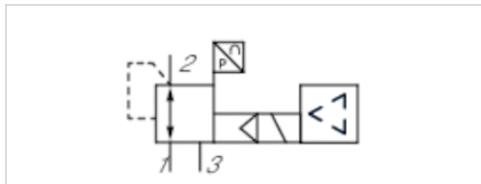


# E/P pressure regulator, Series AV03-EP





- Display: LED
- $Q_n = 550$  l/min
- Electr. connection M12, 5-pin, A-coded
- With collective pilot air exhaust



Version	Poppet valve
Mounting orientation	Any
Working pressure max	11 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air
Max. particle size	40 µm
Oil content of compressed air	0 ... 5 mg/m <sup>3</sup>
Nominal flow $Q_n$	550 l/min
Control	Analog
DC operating voltage	24 V
Voltage tolerance DC	-20% / +30%
Protection class	IP65
Weight	0,21 kg
	Nominal flow $Q_n$ with working pressure 7 bar , with secondary pressure 6 bar and $\Delta p = 0.2$ bar



## Technical data

Part No.		Pressure setting rangemin./max.	Nominal input value		Actual output value	
			Min./max.	Min./max.		
R414009024		0,5 ... 6 bar	0 ... 10 V	0 ... 10 V		
R414009029		0,5 ... 6 bar	4 ... 20 mA	4 ... 20 mA		
R414009034		0,5 ... 10 bar	0 ... 10 V	0 ... 10 V		
R414009039		0,5 ... 10 bar	4 ... 20 mA	4 ... 20 mA		
R414009025		0,5 ... 6 bar	0 ... 10 V	0 ... 10 V		
R414009030		0,5 ... 6 bar	4 ... 20 mA	4 ... 20 mA		
R414009035		0,5 ... 10 bar	0 ... 10 V	0 ... 10 V		
R414009040		0,5 ... 10 bar	4 ... 20 mA	4 ... 20 mA		
R414009026		0,5 ... 6 bar	0 ... 10 V	-		
R414009031		0,5 ... 6 bar	4 ... 20 mA	-		
R414009036		0,5 ... 10 bar	0 ... 10 V	-		
R414009041		0,5 ... 10 bar	4 ... 20 mA	-		
R414009018		0,5 ... 10 bar	0 ... 10 V	0 ... 10 V		
R414009021		0,5 ... 10 bar	4 ... 20 mA	4 ... 20 mA		
R414009019		0,5 ... 10 bar	0 ... 10 V	-		
R414009022		0,5 ... 10 bar	4 ... 20 mA	-		

Part No.	Control	Max. power consumption		Repetitive precision	Hysteresis
		mA			
R414009024	Analog	180 mA		0.04 bar	0.05 bar 1)
R414009029	Analog	180 mA		0.04 bar	0.05 bar 1)
R414009034	Analog	180 mA		0.04 bar	0.05 bar 1)

Part No.	Control	Max. power consumption	Repetitive precision	Hysteresis	
		mA			
R414009039	Analog	180 mA	0.04 bar	0.05 bar	1)
R414009025	Analog	120 mA	0.04 bar	0.05 bar	2)
R414009030	Analog	120 mA	0.04 bar	0.05 bar	2)
R414009035	Analog	120 mA	0.04 bar	0.05 bar	2)
R414009040	Analog	120 mA	0.04 bar	0.05 bar	2)
R414009026	Analog	120 mA	0.04 bar	0.05 bar	3)
R414009031	Analog	120 mA	0.04 bar	0.05 bar	3)
R414009036	Analog	120 mA	0.04 bar	0.05 bar	3)
R414009041	Analog	120 mA	0.04 bar	0.05 bar	3)
R414009018	Analog	120 mA	0.18 bar	0.2 bar	2)
R414009021	Analog	120 mA	0.18 bar	0.2 bar	2)
R414009019	Analog	120 mA	0.18 bar	0.2 bar	3)
R414009022	Analog	120 mA	0.18 bar	0.2 bar	3)

## Technical information

### 3) Power outage: maintain pressure. With switch output

The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

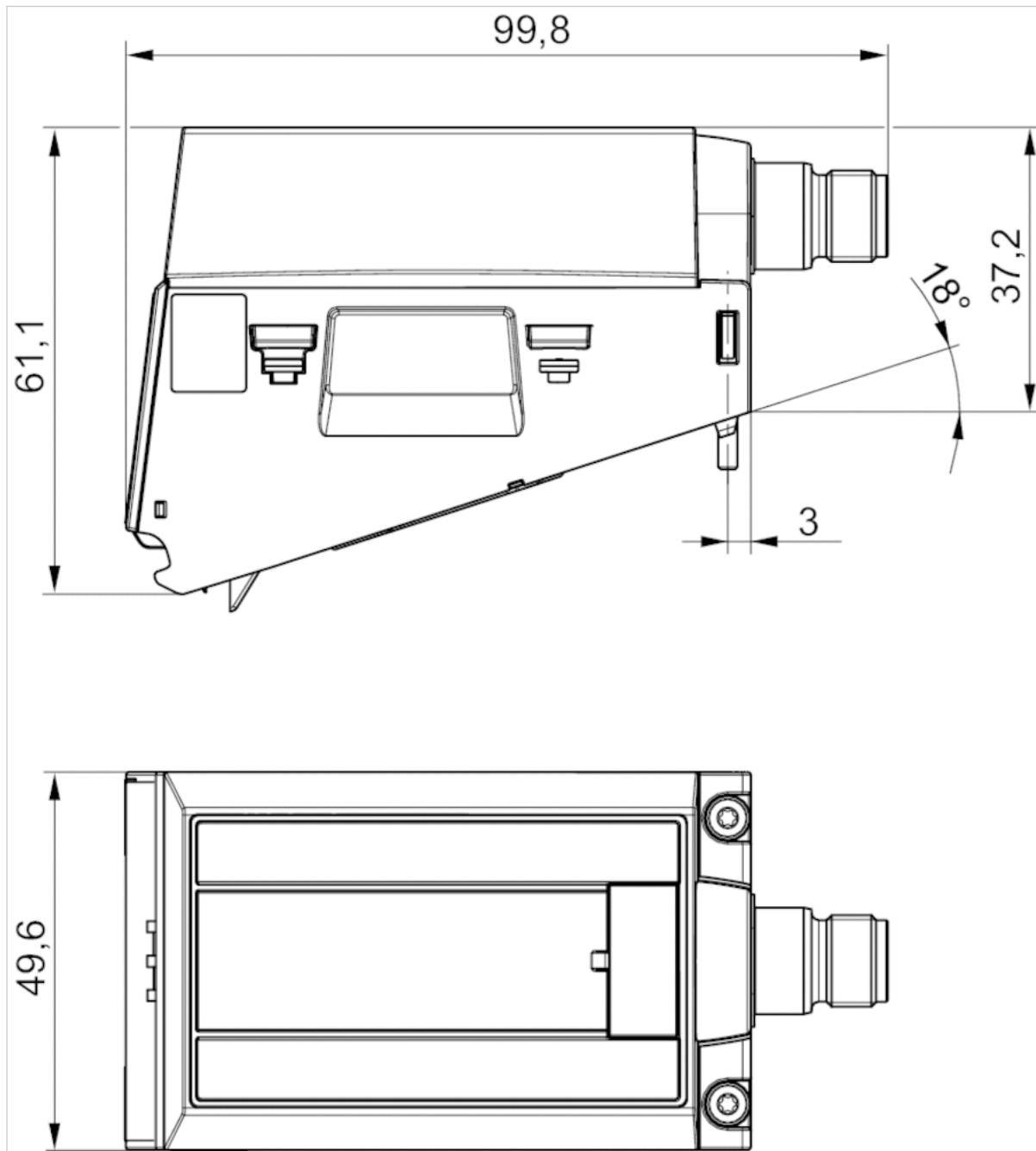
## Technical information

### Material

Housing	Polyarylamide
Seals	Nitrile butadiene rubber

## Dimensions

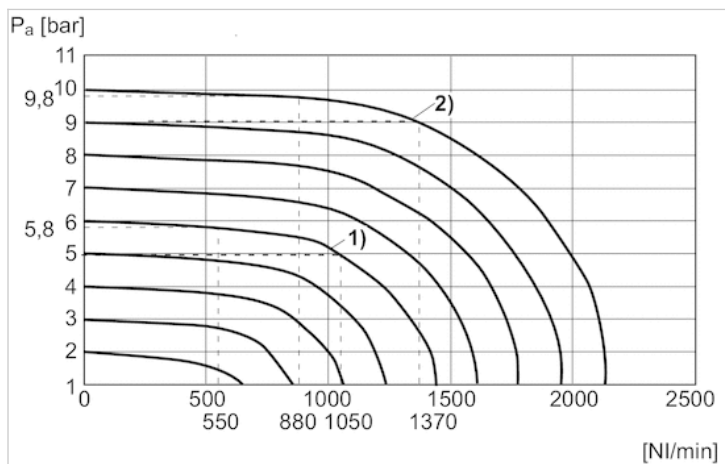
### Dimensions



Port for plug M12x1

# Diagrams

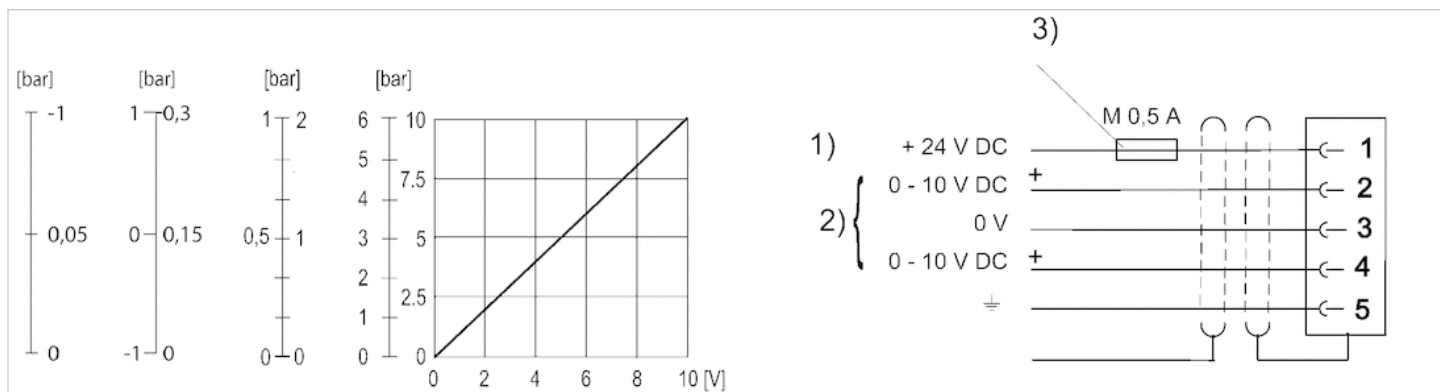
## Flow characteristic curve



- 1)  $P_v = 7$  bar
- 2)  $P_v = 11$  bar
- $P_v$  = Supply pressure
- $P_a$  = Working pressure
- $P_v = P_a + 1$

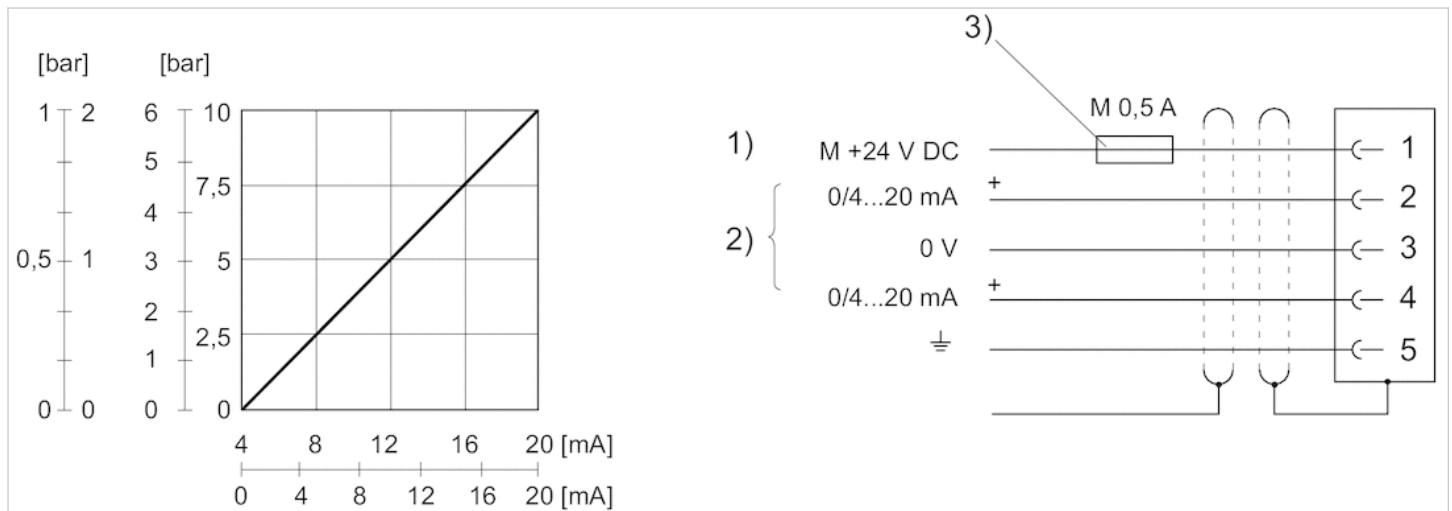
## Circuit diagram

Fig. 2 Characteristic and pin assignment for voltage control with actual output value



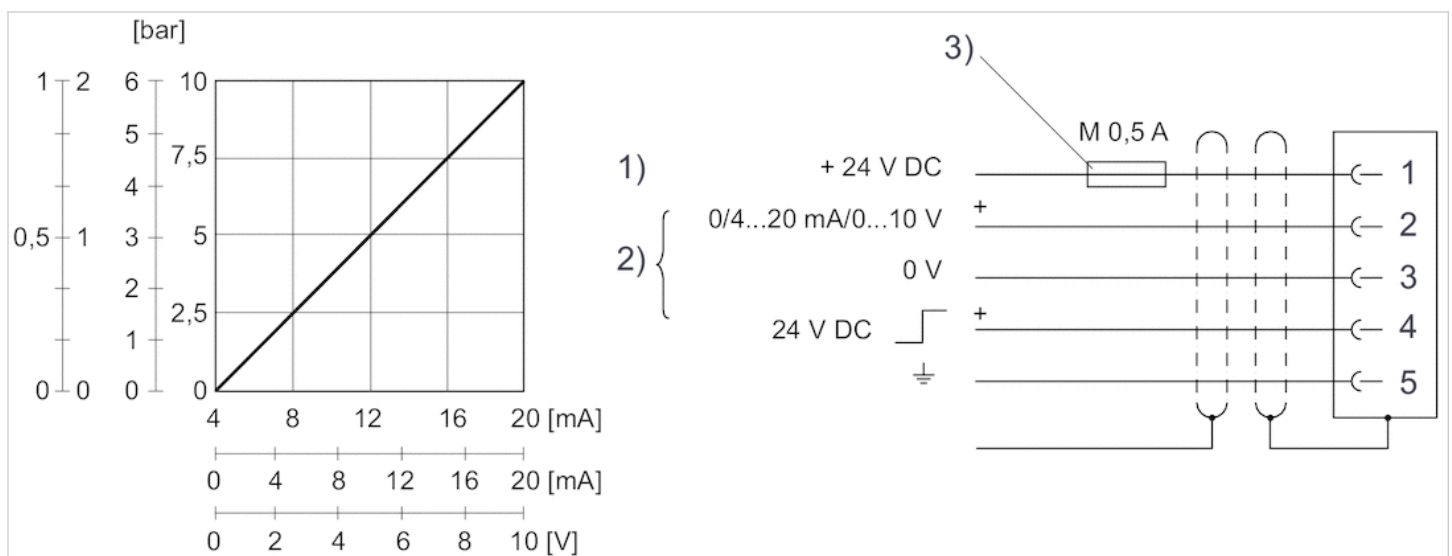
- 1) Supply voltage
- 2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V. Min. load resistance of nominal value output = 1 kΩ.
- 3) The operating voltage must be protected by an external M 0.5 A fuse. Connect the plug via a shielded cable to ensure EMC.

### Characteristic and pin assignment for current control with actual output value



- 1) power supply
- 2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V (pin 3). Nominal input value (ohmic load 100 Ω), actual output value: external ohmic load 300 Ω. If the power supply is switched off, the nominal input value is high-ohmic.
- 3) The power supply must be protected by an external M 0.5 A fuse. Connect the plug via a shielded cable to ensure EMC.

### Characteristic and pin assignment for current and voltage control with actual output value



- 1) Operational voltage
- 2) Nominal value (pin 2) and switch output (pin 4) are related to 0 V. Acknowledge signal
- 3) The operating voltage must be protected by an external M 0.5 A fuse.