

Pressure regulators ▶ E/P pressure regulators

E/P pressure regulator, Series ED05

- ▶ Qn= 1000 l/min ▶ Compressed air connection output: G 1/4 ▶ Electr. connection: via signal connection
- ▶ Signal connection: input and output, Plug, M12, 5-pin



00125383

Version	Poppet valve
Control	Analog
Certificates	CE declaration of conformity
Ambient temperature min./max.	+0 °C / +70 °C
Medium temperature min./max.	+0 °C / +70 °C
Medium	Compressed air
Max. particle size	50 μm
Max. oil content of compressed air	1 mg/m³
Qn	1000 l/min
Mounting orientation	α = 0-90° β = 0-90°
Hysteresis	< 0,06 bar
DC operating voltage	24 V
Voltage tolerance DC	-20% / +20%
Permissible ripple	5%
Protection class	IP65
Compressed air connection input	G 1/4
Compressed air connection output	G 1/4
Compressed air connection, exhaust	G 1/4
Weight	0.95 kg
Materials:	
Housing	Die-cast aluminum; Steel
Seal	Hydrogenated acrylonitrile butadiene rubber

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

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 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, 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.

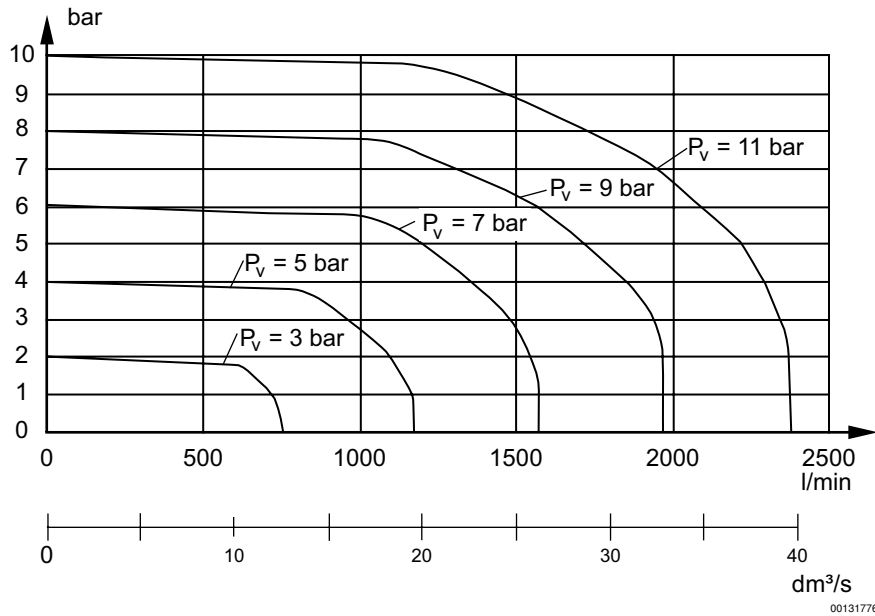
	Operating pressure max.	Pressure setting range min./max.	Nominal input value		Actual output value		Fig.	Note	Part No.
	[bar]	[bar]							
	11	0 / 6	0 - 20	mA	0 - 20	mA	Fig. 1	-	R414002003
		0 / 6	4 - 20	mA	4 - 20	mA	Fig. 1	-	R414002004
		0 / 6	0 - 10	V	0 - 10	V	Fig. 2	-	R414002005
		0 / 6	0 - 20	mA	-	-	Fig. 3	1)	R414002006
		0 / 6	4 - 20	mA	-	-	Fig. 3	1)	R414002294
		0 / 6	0 - 10	V	-	-	Fig. 3	1)	R414002295
		0 / 10	0 - 20	mA	0 - 20	mA	Fig. 1	-	R414002007
		0 / 10	4 - 20	mA	4 - 20	mA	Fig. 1	-	R414002008
		0 / 10	0 - 10	V	0 - 10	V	Fig. 2	-	R414002009
		0 / 10	0 - 20	mA	-	-	Fig. 3	1)	R414002010
		0 / 10	4 - 20	mA	-	-	Fig. 3	1)	R414002296
		0 / 10	0 - 10	V	-	-	Fig. 3	1)	R414002297

1) Acknowledge signal - output from + Ub, if the outlet pressure corresponds to the setpoint +/- 200 mbar

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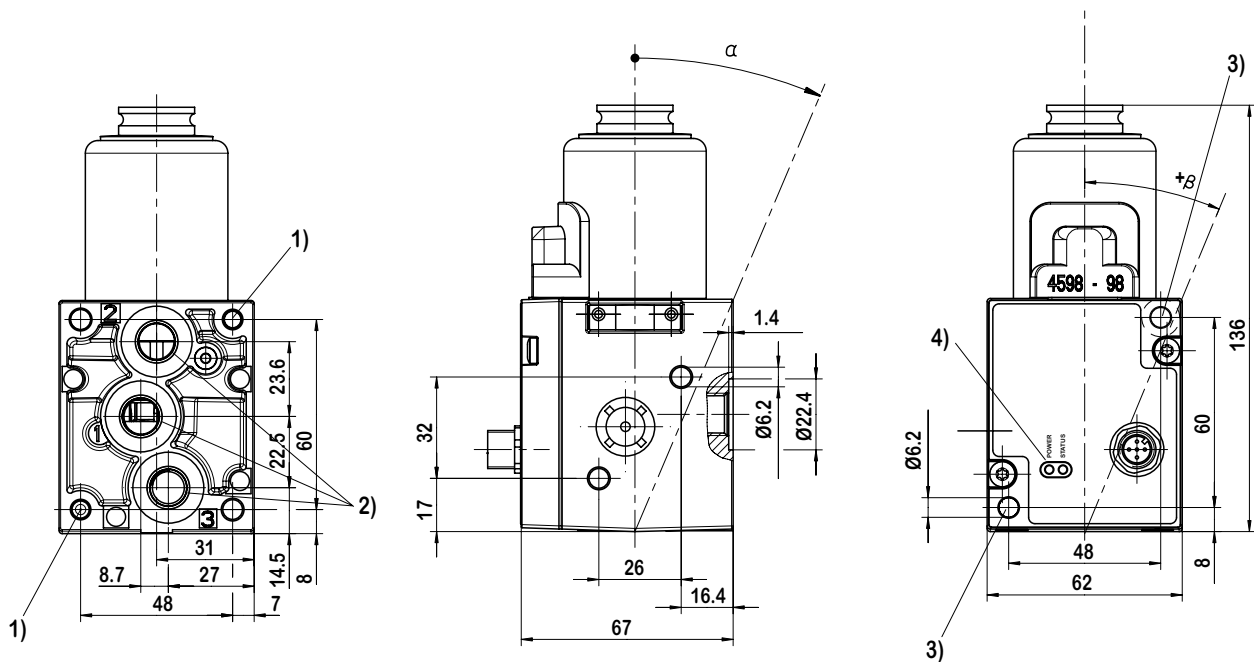
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Flow diagram



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Dimensions



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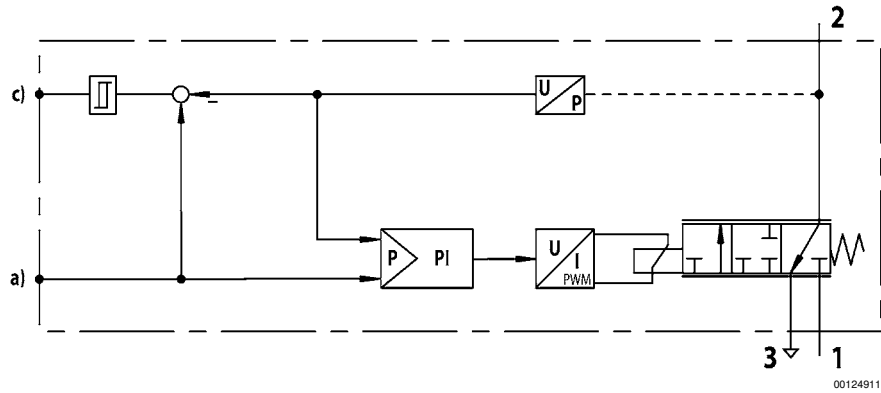
- 1) Core hole 15 mm deep for self-tapping screws M6
- 2) Universal threaded connection, suitable for G1/4 according to ISO 228/1:2000 and 1/4-27 NPTF
- 3) Through hole
- 4) Green LED display; power = pressure control in operation; status = output pressure corresponds to the set point +/- 200 mbar.

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Functional diagram for switch output (acknowledge signal)



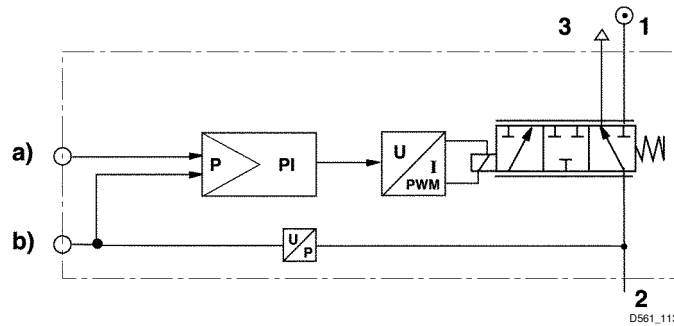
a) Nominal input value

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

Functional diagram for actual output value



a) Nominal input value b) Actual output value

The E/P pressure control valve modulates the pressure corresponding to an analog electrical nominal input value.

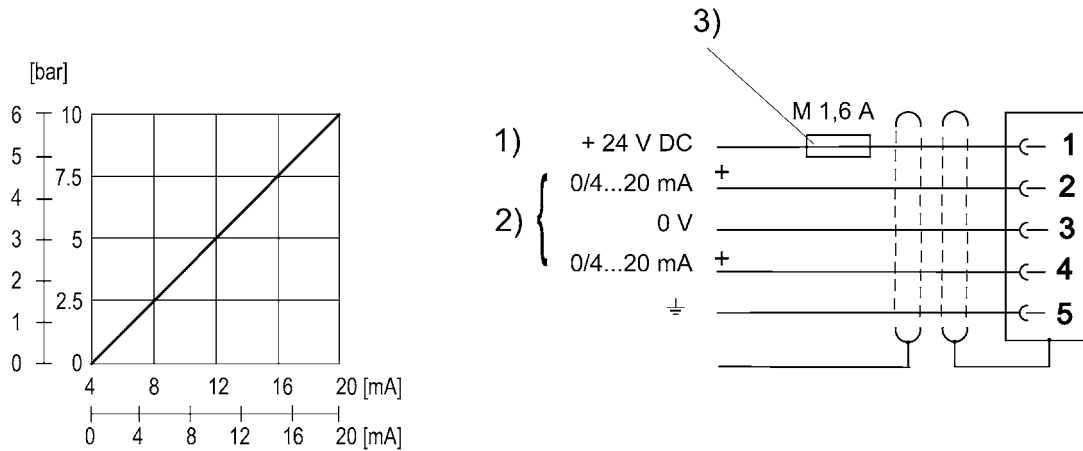
- 1) Operating pressure
- 2) Working pressure
- 3) Exhaust

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



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1) Operational voltage

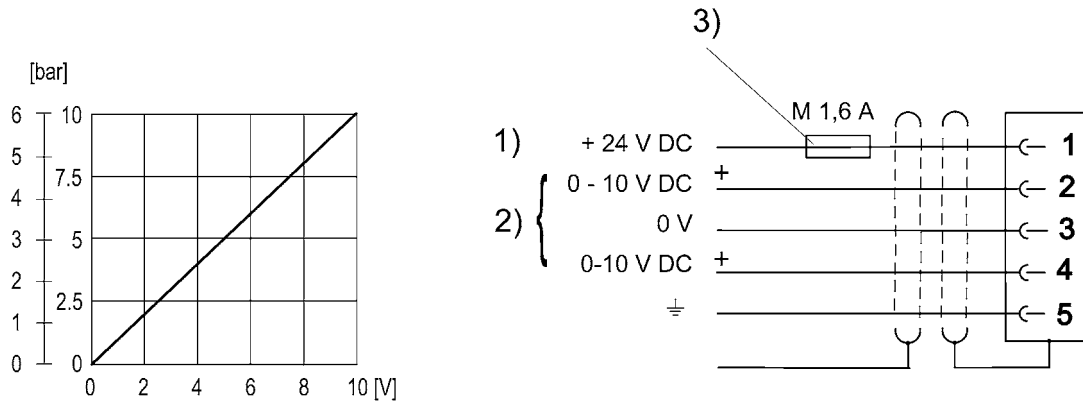
2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V (control voltage).

Nominal input value current (ohmic load 100 Ω). Actual output value (max. total resistance of downstream devices < 300 Ω).

3) The operating voltage must be protected by an external M 1.6 A fuse.

Connect plug 2 via a shielded cable to ensure EMC.

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



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1) Operational voltage

2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V (control voltage).

3) The operating voltage must be protected by an external M 1.6 A fuse.

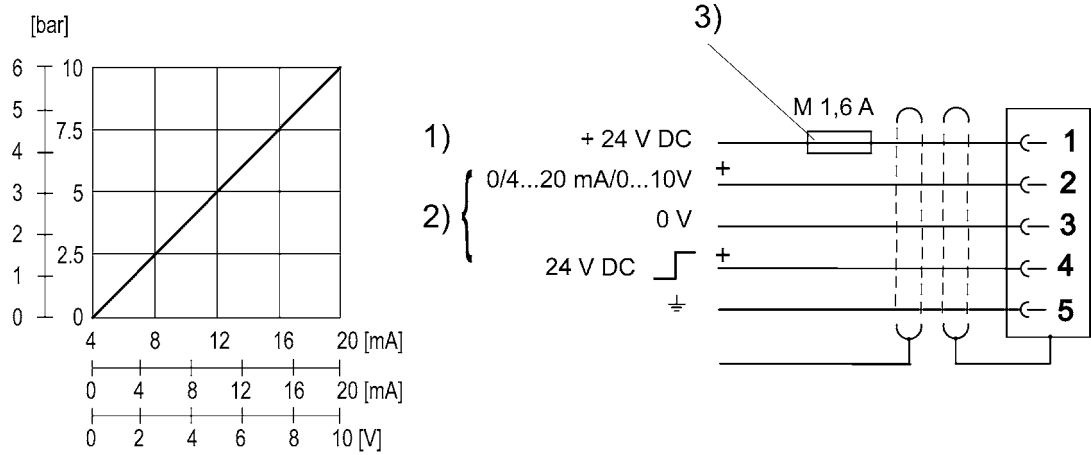
Connect plug 2 via a shielded cable to ensure EMC.

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Fig. 3. Characteristic and pin assignment for current and voltage control with actual output value



00125472

- 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 1.6 A fuse.