



ThermoWorks MicroTherma 2K Thermometer Instruction Manual

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ThermoWorks

MicroTherma 2K
Thermometer
Operating Instructions



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INSTRUMENT OPERATION

– Where applicable, connect a probe via the socket located on the front of the instrument. Switch the instrument on and apply the tip of the probe to the substance or medium to be measured. The instrument reading may take a few seconds to stabilize, depending on the nature of the measurement and sensitivity of the probe.

ON/OFF – To turn the instrument on press the ON/OFF button. All display segments will be tested. When turning off, the unit will remember the last settings and restart with the same configuration. The unit is now ready to measure temperature. To turn the instrument off press the ON/OFF button. 'Saving data' followed by 'Product OFF' will be displayed in the text line.

DISPLAY – The display has two sections. The main section is a 4½-digit temperature display located in the lower half of the viewing area, where measured values are displayed. The other section is a 12-digit alpha/numeric dot-matrix text line, located at the top of the viewing area, above the temperature display. Set-up information and the command prompt will be displayed here.

RESOLUTION – The unit resolution will be 0.1°, within the range ±1999.9° and will be 1° outside of this.

AUTO-OFF – Auto-off is set at 30 minutes. This can be disabled. In ambient measurement mode, the auto-off is fixed at 10 minutes.

AMBIENT MEASUREMENT

– This facility allows the internal CJC temperature of the unit to be measured. This allows the user to determine if the unit has sufficiently acclimatized. Acclimatize a nation is crucial for accurate measurement. Start the unit by pressing and releasing the ON/OFF button while pressing the HOLD and MAX/MIN buttons. Do not release the HOLD and MAX/MIN buttons until the software revision is displayed.

°C/°F – °C or °F is selectable in the Parameter Set-Up Menu.

HOLD – Press the HOLD button to hold the reading. 'HOLD' will illuminate in the display. Press again to release the hold.

MAX/MIN – Press the MAX/MIN button to show the max temperature in the dot matrix text line. Press again to show the minimum temperature. Press again to show the T/C type. Max and Min values will be cleared when the instrument changes from °C to °F and vice versa or is switched off. Max/Min values can be cleared in the Parameter Set-up Menu.

TRIM FUNCTION – This function allows a constant temperature offset to be entered to compensate for thermocouple probe tolerances. The trim value is selectable in the Parameter Set-Up Menu. The maximum trim value is ± 4.5°F

(2.5°C). The trim value will be displayed in the text line at start-up if it is not equal to zero.

INTERNAL/EXTERNAL CJC (COLD JUNCTION COMPENSATION)

– The unit will automatically adjust the thermocouple input to allow for changes in the ambient temperature when the CJC is set to 'INTERNAL'. Use CJC 'EXTERNAL' if the input is being wired through an "ice point reference". When using an "ice point reference", copper wires must be used from the reference to the MicroTherma input. This is selectable in the Parameter Set-Up Menu.

UNDER OR OVER RANGE/OPEN CIRCUIT – 'Range Error' will be displayed in the text line if the measured temperature is outside the range of the instrument. 'Range Error' will also be displayed if the sensor is open circuit.

BUTTON FUNCTION IN THE PARAMETER SET-UP MENU – Press the MODE button to enter the parameter set-up menu. The parameter and its current setting will be shown in the text line.

Press the MODE button to move to the next parameter. Use either the HOLD or MAX/MIN button to change the setting (i.e. Y to N, °C to °F, Internal CJC to External CJC). When setting display contrast press and hold the HOLD button to increase contrast (darken the display) and the MAX/MIN button to decrease contrast (lighten the display). Press both HOLD and MAX/MIN buttons together to return to the factory default. When adjusting the trim function press the HOLD button to increase the value and the MAX/MIN button to decrease the value. Press both HOLD and MAX/MIN buttons together to return to zero trim value. When all parameters have been scrolled through, 'End of list' will be displayed while the settings are saved. Press the MODE button to enter the parameter set up menu.

Parameter Set-up Menu List:

Temp in <°C> <°F>
<Internal CJC> <External CJC>
Set Trim = <Y> <N>
Auto-Off <Y> <N>
Clr Mx/Mn <Y> <N>
Contrast Set
End of List

BATTERIES – 'LO BAT' indicates that the batteries need replacing as soon as possible. The unit will continue to function but to maintain accuracy new batteries are required. Replace 2x batteries with AAA, 1.5-volt alkaline batteries. If 'Battery Flat' is displayed in the text line the instrument has detected that there is insufficient battery voltage left to function correctly. The instrument will shut down and will not measure again until new batteries have been installed.

EMC/RFI – Readings may be affected if the unit is operated within a radio frequency electromagnetic field strength of approximately 3 volts per meter, but the performance of the instrument will not be permanently affected.

MODEL

MicroTherma 2K

ORDER CODE

221-092

SPECIFICATIONS

Range	—328 to 2501°F (-200 to 1372°C)
Accuracy	±0.36°F (+0.2°C), ±1 digit
Resolution	0.1° to 1999.9°, auto-ranging to 1° above
Probe	Not included, mini-connector, Type K
Battery	2 x AAA, 1,000 hours
Auto-off	30 minutes
Environmental	32 to 122°F (0 to 50°C)
Range	
Dimensions	2.87 W x 5.55 H x 1.38 D inches (73 W x 141 H x 35 D mm)
Certificate	NIST-traceable certificate included

GUARANTEE – This instrument carries a two-year warranty against defects in either components or workmanship. During this period, products that prove to be defective will, at the discretion of ThermoWorks, be either repaired or replaced without charge. This warranty does not apply to probes, where a six-month period is offered. Full details of liability are available within ThermoWorks' Terms & Conditions of Sale at www.thermoworks.com/productwarranty.

For warranty, service, and technical assistance, please contact ThermoWorks' Technical Support at (801) 756-7705 or email at echsupport@thermoworks.com.

ACCESSORIES/RELATED ITEMS

		
MicroTherma 2K Meter & Probe Kit (Y-221-092)	Carrying Case (THS-834-100)	Duracell Procell AAA Battery, 4-pack (PC2400)



■ P-20-001-02-a



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ThermoWorks

741 E. Utah Valley Dr., American Fork, UT 84003

Ph: 801-756-7705 Fax: 801-756-8948

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References

-  [Professional Thermometers from the Temperature Experts | ThermoWorks](#)

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