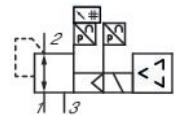


- Compact design with high flow, no pressure loss in case of a load
- Versatile application as stand-alone solution, in maintenance units, or assembled into blocks
- Different pressure profiles possible
- Different electrical connections available
- Set point specification on the device or PLC

AVENTICS EV12 High Flow Proportional Control Valve

The AVENTICS EV12 high flow proportional pressure control valve with its compact design hides its large flow capacity. It can be used as a stand-alone solution (high flow valve), as a battery for block assembly with consistently controlled pressure, or integrated into a maintenance unit.



Technical data

Type

Continuous pressure supply

Display: display

Archive product: Do not use in new constructions!

Control

Externally piloted

Function

Pressure-holding, output 10V constant to supply a set point potentiometer.

Operational voltage DC

24 V

Max. current consumption

220 mA

Air supply

through

Min. regulation range

0 bar

Max. regulation range

10 bar

Min. working pressure

0 bar

Max. working pressure

10 bar

Hysteresis

< 0,12 bar

< 0,12 bar

Nominal flow Qn

6500 l/min

Min. ambient temperature

0 °C

Max. ambient temperature

50 °C

Min. medium temperature

0 °C

E/P pressure regulator, Series EV12

R414011406

Series

EV12

2025-05-09

Max. medium temperature	50 °C
Permissible ripple	5%
Max. particle size	50 µm
Min. oil content of compressed air	0 mg/m ³
Max. oil content of compressed air	5 mg/m ³
Frame size	AS3
Type	Poppet valve
Compressed air connection input	G 3/8
Compressed air connection output	G 3/8
Electrical connection size	M12
Electrical connection number of poles	5-pin
Electrical connection coding	A-coded
Industry	Industrial
Weight	1.4 kg

Material

Housing material	Polyamide
Seal material	Nitrile butadiene rubber
Material base plate	Aluminum
Part No.	R414011406

Technical information

Power outage: maintain pressure

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>).

Dimensions

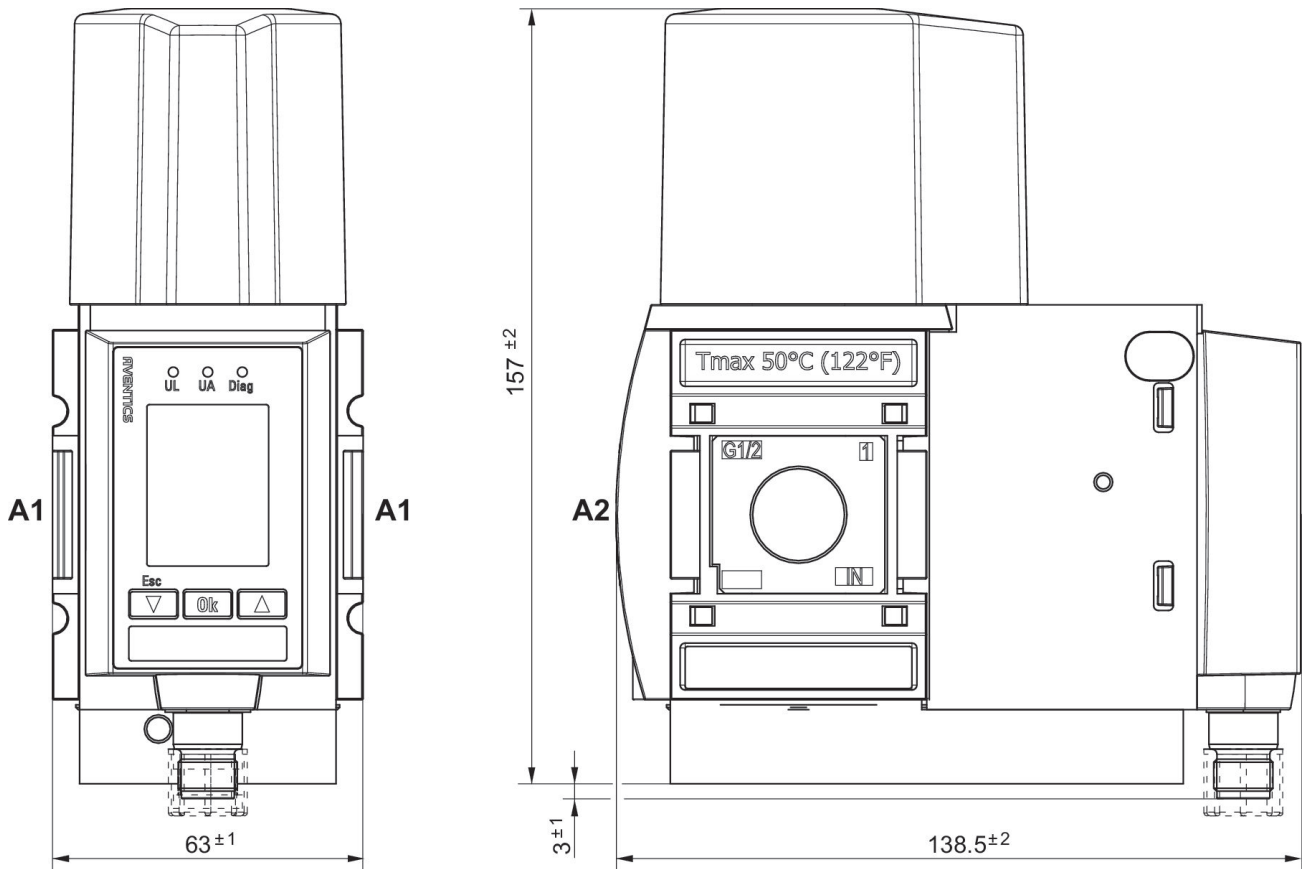
E/P pressure regulator, Series EV12

R414011406

Series
EV12

2025-05-09

Continuous pressure supply



A1 = input
A2 = output

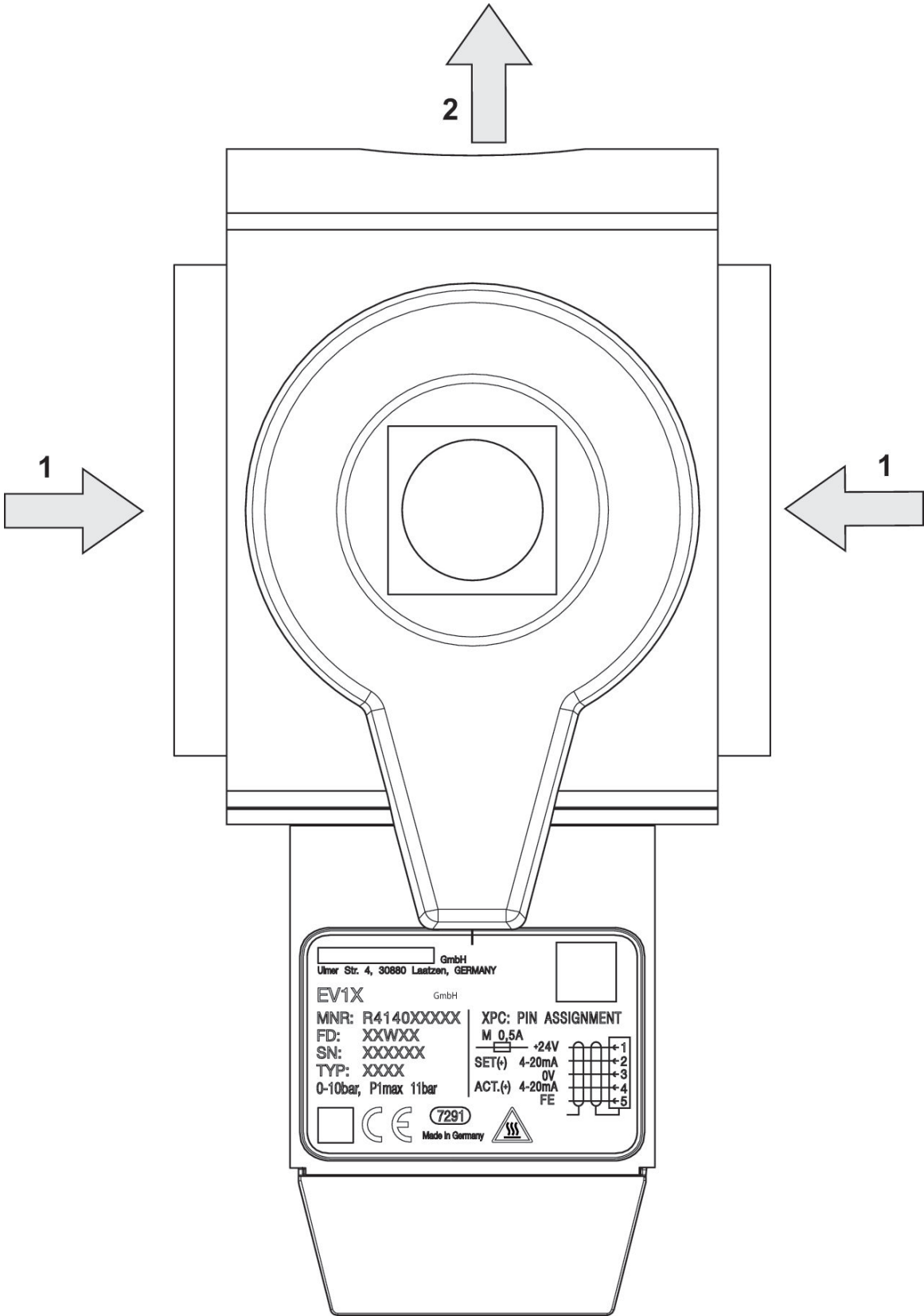
E/P pressure regulator, Series EV12

R414011406

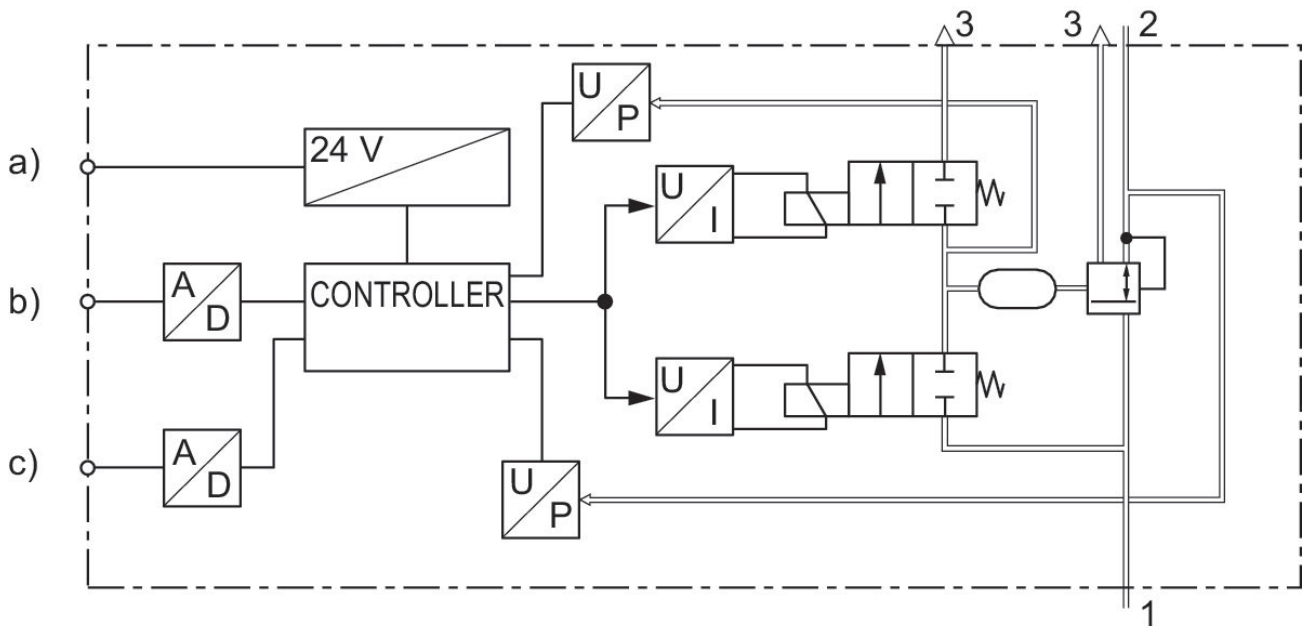
Series
EV12

2025-05-09

Continuous pressure supply

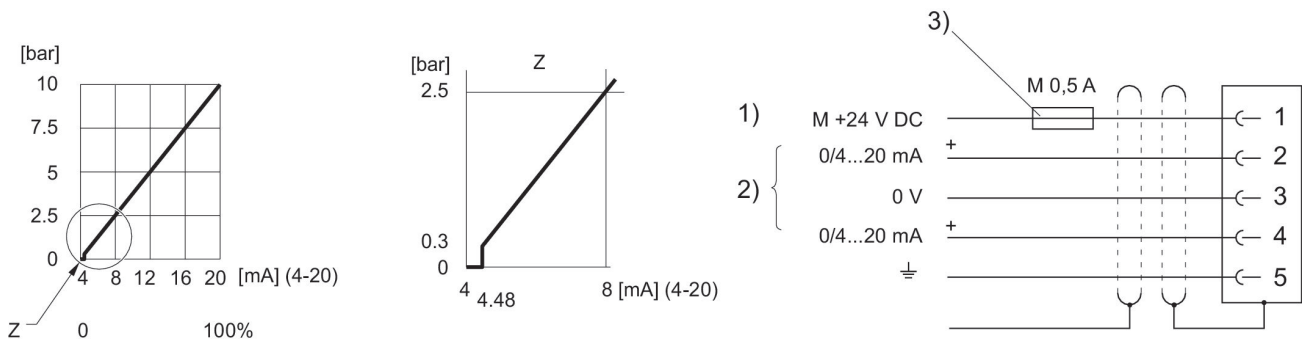


Functional diagram



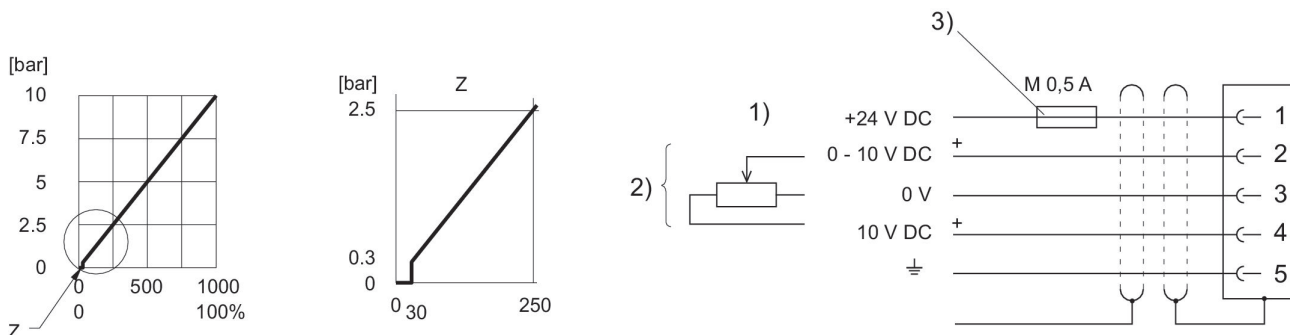
a) Voltage supply b) Nominal value
c) Actual output value

Characteristic and pin assignment for current control with actual output value



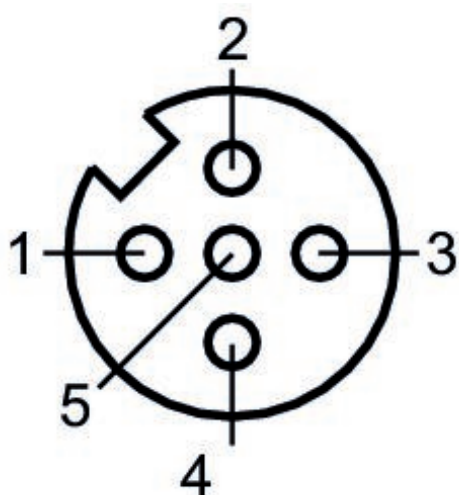
1) power supply
2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V (pin 3). Nominal input value (ohmic load 100 Ω), actual output value: external ohmic load < 300 Ω . If the power supply is switched off, the nominal input value is high-ohmic.
3) The power supply must be protected by an external M 0.5 A fuse. Connect the plug via a shielded cable to ensure EMC.

Characteristic and pin assignment for voltage control with actual output value



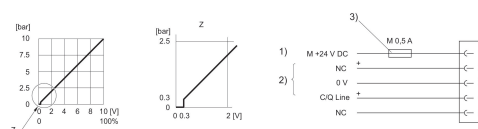
- 1) power supply
- 2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V (pin 3). Nominal input value ($R = 1 \text{ M}\Omega$), actual output value: min. load resistance $> 10 \text{ K}\Omega$. If the power supply is switched off, the nominal input value is high-ohmic.
- 3) The power supply must be protected by an external M 0.5 A fuse. Connect the plug via a shielded cable to ensure EMC.

Plug assignment



- 1) 24 V DC
- 2) Nominal input value
- 3) GND
- 4) Actual output value
- 5) Ground

Characteristic curve and plug assignment for IO-Link version



- 1) power supply
- 2) C/Q Line (pin 4) Not connected (NC) (pin 2) are related to 0 V (pin 3).
- 3) The power supply must be protected by an external M 0.5 A fuse. Connect the plug via a shielded cable to ensure EMC.

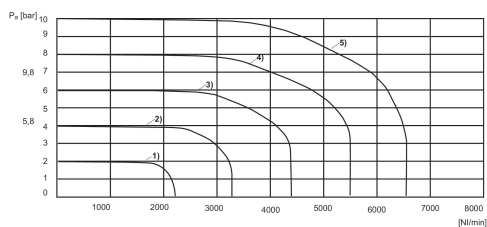
E/P pressure regulator, Series EV12

R414011406

Series
EV12

2025-05-09

Flow characteristic curve



1) $P_v = 3$ bar 2) $P_v = 5$ bar 3) $P_v = 7$ bar 4) $P_v = 9$ bar 5) $P_v = 11$ bar

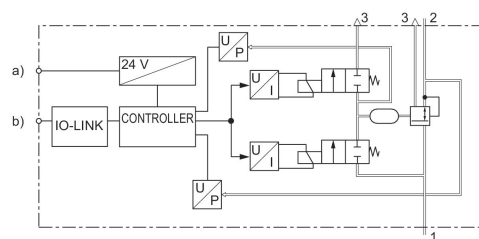
P_v = Supply pressure

P_a = Working pressure

$P_v = P_a + 1$

Functional diagram

IO-Link



a) Supply Voltage

b) C/Q Line