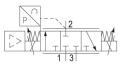
## E/P pressure regulator, Series ED02 R414002411

#### Series ED02

The AVENTICS ED02 direct-acting pressure control valve ensures sensitive pressure control by combining digital control electronics with innovative proportional technology. The robust poppet valve technology, a large opening crosssection and the use of a soft-sealing valve seat make the valve highly resistant to contamination.





Technical data Control Control Function Actual output value Min. regulation range Max. regulation range Min. working pressure Max. working pressure Hysteresis Medium Nominal flow Qn Min. ambient temperature Max. ambient temperature Min. medium temperature Max. medium temperature Operational voltage DC Max. current consumption Protection class Permissible ripple

Directly controlled Analog Air exhaust Analog 0 bar 10 bar 0.5 bar 12 bar < 0,05 bar Compressed air 120 l/min 0°C 50 °C 0°C 50 °C 24 V 300 mA IP65 5%



# E/P pressure regulator, Series ED02

R414002411

Max. particle size	50 µm
Max. oil content of compressed air	1 mg/m <sup>3</sup>
	Poppet valve
Туре	
Mounting orientation	$\pm \alpha = 0 \dots 90^{\circ} \pm \beta = 0 \dots 90^{\circ}$
Certificates	CE declaration of conformity
Compressed air connection input	G 1/8
	1/8 NPT
Compressed air connection output	G 1/8
	1/8 NPT
Electrical connection size	via signal connection
Signal connection	input and output
Signal connection	Plug
Signal connection	M12
Signal connection	5-pin
Actual output value	4 20 mA
Nominal input value	4 20 mA
Industry	Industrial
Weight	0.32 kg
• • · · ·	

#### Material

Housing material

Seal material Part No. Die-cast aluminum Steel, chrome-plated Hydrogenated acrylonitrile butadiene rubber R414002411

#### **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.

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 less than 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. Further information can be found in the "Technical information" document (available in https://www.emerson.com/en-us/support).



# E/P pressure regulator, Series ED02

+β

3

R414002411

### Dimensions

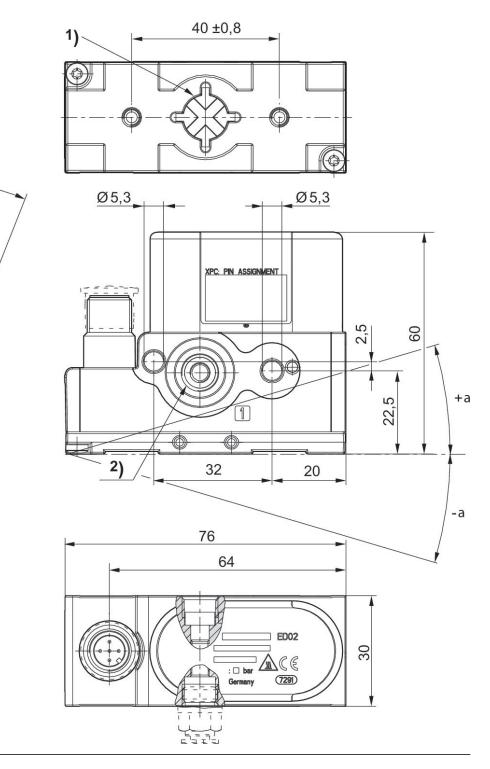
-β

2

8,5

26

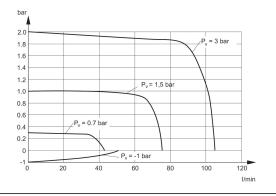
2)



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



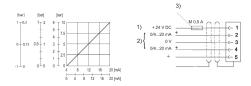
### Flow diagram for pressure range up to 2 bar



Pv = Supply pressure

### Fig. 1

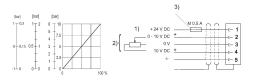
Characteristic and pin assignment for current control with actual output value



1) Supply Voltage 2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V. Current control (ohmic load 100  $\Omega$ ). Actual value output (max. total resistance of downstream devices < 500  $\Omega$ ). 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.

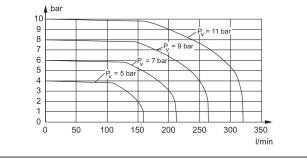
### Fig. 3

Characteristic and pin assignment for potentiometer control without actual output value



1) Supply voltage 2) Potentiometer supply (pin 4) and nominal value (pin 2) are related to 0 V. Potentiometer resistance 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.

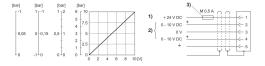
#### Durchflussdiagramm für Druckbereich bis 10 bar



Pv = Supply pressure

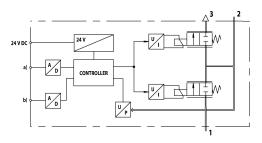
Fig. 2

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. Min. load resistance of nominal value output = 1 k $\Omega$ . 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.

## 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.

1) Operating pressure

2) Working pressure3) Exhaust

