

- Robust poppet valve technology
- Very high control precision and dynamics
- Suitable for a wide range of applications
- High air flow rates
- ED07 supports different types of connectivity from Analog Version to Fieldbus connection via EtherCAT

AVENTICS ED07 Dynamic Direct Acting Pressure Regulator

The AVENTICS Series ED07 offers proportional pressurization and the exhaust valves are controlled separately to deliver dynamic control for the most demanding applications.

Highly dynamic proportional pressure regulator

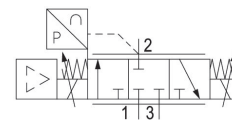
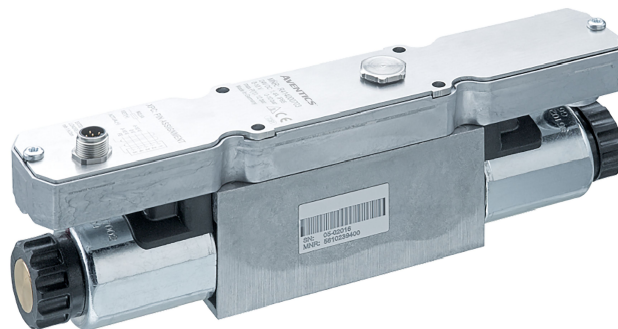
Stackable with base plate

Nominal width 7

Flow 1300 l/min

Pressure range -1 ... 20 bar

EtherCAT, AES fieldbus connection



Technical data

Type

Control

Control

Function

Output signal

Operational voltage DC

Max. current consumption

Actual output value

Nominal input 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

Voltage control with actual output value

Directly controlled

Analog

Air exhaust

Analog

24 V

1400 mA

0 ... 10 V

0 ... 10 V

0 bar

10 bar

0.5 bar

12 bar

< 0,03 bar

Compressed air

1300 l/min

5 °C

50 °C

5 °C

E/P pressure regulator, Series ED07

R414000703

Series

ED07

2025-05-09

Max. medium temperature	50 °C
Protection class	IP65
Permissible ripple	5%
Max. particle size	50 µm
Min. oil content of compressed air	0 mg/m ³
Max. oil content of compressed air	1 mg/m ³
Type	Poppet valve
Mounting orientation	$\alpha = 0 \dots 90^\circ \pm \beta = 0 \dots 90^\circ$
Certificates	CE declaration of conformity
Electrical connection size	via signal connection
Signal connection	input and output
Signal connection	Plug
Signal connection	M12
Signal connection	5-pin
Industry	Industrial
Weight	2.05 kg

Material

Housing material	Die-cast aluminum Steel, chrome-plated
Seal material	Hydrogenated acrylonitrile butadiene rubber
Part No.	R414000703

Technical information

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

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 °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>).

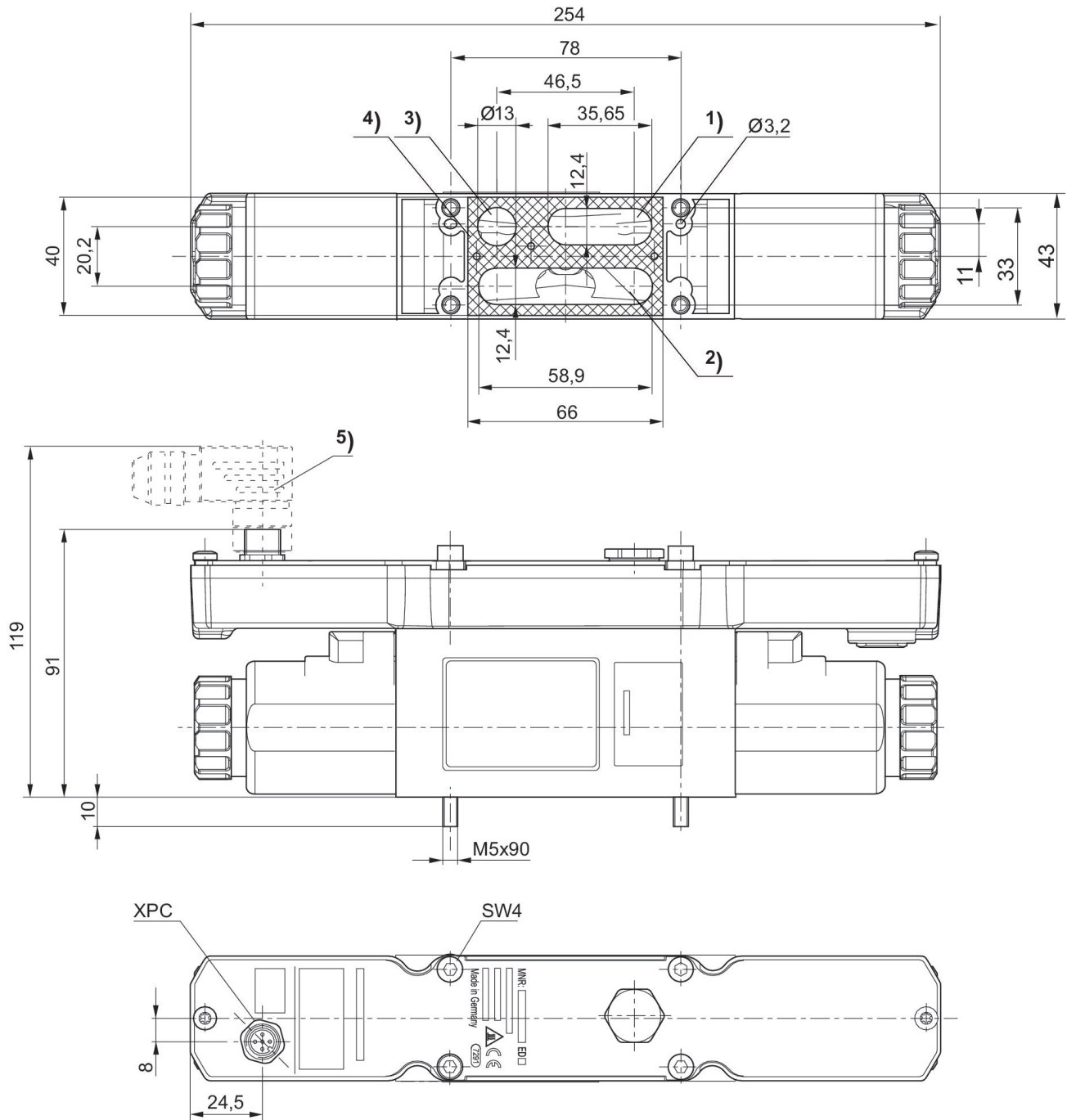
E/P pressure regulator, Series ED07

R414000703

Series
ED07

2025-05-09

Dimensions



- 1) Operating pressure
- 2) Working pressure
- 3) Exhaust
- 4) Profile seal
- 5) Accessories not supplied

E/P pressure regulator, Series ED07

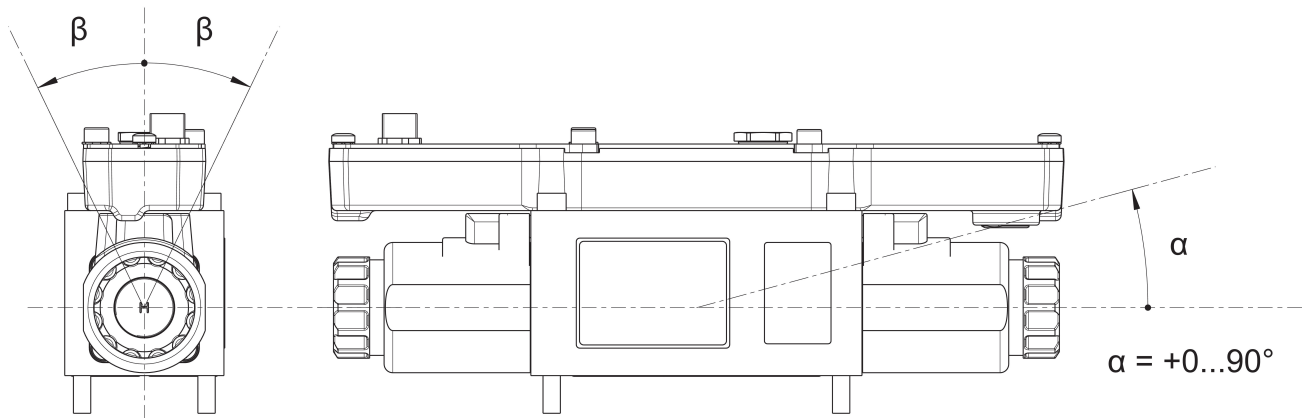
R414000703

Series
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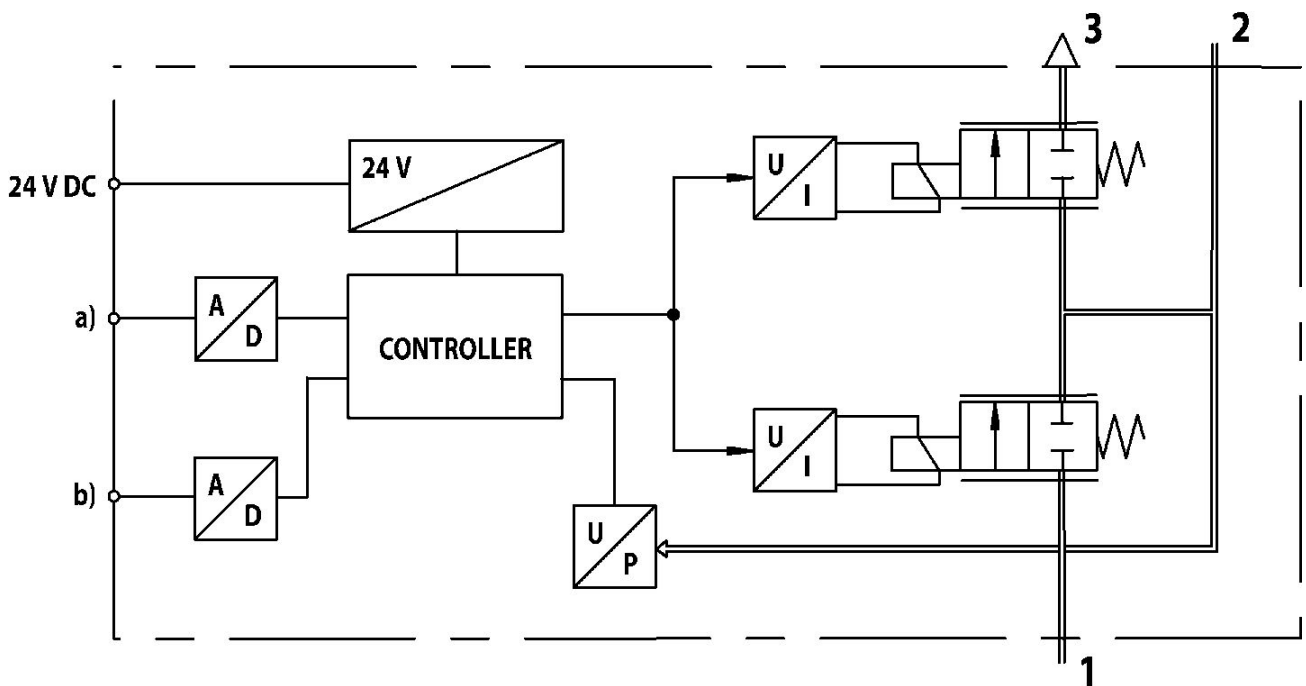
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Mounting orientation

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



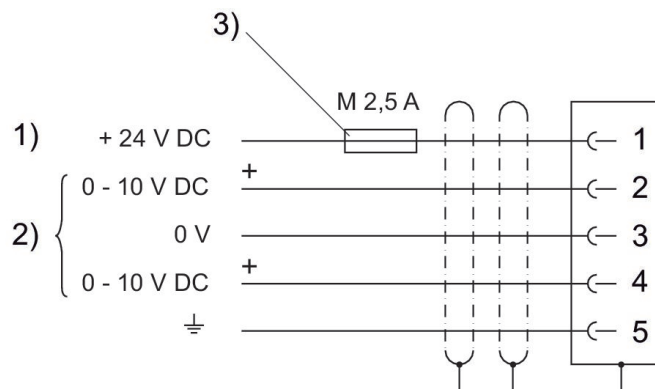
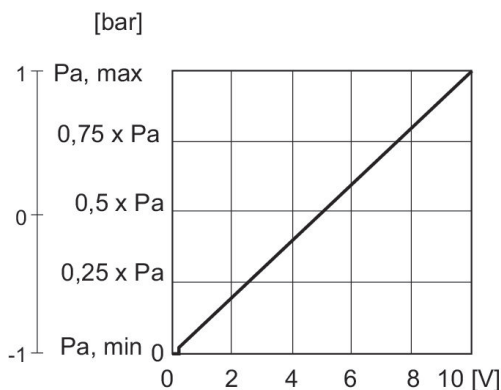
Functional diagram



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 pressure
- 3) Exhaust

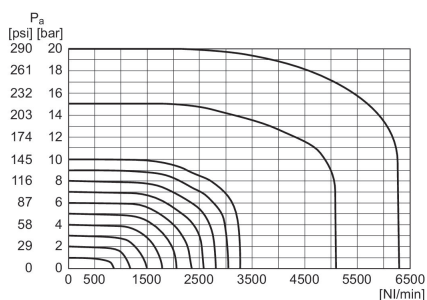
Characteristic and pin assignment for voltage control with actual output value



1) Supply Voltage

2) Actual value (pin 4) and target value (pin 2) are related to 0 V. If the supply voltage is switched off, the voltage input value is high-ohmic. Input resistance under supply voltage: 1 MΩ Voltage output (actual value): external working resistance 10 kΩ 3) The operating voltage must be protected by an external M 2.5 A fuse. Connect the plug via a shielded cable to ensure EMC.

Flow diagram



Pa = Working pressure