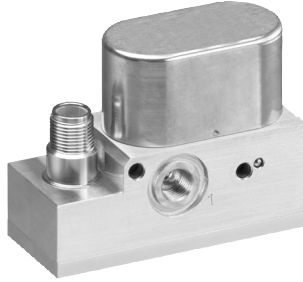


## Pressure regulators → Proportional Valves

**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 <sup>3</sup> - 1 mg/m <sup>3</sup>
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
<b>Materials:</b>	
Housing	Die-cast aluminum; Steel
Seal	Hydrogenated acrylonitrile butadiene rubber

**Technical Remarks**

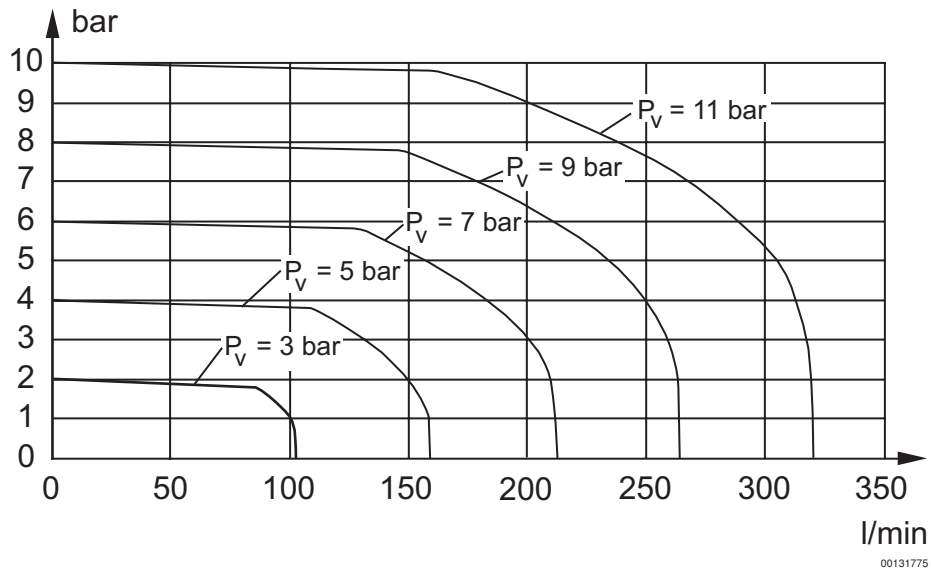
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.
- With oil-free, dry air, other 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	<b>R414002400</b>
	8	0 / 6	4 - 20	mA	4 - 20	mA	Fig. 1	<b>R414002401</b>
	8	0 / 6	0 - 10	V	-	-	1); Fig. 3	<b>R414002402</b>
	8	0 / 6	0 - 10	V	0 - 10	V	Fig. 2	<b>R414002403</b>
	12	0 / 10	0 - 20	mA	0 - 20	mA	Fig. 1	<b>R414002410</b>
	12	0 / 10	4 - 20	mA	4 - 20	mA	Fig. 1	<b>R414002411</b>
	12	0 / 10	0 - 10	V	-	-	1); Fig. 3	<b>R414002412</b>
	12	0 / 10	0 - 10	V	0 - 10	V	Fig. 2	<b>R414002413</b>

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

**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

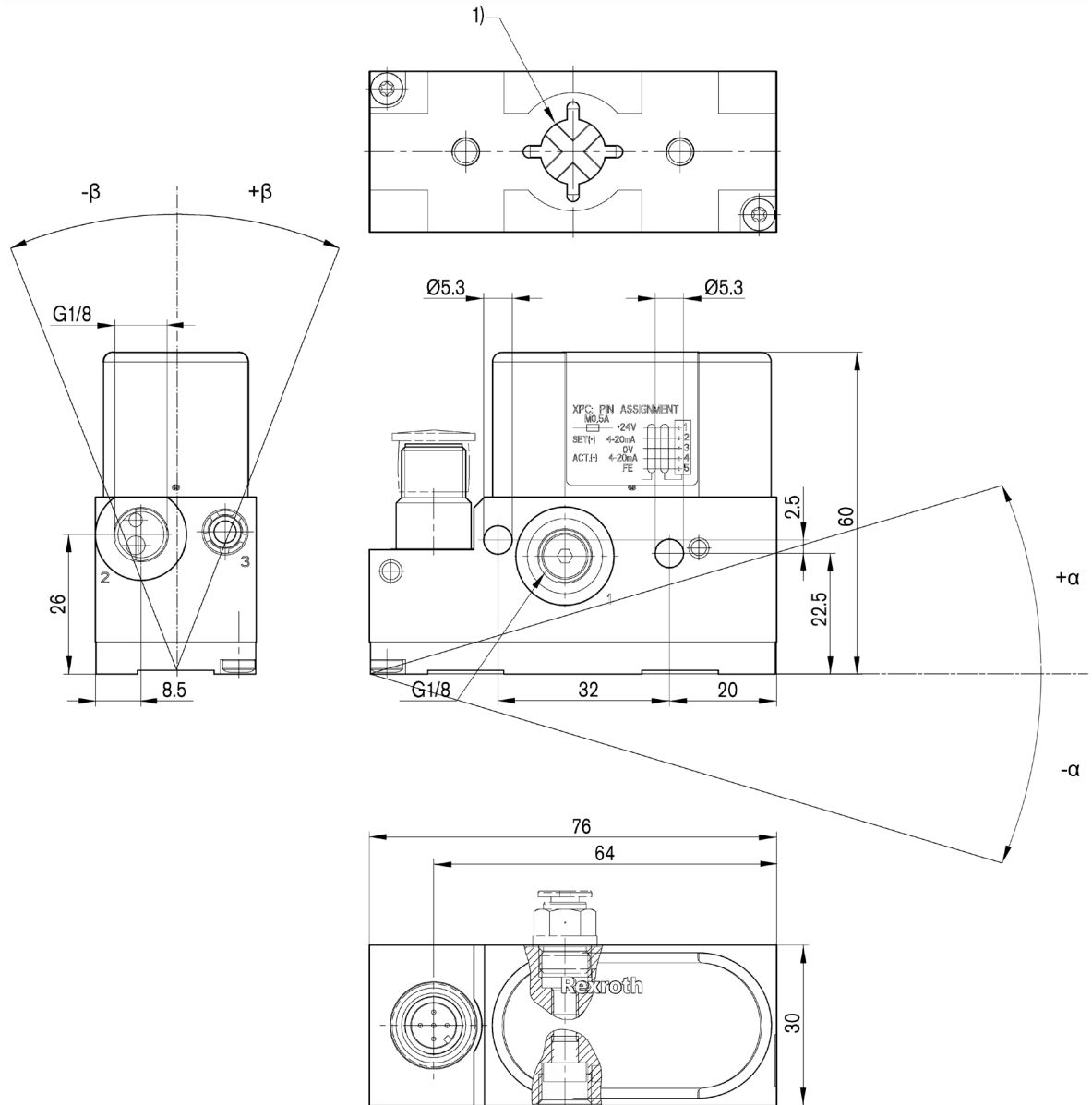
**Flow diagram**

## 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

## Dimensions



00124910

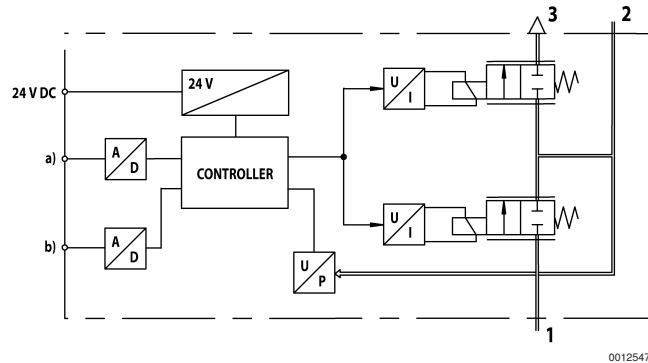
1) Housing exhaust

## 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

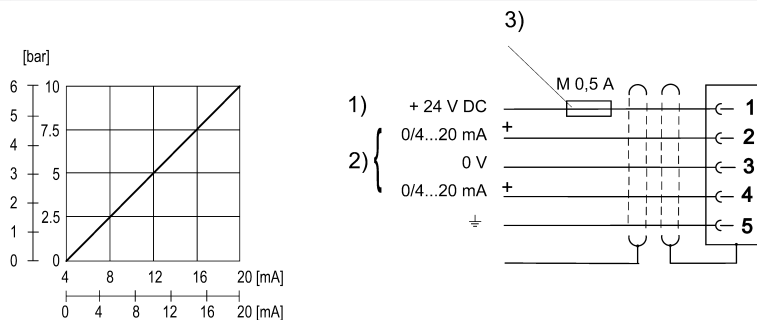
#### Functional diagram



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**



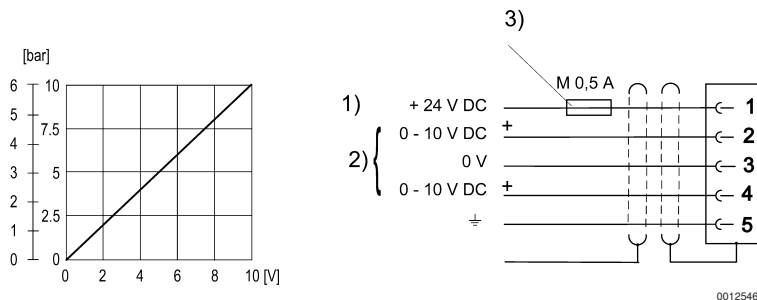
1) supply voltage

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.

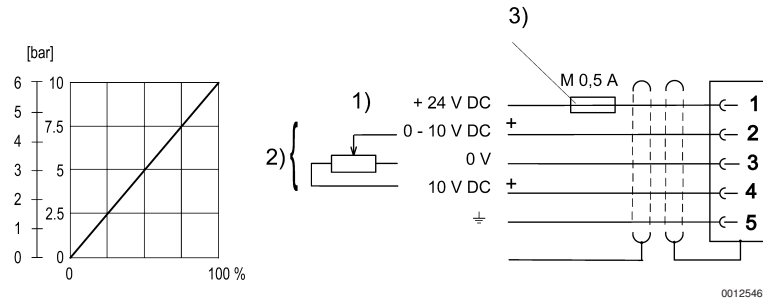
3) The supply voltage must be protected by an external M 0.5 A fuse. Connect the plug via a shielded cable to ensure EMC

## 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

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 kΩ, max. 0-10 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.