

Pressure regulators → Proportional Valves

E/P pressure regulator, Series ED02

► compressed air connection output: G 1/8, 1/8 NPTF ► Electr. connection: via signal connection ► Signal connection: input and output, Plug, M12, 5-pin



00123883

Version	Poppet valve
Control	Analog
Certificates	CE declaration of conformity
Ambient temperature min./max.	+0 °C / +50 °C
Medium temperature min./max.	+0 °C / +50 °C
Medium	Compressed air
Max. particle size	50 µm
Max. oil content of compressed air	1 mg/m ³
Mounting orientation	±α = 0 - 90° ±β = 0 - 90°
Operating pressure	See table below
DC operating voltage	24 V
Voltage tolerance DC	-20% / +20%
Permissible ripple	5%
Max. power consumption	0.3 A
Protection class with electrical connector/ plug	IP 65
Compressed air connection input	G 1/8, 1/8 NPTF
Compressed air connection output	G 1/8, 1/8 NPTF
Exhaust type	Unrestricted, with silencer
Weight	0.32 kg
Materials:	
Housing	Die-cast aluminum; Steel
Seal	Hydrogenated acrylonitrile butadiene rubber

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.
- ED02 series valves can be assembled into blocks using tie rods (see accessories).
- The protection class is only ensured when the plug is mounted properly. For detailed information, see operating instructions.
- The compressed air connection threads fit both G 1/8 and 1/8 NPTF.

	Operating pressure	Pressure setting range	Nominal input value		Actual output value		Hysteresis	Fig.	Note	Part No.
	Max.	min./max.								
	[bar]	[bar]								
	8	0 / 6	0 - 20	mA	0 - 20	mA	< 0,05 bar	Fig. 1	-	R414002400
	8	0 / 6	4 - 20	mA	4 - 20	mA		Fig. 1	-	R414002401
	8	0 / 6	0 - 10	V	-	-		Fig. 3	1)	R414002402
	8	0 / 6	0 - 10	V	0 - 10	V		Fig. 2	-	R414002403
	12	0 / 10	0 - 20	mA	0 - 20	mA		Fig. 1	-	R414002410
	12	0 / 10	4 - 20	mA	4 - 20	mA		Fig. 1	-	R414002411
	12	0 / 10	0 - 10	V	-	-		Fig. 3	1)	R414002412
	12	0 / 10	0 - 10	V	0 - 10	V		Fig. 2	-	R414002413

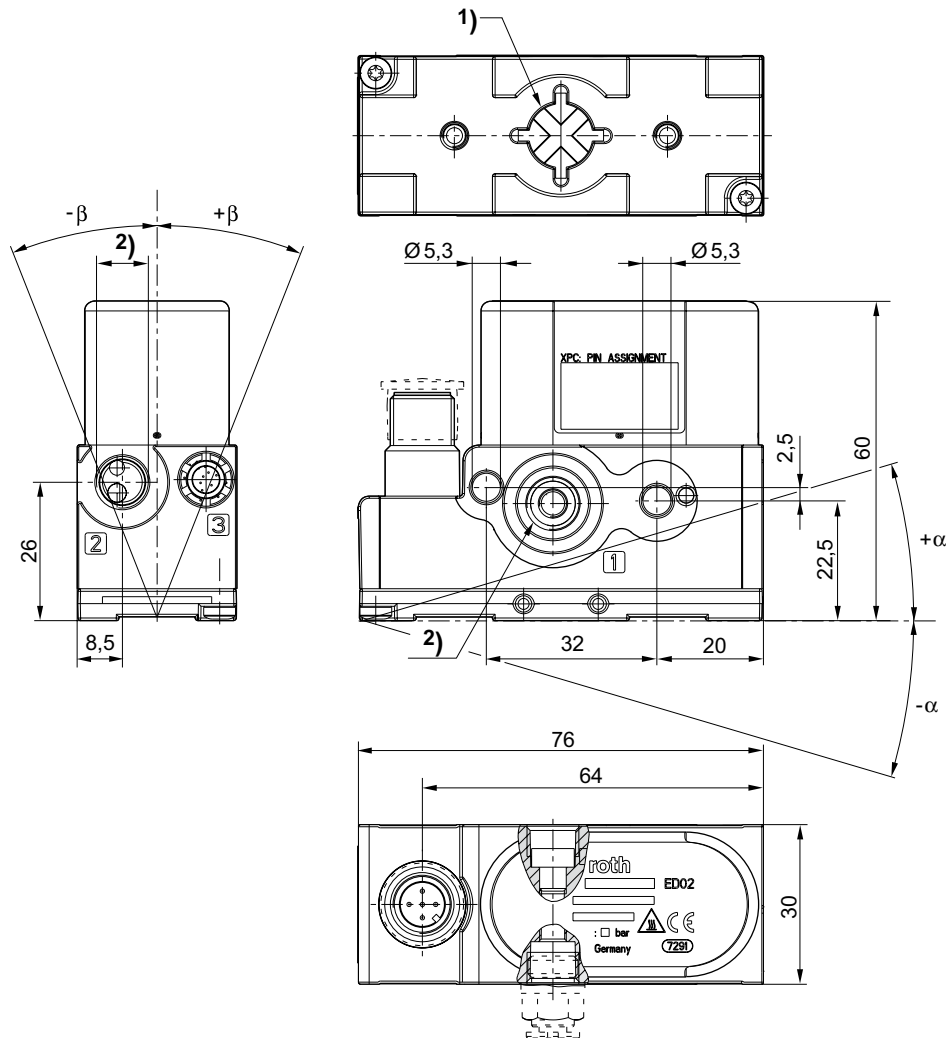
1) Output 10V constant to supply a potentiometer
 Minimum working pressure = 0.5 bar + max. required secondary pressure
 Additional pressure setting ranges available on request

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Dimensions



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1) Housing exhaust

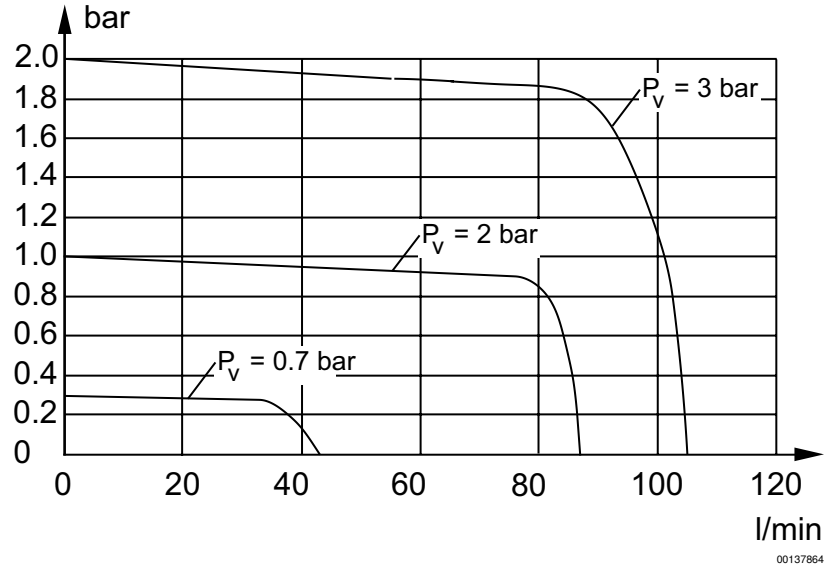
2) Universal threaded connection, suitable for G1/8 according to ISO 228/1:2000 and 1/8-27 NPTF

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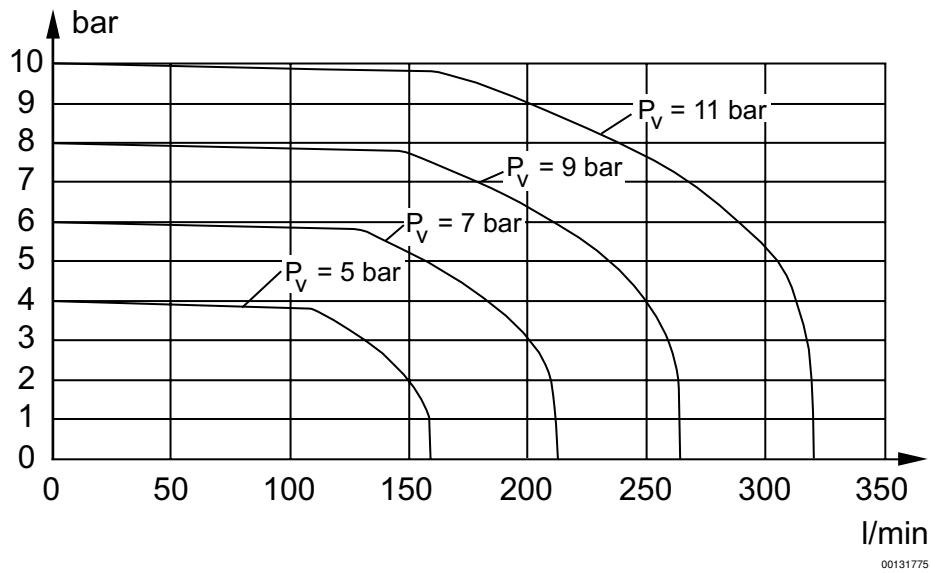
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Flow diagram for pressure range up to 2 bar



Flow diagram for pressure range up to 10 bar

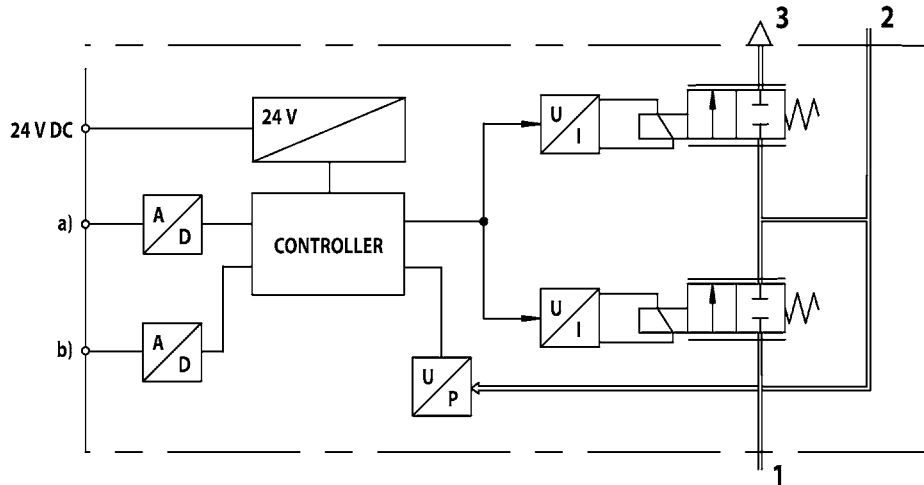


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Functional diagram

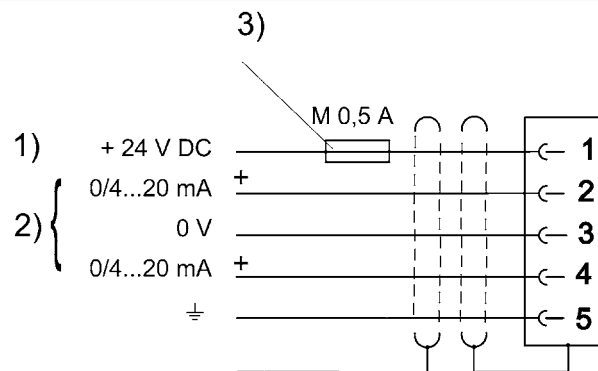
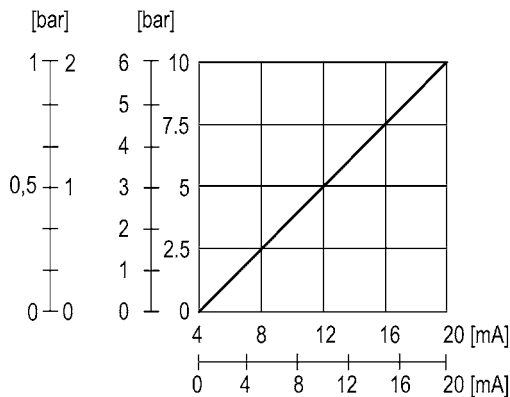


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a) Nominal input value b) Actual output value

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

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



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1) Operating voltage

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

Current control (ohmic load 100 Ω). Actual value output (max. total resistance of downstream devices < 500 Ω).

3) The operating voltage must be protected by an external M 0.5 A fuse.

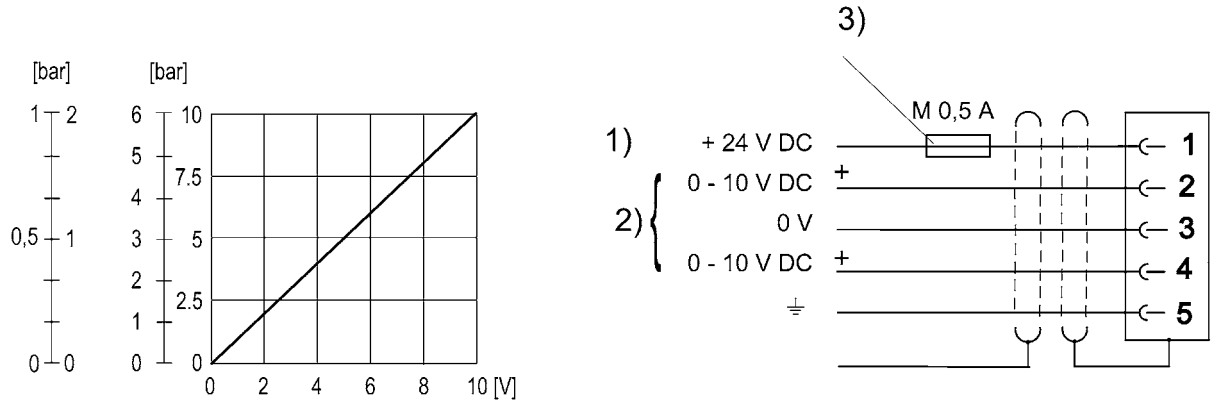
Connect the plug via a shielded cable to ensure EMC.

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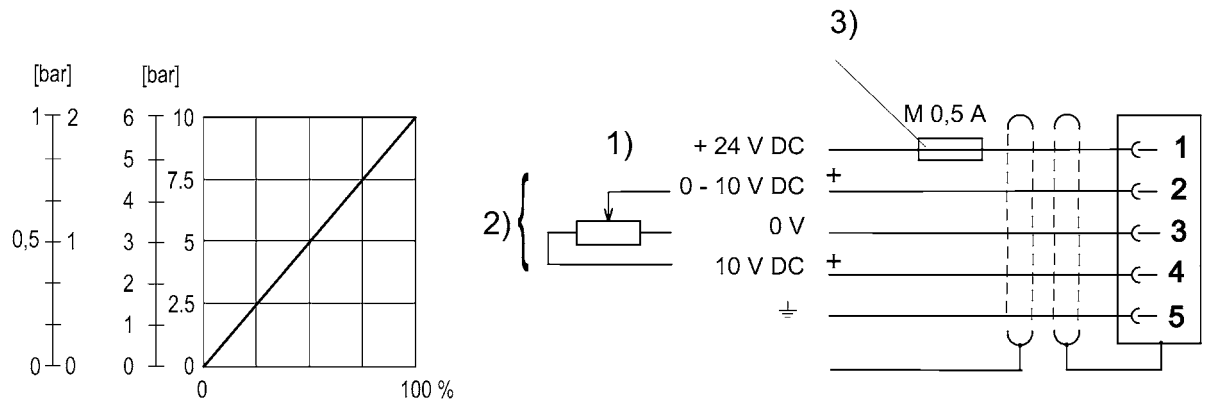
Fig. 2, Characteristic and pin assignment for voltage control with actual output value



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

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



- 1) Operating voltage 2) Potentiometer control (pin 4) and nominal value (pin 2) are related to 0 V.
Load resistance of potentiometer 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.

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