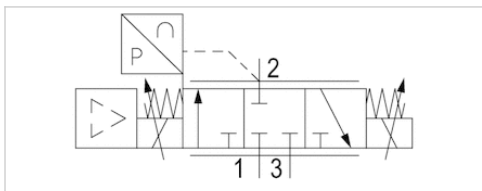


# E/P pressure regulator, Series ED12

- Qn = 2600 l/min
- Electr. connection Plug, M12, 5-pin
- Signal connection input and output, Socket, M12, 5-pin



Type	Poppet valve
Mounting orientation	$\alpha = 0 \dots 90^\circ \pm \beta = 0 \dots 90^\circ$
Certificates	CE declaration of conformity
Working pressure max	See table below
Ambient temperature min./max.	5 ... 50 °C
Medium temperature min./max.	5 ... 50 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 1 mg/m <sup>3</sup>
Nominal flow Qn	2600 l/min
Control	Analog
DC operating voltage	24 V
Voltage tolerance DC	-20% / +30%
Permissible ripple	5%
Max. power consumption	1400 mA
Protection class	IP65
Weight	2,3 kg

## Technical data

Part No.	Working pressure max	Pressure setting range min./max.	Nominal input value
			Min./max.
R414009666	3 bar	0 ... 1 bar	0 ... 20 mA
R414009667	3 bar	0 ... 1 bar	4 ... 20 mA
R414009668	3 bar	0 ... 1 bar	0 ... 10 V
R414009669	3 bar	0 ... 1 bar	0 ... 10 V
R414009670	3 bar	0 ... 2 bar	0 ... 20 mA
R414009671	3 bar	0 ... 2 bar	4 ... 20 mA
R414009672	3 bar	0 ... 2 bar	0 ... 10 V
R414009673	3 bar	0 ... 2 bar	0 ... 10 V
R414009574	8 bar	0 ... 6 bar	0 ... 20 mA
R414009575	8 bar	0 ... 6 bar	4 ... 20 mA
R414009576	8 bar	0 ... 6 bar	0 ... 10 V
R414002870	8 bar	0 ... 6 bar	0 ... 10 V
R414000728	12 bar	0 ... 10 bar	0 ... 20 mA
R414000729	12 bar	0 ... 10 bar	4 ... 20 mA
R414000730	12 bar	0 ... 10 bar	0 ... 10 V
R414000731	12 bar	0 ... 10 bar	0 ... 10 V

Part No.	Actual output value	Control	Hysteresis	Fig.	
	Min./max.				
R414009666	0 ... 20 mA	Analog	0.015 bar	Fig. 1	-
R414009667	4 ... 20 mA	Analog	0.015 bar	Fig. 1	-
R414009668	-	Analog	0.015 bar	Fig. 3	1)

Part No.	Actual output value	Control	Hysteresis	Fig.	
	Min./max.				
R414009669	0 ... 10 V	Analog	0.015 bar	Fig. 2	-
R414009670	0 ... 20 mA	Analog	0.015 bar	Fig. 1	-
R414009671	4 ... 20 mA	Analog	0.015 bar	Fig. 1	-
R414009672	-	Analog	0.015 bar	Fig. 3	1)
R414009673	0 ... 10 V	Analog	0.015 bar	Fig. 2	-
R414009574	0 ... 20 mA	Analog	0.03 bar	Fig. 1	-
R414009575	4 ... 20 mA	Analog	0.03 bar	Fig. 1	-
R414009576	-	Analog	0.03 bar	Fig. 3	1)
R414002870	0 ... 10 V	Analog	0.03 bar	Fig. 2	-
R414000728	0 ... 20 mA	Analog	0.03 bar	Fig. 1	-
R414000729	4 ... 20 mA	Analog	0.03 bar	Fig. 1	-
R414000730	-	Analog	0.03 bar	Fig. 3	1)
R414000731	0 ... 10 V	Analog	0.03 bar	Fig. 2	-

Minimum working pressure = 0.5 bar + max. required secondary pressure, Additional pressure setting ranges available on request

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.

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

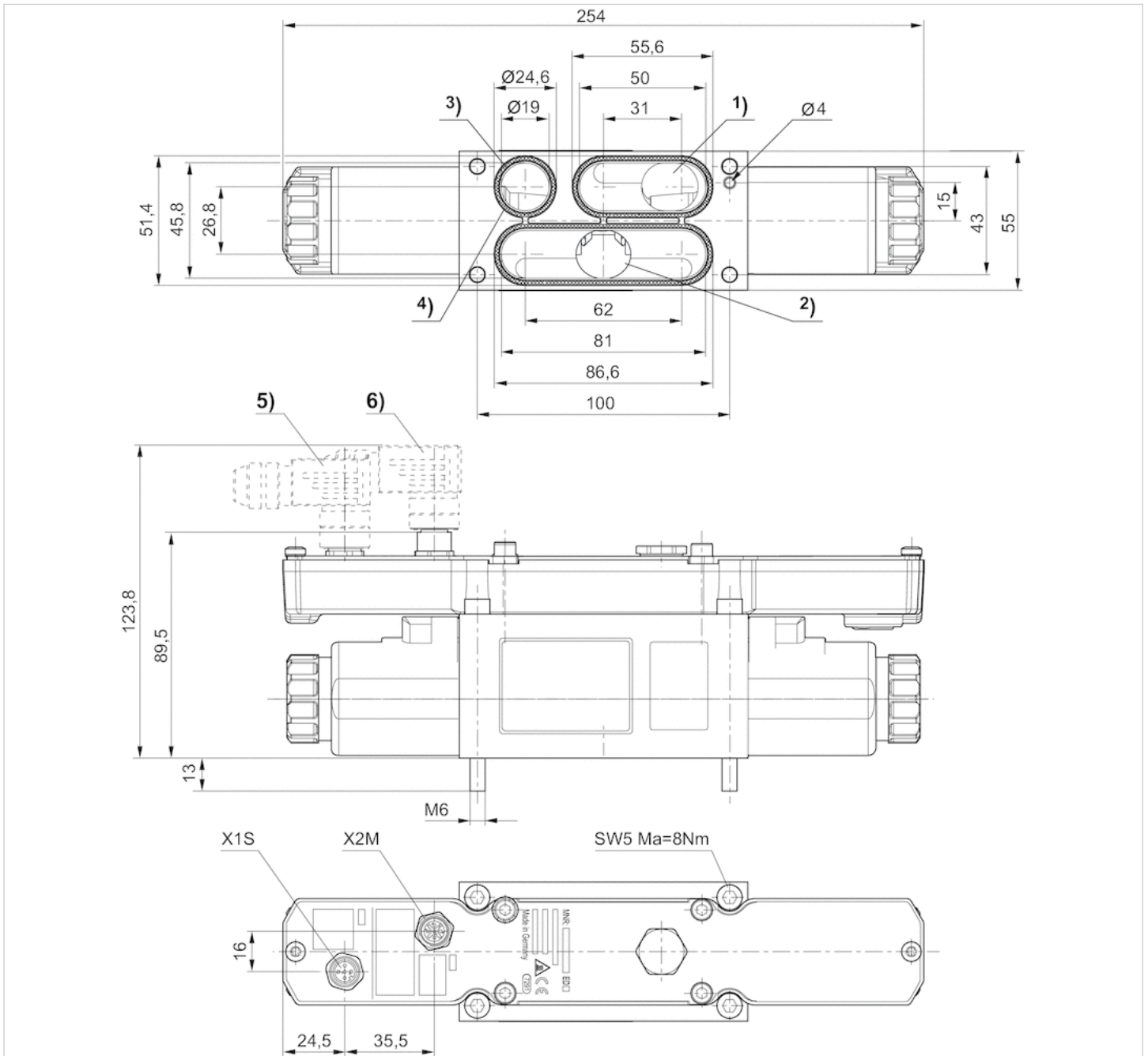
The protection class is only ensured when the plug is mounted properly. For detailed information, see operating instructions.

## Technical information

Material	
Housing	Aluminum Steel
Seals	Hydrogenated acrylonitrile butadiene rubber

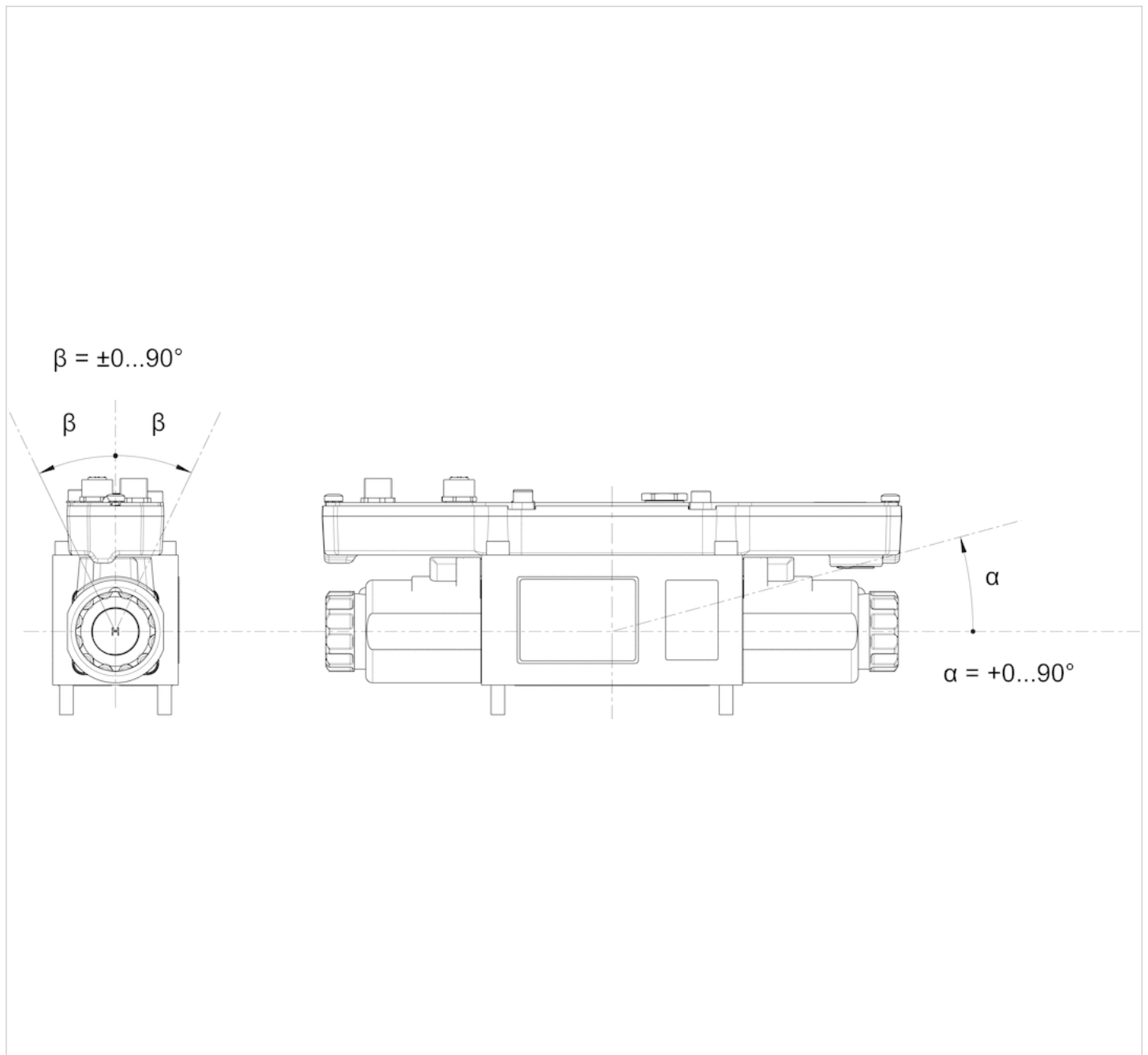
# Dimensions

## Dimensions



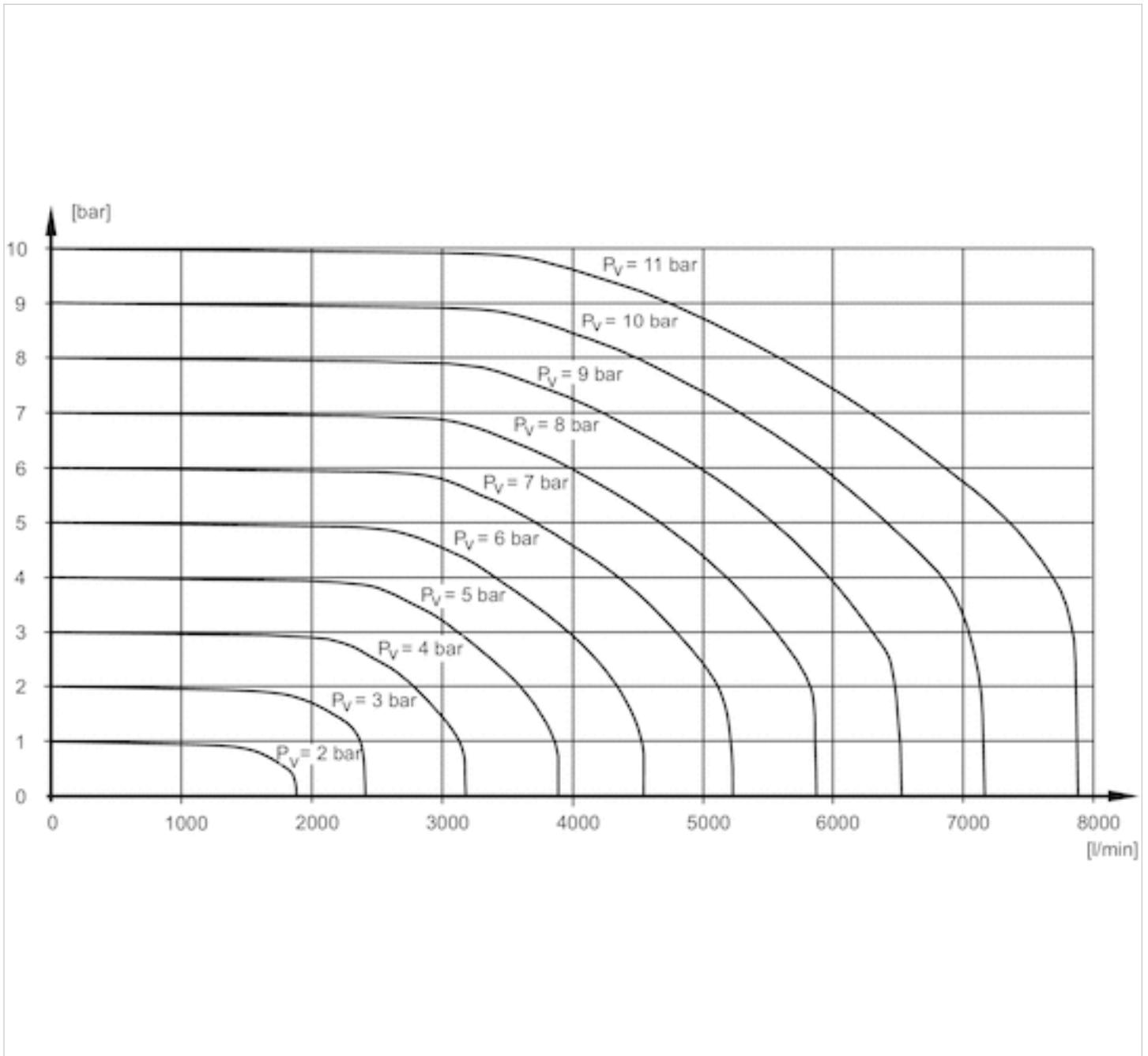
- 1) Operating pressure
- 2) Working pressure
- 3) Exhaust
- 4) Seal (not assembled)
- 5) + 6) Accessories not supplied

### Mounting orientation



# Diagrams

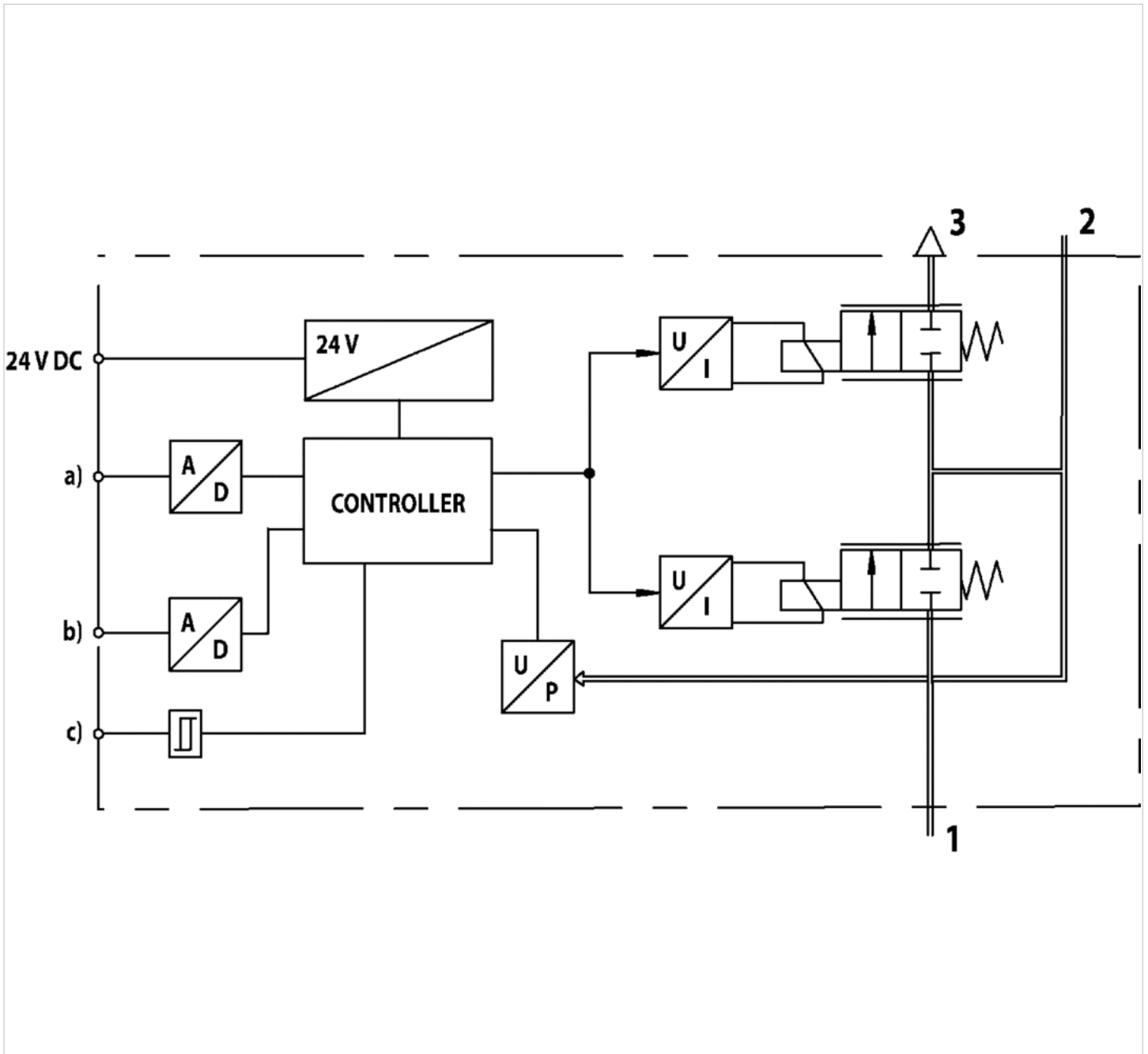
## Flow diagram



P<sub>v</sub> = Supply pressure

Circuit diagram

Functional diagram



a) Nominal input value

b) Actual output value

c) Switch output (acknowledge signal)

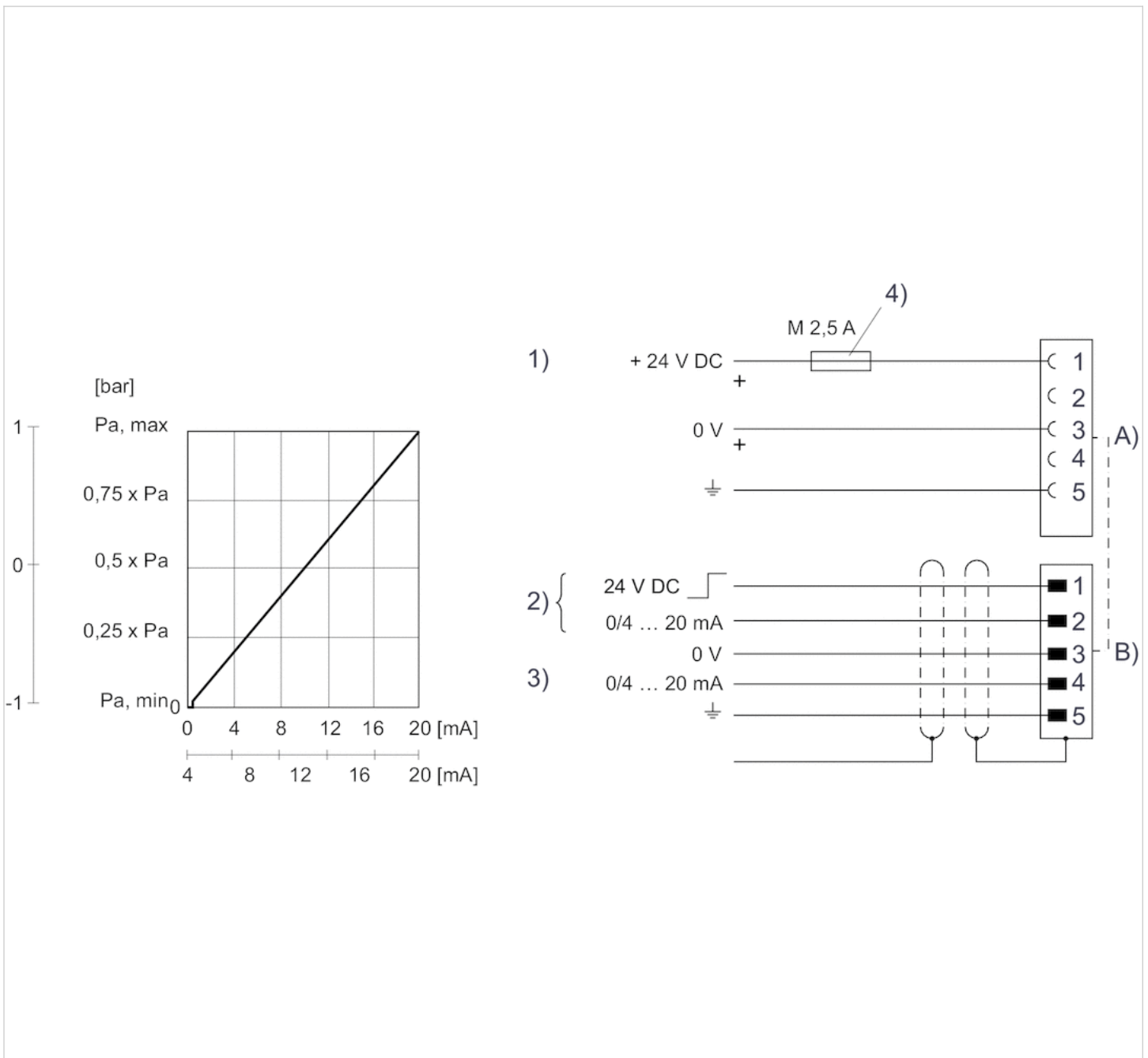
The E/P pressure control valve modulates the pressure corresponding to an analog electrical nominal input value.

1) Operating pressure

2) Working pressure

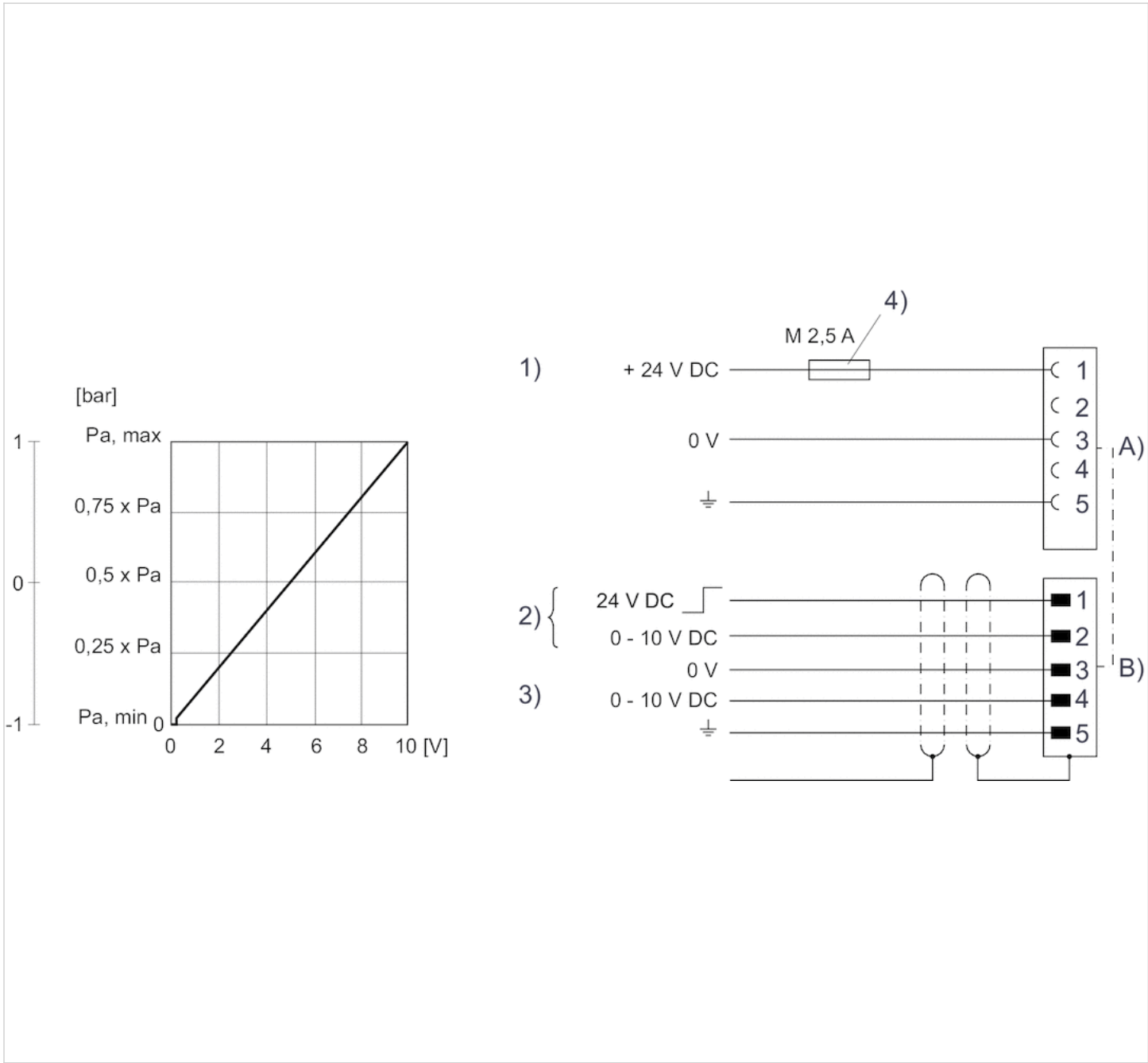
3) Exhaust

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

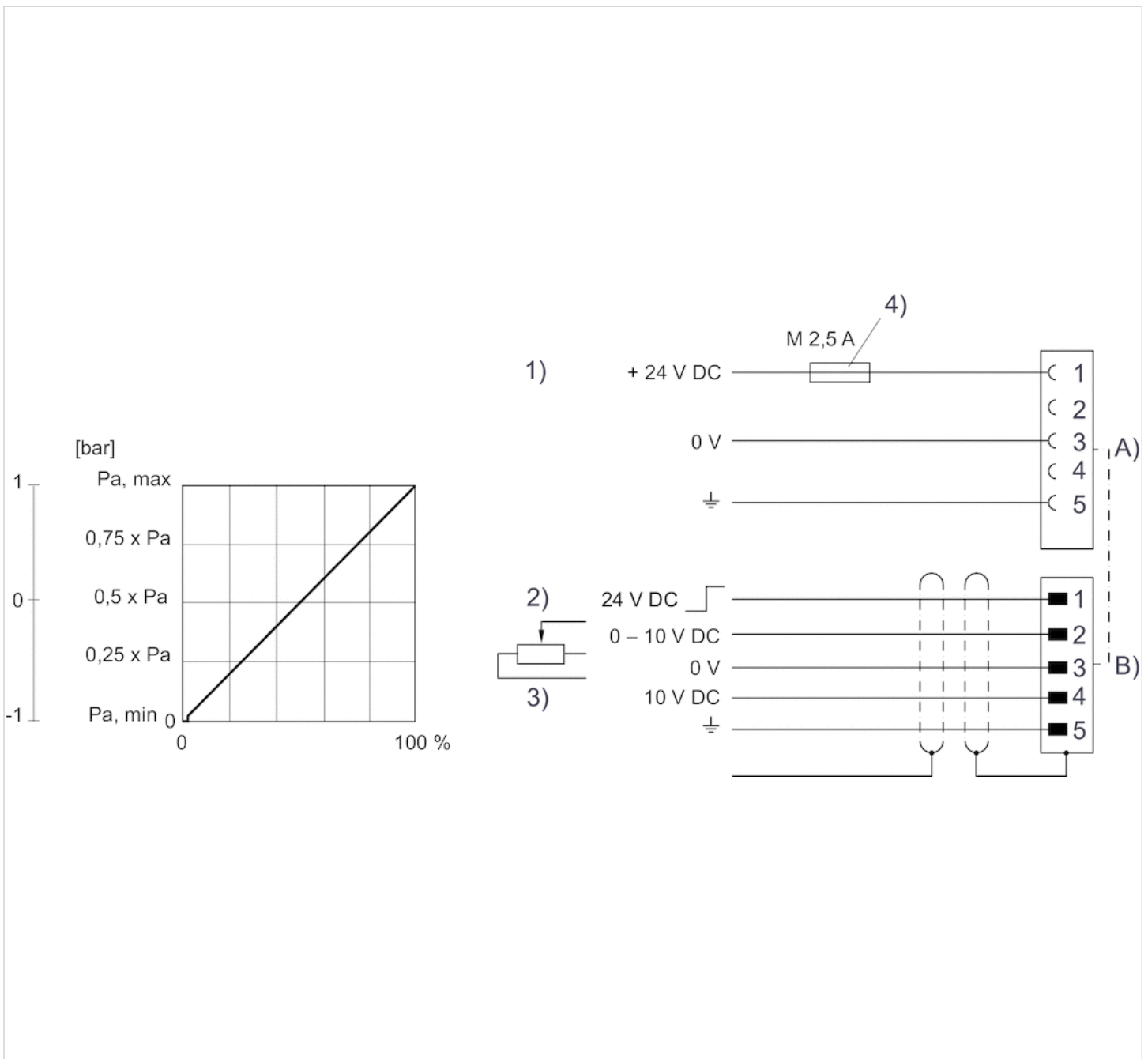
Fig. 2, Characteristic and pin assignment for voltage control with actual output value



- 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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