Model 6400: Supplied with a stainless steel immersion probe with cable. Designed for use in air, liquids, and semi-solids, the sensor and cable may be completely immersed.

**AC power supply only**

If the AC power supply is being used without batteries, in the event of a power outage, the meter will turn off and data logging will stop.

**AC power supply and batteries together**

Using the AC power supply and batteries together allows the batteries to act as a backup power supply in the event of a power outage. When using the AC power supply and batteries together, the batteries will need to be replaced periodically to insure they have sufficient power to operate the meter during a power outage (see the 'Battery Replacement' section).

**DISPLAY MESSAGES**

The following messages may appear alternating in place of the time of day clock:

- **Sd** indicates that an SD memory card is ready to record data, however, logging date is turned off.
- **edi** indicates that an SD memory card is inserted and data logging is turned on.
- **full** indicates that the SD memory card is full and data logging will be turned off if no more data can be written to a full SD memory card.
- **Err 5** indicates that the SD memory card was recorded while data logging is turned off, the meter is no longer recording data.

**SETTING TIME-OF-DAY/DATE**

1. Turn the meter on by pressing the ON/OFF button.
2. Press and hold the SET and buttons simultaneously for 3 seconds to enter the time of day setting mode (12hr or 24hr will flash on the display).
3. Press the or button to select 12 or 24 hour time format.
4. Press the SET button, the year will flash.
5. Press the or button to increment the display to the correct year. This is the last 2 digits of the year. Example: 2013 is displayed as 13.
6. Press the SET button, the month will flash.
7. Press the or button to increment the display to the correct month. The first 10 letters of the month will appear. Example: January will flash as J an.
8. Press the SET button, the day number will flash.
9. Press the or button to increment the display to the correct day.
10. Press the SET button, the time of day will flash.
11. Press the or button to increment the display to the correct time.
12. Press the SET button, the time of day will flash.
13. Press the or button to increment the display to the correct time.
14. Press the SET button, the display will return to the current temperature/humidity display.

**MINIMUM AND MAXIMUM MEMORY**

The meter will automatically record into memory:
- Minimum Ambient Temperature Achieved
- Maximum Ambient Temperature Achieved
- Minimum Ambient Relative Humidity Achieved
- Maximum Ambient Relative Humidity Achieved
- Minimum Probe Temperature Achieved
- Maximum Probe Temperature Achieved

Minimum and maximum memories are NOT programmable. The minimum value recorded into memory is the minimum value reached since the last time the memory was last cleared. The minimum and maximum memories are maintained over the period since the memory was last cleared.

**VIEWING MINIMUM/MAXIMUM MEMORY**

Press the MIN button, the display will show "MIN" at the bottom left side of the display indicating that the minimum memory values are being displayed.

**VIEWING MINIMUM/MAXIMUM MEMORY**

Press the MAX button, the display will show "MAX" at the bottom left side of the display indicating that the maximum memory values are being displayed.

To clear the minimum and maximum memories, press and hold the MIN button for 3 seconds, all of the LCD segments will appear on the display for approximately 3 seconds indicating that the minimum and maximum memories have been cleared.

The minimum and maximum memories are also cleared when the meter is turned off.

**EXAMPLE - USING THE MEMORY TO MONITOR A REFRIGERATOR/FREEZER**

Following is a simple example of how to use the MiniMax memory to monitor the temperature inside a refrigerator or freezer. This example is provided only as a helpful guide and is not intended to replace existing facility requirements or procedures.

By following the above procedure, the minimum and maximum memory are NOT programmable. The minimum value recorded into memory is the minimum value reached since the last time the memory was last cleared. The minimum and maximum memories are maintained over the period since the memory was last cleared.

To clear the minimum and maximum memories, press and hold the MIN button for 3 seconds, all of the LCD segments will appear on the display for approximately 3 seconds indicating that the minimum and maximum memories have been cleared.

To clear the memory display mode to clear the minimum/maximum memory.

**DISPLAYING "OF" or "C"**

With the meter turned on, to toggle the display between Fahrenheit or Celsius, press and hold the button for 3 seconds.

**SETTING ALARM LIMITS**

Alarm limits may be set for high/Low alarm temperature, ambient relative humidity and probe temperature. Temperature alarm limits may be set in 0.1 increments. Relative humidity alarm limits may be set in 0.1 RH increments.

An alarm limit may be disabled while being displayed by pressing the MIN button. Once the alarm is disabled, the following message will appear on the display indicating the alarm for the value is disabled:

- **"Lo"** will flash on the display indicating that a low alarm limit is set.
- **"Hi"** will flash on the display indicating that a high alarm limit is set.
- **"Lo & Hi"** will flash on the display indicating that both high and low alarm limits are enabled.

**CLEARING THE MINIMUM/MAXIMUM MEMORIES**

The meter will automatically record into memory:
- Minimum Ambient Temperature Achieved
- Maximum Ambient Temperature Achieved
- Minimum Ambient Relative Humidity Achieved
- Maximum Ambient Relative Humidity Achieved
- Minimum Probe Temperature Achieved
- Maximum Probe Temperature Achieved

**SET ALARM LIMITS**

Model 6400: Supplied with a stainless steel immersion probe with cable. Designed for use in air, liquids, and semi-solids, the sensor and cable may be completely immersed.

**AC POWER SUPPLY/BATTERY POWER**

The meter may be powered the following ways:

- AC Power Supply/Battery power
- Battery power

Typical operating time when using the three (3) AA alkaline batteries only:
- Up to 1 year in display mode only, no data logging.
- Up to 1 month with data logging on at a 1 minute recording rate, with no alarms. Higher capacity memory cards require more power to operate, therefore, larger cards will exhaust the batteries more rapidly. A 3GB SD card and 2GB SD card will exhaust in about 1 month and 2 weeks respectively.
ADJUSTING DATA LOGGER RECORDING RATE
The sampling rate for the data logger may be set to record readings from every 1 minute to every 720 minutes in 1 minute increments. A 1 minute interval will record 1440 readings/day. A 720 minute interval will record 2 readings/day. To toggle data logging On/Off, press and hold the SET button for 6 seconds (each time this is performed, it will toggle from on/off and from off/on): Set the desired data logger recording rate (see the "Adjusting Data Logger Recording Rate" section).

The following will cause data logging to stop:

- Turning the meter off
- Low battery power
- When using batteries only
- Power failure, when using the AC power supply only
- Removing the SD memory card
- Changing the time-of-daydate
- Changing the data logger recording rate
- Changing the High/Low alarm settings
- Changing display from "F/C", "C/F"

Pressing the RESET button once data logging has stopped, it must be turned back on.

DATA LOGGING FILE FORMAT/STRUCTURE

With data logging turned on ( see the "Turning On/Off Data Logging" section), the meter will write a file to the SD memory card. The file is created with a standard text (.TXT) file. Once data logging has started, the name created is based on the start date (month and day number) and time.

Example: Start 11/28/2013 at 16:48, will create a file with the name "12381648.TXT".

The maximum size per file is 30,000 records. During continuous data logging, once the maximum size file has reached, a new file is automatically created utilizing the same file naming method. A file containing 30,000 records represents over 20 days of minute by minute data. Depending on the selected data logger recording rate and the duration, continuous data logging may generate numerous files containing data.

The file is created for a fixed width data file that may be read utilizing any computer application capable of reading *.TXT files (Word®, Excel®, NotePad, WordPad, etc)