

# Measuring transmitter MU 1000

Voltage - current - resistance - RTD - thermocouple

## Features

- DC voltage/current/resistance
- AC voltage/current
- Temperature RTD (Pt100, Pt1000, Ni1000)  
Thermo couple J,K,S  
(built-in cold junction compensation)
- Accuracy 0.2 %
- Analog output signal  
0/4 ... 20 mA and 0 ... 10 V
- Current burden max. 500 Ω
- Full 3-port isolation
- Power-on LED
- Standard case for Wall mounting and  
TS 35 DIN rail



## General information

The MU1000 measuring transmitter converts physical signals to industry standard signals 0/4...20 mA and 0...10 V. The electrical isolation between input and output prevents ground loops and associated problems. An inputfilter prevents interferences which are overlayed at the measuring signal.

## Short information

- |            |  |
|------------|--|
| Adjustment | Start value and end value can be adjusted with 2 trim pots at the front plate.   |
| Output     | Current and voltage output can be used simultaneous. Changing the current output from 0...20 mA to 4...20 mA is switch selectable. |

## Technical data

### Power supply

Supply voltage	: $U_c \pm 10\%$ (supplies see page 4)
Frequency	: 47 ... 63 Hz
Power consumption	: < 3.5 VA
Operating temperature	: -10 ... 60 °C (14 ... 140 °F)
Rated voltage	: 500 V $\approx$ acc. to VDE0110 group 2, between input/output/supply
Prüfspannung	: 2.5 kV= between input/output/supply
CE - conformity	: EN55022, EN60555, IEC61000-4-4/5/11/13

### Input

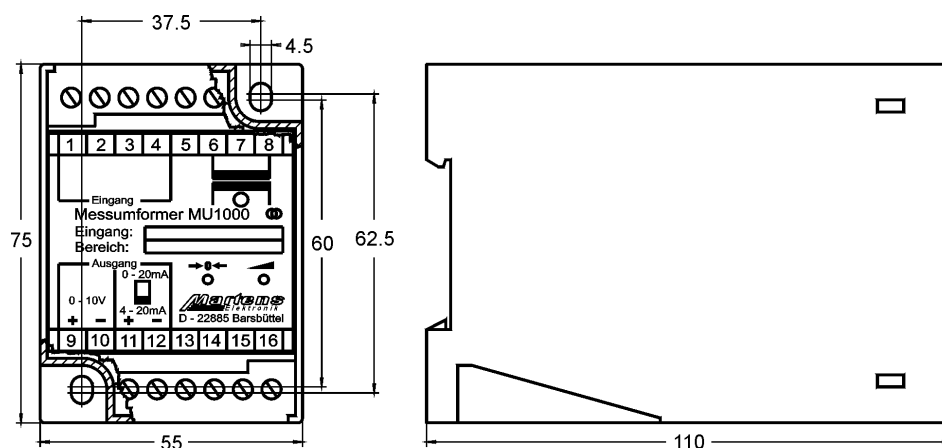
Current	: $R_i \leq \frac{200\Omega}{n \times \text{mA}}$ (n = measurement end value)
Voltage	: $R_i \geq 10 \text{ k}\Omega/\text{V}$
RTD (Pt100)	: Sensor current approx 0.8 mA
Thermo couple	: $R_i \geq 1 \text{ M}\Omega$ Type J, K, S

### Output

Current	: 0/4 ... 20 mA switch selectable, burden max. 500 $\Omega$
Voltage	: 0 ... 10 V max. 10 mA, short circuit protection, simultaneously with current output max. 5 mA
Accuracy	: $\leq 0.2\%$
Temperature error	: $\leq 0.01\%/K$
Linearisation error	: $\leq 0.2\%$ (RTD Pt100, thermo couple)

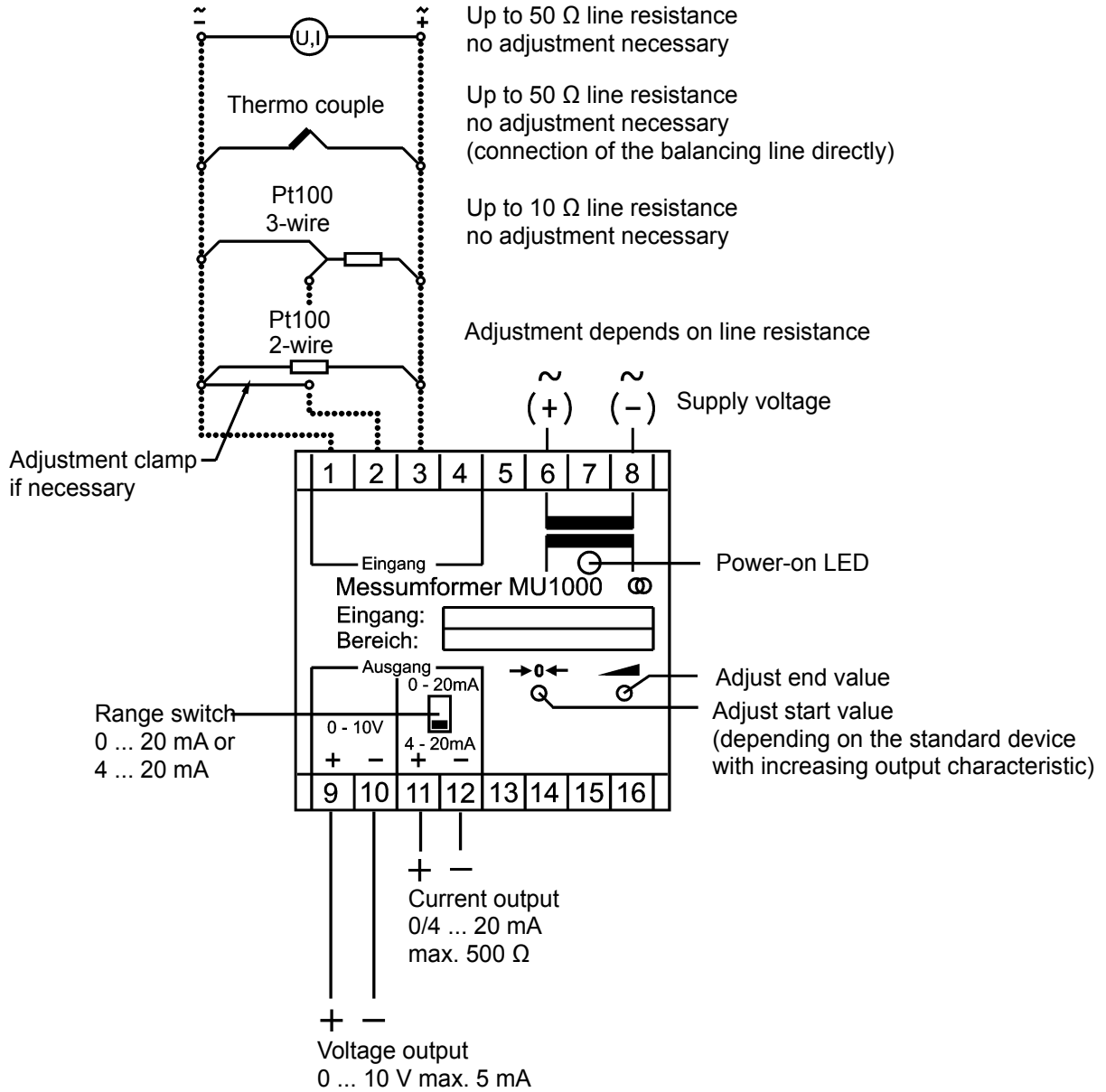
Case	: Standard aus polycarbonate 8020 UL 94V-1
Weight	: 0.37 kg
Protection	: case IP40, terminals IP20, BGV A3
Connection	: screw terminals with pressure plate, max. 4 mm <sup>2</sup>

## Dimensions



TS35 DIN rail mounting acc. to DIN 46277 and DIN EN 50022  
or wall mounting via 2 screws M4 acc. to DIN 46121/DIN 43660

## Connection diagram



## Ordering code

MU1000 -  1. -  2. -  3. -  4.  5. -  6.  7. -  8. -  9. -  10.

### 1. Signal isolation

- A full 3-port isolation
- B without isolation (on request)

### 2. Measuring input

- 0 DC voltage
- 1 AC voltage
- 2 DC current
- 3 AC current
- 4 Resistance
- 5 RTD Pt100
- 6 Thermo couple Fe-CuNi (J)
- 7 Thermo couple NiCr-Ni (K)
- 8 Thermo couple PtRh-Pt (S)
- 9 Custom

### 3. Unit

- 0 mV
- 1 V
- 2 mA
- 3 A
- 4  $\Omega$
- 5 k $\Omega$
- 6  $^{\circ}\text{C}$
- 7  $^{\circ}\text{F}$
- 8 Custom

### 4. Polarity of the start value

- P sign + incl. 0
- N sign -

### 5. Start value

- XXXX value absolute (please state)

### 6. Polarity of the end value

- P sign + or 0
- N sign -

### 7. End value

- XXXX value absolute (please state)

### 8. Output characteristic

- S increasing (standard)
- 1 decreasing (inverted)

### 9. Supply voltage

- 0 230 V AC 50-60 Hz
- 1 115 V AC 50-60 Hz
- 4 24 V AC 50-60 Hz
- 5 20 ... 28 V DC with isolation

### 10. Options

- 00 without