

E/P pressure regulator, Series ED05

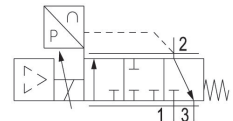
R414002297

Series
ED05

2024-04-30

Series ED05

The AVENTICS ED05 direct-acting pressure regulator ensures sensitive pressure control by combining digital control electronics with innovative proportional technology. The robust poppet valve technology, a large opening cross-section and the use of a soft-sealing valve seat make the valve highly resistant to contamination.



Technical data

| | |
|--------------------------|---------------------|
| Control | Directly controlled |
| Control | Analog |
| Function | Air exhaust |
| Actual output value | Switch output |
| Min. regulation range | 0 bar |
| Max. regulation range | 10 bar |
| Min. working pressure | 0 bar |
| Max. working pressure | 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 |
| Operational voltage DC | 24 V |
| Protection class | IP65 |
| Permissible ripple | 5% |
| Max. particle size | 50 µm |

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|------------------------------------|--|
| 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 | $\alpha = 0-90^\circ$ $\beta = 0-90^\circ$ |
| 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 size | via signal connection |
| Signal connection | input and output |
| Signal connection | Plug |
| Signal connection | M12 |
| Signal connection | 5-pin |
| Nominal input value | 0 ... 10 V |
| Industry | Industrial |
| Weight | 0.95 kg |

Material

| | |
|------------------|---|
| Housing material | Die-cast aluminum Steel, chrome-plated |
| Seal material | Hydrogenated acrylonitrile butadiene rubber |
| Part No. | R414002297 |

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>).

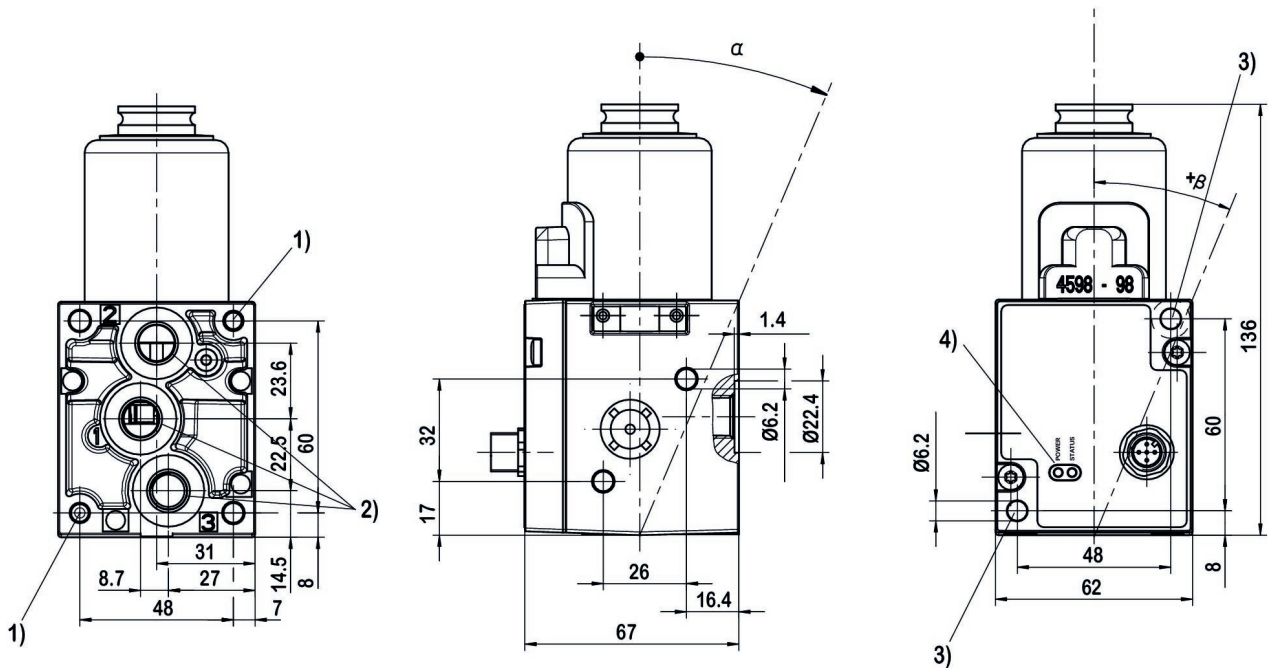
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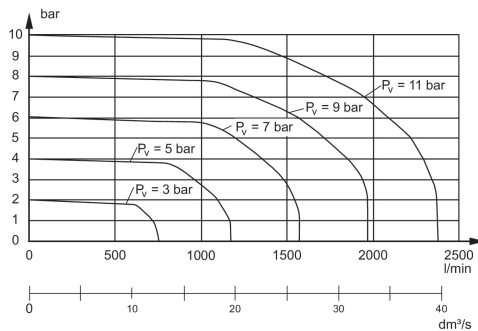
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Dimensions



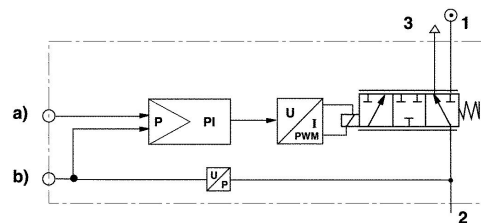
- 1) Core hole 15 mm deep for self-tapping screws M6
- 2) Universal threaded connection, suitable for G1/4 according to ISO 228/1:2000 and 1/4-27 NPTF
- 3) Through hole

Flow diagram



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

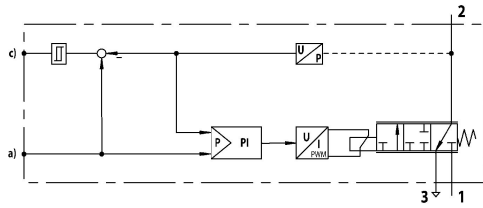
Functional diagram



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 pressure
- 3) Exhaust

Functional diagram for switch output (acknowledge signal)



a) Nominal input 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