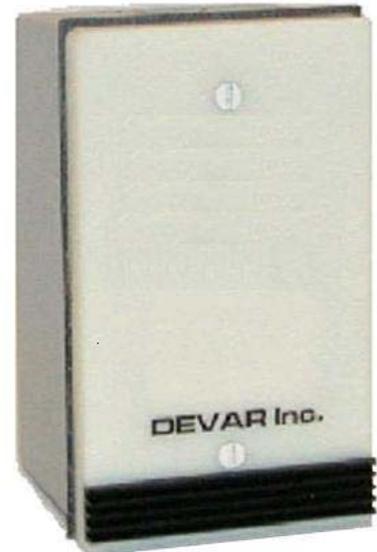


- RTD Sensor and Transmitter Assembly
- Fits Standard Electrical Outlet Box
- Splash Resistant Front Panel
- 4/20 mA Temperature Output
- True 2-Wire Operation



#### GENERAL DESCRIPTION

The Model d-RTT **D**igital **R**oom **T**emperature **T**ransmitter is designed to accurately sense ambient temperature and provide a 4 to 20 mA output signal that is linear to the measured temperature to within  $\pm 0.1^{\circ}\text{F}$ .

The operating range of the d-RTT is  $-40$  to  $180^{\circ}\text{F}$  ( $-40$  to  $82^{\circ}\text{C}$ ). The output is configured at the factory to represent any temperature span within this range. The desired temperature span must be specified when ordering. The d-RTT will be configured at the factory to the required specifications and arrive on site, ready for installation.

A precision 1000 ohm Platinum RTD sensor is used to detect the ambient temperature. The sensor is attached to a heatsink to ensure compliance with the temperature of the surrounding environment. The black heatsink is

mounted on the front of the instrument, and is visible on the image above. The d-RTT pictured above is shown mounted on the optional die cast aluminum housing with gray paint finish. An option is also available that accepts as input an external three wire 1000 ohm platinum RTD sensor.

These are true two wire devices with signal and power being provided over a single pair of wires. The required operating voltage for the d-RTT ranges from 5 to 28 Volts DC.

The d-RTT is housed inside a flat plastic panel that can be mounted on any standard electrical outlet box. Each unit is fitted with a rear gasket seal that provides splash resistance, allowing these units to be safely mounted in areas requiring periodic wash down.

# SPECIFICATIONS

## GENERAL

Housing: Splash resistant faceplate with rear gasket seal  
 Material: ABS Plastic faceplate with black anodized aluminum heat sink  
 Sensor: 1000 Ohm Platinum RTD, Conforms to DIN Standard EN 60751, Class A  
 Open RTD: Output goes upscale  
 Nominal Temperature Range: -40 to 180°F (-40 to 82°C)  
 RFI Immunity: Rated class 3-C

## MILLIAMP OUTPUT

Range: 4 to 20 mA  
 Accuracy:  $\pm 0.7\text{ }^\circ\text{F}$  ( $\pm 0.39\text{ }^\circ\text{C}$ ) + 0.1% of Span referenced to a DIN Standard EN 60751 input.  
 Thermal Effect: Zero: Display Shift  $\pm 0.01\%$  of Span per  $^\circ\text{F}$   
 Span: Display Shift  $\pm 0.01\%$  of Span per  $^\circ\text{F}$   
 Supply: 5 to 28 VDC  
 Max Load:  $R_{\text{ohms}} = (V_{\text{supply}} - 5\text{V}) / 0.020\text{A}$   
 Supply effect: 0.01% of Span per Volt  
 Load Effect: 0.05% of Span per 300 Ohm Change

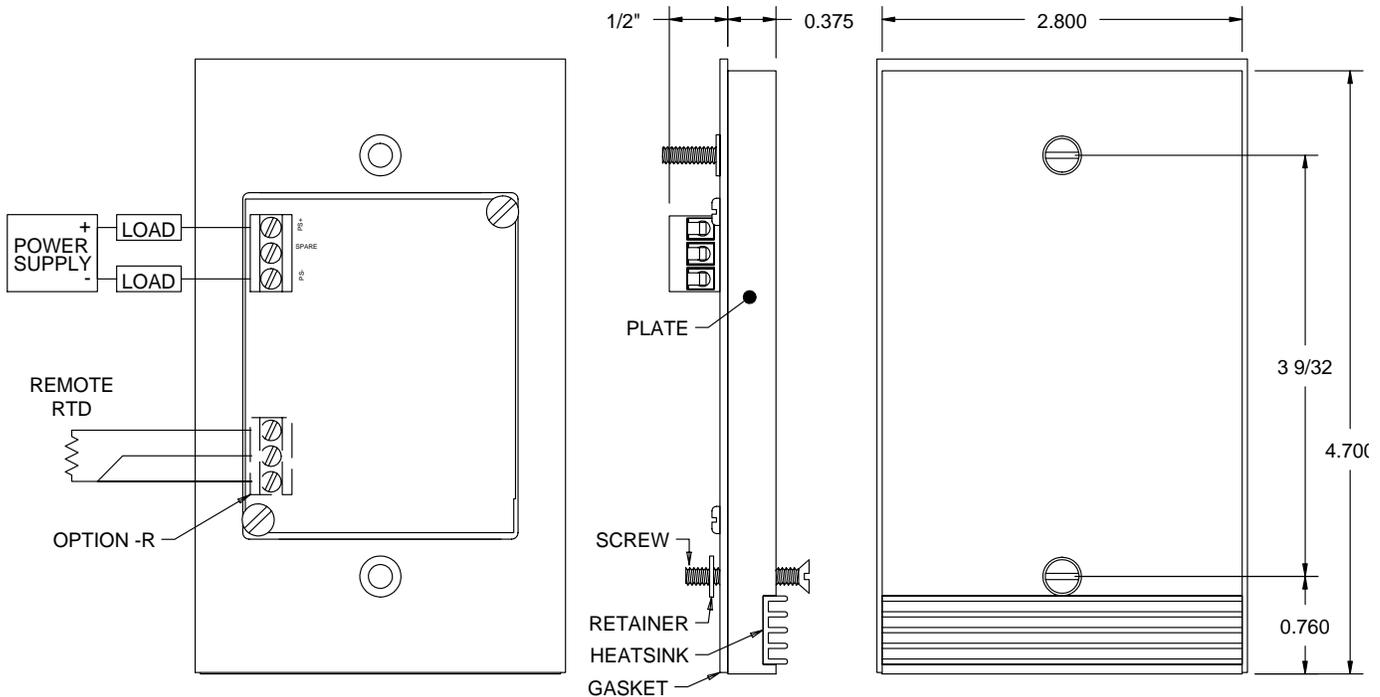
## OUTPUT SCALING

Output Loop: Milliamp output can be set to represent any temperatures within the nominal range  
 Nominal Temperature Range: -40 to 180°F (-40 to 82°C)  
 Caution: The recommended minimum span for the milliamp output is 35  $^\circ\text{F}$  (20  $^\circ\text{C}$ ). Narrower spans will degrade system performance. Fixed range is specified at time of order.  
 Method:

## ORDERING

General form: d-RTT <-R> <-H> <temp at 4mA / temp at 20mA  $^\circ\text{F}$  or  $^\circ\text{C}$ >  
 (e.g. d-RTT -30/120  $^\circ\text{F}$ )  
 Option -R: Replace internal sensor with external 1000 ohm platinum RTD input (e.g. d-RTT-R 0/85  $^\circ\text{F}$ )  
 Option -H: Add Die Cast Aluminum Housing Painted Gray (shown on front page).

**WARRANTY:** 2 YEARS, *Made in USA*



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