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› Ace Instruments Elitech GSP-6 Pro Digital Temperature and Humidity Data Logger User Manual

Ace Instruments GSP-6 Pro

Ace Instruments Elitech GSP-6 Pro Digital Temperature and Humidity Data Logger User Manual

Model: GSP-6 Pro

1. PRODUCT OVERVIEW

The Ace Instruments Elitech GSP-6 Pro is a multi-use digital data logger designed for precise temperature and humidity monitoring. It is particularly suited for applications requiring strict environmental control, such as medicine and vaccine storage, cold chain logistics, and pharmaceutical industries. This device features a glycol-buffered probe for stable temperature readings, an LCD display, and compliance with FDA 21 CFR Part 11 regulations.



Figure 1: Elitech GSP-6 Pro Data Logger with Glycol Probe

Key Features:

- Meets CDC/VFC requirements for vaccine storage.
- FDA 21 CFR Part 11 Compliant.
- Integrated magnet for easy mounting.
- Measures both temperature and humidity.
- Powered by a single-use 3.6V ER14505H lithium battery or via USB.
- Clear LCD display for real-time data.
- External glycol-buffered probe for stable temperature readings.
- 16,000 data points memory capacity.
- Configurable logging interval from 10 seconds to 24 hours.
- Audible and visual alarms.
- Data export in PDF/EXCEL/TXT formats via ElitechLog software.

Data Storage Capacity:

Max & Min Measuring Range Large Record Capacity



Temperature: -40°F ~ 185°F
Humidity: 10% ~ 99%
Record CAP: 16,000 points(MAX)
Record INR: 10s ~ 24h available

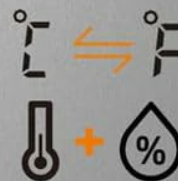


Figure 6: Large Capacity Data Storage. The device offers 16,000 points of storage capacity, allowing for continuous recording for up to 2 years at a 1-hour cycle. Data can be cleared and reused.

2. DEVICE COMPONENTS

Familiarize yourself with the main components of your GSP-6 Pro data logger:



Figure 2: Elitech GSP-6 Pro Component Diagram. This image shows the LCD Screen, LED Indicator, Glycol Bottle Probe, USB Port, and Control Button.

- **LCD Screen:** Displays current temperature, humidity, battery status, and logging information.
- **LED Indicator:** Provides visual alerts for alarms and operational status.
- **Glycol Bottle Probe:** External probe for temperature measurement, buffered by glycol to minimize fluctuations from door openings.
- **USB Port:** For connecting to a computer to configure settings and download data.
- **Button:** Used for various operations such as starting/stopping logging and checking maximum/minimum values.

3. SETUP AND INSTALLATION

3.1. Battery Installation

The device comes with a pre-installed 3.6V ER14505H lithium battery. Ensure the battery is properly seated before first use. The battery life is approximately two years with a 15-minute record interval and disabled buzzer alarm.

3.2. Software Installation (ElitechLog)

To configure the data logger and download data, you need to install the ElitechLog software on your computer. The software is compatible with macOS and Windows operating systems.

1. Download the ElitechLog software from the official Ace Instruments or Elitech website.
2. Follow the on-screen instructions to complete the installation.
3. Connect the GSP-6 Pro to your computer using a Micro USB cable.
4. Launch the ElitechLog software. The device should be automatically recognized.



Figure 3: ElitechLog Software Capabilities. The software allows for data query and storage, chart comparison, temperature unit switching, settable alarm ranges, email backup, and data export in PDF/Excel formats, and is FDA 21 CFR Part 11 Compliant.

3.3. Initial Configuration

Before starting a new logging session, configure the device settings using the ElitechLog software:

- **Logging Interval:** Set how frequently the device records data (e.g., 10 seconds, 15 minutes, 1 hour).
- **Alarm Thresholds:** Define upper and lower limits for temperature and humidity. The device will trigger an alarm if readings exceed these limits.

- **Logging Mode:** Choose between "Stop when full" (logging stops once memory is full) or "Circular logging" (oldest data is overwritten when memory is full).
- **Temperature Unit:** Select Celsius (°C) or Fahrenheit (°F).
- **Time Zone:** Adjust the device's internal clock to your local time zone.

3.4. Probe Placement

For accurate temperature and humidity monitoring, especially in vaccine or medicine storage, proper probe placement is crucial.



Figure 4: Recommended Probe Placement. The main unit can be mounted on the exterior of a refrigerator using its magnet, while the external glycol-buffered probe is placed inside the storage unit to monitor internal conditions.

- Mount the main data logger unit on the exterior of the refrigerator or storage unit using its built-in magnet.
- Place the glycol-buffered probe inside the storage unit, ideally near the items being monitored, away from direct airflow from cooling vents or the door opening.
- Ensure the probe cable is not pinched or damaged by the refrigerator door seal.

4. OPERATING INSTRUCTIONS

4.1. Starting a New Logging Session

After configuring the device via ElitechLog software, disconnect it from the computer. The device is ready to start logging.

1. Press and hold the button on the device for approximately 3 seconds until the "REC" indicator appears on the LCD, indicating logging has started.
2. The LCD will display current temperature, humidity, and the remaining memory capacity.

4.2. Stopping a Logging Session

To stop the current logging session:

1. Press and hold the button on the device for approximately 3 seconds until the "STOP" indicator appears on the LCD.
2. The device will cease recording data.

4.3. Viewing Data on LCD

The LCD screen provides real-time readings and summary information:

- **Current Readings:** Displays the live temperature and humidity.
- **Max/Min Values:** Briefly press the button to cycle through maximum and minimum recorded temperature and humidity values for the current session.
- **Alarm Status:** The LED indicator will flash and the buzzer will sound if an alarm condition is met.

4.4. Data Download and Report Generation

To retrieve recorded data and generate reports:

1. Connect the GSP-6 Pro to your computer using the Micro USB cable.
2. Open the ElitechLog software.
3. The software will automatically detect the device and prompt you to download data.
4. Select the desired data range and export format (PDF, Excel, or TXT).
5. Save the report to your computer.

Large Capacity Data Storage

16000 points storage capacity

Continuous recording for 2 years at a 1 hour cycle

Data can be cleared and reused when capacity is full



Figure 5: Data Export and Alarm Functionality. The device supports data export via USB and features visible and audible alarms for out-of-range conditions.

5. MAINTENANCE

5.1. Battery Replacement

When the battery indicator on the LCD shows low power, replace the 3.6V ER14505H lithium battery. Refer to the device's back panel for instructions on accessing the battery compartment. Ensure proper polarity during installation.

5.2. Cleaning

- Wipe the device's exterior with a soft, damp cloth.
- Do not use abrasive cleaners or solvents.
- Ensure the USB port and probe connections are free from dust and moisture.

5.3. Probe Care

Handle the external probe with care. Avoid bending or kinking the cable excessively. Ensure the glycol bottle is sealed and intact. If the probe or cable is damaged, it may affect measurement accuracy and should be

replaced.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device not turning on.	Low or depleted battery.	Replace the 3.6V ER14505H lithium battery.
Cannot connect to ElitechLog software.	USB cable issue, software not installed correctly, or driver problem.	Try a different USB cable or port. Reinstall ElitechLog software. Ensure USB drivers are updated.
Inaccurate readings.	Damaged probe, improper probe placement, or device malfunction.	Check probe for damage. Reposition probe away from direct airflow. Contact support if issues persist.
Alarms not triggering.	Alarm thresholds not set correctly in software, or alarm function disabled.	Verify alarm settings in ElitechLog software. Ensure buzzer is enabled.
Data logging stops unexpectedly.	Memory full (if "Stop when full" mode is selected), or battery depleted.	Download data and clear memory. Replace battery. Consider using "Circular logging" mode.

7. TECHNICAL SPECIFICATIONS

Parameter	Detail
Model	Elitech GSP-6 Pro
Temperature Range	-40°C to +85°C (-40°F to 185°F)
Temperature Accuracy	±0.5°C/±0.9°F (-20°C to +40°C), ±1°C/±1.8°F (Others)
Humidity Range	0%RH to 100%RH
Humidity Accuracy	±3%RH (25°C, 20%RH to 80%RH), ±5%RH (Others)
Resolution	0.1°C/°F, 0.1%RH
Memory Capacity	16,000 points
Logging Interval	10 seconds to 24 hours (configurable)
Data Interface	Micro USB
Alarm Configuration	Buzzer; LCD display
Report Format	PDF/EXCEL/TXT (via ElitechLog software)
Power Supply	Single-use 3.6V ER14505H lithium battery; or powered via USB
Battery Life	Approx. two years (at room temperature, 15 min interval, buzzer off)

Parameter	Detail
Logging Mode	Stop when full; Circular logging
Dimensions	118 x 61.5 x 19 mm
Material	Plastic
Certifications	EN12830, CE, RoHS, FDA 21 CFR Part 11 Compliant
Software	ElitechLog (for macOS & Windows System)


Innovation Preceding All

Glycol Bottle Buffered Probe for Vaccine

Avoid inaccurate temperature data caused by frequent door openings.

0.3°C
High Precision

3m/Φ2
TPE Medical-grade Line

Temperature Buffer
Glycol Bottle with temperature buffer

IP67
Waterproof Grade



$C_3H_8O_2$



Elitech

LOG

GSP-60

Figure 7: Device Displaying Max/Min Values and Logging Capacity. This image highlights the temperature range of -40°F to 185°F, humidity range of 10% to 99%, record capacity of 16,000 points, and record interval from 10s to 24h.



Figure 8: Glycol Bottle Buffered Probe. This image details the probe's features: 0.3°C high precision, 3m/Φ2 TPE medical-grade line, temperature buffer, and IP67 waterproof grade, designed to avoid inaccurate temperature data caused by frequent door openings.

8. APPLICATIONS

The Elitech GSP-6 Pro is suitable for a variety of applications requiring precise temperature and humidity monitoring:

- Pharmaceutical Industry
- Cold Chain & Logistics
- Medicine and Vaccine Storage & Monitoring
- Drug Refrigerators
- Frozen Food Cabinets

Export Data from Software Visible and Audible Alarm



ALARM



ER14505



USB



Figure 9: Common Applications. This image illustrates the use of the data logger in vaccine storage, cold trucks, drug refrigerators, and frozen food cabinets.

9. WARRANTY AND SUPPORT

The Elitech GSP-6 Pro comes with a factory calibration certificate. For specific warranty details, please refer to the documentation included with your purchase or contact Ace Instruments customer support. For technical assistance, software downloads, or troubleshooting not covered in this manual, please visit the official Ace Instruments website or contact their support team.

Included Components: 1 unit of Elitech GSP-6G Pro datalogger with Instruction Manual & Factory Calibration Certificate.