TECHNOLOGY IN TEMPERATURE

T M E

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T M E

**MM2120
Handheld Thermometer**

INPUT 1   INPUT 2

MX   MX
MN   MN

23.9 °C
K

①   SCL

1/2/DIFF   ▽

MAX MIN   CLR

SPECIFICATIONS

Environmental

Ambient operating range	-30°C to 50°C (-21 to 122°F)
Storage temperature range	-40°C to 60°C (-40 to 140°F)
Humidity	0 to 70% R.H.

ELECTRICAL

Measurement Ranges

	CENTIGRADE	FAHRENHEIT	KELVIN
K	-200°C to 1372°C	-328°F to 250°F	-73°F to 1645°F
T	-200°C to 400°C	-328°F to 752°F	-73°F to 673°F
R	-50°C to 1767°C	-58°F to 3212°F	-223°F to 2040°F
N	-200°C to 1300°C	-328°F to 2372°F	-73°F to 1573°F
J	-200°C to 1200°C	-328°F to 2192°F	-73°F to 1473°F
E	-200°C to 1000°C	-328°F to 1832°F	-223°F to 1273°F
S	-50°C to 1767°C	-58°F to 3212°F	-223°F to 2040°F
I/R	-50°C to 200°C	-58°F to 392°F	-223°F to 473°F

Accuracy@23°C	±0.15% of reading ±0.2°C
Characterising error	less than 0.05°C
Temperature coefficient	0.01% of reading/°C
Cold junction compensation	0.0075°C/°C
Resolution	0.1° autoranging to 1° 1000°

Note Strong RF fields may adversely affect measurement accuracy.

General

|	
WEIGHT	155 gms (5.47 oz)
DIMENSIONS	130 x 70 x 33 mm
BATTERY	PP3
BATTERY LIFE	200 Hours

Introduction

Your high accuracy microprocessor driven thermometer is suitable for use with thermocouple types K,J,T,R,N,E,S or Infra-Red sensors.

The thermocouple calibrations are in accordance with national and international standards (NBS and IEC) tables.

Features

- °C / °F / A TEMPERATURE SCALES
- TRUE ARITHMETIC DIFFERENTIAL MEASUREMENT
- HOLD FUNCTION
- MULTIFUNCTIONAL DISPLAY - SIMULTANEOUS DISPLAY OF BOTH INPUTS FOR DIFFERENTIAL VALUES (IP1 - IP2)
- DIFFERENTIAL AND INPUT 1
- MAX/MIN BOTH INPUTS
- OVERRANGE / OPENCIRCUIT PROBE INDICATION
- LOW BATTERY INDICATION
- K, J, T, R, N, E, S THERMOCOUPLE TYPES
- COMPATIBLE WITH INFRA-RED SENSORS
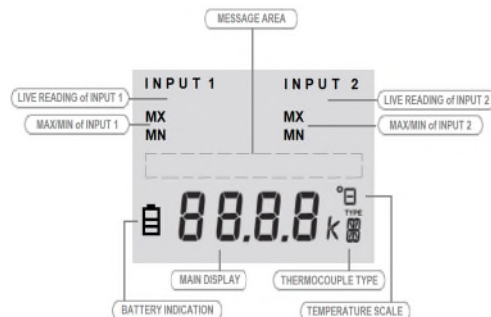
OPERATING INSTRUCTIONS

To Measure Temperature

1. Fit the battery into the instrument
   (refer to battery replacement details)
2. Switch thermometer ON
3. Plug thermocouple into input socket
4. Check temperature scale is correct (˚C /˚F/ ˚A)
5. Check thermocouple type is correct
6. Take measurement by contacting object with probe and
   reading from the display.

Changing Temperature Scale (˚C /˚F/ ˚A)

To change the temperature scale, simply press the button
marked 'SCL'.

The temperature scale will alter as shown on the right hand
side of the display.

Changing Thermocouple Type

To change thermocouple type, follow the sequence below:

1. Switch the unit OFF
2. Press and hold the 'SCL' button
3. Switch the unit ON
4. Release buttons

The new thermocouple type will appear in the bottom right
hand corner of the display (see fig 1). Repeat steps above unit
desired thermocouple type is shown.

Replacing The Battery

The display has a battery life indicator. When the level is low,
the battery needs changing. To change the battery, firstly re-
move the unit from the outer case. The battery compartment
is on the rear of the instrument. Using a small screwdriver,
ease back the tab of the battery compartment. The
compartment will then lift away.

Open Circuit Thermocouple Detection

An error in the probe is shown on the display by a series
of bars '- - - -'. This indicates either that the probe has
an error or the temperature is out of range.

Differential Measurement

Once the instrument has been turned on, the display
will show the reading from Input 1.

Use the 1/2/DIFF button to change to Input 2 or
Differential measurement (I/P 1—I/P 2)

Using The Hold Feature

The hold feature is used to freeze the current value(s).
When you press the button the current display will
freeze and the values will not be updated.

To cancel, press the hold button again.

Using The Max/Min Feature

To enable the Max/Min display simply press the MAX MIN
button. The results for Input 1 and Input 2 will be shown
and updated as and when the Max Min limits are exceeded.
To clear the current Max Min limits press "CLR", this will
reset Max and Min to the current reading for each input.
Please note if you switch to Differential measurement,
(Input 1—Input 2), whilst Max Min is enabled Input 2 values
are replaced and updated with Differential measurements. To
cancel the Max Min display simply press Max Min again.