GENERAL
The PT500 Digital Thermometer is designed to meet specific needs in the food service, industrial, HVAC, laboratory, and scientific markets. The unit offers dual scale temperature measurement in a range from -58 to 500°F (-50 to 260°C), maximum/minimum memory, two-speed display update, and field recalibration adjustment. The PT500 thermometer can be set for constant “on” state, auto-off (after 6 to 7 minutes), or instant “off”. Use the pocket case/clip assembly to carry the unit or as a holder when measuring hot substances.

OPERATION
See Figure 1.

“ON” Button
Press once and release immediately. The instrument will come on in 1 to 2 seconds. The thermometer is in the 10-second display-update frequency which conserves battery life.
Press and hold down for 1-second displays. This is useful for observing rapid temperature changes but is not appropriate when thermometer must be removed from a substance or an area and read before ambient temperature can effect the display. Instrument will return to 10-second update mode when button is released.

Two-stage “OFF” Button
Leave the thermometer in the “ON” mode for long term measurements.
Press “OFF” button once for short term measurements, “A” will appear on LCD indicator read-out. The unit will turn off automatically in 6 to 7 minutes.
Press “OFF” twice to turn thermometer off manually.

MAX/MIN Memory Button
Press once to switch from ambient temperature to “Maximum Memory” reading (“MA” LCD indicator read-out)
Press a second time to switch from “Maximum Memory” to “Minimum Memory” reading (“MI” is displayed).

PHYSICAL DATA
Temperature Range: -58 to 500°F (-50 to 260°C), °F or °C selectable.
Resolution: 0.1°F (0.1°C).
Accuracy: ±2°F (±1°C) from 32 to 140°F (0 to 60°C); ±5°F (±2.7°C) below 32°F (0°C) and ±2% of reading above 140°F (60°C).
Display: 3½ digit, 0.3” H.
Display Update: 1 second or 10 seconds, selectable.
Power: 1.5 Volt LR44 watch/camera battery.
Battery Life: Approximately one year.
Construction: Stainless steel pointed stem, and ABS plastic case.

MAXIMUM MEMORY INDICATOR
ON/FAST UPDATE MEMORY CLEAR
MINIMUM MEMORY INDICATOR
AUTO OFF/INSTANT OFF
CURRENT TEMPERATURE

FIGURE 1

Or press twice to go directly from ambient temperature to ”Minimum Memory” mode.
The MAX/MIN readings remain in memory until the memory is reset. To reset maximum or minimum memory, hold down the “ON” button for more than one second while the unit is in that memory mode.
NOTE: MAXIMUM and MINIMUM must be reset separately.
Press “MAX/MIN” button a third time to return to ambient temperature reading.

CPU Microprocessor Reset Port
If improper display is indicated (due to changing the
battery or other power interruption) microprocessor may be reset by pressing the CPU reset with the end of an open paper clip. See Figure 2.

**F/C Switch**
The Fahrenheit/Celsius scales are controlled by a slide switch on the left side of the instrument. Firmly press the switch all the way to the indicated letter to ensure proper readings.

**Battery**
The small round battery compartment cover is located on the bottom flat of the instrument head. Use a coin to rotate the cover counterclockwise to remove. Tapping the instrument on the instruction plate should cause the battery to fall out.

Replace the battery with the same type 1.5V watch/camera battery type LR44 or equivalent. Be sure to replace the O-ring to help prevent liquids from entering the compartment.

The CPU port may need to be reset to restart the unit after power interruption.

**Recalibration Adjustment**
Two variable resistors are located under the instruction plate. The variable resistors are to be used for small adjustments and cannot compensate for large errors which indicate a microprocessor or sensor problem.

See Figure 3 for variable resistor locations. VR2 is used to calibrate from -58 to 450°F (-50 to 232°C). Use VR1 to calibrate from 450 to 500°F (232 to 260°C). Immerse the thermometer stem at least 1” into a well-circulated bath along with a reliable reference thermometer of known accuracy. Carefully adjust the correct variable resistor with an appropriate sized screwdriver.

**Pocket Case/Holder Assembly**
The pocket case/holder assembly is used as both a convenient method of carrying the thermometer and as a handle. By inserting the thermometer stem through the ring at the top of the metal pocket clip, your hands are protected when measuring hot or problematic substances. See Figure 4.

**MAINTENANCE**
No routine maintenance is required on the PT500 Digital Pocket Thermometer. Please contact Dwyer Instruments, Inc. before returning unit for repair to review information relative to your application and obtain a return authorization number. When returning a product to the factory, carefully package and ship freight prepaid. Be sure to include a complete description of the application and problem and identify any hazardous material used with the product.