SPECIFICATIONS

Temperature—
Range: 32.00 to 122.00°F / 0.00 to 50.00°C
Resolution: 0.01°

Humidity—
Range: 0.00 to 95.00%RH
Resolution: 0.01%

Dew Point—
Range: –13.50 to 120.10°F / 25.30 to 48.90°C
Resolution: 0.01°

Data output: PC serial interface

Data Logging: 1000 reading capability

OPERATION

1. Attach the humidity/temperature probe to the meter. (THE CABLE AND CONNECTORS ARE KEYED, DO NOT INSERT THE CABLE INCORRECTLY AND FORCE IT.)
2. Turn the meter on by pressing the POWER button.
3. Take the desired measurements.
4. Turn the meter off by pressing and holding the POWER button, release the POWER button when the meter emits a continuous beep. To preserve battery life, always turn the meter off when not in use.

SELECTING °F OR °C (Temperature/Dew Point)

1. Turn the meter on by pressing the POWER button.
2. Press and hold the SET/LOGGER button until "CODE" appears at the bottom of the display.
3. Release the SET/LOGGER button "1000" will appear at the top of the display.
4. Press the REC/ENTER button. "°F" will appear at the bottom of the display and "0" or "1" will appear at the top of the display.
5. Press the FUNCTION/SEND button to select the desired unit of measure (0 = °C 1 = °F).
   Note: When pressing the FUNCTION/SEND button, "°F" will not change at the bottom of the display.
6. With the desired value on the display, press the REC/ENTER button to confirm and save the selection.
7. Press the HOLD/ESC button to return to the measurement display.

The unit of measure selected will be the default unit of measure for both temperature and dew point until it is re-set.

SELECTING HUMIDITY OR DEW POINT DISPLAY

1. Turn the meter on by pressing the POWER button.
2. Each press of the FUNCTION/SEND button will toggle the top display between showing Humidity ("%RH" appears) and Dew Point Temperature ("Dew" appears). Temperature will always appear at the bottom of the display.

The Dew Point temperature will be displayed in the same unit of measure as the temperature display (See the "Selecting °F or °C" section).

HOLD FUNCTION

The hold function allows the readings on the display to be "frozen" so that they may be recorded.

1. Press the HOLD/ESC button to "freeze" the display at the current reading. "HOLD" will appear at the top of the display.

While in the hold mode, pressing the REC/ENTER, FUNCTION/SEND, or SET/LOGGER buttons will have no affect and will not change the "frozen" reading.

2. Once the reading has been recorded, press the HOLD/ESC button to return the display to the current reading. "HOLD" will no longer appear on the display.

RECORD MODE (Min/Max Memories)

While in the Record Mode, the maximum and minimum readings for Humidity or Dew Point (depending on the display mode) will be recorded. Also, while in the Record Mode, the Automatic Shutoff feature is disabled so that long term monitoring may be performed.

To enter the Record Mode, press the REC/ENTER button. "REC." will appear on display.

To recall the maximum and minimum readings since entering the Record Mode ("REC" appearing on the display), press the REC/ENTER button.

The first press of the REC/ENTER button will display the maximum reading achieved since entering the Record Mode. ("MAX" will appear on the display).

The second press of the REC/ENTER button displays the minimum reading achieved since entering the Record Mode. ("MIN" appear on the display).

To return the display to the current reading, press the HOLD/ESC button. "MAX" or "MIN" will no longer appear on the display.

To exit from the Record Mode, press and hold the REC/ENTER button for 3 seconds. "REC" will no longer appear on the display. The maximum and minimum readings are automatically cleared once the Record Mode has been exited.

AUTOMATIC SHUTOFF (Enable/Disable)

With the Automatic Shutoff feature enabled, after 10 minutes, if no button has been pressed, the meter will automatically shut off to preserve battery life.

When automatic shutoff is enabled, prior to shutting off, the meter will alarm to indicate that it is about to turn off. To prevent the meter from shutting off at this point, press any button twice (except POWER).

The automatic shutoff feature setting is overridden while in the Record Mode. (See the "Record Mode" section)

To Enable/Disable the Automatic Shutoff feature:

1. Turn the meter on by pressing the POWER button.
2. Press and hold the SET/LOGGER button until "CODE" appears on the display.
3. Release the SET/LOGGER button "1000" will appear on the top display.
4. Press the REC/ENTER button, °F will appear at the bottom of the display.
5. Press the SET/LOGGER button until "OFF" appears at the bottom of the display.
6. Press the FUNCTION/SEND button to enable/disable the automatic shutoff feature.
   (0 = Disabled 1 = Enabled).
   Note: When pressing the FUNCTION/SEND button, "OFF" will not change at the bottom of the display.
7. With the desired value on the display, press the REC/ENTER button to confirm and save the selection.
8. Press the HOLD/ESC button to return to the measurement display.

The automatic shutoff feature will now be enabled/disabled until it is re-set.

DATA LOGGER

The built in data logger function can store up to 1000 Humidity/Temperature or Dew Point/Temperature values. The values that are recorded are dependant upon the display mode that has been selected. (See the "Selecting Humidity or Dew Point Display" section.) If Humidity and Temperature are being displayed, then Humidity and Temperature will be logged. If Dew Point and Temperature are being displayed, then Dew Point and Temperature will be logged.

NOTE: There is no annunciator to differentiate the Dew Point temperature reading from the Temperature reading in the data that is output/logged (See the "Real-Time Data Output" section.), it is best to have the meter displaying Relative Humidity and Temperature when using the data logger function.

The sampling rate for the data logger may be set in the following increments 0, 1, 2, 10, 30, 60, 600, 1800, and 3600 seconds. (See the "Adjusting Data Logger Sampling Rate" section.)

Adjusting Data Logger Sampling Rate

The sampling rate for the data logger may be set in the following increments 0, 1, 2, 10, 30, 60, 600, 1800, and 3600 seconds.

1. Turn the meter on by pressing the POWER button.
2. Press and hold the SET/LOGGER button until "CODE" appears at the bottom of the display.
3. Release the SET/LOGGER button. "1000" will appear at the top of the display.
4. Press the REC/ENTER button. "°F" will appear at the bottom of the display.
5. Press the SET/LOGGER button. "SEC" will appear at the bottom of the display. The number that appears at the top of the display is the data logger sampling rate (seconds).
6. Press the FUNCTION/SEND button to select the desired sampling rate from the available options.
7. With the desired value on the display, press the REC/ENTER button to confirm and save the selection.
8. Press the HOLD/ESC button to return to the measurement display.

The data logger sampling rate selected will be the default value until it is re-set.

Automatic Data Logging

Set the desired data logger sampling rate. (See the "Adjusting Data Logger Sampling Rate" section.) For automatic data logging, the sampling rate must not be set to zero.

If desired, clear the data in the data logger memory. (See the "Clearing the Data Logger Memory" section.)

Enter the Record Mode by pressing the REC/ENTER button. "REC." will appear on display.

To begin automatic data logging, press the SET/LOGGER button. "A" will appear at the top of the display and the sampling rate will flash once on the display.

NOTE:

1. If "A" does not remain at the top of the display, the sampling rate is set to zero, see the "Adjusting Data Logger Sampling Rate" section to set the sampling rate.
2. If the display flashes continuously when the SET/LOGGER button is pressed, this indicates that the data logger memory is full. See the "Exporting the Data Logger Memory" to export the readings that have been recorded, and/or the "Clearing the Data Logger Memory" section to clear the memory so that more data may be recorded.

"A" will remain on the display and will flash each time a reading is recorded. "REC" and "A" appearing on the display indicate that the meter is in the automatic data logger mode.

Once the data logger memory is full, the display will flash continuously. See the "Exporting the Data Logger Memory" section to export the readings that have been recorded, and/or the "Clearing the Data Logger Memory" section to clear the memory so that more data may be recorded.

To stop data logging, press the SET/LOGGER button. "A" will no longer appear at the top of the display.

Automatic data logging may be resumed by pressing the SET/LOGGER button. "A" will appear at the top of the display.

To exit from the Record Mode, press and hold the REC/ENTER button for 3 seconds. "REC" will no longer appear on the display.

The data logged will remain the data logger memory until it is cleared. (See the "Clearing the Data Logger Memory" section.)

Manual Data Logging
Set the data logger sampling rate to zero "0". (See the "Adjusting Data Logger Sampling Rate" section.)

If desired, clear the data in the data log memory. (See the "Clearing the Data Logger Memory" section.)

Enter the Record Mode by pressing the REC/ENTER button. "REC." will appear on display.

Each time the SET/LOGGER button is pressed, the reading will be recorded in the data logger memory. "A" will appear at the top of the display each time a reading is recorded into memory.

NOTE:
1. If "A" remains at the top of the display, the sampling rate is not set to zero, see the "Adjusting Data Logger Sampling Rate" section to set the sampling rate to zero.
2. If the display flashes when the SET/LOGGER button is pressed, this indicates that the data logger memory is full. See the "Exporting the Data Logger Memory" to export the readings that have been recorded, and/or the "Clearing the Data Logger Memory" section to clear the memory so that more data may be recorded.

Once the data logger memory is full, the display will flash continuously. See the "Exporting the Data Logger Memory" to export the readings that have been recorded, and/or the "Clearing the Data Logger Memory" section to clear the memory so that more data may be recorded.

To exit from the Record Mode, press and hold the REC/ ENTER button for 3 seconds. ("REC" will no longer appear on the display).

The data logged will remain the data log memory until it is cleared. (See the "Clearing the Data Log Memory" section.)

Displaying the Remaining Data Logger Memory
The data logger will store and retain the readings until they have been cleared. Once the maximum number of readings (1000) have been recorded in the data logger, it must be cleared in order to record more data. The balance of the remaining data logger memory may be viewed by following this procedure.

1. Turn the meter on by pressing the POWER button.
2. Press and hold the SET/LOGGER button until "CODE" appears at the bottom of the display.
3. Release the SET/LOGGER button. "1000" will appear at the top of the display.
4. Press the REC/ENTER button. "0F" will appear at the bottom of the display.
5. Press the SET/LOGGER button until "CNT" appears at the bottom of the display.
6. With "CNT" at the bottom of the display, the number that appears at the top of the display is the remaining data logger memory.
7. When finished viewing, press the HOLD/ESC button to return to the measurement display.

Exporting the Data Logger Memory
The data logger will store and retain the readings until they have been cleared. To export the data logger memory, accessory Cat. No. 4136 is required (See the "**Optional Accessories**" section).

1. Attach one end of the Data Acquisition cable to the "RS-232 OUT" port on the meter and the other end to the PC.
2. Make certain that "HOLD" and/or "REC" do not appear on the display.
   -If "HOLD" appears on the display, press the HOLD/ESC button. ("HOLD" will no longer appear on the display.)
   -If "REC" appears on the display, press and hold the REC/ENTER button for 3 seconds. ("REC" will no longer appear on the display.)
3. Press and hold the FUNCTION/SEND button until "232" appears at the bottom of the display. The meter is now ready to export the data logger memory.
4. Prepare the PC software to receive the data.
5. Once the PC software is ready to receive the data, press the FUNCTION/SEND button.

The display will flash slowly while the data is being exported. The display will flash rapidly once all of the data has been exported.

6. Once the data has been exported, press the HOLD/ESC button to return to the measurement display.

Clearing the Data Logger Memory
The data logger will store and retain the readings until they have been cleared. Once the maximum number of readings (1000) have been recorded in the data logger, it must be cleared in order to record more data.

1. Turn the meter on by pressing the POWER button.
2. Press and hold the SET/LOGGER button until "CODE" appears at the bottom of the display.
3. Release the SET/LOGGER button. "1000" will appear at the top of the display.
4. Press the REC/ENTER button. "0F" will appear at the bottom of the display.
5. Press the SET/LOGGER button until "CLR" appears at the bottom of the display.
6. With "CLR" appearing at the bottom of the display, the number that appears at the top of the display is the used data logger memory.
7. Press the FUNCTION/SEND button. "0" will appear at the top of the display indicating the memory will be cleared.
8. Press the REC/ENTER button to confirm and save the selection.
9. Press the HOLD/ESC button to return to the measurement display.

REAL-TIME DATA OUTPUT
The meter features a computer output via 3-pole 3.5 mm plug that will output the current display readings in real-time. The output is a 16-digit data stream that may be utilized by accessory Cat. No. 4136 (See the "**Optional Accessories**" section) or by user specific applications.

A lead with a 3-pole 3.5 mm jack on one end (plugs into "RS 232 OUT") and a 9-pin female D-Subminiature connector on the other end (plugs into the PC's serial port) will be required to link the instrument with a PC.

ALL OPERATION DIFFICULTIES
If this meter does not function properly for any reason, replace the battery with a new, high-quality battery (see the "Battery Replacement" section). Low battery power can occasionally cause an 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 a battery icon appearing on the display are all indicators that the battery needs replacement. Remove the battery cover. Remove the exhausted battery and replace it with a new 9 volt alkaline battery. Replace the battery cover.

OPTIONAL ACCESSORIES
Cat. No. 4136 Data Acquisition System Accessory
Records interval readings from 1 to 10,000 seconds; displays minimum/maximum readings; and utilizes an alarm mode that permits user to be notified visually, audibly, and by email when an alarm is triggered. Data is stored to a file that can be printed in any report or spreadsheet format. Networking server/ client capability allows the captured data to be monitored on a remote workstation and/or by email. It is designed to work with Windows® 98/Me/NT/2000/XP/Vista. Includes a CD, a 6-foot cable (supplied USB and serial connections) that plugs into the instrument and computer. Accessory extension cables expand cable length to 300 feet.

WARRANTY, SERVICE, OR RECALIBRATION
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