SPECIFICATIONS

Thermocouple: Type-K

Range: –328 to 2498 °F / –200 to 1370 °C

Resolution: 0.1° from -328 to 990°F/-200 to 640°C
1° from 990 to 2498°F / 640 to 1370°C

Accuracy: ±1° C

TEMPERATURE MEASUREMENT

1. Insert the probe plug into the socket at the top of the meter. The plug and sockets are keyed with a small and large pin. Make certain that the plug is inserted correctly. Do not insert the plug incorrectly and force the connection.
2. Press the ⏻ button to turn the meter on.
3. Press the °C/°F button to select °F or °C.
4. Place the probe in contact with the material to be measured and read the temperature on the display.
5. Press the ⏻ button again to turn the meter off. To conserve battery life, always turn off the meter when not in use.

After 20 minutes, the meter will automatically turn off to preserve battery life. To disable this feature, see the “Automatic Shutoff Disable/Enable” section.

DATA HOLD FUNCTION

To “freeze” the display at the current temperature reading, press and release the HOLD button (“HOLD” will appear at the top of the display).

Note: While in this mode, pressing the °C/°F button will have no affect and will not change the display.

Press and release the HOLD button a second time to return to current temperature display (“HOLD” will no longer appear on the display).

MEMORY RECORD MODE

Press the REC button to activate the Record mode and start the timer (“REC” will appear on the display).

While in the Record mode, the meter will record the minimum and maximum temperature readings achieved along with the relative time (count-up time) that the minimum and maximum were achieved.

Note: While in this mode, pressing the °C/°F button will have no affect and will not change the display.

Note: If the Automatic Shutoff feature has not been disabled, the meter will turn off automatically after 20 minutes. For long term monitoring, disable the Automatic Shutoff feature. (See the “Automatic Shutoff Disable” section.).

Press and hold the REC button for 3 seconds to exit the Record mode (“REC” will no longer appear on the display).

The minimum and maximum temperature recordings are automatically cleared once the Record mode has been exited.

MEMORY RECALL

1. While in the Record mode, press the REC button to display the maximum temperature and relative time (count-up time) that the maximum temperature was achieved. (“MAX” will appear on the display.)
2. Press the REC button a second time to display the minimum temperature and relative time (count-up time) that the minimum temperature was achieved. (“MIN” will appear on the display.)
3. Press the REC button a third time to return to the current temperature display and relative time (count-up time).

AUTOMATIC SHUTOFF DISABLE

The Automatic Shutoff feature will turn the meter off after 20 minutes to preserve battery life. This feature is automatically enabled each time the meter is powered on, regardless of whether the feature was disabled previously.

To disable the Automatic Shutoff feature:
While the meter is turned off, press and hold the HOLD button, then press and release the ⏻ button. Continue to press and hold the HOLD button while the meter turns on. Once “n” appears on the display (indicating that the Automatic Shutoff feature has been disabled), release the HOLD button. The meter will then display the current temperature.

With the Automatic Shutoff feature disabled, the meter will remain on until the ⏻ button is pressed, or until the battery is fully drained.

RELATIVE MEASUREMENT MODE

Press and hold the REL button for 3 seconds to activate the relative measurement mode (“REL” will appear on the display. When the relative measurement mode is activated, the display will show the “relative zero” based on the temperature that was being measured when the mode was entered. The display will then indicate the temperature difference from the “relative zero” value.

Example--
If the temperature being measured is 25.0 °C when the relative measurement mode is entered, the meter will set 25.0 °C as the “relative zero” and the display will show 0.0 °C as long as the temperature being measured is 25.0 °C. If the temperature rises to 27.5 °C, the display will show 2.5 °C. If the temperature falls to 20.0 °C, the display will show -5.0 °C.

Note: While in this mode, pressing the °C/°F button will have no affect and will not change the display.

To exit the relative measurement mode, press and release the REL button (“REL” will no longer appear on the display.)

MEMORY RECORD - RELATIVE MEASUREMENT

While in the relative measurement mode, press the REC button to activate the Record mode and start the timer (“REC” will appear on the display).

While in the Record mode during relative measurement, the meter will record the minimum and maximum temperature difference from the “relative zero” value achieved along with the relative time (count-up time) that the minimum and maximum were achieved.

Note: If the Automatic Shutoff feature has not been disabled, the meter will turn off automatically after 20 minutes. For long term monitoring, disable the Automatic Shutoff feature. (See the “Automatic Shutoff Disable/Enable” section.).

Press and hold the REC button for 3 seconds to exit the Record mode (“REC” will no longer appear on the display).

The minimum and maximum temperature recordings are automatically cleared once the Record mode has been exited.

MEMORY RECALL - RELATIVE MEASUREMENT

1. While in the Record mode during relative measurement, press the REC button to display the maximum temperature difference and relative time (count-up time) that the maximum temperature difference was achieved. (“MAX” will appear on the display.)
2. Press the REC button a second time to display the minimum temperature difference and relative time (count-up time) that the minimum temperature difference was achieved. (“MIN” will appear on the display.)
3. Press the REC button a third time to return to the current relative temperature display and relative time (count-up time).

COUNT-UP TIMER

The count-up timer feature offers a relative time reference while taking temperature measurements.

To turn on the count-up timer and begin timing, press the TIMER button.

To stop timing and turn off the count-up timer, press the TIMER button a second time.

BACKLIGHT

Press the ☼ button to turn on the display backlight when in dim or dark conditions. The light will automatically turn of after 30 seconds to preserve battery life.

THERMOCOUPLES

The meter is supplied with a Type-K thermocouple but is also able to accept Type-J and Type-T thermocouples.

Thermocouple range:
Type-J = -328 to 940°F/-200 to 760°C

Type-T = -328 to 730°F/-200 to 390°C

To change the thermocouple type:
1. While the meter is turned off, press and hold the REC button, then press and release the ⏻ button. Continue to press and hold the REC button while the meter turns on. Once the display appears with only “K”, “J”, or “T”, release the REC button.
2. Press the °C/°F button to select the desired thermocouple type (K, J, or T).
3. With the desired thermocouple type on the display, press the REC button. “S” will momentarily appear on the display indicating that the setting has been saved and the meter will then display the current temperature.

RS-232 PC INTERFACE

The meter features an RS-232 output which allows data to be exported to a computer or data logger in real-time via the accessory data acquisition software. (See the "Accessories" section.)

DISPLAY MESSAGES

"BAT" appearing on the display indicates that the battery is low and needs replacement (see the "Battery Replacement" section)

"---" appearing on the display indicates that no probe is plugged into the meter, or the probe is damaged.

ALL OPERATIONAL DIFFICULTIES

If this meter does not function properly for any reason, please replace the battery with a new, high-quality battery (see the "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

An erratic display, faint display, no display, or "BAT" appearing on the display are all indicators that the battery needs replacement. To replace the battery, remove the battery cover screw (located on the back of the meter). Remove the battery cover by sliding it in the direction of the arrow. Remove the exhausted battery and replace it with a new 9-volt alkaline battery. Replace the battery cover. Replace the battery cover screw and tighten securely.

ACCESSORIES

Cat. No. 4136 Data Acquisition System—
Complete DAS–3™ Data Acquisition System captures, displays, and stores readings on a PC. Information can be imported into databases. Software and cable.

Cat. No. 4325 Data Logger—
Complete DAS–4™ System captures and stores up to 8000 bytes (over 1000 readings). Readings may be taken at intervals from 1 second to 99 hours. Stored readings may be downloaded to any PC and viewed. Can be read as-is or imported to spreadsheets, databases, and statistical programs. Supplied complete with cable, software, and batteries. Size is 5 x 3 x 1 inches. Weight is 7 oz.

Cat. No. 4008 Surface Probe—
Temperature range is –73 to 760°C. Dimensions: 5-inch probe length; 0.5-inch tip diameter; 8½-inch overall length. Supplied with 36-inch cable.

Cat. No. 4014 Stainless Steel Probe—
Stainless-steel, triple purpose (liquids, air/gas, and semi-solids), Type-K probe. Temperature range is –50 to 700°C. Dimensions: 0.13-inch diameter; 6¼-inch stem length; 9¾-inch overall length. Supplied with 40-inch cable.

Cat. No. 4028 Beaded Probe—
Fast-Response, Type-K thermocouple, beaded probe. Teflon cable can withstand temperatures of -40 to 250 °C continuous or 300 °C short-term use. Dimensions: 0.06-inch diameter probe with cable length of 4 feet for use in liquids, air/gas, and semi solids.

Cat. No. 8039 Low-Temperature Probe—
Stainless-steel; triple purpose (liquids, air/gas, and semi-solids), Type-K probe. Temperature range is -240 to 220 °C. Dimensions: diameter 0.17 inch; stem length 12 inches; overall length 17 inches. Supplied with 8-foot cable.

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. For use in liquids, air/gas, and semi-solids.

WARRANTY, SERVICE, OR RECALIBRATION

For warranty, service, or recalibration, contact:

CONTROL COMPANY
4455 Rex Road
Friendswood, Texas 77546 USA
Ph. 281 482-1714 • Fax 281 482-9448
E-mail sales@control3.com • www.control3.com

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

TRACEABLE® WIDE RANGE THERMOMETER INSTRUCTIONS

Control Company Cat. No. 4007
Traceable® is a registered trademark of Control Company.
© 2009 Control Company. 92-4007-00 Rev. 1 03182009