

Proportional pressure regulators VPPM

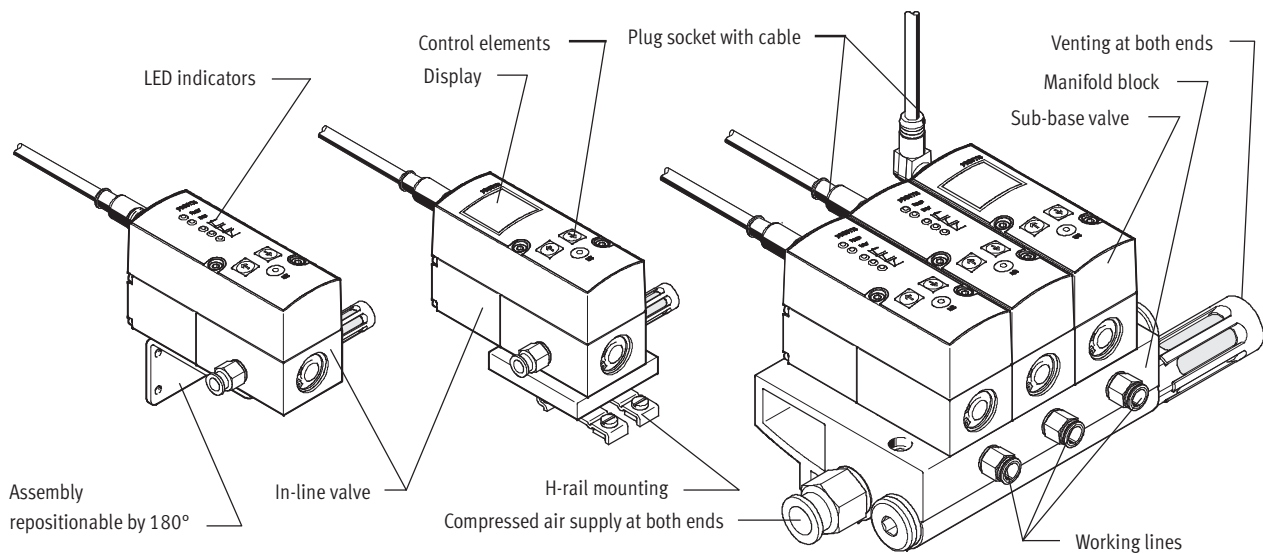
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Proportional pressure regulators VPPM

General information

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Innovative

- Multi-sensor control (cascade control)
- Diagnostics
- Choice of regulation characteristics
- Temperature compensated
- High dynamic response
- High repetition accuracy
- Modular product system

Versatile

- Individual valves (in-line valve)
- Manifold valves (sub-base/flange valve)
- Various user interfaces
 - LED indicators
 - LCD display
 - Adjustment/selection buttons
- A choice of valves with different pressure ranges
- Pressure range can be modified on the valve
- Choice of different setpoint specifications
 - Current input
 - Voltage input

Reliable

- Integrated pressure sensor
 - with independent output
- Open circuit monitoring
- Pressure is maintained if the controller fails

Easy to mount

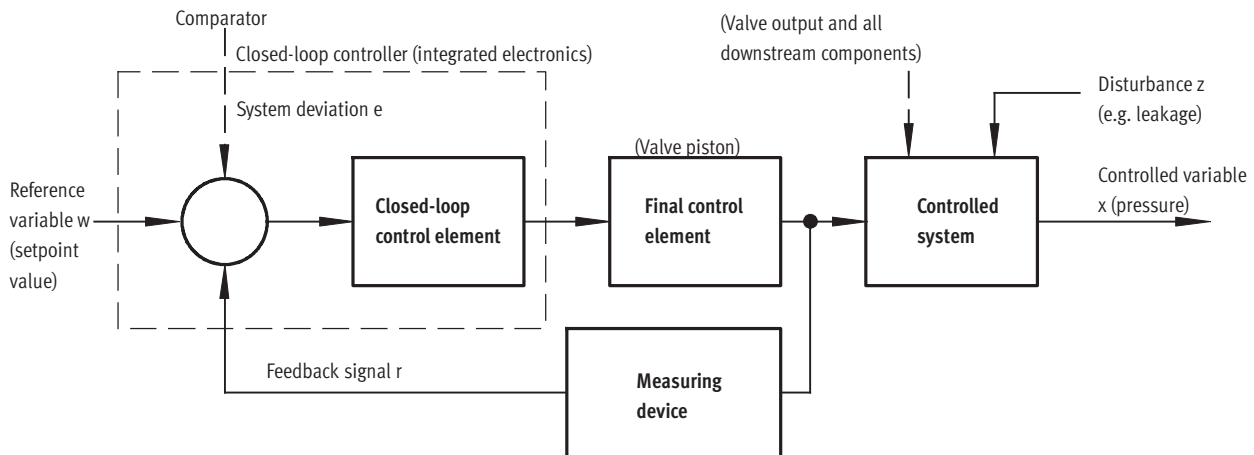
- Manifold block
- H-rail mounting
- Individually via mounting bracket
- QS fittings

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General information

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Layout of a control circuit



Layout

The figure shows a closed-loop control circuit. The reference variable w (setpoint value, e.g. 5 volts or 8 mA) initially acts on a comparator. The measuring device sends the controlled variable x value (actual value, e.g. 3 bar) to the comparator as a feedback signal r . The closed-loop control element detects the system

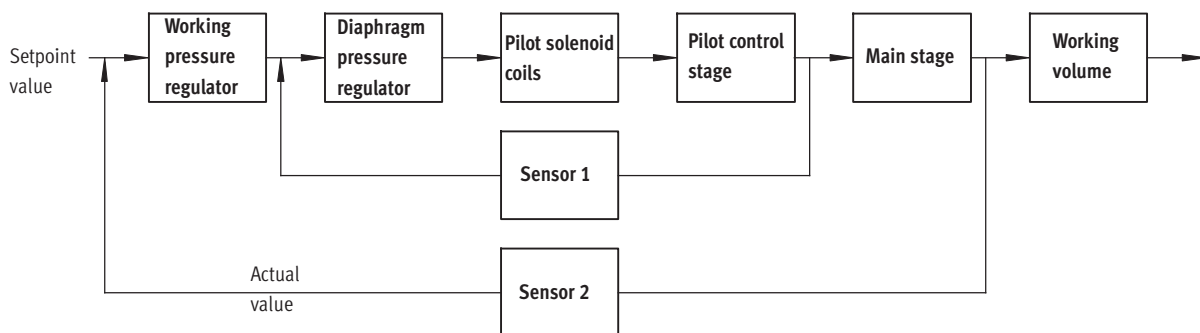
deviation e and actuates the final control element. The output of the final control element acts on the controlled system. The closed-loop control element thus attempts to compensate for the difference between the reference variable w and the controlled variable x by using the final control element.

Method of operation

This process runs continuously so changes in the reference variable are always detected. However, a system deviation will also appear if the reference variable is constant but the controlled variable changes. This happens when the flow through the valve changes in response to a switching action, a cylinder movement

or a change in load. The disturbance variable z will also cause a system deviation. An example of this is when the pressure drops in the air supply. The disturbance variable z acts on the controlled variable x unintentionally. In all cases, the regulator attempts to readjust the controlled variable x to the reference variable w .

Multi-sensor control (cascade control) of the VPPM



Cascade control

Unlike conventional direct-acting regulators, with multi-sensor control several control circuits are nested inside each other. The overall

controlled system is divided into smaller sub-controlled circuits that are easier to control for the specific task.

Control precision

Multi-sensor control significantly improves control precision and dynamic response in comparison with single-acting regulators.

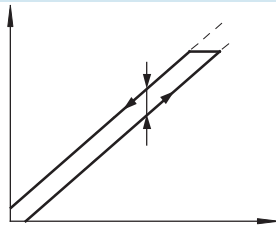
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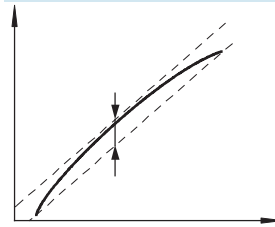
Terms related to the proportional pressure regulator

Hysteresis



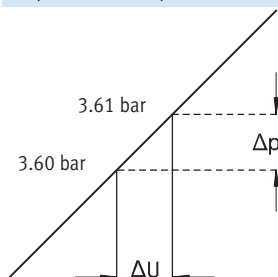
There is always a linear relationship within a certain tolerance between the setpoint value entered and the pressure output. Nevertheless it makes a difference whether the setpoint value is entered as rising or falling. The difference between the maximum deviations is referred to as hysteresis.

Linearity error



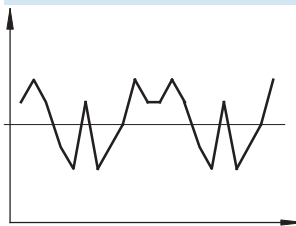
A perfectly linear progression of the control characteristic of the output pressure is theoretical. The maximum percentage deviation from this theoretical control characteristic is referred to as the linearity error. The percentage value refers to the maximum output pressure (full scale).

Response sensitivity



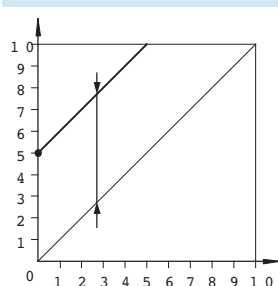
The response sensitivity of the device determines how sensitively one can change, i.e. adjust, a pressure. The smallest setpoint value difference that results in a change in the output pressure is referred to as the response sensitivity. In this case, 0.01 bar.

Repetition accuracy (reproducibility)



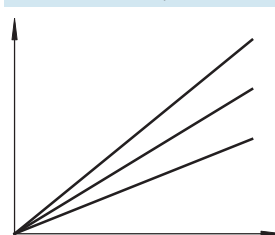
The repetition accuracy is the margin within which the fluid output variables are scattered when the same electrical input signal coming from the same direction is repeatedly adjusted. The repetition accuracy is expressed as a percentage of the maximum fluid output signal.

Zero offset



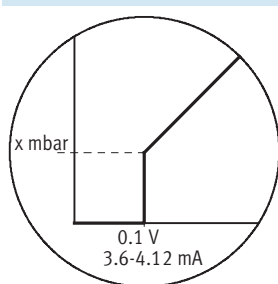
If, for example, a VPPM cannot be vented for safety reasons, the minimum pressure can be increased from the zero point. The smallest setpoint value is then assigned an output pressure of 5 bar, for example, and the largest setpoint value an output pressure of 10 bar. Zero suppression is automatically switched off if zero offsetting is used.

Pressure range adaptation



In the delivery condition, 100% setpoint value equals 100% fluid output signal. Pressure range adaptation or adjustment enables the fluid output variable to be matched to the setpoint value.

Zero point suppression



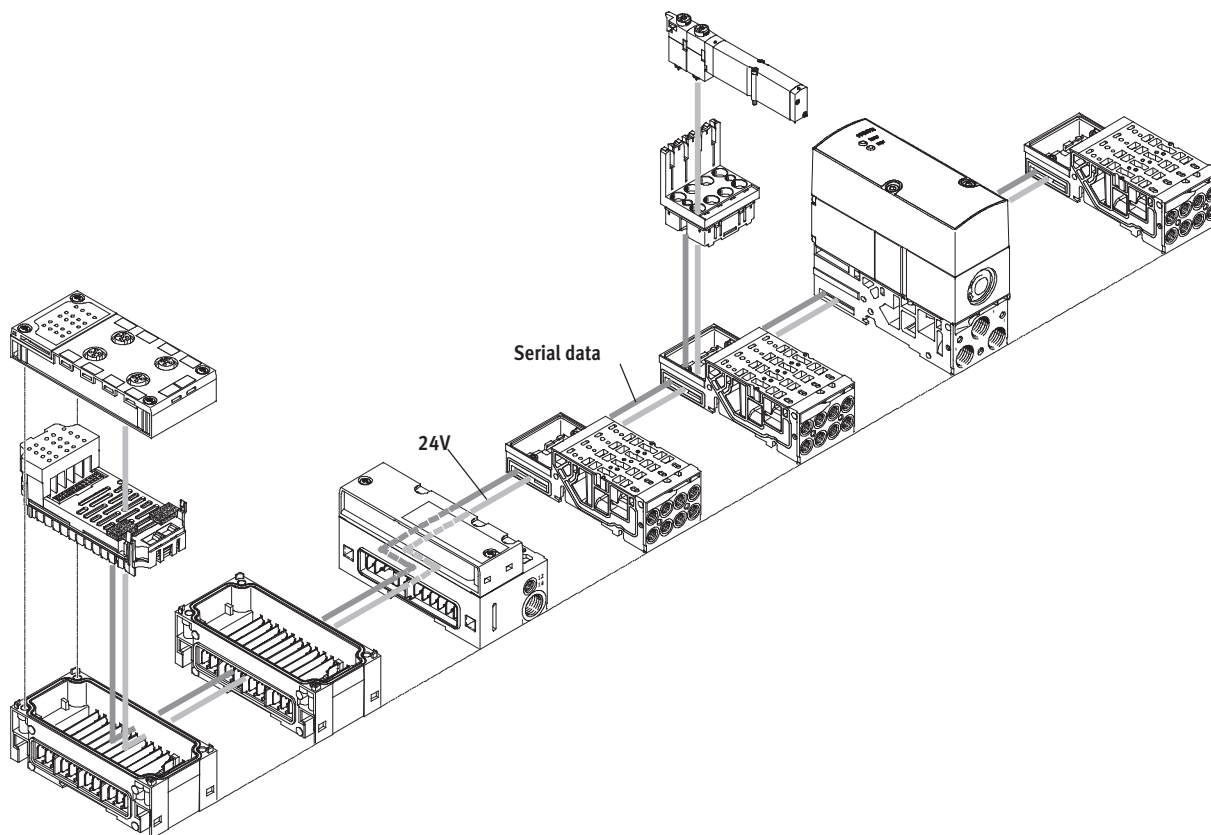
In practice there exists the possibility of residual voltage or residual current at the setpoint input of the VPPM via the setpoint generator. Zero point suppression is used so that the valve is reliably vented at a setpoint value of zero.

Proportional pressure regulators VPPM

General information

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VPPM on the valve terminal MPA



Innovative

- Multi-sensor control
- Diagnostics via bus
- Choice of regulation characteristics
- High dynamic response
- 2 accuracy levels

Versatile

- For all common protocols
- As an individual pressure regulator
- As a pressure zone regulator
- Choice of 3 valves with different pressure ranges
- 3 pressure ranges (presets) can be set via the bus
- Internal or external compressed air supply possible

Reliable

- Long service life
- LED display for the operating status
- Pressure is maintained if the supply voltage fails
- Fast troubleshooting thanks to LEDs on the valves and diagnostics via fieldbus
- Ease of servicing through replaceable valves

Easy to mount

- Simple replacement of the valves
- Tested units
- Easy extension of the valve terminal



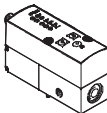
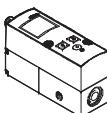
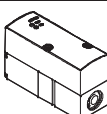
New

Nominal diameter 8 mm

Proportional pressure regulators VPPM

Product range overview

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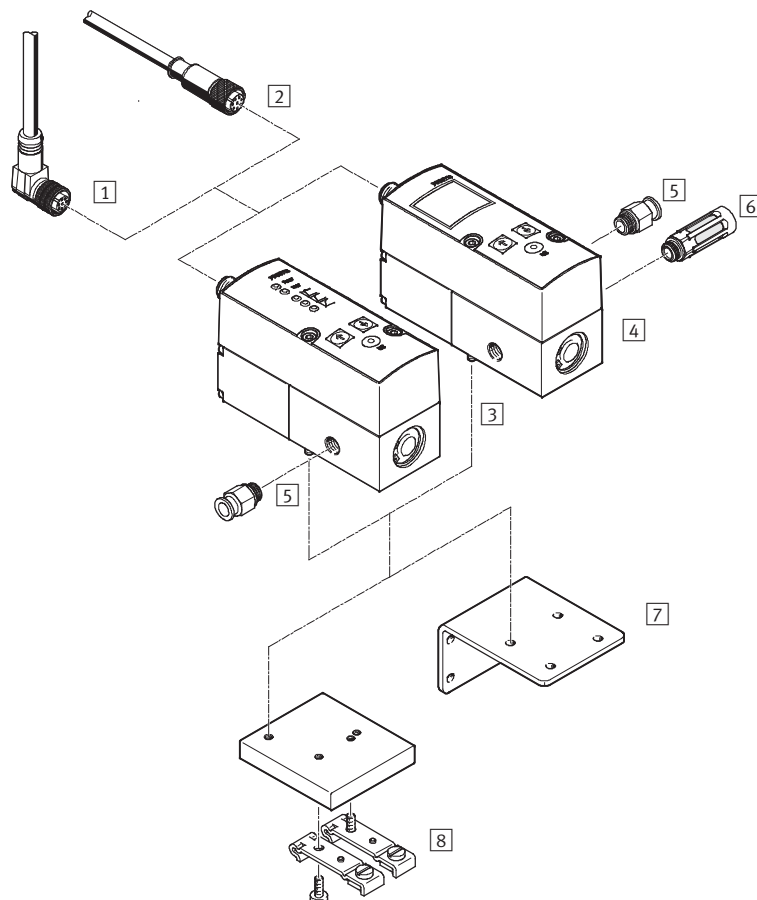
Function	Version	Constructional design	Pneumatic connection 1, 2, 3	Nominal diameter pressurise/exhaust [mm]	Pressure regulation range [bar]	Setpoint value input			→ Page/ Internet
						Voltage type	Current type	Digital	
						0 ... 10 V	4 ... 20 mA	–	
Pressure regulators	With LED								
		Pilot actuated diaphragm valve	G1/8	6/4.5	0.02 ... 2 0.06 ... 6 0.1 ... 10	■	■	–	12
			Sub-base	6/4.5	0.02 ... 2 0.06 ... 6 0.1 ... 10	■	■	–	
				8/7	0.02 ... 2 0.06 ... 6 0.1 ... 10	■	■	–	
			G1/4	8/7	0.02 ... 2 0.06 ... 6 0.1 ... 10	■	■	–	
	With LCD								
		Pilot actuated diaphragm valve	G1/8	6/4.5	0.02 ... 2 0.06 ... 6 0.1 ... 10	■	■	–	12
			Sub-base	6/4.5	0.02 ... 2 0.06 ... 6 0.1 ... 10	■	■	–	
				8/7	0.02 ... 2 0.06 ... 6 0.1 ... 10	■	■	–	
			G1/4	8/7	0.02 ... 2 0.06 ... 6 0.1 ... 10	■	■	–	
	With LED for valve terminal MPA								
		Pilot actuated diaphragm valve	Manifold block MPA	6/4.5, 8/7	0.02 ... 2 0.06 ... 6 0.1 ... 10	–	–	■	type 32

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Peripherals overview

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Individual valve



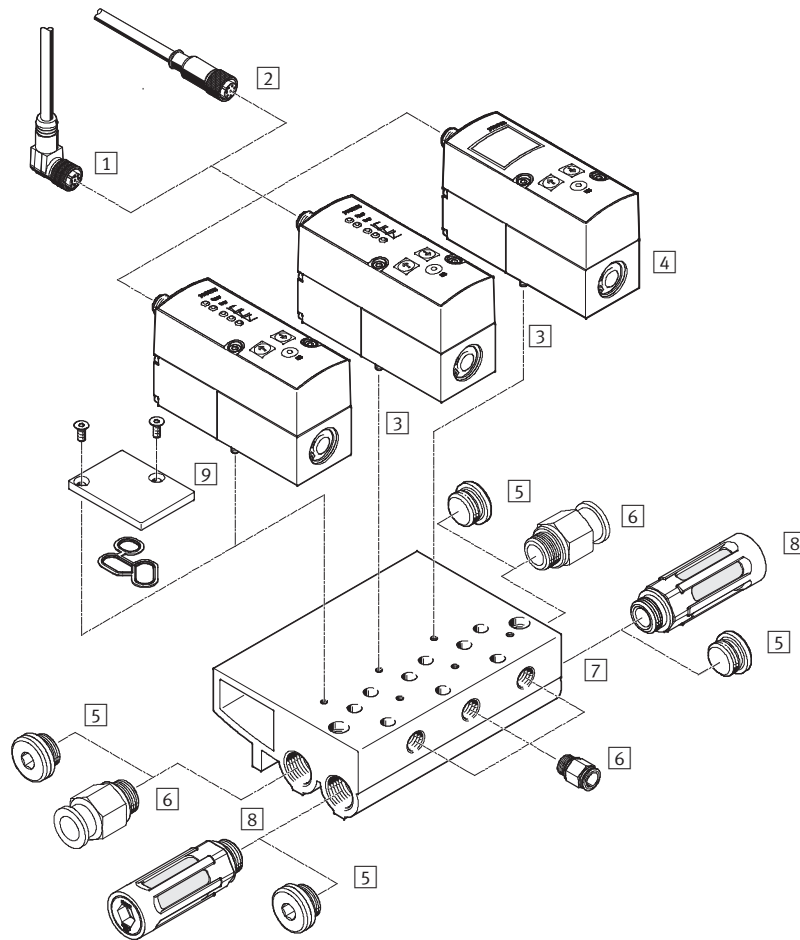
Accessories		
	Brief description	→ Page/Internet
1	Plug socket with cable, angled NEBU-M12W8-...	28
2	Plug socket with cable, straight SIM-M12-8GD-...	28
3	Proportional pressure regulator VPPM	Operator unit with LED 12
4	Proportional pressure regulator VPPM	Operator unit with LCD 12
5	Push-in fitting QS	For connecting compressed air tubing with standard outside diameter qs
6	Silencer	For fitting on exhaust ports u
7	Mounting bracket VAME-P1-A	For attaching the valve 25
8	H-rail mounting VAME-P1-T	For mounting on a H-rail 23

Proportional pressure regulators VPPM

Peripherals overview

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Valve manifold



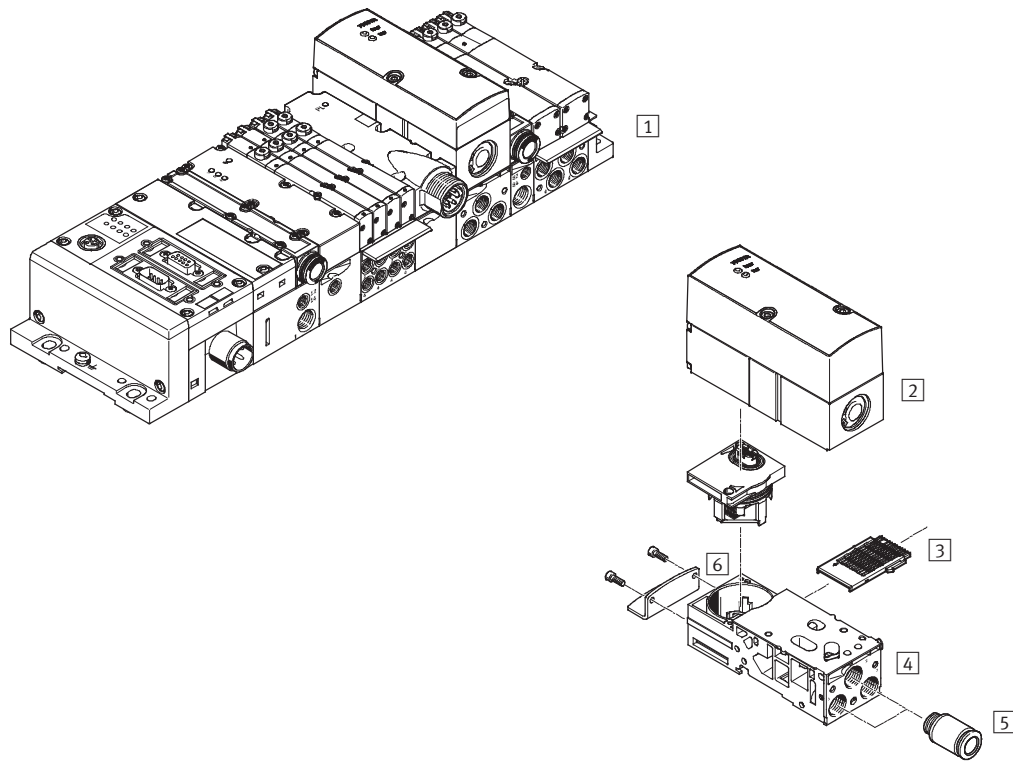
Accessories		
	Brief description	→ Page/Internet
1	Plug socket with cable, angled NEBU-M12W8-...	28
2	Plug socket with cable, straight SIM-M12-8GD-...	28
3	Proportional pressure regulator VPPM	Operator unit with LED 12
4	Proportional pressure regulator VPPM	Operator unit with LCD 12
5	Blanking plug B	— b
6	Push-in fitting QS	For connecting compressed air tubing with standard outside diameter qs
7	Manifold block VABM	— 23
8	Silencer	For fitting on exhaust ports u
9	Blanking plate VABB-P1	For vacant position; seal and countersunk screws included in the scope of delivery 24

Proportional pressure regulators VPPM

System overview

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VPPM for valve terminal MPA



Accessories		Brief description	→ Page/Internet
1	Valve terminal MPA	With fieldbus connection and VPPM	mpa
2	Proportional pressure regulator VPPM	For valve terminal MPA	mpa
3	Electrical manifold module VMPA1-FB-EV-AB	For sub-base of the proportional pressure regulator	mpa
4	Sub-base VMPA-FB-AP-P1	Without electrical manifold module and electrical module	mpa
5	Push-in fitting QS	–	qs
6	Attachment VMPA-BG	–	mpa



New

Nominal diameter 8 mm

Proportional pressure regulators VPPM

Type codes

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		VPPM	–	6	L		–	L	–	1	–	G18	–	0L	6H	–	1L	–	6H
Type																			
VPPM	Modular proportional pressure regulator																		
Nominal diameter																			
6	6 mm																		
8	8 mm																		
Design																			
L	In-line valve																		
F	Flanged valve																		
T	Flanged valve for valve terminal																		
Mounting method																			
	Freely mountable																		
Dynamic response class																			
L	Low																		
Valve function																			
1	3/2-way valve, normally closed																		
Pneumatic connection																			
G18	Thread G1/8																		
G14	Thread G1/4																		
F	Flange/sub-base																		
Lower pressure value of regulation range																			
0L	0 bar																		
Upper pressure value of regulation range																			
2H	2 bar																		
6H	6 bar																		
10H	10 bar																		
Alternative lower pressure value of regulation range																			
...L	0 ... 9 bar																		
Alternative upper pressure value of regulation range																			
...H	0.2 ... 10 bar																		

Proportional pressure regulators VPPM

Type codes

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		–	V1	N	–	S1	
Setpoint specification for individual valve							
V1	0 ... 10 V						
A4	4 ... 20 mA						
Switching output							
N	Negative switching						
P	Positive switching						
Accuracy							
–	2% (standard)						
S1	1%						
Operator unit							
–	LED (standard)						
C1	With LCD, pressure unit variable						

New
Nominal diameter 8 mm

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Technical data

Flow rate	380 ... 2,750 l/min	Variants • Setpoint input as analogue voltage signal 0 ... 10 V • Setpoint input as analogue current signal 4 ... 20 mA • LED version • With LCD display • NPN or PNP switching output
Voltage	21.6 ... 26.4 V DC	
Pressure	0.02 ... 10 bar	



General technical data							
			G1/8	G1/4	Sub-base		
Constructional design			Pilot actuated diaphragm regulator				
Sealing principle			Soft				
Actuation type			Electric				
Type of control			Pilot actuated via 2/2-way valves				
Type of mounting			Via through-hole, via accessories				
Mounting position			Any				
Nominal diameter	Pressurisation	[mm]	6	8	6	8	
	Exhaust	[mm]	4.5	7	4.5	7	
Standard nominal flow rate		[l/min]	➔ Graphs				
Product weight		[g]	400	500	400	500	

Electrical data				VPPM-6	VPPM-8
Electrical connection				Plug, round design, 8-pin, M12	
Operating voltage range			[V DC]	24 ± 10% = 21.6 ... 26.4	
Residual ripple				10%	
Max. electrical power consumption			[W]	7	
Signal setpoint input	Voltage	[V DC]		0 ... 10	
	Current	[mA]		4 ... 20	
Protection against short circuit				For all electrical connections	
Protection against polarity reversal				For all electrical connections	
Protection class				IP65	
CE mark				EU conformity in accordance with the directive 89/336/EEC (EMC)	
Certification				C-Tick	
				c UL us - Recognized (OL)	–

Note

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

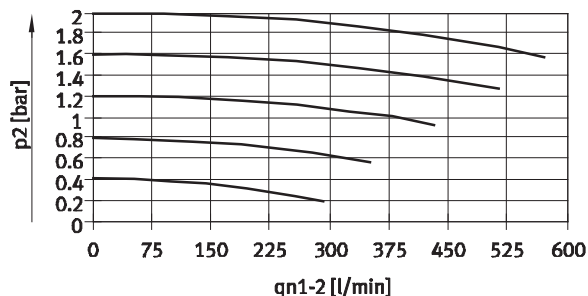
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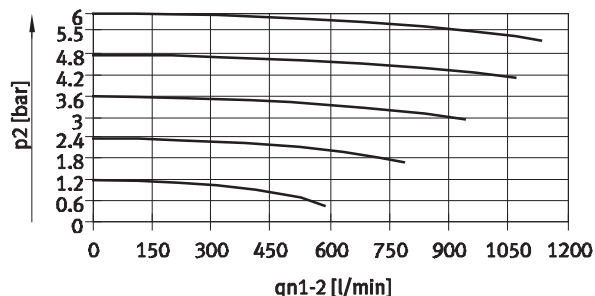
Technical data

Flow rate q_n from 1 $\rightarrow$ 2 as a function of output pressure p_2

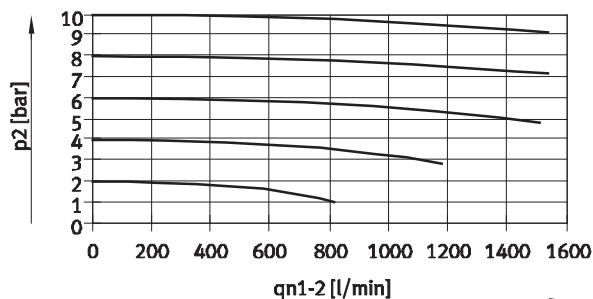
VPPM-6L/F-...-0L2H-... (2 bar)



VPPM-6L/F-...-0L6H-... (6 bar)



VPPM-6L/F-...-0L10H-... (10 bar)

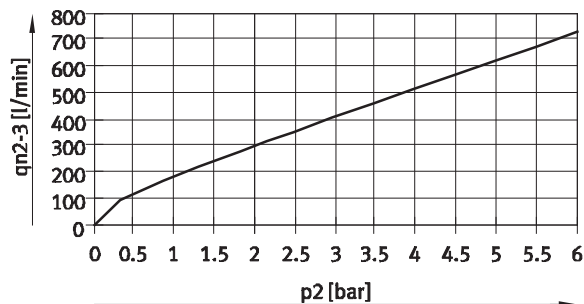


Flow rate q_n from 2 $\rightarrow$ 3 as a function of output pressure p_2

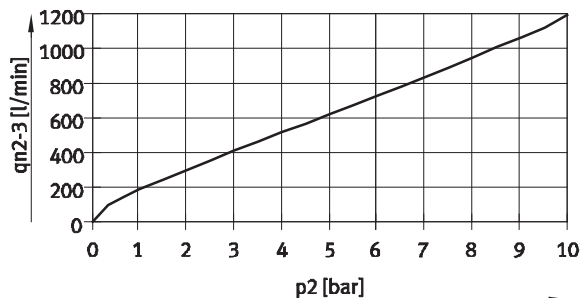
VPPM-6L/F-...-0L2H-... (2 bar)



VPPM-6L/F-...-0L6H-... (6 bar)



VPPM-6L/F-...-0L10H-... (10 bar)



Proportional pressure regulators VPPM

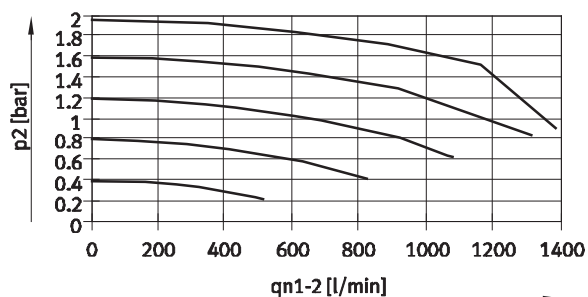
Technical data

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Flow rate q_n from 1 → 2 as a function of output pressure p_2

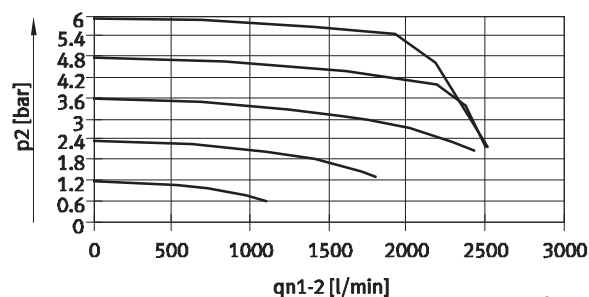
VPPM-8L-...-0L2H-...

(2 bar)



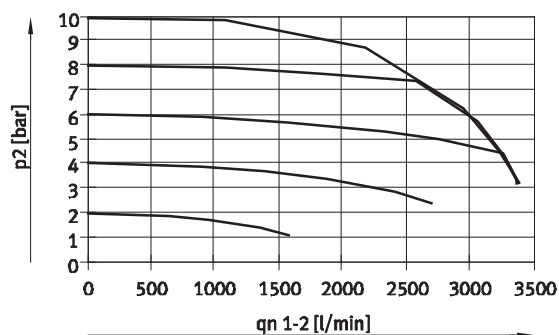
VPPM-8L-...-0L6H-...

(6 bar)



VPPM-8L-...-0L10H-...

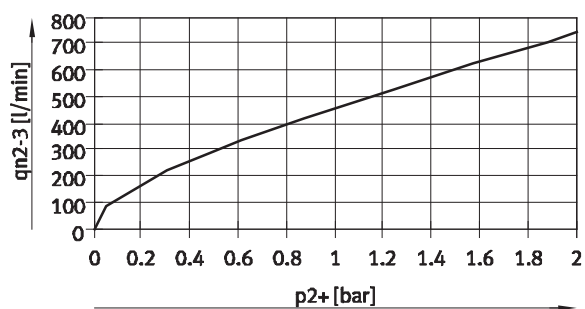
(10 bar)



Flow rate q_n from 2 → 3 as a function of output pressure p_2

VPPM-8L-...-0L2H-...

(2 bar)



VPPM-8L-...-0L6H-...

(6 bar)



VPPM-8L-...-0L10H-...

(10 bar)



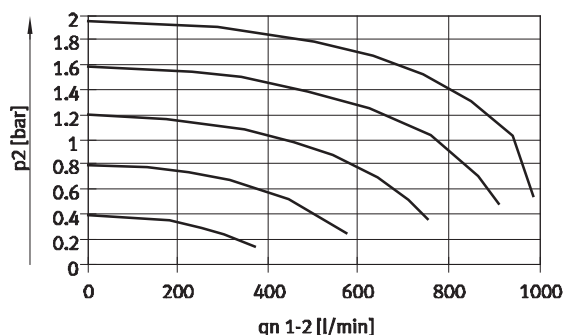
Proportional pressure regulators VPPM

Technical data

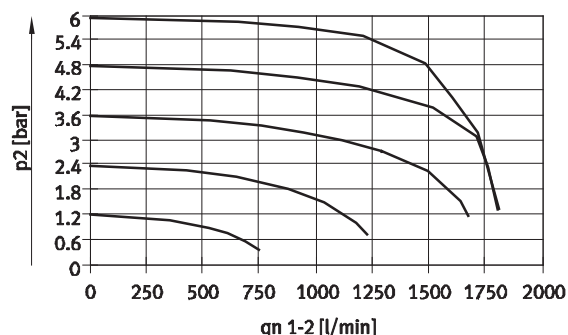
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Flow rate q_n from 1 → 2 as a function of output pressure p_2

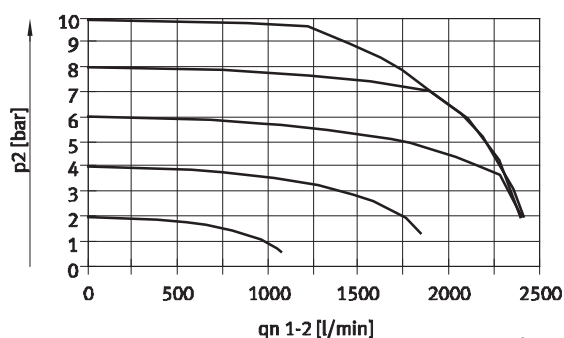
VPPM-8F-...-0L2H-... (2 bar)



VPPM-8F-...-0L6H-... (6 bar)

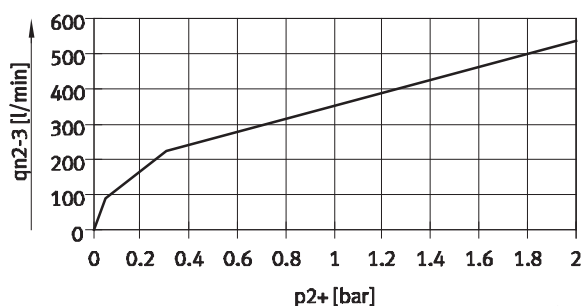


VPPM-8F-...-0L10H-... (10 bar)



Flow rate q_n from 2 → 3 as a function of output pressure p_2

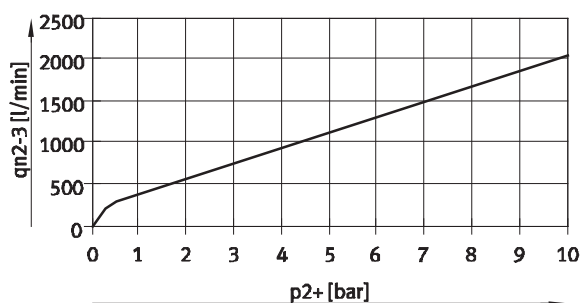
VPPM-8F-...-0L2H-... (2 bar)



VPPM-8F-...-0L6H-... (6 bar)



VPPM-8F-...-0L10H-... (10 bar)



Proportional pressure regulators VPPM

Technical data

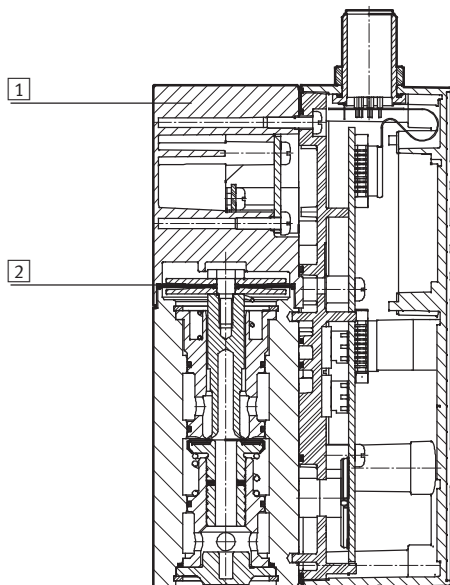
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Operating and environmental conditions				
Pressure regulation range	[bar]	0.02 ... 2	0.06 ... 6	0.1 ... 10
Operating medium		Compressed air, filtered, unlubricated, grade of filtration 40 µm Neutral gases		
Supply pressure 1	[bar]	2 ²⁾ ... 4	2 ²⁾ ... 8	2 ²⁾ ... 11
Max. hysteresis	[mbar]	10	30	50
FS (full scale) linearity error	[%]	± 0.5		
FS (full scale) repetition accuracy	[%]	0.5		
Temperature coefficient	[%/°C]	0.04/1		
Ambient temperature	[°C]	0 ... 60		
Temperature of medium	[°C]	10 ... 50		
Note on materials		RoHS-compliant		
Corrosion resistance	[CRC]	2 ¹⁾		

- 1) Corrosion resistance class 2 as per Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.
- 2) Supply pressure 1 should always be 1 bar greater than the maximum regulated output pressure.

Materials

Sectional view



1	Housing	Wrought aluminium alloy
2	Diaphragm	Nitrile rubber

Proportional pressure regulators VPPM

Technical data

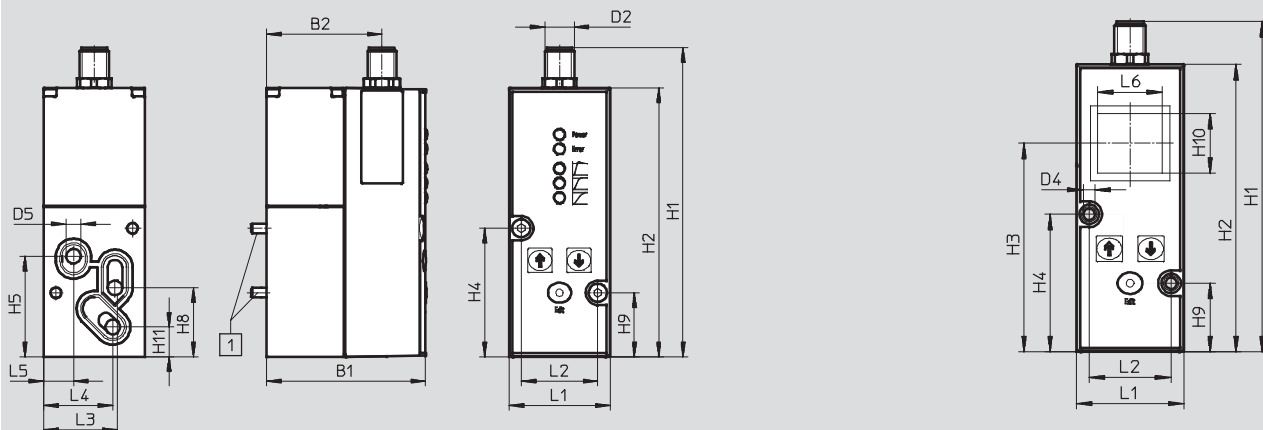
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Dimensions

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

VPPM-6F

With LCD



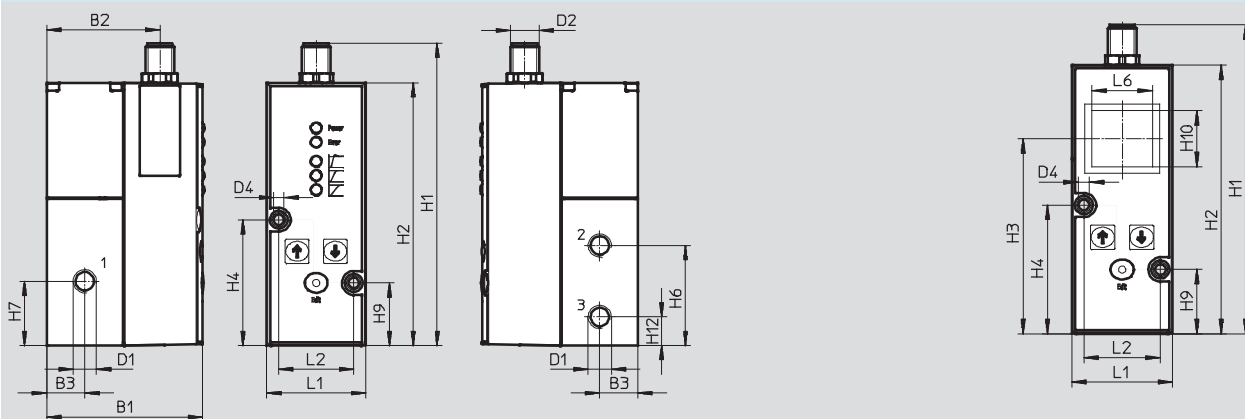
1 Socket head screw M4x65

Type	B1	B2	B3	D1	D2	D4 Ø	D5 Ø	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12
VPPM-6F	65.4	47.5	–	–	M12	4.4	6	126.9	110.4	80.1	52.8	41.3	–	–	28.3	26.3	23	12.2	–

Type	L1	L2	L3	L4	L5	L6
VPPM-6F	41.5	31.5	30.3	28.4	12.3	25

VPPM-6L

With LCD

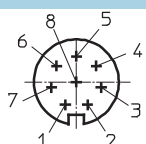


1 Socket head screw M4x65

Type	B1	B2	B3	D1	D2	D4 Ø	D5 Ø	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12
VPPM-6L	65.5	47.5	16	G $\frac{1}{8}$	M12	4.4	–	126.9	110.4	80.1	52.8	–	42	27	–	26.3	23	–	12

Type	L1	L2	L3	L4	L5	L6
VPPM-6L	41.5	31.5	–	–	–	25

M12 – Connection allocation



- | | | |
|---------------------------|---------------------|---------------------|
| 1 Digital input D1 | 4 Analogue input W+ | 7 DC 0 V or GND |
| 2 DC +24 V supply voltage | 5 Digital input D2 | 8 Digital output D3 |
| 3 Analogue input W– | 6 Analogue output X | |

Proportional pressure regulators VPPM

Technical data

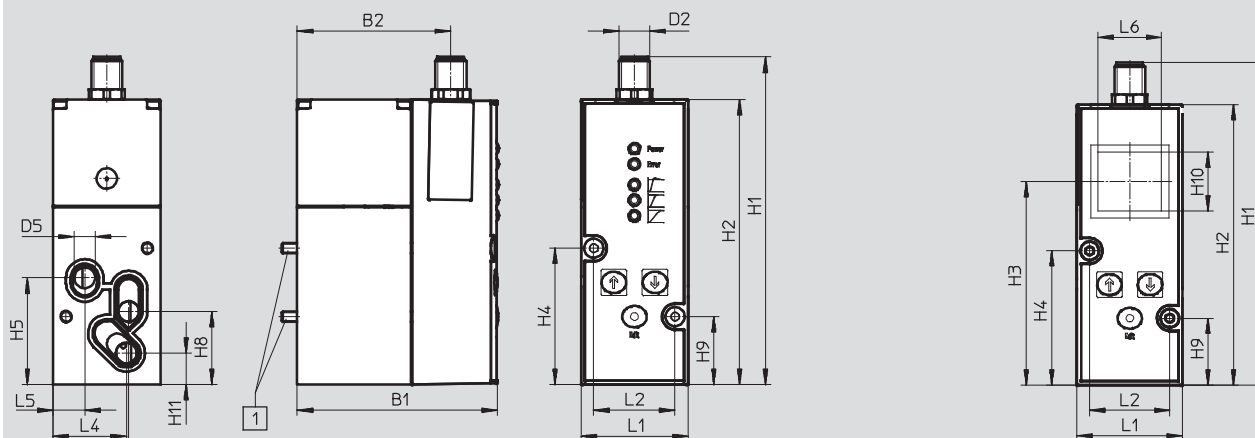
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Dimensions

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

VPPM-8F

With LCD



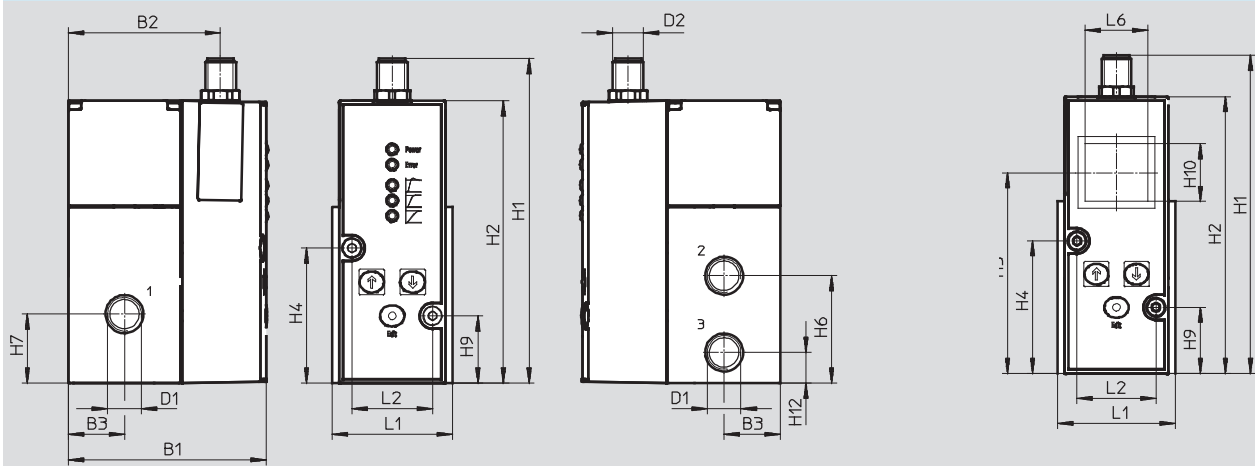
1 Socket head screw M4x77

Type	B1	B2	B3	D1 Ø	D2 Ø	D5 Ø	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13
VPPM-8F	77.4	59.5	–	–	M12	8	126.9	110.4	80	52.8	41.3	–	–	28.3	26.3	23	12.2	–	–

Type	L1	L2	L3	L4	L5	L6	L7
VPPM-8F	41.5	31.5	29.3	28.4	12.3	25	–

VPPM-8L

With LCD



Type	B1	B2	B3	D1 Ø	D2 Ø	D5 Ø	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13
VPPM-8L	77.4	59.5	22	G1/4	M12	–	126.9	110.4	80	52.8	–	42	27	–	26.3	23	–	12	–

Type	L1	L2	L3	L4	L5	L6	L7
VPPM-8L	47	31.5	–	–	–	25	–

Proportional pressure regulators VPPM

Technical data

FESTO

Ordering data				
Proportional pressure regulators	Pneumatic connection	Pressure regulation range [bar]	Part No.	Type
Voltage type 0 ... 10 V				
Overall accuracy 2%	G $\frac{1}{8}$	0.02 ... 2	542233	VPPM-6L-L-1-G18-0L2H-V1N
		0.06 ... 6	542234	VPPM-6L-L-1-G18-0L6H-V1N
			554043	VPPM-6L-L-1-G18-0L6H-V1P
			558337	VPPM-6L-L-1-G18-0L6H-V1P-C1
		0.1 ... 10	575125	VPPM-6L-L-1-G18-0L10H-V1P-C1
			542235	VPPM-6L-L-1-G18-0L10H-V1N
			554044	VPPM-6L-L-1-G18-0L10H-V1P
	Sub-base	0.02 ... 2	542245	VPPM-6F-L-1-F-0L2H-V1N
		0.06 ... 6	542246	VPPM-6F-L-1-F-0L6H-V1N
			558339	VPPM-6F-L-1-F-0L6H-V1P-C1
			558347	VPPM-6F-L-1-F-0L6H-V1N-C1
		0.1 ... 10	571285	VPPM-8F-L-1-F-0L6H-V1P 
			542247	VPPM-6F-L-1-F-0L10H-V1N
	G $\frac{1}{4}$	0.06 ... 6	571296	VPPM-8L-L-1-G14-0L6H-V1P 
Overall accuracy 1%	G $\frac{1}{8}$	0.02 ... 2	542227	VPPM-6L-L-1-G18-0L2H-V1N-S1
		0.06 ... 6	542228	VPPM-6L-L-1-G18-0L6H-V1N-S1
			554039	VPPM-6L-L-1-G18-0L6H-V1P-S1
			571448	VPPM-6L-L-1-G18-0L6H-V1N-S1C1
		0.1 ... 10	575121	VPPM-6L-L-1-G18-0L6H-V1P-S1C1
			542229	VPPM-6L-L-1-G18-0L10H-V1N-S1
			554040	VPPM-6L-L-1-G18-0L10H-V1P-S1
			558335	VPPM-6L-L-1-G18-0L10H-V1P-S1C1
			558345	VPPM-6L-L-1-G18-0L10H-V1N-S1C1
	Sub-base	0.02 ... 2	542239	VPPM-6F-L-1-F-0L2H-V1N-S1
		0.06 ... 6	542240	VPPM-6F-L-1-F-0L6H-V1N-S1
			571286	VPPM-8F-L-1-F-0L6H-V1P-S1 
			571287	VPPM-8F-L-1-F-0L6H-V1P-S1C1 
		0.1 ... 10	542241	VPPM-6F-L-1-F-0L10H-V1N-S1
	G $\frac{1}{4}$	0.1 ... 10	571291	VPPM-8L-L-1-G14-0L10H-V1N-S1 
			571292	VPPM-8L-L-1-G14-0L10H-V1P-S1 
			571293	VPPM-8L-L-1-G14-0L10H-V1P-S1C1 
		0.06 ... 6	571294	VPPM-8L-L-1-G14-0L6H-V1N-S1 
			571295	VPPM-8L-L-1-G14-0L6H-V1N-S1C1 
			571297	VPPM-8L-L-1-G14-0L6H-V1P-S1 
			571298	VPPM-8L-L-1-G14-0L6H-V1P-S1C1 



New

Nominal diameter 8 mm

Proportional pressure regulators VPPM

FESTO

Technical data

Ordering data				
Proportional pressure regulators	Pneumatic connection	Pressure regulation range [bar]	Part No.	Type
Current type 4 ... 20 mA				
Overall accuracy 2%	G $\frac{1}{8}$	0.02 ... 2	542236	VPPM-6L-L-1-G18-0L2H-A4N
		0.06 ... 6	542237	VPPM-6L-L-1-G18-0L6H-A4N
			554045	VPPM-6L-L-1-G18-0L6H-A4P
			558338	VPPM-6L-L-1-G18-0L6H-A4P-C1
		0.1 ... 10	542238	VPPM-6L-L-1-G18-0L10H-A4N
			554046	VPPM-6L-L-1-G18-0L10H-A4P
	Sub-base	0.02 ... 2	542248	VPPM-6F-L-1-F-0L2H-A4N
		0.06 ... 6	542249	VPPM-6F-L-1-F-0L6H-A4N
			558340	VPPM-6F-L-1-F-0L6H-A4P-C1
			571282	VPPM-8F-L-1-F-0L6H-A4P
		0.1 ... 10	542250	VPPM-6F-L-1-F-0L10H-A4N
	G $\frac{1}{4}$	0.06 ... 6	571299	VPPM-8L-L-1-G14-0L6H-A4P
Overall accuracy 1%	G $\frac{1}{8}$	0.02 ... 2	542230	VPPM-6L-L-1-G18-0L2H-A4N-S1
		0.06 ... 6	542231	VPPM-6L-L-1-G18-0L6H-A4N-S1
			554041	VPPM-6L-L-1-G18-0L6H-A4P-S1
			575128	VPPM-6L-L-1-G18-0L6H-A4P-S1C1
		0.1 ... 10	542232	VPPM-6L-L-1-G18-0L10H-A4N-S1
			554042	VPPM-6L-L-1-G18-0L10H-A4P-S1
	Sub-base	0.06 ... 6	558336	VPPM-6L-L-1-G18-0L10H-A4P-S1C1
			542242	VPPM-6F-L-1-F-0L2H-A4N-S1
			542243	VPPM-6F-L-1-F-0L6H-A4N-S1
			571283	VPPM-8F-L-1-F-0L6H-A4P-S1
		0.1 ... 10	571284	VPPM-8F-L-1-F-0L6H-A4P-S1C1
			542244	VPPM-6F-L-1-F-0L10H-A4N-S1
	G $\frac{1}{4}$	0.1 ... 10	571288	VPPM-8L-L-1-G14-0L10H-A4N-S1
			571289	VPPM-8L-L-1-G14-0L10H-A4P-S1
			571290	VPPM-8L-L-1-G14-0L10H-A4P-S1C1
		0.06 ... 6	571302	VPPM-8L-L-1-G14-0L6H-A4N-S1
			571303	VPPM-8L-L-1-G14-0L6H-A4N-S1C1
			571300	VPPM-8L-L-1-G14-0L6H-A4P-S1
			571301	VPPM-8L-L-1-G14-0L6H-A4P-S1C1

Proportional pressure regulators VPPM

Ordering data – Modular products

FESTO

M Mandatory data →

Module No.	Design	Nominal diameter	Valve type	Dynamic response	Valve mode	Type of connection
543432 543433	VPPM	6 8	L F T	L	1	G18 G14 F
Order example						
543432	VPPM	- 6	F	- L	- 1	- F

Ordering table					
Size	6	Condition s	Code		Enter code
M Module No.	543432				
Design	Modular pressure regulator		VPPM		VPPM
Nominal diameter	6		-6		
	8		-8		
Valve type	In-line	1	L		
	Flanged valve	2	F		
	Flanged valve for valve terminal	3	T		
Dynamic response	Low dynamic response (pilot-actuated, soft-sealing)		-L		-L
Valve mode	3/2-way valve, normally closed		-1		-1
Type of connection	G1/8 thread		-G18		
	G1/4 thread		-G14		
	Flange/sub-base		-F		

- 1 L Only with connection type G18 (G1/8 thread)
2 F Only with connection type F (flange/sub-base)

- 3 T Only with connection type F (flange/sub-base)

Order code

543432	VPPM	- 6		- L	- 1	-
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New

Nominal diameter 8 mm

Proportional pressure regulators VPPM

Ordering data – Modular products

FESTO

→ [M] Mandatory data					[O] Options	
Pressure regulation range	Alternative lower pressure regulation range	Alternative upper pressure regulation range	Setpoint specification	Switching output	Overall accuracy	Operator unit
0L2H 0L6H 0L10H	0.1 ... 10L	0.1 ... 10H	V1 A4	P N	S1	C1
-	6.5L	7.1H	- A4	P	- S1	C1

Ordering table					
Size	6	Condition	Code	Enter code	
↓ [M] Pressure regulation range	0 ... 2 bar		-0L2H		
	0 ... 6 bar		-0L6H		
	0 ... 10 bar		-0L10H		
Alternative lower pressure regulation range	0.1 ... 10 bar	[4]	-...L		
Alternative upper pressure regulation range	0.1 ... 10 bar	[5]	...H		
Setpoint specification	Voltage (standard 0 ... 10 V)		-V1		
	Current (standard 4 ... 20 mA)		-A4		
Switching output	Positive switching		P		
	Negative switching		N		
[O] Overall accuracy	1%		-S1		
Operator unit	With LCD, pressure unit variable		C1		

[4] ...L Not with pressure regulation range (0L2H, 0L6H, 0L10H).
Must always be less than alternative upper pressure regulation range H

[5] ...H Not with pressure regulation range (0L2H, 0L6H, 0L10H).
Must always be greater than alternative lower pressure regulation range L

Transfer order code

-				-			-		
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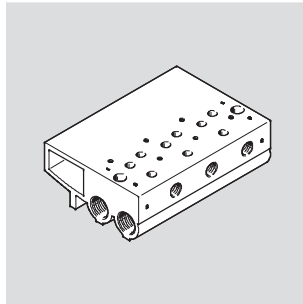
Proportional pressure regulators VPPM

Accessories

FESTO

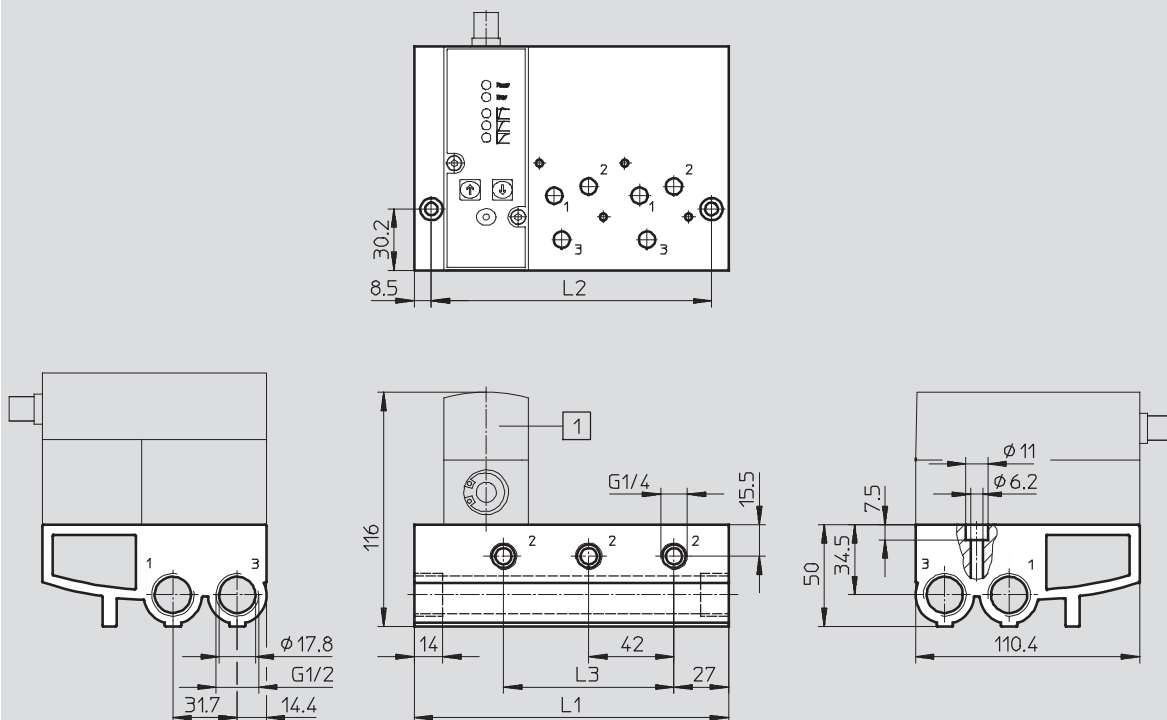
Sub-base VABM-P1

Material:
Wrought aluminium alloy



Dimensions

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



1 Proportional pressure regulator
VPPM

Dimensions and ordering data							
Valve positions	L1	L2	L3	Weight [g]	CRC ¹⁾	Part No.	Type
2	113	96	42	900	2	542252	VABM-P1-SF-G18-2-P3
3	155	138	84	1,230	2	542253	VABM-P1-SF-G18-3-P3
4	197	180	126	1,565	2	542254	VABM-P1-SF-G18-4-P3

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

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

Proportional pressure regulators VPPM

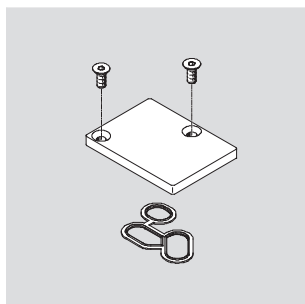
Accessories

FESTO

Blanking plate VABB-P1

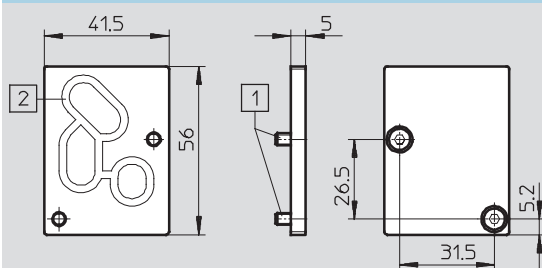
Material:

Wrought aluminium alloy, NBR, steel



Dimensions

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



1 Countersunk screw M4x10

2 Seal VMPA- ...

Ordering data

Weight [g]	CRC	Part No.	Type
35	1 ¹⁾	558350	VABB-P1

1) Corrosion resistance class 1 as per Festo standard 940 070
Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Proportional pressure regulators VPPM

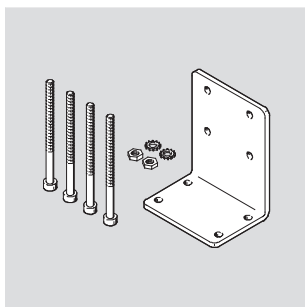
FESTO

Accessories

Mounting bracket VAME-P1-A

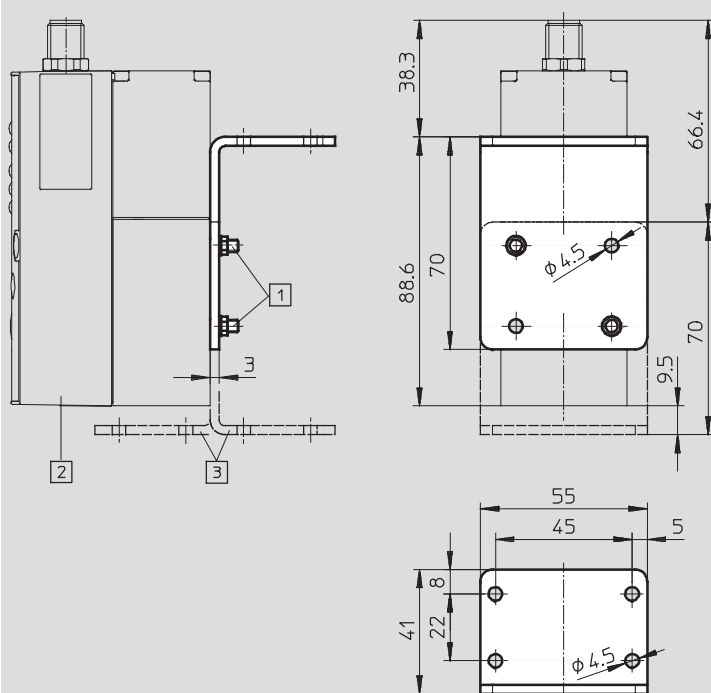
Material:

Wrought aluminium alloy, steel



Dimensions

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



1) Socket head screw M4

2) Proportional pressure regulator VPPM

3) Mounting bracket can be reversed if required

Ordering data

Weight [g]	CRC	Part No.	Type
71	1 ¹⁾	542251	VAME-P1-A

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

Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Proportional pressure regulators VPPM

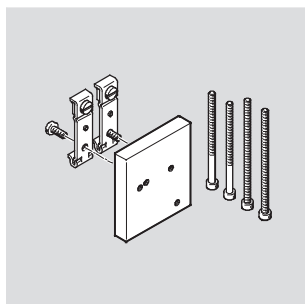
Accessories

FESTO

H-rail mounting VAME-P1-T

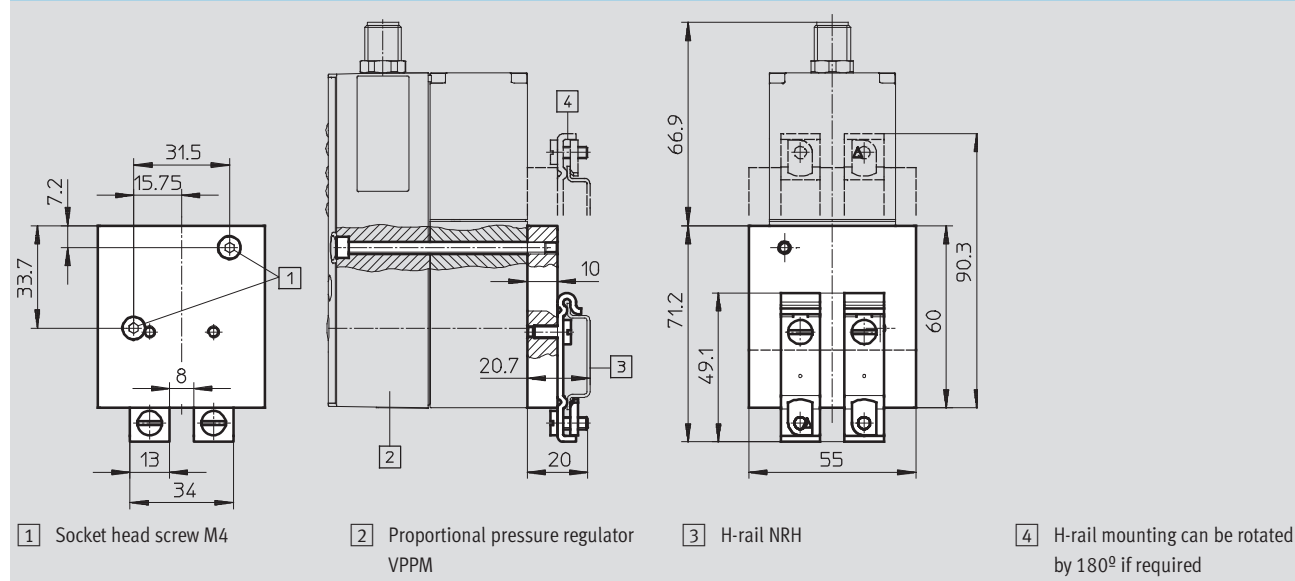
Material:

Wrought aluminium alloy, steel



Dimensions

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



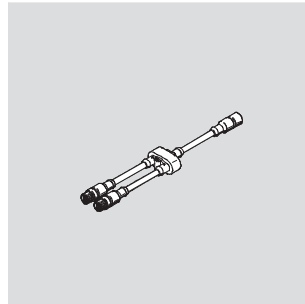
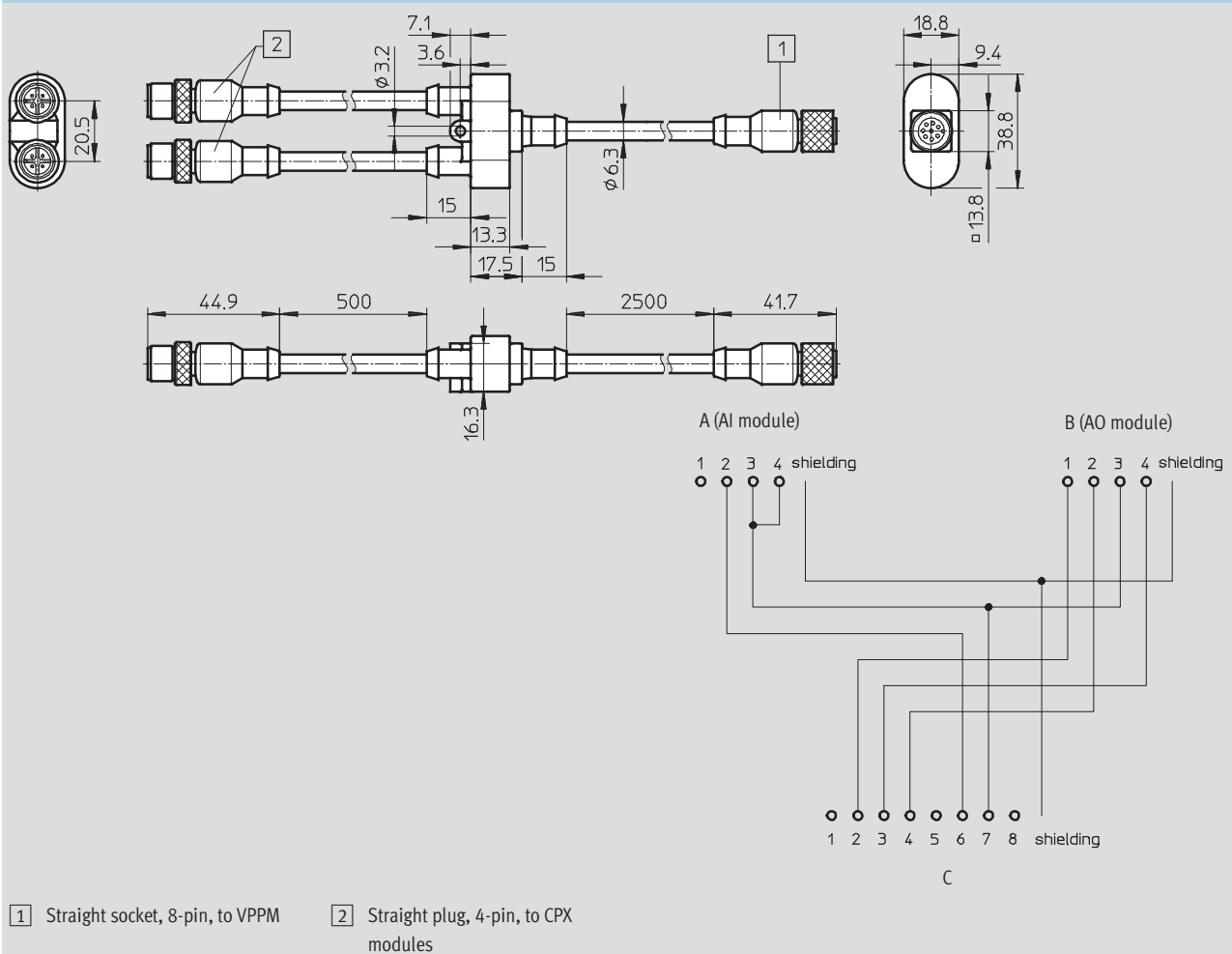
Ordering data			
Weight [g]	CRC	Part No.	Type
150	1 ¹⁾	542255	VAME-P1-T

1) Corrosion resistance class 1 as per Festo standard 940 070
Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Accessories

Plug socket with cable
NEBV-M12G8-KD-3-M12G4

For connecting the VPPM with the analogue input and output modules of the controller CPX.

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

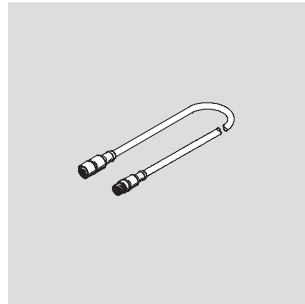
Proportional pressure regulators VPPM

Accessories

FESTO

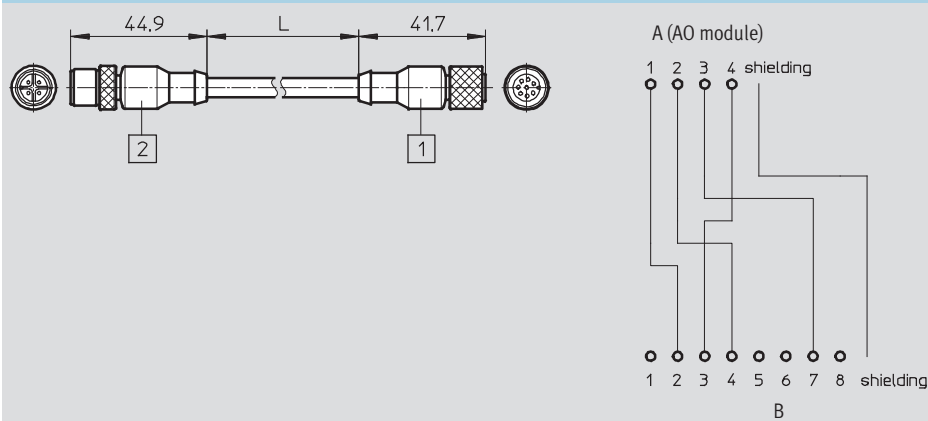
Plug socket with cable
NEBV-M12G8-K-2-M12G4
NEBV-M12G8-K-5-M12G4

For connecting the VPPM with the analogue output modules of the controller CPX.



Dimensions and pin allocation

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



Type	2	1	L1
NEBV-M12G8-K-2-M12G4	Straight socket, M12, 8-pin to VPPM	Straight plug, M12, 4-pin to CPX module	2 m
NEBV-M12G8-K-5-M12G4			5 m

Ordering data				
	Description	Cable length [m]	Part No.	Type
Plug socket with cable			Technical data → Internet: plug socket with cable	
	Straight socket, 8-pin, M12	2	525616	SIM-M12-8GD-2-PU
		5	525618	SIM-M12-8GD-5-PU
		10	570008	SIM-M12-8GD-10-PU
	Angled socket, 8-pin, M12	2	542256	NEBU-M12W8-2-N-LE8
		5	542257	NEBU-M12W8-5-N-LE8
		10	570007	NEBU-M12W8-10-N-LE8
	One straight socket, 8-pin, and one straight plug, 4-pin	2	553575	NEBV-M12G8-K-2-M12G4
		5	553576	NEBV-M12G8-K-5-M12G4
	One straight socket, 8-pin, and two straight plugs, 4-pin	–	547888	NEBV-M12G8-KD-3-M12G4
Setpoint module			Technical data → Internet: mpz	
	Generation of 6+1 analogue setpoint values	–	546224	MPZ-1-24DC-SGH-6-SW5

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