TRACEABLE® DIGITAL THERMOMETER WITH RECORDER OUTPUT INSTRUCTIONS

SPECIFICATIONS

Range:	–58 to 1999 °F (–50 to 1300 °C)
Resolution:	0.1° or 1° (selectable)
Accuracy:	±0.3% + 1°C
Sampling Rate:	2.5 times per second
Display:	3½ digit LCD, ⅝ inches high (1.5cm)
Fail-safe:	Low battery indicator
Power:	9 volt alkaline battery
Accessories:	Type-K thermocouple, rubberized case and a flip-out stand

FRONT PANEL QUICK REFERENCE

ON/OFF: Turns power on and off
MAX: Records and updates maximum values
HOLD: "Freezes" the display
0.1°: Selects resolution to 0.1°
1°: Selects resolution to 1°
°C/°F: Selects the temperature to be displayed in either Fahrenheit or Celsius

OPERATION

1. Insert the probe plug into the receptacle located on the front of the thermometer. The plug and receptacle are keyed with a small and a large pin. Make certain that the plug is inserted properly.

2. Press the ON/OFF button to turn the unit on.

3. Press the °C/°F button to display the temperature in Fahrenheit (°F will appear on the display) or Celsius (°C will appear on the display).

4. Set the thermometer to desired resolution 0.1° or 1°.

5. Place the probe tip in contact with the material to be measured and read the temperature on the display.

MAX MODE

In the MAX mode, the thermometer will display the highest temperature reading achieved. It does not display the current temperature if it falls below the MAX reading.

CURRENT TEMPERATURE	DISPLAY READS
42°	42°
60°	60°
40°	60°

Example: In the MAX mode

Press the MAX button (MAX will appear on the display). The thermometer will display the maximum temperature reading on the LCD display. Press the MAX button again to exit MAX recording mode.

HOLD

Press the HOLD button to "freeze" the display at the current reading (HOLD will appear in the display). Press the HOLD button again to return to the current reading.

PROBES

The probe supplied are ultra-fast response Type K thermocouple naked bead probes with 4' leads and teflon insulation. Maximum operating temperature range for this thermocouple is 500°F (260°C).

An accessory stainless steel triple purpose probe with handle is available. An accessory surface probe is also available (see accessories).

Longer leads and extension may be used. The lead effect for 164 feet (50 meters) is generally less the 0.2°C with a limit of error of 2.2°C. Type-K wire and Type-K connectors must be used.

RECORDER OUTPUT

A voltage proportional to the display reading appears at the recorder OUTPUT socket located on the right side of the unit. Output is via a standard 3-pole 3.5 mm jack.

Output specifications are as follows:

1mV output per degree in the 0.1° display mode
0.1 mV output per degree in the 1° display mode

Output examples:

Mode	Readings	Output
0.1°	26.5°	26.5 mV
1°	1500°	150.0 mV

OFFSET ADJUSTMENT (Fine tuning)

The offset controls are set at the factory to allow for the variations found in standard thermocouples. By adjusting the offset controls, found on the side of the unit, you can optimize measurement accuracy for a particular thermocouple at a particular temperature.

This unit has been calibrated Traceable® to standards provided by the National Institute of Standards and Technology (NIST). While offset adjustments are possible, they will interfere with the factory calibration. Traceable® recalibration must be made by the factory (see Recalibration).

BENCH STAND/WALL MOUNT

This unit is supplied with a bench stand that is on the back of the case. Locate the rectangular slots on the raised portion of the back of the unit. With your thumb and forefinger, lift the stand out. To close the stand, simply snap it shut.

This unit may be wall mounted by using a screw. Set the screw into the wall at the location desired, the head of the screw will need to slip into the receptacle on the back of the unit, so do not set the screw flush to the wall. Once the screw has been properly set, hang the unit in place by sliding the receptacle on the back of the unit over the head of the screw.

ACCESSORIES

Control Cat. No. 4014—
Stainless Steel Triple Purpose Probe, probe diameter 1/8" (0.32cm), probe length 6" (15.2cm), overall length 9" (22.9cm), cable length 50" (127cm).

Control Cat. No. 4008—
Surface Probe, flat disk on end has a diameter of 0.39" (1cm), overall length 9" (23cm), cable length 36" (91.4cm).

Control Cat. No. 4028—
Ultra-fast response, naked bead thermocouple. (identical to probe supplied with unit) cable length 48" (122cm).

Control Cat. No. 8039—
Low-Temperature Probe - Stainless-steel with handle; triple purpose (liquids, air/gas, and semi-solids), Dimensions: diameter 0.17 inch; stem length 12 inches; overall length 17 inches.

Control Cat. No. 8613—
High-Temperature Probe - Ten-foot-long 0.19-inch diameter braided metal wire cable with smooth tip measures -73 to 982°C continuous or 1093°C short-term use.

DISPLAY MESSAGES

OL indicates that no probe is present indicates that the battery is low and needs replacement (see batter replacement).

ALL OPERATIONAL DIFFICULTIES

If this thermometer does not function properly for any reason, please replace the battery with a new high quality battery (see "Battery Replacement" section). Low battery power can occasionally cause any number of "apparent" operational difficulties. Replacing the battery with a new fresh battery will solve most difficulties.

BATTERY REPLACEMENT:

A "⊞" symbol will appear on the LCD display when the battery needs replacement. Before replacing the battery turn the unit off and unplug the probe. Remove the three screws from the back of the thermometer and lift off the back of the case. (NOTE: When the top middle screw is removed, the 2-piece stand with come off the case). Remove the exhausted battery and replace it with a new 9-colt alkaline battery. Replace the back of the thermometer, replace the 2-piece stand, reinstall the three screws and tighten securely.

WARRANTY, SERVICE, OR RECALIBRATION

For warranty, service, or recalibration, contact:

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Control Company is ISO 9001 Quality-
Certified by DNV and ISO 17025 accredited
as a Calibration Laboratory by A2LA.

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