LIMITED WARRANTY

DeltaTRAK instruments have a limited warranty period of 1 year against defects in materials and workmanship from the date of purchase. Accessory items and sensors have a limited warranty of 3 months. Repair services have a limited warranty period of 3 months against defects in materials and workmanship. DeltaTRAK shall, at its option either repair or replace hardware products that prove to be defective, if a notice to that effect is received within the warranty period. DeltaTRAK makes no other warranties or representations of any kind whatsoever, expressed or implied, except that of title, and all implied warranties including any warranty of merchantability and fitness for a particular purpose are hereby disclaimed.

For technical support, please call +86 755 84200058 or email sales@eofirm.com

For more information, please call DeltaTRAK at +86 755-84200058. See us on the web at www.eofirm.com

DeltaTRAK manufactures under an ISO 9000 registered quality management system

Model 26003
Heat/Cool Thermometer
USER MANUAL

- IP56 Rated
- Auto Cool-Down
- Auto-Cal Feature

Heat/Cool Thermometer (Model 26003) User Manual

Thank you for purchasing the DeltaTRAK Heat/Cool Thermometer with auto-calibration. The thermometer has been designed to help eliminate the problems associated with food borne illnesses due to improper cooling of prepared foods as determined by the FDA Food Code 3-501.14 (A,B). Additionally, this versatile thermometer monitors temperatures in the range of -58 to 392°F (-50 to 200°C) providing usability in both the heating and cooling cycles of most applications.

KEY FEATURES

Time Counter

Alarm Set Temperature

Current Temperature

Back View: Temperature Probe Connector

Side View: Auto-Calibration Button

Battery Compartment

CALIBRATION PROCEDURE

Before beginning the thermometer calibration, fill a cup with crushed ice and then add water (not ice cubes). Allow the temperature to settle for 60 seconds.

During the calibration process the thermometer will display "CAL" in the upper area of the LCD. Three (3) consecutive temperature readings will be recorded and displayed on the LCD during the calibration process. As the three temperature reading are being taken the LCD will display 'P1' (first reading), 'P2' (second reading), and finally 32°F/ 0°C (final reading).

1. Fill a cup with crushed ice and then add water.
2. Turn on the thermometer and set for °C or °F temperature scale.
3. Locate the red 'CAL' button on the side of the unit.
4. Place the probe tip in the center of the cup making sure the tip is fully submerged but not in contact with the cup surfaces.
5. Stir for a minimum of 15 seconds to allow the probe temperature to stabilize.
6. While the probe is still in the cup, press and hold the 'CAL' button for 2 seconds. 'CAL' must appear on the LCD before releasing the 'CAL' button.
7. Allow the unit to complete its cycle of taking 3 consecutive temperature readings and return to temperature display before removing the probe from the cup,

Error Conditions (Codes)

If the LCD screen displays the flashing "Err" message, all buttons are disabled except the START/STOP button. Pressing the START/STOP button will cancel the error mode and clear the LCD screen.

Error 1 (Err 1) - Calibration Error
Err 1 may be displayed during the calibration procedure if the temperature of the ice slurry is not stable or is not at 32°F/ 0°C or the thermometer probe is damaged. Allow the ice slurry to settle for 60 seconds or replace the thermometer probe. Restart the unit and begin the calibration process again.

Error 2 (Err 2) - Verification Error
Err 2 may be displayed during the calibration procedure if the temperature probe is removed from the ice slurry prior to the unit completing 3 cycles of temperature verification. If this occurs, restart the calibration process and leave the temperature probe in the ice slurry for the entire calibration cycle.

Error 3 (Err 3) - Skipping Zone in COOL Mode
Err 3 may be displayed in the COOL down mode if the unit detects an initial temperature that is in Zone B or Zone C. Reset the unit and check the set point for Zone A.

Error 4 (Err 4) - Cool Down interruption
Err 4 may be displayed at any point in the cool down process if the current temperature reading is greater than the previous temperature reading by 3 degrees.

6. When the set temperature is reached:
   6a) the alarm sounds,
   6b) the timer stops counting up, and
   6c) the LCD displays 'PASS.'
7. If the temperature should fall below the set temperature, the timer will continue counting up. Each time the temperature goes above the set temperature the timer stops counting up and flashes.
8. Press START/STOP to cancel the timer function

Count Down Mode

9. In the count-down mode, the LCD screen will display the last set time value used (10 minutes is the default value) and the set temperature.
10. Press the HOUR button to change the number of count-down hours and/or press the MIN (minutes) button to change the number of count-down minutes.
    10a) Holding either the HOUR or the MIN button for 2 seconds will rapidly advance the time settings.
11. Press the START/STOP button to start the count-down timer function.
12. If the set temperature is NOT reached when the timer counts down to 00:00
    12a) the alarm sounds and LCD displays 'FAIL' ,
    12b) the timer starts to count up.
13. When the set temperature IS reached before the timer counts down to 00:00,
    13a) the timer stops counting down,
    13b) the LCD displays 'PASS' and
    13c) displays the amount of time remaining.
14. The user can not change the timer setting while the timer is running.
15. The timer can be stopped at any point by pressing the START/STOP button.

ALARM OPERATION

1. The alarm sound can be stopped by pressing START/STOP button.
2. If the alarm is activated by the temperature probe, the measured temperature value will be shown on the LCD and flashing. The temperature will continue to be measured and displayed, and the alarm will sound once every 30 seconds until stopped by the user.
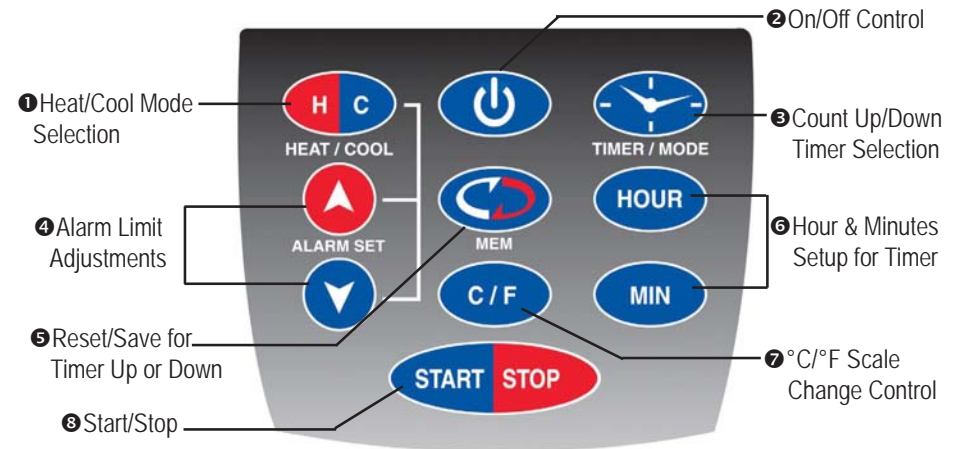
TIME ALARM

In the count-down mode, when the timer reaches 00:00 the alarm will sound and the timer display will blink. Pressing the START/STOP button will stop the count-down timer and the alarm.

TEMPERATURE ALARM

1. Temperature alarms occur in both HEAT and COOL cycles.
2. When the measured temperature reaches one of the set points
   2a) the alarm will sound and continue once each 30 seconds until the operator presses the START/STOP button or
   2b) the measured temperature returns to an acceptable level.
3. When setting the alarm temperature in the Fahrenheit scale (°F), the temperature reading will advance in 0.2 increments/decrements.
4. When setting the alarm temperature in the scale (°C), the temperature reading will advance in 0.1 increments/decrements.

OPERATION MODES

- Up/Down Timer with audible alarm
- Heat and Cool set points with audible alarm

❷On/Off Control
❶Heat/Cool Mode Selection
❸Count Up/Down Timer Selection
❹Alarm Limit Adjustments
❻Hour & Minutes Setup for Timer
❺Reset/Save for Timer Up or Down
❼°C/°F Scale Change Control
❽Start/Stop

KEYBOARD DESCRIPTION

❶   HEAT/COOL button selects the mode of operation.

❷   On/Off button halts the operation and turns the LCD off.

❸   TIMER/MODE button selects the 'Count up' or 'Count down' mode (used in Heat Mode only).

❹   Alarm Set button:

           a) the up arrow increases the set point and,

           b) the down arrow decreases the set point.

❺   MEM button sets the timer to the last set value.

❻   HOUR and MIN buttons set the timer hour and minute respectively.

❼   C/F button selects temperature scale.

❽   START/STOP button:

           a) starts and stops the timer;

           b) starts and stops the Heat and Cool modes; and

   c) after an alarm has sounded will turn the alarm off.

NOTE: The timer LCD screen will display a maximum time of 23 hours and 59 minutes (23:59).

HEAT MODE OPERATION

1. Press the HEAT/COOL button to toggle into the 'HEAT' mode.
   1a) "HEAT" will be displayed in the lower left area of the LCD screen and, the last alarm setting will appear on the screen.
2. To change the alarm temperature,
   2a) Press the ALARM SET up or down arrow to the desired ALARM SET temperature.
   2b) Holding the ALARM SET up or down arrow for 2 seconds will rapidly advance the temperature readings.
3. The ALARM SET temperature is saved even if the unit is powered off.
   3a)When the unit is powered on the last alarm setting will reappear.
4. Press START/STOP to start the heat mode.
5. When the probe temperature reaches the ALARM SET point,
   5a) the alarm sounds and the timer stops counting up,
   5b) the LCD screen flashes 'PASS', and
   5c) the alarm continues to sound until STOP/START is pressed

COOL MODE OPERATION

The thermometer provides full automation for monitoring time and temperature during cool down periods. Cooked food must be cooled down from the cooked temperature to 70° F(21°C) within 2 hours and then from 70°F to 41°F(21°C to 5°C) within four hours to ensure safety. This model's unique, programmable three-zone cool down feature conforms to FDA Food Code 3-501.14 (A,B).

COOL MODE ZONE DIAGRAM
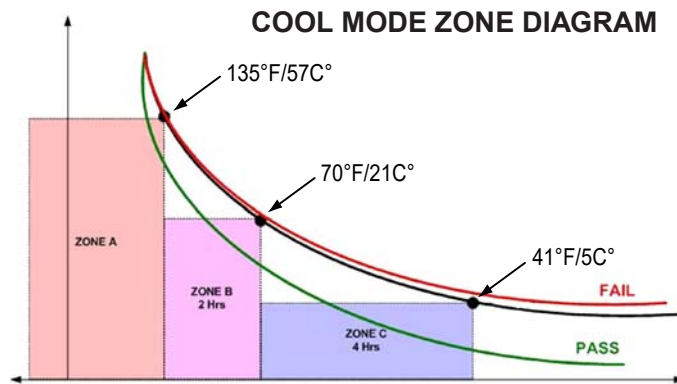
Default set points are programmed into the thermometer. Zone A(A1): 135°F/57°C; Zone B (A2): 70°F/21°C; and Zone C (A3): 41°F/5°C

1. Press the HEAT/COOL button to toggle into the 'COOL' mode. "COOL" will be displayed at the bottom of the LCD in the lower left screen.
2. Press the ALARM SET Up/Down arrows to cycle through the programmed temperature zones if desired.
3. Changing the default set points:
   3a) Press the ALARM SET Up/Down arrows to select the desired cool mode zone (A1, A2, or A3).
   3b)Entering the change temperature mode: Press AND Hold the Up arrow until the temperature starts to change and flash. The temperature change mode is now active.

3c) Press the Up/Down arrows to select the desired temperature.
3d) When the desired temperature is reached, press the MEM button to set the temperature into the thermometer memory; and
3e) Press the START/STOP button to exit the change temperature mode.
3f) Repeat the above steps to make changes to other zones.
4. Press START/STOP to start the Cool Mode sequence.
   4a) The LCD will flash indicating the thermometer is above the first set point.
   4b) ERR 3 will be displayed if the temperature is below the first set point and Auto Cool Mode will not continue.
5. When the temperature of the first set point for Zone A is reached (135°F/57°C - default setting), the next stage (Zone B) will be entered automatically and the timer will start to count down for 2 hours.

PASS(ing) into Zone B before 2 hours of elapsed time

6. When the temperature reaches the set point for Zone B before the counter counts down to zero (70°F/21°C - default setting), the LCD timer screen will reset to show 4 hours and begin the next stage of cooling (counting down).

FAILING to enter Zone B before 2 hours of elapsed time

7. If the timer counts down to zero before the temperature set for Zone B is reached (70°F/21°C - default setting),
   7a) the LCD will flash 'FAIL' and the counter will start counting UP from 2 hours to record the time above the set point (70°F/21°C - default setting).
   7b) The alarm will sound.
   7c) When the temperature reaches the Zone B set point (70°F/21°C - default setting), the timer will stop counting, the elapsed time will be saved, the LCD will display FAIL and the timer will NOT enter into Zone C.

PASS(ing) into Zone C before 4 hours of elapsed time

8. When the temperature reaches the set point for Zone C before the counter counts down to zero (41°F/5°C - default setting), the LCD timer screen will display PASS.

FAILING to enter Zone C before 4 hours of elapsed time

9. If the timer counts down to zero before the temperature set for Zone C is reached (41°F/5°C - default setting),
   9a) the LCD will flash 'FAIL' and the counter will start counting UP from 4 hours to record the time above the set point.
   9b) The alarm will sound.
   9c) When temperature reaches the Zone C set point (41°F/5°C - default setting), the timer will stop counting, the elapsed time will be saved and the LCD will display 'Fail.'

TIMER OPERATION

1. Press the HEAT/COOL button and select the "HEAT" mode.
2. Press the TIMER/MODE button to select either the count-up or count-down timer. The selected timer mode will be indicated with an up or down arrow displayed in the top left portion of the LCD screen.
3. Set the desired alarm temperature.

Count Up Mode

4. In the count-up mode, the LCD screen will display 00:00 indicating that the thermometer is ready to start the count-up time.
5. Press the START button to begin the count-up timer function.