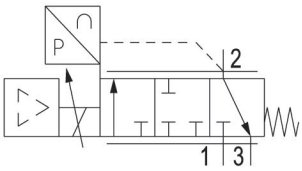
E/P pressure regulator, Series ED05

5610141310

Series ED05

- Sturdy poppet valve technology
- Directly controlled E/P pressure regulator
- Exemplary dynamics
- Nominal width 5
- Flow [[1000] l/min]
- Pressure range [[0]bar] -[[10]bar]
- AES fieldbus connection



Technical data

Control
Analog

Regulation range min.
0 bar

Regulation range max.
6 bar

Working pressure min.
0 bar

Working pressure max
11 bar

Hysteresis
< [[0,06] bar]

Medium
Compressed air

Nominal flow Qn
1000 l/min

Min. ambient temperature
0 °C

Max. ambient temperature
70 °C

Min. medium temperature
0 °C

Max. medium temperature
70 °C

DC operating voltage
24 V

Permissible ripple
5%

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
α = 0-90° β = 0-90°

Certificates
CE declaration of conformity

Compressed air connection input
G 1/4

Compressed air connection output
G 1/4

Compressed air connection, exhaust
G 1/4

Electrical connection type
Plug

Electrical connection size
ISO 15217, form C

Signal connection
input and output

Signal connection
Plug

Signal connection
ISO 15217, form C

Actual output value
4 ... 20 mA

Nominal input value
4 ... 20 mA

Industry
Industrial

Weight
1.1 kg

Material

Housing material
Die-cast aluminum
Steel

Seal material
Hydrogenated acrylonitrile butadiene rubber

Part No.
5610141310

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.

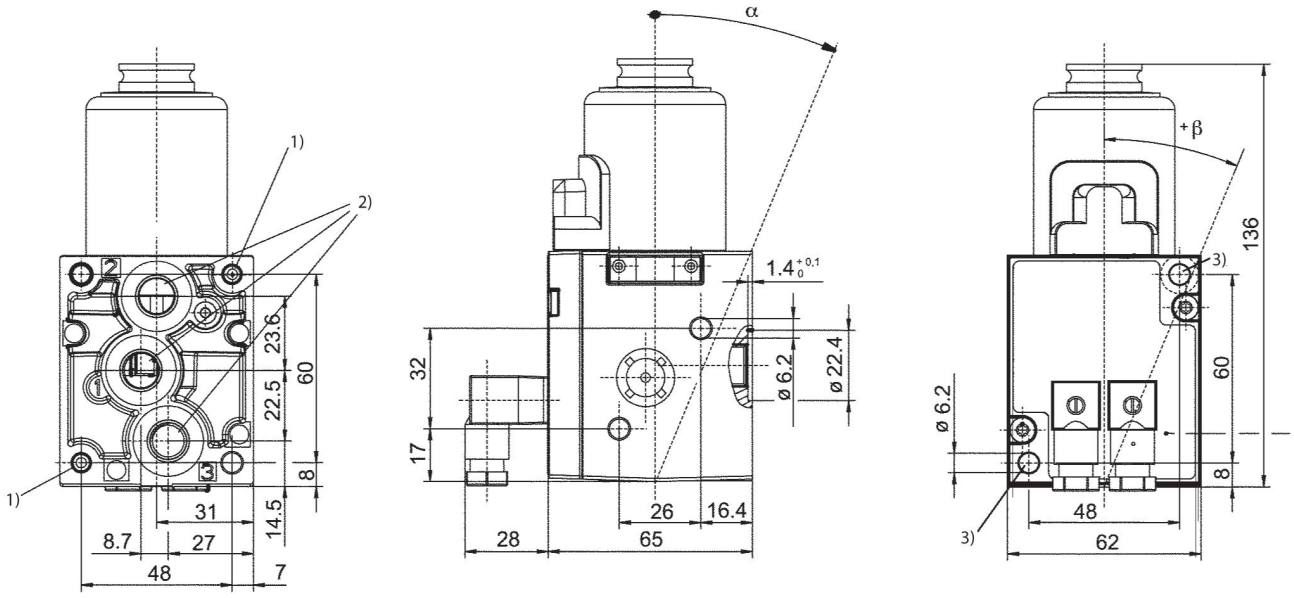
The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

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

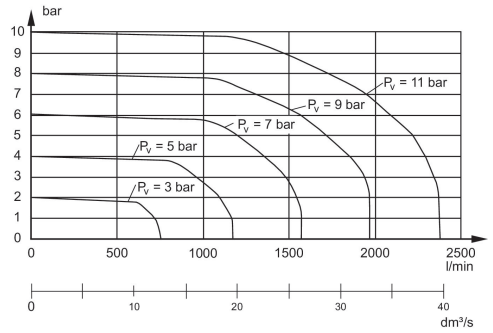
Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in https://www.emerson.com/en-us/support).

Dimensions



1) Core hole 15 mm deep for self-tapping screws M6
2) Universal threaded connection, suitable for G1/4 according to ISO 228/1:2000 and 1/4-27 NPTF
3) Through hole

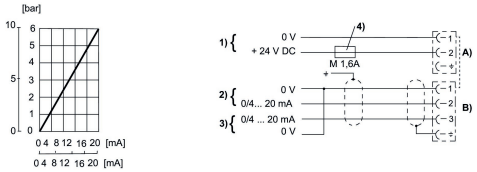
Flow diagram



Pv = Supply pressure
Connect the plug via a shielded cable to ensure EMC

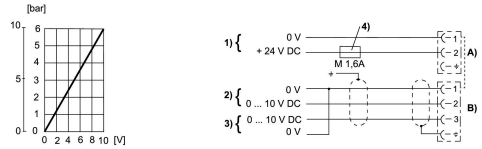
Fig. 1

Characteristic and pin assignment for current control with actual output value



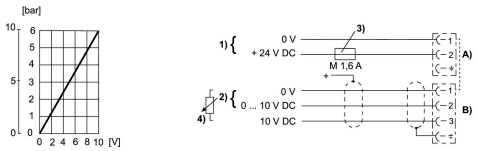
1) Operational voltage
2) Input current nominal value (ohmic load 100 Ω, max. 50 mA.) The voltage at the nominal input value may not exceed 12 V.
4) actual output value (max. total resistance of downstream devices < 300 Ω).
3) The operating voltage must be protected by an external M 1.6 A fuse.
Connect plug 2 via a shielded cable to ensure EMC. A) Plug 1 B) Plug 2

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



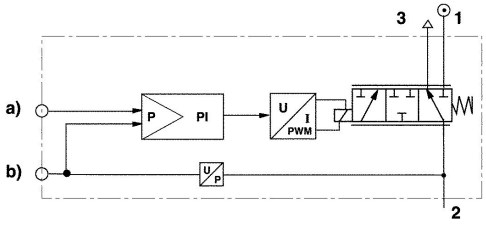
1) Operational voltage
2) Nominal input value voltage
3) Actual output value (min. external ohmic load 1 kΩ)
4) The operating voltage must be protected by an external M 1.6 A fuse. Connect plug 2 via a shielded cable to ensure EMC. A) Plug 1 B) Plug 2

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



1) Operational voltage
2) Nominal input value voltage
3) The operating voltage must be protected by an external M 1.6 A fuse. Connect plug 2 via a shielded cable to ensure EMC. A) Plug 1 B) Plug 2
4) Potentiometer control (0 - 2 kΩ (min.), 0 - 10 kΩ (max.))

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