

Product Information

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 ²
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

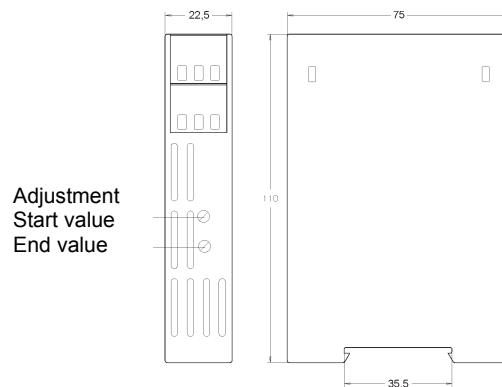
Power supply	
Supply voltage	: 85..253 V AC/110..125 V DC 10..30 V AC/DC
Frequency AC	: 40..400 Hz
Power consumption	: < 3.3 VA
Operating temperature	: -10..+60 °C
CE-conformity	: ATEX-Richtlinie 2014/34/EU
Standards	: EN 60079-0:2006, EN 60079-11:2007 EN 61241-0:2006, EN 61241-11:2006
EMC-directive / 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.

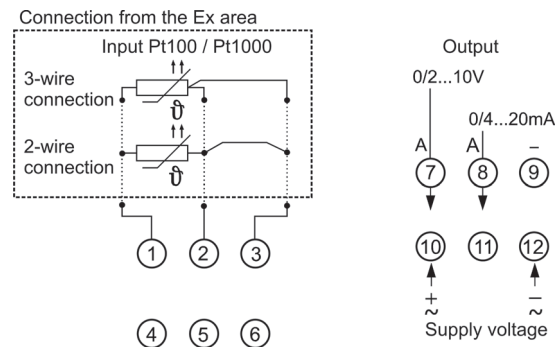
Measuring input

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