

# Temperature transmitter MU500L

## Input for RTD sensor, Pt100 or Pt1000

### Features

- Free measuring range selection
- 2- or 3-wire-connection
- Output linearized for 0/4 ... 20 mA and 0/2 ... 10 V DC simultaneously
- Front side adjustment by 20-turn trimpot for start value (→0←), 4 mA/2 V (→4 mA←) and span
- Supply voltage isolated from input and output
- Supply voltage 230 V AC or 24 V DC
- Power-on LED
- 22,5 mm case for DIN rail mounting



### General information

Temperature transmitter MU500L accept field signals of Pt100 or Pt1000 RTD sensors to the input which is filtered, isolated and converted into industry standard signals for process control systems. Special circuit design makes it possible, to produce any useful measurement ranges.

### Short information

Measuring range      Zero point and span free selectable. Please note:

Sensor	Start value must be in range	Span must be in range
Pt100	-100 ... 100 °C	50 ... 600 °C
Pt1000	-50 ... 50 °C	10 ... 200 °C

## Technical data

### Power supply

Supply voltage	: 230 V AC $\pm 10\%$ or 24 V DC $\pm 20\%$
Frequency AC	: 47 ... 63 Hz
Power consumption	: <1.5 VA
Working temperature	: -10 ... +60 °C
Isolation voltage	: 250V AC, pollution degree 2, overvoltage cat. II
Test voltage	: 3 kV DC, between Input, Output / Supply Voltage

### Input

Start value Pt100	: -100 °C ... +100 °C	(please note these values when ordering)
Span Pt100	: 50 ... 600 °C	
Start value Pt1000	: -50 °C ... +50 °C	
Span Pt1000	: 10 ... 200 °C	
Sensor current	: 0.6 mA (no self-heating)	
Cable-resistance	: automatic compensation, up to 10 $\Omega$ symmetric line resistance use 3-wire configuration	
Start value adjustment	: approx. $\pm 10$ °C	
4mA /2V adjustment	: approx. $\pm 1$ mA or $\pm 0.5$ V	
Span adjustment	: approx. $\pm 10\%$	
Broken line	: output shows max. value	
Shorted line	: output shows min. value	

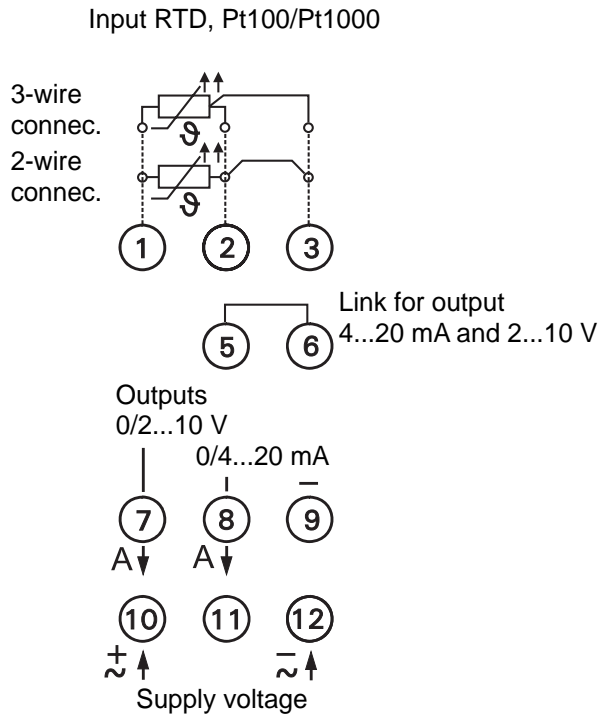
### Output

Current output	: 0 ... 20 mA/4 ... 20 mA selectable by link
Load	: max. 500 $\Omega$
Voltage output	: 0 ... 10 V DC/2 ... 10 V DC selectable by link
Load	: max. 10 mA, simultaneous to current output max. 1 mA
Accuracy	: $\leq 0.2\%$
Temperature coefficient	: $\leq 0.01\%/K$

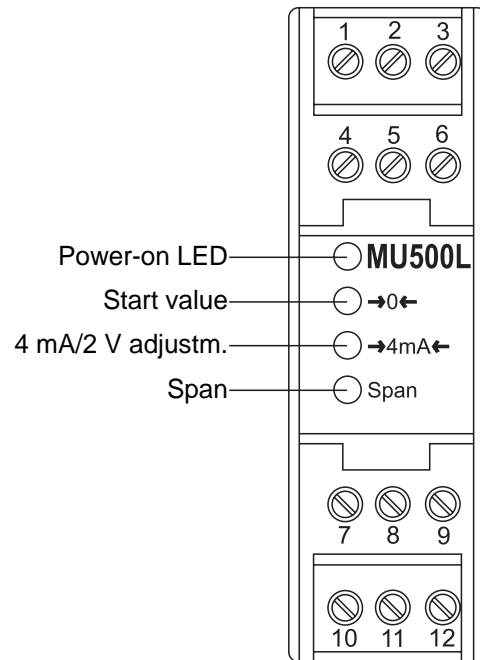
### Case

Case	: standard case of polycarbonate 8020 UL94V-1
Weight	: approx. 140 g
Connection	: screw-terminals with pressure plate, max. 2,5 mm <sup>2</sup> wire
Protection	: case IP30; terminals IP20, finger safe acc. German BGV A3

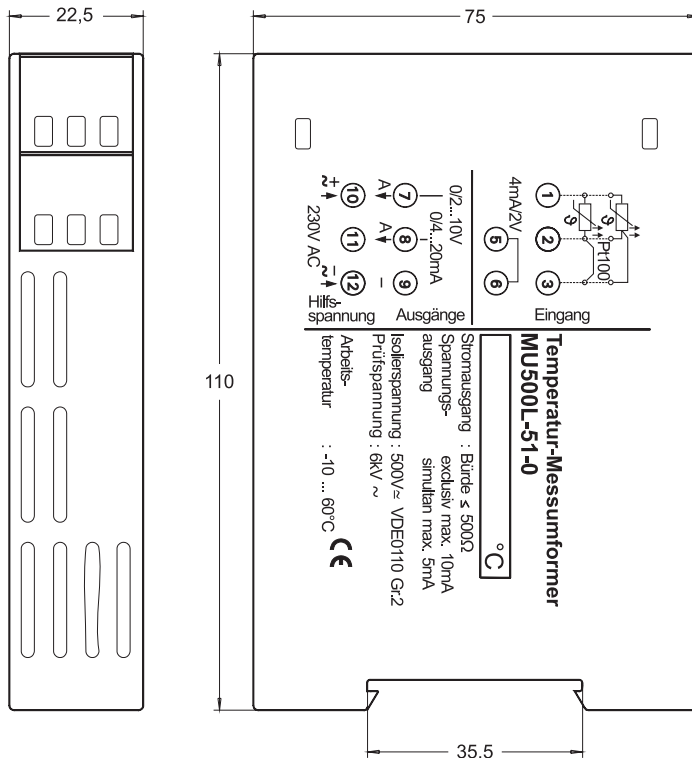
### Connection diagram



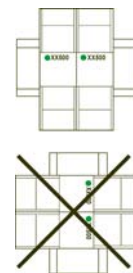
### Front panel controls



### Dimensions



**Caution!**  
 Mounting of multiple units without distance is only permitted in horizontal orientation.



## Ordering code

MU500L -  1. -  2. -  3.

### 1. Device type

51	Pt100
53	Pt1000

Measuring range  
 start value in range  
 -100 ... 150 °C  
 -50 ... 50 °C

Measuring span  
 in range of  
 50 ... 600 °C  
 10 ... 200 °C

### 2. Supply voltage

0	230 V AC	±10 %
5	24 V DC	±20 %

### 3. Measuring range

please state in clear text  
 e.g. : -50 ... 100 °C

## Stock

Sensor	Supply voltage	Range [°C]
Pt100 or Pt1000	230 V AC or 24 V DC	-50 ... 50
		0 ... 50
		0 ... 100
		0 ... 120
		0 ... 150
		0 ... 200
Pt100		0 ... 300
		0 ... 400