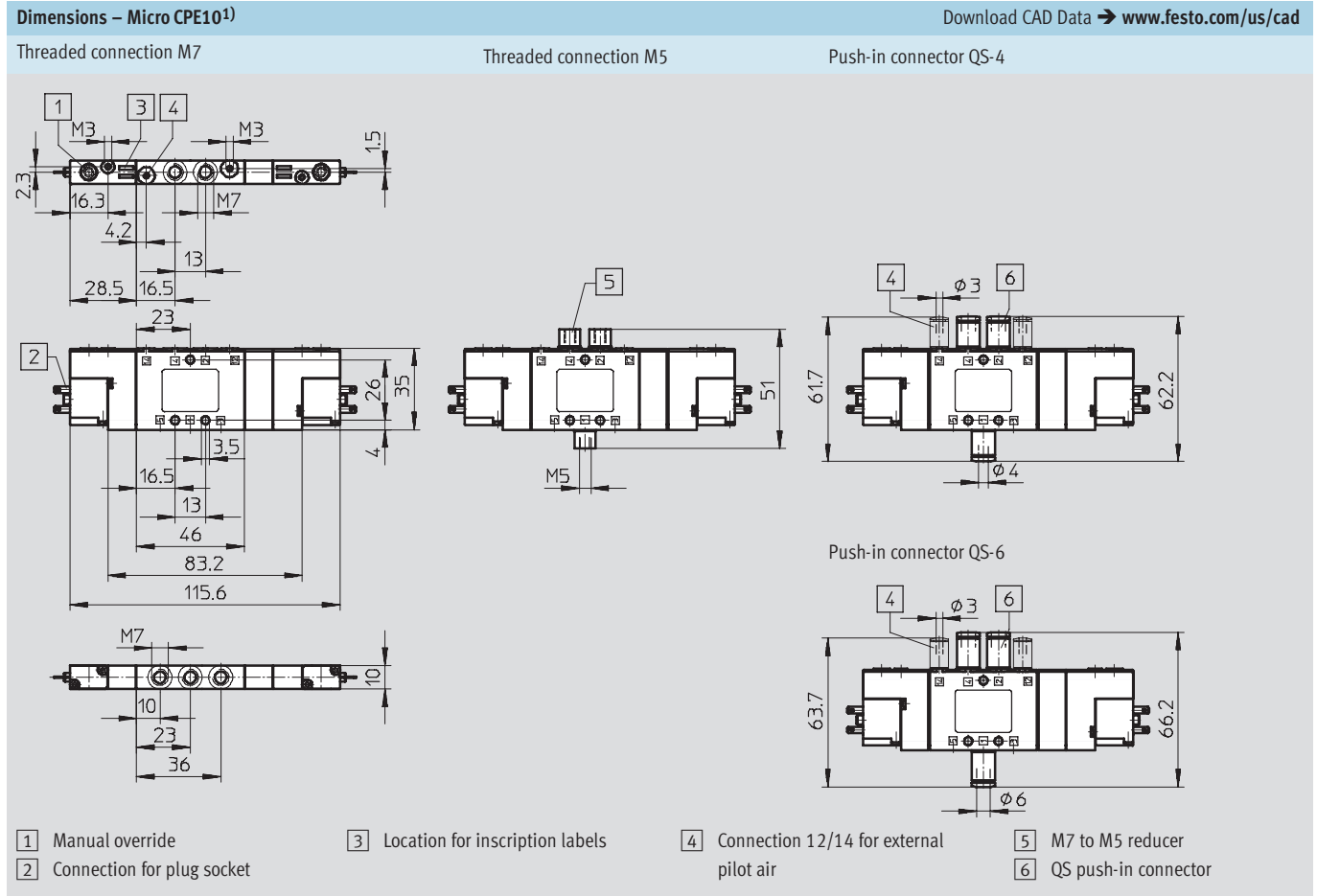
Midi CPE18, Maxi CPE24



Suitable for plug sockets to
DIN 43650, type C
KMEB-1-...
KMEB-2-...
MSSD-EB

Dimensional Drawings, 5/3-Way Valves

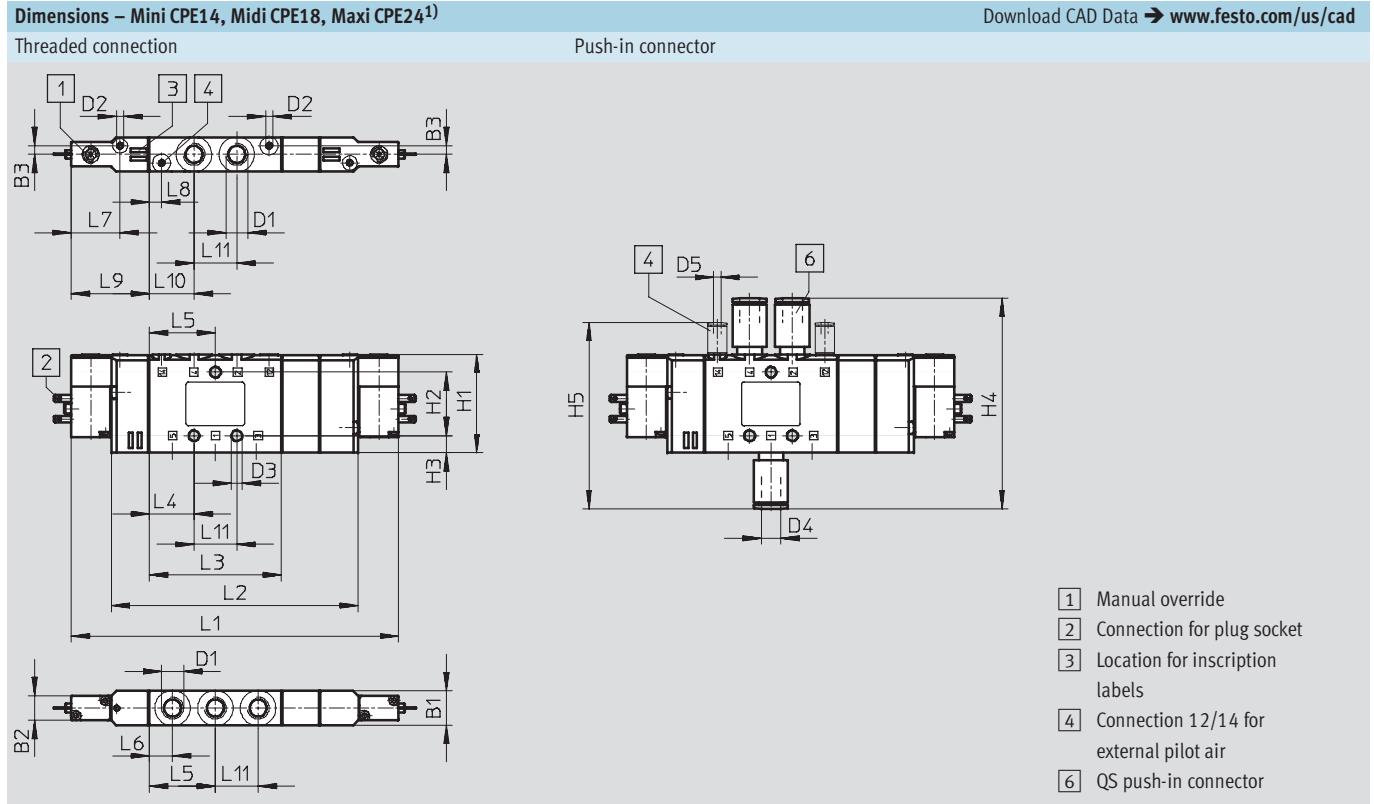
Solenoid Valves CPE, Compact Performance – Metric Series



1) Dimensions are in millimeters, unless otherwise noted.

Dimensional Drawings, 5/3-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series



1) Dimensions are in millimeters, unless otherwise noted.

Dimensional Drawings, 5/3-Way Valves

Solenoid Valves CPE, Compact Performance – Metric Series



Dimensions – Mini CPE14, Midi CPE18, Maxi CPE24										Download CAD Data → www.festo.com/us/cad		
Pneumatic connection	B1	B2	B3	D1	D2	D3 ∅	D4 ∅	D5 ∅	H1	H2	H3	H4
Mini CPE14												
G $\frac{1}{8}$	14	10	3.5	G $\frac{1}{8}$	M3	4.4	–	–	40.3	26	7	–
QS-6							6	3				75.3
QS-8							8	86.3				
Midi CPE18												
G $\frac{1}{4}$	18	17.5	3.5	G $\frac{1}{4}$	M5	4.4	–	–	57	45	6	–
QS-8							8	6				98
QS-10							10	105				
Maxi CPE24												
G $\frac{3}{8}$	24	17.5	6	G $\frac{3}{8}$	M5	6.5	–	–	62	40	11	–
QS-10							10	6				108
QS-12							12	113				

Pneumatic connection	H5	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11
Mini CPE14												
G $\frac{1}{8}$	–	134	101	54	18.3	27	9.5	20	5	32	18.3	17.5
QS-6	70.9											
QS-8	76.4											
Midi CPE18												
G $\frac{1}{4}$	–	182	132	75	28	38	17.5	29	5.5	44	27.5	20
QS-8	90.5											
QS-10	94											
Maxi CPE24												
G $\frac{3}{8}$	–	213	163	100	35	50	20	33	10	45	35	30
QS-10	99.5											
QS-12	102											

Ordering Data – Pre-configured Products, 5/3-Way Valves



Solenoid Valves CPE, Compact Performance – Metric Series

Ordering Data – Micro CPE10					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	<ul style="list-style-type: none"> • Normally closed • Internal pilot air 	M5	533159	CPE10-M1BH-5/3G-M5-B	1D
		M7	533141	CPE10-M1BH-5/3G-M7-B	1D
		QS-4	533147	CPE10-M1BH-5/3G-QS-4-B	Q
		QS-6	533153	CPE10-M1BH-5/3G-QS-6-B	Q
	<ul style="list-style-type: none"> • Normally closed • External pilot air 	M5	533160	CPE10-M1BH-5/3GS-M5-B	1D
		M7	533142	CPE10-M1BH-5/3GS-M7-B	Q
		QS-4	533148	CPE10-M1BH-5/3GS-QS-4-B	Q
		QS-6	533154	CPE10-M1BH-5/3GS-QS-6-B	Q
	<ul style="list-style-type: none"> • Normally exhausted • Internal pilot air 	M5	533161	CPE10-M1BH-5/3E-M5-B	1D
		M7	533143	CPE10-M1BH-5/3E-M7-B	Q
		QS-4	533149	CPE10-M1BH-5/3E-QS-4-B	Q
		QS-6	533155	CPE10-M1BH-5/3E-QS-6-B	1D
	<ul style="list-style-type: none"> • Normally exhausted • External pilot air 	M5	533162	CPE10-M1BH-5/3ES-M5-B	1D
		M7	533144	CPE10-M1BH-5/3ES-M7-B	Q
		QS-4	533150	CPE10-M1BH-5/3ES-QS-4-B	Q
		QS-6	533156	CPE10-M1BH-5/3ES-QS-6-B	Q
	<ul style="list-style-type: none"> • Normally pressurised • Internal pilot air 	M5	533163	CPE10-M1BH-5/3B-M5-B	1D
		M7	533145	CPE10-M1BH-5/3B-M7-B	Q
		QS-4	533151	CPE10-M1BH-5/3B-QS-4-B	Q
		QS-6	533157	CPE10-M1BH-5/3B-QS-6-B	Q
	<ul style="list-style-type: none"> • Normally pressurised • External pilot air 	M5	533164	CPE10-M1BH-5/3BS-M5-B	1D
		M7	533146	CPE10-M1BH-5/3BS-M7-B	Q
		QS-4	533152	CPE10-M1BH-5/3BS-QS-4-B	Q
		QS-6	533158	CPE10-M1BH-5/3BS-QS-6-B	Q

Ordering Data – Mini CPE14					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	<ul style="list-style-type: none"> • Normally closed • Internal pilot air 	G1/8	196937	CPE14-M1BH-5/3G-1/8	1D
		QS-6	196903	CPE14-M1BH-5/3G-QS-6	1D
		QS-8	196904	CPE14-M1BH-5/3G-QS-8	Q
	<ul style="list-style-type: none"> • Normally closed • External pilot air 	G1/8	196938	CPE14-M1BH-5/3GS-1/8	1D
		QS-6	196905	CPE14-M1BH-5/3GS-QS-6	Q
		QS-8	196906	CPE14-M1BH-5/3GS-QS-8	Q
	<ul style="list-style-type: none"> • Normally exhausted • Internal pilot air 	G1/8	196935	CPE14-M1BH-5/3E-1/8	1D
		QS-6	196899	CPE14-M1BH-5/3E-QS-6	Q
		QS-8	196900	CPE14-M1BH-5/3E-QS-8	Q
	<ul style="list-style-type: none"> • Normally exhausted • External pilot air 	G1/8	196936	CPE14-M1BH-5/3ES-1/8	1D
		QS-6	196901	CPE14-M1BH-5/3ES-QS-6	Q
		QS-8	196902	CPE14-M1BH-5/3ES-QS-8	Q
	<ul style="list-style-type: none"> • Normally pressurised • Internal pilot air 	G1/8	196933	CPE14-M1BH-5/3B-1/8	1D
		QS-6	196895	CPE14-M1BH-5/3B-QS-6	Q
		QS-8	196896	CPE14-M1BH-5/3B-QS-8	Q
	<ul style="list-style-type: none"> • Normally pressurised • External pilot air 	G1/8	196934	CPE14-M1BH-5/3BS-1/8	1D
		QS-6	196897	CPE14-M1BH-5/3BS-QS-6	Q
		QS-8	196898	CPE14-M1BH-5/3BS-QS-8	Q

LT = Lead time

1D typically ships same day/next day

1W typically ships within 1 week

Q request a quote for lead time

Ordering Data – Pre-configured Products, 5/3-Way Valves



Solenoid Valves CPE, Compact Performance – Metric Series

Ordering Data – Midi CPE18					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	<ul style="list-style-type: none"> • Normally closed • Internal pilot air 	G $\frac{1}{4}$	170247	CPE18-M1H-5/3G- $\frac{1}{4}$	1D
		QS-8	170253	CPE18-M1H-5/3G-QS-8	Q
		QS-10	170259	CPE18-M1H-5/3G-QS-10	Q
	<ul style="list-style-type: none"> • Normally closed • External pilot air 	G $\frac{1}{4}$	170248	CPE18-M1H-5/3GS- $\frac{1}{4}$	Q
		QS-8	170254	CPE18-M1H-5/3GS-QS-8	Q
		QS-10	170260	CPE18-M1H-5/3GS-QS-10	Q
	<ul style="list-style-type: none"> • Normally exhausted • Internal pilot air 	G $\frac{1}{4}$	170249	CPE18-M1H-5/3E- $\frac{1}{4}$	1D
		QS-8	170255	CPE18-M1H-5/3E-QS-8	Q
		QS-10	170261	CPE18-M1H-5/3E-QS-10	Q
	<ul style="list-style-type: none"> • Normally exhausted • External pilot air 	G $\frac{1}{4}$	170250	CPE18-M1H-5/3ES- $\frac{1}{4}$	1D
		QS-8	170256	CPE18-M1H-5/3ES-QS-8	Q
		QS-10	170262	CPE18-M1H-5/3ES-QS-10	Q
	<ul style="list-style-type: none"> • Normally pressurised • Internal pilot air 	G $\frac{1}{4}$	170251	CPE18-M1H-5/3B- $\frac{1}{4}$	Q
		QS-8	170257	CPE18-M1H-5/3B-QS8	Q
		QS-10	170263	CPE18-M1H-5/3B-QS10	Q
	<ul style="list-style-type: none"> • Normally pressurised • External pilot air 	G $\frac{1}{4}$	170252	CPE18-M1H-5/3BS- $\frac{1}{4}$	Q
		QS-8	170258	CPE18-M1H-5/3BS-QS-8	Q
		QS-10	170264	CPE18-M1H-5/3BS-QS-10	Q
Operating voltage 110 V AC					
	<ul style="list-style-type: none"> • Normally closed • Internal pilot air 	G $\frac{1}{4}$	170283	CPE18-M2H-5/3G- $\frac{1}{4}$	Q
		QS-8	170289	CPE18-M2H-5/3G-QS-8	Q
		QS-10	170295	CPE18-M2H-5/3G-QS-10	Q
	<ul style="list-style-type: none"> • Normally closed • External pilot air 	G $\frac{1}{4}$	170284	CPE18-M2H-5/3GS- $\frac{1}{4}$	Q
		QS-8	170290	CPE18-M2H-5/3GS-QS-8	Q
		QS-10	170296	CPE18-M2H-5/3GS-QS10	Q
	<ul style="list-style-type: none"> • Normally exhausted • Internal pilot air 	G $\frac{1}{4}$	170285	CPE18-M2H-5/3E- $\frac{1}{4}$	Q
		QS-8	170291	CPE18-M2H-5/3E-QS-8	Q
		QS-10	170297	CPE18-M2H-5/3E-QS-10	Q
	<ul style="list-style-type: none"> • Normally exhausted • External pilot air 	G $\frac{1}{4}$	170286	CPE18-M2H-5/3ES- $\frac{1}{4}$	Q
		QS-8	170292	CPE18-M2H-5/3ES-QS-8	Q
		QS-10	170298	CPE18-M2H-5/3ES-QS10	Q
	<ul style="list-style-type: none"> • Normally pressurised • Internal pilot air 	G $\frac{1}{4}$	170287	CPE18-M2H-5/3B- $\frac{1}{4}$	Q
		QS-8	170293	CPE18-M2H-5/3B-QS-8	Q
		QS-10	170299	CPE18-M2H-5/3B-QS-10	Q
	<ul style="list-style-type: none"> • Normally pressurised • External pilot air 	G $\frac{1}{4}$	170288	CPE18-M2H-5/3BS- $\frac{1}{4}$	Q
		QS-8	170294	CPE18-M2H-5/3BS-QS-8	Q
		QS-10	170300	CPE18-M2H-5/3BS-QS-10	Q

LT = Lead time

1D typically ships same day/next day

1W typically ships within 1 week

Q request a quote for lead time

Ordering Data – Pre-configured Products, 5/3-Way Valves



Solenoid Valves CPE, Compact Performance – Metric Series

Ordering Data – Midi CPE18					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 230 V AC					
	<ul style="list-style-type: none"> • Normally closed • Internal pilot air 	G $\frac{1}{4}$	170319	CPE18-M3H-5/3G- $\frac{1}{4}$	Q
		QS-8	170325	CPE18-M3H-5/3G-QS-8	Q
		QS-10	170331	CPE18-M3H-5/3G-QS-10	Q
	<ul style="list-style-type: none"> • Normally closed • External pilot air 	G $\frac{1}{4}$	170320	CPE18-M3H-5/3GS- $\frac{1}{4}$	Q
		QS-8	170326	CPE18-M3H-5/3GS-QS-8	Q
		QS-10	170332	CPE18-M3H-5/3GS-QS10	Q
	<ul style="list-style-type: none"> • Normally exhausted • Internal pilot air 	G $\frac{1}{4}$	170321	CPE18-M3H-5/3E- $\frac{1}{4}$	Q
		QS-8	170327	CPE18-M3H-5/3E-QS-8	Q
		QS-10	170333	CPE18-M3H-5/3E-QS-10	Q
	<ul style="list-style-type: none"> • Normally exhausted • External pilot air 	G $\frac{1}{4}$	170322	CPE18-M3H-5/3ES- $\frac{1}{4}$	Q
		QS-8	170328	CPE18-M3H-5/3ES-QS-8	Q
		QS-10	170334	CPE18-M3H-5/3ES-QS10	Q
	<ul style="list-style-type: none"> • Normally pressurised • Internal pilot air 	G $\frac{1}{4}$	170323	CPE18-M3H-5/3B- $\frac{1}{4}$	Q
		QS-8	170329	CPE18-M3H-5/3B-QS-8	Q
		QS-10	170335	CPE18-M3H-5/3B-QS-10	Q
	<ul style="list-style-type: none"> • Normally pressurised • External pilot air 	G $\frac{1}{4}$	170324	CPE18-M3H-5/3BS- $\frac{1}{4}$	Q
		QS-8	170330	CPE18-M3H-5/3BS-QS-8	Q
		QS-10	170336	CPE18-M3H-5/3BS-QS-10	Q

LT = Lead time

1D typically ships same day/next day

1W typically ships within 1 week

Q request a quote for lead time

Ordering Data – Pre-configured Products, 5/3-Way Valves



Solenoid Valves CPE, Compact Performance – Metric Series

Ordering Data – Maxi CPE24					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	<ul style="list-style-type: none"> • Normally closed • Internal pilot air 	G $\frac{3}{8}$	170265	CPE24-M1H-5/3G- $\frac{3}{8}$	1D
		QS-10	170271	CPE24-M1H-5/3G-QS-10	Q
		QS-12	170277	CPE24-M1H-5/3G-QS-12	Q
	<ul style="list-style-type: none"> • Normally closed • External pilot air 	G $\frac{3}{8}$	170266	CPE24-M1H-5/3GS- $\frac{3}{8}$	Q
		QS-10	170272	CPE24-M1H-5/3GS-QS-10	Q
		QS-12	170278	CPE24-M1H-5/3GS-QS-12	Q
	<ul style="list-style-type: none"> • Normally exhausted • Internal pilot air 	G $\frac{3}{8}$	170267	CPE24-M1H-5/3E- $\frac{3}{8}$	1D
		QS-10	170273	CPE24-M1H-5/3E-QS-10	Q
		QS-12	170279	CPE24-M1H-5/3E-QS-12	Q
	<ul style="list-style-type: none"> • Normally exhausted • External pilot air 	G $\frac{3}{8}$	170268	CPE24-M1H-5/3ES- $\frac{3}{8}$	Q
		QS-10	170274	CPE24-M1H-5/3ES-QS-10	Q
		QS-12	170280	CPE24-M1H-5/3ES-QS-12	Q
	<ul style="list-style-type: none"> • Normally pressurised • Internal pilot air 	G $\frac{3}{8}$	170269	CPE24-M1H-5/3B- $\frac{3}{8}$	Q
		QS-10	170275	CPE24-M1H-5/3B-QS-10	Q
		QS-12	170281	CPE24-M1H-5/3B-QS-12	Q
	<ul style="list-style-type: none"> • Normally pressurised • External pilot air 	G $\frac{3}{8}$	170270	CPE24-M1H-5/3BS- $\frac{3}{8}$	Q
		QS-10	170276	CPE24-M1H-5/3BS-QS-10	Q
		QS-12	170282	CPE24-M1H-5/3BS-QS-12	Q
Operating voltage 110 V AC					
	<ul style="list-style-type: none"> • Normally closed • Internal pilot air 	G $\frac{3}{8}$	170301	CPE24-M2H-5/3G- $\frac{3}{8}$	Q
		QS-10	170307	CPE24-M2H-5/3G-QS-10	Q
		QS-12	170313	CPE24-M2H-5/3G-QS-12	Q
	<ul style="list-style-type: none"> • Normally closed • External pilot air 	G $\frac{3}{8}$	170302	CPE24-M2H-5/3GS- $\frac{3}{8}$	Q
		QS-10	170308	CPE24-M2H-5/3GS-QS-10	Q
		QS-12	170314	CPE24-M2H-5/3GS-QS-12	Q
	<ul style="list-style-type: none"> • Normally exhausted • Internal pilot air 	G $\frac{3}{8}$	170303	CPE24-M2H-5/3E- $\frac{3}{8}$	Q
		QS-10	170309	CPE24-M2H-5/3E-QS-10	Q
		QS-12	170315	CPE24-M2H-5/3E-QS-12	Q
	<ul style="list-style-type: none"> • Normally exhausted • External pilot air 	G $\frac{3}{8}$	170304	CPE24-M2H-5/3ES- $\frac{3}{8}$	Q
		QS-10	170310	CPE24-M2H-5/3ES-QS-10	Q
		QS-12	170316	CPE24-M2H-5/3ES-QS-12	Q
	<ul style="list-style-type: none"> • Normally pressurised • Internal pilot air 	G $\frac{3}{8}$	170305	CPE24-M2H-5/3B- $\frac{3}{8}$	Q
		QS-10	170311	CPE24-M2H-5/3B-QS-10	Q
		QS-12	170317	CPE24-M2H-5/3B-QS-12	Q
	<ul style="list-style-type: none"> • Normally pressurised • External pilot air 	G $\frac{3}{8}$	170306	CPE24-M2H-5/3BS- $\frac{3}{8}$	Q
		QS-10	170312	CPE24-M2H-5/3BS-QS-10	Q
		QS-12	170318	CPE24-M2H-5/3BS-QS-12	Q

LT = Lead time

1D typically ships same day/next day

1W typically ships within 1 week

Q request a quote for lead time

Ordering Data – Pre-configured Products, 5/3-Way Valves



Solenoid Valves CPE, Compact Performance – Metric Series

Ordering Data – Maxi CPE24					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 230 V AC					
	<ul style="list-style-type: none"> • Normally closed • Internal pilot air 	G $\frac{3}{8}$	170337	CPE24-M3H-5/3G- $\frac{3}{8}$	Q
		QS-10	170343	CPE24-M3H-5/3G-QS-10	Q
		QS-12	170349	CPE24-M3H-5/3G-QS-12	Q
	<ul style="list-style-type: none"> • Normally closed • External pilot air 	G $\frac{3}{8}$	170338	CPE24-M3H-5/3GS- $\frac{3}{8}$	Q
		QS-10	170344	CPE24-M3H-5/3GS-QS-10	Q
		QS-12	170350	CPE24-M3H-5/3GS-QS-12	Q
	<ul style="list-style-type: none"> • Normally exhausted • Internal pilot air 	G $\frac{3}{8}$	170339	CPE24-M3H-5/3E- $\frac{3}{8}$	Q
		QS-10	170345	CPE24-M3H-5/3E-QS-10	Q
		QS-12	170351	CPE24-M3H-5/3E-QS-12	Q
	<ul style="list-style-type: none"> • Normally exhausted • External pilot air 	G $\frac{3}{8}$	170340	CPE24-M3H-5/3ES- $\frac{3}{8}$	Q
		QS-10	170346	CPE24-M3H-5/3ES-QS-10	Q
		QS-12	170352	CPE24-M3H-5/3ES-QS-12	Q
	<ul style="list-style-type: none"> • Normally pressurised • Internal pilot air 	G $\frac{3}{8}$	170341	CPE24-M3H-5/3B- $\frac{3}{8}$	Q
		QS-10	170347	CPE24-M3H-5/3B-QS-10	Q
		QS-12	170353	CPE24-M3H-5/3B-QS-12	Q
	<ul style="list-style-type: none"> • Normally pressurised • External pilot air 	G $\frac{3}{8}$	170342	CPE24-M3H-5/3BS- $\frac{3}{8}$	Q
		QS-10	170348	CPE24-M3H-5/3BS-QS-10	Q
		QS-12	170354	CPE24-M3H-5/3BS-QS-12	Q

LT = Lead time

1D typically ships same day/next day

1W typically ships within 1 week

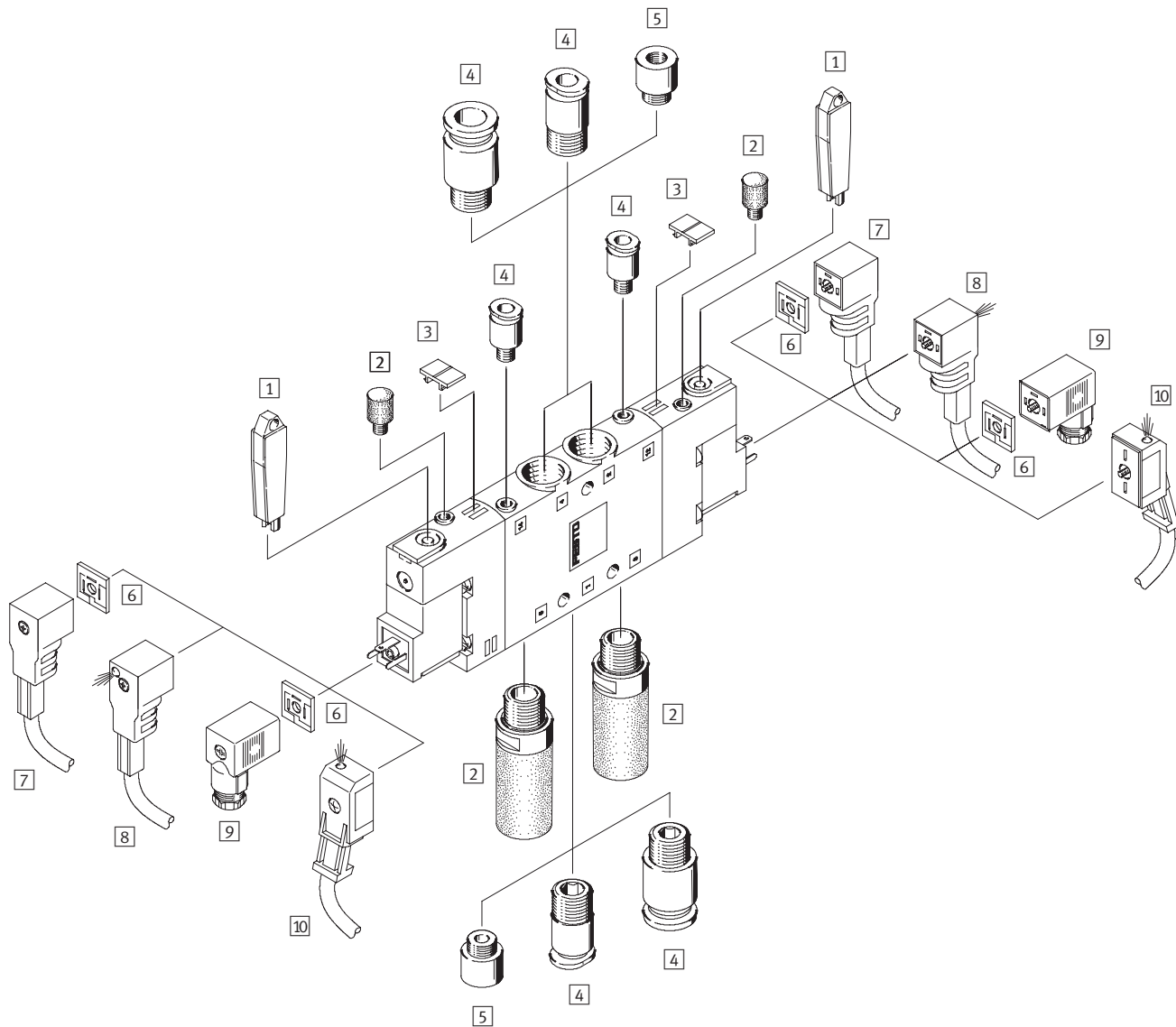
Q request a quote for lead time

Accessories

Solenoid Valves CPE, Compact Performance – Metric Series



Individual Valve



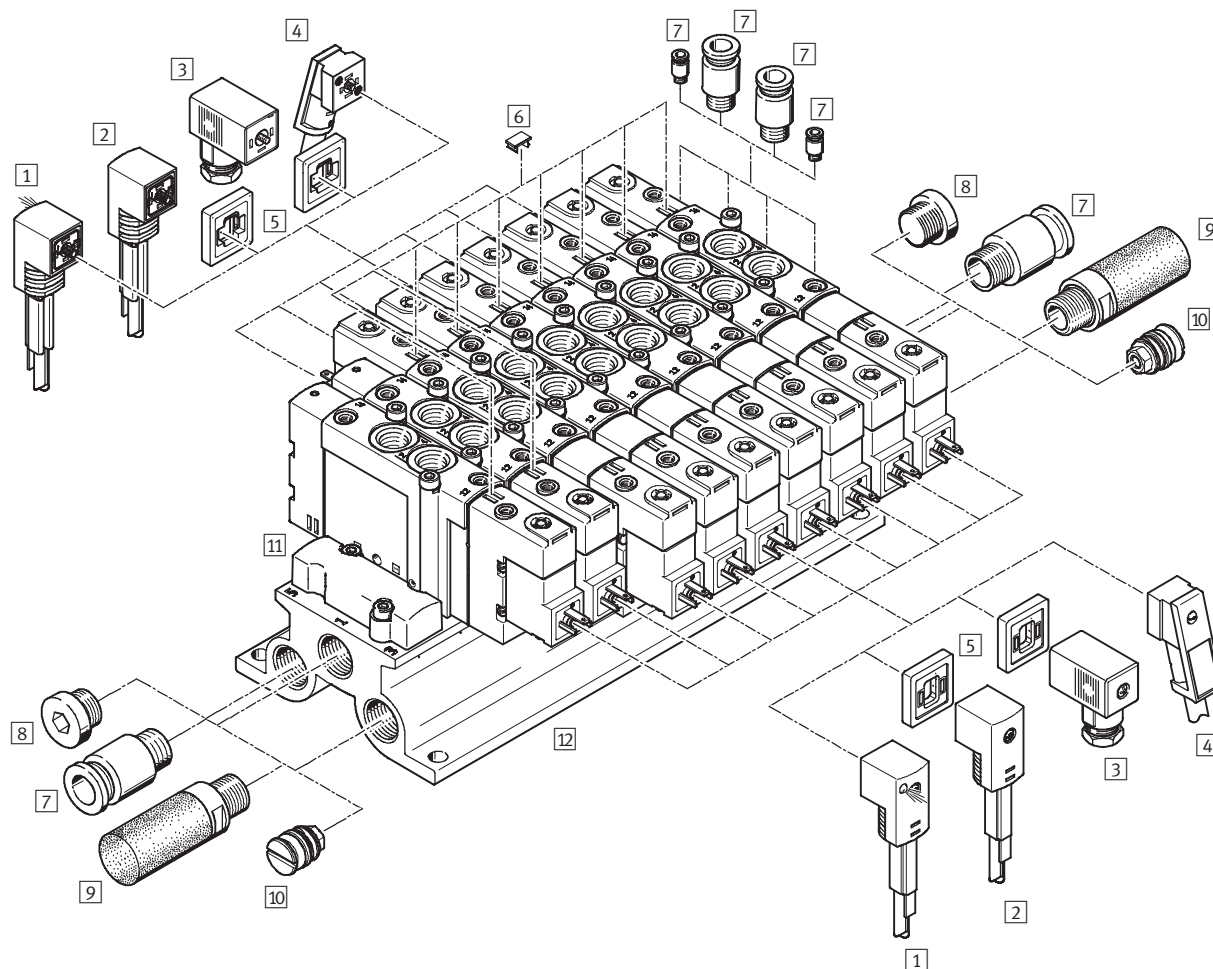
Component parts and accessories	Brief description	CPE10	CPE14	CPE18	CPE24	→ Page
1	Manual override tool AHB	■	■	■	■	55
2	Silencer U or UC	■	■	■	■	55
3	Inscription labels IBS-6x10	■	■	■	■	55
4	Quick Star push-in fitting QS	■	■	■	■	55
5	M7 to M5 reducer	■	-	-	-	-
6	Illuminating seal MEB-LD	-	-	■	■	56
7	Plug socket with cable KMEB	-	-	■	■	56
8	Plug socket with cable KMEB	-	-	■	■	56
9	Standard plug socket MSSD-EB	-	-	■	■	56
10	Plug socket with cable KMYZ-9	■	■	-	-	56

Accessories

Solenoid Valves CPE, Compact Performance – Metric Series



Mounting on Aluminum Manifold Block



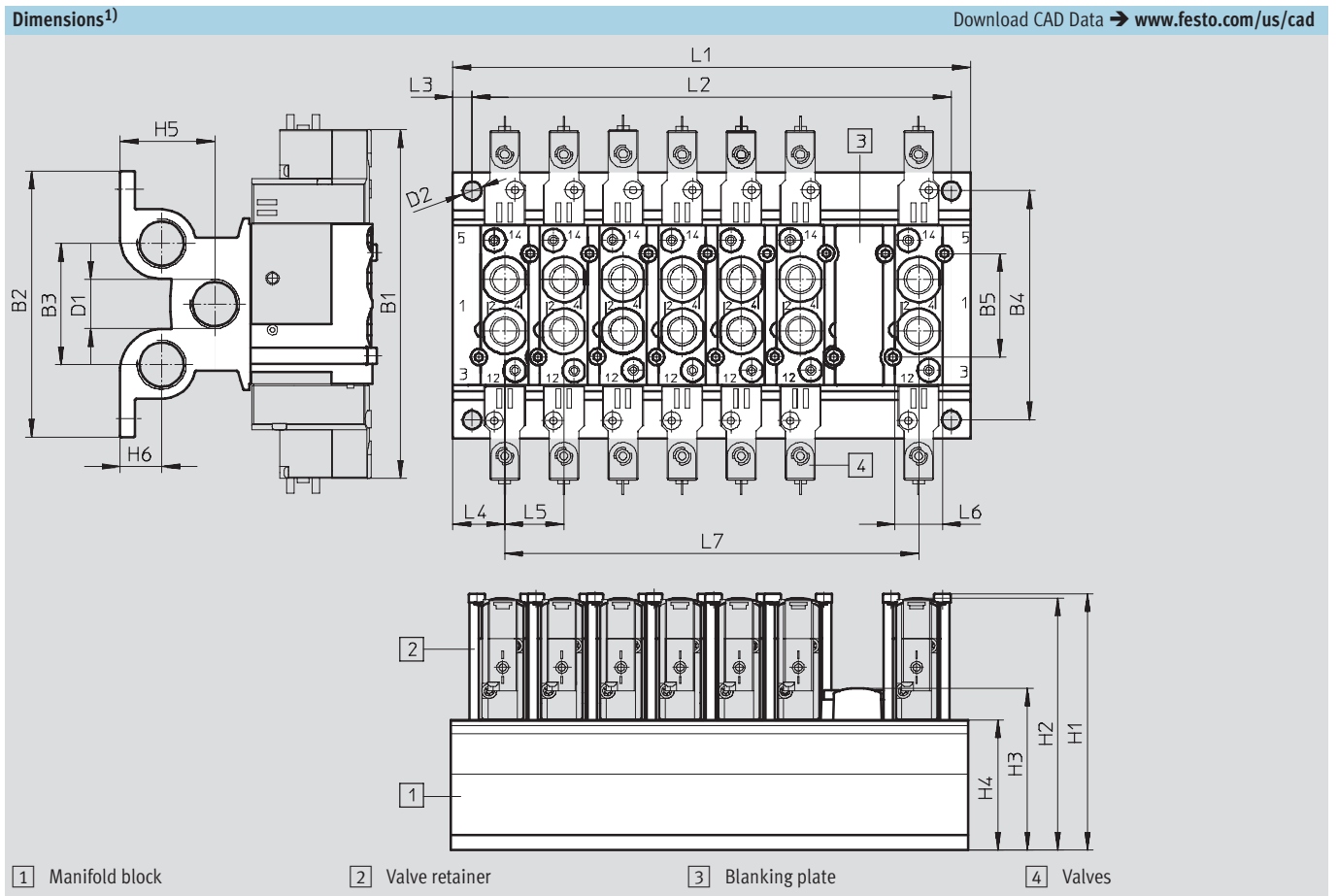
Component parts and accessories	Brief description	→ Page
1 Plug socket with cable KMEB-1	With LED for 24 V DC	56
2 Plug socket with cable KMEB-1	For 0 ... 230 V AC	56
3 Standard plug socket MSSD-EB	–	56
4 Plug socket with cable KMEB-2	For 0 ... 230 V AC	56
5 Illuminating seal MEB-LD	–	56
6 Inscription label IBS-6x10	–	55
7 Quick Star push-in fitting QS	For standard O.D. tubing	55
8 Blanking plug B	–	55
9 Silencer U or UC	For fitting in exhaust ports	55
10 Separator for pressure zones VABD, PRSV	For fitting in the manifold block	55
11 Blanking plate CPE...-RP	For fitting on unused valve positions	53
12 Manifold block CPE...-PRS	2 ... 10 valve positions	51

Accessories

Solenoid Valves CPE, Compact Performance – Metric Series

Manifold block CPE...-PRS

Material:
Wrought aluminum alloy



Type	B1	B2	B3	B4	B5	D1	D2	H1	H2	H3	H4	H5
CPE10-PRS...	103	79	35	67.5	26	G¼	5.3	72	69.5	44.8	34	23.5
CPE14-PRS...	108	90	41	77.5	35	G¾	6.3	86.7	84.8	54.8	44	32
CPE18-PRS...	155	102	46	85.6	40	G¾	8.3	105	101.5	59.8	44	30.5

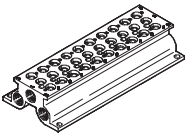
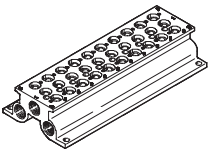
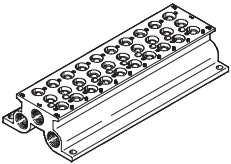
Type	H6	L1	L2	L3	L4	L5	L6	L7
CPE10-PRS...	11	28 + (n-1) x 16	L1 - 11 ± 0.1	5.5	14	16	13.4	(n-1) x 16
CPE14-PRS...	14	35 + (n-1) x 20	L1 - 13 ± 0.1	6.5	17.5	20	17.4	(n-1) x 20
CPE18-PRS...	14	45 + (n-1) x 26	L1 - 17 ± 0.1	8.5	22.5	26	22.4	(n-1) x 26

1) Dimensions are in millimeters, unless otherwise noted.

Accessories

Solenoid Valves CPE, Compact Performance – Metric Series

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Ordering Data					
	Pneumatic connection 1, 3, 5	Valve positions	Weight [g]	Part No.	Type
Micro CPE10					
	G $\frac{1}{4}$	2	131	543821	CPE10-PRS- $\frac{1}{4}$ -2
		3	179	543822	CPE10-PRS- $\frac{1}{4}$ -3
		4	227	543823	CPE10-PRS- $\frac{1}{4}$ -4
		5	275	543824	CPE10-PRS- $\frac{1}{4}$ -5
		6	323	543825	CPE10-PRS- $\frac{1}{4}$ -6
		7	371	543826	CPE10-PRS- $\frac{1}{4}$ -7
		8	419	543827	CPE10-PRS- $\frac{1}{4}$ -8
		9	467	543828	CPE10-PRS- $\frac{1}{4}$ -9
		10	515	543829	CPE10-PRS- $\frac{1}{4}$ -10
		Mini CPE14			
	G $\frac{3}{8}$	2	239	543830	CPE14-PRS- $\frac{3}{8}$ -2
		3	326	543831	CPE14-PRS- $\frac{3}{8}$ -3
		4	412	543832	CPE14-PRS- $\frac{3}{8}$ -4
		5	498	543833	CPE14-PRS- $\frac{3}{8}$ -5
		6	584	543834	CPE14-PRS- $\frac{3}{8}$ -6
		7	671	543835	CPE14-PRS- $\frac{3}{8}$ -7
		8	757	543836	CPE14-PRS- $\frac{3}{8}$ -8
		9	843	543837	CPE14-PRS- $\frac{3}{8}$ -9
		10	930	543838	CPE14-PRS- $\frac{3}{8}$ -10
		Midi CPE18			
	G $\frac{3}{8}$	2	353	543839	CPE18-PRS- $\frac{3}{8}$ -2
		3	482	543840	CPE18-PRS- $\frac{3}{8}$ -3
		4	611	543841	CPE18-PRS- $\frac{3}{8}$ -4
		5	740	543842	CPE18-PRS- $\frac{3}{8}$ -5
		6	870	543843	CPE18-PRS- $\frac{3}{8}$ -6
		7	999	543844	CPE18-PRS- $\frac{3}{8}$ -7
		8	1,128	543845	CPE18-PRS- $\frac{3}{8}$ -8
		9	1,257	543846	CPE18-PRS- $\frac{3}{8}$ -9
		10	1,386	543847	CPE18-PRS- $\frac{3}{8}$ -10

Accessories

Solenoid Valves CPE, Compact Performance – Metric Series

Blanking plate CPE...-RP

for vacant positions

Material:
Polyamide



Ordering Data			
Size	Pneumatic connection 1, 3, 5	Part No.	Type
Micro CPE10	G $\frac{1}{4}$	544479	CPE10-RP
Mini CPE14	G $\frac{3}{8}$	544480	CPE14-RP
Midi CPE18	G $\frac{3}{8}$	544481	CPE18-RP

Valve retainer CPE...-H5-SET

Material:
Retainer: High-alloy stainless steel
Screws: Galvanised steel
Seals: Nitrile rubber



Ordering Data			
Size	Pneumatic connection 1, 3, 5	Part No.	Type
Micro CPE10	G $\frac{1}{4}$	544394	CPE10-H5-SET
Mini CPE14	G $\frac{3}{8}$	544395	CPE14-H5-SET
Midi CPE18	G $\frac{3}{8}$	544396	CPE18-H5-SET

Accessories

Solenoid Valves CPE, Compact Performance – Metric Series

FESTO

Valve retainer CPE...-H5

Material:
High-alloy stainless steel



Ordering Data				
Size	Pneumatic connection 1, 3, 5	Part No.	Type	PU ¹⁾
Micro CPE10	G $\frac{1}{4}$	547045	CPE10-H5-50	50
Mini CPE14	G $\frac{3}{8}$	547046	CPE14-H5-50	50
Midi CPE18	G $\frac{3}{8}$	547047	CPE18-H5-50	50

1) Packaging unit quantity

Screw M...

for valve retainer CPE...-H5

Material:
Galvanised steel



Ordering Data				
Size	Pneumatic connection 1, 3, 5	Part No.	Type	PU ¹⁾
Micro CPE10	G $\frac{1}{4}$	547048	M3X40-8.8-VS-100	100
Mini CPE14	G $\frac{3}{8}$	547049	M3X45-8.8-VS-100	100
Midi CPE18	G $\frac{3}{8}$	547050	M4X65-8.8-VS-100	100

1) Packaging unit quantity

Seal CPV...-VI...

for valve retainer CPE...-H5

Material:
Nitrile rubber





Ordering Data				
Size	Pneumatic connection 1, 3, 5	Part No.	Type	PU ¹⁾
Micro CPE10	G $\frac{1}{4}$	547051	CPV10-VI-P.M7-150	150
Mini CPE14	G $\frac{3}{8}$	547052	CPV14-VI-P. $\frac{1}{8}$ -150	150
Midi CPE18	G $\frac{3}{8}$	547053	CPV18-VI-P. $\frac{1}{4}$ -150	150

1) Packaging unit quantity



Accessories

Solenoid Valves CPE, Compact Performance – Metric Series








Ordering Data – Push-in Fittings QSM					Technical Data → www.festo.com/catalog/QSM	
	For tubing O.D. [mm]	M3 ¹⁾		M5 ¹⁾		M7 ¹⁾
		Part No.	Type	Part No.	Type	Part No. Type
With external hex						
	3	153301	QSM-M3-3	153302	QSM-M5-3	–
	4	153303	QSM-M3-4	153304	QSM-M5-4	–
	6	–	–	153306	QSM-M5-6	–
With internal hex						
	3	153312	QSM-M3-3-I	153313	QSM-M5-3-I	–
	4	153314	QSM-M3-4-I	153315	QSM-M5-4-I	153319 QSM-M7-4-I
	6	–	–	153317	QSM-M5-6-I	153321 QSM-M7-6-I

1) Scope of delivery 10 pieces

Ordering Data – Push-in Fittings QS					Technical Data → www.festo.com/catalog/QS		
	For tubing O.D. [mm]	R ^{1/8} ¹⁾		R ^{1/4} ¹⁾	R ^{3/8} ¹⁾		R ^{1/2}
		Part No.	Type	Part No. Type	Part No. Type	Part No. Type	
With external hex							
	4	153001	QS-1/8-4	190644	QS-1/4-4	–	–
	6	153002	QS-1/8-6	153303	QS-1/4-6	190645	QS-3/8-6
	8	153004	QS-1/8-8	153305	QS-1/4-8	153006	QS-3/8-8
	10	190643	QS-1/8-10	153307	QS-1/4-10	153008	QS-3/8-10
	12	–	–	164980	QS-1/4-12	153009	QS-3/8-12
With internal hex							
	4	153012	QS-1/8-4-I	–	–	–	–
	6	153013	QS-1/8-6-I	153014	QS-1/4-6-I	–	–
	8	153015	QS-1/8-8-I	153016	QS-1/4-8-I	153017	QS-3/8-8-I
	10	190647	QS-1/8-10-I	153018	QS-1/4-10-I	153019	QS-3/8-10-I
	12	–	–	190649	QS-1/4-12-I	153020	QS-3/8-12-I



1) Scope of delivery 10 pieces





Ordering Data – General Accessories		Part No.	Type
Blanking plug			
	For manifold block CPE10	3569	B-1/4
	For manifold block CPE14, CPE18	3570	B-3/8
Separator for pressure zones			
	For manifold block CPE10	537515	VABD-B6-14-P-C
	For manifold block CPE14, CPE18	160997	PRSV-1/8
Silencer			
	For M3 thread	163978	U-M3
	For M5 thread	165003	UC-M5
	For M7 thread	161418	UC-M7
	For thread G ^{1/8}	161419	UC-1/8
	For thread G ^{1/4}	165004	UC-1/4
Manual override tool			
	For KMYZ coils	157600	AHB-MZB
	For EB coils	157601	AHB-MEB
Inscription labels			
	–	18576	IBS-6x10


Accessories

Solenoid Valves CPE, Compact Performance – Metric Series

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Ordering Data – Plug Sockets, Plug Sockets with Cable for KMYZ Solenoid Coils				Technical data → www.festo.com/catalog/kmyz	
	Voltage	Cable length [m]	Switching status display with LED	Part No.	Type
Plug socket with PUR cable					
	24 V DC	2.5	■	193687	KMYZ-9-24-2,5-LED-PUR-B
		5	■	193689	KMYZ-9-24-5-LED-PUR-B
		10	■	196063	KMYZ-9-24-10-LED-PUR-B
Plug socket with PVC cable and plug M8x1					
	24 V DC	0.5	■	196064	KMYZ-9-24-M8-0,5-LED-B
		2.5	■	196065	KMYZ-9-24-M8-2,5-LED-B

Ordering Data – Plug Sockets, Plug Sockets with Cable for EB Solenoid Coils				Technical data → www.festo.com/catalog/MSSD	
	Voltage	Cable length [m]	Switching status display with LED	Part No.	Type
Plug socket without cable					
	–	–	–	151687	MSSD-EB
	–	–	–	539712	MSSD-EB-M12
Plug socket without cable with insulation displacement technology					
	–	–	–	192745	MSSD-EB-S-M14
Plug socket with PVC cable				Technical data → www.festo.com/catalog/KMEB	
	24 V DC	2.5	■	151688	KMEB-1-24-2,5-LED
	24 V DC	5	■	151689	KMEB-1-24-5-LED
	24 V DC	10	■	193457	KMEB-1-24-10-LED
	Up to 240 V	2.5	–	151690	KMEB-1-230-2,5
	Up to 240 V	5	–	151691	KMEB-1-230-5
Plug socket with PUR cable					
	24 V DC	2.5	■	174844	KMEB-2-24-2,5-LED
	24 V DC	5	■	174845	KMEB-2-24-5-LED
	Up to 240 V	2.5	–	174846	KMEB-2-230-2,5
	Up to 240 V	5	–	174847	KMEB-2-230-5

Ordering Data – Illuminating Seals for EB Solenoid Coils			Technical data → www.festo.com/catalog/MEB	
	Voltage [V DC]	[V AC]	Part No.	Type
	12 ... 24	–	151717	MEB-LD-12-24DC
	–	230	151718	MEB-LD-230AC

Solenoid Valves CPE, Compact Performance – Inch Series

FESTO



Performance optimized, compact valves for “on board” installation.

- Width 0.39/0.55/0.71/0.94 in, flow rates up to 113 scfm
- Minimal flow resistance
- Minimal power consumption
- Small and powerful
- Rapid response times
- Assembly as individual valves or an aluminum manifold rail

Product Range Overview				
Actuation type	Valve function		q _N [l/min]	Pilot air supply
			Threaded connection M5, M7, G ¹ / ₈ , G ¹ / ₄ , G ³ / ₈	
Solenoid coil 1 ¹⁾ 24 V DC	3/2	Normally closed	14 ... 88	Internal/external
		Normally open		
Solenoid coil 2 110 V AC	5/2	Single solenoid	12.4 ... 102	
		Double solenoid	12.4 ... 113	
Solenoid coil 3 230 V AC	5/3	Mid-position closed	12.4 ... 106	
		Mid-position pressurised		
		Mid-position exhausted		

1) CPE10 (M7) and CPE14 (G¹/₈) valves are only supplied with solenoid coil 1/24 V DC.

Features

Performance optimized sizes:
The solenoid valves CPE, Compact Performance are distinguished by their minimal width and low power consumption at high flow rates.
Can be mounted right in the “front line”:
– on cylinders,
– on moving system components.
– Choice of installation either individual, H-rail or wall mounted.
Micro CPE10, Mini CPE14 and Midi CPE18 and CPE24:
Simple structure comprising compact valve manifolds.

Shorter tubing lengths with minimal air volumes:
– fast switching times,
– short response times.
Optimized installations:
– shorter machine cycles,
– larger quantities,
– low power consumption.
Convenient manual override.
A current reduction function has been integrated in the KMYZ-9 plug socket for sizes Micro CPE10 and Mini CPE14.

Contents

Product Overview	→ 57	5/2-Way Valves, Double Solenoid	
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→ www.festo.com/catalog/cpe

Product Overview



Solenoid Valves CPE, Compact Performance – Inch Series

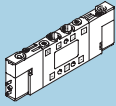
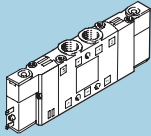
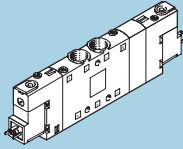
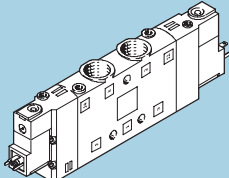
3/2-Way Valves				
Type	Micro CPE10	Mini CPE14	Midi CPE18	Maxi CPE24
Grid dimension	0.39 in	0.55 in	0.71 in	0.94 in
Nominal flow rate [scfm]				
Thread	M5	6.7	–	–
	M7	14.1	–	–
	G $\frac{1}{8}$	–	31.8	–
	G $\frac{1}{4}$	–	–	45.9
	G $\frac{3}{8}$	–	–	–
Operating voltage				
24 V DC	■	■	■	■
110 V AC	–	–	■	■
230 V AC	–	–	■	■
Technical data →	62	63	64	65

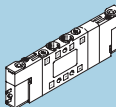
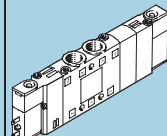
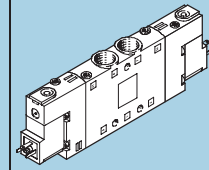
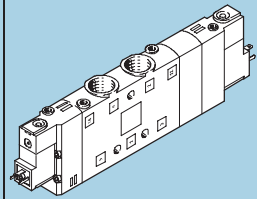
5/2-Way Valves				
Type	Micro CPE10	Mini CPE14	Midi CPE18	Maxi CPE24
Grid dimension	0.39 in	0.55 in	0.71 in	0.94 in
Nominal flow rate [scfm]				
Thread	M5	6.4	–	–
	M7	12.4	–	–
	G $\frac{1}{8}$	–	28.2	–
	G $\frac{1}{4}$	–	–	53.0
	G $\frac{3}{8}$	–	–	–
Operating voltage				
24 V DC	■	■	■	■
110 V AC	–	–	■	■
230 V AC	–	–	■	■
Technical data →	72	73	74	75

Product Overview



Solenoid Valves CPE, Compact Performance – Inch Series

5/2-Way Valves, Double Solenoid Valves					
Type		Micro CPE10	Mini CPE14	Midi CPE18	Maxi CPE24
Grid dimension		0.39 in	0.55 in	0.71 in	0.94 in
Nominal flow rate [scfm]					
Thread	M5	6.4	–	–	–
	M7	12.4	–	–	–
	G $\frac{1}{8}$	–	28.2	–	–
	G $\frac{1}{4}$	–	–	53.0	–
	G $\frac{3}{8}$	–	–	–	113
Operating voltage					
24 V DC		■	■	■	■
110 V AC		–	–	■	■
230 V AC		–	–	■	■
Technical data →		82	83	84	85

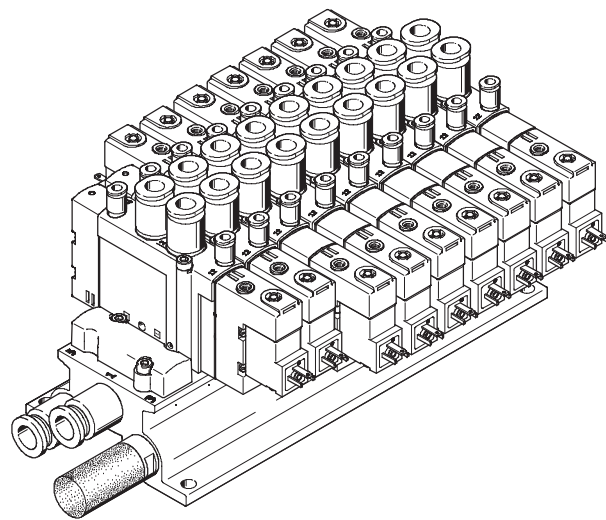
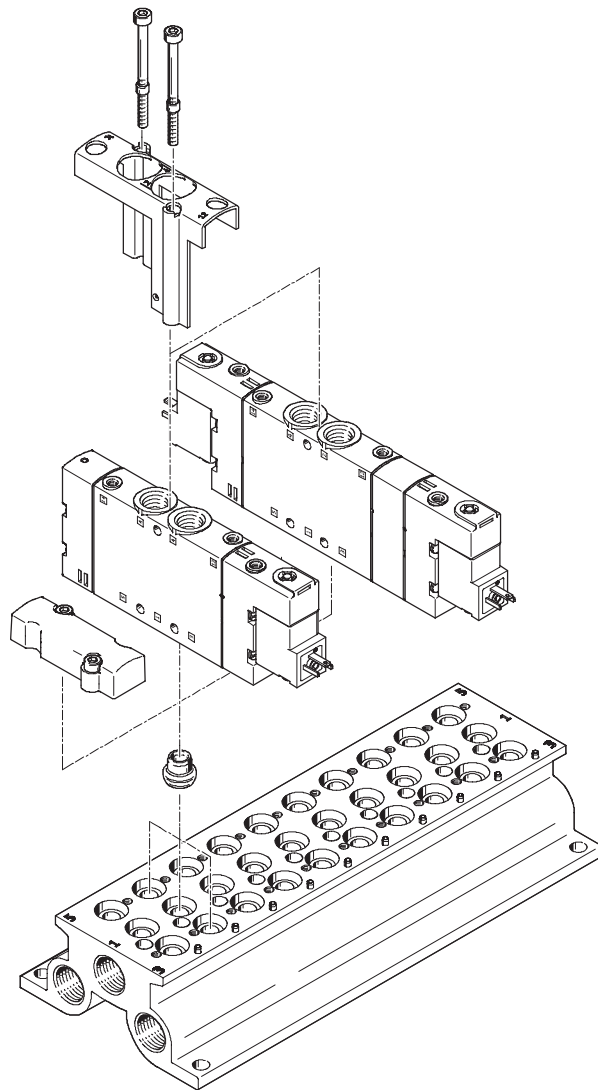
5/3-Way Valves					
Type		Micro CPE10	Mini CPE14	Midi CPE18	Maxi CPE24
Grid dimension		0.39 in	0.55 in	0.71 in	0.94 in
Nominal flow rate [l/min]					
Thread	M5	6.4	–	–	–
	M7	8.8 ... 12.4	–	–	–
	G $\frac{1}{8}$	–	24.7 ... 26.5	–	–
	G $\frac{1}{4}$	–	–	42.4 ... 51.2	–
	G $\frac{3}{8}$	–	–	–	91.8 ... 105.9
Operating voltage					
24 V DC		■	■	■	■
110 V AC		–	–	■	■
230 V AC		–	–	■	■
Technical data →		91	92	93	94

Key Features

Solenoid Valves CPE, Compact Performance – Inch Series

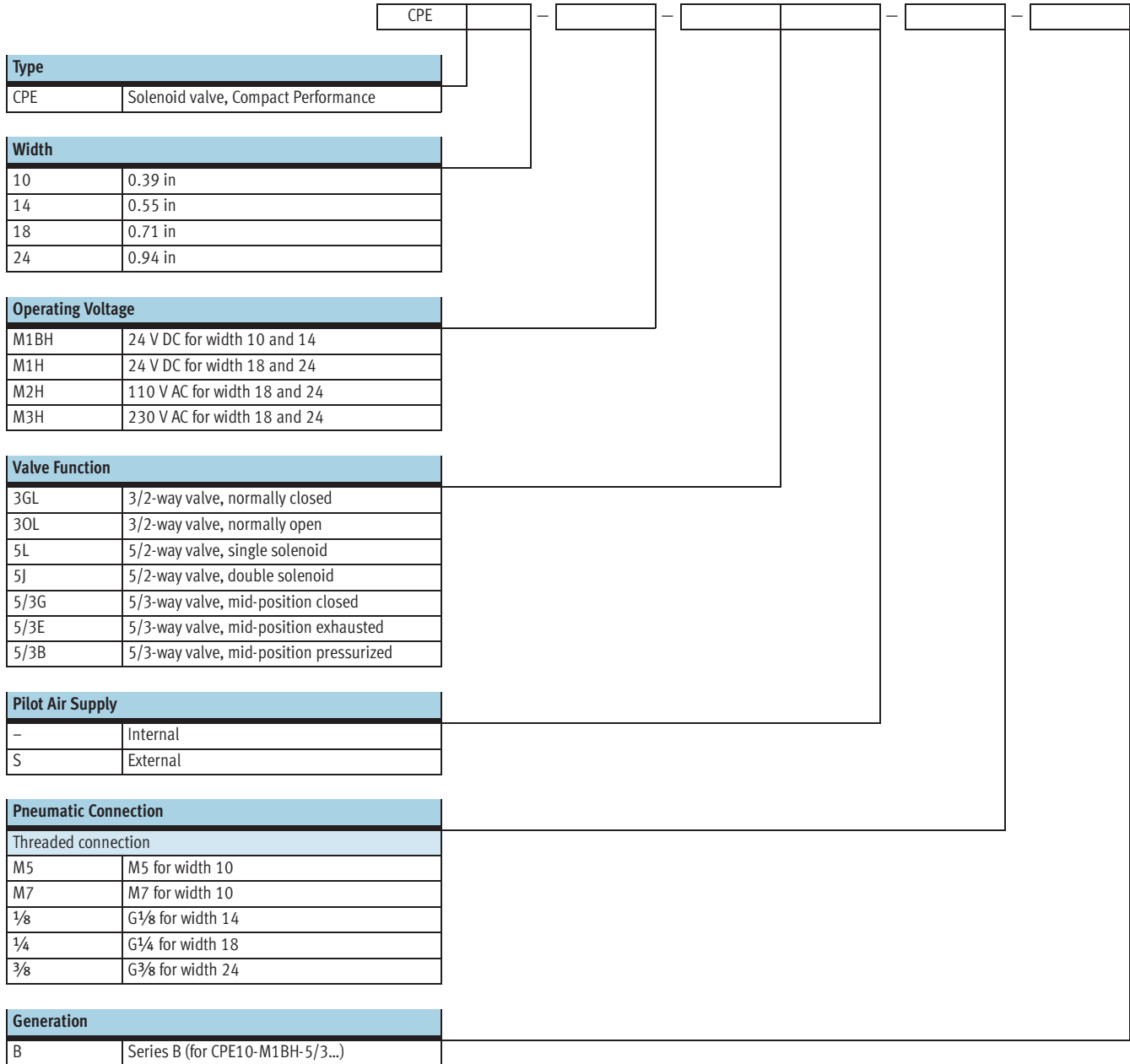
Manifold Block Mounting of Micro CPE10, Mini CPE14 and Midi CPE18

- Simple structure comprising compact valve manifolds
- 2 to 10 valve positions
- Sturdy
- High flow rates thanks to supply and exhaust ports at both ends
- Different pressure zones can be implemented by means of separators



Order Code

Solenoid Valves CPE, Compact Performance – Inch Series



Ordering example:

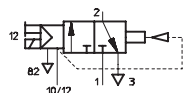
CPE10-M1BH-3OLS-M7

Technical Data, 3/2-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series

FESTO

ISO Symbol



e.g. with external pilot air,
normally closed



General Technical Data – Micro CPE10		
		Threaded connection
Valve function		3/2-way, single solenoid
Constructional design		Piston spool valve
Sealing principle		Soft
Type of actuation		Electrical
Type of reset		Pneumatic
Type of pilot control		Piloted
Pilot air supply		Internal or external
Direction of flow		Reversible for external pilot air supply
Exhaust function		Flow control
Manual override		Non-detenting, detenting via accessory
Mounting position		Any
Width		0.39 in
Grid dimension		0.47 in
Nominal diameter		0.16 in
Standard nominal flow rate		M5: 6.7 scfm M7: 14.1 scfm
Type of mounting		Via through-holes
Pneumatic connection	1, 2	M5 or M7
	3	M7
	10, 12	M3
	82	M3
Switching time on/off		14/14 ms
Product weight		0.09 lb

Operating and Environmental Conditions		
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases
Filtration grade		40 µm
Operating pressure	Internal pilot air	36 ... 117.6 psi
	External pilot air	-13.2 ... +147 psi
Pilot pressure		36 ... 117.6 psi
Ambient temperature		23 ... +122 °F
Temperature of medium		23 ... +122 °F
Certification		c UL us - Recognized (OL)

Electrical Data	
Operating voltage	24 V DC +10/-15%
Power consumption	1.28 W
Protection class with plug socket	IP65 (EN 60529)

Technical Data, 3/2-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series

FESTO

General Technical Data – Mini CPE14		
		Threaded connection
Valve function		3/2-way, single solenoid
Constructional design		Piston spool valve
Sealing principle		Soft
Type of actuation		Electrical
Type of reset		Pneumatic
Type of pilot control		Piloted
Pilot air supply		Internal or external
Direction of flow		Reversible for external pilot air supply
Exhaust function		Flow control
Manual override		Non-detenting, detenting via accessory
Mounting position		Any
Width		0.55 in
Grid dimension		0.63 in
Nominal diameter		0.24 in
Standard nominal flow rate		G $\frac{1}{8}$: 31.8 scfm
Type of mounting		Via through-holes
Pneumatic connection	1, 2	G $\frac{1}{8}$
	3	G $\frac{1}{8}$
	10, 12	M3
	82	M3
Switching time on/off		16/27 ms
Product weight		0.12 lb

Operating and Environmental Conditions		
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases
Filtration grade		40 μ m
Operating pressure	Internal pilot air	37.5 ... 120 psi
	External pilot air	-13.5 ... +150 psi
Pilot pressure		37.5 ... 120 psi
Ambient temperature		23 ... 122 °F
Temperature of medium		23 ... 122 °F
Certification		c UL us - Recognized (OL)

Electrical Data	
Operating voltage	24 V DC +10/-15%
Power consumption	1.28 W
Protection class with plug socket	IP65 (EN 60529)

Technical Data, 3/2-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series

FESTO

General Technical Data – Midi CPE18		
		Threaded connection
Valve function		3/2-way, single solenoid
Constructional design		Piston spool valve
Sealing principle		Soft
Type of actuation		Electrical
Type of reset		Pneumatic
Type of pilot control		Piloted
Pilot air supply		Internal or external
Direction of flow		Reversible for external pilot air supply
Exhaust function		Flow control
Manual override		Non-detenting, detenting via accessory
Mounting position		Any
Width		0.71 in
Grid dimension		0.79 in
Nominal diameter		0.31 in
Standard nominal flow rate		G $\frac{3}{4}$: 45.9 scfm
Type of mounting		Via through-holes
Pneumatic connection	1, 2	G $\frac{1}{4}$
	3	G $\frac{1}{4}$
	10, 12	M5
	82	M5
Switching time on/off		14/18 ms
Product weight		0.3 lb

Operating and Environmental Conditions		
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases
Filtration grade		40 μ m
Operating pressure	Internal pilot air	37.5 ... 150 psi
	External pilot air	-13.5 ... +150 psi
Pilot pressure		37.5 ... 150 psi
Ambient temperature		23 ... 122 °F
Temperature of medium		23 ... 122 °F
Certification		c UL us - Recognized (OL)

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

Technical Data, 3/2-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series

FESTO

General Technical Data – Maxi CPE24		
		Threaded connection
Valve function		3/2-way, single solenoid
Constructional design		Piston spool valve
Sealing principle		Soft
Type of actuation		Electrical
Type of reset		Pneumatic
Type of pilot control		Piloted
Pilot air supply		Internal or external
Direction of flow		Reversible for external pilot air supply
Exhaust function		Flow control
Manual override		Non-detenting, detenting via accessory
Mounting position		Any
Width		0.94 in
Nominal diameter		0.43 in
Standard nominal flow rate		G $\frac{3}{8}$: 88.3 scfm
Type of mounting		Via through-holes
Pneumatic connection	1, 2	G $\frac{3}{8}$
	3	G $\frac{3}{8}$
	10, 12	M5
	82	M5
Switching time on/off		50/33 ms
Product weight		0.44 lb

Operating and Environmental Conditions		
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases
Filtration grade		40 μ m
Operating pressure	Internal pilot air	37.5 ... 150 psi
	External pilot air	-13.5 ... +150 psi
Pilot pressure		37.5 ... 150 psi
Ambient temperature		23 ... 122 °F
Temperature of medium		23 ... 122 °F
Certification		c UL us - Recognized (OL)

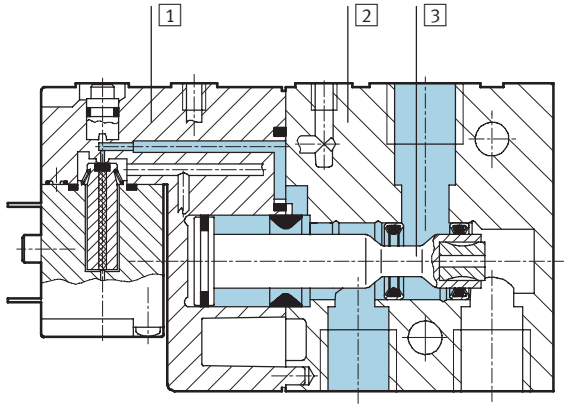
Electrical Data		
Operating voltage	M1H	24 V DC +10/-15%
	M2H	110 V AC \pm 10% at 50 ... 60 Hz
	M3H	230 V AC \pm 10% at 50 ... 60 Hz
Power consumption	M1H	1.5 W
	M2H, M3H	Pull: 3 VA Hold: 2.4 VA
Protection class with plug socket		IP65 (EN 60529)

Technical Data, 3/2-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series

Materials

Sectional view



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

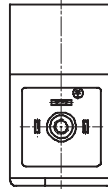
Connection Diagrams

Micro CPE10, Mini CPE14



Suitable for plug socket
KMYZ-9-...

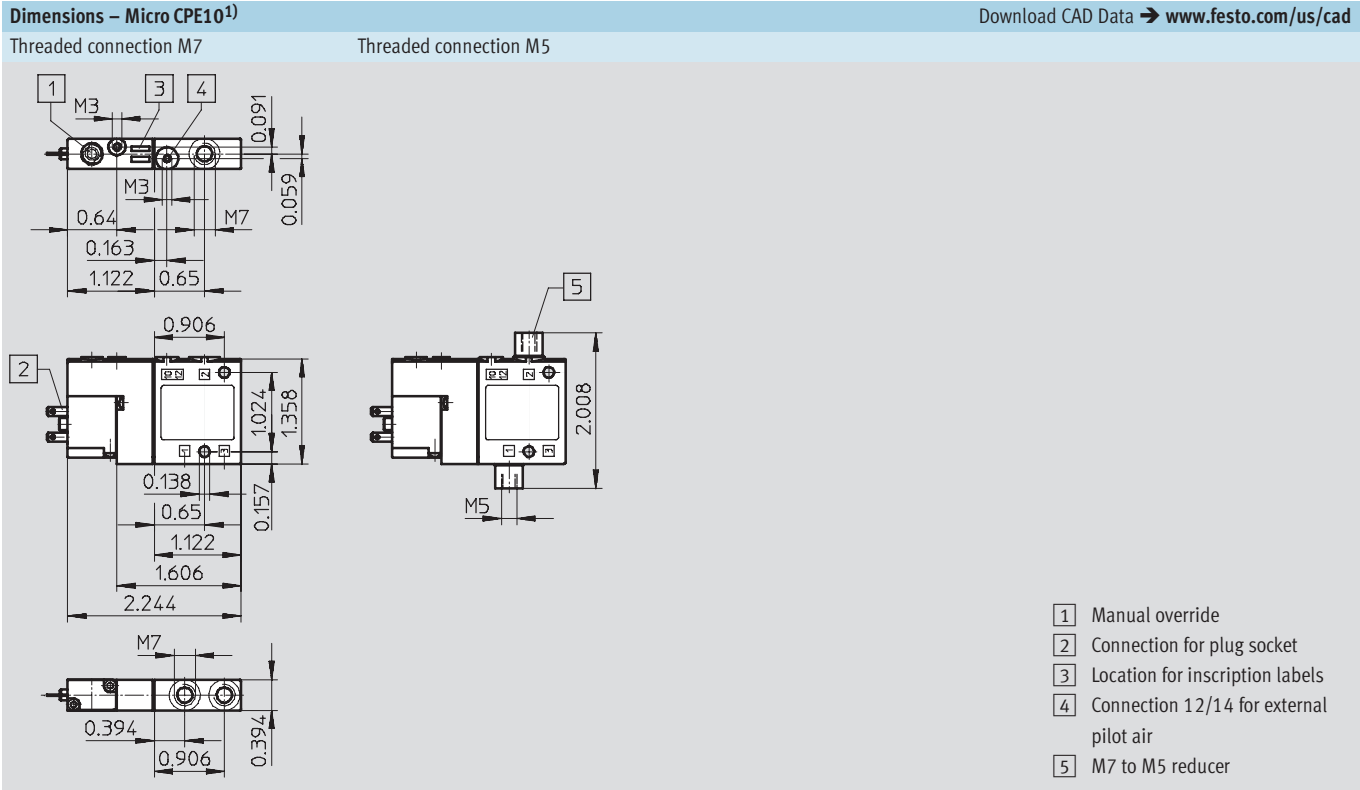
Midi CPE18, Maxi CPE24



Suitable for plug sockets to
DIN 43650, type C
KMEB-1-...
KMEB-2-...
MSSD-EB

Dimensional Drawings, 3/2-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series



1) Dimensions are in inches, unless otherwise noted.

Dimensional Drawings, 3/2-Way Valves

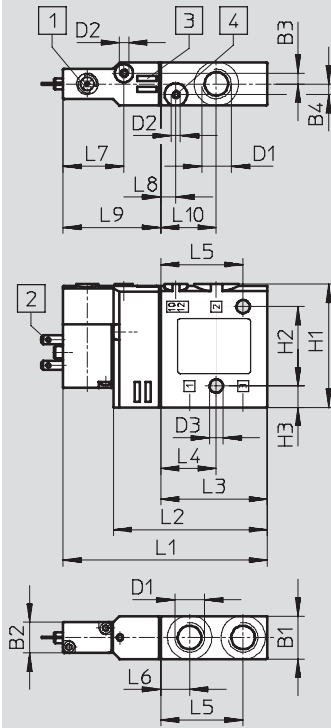
Solenoid Valves CPE, Compact Performance – Inch Series



Dimensions – Mini CPE14, Midi CPE18, Maxi CPE24¹⁾

Download CAD Data → www.festo.com/us/cad

Threaded connection



- 1 Manual override
- 2 Connection for plug socket
- 3 Location for inscription labels
- 4 Connection 12/14 for external pilot air

Pneumatic connection D1	B1	B2	B3	B4	D2	D3 ∅	H1	H2	H3
Mini CPE14									
G ¹ / ₈	0.55	0.39	0.14	0.14	M3	0.17	1.59	1.02	0.28
Midi CPE18									
G ¹ / ₄	0.71	0.69	0.14	0.14	M5	0.17	2.24	1.77	0.24
Maxi CPE24									
G ³ / ₈	0.94	0.69	0.24	0.24	M5	0.26	2.44	1.57	0.43

Pneumatic connection D1	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10
Mini CPE14										
G ¹ / ₈	2.64	1.99	1.38	0.72	1.06	0.37	0.79	0.2	1.26	0.72
Midi CPE18										
G ¹ / ₄	3.7	2.72	1.97	1.1	1.5	0.69	1.14	0.22	1.73	1.08
Maxi CPE24										
G ³ / ₈	4.33	3.35	2.56	1.38	1.97	0.79	1.3	0.39	1.77	1.38

1) Dimensions are in inches, unless otherwise noted.

Ordering Data – Pre-configured Products, 3/2-Way Valves



Solenoid Valves CPE, Compact Performance – Inch Series

Ordering Data – Micro CPE10					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	M5	196845	CPE10-M1BH-3GL-M5	1D
		M7	196915	CPE10-M1BH-3GL-M7	1D
	<ul style="list-style-type: none"> Normally closed External pilot air 	M5	196848	CPE10-M1BH-3GLS-M5	1D
		M7	196916	CPE10-M1BH-3GLS-M7	Q
	<ul style="list-style-type: none"> Normally open Internal pilot air 	M5	196851	CPE10-M1BH-3OL-M5	1D
		M7	196917	CPE10-M1BH-3OL-M7	Q
	<ul style="list-style-type: none"> Normally open External pilot air 	M5	196854	CPE10-M1BH-3OLS-M5	1D
		M7	196918	CPE10-M1BH-3OLS-M7	Q

Ordering Data – Mini CPE14					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	G $\frac{1}{8}$	196929	CPE14-M1BH-3GL- $\frac{1}{8}$	1D
		G $\frac{1}{8}$	196930	CPE14-M1BH-3GLS- $\frac{1}{8}$	1D
	<ul style="list-style-type: none"> Normally open Internal pilot air 	G $\frac{1}{8}$	196931	CPE14-M1BH-3OL- $\frac{1}{8}$	1D
		G $\frac{1}{8}$	196932	CPE14-M1BH-3OLS- $\frac{1}{8}$	1D

LT = Lead time 1D typically ships same day/next day 1W typically ships within 1 week Q request a quote for lead time

Ordering Data – Pre-configured Products, 3/2-Way Valves



Solenoid Valves CPE, Compact Performance – Inch Series

Ordering Data – Midi CPE18					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	G $\frac{1}{4}$	163141	CPE18-M1H-3GL- $\frac{1}{4}$	1D
	<ul style="list-style-type: none"> Normally closed External pilot air 	G $\frac{1}{4}$	163145	CPE18-M1H-3GLS- $\frac{1}{4}$	1D
	<ul style="list-style-type: none"> Normally open Internal pilot air 	G $\frac{1}{4}$	163140	CPE18-M1H-3OL- $\frac{1}{4}$	1D
	<ul style="list-style-type: none"> Normally open External pilot air 	G $\frac{1}{4}$	163144	CPE18-M1H-3OLS- $\frac{1}{4}$	Q
Operating voltage 110 V AC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	G $\frac{1}{4}$	163761	CPE18-M2H-3GL- $\frac{1}{4}$	1D
	<ul style="list-style-type: none"> Normally closed External pilot air 	G $\frac{1}{4}$	163765	CPE18-M2H-3GLS- $\frac{1}{4}$	Q
	<ul style="list-style-type: none"> Normally open Internal pilot air 	G $\frac{1}{4}$	163760	CPE18-M2H-3OL- $\frac{1}{4}$	Q
	<ul style="list-style-type: none"> Normally open External pilot air 	G $\frac{1}{4}$	163764	CPE18-M2H-3OLS- $\frac{1}{4}$	Q
Operating voltage 230 V AC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	G $\frac{1}{4}$	163785	CPE18-M3H-3GL- $\frac{1}{4}$	Q
	<ul style="list-style-type: none"> Normally closed External pilot air 	G $\frac{1}{4}$	163789	CPE18-M3H-3GLS- $\frac{1}{4}$	Q
	<ul style="list-style-type: none"> Normally open Internal pilot air 	G $\frac{1}{4}$	163784	CPE18-M3H-3OL- $\frac{1}{4}$	Q
	<ul style="list-style-type: none"> Normally open External pilot air 	G $\frac{1}{4}$	163788	CPE18-M3H-3OLS- $\frac{1}{4}$	Q

LT = Lead time

1D typically ships same day/next day

1W typically ships within 1 week

Q request a quote for lead time

Ordering Data – Pre-configured Products, 3/2-Way Valves



Solenoid Valves CPE, Compact Performance – Inch Series

Ordering Data – Maxi CPE24					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	G $\frac{3}{8}$	163165	CPE24-M1H-3GL- $\frac{3}{8}$	1D
	<ul style="list-style-type: none"> Normally closed External pilot air 	G $\frac{3}{8}$	163169	CPE24-M1H-3GLS- $\frac{3}{8}$	1D
	<ul style="list-style-type: none"> Normally open Internal pilot air 	G $\frac{3}{8}$	163164	CPE24-M1H-3OL- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> Normally open External pilot air 	G $\frac{3}{8}$	163168	CPE24-M1H-3OLS- $\frac{3}{8}$	Q
Operating voltage 110 V AC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	G $\frac{3}{8}$	163809	CPE24-M2H-3GL- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> Normally closed External pilot air 	G $\frac{3}{8}$	163813	CPE24-M2H-3GLS- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> Normally open Internal pilot air 	G $\frac{3}{8}$	163808	CPE24-M2H-3OL- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> Normally open External pilot air 	G $\frac{3}{8}$	163812	CPE24-M2H-3OLS- $\frac{3}{8}$	Q
Operating voltage 230 V AC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	G $\frac{3}{8}$	163833	CPE24-M3H-3GL- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> Normally closed External pilot air 	G $\frac{3}{8}$	163837	CPE24-M3H-3GLS- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> Normally open Internal pilot air 	G $\frac{3}{8}$	163832	CPE24-M3H-3OL- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> Normally open External pilot air 	G $\frac{3}{8}$	163836	CPE24-M3H-3OLS- $\frac{3}{8}$	Q

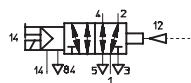
LT = Lead time 1D typically ships same day/next day 1W typically ships within 1 week Q request a quote for lead time

Technical Data, 5/2-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series

FESTO

ISO Symbol



e.g. with external pilot air



General Technical Data – Micro CPE10		
		Threaded connection
Valve function		5/2-way, single solenoid
Constructional design		Piston spool valve
Sealing principle		Soft
Type of actuation		Electrical
Type of reset		Pneumatic
Type of pilot control		Piloted
Pilot air supply		Internal or external
Direction of flow		Reversible for external pilot air supply
Exhaust function		Flow control
Manual override		Non-detenting, detenting via accessory
Mounting position		Any
Width		0.39 in
Grid dimension		0.47 in
Nominal diameter		0.16 in
Standard nominal flow rate		M5: 6.4 scfm
		M7: 12.6 scfm
Type of mounting		Via through-holes
Pneumatic connection	1, 2, 4	M5 or M7
	3, 5	M7
	12, 14	M3
	84	M3
Switching time on/off		16/16 ms
Product weight		0.11 lb

Operating and Environmental Conditions		
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases
Filtration grade		40 µm
Operating pressure	Internal pilot air	15 ... 120 psi
	External pilot air	-13.5 ... +150 psi
Pilot pressure		15 ... 120 psi
Ambient temperature		23 ... 122 °F
Temperature of medium		23 ... 122 °F
Certification		c UL us - Recognized (OL)

Electrical Data	
Operating voltage	24 V DC +10/-15%
Power consumption	1.28 W
Protection class with plug socket	IP65 (EN 60529)

Technical Data, 5/2-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series

FESTO

General Technical Data – Mini CPE14		
		Threaded connection
Valve function		5/2-way, single solenoid
Constructional design		Piston spool valve
Sealing principle		Soft
Type of actuation		Electrical
Type of reset		Pneumatic
Type of pilot control		Piloted
Pilot air supply		Internal or external
Direction of flow		Reversible for external pilot air supply
Exhaust function		Flow control
Manual override		Non-detenting, detenting via accessory
Mounting position		Any
Width		0.55 in
Grid dimension		0.63 in
Nominal diameter		0.24 in
Standard nominal flow rate		G $\frac{1}{8}$: 28.2 scfm
Type of mounting		Via through-holes
Pneumatic connection	1, 2, 4	G $\frac{1}{8}$
	3, 5	G $\frac{1}{8}$
	12, 14	M3
	84	M3
Switching time on/off		24/32 ms
Product weight		0.19 lb

Operating and Environmental Conditions		
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases
Filtration grade		40 μ m
Operating pressure	Internal pilot air	15 ... 120 psi
	External pilot air	-13.5 ... +150 psi
Pilot pressure		15 ... 120 psi
Ambient temperature		23 ... 122 °F
Temperature of medium		23 ... 122 °F
Certification		c UL us - Recognized (OL)

Electrical Data	
Operating voltage	24 V DC +10/-15%
Power consumption	1.28 W
Protection class with plug socket	IP65 (EN 60529)

Technical Data, 5/2-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series

FESTO

General Technical Data – Midi CPE18		
		Threaded connection
Valve function		5/2-way, single solenoid
Constructional design		Piston spool valve
Sealing principle		Soft
Type of actuation		Electrical
Type of reset		Pneumatic
Type of pilot control		Piloted
Pilot air supply		Internal or external
Direction of flow		Reversible for external pilot air supply
Exhaust function		Flow control
Manual override		Non-detenting, detenting via accessory
Mounting position		Any
Width		0.71 in
Grid dimension		0.79 in
Nominal diameter		0.31 in
Standard nominal flow rate		G $\frac{3}{4}$: 53.0 scfm
Type of mounting		Via through-holes
Pneumatic connection	1, 2, 4	G $\frac{1}{4}$
	3, 5	G $\frac{1}{4}$
	12, 14	M5
	84	M5
Switching time on/off		26/20 ms
Product weight		0.44 lb

Operating and Environmental Conditions		
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases
Filtration grade		40 μ m
Operating pressure	Internal pilot air	37.5 ... 150 psi
	External pilot air	-13.5 ... +150 psi
Pilot pressure		37.5 ... 150 psi
Ambient temperature		23 ... 122 °F
Temperature of medium		23 ... 122 °F
Certification		c UL us - Recognized (OL)

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

Technical Data, 5/2-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series

FESTO

General Technical Data – Maxi CPE24		
		Threaded connection
Valve function		5/2-way, single solenoid
Constructional design		Piston spool valve
Sealing principle		Soft
Type of actuation		Electrical
Type of reset		Pneumatic
Type of pilot control		Piloted
Pilot air supply		Internal or external
Direction of flow		Reversible for external pilot air supply
Exhaust function		Flow control
Manual override		Non-detenting, detenting via accessory
Mounting position		Any
Width		0.94 in
Nominal diameter		0.43 in
Standard nominal flow rate		G $\frac{3}{8}$: 102.4 scfm
Type of mounting		Via through-holes
Pneumatic connection	1, 2, 4	G $\frac{3}{8}$
	3, 5	G $\frac{3}{8}$
	12, 14	M5
	84	M5
Switching time on/off		40/50 ms
Product weight		0.72 lb

Operating and Environmental Conditions		
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases
Filtration grade		40 μ m
Operating pressure	Internal pilot air	37.5 ... 150 psi
	External pilot air	-13.5 ... +150 psi
Pilot pressure		37.5 ... 150 psi
Ambient temperature		23 ... 122 °F
Temperature of medium		23 ... 122 °F
Certification		c UL us - Recognized (OL)

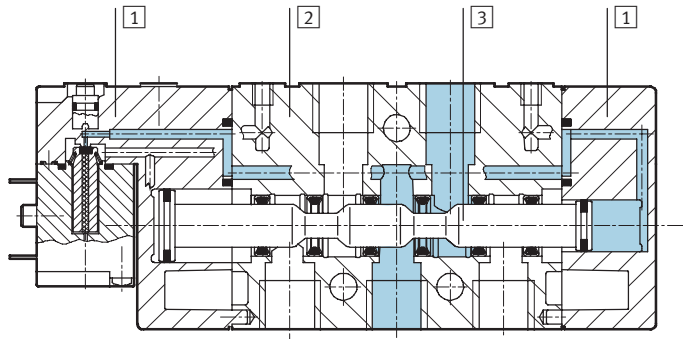
Electrical Data		
Operating voltage	M1H	24 V DC +10/-15%
	M2H	110 V AC \pm 10% at 50 ... 60 Hz
	M3H	230 V AC \pm 10% at 50 ... 60 Hz
Power consumption	M1H	1.5 W
	M2H, M3H	Pull: 3 VA Hold: 2.4 VA
Protection class with plug socket		IP65 (EN 60529)

Technical Data, 5/2-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series

Materials

Sectional view



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

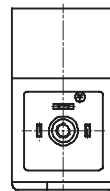
Connection Diagrams

Micro CPE10, Mini CPE14



Suitable for plug socket
KMYZ-9-...

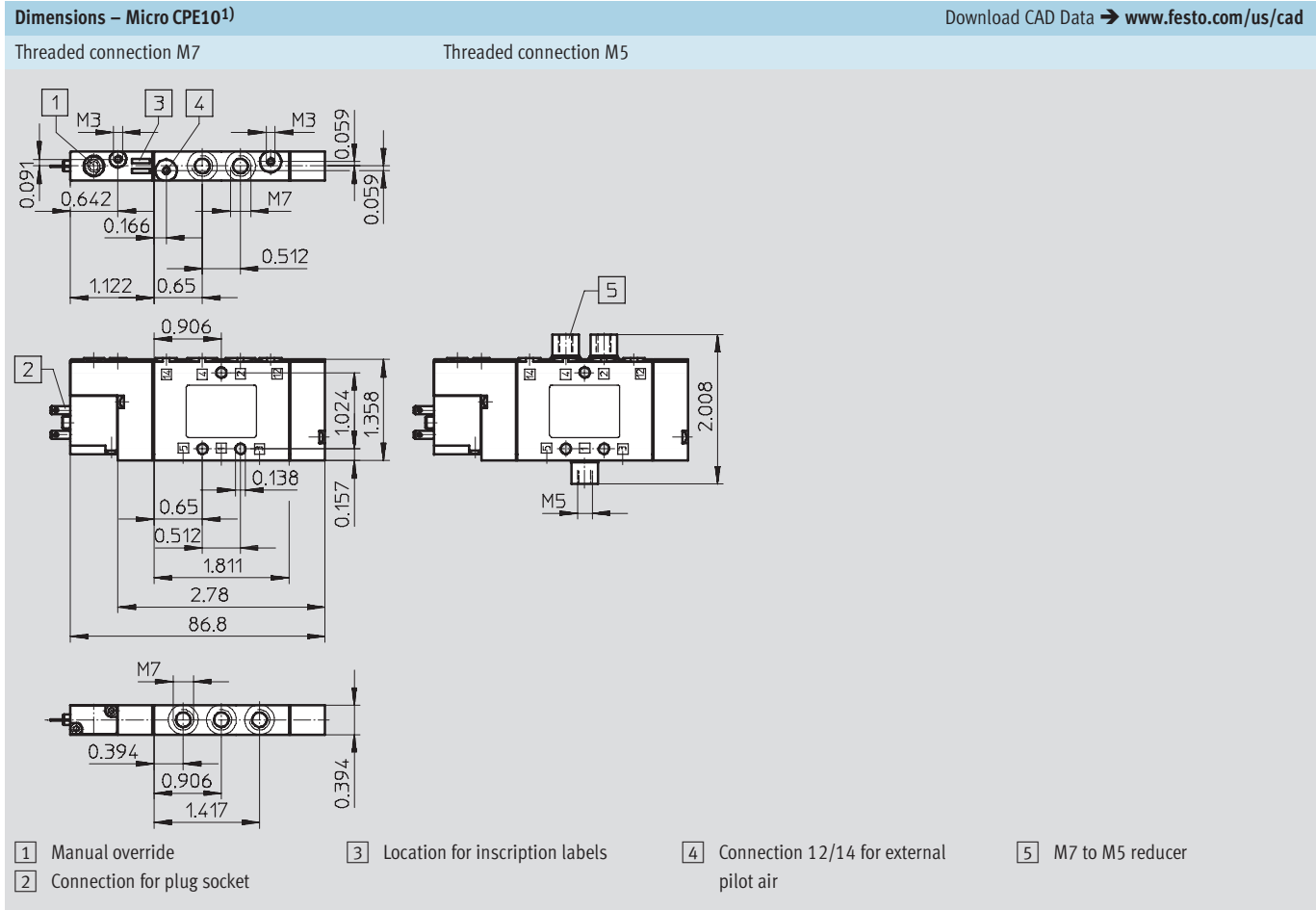
Midi CPE18, Maxi CPE24



Suitable for plug sockets to
DIN 43650, type C
KMEB-1-...
KMEB-2-...
MSSD-EB

Dimensional Drawings, 5/2-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series



1) Dimensions are in inches, unless otherwise noted.

Dimensional Drawings, 5/2-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series



Dimensions – Mini CPE14, Midi CPE18, Maxi CPE24¹⁾ Download CAD Data → www.festo.com/us/cad

Threaded connection

- 1 Manual override
- 2 Connection for plug socket
- 3 Location for inscription labels
- 4 Connection 12/14 for external pilot air

Pneumatic connection D1	B1	B2	B3	B4	D2	D3 Ø	H1	H2	H3
Mini CPE14									
G ¹ / ₈	0.55	0.39	0.14	0.14	M3	0.17	1.59	1.02	0.28
Midi CPE18									
G ¹ / ₄	0.71	0.69	0.14	0.14	M5	0.17	2.24	1.77	0.24
Maxi CPE24									
G ³ / ₈	0.94	0.69	0.24	0.24	M5	0.26	2.44	1.57	0.43

Pneumatic connection D1	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11
Mini CPE14											
G ¹ / ₈	4.0	3.35	2.13	0.72	1.06	0.37	0.79	0.2	1.26	0.72	0.69
Midi CPE18											
G ¹ / ₄	5.43	4.45	2.95	1.1	1.5	0.69	1.14	0.22	1.73	1.08	0.79
Maxi CPE24											
G ³ / ₈	6.5	5.51	3.94	1.38	1.97	0.79	1.3	0.39	1.77	1.38	1.18

1) Dimensions are in inches, unless otherwise noted.

Ordering Data – Pre-configured Products, 5/2-Way Valves



Solenoid Valves CPE, Compact Performance – Inch Series

Ordering Data – Micro CPE10					
ISO Symbol	Pilot air supply	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	Internal	M5	196881	CPE10-M1BH-5L-M5	1D
		M7	196927	CPE10-M1BH-5L-M7	1D
	External	M5	196884	CPE10-M1BH-5LS-M5	1D
		M7	196928	CPE10-M1BH-5LS-M7	Q

Ordering Data – Mini CPE14					
ISO Symbol	Pilot air supply	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	Internal	G $\frac{1}{8}$	196941	CPE14-M1BH-5L- $\frac{1}{8}$	1D
			External	G $\frac{1}{8}$	196942

LT = Lead time 1D typically ships same day/next day 1W typically ships within 1 week Q request a quote for lead time

Ordering Data – Pre-configured Products, 5/2-Way Valves



Solenoid Valves CPE, Compact Performance – Inch Series

Ordering Data – Midi CPE18					
ISO Symbol	Pilot air supply	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	Internal	G $\frac{1}{4}$	163142	CPE18-M1H-5L- $\frac{1}{4}$	Q
	External	G $\frac{1}{4}$	163146	CPE18-M1H-5LS- $\frac{1}{4}$	1D
Operating voltage 110 V AC					
	Internal	G $\frac{1}{4}$	163762	CPE18-M2H-5L- $\frac{1}{4}$	1D
	External	G $\frac{1}{4}$	163766	CPE18-M2H-5LS- $\frac{1}{4}$	Q
Operating voltage 230 V AC					
	Internal	G $\frac{1}{4}$	163786	CPE18-M3H-5L- $\frac{1}{4}$	Q
	External	G $\frac{1}{4}$	163790	CPE18-M3H-5LS- $\frac{1}{4}$	Q

LT = Lead time 1D typically ships same day/next day 1W typically ships within 1 week Q request a quote for lead time

Ordering Data – Pre-configured Products, 5/2-Way Valves



Solenoid Valves CPE, Compact Performance – Inch Series

Ordering Data – Maxi CPE24					
ISO Symbol	Pilot air supply	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	Internal	G3/8	163166	CPE24-M1H-5L-3/8	1D
	External	G3/8	163170	CPE24-M1H-5LS-3/8	Q
Operating voltage 110 V AC					
	Internal	G3/8	163810	CPE24-M2H-5L-3/8	1D
	External	G3/8	163814	CPE24-M2H-5LS-3/8	Q
Operating voltage 230 V AC					
	Internal	G3/8	163834	CPE24-M3H-5L-3/8	Q
	External	G3/8	163838	CPE24-M3H-5LS-3/8	Q

LT = Lead time

1D typically ships same day/next day

1W typically ships within 1 week

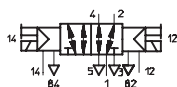
Q request a quote for lead time

Technical Data, 5/2-Way Valves, Double Solenoid

Solenoid Valves CPE, Compact Performance – Inch Series



ISO Symbol



e.g. with external pilot air



General Technical Data – Micro CPE10		
		Threaded connection
Valve function		5/2-way, double solenoid
Constructional design		Piston spool valve
Sealing principle		Soft
Type of actuation		Electrical
Type of pilot control		Piloted
Pilot air supply		Internal or external
Direction of flow		Reversible for external pilot air supply
Exhaust function		Flow control
Manual override		Non-detenting, detenting via accessory
Mounting position		Any
Width		0.39 in
Grid dimension		0.47 in
Nominal diameter		0.16 in
Standard nominal flow rate		M5: 6.4 scfm M7: 12.4 scfm
Type of mounting		Via through-holes
Pneumatic connection	1, 2, 4	M5 or M7
	3, 5	M7
	12, 14	M3
	84	M3
Changeover time		8 ms
Product weight		0.14 lb

Operating and Environmental Conditions		
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases
Filtration grade		40 µm
Operating pressure	Internal pilot air	37.5 ... 120 psi
	External pilot air	-13.5 ... +150 psi
Pilot pressure		37.5 ... 120 psi
Ambient temperature		23 ... 122 °F
Temperature of medium		23 ... 122 °F
Certification		c UL us - Recognized (OL)

Electrical Data	
Operating voltage	24 V DC +10/-15%
Power consumption	1.28 W
Protection class with plug socket	IP65 (EN 60529)

Technical Data, 5/2-Way Valves, Double Solenoid

Solenoid Valves CPE, Compact Performance – Inch Series

FESTO

General Technical Data – Mini CPE14		
		Threaded connection
Valve function		5/2-way, double solenoid
Constructional design		Piston spool valve
Sealing principle		Soft
Type of actuation		Electrical
Type of pilot control		Piloted
Pilot air supply		Internal or external
Direction of flow		Reversible for external pilot air supply
Exhaust function		Flow control
Manual override		Non-detenting, detenting via accessory
Mounting position		Any
Width		0.55 in
Grid dimension		0.63 in
Nominal diameter		0.24 in
Standard nominal flow rate		G $\frac{1}{8}$: 28.2 scfm
Type of mounting		Via through-holes
Pneumatic connection	1, 2, 4	G $\frac{1}{8}$
	3, 5	G $\frac{1}{8}$
	12, 14	M3
	84	M3
Changeover time		12 ms
Product weight		0.23 lb

Operating and Environmental Conditions		
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases
Filtration grade		40 μ m
Operating pressure	Internal pilot air	2 ... 120 psi
	External pilot air	-13.5 ... +150 psi
Pilot pressure		2 ... 120 psi
Ambient temperature		23 ... 122 °F
Temperature of medium		23 ... 122 °F
Certification		c UL us - Recognized (OL)

Electrical Data	
Operating voltage	24 V DC +10/-15%
Power consumption	1.28 W
Protection class with plug socket	IP65 (EN 60529)

Technical Data, 5/2-Way Valves, Double Solenoid

Solenoid Valves CPE, Compact Performance – Inch Series

FESTO

General Technical Data – Midi CPE18		
		Threaded connection
Valve function		5/2-way, double solenoid
Constructional design		Piston spool valve
Sealing principle		Soft
Type of actuation		Electrical
Type of pilot control		Piloted
Pilot air supply		Internal or external
Direction of flow		Reversible for external pilot air supply
Exhaust function		Flow control
Manual override		Non-detenting, detenting via accessory
Mounting position		Any
Width		0.71 in
Grid dimension		0.79 in
Nominal diameter		0.31 in
Standard nominal flow rate		G $\frac{1}{4}$: 53.0 scfm
Type of mounting		Via through-holes
Pneumatic connection	1, 2, 4	G $\frac{1}{4}$
	3, 5	G $\frac{1}{4}$
	12, 14	M5
	84	M5
Changeover time		13 ms
Product weight		0.54

Operating and Environmental Conditions		
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases
Filtration grade		40 μ m
Operating pressure	Internal pilot air	2 ... 150 psi
	External pilot air	-13.5 ... +150 psi
Pilot pressure		2 ... 150 psi
Ambient temperature		23 ... 122 °F
Temperature of medium		23 ... 122 °F
Certification		c UL us - Recognized (OL)

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

Technical Data, 5/2-Way Valves, Double Solenoid

Solenoid Valves CPE, Compact Performance – Inch Series

FESTO

General Technical Data – Maxi CPE24		
		Threaded connection
Valve function		5/2-way, double solenoid
Constructional design		Piston spool valve
Sealing principle		Soft
Type of actuation		Electrical
Type of pilot control		Piloted
Pilot air supply		Internal or external
Direction of flow		Reversible for external pilot air supply
Exhaust function		Flow control
Manual override		Non-detenting, detenting via accessory
Mounting position		Any
Width		0.94 in
Nominal diameter		0.43 in
Standard nominal flow rate		G $\frac{3}{8}$: 113.0 scfm
Type of mounting		Via through-holes
Pneumatic connection	1, 2, 4	G $\frac{3}{8}$
	3, 5	G $\frac{3}{8}$
	12, 14	M5
	84	M5
Changeover time		25 ms
Product weight		0.78 lb

Operating and Environmental Conditions		
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases
Filtration grade		40 μ m
Operating pressure	Internal pilot air	2 ... 150 psi
	External pilot air	-13.5 ... +150 psi
Pilot pressure		2 ... 150 psi
Ambient temperature		23 ... 122 °F
Temperature of medium		23 ... 122 °F
Certification		c UL us - Recognized (OL)

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

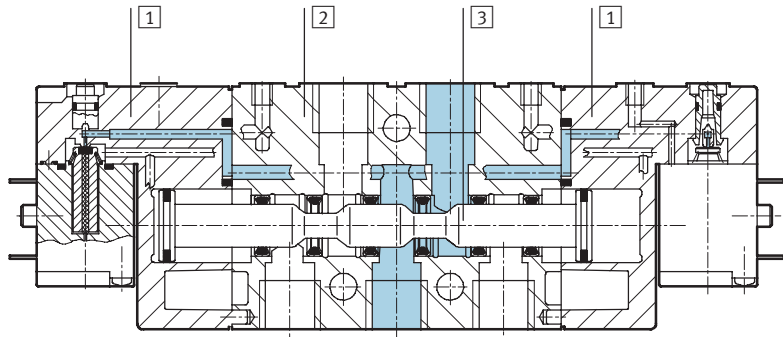
Technical Data, 5/2-Way Valves, Double Solenoid

Solenoid Valves CPE, Compact Performance – Inch Series



Materials

Sectional view



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

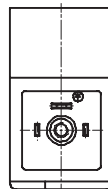
Connection Diagrams

Micro CPE10, Mini CPE14



Suitable for plug socket
KMYZ-9-...

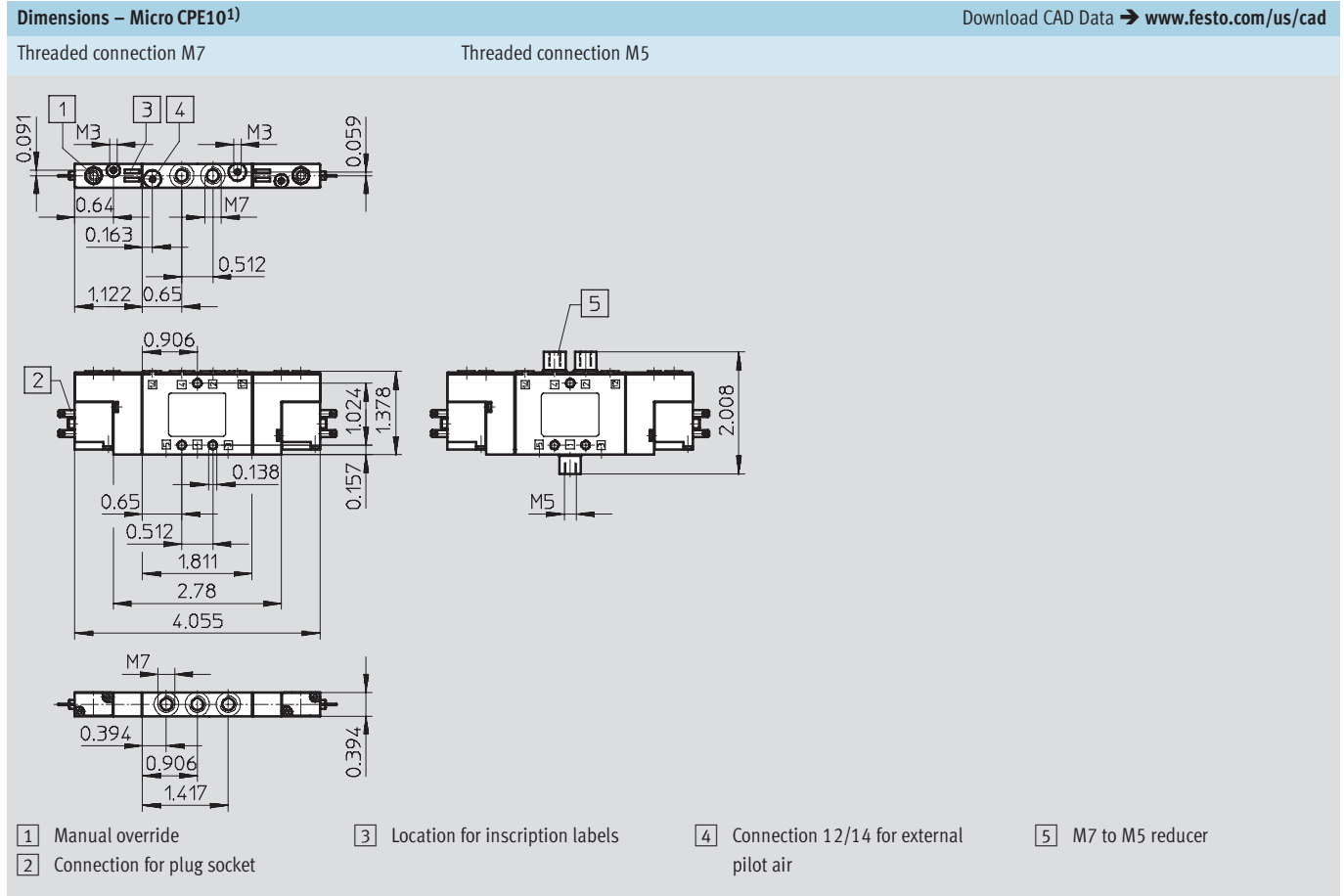
Midi CPE18, Maxi CPE24



Suitable for plug sockets to
DIN 43650, type C
KMEB-1-...
KMEB-2-...
MSSD-EB

Dimensional Drawings, 5/2-Way Valves, Double Solenoid

Solenoid Valves CPE, Compact Performance – Inch Series



1) Dimensions are in inches, unless otherwise noted.

Dimensional Drawings, 5/2-Way Valves, Double Solenoid

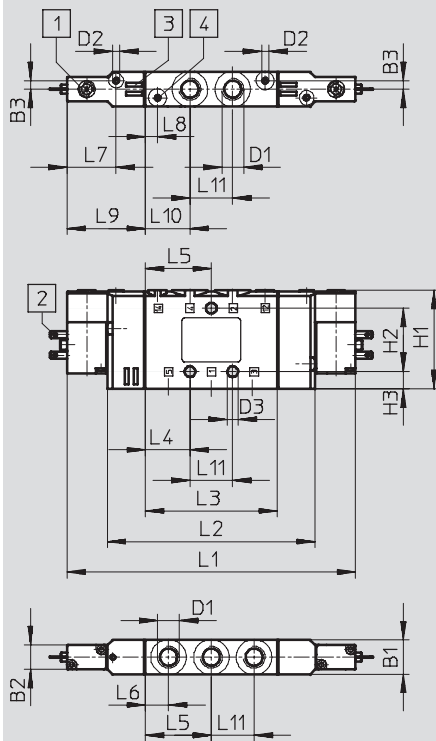
Solenoid Valves CPE, Compact Performance – Inch Series



Dimensions – Mini CPE14, Midi CPE18, Maxi CPE24¹⁾

Download CAD Data → www.festo.com/us/cad

Threaded connection



- 1 Manual override
- 2 Connection for plug socket
- 3 Location for inscription labels
- 4 Connection 12/14 for external pilot air

Pneumatic connection D1	B1	B2	B3	B4	D2	D3 Ø	H1	H2	H3
Mini CPE14									
G ¹ / ₈	0.55	0.39	0.14	0.14	M3	0.17	1.59	1.02	0.28
Midi CPE18									
G ¹ / ₄	0.71	0.69	0.14	0.14	M5	0.17	2.24	1.77	0.24
Maxi CPE24									
G ³ / ₈	0.94	0.69	0.24	0.24	M5	0.26	2.44	1.57	0.43

Pneumatic connection D1	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11
Mini CPE14											
G ¹ / ₈	4.65	3.35	2.13	0.72	1.06	0.37	0.79	0.2	1.26	0.72	0.69
Midi CPE18											
G ¹ / ₄	6.42	4.45	2.95	1.1	1.5	0.69	1.14	0.22	1.73	1.08	0.79
Maxi CPE24											
G ³ / ₈	7.48	5.51	3.94	1.38	1.97	0.79	1.3	0.39	1.77	1.38	1.18

1) Dimensions are in inches, unless otherwise noted.

Ordering Data – Pre-configured Products, 5/2-Way Valves, Double Solenoid



Solenoid Valves CPE, Compact Performance – Inch Series

Ordering Data – Micro CPE10					
ISO Symbol	Pilot air supply	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	Internal	M5	196875	CPE10-M1BH-5J-M5	1D
		M7	196925	CPE10-M1BH-5J-M7	1D
	External	M5	196878	CPE10-M1BH-5JS-M5	1D
		M7	196926	CPE10-M1BH-5JS-M7	Q

Ordering Data – Mini CPE14					
ISO Symbol	Pilot air supply	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	Internal	G1/8	196939	CPE14-M1BH-5J-1/8	1D
		G1/8	196940	CPE14-M1BH-5JS-1/8	1D
	External	G1/8	196940	CPE14-M1BH-5JS-1/8	1D
		G1/8	196940	CPE14-M1BH-5JS-1/8	1D

Ordering Data – Midi CPE18					
ISO Symbol	Pilot air supply	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	Internal	G1/4	163143	CPE18-M1H-5J-1/4	1D
		G1/4	163147	CPE18-M1H-5JS-1/4	Q
	External	G1/4	163147	CPE18-M1H-5JS-1/4	Q
		G1/4	163147	CPE18-M1H-5JS-1/4	Q
Operating voltage 110 V AC					
	Internal	G1/4	163763	CPE18-M2H-5J-1/4	1D
		G1/4	163767	CPE18-M2H-5JS-1/4	Q
	External	G1/4	163767	CPE18-M2H-5JS-1/4	Q
		G1/4	163767	CPE18-M2H-5JS-1/4	Q
Operating voltage 230 V AC					
	Internal	G1/4	163787	CPE18-M3H-5J-1/4	Q
		G1/4	163791	CPE18-M3H-5JS-1/4	Q
	External	G1/4	163787	CPE18-M3H-5J-1/4	Q
		G1/4	163791	CPE18-M3H-5JS-1/4	Q

LT = Lead time 1D typically ships same day/next day 1W typically ships within 1 week Q request a quote for lead time

Ordering Data – Pre-configured Products, 5/2-Way Valves, Double Solenoid



Solenoid Valves CPE, Compact Performance – Inch Series

Ordering Data – Maxi CPE24					
ISO Symbol	Pilot air supply	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	Internal	G $\frac{3}{8}$	163167	CPE24-M1H-5J- $\frac{3}{8}$	1D
	External	G $\frac{3}{8}$	163171	CPE24-M1H-5JS- $\frac{3}{8}$	Q
Operating voltage 110 V AC					
	Internal	G $\frac{3}{8}$	163811	CPE24-M2H-5J- $\frac{3}{8}$	Q
	External	G $\frac{3}{8}$	163815	CPE24-M2H-5JS- $\frac{3}{8}$	Q
Operating voltage 230 V AC					
	Internal	G $\frac{3}{8}$	163835	CPE24-M3H-5J- $\frac{3}{8}$	Q
	External	G $\frac{3}{8}$	163839	CPE24-M3H-5JS- $\frac{3}{8}$	Q

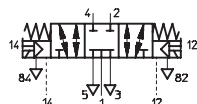
LT = Lead time 1D typically ships same day/next day 1W typically ships within 1 week Q request a quote for lead time

Technical Data, 5/3-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series



ISO Symbol



e.g. with external pilot air



General Technical Data – Micro CPE10		
		Threaded connection
Valve function		5/3-way, single solenoid
Constructional design		Piston spool valve
Sealing principle		Soft
Type of actuation		Electrical
Type of reset		Mechanical spring
Type of pilot control		Piloted
Pilot air supply		Internal or external
Direction of flow		Reversible for external pilot air supply
Exhaust function		Flow control
Manual override		Non-detenting, detenting via accessory
Mounting position		Any
Width		0.39 in
Grid dimension		0.47 in
Nominal diameter		0.16 in
Standard nominal flow rate	closed	M5: 6.4 scfm
		M7: 12.4 scfm
	exhausted	M5: 6.4 scfm
		M7: 8.8 scfm
	pressurised	M5: 6.4 scfm
		M7: 10.6 scfm
Type of mounting		Via through-holes
Pneumatic connection	1, 2, 4	M5 or M7
	3, 5	M7
	12, 14	M3
	82, 84	M3
Switching time on/off		16/20 ms
Product weight		0.15 lb

Operating and Environmental Conditions		
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases
Filtration grade		40 µm
Operating pressure	Internal pilot air	15 ... 120 psi
	External pilot air	-13.5 ... +150 psi
Pilot pressure		15 ... 120 psi
Ambient temperature		23 ... 122 °F
Temperature of medium		23 ... 122 °F
Certification		c UL us - Recognized (OL)

Electrical Data	
Operating voltage	24 V DC +10/-15%
Power consumption	1.28 W
Protection class with plug socket	IP65 (EN 60529)

Technical Data, 5/3-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series

FESTO

General Technical Data – Mini CPE14		
		Threaded connection
Valve function		5/3-way, single solenoid
Constructional design		Piston spool valve
Sealing principle		Soft
Type of actuation		Electrical
Type of reset		Mechanical spring
Type of pilot control		Piloted
Pilot air supply		Internal or external
Direction of flow		Reversible for external pilot air supply
Exhaust function		Flow control
Manual override		Non-detenting, detenting via accessory
Mounting position		Any
Width		0.55 in
Grid dimension		0.63 in
Nominal diameter		0.24 in
Standard nominal flow rate	closed	G $\frac{1}{8}$: 26.5 scfm
	exhausted	G $\frac{1}{8}$: 24.7 scfm
	pressurised	G $\frac{1}{8}$: 26.5 scfm
Type of mounting		Via through-holes
Pneumatic connection	1, 2, 4	G $\frac{1}{8}$
	3, 5	G $\frac{1}{8}$
	12, 14	M3
	82, 84	M3
Switching time on/off		20/42 ms
Product weight		0.24 lb

Operating and Environmental Conditions		
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases
Filtration grade		40 μ m
Operating pressure	Internal pilot air	3 ... 120 psi
	External pilot air	-13.5 ... +150 psi
Pilot pressure		3 ... 120 psi
Ambient temperature		23 ... 122 °F
Temperature of medium		23 ... 122 °F
Certification		c UL us - Recognized (OL)

Electrical Data	
Operating voltage	24 V DC +10/-15%
Power consumption	1.28 W
Protection class with plug socket	IP65 (EN 60529)

Technical Data, 5/3-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series

FESTO

General Technical Data – Midi CPE18		
		Threaded connection
Valve function		5/3-way, single solenoid
Constructional design		Piston spool valve
Sealing principle		Soft
Type of actuation		Electrical
Type of reset		Mechanical spring
Type of pilot control		Piloted
Pilot air supply		Internal or external
Direction of flow		Reversible for external pilot air supply
Exhaust function		Flow control
Manual override		Non-detenting, detenting via accessory
Mounting position		Any
Width		0.71 in
Grid dimension		0.79 in
Nominal diameter		0.31 in
Standard nominal flow rate	closed	G $\frac{3}{4}$: 51.2 scfm
	exhausted	G $\frac{3}{4}$: 42.4 scfm
	pressurised	G $\frac{3}{4}$: 45.9 scfm
Type of mounting		Via through-holes
Pneumatic connection	1, 2, 4	G $\frac{1}{4}$
	3, 5	G $\frac{1}{4}$
	12, 14	M5
	82, 84	M5
Switching time on/off		20/38 ms
Product weight		0.56 lb

Operating and Environmental Conditions		
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases
Filtration grade		40 μ m
Operating pressure	Internal pilot air	37.5 ... 150 psi
	External pilot air	-13.5 ... +150 psi
Pilot pressure		37.5 ... 150 psi
Ambient temperature		23 ... 122 °F
Temperature of medium		23 ... 122 °F
Certification		c UL us - Recognized (OL)

Electrical Data		
Operating voltage	M1H	24 V DC +10/-15%
	M2H	110 V AC \pm 10% at 50 ... 60 Hz
	M3H	230 V AC \pm 10% at 50 ... 60 Hz
Power consumption	M1H	1 W
	M2H, M3H	Pull: 3 VA Hold: 2.4 VA
Protection class with plug socket		IP65 (EN 60529)

Technical Data, 5/3-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series

FESTO

General Technical Data – Maxi CPE24		
		Threaded connection
Valve function		5/3-way, single solenoid
Constructional design		Piston spool valve
Sealing principle		Soft
Type of actuation		Electrical
Type of reset		Mechanical spring
Type of pilot control		Piloted
Pilot air supply		Internal or external
Direction of flow		Reversible for external pilot air supply
Exhaust function		Flow control
Manual override		Non-detenting, detenting via accessory
Mounting position		Any
Width		0.94 in
Nominal diameter		0.43 in
Standard nominal flow rate	closed	G $\frac{3}{8}$: 105.9 scfm
	exhausted	G $\frac{3}{8}$: 93.5 scfm
	pressurised	G $\frac{3}{8}$: 91.8 scfm
Type of mounting		Via through-holes
Pneumatic connection	1, 2, 4	G $\frac{3}{8}$
	3, 5	G $\frac{3}{8}$
	12, 14	M5
	82, 84	M5
Switching time on/off		25/55 ms
Product weight		0.86 lb

Operating and Environmental Conditions		
Operating medium		Filtered compressed air or vacuum, lubricated or unlubricated; Inert gases
Filtration grade		40 μ m
Operating pressure	Internal pilot air	37.5 ... 150 psi
	External pilot air	-13.5 ... +150 psi
Pilot pressure		37.5 ... 150 psi
Ambient temperature		23 ... 122 °F
Temperature of medium		23 ... 122 °F
Certification		c UL us - Recognized (OL)

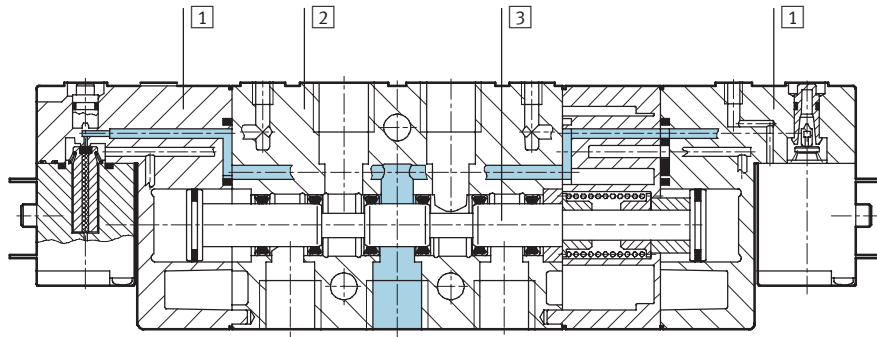
Electrical Data		
Operating voltage	M1H	24 V DC +10/-15%
	M2H	110 V AC \pm 10% at 50 ... 60 Hz
	M3H	230 V AC \pm 10% at 50 ... 60 Hz
Power consumption	M1H	1 W
	M2H, M3H	Pull: 3 VA Hold: 2.4 VA
Protection class with plug socket		IP65 (EN 60529)

Technical Data, 5/3-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series

Materials

Sectional view



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

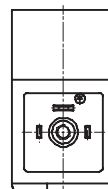
Connection Diagrams

Micro CPE10, Mini CPE14



Suitable for plug socket
KMYZ-9-...

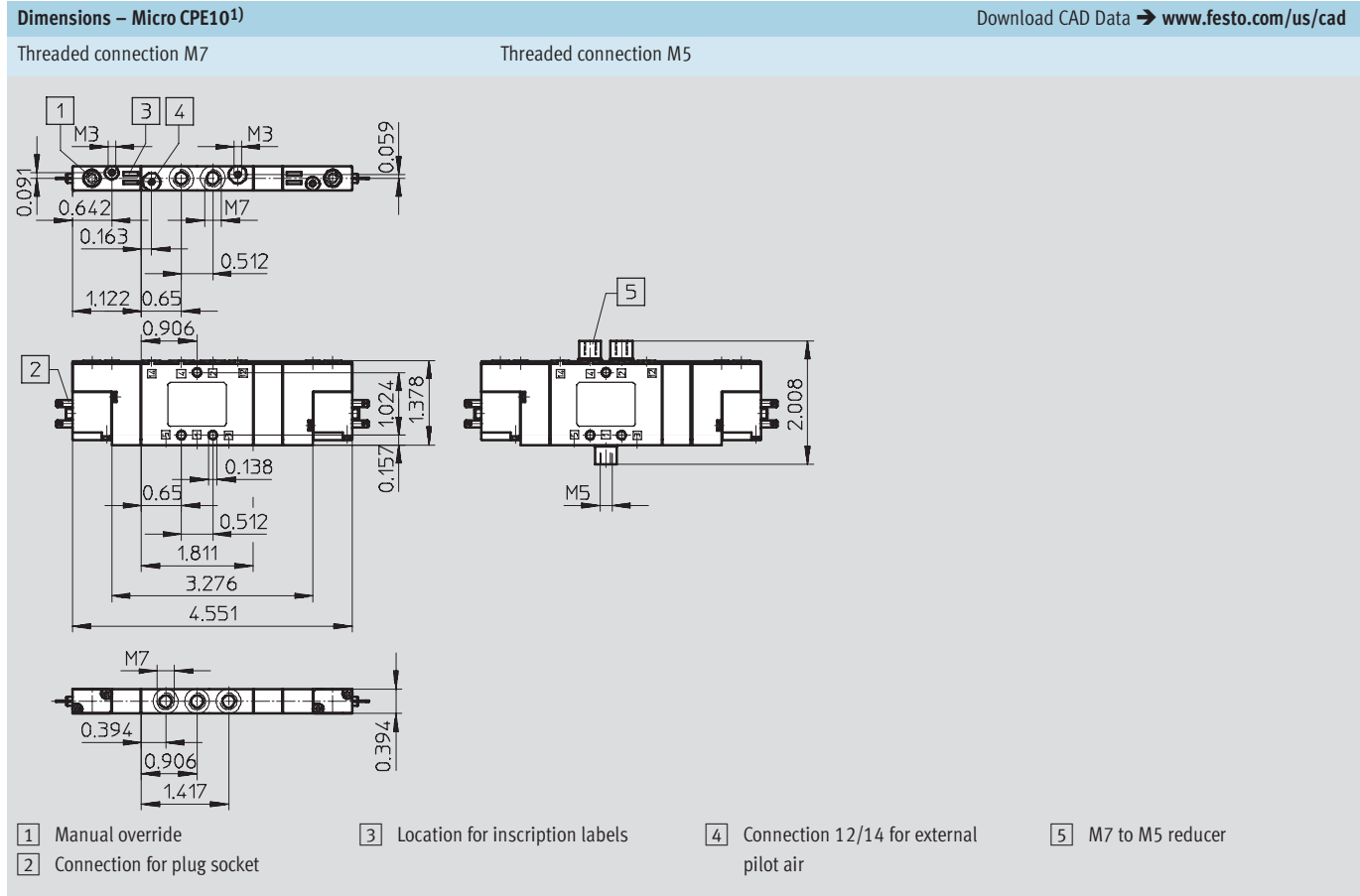
Midi CPE18, Maxi CPE24



Suitable for plug sockets to
DIN 43650, type C
KMEB-1-...
KMEB-2-...
MSSD-EB

Dimensional Drawings, 5/3-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series



1) Dimensions are in inches, unless otherwise noted.

Dimensional Drawings, 5/3-Way Valves

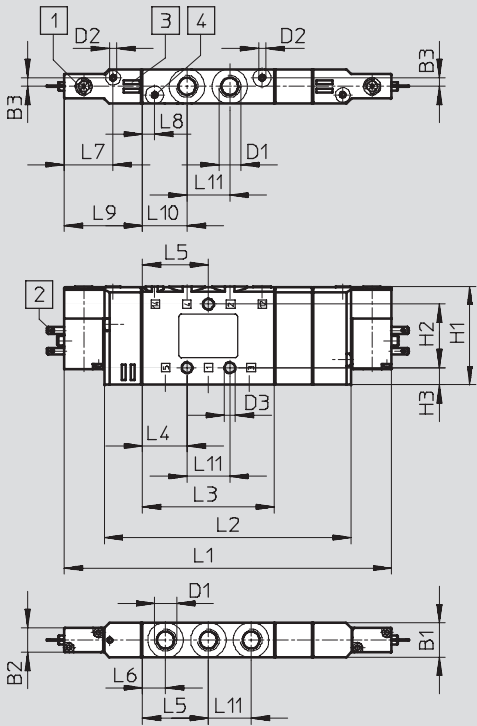
Solenoid Valves CPE, Compact Performance – Inch Series



Dimensions – Mini CPE14, Midi CPE18, Maxi CPE24¹⁾

Download CAD Data → www.festo.com/us/cad

Threaded connection



- 1 Manual override
- 2 Connection for plug socket
- 3 Location for inscription labels
- 4 Connection 12/14 for external pilot air

Pneumatic connection D1	B1	B2	B3	B4	D2	D3 ∅	H1	H2	H3
Mini CPE14									
G ¹ / ₈	0.55	0.39	0.14	0.14	M3	0.17	1.59	1.02	0.28
Midi CPE18									
G ¹ / ₄	0.71	0.69	0.14	0.14	M5	0.17	2.24	1.77	0.24
Maxi CPE24									
G ³ / ₈	0.94	0.69	0.24	0.24	M5	0.26	2.44	1.57	0.43

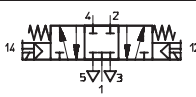
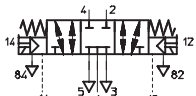
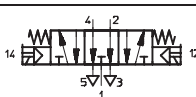
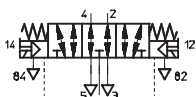
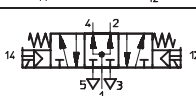
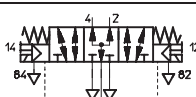
Pneumatic connection D1	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11
Mini CPE14											
G ¹ / ₈	5.28	3.98	2.13	0.72	1.06	0.37	0.79	0.2	1.26	0.72	0.69
Midi CPE18											
G ¹ / ₄	7.17	5.2	2.95	1.1	1.5	0.69	1.14	0.22	1.73	1.08	0.79
Maxi CPE24											
G ³ / ₈	8.39	6.42	3.94	1.38	1.97	0.79	1.3	0.39	1.77	1.38	1.18

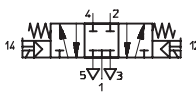
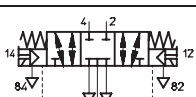
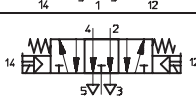
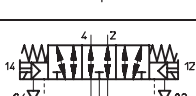
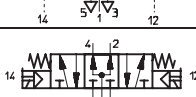
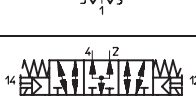
1) Dimensions are in inches, unless otherwise noted.

Ordering Data – Pre-configured Products, 5/3-Way Valves



Solenoid Valves CPE, Compact Performance – Inch Series

Ordering Data – Micro CPE10					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	M5	533159	CPE10-M1BH-5/3G-M5-B	1D
		M7	533141	CPE10-M1BH-5/3G-M7-B	1D
	<ul style="list-style-type: none"> Normally closed External pilot air 	M5	533160	CPE10-M1BH-5/3GS-M5-B	1D
		M7	533142	CPE10-M1BH-5/3GS-M7-B	Q
	<ul style="list-style-type: none"> Normally exhausted Internal pilot air 	M5	533161	CPE10-M1BH-5/3E-M5-B	1D
		M7	533143	CPE10-M1BH-5/3E-M7-B	Q
	<ul style="list-style-type: none"> Normally exhausted External pilot air 	M5	533162	CPE10-M1BH-5/3ES-M5-B	1D
		M7	533144	CPE10-M1BH-5/3ES-M7-B	Q
	<ul style="list-style-type: none"> Normally pressurised Internal pilot air 	M5	533163	CPE10-M1BH-5/3B-M5-B	1D
		M7	533145	CPE10-M1BH-5/3B-M7-B	Q
	<ul style="list-style-type: none"> Normally pressurised External pilot air 	M5	533164	CPE10-M1BH-5/3BS-M5-B	1D
		M7	533146	CPE10-M1BH-5/3BS-M7-B	Q

Ordering Data – Mini CPE14					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	G $\frac{3}{8}$	196937	CPE14-M1BH-5/3G- $\frac{3}{8}$	1D
	<ul style="list-style-type: none"> Normally closed External pilot air 	G $\frac{3}{8}$	196938	CPE14-M1BH-5/3GS- $\frac{3}{8}$	1D
	<ul style="list-style-type: none"> Normally exhausted Internal pilot air 	G $\frac{3}{8}$	196935	CPE14-M1BH-5/3E- $\frac{3}{8}$	1D
	<ul style="list-style-type: none"> Normally exhausted External pilot air 	G $\frac{3}{8}$	196936	CPE14-M1BH-5/3ES- $\frac{3}{8}$	1D
	<ul style="list-style-type: none"> Normally pressurised Internal pilot air 	G $\frac{3}{8}$	196933	CPE14-M1BH-5/3B- $\frac{3}{8}$	1D
	<ul style="list-style-type: none"> Normally pressurised External pilot air 	G $\frac{3}{8}$	196934	CPE14-M1BH-5/3BS- $\frac{3}{8}$	1D

LT = Lead time 1D typically ships same day/next day 1W typically ships within 1 week Q request a quote for lead time

Ordering Data – Pre-configured Products, 5/3-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series

Ordering Data – Midi CPE18					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	G $\frac{1}{4}$	170247	CPE18-M1H-5/3G- $\frac{1}{4}$	1D
	<ul style="list-style-type: none"> Normally closed External pilot air 	G $\frac{1}{4}$	170248	CPE18-M1H-5/3GS- $\frac{1}{4}$	Q
	<ul style="list-style-type: none"> Normally exhausted Internal pilot air 	G $\frac{1}{4}$	170249	CPE18-M1H-5/3E- $\frac{1}{4}$	1D
	<ul style="list-style-type: none"> Normally exhausted External pilot air 	G $\frac{1}{4}$	170250	CPE18-M1H-5/3ES- $\frac{1}{4}$	1D
	<ul style="list-style-type: none"> Normally pressurised Internal pilot air 	G $\frac{1}{4}$	170251	CPE18-M1H-5/3B- $\frac{1}{4}$	Q
	<ul style="list-style-type: none"> Normally pressurised External pilot air 	G $\frac{1}{4}$	170252	CPE18-M1H-5/3BS- $\frac{1}{4}$	Q
Operating voltage 110 V AC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	G $\frac{1}{4}$	170283	CPE18-M2H-5/3G- $\frac{1}{4}$	Q
	<ul style="list-style-type: none"> Normally closed External pilot air 	G $\frac{1}{4}$	170284	CPE18-M2H-5/3GS- $\frac{1}{4}$	Q
	<ul style="list-style-type: none"> Normally exhausted Internal pilot air 	G $\frac{1}{4}$	170285	CPE18-M2H-5/3E- $\frac{1}{4}$	Q
	<ul style="list-style-type: none"> Normally exhausted External pilot air 	G $\frac{1}{4}$	170286	CPE18-M2H-5/3ES- $\frac{1}{4}$	Q
	<ul style="list-style-type: none"> Normally pressurised Internal pilot air 	G $\frac{1}{4}$	170287	CPE18-M2H-5/3B- $\frac{1}{4}$	Q
	<ul style="list-style-type: none"> Normally pressurised External pilot air 	G $\frac{1}{4}$	170288	CPE18-M2H-5/3BS- $\frac{1}{4}$	Q

LT = Lead time 1D typically ships same day/next day 1W typically ships within 1 week Q request a quote for lead time

Ordering Data – Pre-configured Products, 5/3-Way Valves



Solenoid Valves CPE, Compact Performance – Inch Series

Ordering Data – Midi CPE18					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 230 V AC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	G $\frac{1}{4}$	170319	CPE18-M3H-5/3G- $\frac{1}{4}$	Q
	<ul style="list-style-type: none"> Normally closed External pilot air 	G $\frac{1}{4}$	170320	CPE18-M3H-5/3GS- $\frac{1}{4}$	Q
	<ul style="list-style-type: none"> Normally exhausted Internal pilot air 	G $\frac{1}{4}$	170321	CPE18-M3H-5/3E- $\frac{1}{4}$	Q
	<ul style="list-style-type: none"> Normally exhausted External pilot air 	G $\frac{1}{4}$	170322	CPE18-M3H-5/3ES- $\frac{1}{4}$	Q
	<ul style="list-style-type: none"> Normally pressurised Internal pilot air 	G $\frac{1}{4}$	170323	CPE18-M3H-5/3B- $\frac{1}{4}$	Q
	<ul style="list-style-type: none"> Normally pressurised External pilot air 	G $\frac{1}{4}$	170324	CPE18-M3H-5/3BS- $\frac{1}{4}$	Q

LT = Lead time

1D typically ships same day/next day

1W typically ships within 1 week

Q request a quote for lead time

Ordering Data – Pre-configured Products, 5/3-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series

Ordering Data – Maxi CPE24					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 24 V DC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	G $\frac{3}{8}$	170265	CPE24-M1H-5/3G- $\frac{3}{8}$	1D
	<ul style="list-style-type: none"> Normally closed External pilot air 	G $\frac{3}{8}$	170266	CPE24-M1H-5/3GS- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> Normally exhausted Internal pilot air 	G $\frac{3}{8}$	170267	CPE24-M1H-5/3E- $\frac{3}{8}$	1D
	<ul style="list-style-type: none"> Normally exhausted External pilot air 	G $\frac{3}{8}$	170268	CPE24-M1H-5/3ES- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> Normally pressurised Internal pilot air 	G $\frac{3}{8}$	170269	CPE24-M1H-5/3B- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> Normally pressurised External pilot air 	G $\frac{3}{8}$	170270	CPE24-M1H-5/3BS- $\frac{3}{8}$	Q
Operating voltage 110 V AC					
	<ul style="list-style-type: none"> Normally closed Internal pilot air 	G $\frac{3}{8}$	170301	CPE24-M2H-5/3G- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> Normally closed External pilot air 	G $\frac{3}{8}$	170302	CPE24-M2H-5/3GS- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> Normally exhausted Internal pilot air 	G $\frac{3}{8}$	170303	CPE24-M2H-5/3E- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> Normally exhausted External pilot air 	G $\frac{3}{8}$	170304	CPE24-M2H-5/3ES- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> Normally pressurised Internal pilot air 	G $\frac{3}{8}$	170305	CPE24-M2H-5/3B- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> Normally pressurised External pilot air 	G $\frac{3}{8}$	170306	CPE24-M2H-5/3BS- $\frac{3}{8}$	Q

LT = Lead time 1D typically ships same day/next day 1W typically ships within 1 week Q request a quote for lead time

Ordering Data – Pre-configured Products, 5/3-Way Valves

Solenoid Valves CPE, Compact Performance – Inch Series

Ordering Data – Maxi CPE24					
ISO Symbol	Description	Pneumatic connection	Part No.	Type	LT
Operating voltage 230 V AC					
	<ul style="list-style-type: none"> • Normally closed • Internal pilot air 	G $\frac{3}{8}$	170337	CPE24-M3H-5/3G- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> • Normally closed • External pilot air 	G $\frac{3}{8}$	170338	CPE24-M3H-5/3GS- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> • Normally exhausted • Internal pilot air 	G $\frac{3}{8}$	170339	CPE24-M3H-5/3E- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> • Normally exhausted • External pilot air 	G $\frac{3}{8}$	170340	CPE24-M3H-5/3ES- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> • Normally pressurised • Internal pilot air 	G $\frac{3}{8}$	170341	CPE24-M3H-5/3B- $\frac{3}{8}$	Q
	<ul style="list-style-type: none"> • Normally pressurised • External pilot air 	G $\frac{3}{8}$	170342	CPE24-M3H-5/3BS- $\frac{3}{8}$	Q

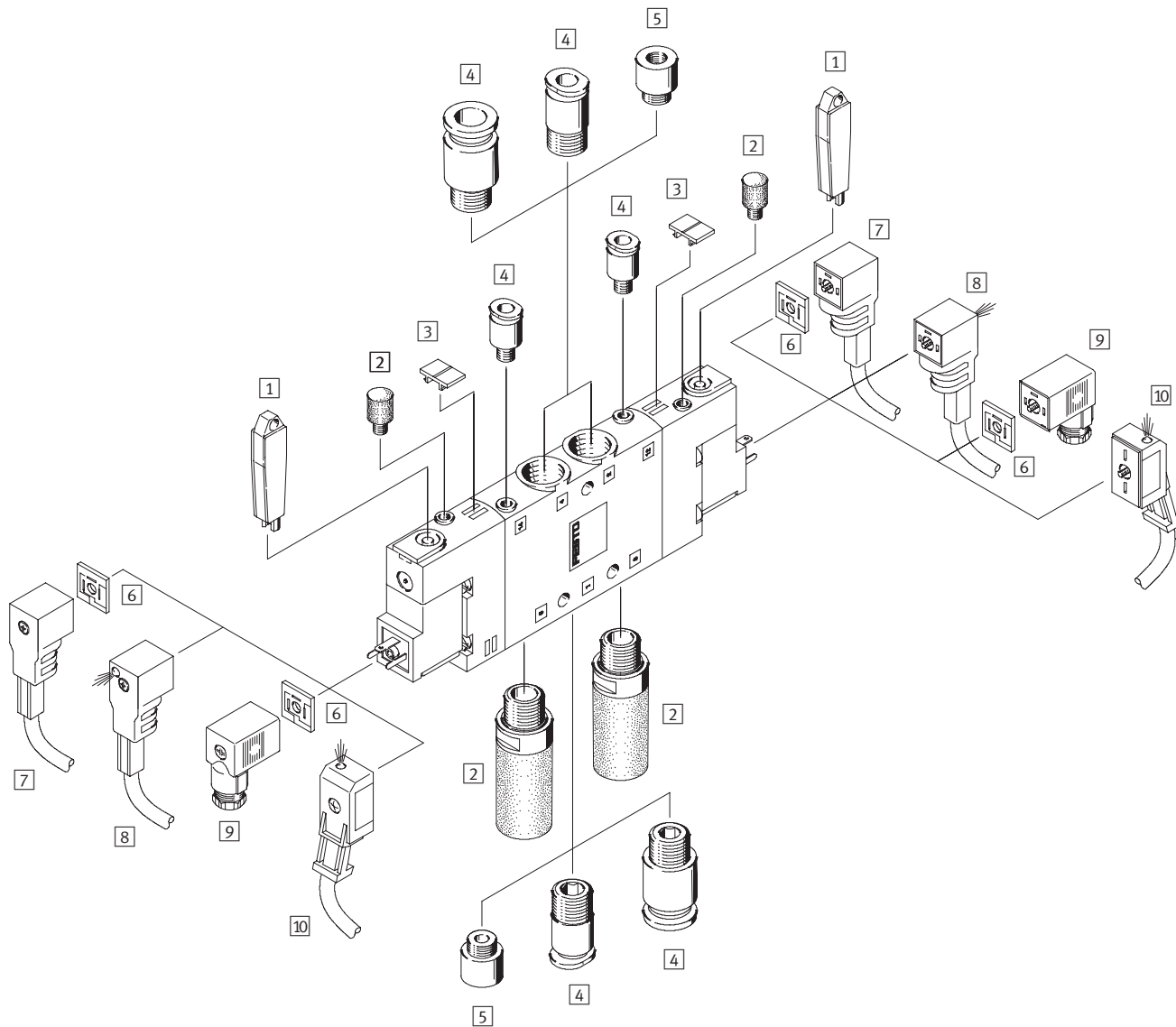
LT = Lead time 1D typically ships same day/next day 1W typically ships within 1 week Q request a quote for lead time

Accessories

Solenoid Valves CPE, Compact Performance – Inch Series



Individual Valve



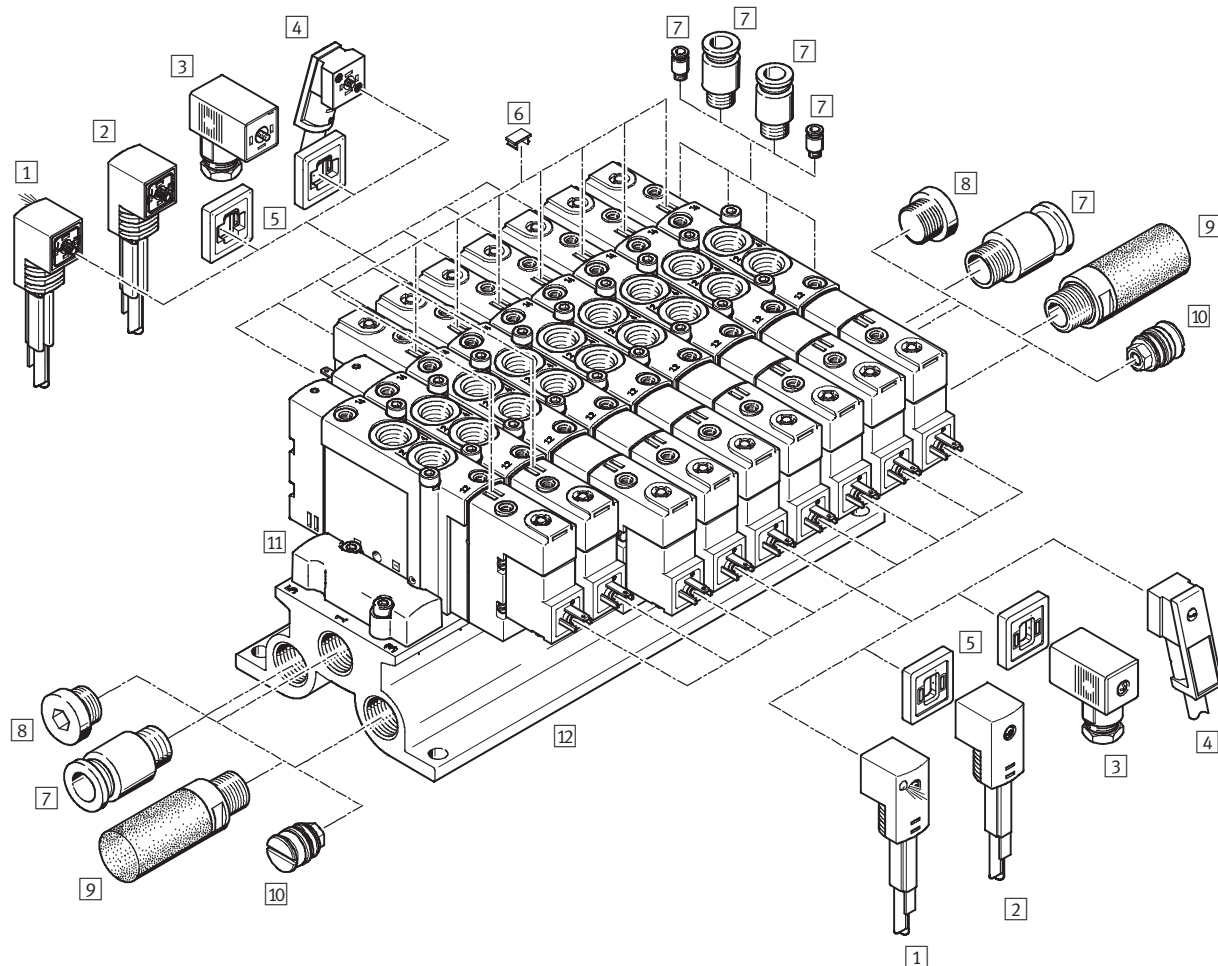
Component parts and accessories	Brief description	CPE10	CPE14	CPE18	CPE24	→ Page
1	Manual override tool AHB	■	■	■	■	110
2	Silencer U or UC	■	■	■	■	110
3	Inscription labels IBS-6x10	■	■	■	■	110
4	Quick Star push-in fitting QB, QS	■	■	■	■	109
5	M7 to M5 reducer	■	-	-	-	-
6	Illuminating seal MEB-LD	-	-	■	■	111
7	Plug socket with cable KMEB	-	-	■	■	111
8	Plug socket with cable KMEB	-	-	■	■	111
9	Standard plug socket MSSD-EB	-	-	■	■	111
10	Plug socket with cable KMYZ-9	■	■	-	-	111

Accessories

Solenoid Valves CPE, Compact Performance – Inch Series



Mounting on Aluminum Manifold Block



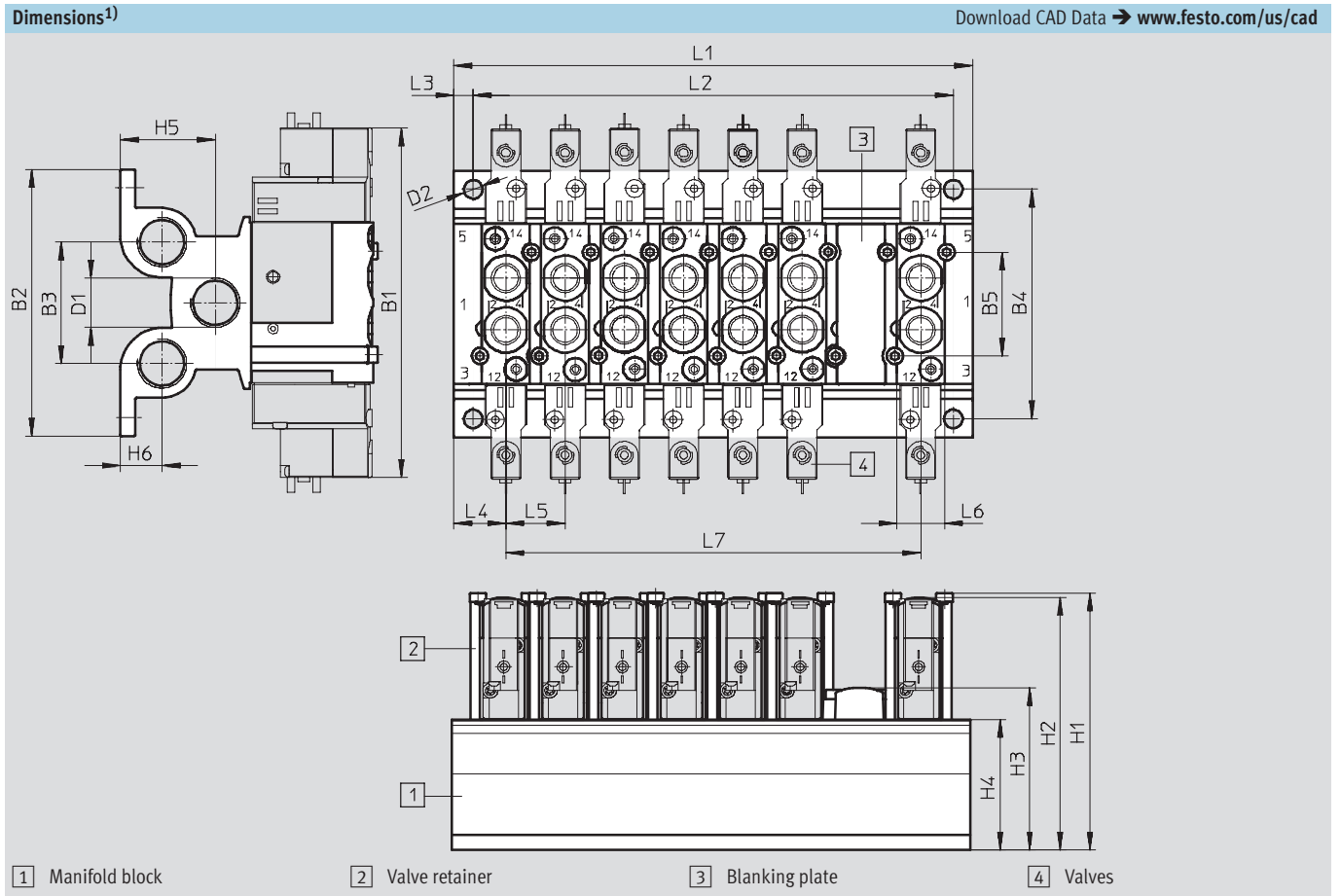
Component parts and accessories	Brief description	→ Page
1 Plug socket with cable KMEB-1	With LED for 24 V DC	111
2 Plug socket with cable KMEB-1	For 0 ... 230 V AC	111
3 Standard plug socket MSSD-EB	–	111
4 Plug socket with cable KMEB-2	For 0 ... 230 V AC	111
5 Illuminating seal MEB-LD	–	111
6 Inscription label IBS-6x10	–	110
7 Quick Star push-in fitting QB, QS	For standard O.D. tubing	109
8 Blanking plug B	–	110
9 Silencer U or UC	For fitting in exhaust ports	110
10 Separator for pressure zones VABD, PRSV	For fitting in the manifold block	110
11 Blanking plate CPE...-RP	For fitting on unused valve positions	107
12 Manifold block CPE...-PRS	–	105

Accessories

Solenoid Valves CPE, Compact Performance – Inch Series

Manifold block CPE...-PRS

Material:
Wrought aluminum alloy



Type	B1	B2	B3	B4	B5	D1	D2	H1	H2	H3	H4	H5
CPE10-PRS...	4.06	3.11	1.38	2.66	1.02	1/4NPT	0.21	2.83	2.74	1.76	1.34	0.93
CPE14-PRS...	4.25	3.54	1.61	3.05	1.38	3/8NPT	0.25	3.41	3.34	2.16	1.73	1.26
CPE18-PRS...	6.1	4.02	1.81	3.37	1.57	3/8NPT	0.33	4.13	4.00	2.35	1.73	1.2

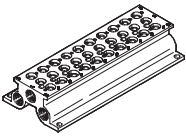
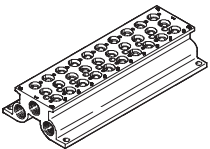
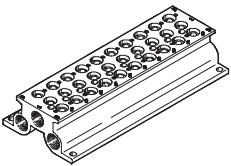
Type	H6	L1	L2	L3	L4	L5	L6	L7
CPE10-PRS...	0.43	1.1 + (n-1) x 0.63	L1 - 0.43 ± 0.1	0.22	0.55	0.63	0.53	(n-1) x 0.63
CPE14-PRS...	0.55	1.38 + (n-1) x 0.79	L1 - 0.51 ± 0.1	0.26	0.69	0.79	0.69	(n-1) x 0.79
CPE18-PRS...	0.55	1.77 + (n-1) x 1.02	L1 - 0.67 ± 0.1	0.33	0.89	1.02	0.88	(n-1) x 1.02

1) Dimensions are in inches, unless otherwise noted.

Accessories

Solenoid Valves CPE, Compact Performance – Inch Series



Ordering Data					
	Pneumatic connection 1, 3, 5	Valve positions	Weight [lb]	Part No.	Type
Micro CPE10					
	1/4NPT	2	0.26	550070	CPE10-PRS-1/4-2-NPT
		3	0.36	550071	CPE10-PRS-1/4-3-NPT
		4	0.45	550072	CPE10-PRS-1/4-4-NPT
		5	0.55	550073	CPE10-PRS-1/4-5-NPT
		6	0.65	550074	CPE10-PRS-1/4-6-NPT
		7	0.74	550075	CPE10-PRS-1/4-7-NPT
		8	0.84	550076	CPE10-PRS-1/4-8-NPT
		9	0.93	550077	CPE10-PRS-1/4-9-NPT
		10	1.03	550078	CPE10-PRS-1/4-10-NPT
		Mini CPE14			
	3/8NPT	2	0.48	550079	CPE14-PRS-3/8-2-NPT
		3	0.65	550080	CPE14-PRS-3/8-3-NPT
		4	0.82	550081	CPE14-PRS-3/8-4-NPT
		5	1.0	550082	CPE14-PRS-3/8-5-NPT
		6	1.17	550083	CPE14-PRS-3/8-6-NPT
		7	1.34	550084	CPE14-PRS-3/8-7-NPT
		8	1.51	550085	CPE14-PRS-3/8-8-NPT
		9	1.69	550086	CPE14-PRS-3/8-9-NPT
		10	1.86	550087	CPE14-PRS-3/8-10-NPT
		Midi CPE18			
	3/8NPT	2	0.71	550088	CPE18-PRS-3/8-2-NPT
		3	0.96	550089	CPE18-PRS-3/8-3-NPT
		4	1.22	550090	CPE18-PRS-3/8-4-NPT
		5	1.48	550091	CPE18-PRS-3/8-5-NPT
		6	1.74	550092	CPE18-PRS-3/8-6-NPT
		7	2.0	550093	CPE18-PRS-3/8-7-NPT
		8	2.26	550094	CPE18-PRS-3/8-8-NPT
		9	2.51	550095	CPE18-PRS-3/8-9-NPT
		10	2.77	550096	CPE18-PRS-3/8-10-NPT

Accessories

Solenoid Valves CPE, Compact Performance – Inch Series

Blanking plate CPE...-RP

for vacant positions

Material:
Polyamide



Ordering Data			
Size	Pneumatic connection 1, 3, 5	Part No.	Type
Micro CPE10	G $\frac{1}{4}$	544479	CPE10-RP
Mini CPE14	G $\frac{3}{8}$	544480	CPE14-RP
Midi CPE18	G $\frac{3}{8}$	544481	CPE18-RP

Valve retainer CPE...-H5-SET

Material:
Retainer: High-alloy stainless steel
Screws: Galvanised steel
Seals: Nitrile rubber



Ordering Data			
Size	Pneumatic connection 1, 3, 5	Part No.	Type
Micro CPE10	G $\frac{1}{4}$	544394	CPE10-H5-SET
Mini CPE14	G $\frac{3}{8}$	544395	CPE14-H5-SET
Midi CPE18	G $\frac{3}{8}$	544396	CPE18-H5-SET

Accessories

Solenoid Valves CPE, Compact Performance – Inch Series

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Valve retainer CPE...-H5

Material:
High-alloy stainless steel



Ordering Data				
Size	Pneumatic connection 1, 3, 5	Part No.	Type	PU ¹⁾
Micro CPE10	G $\frac{1}{4}$	547045	CPE10-H5-50	50
Mini CPE14	G $\frac{3}{8}$	547046	CPE14-H5-50	50
Midi CPE18	G $\frac{3}{8}$	547047	CPE18-H5-50	50

1) Packaging unit quantity

Screw M...

for valve retainer CPE...-H5

Material:
Galvanised steel



Ordering Data				
Size	Pneumatic connection 1, 3, 5	Part No.	Type	PU ¹⁾
Micro CPE10	G $\frac{1}{4}$	547048	M3X40-8.8-VS-100	100
Mini CPE14	G $\frac{3}{8}$	547049	M3X45-8.8-VS-100	100
Midi CPE18	G $\frac{3}{8}$	547050	M4X65-8.8-VS-100	100

1) Packaging unit quantity

Seal CPV...-VI...

for valve retainer CPE...-H5

Material:
Nitrile rubber




Ordering Data				
Size	Pneumatic connection 1, 3, 5	Part No.	Type	PU ¹⁾
Micro CPE10	G $\frac{1}{4}$	547051	CPV10-VI-P.M7-150	150
Mini CPE14	G $\frac{3}{8}$	547052	CPV14-VI-P. $\frac{1}{8}$ -150	150
Midi CPE18	G $\frac{3}{8}$	547053	CPV18-VI-P. $\frac{1}{4}$ -150	150



1) Packaging unit quantity



Accessories

Solenoid Valves CPE, Compact Performance – Inch Series

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Ordering Data – Push-in Fittings QB				Technical Data → www.festo.com/catalog/QB	
For tubing O.D. [in]	1/4 NPT		3/8 NPT		Part No. Type
	Part No.	Type	Part No.	Type	
With external hex					
	1/8	–	–	–	–
	5/32	–	–	–	–
	3/16	533275	QB-1/4-3/16-U	–	–
	1/4	533276	QB-1/4-1/4-U	533279	QB-3/8-1/4-U
	5/16	533277	QB-1/4-5/16-U	533280	QB-3/8-5/16-U
	3/8	533278	QB-1/4-3/8-U	533281	QB-3/8-3/8-U
	1/2	–	–	533282	QB-3/8-1/2-U






Ordering Data – Push-in Fittings QS				Technical Data → www.festo.com/catalog/QS			
For tubing O.D. [in]	M3		M5		M7		
	Part No.	Type	Part No.	Type	Part No. Type		
With external hex							
	1/8	–	533209	QS-H-M5-1/8-U-M ¹⁾	–		
	5/32	–	533210	QS-H-M5-5/32-U-M	–		
	3/16	–	533211	QS-H-M5-3/16-U-M	–		
	1/4	–	533212	QS-H-M5-1/4-U-M	–		
With internal hex							
	1/8	183751	QSM-M3-1/8-I-U-M	183749	QSM-M5-1/8-I-U-M	183738	QSM-M7-1/8-I-U-M
	5/32	130592	QSM-M3-5/32-I-U-M	130593	QSM-M5-5/32-I-U-M	–	–
	3/16	183752	QSM-M3-3/16-I-U-M	183750	QSM-M5-3/16-I-U-M	183739	QSM-M7-3/16-I-U-M
	1/4	–	–	130591	QSM-M5-1/4-I-U-M	183740	QSM-M7-1/4-I-U-M

Ordering Data – Push-in Fittings QS				Technical Data → www.festo.com/catalog/QS					
For tubing O.D. [in]	R3/8		R1/4		R3/8		R1/2		
	Part No.	Type	Part No.	Type	Part No.	Type	Part No. Type		
With external hex									
	1/8	533213	QS-H-1/8-1/8-U-M	–	–	–	–		
	5/32	533214	QS-H-1/8-5/32-U-M	–	–	–	–		
	3/16	533215	QS-H-1/8-3/16-U-M	533218	QS-H-1/4-3/16-U-M	–	–		
	1/4	533216	QS-H-1/8-1/4-U-M	533219	QS-H-1/4-1/4-U-M	533222	QS-H-3/8-1/4-U-M	–	
	5/16	533217	QS-H-1/8-5/16-U-M	533220	QS-H-1/4-5/16-U-M	533223	QS-H-3/8-5/16-U-M	–	
	3/8	–	–	533221	QS-H-1/4-3/8-U-M	533224	QS-H-3/8-3/8-U-M	533226	QS-H-1/2-3/8-U-M
	1/2	–	–	–	–	533225	QS-H-3/8-1/2-U-M	533227	QS-H-1/2-1/2-U-M
With internal hex									
	1/4	183741	QS-1/8-1/4-I-U-M	192809	QS-1/4-1/4-I-U-M	–	–		
	5/16	183742	QS-1/8-5/16-I-U-M	183743	QS-1/4-5/16-I-U-M	183745	QS-3/8-5/16-I-U-M	–	
	3/8	–	–	183744	QS-1/4-3/8-I-U-M	183746	QS-3/8-3/8-I-U-M	183747	QS-1/2-3/8-I-U-M
	1/2	–	–	–	–	–	–	183748	QS-1/2-1/2-I-U-M

Accessories

Solenoid Valves CPE, Compact Performance – Inch Series



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



Ordering Data – General Accessories		
		Part No. Type
Blanking plug		
	For manifold block CPE10, for thread G $\frac{1}{4}$	3569 B- $\frac{1}{4}$
	For manifold block CPE14, CPE18, for thread G $\frac{3}{8}$	3570 B- $\frac{3}{8}$
	For manifold block CPE10, for thread $\frac{1}{4}$ NPT	174165 B- $\frac{1}{4}$ -NPT
	For manifold block CPE14, CPE18, for thread $\frac{3}{8}$ NPT	174169 B- $\frac{3}{8}$ -NPT
Separator for pressure zones		
	For manifold block CPE10	537515 VABD-B6-14-P-C
	For manifold block CPE14, CPE18	160997 PRSV- $\frac{1}{8}$
Silencer		
	For M3 thread	163978 U-M3
	For M5 thread	165003 UC-M5
	For M7 thread	161418 UC-M7
	For thread G $\frac{1}{8}$	161419 UC- $\frac{1}{8}$
	For thread G $\frac{1}{4}$	165004 UC- $\frac{1}{4}$
	For thread G $\frac{3}{8}$	2309 U- $\frac{3}{8}$
	For thread $\frac{1}{4}$ NPT	12639 U- $\frac{1}{4}$ -B-NPT
	For thread $\frac{3}{8}$ NPT	12740 U- $\frac{3}{8}$ -B-NPT
Manual override tool		
	For KMYZ coils	157600 AHB-MZB
	For EB coils	157601 AHB-MEB
Inscription labels		
	–	18576 IBS-6x10


Accessories

Solenoid Valves CPE, Compact Performance – Inch Series

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Ordering Data – Plug Sockets, Plug Sockets with Cable for KMYZ Solenoid Coils				Technical data → www.festo.com/catalog/kmyz	
	Voltage	Cable length [ft]	Switching status display with LED	Part No.	Type
Plug socket with PUR cable					
	24 V DC	8.2	■	193687	KMYZ-9-24-2,5-LED-PUR-B
		16.4	■	193689	KMYZ-9-24-5-LED-PUR-B
		32.8	■	196063	KMYZ-9-24-10-LED-PUR-B
Plug socket with PVC cable and plug M8x1					
	24 V DC	1.6	■	196064	KMYZ-9-24-M8-0,5-LED-B
		8.2	■	196065	KMYZ-9-24-M8-2,5-LED-B

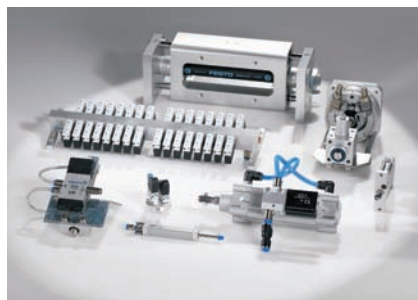
Ordering Data – Plug Sockets, Plug Sockets with Cable for EB Solenoid Coils				Technical data → www.festo.com/catalog/MSSD	
	Voltage	Cable length [ft]	Switching status display with LED	Part No.	Type
Plug socket without cable					
	–	–	–	151687	MSSD-EB
	–	–	–	539712	MSSD-EB-M12
Plug socket without cable with insulation displacement technology					
	–	–	–	192745	MSSD-EB-S-M14
Plug socket with PVC cable				Technical data → www.festo.com/catalog/KMEB	
	24 V DC	8.2	■	151688	KMEB-1-24-2,5-LED
	24 V DC	16.4	■	151689	KMEB-1-24-5-LED
	24 V DC	32.8	■	193457	KMEB-1-24-10-LED
	Up to 240 V	8.2	–	151690	KMEB-1-230-2,5
	Up to 240 V	16.4	–	151691	KMEB-1-230-5
Plug socket with PUR cable					
	24 V DC	8.2	■	174844	KMEB-2-24-2,5-LED
	24 V DC	16.4	■	174845	KMEB-2-24-5-LED
	Up to 240 V	8.2	–	174846	KMEB-2-230-2,5
	Up to 240 V	16.4	–	174847	KMEB-2-230-5

Ordering Data – Illuminating Seals for EB Solenoid Coils			Technical data → www.festo.com/catalog/MEB	
	Voltage		Part No.	Type
	[V DC]	[V AC]		
	12 ... 24	–	151717	MEB-LD-12-24DC
	–	230	151718	MEB-LD-230AC

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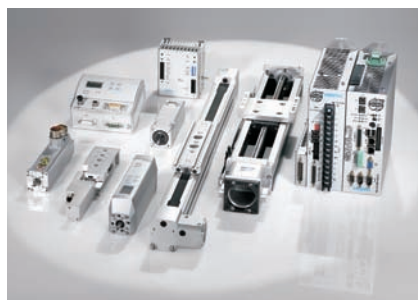
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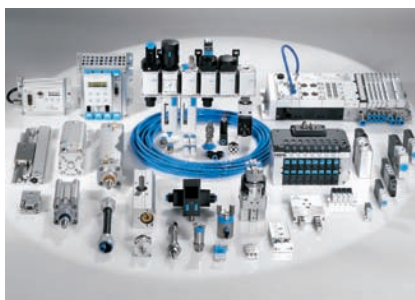
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