

# Proportional-pressure regulator VPPM

**FESTO**



## Characteristics

### At a glance

#### Innovative:

- Multi-sensor control (cascade control)
- Diagnostics
- Choice of control characteristics
- Temperature-compensated
- High dynamic response
- High repetition accuracy
- Modular system processing
- IO-Link® for direct connection to a higher-order IO-Link®/I-Port master

#### Flexible:

- Individual valves (inline valve)
- Sub-base valves (manifold/flanged valve)
- Various user interfaces: LED displays, LCD display, setting/selection buttons
- Choice of valves with different pressure ranges
- Pressure range can be modified at the valve
- Choice of different setpoint specifications: current input; voltage input

#### Operationally safe:

- Integrated pressure sensor with separate output
- Cable break monitoring
- Pressure is maintained if the controller fails

#### Easy to assemble:

- Manifold block (manifold)
- H-rail mounting
- Individually with mounting bracket
- QS fittings

#### Layout of a control loop (layout):

- The reference variable  $w$  (setpoint value e.g. 5 volts or 8 milliamperes) first acts on a comparator. The measuring equipment sends the value of the controlled variable  $x$  (actual value e.g. 3 bar) to the comparator as feedback variable  $r$ . The control element detects the control difference  $e$  and controls the final control element. The output of the final control element acts on the system. The 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.

#### Operating principle:

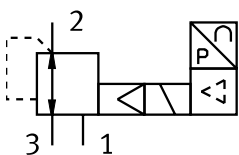
- This process runs continuously so changes in the reference variable are always detected. However, a system deviation will also occur if the reference variable is constant and the controlled variable changes. This happens when there is a change in the flow rate through the valve, caused by a switching operation, a cylinder movement or a load change. The disturbance variable  $z$  also causes a control difference, such as, for example, a pressure drop in the air supply. The disturbance variable  $z$  has an unintended effect on the controlled variable  $x$ . The controller always tries to re-adjust the controlled variable  $x$  to the reference variable  $w$ .

#### Multi-sensor control (cascade control) of the VPPM:

- Unlike conventional direct-acting control systems, in multi-sensor control several control loops are nested inside one another. The overall controlled system is thus divided into smaller sections that are easier to control for specific tasks.

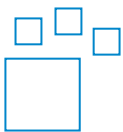
### Valve function

[3] 3-way proportional-pressure regulator, closed



## Characteristics

### Ordering data - modular system



Configurable product

This product and all its product options can be ordered online via the configurator.

### Diagrams

[Further information → vppm](#)



The diagrams shown in this document are also available online. These can be used to display precise values.

Type code

<b>001</b>	<b>Series</b>	
<b>VPPM</b>	Proportional pressure regulator, modular	
<b>002</b>	<b>Nominal width [mm]</b>	
<b>6</b>	6	
<b>8</b>	8	
<b>12</b>	12	
<b>003</b>	<b>Directional control valve type</b>	
<b>L</b>	In-line valve	
<b>F</b>	Flanged valve	
<b>T</b>	Flanged valve for valve terminal	
<b>004</b>	<b>Mounting method</b>	
	Standard	
<b>A</b>	Valve terminal MPA	
<b>005</b>	<b>Dynamic response</b>	
<b>L</b>	Low	
<b>006</b>	<b>Valve function</b>	
<b>1</b>	3/2-way valve, normally closed	
<b>007</b>	<b>Pneumatic connection</b>	
<b>F</b>	Flange/sub-base	
<b>G18</b>	G1/8	
<b>G14</b>	G1/4	
<b>G12</b>	G1/2	
<b>008</b>	<b>Lower pressure value of control range</b>	
<b>OL</b>	0 bar	

<b>009</b>	<b>Upper pressure value of control range</b>	
<b>2H</b>	2 bar	
<b>6H</b>	6 bar	
<b>10H</b>	10 bar	
<b>010</b>	<b>Alternative lower pressure regulation range</b>	
<b>...L</b>	0 ... 9 bar	
<b>011</b>	<b>Alternative upper pressure regulation range</b>	
<b>...H</b>	0.2 ... 10 bar	
<b>012</b>	<b>Setpoint input for individual valves</b>	
	For valve terminals/servo-pneumatics	
<b>A4</b>	4 ... 20 mA	
<b>LK</b>	IO-Link®	
<b>V1</b>	0 ... 10 V	
<b>013</b>	<b>Switching input/output</b>	
	None	
<b>N</b>	NPN	
<b>P</b>	PNP	
<b>014</b>	<b>Overall accuracy</b>	
	2%	
<b>S1</b>	1%	
<b>015</b>	<b>Operator unit/interface</b>	
	None	
<b>C1</b>	With LCD, variable pressure unit	

## Datasheet

## Analogue interface, general technical data

Pneumatic connection, port 1	Sub-base							G1/8			G1/4		G1/2	
Nominal size, supply	6 mm			8 mm				6 mm			8 mm		12 mm	
Nominal size, exhaust	4.5 mm			7 mm				4.5 mm			7 mm		12 mm	
Standard nominal flow rate (standardised to DIN 1343)	380 l/min	900 l/min	1,400 l/min	450 l/min	1,050 l/min	1,650 l/min	1,750 l/min	380 l/min	900 l/min	1,400 l/min	1,750 l/min	2,750 l/min	4,500 l/min	7,000 l/min
Valve function	3-way proportional pressure regulator													
Design	Piloted diaphragm regulator													
Sealing principle	Soft													
Type of actuation	Electric													
Type of piloting	Pilot actuated													
Type of reset	Mechanical spring													
Type of mounting	Either., With through-hole, With accessories													
Mounting position	optional													
Product weight	400 g			560 g				400 g			560 g		2,050 g	

## Analogue interface, electrical data

Pneumatic connection, port 1	Sub-base				G1/8		G1/4		G1/2	
Electrical connection	8-pin, M12, Plugs			Via sub-base		8-pin, M12, Plugs				
Operational voltage range DC	21.6 ... 26.4 V									
Residual ripple	10%									
Duty cycle	100%									
Max. electrical power consumption	7 W								12 W	
Setpoint value input	–									
Short circuit current rating	For all electrical connections									
Reverse polarity protection	For all electrical connections									
Degree of protection	IP65									
Signal range analogue input	0 - 10 V 4 - 20 mA			–		0 - 10 V 4 - 20 mA				
Signal range analogue output	0 - 10 V 4 - 20 mA			–		0 - 10 V 4 - 20 mA				

## Datasheet

Analogue interface, operating and environmental conditions			
Pressure regulation range	0.01 ... 1 MPa	0.002 ... 0.2 MPa	0.006 ... 0.6 MPa
Pressure regulation range	0.1 ... 10 bar	0.02 ... 2 bar	0.06 ... 6 bar
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4] Inert gases		
Note on operating and pilot medium	Lubricated operation not possible		
Inlet pressure 1 <sup>1)</sup>	0 ... 1.1 MPa	0 ... 0.4 MPa	0 ... 0.8 MPa
Inlet pressure 1 <sup>2)</sup>	0 ... 11 bar	0 ... 4 bar	0 ... 8 bar
Max. pressure hysteresis	0.05 bar	0.01 bar	0.03 bar
Hysteresis	0.5 %FS		
Linearity	1 %FS		
Linearity error in ± %FS	–		
Reproducibility	0.5 %FS		
Total accuracy	1.25%FS		
Repetition accuracy FS	0.5%		
Temperature coefficient	0.04 %/K		
Ambient temperature	0 ... 60°C		
Media temperature	10 ... 50°C		
Note on materials	RoHS-compliant		
LABS (PWIS) conformity	VDMA24364-B1/B2-L		
Corrosion resistance class CRC <sup>3)</sup>	2 - Moderate corrosion stress		
CE mark (see declaration of conformity) <sup>4)</sup>	To EU EMC Directive In accordance with EU RoHS Directive		
CE marking (see declaration of conformity) <sup>5)</sup>	To UK instructions for EMC To UK RoHS instructions		
Approval	RCM trademark c UL us listed (OL)		
Certificate issuing authority	UL E322346		

1) The input pressure 1 should always be 1 bar greater than the maximum regulated outlet pressure.

2) The input pressure 1 should always be 1 bar greater than the maximum regulated outlet pressure.

3) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

4) For information about the area of use, see the declaration of conformity at: [www.festo.com/catalogue/... d Support/Downloads](http://www.festo.com/catalogue/...d/Support/Downloads).

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

5) For information about the area of use, see the declaration of conformity at: [www.festo.com/catalogue/... d Support/Downloads](http://www.festo.com/catalogue/...d/Support/Downloads).

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

Analogue interface, materials	
Material housing	Wrought aluminium alloy, Anodised
Material membrane	–

IO-Link® interface, general technical data															
Pneumatic connection, port 1	Sub-base						G1/8			G1/4			G1/2		
Nominal size, supply	6 mm		8 mm				6 mm			8 mm			12 mm		
Nominal size, exhaust	4.5 mm		7 mm				4.5 mm			7 mm			12 mm		
Standard nominal flow rate (standardised to DIN 1343)	380 l/min	900 l/min	1,400 l/min	450 l/min	1,050 l/min	1,650 l/min	380 l/min	900 l/min	1,400 l/min	650 l/min	1,750 l/min	2,750 l/min	1,900 l/min	4,500 l/min	7,000 l/min
Valve function	3-way proportional pressure regulator														
Design	Piloted diaphragm regulator														
Sealing principle	Soft														
Type of actuation	Electric														
Type of piloting	Pilot actuated														
Type of reset	Mechanical spring														
Type of mounting	Either., With through-hole, With accessories														
Mounting position	optional														
Product weight	400 g		560 g				400 g			560 g			2,050 g		
IO-Link, Protocol version	Device V 1.1														
IO-Link, Process data length OUT	2 bytes														
IO-Link, Process data length IN	2 bytes														
IO-Link, communication mode	COM1 (4.8 kB), COM2 (38.4 kB), COM3 (230.4 kB)														
IO-Link, Min. cycle time	0.5 ms														

## Datasheet

## IO-Link® interface, operating and environmental conditions

Pressure regulation range	0.01 ... 1 MPa	0.002 ... 0.2 MPa	0.006 ... 0.6 MPa
Pressure regulation range	0.1 ... 10 bar	0.02 ... 2 bar	0.06 ... 6 bar
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4] Inert gases		
Note on operating and pilot medium	Lubricated operation not possible		
Inlet pressure 1	0 ... 1.1 MPa	0 ... 0.4 MPa	0 ... 0.8 MPa
Inlet pressure 1	0 ... 11 bar	0 ... 4 bar	0 ... 8 bar
Max. pressure hysteresis	0.05 bar	0.01 bar	0.03 bar
Hysteresis	0.5 %FS		
Linearity	1 %FS		
Linearity error in ± %FS	–		
Reproducibility	0.5 %FS		
Total accuracy	1.25%FS		
Repetition accuracy FS	0.5%		
Temperature coefficient	0.04 %/K		
Ambient temperature	0 ... 60°C		
Media temperature	10 ... 50°C		
Note on materials	RoHS-compliant		
LABS (PWIS) conformity	VDMA24364-B1/B2-L		
Corrosion resistance class CRC <sup>1)</sup>	2 - Moderate corrosion stress		
CE mark (see declaration of conformity) <sup>2)</sup>	To EU EMC Directive In accordance with EU RoHS Directive		
CE marking (see declaration of conformity) <sup>3)</sup>	To UK instructions for EMC To UK RoHS instructions		
Approval	RCM trademark c UL us listed (OL)		
Certificate issuing authority	UL E322346		

1) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

2) For information about the area of use, see the declaration of conformity at: [www.festo.com/catalogue/...d/Support/Downloads](http://www.festo.com/catalogue/...d/Support/Downloads).

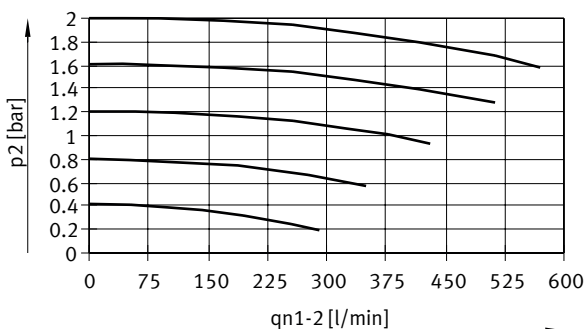
If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

3) For information about the area of use, see the declaration of conformity at: [www.festo.com/catalogue/...d/Support/Downloads](http://www.festo.com/catalogue/...d/Support/Downloads).

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

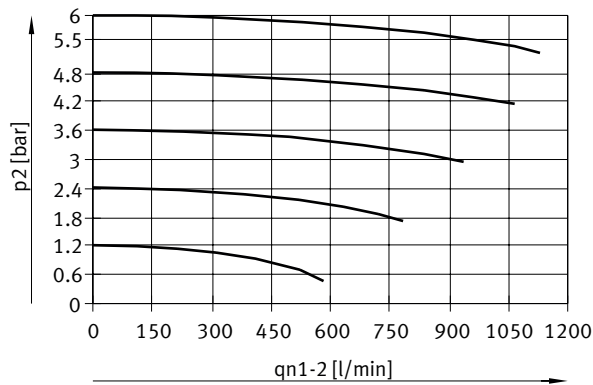
## IO-Link® interface, materials

Material housing	Wrought aluminium alloy, Anodised
------------------	-----------------------------------

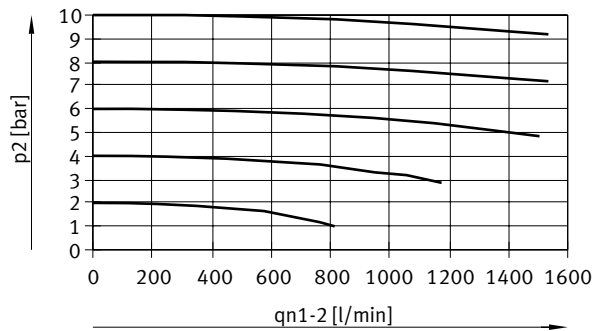
Flow rate  $q_{n1}$  from 1 -> 2 as a function of excess output pressure  $p_2$ , VPPM-6L/F-...-0L2H-... (2 bar)

Datasheet

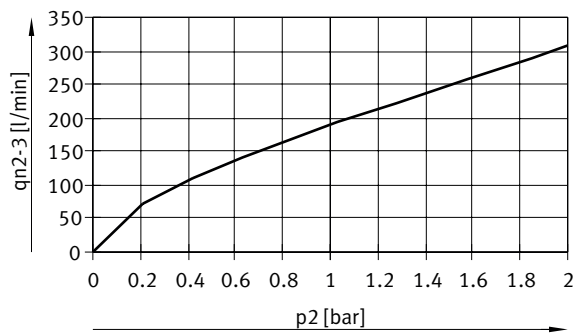
Flow rate  $q_n$  from 1 -> 2 as a function of excess output pressure  $p_2$ , VPPM-6L/F-...-0L6H-... (6 bar)



Flow rate  $q_n$  from 1 -> 2 as a function of excess output pressure  $p_2$ , VPPM-6L/F-...-0L10H-... (10 bar)

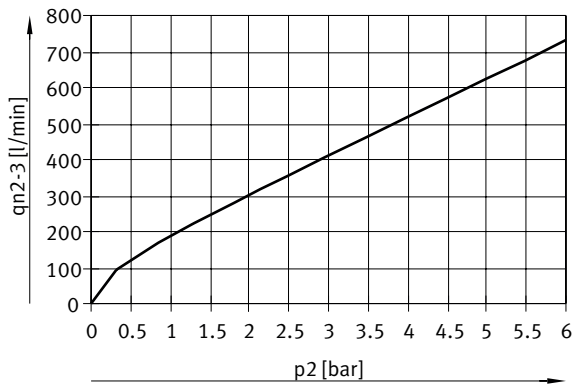
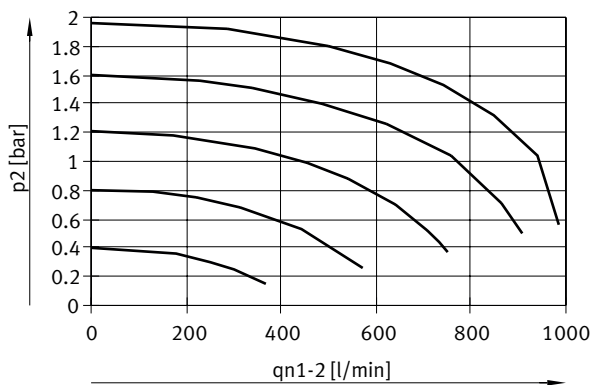


Flow rate  $q_n$  from 2 -> 3 as a function of excess output pressure  $p_2$ , VPPM-6L/F-...-0L2H-... (2 bar)



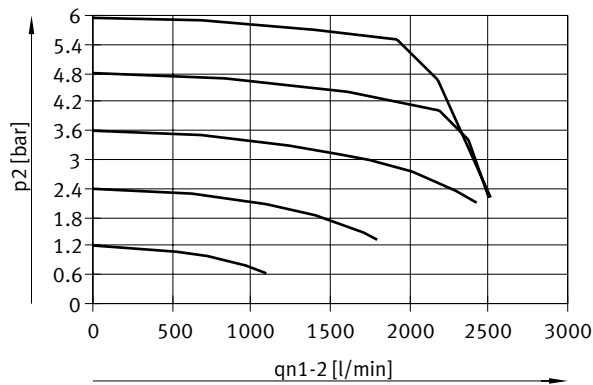


## Datasheet

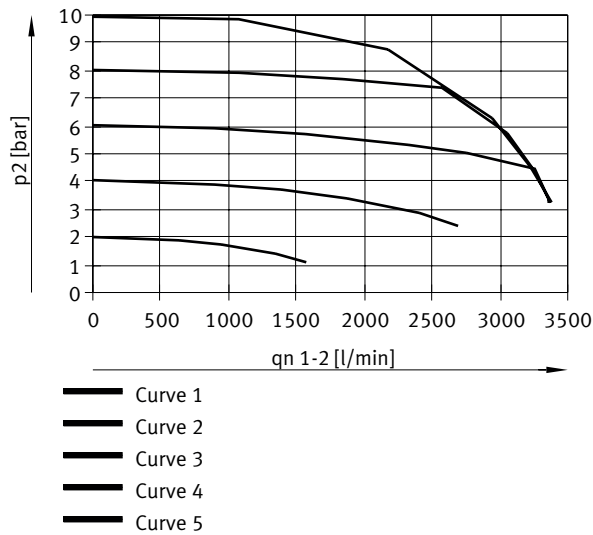
Flow rate  $q_{n2-3}$  from 2 -> 3 as a function of excess output pressure  $p_2$ , VPPM-6L/F...-0L6H... (6 bar)Flow rate  $q_n$  from 2 -> 3 as a function of excess output pressure  $p_2$ , VPPM-6L/F...-0L10H... (10 bar)Flow rate  $q_n$  from 1 -> 2 as a function of excess output pressure  $p_2$ , VPPM-8L/F...-0L2H... (2 bar)

Datasheet

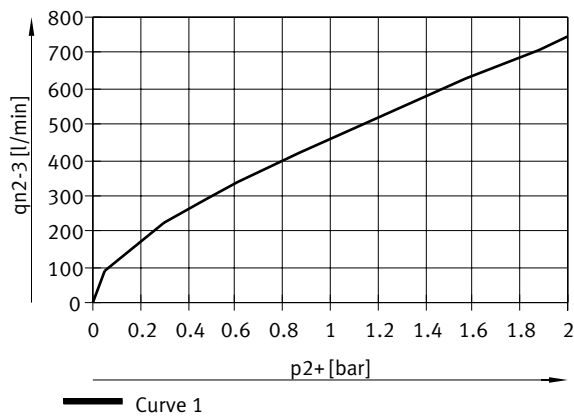
Flow rate  $q_n$  from 1 -> 2 as a function of excess output pressure  $p_2$ , VPPM-8L/F-...-0L6H-... (6 bar)



Flow rate  $q_n$  from 1 -> 2 as a function of excess output pressure  $p_2$ , VPPM-8L/F-...-0L10H-... (10 bar)

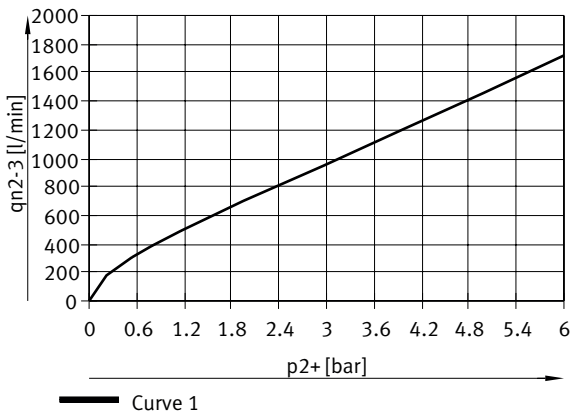


Flow rate  $q_n$  from 2 -> 3 as a function of excess output pressure  $p_2$ , VPPM-8L/F-...-0L2H-... (2 bar)

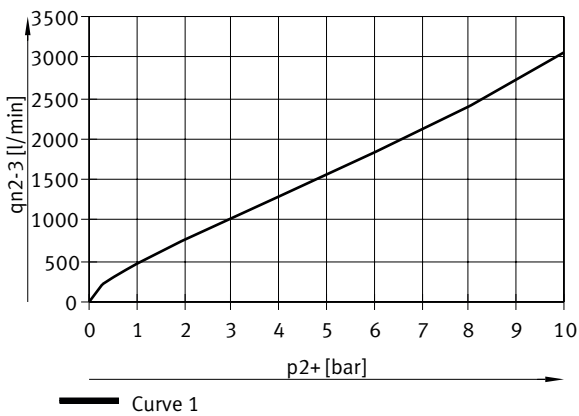


## Datasheet

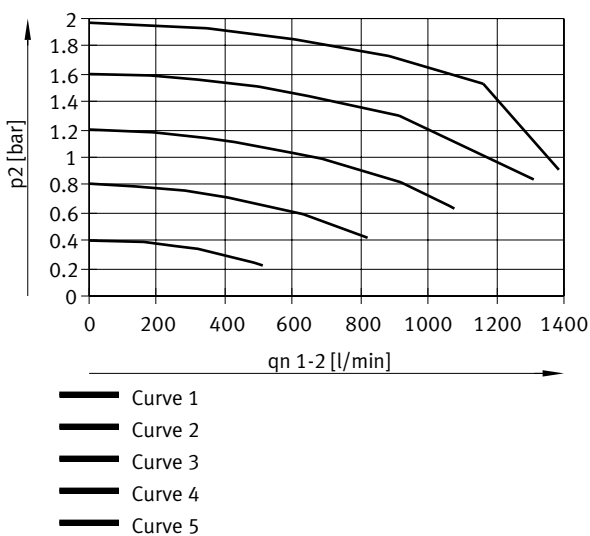
Flow rate  $q_{n2-3}$  from 2 -> 3 as a function of excess output pressure  $p_{2+}$ , VPPM-8L/F-...-0L6H-... (6 bar)



Flow rate  $q_{n2-3}$  from 2 -> 3 as a function of excess output pressure  $p_{2+}$ , VPPM-8L/F-...-0L10H-... (10 bar)

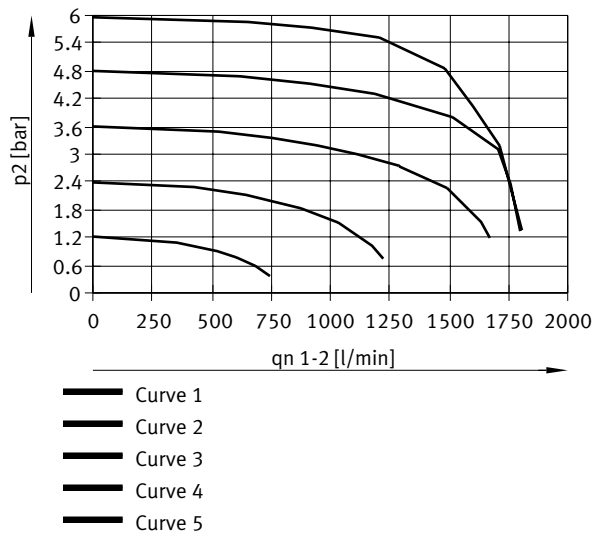


Flow rate  $q_n$  from 1 -> 2 as a function of excess output pressure  $p_2$ , VPPM-8F/8TA-...-0L2H-... (2 bar)

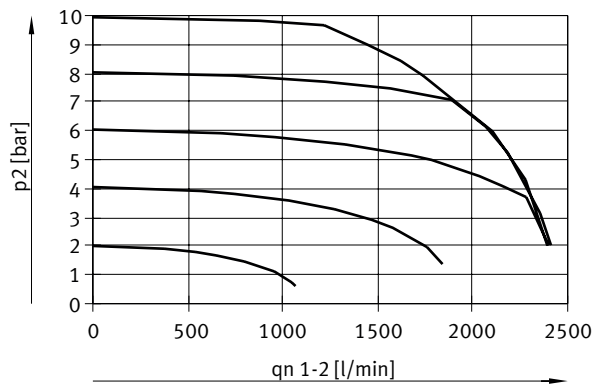


Datasheet

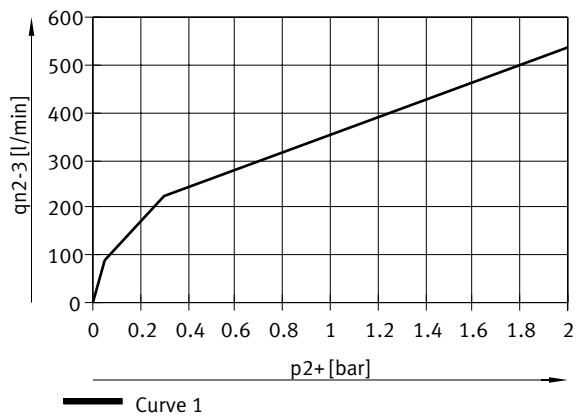
Flow rate  $q_n$  from 1 -> 2 as a function of excess output pressure  $p_2$ , VPPM-8F/8TA-...-0L6H-... (6 bar)



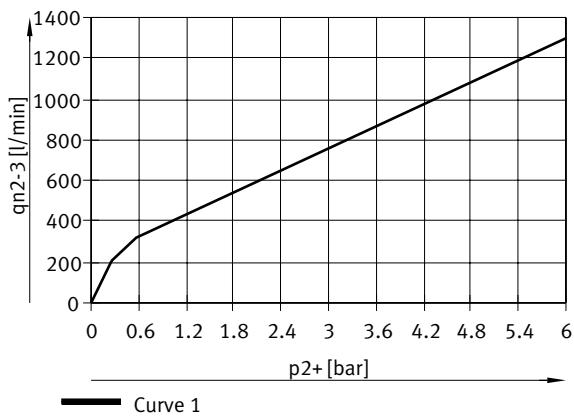
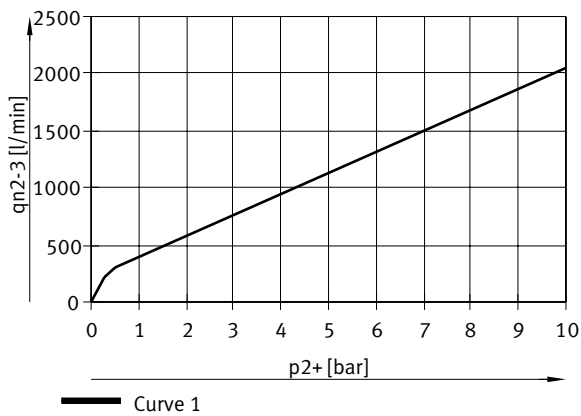
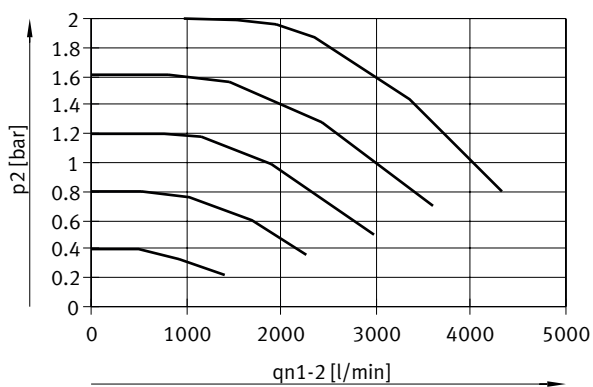
Flow rate  $q_n$  from 1 -> 2 as a function of excess output pressure  $p_2$ , VPPM-8F/8TA-...-0L10H-... (10 bar)



Flow rate  $q_n$  from 2 -> 3 as a function of excess output pressure  $p_2$ , VPPM-8F/8TA-...-0L2H-... (2 bar)

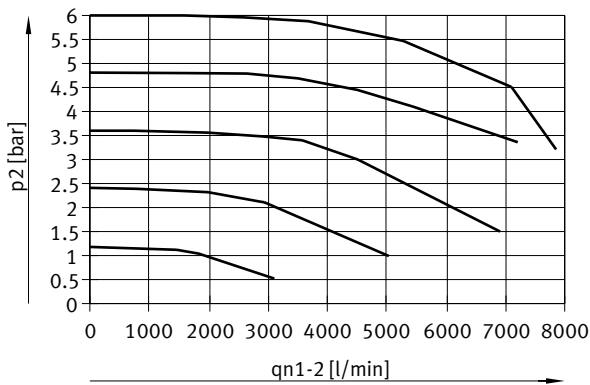


## Datasheet

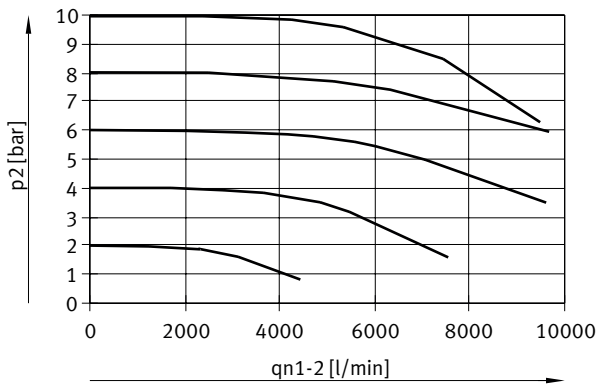
Flow rate  $q_{n2-3}$  from 2 -> 3 as a function of excess output pressure  $p_{2+}$ , VPPM-8F/8TA-...-0L6H-... (6 bar)Flow rate  $q_{n2-3}$  from 2 -> 3 as a function of excess output pressure  $p_{2+}$ , VPPM-8F/8TA-...-0L10H-... (10 bar)Flow rate  $q_{n1-2}$  as a function of excess output pressure  $p_2$ , VPPM-12L-...-0L2H-... (4 bar)

Datasheet

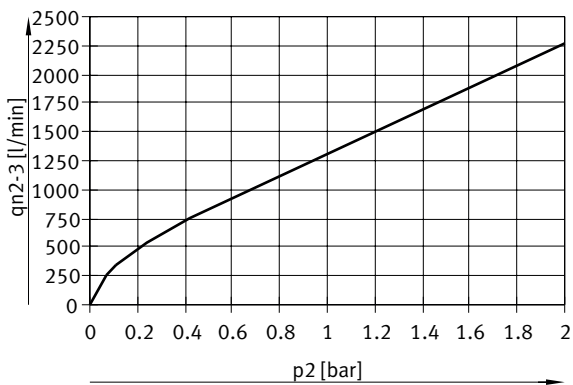
Flow rate  $q_n$  from 1 -> 2 as a function of excess output pressure  $p_2$ , VPPM-12L-...-0L6H-... (8 bar)



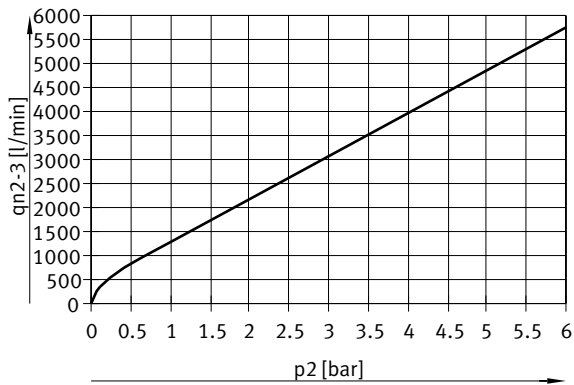
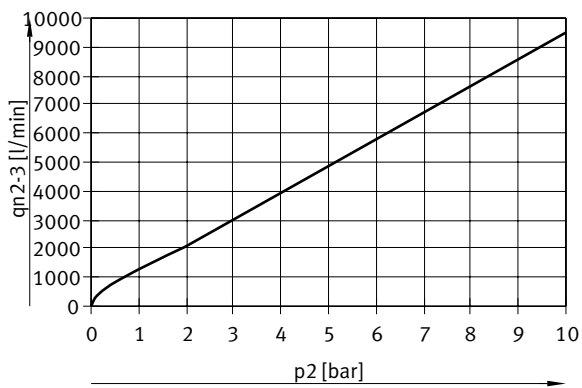
Flow rate  $q_n$  from 1 -> 2 as a function of excess output pressure  $p_2$ , VPPM-12L-...-0L10H-... (11 bar)



Flow rate  $q_n$  from 2 -> 3 as a function of excess output pressure  $p_2$ , VPPM-12L-...-0L2H-... (4 bar)



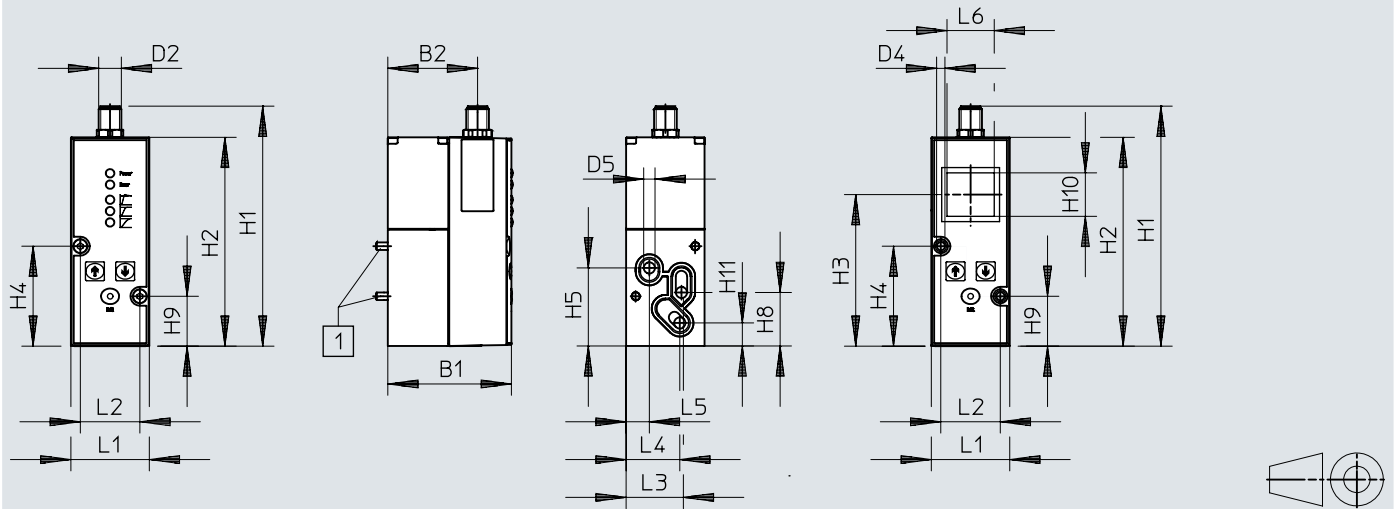
## Datasheet

Flow rate  $q_{n2-3}$  from 2 -> 3 as a function of excess output pressure  $p_2$ , VPPM-12L-...-0L6H-... (8 bar)Flow rate  $q_n$  from 2 -> 3 as a function of excess output pressure  $p_2$ , VPPM-12L-...-0L10H-... (11 bar)

## Dimensions

Dimensions – Analogue interface, VPPM-6F, sub-base valve

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



[1] Socket head screw M4x65

	B1	B2	D2 ∅	D4 ∅	D5 ∅	H1	H2	H3	H4	H5	H8	H9	H10	H11
VPPM-6F	65,4	47,5	M12x1	4,4	6	126,9	110,4	80,1	52,8	41,3	28,3	26,3	23	12,2

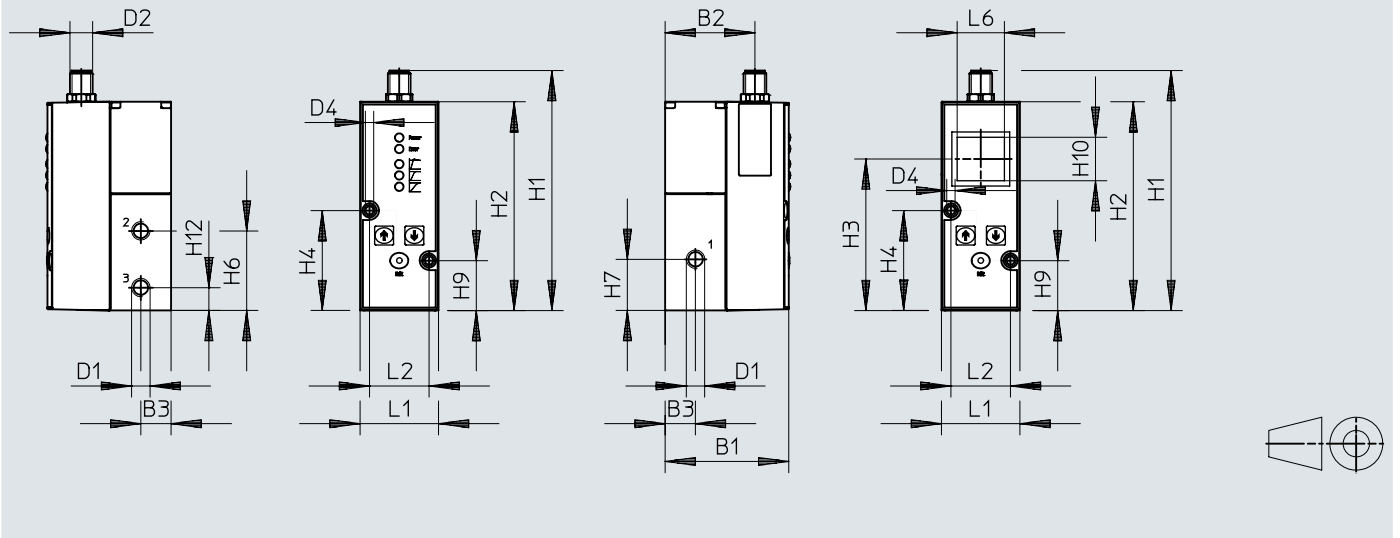
	L1	L2	L3	L4	L5	L6
VPPM-6F	41,5	31,5	30,3	28,4	12,3	25



## Dimensions

Dimensions – Analogue interface, VPPM-6L- pneumatic connection G1/8

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

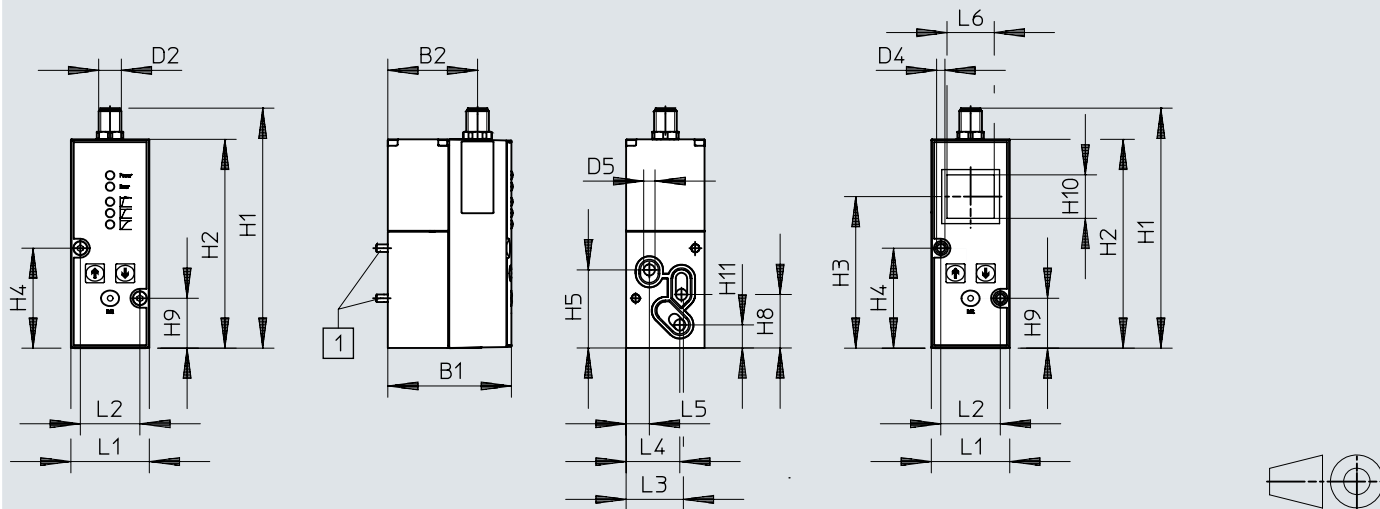


	B1	B2	B3	D1	D2	D4 ∅	H1	H2	H3	H4	H6	H7	H9	H10	H12
VPPM-6L	65,5	47,5	16	G1/8	M12x1	4,4	126,9	110,4	80,1	52,8	42	27	26,3	23	12
	L1			L2			L6								
VPPM-6L	41,5			31,5			25								

## Dimensions

Dimensions – Analogue interface, VPPM-8F, sub-base valve

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



[1] Socket head screw M4x77

	B1	B2	D2	D5 ∅	H1	H2	H3	H4	H5	H8	H9	H10	H11
VPPM-8F	77,4	59,5	M12x1	8	126,9	110,4	80	52,8	41,3	28,3	26,3	23	12,2

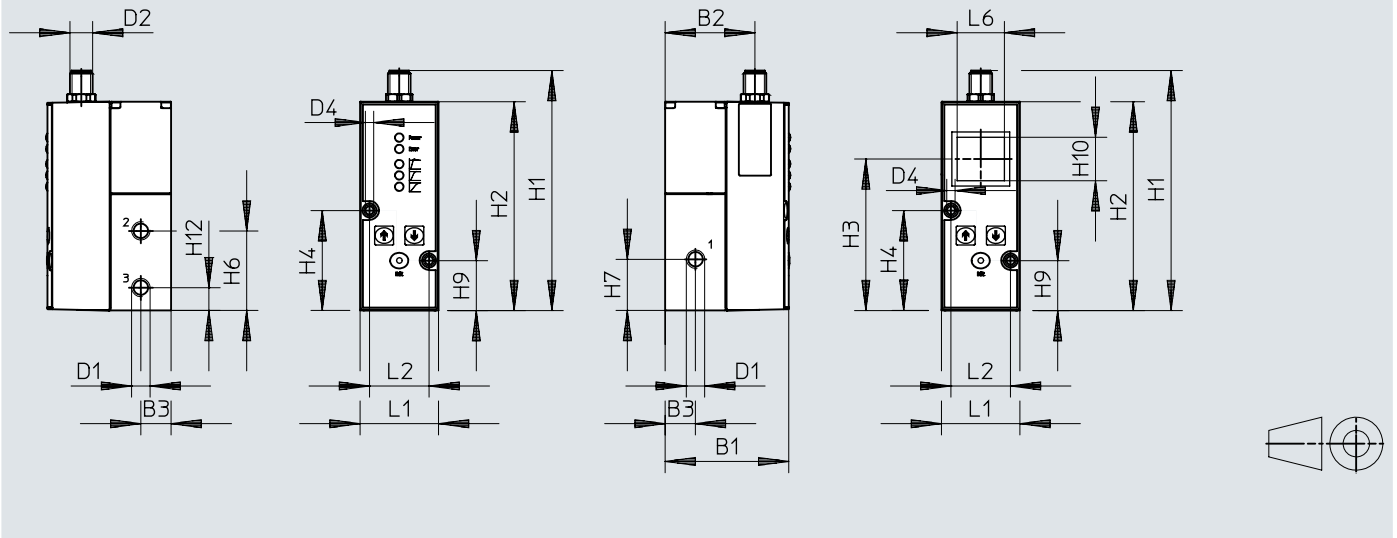
  

	L1	L2	L3	L4	L5	L6
VPPM-8F	41,5	31,5	29,3	28,4	12,3	25

## Dimensions

Dimensions – Analogue interface, VPPM-8L, pneumatic connection G1/4

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

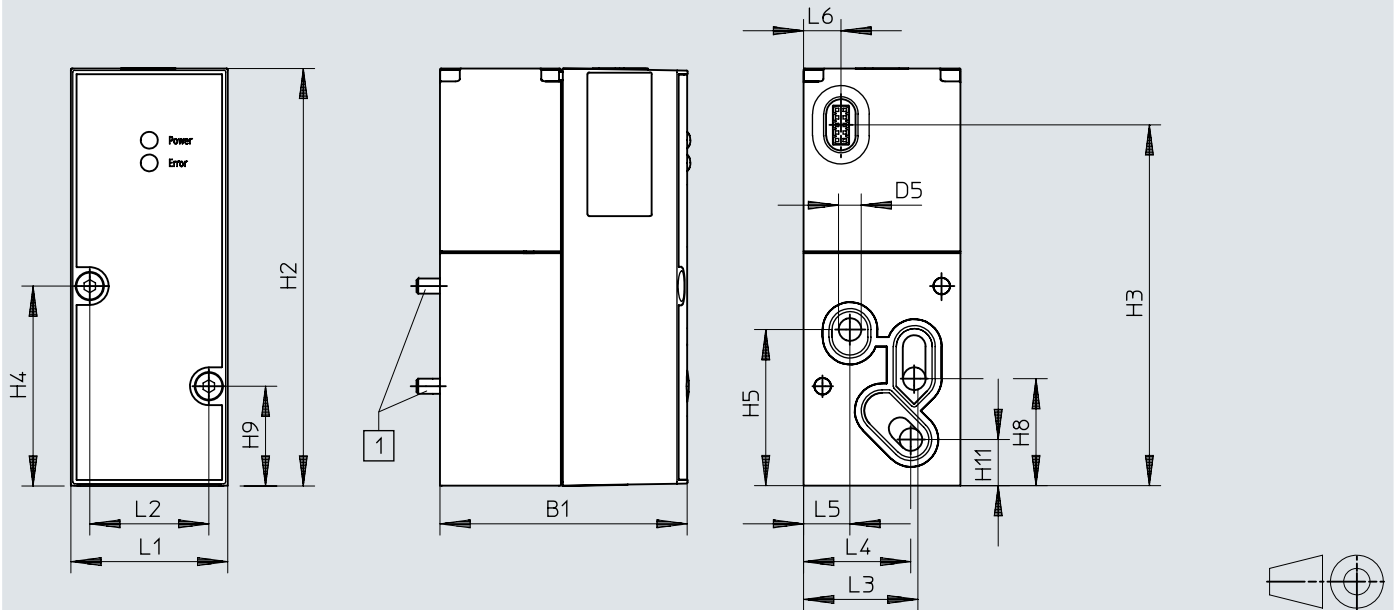


	B1	B2	B3	D1	D2	H1	H2	H3	H4	H6	H7	H9	H10	H12
VPPM-8L	77,4	59,5	22	G1/4	M12x1	126,9	110,4	80	52,8	42	27	26,3	23	12
	L1			L2			L6							
VPPM-8L	47			31,5			25							

## Dimensions

Dimensions – Analogue interface, VPPM-6TA, sub-base valve

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



[1] Socket head screw M4x55

	B1	D5 ∅	H2	H3	H4	H5	H8	H9	H11
VPPM-6TA	55,1	6	110,4	95,5	52,8	41,3	28,3	26,3	12,2

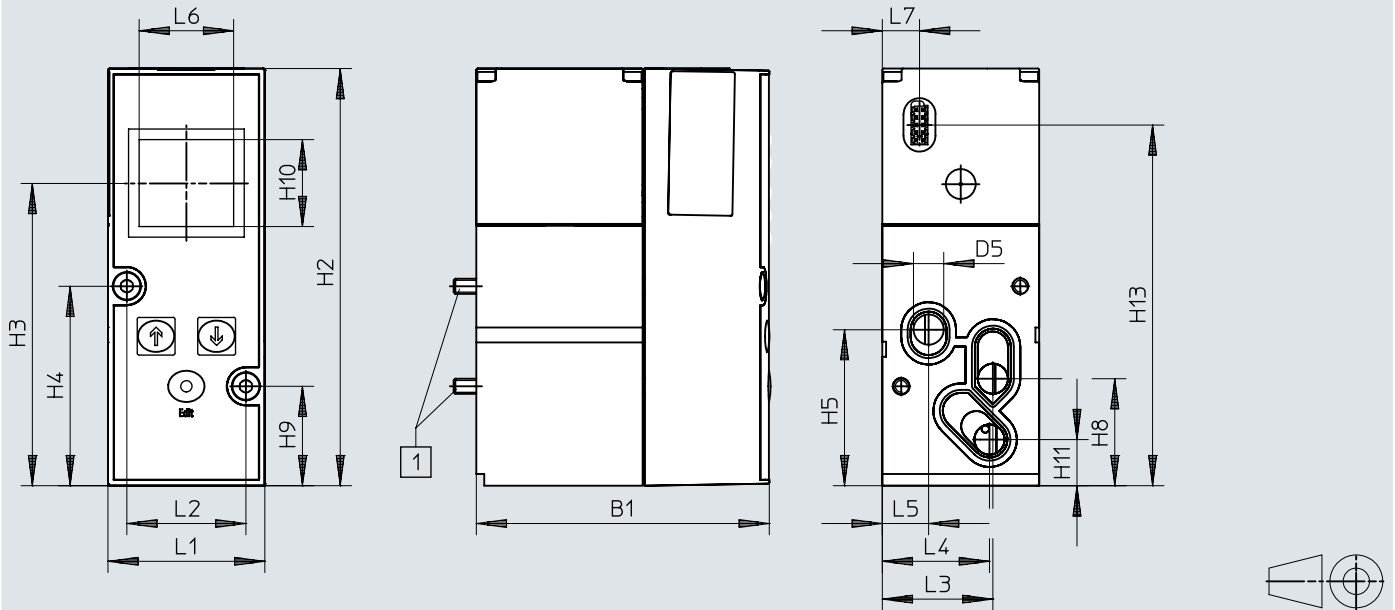
  

	L1	L2	L3	L4	L5	L6
VPPM-6TA	41,5	31,5	30,3	28,4	12,3	9,9

## Dimensions

Dimensions – Analogue interface, VPPM-8TA, sub-base valve with LCD

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



[1] Socket head screw M4x77

	B1	D5 ∅	H2	H3	H4	H5	H8	H9	H10	H11	H13
VPPM-8TA	77,4	8	110,4	80	52,8	41,3	28,3	26,3	23	12,2	95,5

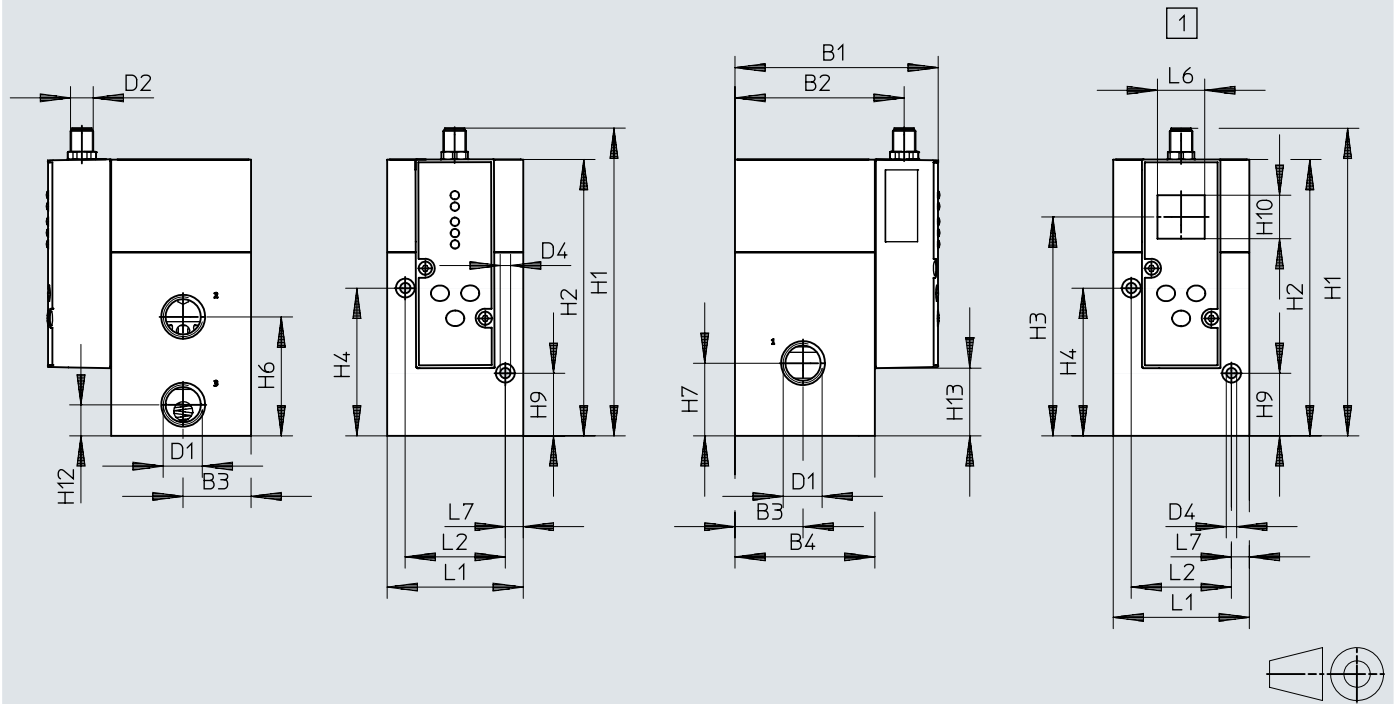
  

	L1	L2	L3	L4	L5	L6	L7
VPPM-8TA	41,5	31,5	29,3	28,4	12,3	25	9,9

## Dimensions

Dimensions – Analogue interface, VPPM-12L, pneumatic connection G1/2

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

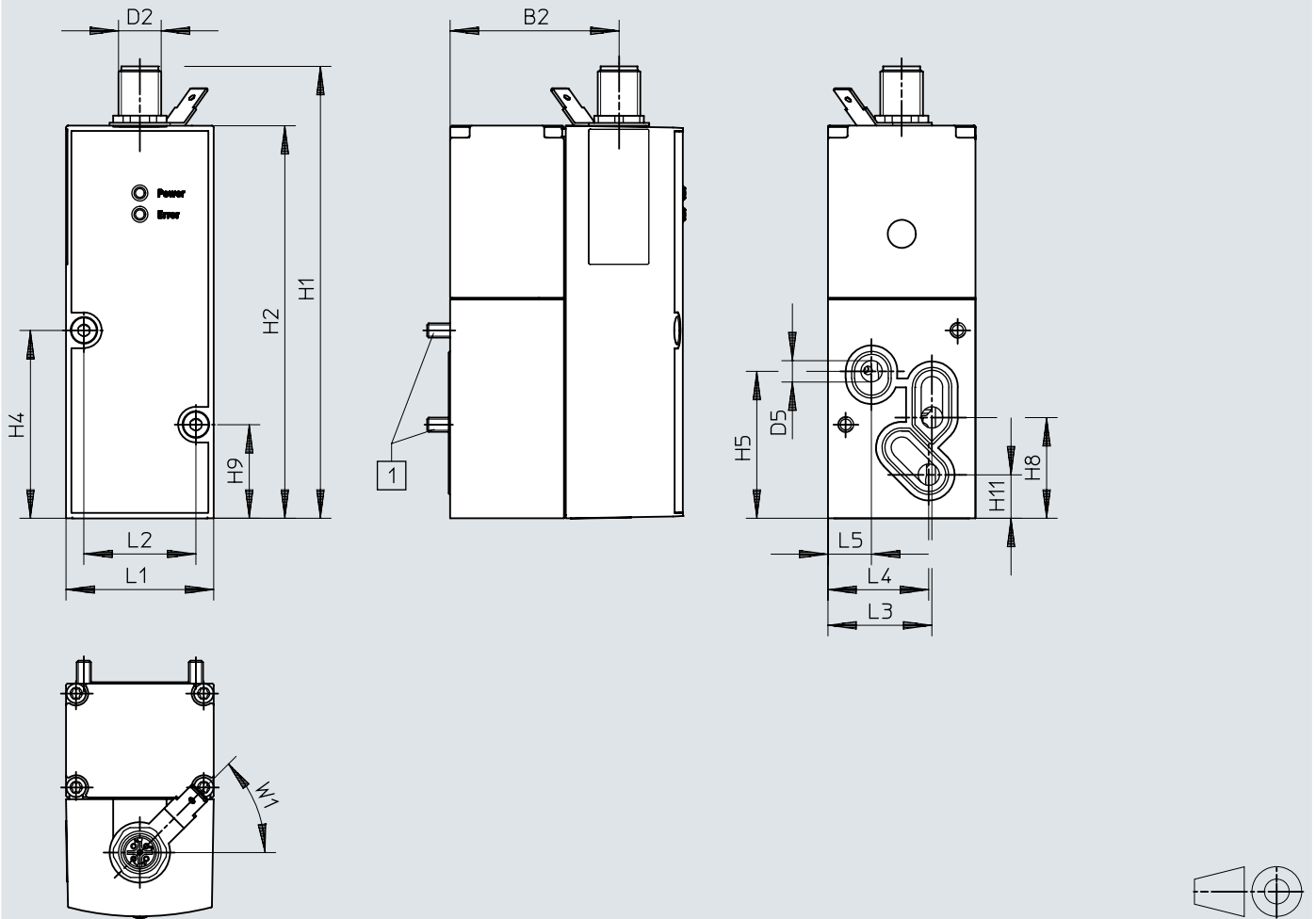


[1] With LCD

	B1	B2	B3	B4	D1	D2	D4	H1	H2	H3	H4	H6	H7	H9	H10	H12	H13
VPPM-12L	107,4	89,5	36	74	G1/2	M12x1	5,5	162,8	146,3	116	78,2	63	38,5	33,2	23	16,5	35,9
			L1				L2				L6				L7		
VPPM-12L			72				53				25				9,5		

## Dimensions

Dimensions – IO-Link® interface, VPPM-6F, sub-base valve

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

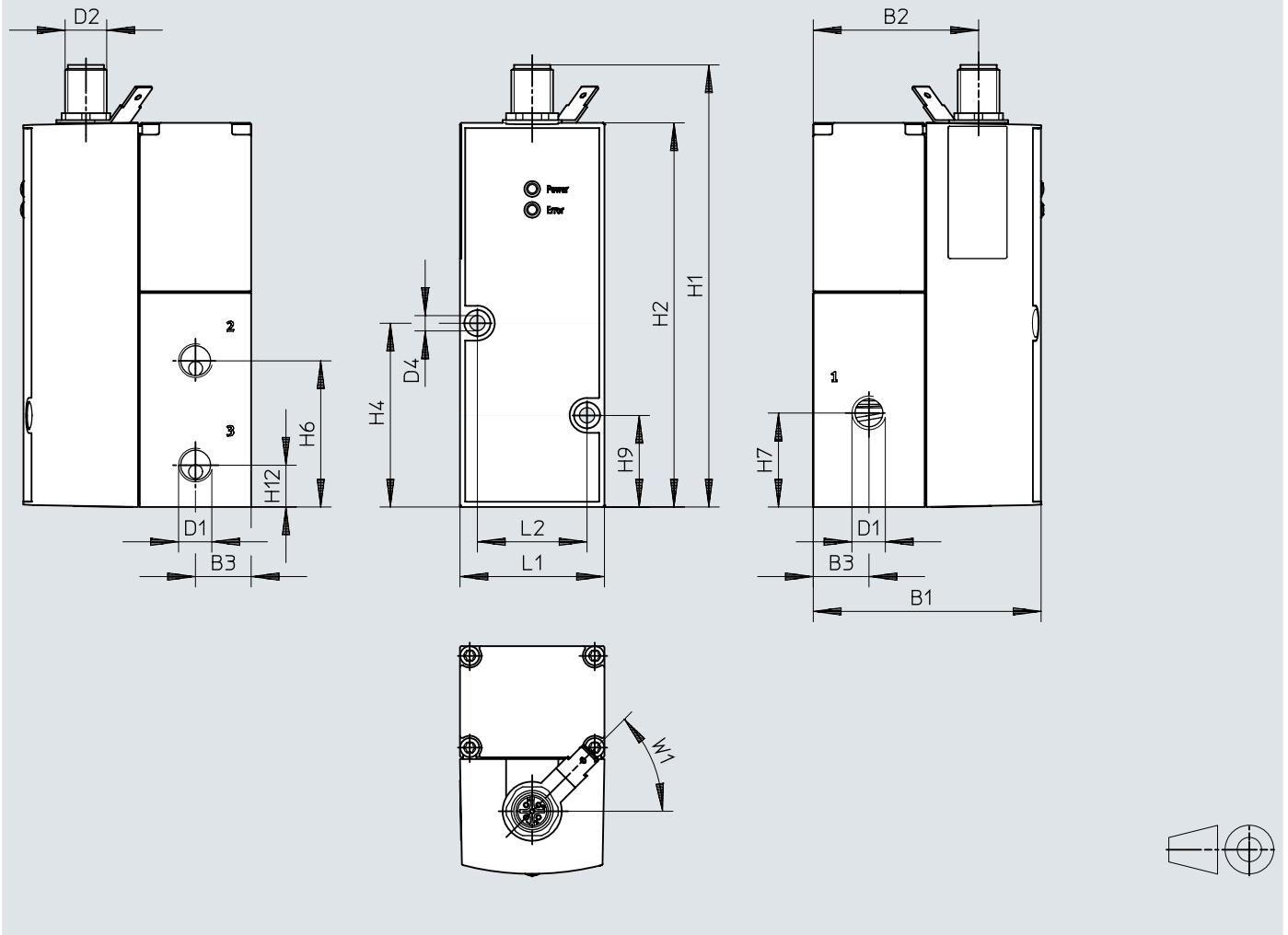
[1] Socket head screw M4x65

	B1	B2	D2 ∅	D5 ∅	H1	H2	H4	H5	H8	H9	H11
VPPM-6F	65,5	47,5	M12x1	6	126,9	110,4	52,8	41,3	28,3	26,3	12,2
	L1	L2	L3	L4	L5	W1 ± 5°					
VPPM-6F	41,5	31,5	30,3	28,4	12,3	45°					

## Dimensions

Dimensions – IO-Link® interface, VPPM-6L- pneumatic connection G1/8

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



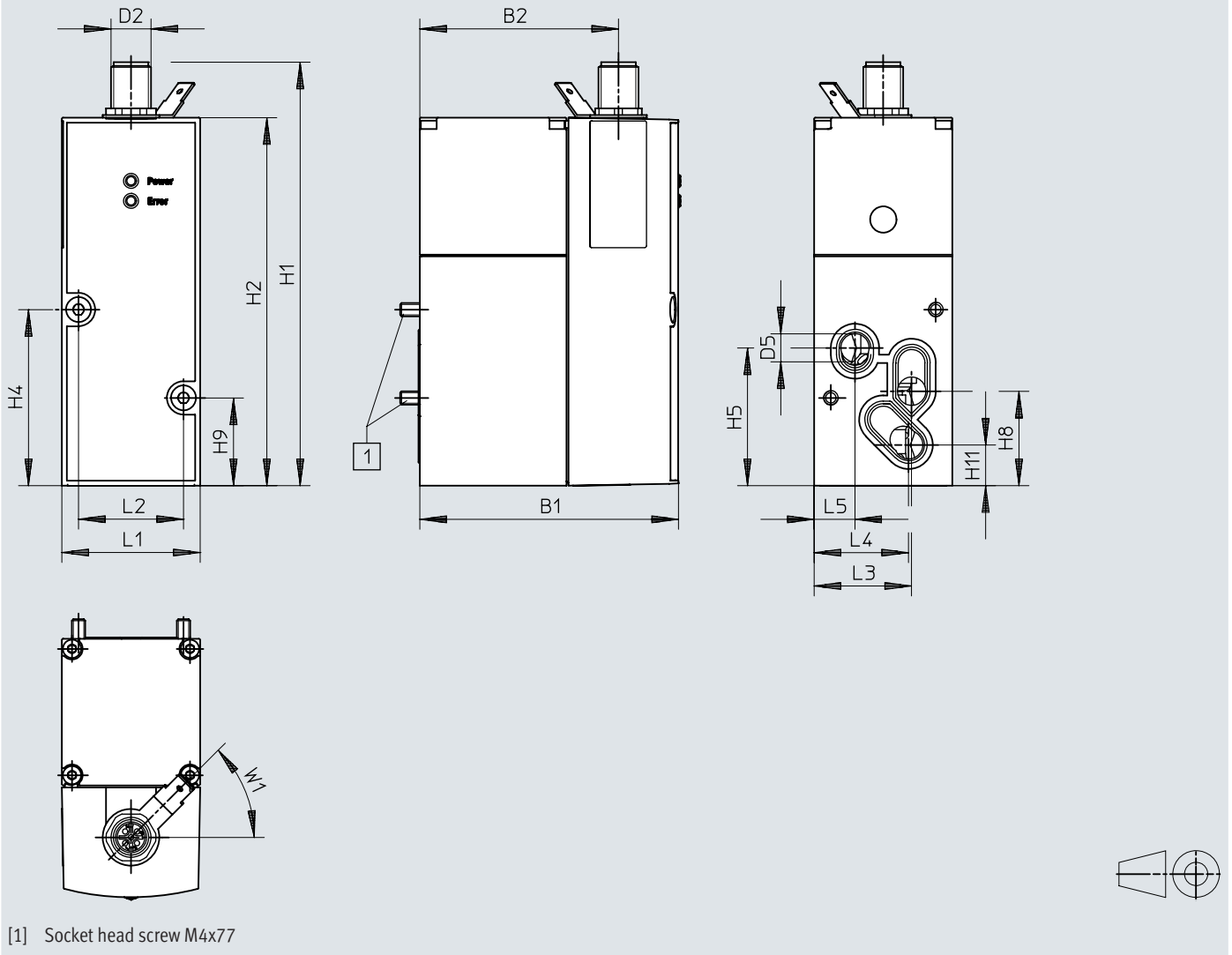
	B1	B2	B3	D1 ∅	D2 ∅	D4 ∅	H1	H2	H4	H6	H7	H9	H12
VPPM-6L	65,5	47,5	16	G1/8	M12x1	4,4	126,9	110,4	52,8	42	27	26,3	12
	L1			L2			W1 ± 5°						
VPPM-6L	41,5			31,5			45°						



## Dimensions

Dimensions – IO-Link® interface, VPPM-8F, sub-base valve

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

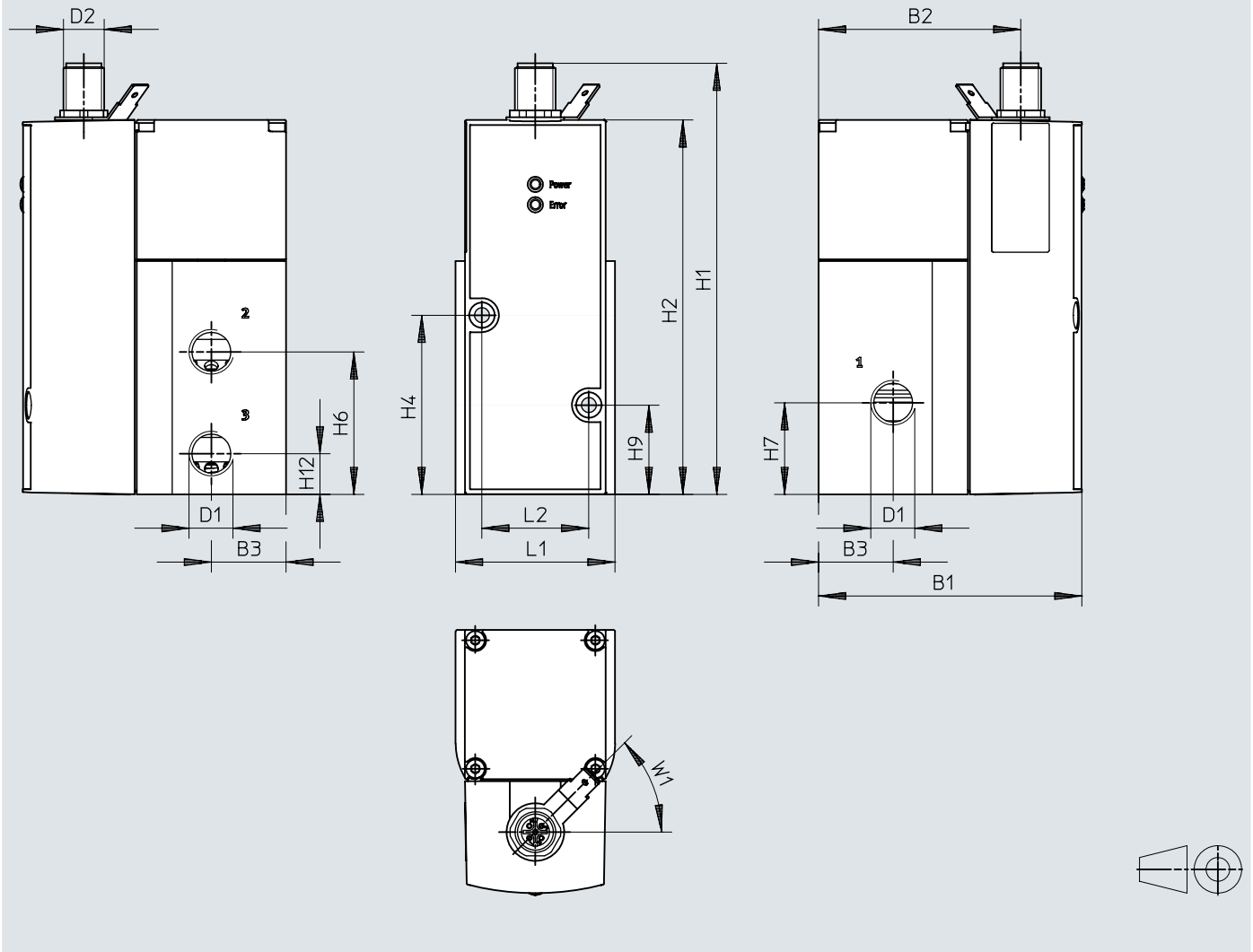


	B1	B2	D2	D5 ø	H1	H2	H4	H5	H8	H9	H11
VPPM-8L	77,4	59,5	M12x1	8	126,9	110,4	52,8	41,3	28,3	26,3	12,2
	L1	L2	L3	L4	L5	W1 ± 5°					
VPPM-8L	41,5	31,5	29,3	28,4	12,3	45°					

## Dimensions

Dimensions – IO-Link® interface, VPPM-8L, pneumatic connection G1/4

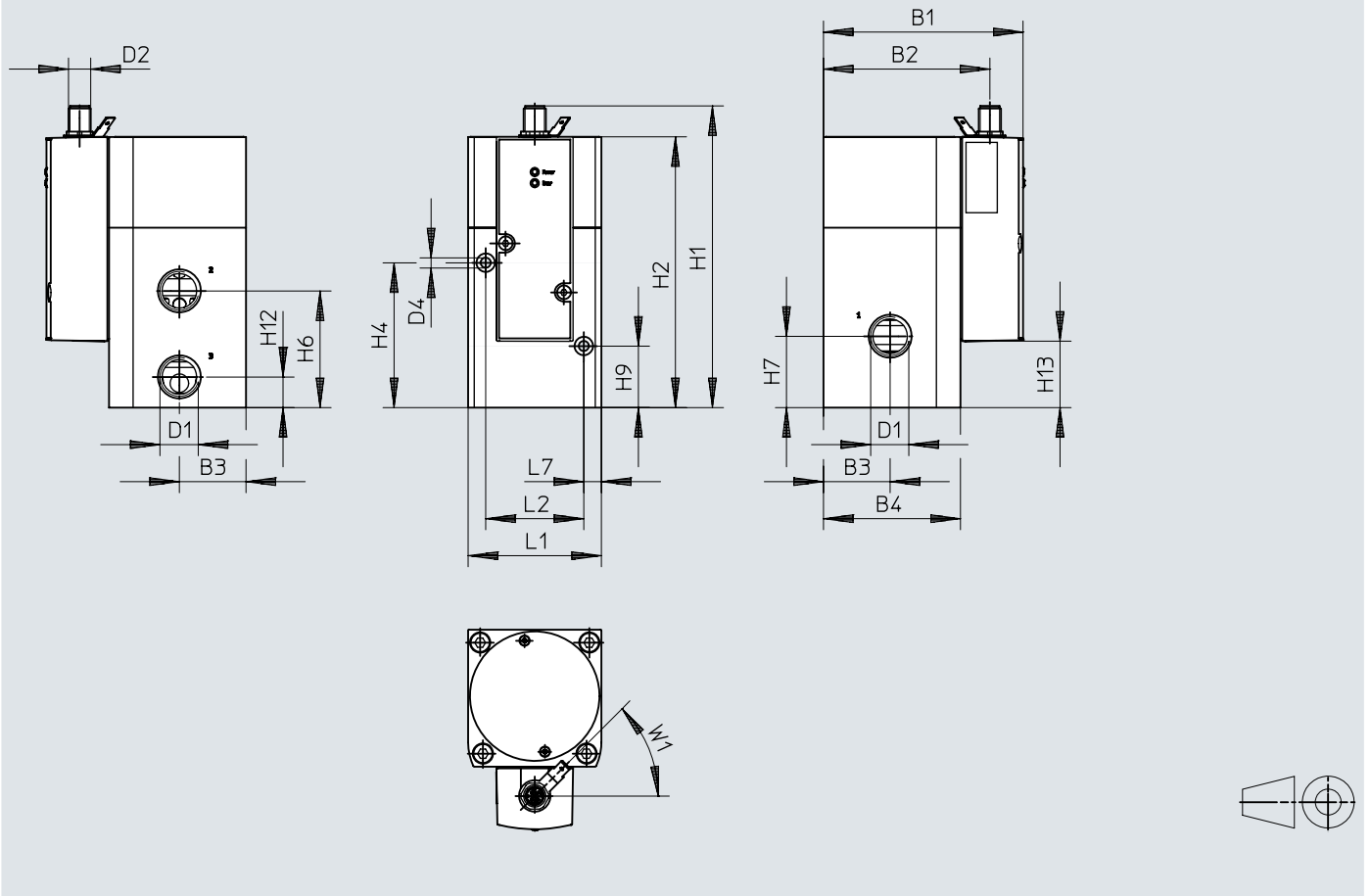
Download CAD data → [www.festo.com](http://www.festo.com)



	B1	B2	B3	D1	D2	H1	H2	H4	H6	H7	H9	H12
VPPM-8L	77,4	59,5	22	G1/4	M12x1	126,9	110,4	52,8	42	27	26,3	12
	L1			L2			W1 ± 5°					
VPPM-8L	47			31,5			45°					

## Dimensions

Dimensions – IO-Link® interface, VPPM-12L, pneumatic connection G1/2

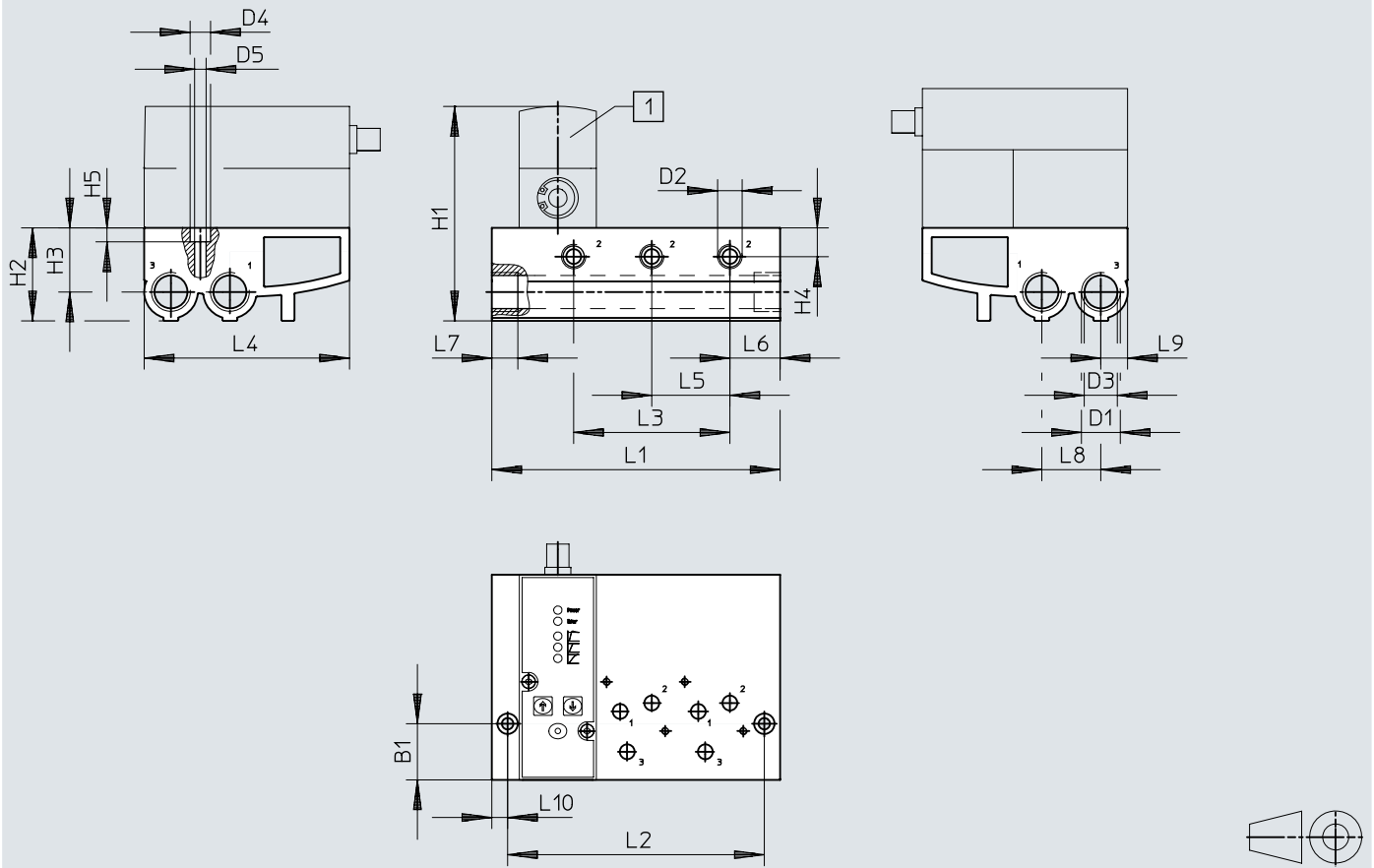
Download CAD data → [www.festo.com](http://www.festo.com)

	B1	B2	B3	B4	D1	D2	D4 ø	H1	H2	H4	H6	H7	H9	H12	H13
VPPM-12L	107,4	89,5	36	74	G1/2	M12x1	5,5	162,8	146,3	78,2	63	38,5	33,2	16,5	35,9
		L1			L2		L7							W1 ±5°	
VPPM-12L		72			53		9,5							45°	

## Dimensions

### Dimensions – Manifold block VABM-P1

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



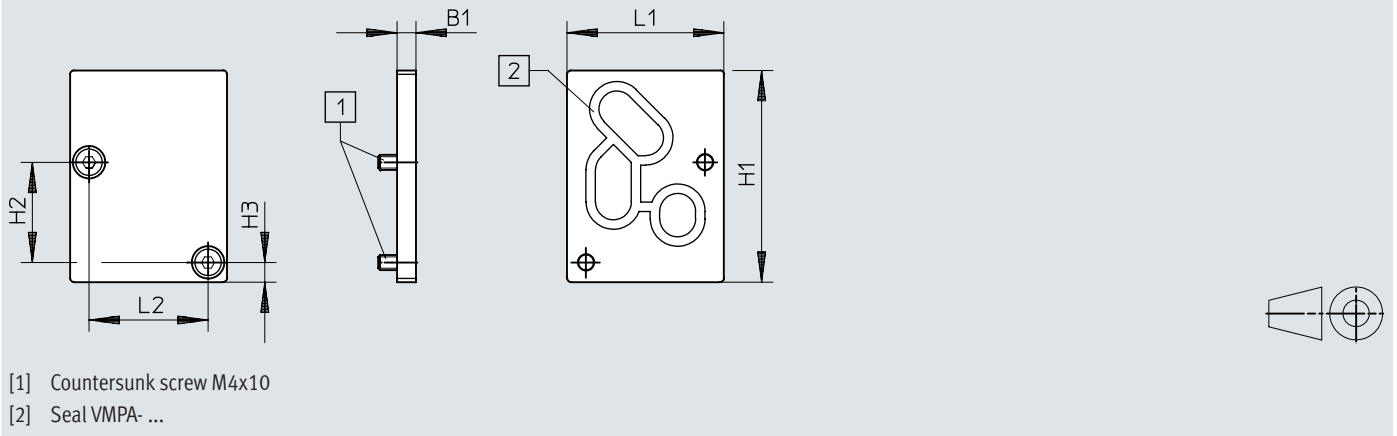
[1] Proportional-pressure regulator VPPM

	B1	D1	D2	D3 ∅	D4 ∅	D5 ∅	H1	H2	H3	H4	H5
VABM-P1-SF-G14-2-P3	30,2	G1/2	G1/4	17,8	11	6,2	~116	50	34,5	15,5	7,5
VABM-P1-SF-G14-3-P3											
VABM-P1-SF-G14-4-P3											

	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10
VABM-P1-SF-G14-2-P3	113	96	42	110,4	42	27	14	31,7	14,4	8,5
VABM-P1-SF-G14-3-P3	155	138	84							
VABM-P1-SF-G14-4-P3	197	180	126							

## Dimensions

## Dimensions – Cover plate VABB-P1

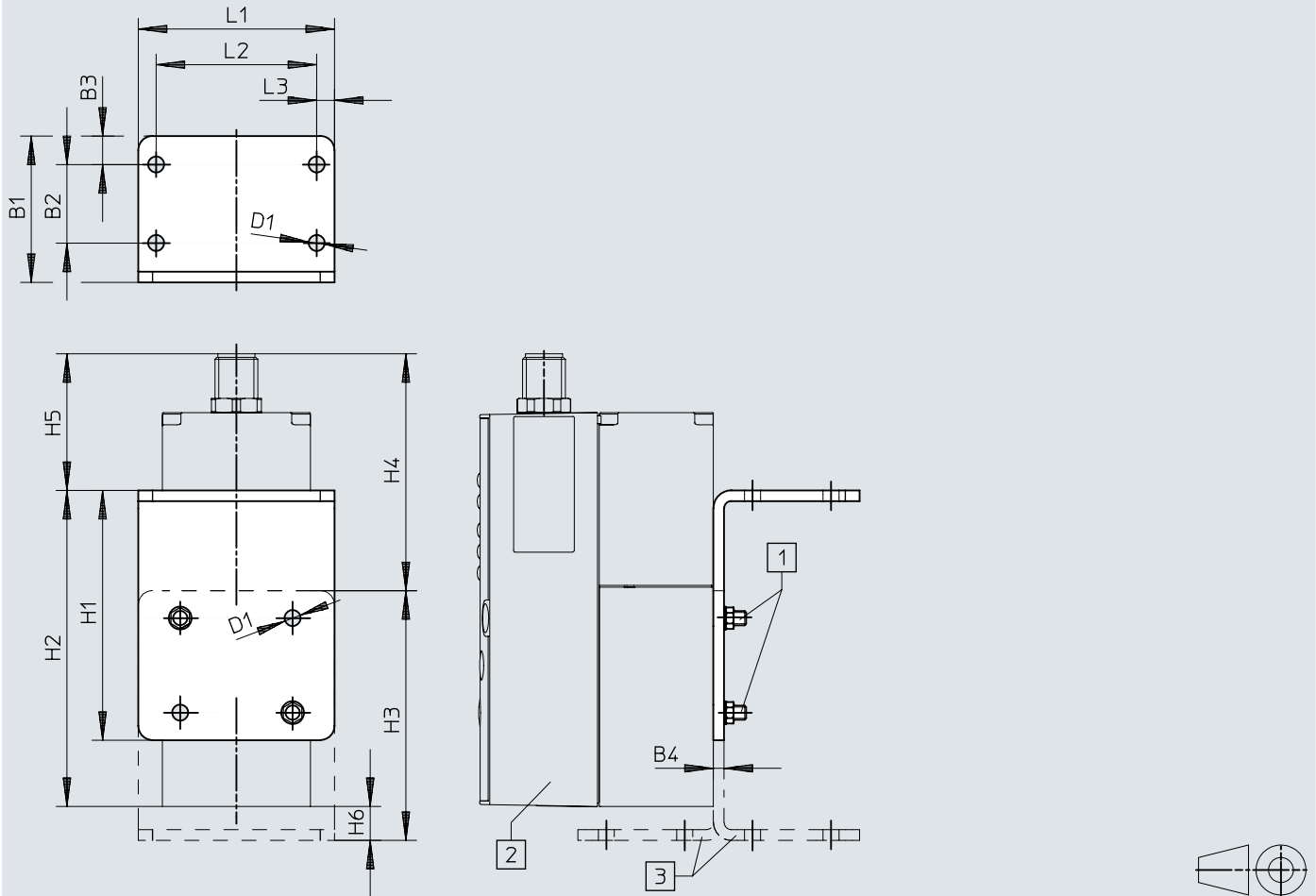
Download CAD data → [www.festo.com](http://www.festo.com)

	B1	H1	H2	H3	L1	L2
VABB-P1	5	56	26,5	5,2	41,5	31,5

## Dimensions

### Dimensions – Bracket VAME-P1-A

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

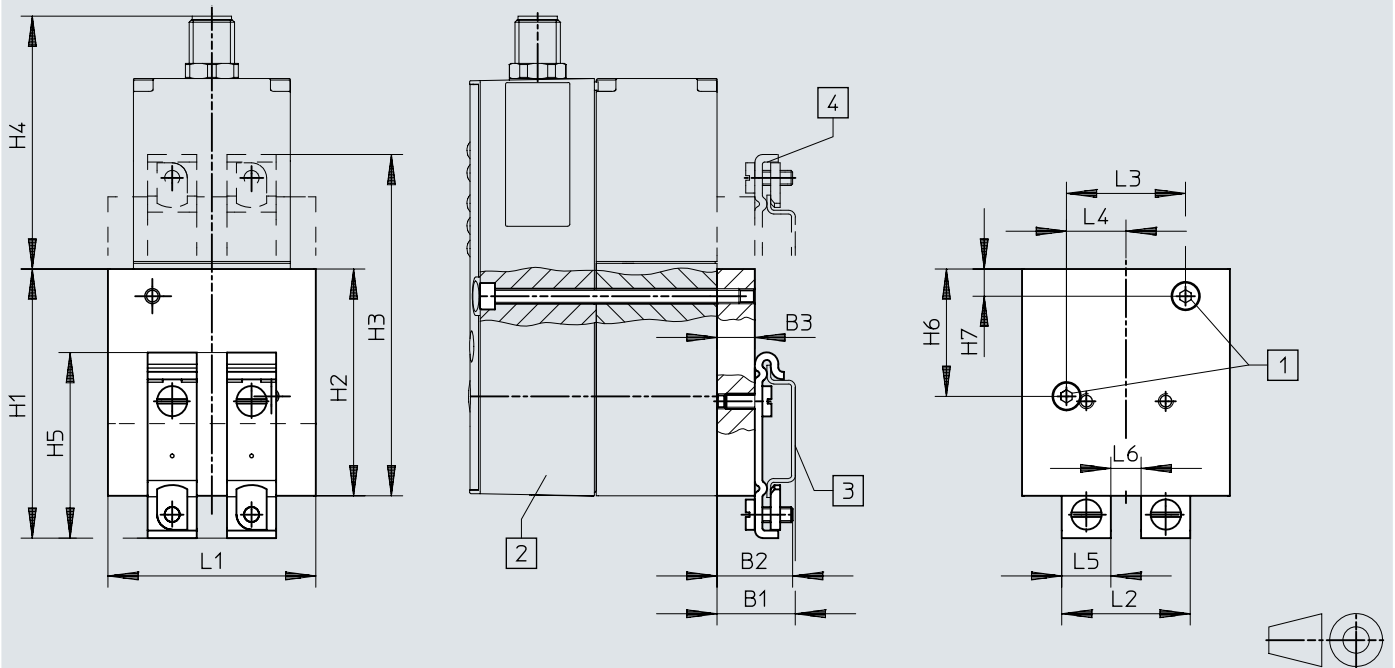


- [1] Socket head screw M4
- [2] Proportional-pressure regulator VPPM
- [3] Bracket can be reversed if required

	B1	B2	B3	B4	D1 ∅	H1	H2	H3	H4	H5	H6	L1	L2	L3
VAME-P1-A	41	22	8	3	4,5	70	88,6	70	66,4	38,3	9,5	55	45	5

## Dimensions

## Dimensions – H-rail mounting VAME-P1-T

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

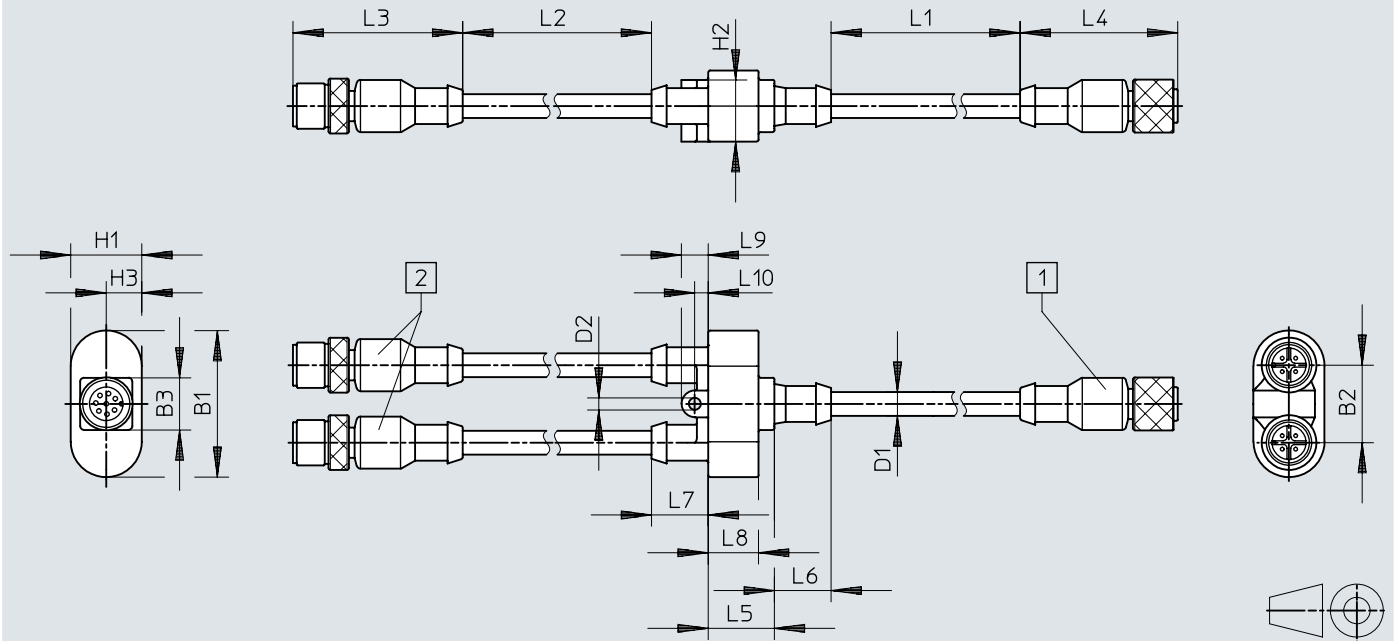
- [1] Socket head screw M4  
 [2] Proportional-pressure regulator VPPM  
 [3] H-rail NRH  
 [4] H-rail mounting can be rotated 180° if required

	B1	B2	B3	H1	H2	H3	H4	H5	H6	H7	L1	L2	L3	L4	L5	L6
VAME-P1-T	20,7	20	10	71,2	60	90,3	66,9	49,1	33,7	7,2	55	34	31,5	15,75	13	8

## Dimensions

### Dimensions – Connecting cable NEBV-M12G8-KD-3-M12G4

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



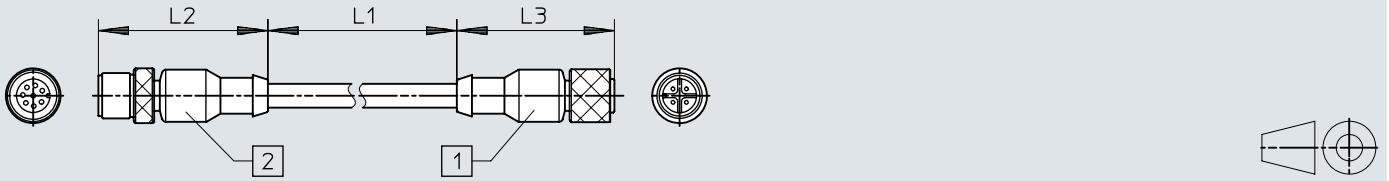
- [1] Straight socket, 8-pin on VPPM
- [2] Straight plug, 4-pin on CPX modules

	B1	B2	B3	D1	D2	H1	H2	H2	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10
NEBV-M12G8	38,8	20,5	13,8	6,3	3,2	18,8	16,3	9,4	2500	500	44,9	41,7	17,5	15	15	13,3	7,1	3,6



## Dimensions

## Dimensions – Connecting cable NEBV-M12G8-K-5-M12G4

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

- [1] Straight plug, M12 4-pin on CPX module  
 [2] Straight socket, M12 8-pin on VPPM

	L1	L2	L3
NEBV-M12G8-K-2-M12G4	2000	44,9	41,7
NEBV-M12G8-K-5-M12G4	5000	44,9	41,7

Ordering data

VPPM with analogue interface									
Signal range analogue input	Signal range analogue output	Total accuracy	Pneumatic connection, port 1	Pressure regulation range	Part no.	Type			
0 - 10 V	0 - 10 V	1.25%FS	Sub-base	0.002 ... 0.2 MPa	542239	VPPM-6F-L-1-F-0L2H-V1N-S1			
					542245	VPPM-6F-L-1-F-0L2H-V1N			
				0.006 ... 0.6 MPa	558339	VPPM-6F-L-1-F-0L6H-V1P-C1			
					571286	VPPM-8F-L-1-F-0L6H-V1P-S1			
					542246	VPPM-6F-L-1-F-0L6H-V1N			
					571285	VPPM-8F-L-1-F-0L6H-V1P			
					558347	VPPM-6F-L-1-F-0L6H-V1N-C1			
					571287	VPPM-8F-L-1-F-0L6H-V1P-S1C1			
				0.01 ... 1 MPa	542240	VPPM-6F-L-1-F-0L6H-V1N-S1			
					542241	VPPM-6F-L-1-F-0L10H-V1N-S1			
				G1/8	0.002 ... 0.2 MPa	542233	VPPM-6L-L-1-G18-0L2H-V1N		
						542227	VPPM-6L-L-1-G18-0L2H-V1N-S1		
			0.006 ... 0.6 MPa		542228	VPPM-6L-L-1-G18-0L6H-V1N-S1			
					554043	VPPM-6L-L-1-G18-0L6H-V1P			
					575121	VPPM-6L-L-1-G18-0L6H-V1P-S1C1			
					554039	VPPM-6L-L-1-G18-0L6H-V1P-S1			
					558337	VPPM-6L-L-1-G18-0L6H-V1P-C1			
					542234	VPPM-6L-L-1-G18-0L6H-V1N			
			0.01 ... 1 MPa		558346	VPPM-6L-L-1-G18-0L6H-V1N-C1			
					571448	VPPM-6L-L-1-G18-0L6H-V1N-S1C1			
					558345	VPPM-6L-L-1-G18-0L10H-V1N-S1C1			
					554044	VPPM-6L-L-1-G18-0L10H-V1P			
					558335	VPPM-6L-L-1-G18-0L10H-V1P-S1C1			
					542229	VPPM-6L-L-1-G18-0L10H-V1N-S1			
			G1/4		0.006 ... 0.6 MPa	542235	VPPM-6L-L-1-G18-0L10H-V1N		
						554040	VPPM-6L-L-1-G18-0L10H-V1P-S1		
					0.01 ... 1 MPa	575125	VPPM-6L-L-1-G18-0L10H-V1P-C1		
						571296	VPPM-8L-L-1-G14-0L6H-V1P		
				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			
				G1/2	0.006 ... 0.6 MPa	571293	VPPM-8L-L-1-G14-0L10H-V1P-S1C1		
						571291	VPPM-8L-L-1-G14-0L10H-V1N-S1		
					0.01 ... 1 MPa	571292	VPPM-8L-L-1-G14-0L10H-V1P-S1		
						575240	VPPM-12L-L-1-G12-0L6H-V1P-S1		
			575238			VPPM-12L-L-1-G12-0L6H-V1N-S1			
			575241			VPPM-12L-L-1-G12-0L6H-V1P-S1C1			
			0.01 ... 1 MPa	575239	VPPM-12L-L-1-G12-0L6H-V1N-S1C1				
				575236	VPPM-12L-L-1-G12-0L10H-V1P-S1				
				575235	VPPM-12L-L-1-G12-0L10H-V1N-S1				
				575237	VPPM-12L-L-1-G12-0L10H-V1P-S1C1				
			4 - 20 mA	4 - 20 mA	1.25%FS	Sub-base	0.002 ... 0.2 MPa	542248	VPPM-6F-L-1-F-0L2H-A4N
								542242	VPPM-6F-L-1-F-0L2H-A4N-S1
							0.006 ... 0.6 MPa	558340	VPPM-6F-L-1-F-0L6H-A4P-C1
								571282	VPPM-8F-L-1-F-0L6H-A4P
								542243	VPPM-6F-L-1-F-0L6H-A4N-S1
								571284	VPPM-8F-L-1-F-0L6H-A4P-S1C1
						0.01 ... 1 MPa	571283	VPPM-8F-L-1-F-0L6H-A4P-S1	
							542249	VPPM-6F-L-1-F-0L6H-A4N	
						G1/8	0.002 ... 0.2 MPa	542244	VPPM-6F-L-1-F-0L10H-A4N-S1
								542250	VPPM-6F-L-1-F-0L10H-A4N
0.006 ... 0.6 MPa	542230	VPPM-6L-L-1-G18-0L2H-A4N-S1							
	542236	VPPM-6L-L-1-G18-0L2H-A4N							
	542231	VPPM-6L-L-1-G18-0L6H-A4N-S1							
	554045	VPPM-6L-L-1-G18-0L6H-A4P							
542237	VPPM-6L-L-1-G18-0L6H-A4N								
575128	VPPM-6L-L-1-G18-0L6H-A4P-S1C1								
558338	VPPM-6L-L-1-G18-0L6H-A4P-C1								


## Ordering data

VPPM with analogue interface								
Signal range analogue input	Signal range analogue output	Total accuracy	Pneumatic connection, port 1	Pressure regulation range	Part no.	Type		
4 - 20 mA	4 - 20 mA	1.25%FS	G1/8	0.006 ... 0.6 MPa	554041	VPPM-6L-L-1-G18-0L6H-A4P-S1		
					554042	VPPM-6L-L-1-G18-0L10H-A4P-S1		
				542232	VPPM-6L-L-1-G18-0L10H-A4N-S1			
				542238	VPPM-6L-L-1-G18-0L10H-A4N			
				554046	VPPM-6L-L-1-G18-0L10H-A4P			
				558336	VPPM-6L-L-1-G18-0L10H-A4P-S1C1			
			G1/4	0.006 ... 0.6 MPa	571302	VPPM-8L-L-1-G14-0L6H-A4N-S1		
					571299	VPPM-8L-L-1-G14-0L6H-A4P		
					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		
				0.01 ... 1 MPa	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		
					G1/2	0.006 ... 0.6 MPa	575243	VPPM-12L-L-1-G12-0L6H-A4P-S1C1
							575242	VPPM-12L-L-1-G12-0L6H-A4P-S1
			575244	VPPM-12L-L-1-G12-0L6H-A4N-S1				
			575245	VPPM-12L-L-1-G12-0L6H-A4N-S1C1				
			0.01 ... 1 MPa	575232	VPPM-12L-L-1-G12-0L10H-A4N-S1			
				575234	VPPM-12L-L-1-G12-0L10H-A4P-S1C1			
575233	VPPM-12L-L-1-G12-0L10H-A4P-S1							

VPPM with analogue interface, for valve manifold				
Total accuracy	Pneumatic connection, port 1	Pressure regulation range	Part no.	Type
1.25%FS	Sub-base	0.002 ... 0.2 MPa	572407	VPPM-8TA-L-1-F-0L2H-S1C1
			542217	VPPM-6TA-L-1-F-0L2H-S1
			542220	VPPM-6TA-L-1-F-0L2H
			572410	VPPM-8TA-L-1-F-0L2H-C1
		0.006 ... 0.6 MPa	542218	VPPM-6TA-L-1-F-0L6H-S1
			572408	VPPM-8TA-L-1-F-0L6H-S1C1
			572411	VPPM-8TA-L-1-F-0L6H-C1
			542221	VPPM-6TA-L-1-F-0L6H
		0.01 ... 1 MPa	572412	VPPM-8TA-L-1-F-0L10H-C1
			542219	VPPM-6TA-L-1-F-0L10H-S1
			542222	VPPM-6TA-L-1-F-0L10H
			572409	VPPM-8TA-L-1-F-0L10H-S1C1

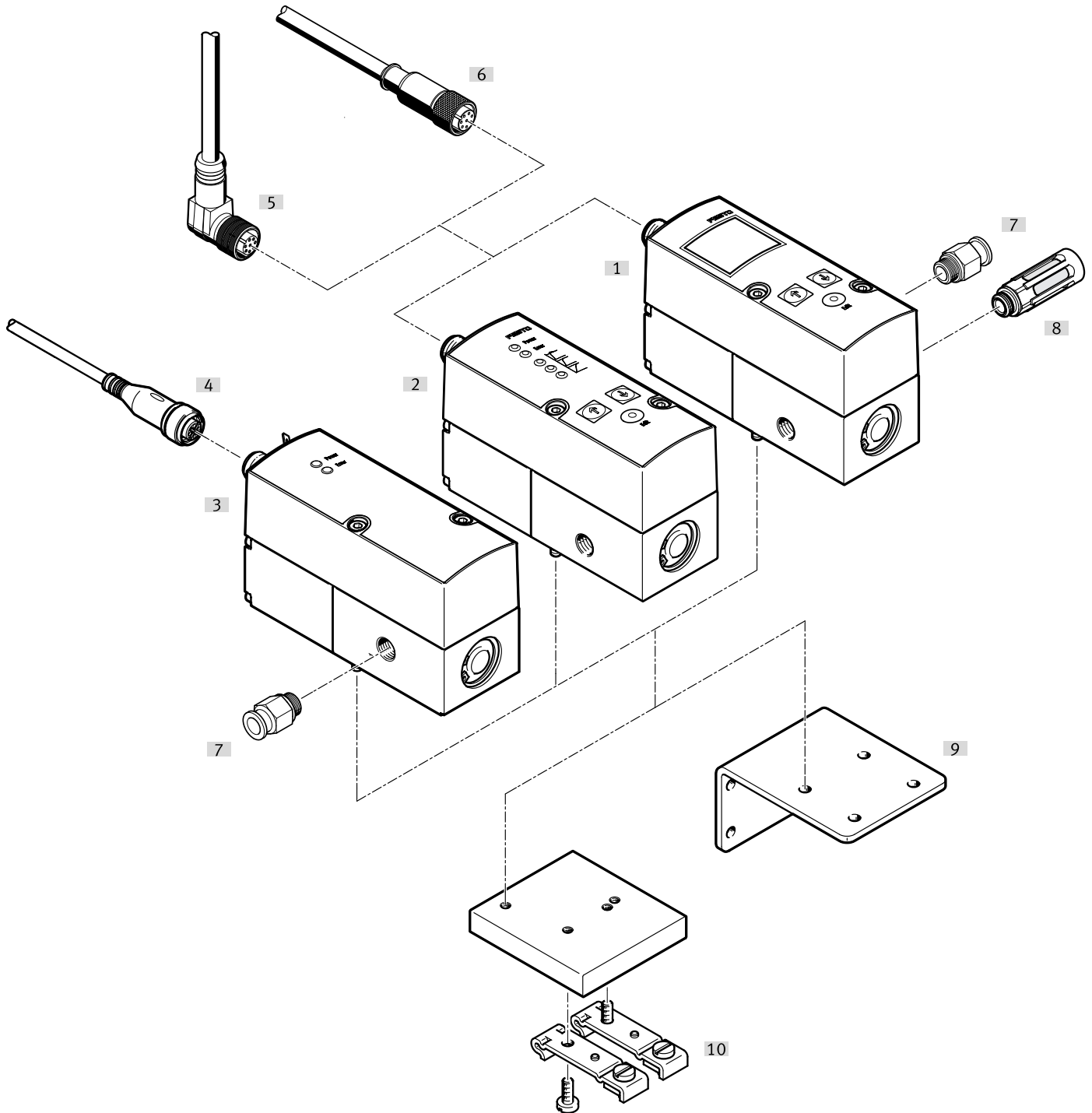
VPPM with IO-Link® interface						
Total accuracy	Pneumatic connection, port 1	Pressure regulation range	Part no.	Type		
1.25%FS	Sub-base	0.002 ... 0.2 MPa	8031107	VPPM-6F-L-1-F-0L2H-LK-S1		
			8031110	VPPM-8F-L-1-F-0L2H-LK-S1		
		0.006 ... 0.6 MPa	8031111	VPPM-8F-L-1-F-0L6H-LK-S1		
			8031108	VPPM-6F-L-1-F-0L6H-LK-S1		
			0.01 ... 1 MPa	8031112	VPPM-8F-L-1-F-0L10H-LK-S1	
		8031109		VPPM-6F-L-1-F-0L10H-LK-S1		
		G1/8		0.002 ... 0.2 MPa	8024258	VPPM-6L-L-1-G18-0L2H-LK-S1
				0.006 ... 0.6 MPa	8024259	VPPM-6L-L-1-G18-0L6H-LK-S1
			0.01 ... 1 MPa	8024260	VPPM-6L-L-1-G18-0L10H-LK-S1	
	G1/4	0.002 ... 0.2 MPa	8024261	VPPM-8L-L-1-G14-0L2H-LK-S1		
		0.006 ... 0.6 MPa	8024262	VPPM-8L-L-1-G14-0L6H-LK-S1		
		0.01 ... 1 MPa	8024263	VPPM-8L-L-1-G14-0L10H-LK-S1		
	G1/2	0.002 ... 0.2 MPa	8024264	VPPM-12L-L-1-G12-0L2H-LK-S1		
		0.006 ... 0.6 MPa	8024265	VPPM-12L-L-1-G12-0L6H-LK-S1		
		0.01 ... 1 MPa	8024266	VPPM-12L-L-1-G12-0L10H-LK-S1		

## Ordering data

Modular product system			
	Nominal size, supply	Part no.	Type
	6 mm	543432	VPPM-6-...
	8 mm	543433	VPPM-8
	12 mm	543435	VPPM-12

## Peripherals

### Individual valve VPPM-6L..., VPPM-8L...



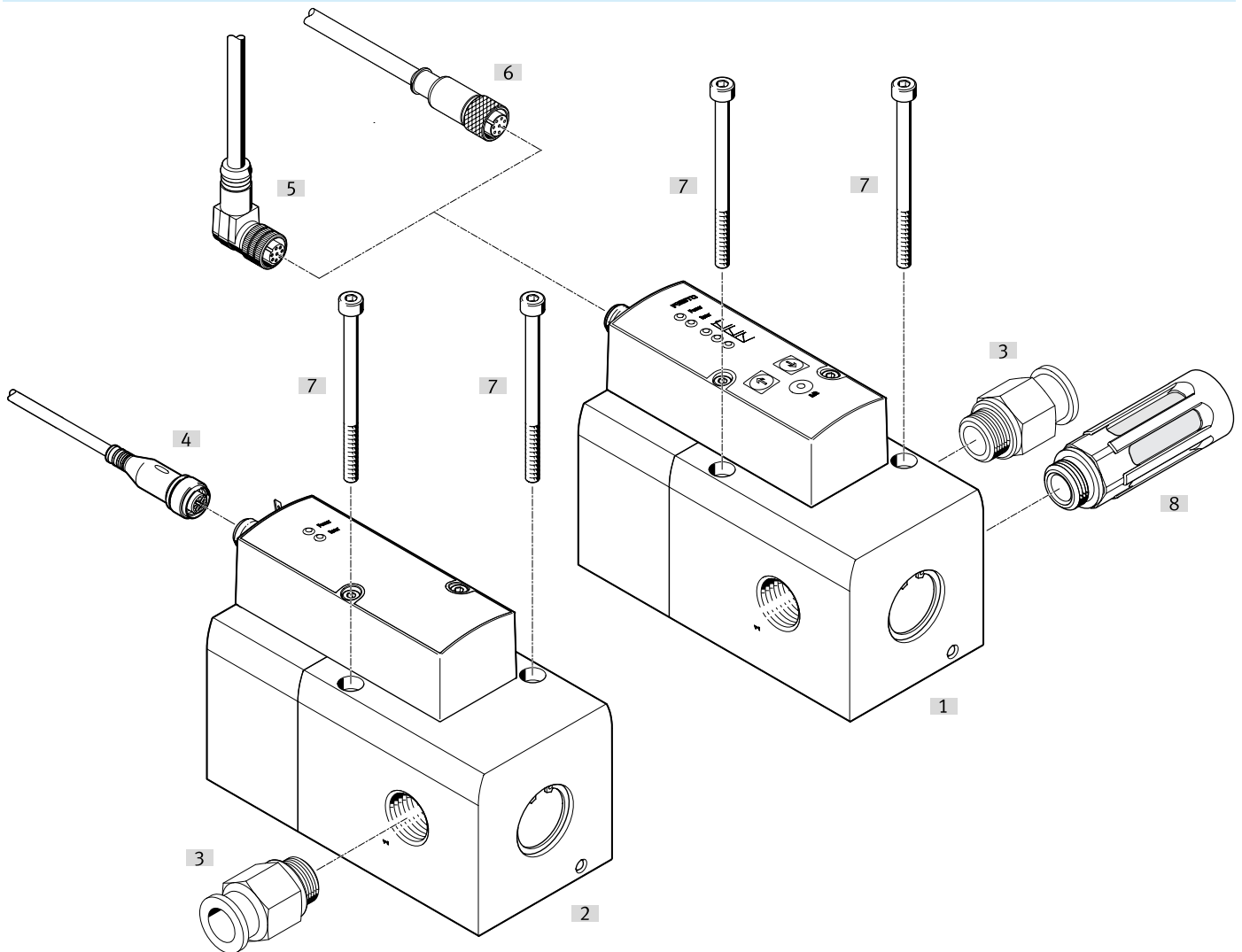
Accessories			→ Page/Internet
Type/order code	Description		
[1]	Proportional-pressure regulator with LCD	Operator unit with LCD	–
[2]	Proportional-pressure regulator with LED	Operator unit with LED	–
[3]	Proportional-pressure regulator with LED, with IO-Link®	Operator unit with LED, IO-Link®	–
[4]	Connecting cable	–	44
[5]	Angled plug socket with cable	–	44
[6]	Plug socket with cable, straight	–	43
[7]	Push-in fitting	For connecting tubing with standard O.D.	qs
[8]	Silencer	For mounting in exhaust ports	u
[9]	Bracket	For mounting the valve	43

## Peripherals

Accessories		→ Page/Internet
Type/order code	Description	
[10] H-rail mounting	For mounting on an H-rail	43

## Peripherals

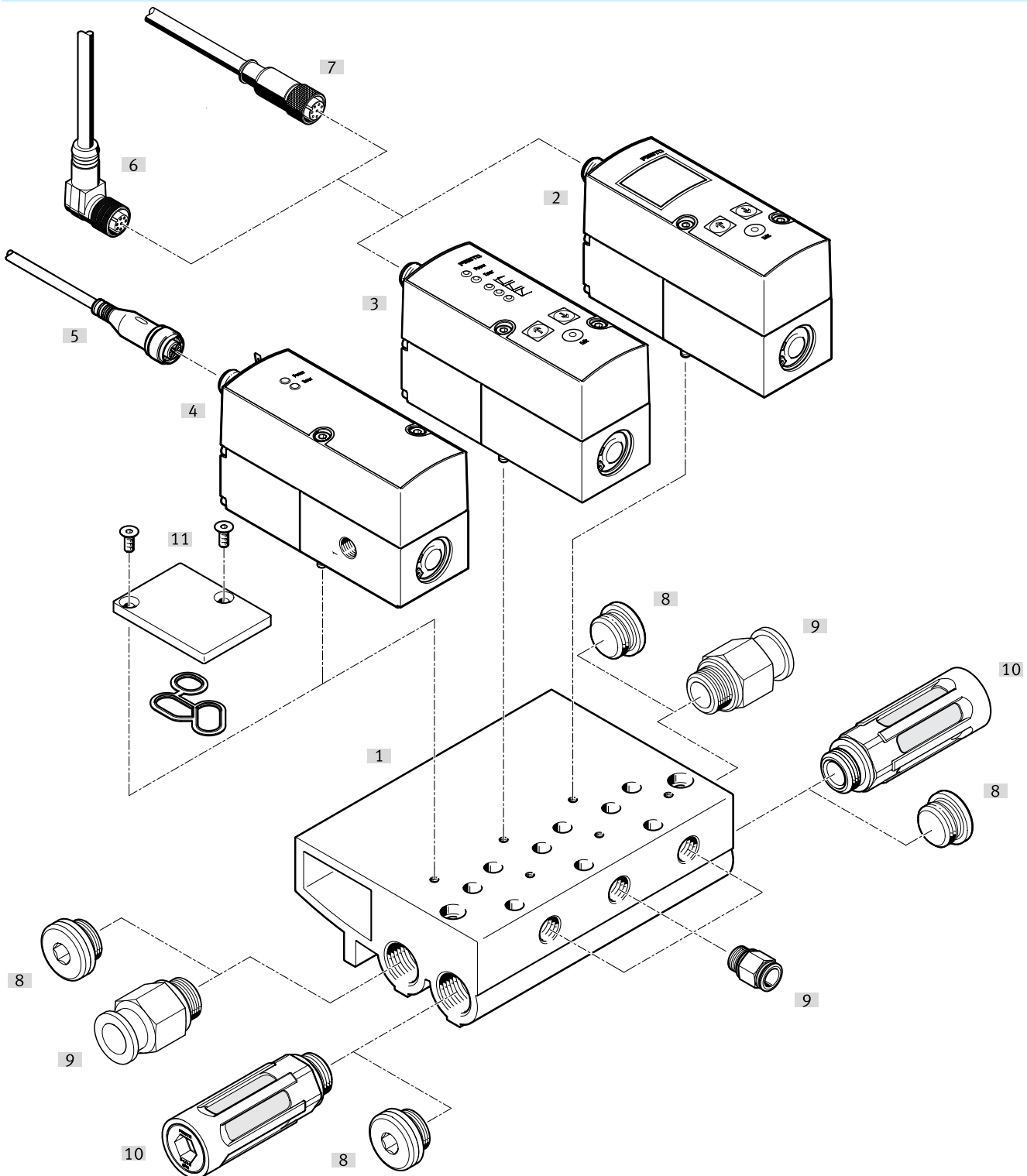
## Individual valve VPPM-12L...



Accessories			→ Page/Internet
Type/order code		Description	
[1]	Proportional-pressure regulator with LED or LCD	Operator unit with LED or LCD	-
[2]	Proportional-pressure regulator with LED, with IO-Link®	Operator unit with LED, IO-Link®	-
[3]	Push-in fitting	For connecting tubing with standard O.D.	qs
[4]	Connecting cable	-	44
[5]	Angled plug socket with cable	-	44
[6]	Plug socket with cable, straight	-	43
[7]	Retaining screws	-	-
[8]	Silencer	For mounting in exhaust ports	u

## Peripherals

### Valve manifold assembly with VPPM-6F..., VPPM-8F...



Accessories		→ Page/Internet	
Type/order code	Description		
[1]		43	
[2]	Proportional-pressure regulator with LCD	Operator unit with LCD	-
[3]	Proportional-pressure regulator with LED	Operator unit with LED	-
[4]	Proportional-pressure regulator with LED, with IO-Link®	Operator unit with LED, IO-Link®	-
[5]	Connecting cable	-	44
[6]	Angled plug socket with cable	-	44

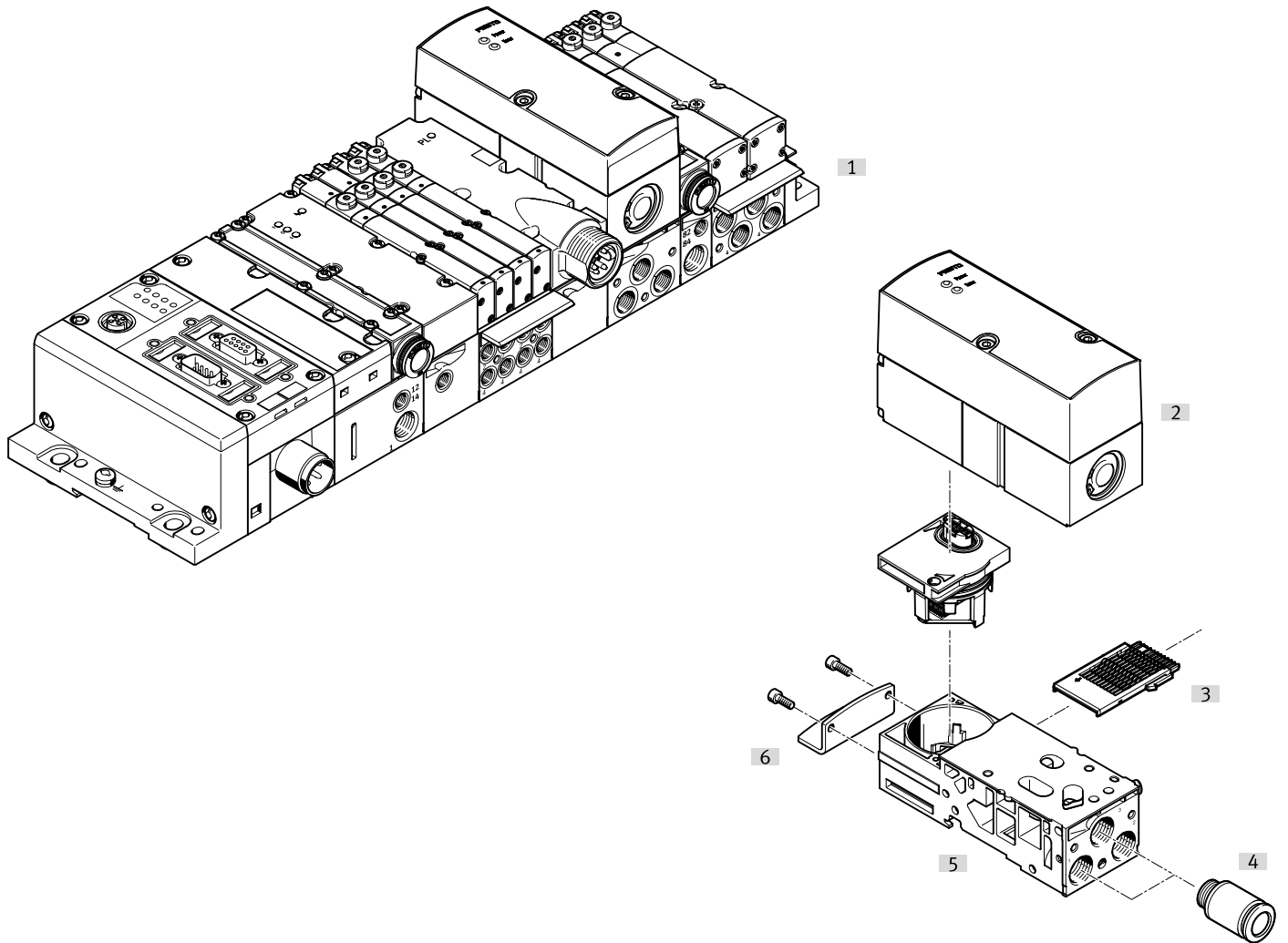


## Peripherals

Accessories		→ Page/Internet
Type/order code	Description	
[7]	Plug socket with cable, straight	43
[8]	Blanking plug	b
[9]	Push-in fitting	qs
[10]	Silencer	u
[11]	Cover plate	43

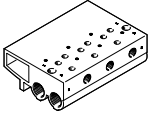
## Peripherals

VPPM-6TA..., VPPM-8TA... for valve terminal MPA-S

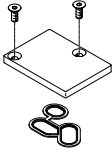


Accessories		→ Page/Internet
Type/order code	Description	
[1] Valve terminal MPA-S	With fieldbus connection and VPPM	mpas
[2] Proportional pressure regulator	For valve terminal MPA-S	mpas
[3] Electrical interlinking module	For the sub-base of the proportional-pressure regulator	mpas
[4] Push-in fitting	–	qs
[5] Sub-base	Without electrical linking module or electrical module	mpas
[6] Mounting	–	mpas


## Accessories

Manifold block				
	Product weight	Corrosion resistance class CRC <sup>1)</sup>	Part no.	Type
	900 g	2 - Moderate corrosion stress	542252	VABM-P1-SF-G14-2-P3
	1,230 g		542253	VABM-P1-SF-G14-3-P3
	1,565 g		542254	VABM-P1-SF-G14-4-P3

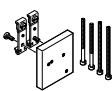
1) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

Cover plate				
	Product weight	Corrosion resistance class CRC <sup>1)</sup>	Part no.	Type
	35 g	1 - Low corrosion stress	558350	VABB-P1


1) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)


Bracket				
	Product weight	Corrosion resistance class CRC <sup>1)</sup>	Part no.	Type
	71 g	1 - Low corrosion stress	542251	VAME-P1-A

1) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

H-rail mounting				
	Product weight	Corrosion resistance class CRC <sup>1)</sup>	Part no.	Type
	150 g	1 - Low corrosion stress	542255	VAME-P1-T


1) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

Connecting cable, straight socket							
	Electrical connection 1, connection type	Electrical connection 1, cable outlet	Electrical connection 1, number of connections/cores	Electrical connection 1, connector system	Cable length	Part no.	Type
	Socket	Straight	8	M12x1, A-coded to EN 61076-2-101	2 m	525616	SIM-M12-8GD-2-PU
					5 m	525618	SIM-M12-8GD-5-PU
					10 m	570008	SIM-M12-8GD-10-PU


Connecting cable, angled socket							
	Electrical connection 1, connection type	Electrical connection 1, cable outlet	Electrical connection 1, number of connections/cores	Electrical connection 1, connector system	Cable length	Part no.	Type
	Socket	Angled	8	M12x1, A-coded to EN 61076-2-101	2 m	542256	NEBU-M12W8-K-2-N-LE8

## Accessories


### Connecting cable, angled socket

	Electrical connection 1, connection type	Electrical connection 1, cable outlet	Electrical connection 1, number of connections/cores	Electrical connection 1, connector system	Cable length	Part no.	Type
	Socket	Angled	8	M12x1, A-coded to EN 61076-2-101	5 m	542257	NEBU-M12W8-K-5-N-LE8
					10 m	570007	NEBU-M12W8-K-10-N-LE8


### Connecting cable, one straight socket and one straight plug

	Electrical connection 1, connection type	Electrical connection 1, cable outlet	Electrical connection 1, number of connections/cores	Electrical connection 1, connector system	Cable length	Part no.	Type
	Socket	Straight	8	M12x1, A-coded to EN 61076-2-101	2 m	553575	NEBV-M12G8-K-2-M12G4
					5 m	553576	NEBV-M12G8-K-5-M12G4

### Connecting cable, one straight socket and two straight plugs

	Electrical connection 1, connection type	Electrical connection 1, cable outlet	Electrical connection 1, number of connections/cores	Electrical connection 1, connector system	Part no.	Type
	Socket	Straight	8	M12x1, A-coded to EN 61076-2-101	547888	NEBV-M12G8-KD-3-M12G4

### Connecting cable for IO-Link® interface

	Electrical connection 1, connection type	Electrical connection 1, cable outlet	Electrical connection 1, number of connections/cores	Electrical connection 1, connector system	Degree of protection	Cable length	Part no.	Type
	Socket	Straight	5	M12x1, A-coded to EN 61076-2-101	IP65, IP68, IP69K	5 m	574321	NEBU-M12G5-E-5-Q8N-M12G5
						7.5 m	574322	NEBU-M12G5-E-7.5-Q8N-M12G5
						10 m	574323	NEBU-M12G5-E-10-Q8N-M12G5