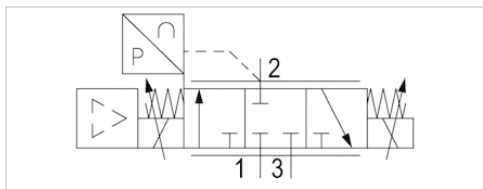


E/P pressure regulator, Series ED07

- Qn = 1300 l/min

- Electr. connection Plug, M12, 5-pin

- Signal connection input and output, Socket, M12, 5-pin



Type

Mounting orientation

Certificates

Working pressure max

Ambient temperature min./max.

Medium temperature min./max.

Medium

Max. particle size

Oil content of compressed air

Nominal flow Qn

Control

DC operating voltage

Voltage tolerance DC

Permissible ripple

Max. power consumption

Protection class

Weight

Poppet valve

$\alpha = 0 \dots 90^\circ \pm \beta = 0 \dots 90^\circ$

CE declaration of conformity

See table below

5 ... 50 °C

5 ... 50 °C

Compressed air

50 µm

1 mg/m³

1300 l/min

Analog

24 V

-20% / +30%

5%

1400 mA

IP65

2,05 kg

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

Technical data

Part No.	Working pressure max	Pressure setting range min./max.	Nominal input value
			Min./max.
R414009638	0,12 bar	0 ... 0,05 bar	0 ... 20 mA
R414009639	0,12 bar	0 ... 0,05 bar	4 ... 20 mA
R414009640	0,12 bar	0 ... 0,05 bar	0 ... 10 V
R414009641	0,7 bar	0 ... 0,2 bar	0 ... 20 mA
R414009642	0,7 bar	0 ... 0,2 bar	4 ... 20 mA
R414009643	0,7 bar	0 ... 0,2 bar	0 ... 10 V
R414009644	0,7 bar	0 ... 0,2 bar	0 ... 10 V
R414000687	3 bar	-1 ... 1 bar	0 ... 20 mA
R414009645	3 bar	-1 ... 1 bar	4 ... 20 mA
R414009646	3 bar	-1 ... 1 bar	0 ... 10 V
R414009647	3 bar	-1 ... 1 bar	0 ... 10 V
R414009648	3 bar	0 ... 1 bar	0 ... 20 mA
R414009649	3 bar	0 ... 1 bar	4 ... 20 mA
R414009650	3 bar	0 ... 1 bar	0 ... 10 V
R414009651	3 bar	0 ... 1 bar	0 ... 10 V
R414009652	3 bar	0 ... 2 bar	0 ... 20 mA
R414009653	3 bar	0 ... 2 bar	4 ... 20 mA
R414009654	3 bar	0 ... 2 bar	0 ... 10 V
R414009655	3 bar	0 ... 2 bar	0 ... 10 V

Part No.	Working pressure max	Pressure setting range min./max.	Nominal input value
			Min./max.
5610264800	8 bar	0 ... 6 bar	0 ... 20 mA
5610264810	8 bar	0 ... 6 bar	4 ... 20 mA
5610264820	8 bar	0 ... 6 bar	0 ... 10 V
5610264830	8 bar	0 ... 6 bar	0 ... 10 V
5610264500	12 bar	0 ... 10 bar	0 ... 20 mA
5610264510	12 bar	0 ... 10 bar	4 ... 20 mA
5610264520	12 bar	0 ... 10 bar	0 ... 10 V
5610264530	12 bar	0 ... 10 bar	0 ... 10 V
R414000775	18 bar	0 ... 16 bar	0 ... 20 mA
R414000776	18 bar	0 ... 16 bar	4 ... 20 mA
R414000777	18 bar	0 ... 16 bar	0 ... 10 V
R414000778	18 bar	0 ... 16 bar	0 ... 10 V
5610264200	21 bar	0 ... 20 bar	0 ... 20 mA
5610264210	21 bar	0 ... 20 bar	4 ... 20 mA
5610264220	21 bar	0 ... 20 bar	0 ... 10 V
5610264230	21 bar	0 ... 20 bar	0 ... 10 V

Part No.	Actual output value	Control	Hysteresis	Fig.	
	Min./max.				
R414009638	0 ... 20 mA	Analog	0.001 bar	Fig. 1	-
R414009639	4 ... 20 mA	Analog	0.001 bar	Fig. 1	-
R414009640	0 ... 10 V	Analog	0.001 bar	Fig. 2	-
R414009641	0 ... 20 mA	Analog	0.003 bar	Fig. 1	-
R414009642	4 ... 20 mA	Analog	0.003 bar	Fig. 1	-
R414009643	-	Analog	0.003 bar	Fig. 3	1)
R414009644	0 ... 10 V	Analog	0.003 bar	Fig. 2	-
R414000687	0 ... 20 mA	Analog	0.015 bar	Fig. 1	-
R414009645	4 ... 20 mA	Analog	0.015 bar	Fig. 1	-
R414009646	-	Analog	0.015 bar	Fig. 3	1)
R414009647	0 ... 10 V	Analog	0.015 bar	Fig. 2	-
R414009648	0 ... 20 mA	Analog	0.015 bar	Fig. 1	-
R414009649	4 ... 20 mA	Analog	0.015 bar	Fig. 1	-
R414009650	-	Analog	0.015 bar	Fig. 3	1)
R414009651	0 ... 10 V	Analog	0.015 bar	Fig. 2	-
R414009652	0 ... 20 mA	Analog	0.015 bar	Fig. 1	-
R414009653	4 ... 20 mA	Analog	0.015 bar	Fig. 1	-
R414009654	-	Analog	0.015 bar	Fig. 3	1)
R414009655	0 ... 10 V	Analog	0.015 bar	Fig. 2	-
5610264800	0 ... 20 mA	Analog	0.03 bar	Fig. 1	-
5610264810	4 ... 20 mA	Analog	0.03 bar	Fig. 1	-
5610264820	-	Analog	0.03 bar	Fig. 3	1)
5610264830	0 ... 10 V	Analog	0.03 bar	Fig. 2	-
5610264500	0 ... 20 mA	Analog	0.03 bar	Fig. 1	-
5610264510	4 ... 20 mA	Analog	0.03 bar	Fig. 1	-
5610264520	-	Analog	0.03 bar	Fig. 3	1)
5610264530	0 ... 10 V	Analog	0.03 bar	Fig. 2	-
R414000775	0 ... 20 mA	Analog	0.04 bar	Fig. 1	-
R414000776	4 ... 20 mA	Analog	0.04 bar	Fig. 1	-

Part No.	Actual output value	Control	Hysteresis	Fig.	
	Min./max.				
R414000777	-	Analog	0.04 bar	Fig. 3	1)
R414000778	0 ... 10 V	Analog	0.04 bar	Fig. 2	-
5610264200	0 ... 20 mA	Analog	0.09 bar	Fig. 1	-
5610264210	4 ... 20 mA	Analog	0.09 bar	Fig. 1	-
5610264220	-	Analog	0.09 bar	Fig. 3	1)
5610264230	0 ... 10 V	Analog	0.09 bar	Fig. 2	-

1) Output 10V constant to supply a set point potentiometer.

Technical information

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 the MediaCentre).

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.

Minimum working pressure = 0.5 bar + max. required secondary pressure

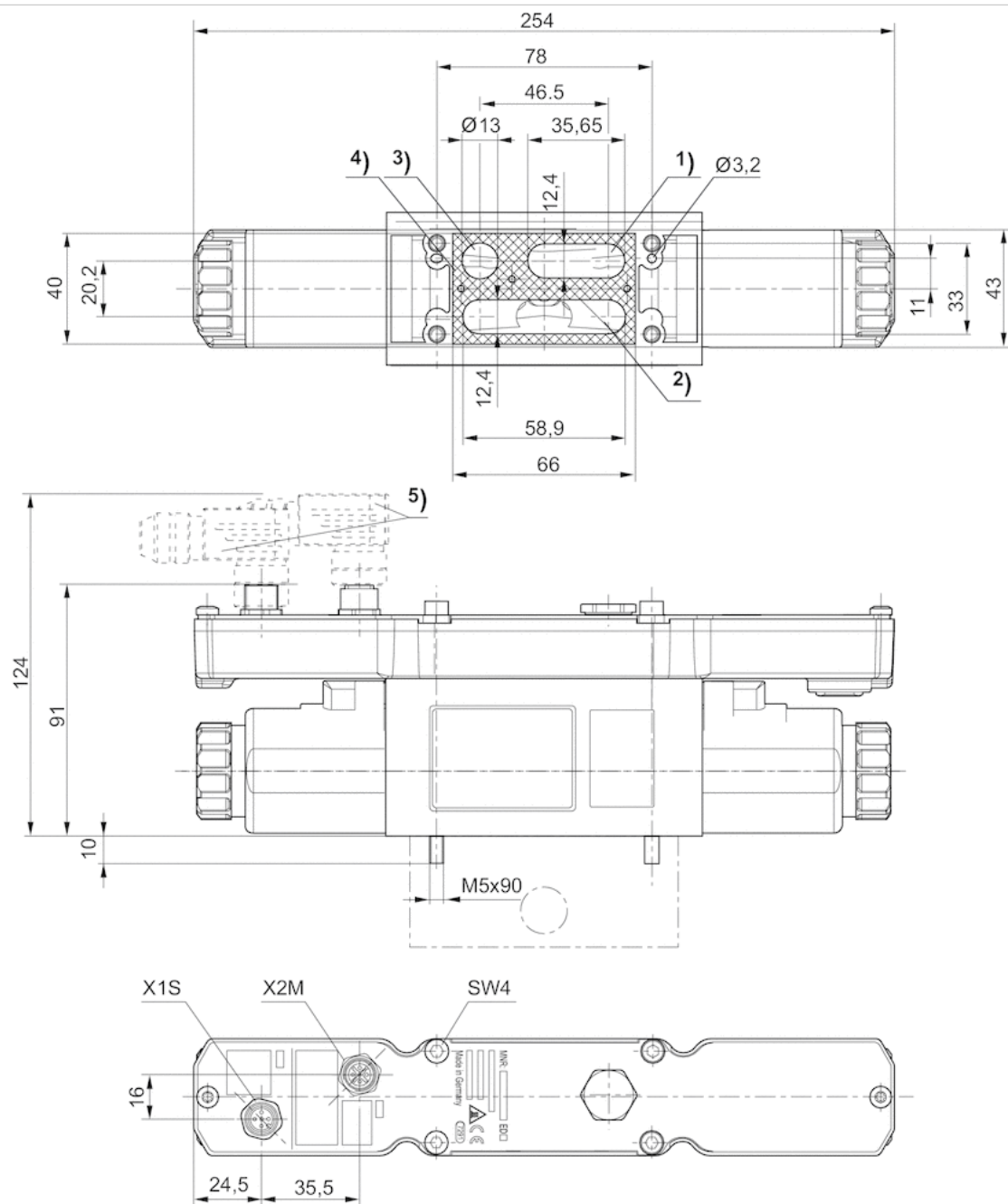
Additional pressure setting ranges available on request

Technical information

Material	
Housing	Die-cast aluminum Steel
Seals	Hydrogenated acrylonitrile butadiene rubber

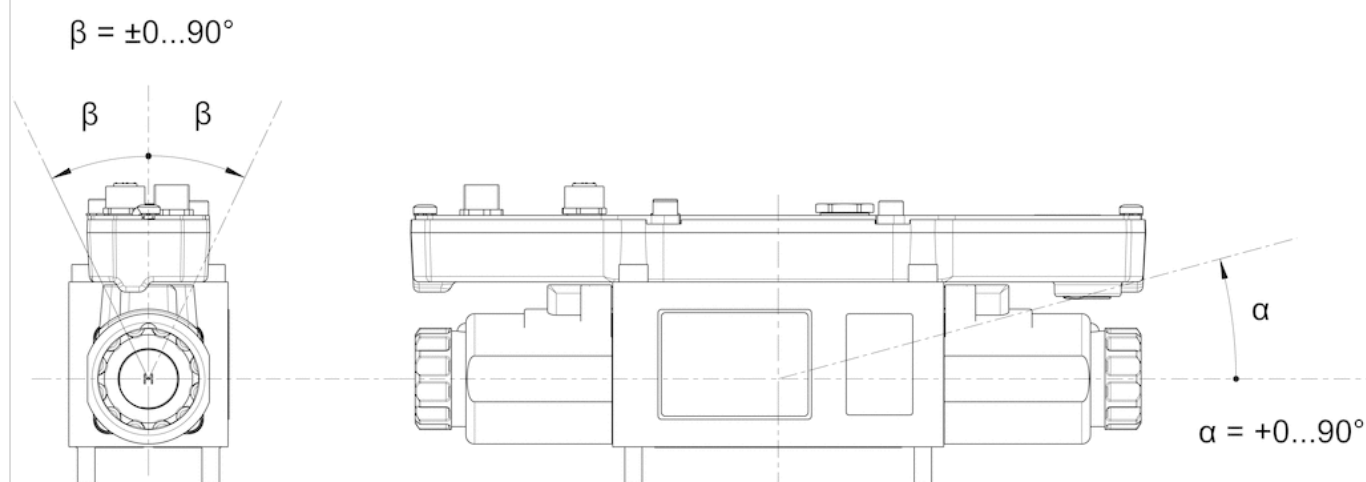
Dimensions

Dimensions



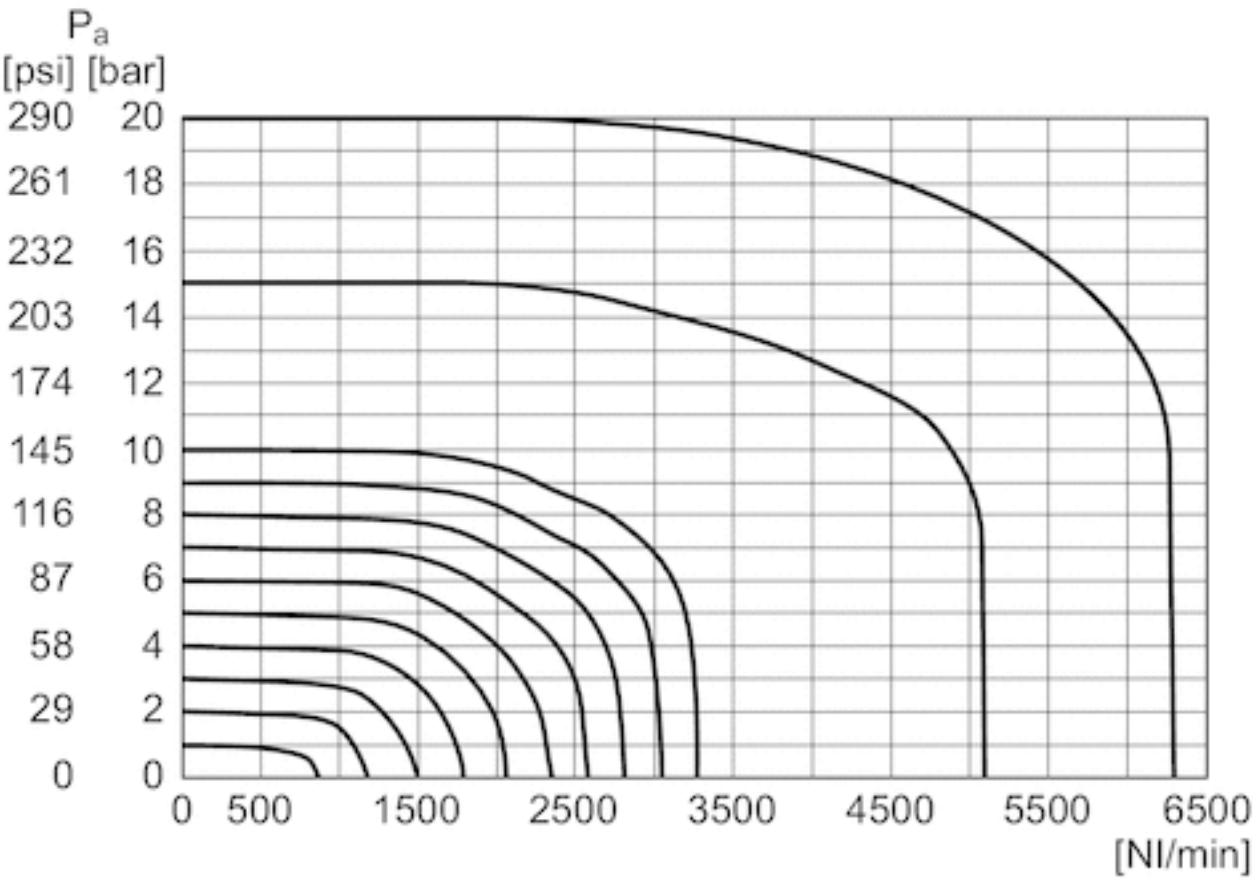
- 1) Operating pressure
- 2) Working pressure
- 3) Exhaust
- 4) Flat gasket
- 5) Accessories not supplied

Mounting orientation



Diagrams

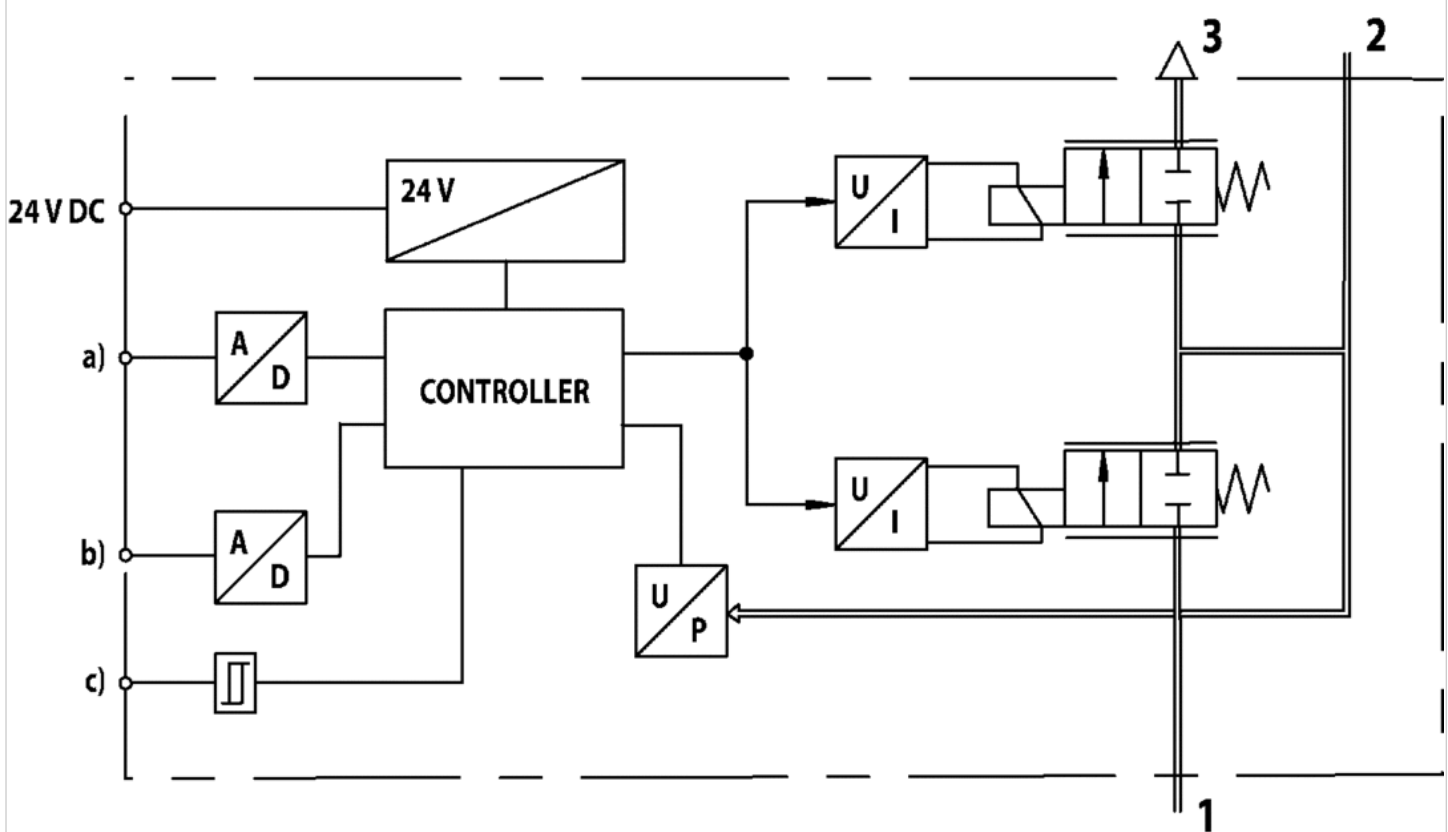
Flow diagram



Pa = Working pressure

Circuit diagram

Functional diagram



a) Nominal input value

b) Actual output value

c) Switch output (acknowledge signal)

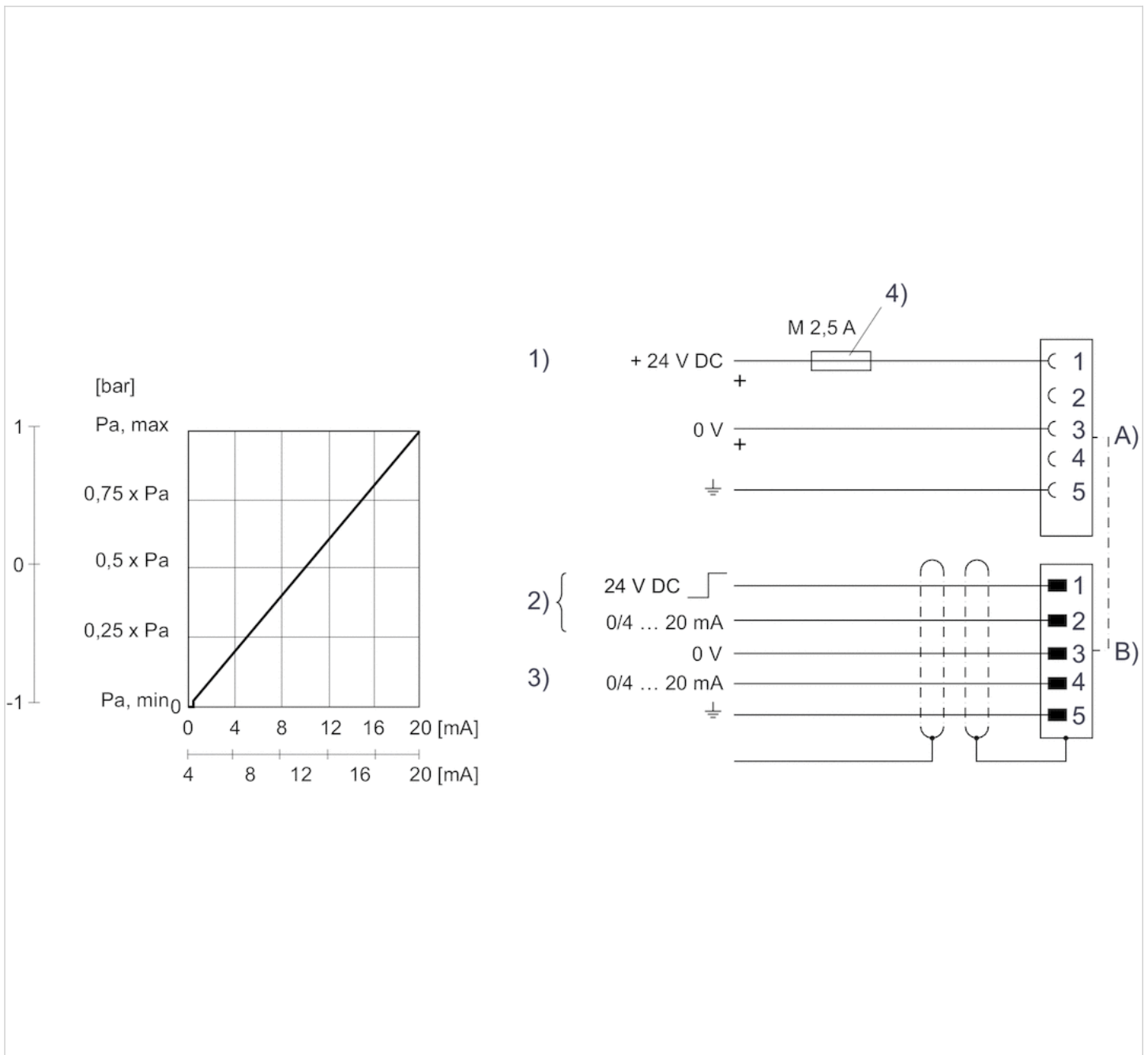
The E/P pressure control valve modulates the pressure corresponding to an analog electrical nominal input value.

1) Operating pressure

2) Working pressure

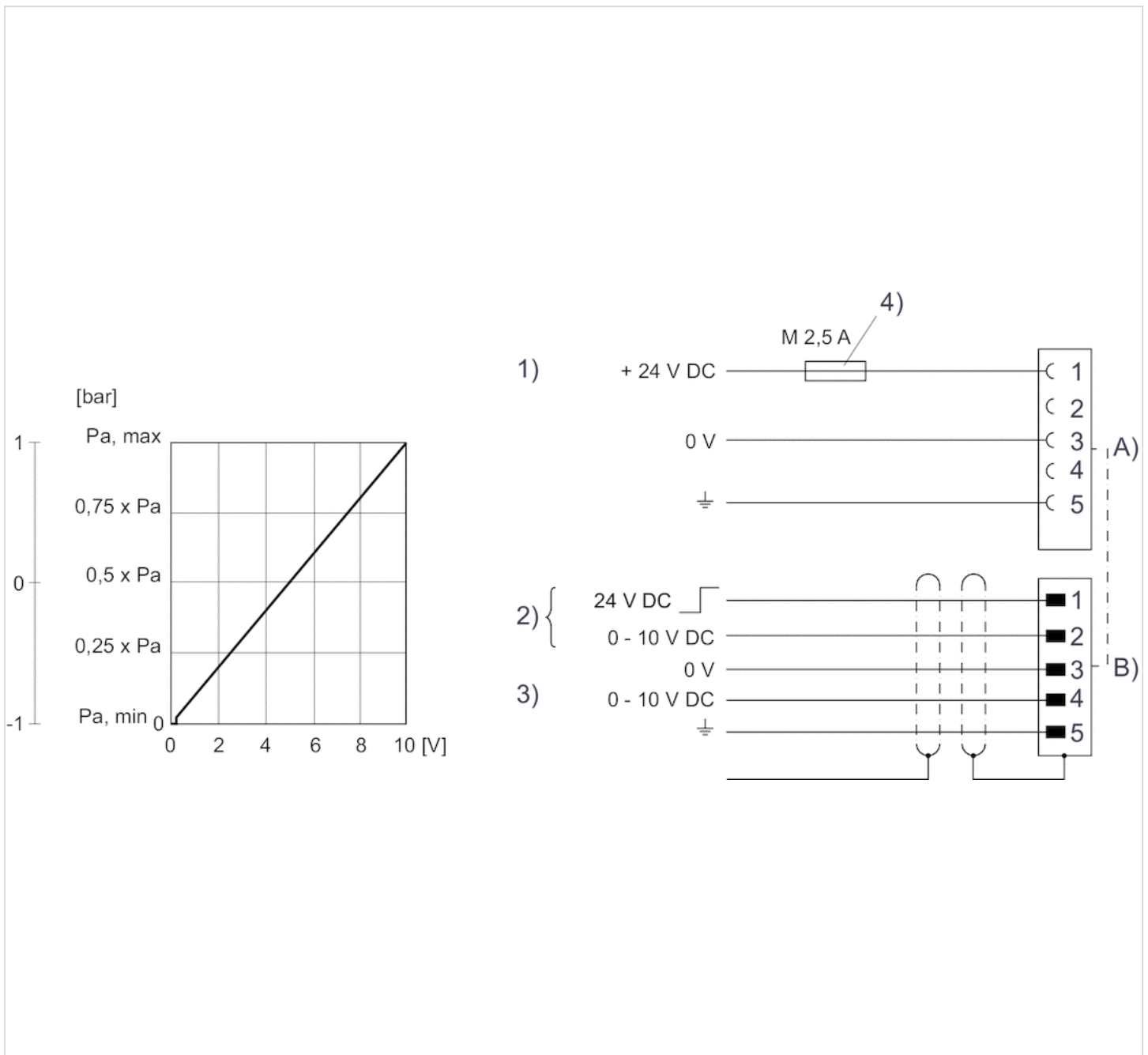
3) Exhaust

Fig. 1, Characteristic and pin assignment for current control with actual output value



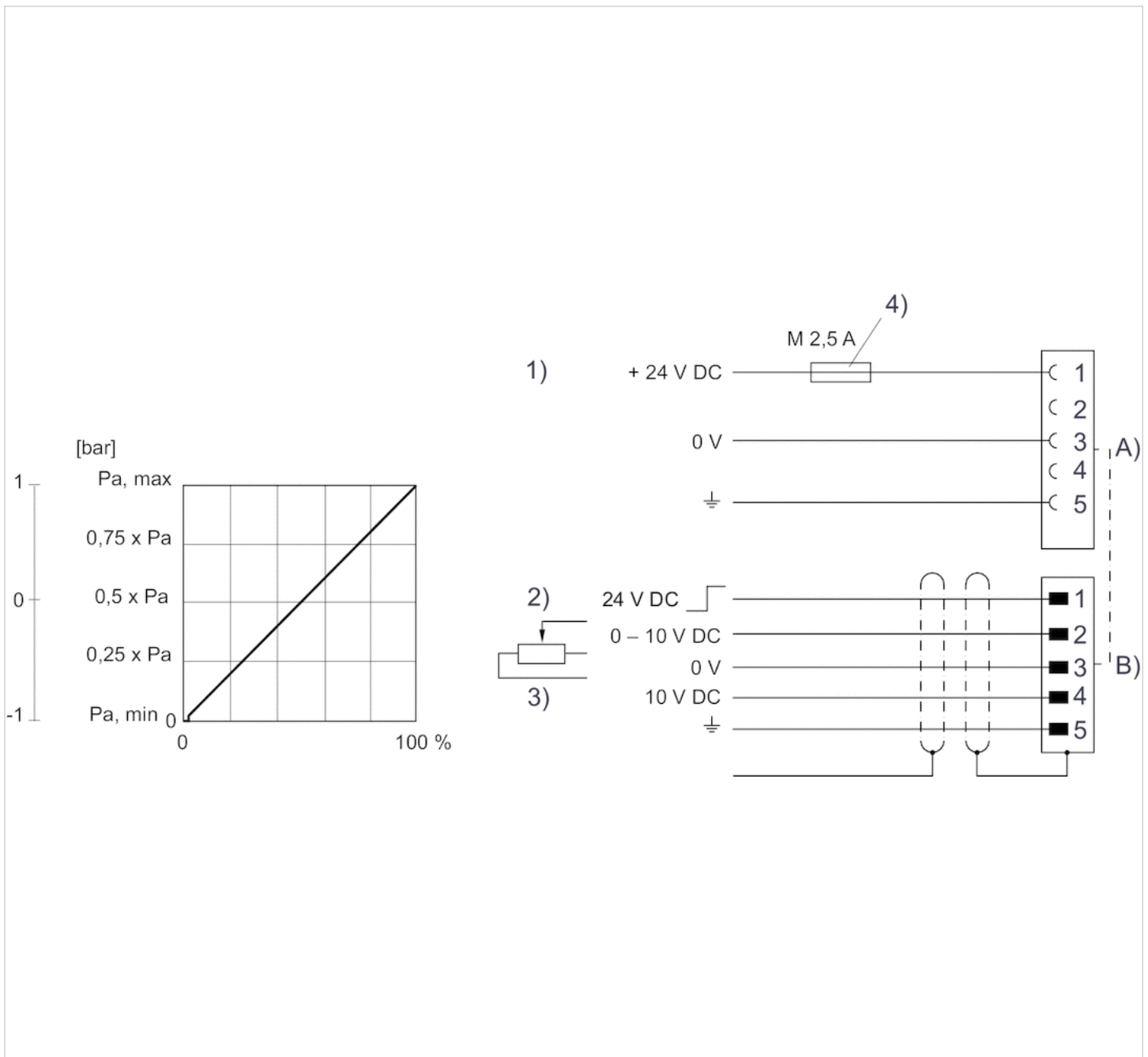
- 1) Supply Voltage
 - 2) Switch output (pin 1) and nominal value (pin 2) are related to 0 V. Input current nominal value (ohmic load 100 Ω).
 - 3) Actual value (pin 4) is related to 0 V (max. total resistance of downstream devices 300 Ω).
 - 4) The operating voltage must be protected by an external M 2.5 A fuse.
- Connect plug X2M via a shielded cable to ensure EMC.
- A) Plug X1S B) Plug X2M

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



- 1) Supply Voltage
 - 2) Switch output (pin 1) and nominal value (pin 2) are related to 0 V.
 - 3) Actual value (pin 4) is related to 0 V (min. load resistance 1 kΩ).
 - 4) The operating voltage must be protected by an external M 2.5 A fuse.
- Connect plug X2M via a shielded cable to ensure EMC.
- A) Plug X1S B) Plug X2M

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



- 1) Supply Voltage
- 2) Switch output (pin 1) and nominal value (pin 2) are related to 0 V.
- 3) Potentiometer control (min. 0-2 kΩ, max. 0-10 kΩ)
- 4) The operating voltage must be protected by an external M 2.5 A fuse.
Connect plug X2M via a shielded cable to ensure EMC.
- A) Plug X1S B) Plug X2M

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