

# 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 mm <sup>2</sup>
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

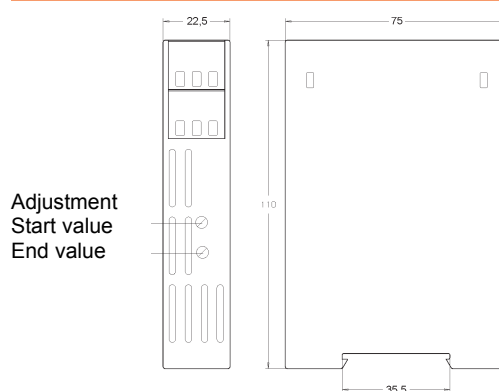
	$U_0$	$I_0$	$P_0$	$C_0$	$L_0$
MU500Ex- ... -51	: 1.3 V	<3mA	<3mW	29µF	100mH
MU500Ex- ... -53	: 4.9 V	<3mA	<3mW	2.2µF	100mH
Ci, Li	: 5 nF, ca. 0 mH				

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.

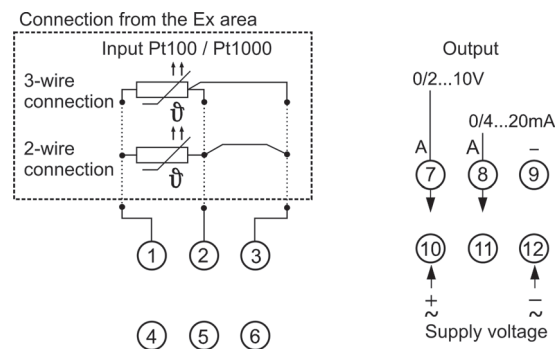
### Measuring input

Sensor current	: Pt100 approx 1 mA, Pt1000 approx. 0.25 mA
Line resistance	: max. 100 $\Omega$ , automatic compensation with 3-wire connection
Zero adjust	: Pt100 approx. $\pm 8 \Omega$ ( $\triangleq 2 \text{ }^\circ\text{C}$ ) Pt1000 approx. $\pm 8 \Omega$ ( $\triangleq 2 \text{ }^\circ\text{C}$ )
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