



- Multiple pressure ranges selectable
- Special adaptation to individual pressure ranges
- Setpoint value input as analogue voltage or current signal
- Optional setpoint module
- Connection sizes
G¹/₈, G¹/₄, G¹/₂

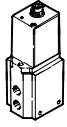

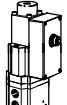
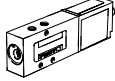
Proportional pressure regulators MPPE/VPPE/MPPES



Product range overview

Proportional valves
Proportional pressure valves

6.1

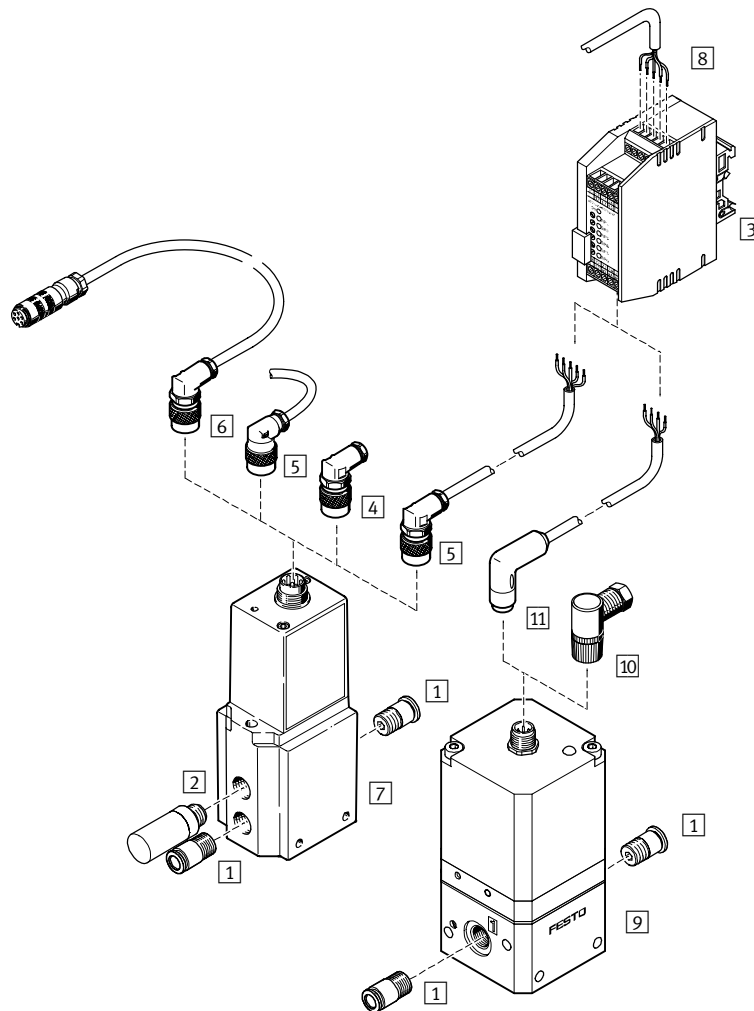
Function	Version	Type	Constructional design	Pneumatic connection 1	Nominal size pressurising/exhaust [mm]	Pressure regulation range ¹⁾ [bar]	Setpoint value input		→ Page
							Voltage type 0 ... 10 V	Current type 4 ... 20 mA	
Pressure regulators	with pilot control via 2/2-way valves (switching valves)								
		MPPE	Pilot-actuated poppet valve	G $\frac{1}{8}$	5/5	0 ... 1 0 ... 2.5 0 ... 6 0 ... 10	■	■	2 / 6.1-8
				G $\frac{1}{4}$	7/7		■	■	
				G $\frac{1}{2}$	11/12		■	■	
		VPPE	Pilot-actuated poppet valve	G $\frac{1}{8}$	5/2.5	0.15 ... 6	■	-	2 / 6.1-4
	with proportional solenoid								
	MPPES	Directly-actuated valve	G $\frac{1}{8}$	3/2	0 ... 2 0 ... 6 0 ... 10	■	■	2 / 6.1-14	
		Pilot-actuated valve	G $\frac{1}{4}$	7/7		■	■		
			G $\frac{1}{2}$	11/12		■	■		
Directional control valves	5/3-way valves								
		MPYE	Piston spool	M5	2	-	■	■	NO TAG
				G $\frac{1}{8}$	4	-	■	■	
					6	-	■	■	
					G $\frac{1}{4}$	8	-	■	
G $\frac{3}{8}$				10	-	■	■		

1) Pressure regulation range also by customer request

Proportional pressure regulators MPPE/VPPE/MPPES

Peripherals overview

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Accessories		
	Brief description	→ Page
1	Push-in fitting QS For connecting compressed air tubing with standard O.D. to CETOP RP 54 P	Volume 3 www.festo.com
2	Silencer For fitting in exhaust ports	Volume 3 www.festo.com
3	Setpoint value module MPZ For generating 6+1 analogue voltage signals	2 / 6.1-20
4	Angled plug socket MPPE-3-B -	2 / 6.1-22
5	Plug socket with cable KMPE-B -	2 / 6.1-22
6	Connecting cable KVIA-MPPE -	2 / 6.1-22
7	Proportional pressure regulator MPPE -	2 / 6.1-5
8	Digital input/output For controlling the setpoint module	-
9	Proportional pressure regulator VPPE -	
10	Plug socket, angled SIE-WD-TR -	
-	Plug socket, straight SIE-GD -	
11	Plug socket with cable, angled SIM-M12-4WD-5PU -	
-	Plug socket with cable, straight SIM-M12-4GD-5PU -	

Proportional pressure regulators VPPE

Type codes

FESTO

VPPE – 3 – 1/8 – 6 – 010

Type

VPPE	Proportional pressure regulator with switching valve head
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Valve function

3	3-way pressure regulator
---	--------------------------

Pneumatic connection

1/8	Female thread G1/8
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Pressure regulation range

6	0.15 ... 6 bar
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Analogue setpoint value input

010	0 ... 10 V
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Proportional valves
Proportional pressure valves

6.1

Proportional pressure regulators VPPE


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Technical data


 Flow rate
600 l/min

Variants

■ Setpoint value input as analogue voltage signal 0 ... 10 V

 Voltage
21.6 ... 26.4 V DC

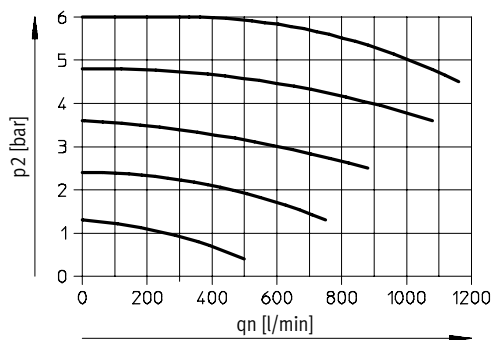
 Repair service

 Pressure regulation range
0.15 ... 6 bar



General technical data		
Pneumatic connection 1 and 2		G1/8
Constructional design		Pilot-actuated piston regulator
Sealing principle		Soft
Actuation mode		Electrical
Pilot control mode		Pilot actuated via 2/2-way valves
Type of mounting		Via through-holes
Assembly position		Any
Nominal size	Ventilation	[mm] 5
	Exhaust	[mm] 2.5
Standard nominal flow rate		[l/min] → Graphs
Product weight		[g] 420

Flow rate q_n as a function of the output pressure p_2



Electrical data		
Electrical connection		Plug, round design, 4-pin, M12x1
Operating voltage range	[V DC]	21.6 ... 26.4
Residual ripple		10 %
Max. electrical power consumption	[W]	2.5
Signal setpoint value input	[V DC]	0 ... 10
Protection against short circuit		For all electrical connections
Protection against polarity reversal		For all electrical connections
Protection class		IP65
CE symbol		EU conformity in accordance with the directive 89/336/EEC (EMC)

Proportional valves
Proportional pressure valves

6.1

Proportional pressure regulators VPPE

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Technical data

Proportional valves
Proportional pressure valves

6.1

Operating and environmental conditions		
Operating medium		Filtered compressed air, grade of filtration 40µm Neutral gases
Input pressure 1	[bar]	7 ... 8
Pressure regulation range	[bar]	0.15 ... 6
Max. hysteresis	[bar]	0.15
Ambient temperature	[°C]	10 ... 50
Temperature of medium	[°C]	10 ... 50
Corrosion resistance class CRC ¹⁾		2

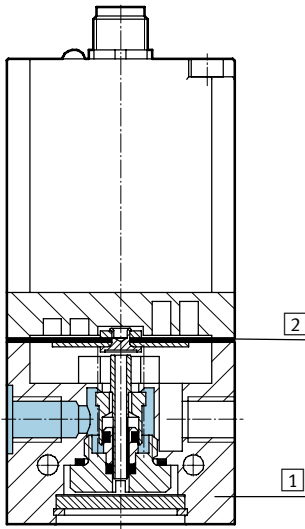
1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

 Safety advice

If the power supply cable is interrupted, output pressure is maintained unregulated.

Materials

Sectional view



1	Housing	Wrought aluminium alloy
2	Diaphragm	Nitrile rubber

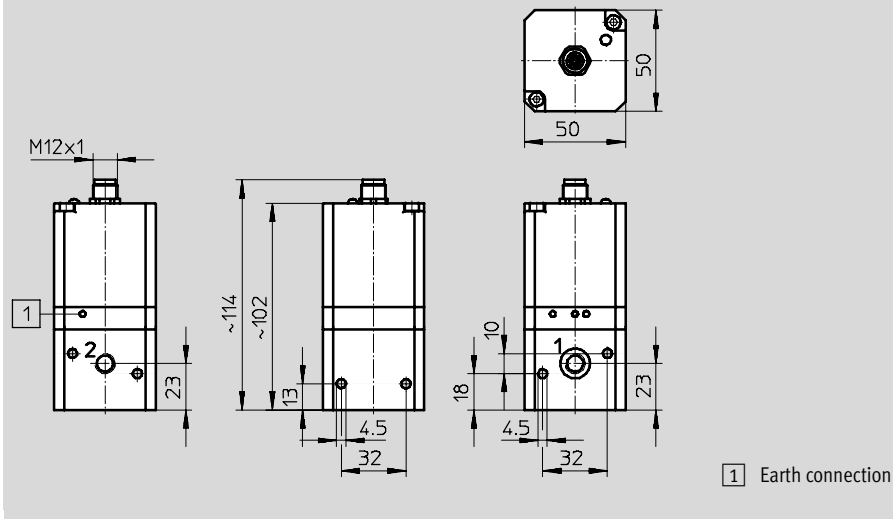
Proportional pressure regulators VPPE

Technical data

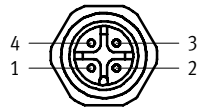
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Dimensions

Download CAD data → www.festo.com/en/engineering



M12x1 – Terminal allocation



- 1 Power supply
21.6 ... 26.4 V DC
- 2 Nominal value (-)
- 3 GRD (-)
- 4 Nominal value (+) 0 ... 10 V DC

Ordering data

Pneumatic connection	Pressure regulation range [bar]	Part No.	Type
G $\frac{1}{8}$	0 ... 6	539 639	VPPE-3- $\frac{1}{8}$ -6-010

Proportional valves
Proportional pressure valves

6.1

Proportional pressure regulators MPPE

Type codes

Basic version


		MPPE	-	3	-	1/8	-	1	-	010	-	B
Type												
MPPE	Proportional pressure regulator with switching valve											
Valve function												
3	3-way pressure regulator											
Pneumatic connection												
1/8	G1/8											
1/4	G1/4											
1/2	G1/2											
Pressure regulation range												
1	0 ... 1 bar											
2.5	0 ... 2.5 bar											
6	0 ... 6 bar											
10	0 ... 10 bar											
Setpoint value input												
010	Analogue voltage signal											
420	Analogue current signal											
Generation												
B	B series											


Special pressure regulation range by customer request


		MPPE	-	3	-	1/8	-	1	-	6	-	010	-	B
Type														
MPPE	Proportional pressure regulator with switching valve													
Valve function														
3	3-way pressure regulator													
Pneumatic connection														
1/8	G1/8													
1/4	G1/4													
1/2	G1/2													
Required pressure at 0 V or 4 mA [bar]														
Required pressure at 10 V or 20 mA [bar]														
Setpoint value input														
010	Analogue voltage signal													
420	Analogue current signal													
Generation														
B	B series													

Proportional pressure regulators MPPE

Technical data

 Flow rate
350 ... 5,500 l/min

 Voltage
18 ... 30 V DC

 Pressure regulation ranges
0 ... 1 bar
0 ... 2.5 bar
0 ... 6 bar
0 ... 10 bar

Variants

- Setpoint value input as analogue voltage signal 0 ... 10 V
- Setpoint value input as analogue current signal 4 ... 20 mA

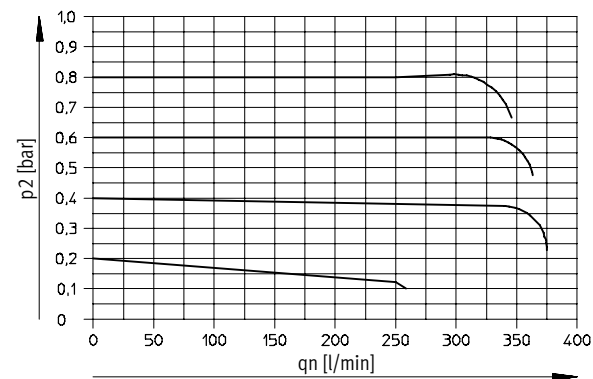


General technical data					
Pneumatic connection		G1/8	G1/4	G1/2	
Constructional design		Pilot actuated piston regulator			
Sealing principle		Soft			
Actuation type		Electrical			
Type of pilot control		Pilot actuated using 2/2-way valves			
Type of mounting		Via through-holes			
Mounting position		Any			
Nominal size	Ventilation	[mm]	5	7	11
	Exhaust	[mm]	5	7	12
Standard nominal flow rate		[l/min]	→ Diagrams		
Product weight		[g]	710	920	2,400

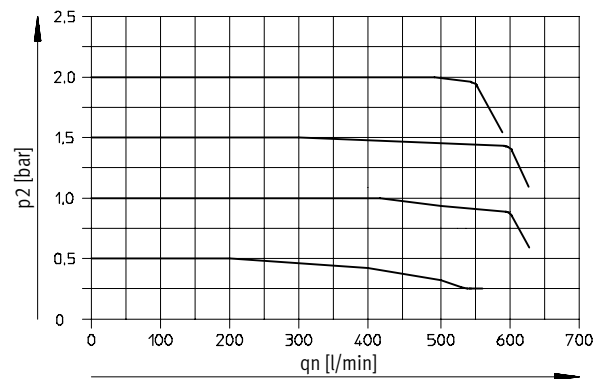
Flow rate qn as a function of the output pressure p2

Pneumatic connection G1/8

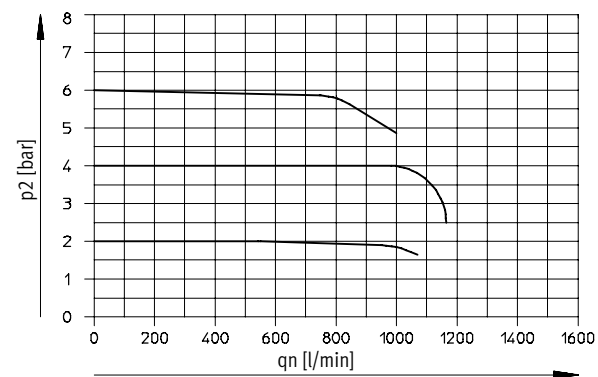
Pressure regulation range 0 ... 1 bar



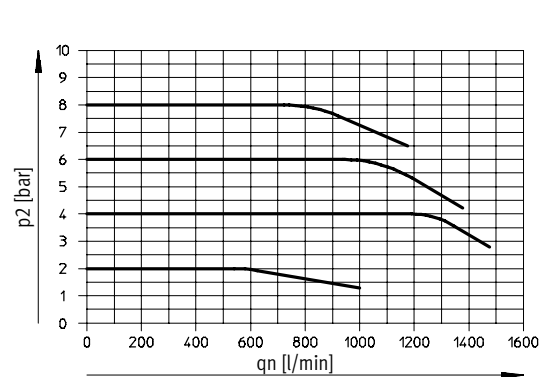
Pressure regulation range 0 ... 2.5 bar



Pressure regulation range 0 ... 6 bar



Pressure regulation range 0 ... 10 bar



Proportional pressure regulators MPPE

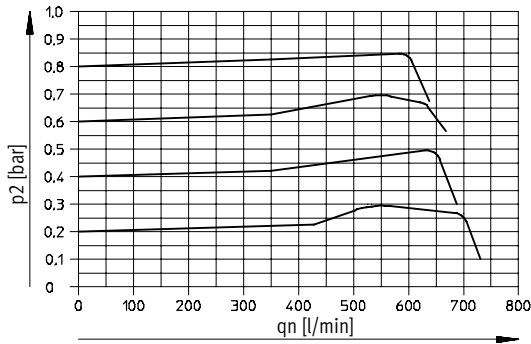
Technical data



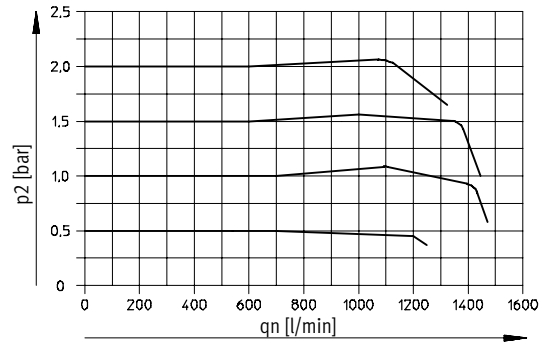
Flow rate q_n as a function of the output pressure p_2

Pneumatic connection G $\frac{1}{4}$

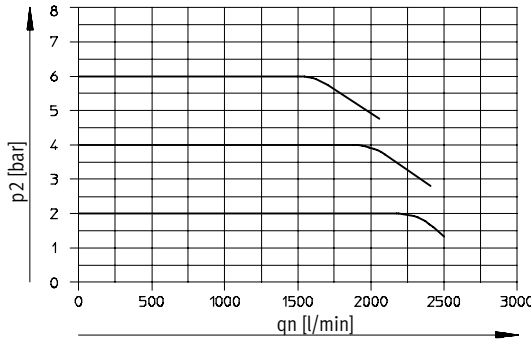
Pressure regulation range 0 ... 1 bar



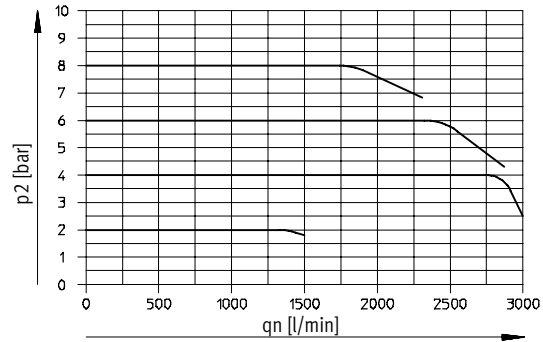
Pressure regulation range 0 ... 2.5 bar



Pressure regulation range 0 ... 6 bar

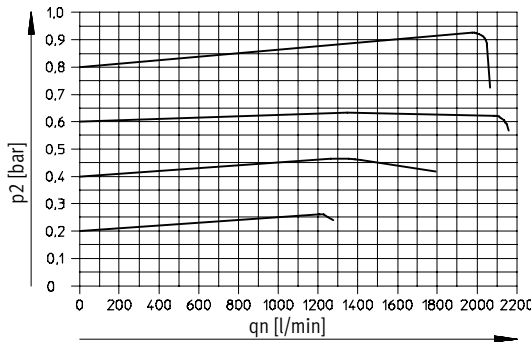


Pressure regulation range 0 ... 10 bar

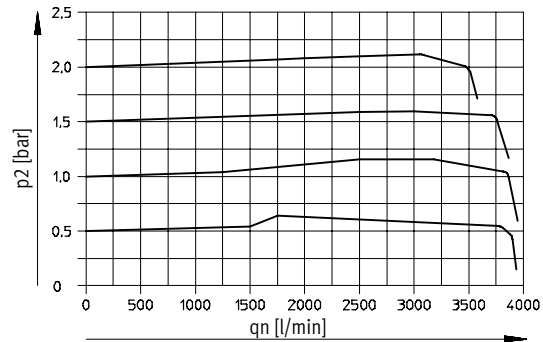


Pneumatic connection G $\frac{1}{2}$

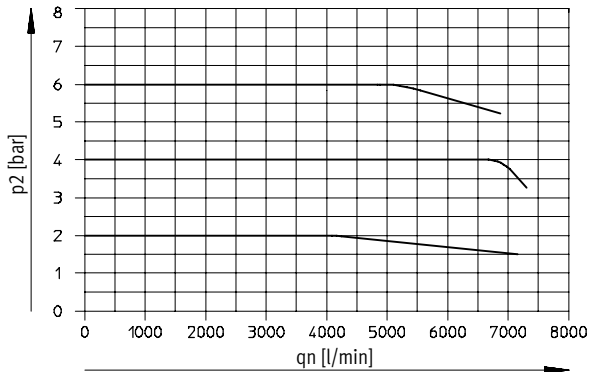
Pressure regulation range 0 ... 1 bar



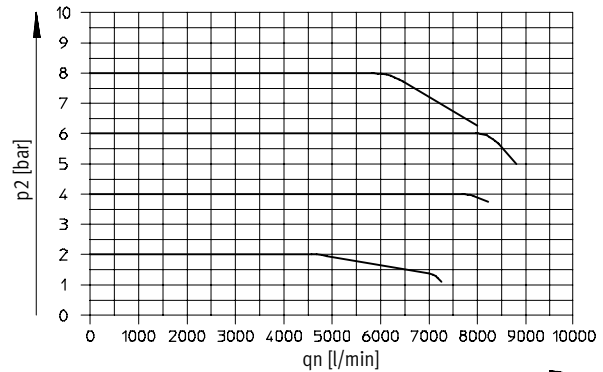
Pressure regulation range 0 ... 2.5 bar



Pressure regulation range 0 ... 6 bar



Pressure regulation range 0 ... 10 bar



Proportional pressure regulators MPPE

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Technical data

Operating and environmental conditions					
Pressure regulation range	[bar]	0 ... 1	0 ... 2.5	0 ... 6	0 ... 10
Operating medium		Filtered compressed air, lubricated or unlubricated Neutral gases			
Input pressure 1	[bar]	1.5 ... 2	3.5 ... 4.5	7 ... 8	11 ... 12
Max. hysteresis	[mbar]	30	40	40	50
Ambient temperature	[°C]	0 ... 50			
Temperature of medium	[°C]	0 ... 60			
Corrosion resistance class CRC ¹⁾		2	2	2	2

- 1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

Response times/step responses to output 2 at p _{1max} [s]									
Pressure regulation range [bar]	Volume to output 2	0 ... 1		0 ... 2.5		0 ... 6		0 ... 10	
		On ¹⁾	Off ²⁾	On ¹⁾	Off ²⁾	On ¹⁾	Off ²⁾	On ¹⁾	Off ²⁾
0 l	G ¹ / ₈	0.095	0.165	0.100	0.180	0.100	0.190	0.125	0.220
	G ¹ / ₄	0.140	0.225	0.150	0.260	0.150	0.260	0.160	0.280
	G ¹ / ₂	0.170	0.500	0.170	0.500	0.170	0.510	0.140	0.535
0.7 l	G ¹ / ₈	0.140	0.250	0.180	0.310	0.220	0.340	0.250	0.380
	G ¹ / ₄	0.150	0.280	0.170	0.320	0.180	0.360	0.200	0.390
	G ¹ / ₂	0.120	0.510	0.130	0.520	0.160	0.560	0.180	0.600
2 l	G ¹ / ₈	0.340	0.730	0.380	0.990	0.430	1.250	0.600	1.160
	G ¹ / ₄	0.360	0.620	0.400	0.700	0.540	0.930	0.540	1.050
	G ¹ / ₂	0.330	0.600	0.410	0.720	0.570	1.000	0.540	1.000

- 1) On = 0 ... 90% p_{2max}.
2) Off = 100 ... 10% p_{2max}.

Electrical data					
Pressure regulation range	[bar]	0 ... 1	0 ... 2.5	0 ... 6	0 ... 10
Electrical connection		Plug, round design to DIN 45 326, M16 x 0.75, 8-pin			
Operating voltage range	U _B [V DC]	18 ... 30	18 ... 30	18 ... 30	18 ... 30
Residual ripple		10%			
Power consumption	P _{max.} [W]	3.6 (at 30 V DC and 100% duty cycle)			
Signal setpoint value input	Voltage U _w [V DC]	0 ... 10	0 ... 10	0 ... 10	0 ... 10
	Current I _w [mA]	4 ... 20	4 ... 20	4 ... 20	4 ... 20
Signal actual value output	Voltage U _x [V DC]	0 ... 10	0 ... 10	0 ... 10	0 ... 10
	Current I _x [mA]	4 ... 20	4 ... 20	4 ... 20	4 ... 20
Signal actual value input external	Voltage U _{x,ext.} [V DC]	0 ... 10	0 ... 10	0 ... 10	0 ... 10
	Current I _{x,ext.} [mA]	4 ... 20	4 ... 20	4 ... 20	4 ... 20
Protection class to DIN 60 529		IP65 (with connection socket)			
Safety note		If the power supply cable is interrupted, output pressure is maintained unregulated			
Protection against polarity reversal	Setpoint value input Voltage signal 0 ... 10 V	For all electrical connections			
	Setpoint value input Current signal 4 ... 20 mA	For operating voltage			
Protection against short circuit		No			

Proportional pressure regulators MPPE

Technical data

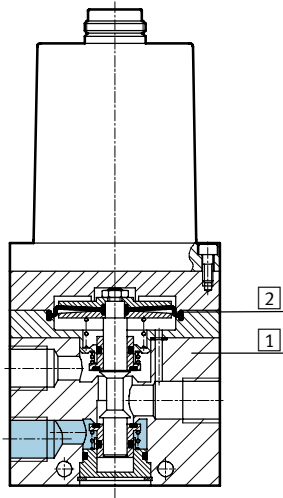
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Proportional valves
Proportional pressure valves

6.1

Materials

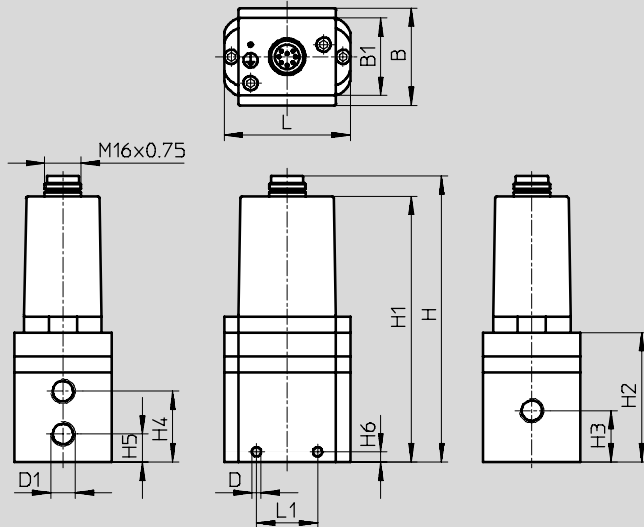
Sectional view



1	Housing	Wrought aluminium alloy
2	Diaphragm	Nitrile rubber

Dimensions

Download CAD data → www.festo.com/en/engineering



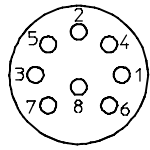
Pneumatic connection D1	B	B1	D Ø	H	H1	H2	H3	H4	H5	H6	L	L1
G1/8	38	-	4.5	129.1	119.1	60.2	18.8	26.8	9.3	4	62	34
G1/4	48	38	4.5	140.7	130.7	63.6	25.3	34.8	13.8	5	62	30
G1/2	76	38	7	194.6	184.6	117.5	53	74	32	18	86	50

Proportional pressure regulators MPPE

Technical data

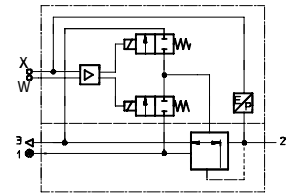
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Terminal allocation



1	WH	$X_{\text{ext,in}}$ (external actual value input)
2	BN	GND
3	GN	GND
4	YE	W_{in} (setpoint value input)
5	GY	10 V_{out} (external potentiometer supply)
6	PK	X_{out} (actual value output)
7	RD	24 V DC (supply voltage)
8	BU	GND

Switching function



Ordering data

Pneumatic connection	Pressure regulation range [bar]	Voltage type 0 ... 10 V		Current type 4 ... 20 mA	
		Part No.	Type	Part No.	Type
Basic version					
G $\frac{1}{8}$	0 ... 1	161 160	MPPE-3-1/8-1-010-B	161 163	MPPE-3-1/8-1-420-B
	0 ... 2.5	164 315	MPPE-3-1/8-2,5-010-B	164 316	MPPE-3-1/8-2,5-420-B
	0 ... 6	161 161	MPPE-3-1/8-6-010-B	161 164	MPPE-3-1/8-6-420-B
	0 ... 10	161 162	MPPE-3-1/8-10-010-B	161 165	MPPE-3-1/8-10-420-B
G $\frac{1}{4}$	0 ... 1	161 166	MPPE-3-1/4-1-010-B	161 169	MPPE-3-1/4-1-420-B
	0 ... 2.5	164 317	MPPE-3-1/4-2,5-010-B	164 318	MPPE-3-1/4-2,5-420-B
	0 ... 6	161 167	MPPE-3-1/4-6-010-B	161 170	MPPE-3-1/4-6-420-B
	0 ... 10	161 168	MPPE-3-1/4-10-010-B	161 171	MPPE-3-1/4-10-420-B
G $\frac{1}{2}$	0 ... 1	161 172	MPPE-3-1/2-1-010-B	161 175	MPPE-3-1/2-1-420-B
	0 ... 2.5	164 319	MPPE-3-1/2-2,5-010-B	164 320	MPPE-3-1/2-2,5-420-B
	0 ... 6	161 173	MPPE-3-1/2-6-010-B	161 176	MPPE-3-1/2-6-420-B
	0 ... 10	161 174	MPPE-3-1/2-10-010-B	161 177	MPPE-3-1/2-10-420-B
Special adaptation type¹⁾					
G $\frac{1}{8}$	0 ... 10	164 330	MPPE-3-1/8-...-...-010-B ¹⁾	164 330	MPPE-3-1/8-...-...-420-B ¹⁾
G $\frac{1}{4}$	0 ... 10	164 331	MPPE-3-1/4-...-...-010-B ¹⁾	164 331	MPPE-3-1/4-...-...-420-B ¹⁾
G $\frac{1}{2}$	0 ... 10	164 332	MPPE-3-1/2-...-...-010-B ¹⁾	164 332	MPPE-3-1/2-...-...-420-B ¹⁾

1) The special adaptation type allows a lower pressure to be assigned to the setpoint value 0 V or 4 mA and an upper pressure to be assigned to the setpoint value 10 V or 20 mA. Upper and lower pressure by customer request.

Proportional pressure regulators MPPES

Type codes

Basic version

MPPES - 3 - 1/8 - 1 - 010

Type	
MPPES	Proportional pressure regulator with proportional solenoid

Valve function	
3	3-way pressure regulator

Pneumatic connection	
1/8	G1/8
1/4	G1/4
1/2	G1/2

Pressure regulation range	
2	0 ... 2 bar
6	0 ... 6 bar
10	0 ... 10 bar

Setpoint value input	
010	Analogue voltage signal
420	Analogue current signal

Special pressure regulation range by customer request

MPPES - 3 - 1/8 - 1 - 6 - 010

Type	
MPPES	Proportional pressure regulator with proportional solenoid

Valve function	
3	3-way pressure regulator

Pneumatic connection	
1/8	G1/8
1/4	G1/4
1/2	G1/2

Required pressure at 0 V or 4 mA [bar]	


Required pressure at 10 V or 20 mA [bar]	


Setpoint value input	
010	Analogue voltage signal
420	Analogue current signal


Proportional pressure regulators MPPES

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Technical data

 Flow rate
230 ... 5,500 l/min

 Voltage
18 ... 30 V DC

 Pressure regulation ranges
0 ... 2 bar
0 ... 6 bar
0 ... 10 bar

Variants

- Setpoint value input as analogue voltage signal 0 ... 10 V
- Setpoint value input as analogue current signal 4 ... 20 mA

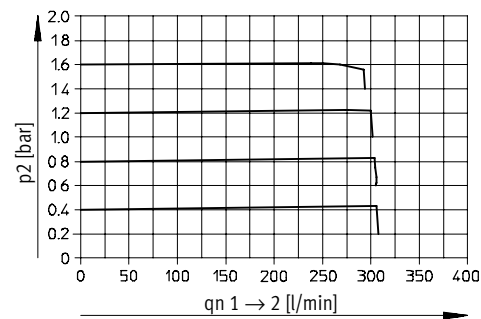


General technical data					
Pneumatic connection		G1/8	G1/4	G1/2	
Constructional design		Directly actuated piston regulator	Pilot actuated piston regulator		
Sealing principle		Soft			
Actuation type		Electrical			
Type of pilot control		Direct	Pilot actuated		
Type of mounting		Via through-holes			
Mounting position		Any			
Nominal size	Ventilation	[mm]	3	7	11
	Exhaust	[mm]	2	7	12
Standard nominal flow rate		[l/min]	→ Diagrams		
Product weight		[g]	915	1 310	2 670

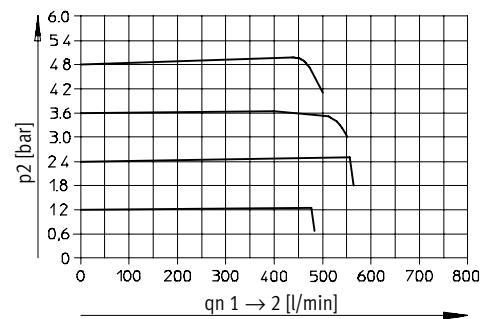
Flow rate q_n as a function of the output pressure p_2

Pneumatic connection G1/8

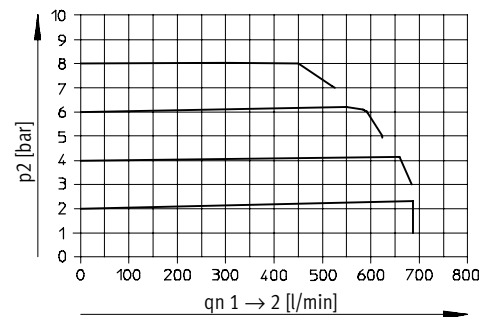
Pressure regulation range 0 ... 2 bar



Pressure regulation range 0 ... 6 bar



Pressure regulation range 0 ... 10 bar



Proportional pressure regulators MPPES

Technical data

FESTO

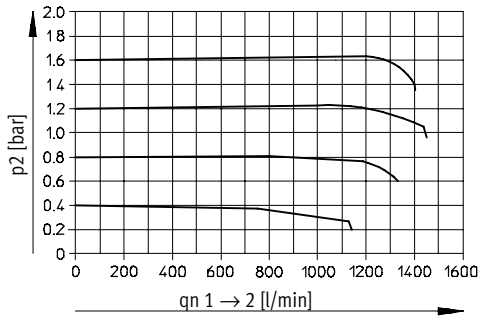
Proportional valves
Proportional pressure valves

6.1

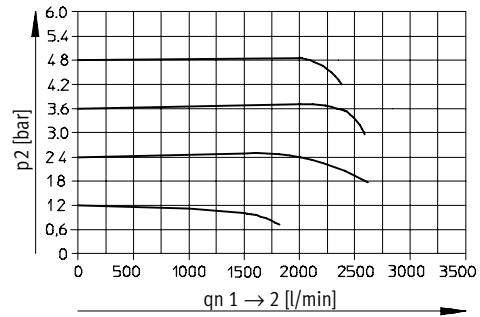
Flow rate q_n as a function of the output pressure p_2

Pneumatic connection G $\frac{1}{4}$

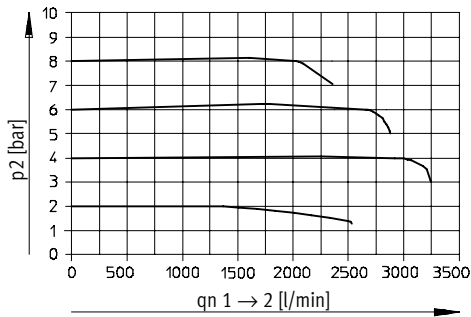
Pressure regulation range 0 ... 2 bar



Pressure regulation range 0 ... 6 bar

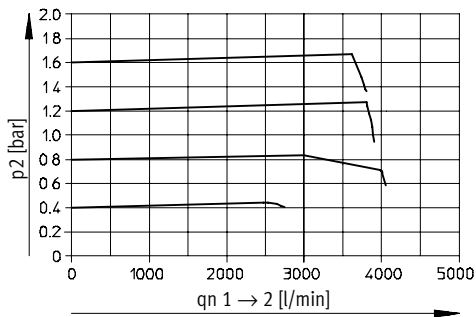


Pressure regulation range 0 ... 10 bar

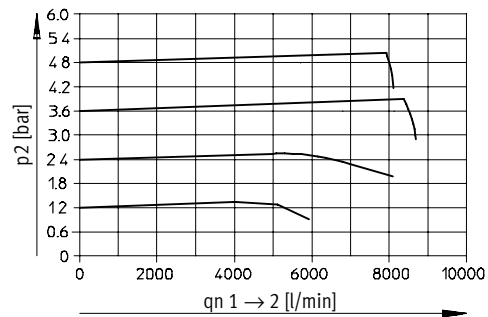


Pneumatic connection G $\frac{1}{2}$

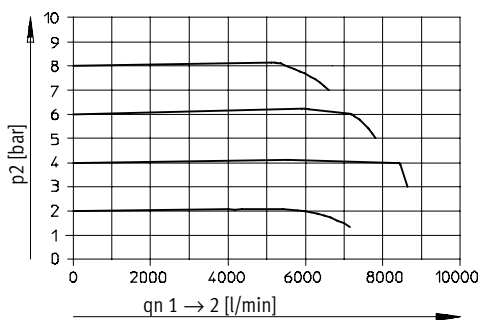
Pressure regulation range 0 ... 2 bar



Pressure regulation range 0 ... 6 bar



Pressure regulation range 0 ... 10 bar



Proportional pressure regulators MPPES

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Technical data

Operating and environmental conditions				
Pressure regulation range	[bar]	0 ... 2	0 ... 6	0 ... 10
Operating medium		Filtered compressed air, lubricated or unlubricated Neutral gases		
Input pressure 1	[bar]	3 ... 4	7 ... 8	11 ... 12
Max. hysteresis	[mbar]	10	50	50
Ambient temperature	[°C]	0 ... 50		
Temperature of medium	[°C]	0 ... 60		
Corrosion resistance class CRC ¹⁾		2	2	2

- 1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

Response times/step responses to output 2 at p _{1max} [s]							
Pressure regulation range [bar]	Volume to output 2	0 ... 2		0 ... 6		0 ... 10	
		On ¹⁾	Off ²⁾	On ¹⁾	Off ²⁾	On ¹⁾	Off ²⁾
0 l	G ¹ / ₈	0.220	0.410	0.210	0.280	0.200	0.290
	G ¹ / ₄	0.200	0.890	0.200	0.640	0.200	0.360
	G ¹ / ₂	0.220	1.000	0.230	0.660	0.230	0.450
2 l	G ¹ / ₈	0.660	2.530	1.200	5.760	1.370	6.300
	G ¹ / ₄	0.200	1.000	0.450	0.760	0.460	0.900
	G ¹ / ₂	0.320	1.000	0.340	0.570	0.350	0.630
10 l	G ¹ / ₈	2.700	2.800	5.150	24.000	5.800	27.000
	G ¹ / ₄	0.900	2.700	1.500	3.000	1.900	3.400
	G ¹ / ₂	0.800	1.400	1.100	1.500	1.300	1.800

- 1) On = 0 ... 90% p_{2max}.
2) Off = 100 ... 10% p_{2max}.

Electrical data				
Pressure regulation range	[bar]	0 ... 2	0 ... 6	0 ... 10
Electrical connection		Plug, round design to DIN 45 326, M16 x 0.75, 8-pin		
Operating voltage range	U _B [V DC]	18 ... 30	18 ... 30	18 ... 30
Residual ripple		10%		
Power consumption	P _{max.} [W]	20 (at 30 V DC)		
Signal setpoint value input	Voltage U _w [V DC]	0 ... 10	0 ... 10	0 ... 10
	Current I _w [mA]	4 ... 20	4 ... 20	4 ... 20
Signal actual value input	Voltage U _x [V DC]	0 ... 10	0 ... 10	0 ... 10
	Current I _x [mA]	4 ... 20	4 ... 20	4 ... 20
Signal actual value input external	Voltage U _{x,ext.} [V DC]	0 ... 10	0 ... 10	0 ... 10
	Current I _{x,ext.} [mA]	4 ... 20	4 ... 20	4 ... 20
Protection class to DIN 60 529		IP65 (with connection socket)		
Safety note		If the power supply cable is interrupted, output pressure is maintained unregulated.		
Protection against polarity reversal	Setpoint value input Voltage signal 0 ... 10 V	For all electrical connections		
	Setpoint value input Current signal 4 ... 20 mA	For operating voltage		
Protection against short circuit		No		

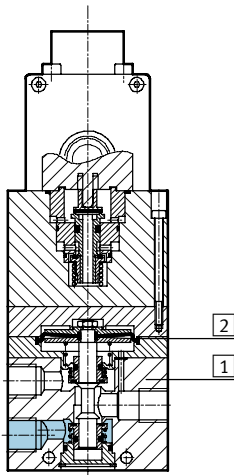
Proportional pressure regulators MPPES

Technical data



Materials

Sectional view



1	Housing	Wrought aluminium alloy
2	Diaphragm	Nitrile rubber

Dimensions

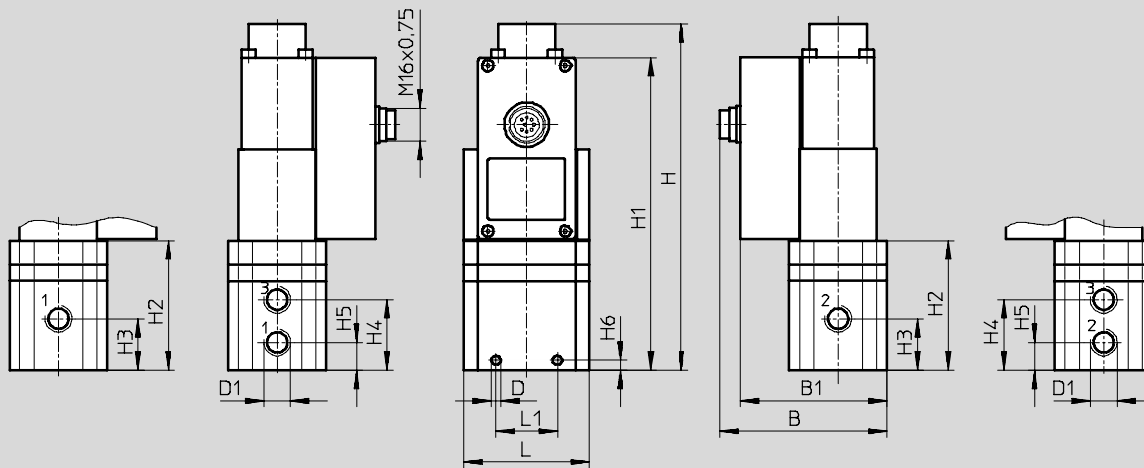
Download CAD data → www.festo.com/en/engineering

MPPES-3-1/8-...

MPPES-3-1/4-...
MPPES-3-1/2-...

MPPES-3-1/4-...
MPPES-3-1/2-...

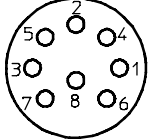
MPPES-3-1/8-...

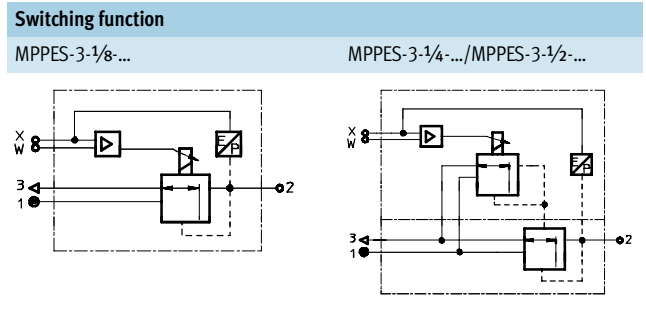


Pneumatic connection D1	B	B1	D Ø	H	H1	H2	H3	H4	H5	H6	L	L1
G1/8	77.1	67.1	4.4	116.5	100	55	34	45	23	4	62	34
G1/4	82.1	72.1	4.5	170.2	153.7	63.7	25.3	34.8	13.8	5	62	30
G1/2	96.1	86.1	7	227.1	210.6	120.6	53	74	32	18	86	50

Proportional pressure regulators MPPES

Technical data

Connections		
Terminal allocation		
	1	WH n. c.
	2	BN GND
	3	GN GND
	4	YE W_{in} (setpoint value input)
	5	GY n. c.
	6	PK X_{out} (actual value output)
	7	RD 24 V DC (supply voltage)
	8	BU GND



Ordering data					
Pneumatic connection	Pressure regulation range [bar]	Voltage type 0 ... 10 V		Current type 4 ... 20 mA	
		Part No.	Type	Part No.	Type
Basic version					
G1/8	0 ... 2	187 350	MPPES-3-1/8-2-010	187 351	MPPES-3-1/8-2-420
	0 ... 6	187 352	MPPES-3-1/8-6-010	187 353	MPPES-3-1/8-6-420
	0 ... 10	187 348	MPPES-3-1/8-10-010	187 349	MPPES-3-1/8-10-420
G1/4	0 ... 2	187 335	MPPES-3-1/4-2-010	187 336	MPPES-3-1/4-2-420
	0 ... 6	187 337	MPPES-3-1/4-6-010	187 338	MPPES-3-1/4-6-420
	0 ... 10	187 333	MPPES-3-1/4-10-010	187 334	MPPES-3-1/4-10-420
G1/2	0 ... 2	187 328	MPPES-3-1/2-2-010	187 329	MPPES-3-1/2-2-420
	0 ... 6	187 330	MPPES-3-1/2-6-010	187 331	MPPES-3-1/2-6-420
	0 ... 10	187 326	MPPES-3-1/2-10-010	187 327	MPPES-3-1/2-10-420
Special adaptation type¹⁾					
G1/8	0 ... 10	187 347	MPPES-3-1/8-PU-PO-010	187 762	MPPES-3-1/8-PU-PO-420
G1/4	0 ... 10	187 339	MPPES-3-1/4-PU-PO-010	187 744	MPPES-3-1/4-PU-PO-420
G1/2	0 ... 10	187 332	MPPES-3-1/2-PU-PO-010	187 735	MPPES-3-1/2-PU-PO-420

1) The special adaptation type allows a lower pressure PU to be assigned to the setpoint value 0 V or 4 mA and an upper pressure PO to be assigned to the setpoint value 10 V or 20 mA. PU and PO by customer request.

Proportional pressure regulators MPPE/VPPE/MPPES

Accessories – Setpoint module MPZ

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V - Voltage
20 ... 30 V DC

- Function**
- Generation of 6+1 analogue setpoint values for the proportional pressure regulators MPPE, MPPES and MPYE
 - Digital activation
 - Output voltage adjustable via spindle potentiometer



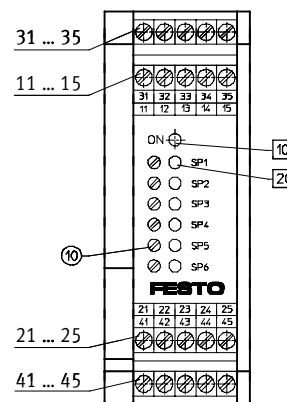
MPZ-1-24DC-SGH-6-SW

General technical data			
Function	Digital-analogue circuit with analogue output		
Type of mounting	Mounting on G or H rails		
Assembly position	Any		
Electrical connection	Screw terminal	[mm ²]	2.5
Operating voltage range		[V DC]	20 ... 30
Output voltage		[V DC]	0 ... 10
Output current		[mA]	5
Power consumption at 24 V DC		[W]	1.5
Supply setpoint value adjustment	Voltage ± 3 %	[V]	10
	Current ± 3%	[mA]	6
External setpoint input	Voltage	[V DC]	0 ... 10
	Input resistance	[kΩ]	Approx. 100
	Potentiometer	[kΩ]	2.5 ... 10
Setpoint controller	Input resistance	[kΩ]	3
Electromagnetic compatibility (DIN 843 Part 2 and 4)	Severity level 2		
Residual ripple	Max. 10% within operating voltage		
Displays	Ready		Green LED
	Setpoint value active		Yellow LED
Ambient temperature		[°C]	0 ... 60
Protection class to DIN 60 529	IP20		
Product weight		[g]	190

Proportional valves
Proportional pressure valves

6.1

Connections and control elements			
Connections			Priority
31	Activate setpoint 1	SP1	1 (highest)
32	Activate setpoint 2	SP2	2
33	Activate setpoint 3	SP3	3
34	Activate setpoint 4	SP4	4
35	Activate setpoint 5	SP5	5
11	Activate setpoint 6	SP6	6
13	Pilot line	0 V	–
21	Pilot line	0 V	–
22	External setpoint value input	U _{w,in}	7 (lowest)
23	Pilot line	10 V DC	–
24	Screening	PE	–
41	Pilot line	0 V DC	–
42	Setpoint value output	U _{w, out}	–
43	Power supply	–	–
44	Earth	GND	–
45	Power supply	+	–



- Display**
- 10 Operational status display
Green LED
 - 20 Setpoint value active
(SP1 ... SP6)
Yellow LED
- Voltage adjustment**
- ⊕ = Setpoint value potentiometer
(SP1 ... SP6)

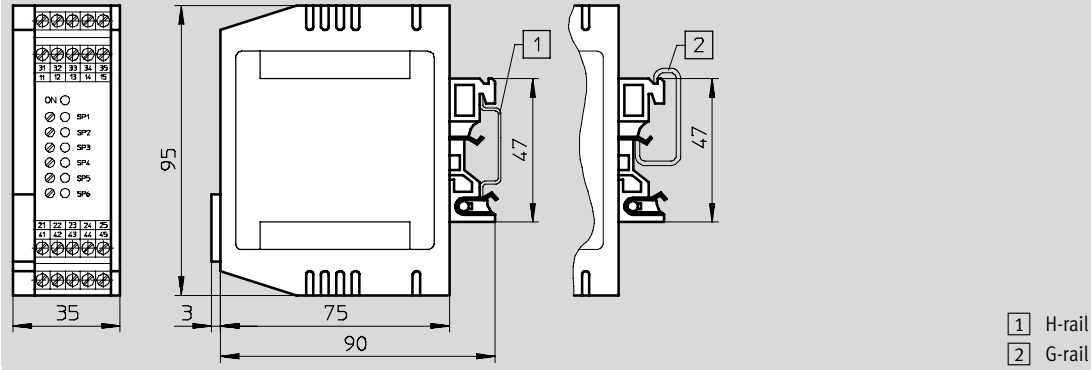
Proportional pressure regulators MPPE/VPPE/MPPES

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Accessories – Setpoint module MPZ

Dimensions

Download CAD data → www.festo.com/en/engineering



Ordering data

	Description	Part No.	Type
	Setpoint module for generating 6 + 1 analogue voltage signals	36 101	MPZ-1-24DC-SGH-6-SW

Proportional valves
Proportional pressure valves

6.1



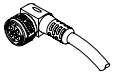





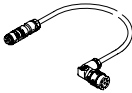

Proportional pressure regulators MPPE/VPPE/MPPES

Accessories



Proportional valves
Proportional pressure valves

6.1

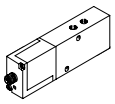
Ordering data		Part No.	Type		Part No.	Type	
Plug socket with cable, straight		Technical data → NO TAG		Plug socket, straight			Technical data → NO TAG
Angled plug socket without cable		Technical data → www.festo.com					
	5	164 259	SIM-M12-4GD-5-PU		18 494	SIE-GD → www.festo.com www.festo.com	
Plug socket with cable, angled		Technical data → NO TAG		Plug socket, angled			Technical data → NO TAG
Plug socket with cable		Technical data → www.festo.com					
	5	164 258	SIM-M12-4WD-5-PU		12 956	SIE-WD-TR → www.festo.com www.festo.com	
Angled plug socket without cable		Technical data → NO TAG		Push-in fittings			
Plug socket with cable		Technical data → www.festo.com					
	–	161 839	MPPE-3-B			→ Volume 3 → www.festo.com	
Plug socket with cable		Technical data → NO TAG		Silencers			
Connecting cable		Technical data → www.festo.com					
	2.5	161 879	KMPPE-...-B-2,5			→ Volume 3 → www.festo.com	
	5	161 878	KMPPE-...-B-5				
Connecting cable		Technical data → NO TAG		Reducing nipple			
Connecting cable		Technical data → www.festo.com					
	5	163 882	KVIA-MPPE-5			→ Volume 3 → www.festo.com	
	10	163 883	KVIA-MPPE-10				



- High dynamics
- Final control element for closed control loops
- 5/3 –way function

Proportional directional control valves MPYE

Product range overview

Function	Design	Type	Construc- tional design	Pneumatic connection	Nominal size [mm]	Standard nominal flow rate [l/min]	Setpoint/actual values		→ Page
							Voltage type 0 ... 10 V	Current type 4 ... 20 mA	
5/3-way valves		MPYE	Piston spool	M5	2	0 ... 100	■	■	Volume 5
				G ¹ / ₈	4 ¹⁾	0 ... 350 ¹⁾	■	■	
					6 ²⁾	0 ... 700 ²⁾	■	■	
				G ¹ / ₄	8	0 ... 1400	■	■	
				G ³ / ₈	10	0 ... 2000	■	■	

- 1) Low flow version
- 2) High flow version