

Temperature transmitter MU 500L

RTD sensor Pt100 or Pt1000

Features

- Free measuring range selection
- 2- or 3-wire configuration
- Outputs linearize
0/4 ... 20mA and 0/2 ... 10V DC simultaneous
- Front adjustment by 20-turn trimpot
zero point (→0←) output,
4mA/2V (→4mA←) output,
span
- Supply voltage 230V AC
or 24V DC
- Supply voltage isolated from
input and output
- Power-on LED
- 22.5mm 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

Measurement range

start value and span are free selectable. Please note:

sensor	start value must be in the range	span must be in the range
Pt100	-100 ... 100°C	50 ... 600°C
Pt1000	-50 ... 50°C	10 ... 200°C

Technical data

Power supply

Supply voltage	: 230V AC $\pm 10\%$ or 24V DC $\pm 20\%$
Frequency AC	: 47 ... 63 Hz
Power consumption	: <1.5VA
Working temperature	: -10 ... +60°C
Isolation voltage	: 500V~ according to VDE 0110 group 2
Test voltage	: 6kV~
CE-conformity	: EN55022, IEC1000-4-3/4/5/11/13, EN60555

Input

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

Output

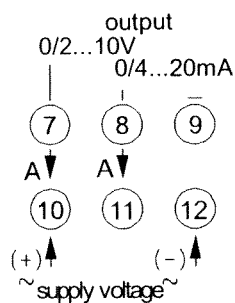
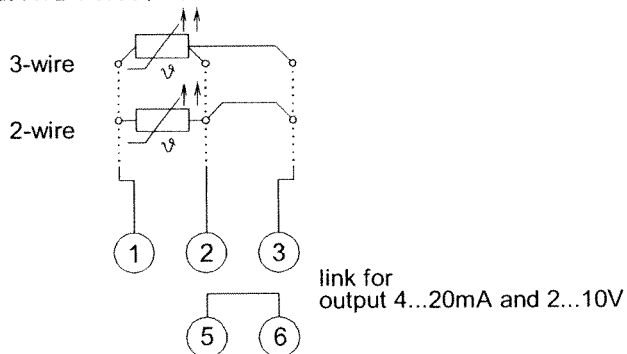
Current output	: 0 ... 20mA / 4 ... 20mA selectable by link
Load	: max. 500 Ω
Voltage output	: 0 ... 10V DC / 2 ... 10V DC selectable by link
Load	: max. 10mA, simultaneous to current output max. 1mA
Accuracy	: $\leq 0.2\%$
Temperature coefficient	: $\leq 10\text{ppm/K}$

Case

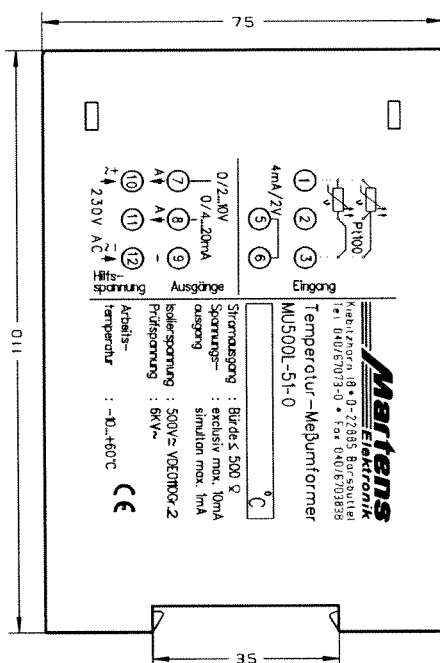
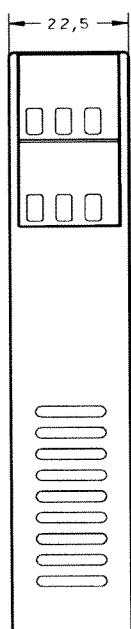
Weight	: standard case of polycarbonate 8020 UL94V-1
Connection	: approx. 140g
Protection	: screw-terminals with pressure plate, max. 2,5mm ² wire
	: case IP30; terminals IP20, finger safe acc. German BGVA2

Connection diagram

input RTD Pt100 / Pt1000

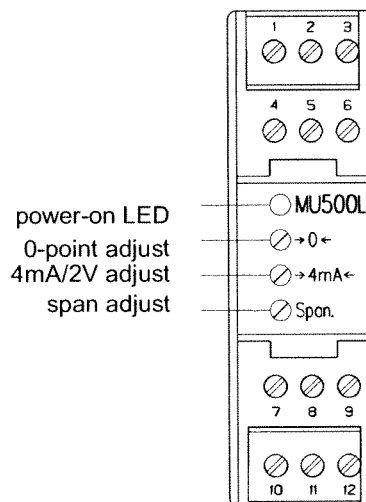


Dimensions



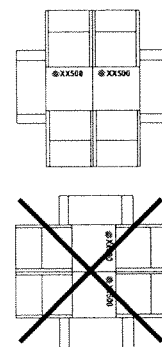
TS35 DIN rail mounting
acc. to DIN46277 and DIN EN 50022

Front panel controls



Caution!

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



Order code

MU 500L - 1. - 2. - 3.

- | 1. Device type | Measuring range
start value in range | Measuring span
in range |
|----------------|-----------------------------------------|----------------------------|
| 51 Pt100 | -100 ... 100°C | 50 ... 600°C |
| 53 Pt1000 | -50 ... 50°C | 10 ... 200°C |
2. Supply voltage
- | | |
|---|--------------|
| 0 | 230V AC ±10% |
| 5 | 24V DC ±20% |
3. Measuring range
 please state in clear text
 e.g. : -50 ... 100°C.

Stock

Sensor	Supply voltage	Temperature range
Pt100 or Pt1000	230V AC or 24V DC	-50 ... + 50°C
		0 ... + 50°C
		0 ... +100°C
		0 ... +120°C
		0 ... +150°C
		0 ... +200°C
		0 ... +300°C
Pt100		0 ... +400°C