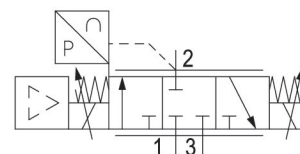


E/P pressure regulator, Series ED12

R414000730

Series ED12

- Highly dynamic E/P pressure regulator
- Stackable with base plate
- Nominal width 12
- Flow [[2600] l/min]
- Pressure range -[[1]bar] ... [[10]bar]
- AES fieldbus connection



Technical data

Control

Analog

Regulation range min.

0 bar

Regulation range max.

10 bar

Working pressure min.

0.5 bar

Working pressure max

12 bar

Hysteresis

< [[0,03] bar]

Medium

Compressed air

Nominal flow Qn

2600 l/min

Min. ambient temperature

5 °C

Max. ambient temperature

50 °C

Min. medium temperature

5 °C

Max. medium temperature

50 °C

DC operating voltage

24 V

Permissible ripple

5%

Max. power consumption

1400 mA

Protection class

IP65

Max. particle size

50 µm

Oil content of compressed air min.

0 mg/m³

Oil content of compressed air max.

1 mg/m³

Type

Poppet valve

Mounting orientation

$\alpha = 0 \dots 90^\circ \pm \beta = 0 \dots 90^\circ$

Certificates

CE declaration of conformity

Electrical connection type

Plug

Electrical connection size

M12

Electrical connection number of poles

5-pin

Signal connection

input and output

Signal connection

Socket

Signal connection

M12

Signal connection

5-pin

Nominal input value

0 ... 10 V

Industry
Industrial

Weight
2.3 kg

Material

Housing material
Aluminum
Steel

Seal material
Hydrogenated acrylonitrile butadiene rubber
Part No.
R414000730

Technical information

With oil-free, dry air, other installation positions are possible on request.

Nominal flow Q_n with working pressure $[[7 \text{ bar}]]$, with secondary pressure $[[6 \text{ bar}]]$ and $\Delta p = [[0.2 \text{ bar}]]$

The protection class is only ensured when the plug is mounted properly. For detailed information, see operating instructions.

The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!

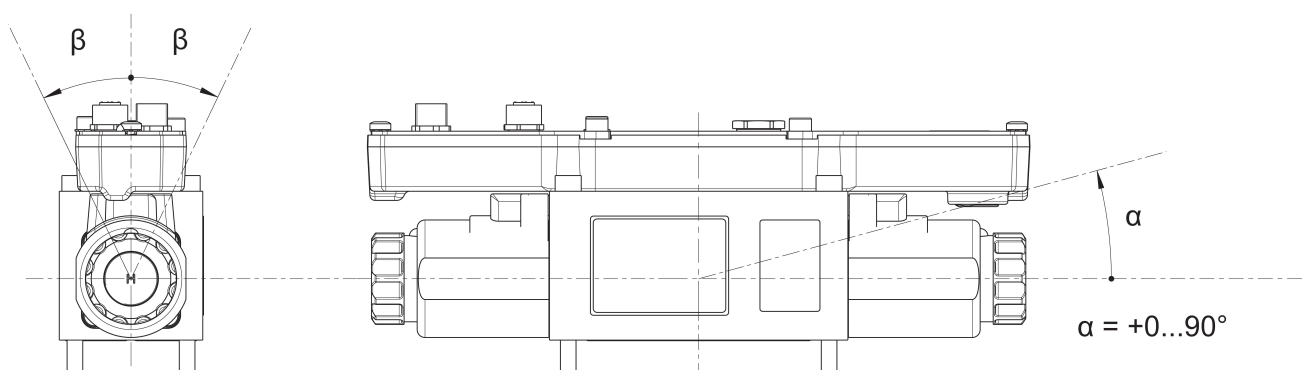
The pressure dew point must be at least $15 \text{ }^\circ\text{C}$ under ambient and medium temperature and may not exceed $3 \text{ }^\circ\text{C}$.

The oil content of compressed air must remain constant during the life cycle.

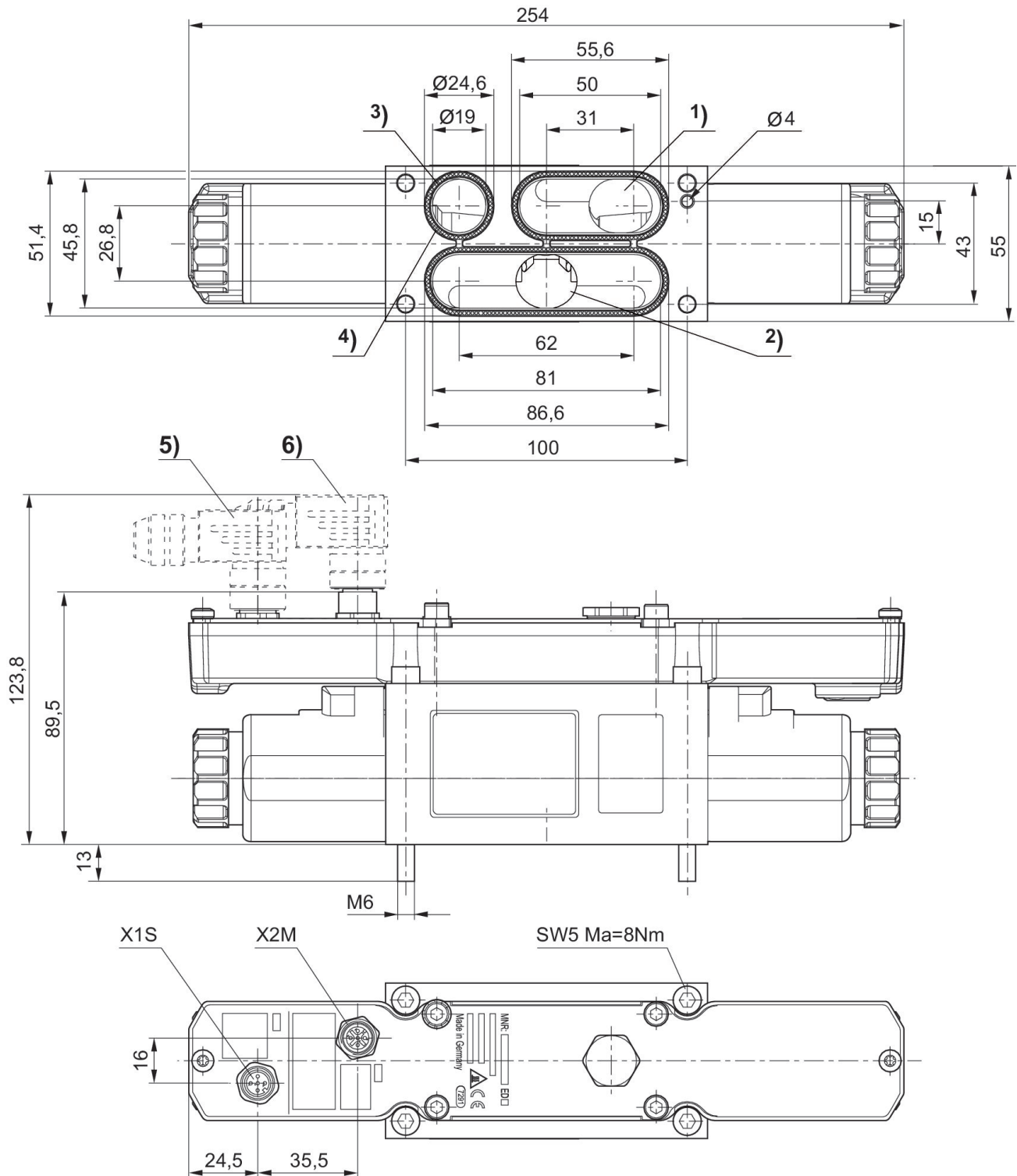
Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in <https://www.emerson.com/en-us/support>).

Mounting orientation

$$\beta = \pm 0 \dots 90^\circ$$

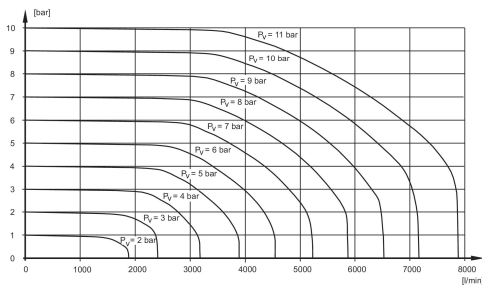


Dimensions



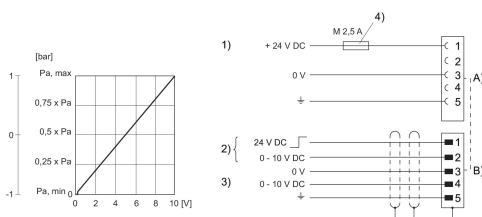
1) Operating pressure 2) Working pressure 3) Exhaust 4) Seal (not assembled) 5) + 6) Accessories not supplied

Flow diagram



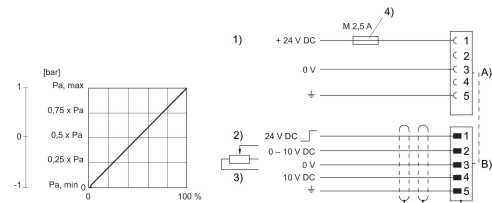
Pv = Supply pressure

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



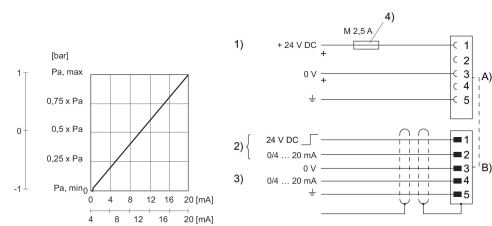
- 1) Supply Voltage
- 2) Switch output (pin 1) and nominal value (pin 2) are related to 0 V.
- 3) Actual value (pin 4) is related to 0 V (min. load resistance 1 kΩ).
- 4) The operating voltage must be protected by an external M 2.5 A fuse. Connect plug X2M via a shielded cable to ensure EMC. A) Plug X1S B) Plug X2M

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



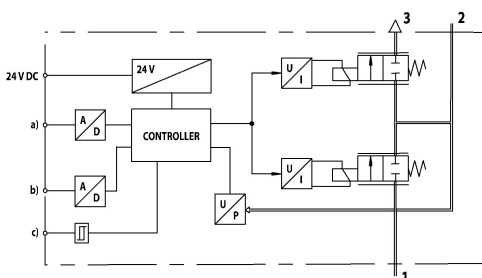
- 1) Supply Voltage
- 2) Switch output (pin 1) and nominal value (pin 2) are related to 0 V.
- 3) Potentiometer control (min. 0-2 kΩ, max. 0-10 kΩ)
- 4) The operating voltage must be protected by an external M 2.5 A fuse. Connect plug X2M via a shielded cable to ensure EMC. A) Plug X1S B) Plug X2M

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



- 1) Supply Voltage
- 2) Switch output (pin 1) and nominal value (pin 2) are related to 0 V. Input current nominal value (ohmic load 100 Ω).
- 3) Actual value (pin 4) is related to 0 V (max. total resistance of downstream devices < 300 Ω).
- 4) The operating voltage must be protected by an external M 2.5 A fuse. Connect plug X2M via a shielded cable to ensure EMC. A) Plug X1S B) Plug X2M

Functional diagram



- a) Nominal input value b) Actual output 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