E/P pressure regulator, Series EV03

- Display: LED
- Qn = 550 l/min
- Compressed air connection output G 1/4
- Electr. connection M12, 5-pin, A-coded
- Pilot valves
- With collective pilot air exhaust

Type	Poppet valve
Working pressure max	11 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Compressed air connection input	G 1/4
Compressed air connection output	G 1/4
Compressed air connection, exhaust	G 1/8
Medium	Compressed air
Max. particle size	40 µm
Oil content of compressed air	0 ... 5 mg/m³
Nominal flow Qn	550 l/min
Control	Analog
DC operating voltage	24 V
Voltage tolerance DC	-20% / +30%
Permissible ripple	5%
Protection class	IP65
Weight	0,26 kg

Technical data

Part No.		Pressure setting range min./max.	Nominal input value	Actual output value
			Min./max.	Min./max.
R414008243		0,5 ... 6 bar	0 ... 10 V	0 ... 10 V
R414008248		0,5 ... 6 bar	4 ... 20 mA	4 ... 20 mA
R414008253		0,5 ... 10 bar	0 ... 10 V	0 ... 10 V
R414008258		0,5 ... 10 bar	4 ... 20 mA	4 ... 20 mA
R414008244		0,5 ... 6 bar	0 ... 10 V	0 ... 10 V
R414008449		0,5 ... 6 bar	0 ... 20 mA	0 ... 20 mA
R414008249		0,5 ... 6 bar	4 ... 20 mA	4 ... 20 mA
R414008245		0,5 ... 6 bar	0 ... 10 V	-
R414008250		0,5 ... 6 bar	4 ... 20 mA	-
R414008451		0,5 ... 6 bar	0 ... 10 V	0 ... 10 V
R414008453		0,5 ... 6 bar	0 ... 10 V	0 ... 20 mA
R414008254		0,5 ... 10 bar	0 ... 10 V	0 ... 10 V
R414008450		0,5 ... 10 bar	0 ... 20 mA	0 ... 20 mA
R414008259		0,5 ... 10 bar	4 ... 20 mA	4 ... 20 mA
R414008255		0,5 ... 10 bar	0 ... 10 V	-
R414008260		0,5 ... 10 bar	4 ... 20 mA	-
R414008452		0,5 ... 10 bar	0 ... 10 V	0 ... 10 V
R414008227		0,5 ... 10 bar	0 ... 10 V	0 ... 10 V
R414008230		0,5 ... 10 bar	4 ... 20 mA	4 ... 20 mA

Part No.		Pressure setting range min./max.	Nominal input value Min./max.	Actual output value Min./max.
R414008228		0,5 ... 10 bar	0 ... 10 V	0 ... 10 V
R414008231		0,5 ... 10 bar	4 ... 20 mA	4 ... 20 mA

Part No.	Control	Max. power consumption mA	Repetitive precision	Hysteresis	
R414008243	Analog	180 mA	0.04 bar	0.05 bar	1)
R414008248	Analog	180 mA	0.04 bar	0.05 bar	1)
R414008253	Analog	180 mA	0.04 bar	0.05 bar	1)
R414008258	Analog	180 mA	0.04 bar	0.05 bar	1)
R414008244	Analog	120 mA	0.04 bar	0.05 bar	2)
R414008449	Analog	120 mA	0.04 bar	0.05 bar	2)
R414008249	Analog	120 mA	0.04 bar	0.05 bar	2)
R414008245	Analog	120 mA	0.04 bar	0.05 bar	3)
R414008250	Analog	120 mA	0.04 bar	0.05 bar	3)
R414008451	Analog	120 mA	0.04 bar	0.05 bar	4)
R414008453	Analog	120 mA	0.04 bar	0.05 bar	2)
R414008254	Analog	120 mA	0.04 bar	0.05 bar	2)
R414008450	Analog	120 mA	0.04 bar	0.05 bar	2)
R414008259	Analog	120 mA	0.04 bar	0.05 bar	2)
R414008255	Analog	120 mA	0.04 bar	0.05 bar	3)
R414008260	Analog	120 mA	0.04 bar	0.05 bar	3)
R414008452	Analog	120 mA	0.04 bar	0.05 bar	4)
R414008227	Analog	120 mA	0.18 bar	0.2 bar	2)
R414008230	Analog	120 mA	0.18 bar	0.2 bar	2)
R414008228	Analog	120 mA	0.18 bar	0.2 bar	3)
R414008231	Analog	180 mA	0.18 bar	0.2 bar	3)

Nominal flow Qn with working pressure 7 bar , with secondary pressure 6 bar and Δp = 0.2 bar

1) Power outage: operating line exhaust

2) Power outage: maintain pressure

3) Power outage: maintain pressure, With switch output

4) Power outage: maintain pressure, Output 10V constant to supply a set point potentiometer.

Technical information

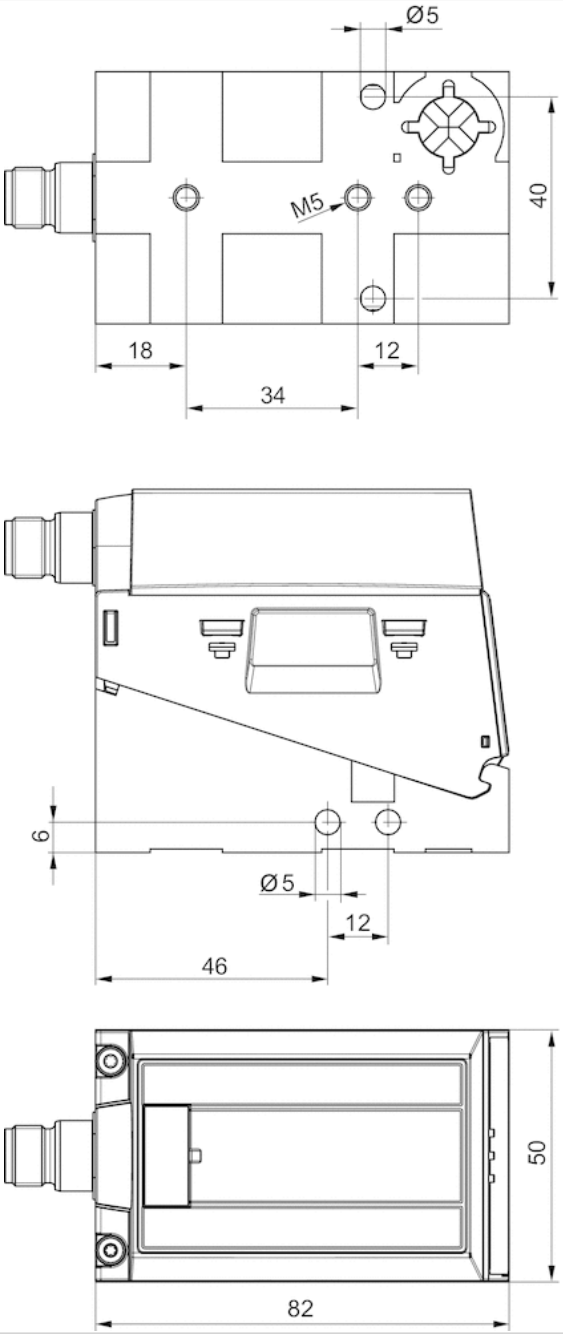
The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .
The oil content of compressed air must remain constant during the life cycle.
Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).

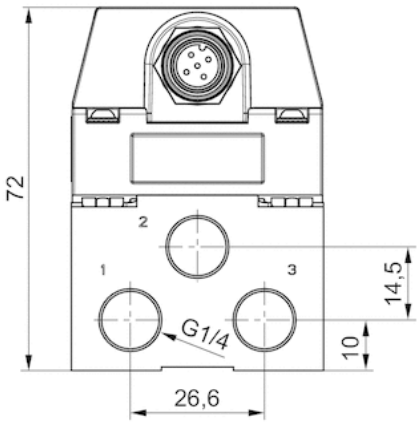
Technical information

Material	
Housing	Polyamide
Base plate	Aluminum
Seals	Nitrile butadiene rubber

Dimensions

Dimensions

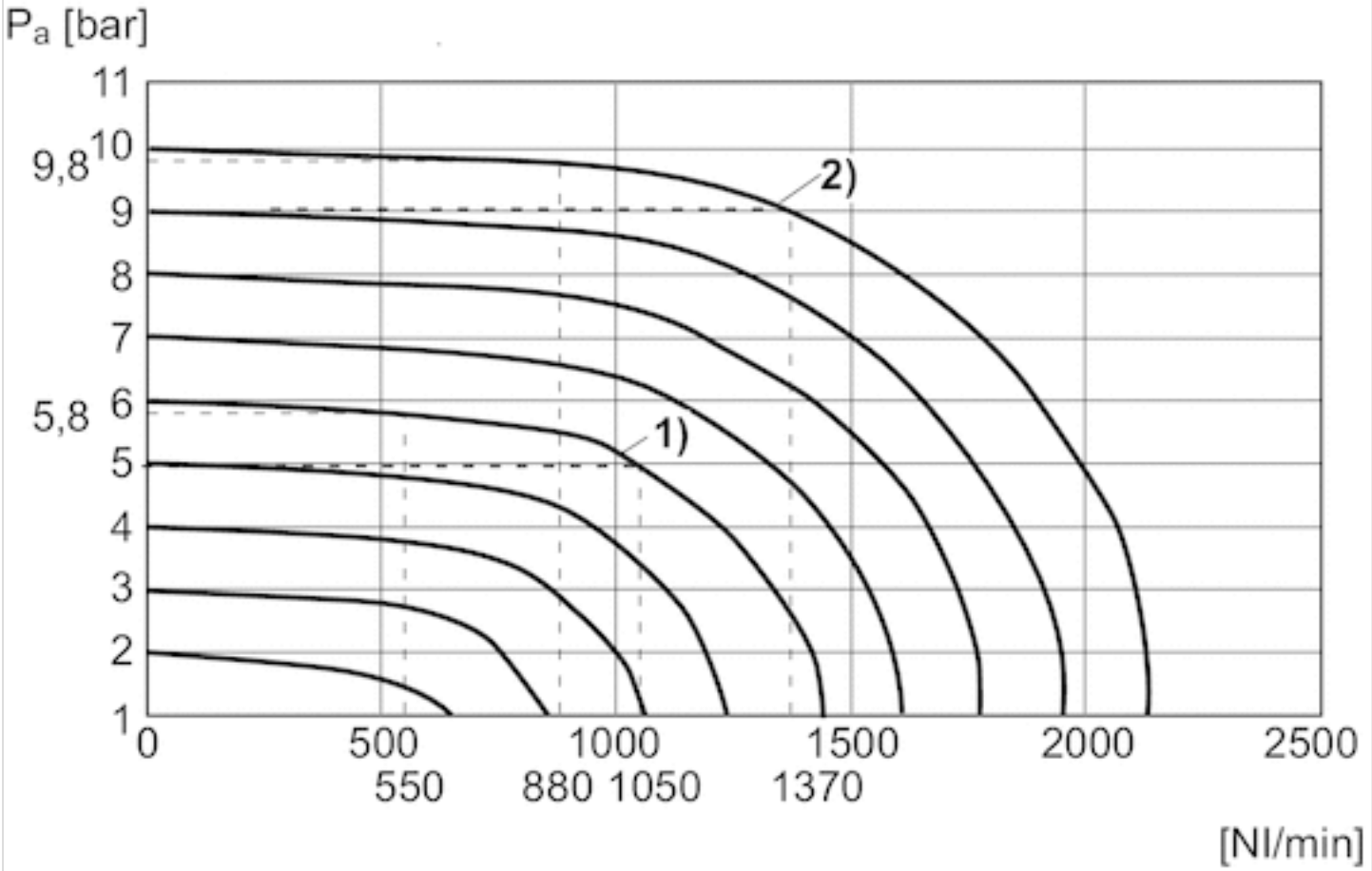




Port for plug M12x1

Diagrams

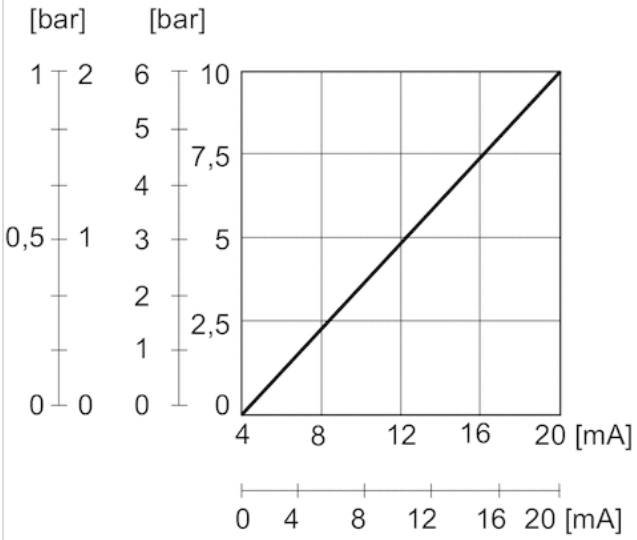
Flow characteristic curve

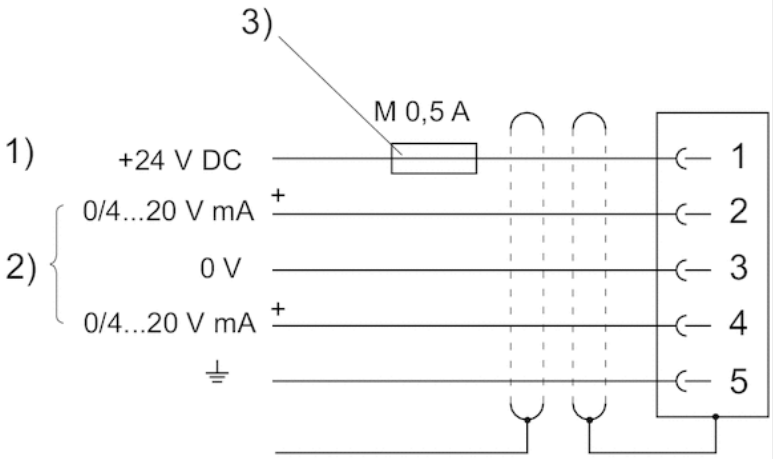


1) Pv = 7 bar
2) Pv = 11 bar
Pv = Supply pressure
Pa = Working pressure
Pv = Pa + 1

Circuit diagram

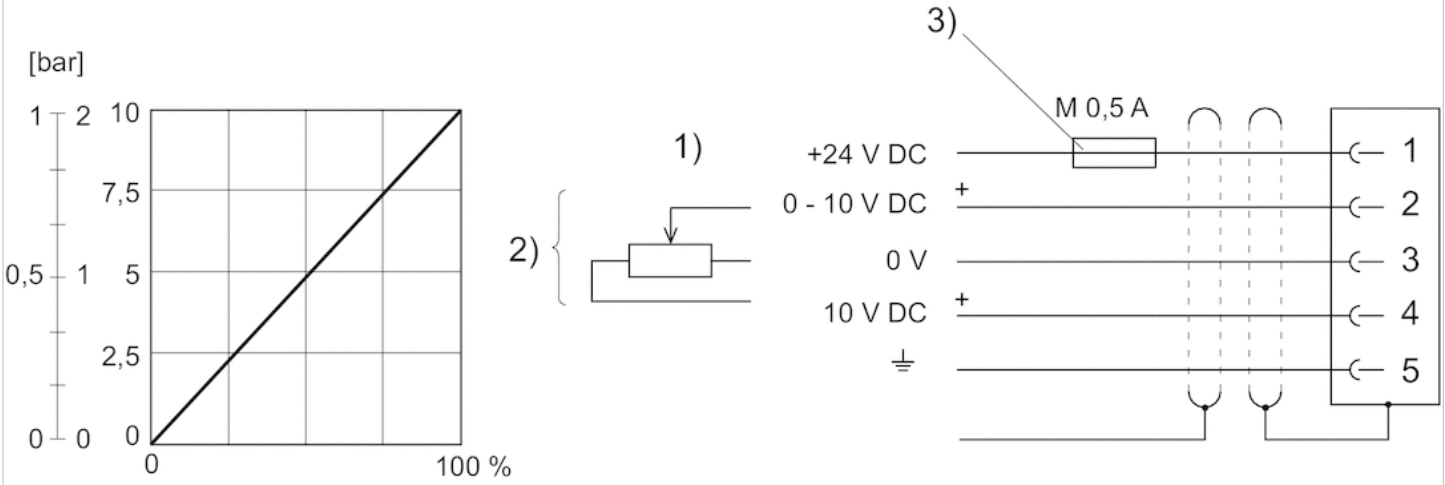
Characteristic and pin assignment for current control with actual output value





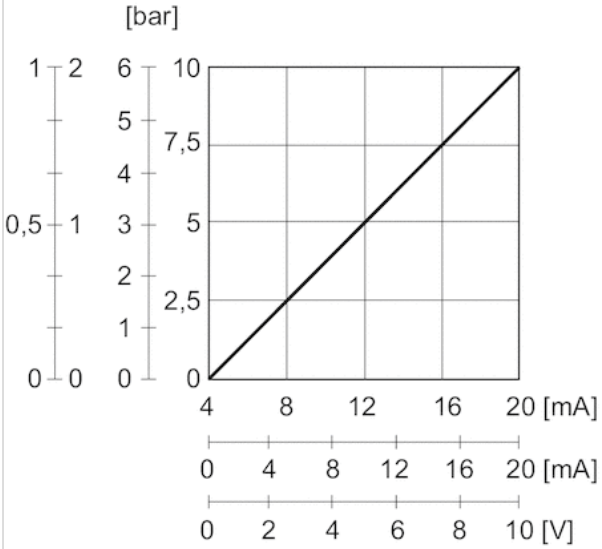
1) power supply
2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V (pin 3).
Nominal input value (ohmic load 100 Ω), actual output value: external ohmic load 300 Ω. If the power supply is switched off, the nominal input value is high-ohmic.
3) The power supply must be protected by an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

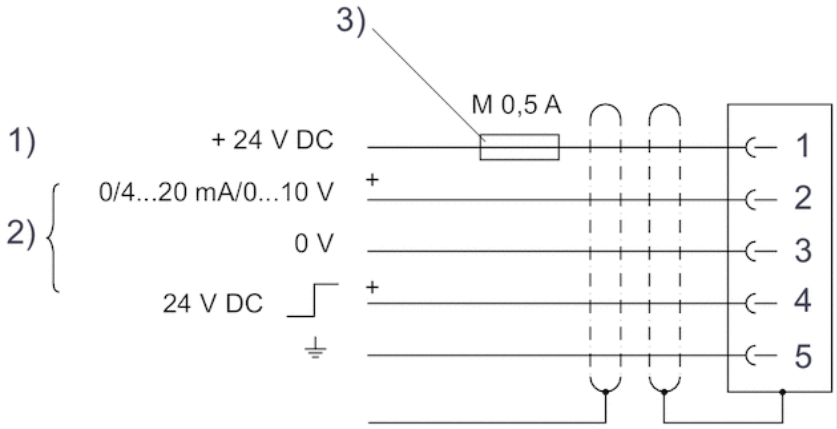
Characteristic and pin assignment for potentiometer control without actual output value



1) Supply voltage
2) Potentiometer supply (pin 4) and nominal value (pin 2) are related to 0 V.
Potentiometer resistance min. 0-2 kΩ, max. 0-10 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.

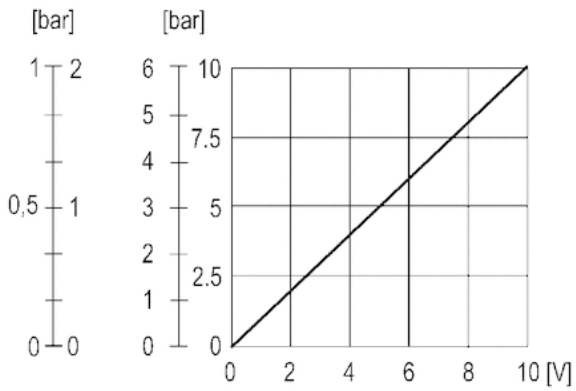
Characteristic and pin assignment for current and voltage control with actual output value

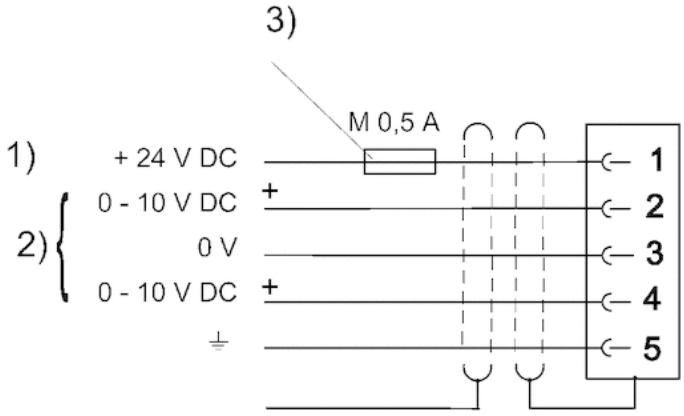




1) Operational
voltage
2) Nominal value (pin 2) and switch output (pin 4) are related to 0 V. Acknowledge signal
3) The operating voltage must be protected by an external M 0.5 A fuse.

Characteristic and pin assignment for voltage 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 (R = 1 MΩ), actual output value: min. load resistance > 10 KΩ. 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.

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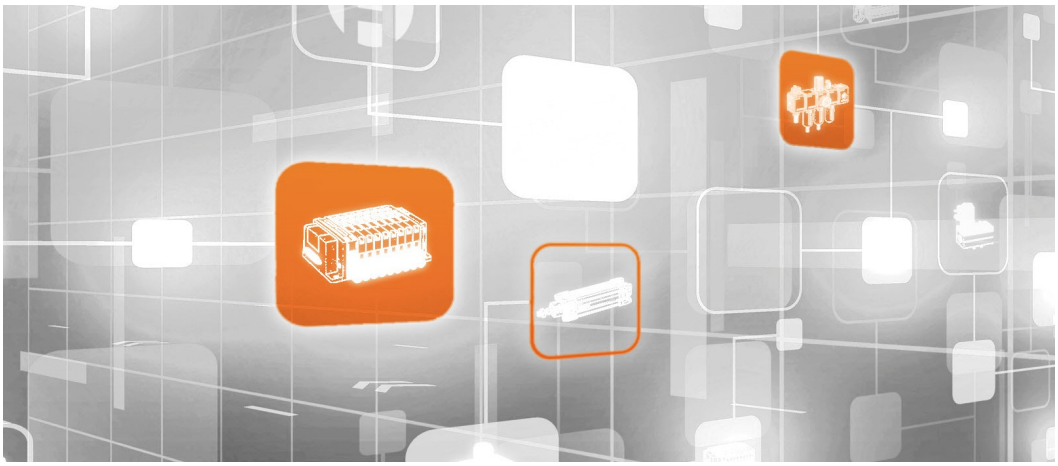

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