



## RTD and Type J Thermocouple Meat Piercing Sensor For Food Service Applications

### RTD Performance Capabilities

**Stability:** Less than 0.08°C per year shift when tested in accordance with ASTM E644, paragraph 12

**Self heating:** Less than 50 mW per °C when tested in accordance with ASTM E644, paragraph 11.2

**Insulation resistance at 25°C:** 100MΩ at 100VDC when tested in accordance with ASTM E644, paragraph 5

**Repeatability:** ±0.1°C or better

**Accuracy:** Conforms to DIN-IEC-751

**Tolerance:**

**Class A**

0°C ± 0.15°C (32°F ± 0.27°F)

260°C ± 0.68°C (500°F ± 1.21°F)

### Type J Thermocouple Performance Capabilities

**Accuracy:**

- Special tolerances conform to ANSI MC96.1
- Type J thermocouple with accuracy of ±1.1°C or ±0.4%

**Insulation resistance:** Same as shown on RTD

### Applications

- Meat processing
- Food warming
- Holding ovens
- Smokehouse environments
- Food transport
- Conventional steam tables
- Rotisserie ovens
- Frozen food packaging

### Features

- **Entire sensor rated for 500°F** continuous use
- **PFA leadwire** is four feet long
- **Stainless steel metal underbraid** aids in mechanical protection of internal conductors
- **100Ω platinum RTD** is supplied in DIN 0.00385 temperature coefficient, Class A tolerances. Type J thermocouple meets special limit tolerances per ANSI MC96.1
- **Two or three wire configuration** available on RTDs
- **Molded construction** provides resistance to moisture penetration and vibration
- **Area sensing capabilities of 3/4 inch** on the R5000 for better cooking process control
- **Exact point temperature sensing** with the T5000 thermocouple assembly supplied with a grounded junction
- **Dishwasher safe** even in commercial wash cycles
- **NSF Certified**

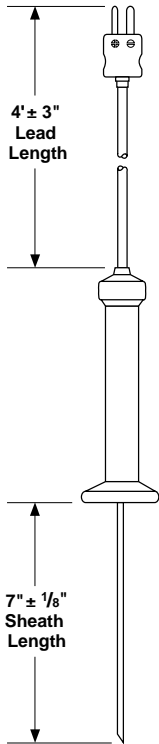


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## Hand-Held Probes

### Style R5000/T5000

#### RTD and Type J Thermocouple Meat Piercing Sensor



### Testing Specifications

The entire sensor, including the molded on mini-connector, has survived complete immersion in 350°F oil for four hours without degradation. Insulation resistance remained the same on all units tested. The entire sensor also survived eight hours in 95°C, 95 percent RH without degradation.

The leadwire was flexed at 45° angles from center in two directions. The life cycle prior to breaking strands was approximately 4000 cycles. One 90° sweep equaled one cycle. The average force required to pull leadwire out of the handle was 162 pounds and 0.5 inch per minute.

### Ordering Information

1 2 3 4 5 6 7 8 9  
5 0 0 0 N

#### 1. Sensor Assembly

R = RTD

T\* = Thermocouple Type J calibration

#### 2-4. Enter "500"

#### 5. Diameter

0 = 0.188

#### 6. Number of Conductors

1\* = Thermocouple

2\* = 2 wire RTD

3 = 3 wire RTD

#### 7. Temperature Coefficient

A = DIN 0.00385, Class A RTD

P\* = Thermocouple

#### 8. Termination

1\*\* = No connector, split end leads

2\* = Molded miniature male connector

5 = RTD adaptor to instrument 5404

#### 9. Enter "N"

\* Not compatible with 5404 RTD meter. Must use 3 wire sensor with adaptor selection from digit 8.

\*\* When using with meter, proper connector/adaptor selection must be made.

**Note:** For modifications to sheath or lead lengths, consult factory.

## Watlow Gordon Model 5404 RTD Thermometer For Use With R5000 Sensor



- Includes certificate of conformance to NIST
- Field calibration capabilities minimize probe error
- Stores up to 99 readings
- Features selectable temperature scale and resolution

### Specifications

**Range:** -330°F to 1560°F; -201 to 849°C (selectable)

**Accuracy:** ±0.1% of reading or ±0.7°F; ±0.4°C (whichever is greater)

**Display:** Dual LCD-upper is 4 digit, lower is 5 character alphanumeric

**Operating ambient:** 50 to 104°F (10 to 40°C) for stated accuracy

**Power:** One 9V battery (included)

**Dimensions:** 3½" W x 6½" H x 1¼" D

**Shipping weight:** 1 lb (0.5 kg)

### Watlow Sales Engineers:

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