



# HAZARDOUS LOCATIONS

## MINCO INTRINSICALLY SAFE RTD TRANSMITTER TT211

### DESCRIPTION

The **Minco Model TT211 intrinsically safe RTD transmitter** takes a standard RTD input and provides an accurate 4-20 mA output over any of three factory-calibrated temperature ranges. When coupled with a Model MTL7706 Safety Barrier and appropriate cabling, both the **Model TT211** and the RTD are suitable for use in hazardous locations without the use of explosion proof enclosures.



TT211

### FEATURES

- **Class I, Division 1, Groups A, B, C, D with intrinsic safety barrier**
- **Nonincendive for use in Class I Division 2 areas without barrier**
- **Accuracy  $\pm 0.1\%$  of span**
- **Compact size**
- **Epoxy potted for moisture resistance**
- **Zero and span adjustable to  $\pm 5\%$  of span**

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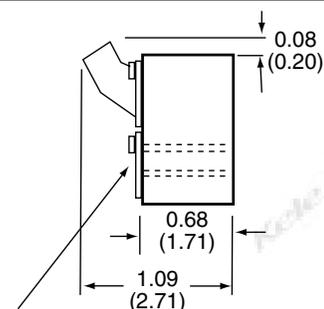
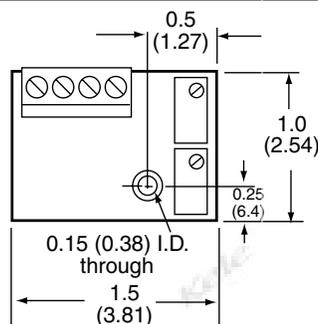
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### SPECIFICATIONS

<b>Supply Voltage Input</b>	8.5-35 VDC Platinum RTD, 100 (0.00385 / $\Omega/^\circ\text{C}$ ) Platinum RTD, 1000 (0.00375 / $\Omega/^\circ\text{C}$ )	<b>Operating Humidity Thermal Effect</b>	0% to 100% non-condensing $\pm 0.007\%$ of span per $^\circ\text{F}$ ( $\pm 0.013\%$ per )
<b>Configuration Signal Output</b>	Two-wire, loop powered 4-20 mA @ 775 , two wire, loop powered	<b>Area</b>	Intrinsically safe Class I, Division 1, Groups A,B,C,D
<b>Linearity</b>	(accuracy) $\pm 0.1\%$ of span	<b>Entity Parameters</b>	Vmax: 35V; Imax: 150 mA; Ci: 0 $\mu\text{F}$ ; Li: 0 mH
<b>Operating Temperature</b>	-13 $^\circ$ to 185 $^\circ\text{F}$ (-25 $^\circ$ to 85 $^\circ\text{C}$ )	<b>Weight Approvals Warranty</b>	0.07 lb (0.03 Kg) FM 3 years

### DIMENSIONS

in  
(cm)



Mounting: Use #6 screw through or #8 thread forming screw

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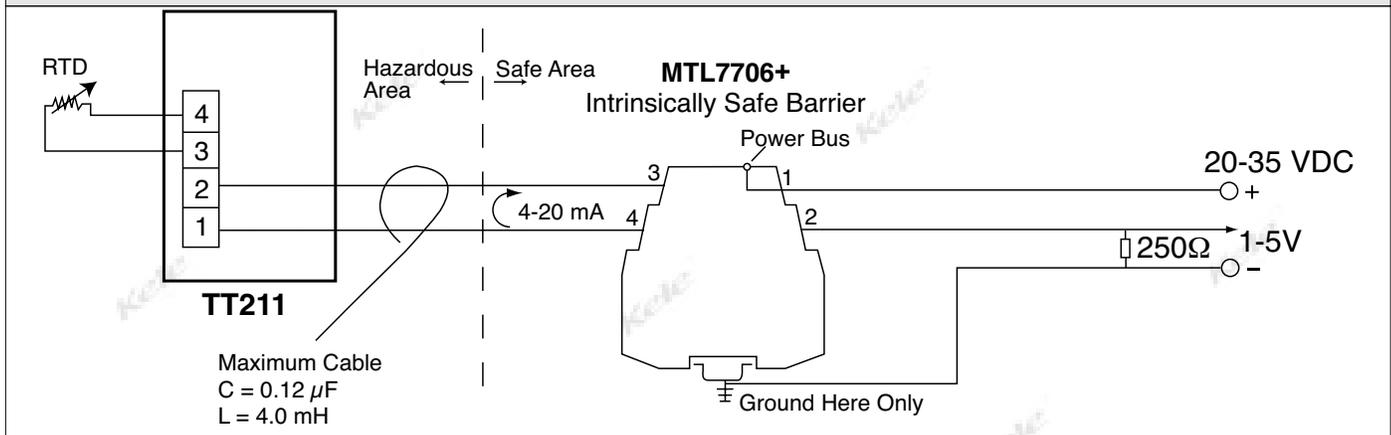


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**CAUTION:** Intrinsically safe devices require the use of an intrinsic safety barrier when applied in hazardous locations. Provide wiring and grounding strictly in accordance with manufacturer's instructions. When the Model TT211 transmitter is combined with the Model MTL7706+ intrinsic safety barrier, total cable capacitance between the two must be limited to 0.12  $\mu\text{F}$ , and total cable inductance must be limited to 4.0 mH (equivalent to 2200'/823m maximum Belden® #8760 18/2 shielded twisted pair cable 0.18  $\mu\text{H}/\text{FT}$ , 44  $\text{pF}/\text{FT}$ ).

### WIRING



### ORDERING INFORMATION

MODEL	DESCRIPTION
TT211	Intrinsically-safe RTD transmitter
PD	For 100 $\Omega$ platinum RTD, TCR=0.00385 $\Omega/\Omega/^{\circ}\text{C}$
PW	For 1000 $\Omega$ platinum RTD, TCR=0.00375 $\Omega/\Omega/^{\circ}\text{C}$
<b>RANGE</b>	
1EN	-20° to 140°F (-28.9° to 60°C)
1S	0° to 100°F (-17.8° to 37.8°C)
1BN	30° to 240°F (-1.1° to 115.6°C)

Note: Contact Kele for additional ranges and RTD types.

TT211 - PW - 1EN **Example:** TT211-PW-1EN Transmitter with range of -20° to 140°F (-28.9° to 60°C) for 1000 $\Omega$  platinum RTD (TCR=0.00375  $\Omega/\Omega/^{\circ}\text{C}$ )

### RELATED PRODUCTS

250R-3-1	250 3 WATT 1% Resistor Long Leads
DCP-1.5-V	Power supply, 24 VAC IN to 24 VDC OUT
MTL7706+	Intrinsic safety barrier, 4-20 mA two-wire transmitters
ST-A81	100 platinum RTD all-purpose temperature probe
ST-A91	1000 platinum RTD all-purpose temperature probe
ST-D81	100 platinum RTD duct temperature sensor
ST-D91	1000 platinum RTD duct temperature sensor
ST-S81	100 platinum RTD space temperature sensor
ST-S91	1000 platinum RTD space temperature sensor
ST-W81	100 platinum immersion temperature probe
ST-W91	1000 platinum immersion temperature probe