

CEM DT-172

CEM DT-172 Temperature and Humidity Data Logger User Manual

Model: DT-172

1. INTRODUCTION

The CEM DT-172 is a temperature and humidity data logger designed for efficient and convenient long-term environmental monitoring. This device records temperature and humidity values, storing them internally for later retrieval and analysis via a personal computer with a USB interface. This manual provides essential information for the proper setup, operation, and maintenance of your DT-172 data logger.

2. SAFETY INFORMATION

Please read and understand the following safety precautions before using the device:

- Read all instructions thoroughly before operating the device.
- Do not expose the device to extreme temperatures or humidity levels outside its specified operating range.
- Do not attempt to open, disassemble, or modify the device. This may void the warranty and cause damage.
- Dispose of depleted batteries according to local environmental regulations.
- Keep the device away from strong electromagnetic fields.

3. PRODUCT OVERVIEW

The CEM DT-172 features a compact design with an LCD display and two control buttons. It is equipped with internal sensors for accurate temperature and humidity measurement.

3.1 Key Features

- Memory capacity for 32,000 readings (16,000 each for temperature and humidity).
- LCD display provides real-time data and logging status.
- User-selectable measurement cycle from 1 second to 24 hours.
- Extended battery life, typically more than 3 years.
- USB interface for convenient data download to a PC.
- Alarm display indicates when user-defined maximum or minimum values are exceeded.

- Includes analysis software for data graphing, review, and export.
- Supports temperature measurement in both Celsius (°C) and Fahrenheit (°F).
- High resolution: 0.1°C and 0.1% RH.

3.2 Components

The standard package includes:

- DT-172 Data Logger Unit
- Instruction Manual
- 3.6V Lithium battery (14250 type) (*Note: Batteries are not included in some packages and must be purchased separately*)
- Software CD
- USB Cable
- Wall Holder
- Instrument Lock



Figure 1: CEM DT-172 Data Logger highlighting key features and display.



Figure 2: CEM DT-172 Data Logger with its accessories.

4. SETUP

4.1 Battery Installation

1. Locate the battery compartment on the back of the DT-172 device.
2. Open the battery compartment cover.
3. Insert one 3.6V Lithium battery (14250 type) into the compartment, ensuring correct polarity.
4. Securely close the battery compartment cover.

Note: Batteries are typically not included and must be purchased separately.

4.2 Software Installation

1. Insert the provided Software CD into your computer's CD-ROM drive.
2. Follow the on-screen instructions to install the analysis software. The software is compatible with Windows 98/2000/XP/Vista/7 operating systems.

4.3 Initial Connection to PC

1. Connect the data logger to your computer using the supplied USB cable.
2. Your computer should automatically detect the device and install any necessary drivers.



Figure 3: Connecting the DT-172 Data Logger to a PC via USB.

5. OPERATING INSTRUCTIONS

5.1 Power On/Off

The device typically powers on automatically upon correct battery installation. There is no explicit power button.

5.2 Display Information

The LCD displays current temperature, humidity, time, and logging status. Two LEDs, labeled **ALM** (Alarm) and **REC** (Recording), indicate the device's status.



Figure 4: Close-up of the DT-172 display and control buttons.

5.3 Button Functions

- **Temp. %RH Button:** Press this button to cycle between displaying the current temperature and relative humidity readings on the LCD.
- **MAX/MIN Button:** Press this button to view the maximum and minimum recorded temperature and humidity values since the last reset or logging session.

5.4 Starting Data Logging

1. Connect the data logger to your PC and open the analysis software.
2. Use the software to configure desired logging parameters, such as the measurement cycle (e.g., 1 second, 1 hour, 24 hours) and any alarm limits for temperature and humidity.
3. Once configured, disconnect the logger from the PC. The device will automatically begin standalone data logging. The **REC** LED will illuminate to indicate active recording.

5.5 Downloading Data

1. To retrieve recorded data, connect the data logger to your PC via the USB cable.

2. Open the analysis software on your computer.
3. Follow the software's instructions to download the logged data from the device.
4. The software allows you to view the data in graphical format, analyze trends, and export the data for further processing.

6. MAINTENANCE

6.1 Battery Replacement

When the battery indicator on the LCD shows low power, replace the 3.6V Lithium battery (14250 type) promptly to ensure continuous operation and prevent data loss. Refer to Section 4.1 for battery installation steps.

6.2 Cleaning

Wipe the device with a soft, dry cloth. Do not use abrasive cleaners, solvents, or immerse the device in water. Ensure the sensor area remains clean and free of dust or obstructions for accurate readings.

7. TROUBLESHOOTING

- **Device not turning on:** Check if the 3.6V Lithium battery (14250) is correctly installed and not depleted. Ensure proper polarity.
- **No data logging:** Verify that logging parameters have been set and activated via the analysis software. Confirm the **REC** LED is illuminated when the device is disconnected from the PC. Ensure sufficient memory is available (32,000 readings capacity).
- **Cannot connect to PC or download data:** Ensure the USB cable is securely connected to both the logger and the PC. Verify that the analysis software is correctly installed. Try connecting to a different USB port on your computer.
- **Alarm indication (ALM LED):** The **ALM** LED indicates that user-defined maximum or minimum temperature/humidity values have been exceeded. Review your logged data using the software to identify the specific exceedance.
- **Inaccurate RH readings at low humidity:** Some users have reported limitations in logging data for relative humidity below 18% RH. This may be a characteristic of the device's sensor.

8. SPECIFICATIONS

Parameter	Value
Temperature Range	-40 to 70°C (-40 to 158°F)
Temperature Accuracy	±1°C
Humidity Range	0 to 100% RH
Humidity Accuracy	±3.5% RH
Memory Capacity	32,000 readings (16,000 for Temp, 16,000 for RH)
Measuring Rate	1 second to 24 hours (selectable)
Resolution	0.1°C, 0.1% RH
Battery Life	Typically 3 years
Power Source	1 x 3.6V Lithium battery (14250)

Parameter	Value
Analysis Software	Windows 98/2000/XP/Vista/7 compatible
Dimensions (HxWxD)	94mm x 50mm x 32mm (approx. 9.4cm x 5cm x 3.2cm)
Weight	91g
Mounting Type	Wall Mount
Model Number	DT-172
UPC	736631254849



Figure 5: DT-172 Data Logger with approximate dimensions.

9. WARRANTY INFORMATION

Warranty details for the CEM DT-172 Temperature and Humidity Data Logger are not specified in the provided product information. Please refer to your purchase documentation or contact the manufacturer directly for specific warranty terms and conditions.

10. CUSTOMER SUPPORT

For technical assistance, inquiries, or support regarding your CEM DT-172 Data Logger, please contact CEM Instruments (India) Pvt. Ltd. using the information below:

Email: info@cem-instruments.in

Website: www.cem-instruments.in