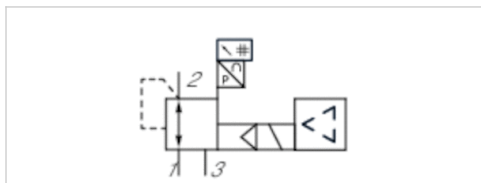


E/P pressure regulator, Series AV03-EP











- Display: display
- Qn = 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 ³ |
| Nominal flow Qn | 550 l/min |
| Control | Analog |
| DC operating voltage | 24 V |
| Voltage tolerance DC | -20% / +30% |
| Protection class | IP65 |
| Weight | 0,22 kg |
| | Nominal flow Qn with working pressure 7 bar , with secondary pressure 6 bar and Δp = 0.2 bar |



Technical data

| Part No. | | Pressure setting range min./max. | Nominal input value | | Actual output value | |
|------------|---|----------------------------------|---------------------|-------------|---------------------|--|
| | | | Min./max. | Min./max. | | |
| R414009027 |  | 0,5 ... 6 bar | 0 ... 10 V | 0 ... 10 V | | |
| R414009032 |  | 0,5 ... 6 bar | 4 ... 20 mA | 4 ... 20 mA | | |
| R414009037 |  | 0,5 ... 10 bar | 0 ... 10 V | 0 ... 10 V | | |
| R414009042 |  | 0,5 ... 10 bar | 4 ... 20 mA | 4 ... 20 mA | | |
| R414009028 |  | 0,5 ... 6 bar | 0 ... 10 V | 0 ... 10 V | | |
| R414009033 |  | 0,5 ... 6 bar | 4 ... 20 mA | 4 ... 20 mA | | |
| R414009038 |  | 0,5 ... 10 bar | 0 ... 10 V | 0 ... 10 V | | |
| R414009043 |  | 0,5 ... 10 bar | 4 ... 20 mA | 4 ... 20 mA | | |
| R414009020 |  | 0,5 ... 10 bar | 0 ... 10 V | 0 ... 10 V | | |
| R414009023 |  | 0,5 ... 10 bar | 4 ... 20 mA | 4 ... 20 mA | | |

| Part No. | Control | Max. power consumption | | Repetitive precision | Hysteresis | |
|------------|---------|------------------------|--|----------------------|------------|----|
| | | mA | | | | |
| R414009027 | Analog | 220 mA | | 0.04 bar | 0.05 bar | 1) |
| R414009032 | Analog | 220 mA | | 0.04 bar | 0.05 bar | 1) |
| R414009037 | Analog | 220 mA | | 0.04 bar | 0.05 bar | 1) |
| R414009042 | Analog | 220 mA | | 0.04 bar | 0.05 bar | 1) |
| R414009028 | Analog | 160 mA | | 0.04 bar | 0.05 bar | 2) |
| R414009033 | Analog | 160 mA | | 0.04 bar | 0.05 bar | 2) |
| R414009038 | Analog | 160 mA | | 0.04 bar | 0.05 bar | 2) |
| R414009043 | Analog | 160 mA | | 0.04 bar | 0.05 bar | 2) |
| R414009020 | Analog | 160 mA | | 0.18 bar | 0.2 bar | 2) |



| Part No. | Control | Max. power consumption | Repetitive precision | Hysteresis | |
|------------|---------|------------------------|----------------------|------------|----|
| | | mA | | | |
| R414009023 | Analog | 160 mA | 0.18 bar | 0.2 bar | 2) |

Technical information

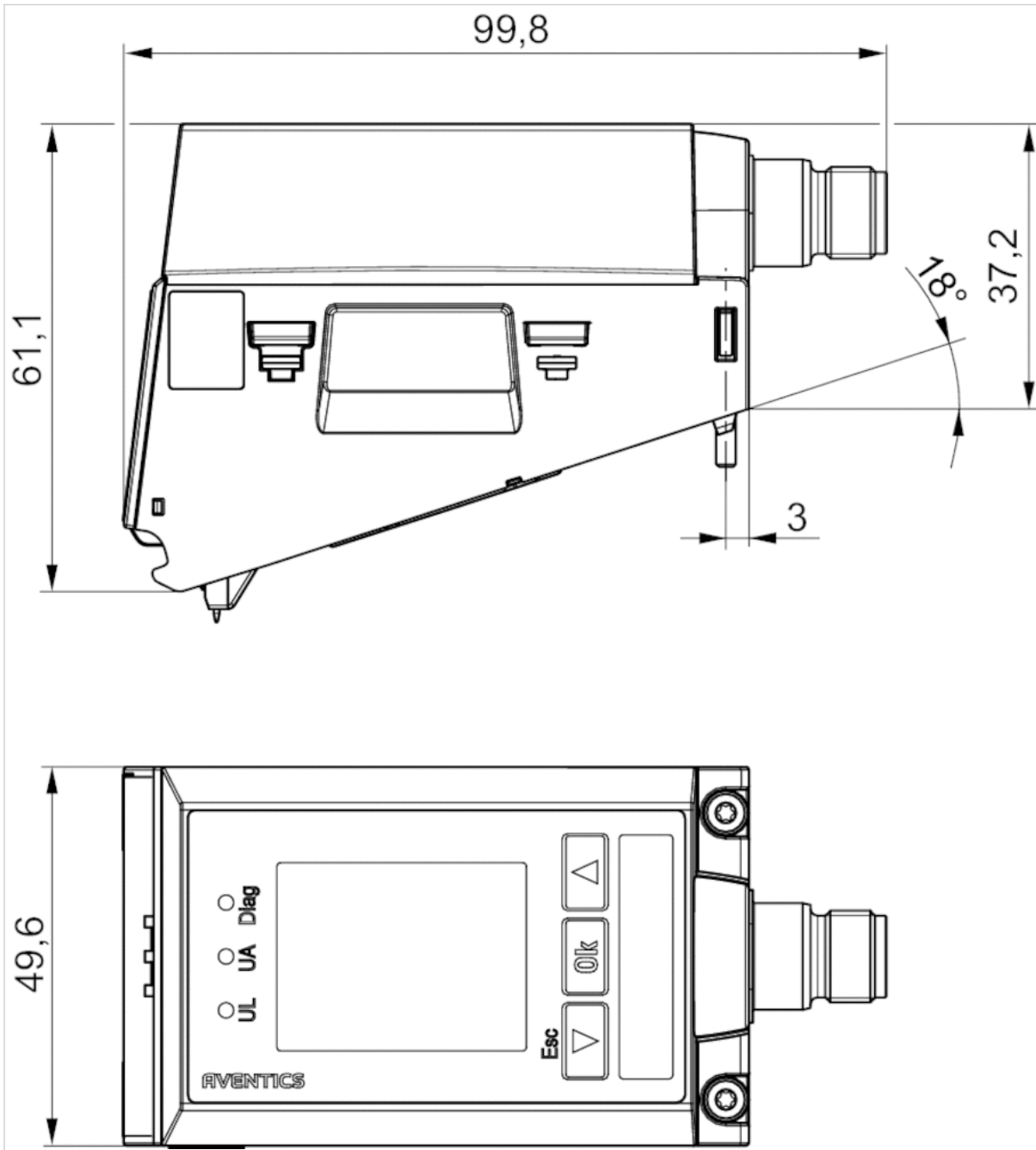
The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
 The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .
 The oil content of compressed air must remain constant during the life cycle.
 Use 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

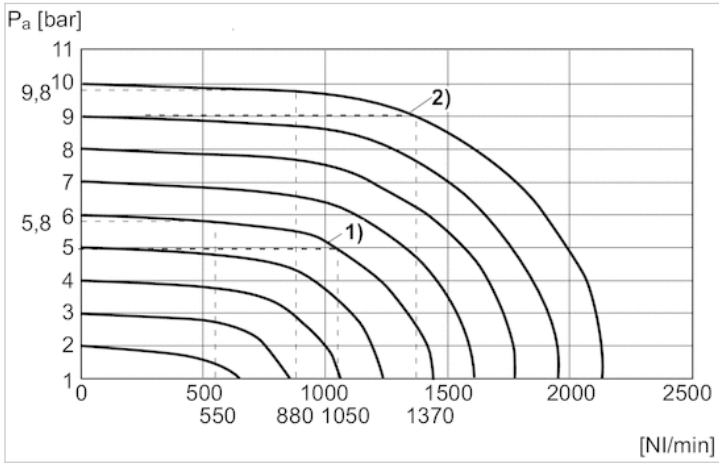
Dimensions



Port for plug M12x1

Diagrams

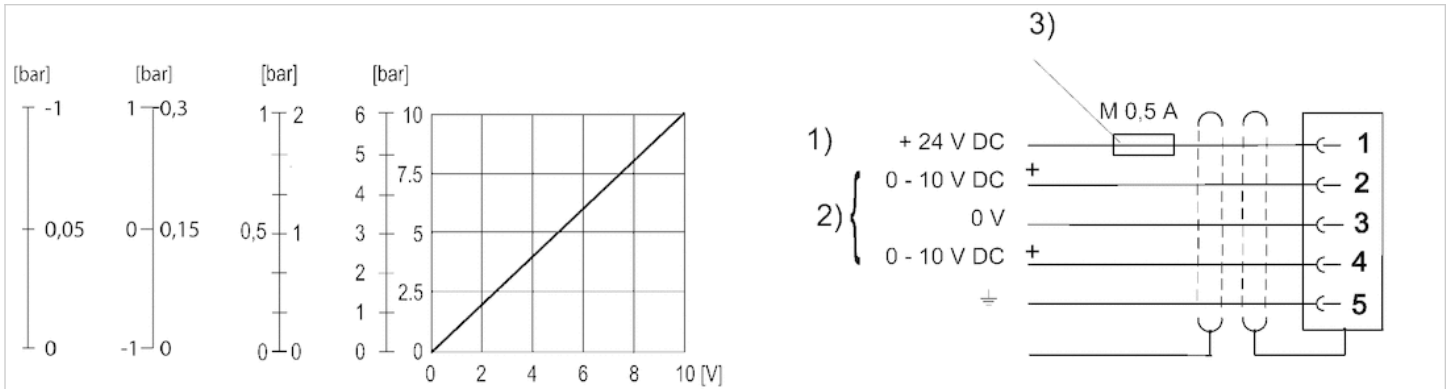
Flow characteristic curve



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

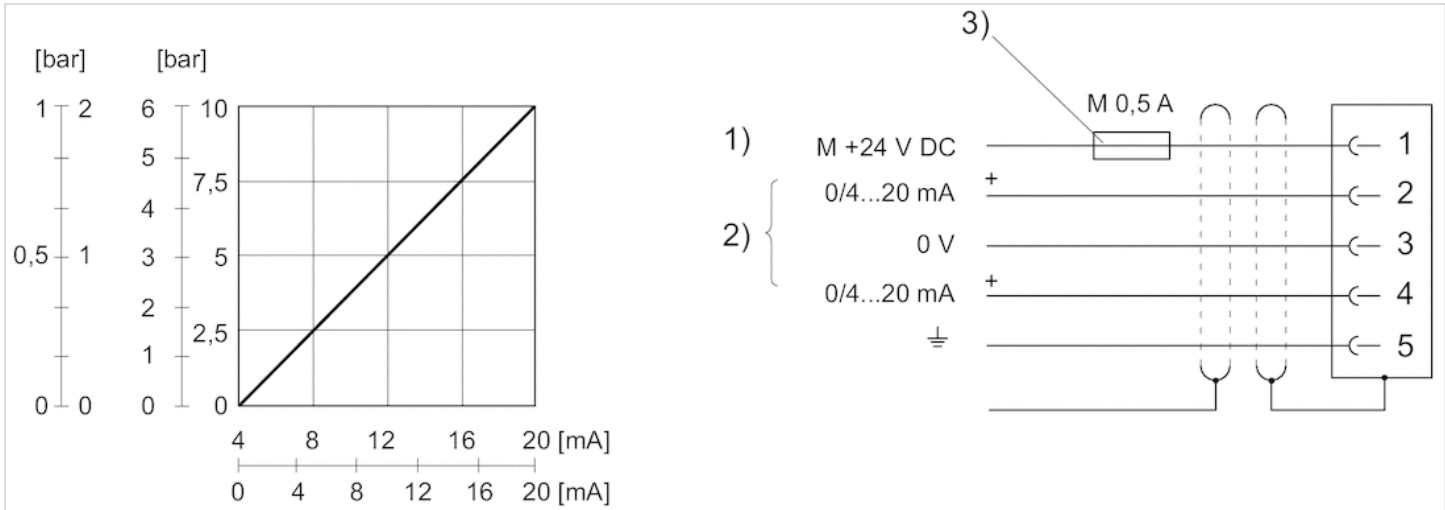
Circuit diagram

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.