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Model T-506 Digital Thermometer Kit



User Manual



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Warranty

This product is fully warranted against defective materials and/or workmanship for a period of one year after purchase, provided it was not improperly used. For your protection, please use this product as soon as possible. If returned, it must be securely wrapped, sent prepaid and insured to:

Miltronics Mfg., Inc.
95 Krif Road
Keene, NH 03431
PH: 603-352-3333
FX: 603-352-4444

Please include a note with name, address, telephone number and description of the problem. Although we provide assistance on Miltronics and Pacer products both personally and through our literature, it is still the total responsibility of the customer to determine the suitability of the product for use in their application.

This manual is provided by Miltronics Mfg., Inc. without any kind of warranty. Precautions have been taken in accurately preparing this manual; however, we neither assume responsibility for any omissions or errors that may appear nor assume liability for any damages that result from the use of the products in accordance with the information contained in the manual.



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Notes:



INTRODUCTION

The model T-506 Digital Thermometer kit is a high performance, reliable, portable, easy to use unit for a low reasonable cost. It is important for you to read this manual before operation.

SECTION 1 – SPECIFICATIONS

Range: K-type:	-180 to +1372 °C
Accuracy:	± 0.2% of reading + 0.3°C (-100 ~ +1000°C)
Measurement:	°C or °F, switch-able
Temperature Coefficient:	(±0.02 ±% of reading +0.03°C)
Sampling Time:	Approx. 1.5 times per second
Power Supply:	9V Duracell PC1604 Procell Alkaline Battery or equivalent
Weight:	5.1 ounces
Dimensions:	5.9" x 3.1" x 1.1"
Included:	#S-506 Digital Thermometer Instrument, 9V Duracell Procell Battery, User Manual, Carrying Case, #STD-5 Probe (2.8mm O.D. x 60mm, 650°C),



Optional Probes: Any K-Type probe can be used with this instrument. Miltronics has several common styles available. Others may also be custom ordered, please call or e-mail.

Notes:

General Purpose, Immersion Probes

- #STD-5 Short, Medium-Duty, 2.8 x 60mm, 650°C
- #S-511 Medium, Medium-Duty, 2.8 x 95mm, 650°C
- #S-512 Short, Heavy-Duty, 3.6 x 195mm, 900°C

Bendable, Immersion Probes

- #TK101 1.5 x 130mm, 900°C
- #TK101/300 1.5 x 300mm, 900°C
- #TK102 3.0 x 130mm, 1100°C
- #TK102/300 3.0 x 300mm, 1100°C

Penetration Probes

- #TK106 Medium, Heavy-Duty, 3.0 x 130mm, 600°C
- #S-531 Short, Medium-Duty, 2.8 x 95mm, 480°C
- #S-532 Short, Super H.D., High-Temp, 3.6 x 95mm, 800°C
- #S-534 Short, Medium-Duty, 2.6 x 50mm, 550°C (wide base)

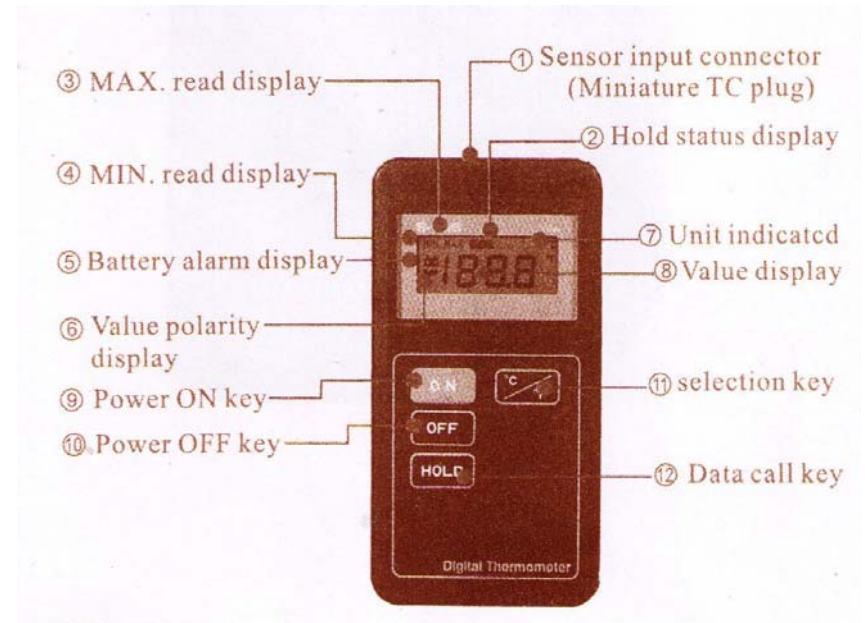
Other Style Probes

- #S-521 Hot-Wire, Air, Medium, 10mm (tip) x 200mm, 450°C
- #TK104 Hot-Wire, Air, Small, 6mm (tip) x 130mm, 600°C
- #TK103 Surface, Ceramic Spring Loaded, 900°C
- #TK105 Right Angle Surface, Spring Loaded Disc, 450°C
- #TK107 Pipe Clamp, 35mm Dia. Max, 200°C

SECTION 5 – SAFETY PRECAUTIONS

1. Select the proper probe range for the specific measuring.
2. When measuring high temperatures, use longer length probes with higher ratings to protect the instrument from the extreme temperatures.
3. Do not use the instrument near high voltage, high current, and magnetic and / or high vibration areas.
4. Remove the battery, when not using the instrument for extended periods of time. Store instrument in a low temperature / low humidity environment.
5. Unit is not user serviceable. Do not attempt to dismantle or open the unit. Contact the manufacturer for repair.
6. Routinely check probes and cables for signs of wear, corrosion or fatigue and /or are broken.
7. Observe correct polarity of K-type probes when connecting to the instrument. Do not force the connection.
8. When the probe is first inserted into the instrument or if the probe is changed, the plug must be allowed to stabilize at the temperature of the socket, which would be in contact with a colder plug, for greatest accuracy. This takes only a couple of minutes and only applies if the probe plug has been previously exposed to an ambient temperature different than that of the thermometer.

SECTION 2 – INSTRUMENT DIAGRAM





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SECTION 3 – PREPARATION FOR OPERATION

1. Remove the lid and attach battery (power switch should be OFF).
 2. Insert the plug of the thermal sensor (K-type) into the thermometer.
 3. Depress the “ON” key to turn on power. The instrument will perform a self-test (for approximately 4 seconds then switch into the measuring mode automatically.
- **Unit may power off by itself, if Auto Power Off Mode is selected. Turn power back on and/or set to Manual power Off Mode, see section 4.**



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SECTION 4 – FUNCTION INFORMATION

1. **AUTO / MANUAL POWER OFF FUNCTION**
 - a. Depress the “ON” and “HOLD” keys at the same time until the display shows “ON”, indicating Auto Power Off mode is engaged.
 - b. Keeping the “ON” key depressed, release the “HOLD” key and then press again. The display will now show “OFF”, indicating Manual Power Off Mode is engaged.

Example:

“ON” + “HOLD” = display showing ON (Auto Power Off Mode)

+ “HOLD” = display showing OFF (Manual Power Off Mode)

+ “HOLD” = display showing ON (Auto Power Off Mode)

- **When in Auto Power Off Mode, the unit will shut down automatically 7 (seven) minutes after the last key input.**
2. **°C / °F SELECTABLE FUNCTION**

Depress the “°C/°F” key to select your unit of measurement as shown on the display.