

Product Information

Temperature

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
- 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 VA
- Operating temperature : -10..+60 °C
- CE-conformity : ATEX-Richtlinie 2014/34/EU
- Standards : EN 60079-0:2006, EN 60079-11:2007
EN 61241-0:2006, EN 61241-11:2006
- EMC-directive / standard : 2014/30/EU / EN 61326-1:2013

Explosion protection

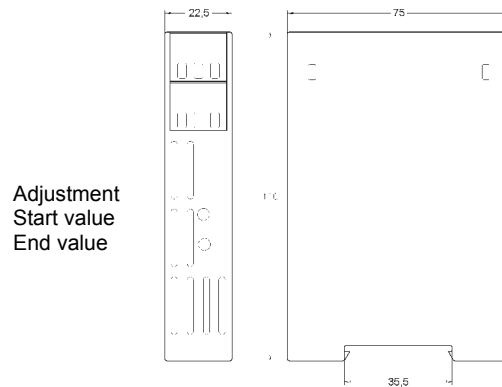
- Approval : TÜV 03 ATEX 2283,
 - Marking : II (1) G [Ex ia Ga] IIC or II (1) D [Ex ia Da] IIIC
- | | U ₀ | I ₀ | P ₀ | C ₀ | L ₀ |
|------------------|------------------|----------------|----------------|----------------|----------------|
| MU500Ex- ... -51 | : 1.3 V | <3mA | <3mW | 29µF | 100mH |
| MU500Ex- ... -53 | : 4.9 V | <3mA | <3mW | 2.2µF | 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.

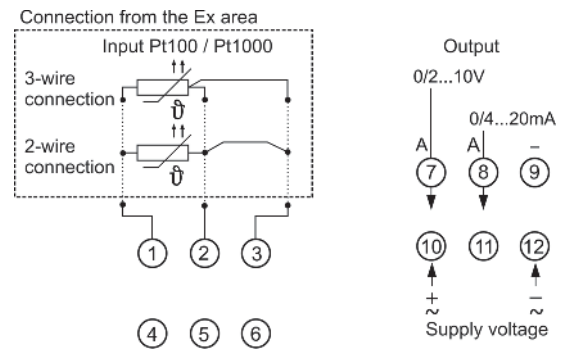
Measuring input

- 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. $\pm 8 \Omega$ ($\triangleq 20^\circ\text{C}$)
Pt1000 approx. $\pm 8 \Omega$ ($\triangleq 2^\circ\text{C}$)
- End value : approx. +/-20 % adjustable
- Sensor error : output rises to max. output (voltage output >12V DC current output > 25 mA)

Dimensions



Connection diagram



Ordering code

MU500Ex - - -

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