7. Specifications

@Vnom : 24 VDC, Tambient = 25°C
Span nom. : RTD (Cu10) = 100°C

Output :	4-20mA two wire isolated
Power Supply :	12-36 VDC, polarity protected
Supply Voltage Effect :	±0.002 % / V
Galvanic Isolation :	1000 VDC (AC peak) isolation
Open Circuit Detection :	Up scale, greater than 23mA,
	limited to 40mA.
Load Capability :	Rmax.=(Vsupply - 10V) / 20mA
Zero Drift :	±0.05% / °C
Span Drift :	±0.05% / °C
Ambient Operating Temperature :	-40 to +70 °C (-40 to +158°F)
Storage Temperature :	-40 to +85 °C (-40 to +185°F)
Zero and Span Adjustment :	20 turn potentiometer
	± 25% for zero and span
Input :	Copper 10 Ohm RTD 3-wire
Linearity to Temperature :	±0.1% or better
Excitation Current :	0.2 mA

8. Notes

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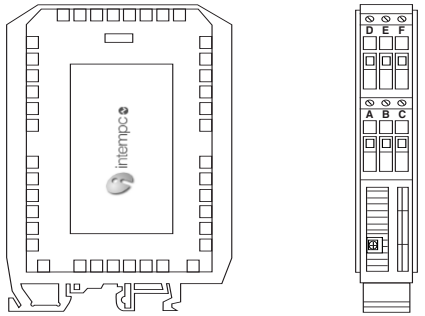
INTEMPCO's RT610Di

Copper 10 ohm RTD - Isolated Temperature Transmitter



INSTRUCTION MANUAL

1. Description

The Model RT610Di is a high quality isolated 10 ohm copper RTD transmitter. It completely eliminates ground loop and other associated problems. Combined with SMD technology it provides full input/output isolation to 1000 VDC. RT610Di series temperature transmitters feature linearized output to temperature for 10 ohm copper RTD's. Precision 20-turn potentiometers allow fine adjustement for ZERO and SPAN. They are factory calibrated and designed for highest performance and lowest cost. Standard DIN rail-mounted package allowas for compact assembly and easy wiring in panels.

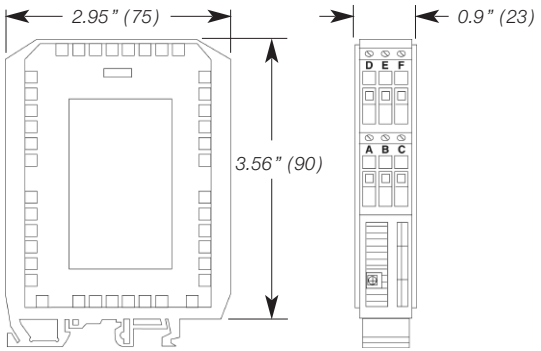
2. Note

Prior to unpacking and installation, please read the operating instructions and follow them carefully. These units are to be used, serviced, and repaired only by individuals who are familiar with the operating instructions and the applicable regulations for operational safety and accident prevention.

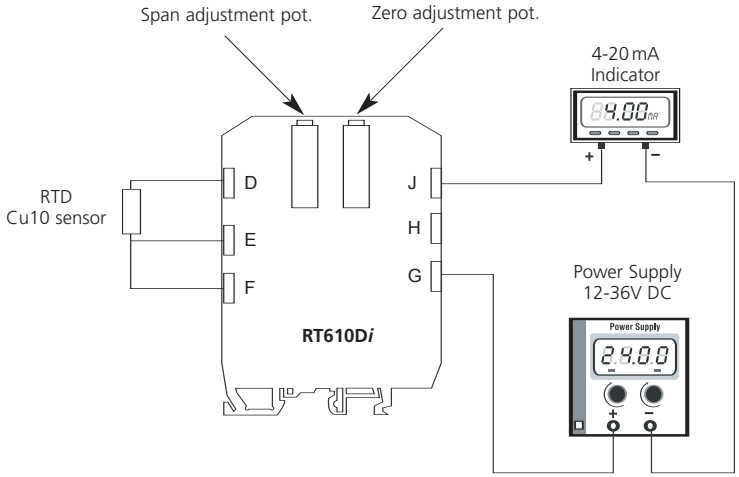
3. Control of Units

The units are calibrated and checked before shipment and shipped in good conditions. If you detect a visible defect on the unit, we recommend that you carefully check the packing material. In the event of a defect, please immediately notify the mail service/freight forwarder, as they are responsible for shipping damage.

4. Dimensions



5. Electrical Connections



The diagram above represents the connection method to provide the 4-20 mA with a current loop output. In most cases, the RT610Di would take the form of a 3 wire output probe assembly. The output loop, the indicator and the transmitter are powered by a 12 to 36 VDC power supply. The indicator could be replaced by a controller, a data logger, etc.

Note : **Transmitters are protected against reverse connections, incorrect connections of the output wires result in a near zero current flow in the loop.**

6. Calibration Instructions

The RT610Dii comes factory calibrated. If you need to re-calibrate the unit, you will require the following equipment :

- 12-36 VDC Power Supply with a milliamp indicator or a loop-powered calibrator.
- A temperature bath.
- A standard reference temperature sensor.
- Test leads

2 Point Calibration, Min. & Max. (Example : 0-100 °C range)

1. Connect the RT610Di as per the wiring diagram. (5)
2. Set the temperature bath to the minimum range of the RT610Di transmitter, Ex.: 0 °C = 4.00 mA
3. With the temperature standard, verify the bath temperature and if required calculate the corresponding current output for the RT610Di.
4. Immerse the RT610Di probe in the temperature bath. Make sure the output stabilizes. With ZERO pot. adjust current output to 4.00mA or the corresponding current output.
5. Set the temperature bath to maximum range of the RT610Di transmitter, Ex.: 100 °C = 20.00 mA
6. With the temperature standard, verify the bath temperature and if required calculate the corresponding current output for the RT610Di.
7. Immerse the RT610Di probe in the temperature bath. Make sure the output stabilizes. With the SPAN pot. adjust current output to 20.00 mA or the corresponding current output.
8. Repeat steps 2 to 7 until required accuracy is reached. This step is necessary because of the small interaction between Zero and Span.

Single Point Calibration (Example : 0-100 °C range)

In some cases, a single point calibration is sufficient especially when a process is at a fixed set point.

1. With a temperature standard, verify the correct process temperature and compare it to the RT610Di reading.
2. If the temperature reading is below the mid-point of the RT610Di range, use the ZERO pot. to obtain the correct reading.
3. If the temperature reading is above the mid-point of the RT610Di range, use the SPAN pot. to obtain the correct reading.