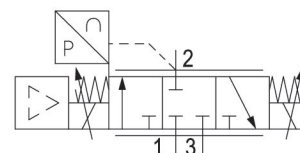


# ED12 series proportional pressure regulator, EtherCAT

## R414014324

General series information  
AVENTICS ED12 Dynamic Direct Acting  
Pressure Regulator

- The AVENTICS ED12 direct acting pressure regulator offers proportional pressurization and the exhaust valves are controlled separately to deliver dynamic control for the most demanding applications.



### Technical data

Protocol	EtherCAT
Control	Directly controlled
Control	digital
Function	Air exhaust
Actual output value	EtherCAT
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
Max. current consumption	1400 mA
Protection class	IP65
Permissible ripple	5%
Max. particle size	50 µm
Oil content of compressed air min.	0 mg/m <sup>3</sup>
Oil content of compressed air max.	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
Electrical connection size	via signal connection
Signal connection	input and output
Signal connection	Plug
Signal connection	M12
Signal connection	5-pin
Actual output value	digital
Industry	Industrial
Weight	2.3 kg

## Material

Housing material	Aluminum Steel, chrome-plated
Seal material	Hydrogenated acrylonitrile butadiene rubber
Part No.	R414014324

## Technical information

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

Nominal flow  $Q_n$  with working pressure 7 bar, with secondary pressure 6 bar and  $\Delta p = 0.2$  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!

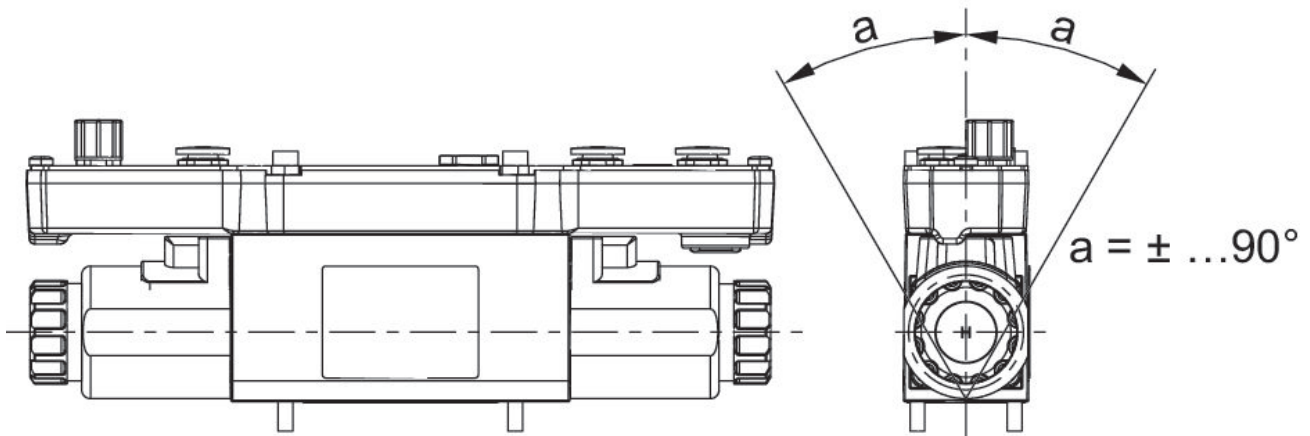
The pressure dew point must be at least 15 °C less than ambient and medium temperature and may not exceed 3 °C.

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

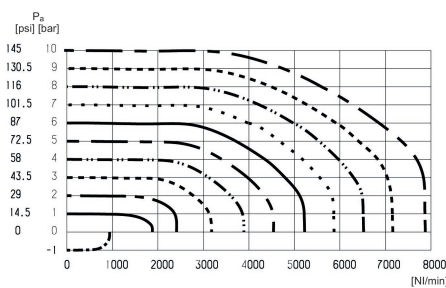
Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in <https://www.emerson.com/en-us/support>).



## Mounting orientation

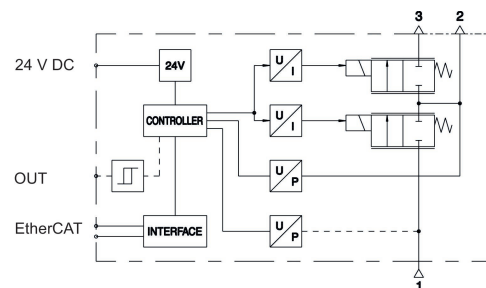


## Flow diagram



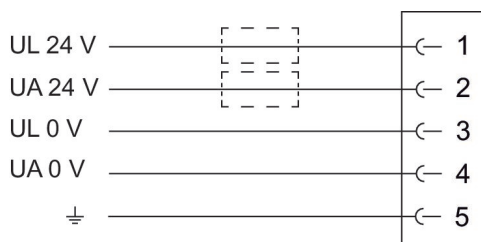
Pa = Working pressure

## Functional diagram



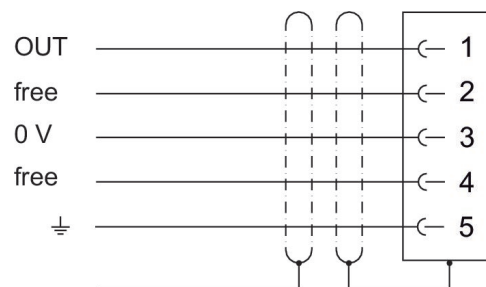
- 1) Input
- 2) Output
- 3) Exhaust

## Plug X1S



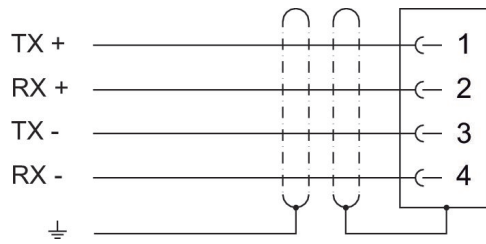
Sensor round plug M12x1, 5-pin, integrated plug, A-coded  
Only use a power pack with safe isolation for power supply (electronics and actuator power).

## 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.

## Plug X7E1, X7E2



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