Pressure regulators → Proportional Valves

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%
Max. power consumption	1.3 A
Protection class with electrical connector/ plug	IP 65
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 pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
■ The oil content of air pressure must remain constant during the life cycle.
■ Use only the approved oils from Bosch Rexroth, 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.

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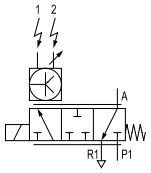
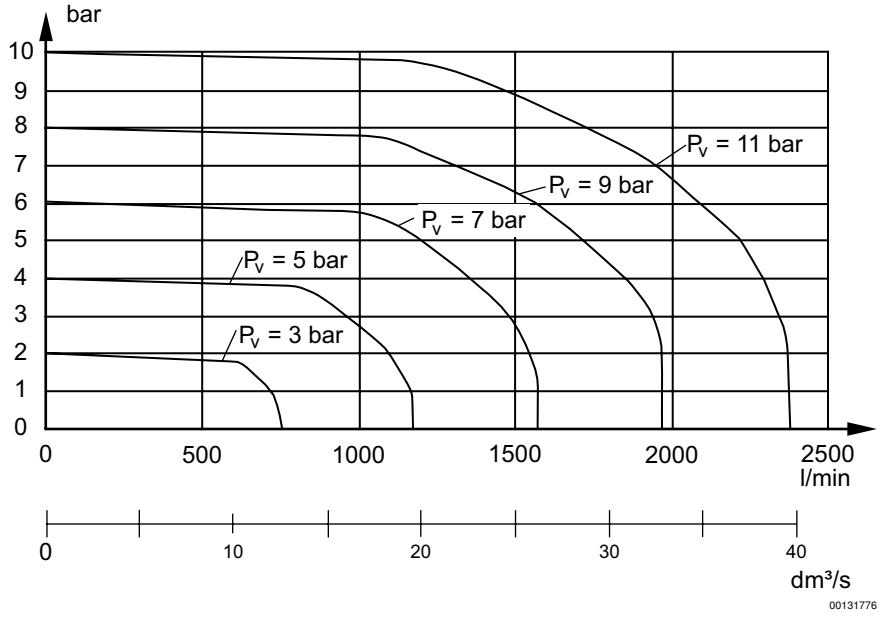
	Operating pressure Max.	Pressure setting range min./max.	Nominal input value		Actual output value		Fig.	Note	Part No.
	[bar]	[bar]							
	11	0 / 6	0 - 20	mA	0 - 20	mA	Fig. 1	-	**R414002003**
		0 / 6	4 - 20	mA	4 - 20	mA	Fig. 1	-	**R414002004**
		0 / 6	0 - 10	V	0 - 10	V	Fig. 2	-	**R414002005**
		0 / 6	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

Flow diagram



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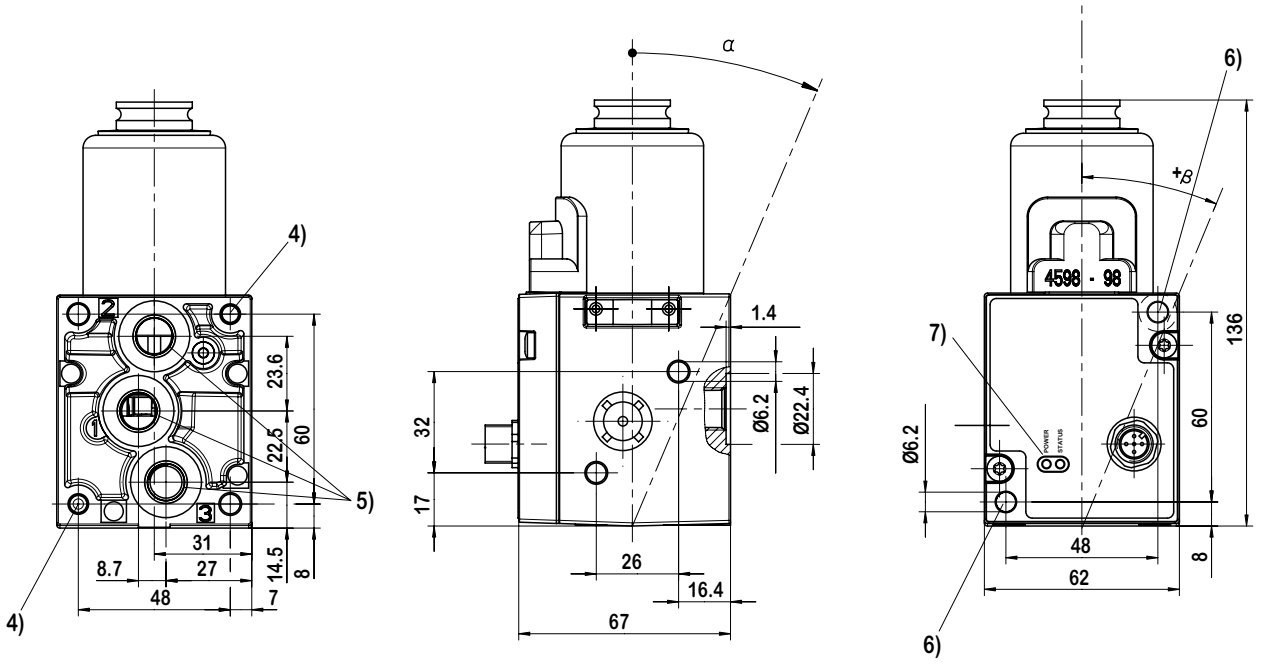
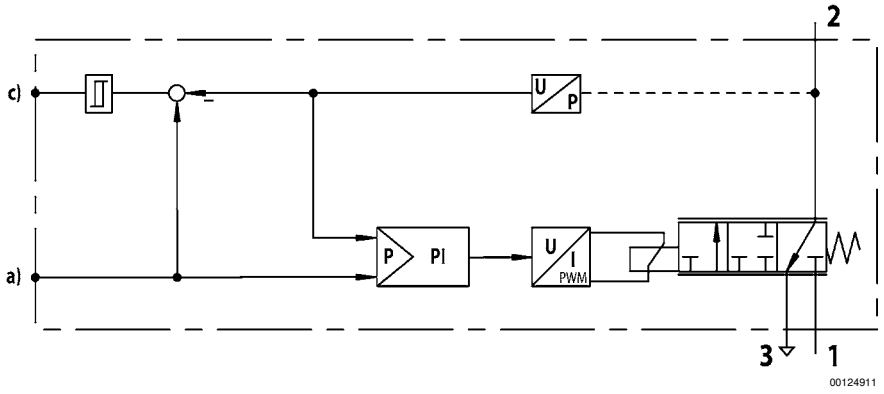
Dimensions



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

Functional diagram



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

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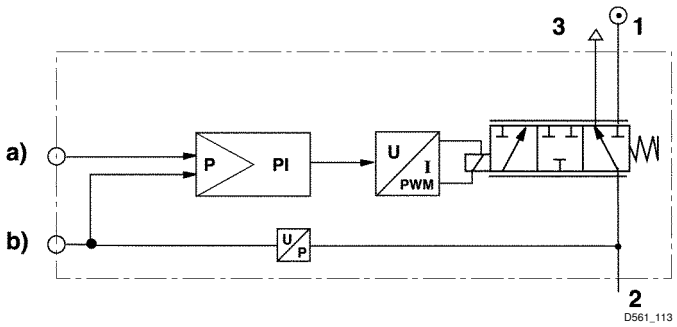
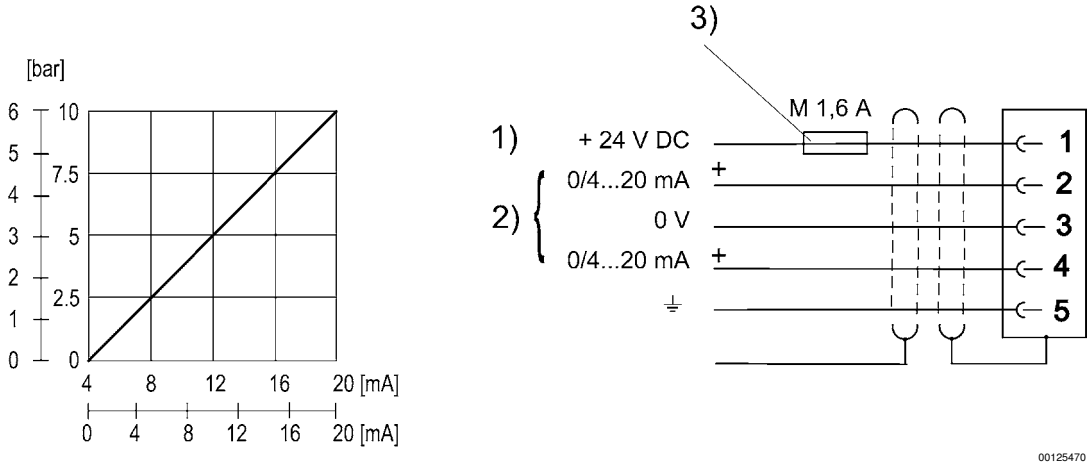


a) Nominal input value b) Actual output value
The E/P pressure control valve modulates the pressure corresponding to an analog electrical nominal input value.
1) Operating pressure
2) Working pressure
3) Exhaust

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



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.

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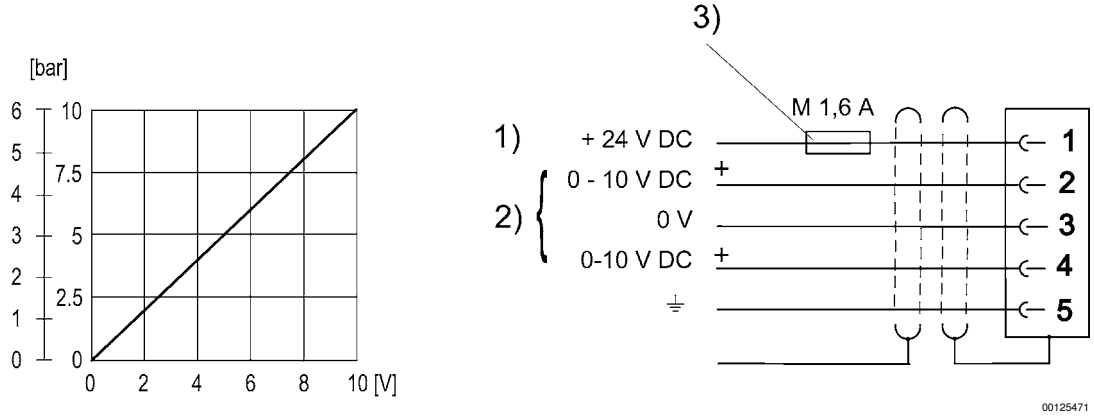
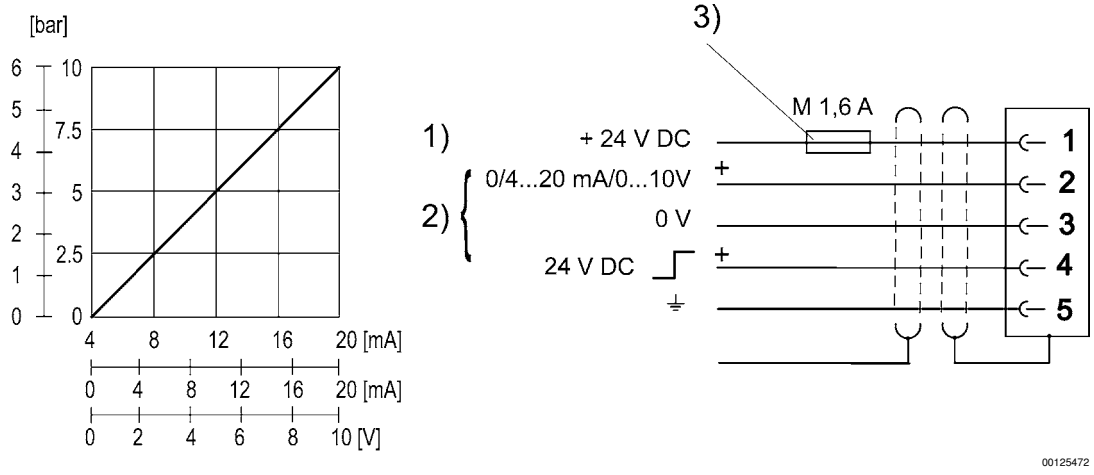
Fig. 2, Characteristic and pin assignment for voltage control with actual output value



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

Fig. 3, 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 1.6 A fuse.