

# Multi-range temperature transmitter MU 500

Switch selectable temperature ranges RTD; Pt100 or Pt1000

## Features

- Pt100: 13 temperature-ranges  
Pt1000: 16 temperature-ranges
- 2-or 3-wire configuration
- Linearize outputs  
for 0/4...20mA and 0/2...10V simultaneously
- Offset and span adjustable
- Supply voltage 100...265V AC or  
10.8...30V AC/DC
- Full 3-port isolation
- Power-on LED
- 22.5mm case for DIN rail mounting



## General information

Temperature transmitter MU500 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.

The multi-purpose design of inputs and outputs, also the wide range of supply voltage reduces the number of types. The small case allows space-saving mounting.

## Short information

Current output                      burden max. 1k $\Omega$

Multi-range                          temperature range and output configuration can be selected with DIP- and rotary switch at the front panel

## Technical data

### Power supply

Supply voltage	: 100 ... 265V AC or 10.8 ... 30V AC/DC
Frequency AC	: 47 ... 63Hz
Power consumption	: < 3.5VA
Working temperature	: -10 ... +60°C
Isolation voltage	: 500V according to VDE 0110 Gr. 2 between input / output / supply
Test voltage	: 4 kV between input / output / supply
CE-conformity	: EN55022, IEC1000-4-4/5/11/13, EN60555-2

### Input

Sensor current	: Pt100 approx. 1mA, Pt1000 approx. 0.25mA (no self-heating)
Cable resistance	: max. 100Ω (operation with safety barriers possible) automatic compensation of cable resistance at 3-wire configuration
Offset adjust	: Pt100 ca. +/-4Ω, ( $\Delta$ 10°C) Pt1000 ca. +/-8Ω ( $\Delta$ 2°C) (to compensate cable resistance at 2-wire configuration)
Span	: adjustable ca. +/-5%
Broken or shorted line	: output rises to max. value

### Output

Current output	: 0 ... 20mA, 4 ... 20mA switch selectable, max. 1kΩ load
Voltage output	: 0 ... 10V, 2 ... 10V switch selectable, max. 15mA load, short circuit protected (simultaneous to current output max. 5mA)

### Accuracy

Temperature coefficient	: ≤0.5% (≤0.2% factory calibration for one range available)
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### Case

Weight	: ca. 200g
Connection	: screw-terminals with pressure plates, max. 2.5 mm <sup>2</sup> , wire
Protection	: case IP40, terminals IP20, finger safe acc. German VBG4

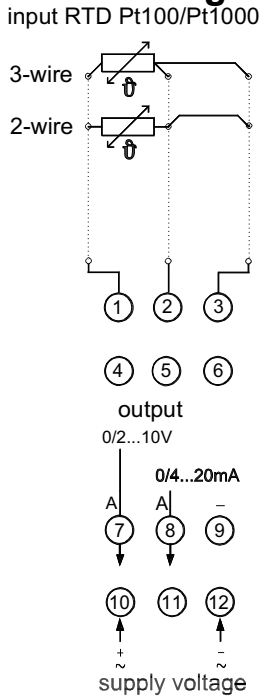
### Temperature range Pt100

temperature range [°C]	rotary switch	DIP switch S1
-50...0	6	on
-50...50	7	on
-30...20	4	on
-30...70	5	on
-20...30	2	on
-20...80	3	on
0... 50	0	on
0...100	1	on
0...150	8	on
0...200	9	on
0...300	1	off
0...450	8	off
0...600	9	off

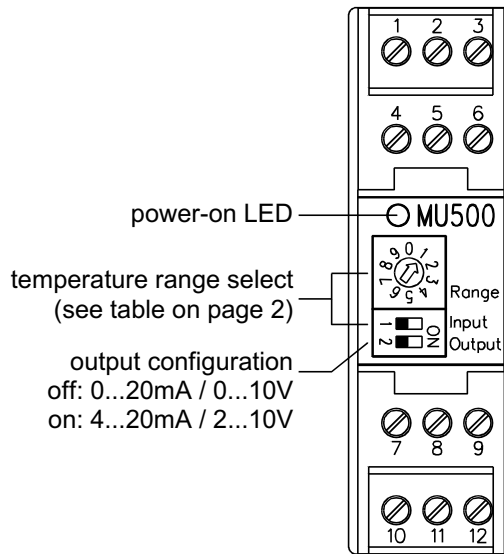
### Temperature range Pt1000

temperature range [°C]	rotary switch	DIP Switch S1
-50...0	2	off
-50...50	3	off
-30...-20	6	on
-30...-10	7	on
-20...-10	4	on
-20...0	5	on
-10...0	2	on
-10...10	3	on
0...10	0	on
0...20	1	on
0...30	8	on
0...40	9	on
0...50	0	off
0...100	1	off
0...150	8	off
0...200	9	off

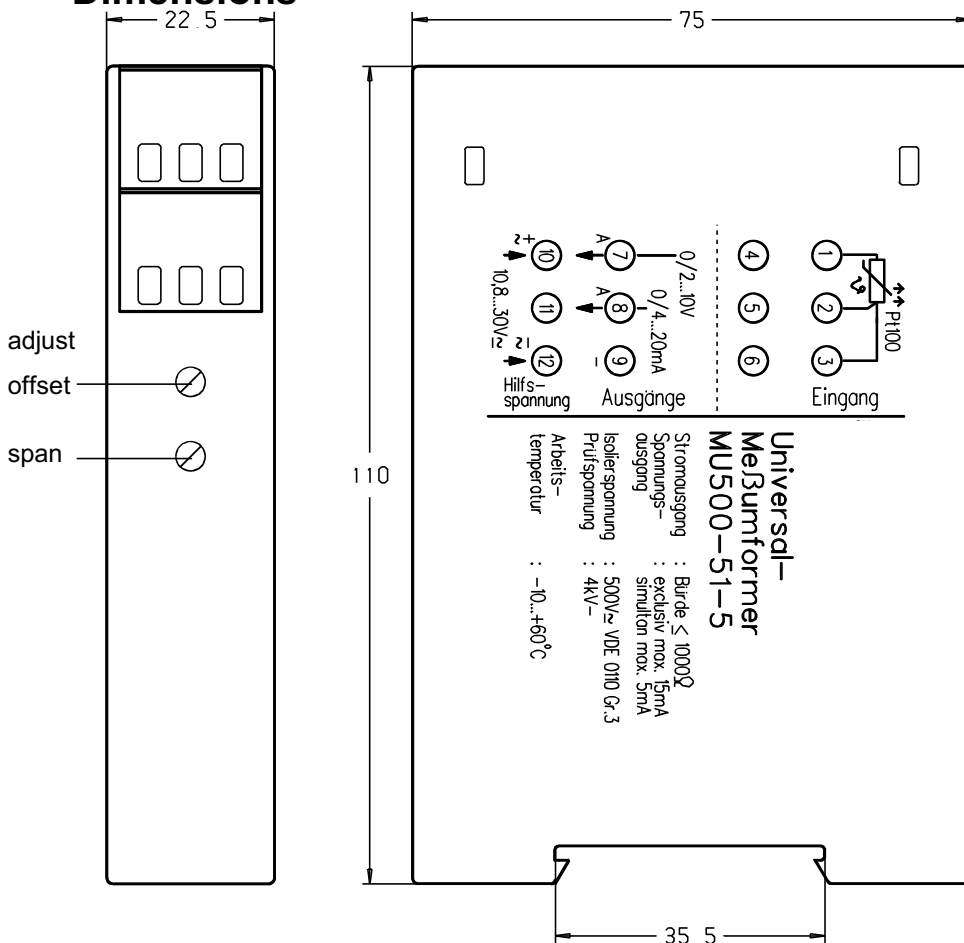
## Connection diagram



## Front panel controls

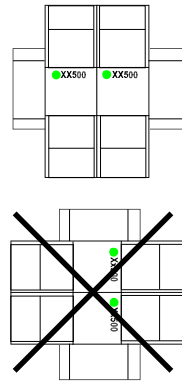


## Dimensions



### Caution!

Mounting of multiple units without distance is only permitted in vertical orientation.



TS35 DIN rail mounting  
acc.to DIN 46277 and DIN EN 50022

## Order code

<b>MU500</b> - <span style="margin: 0 10px;">1.</span> <input style="width: 50px; height: 20px;" type="text"/> - <span style="margin: 0 10px;">2.</span> <input style="width: 50px; height: 20px;" type="text"/>
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1.

<b>Temperature sensor</b>
51: Pt100 - 13 temperature ranges 53: Pt1000 - 16 temperature ranges
Custom ranges on request

2.

<b>Supply voltage</b>
0: 100...265V AC 5: 10.8...30V AC/DC

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Ihr kompetenter Ansprechpartner / Your competent contact partner :

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