

Pressure regulators → Proportional Valves

E/P pressure regulator, Series ED02

► compressed air connection output: G 1/8 ► 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
Oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Installation location	±α = 0 - 90° ±β = 0 - 90°
Operating pressure	See table below
Hysteresis	< 0,05 bar
DC operating voltage	24 V
Voltage tolerance DC	-20% / +20%
Permissible ripple	5%
Max. power consumption	0.3 A
Protection class according to EN 60529:2001 with electrical connector/plug	IP 65
Compressed air connection input	G 1/8
Compressed air connection output	G 1/8
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.

	Operating pressure max.	Pressure setting range min./max.	Nominal input value		Actual output value		Note	Part No.
	[bar]	[bar]						
	8	0 / 6	0 - 20	mA	0 - 20	mA	Fig. 1	R414002400
	8	0 / 6	4 - 20	mA	4 - 20	mA	Fig. 1	R414002401
	8	0 / 6	0 - 10	V	-	-	1); Fig. 3	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	-	-	1); Fig. 3	R414002412
	12	0 / 10	0 - 10	V	0 - 10	V	Fig. 2	R414002413

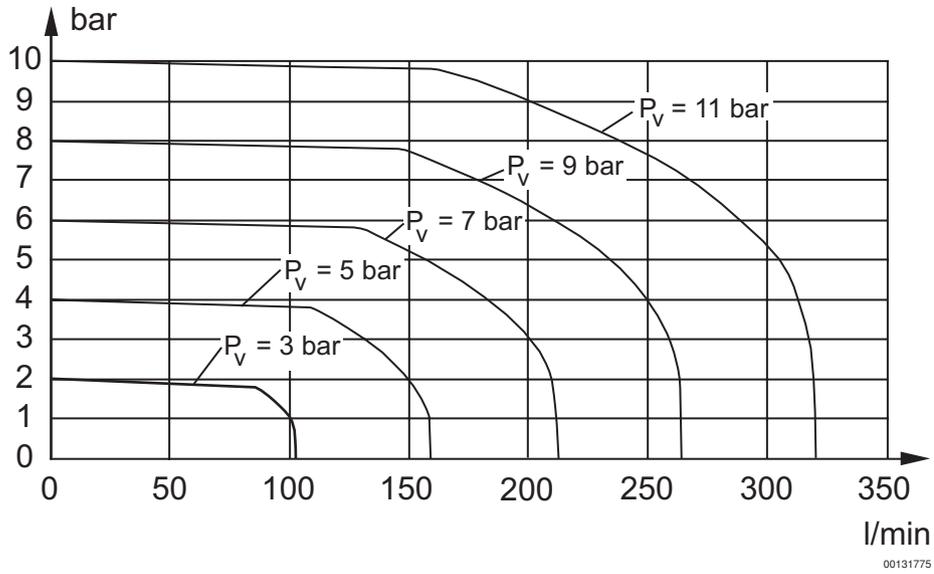
1) Output 10V constant to supply a potentiometer
 Minimum working pressure = 0.5 bar + max. required secondary pressure
 Additional pressure ranges available on request

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Flow diagram

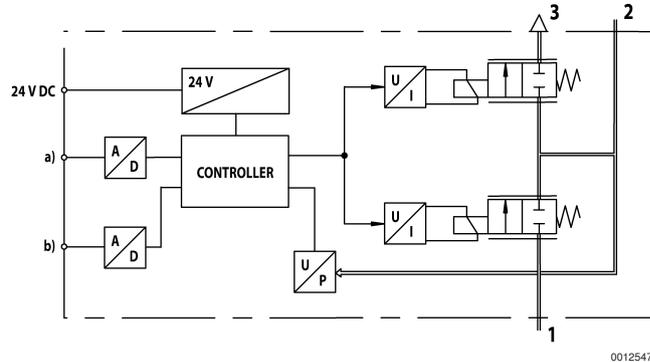


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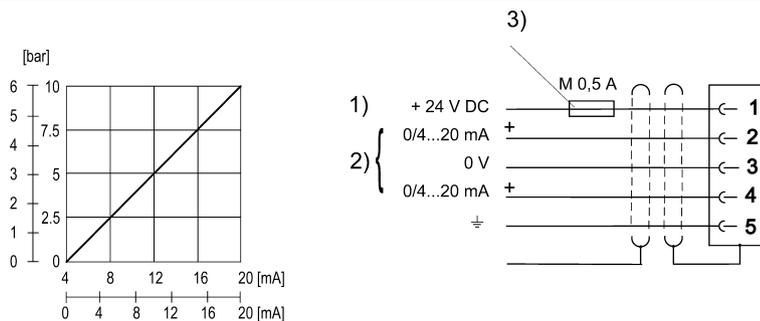
Functional diagram



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



1) supply voltage

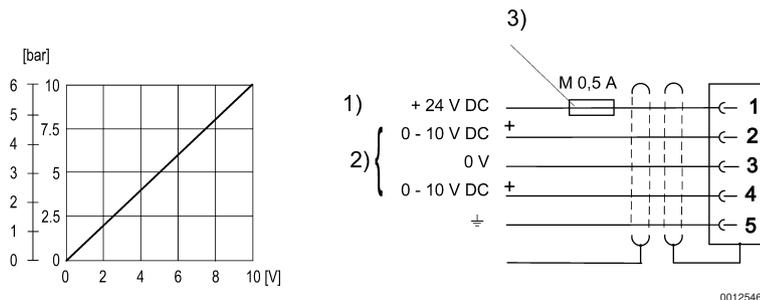
2) actual value (pin 4) and set point (pin 2) are related to 0 V.

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

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

Connect the plug via a shielded cable to ensure EMC.

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



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

Min. load resistance of set value = 1 kΩ.

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

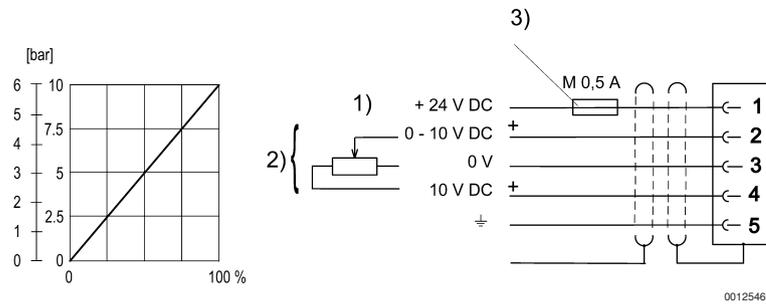
Connect the plug via a shielded cable to ensure EMC

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



1) Supply voltage 2) Potentiometer control (pin 4) and nominal value (pin 2) are related to 0 V (potentiometer control). Load resistance min. 0-2 k Ω , max. 0-10 k Ω .

3) The supply voltage must be protected by an external M 0.5 A fuse. Connect the plug via a shielded cable to ensure EMC.