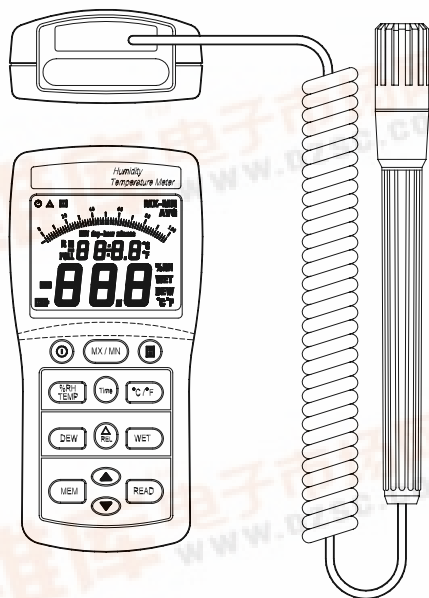


EasyView™
Digital Hygro-Thermometer
and Datalogger

Model EA20



Introduction

Congratulations on your purchase of the Extech EasyView™ EA20 Digital Hygro-Thermometer. This device measures Humidity, Temperature, Dew Point temperature and Wet Bulb temperature. Advanced features include Manual Datalogging of up to 99 sets, MAX/MIN recording, Relative measurement mode, and elapsed timer. 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)
Temperature	14 to 140°F (-20 to 60°C)	±5% RH (at 25°C, 10 to 30% RH)
		±1.8°F (±1°C)
Display	Multifunction LCD with bargraph and status indicators	
Sensor Type	Humidity: Precision 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	
Sampling Rate	2 times per second	
Datalogging Memory	99 sets	
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 with programmable auto power off (1 minute to 59 minutes in 7 selectable times)	
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

1. Humidity/Temperature Probe

2. Multifunction LCD with bargraph and status indicators

3. Power ON/OFF button

4. MX/MN button

5. DATA HOLD button

6. Humidity / Temperature select button

7. TIME button (for MX/MN elapsed timer)

8. Temperature units (C/F) select button

9. DEW POINT temperature select button

10. RELATIVE mode button

11. WET BULB temperature select button

12. MEM key manual datalogging control key

13. READ key manual memory data reading control key


14. ▲ ▼ keys to select memory location

Note: The battery compartment is located on the rear of the instrument

Operation

NOTE: Do not immerse the probe in liquid; it is intended for use in air only.

Turn Power ON or OFF

Press the  button to turn power on or off. The meter will perform a short self-test when turned on.

Taking measurements

1. Hold the probe in the area to be tested.
2. Allow adequate time for readings to stabilize.
3. Read the humidity and temperature on the LCD. The **%RH/TEMP** button allows the user to choose whether the temperature or the humidity is displayed on the larger digits. Press the **%RH/TEMP** button to toggle the display configuration.

Selecting temperature units of measure (C/F)

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

Maximum (MX) and Minimum (MN) recording

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

The MX/MN mode allows the user to view only the highest (MX) or lowest (MN) readings. Press the **MX/MN** button momentarily to start the elapsed timer and begin recording. The display will now only show the highest reading (the MX icon will appear). Press the **MX/MN** button again to view the lowest reading (MN will display). The TIME button allows the user to view the elapsed time for a particular Max or Min reading in Minutes:Seconds (59mins:59secs max) or Days:Hours (99days:24hours max). To check the highest or lowest Dew Point or Wet Bulb temperatures, use the DEW and the WET buttons. The following data displays are available in the MX/MN mode:

- a. Maximum and Minimum humidity with its associated temperature reading
- b. Maximum and Minimum temperature with its associated humidity reading
- c. Maximum and Minimum Dew point temperature with its associated standard temperature or humidity
- d. Maximum and Minimum Wet Bulb temperature with associated standard temperature or humidity

To exit the MX/MN mode, press and hold the **MX/MN** button until the MX and 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 temperature display



Dew Point temperature is calculated by the meter based on humidity/temperature measurements. To view the Dew Point temperature, press the **DEW** button momentarily. The 'DEW' display icon will appear on the right side of the LCD. The Dew Point 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).

WET BULB temperature display

Wet Bulb temperature is calculated by the meter based on humidity/temperature measurements. To view the Wet Bulb temperature, press the **WET** button momentarily. The 'WET' display icon will appear on the right side of the LCD. The Wet Bulb temperature is displayed 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 The Memory

1. Press the  button to power off the meter.
2. Press and hold down the **MEM** key, then press the  key to power on the meter. The display will show "CLR" indicating that the memory has been erased.

Entering A Reading

1. Press the **MEM** key to enter a reading. The display will momentarily show an "M" and the memory location number from 1 to 99.
2. When the memory is full, the display will show "FULL".

Data Recall

1. Press the "READ" key to enter the READ mode. The LCD will show an "R" and the memory address number.
2. Press the "▲▼" keys to scroll through the memory locations.
3. Press "DEW" or "WET" to view the stored Dew Point or Wet Bulb temperature.
4. Press the "READ" key to exit this mode.

Relative mode

Measurements can be displayed as a difference between actual humidity/temperature and stored reference values. To store a humidity/temperature reading group as a reference, press the REL button when the desired reference readings are on the LCD (the triangle icon will appear steady in the upper left-hand corner of the LCD). All subsequent displayed readings will be "relative" to the stored reference value. For example, if the reference values are 50.0% & 100°F and the actual readings are 53.0% & 105°F, the meter will display 3.0% & 5°F. To exit the Relative mode, press and hold the REL button until the triangle icon disappears.

Automatic Power OFF

The meter automatically shuts off after a programmed period of time. To program the time period press and hold the TIME button while turning the meter on. Release the TIME button after the meter finishes its self-test. Press the TIME button to scroll through the eight time selections (shown on the smaller digits at the center of the LCD). Select from the following list: 0 (disabled), 1, 3, 5, 10, 15, 30, or 59 minutes. Press the H button to store the desired time.

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 (6) 1.5 'AAA' batteries by removing the rear (center) battery compartment screw and accessing the battery compartment. Observe polarity 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 the basic 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 EXTENSION 210 for authorization or visit www.extech.com for more information. **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.

Calibration and Repair Services

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



Support Hotline (781) 890-7440

Tech support: Ext. 200; Email: support@extech.com
Repair>Returns: Ext. 210; Email: repair@extech.com
Website: www.extech.com

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