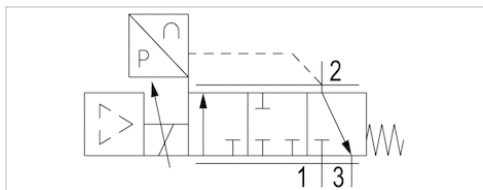


E/P pressure regulator, Series ED05

- $Q_n = 1000 \text{ l/min}$
- Compressed air connection output G 1/4
- Electr. connection via signal connection
- Signal connection input and output, Plug, M12, 5-pin



Type	Poppet valve
Mounting orientation	$\alpha = 0-90^\circ \beta = 0-90^\circ$
Certificates	CE declaration of conformity
Working pressure max	11 bar
Ambient temperature min./max.	0 ... 70 °C
Medium temperature min./max.	0 ... 70 °C
Compressed air connection input	G 1/4
Compressed air connection output	G 1/4
Compressed air connection, exhaust	G 1/4
Medium	Compressed air
Max. particle size	50 μm
Oil content of compressed air	0 ... 1 mg/m ³
Nominal flow Q_n	1000 l/min
Control	Analog
DC operating voltage	24 V
Voltage tolerance DC	-20% / +20%
Hysteresis	0.06 bar
Permissible ripple	5%
Protection class	IP65
Weight	0,95 kg
Nominal flow Q_n with working pressure 7 bar , with secondary pressure 6 bar and $\Delta p = 0.2 \text{ bar}$	

Technical data

Part No.	Pressure setting range min./max.	Nominal input value	Actual output value	Control
		Min./max.	Min./max.	
R414002003	0 ... 6 bar	0 ... 20 mA	0 ... 20 mA	Analog
R414002004	0 ... 6 bar	4 ... 20 mA	4 ... 20 mA	Analog
R414002005	0 ... 6 bar	0 ... 10 V	0 ... 10 V	Analog
R414002006	0 ... 6 bar	0 ... 20 mA	-	Analog
R414002294	0 ... 6 bar	4 ... 20 mA	-	Analog
R414002295	0 ... 6 bar	0 ... 10 V	-	Analog
R414002007	0 ... 10 bar	0 ... 20 mA	0 ... 20 mA	Analog
R414002008	0 ... 10 bar	4 ... 20 mA	4 ... 20 mA	Analog
R414002009	0 ... 10 bar	0 ... 10 V	0 ... 10 V	Analog
R414002010	0 ... 10 bar	0 ... 20 mA	-	Analog
R414002296	0 ... 10 bar	4 ... 20 mA	-	Analog
R414002297	0 ... 10 bar	0 ... 10 V	-	Analog

Part No.	Fig.	
R414002003	Fig. 1	-

Part No.	Fig.	
R414002004	Fig. 1	-
R414002005	Fig. 2	-
R414002006	Fig. 3	1)
R414002294	Fig. 3	1)
R414002295	Fig. 3	1)
R414002007	Fig. 1	-
R414002008	Fig. 1	-
R414002009	Fig. 2	-
R414002010	Fig. 3	1)
R414002296	Fig. 3	1)
R414002297	Fig. 3	1)

1) Acknowledge signal - output from + Ub, if the outlet pressure corresponds to the setpoint +/- 200 mbar

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.

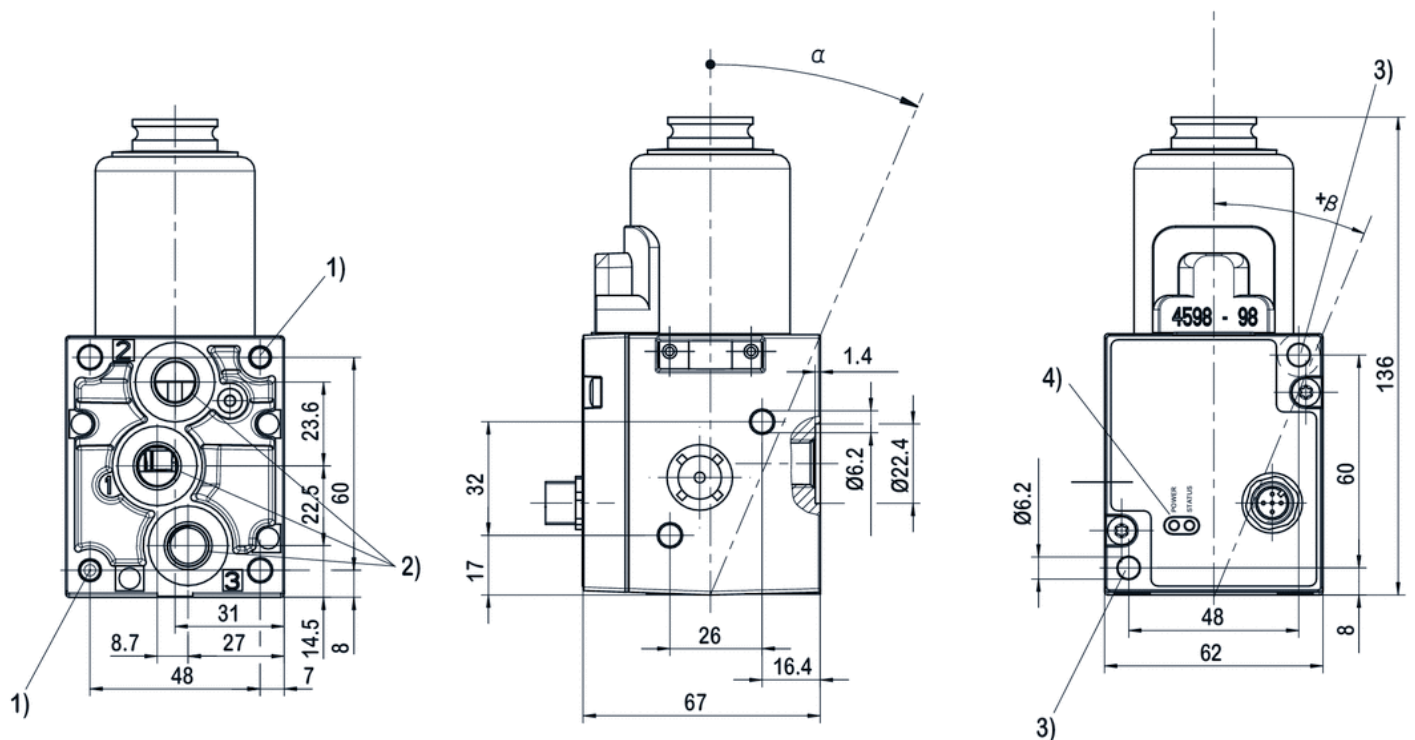
The protection class is only ensured when the plug is mounted properly. For detailed information, see operating instructions.

Technical information

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

Dimensions

Dimensions



1) Core hole 15 mm deep for self-tapping screws M6

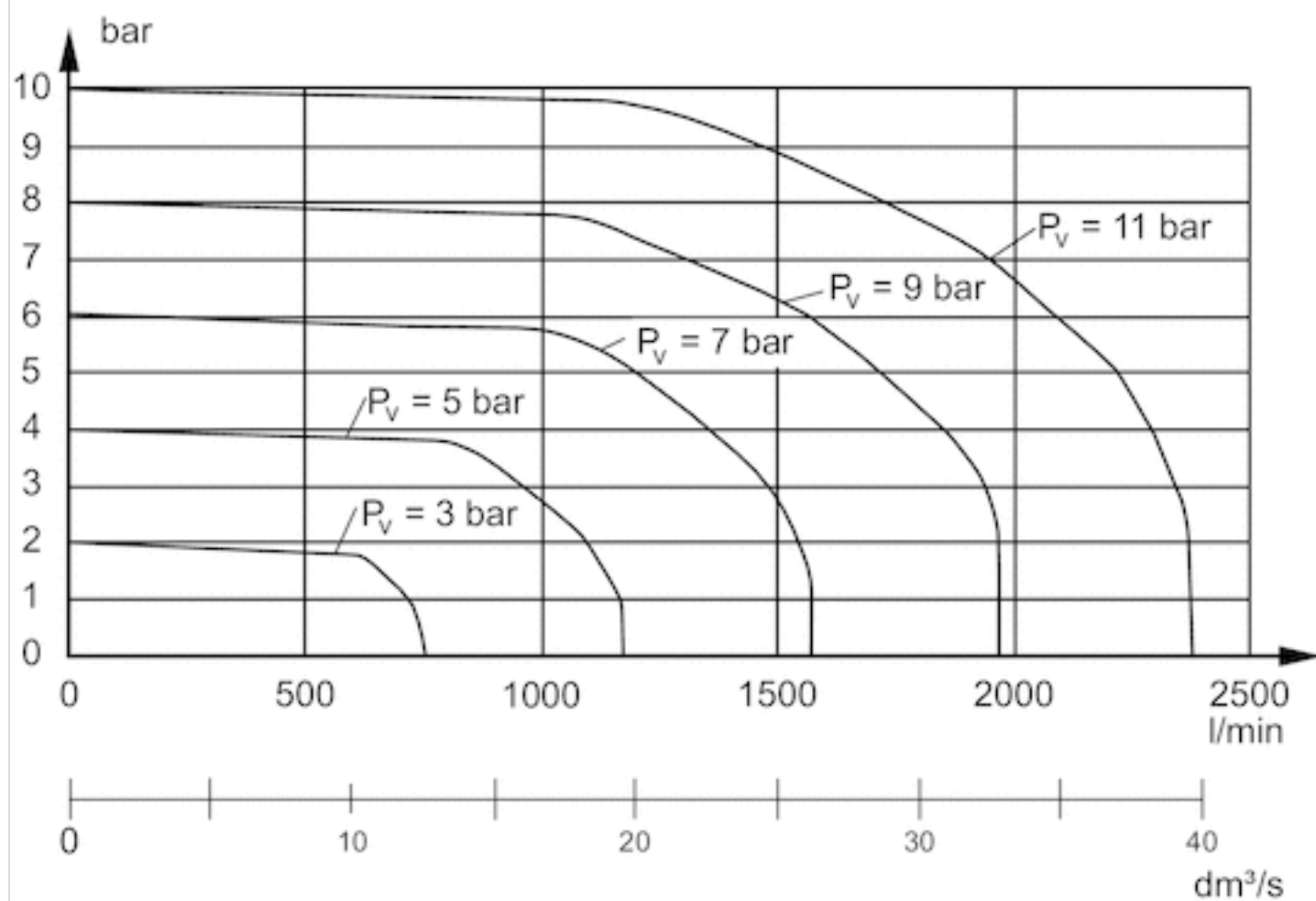
2) Universal threaded connection, suitable for G1/4 according to ISO 228/1:2000 and 1/4-27 NPTF

3) Through hole

4)

Diagrams

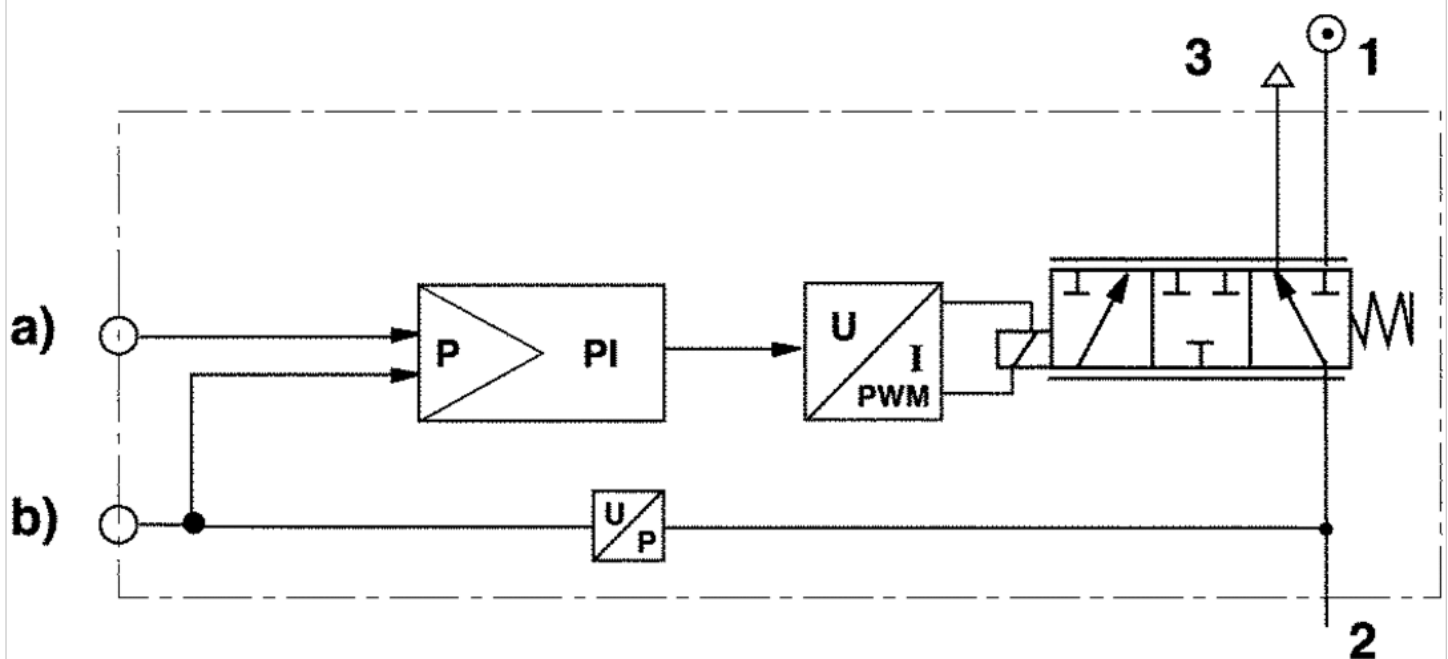
Flow diagram



Connect the plug via a shielded cable to ensure EMC

Circuit diagram

Functional diagram

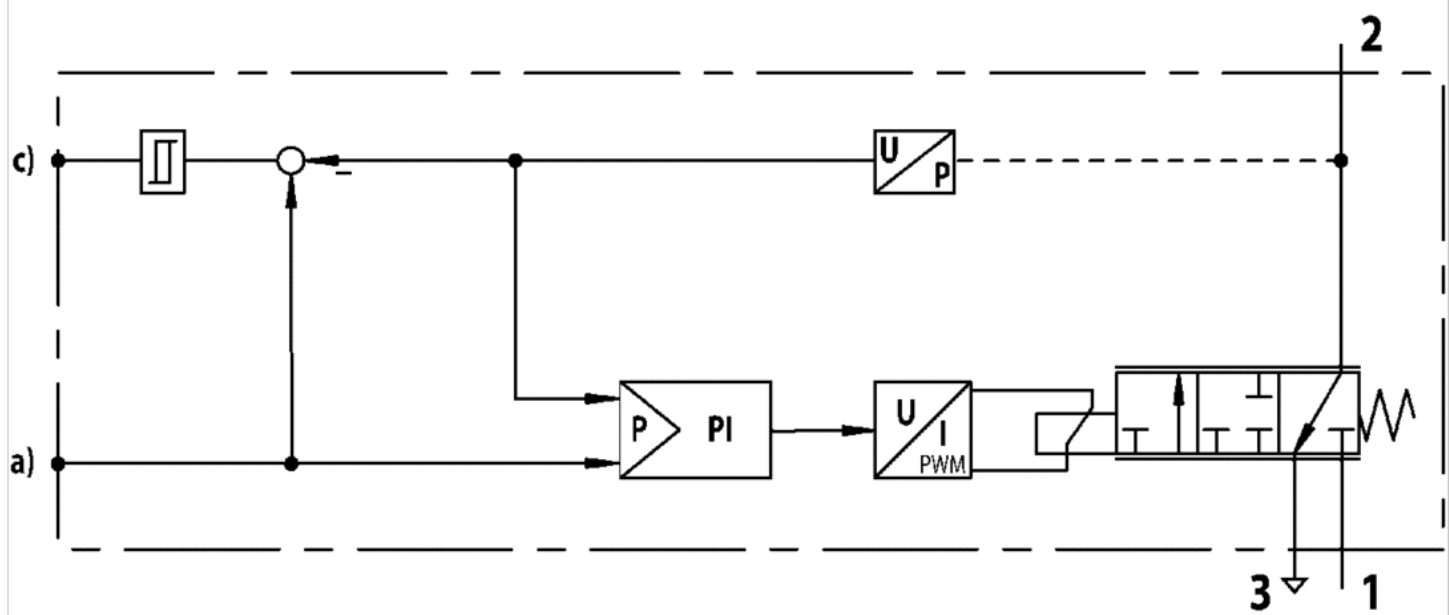


a) Nominal input value b) Actual output value

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

Functional diagram for switch output (acknowledge signal)



a) Nominal input value

c) Switch output (acknowledge signal)

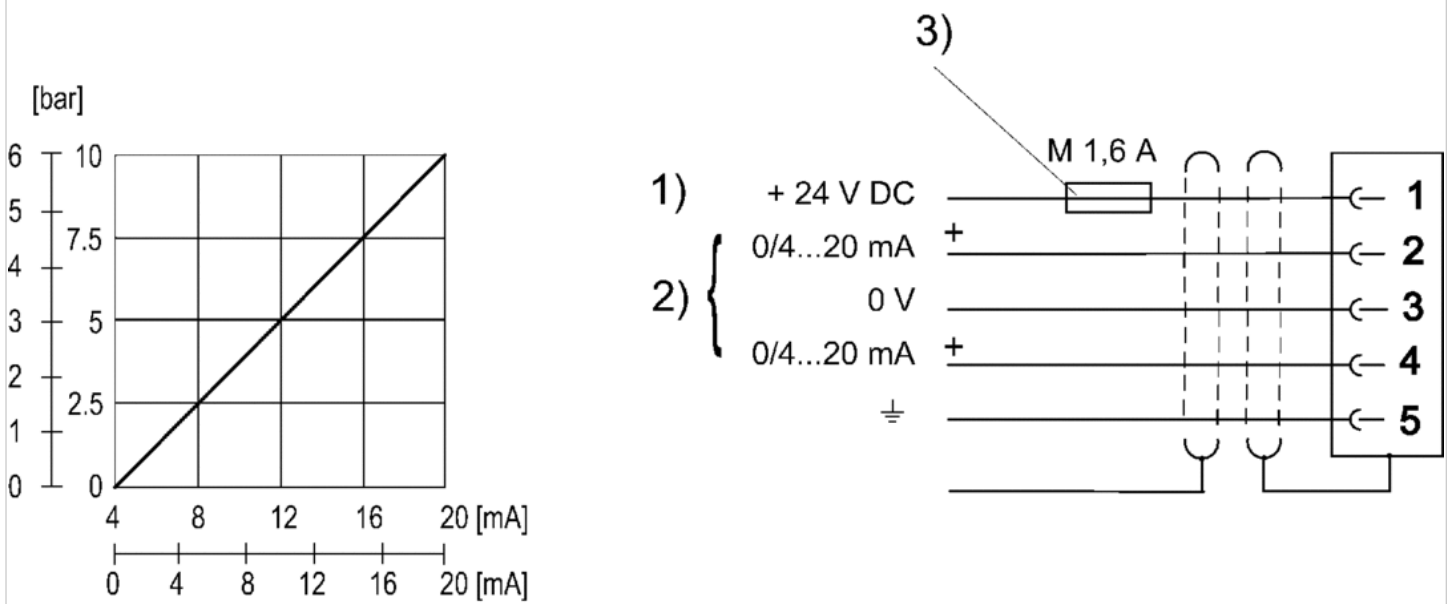
The E/P pressure control valve modulates the pressure corresponding to an analog electrical nominal input value.

1) Operating pressure

2) Working pressure

3) Exhaust

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



1) Operational voltage

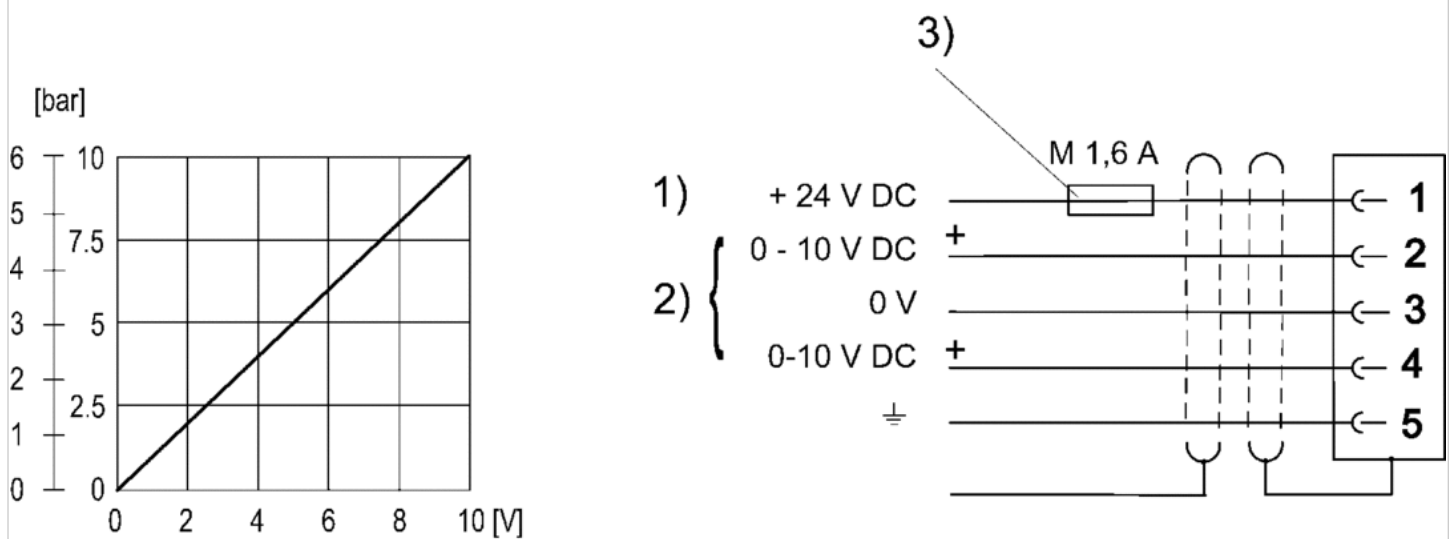
2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V (control voltage).

Nominal input value current (ohmic load 100 Ω). Actual output value (max. total resistance of downstream devices 300 Ω).

3) The operating voltage must be protected by an external M 1.6 A fuse.

Connect plug 2 via a shielded cable to ensure EMC.

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



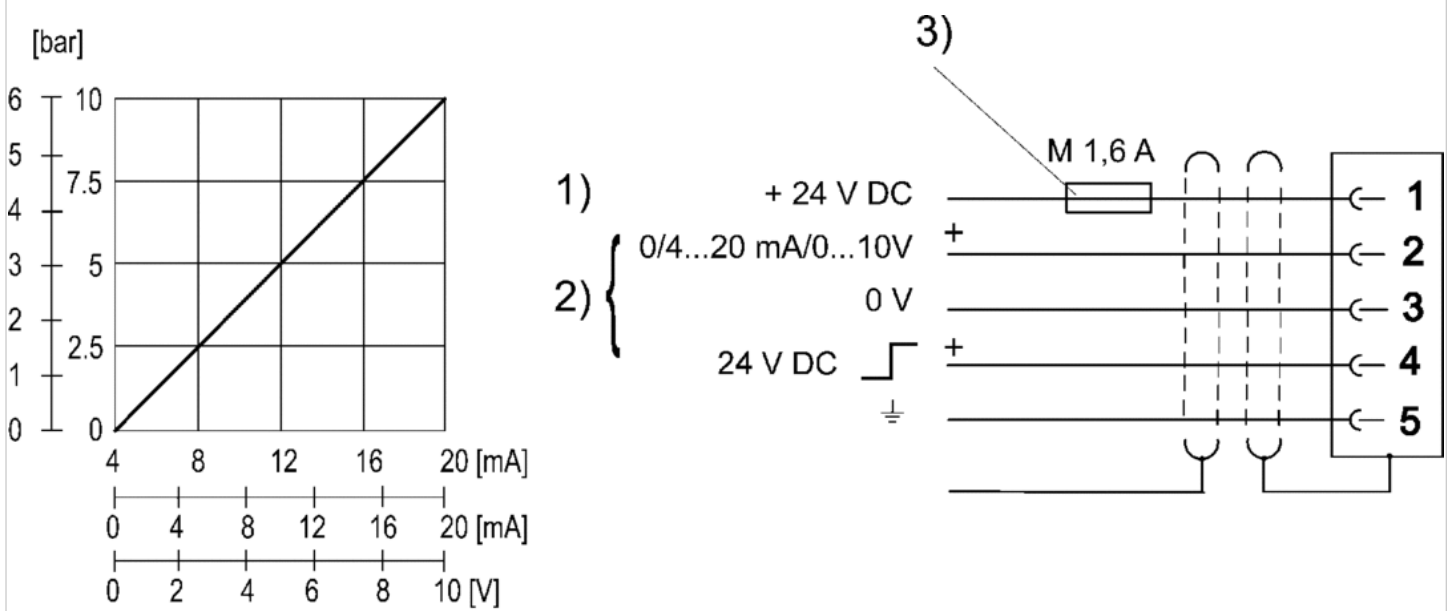
1) Operational voltage

2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V (control voltage).

3) The operating voltage must be protected by an external M 1.6 A fuse.

Connect plug 2 via a shielded cable to ensure EMC.

Fig. 3, Characteristic and pin assignment for current and voltage control with actual output value



1) Operational voltage

2) Nominal value (pin 2) and switch output (pin 4) are related to 0 V. Acknowledge signal

3) The operating voltage must be protected by an external M 1.6 A fuse.

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