

User Manual

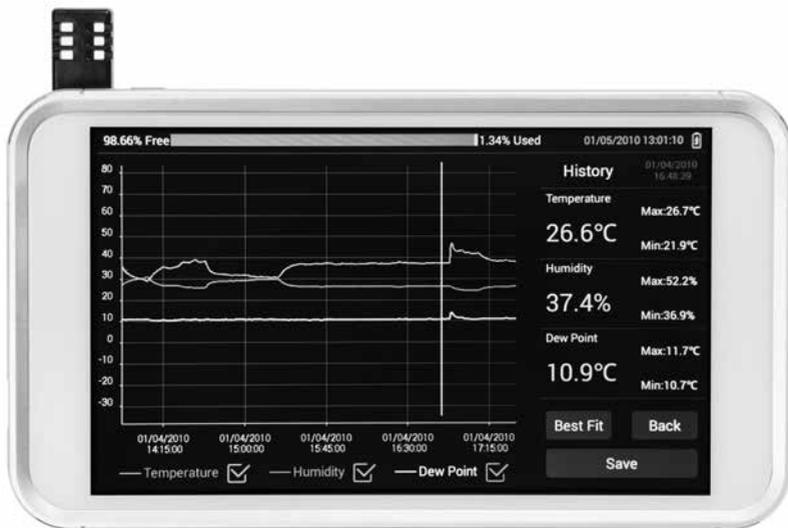


Temperature/RH Touch-Screen Monitor

with NIST-Traceable Calibration

Model 20250-40

THE STANDARD IN PRECISION MEASUREMENT



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Introduction

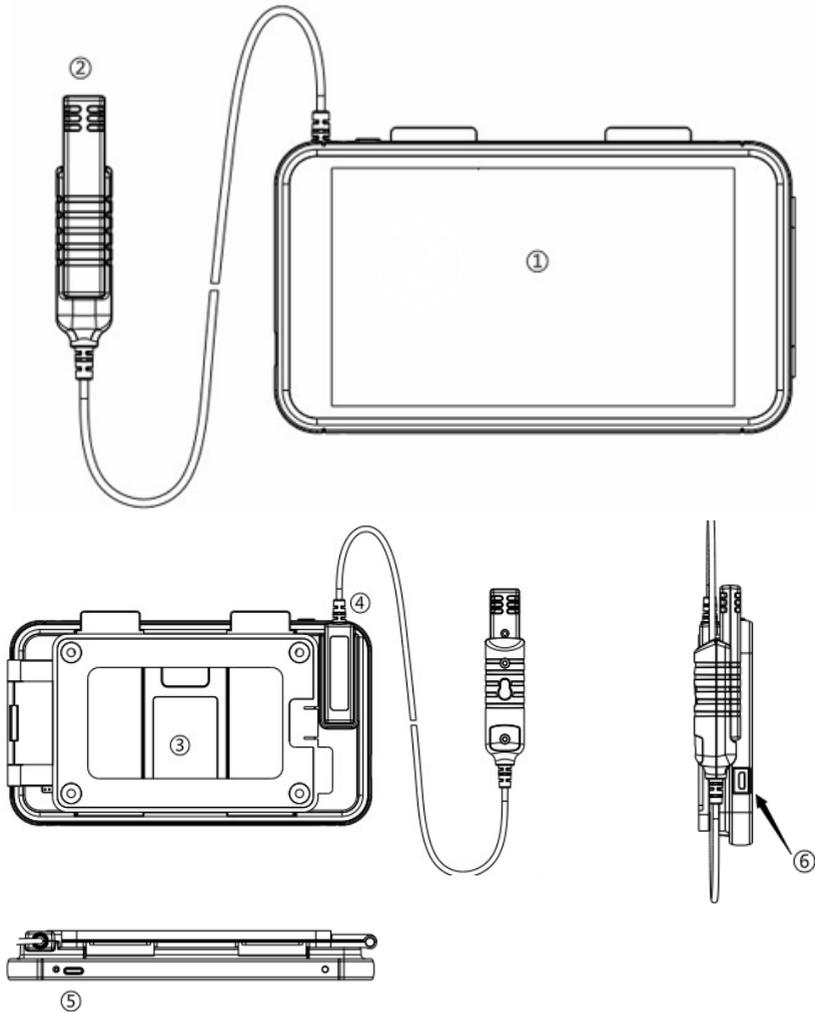
The Digi-Sense Temperature/RH Touch-Screen Monitor (Model 20250-40) measures and logs temperature, relative humidity, and dew point readings in real time and displays them in digital and graphic forms. Intuitive touch-screen menu allows you to program data collection parameters and adjust the graphic display for the best presentation of the data. Software is pre-installed so no downloading is required; just turn the instrument on and it is ready to run. The 8 GB of memory means you have nearly unlimited data collection capability which is easily downloaded to a computer in CSV format for simple integration with standard applications. The instrument is fully tested and calibrated to NIST-traceable standards. Careful use of this unit will provide years of reliable service.

Unpacking

Check individual parts against the list of items below. If anything is missing or damaged, please contact your instrument supplier immediately.

1. Touch-screen monitor tablet
2. Temperature/RH sensor
3. Sensor extension cable, 6-ft (1.8-m) long
4. Wall-mounting bracket
5. USB cable
6. Power supply
7. NIST-traceable calibration report with data

Description



1. Touch-screen monitor tablet
2. Temperature/RH sensor
3. Built-in desk stand and wall-mounting bracket
4. Slot for short probe and the probe of extension cord
5. On/Off button
6. USB interface for charging power and reviewing data via PC

Key Features

- Graphical and digital touch-screen display interface
- Multifunction content-rich interactive menu
- Large high-resolution color LCD, resolution 1024 x 600
- Touch-screen operation, zoom in/out curve
- User-adjustable high and low alarms, sampling rates, and data points
- Live and future recording options
- Selectable temperature units (°F/°C)
- Max/Min readings
- Date and time setting
- Adjustable brightness and screen saver timing
- Export the recording data to computer
- Built-in desktop stand and wall-mounting bracket options

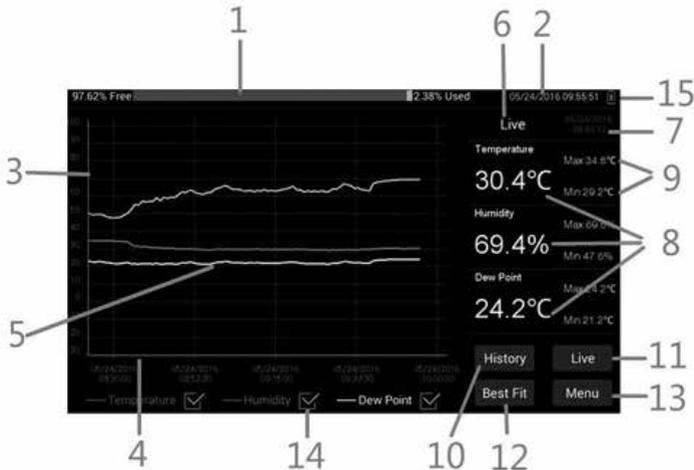
Applications

- Food processing
- Environmental monitoring
- Health care
- Storage and warehouse monitoring
- Office and workspace monitoring

Setup and Operation

Caution: The sensor or sensor extension cable should be connected to the instrument before turning it on to prevent data corruption.

Main Interface



1. Memory progress bar: "Used" indicating used memory, "Free" indicating memory remaining
2. System real time and date
3. Numerical scale of the temperature, humidity, and dew point
4. Date and time scale
5. Temperature, humidity, and dew point trend curves
6. "Live" showing real-time mode
7. Date and time of "Live" and "History" mode
8. Value of real-time temperature, humidity, and dew point
9. Max/Min settings
10. History mode selection
11. Live mode selection
12. Best Fit selection to provide the optimal view of the data curves
13. Menu selection
14. Parameter curve display on or off
15. Battery capacity

Live Mode



1. "Live" indicates that the instrument is in Live mode, default of starting up is Live Mode with sampling rate of one measurement per minute. There are three modes: Live, Recording and History.

Live: Default mode, the instrument will start to record according to a sampling rate of 1 per minute.

Recording: Set by the user according to the sampling rate, time, and data points.

History: Pulls up historical data recorded.

2. The right side indicates the current data and time of sampling points.

Digital Area

| | |
|---------------|------------|
| Temperature | Max:30.7°C |
| 30.7°C | Min:28.7°C |
| Humidity | Max:54.2% |
| 52.5% | Min:52.0% |
| Dew Point | Max:19.9°C |
| 19.9°C | Min:18.3°C |

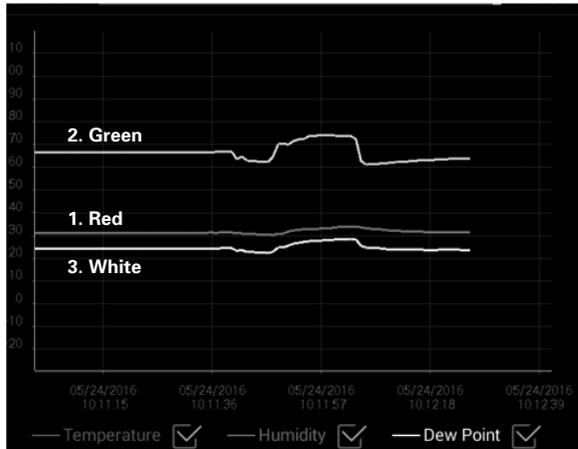
1. **Temperature** indicates the temperature value in Fahrenheit or Celsius.

2. **Humidity** indicates humidity value in % RH.

3. **Dew Point** indicates dew point value in Fahrenheit or Celsius.

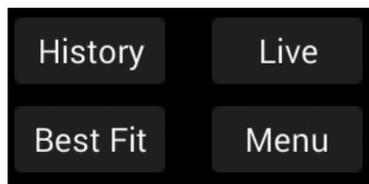
4. **Max/Min** indicates the maximum or minimum value that has been recorded.

Curve Display Area



1. Red curve indicates “temperature” trend.
2. Green curve indicates “humidity” trend.
3. White curve indicates “dew point” trend.
4. Ordinate scale shows the value of temperature, humidity, and dew point.
5. Abscissa scale shows the date and time.
6. Check or uncheck each box at the bottom of screen to show or hide the curve.

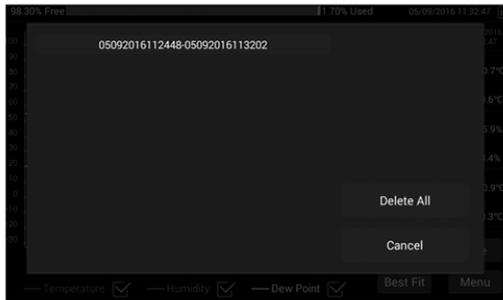
Main Interface Buttons



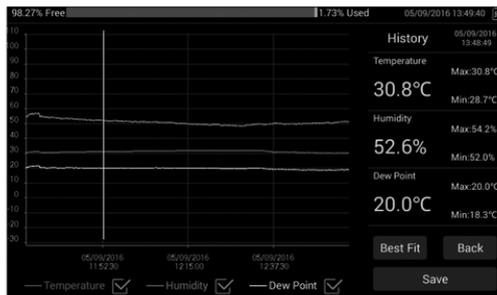
1. **History** brings up saved data files when selected.
2. **Live** places the instrument in “Live” mode when selected.
3. **Best Fit** gives an optimal presentation of the trend curves when selected.
4. **Menu** pulls up user-selectable parameters.

How to Review History Recorded Data

Click **History** button on main screen to pull up a menu of recorded files as shown below:



1. Click **Delete All** to delete all historical files.
2. Click **Cancel** to return to the main menu.
3. Clicking on a history file pulls up an **Open/Delete** option. Selecting **Open** will open and display the recorder data in the file as shown below:

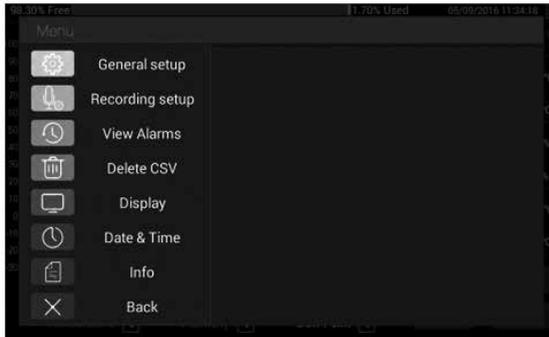


Once in the interface:

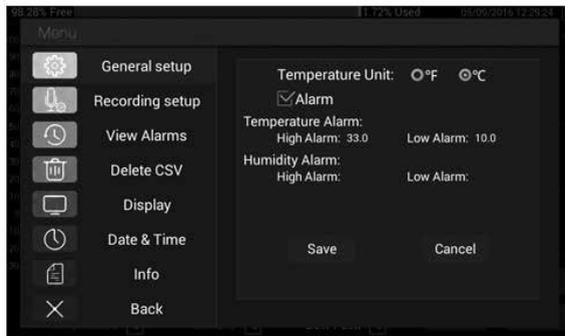
1. Click **Best Fit** to get the best view.
2. Clicking **Save** will generate a CSV file (**Note:** When the instrument is connected to a computer, you can open the CSV file).
3. Click **Back** to return to main interface.

Menu

Clicking the **Menu** button on main screen brings up the menu below which allows you to set various parameters.

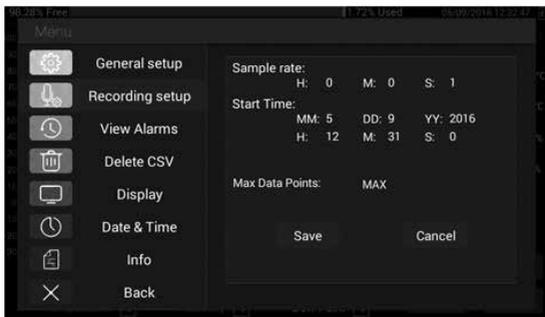


General Setup: Allows you to set temperature units and temperature/humidity alarm levels.



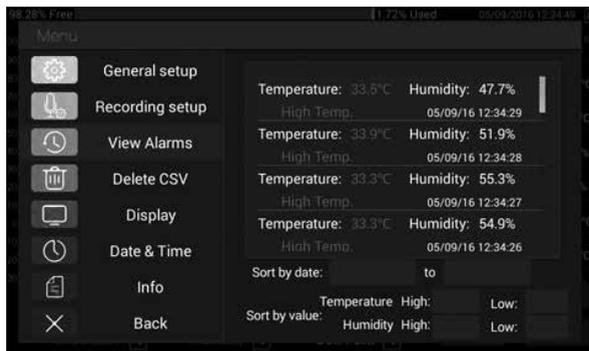
1. **Temperature Unit:** Switch between units (°F/°C).
2. **Alarm:** Check the box to set alarm values for temperature and humidity.
3. Click **Save** to save the settings.
4. Click **Cancel** to return to main screen.

Recording Setup: Allows you to set sampling rate, start time, and data points.



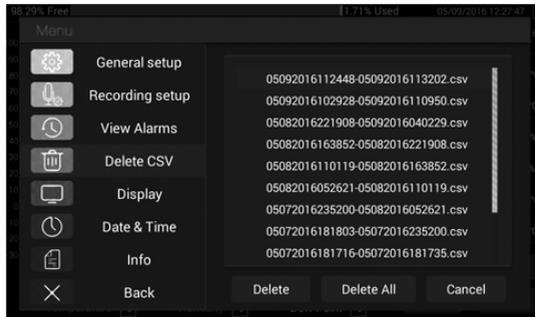
1. **Sample Rate:** Set sampling rate.
2. **Start Time:** Set recording starting time (**Note:** The default time is the current date and time in the system; a start time can be set into the future and the instrument will be automatically start recording at the future date and time)
3. **Max Data Points:** Select the number of sample points from 500, 1000, 5000, 10000, 20000, or MAX.
4. Click **Save** to save the setting parameters.
5. Click **Cancel** to return to main screen.

View Alarms: Lets you view recorded alarm values.



1. **Sort by Date:** View recorded alarms sorted by date.
2. **Sort by Value:** View recorded alarms sorted by temperature and humidity alarm value.

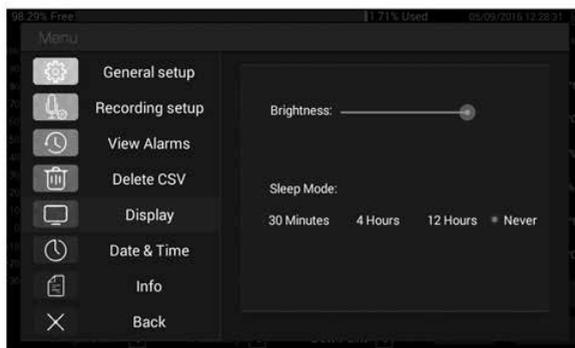
Delete CSV



A CSV file is generated automatically when placed in Recording Mode. It can be reviewed when connected to a computer.

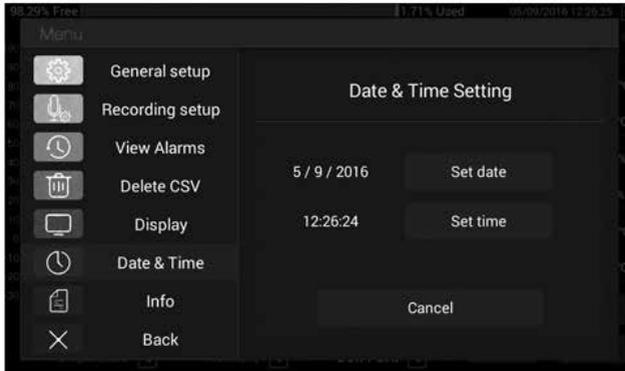
1. **Delete:** Click on a selected file and that file will be deleted.
2. **Delete All:** Deletes all files.
3. Select **Cancel** to return to main screen.

Display: Allows you to adjust the brightness and screen saver “Sleep Mode” timing.



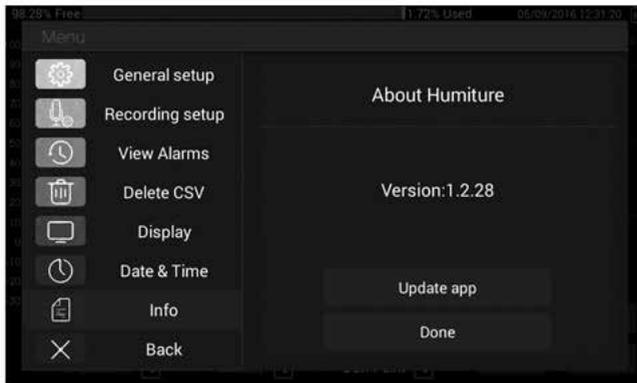
1. **Brightness:** Drag the dot to adjust the screen brightness level.
2. **Sleep Mode:** Use to set the screen saver timing at 30 minutes, 4 hours, 12 hours, or Never.

Date & Time



1. Click on **Set Date** to set the current date.
2. Click **Set Time** to set the current time.
3. Click **Cancel** to return to main screen.

Info: Shows version information and upgrade software.

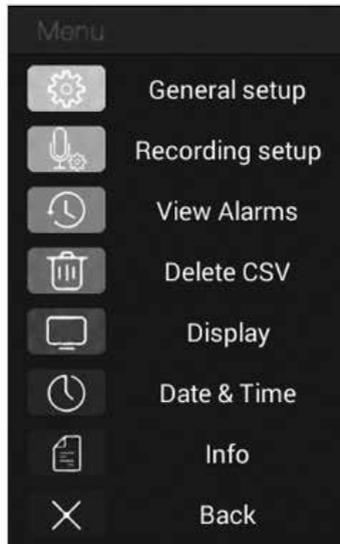


1. **Version:** Indicates the current software version.
2. Click on **Update App** to upload free future software updates over the life of the product.
3. Click on **Done** to return to main interface.

Note: Future software updates can be easily installed from your computer as follows:

1. Connect the instrument to your computer via the USB cable provided.
2. Copy the downloaded software file from your computer to the root directory of the instrument.
3. Click **Update App** to activate the upgrade.

Back



1. Selecting **Back** returns you to the main screen.

Specifications

| | |
|-----------------------------|--|
| Humidity range | 0 to 100% RH |
| Humidity accuracy | ±1.5% RH |
| Temperature range | 14 to 176°F (-10 to 80°C) |
| Temperature accuracy | ±0.36°F (±0.2°C) |
| Dew point temperature range | -4 to 176°F (-20 to 80°C) |
| Data points | 500 to 20,000 |
| Internal storage | 8 GB |
| Dimensions (W x H x D) | 7 ⁵ / ₈ " x 4 ¹ / ₄ " x 5 ⁵ / ₈ " (19.4 x 10.8 x 1.6 cm) |
| Adapter | 5 V 2 A AC adapter |
| Battery | 2500 mAh lithium battery |

Maintenance, Recalibration, and Repair

Cleaning and storage

- The instrument should be cleaned with a damp cloth and mild detergent when necessary. Do not use solvents or abrasives.
- Store the instrument in an area with moderate temperature and humidity.

It is recommended that Digi-Sense products are calibrated annually to ensure proper function and accurate measurements; however, your quality system or regulatory body may require more frequent calibrations. To schedule your recalibration, please contact InnoCal, an ISO 17025 calibration laboratory accredited by A2LA.



For Product and Ordering Information, Contact:

