

# ED07 series proportional pressure regulator, EtherCAT

R414014312

ED07

2024-02-20

## 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

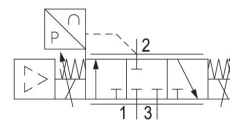
Stackable with base plate

Nominal width 7

Flow 1300 l/min

Pressure range -1 ... 20 bar

EtherCAT, AES fieldbus connection



## Technical data

Protocol	EtherCAT
Control	Directly controlled
Control	EtherCAT
Actual output value	digital
Min. regulation range	0 bar
Max. regulation range	10 bar
Min. working pressure	0.5 bar
Max. working pressure	12 bar
Hysteresis	< 0,03 bar
Medium	Compressed air
Nominal flow Qn	1300 l/min
Min. ambient temperature	5 °C
Max. ambient temperature	50 °C
Min. medium temperature	5 °C
Max. medium temperature	50 °C
Operational voltage DC	24 V
Max. current consumption	1400 mA
Protection class	IP65
Permissible ripple	5%

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ED07  
2024-02-20

R414014312

Max. particle size	50 µm
Min. oil content of compressed air	0 mg/m <sup>3</sup>
Max. oil content of compressed air	1 mg/m <sup>3</sup>
Type	Poppet valve
Mounting orientation	$\alpha = 0 \dots 90^\circ \pm \beta = 0 \dots 90^\circ$
Certificates	CE declaration of conformity
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
Seal material	Hydrogenated acrylonitrile butadiene rubber
Material base plate	Aluminum
Part No.	R414014312

## 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!

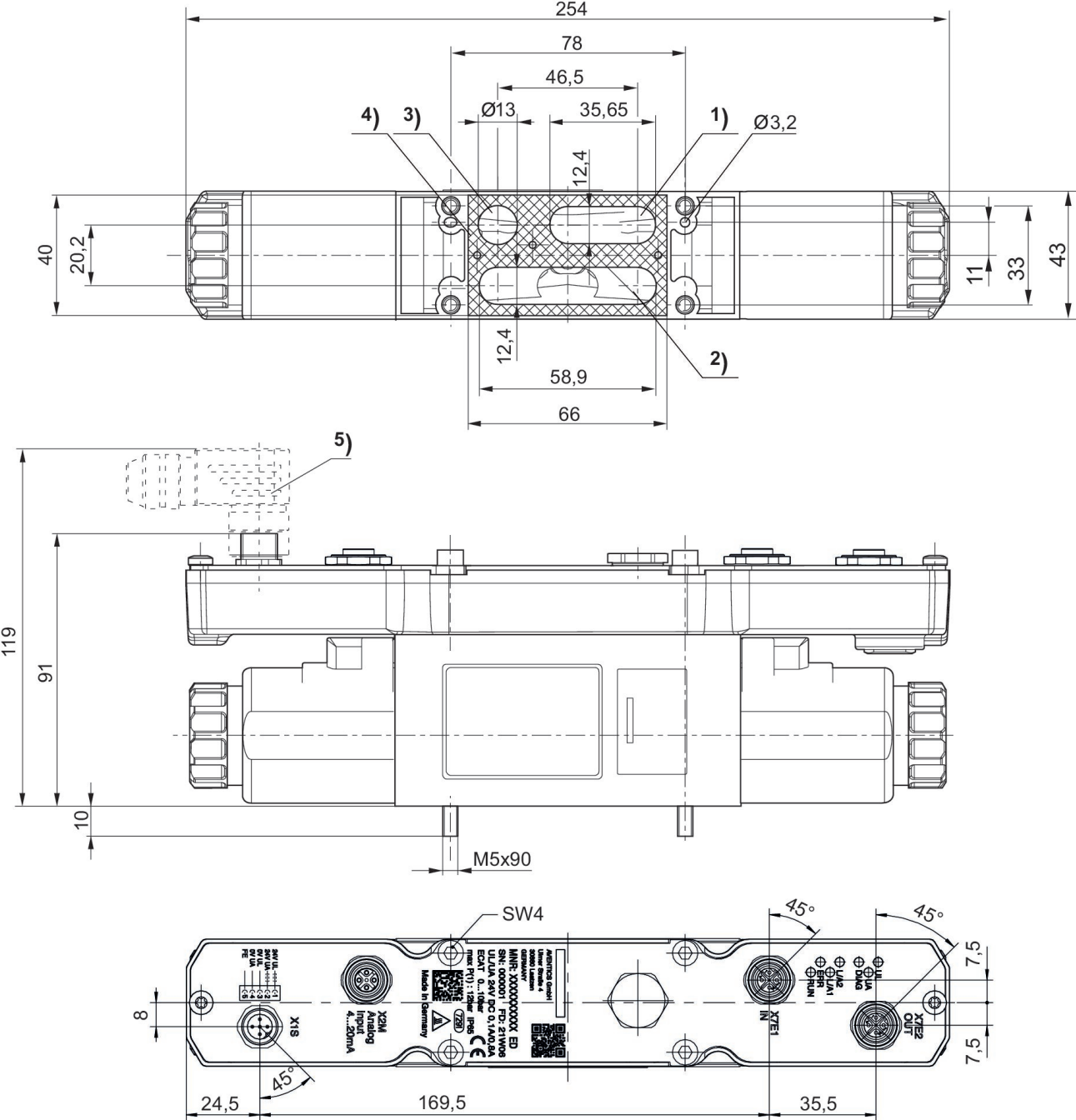
The pressure dew point must be at least 15 °C less than ambient and medium temperature and may not exceed 3 °C.

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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## R414014312 Dimensions

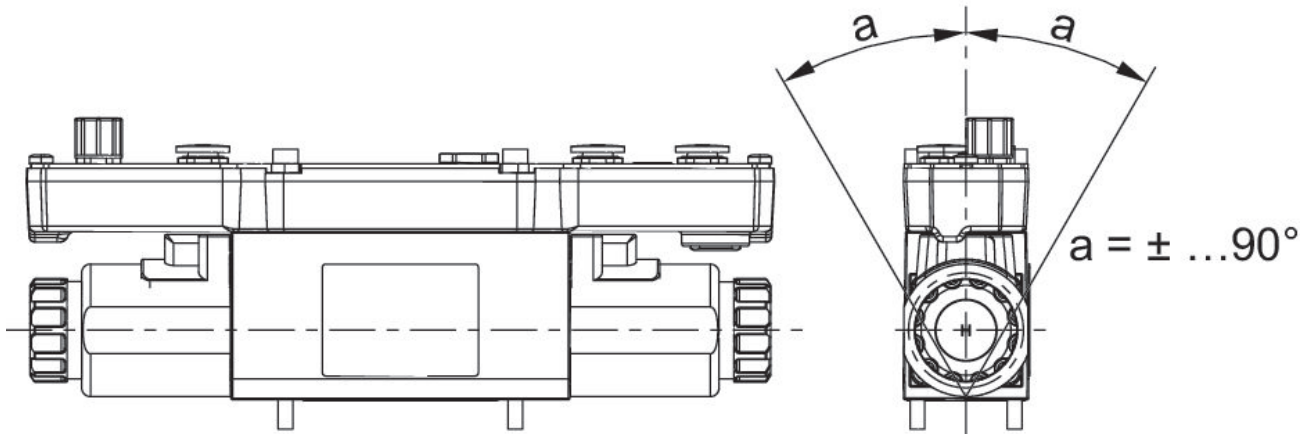


- 1) Operating pressure
- 2) Working pressure
- 3) Exhaust
- 4) Flat gasket
- 5) Accessories not supplied

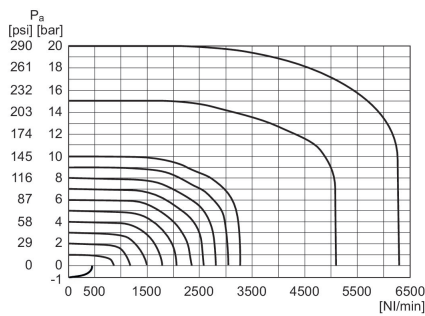
# ED07 series proportional pressure regulator, EtherCAT

ED07  
2024-02-20

R414014312  
Mounting orientation

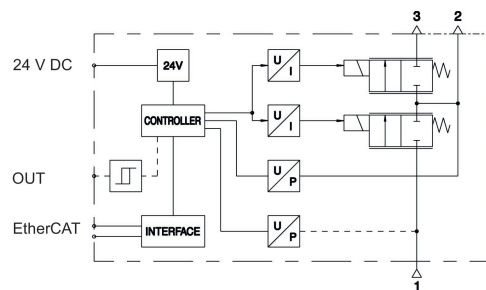


## Flow diagram



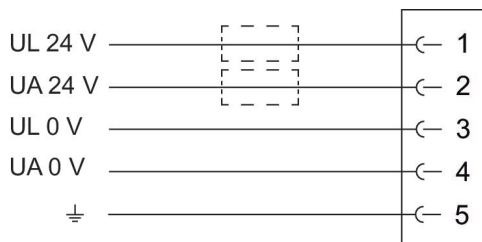
Pa = Working pressure

## Functional diagram



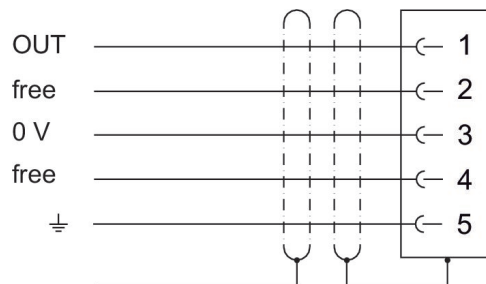
- 1) Input
- 2) Output
- 3) Exhaust

## Plug X1S



Sensor round plug M12x1, 5-pin, integrated plug, A-coded  
Only use a power pack with safe isolation for power supply (electronics and actuator power).

## Plug X20



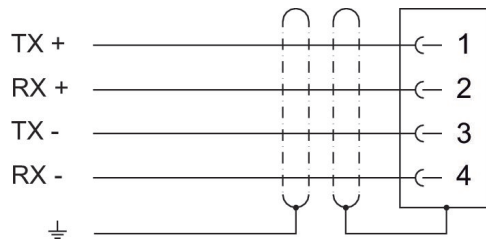
Sensor round plug M12x1, 5-pin, integrated socket, A-coded  
The ground for plug X20 PIN 5 and the shielding for plugs X7E1 / X7E2 and X20 are directly connected to the housing. The device must be mounted on a grounded mounting plate.

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ED07  
2024-02-20

R414014312  
Plug X7E1, X7E2

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Ethernet plug M12x1, 4-pin, socket, D-coded  
The Ethernet cables must be shielded.