

PROCESS TECHNOLOGY

INSTALLATION AND MAINTENANCE INSTRUCTIONS FOR THE MODEL ETI-1 ELECTRONIC DIGITAL THERMOSTAT

GENERAL

The ETI-1 Digital Thermostat is a compact, solid state temperature measurement and display device designed especially for the electroplating industry.

The ETI-1 measures temperature with a laser trimmed 2000 ohm RTD contained in a fluoropolymer covered stainless steel probe. The signal from the RTD is conditioned and sent through an analog to digital converter and is indicated on a 2½ digit LED display. The numerals are ½" high, ¼" wide, which makes the digital display easy to read at a distance. The ETI-1 measures temperatures between 0°-250°F with resolution of 1°, and delivers accuracy of +/-2° of actual temperature. The digital thermometer is housed in a flame retardant polypropylene case. The solid state electronic design makes the thermometer very resistant to shock and vibration that normally would have an adverse effect on mercury or alcohol thermometers.

The unit is powered by 6 VDC, which is delivered through a power supply that works off of 110 VAC. The power supply is UL recognized.

The ETI-1 has a zero adjustment on the back of the LED display module.

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SPECIFICATIONS

Functional Specifications:

Range: 0-250°F

Over Range: Displays 1

Under Range: Displays 2

Ambient
Temperature Limit: -30°F to +160°F

Temperature
Stability: .01%/°F

Storage
Temperature: -40°F to +180°F

Zero Adjustment: +/-10% of operating range
through two, single turn
potentiometers located on
the back of the LED display
module.

Power: 110 VAC Input - 6 VDC regulated
output

Humidity Limits: Up to 100% RH @ 140°F

Approvals: UL recognized (File E103515)
NSF Approval - Class C-2

SPECIFICATIONS

Physical Specifications:

Size: Approximately 4" x 7" x 4" high case

Display: 2½ digit LED with ½" x ¼" numerals

Sensor: Laser trimmed 2000 ohm RTD

Sensor

Dimensions: .250" dia. x 2.54" long, 300 stainless steel probe with 8 ft. #26 PVC coated copper wire encapsulated in a .313" dia. fluoropolymer sleeve.

Mounting: Surface mount (see diagram, page 4)

Performance Specifications:

Accuracy: +/-2°F of actual temperature (includes sensor error)

Resolution: One degree

Update time: 3 readings per second

Sensitivity: At operating temperature, ½° fluctuations in temperature not indicated

WIRING

The digital thermometer temperature probe is provided with 8 feet of 26 gauge copper wire. If additional length is needed, simply obtain a piece of 26 gauge copper wire of the desired length and splice it in. A 4 foot grounded AC plug is provided for connection to a standard 110 VAC convenience outlet.

CALIBRATION

Every thermometer has been factory calibrated. To recalibrate, power up the module, place the temperature probe in a 0 degree standard bath and turn the zero adjustment on the back of the unit to read 00 if necessary.

TROUBLESHOOTING

If the thermometer appears to be operating incorrectly, check to see that it is receiving power. All screw terminals must be tight. This product is not designed for component level troubleshooting. For display replacement, consult the factory.

MOUNTING LAYOUT

