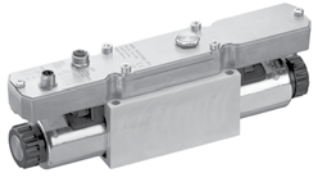
E/P pressure regulator, Series ED12

► Flow= 2.6 Cv ► Electr. connection: Plug, M12, 5-pin ► Signal connection: input and output, Socket, M12, 5-pin



00124123

Version	Poppet valve
Control	Analog
Certificates	CE declaration of conformity
Ambient temperature min./max.	+41 °F / +122 °F
Medium temperature min./max.	+41 °F / +122 °F
Medium	Compressed air
Max. oil content of compressed air	1 mg/m³
Qn	2.6 Cv
Mounting orientation	α = 0 - 90° ±β = 0 - 90°
Operating pressure	174
Hysteresis	< 0.44 psi
DC operating voltage	24 V
Voltage tolerance DC	-20% / +30%
Permissible ripple	5%
Max. power consumption	1.4
Protection class	IP65
Weight	5.07 lbs
Materials:	
Housing	Aluminum; Steel
Seal	Hydrogenated acrylonitrile butadiene rubber

Nominal flow Qn with working pressure 101.5 psi, with secondary pressure 87 psi and Δp = 2.9 psi

Technical Remarks

- 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 27 °F under ambient and medium temperature and may not exceed 37 °F.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.
- With oil-free, dry air, other installation positions are possible on request.
- The protection class is only ensured when the plug is mounted properly. For detailed information, see operating instructions.

Pressure setting range min./max.	Nominal input value		Actual output value		Fig.	Note	Part No.
psi							
[psi]							
0 / 145	0 - 20	mA	0 - 20	mA	Fig. 1	-	R414000728
0 / 145	4 - 20	mA	4 - 20	mA	Fig. 1	-	R414000729
0 / 145	0 - 10	V	0 - 10	V	Fig. 2	-	R414000731
0 / 145	0 - 10	V	-	-	Fig. 3	1)	R414000730

1) Output 10V constant to supply a potentiometer
Minimum working pressure = 7.25 psi + max. required secondary pressure
Additional pressure setting ranges available on request

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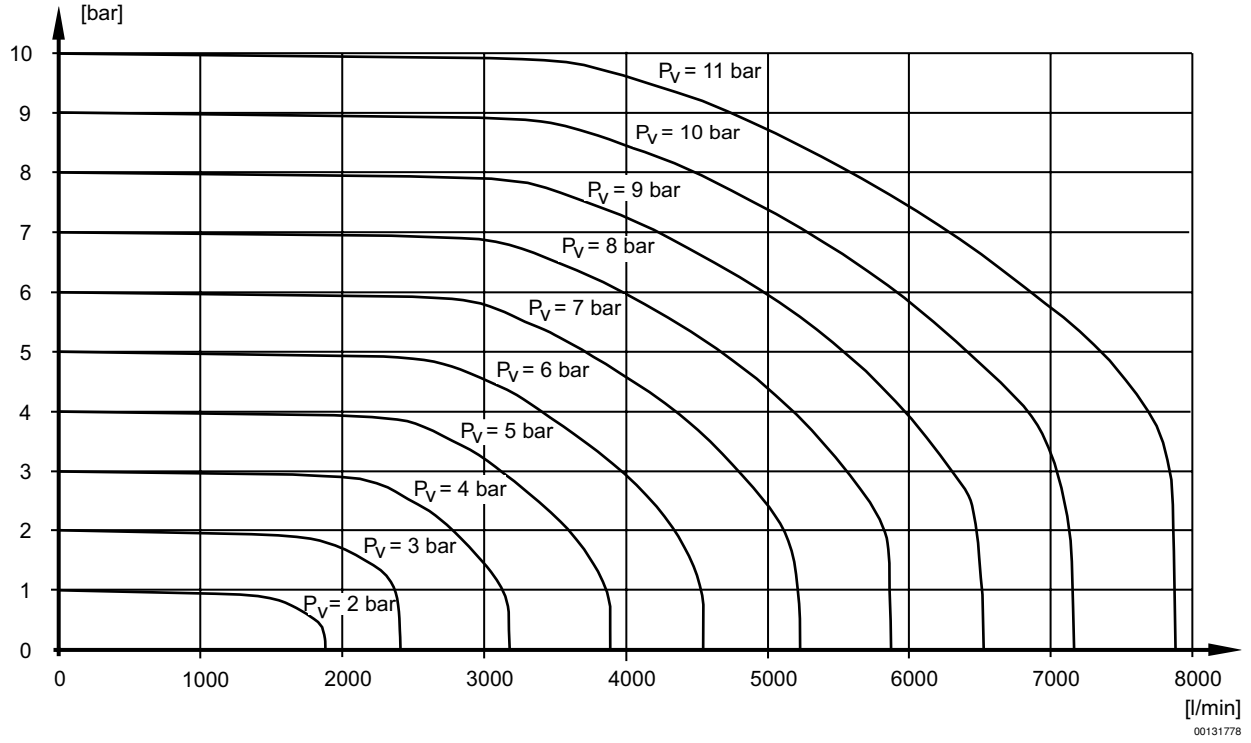
Flow diagram



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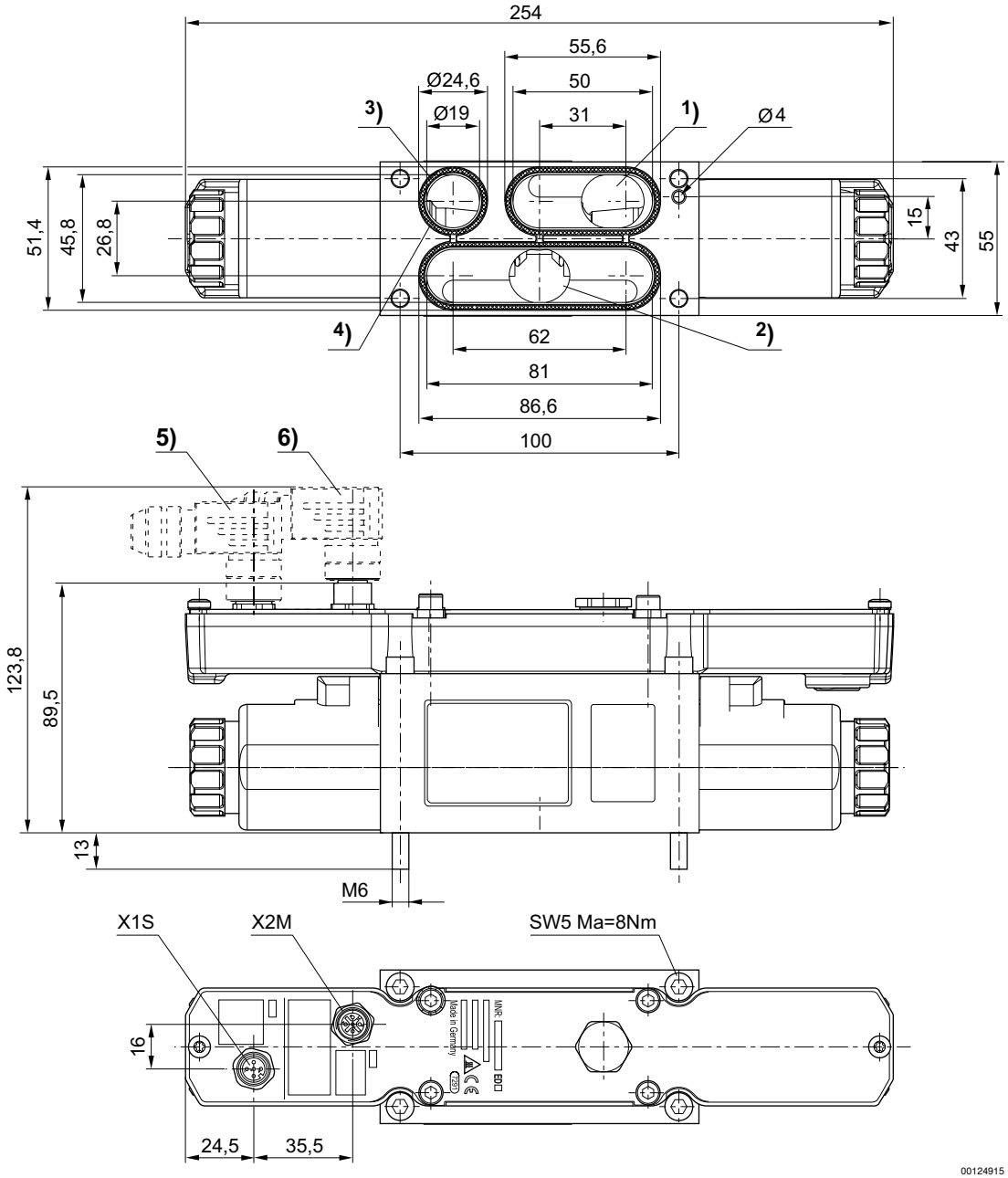
Dimensions



1) Operating pressure
2) Working pressure
3) Exhaust
4) Seal (not assembled)
5) + 6) Accessories not supplied

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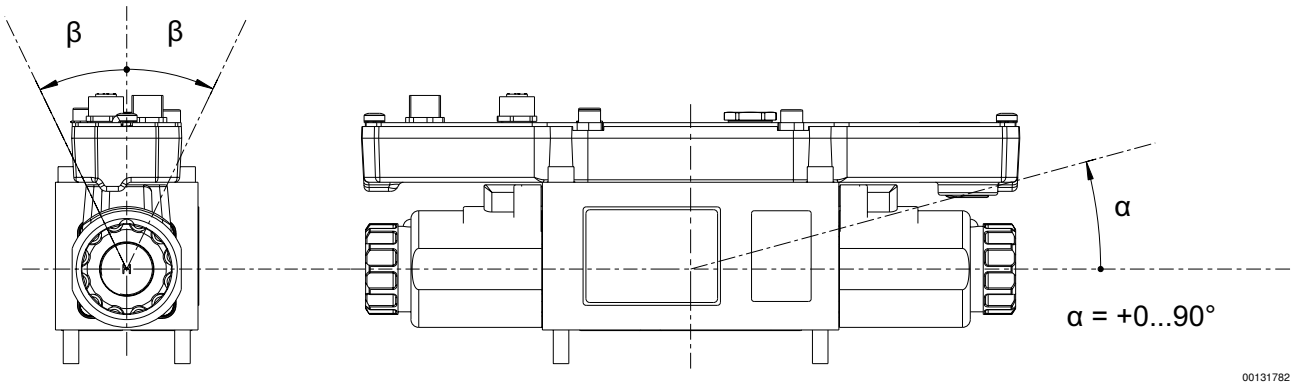
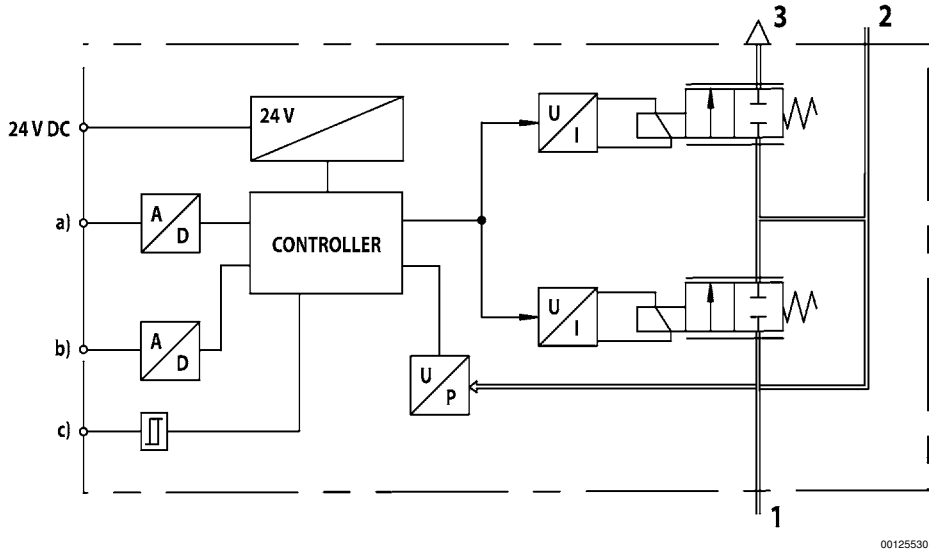
Mounting orientation

β = ±0...90°



Functional diagram



a) Nominal input value
b) Actual output value
c) Switch output (acknowledge signal)
The E/P pressure control valve modulates the pressure corresponding to an analog electrical nominal input value.
1) Operating pressure
2) Working pressure
3) Exhaust

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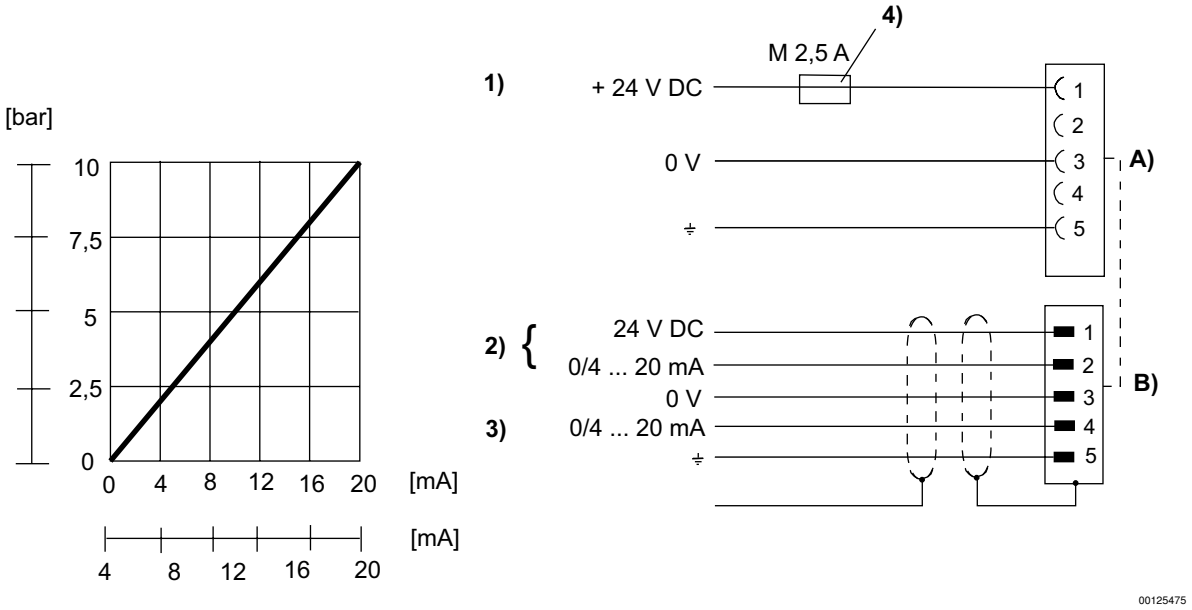
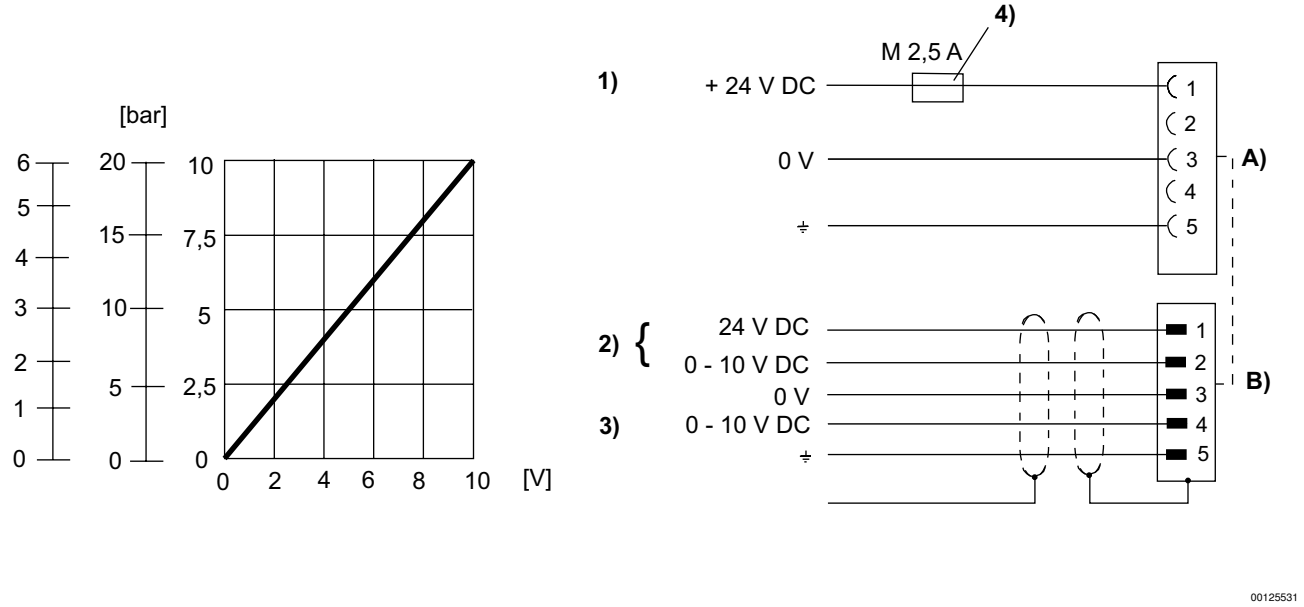
Fig. 1, Characteristic and pin assignment for current control with actual output value



1) Supply Voltage
2) Switch output (pin 1) and nominal value (pin 2) are related to 0 V. Input current nominal value (ohmic load 100 Ω).
3) Actual value (pin 4) is related to 0 V (max. total resistance of downstream devices < 300 Ω).
4) The operating voltage must be protected by an external M 2.5 A fuse.
Connect plug X2M via a shielded cable to ensure EMC.
A) Plug X1S B) Plug X2M

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



1) Supply Voltage
2) Switch output (pin 1) and nominal value (pin 2) are related to 0 V (min load resistance 1 kΩ)
3) Actual value (pin 4) is related to 0 V (min. load resistance 1 kΩ).
4) The operating voltage must be protected by an external M 2.5 A fuse.
Connect plug X2M via a shielded cable to ensure EMC.
A) Plug X1S B) Plug X2M

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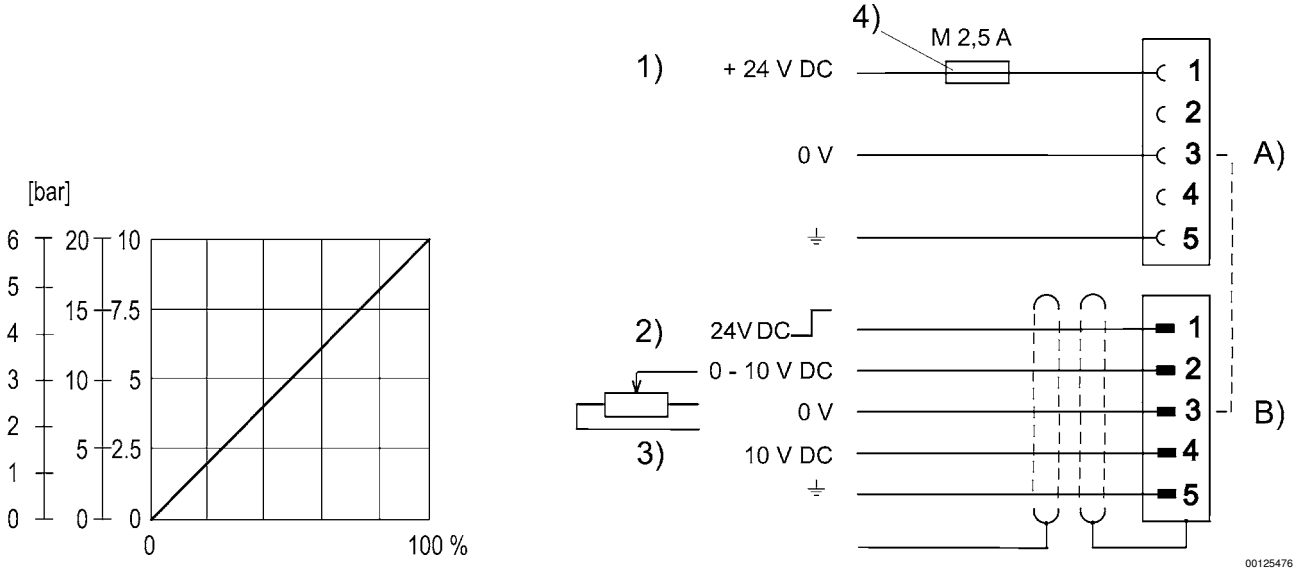
Fig. 3, Characteristic and pin assignment for potentiometer control without actual output value



1) Supply Voltage
2) Switch output (pin 1) and nominal value (pin 2) are related to 0 V.
3) Potentiometer control (min. 0-2 kΩ, max. 0-10 kΩ)
4) The operating voltage must be protected by an external M 2.5 A fuse.
Connect plug X2M via a shielded cable to ensure EMC.
A) Plug X1S B) Plug X2M