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Lascar Electronics EL-21CFR-TP-LCD+

Lascar Electronics EL-21CFR-TP-LCD EasyLog 21CFR FDA-Compatible Temperature Data Logger with Probe User Manual

Model: EL-21CFR-TP-LCD+

1. INTRODUCTION

The Lascar Electronics EL-21CFR-TP-LCD EasyLog 21CFR FDA-Compatible Temperature Data Logger with Probe is a standalone device designed for accurate temperature monitoring. This data logger is compliant with 21CFR regulations and is capable of recording and displaying over 32,000 temperature readings from its high-accuracy thermistor probe. It features an integrated LCD screen and a push-button interface, allowing users to easily view the most recent, highest, and lowest recorded temperature values.

2. SAFETY INFORMATION

Please read all instructions carefully before operating the device. Failure to do so may result in inaccurate readings or damage to the unit.

- Do not expose the data logger to extreme temperatures outside its specified operating range (-35 to +80°C / -31 to +176°F).
- Avoid exposing the device to excessive moisture or corrosive substances.
- Handle the thermistor probe with care to prevent damage.
- Ensure proper ventilation if used in an enclosed space.
- Do not attempt to disassemble or modify the device. Refer all servicing to qualified personnel.
- Dispose of the device and its components according to local environmental regulations.

3. PRODUCT OVERVIEW

The EL-21CFR-TP-LCD data logger is a compact and robust device designed for reliable temperature monitoring.



Figure 1: Lascar Electronics EL-21CFR-TP-LCD Data Logger. The image shows the black data logger unit with an LCD display showing "120.0°C", a button, and a USB connector at one end. A clear protective cap is shown detached from the USB end.

Key Components:

- **LCD Display:** Shows current temperature, highest, lowest, and other status indicators.
- **Push-Button:** Used to cycle through display modes and initiate logging (if configured).
- **USB Connector:** For connecting to a computer to configure the logger and download data.
- **Thermistor Probe Input:** Port for connecting the external thermistor probe.
- **Protective Cap:** Covers the USB connector when not in use.

4. SETUP

4.1 Software Installation

Before using the data logger, you must install the EasyLog 21CFR software on your computer. This software is required for configuring the logger, downloading data, and viewing graphs.

1. Obtain the EasyLog 21CFR software from the manufacturer's official website or the provided installation media.
2. Follow the on-screen instructions to complete the software installation.
3. Ensure your computer meets the minimum system requirements for the software.

4.2 Initial Configuration

Once the software is installed, connect the data logger to your computer via the USB port.

1. Remove the protective cap from the USB connector of the data logger.
2. Plug the data logger into an available USB port on your computer.
3. Launch the EasyLog 21CFR software. The software should detect the connected data logger.
4. Within the software, configure the desired logging parameters, including:
 - Logging rate (e.g., every 10 minutes, every hour)
 - Start mode (e.g., immediate, delayed start, push-button start)
 - Alarm thresholds (high and low temperature limits)
 - Units of measurement (°C or °F)
5. Apply the settings to the data logger. The logger is now ready for deployment.

4.3 Probe Connection

Connect the thermistor probe to the designated input port on the data logger. Ensure a secure connection for accurate readings.

5. OPERATION

5.1 Starting Data Logging

The method for starting data logging depends on the configuration set in the software:

- **Immediate Start:** Logging begins as soon as the settings are applied from the software.
- **Delayed Start:** Logging begins after a pre-set time delay.
- **Push-Button Start:** Press and hold the push-button on the data logger for approximately 3 seconds until the 'REC' indicator appears on the LCD.

5.2 Viewing Readings on LCD

Press the push-button briefly to cycle through the displayed information on the LCD:

- **Current Temperature:** The real-time temperature reading from the probe.
- **Highest Recorded Temperature:** The maximum temperature recorded during the current logging session.
- **Lowest Recorded Temperature:** The minimum temperature recorded during the current logging session.
- **Logging Status:** Indicators such as 'REC' (recording), 'STOP' (stopped), 'FULL' (memory full).

5.3 Stopping Data Logging

Logging can be stopped in several ways, depending on the configuration:

- **Memory Full:** Logging automatically stops when the device's memory capacity (32,000 readings) is reached.

- **Push-Button Stop:** If configured, press and hold the push-button for approximately 3 seconds until the 'STOP' indicator appears.
- **Via Software:** Connect the logger to a computer and use the EasyLog 21CFR software to stop the logging session.

5.4 Downloading Data

To retrieve recorded data:

1. Connect the data logger to your computer via USB.
2. Open the EasyLog 21CFR software.
3. The software will automatically detect the logger and prompt you to download the data.
4. Follow the software instructions to save the data, which can then be viewed, analyzed, and exported in various formats.

6. MAINTENANCE

6.1 Cleaning

Clean the exterior of the data logger with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure the USB port and probe input are free from dust and debris.

6.2 Battery Replacement

The data logger contains an internal battery. If the battery indicator on the LCD or software shows low power, the battery may need replacement. Refer to the EasyLog 21CFR software documentation or contact customer support for battery replacement procedures, as this may require specialized tools or service.

6.3 Calibration

For applications requiring high accuracy and compliance, periodic calibration of the data logger and its probe is recommended. Consult the manufacturer's guidelines or a certified calibration service for details.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device not detected by software.	USB connection issue, software not running, driver issue.	Ensure USB cable is securely connected. Restart software and computer. Reinstall USB drivers if necessary. Try a different USB port.
LCD display is blank or dim.	Low battery, device not active.	Connect to USB to check if it powers on. If persistent, battery may need replacement.
Inaccurate temperature readings.	Probe not properly connected, probe damage, environmental interference, calibration needed.	Check probe connection. Inspect probe for visible damage. Ensure probe is placed in a representative environment. Consider recalibration.
Data logging not starting.	Incorrect start mode configuration, memory full.	Verify start mode settings in software. Check if memory is full; download data and reconfigure.

8. SPECIFICATIONS

Feature	Detail
Model Number	EL-21CFR-TP-LCD+
Measurement Range	-35 to +80°C / -31 to +176°F
Memory Capacity	32,000 temperature readings
Probe Type	Thermistor probe
Display	LCD with current, highest, and lowest readings
Interface	USB
Compliance	21CFR
Item Weight	1 Pound
Manufacturer	COLE-PARMER
First Available Date	June 20, 2017

9. WARRANTY AND SUPPORT

Specific warranty information for the Lascar Electronics EL-21CFR-TP-LCD data logger is typically provided with the product packaging or available on the manufacturer's official website. Please refer to these resources for detailed terms and conditions regarding warranty coverage.

Customer Support:

For technical assistance, troubleshooting beyond this manual, or inquiries regarding service and calibration, please contact Lascar Electronics customer support. Contact details can usually be found on their official website or in the product documentation.