

Model 421501 Type K Digital Thermometer

- Water-resistant housing
- Maximum temperature record mode
- Selectable units and resolution
- Backlit LCD display with Data Hold



1. INTRODUCTION

Congratulations on your purchase of Extech's Digital Thermometer. This professional meter, with proper care, will provide years of safe reliable service.

2. SPECIFICATIONS

Display	3-1/2 digit LCD (2000 counts)
Battery Power Supply	NEDA 1604, IEC 6F22, or 006P 9VDC battery.
Battery life	200 hours typical with carbon zinc battery
Dimensions / Weight	7.5 x 3.6 x 2.1" (192x91x52.5mm); 11.7oz. (365g)
Ranges/Resolution	-58 to 2000°F (-50 to 1300°C); 1 or 0.1°F/°C
Temperature units	Selectable C or F temperature units
Accuracy	$\pm(0.3\% \text{ rdg} + 1^{\circ}\text{C})$ -50°C to 1000°C $\pm(0.5\% \text{ rdg} + 1^{\circ}\text{C})$ 1000°C to 1300°C $\pm(0.3\% \text{ rdg} + 2^{\circ}\text{F})$ -58°F to 2000°F
Temperature Coefficient	0.1 times the applicable accuracy specifications per °C from 0°C to 18°C and 28°C to 50°C (32°F to 64°F and 82°F to 122°F)
Water resistant housing	Gasket protected front panel
Input Protection	24VDC or 24VAC rms max. input on any combination of inputs
Reading rate	2.5 times per second
Input connector	Accepts standard miniature thermocouple connectors
Supplied thermocouple	4', type K, teflon insulation, Max insulation temp: 260°C (500°F) Accuracy: $\pm 2.2^{\circ}\text{C}$ or $\pm 0.75\%$ of rdg (whichever is greater) from 0°C to 800°C
Ambient Operating Range	32 to 122°F (0 to 50°C); less than 80% RH
Storage Temperature	-4 to 140°F (-20 to 60°C); less than 70% RH

3. FRONT PANEL DESCRIPTION

- 1 Thermocouple plug shown in meter's input terminals
- 2 LCD Display
- 3 Power ON/OFF key
- 4 Resolution select key
- 5 Maximum reading mode key
- 6 Degrees C/F select key
- 7 Backlight activation key
- 8 Data Hold key



4. OPERATION

- 4.1 Ensure that a fresh battery is installed by powering the meter (Press the POWER key) and observing the LCD. If the LCD does not display characters, replace the battery.
- 4.2 Plug in the supplied thermocouple to the meter terminals (top of meter).
- 4.3 Press the "C" or "F" key to set the desired units.
- 4.4 Press the "1/0.1" key until the LCD reflects desired resolution.
- 4.5 Press the Backlight key to activate the LCD backlighting.
- 4.6 Data Hold Mode: During measurements, pressing the "Hold" key "freezes" the displayed value. When selected, an "H" will appear on the LCD. Press "Hold" again to cancel HOLD operation.
- 4.7 MAX Temperature mode. Press the "MAX" key to enter the Max mode (MAX indicator will appear on the LCD). The meter then begins recording temperature peaks. Each time the temperature increases the meter replaces its previous displayed value with the new temperature value. In Max. mode only the highest temperature up to that point is displayed. Press the MAX key again to cancel Max. mode and return to normal operation. While in the "MAX" mode, pressing the "HOLD" key will "freeze" the value in the display. Pressing the "HOLD" key again will resume the "MAX" mode and the display will indicate if any new max value has occurred during the hold period.

5. BATTERY REPLACEMENT

When the low battery indication symbol appears on the display replace the battery. Open the Battery Compartment at the rear of the instrument by removing the two rear meter screws. Remove the old battery, install a new one, and replace cover.

WARNING! To avoid possible electrical shock, disconnect the thermocouple from the thermometer before removing the battery cover.

6. CALIBRATION / REPAIR SERVICES

Extech offers complete repair and calibration services for all of the products we sell. For periodic calibration, NIST certification or repair of any Extech product, call customer service for details on services available. Extech recommends that calibration be performed on an annual basis to insure calibration integrity.

7. WARRANTY

EXTECH INSTRUMENTS CORPORATION warrants this instrument to be free of defects in parts and workmanship for one year from date of shipment (a six month limited warranty applies on sensors and cables). If it should become necessary to return the instrument for service during or beyond the warranty period, contact the Customer Service Department at (781) 890-7440 ext. 210 for authorization. A Return Authorization (RA) number must be issued before any product is returned to Extech. The sender is responsible for shipping charges, freight, insurance and proper packaging to prevent damage in transit. This warranty does not apply to defects resulting from action of the user such as misuse, improper wiring, operation outside of specification, improper maintenance or repair, or unauthorized modification. Extech specifically disclaims any implied warranties or merchantability or fitness for a specific purpose and will not be liable for any direct, indirect, incidental or consequential damages. Extech's total liability is limited to repair or replacement of the product. The warranty set forth above is inclusive and no other warranty, whether written or oral, is expressed or implied.

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