

# RT351 | Rotary Temperature Transmitter

*TempTrak® All-Digital Technology  
For Precise Godet Temperature Control*

The RT351 Series Transmitter is a single-channel temperature measurement system that features Dienes-compatible output signals for temperature and speed. The RT351 also features a linear 4-20mA output for use with standard process control systems. Digital circuitry in the rotating transmitter and the stationary receiver are immune to electrical noise and drift. Generous 5 mm clearance between the rotating and stationary parts eliminate rubbing or impacting - a common failure cause in other designs. Error detection modes protect heater from damage and expedite troubleshooting in the event of a sensor or other failure. Multiple mechanical configurations are available to fit most machines.

- 4-20 mA current output for standard process controllers
- Frequency output for Dienes process controllers
- Multiple mechanical configurations available
- Digital circuitry from sensor input to signal output



## FEATURES

**Accurate** ■ Precise and reliable over the entire sensing range.

**Robust** ■ Fully encapsulated electronics with generous clearance between rotor and stator.

**Dienes Compatible** ■ A true drop-in replacement that works with existing wiring and process control systems.

**Flexible** ■ Provides 4-20 mA current output for standard process controllers and frequency output for Dienes process controllers.

**Versatile** ■ Multiple mechanical configurations available.

**Digital Circuitry** ■ Maintains calibration and is immune to electrical noise and drift.

**Intelligent** ■ Protects heater if sensor or transmitter malfunctions.

**Product Support** ■ Backed by BEI's reputation for the strongest customer support in the industry including a two-year warranty.

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# RTR351 Rotary Temperature Transmitter

## TYPICAL SPECIFICATIONS

### Rotor

Number of Sensors:	1
Input Sensor Type:	PT100 RTD (100 $\Omega$ at 0°C, $\alpha = .00385$ )
Sensor Range:	0° – 300°C
Speed:	10,000 RPM

### Stator

Output Connection:	M3-0.5 screw terminals, or 8 ft (3.8m) unterminated cable, 6-conductor
Output Signals:	Discrete 4-20 mA current source Frequency signal (Dienes curve: 362.48 – 749.86 Hz) Speed Output Pulse (2-pulses per revolution)
Power Input:	Frequency output (Dienes compatible) (+Vf): 11 – 15 VDC For current output (standard 4 – 20 mA) (+Vi): 14 – 25 VDC

### General

Accuracy (max error):	Current: $\pm 0.20\%$ FS, 25-85°C ambient Frequency: $\pm 0.40\%$ FS, 25-85°C ambient
Operating Temperature:	0°C – 100°C
Rotor-Stator Spacing:	5 mm

## TYPICAL OUTPUT CONNECTIONS

### Frequency and Speed (Dienes)

Terminal 1:	Supply voltage (+12VDC nominal)
Terminal 2:	Supply voltage low (Common)
Terminal 3:	Speed output

### Current Output (4-20 mA)

Terminal 4:	Supply voltage (+15VDC nominal)
Terminal 5:	Current output high (+I)
Terminal 2:	Current output low (-I)

Both frequency and current output signals can be used individually or simultaneously but each must be powered accordingly.

*Specifications subject to change without notice.*



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