

Universal-Measuring-Transducer MU1000K

Temperature Pt 100 (RTD), DC Current and Voltage, Isolating Amplifier

MU1000K



Part number: T236002.1

Universal-measuring-transducers MU1000K can measure signals Pt100 (RTD) and DC current (0/4-20 mA) and voltage (DC 0/2-10 V). Several measuring-ranges are pre-programmed. More can be easily scaled. Temperatures at sensors Pt 100 can be evaluated from -200 °C to + 800 °.

The output-signals 0/2-10 V and 0/4-20 mA are potentially separated from inputs and supply-voltage.

With its universal power-supply AC/DC 24-240 V the measuring-transducer can be connected to all common supply-voltages.

Inputs:

- DC 0/2-10 V, DC 0/4-20 mA
- Supply-voltage for external measuring transducer DC 18V/25 mA

- Input Pt 100, 3-wire, -200 ... +800 °C
 - automatic compensation of line-resistance
 - pre-programmed zeros and spans
 - individually programmable zeros and spans

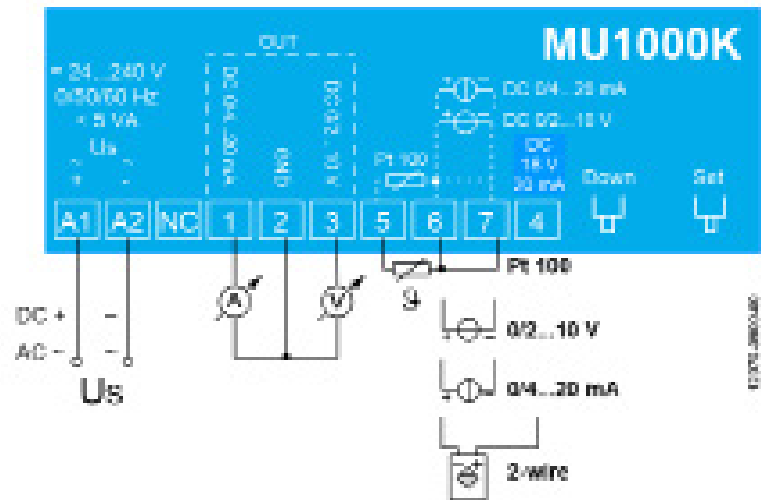
Outputs:

- DC 0/4-20 mA, DC 0/2-10 V
- Insulation between inputs, outputs and supply-voltage

Displays and control elements:

- 2 buttons for scaling
- 4 LEDs for display of state and scaling

Universal supply-voltage AC/DC 24-240 V
Housing type K, 22,5 mm wide



Technical Data

Rated Supply Voltage U_s

AC/DC 24V-240 V, 0/50/60 Hz < 3 W < 5 VA
DC: 20,4 - 297 V, AC: 20 - 264 V

Input DC-Voltage
Accuracy

DC 0/2-10 V, max. 27 V, 12 k Ω
 $\leq 0,1\%$ from fullscale

Input DC-Current
Accuracy

0/4-20 mA, max. 100 mA, 18 Ω
 $\leq 0,5\%$ from fullscale

Input Pt 100
Temperature-range
Line-resistance
Accuracy
Sensor-current

Pt 100 acc. to EN 60 751 / IEC 60 751, 3-wire
-200 °...+800 °C
max. 500 Ω (sensor + line)
 $\pm 0,5\%$ from value $\pm 0,5$ K, drift: $\leq 0,04$ °C/K
 $\leq 0,6$ mA

Output voltage
Accuracy

DC 0/2-10 V, load min. 1 k Ω
0,3 % from fullscale, drift <0,01 %/K

Output current
Accuracy
Error load

DC 0/4-20 mA, load max. 500 Ω
0,3 % from fullscale, drift <0,015 %/K
0,3 % of current x (250 Ω - load) / 250 Ω

Galvanic insulation
Response-time T09

supply-voltage - input - output

Pt100
Voltage-/Current input

< 350 ms
< 20 ms

Test conditions
rated ambient temperature-range
Housing dimensions (h x w x d)
Protection housing/terminals
Attachment
Weight

see "general technical information"
-20 °C ... +65 °C, EN 60068-2-5 dry heat
type K, 75 x 22,5 x 115 mm
IP 40 / IP 20
35mm standard-rail or screws M4 (option)
app. 100 g