

## PANEL-STYLE RTD TEMPERATURE MONITORS

Models 451 & 461

These monitors are ideal for applications requiring a high degree of accuracy and repeatability at an economical price. The meter and probe are calibrated in temperature baths to NBS traceable standards for a total measuring accuracy of  $\pm 0.2^{\circ}$  C. An open-back panel design allows for simple installation onto control cabinets by job shops or original equipment manufacturers. Typical applications include monitoring bio-medical freezers, incubators, photo-developing chemicals or any product or process where temperature is critical.

### FEATURES:

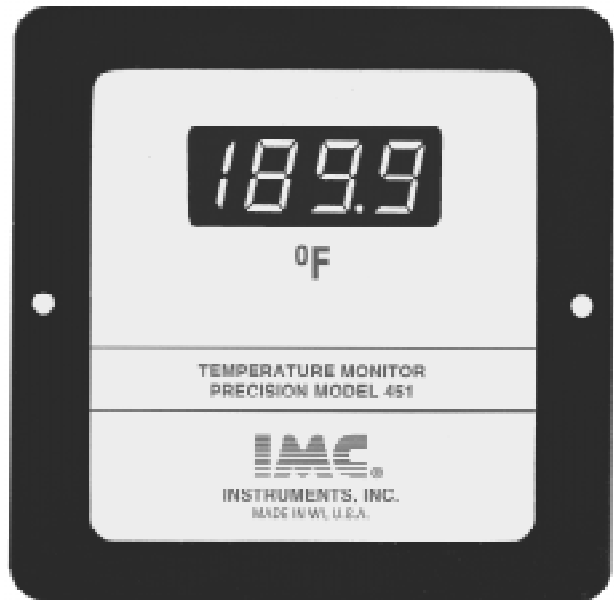
**RTD Sensor input** is for our Nickel RTD probes which have excellent long-term stability and repeatability of 1/10 of one degree.

**Simple calibration procedure** can be performed in the field to fine-tune readings to user standards.

Meter connects with sensor via **two 18 GA wires** for up to 75 feet or **three 22 GA wires** for up to 200 ft.

**Large bright display** is about 1/2" high-red for excellent readability.

**Polymer coated circuit** will perform indefinitely even in high humidity environments.



**ENGINEERED AND MANUFACTURED IN WI, U.S.A.**

**Low cost stainless steel probes** are available in sizes ranging from .08 dia x 2" to 1/4 dia x 6 ft with cables or terminals.

### SPECIFICATIONS:

#### Display Range:

-199.9<sup>o</sup> to +199.9<sup>o</sup> C or F. Usable range is -70<sup>o</sup> to 150<sup>o</sup> C (-90<sup>o</sup> to 199.9<sup>o</sup> F). Probe limit is 300<sup>o</sup>F.

#### Measuring Accuracy:

$\pm 0.1^{\circ}$ C ( $\pm 0.2^{\circ}$ F) for readings from 0<sup>o</sup> to 70<sup>o</sup>C (32<sup>o</sup> to 160<sup>o</sup>F) and  $\pm 0.2^{\circ}$ C ( $\pm 0.4^{\circ}$ F) to the extremes.

#### Instrument Environmental Range:

-26<sup>o</sup> to 54<sup>o</sup> C or -15<sup>o</sup> to 130<sup>o</sup> F and 90% RH max. (no condensation).

#### Ambient Temperature Effects:

$\pm 0.1^{\circ}$ C max. from 5<sup>o</sup> to 40<sup>o</sup>C, or  $\pm 0.005$  deg. per deg. offset from 21<sup>o</sup>C (70<sup>o</sup>F).

#### Cable (3 wire) Resistance Effect:

0.2 % max. span change per ohm of wire (when all three wires have equal resistance).

#### Display Indication:

Updated three times per second on LED digits 0.56" (11mm) high.

#### Construction:

Aluminum front and open back for simple installation into a cutout on any suitable cabinet.

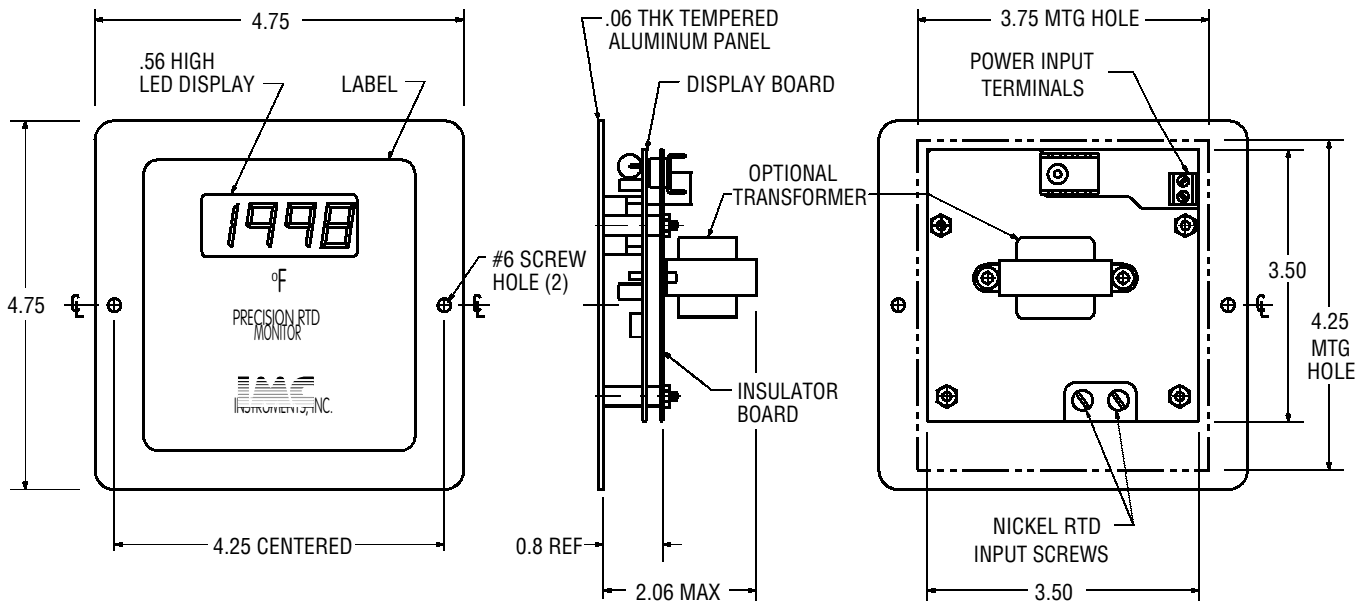
#### Power Requirements:

Isolated 10-12 VAC at 0.15 amp. Optional transformers available.

#### Weight:

Approximately 7 oz. (0.2 kg.) without transformer.

**MECHANICAL DETAIL: Model 9410-0451**



ALL DIMENTIONS ARE IN INCHES

**ORDERING INFORMATION:**

Refer to sheet titled "PERMANENT INSTALLATION RTD PROBES" for the selection of probes to complete any measuring system. All prices listed below are F.O.B. factory or distributor warehouse. Contact distributor listed below for assistance. Products are warranted against material or workmanship defects for a full year from date of shipment. Orders under \$ 100.00 will be charged \$ 5.25 handling.

SCALE: \_\_\_\_\_

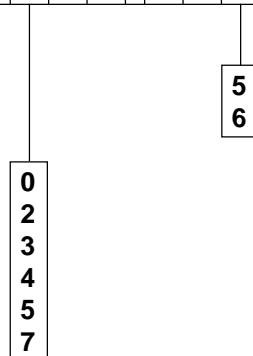
fahrenheit reading  
celsius reading

POWER INPUT: \_\_\_\_\_

- Standard 10-12 VAC 50/60 HZ isolated input
- Truck 12 DC negative ground (use ungrounded probes)
- Back mounted transformer for
  - 24 VAC 50/60 HZ
  - 120 VAC 50/60 HZ
  - 230 VAC 50/60 HZ
- Flanged transformer - remote mtg. (U.L. listed) 120 VAC

**OPTION - MODEL**

9 1 0 - 0 4 1



Prices and specifications are subject to change without notice

DS451-02/96



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