



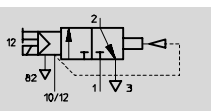
- Electrically actuated valves
- Performance optimised sizes
- Minimal width
- High flow rates
- Low power consumption

# Solenoid valves CPE, Compact Performance

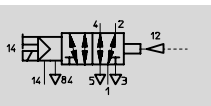
Features



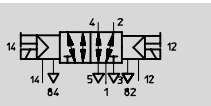
## Function<sup>1)</sup>



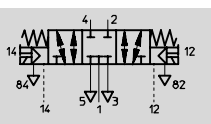
1) 3/2-way, e.g. with external pilot air, normally closed



1) 5/2-way, single solenoid, e.g. with external pilot air



1) 5/2-way, double solenoid, e.g. with external pilot air



1) 5/3-way, e.g. with external pilot air, normally closed

- - Width  
10 ... 24 mm

- - Flow rate  
180 ... 3,200 l/min

- - Voltage  
24 V DC  
110 V AC  
230 V AC

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

Can be mounted on site:  
- on cylinders,  
- on moving system components.  
- Choice of installation either individual, top-hat rail or wall mounted.

Micro CPE10, Mini CPE14 and Midi CPE18:  
Simple structure comprising compact valve manifolds through modular manifold blocks.  
Possible combinations → 2 / 2.1-58

Shorter tubing lengths with minimal air volumes:

- fast switching times
  - quick reaction times
- Optimised 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.

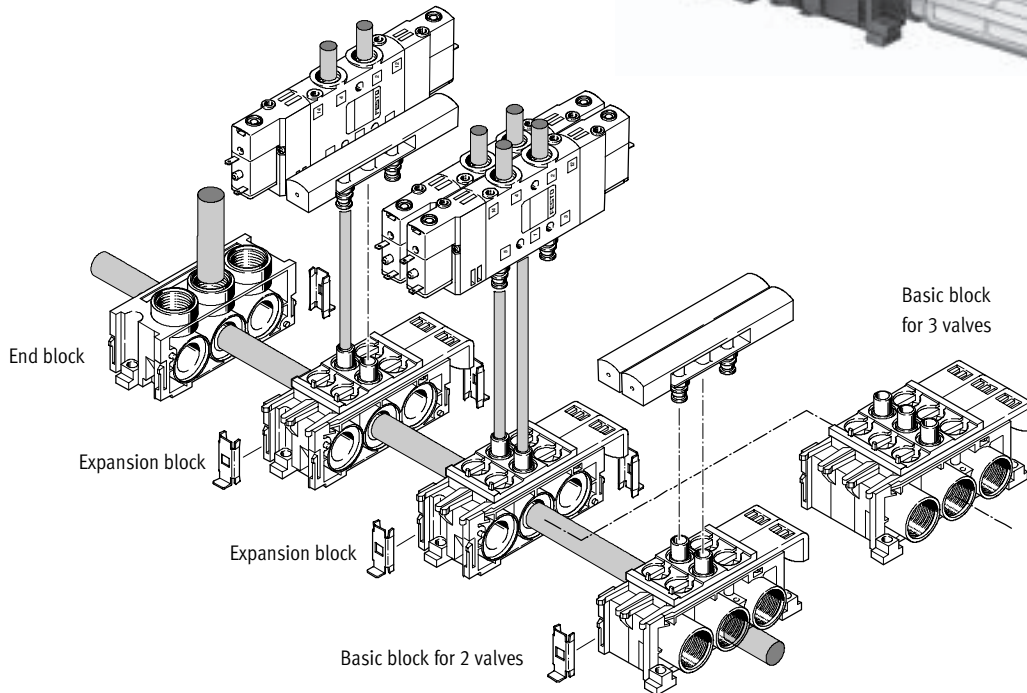
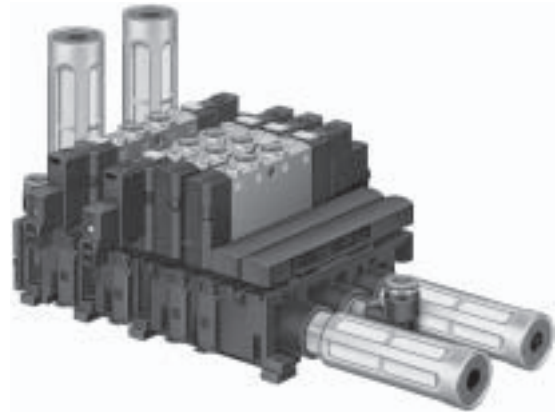
# Solenoid valves CPE, Compact Performance

Features

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## Manifold assembly for Micro CPE10, Mini CPE14 and Midi CPE18

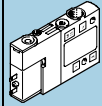
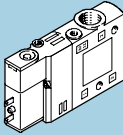
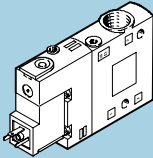
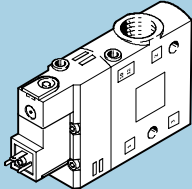
- From individual valves through to compact valve manifolds thanks to modular sub-base systems made from high impact, fibre glass reinforced polyamide.
- Different pressure zones can be implemented with closed PRS channels in basic and expansion blocks.
- Supply and exhaust air can be connected at both ends with connections on basic and end blocks.
- Supply and exhaust air can be connected at the end block, both from the side and from the top.
- No screws required for mounting thanks to quick connecting clips.
- Possible combinations  
→ 2 / 2.1-58

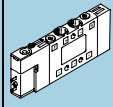
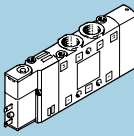
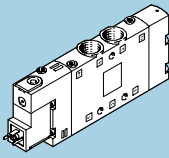
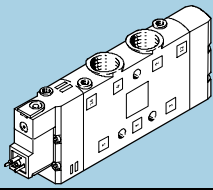


# Solenoid valves CPE, Compact Performance

Product range overview



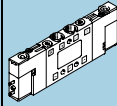
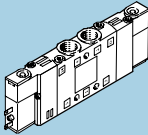
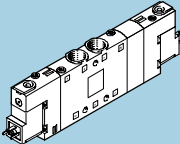
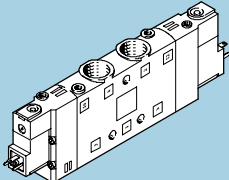
3/2-way valves						
Type			Micro CPE10	Mini CPE14	Midi CPE18	Maxi CPE24
Grid dimension			10 mm	14 mm	18 mm	24 mm
<b>Nominal flow rate [l/min]</b>						
Threaded	M5	190	-	-	-	-
	M7	400	-	-	-	-
	G1/8	-	900	-	-	-
	G1/4	-	-	1,300	-	-
	G3/8	-	-	-	-	2,500
Push-in connector	QS-4	190	-	-	-	-
	QS-6	300	510	-	-	-
	QS-8	-	810	850	-	-
	QS-10	-	-	1,000	1,250	-
	QS-12	-	-	-	-	1,650
<b>Operating voltage</b>						
24 V DC			■	■	■	■
110 V AC			-	-	■	■
230 V AC			-	-	■	■
Technical data →			2 / 2.1-12	2 / 2.1-13	2 / 2.1-14	2 / 2.1-15

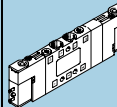
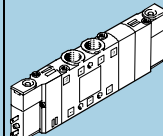
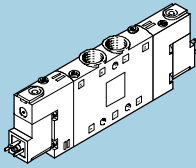
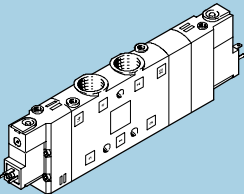
5/2-way valves						
Type			Micro CPE10	Mini CPE14	Midi CPE18	Maxi CPE24
Grid dimension			10 mm	14 mm	18 mm	24 mm
<b>Nominal flow rate [l/min]</b>						
Threaded	M5	180	-	-	-	-
	M7	350	-	-	-	-
	G1/8	-	800	-	-	-
	G1/4	-	-	1,500	-	-
	G3/8	-	-	-	-	2,900
Push-in connector	QS-4	180	-	-	-	-
	QS-6	320	400	-	-	-
	QS-8	-	680	850	-	-
	QS-10	-	-	1,000	1,250	-
	QS-12	-	-	-	-	1,650
<b>Operating voltage</b>						
24 V DC			■	■	■	■
110 V AC			-	-	■	■
230 V AC			-	-	■	■
Technical data →			2 / 2.1-22	2 / 2.1-23	2 / 2.1-24	2 / 2.1-25

# Solenoid valves CPE, Compact Performance

Product range overview



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
<b>Nominal flow rate [l/min]</b>					
Threaded	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
<b>Operating voltage</b>					
24 V DC		■	■	■	■
110 V AC		–	–	■	■
230 V AC		–	–	■	■
Technical data →		2 / 2.1-32	2 / 2.1-33	2 / 2.1-34	2 / 2.1-35

5/3-way valves					
Type		Micro CPE10	Mini CPE14	Midi CPE18	Maxi CPE24
Grid dimension		10 mm	14 mm	18 mm	24 mm
<b>Nominal flow rate [l/min]</b>					
Threaded	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
<b>Operating voltage</b>					
24 V DC		■	■	■	■
110 V AC		–	–	■	■
230 V AC		–	–	■	■
Technical data →		2 / 2.1-41	2 / 2.1-42	2 / 2.1-43	2 / 2.1-44

# Solenoid valves CPE, Compact Performance



Product range overview

Directional control valves for standard applications  
Compact Performance

2.1

Accessories				
Type	Micro CPE10	Mini CPE14	Midi CPE18	Maxi CPE24
Grid dimension	10 mm	14 mm	18 mm	24 mm
Basic block for 2 valves with PRS channels				
closed	■	■	■	-
open	■	■	■	-
Basic block for 3 valves with PRS channels				
closed	■	■	■	-
open	■	■	■	-
Expansion block for 2 valves with PRS channels				
closed	■	■	■	-
open	■	■	■	-
End block	■	■	■	-
Blanking plate	■	■	■	-
Silencer for port				
3 or 5	■	■	■	-
82 or 84	■	■	■	-
Blanking plugs	■	■	■	-
Manual override tool	■	■	■	■
Inscription labels	■	■	■	■
Plug sockets				
with PUR cable	■	■	■	■
without cable	-	-	■	■
Luminescent seal	-	-	■	■
Technical data starting on → 2 / 2.1-54				

# Solenoid valves CPE, Compact Performance

Type codes

CPE 10 - M1BH - 5/3 B S - QS-6 - B

Type	
CPE	Solenoid valve, Compact Performance

Width	
10	10 mm Micro
14	14 mm Mini
18	18 mm Midi
24	24 mm Maxi

Operating voltage	
M1BH	24 V DC with plug pattern for KMYZ-9
M1H	24 V DC
M2H	110 V AC
M3H	230 V AC

Valve function	
3	3/2-way
5	5/2-way, single solenoid
5L	5/2-way, single solenoid, with pneumatic spring return
5J	5/2-way, double solenoid
5/3	5/3-way, single solenoid

Normal position	
GL	Normally closed, with pneumatic spring return
OL	Normally open, with pneumatic spring return
B	Pressurised
E	Exhausted
G	Closed

Pilot air supply	
	With internal pilot air
S	With external pilot air

Pneumatic connection	
Female thread	
M5	M5
M7	M7
G <sup>1</sup> / <sub>8</sub>	G <sup>1</sup> / <sub>8</sub>
G <sup>1</sup> / <sub>4</sub>	G <sup>1</sup> / <sub>4</sub>
G <sup>3</sup> / <sub>8</sub>	G <sup>3</sup> / <sub>8</sub>
Push-in connector for standard tubing	
QS-4	For tubing 4 mm O.D.
QS-6	For tubing 6 mm O.D.
QS-8	For tubing 8 mm O.D.
QS-10	For tubing 10 mm O.D.
QS-12	For tubing 12 mm O.D.

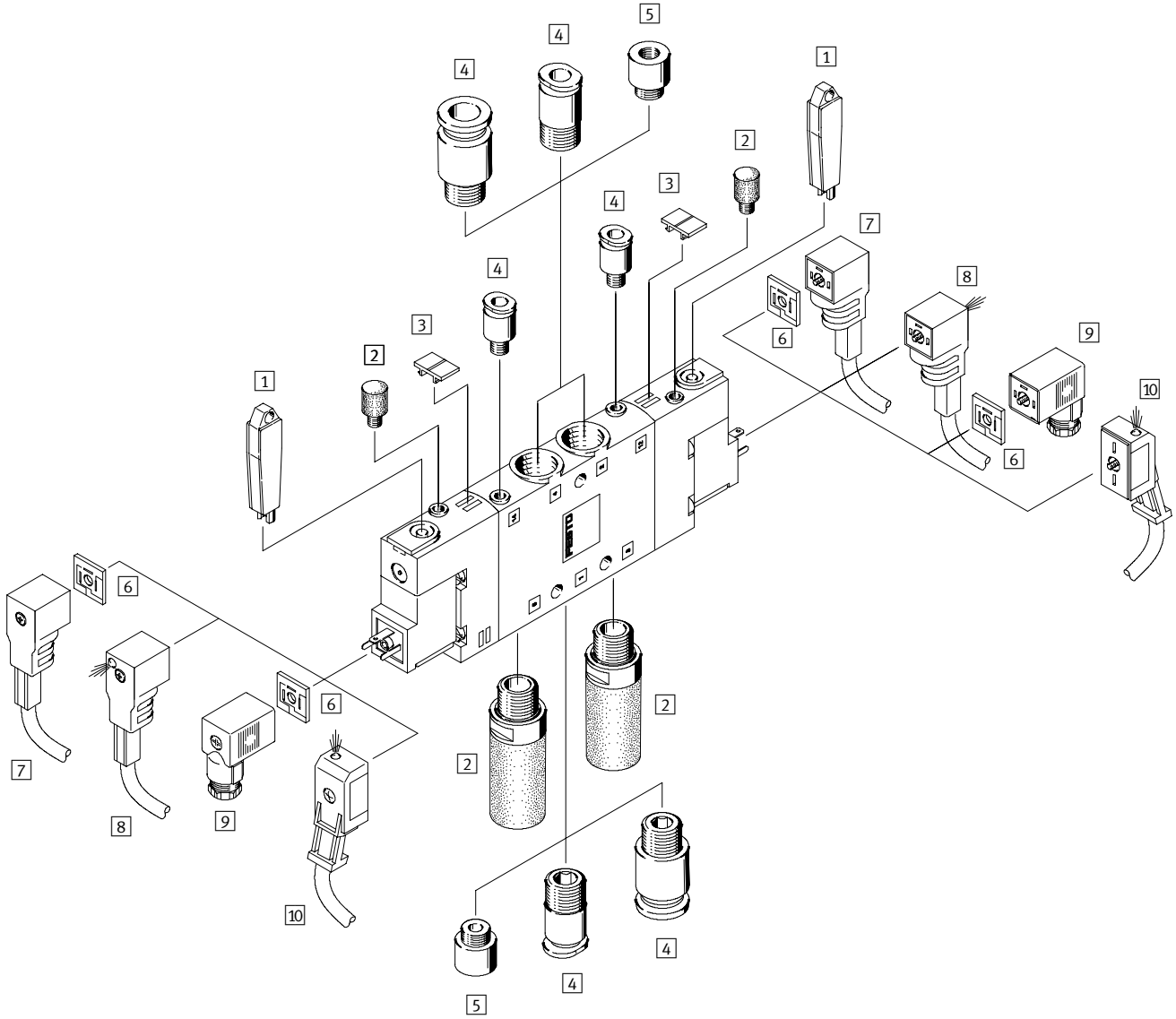
Generation	
B	B series

# Solenoid valves CPE, Compact Performance

Peripherals overview



## Individual valve



Directional control valves for standard applications  
Compact Performance

2.1



# Solenoid valves CPE, Compact Performance



Peripherals overview

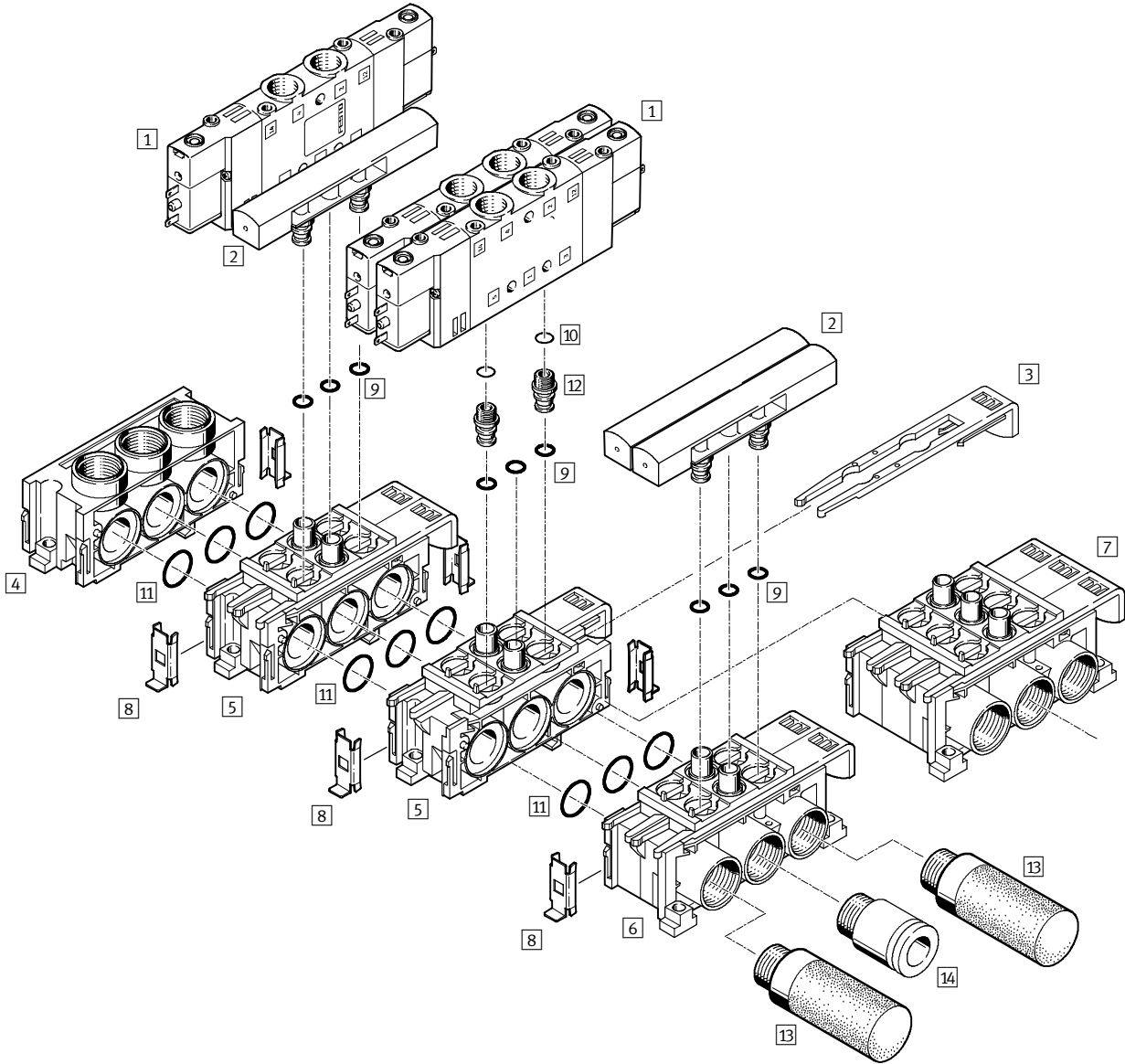
Accessories – Individual valve						
	Brief description	CPE10	CPE14	CPE18	CPE24	→ Page
1	Manual override tool AHB	■	■	■	■	2 / 2.1-60
2	Silencers U or UC	■	■	■	■	2 / 2.1-60
3	Inscription labels IBS-6x10	■	■	■	■	2 / 2.1-60
4	Quick Star push-in fitting QS	■	■	■	■	Volume 3
5	M7 to M5 reducer	■	-	-	-	-
6	Luminescent seal MEB-LD	-	-	■	■	2 / 2.1-59
7	Plug socket with cable KMEB	-	-	■	■	2 / 2.1-59
8	Plug socket with cable KMEB	-	-	■	■	2 / 2.1-59
9	Standard plug socket MSSD-EB	-	-	■	■	2 / 2.1-59
10	Plug socket with cable KMYZ-9	■	■	-	-	2 / 2.1-59

# Solenoid valves CPE, Compact Performance

Peripherals overview



## Manifold



Directional control valves for standard applications  
Compact Performance

2.1

# Solenoid valves CPE, Compact Performance

Peripherals overview

Accessories – Manifold		
	Brief description	→ Page
1	Solenoid valve CPE	–
2	Blanking plate	For blanking vacant positions
3	Slide clip	For attaching the valve
4	End plate <sup>1)</sup>	–
5	Expansion block <sup>1)</sup>	For 2 valves
6	Sub-base <sup>1)</sup>	For 2 valves
7	Sub-base <sup>1)</sup>	For 3 valves
8	Connecting clip	For connecting the blocks
9	Seal	Included in scope of delivery
10	Seal	Included in scope of delivery
11	Seal	Included in scope of delivery
12	Fitting	Included in scope of delivery
13	Silencers U or UC	For connection 3, 5, 82 or 84
14	Push-in fitting QS	For connection 1, 2, 4, 12 or 14, for standard tubing
–	Manual override tool AHB	–
–	Inscription labels IBS-6x10	–

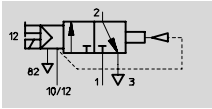
1) Possible combinations → 2 / 2.1-58

# Solenoid valves CPE, Compact Performance

Technical data – 3/2-way valves



Function<sup>1)</sup>



1) e.g. with external pilot air, normally closed

- - Flow rate  
190 ... 2,500 l/min

- - Voltage  
24 V DC  
110, 230 V AC



Directional control valves for standard applications  
Compact Performance

2.1

General technical data – Micro CPE10			
		Threaded connection	Push-in connector
Valve function		3/2, single solenoid	
Design		Piston spool	
Sealing principle		Soft	
Actuation type		Electrical	
Type of reset		Pneumatic	
Type of control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Internal pilot air supply: non-reversible External pilot air supply: reversible	
Exhaust function		With flow control	
Manual override		Resetting, detenting via tool accessory	
Mounting position		Any	
Width		10 mm	
Grid dimension		12 mm	
Nominal size		4 mm	
Standard nominal flow rate		M5: 190 l/min M7: 400 l/min	QS-4: 190 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
Response time on/off		14/14 ms	
Product weight		45 g	
Materials		→ 2 / 2.1-16	

Operating and environmental conditions			
		Threaded connection	Push-in connector
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure range	internal pilot air	2.5 ... 8 bar	
	external pilot air	-0.9 ... +10 bar	
Pilot pressure range		2.5 ... 8 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	

Electrical data			
		Threaded connection	Push-in connector
Operating voltage		24 V DC +10/-15%	
Power consumption		1.28 W	
Degree of protection with plug socket		IP65 (EN 60 529)	

# Solenoid valves CPE, Compact Performance

FESTO

Technical data – 3/2-way valves

General technical data – Mini CPE14			
		Threaded connection	Push-in connector
Valve function		3/2, single solenoid	
Design		Piston spool	
Sealing principle		Soft	
Actuation type		Electrical	
Type of reset		Pneumatic	
Type of control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Internal pilot air supply: non-reversible External pilot air supply: reversible	
Exhaust function		With flow control	
Manual override		Resetting, detenting via tool accessory	
Mounting position		Any	
Width		14 mm	
Grid dimension		16 mm	
Nominal size		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
Response time on/off		27/16 ms	
Product weight		60 g	95 g
Materials		➔ 2 / 2.1-16	

Operating and environmental conditions			
		Threaded connection	Push-in connector
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure range	internal pilot air	2.5 ...8 bar	
	external pilot air	-0.9 ...+10 bar	
Pilot pressure range		2.5 ...8 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	

Electrical data			
		Threaded connection	Push-in connector
Operating voltage		24 V DC +10/-15%	
Power consumption		1.28 W	
Degree of protection with plug socket		IP65 (EN 60 529)	

# Solenoid valves CPE, Compact Performance

Technical data – 3/2-way valves



General technical data – Midi CPE18			
		Threaded connection	Push-in connector
Valve function		3/2, single solenoid	
Design		Piston spool	
Sealing principle		Soft	
Actuation type		Electrical	
Type of reset		Pneumatic	
Type of control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Internal pilot air supply: non-reversible External pilot air supply: reversible	
Exhaust function		With flow control	
Manual override		Resetting, detenting via tool accessory	
Mounting position		Any	
Width		18 mm	
Grid dimension		20 mm	
Nominal size		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
Response time on/off		28/18 ms	
Product weight		150 g	
Materials		➔ 2 / 2.1-16	

Operating and environmental conditions			
		Threaded connection	Push-in connector
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure range	internal pilot air	2.5 ...10 bar	
	external pilot air	-0.9 ...+10 bar	
Pilot pressure range		2.5 ...10 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	

Electrical data			
		Threaded connection	Push-in connector
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	
Degree of protection with plug socket		IP65 (EN 60 529)	

# Solenoid valves CPE, Compact Performance

FESTO

Technical data – 3/2-way valves

General technical data – Maxi CPE24			
		Threaded connection	Push-in connector
Valve function		3/2, single solenoid	
Design		Piston spool	
Sealing principle		Soft	
Actuation type		Electrical	
Type of reset		Pneumatic	
Type of control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Internal pilot air supply: non-reversible External pilot air supply: reversible	
Exhaust function		With flow control	
Manual override		Resetting, detenting via tool accessory	
Mounting position		Any	
Width		24 mm	
Nominal size		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
Response time on/off		50/33 ms	
Product weight		220 g	
Materials		→ 2 / 2.1-16	

Operating and environmental conditions			
		Threaded connection	Push-in connector
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure range	internal pilot air	2.5 ...10 bar	
	external pilot air	-0.9 ...+10 bar	
Pilot pressure range		2.5 ...10 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	

Electrical data			
		Threaded connection	Push-in connector
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	
Degree of protection with plug socket		IP65 (EN 60 529)	

Directional control valves for standard applications  
Compact Performance

2.1

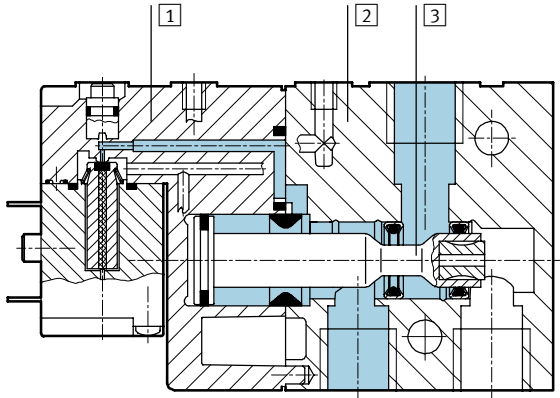
# Solenoid valves CPE, Compact Performance

Technical data – 3/2-way valves



## Materials

Sectional view



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



# Solenoid valves CPE, Compact Performance

Technical data – 3/2-way valves



Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Dimensions – Micro CPE10		Threaded connection M5	Push-in fitting QS-4	Push-in fitting QS-6
Threaded connection M7				

1 Manual override facility  
2 Connection for plug socket  
3 Location for inscription labels  
4 Pilot air connection  
5 M7 to M5 reducer  
6 QS push-in connection

Directional control valves for standard applications  
 Compact Performance  
**2.1**

### Connection diagrams

Micro CPE10, Mini CPE14	Midi CPE18, Maxi CPE24
<p>Suitable for plug socket KMYZ-9-...</p>	<p>Suitable for plug sockets to DIN 43 650, type C KMEB-1-... KMEB-2-... MSSD-EB</p>

# Solenoid valves CPE, Compact Performance

Technical data – 3/2-way valves

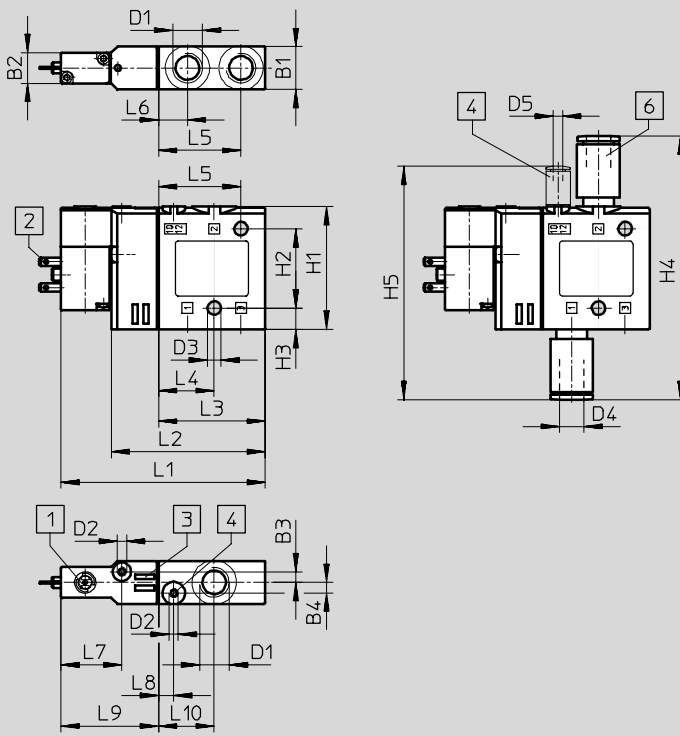


## Dimensions – Mini CPE14, Midi CPE18, Maxi CPE24

Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Threaded connection

Push-in connector



- 1 Manual override facility
- 2 Connection for plug socket
- 3 Location for inscription labels
- 4 Pilot air connection
- 6 QS push-in connection

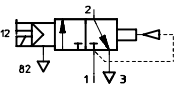
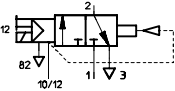
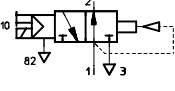
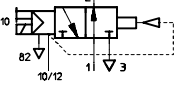
Pneumatic connection	B1	B2	B3	B4	D1	D2	D3 Ø	D4 Ø	D5 Ø	H1	H2	H3
<b>Mini CPE14</b>												
G $\frac{1}{8}$	14	10	3.5	3.5	G $\frac{1}{8}$	M3	4.4	–	–	40.3	26	7
QS-6								6	3			
QS-8								8				
<b>Midi CPE18</b>												
G $\frac{1}{4}$	18	17.5	3.5	3.5	G $\frac{1}{4}$	M5	4.4	–	–	57	45	6
QS-8								8	6			
QS-10								10				
<b>Maxi CPE24</b>												
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				

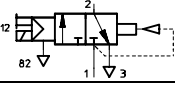
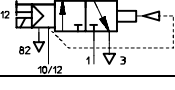
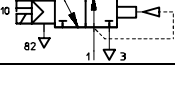
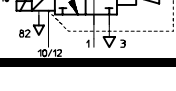
Pneumatic connection	H4	H5	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10
<b>Mini CPE14</b>												
G $\frac{1}{8}$	–	–	67	50.5	35	18.3	27	9.5	20	5	32	18.3
QS-6	75.3	70.9										
QS-8	86.3	76.4										
<b>Midi CPE18</b>												
G $\frac{1}{4}$	–	–	94	69	50	28	38	17.5	29	5.5	44	27.5
QS-8	98	90.5										
QS-10	105	94										
<b>Maxi CPE24</b>												
G $\frac{3}{8}$	–	–	110	85	65	35	50	20	33	10	45	35
QS-10	108	99.5										
QS-12	113	102										

# Solenoid valves CPE, Compact Performance



Technical data – 3/2-way valves

Ordering data – Micro CPE10				
Circuit symbol	Description	Pneumatic connection	Part No.	Type
Operating voltage 24 V DC				
	Normally closed Internal pilot air supply	M5	196 845	CPE10-M1BH-3GL-M5
		M7	196 915	CPE10-M1BH-3GL-M7
		QS-4	196 846	CPE10-M1BH-3GL-QS-4
		QS-6	196 847	CPE10-M1BH-3GL-QS-6
	Normally closed External pilot air supply	M5	196 848	CPE10-M1BH-3GLS-M5
		M7	196 916	CPE10-M1BH-3GLS-M7
		QS-4	196 849	CPE10-M1BH-3GLS-QS-4
		QS-6	196 850	CPE10-M1BH-3GLS-QS-6
	Normally open Internal pilot air supply	M5	196 851	CPE10-M1BH-3OL-M5
		M7	196 917	CPE10-M1BH-3OL-M7
		QS-4	196 852	CPE10-M1BH-3OL-QS-4
		QS-6	196 853	CPE10-M1BH-3OL-QS-6
	Normally open External pilot air supply	M5	196 854	CPE10-M1BH-3OLS-M5
		M7	196 918	CPE10-M1BH-3OLS-M7
		QS-4	196 855	CPE10-M1BH-3OLS-QS-4
		QS-6	196 856	CPE10-M1BH-3OLS-QS-6

Ordering data – Mini CPE14				
Circuit symbol	Description	Pneumatic connection	Part No.	Type
Operating voltage 24 V DC				
	Normally closed Internal pilot air supply	G1/8	196 929	CPE14-M1BH-3GL-1/8
		QS-6	196 887	CPE14-M1BH-3GL-QS-6
		QS-8	196 888	CPE14-M1BH-3GL-QS-8
	Normally closed External pilot air supply	G1/8	196 930	CPE14-M1BH-3GLS-1/8
		QS-6	196 889	CPE14-M1BH-3GLS-QS-6
		QS-8	196 890	CPE14-M1BH-3GLS-QS-8
	Normally open Internal pilot air supply	G1/8	196 931	CPE14-M1BH-3OL-1/8
		QS-6	196 891	CPE14-M1BH-3OL-QS-6
		QS-8	196 892	CPE14-M1BH-3OL-QS-8
	Normally open External pilot air supply	G1/8	196 932	CPE14-M1BH-3OLS-1/8
		QS-6	196 893	CPE14-M1BH-3OLS-QS-6
		QS-8	196 894	CPE14-M1BH-3OLS-QS-8

Directional control valves for standard applications  
Compact Performance

2.1

# Solenoid valves CPE, Compact Performance

Technical data – 3/2-way valves



Ordering data – Midi CPE18				
Circuit symbol	Description	Pneumatic connection	Part No.	Type
<b>Operating voltage 24 V DC</b>				
	Normally closed Internal pilot air supply	G $\frac{1}{4}$	163 141	CPE18-M1H-3GL- $\frac{1}{4}$
		QS-8	163 149	CPE18-M1H-3GL-QS-8
		QS-10	163 157	CPE18-M1H-3GL-QS-10
	Normally closed External pilot air supply	G $\frac{1}{4}$	163 145	CPE18-M1H-3GLS- $\frac{1}{4}$
		QS-8	163 153	CPE18-M1H-3GLS-QS-8
		QS-10	163 161	CPE18-M1H-3GLS-QS-10
	Normally open Internal pilot air supply	G $\frac{1}{4}$	163 140	CPE18-M1H-3OL- $\frac{1}{4}$
		QS-8	163 148	CPE18-M1H-3OL-QS-8
		QS-10	163 156	CPE18-M1H-3OL-QS-10
	Normally open External pilot air supply	G $\frac{1}{4}$	163 144	CPE18-M1H-3OLS- $\frac{1}{4}$
		QS-8	163 152	CPE18-M1H-3OLS-QS-8
		QS-10	163 160	CPE18-M1H-3OLS-QS-10
<b>Operating voltage 110 V AC</b>				
	Normally closed Internal pilot air supply	G $\frac{1}{4}$	163 761	CPE18-M2H-3GL- $\frac{1}{4}$
		QS-8	163 769	CPE18-M2H-3GL-QS-8
		QS-10	163 777	CPE18-M2H-3GL-QS-10
	Normally closed External pilot air supply	G $\frac{1}{4}$	163 765	CPE18-M2H-3GLS- $\frac{1}{4}$
		QS-8	163 773	CPE18-M2H-3GLS-QS-8
		QS-10	163 781	CPE18-M2H-3GLS-QS-10
	Normally open Internal pilot air supply	G $\frac{1}{4}$	163 760	CPE18-M2H-3OL- $\frac{1}{4}$
		QS-8	163 768	CPE18-M2H-3OL-QS-8
		QS-10	163 776	CPE18-M2H-3OL-QS-10
	Normally open External pilot air supply	G $\frac{1}{4}$	163 764	CPE18-M2H-3OLS- $\frac{1}{4}$
		QS-8	163 772	CPE18-M2H-3OLS-QS-8
		QS-10	163 780	CPE18-M2H-3OLS-QS-10
<b>Operating voltage 230 V AC</b>				
	Normally closed Internal pilot air supply	G $\frac{1}{4}$	163 785	CPE18-M3H-3GL- $\frac{1}{4}$
		QS-8	163 793	CPE18-M3H-3GL-QS-8
		QS-10	163 801	CPE18-M3H-3GL-QS-10
	Normally closed External pilot air supply	G $\frac{1}{4}$	163 789	CPE18-M3H-3GLS- $\frac{1}{4}$
		QS-8	163 797	CPE18-M3H-3GLS-QS-8
		QS-10	163 805	CPE18-M3H-3GLS-QS-10
	Normally open Internal pilot air supply	G $\frac{1}{4}$	163 784	CPE18-M3H-3OL- $\frac{1}{4}$
		QS-8	163 792	CPE18-M3H-3OL-QS-8
		QS-10	163 800	CPE18-M3H-3OL-QS-10
	Normally open External pilot air supply	G $\frac{1}{4}$	163 788	CPE18-M3H-3OLS- $\frac{1}{4}$
		QS-8	163 796	CPE18-M3H-3OLS-QS-8
		QS-10	163 804	CPE18-M3H-3OLS-QS-10

# Solenoid valves CPE, Compact Performance



Technical data – 3/2-way valves

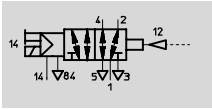
Order data – Maxi CPE24				
Circuit symbol	Description	Pneumatic connection	Part No.	Type
<b>Operating voltage 24 V DC</b>				
	Normally closed Internal pilot air supply	G $\frac{3}{8}$	163 165	CPE24-M1H-3GL- $\frac{3}{8}$
		QS-10	163 173	CPE24-M1H-3GL-QS-10
		QS-12	163 181	CPE24-M1H-3GL-QS-12
	Normally closed External pilot air supply	G $\frac{3}{8}$	163 169	CPE24-M1H-3GLS- $\frac{3}{8}$
		QS-10	163 177	CPE24-M1H-3GLS-QS-10
		QS-12	163 185	CPE24-M1H-3GLS-QS-12
	Normally open Internal pilot air supply	G $\frac{3}{8}$	163 164	CPE24-M1H-3OL- $\frac{3}{8}$
		QS-10	163 172	CPE24-M1H-3OL-QS-10
		QS-12	163 180	CPE24-M1H-3OL-QS-12
	Normally open External pilot air supply	G $\frac{3}{8}$	163 168	CPE24-M1H-3OLS- $\frac{3}{8}$
		QS-10	163 176	CPE24-M1H-3OLS-QS-10
		QS-12	163 184	CPE24-M1H-3OLS-QS-12
<b>Operating voltage 110 V AC</b>				
	Normally closed Internal pilot air supply	G $\frac{3}{8}$	163 809	CPE24-M2H-3GL- $\frac{3}{8}$
		QS-10	163 817	CPE24-M2H-3GL-QS-10
		QS-12	163 825	CPE24-M2H-3GL-QS-12
	Normally closed External pilot air supply	G $\frac{3}{8}$	163 813	CPE24-M2H-3GLS- $\frac{3}{8}$
		QS-10	163 821	CPE24-M2H-3GLS-QS-10
		QS-12	163 829	CPE24-M2H-3GLS-QS-12
	Normally open Internal pilot air supply	G $\frac{3}{8}$	163 808	CPE24-M2H-3OL- $\frac{3}{8}$
		QS-10	163 816	CPE24-M2H-3OL-QS-10
		QS-12	163 824	CPE24-M2H-3OL-QS-12
	Normally open External pilot air supply	G $\frac{3}{8}$	163 812	CPE24-M2H-3OLS- $\frac{3}{8}$
		QS-10	163 820	CPE24-M2H-3OLS-QS-10
		QS-12	163 828	CPE24-M2H-3OLS-QS-12
<b>Operating voltage 230 V AC</b>				
	Normally closed Internal pilot air supply	G $\frac{3}{8}$	163 833	CPE24-M3H-3GL- $\frac{3}{8}$
		QS-10	163 841	CPE24-M3H-3GL-QS-10
		QS-12	163 849	CPE24-M3H-3GL-QS-12
	Normally closed External pilot air supply	G $\frac{3}{8}$	163 837	CPE24-M3H-3GLS- $\frac{3}{8}$
		QS-10	163 845	CPE24-M3H-3GLS-QS-10
		QS-12	163 853	CPE24-M3H-3GLS-QS-12
	Normally open Internal pilot air supply	G $\frac{3}{8}$	163 832	CPE24-M3H-3OL- $\frac{3}{8}$
		QS-10	163 840	CPE24-M3H-3OL-QS-10
		QS-12	163 848	CPE24-M3H-3OL-QS-12
	Normally open External pilot air supply	G $\frac{3}{8}$	163 836	CPE24-M3H-3OLS- $\frac{3}{8}$
		QS-10	163 844	CPE24-M3H-3OLS-QS-10
		QS-12	163 852	CPE24-M3H-3OLS-QS-12

# Solenoid valves CPE, Compact Performance

Technical data – 5/2-way valves



Function<sup>1)</sup>



1) e.g. with external pilot air

- - Flow rate  
180 ... 3,200 l/min

- - Voltage  
24 V DC  
110, 230 V AC



Directional control valves for standard applications  
Compact Performance

2.1

General technical data – Micro CPE10			
		Threaded connection	Push-in connector
Valve function		5/2, single solenoid	
Design		Piston spool	
Sealing principle		Soft	
Actuation type		Electrical	
Type of reset		Pneumatic	
Type of control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Internal pilot air supply: non-reversible	
		External pilot air supply: reversible	
Exhaust function		With flow control	
Manual override		Resetting, detenting via tool accessory	
Mounting position		Any	
Width		10 mm	
Grid dimension		12 mm	
Nominal size		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
Response time on/off		16/16 ms	
Product weight		56 g	
Materials		→ 2 / 2.1-26	

Operating and environmental conditions			
		Threaded connection	Push-in connector
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure range	internal pilot air	3 ...8 bar	
	external pilot air	-0.9 ...+10 bar	
Pilot pressure range		3 ...8 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	

Electrical data			
		Threaded connection	Push-in connector
Operating voltage		24 V DC +10/-15%	
Power consumption		1.28 W	
Degree of protection with plug socket		IP65 (EN 60 529)	

# Solenoid valves CPE, Compact Performance

FESTO

Technical data – 5/2-way valves

General technical data – Mini CPE14			
		Threaded connection	Push-in connector
Valve function		5/2, single solenoid	
Design		Piston spool	
Sealing principle		Soft	
Actuation type		Electrical	
Type of reset		Pneumatic	
Type of control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Internal pilot air supply: non-reversible External pilot air supply: reversible	
Exhaust function		With flow control	
Manual override		Resetting, detenting via tool accessory	
Mounting position		Any	
Width		14 mm	
Grid dimension		16 mm	
Nominal size		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
Response time on/off		24/32 ms	
Product weight		95 g	143 g
Materials		➔ 2 / 2.1-26	

Operating and environmental conditions			
		Threaded connection	Push-in connector
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure range	internal pilot air	3 ...8 bar	
	external pilot air	-0.9 ...+10 bar	
Pilot pressure range		3 ...8 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	

Electrical data			
		Threaded connection	Push-in connector
Operating voltage		24 V DC +10/-15%	
Power consumption		1.28 W	
Degree of protection with plug socket		IP65 (EN 60 529)	

Directional control valves for standard applications  
Compact Performance

2.1

# Solenoid valves CPE, Compact Performance

Technical data – 5/2-way valves

FESTO

General technical data – Midi CPE18			
		Threaded connection	Push-in connector
Valve function		5/2, single solenoid	
Design		Piston spool	
Sealing principle		Soft	
Actuation type		Electrical	
Type of reset		Pneumatic	
Type of control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Internal pilot air supply: non-reversible External pilot air supply: reversible	
Exhaust function		With flow control	
Manual override		Resetting, detenting via tool accessory	
Mounting position		Any	
Width		18 mm	
Grid dimension		20 mm	
Nominal size		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
Response time on/off		26/20 ms	
Product weight		220 g	
Materials		➔ 2 / 2.1-26	

Operating and environmental conditions			
		Threaded connection	Push-in connector
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure range	internal pilot air	2.5 ...10 bar	
	external pilot air	-0.9 ...+10 bar	
Pilot pressure range		2.5 ...10 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	

Electrical data			
		Threaded connection	Push-in connector
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	
Degree of protection with plug socket		IP65 (EN 60 529)	



# Solenoid valves CPE, Compact Performance

FESTO

Technical data – 5/2-way valves

General technical data – Maxi CPE24			
		Threaded connection	Push-in connector
Valve function		5/2, single solenoid	
Design		Piston spool	
Sealing principle		Soft	
Actuation type		Electrical	
Type of reset		Pneumatic	
Type of control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Internal pilot air supply: non-reversible External pilot air supply: reversible	
Exhaust function		With flow control	
Manual override		Resetting, detenting via tool accessory	
Mounting position		Any	
Width		24 mm	
Nominal size		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 $\frac{3}{8}$	∅ 10 or ∅ 12 mm
	3, 5	G $\frac{3}{8}$	G $\frac{3}{8}$
	12, 14	M5	∅ 6 mm
	84	M5	M5
Response time on/off		40/50 ms	
Product weight		360 g	
Materials		→ 2 / 2.1-26	

Operating and environmental conditions			
		Threaded connection	Push-in connector
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure range	internal pilot air	2.5 ...10 bar	
	external pilot air	-0.9 ...+10 bar	
Pilot pressure range		2.5 ...10 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	

Electrical data			
		Threaded connection	Push-in connector
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	
Degree of protection with plug socket		IP65 (EN 60 529)	

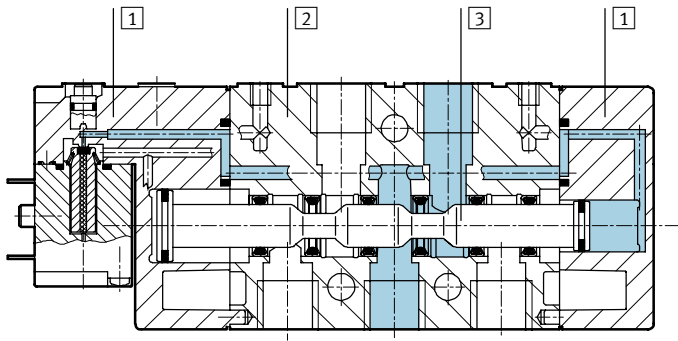
# Solenoid valves CPE, Compact Performance

Technical data – 5/2-way valves



## Materials

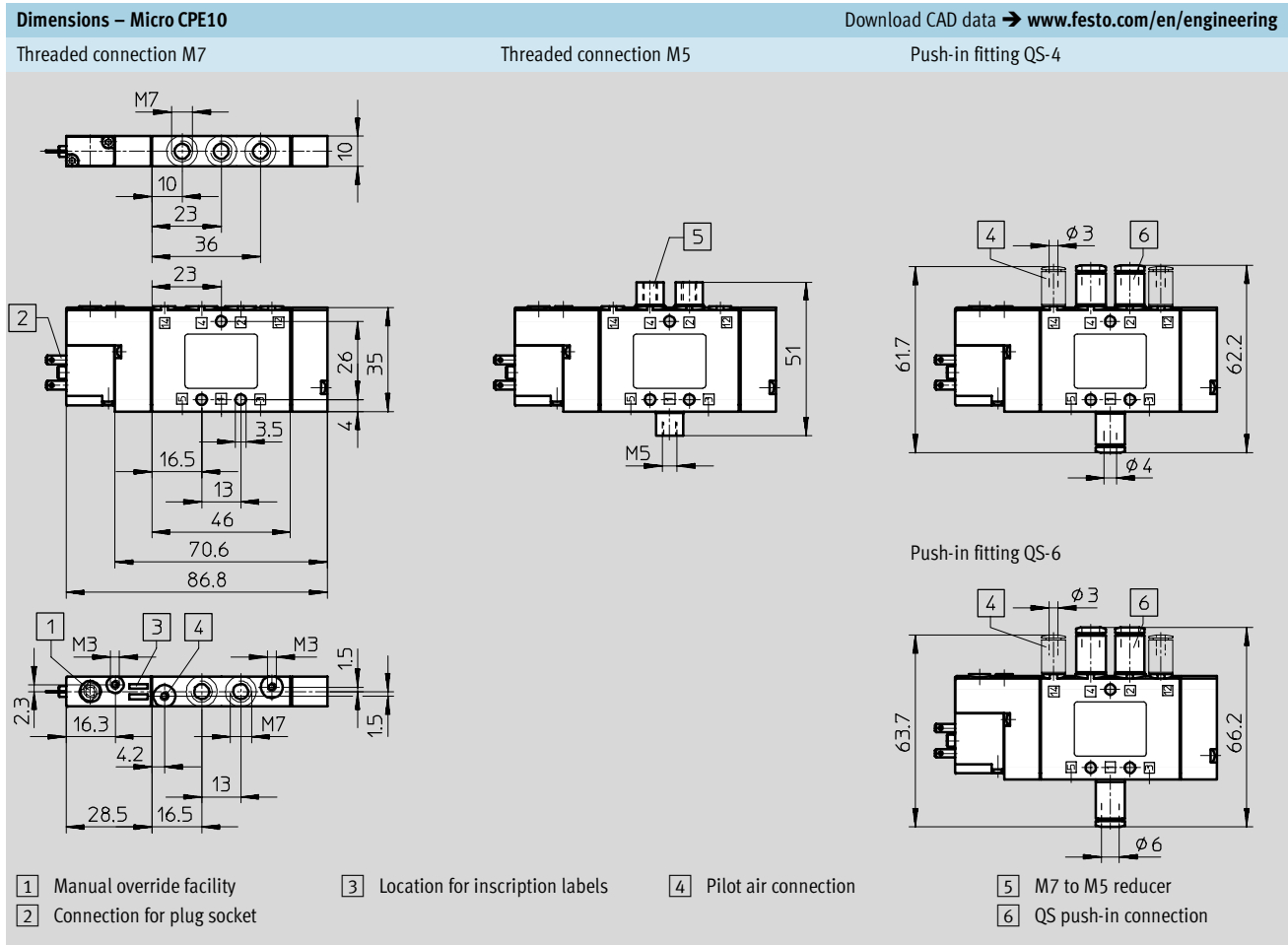
Sectional view



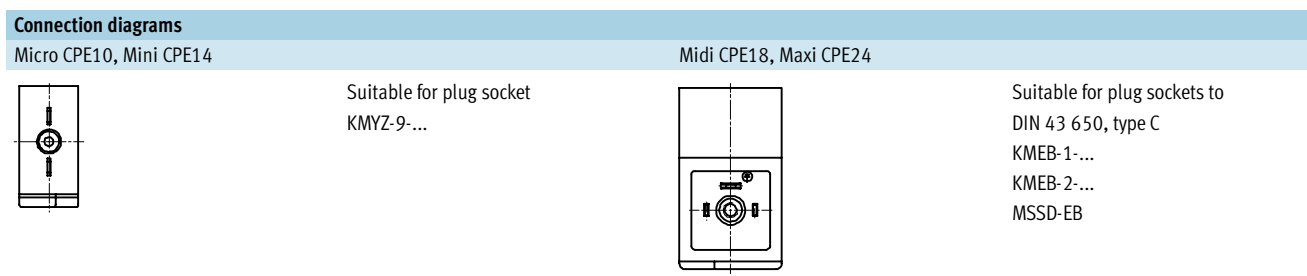
1	Plug cap	Polyamide
2	Housing	Die-cast aluminium
3	Piston spool	Steel
-	Seals	Nitrile rubber

# Solenoid valves CPE, Compact Performance

Technical data – 5/2-way valves



Directional control valves for standard applications  
 Compact Performance  
**2.1**



# Solenoid valves CPE, Compact Performance

Technical data – 5/2-way valves



**Dimensions – Mini CPE14, Midi CPE18, Maxi CPE24**

Threaded connection

Push-in connector

Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

1	Manual override facility
2	Connection for plug socket
3	Location for inscription labels
4	Pilot air connection
6	QS push-in connection

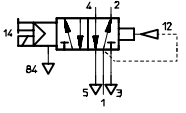
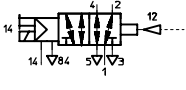
Pneumatic connection	B1	B2	B3	D1	D2	D3 ∅	D4 ∅	D5 ∅	H1	H2	H3	H4
<b>Mini CPE14</b>												
G $\frac{1}{8}$	14	10	3.5	G $\frac{1}{8}$	M3	4.4	–	–	40.3	26	7	–
QS-6							6	3				75.3
QS-8							8	–				86.3
<b>Midi CPE18</b>												
G $\frac{1}{4}$	18	17.5	3.5	G $\frac{1}{4}$	M5	4.4	–	–	57	45	6	–
QS-8							8	6				98
QS-10							10	–				105
<b>Maxi CPE24</b>												
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

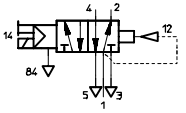
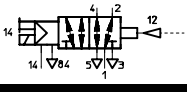
Pneumatic connection	H5	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11
<b>Mini CPE14</b>												
G $\frac{1}{8}$	–	101.5	85	54	18.3	27	9.5	20	5	32	18.3	17.5
QS-6	70.9											
QS-8	76.4											
<b>Midi CPE18</b>												
G $\frac{1}{4}$	–	138	113	75	28	38	17.5	29	5.5	44	27.5	20
QS-8	90.5											
QS-10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

# Solenoid valves CPE, Compact Performance



Technical data – 5/2-way valves

Ordering data – Micro CPE10				
Circuit symbol	Description	Pneumatic connection	Part No.	Type
Operating voltage 24 V DC				
	Internal pilot air supply	M5	196 881	CPE10-M1BH-5L-M5
		M7	196 927	CPE10-M1BH-5L-M7
		QS-4	196 882	CPE10-M1BH-5L-QS-4
		QS-6	196 883	CPE10-M1BH-5L-QS-6
	External pilot air supply	M5	196 884	CPE10-M1BH-5LS-M5
		M7	196 928	CPE10-M1BH-5LS-M7
		QS-4	196 885	CPE10-M1BH-5LS-QS-4
		QS-6	196 886	CPE10-M1BH-5LS-QS-6

Ordering data – Mini CPE14				
Circuit symbol	Description	Pneumatic connection	Part No.	Type
Operating voltage 24 V DC				
	Internal pilot air supply	G1/8	196 941	CPE14-M1BH-5L-1/8
		QS-6	196 911	CPE14-M1BH-5L-QS-6
		QS-8	196 912	CPE14-M1BH-5L-QS-8
	External pilot air supply	G1/8	196 942	CPE14-M1BH-5LS-1/8
		QS-6	196 913	CPE14-M1BH-5LS-QS-6
		QS-8	196 914	CPE14-M1BH-5LS-QS-8

 Core Range

# Solenoid valves CPE, Compact Performance

Technical data – 5/2-way valves



Ordering data – Midi CPE18				
Circuit symbol	Description	Pneumatic connection	Part No.	Type
<b>Operating voltage 24 V DC</b>				
	Internal pilot air supply	G $\frac{1}{4}$	<b>163 142</b>	<b>CPE18-M1H-5L-<math>\frac{1}{4}</math></b>
		QS-8	<b>163 150</b>	<b>CPE18-M1H-5L-QS-8</b>
		QS-10	<b>163 158</b>	<b>CPE18-M1H-5L-QS-10</b>
	External pilot air supply	G $\frac{1}{4}$	<b>163 146</b>	<b>CPE18-M1H-5LS-<math>\frac{1}{4}</math></b>
		QS-8	<b>163 154</b>	<b>CPE18-M1H-5LS-QS-8</b>
		QS-10	<b>163 162</b>	<b>CPE18-M1H-5LS-QS-10</b>
<b>Operating voltage 110 V AC</b>				
	Internal pilot air supply	G $\frac{1}{4}$	<b>163 762</b>	<b>CPE18-M2H-5L-<math>\frac{1}{4}</math></b>
		QS-8	<b>163 770</b>	<b>CPE18-M2H-5L-QS-8</b>
		QS-10	<b>163 778</b>	<b>CPE18-M2H-5L-QS-10</b>
	External pilot air supply	G $\frac{1}{4}$	<b>163 766</b>	<b>CPE18-M2H-5LS-<math>\frac{1}{4}</math></b>
		QS-8	<b>163 774</b>	<b>CPE18-M2H-5LS-QS-8</b>
		QS-10	<b>163 782</b>	<b>CPE18-M2H-5LS-QS-10</b>
<b>Operating voltage 230 V AC</b>				
	Internal pilot air supply	G $\frac{1}{4}$	<b>163 786</b>	<b>CPE18-M3H-5L-<math>\frac{1}{4}</math></b>
		QS-8	<b>163 794</b>	<b>CPE18-M3H-5L-QS-8</b>
		QS-10	<b>163 802</b>	<b>CPE18-M3H-5L-QS-10</b>
	External pilot air supply	G $\frac{1}{4}$	<b>163 790</b>	<b>CPE18-M3H-5LS-<math>\frac{1}{4}</math></b>
		QS-8	<b>163 798</b>	<b>CPE18-M3H-5LS-QS-8</b>
		QS-10	<b>163 806</b>	<b>CPE18-M3H-5LS-QS-10</b>

Core Range

# Solenoid valves CPE, Compact Performance



Technical data – 5/2-way valves

Order data – Maxi CPE24				
Circuit symbol	Description	Pneumatic connection	Part No.	Type
<b>Operating voltage 24 V DC</b>				
	Internal pilot air supply	G $\frac{3}{8}$	<b>163 166</b>	<b>CPE24-M1H-5L-<math>\frac{3}{8}</math></b>
		QS-10	<b>163 174</b>	<b>CPE24-M1H-5L-QS-10</b>
		QS-12	<b>163 182</b>	<b>CPE24-M1H-5L-QS-12</b>
	External pilot air supply	G $\frac{3}{8}$	<b>163 170</b>	<b>CPE24-M1H-5LS-<math>\frac{3}{8}</math></b>
		QS-10	<b>163 178</b>	<b>CPE24-M1H-5LS-QS-10</b>
		QS-12	<b>163 186</b>	<b>CPE24-M1H-5LS-QS-12</b>
<b>Operating voltage 110 V AC</b>				
	Internal pilot air supply	G $\frac{3}{8}$	<b>163 810</b>	<b>CPE24-M2H-5L-<math>\frac{3}{8}</math></b>
		QS-10	<b>163 818</b>	<b>CPE24-M2H-5L-QS-10</b>
		QS-12	<b>163 826</b>	<b>CPE24-M2H-5L-QS-12</b>
	External pilot air supply	G $\frac{3}{8}$	<b>163 814</b>	<b>CPE24-M2H-5LS-<math>\frac{3}{8}</math></b>
		QS-10	<b>163 822</b>	<b>CPE24-M2H-5LS-QS-10</b>
		QS-12	<b>163 830</b>	<b>CPE24-M2H-5LS-QS-12</b>
<b>Operating voltage 230 V AC</b>				
	Internal pilot air supply	G $\frac{3}{8}$	<b>163 834</b>	<b>CPE24-M3H-5L-<math>\frac{3}{8}</math></b>
		QS-10	<b>163 842</b>	<b>CPE24-M3H-5L-QS-10</b>
		QS-12	<b>163 850</b>	<b>CPE24-M3H-5L-QS-12</b>
	External pilot air supply	G $\frac{3}{8}$	<b>163 838</b>	<b>CPE24-M3H-5LS-<math>\frac{3}{8}</math></b>
		QS-10	<b>163 846</b>	<b>CPE24-M3H-5LS-QS-10</b>
		QS-12	<b>163 854</b>	<b>CPE24-M3H-5LS-QS-12</b>

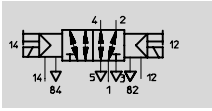
Core Range

# Solenoid valves CPE, Compact Performance

Technical data – 5/2-way valves, double solenoid



Function<sup>1)</sup>



1) e.g. with external pilot air

- - Flow rate  
180 ... 3,200 l/min

- - Voltage  
24 V DC  
110, 230 V AC



General technical data – Micro CPE10		
	Threaded connection	Push-in connector
Valve function	5/2-way, double pilot	
Design	Piston spool	
Sealing principle	Soft	
Actuation type	Electrical	
Type of control	Piloted	
Pilot air supply	Internal or external	
Direction of flow	Internal pilot air supply: non-reversible External pilot air supply: reversible	
Exhaust function	With flow control	
Manual override	Resetting, detenting via tool accessory	
Mounting position	Any	
Width	10 mm	
Grid dimension	12 mm	
Nominal size	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
	3, 5	M7
	12, 14	M3
	84	M3
Changeover time	8 ms	
Product weight	68 g	95 g
Materials	➔ 2 / 2.1-36	

Operating and environmental conditions		
	Threaded connection	Push-in connector
Operating medium	Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure range	internal pilot air	2.5 ... 8 bar
	external pilot air	-0.9 ... +10 bar
Pilot pressure range	2.5 ... 8 bar	
Ambient temperature	-5 ... +50 °C	
Temperature of medium	-5 ... +50 °C	

Electrical data		
	Threaded connection	Push-in connector
Operating voltage	24 V DC +10/-15%	
Power consumption	1.28 W	
Degree of protection with plug socket	IP65 (EN 60 529)	



# Solenoid valves CPE, Compact Performance

FESTO

Technical data – 5/2-way valves, double solenoid

General technical data – Mini CPE14			
	Threaded connection	Push-in connector	
Valve function	5/2-way, double pilot		
Design	Piston spool		
Sealing principle	Soft		
Actuation type	Electrical		
Type of control	Piloted		
Pilot air supply	Internal or external		
Direction of flow	Internal pilot air supply: non-reversible		
	External pilot air supply: reversible		
Exhaust function	With flow control		
Manual override	Resetting, detenting via tool accessory		
Mounting position	Any		
Width	14 mm		
Grid dimension	16 mm		
Nominal size	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	
Materials	→ 2 / 2.1-36		

Operating and environmental conditions		
	Threaded connection	Push-in connector
Operating medium	Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure range	internal pilot air	2 ...8 bar
	external pilot air	-0.9 ...+10 bar
Pilot pressure range	2 ...8 bar	
Ambient temperature	-5 ... +50 °C	
Temperature of medium	-5 ... +50 °C	

Electrical data		
	Threaded connection	Push-in connector
Operating voltage	24 V DC +10/-15%	
Power consumption	1.28 W	
Degree of protection with plug socket	IP65 (EN 60 529)	

Directional control valves for standard applications  
Compact Performance

2.1

# Solenoid valves CPE, Compact Performance

Technical data – 5/2-way valves, double solenoid

FESTO

General technical data – Midi CPE18			
		Threaded connection	Push-in connector
Valve function		5/2-way, double pilot	
Design		Piston spool	
Sealing principle		Soft	
Actuation type		Electrical	
Type of control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Internal pilot air supply: non-reversible	
		External pilot air supply: reversible	
Exhaust function		With flow control	
Manual override		Resetting, detenting via tool accessory	
Mounting position		Any	
Width		18 mm	
Grid dimension		20 mm	
Nominal size		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	
Materials		➔ 2 / 2.1-36	

Operating and environmental conditions			
		Threaded connection	Push-in connector
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure range	internal pilot air	2 ...10 bar	
	external pilot air	-0.9 ...+10 bar	
Pilot pressure range		2 ...10 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	

Electrical data			
		Threaded connection	Push-in connector
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	
Degree of protection with plug socket		IP65 (EN 60 529)	

# Solenoid valves CPE, Compact Performance

FESTO

Technical data – 5/2-way valves, double solenoid

General technical data – Maxi CPE24			
		Threaded connection	Push-in connector
Valve function		5/2-way, double pilot	
Design		Piston spool	
Sealing principle		Soft	
Actuation type		Electrical	
Type of control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Internal pilot air supply: non-reversible External pilot air supply: reversible	
Exhaust function		With flow control	
Manual override		Resetting, detenting via tool accessory	
Mounting position		Any	
Width		24 mm	
Nominal size		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	
Materials		→ 2 / 2.1-36	

Operating and environmental conditions			
		Threaded connection	Push-in connector
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure range	internal pilot air	2 ...10 bar	
	external pilot air	-0.9 ...+10 bar	
Pilot pressure range		2 ...10 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	

Electrical data			
		Threaded connection	Push-in connector
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	
Degree of protection with plug socket		IP65 (EN 60 529)	

Directional control valves for standard applications  
Compact Performance

2.1

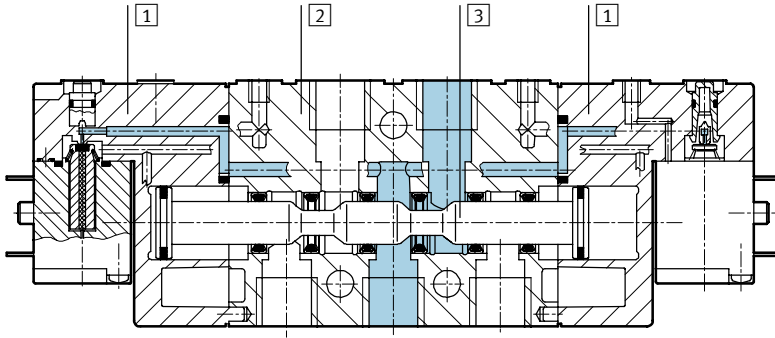
# Solenoid valves CPE, Compact Performance

Technical data – 5/2-way valves, double solenoid



## Materials

Sectional view



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

# Solenoid valves CPE, Compact Performance

Technical data – 5/2-way valves, double solenoid



Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Threaded connection M7	Threaded connection M5	Push-in fitting QS-4
<p>1 Manual override facility</p> <p>2 Connection for plug socket</p>	<p>3 Location for inscription labels</p>	<p>4 Pilot air connection</p> <p>5 M7 to M5 reducer</p> <p>6 QS push-in connection</p>

### Connection diagrams

Micro CPE10, Mini CPE14	Midi CPE18, Maxi CPE24
<p>Suitable for plug socket KMYZ-9-...</p>	<p>Suitable for plug sockets to DIN 43 650, type C KMEB-1-... KMEB-2-... MSSD-EB</p>

Directional control valves for standard applications  
Compact Performance

2.1

# Solenoid valves CPE, Compact Performance

Technical data – 5/2-way valves, double solenoid

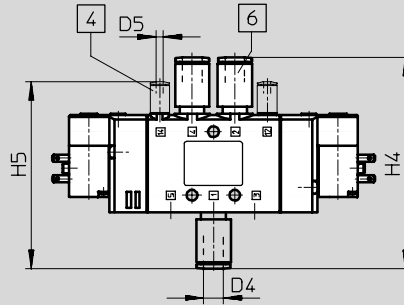
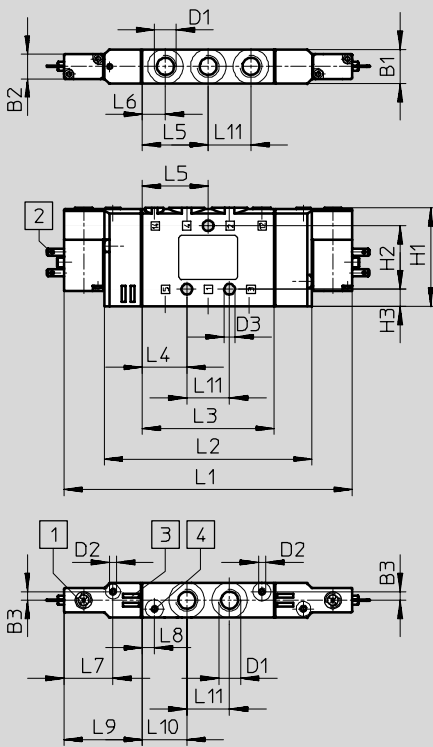


## Dimensions – Mini CPE14, Midi CPE18, Maxi CPE24

Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Threaded connection

Push-in connector



- 1 Manual override facility
- 2 Connection for plug socket
- 3 Location for inscription labels
- 4 Pilot air connection
- 6 QS push-in connection

Pneumatic connection	B1	B2	B3	D1	D2	D3 Ø	D4 Ø	D5 Ø	H1	H2	H3	H4
<b>Mini CPE14</b>												
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				
<b>Midi CPE18</b>												
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				
<b>Maxi CPE24</b>												
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
<b>Mini CPE14</b>												
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											
<b>Midi CPE18</b>												
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											
<b>Maxi CPE24</b>												
G $\frac{3}{8}$	–	190	140	100	35	50	20	33	10	45	35	30
QS-10	99.5											
QS-12	102											

# Solenoid valves CPE, Compact Performance



Technical data – 5/2-way valves, double solenoid

Ordering data – Micro CPE10				
Circuit symbol	Description	Pneumatic connection	Part No.	Type
Operating voltage 24 V DC				
	Internal pilot air supply	M5	196 875	CPE10-M1BH-5J-M5
		M7	196 925	CPE10-M1BH-5J-M7
		QS-4	196 876	CPE10-M1BH-5J-QS-4
		QS-6	196 877	CPE10-M1BH-5J-QS-6
	External pilot air supply	M5	196 878	CPE10-M1BH-5JS-M5
		M7	196 926	CPE10-M1BH-5JS-M7
		QS-4	196 879	CPE10-M1BH-5JS-QS-4
		QS-6	196 880	CPE10-M1BH-5JS-QS-6

Ordering data – Mini CPE14				
Circuit symbol	Description	Pneumatic connection	Part No.	Type
Operating voltage 24 V DC				
	Internal pilot air supply	G1/8	196 939	CPE14-M1BH-5J-1/8
		QS-6	196 907	CPE14-M1BH-5J-QS-6
		QS-8	196 908	CPE14-M1BH-5J-QS-8
	External pilot air supply	G1/8	196 940	CPE14-M1BH-5JS-1/8
		QS-6	196 909	CPE14-M1BH-5JS-QS-6
		QS-8	196 910	CPE14-M1BH-5JS-QS-8

Ordering data – Midi CPE18				
Circuit symbol	Description	Pneumatic connection	Part No.	Type
Operating voltage 24 V DC				
	Internal pilot air supply	G1/4	163 143	CPE18-M1H-5J-1/4
		QS-8	163 151	CPE18-M1H-5J-QS-8
		QS-10	163 159	CPE18-M1H-5J-QS-10
	External pilot air supply	G1/4	163 147	CPE18-M1H-5JS-1/4
		QS-8	163 155	CPE18-M1H-5JS-QS-8
		QS-10	163 163	CPE18-M1H-5JS-QS-10
Operating voltage 110 V AC				
	Internal pilot air supply	G1/4	163 763	CPE18-M2H-5J-1/4
		QS-8	163 771	CPE18-M2H-5J-QS-8
		QS-10	163 779	CPE18-M2H-5J-QS-10
	External pilot air supply	G1/4	163 767	CPE18-M2H-5JS-1/4
		QS-8	163 775	CPE18-M2H-5JS-QS-8
		QS-10	163 783	CPE18-M2H-5JS-QS-10
Operating voltage 230 V AC				
	Internal pilot air supply	G1/4	163 787	CPE18-M3H-5J-1/4
		QS-8	163 795	CPE18-M3H-5J-QS-8
		QS-10	163 803	CPE18-M3H-5J-QS-10
	External pilot air supply	G1/4	163 791	CPE18-M3H-5JS-1/4
		QS-8	163 799	CPE18-M3H-5JS-QS-8
		QS-10	163 807	CPE18-M3H-5JS-QS-10

Core Range

# Solenoid valves CPE, Compact Performance

Technical data – 5/2-way valves, double solenoid



Order data – Maxi CPE24				
Circuit symbol	Description	Pneumatic connection	Part No.	Type
<b>Operating voltage 24 V DC</b>				
	Internal pilot air supply	G $\frac{3}{8}$	<b>163 167</b>	<b>CPE24-M1H-5J-<math>\frac{3}{8}</math></b>
		QS-10	<b>163 175</b>	<b>CPE24-M1H-5J-QS-10</b>
		QS-12	<b>163 183</b>	<b>CPE24-M1H-5J-QS-12</b>
	External pilot air supply	G $\frac{3}{8}$	<b>163 171</b>	<b>CPE24-M1H-5JS-<math>\frac{3}{8}</math></b>
		QS-10	<b>163 179</b>	<b>CPE24-M1H-5JS-QS-10</b>
		QS-12	<b>163 187</b>	<b>CPE24-M1H-5JS-QS-12</b>
<b>Operating voltage 110 V AC</b>				
	Internal pilot air supply	G $\frac{3}{8}$	<b>163 811</b>	<b>CPE24-M2H-5J-<math>\frac{3}{8}</math></b>
		QS-10	<b>163 819</b>	<b>CPE24-M2H-5J-QS-10</b>
		QS-12	<b>163 827</b>	<b>CPE24-M2H-5J-QS-12</b>
	External pilot air supply	G $\frac{3}{8}$	<b>163 815</b>	<b>CPE24-M2H-5JS-<math>\frac{3}{8}</math></b>
		QS-10	<b>163 823</b>	<b>CPE24-M2H-5JS-QS-10</b>
		QS-12	<b>163 831</b>	<b>CPE24-M2H-5JS-QS-12</b>
<b>Operating voltage 230 V AC</b>				
	Internal pilot air supply	G $\frac{3}{8}$	<b>163 835</b>	<b>CPE24-M3H-5J-<math>\frac{3}{8}</math></b>
		QS-10	<b>163 843</b>	<b>CPE24-M3H-5J-QS-10</b>
		QS-12	<b>163 851</b>	<b>CPE24-M3H-5J-QS-12</b>
	External pilot air supply	G $\frac{3}{8}$	<b>163 839</b>	<b>CPE24-M3H-5JS-<math>\frac{3}{8}</math></b>
		QS-10	<b>163 847</b>	<b>CPE24-M3H-5JS-QS-10</b>
		QS-12	<b>163 855</b>	<b>CPE24-M3H-5JS-QS-12</b>

Core Range

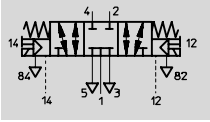


# Solenoid valves CPE, Compact Performance


Technical data – 5/3-way valves


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Function<sup>1)</sup>



1) e.g. with external pilot air

-  - Flow rate  
180 ... 3,000 l/min

-  - Voltage  
24 V DC  
110, 230 V AC



General technical data – Micro CPE10			
		Threaded connection	Push-in connector
Valve function		5/3, single solenoid	
Design		Piston spool	
Sealing principle		Soft	
Actuation type		Electrical	
Type of reset		Mechanical spring	
Type of control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Internal pilot air supply: non-reversible External pilot air supply: reversible	
Exhaust function		With flow control	
Manual override		Resetting, detenting via tool accessory	
Mounting position		Any	
Width		10 mm	
Grid dimension		12 mm	
Nominal size		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
Response time on/off		16/20 ms	
Product weight		73 g	
Materials		→ 2 / 2.1-45	

Operating and environmental conditions			
		Threaded connection	Push-in connector
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure range	internal pilot air	3 ...8 bar	
	external pilot air	-0.9 ...+10 bar	
Pilot pressure range		3 ...8 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	

Electrical data			
		Threaded connection	Push-in connector
Operating voltage		24 V DC +10/-15%	
Power consumption		1.28 W	
Degree of protection with plug socket		IP65 (EN 60 529)	

# Solenoid valves CPE, Compact Performance

Technical data – 5/3-way valves

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Directional control valves for standard applications  
Compact Performance

2.1

General technical data – Mini CPE14			
		Threaded connection	Push-in connector
Valve function		5/3, single solenoid	
Design		Piston spool	
Sealing principle		Soft	
Actuation type		Electrical	
Type of reset		Mechanical spring	
Type of control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Internal pilot air supply: non-reversible External pilot air supply: reversible	
Exhaust function		With flow control	
Manual override		Resetting, detenting via tool accessory	
Mounting position		Any	
Width		14 mm	
Grid dimension		16 mm	
Nominal size		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 $\frac{1}{8}$	∅ 6 or ∅ 8 mm
	3, 5	G $\frac{1}{8}$	G $\frac{1}{8}$
	12, 14	M3	∅ 3 mm
	82, 84	M3	M3
Response time on/off		20/42 ms	
Product weight		120 g	170 g
Materials		→ 2 / 2.1-45	

Operating and environmental conditions			
		Threaded connection	Push-in connector
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure range	internal pilot air	3 ...8 bar	
	external pilot air	-0.9 ...+10 bar	
Pilot pressure range		3 ...8 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	

Electrical data			
		Threaded connection	Push-in connector
Operating voltage		24 V DC +10/-15%	
Power consumption		1.28 W	
Degree of protection with plug socket		IP65 (EN 60 529)	

# Solenoid valves CPE, Compact Performance

Technical data – 5/3-way valves

FESTO

Directional control valves for standard applications  
Compact Performance

2.1

General technical data – Midi CPE18			
		Threaded connection	Push-in connector
Valve function		5/3, single solenoid	
Design		Piston spool	
Sealing principle		Soft	
Actuation type		Electrical	
Type of reset		Mechanical spring	
Type of control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Internal pilot air supply: non-reversible External pilot air supply: reversible	
Exhaust function		With flow control	
Manual override		Resetting, detenting via tool accessory	
Mounting position		Any	
Width		18 mm	
Grid dimension		20 mm	
Nominal size		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 $\frac{1}{4}$	∅ 8 or ∅ 10 mm
	3, 5	G $\frac{1}{4}$	G $\frac{1}{4}$
	12, 14	M5	∅ 4 mm
	82, 84	M5	M5
Response time on/off		20/38 ms	
Product weight		280 g	300 g
Materials		→ 2 / 2.1-45	

Operating and environmental conditions			
		Threaded connection	Push-in connector
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure range	internal pilot air	2.5 ...10 bar	
	external pilot air	-0.9 ...+10 bar	
Pilot pressure range		2.5 ...10 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	

Electrical data			
		Threaded connection	Push-in connector
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	
Degree of protection with plug socket		IP65 (EN 60 529)	

# Solenoid valves CPE, Compact Performance

Technical data – 5/3-way valves

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General technical data – Maxi CPE24			
		Threaded connection	Push-in connector
Valve function		5/3, single solenoid	
Design		Piston spool	
Sealing principle		Soft	
Actuation type		Electrical	
Type of reset		Mechanical spring	
Type of control		Piloted	
Pilot air supply		Internal or external	
Direction of flow		Internal pilot air supply: non-reversible External pilot air supply: reversible	
Exhaust function		With flow control	
Manual override		Resetting, detenting via tool accessory	
Mounting position		Any	
Width		24 mm	
Nominal size		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 $\frac{3}{8}$	∅ 10 or ∅ 12 mm
	3, 5	G $\frac{3}{8}$	G $\frac{3}{8}$
	12, 14	M5	∅ 6 mm
	82, 84	M5	M5
Response time on/off		25/55 ms	
Product weight		430 g	450 g
Materials		➔ 2 / 2.1-45	

Operating and environmental conditions			
		Threaded connection	Push-in connector
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure range	internal pilot air	2.5 ...10 bar	
	external pilot air	-0.9 ...+10 bar	
Pilot pressure range		2.5 ...10 bar	
Ambient temperature		-5 ... +50 °C	
Temperature of medium		-5 ... +50 °C	

Electrical data			
		Threaded connection	Push-in connector
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	
Degree of protection with plug socket		IP65 (EN 60 529)	

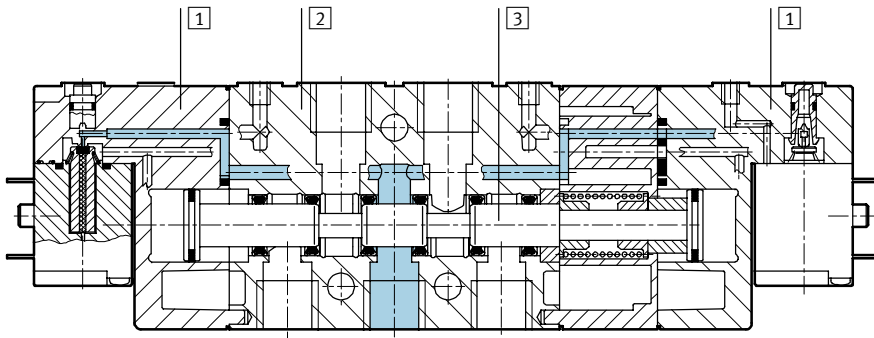
# Solenoid valves CPE, Compact Performance

Technical data – 5/3-way valves

FESTO

## Materials

Sectional view



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

# Solenoid valves CPE, Compact Performance

Technical data – 5/3-way valves



Directional control valves for standard applications  
Compact Performance

2.1

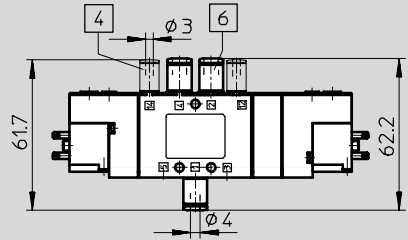
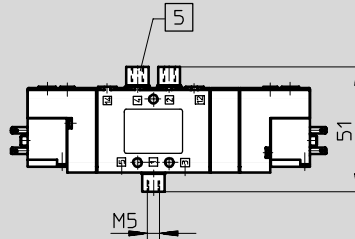
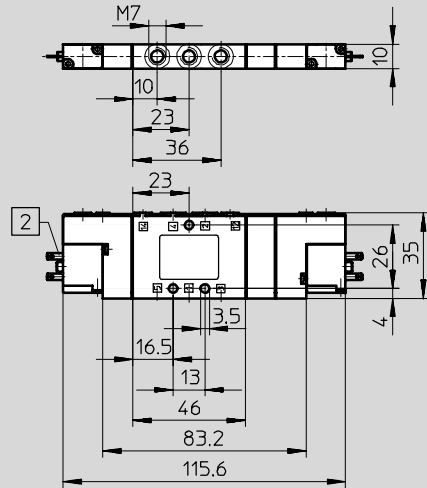
## Dimensions – Micro CPE10

Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

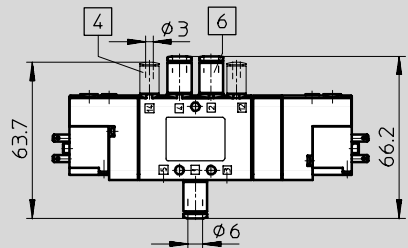
Threaded connection M7

Threaded connection M5

Push-in fitting QS-4



Push-in fitting QS-6



- 1 Manual override facility
- 2 Connection for plug socket

- 3 Location for inscription labels

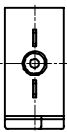
- 4 Pilot air connection

- 5 M7 to M5 reducer
- 6 QS push-in connection

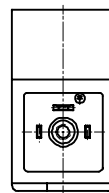
## Connection diagrams

Micro CPE10, Mini CPE14

Midi CPE18, Maxi CPE24



Suitable for plug socket  
KMYZ-9-...



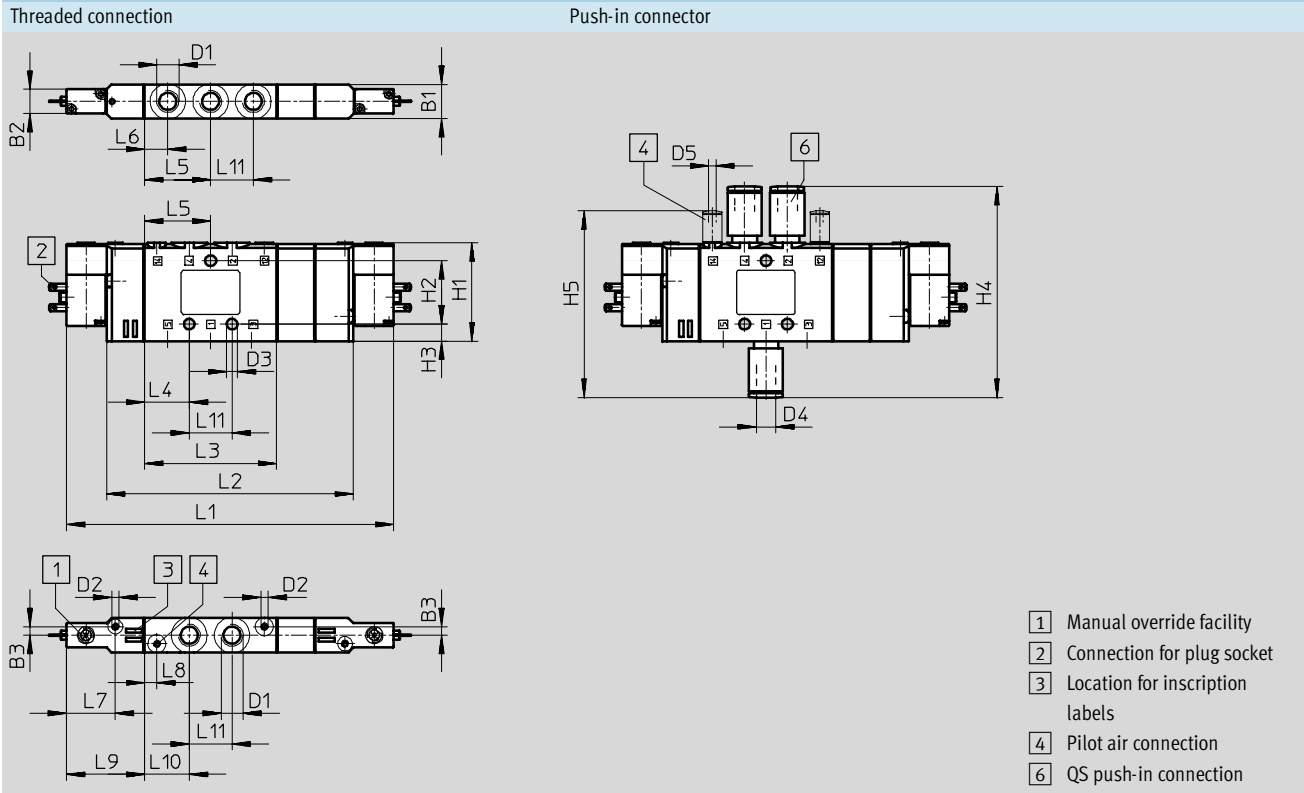
Suitable for plug sockets to  
DIN 43 650, type C  
KMEB-1-...  
KMEB-2-...  
MSSD-EB

# Solenoid valves CPE, Compact Performance

Technical data – 5/3-way valves



Dimensions – Mini CPE14, Midi CPE18, Maxi CPE24 Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)



Pneumatic connection	B1	B2	B3	D1	D2	D3	D4	D5	H1	H2	H3	H4
<b>Mini CPE14</b>												
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
<b>Midi CPE18</b>												
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
<b>Maxi CPE24</b>												
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
<b>Mini CPE14</b>												
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											
<b>Midi CPE18</b>												
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											
<b>Maxi CPE24</b>												
G $\frac{3}{8}$	–	213	163	100	35	50	20	33	10	45	35	30
QS-10	99.5											
QS-12	102											

# Solenoid valves CPE, Compact Performance

Technical data – 5/3-way valves



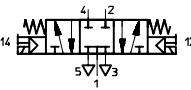
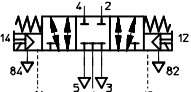
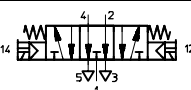
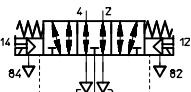
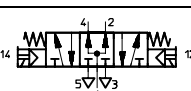
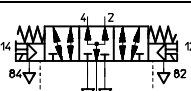
Ordering data – Micro CPE10				
Circuit symbol	Description	Pneumatic connection	Part No.	Type
Operating voltage 24 V DC				
	Normally closed Internal pilot air supply	M5	533 159	CPE10-M1BH-5/3G-M5-B
		M7	533 141	CPE10-M1BH-5/3G-M7-B
		QS-4	533 147	CPE10-M1BH-5/3G-QS-4-B
		QS-6	533 153	CPE10-M1BH-5/3G-QS-6-B
	Normally closed External pilot air supply	M5	533 160	CPE10-M1BH-5/3GS-M5-B
		M7	533 142	CPE10-M1BH-5/3GS-M7-B
		QS-4	533 148	CPE10-M1BH-5/3GS-QS-4-B
		QS-6	533 154	CPE10-M1BH-5/3GS-QS-6-B
	Normally exhausted Internal pilot air supply	M5	533 161	CPE10-M1BH-5/3E-M5-B
		M7	533 143	CPE10-M1BH-5/3E-M7-B
		QS-4	533 149	CPE10-M1BH-5/3E-QS-4-B
		QS-6	533 155	CPE10-M1BH-5/3E-QS-6-B
	Normally exhausted External pilot air supply	M5	533 162	CPE10-M1BH-5/3ES-M5-B
		M7	533 144	CPE10-M1BH-5/3ES-M7-B
		QS-4	533 150	CPE10-M1BH-5/3ES-QS-4-B
		QS-6	533 156	CPE10-M1BH-5/3ES-QS-6-B
	Normally pressurised Internal pilot air supply	M5	533 163	CPE10-M1BH-5/3B-M5-B
		M7	533 145	CPE10-M1BH-5/3B-M7-B
		QS-4	533 151	CPE10-M1BH-5/3B-QS-4-B
		QS-6	533 157	CPE10-M1BH-5/3B-QS-6-B
	Normally pressurised External pilot air supply	M5	533 164	CPE10-M1BH-5/3BS-M5-B
		M7	533 146	CPE10-M1BH-5/3BS-M7-B
		QS-4	533 152	CPE10-M1BH-5/3BS-QS-4-B
		QS-6	533 158	CPE10-M1BH-5/3BS-QS-6-B



# Solenoid valves CPE, Compact Performance



Technical data – 5/3-way valves

Ordering data – Mini CPE14				
Circuit symbol	Description	Pneumatic connection	Part No.	Type
Operating voltage 24 V DC				
	Normally closed Internal pilot air supply	G $\frac{1}{8}$	196 937	CPE14-M1BH-5/3G- $\frac{1}{8}$
		QS-6	196 903	CPE14-M1BH-5/3G-QS-6
		QS-8	196 904	CPE14-M1BH-5/3G-QS-8
	Normally closed External pilot air supply	G $\frac{1}{8}$	196 938	CPE14-M1BH-5/3GS- $\frac{1}{8}$
		QS-6	196 905	CPE14-M1BH-5/3GS-QS-6
		QS-8	196 906	CPE14-M1BH-5/3GS-QS-8
	Normally exhausted Internal pilot air supply	G $\frac{1}{8}$	196 935	CPE14-M1BH-5/3E- $\frac{1}{8}$
		QS-6	196 899	CPE14-M1BH-5/3E-QS-6
		QS-8	196 900	CPE14-M1BH-5/3E-QS-8
	Normally exhausted External pilot air supply	G $\frac{1}{8}$	196 936	CPE14-M1BH-5/3ES- $\frac{1}{8}$
		QS-6	196 901	CPE14-M1BH-5/3ES-QS-6
		QS-8	196 902	CPE14-M1BH-5/3ES-QS-8
	Normally pressurised Internal pilot air supply	G $\frac{1}{8}$	196 933	CPE14-M1BH-5/3B- $\frac{1}{8}$
		QS-6	196 895	CPE14-M1BH-5/3B-QS-6
		QS-8	196 896	CPE14-M1BH-5/3B-QS-8
	Normally pressurised External pilot air supply	G $\frac{1}{8}$	196 934	CPE14-M1BH-5/3BS- $\frac{1}{8}$
		QS-6	196 897	CPE14-M1BH-5/3BS-QS-6
		QS-8	196 898	CPE14-M1BH-5/3BS-QS-8

Directional control valves for standard applications  
 Compact Performance

## 2.1

# Solenoid valves CPE, Compact Performance

Technical data – 5/3-way valves

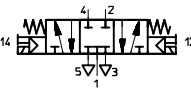
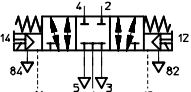
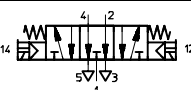
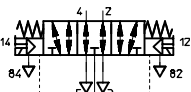
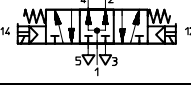
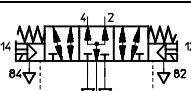


Ordering data – Midi CPE18				
Circuit symbol	Description	Pneumatic connection	Part No.	Type
<b>Operating voltage 24 V DC</b>				
	Normally closed Internal pilot air supply	G $\frac{1}{4}$	170 247	CPE18-M1H-5/3G- $\frac{1}{4}$
		QS-8	170 253	CPE18-M1H-5/3G-QS-8
		QS-10	170 259	CPE18-M1H-5/3G-QS-10
	Normally closed External pilot air supply	G $\frac{1}{4}$	170 248	CPE18-M1H-5/3GS- $\frac{1}{4}$
		QS-8	170 254	CPE18-M1H-5/3GS-QS-8
		QS-10	170 260	CPE18-M1H-5/3GS-QS-10
	Normally exhausted Internal pilot air supply	G $\frac{1}{4}$	170 249	CPE18-M1H-5/3E- $\frac{1}{4}$
		QS-8	170 255	CPE18-M1H-5/3E-QS-8
		QS-10	170 261	CPE18-M1H-5/3E-QS-10
	Normally exhausted External pilot air supply	G $\frac{1}{4}$	170 250	CPE18-M1H-5/3ES- $\frac{1}{4}$
		QS-8	170 256	CPE18-M1H-5/3ES-QS-8
		QS-10	170 262	CPE18-M1H-5/3ES-QS-10
	Normally pressurised Internal pilot air supply	G $\frac{1}{4}$	170 251	CPE18-M1H-5/3B- $\frac{1}{4}$
		QS-8	170 257	CPE18-M1H-5/3B-QS-8
		QS-10	170 263	CPE18-M1H-5/3B-QS-10
	Normally pressurised External pilot air supply	G $\frac{1}{4}$	170 252	CPE18-M1H-5/3BS- $\frac{1}{4}$
		QS-8	170 258	CPE18-M1H-5/3BS-QS-8
		QS-10	170 264	CPE18-M1H-5/3BS-QS-10
<b>Operating voltage 110 V AC</b>				
	Normally closed Internal pilot air supply	G $\frac{1}{4}$	170 283	CPE18-M2H-5/3G- $\frac{1}{4}$
		QS-8	170 289	CPE18-M2H-5/3G-QS-8
		QS-10	170 295	CPE18-M2H-5/3G-QS-10
	Normally closed External pilot air supply	G $\frac{1}{4}$	170 284	CPE18-M2H-5/3GS- $\frac{1}{4}$
		QS-8	170 290	CPE18-M2H-5/3GS-QS-8
		QS-10	170 296	CPE18-M2H-5/3GS-QS-10
	Normally exhausted Internal pilot air supply	G $\frac{1}{4}$	170 285	CPE18-M2H-5/3E- $\frac{1}{4}$
		QS-8	170 291	CPE18-M2H-5/3E-QS-8
		QS-10	170 297	CPE18-M2H-5/3E-QS-10
	Normally exhausted External pilot air supply	G $\frac{1}{4}$	170 286	CPE18-M2H-5/3ES- $\frac{1}{4}$
		QS-8	170 292	CPE18-M2H-5/3ES-QS-8
		QS-10	170 298	CPE18-M2H-5/3ES-QS-10
	Normally pressurised Internal pilot air supply	G $\frac{1}{4}$	170 287	CPE18-M2H-5/3B- $\frac{1}{4}$
		QS-8	170 293	CPE18-M2H-5/3B-QS-8
		QS-10	170 299	CPE18-M2H-5/3B-QS-10
	Normally pressurised External pilot air supply	G $\frac{1}{4}$	170 288	CPE18-M2H-5/3BS- $\frac{1}{4}$
		QS-8	170 294	CPE18-M2H-5/3BS-QS-8
		QS-10	170 300	CPE18-M2H-5/3BS-QS-10

# Solenoid valves CPE, Compact Performance



Technical data – 5/3-way valves

Ordering data – Midi CPE18				
Circuit symbol	Description	Pneumatic connection	Part No.	Type
Operating voltage 230 V AC				
	Normally closed Internal pilot air supply	G $\frac{1}{4}$	170 319	CPE18-M3H-5/3G- $\frac{1}{4}$
		QS-8	170 325	CPE18-M3H-5/3G-QS-8
		QS-10	170 331	CPE18-M3H-5/3G-QS-10
	Normally closed External pilot air supply	G $\frac{1}{4}$	170 320	CPE18-M3H-5/3GS- $\frac{1}{4}$
		QS-8	170 326	CPE18-M3H-5/3GS-QS-8
		QS-10	170 332	CPE18-M3H-5/3GS-QS10
	Normally exhausted Internal pilot air supply	G $\frac{1}{4}$	170 321	CPE18-M3H-5/3E- $\frac{1}{4}$
		QS-8	170 327	CPE18-M3H-5/3E-QS-8
		QS-10	170 333	CPE18-M3H-5/3E-QS-10
	Normally exhausted External pilot air supply	G $\frac{1}{4}$	170 322	CPE18-M3H-5/3ES- $\frac{1}{4}$
		QS-8	170 328	CPE18-M3H-5/3ES-QS-8
		QS-10	170 334	CPE18-M3H-5/3ES-QS10
	Normally pressurised Internal pilot air supply	G $\frac{1}{4}$	170 323	CPE18-M3H-5/3B- $\frac{1}{4}$
		QS-8	170 329	CPE18-M3H-5/3B-QS-8
		QS-10	170 335	CPE18-M3H-5/3B-QS-10
	Normally pressurised External pilot air supply	G $\frac{1}{4}$	170 324	CPE18-M3H-5/3BS- $\frac{1}{4}$
		QS-8	170 330	CPE18-M3H-5/3BS-QS-8
		QS-10	170 336	CPE18-M3H-5/3BS-QS-10

Directional control valves for standard applications  
Compact Performance

## 2.1

# Solenoid valves CPE, Compact Performance

Technical data – 5/3-way valves

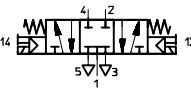
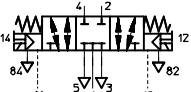
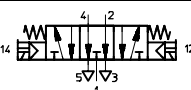
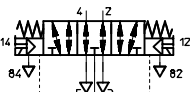
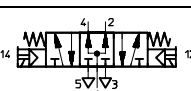
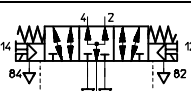


Order data – Maxi CPE24				
Circuit symbol	Description	Pneumatic connection	Part No.	Type
<b>Operating voltage 24 V DC</b>				
	Normally closed Internal pilot air supply	G $\frac{3}{8}$	170 265	CPE24-M1H-5/3G- $\frac{3}{8}$
		QS-10	170 271	CPE24-M1H-5/3G-QS-10
		QS-12	170 277	CPE24-M1H-5/3G-QS-12
	Normally closed External pilot air supply	G $\frac{3}{8}$	170 266	CPE24-M1H-5/3GS- $\frac{3}{8}$
		QS-10	170 272	CPE24-M1H-5/3GS-QS-10
		QS-12	170 278	CPE24-M1H-5/3GS-QS-12
	Normally exhausted Internal pilot air supply	G $\frac{3}{8}$	170 267	CPE24-M1H-5/3E- $\frac{3}{8}$
		QS-10	170 273	CPE24-M1H-5/3E-QS-10
		QS-12	170 279	CPE24-M1H-5/3E-QS-12
	Normally exhausted External pilot air supply	G $\frac{3}{8}$	170 268	CPE24-M1H-5/3ES- $\frac{3}{8}$
		QS-10	170 274	CPE24-M1H-5/3ES-QS-10
		QS-12	170 280	CPE24-M1H-5/3ES-QS-12
	Normally pressurised Internal pilot air supply	G $\frac{3}{8}$	170 269	CPE24-M1H-5/3B- $\frac{3}{8}$
		QS-10	170 275	CPE24-M1H-5/3B-QS-10
		QS-12	170 281	CPE24-M1H-5/3B-QS-12
	Normally pressurised External pilot air supply	G $\frac{3}{8}$	170 270	CPE24-M1H-5/3BS- $\frac{3}{8}$
		QS-10	170 276	CPE24-M1H-5/3BS-QS-10
		QS-12	170 282	CPE24-M1H-5/3BS-QS-12
<b>Operating voltage 110 V AC</b>				
	Normally closed Internal pilot air supply	G $\frac{3}{8}$	170 301	CPE24-M2H-5/3G- $\frac{3}{8}$
		QS-10	170 307	CPE24-M2H-5/3G-QS-10
		QS-12	170 313	CPE24-M2H-5/3G-QS-12
	Normally closed External pilot air supply	G $\frac{3}{8}$	170 302	CPE24-M2H-5/3GS- $\frac{3}{8}$
		QS-10	170 308	CPE24-M2H-5/3GS-QS-10
		QS-12	170 314	CPE24-M2H-5/3GS-QS-12
	Normally exhausted Internal pilot air supply	G $\frac{3}{8}$	170 303	CPE24-M2H-5/3E- $\frac{3}{8}$
		QS-10	170 309	CPE24-M2H-5/3E-QS-10
		QS-12	170 315	CPE24-M2H-5/3E-QS-12
	Normally exhausted External pilot air supply	G $\frac{3}{8}$	170 304	CPE24-M2H-5/3ES- $\frac{3}{8}$
		QS-10	170 310	CPE24-M2H-5/3ES-QS-10
		QS-12	170 316	CPE24-M2H-5/3ES-QS-12
	Normally pressurised Internal pilot air supply	G $\frac{3}{8}$	170 305	CPE24-M2H-5/3B- $\frac{3}{8}$
		QS-10	170 311	CPE24-M2H-5/3B-QS-10
		QS-12	170 317	CPE24-M2H-5/3B-QS-12
	Normally pressurised External pilot air supply	G $\frac{3}{8}$	170 306	CPE24-M2H-5/3BS- $\frac{3}{8}$
		QS-10	170 312	CPE24-M2H-5/3BS-QS-10
		QS-12	170 318	CPE24-M2H-5/3BS-QS-12

# Solenoid valves CPE, Compact Performance



Technical data – 5/3-way valves

Order data – Maxi CPE24				
Circuit symbol	Description	Pneumatic connection	Part No.	Type
Operating voltage 230 V AC				
	Normally closed Internal pilot air supply	G $\frac{3}{8}$	170 337	CPE24-M3H-5/3G- $\frac{3}{8}$
		QS-10	170 343	CPE24-M3H-5/3G-QS-10
		QS-12	170 349	CPE24-M3H-5/3G-QS-12
	Normally closed External pilot air supply	G $\frac{3}{8}$	170 338	CPE24-M3H-5/3GS- $\frac{3}{8}$
		QS-10	170 344	CPE24-M3H-5/3GS-QS-10
		QS-12	170 350	CPE24-M3H-5/3GS-QS-12
	Normally exhausted Internal pilot air supply	G $\frac{3}{8}$	170 339	CPE24-M3H-5/3E- $\frac{3}{8}$
		QS-10	170 345	CPE24-M3H-5/3E-QS-10
		QS-12	170 351	CPE24-M3H-5/3E-QS-12
	Normally exhausted External pilot air supply	G $\frac{3}{8}$	170 340	CPE24-M3H-5/3ES- $\frac{3}{8}$
		QS-10	170 346	CPE24-M3H-5/3ES-QS-10
		QS-12	170 352	CPE24-M3H-5/3ES-QS-12
	Normally pressurised Internal pilot air supply	G $\frac{3}{8}$	170 341	CPE24-M3H-5/3B- $\frac{3}{8}$
		QS-10	170 347	CPE24-M3H-5/3B-QS-10
		QS-12	170 353	CPE24-M3H-5/3B-QS-12
	Normally pressurised External pilot air supply	G $\frac{3}{8}$	170 342	CPE24-M3H-5/3BS- $\frac{3}{8}$
		QS-10	170 348	CPE24-M3H-5/3BS-QS-10
		QS-12	170 354	CPE24-M3H-5/3BS-QS-12

Directional control valves for standard applications  
Compact Performance

## 2.1

# Solenoid valves CPE, Compact Performance

Data sheet – Manifold

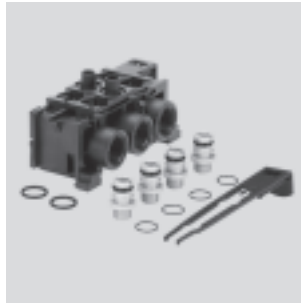


Directional control valves for standard applications  
Compact Performance

2.1

**Sub-base CPE...-PRSG...-2**  
for 2 valves

Material:  
Polyamide, reinforced



Ordering data				
Size	Pneumatic connection 1, 3, 5	Weight [g]	Part No.	Type
with closed PRS channels				
Micro CPE10	G $\frac{1}{4}$	50	164 960	CPE10-PRSG-2
Mini CPE14	G $\frac{3}{8}$	95	164 965	CPE14-PRSG-2
Midi CPE18	G $\frac{1}{2}$	170	164 970	CPE18-PRSG-2
with open PRS channels				
Micro CPE10	G $\frac{1}{4}$	50	187 827	CPE10-PRSGO-2
Mini CPE14	G $\frac{3}{8}$	95	187 829	CPE14-PRSGO-2
Midi CPE18	G $\frac{1}{2}$	170	187 831	CPE18-PRSGO-2

Dimensions → 2 / 2.1-57  
Possible combinations → 2 / 2.1-58

**Sub-base CPE...-PRSG...-3**  
for 3 valves

Material:  
Polyamide, reinforced



Ordering data				
Size	Pneumatic connection 1, 3, 5	Weight [g]	Part No.	Type
with closed PRS channels				
Micro CPE10	G $\frac{1}{4}$	70	187 823	CPE10-PRSG-3
Mini CPE14	G $\frac{3}{8}$	130	187 824	CPE14-PRSG-3
Midi CPE18	G $\frac{1}{2}$	225	187 825	CPE18-PRSG-3
with open PRS channels				
Micro CPE10	G $\frac{1}{4}$	70	187 819	CPE10-PRSGO-3
Mini CPE14	G $\frac{3}{8}$	130	187 820	CPE14-PRSGO-3
Midi CPE18	G $\frac{1}{2}$	225	187 820	CPE18-PRSGO-3

Dimensions → 2 / 2.1-57  
Possible combinations → 2 / 2.1-58

Core Range

# Solenoid valves CPE, Compact Performance

Data sheet – Manifold



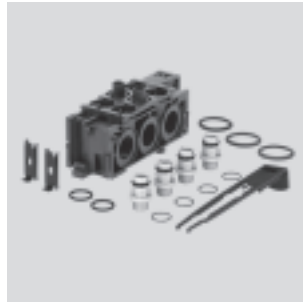
## Expansion block

CPE...-PRSE...-2

for 2 valves

Material:

Polyamide, reinforced



Ordering data				
Size	Pneumatic connection 1, 3, 5	Weight [g]	Part No.	Type
with closed PRS channels				
Micro CPE10	G $\frac{1}{4}$	40	164 962	CPE10-PRSE-2
Mini CPE14	G $\frac{3}{8}$	85	164 967	CPE14-PRSE-2
Midi CPE18	G $\frac{1}{2}$	145	164 972	CPE18-PRSE-2
with open PRS channels				
Micro CPE10	G $\frac{1}{4}$	40	187 828	CPE10-PRSEO-2
Mini CPE14	G $\frac{3}{8}$	85	187 830	CPE14-PRSEO-2
Midi CPE18	G $\frac{1}{2}$	145	187 832	CPE18-PRSEO-2

Dimensions → 2 / 2.1-57

Possible combinations → 2 / 2.1-58

## End plate CPE...-PRS-EP

Material:

Polyamide, reinforced



Ordering data				
Size	Pneumatic connection 1, 3, 5	Weight [g]	Part No.	Type
Micro CPE10	G $\frac{1}{4}$	70	164 964	CPE10-PRS-EP
Mini CPE14	G $\frac{3}{8}$	80	164 969	CPE14-PRS-EP
Midi CPE18	G $\frac{1}{2}$	125	164 974	CPE18-PRS-EP

Dimensions → 2 / 2.1-57

Possible combinations → 2 / 2.1-58

 Core Range

# Solenoid valves CPE, Compact Performance

Data sheet – Manifold



**Blanking plate CPE...-PRSB**  
for vacant positions

Material:  
Polyamide, reinforced



Ordering data				
Size	Pneumatic connection 1, 3, 5	Weight [g]	Part No.	Type
Micro CPE10	G $\frac{1}{4}$	10	164 963	CPE10-PRSB
Mini CPE14	G $\frac{3}{8}$	15	164 968	CPE14-PRSB
Midi CPE18	G $\frac{1}{2}$	28	164 973	CPE18-PRSB



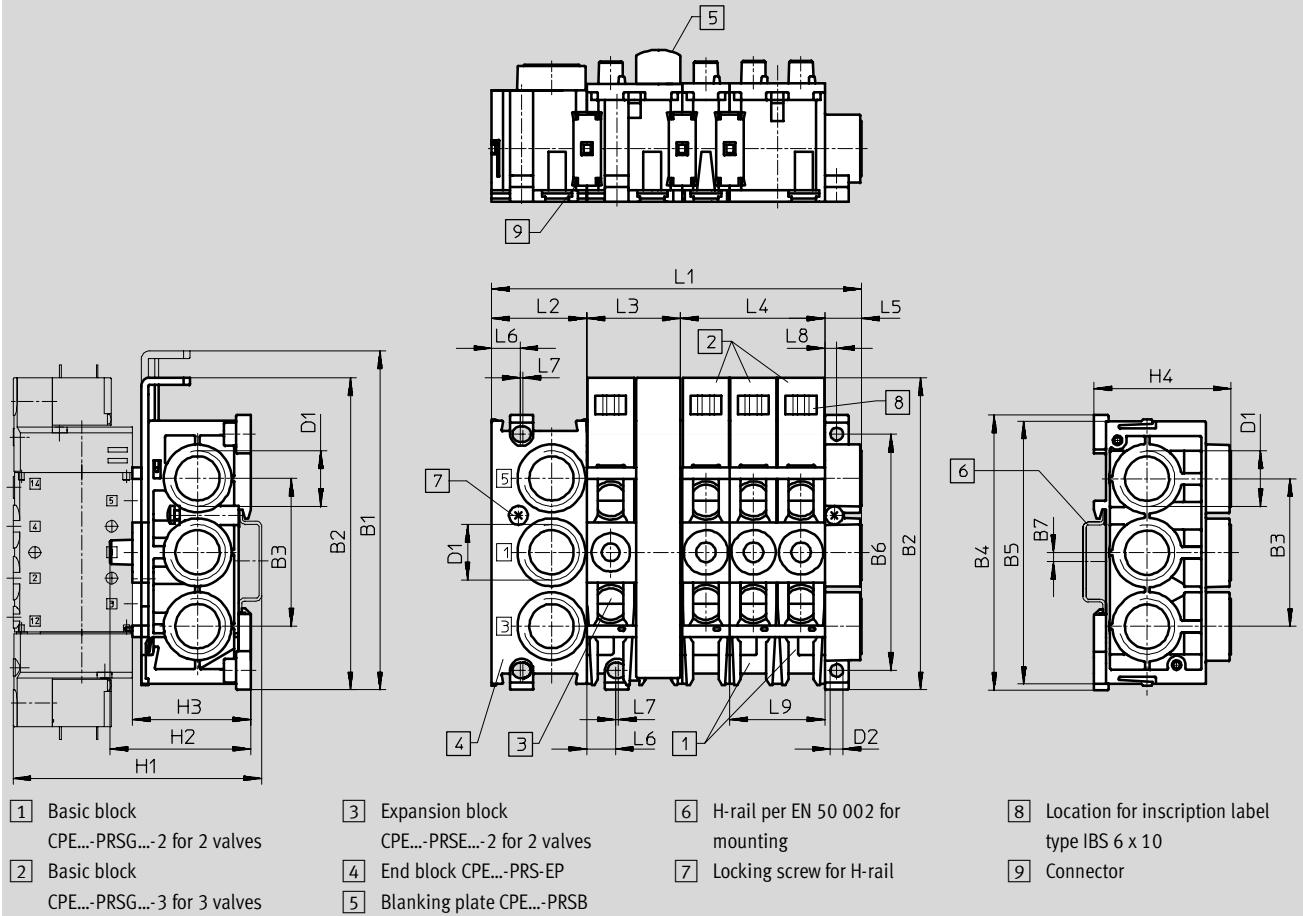
# Solenoid valves CPE, Compact Performance

Data sheet – Manifold



## Dimensions – Manifold

Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)



Size	B1	B2	B3	B4	B5	B6	B7	D1	D2 ∅	H1	H2	H3
Micro CPE10	93.5	87	37	73	71	60	7	G¼	3.3	~72	~40	~34
Mini CPE14	114.6	105.6	50	93	89	80	3	G⅜	4.3	~84	~48	~40
Midi CPE18	151.6	136.5	59	113	–	100	2.75	G½	5.3	~106	~58	~46

Size	H4	L1 <sup>1)</sup>	L2	L3	L4	L5	L6	L7	L8	L9
Micro CPE10	37	24+(nx12)+11.4	24	24	36	11.4	9.6	–	3.2	24
Mini CPE14	46.4	32+(nx16)+12.4	32	32	48	12.4	10.1	–	4	32
Midi CPE18	51.4	40+(nx20)+16.4	40	40	60	16.4	12.6	1	5.2	40

1) n = number of valve positions

# Solenoid valves CPE, Compact Performance

Data sheet – Manifold



Directional control valves for standard applications  
Compact Performance

## 2.1

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

 Note

Maximum 6 valve positions per air inlet.

Use valve connection blocks in combination with 5/2 and 5/3-way valves only.

# Solenoid valves CPE, Compact Performance



Accessories

Ordering data – Plug sockets, plug sockets with cable for KMYZ solenoid coils					
	Voltage	Cable length [m]	Switching status display with LED	Part No.	Type
Plug socket with PUR cable					Technical data → 2 / 7.3-21
	24 V DC	2.5	■	193 687	KMYZ-9-24-2,5-LED-PUR-B
		5	■	193 689	KMYZ-9-24-5-LED-PUR-B
		10	■	196 063	KMYZ-9-24-10-LED-PUR-B
Plug socket with PVC cable and plug M8x1					Technical data → 2 / 7.3-21
	24 V DC	0.5	■	196 064	KMYZ-9-24-M8-0,5-LED-B
		2.5	■	196 065	KMYZ-9-24-M8-2,5-LED-B

Ordering data – Plug sockets, plug sockets with cable for EB solenoid coils					
	Voltage	Cable length [m]	Switching status display with LED	Part No.	Type
Plug socket without cable					Technical data → 2 / 7.2-10
	–	–	–	151 687	MSSD-EB
Plug socket without cable with insulation displacement technology					Technical data → 2 / 7.2-10
	–	–	–	192 745	MSSD-EB-S-M14
Plug socket with PVC cable					Technical data → 2 / 7.3-21
	24 V DC	2.5	■	151 688	KMEB-1-24-2,5-LED
	24 V DC	5	■	151 689	KMEB-1-24-5-LED
	24 V DC	10	■	193 457	KMEB-1-24-10-LED
	Up to 240 V	2.5	–	151 690	KMEB-1-230-2,5
	Up to 240 V	5	–	151 691	KMEB-1-230-5
Plug socket with PUR cable					Technical data → 2 / 7.3-21
	24 V DC	2.5	■	174 844	KMEB-2-24-2,5-LED
	24 V DC	5	■	174 845	KMEB-2-24-5-LED
	Up to 240 V	2.5	–	174 846	KMEB-2-230-2,5
	Up to 240 V	5	–	174 847	KMEB-2-230-5

Ordering data – Illuminating seals for EB solenoid coils					Technical data → 2 / 7.4-1
	Voltage		Part No.	Type	
	[V DC]	[V AC]			
	12 ... 24	–	151 717	MEB-LD-12-24DC	
	–	230	151 718	MEB-LD-230AC	

Core Range





# Solenoid valves CPE, Compact Performance

Accessories



Directional control valves for standard applications  
Compact Performance

2.1

Ordering data – General accessories		
		Part No. Type
<b>Push-in/threaded fittings QS</b>		
		→ Volume 3
<b>Silencer</b>		
	for M3 thread	<b>163 978 U-M3</b>
	for M5 thread	<b>165 003 UC-M5</b>
	for M7 thread	<b>161 418 UC-M7</b>
	for G $\frac{1}{8}$ thread	<b>161 419 UC-<math>\frac{1}{8}</math></b>
	for G $\frac{1}{4}$ thread	<b>165 004 UC-<math>\frac{1}{4}</math></b>
<b>Manual override facility</b>		
	for KMYZ coils	<b>157 600 AHB-MZB</b>
	for EB coils	<b>157 601 AHB-MEB</b>
<b>Inscription labels</b>		
		<b>18 576 IBS-6x10</b>

 Core Range