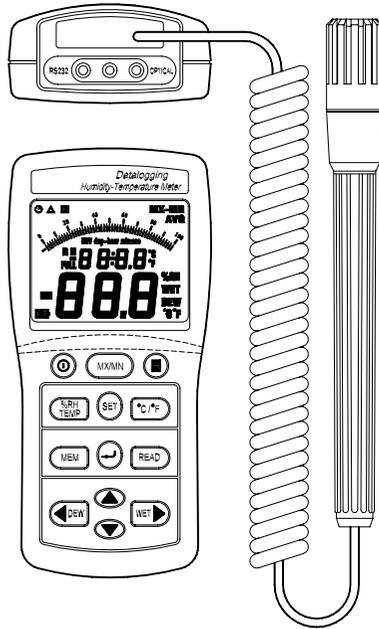


User's Guide



EasyView Digital Hygro-Thermometer Datalogger

Model EA25



Introduction

Congratulations on your purchase of the Extech EA25 EasyView Digital Hygro-Thermometer Datalogger. This device measures and records Humidity, Temperature, Dew Point, and Wet Bulb data in real-time. Careful use of this meter will provide years of reliable service.

Specifications

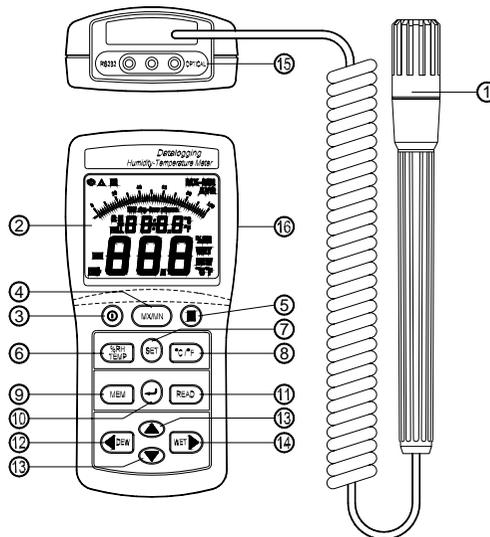
Function	Range and Resolution	Accuracy
Humidity	10.0 to 95.0% RH	±3% RH (at 25°C, 30 to 95% RH) ±5% RH (at 25°C, 10 to 30% RH)
Temperature*	-4 to 140°F (-20 to 60°C)	±1.8°F (±1°C)

* Dew Point and Wet Bulb temperatures have the same range as shown above

Display	Multifunction LCD with bargraph and status indicators
Sensor Type	Humidity: capacitance sensor; Temperature: thermistor
Response Time	Humidity: 45% to 95% < 1 min; 95% to 45% < 3 min. Temperature: Approx. 2 seconds for a 10°C change
Reading Rate	2 readings per second
RS-232 PC Interface	Optical connection with supplied interface cable. Software compatible with Windows™ 95/98, ME, 2000, and XP systems
Datalogger storage	Stores 99 sets of data in manual mode (15,000 in auto mode)
Sampling Intervals	3 to 255 seconds (1 to 86,400 secs. using supplied software)
Operating Conditions	32 to 140°F (0 to 60°C); < 95% RH non-condensing
Storage Conditions	14 to 140°F (-10 to 60°C); <70% RH non-condensing
Power Supply	6 x 1.5V 'AAA' batteries
Auto power off	After 30 minutes of inactivity
Battery Life	Approx. 200 hours
Dimensions / Weight	5.9 x 2.8 x 1.4" (150 x 72 x 35mm); 8.3 oz. (235g)

Meter Description

- Humidity/Temperature Probe
- Multifunction LCD with bargraph and status indicators
- Power ON/OFF button
- MX/MN button
- DATA HOLD button
- Humidity / Temperature select button
- SET button
- Units (C/F) select button
- MEM (memory) button
- ENTER button
- READ button
- DEW POINT temperature select & left arrow button
- UP/DOWN programming keys
- WET BULB temperature select & right arrow button
- RS-232 optical jack
- The battery compartment is located on the rear of the instrument



Turn Power ON or OFF

1. Press the **Ⓞ** button to turn the meter on or off. The meter will perform a short self-test when turned on.
2. The meter automatically turns off after 30 minutes of inactivity unless the MX/MN or Datalogging modes are active.

Taking Measurements

1. Hold the probe in the air in the area to be tested. Do **NOT** immerse in liquid.
2. Allow adequate time for readings to stabilize.
3. Read the measurements on the LCD. The bargraph tracks the large digit display.
4. The **%RH/TEMP** button allows the user to choose whether the temperature or the humidity is displayed on the large digit display.

Selecting temperature units of measure (C/F)

Press the **°C/°F** button momentarily to toggle the temperature units.

Maximum and Minimum recording (MX/MN)

NOTE: The Automatic Power OFF feature will be disabled while in the MX/MN mode.

The MX/MN mode allows the user to view only the highest and lowest readings while taking measurements. (MX stands for maximum and MN for minimum).

1. Press the **MX/MN** button momentarily to start the elapsed timer and begin recording. The display will now show only the highest reading (the MX icon will appear).
2. Press the **MX/MN** button again to view the lowest reading (MN will appear).
3. The **SET** button allows the user to view the elapsed time for a particular MX or MN reading in Minutes:Seconds (59mins:59secs max) or Days:Hours (99days:24hours max).
4. To check the highest and lowest Dew Point or Wet Bulb temperatures, use the **DEW** and the **WET** buttons.
5. The following data displays are available in the MX/MN mode:
 - Maximum and Minimum Humidity with the associated Temperature
 - Maximum and Minimum Temperature with the associated Humidity
 - Maximum and Minimum Dew Point temperature with the associated Temperature or Humidity
 - Maximum and Minimum Wet Bulb temperature with associated standard temperature or humidity
6. To exit MX/MN mode, press and hold the **MX/MN** button (the MX/MN icons disappear).

Data Hold

Press the **H** button momentarily to freeze the displayed reading. The 'H' icon will appear on the upper left-hand side of the display. Press the **H** button again to return to normal operation (the 'H' hold icon will disappear).

DEW POINT and WET BULB Temperature Display

Dew Point and Wet Bulb temperatures are calculated by the meter based on humidity/temperature measurements. To view the Dew Point or Wet Bulb temperatures, press the **DEW** or **WET** button momentarily. The 'DEW' or 'WET' display icon will appear on the right side of the LCD and the temperature will display on the bottom (larger) digits. The upper (smaller) digits will display the regular temperature in °C or °F or the humidity in RH% (use the **%RH/TEMP** button to toggle between the two).

Manual Datalogging

Clearing Previously Stored Data

1. Press the "ⓘ" button to turn the meter off.
2. Press and hold the "MEM" button, then press the "ⓘ" button to turn the meter on. When the LCD indicates "CLr", the entire memory has been erased.

Manual Datalogging

1. Press the "MEM" button to store a reading manually. The LCD will display the "M" icon and the address number. The total memory size for manual recording is 99 sets.
2. When the datalogger memory is full, the LCD will display "Full".

Recalling manually stored data

1. Press the "READ" button to view stored data. The LCD will show the "R" (recall) icon and the current address number.
2. Use the "▲" or "▼" button to select another memory address to view.
3. Press the **DEW** or **WET** button to display the Dew Point or the Wet Bulb value.
4. Press "↵" (enter) to exit this mode.

Automatic Datalogging

NOTE: Before datalogging ensure that previous data has been downloaded otherwise it will be lost. Up to 15,000 sets of data can be recorded in automatic datalogging mode.

The following settings must be configured before datalogging:

- Real-Time Clock: Set to the current time in hours, minutes, and seconds
- Start Time: Set the time that datalogging will automatically begin
- Stop Time: Set the time that datalogging will automatically stop
- Interval Time: Set the sampling rate (time between logged readings)
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Real-Time Clock Setting

1. Press the ⓘ button to power the meter.
2. Press and hold the **SET** button until two beeps sound (screen shown at right appears). Note that if the "Δ" logging icon is already on the LCD before pressing the **SET** button, the meter is already datalogging and cannot be programmed. To stop logging press "↵" (enter button).
3. Press "▲" or "▼" to set the current hour.
4. Press "▶" to move to the two flashing digits representing minutes.
5. Press "▲" or "▼" to set the current minutes.
6. Press "▶" to move to the two flashing digits representing seconds.
7. Press "▲" or "▼" to set the current seconds.
8. Press "↵" (enter) to store the time and move to the next screen.



Datalogging Start-Time (St) Setting

1. The Datalogging start-time screen displays "St1" and two flashing digits (for the hour).
2. Press "▲" or "▼" to set the hour of the day that datalogging will begin.
3. Press "▶" to move to the two flashing digits representing minutes.
4. Press "▲" or "▼" to set the desired minute that datalogging will begin.
5. Press "▶" to move to the two flashing digits representing the seconds.
6. Press "▲" or "▼" to set the desired second that datalogging will begin.
7. Press "⏎" (enter key) to store the datalogging start-time and move to the next screen.



Datalogging Stop-Time (SP) Setting

1. The Datalogging stop-time setting screen shows "SP1" and the two flashing numbers (for the hour).
2. Press "▲" or "▼" to set to the desired hour of the day that datalogging will end.
3. Press "▶" to move to the two flashing digits representing minutes.
4. Press "▲" or "▼" to set the desired minute that datalogging will end.
5. Press "▶" to move to the two flashing digits representing seconds.
6. Press "▲" or "▼" to set the desired second that datalogging will end.
7. Press "⏎" (enter key) to store the datalogging stop-time and move to the next screen.



Datalogging Sampling Interval Setting

1. "INTV" (interval) appears along with the current interval selection (in seconds).
2. Use the "▲" or "▼" buttons to change the number of seconds (3 to 255). For example, with 003 selected a reading will be automatically recorded every three seconds.
3. Press "⏎" (enter key) to store the sampling interval rate and begin datalogging.



Datalogging Mode

1. In datalogging mode, the LCD will continue to display the "Δ" (logging icon). The LCD will also flash the "M" icon each time a reading is logged.
2. Use the "▲" button to display the Start-Time and the "▼" button to display the Stop-Time.
3. Press "⏎" (enter) to stop datalogging and exit the datalogging mode ("Δ" will disappear).

Note: Readings automatically logged can only be viewed by downloading them to a PC.

Datalogging Software

The instructions on how to install the datalogging software are printed on the Software CD label. The software operating manual can be found on the CD.

Note that the software is compatible with Windows™ 95/98, 2000, ME, and XP operating systems.

Maintenance

Cleaning and storage

1. The meter should be cleaned with a damp cloth and mild detergent when necessary. Do not use solvents or abrasives.
2. Store the meter in an area with moderate temperature and humidity (refer to the operating and storage range in the specifications chart earlier in this manual).

Battery Replacement

When the battery power falls low, the 'BT' symbol will appear on the LCD. Replace the six 1.5 'AAA' batteries by removing the rear battery compartment screw and accessing the battery compartment. Check that the polarity (orientation) is correct when placing the batteries in the compartment. Ensure that the compartment cover is securely fastened when finished.

Calibration and Repair Services

Extech offers complete repair and calibration services for all of the products we sell. For periodic calibration, NIST certification or repair of this Extech product, call customer service for details on services available. Extech recommends that calibration be performed on an annual basis to ensure calibration integrity.

Warranty

EXTECH INSTRUMENTS CORPORATION warrants this instrument to be free of defects in parts and workmanship for one year from date of shipment (a six month limited warranty applies on sensors and cables). If it should become necessary to return the instrument for service during or beyond the warranty period, contact the Customer Service Department at (781) 890-7440 ext. 210 for authorization or visit our website at www.extech.com (click on 'Contact Extech' and go to 'Service Department' to request an RA number). A Return Authorization (RA) number must be issued before any product is returned to Extech. The sender is responsible for shipping charges, freight, insurance and proper packaging to prevent damage in transit. This warranty does not apply to defects resulting from action of the user such as misuse, improper wiring, operation outside of specification, improper maintenance or repair, or unauthorized modification. Extech specifically disclaims any implied warranties or merchantability or fitness for a specific purpose and will not be liable for any direct, indirect, incidental or consequential damages. Extech's total liability is limited to repair or replacement of the product. The warranty set forth above is inclusive and no other warranty, whether written or oral, is expressed or implied.



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