

Product Information

**Universal Transmitter
 MU500Ex**



Outputs

Current : 0/4..20 mA DC switch selectable, burden ≤ 1 k Ω

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 : ≤ 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	29 μ F	100mH
MU500Ex- ... -53	: 4.9 V	<3mA	<3mW	2.2 μ F	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

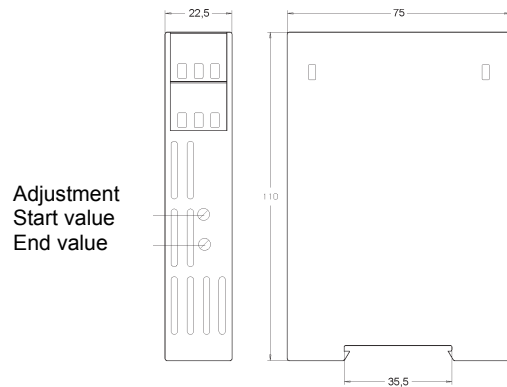
Line resistance : max. 100 Ω , automatic compensation with 3-wire connection

Zero adjust : Pt100 approx. ± 8 Ω ($\triangleq 2$ °C)
 Pt1000 approx. ± 8 Ω ($\triangleq 2$ °C)

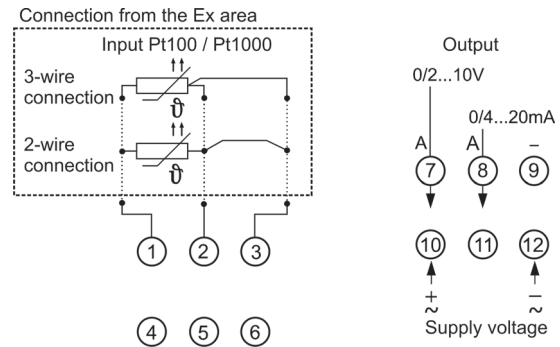
End value : approx. +/-20 % adjustable

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