

Description

The measuring value transformer AD-MV 500 GL transforms the measuring signal emitted from a resistance thermometer (Pt 100) to an impressed output signal (i.e. 4...20 mA, 0...10 V o.a.). The output characteristic is outputted temperature-linear. When using the 3- or 4-conductor switching, the conductor resistances are compensated up to 100 Ohm. With 2-conductor switching, a subsequent zero balance and full balance is necessary. The measuring process can be set via easily accessible DIP switches at the front. The analogue output signal is always galvanic separated from the supply voltage and also from the input. Input and output data must be stated in clear text when ordering. With the input, the temperature measuring range must be stated and with the output, as alternative, current or voltage output can be selected.

Application

Temperature measuring with Pt100 temperature transmitter for continuous transformation of temperature variables to analogue signals.

**Specific characteristics**

- Pt100 input
- current or voltage output
- type of connection selectable over DIP switch on the front-panel
- galvanic isolation between input, output and power-supply
- Trimmer for fine adjustment on the front-panel

Business data

Order number AD-MV 500 GL

Technical specifications**Pt100 input**

Max. measuring range -200 ... 800 °C ¹⁾
 Connection method 2, 3 or 4-wire

Output current

Output range 0 ... 20 mA, 4 ... 20 mA ¹⁾
 Max. burden 400 Ohm
 Residual ripple 50 µAss

Output voltage

Output range 0 ... 10 V, 2 ... 10 V ¹⁾
 Min. burden 1 kOhm
 Residual ripple 70 mVss

Supply

Voltage range AC 50 ... 253 V AC, 50/60 Hz
 Nominal voltage AC 230 VAC
 Voltage range DC 20 ... 253 V DC
 Nominal voltage DC 24 V DC
 Power consumption AC / DC 2 VA / 1W

Transmission behaviour

Accuracy < 0,2 %
 Temperature influence 100 ppm/K
 Response time ~ 50 ms

Housing

Dimensions (WxHxD) 18x78x103 mm
 Type of protection IP 20
 Connection method screw clamp
 Terminals, wire cross section 2,5 mm² flex wire / 4 mm² one wire
 Bolting torque terminals 0,5 Nm
 Weight ~ 100 g
 Manner of fastening 35 mm DIN rail 35mm

Environmental conditions

Ambient temperature 0 ... 50 °C
 Storage and transport -10 ... 70 °C (no condensation)

EMC

Product family standard EN 61326 ²⁾
 Emitted interference EN 55011, CISPR11 Cl. B

Electrical safety requirements

Product family standard EN 61010-1
 Overvoltage category II
 Pollution degree 2

Galvanic isolation, test voltages

Input / output 3,75 kV (1 min.)
 Signal / supply unit 4 kV (1 min.)

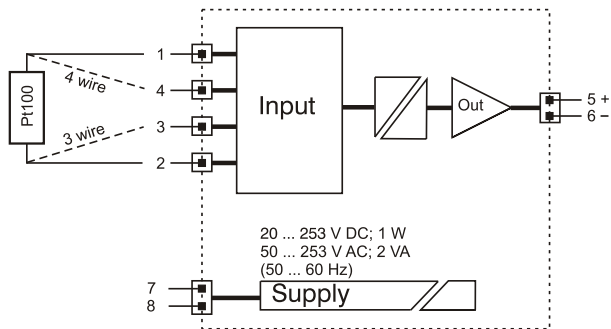
Protection circuits

Input electrical surge protection
 Output electrical surge protection
 Power supply electrical surge and reverse current protection

¹⁾ Signal range according to customer data.

²⁾ During electromagnetic disturbance minor changes in output signal are possible.

Block and wiring diagram



measure	S1.1	S1.2	S1.3
2-wire	0	1	1
3-wire	0	1	0
4-wire	1	0	0

Dimensions

