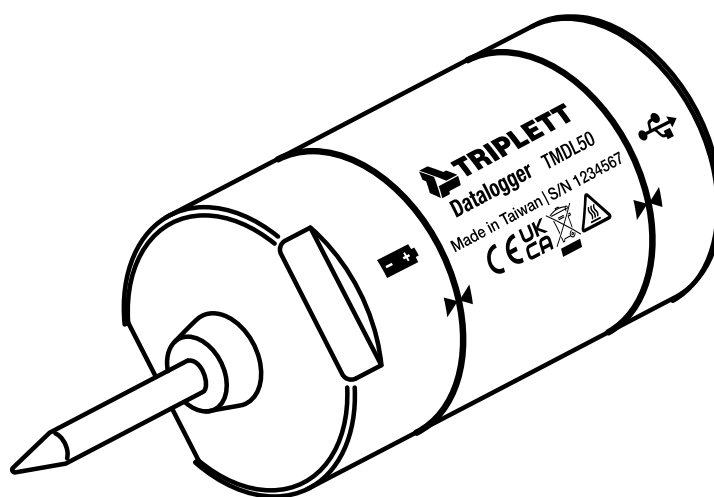


TMDL50

High Temperature Datalogger



Introduction

Welcome, and congratulations on your purchase of the Triplet TMDL50. The TMDL50 High Temperature Data Logger is designed for accurate and reliable temperature monitoring in extreme environments. Constructed from durable 316L stainless steel, it provides precise data logging in applications such as sterilization, pasteurization, and autoclave validation. With a wide temperature range, high accuracy, and long battery life, the TMDL50 is ideal for quality assurance professionals, food and pharmaceutical processing, and laboratory research. Its compact, waterproof design and easy USB interface make setup, configuration, and data retrieval simple and efficient.

What's in the box:

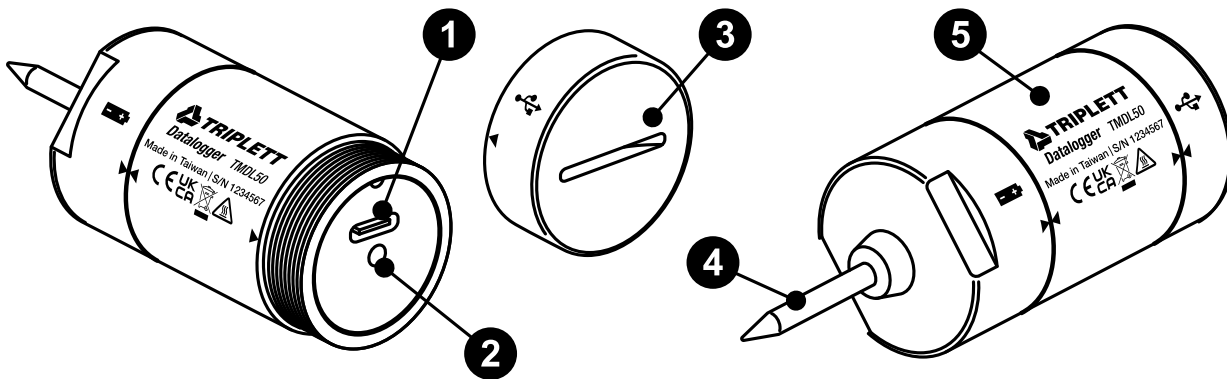
- (1) TMDL50 High Temperature Datalogger
- (1) User Manual
- (12) Replacement O-rings (6 Sets for Front and Back)
- (1) Cleaning Cloth

Stay updated:

For the most recent version of the user manual, always visit the official Triplet website: www.triplett.com and search for **TMDL50**.

Description

Product Description



1. USB Type-C Interface

The data logger is equipped with a USB 2.0 Type-C plug-and-play connector. No driver or software installation is required. Simply connect the included Type-C cable to a computer to configure or download data.

2. LED Indicator

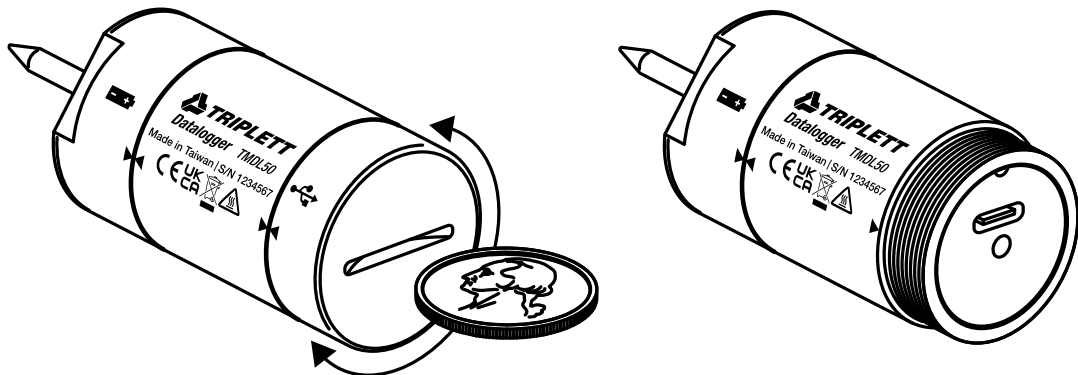
The built-in LED provides visual feedback for the logger's operating status:

Status	LED Indication
Power Off	All LEDs are off.
Standby	Green LED blinks dimly every 5 seconds when the logger is programmed and waiting to start. The brightness is lower than during recording.
Recording	Green LED blinks brightly every 5 seconds while data logging is in progress.
Logging Complete – Data Not Yet Downloaded	Green LED flashes three times every 5 seconds to indicate logging has ended but the data has not been retrieved.
Low Battery	Red LED blinks every 5 seconds to indicate that the battery should be replaced.

3. Waterproof USB Cover

The waterproof cover must be fully tightened to maintain the unit's IP68 rating.

- To **open**, use a coin and rotate the cover counterclockwise to the alignment mark. The included cloth can help improve grip.



- To **close**, rotate the cover clockwise until the alignment marks match.
- Periodically clean the inner surface of the USB cover and replace the O-ring to ensure the best waterproof performance.

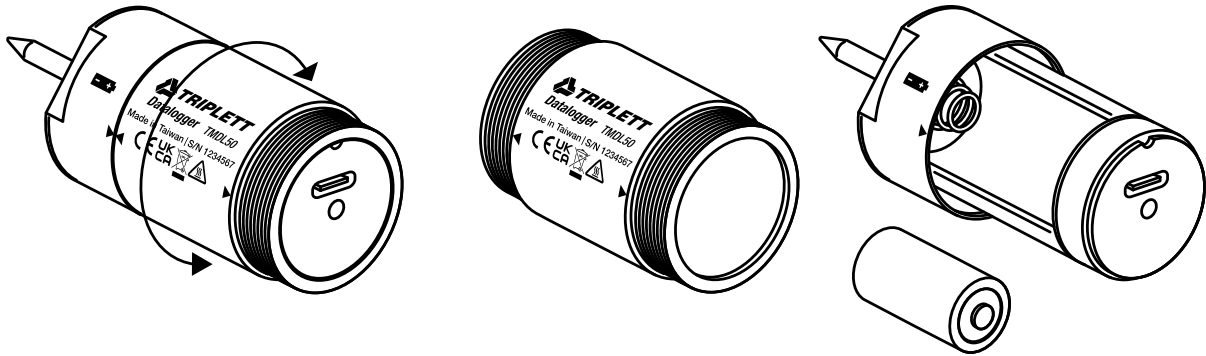
4. Temperature Sensor

High-accuracy built-in PT1000 platinum sensor for precise temperature measurement.

5. Battery Compartment

The logger operates on one replaceable 3.6 V lithium battery (pre-installed and factory-

tested). When replacement is required, contact your distributor to obtain the correct battery type.



Battery Installation

The data logger is powered by a pre-installed, non-rechargeable 3.6 V lithium battery. Under normal conditions, the battery provides power for up to **one million readings or approximately 18 months of use**, whichever comes first.

When the **red LED blinks every 5 seconds**, the battery is low and should be replaced soon. Contact your distributor or the place of purchase to obtain a replacement battery of the same type.

Battery Replacement Procedure

1. Securely hold the logger using a wrench or other suitable tool to keep it steady.
2. Rotate the middle section of the logger **counterclockwise** to open the battery compartment.
3. Remove the old battery and O-ring. Install the new battery and O-ring, making sure to observe the correct polarity.
4. Rotate the middle section **clockwise** until the alignment marks match and the compartment is securely closed.

Note: Always check that the O-ring is properly seated and in good condition before closing to maintain the unit's waterproof rating (IP68).

Operation

Important Notes:

1. Adobe® Reader is required to view the generated PDF reports.
2. Always program and generate reports at **room temperature**. If the logger has been used in high-temperature environments (such as an autoclave), allow it to fully cool to ambient temperature before connecting to a PC.

3. The configuration software is built into the logger and appears automatically when connected to a Windows® computer — no separate installation is required.

Step 1: Configuring the Data Logger

Configuration can be performed at any time **before** recording begins. Once logging starts, configuration changes cannot be made until the recording session is stopped. If a password has been enabled, it will be required to modify settings.

1. Use a coin to open the USB cover.
2. Connect the data logger to your PC using the included USB Type-C cable. The green LED will remain on while communication is established.
3. A Windows File Explorer window will automatically appear. If it does not, open it manually to view the logger's folder.
4. Double-click "**PDF Logger Configuration Tool.exe.**"
5. Select your preferred language. Available options include English, German, French, Italian, Spanish, and Portuguese.

User-Configurable Settings

- **Sampling Rate:** Choose an interval between 1 second and 120 minutes.
- **Start Delay:** Set a delay from 0 minutes up to 24 hours. For example, if a 5-minute delay and a 5-second sampling rate are selected, the first measurement will begin 5 minutes after pressing "Save."
- **Temperature Unit:** Choose between °C (Celsius) or °F (Fahrenheit).
- **Password:** Optionally enable password protection to prevent unauthorized reconfiguration. Passwords can include up to 16 letters or numbers.
- **Company Name:** Enter a custom label (up to 20 characters) such as a company name or test location. This appears as the title on the PDF report.
- **Effective Range:** Define acceptable temperature limits for your process (e.g., 130°C–140°C). The software will indicate how long the measured temperature remained within this range.
- **Time Zone:** Ensure the PC is set to the correct local time zone before programming. The logger automatically synchronizes its internal clock with the PC when you click "Save."

Default Settings

- Sampling Rate: 1 second

- Start Delay: 0 minutes
- Temperature Unit: °C
- Effective Range: 120.0°C to 140.0°C
- Password: Disabled
- Company Name: Blank
- Language: English

After configuring all parameters, click **“Save”** to confirm settings, then disconnect the logger from the PC.

Step 2: Starting Data Logging

- If the **Start Delay** is set to *0 minutes*, logging begins immediately after disconnecting from the PC. The **green LED** will blink once every 5 seconds to indicate active recording.
- If a **Start Delay** is set, the green LED will blink **dimly** every 5 seconds while in standby mode, then switch to a **brighter** blink once logging begins.
- During operation, the red LED will blink if the battery power becomes low.

Step 3: Downloading Data

1. Allow the logger to **cool to room temperature** before connecting it to your PC.
2. Connecting the logger to the PC will automatically stop recording.
3. Open **“PDF Logger Configuration Tool.exe.”**
4. Select **“Convert to PDF”** or **“Convert to Excel”** to generate your report in the desired format.
 - The PDF report includes graphs, summary statistics, and temperature data.
 - The Excel report includes all measurement data in tabular form.
5. Choose a folder to save your report.
6. After the report is generated, the logger automatically powers off unless reprogrammed for a new recording session.

If you end a logging session but have **not yet downloaded data**, the **green LED** will flash three times every 5 seconds as a reminder. This consumes battery power, so it is recommended to download data promptly.

To start a new recording session, reopen the configuration tool, verify or update your settings, and click **“Save”** again before disconnecting.

Note:

The generated Excel file is a tab-delimited ASCII text file. When opened in Microsoft Excel, a warning message may appear because the file is named “.csv” but contains text-format data. This can be safely ignored — click **OK** to proceed.

Specifications

Feature	Description
Temperature Range	-40.0 °C to 140.0 °C (-40.0 °F to 284.0 °F)
Temperature Sensor	Built-in PT1000 Platinum Resistance Sensor
Resolution	0.1 °C / 0.1 °F
Accuracy	±0.4 °C
Response Time (T90)	Approx. 20 seconds (from room temperature to 90 °C)
Memory Capacity	48,000 readings
Sampling Interval	1, 5, 10, 30 seconds; 5, 10, 30, 60, 90, 120 minutes
Start Delay Options	0, 5, 30, 45, 60, 90, 120 minutes, or 24 hours
Battery Type	3.6 V Lithium Battery (replaceable, pre-installed)
Battery Life	Approx. 1 year @ 5 sec sampling rate (full temperature range)
Continuous Operation	≤ 1 week @ 140 °C (oven); ≤ 30 minutes @ 134 °C (autoclave)
Operating Temperature	-40 °C to 140 °C (during logging); room temperature (PC connection)
Operating Humidity	< 80 % RH (non-condensing)
Storage Temperature	-40 °C to 85 °C
Storage Humidity	< 90 % RH (non-condensing)
Material	316 Stainless Steel (SUS316) body and probe
Dimensions	0.67(diameter) x 1.85”(height) (17 x 47mm)
Weight	Approx. 175 g
LED Indicators	Recording Status / Low Battery
Protection Rating	IP68 (Waterproof)
Logging Type	Multiple-Use (Non-Disposable)
Compliance	EN 61326-1: 2013
Operating System	Windows® (built-in configuration tool)

Warranty Statement

Triplett Test Equipment offers a two-year warranty to the original purchaser of its products. We guarantee that our products will be free from defects in workmanship and materials for two (2) years from the purchase date.

This warranty does not cover:

- Products purchased from unauthorized distributors.
- Items that have been repaired or altered by unauthorized individuals.
- Damage from misuse, abuse, misapplication, negligence, or accidents.
- Products with altered, defaced, or removed serial numbers.
- Accessories, including batteries.

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