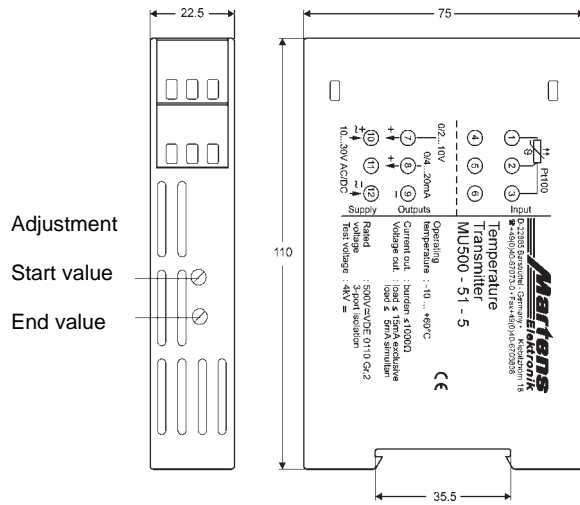


Produktinformation

Universal Transmitter MU500



Dimensions



Characteristics

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

Technical data

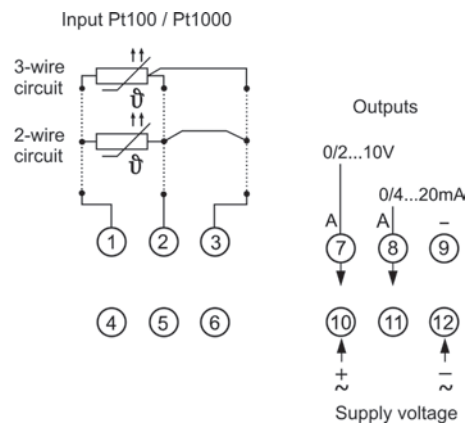
Power supply
Supply voltage : 85..265 V AC/110..125 V DC or 10..30 V AC/10..42 V DC
Frequency AC : 40..400 Hz
Power consumption : max. 2.2 W , max. 3.3 VA
Operating temperature : -10..+60 °C
CE-conformity : EN55022, EN60555-2 IEC61000-4-4/5/11/13

Input
RTD Pt100 : 13 ranges, switch selectable
- Sensor current : Pt100 approx. 1 mA
RTD Pt1000 : 16 ranges, switch selectable
- Sensor current : Pt1000 approx. 0.25 mA
Line resistance : max. 100 Ω
Accuracy : ≤ 0.2 %
Zero adjust : Pt100 approx. ± 8 Ω (± 20 °C)
Pt1000 approx. ± 8 Ω (± 2 °C)
End value : adjustable approx. +/-20 %
Sensor error;
- broken or shorted line: output rises to max. output value

Outputs
Current : 0/4..20 mA switch selectable burden ≤ 1 kΩ
Voltage : 0/2..10 V switch selectable load max. 15 mA , short-circuit-proof (simultaneously to the current output max. 5 mA)

Case : Polycarbonate, UL94V-0 TS 35 acc. to DIN EN 60715:2001-09
Weight : approx. 200 g
Protection class : case IP30, terminals IP20, BGV A3
Electrical connection : screw terminals with pressure plate, max. 2.5 mm²

Connection diagram



Ordering code

1. 2.
MU500 - -

1. Device type	
51	Pt100, 13 measuring ranges
53	Pt1000, 16 measuring ranges
2. Supply voltage	
0	85..265 V AC
5	10..30 V AC/DC

Produktinformation

Universal Transmitter MU500Ex



Outputs

- Current : 0/4..20 mA DC switch selectable, burden $\leq 1 \text{ k}\Omega$
- Voltage : 0/2..10 V DC switch selectable, load max. 15 mA, short-circuit-proof (simultaneously with current output 5 mA)
- Rated voltage : 253 V AC or 125 V DC (Um) acc. to EN 60079-0
- Accuracy : $\leq 0.2 \%$
- Case : Polycarbonate UL94V-0 TS 35 acc. to DIN EN 60715:2001-09
- Weight : approx. 200 g
- Protection class : case IP30, terminals IP20 (BGV A3)
- Connection : screw terminals with pressure plate max. 2.5 mm²
- Mounting : installation in dry, clean and well monitored areas

Characteristics

Temperature transmitters series MU500-Ex offer an intrinsically safe input and convert RTD sensor signals (Pt100 or Pt1000) into industry standard signals. The device includes a full 3-port isolation.

Technical data

Power supply

- Supply voltage : 85..253 V AC/110..125 V DC
10..30 V AC/DC
- Frequency AC : 40..400 Hz
- Power consumption : $< 3.3 \text{ VA}$
- Operating temperature : $-10..+60 \text{ }^\circ\text{C}$
- CE-conformity : ATEX directive 94/9/EG
EMC directive 2004/108/EG

Standards

- : EN 60079-0:2013,
EN 60079-11:2012,
EN 61326-1:2004-05

Explosion protection

- Approval : TÜV 03 ATEX 2283,
- Marking : II (1) G [Ex ia Ga] IIC or
II (1) D [Ex ia Da] IIIC

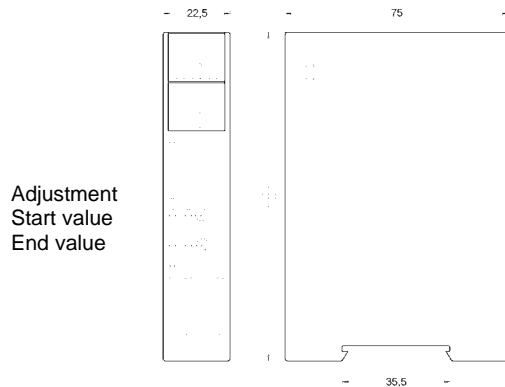
	U_0	I_0	P_0	C_0	L_0
MU500Ex- ... -51	: 1.3 V	$< 3\text{mA}$	$< 3\text{mW}$	29 μF	100mH
MU500Ex- ... -53	: 4.9 V	$< 3\text{mA}$	$< 3\text{mW}$	2.2 μF	100mH
Ci, Li	: 5 nF, ca. 0 mH				

The intrinsically safe circuit is galvanically separated from the non-intrinsically safe circuits up to a peak crest value of the voltage of 375 V.

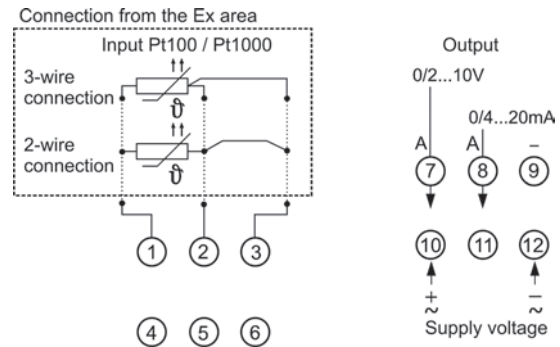
Measuring input

- Sensor current : Pt100 approx 1 mA,
Pt1000 approx. 0.25 mA
- Line resistance : max. 100 Ω , automatic compensation with 3-wire connection
- Zero adjust : Pt100 approx. $\pm 8 \Omega$, ($\cong 20 \text{ }^\circ\text{C}$)
Pt1000 approx. $\pm 8 \Omega$ ($\cong 2 \text{ }^\circ\text{C}$)
- End value : approx. $\pm 20 \%$ adjustable
- Sensor error : output rises to max. output (voltage output $> 12\text{V DC}$ current output $> 25 \text{ mA}$)

Dimensions



Connection diagram



Ordering code

MU500Ex - 1. - 2. - 3.

1. Device type	
51	Pt100, 13 measuring ranges
53	Pt1000, 16 measuring ranges
2. Supply voltage	
0	85..253 V AC/110..125 V DC
5	10..30 V AC/DC
3. Options	
00	without option