

**T→PROBE**

**T Probe Operations Manual**

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## T Probe Instructions

**Congratulations on your purchase of the T Probe. It is a temperature logger capable of collecting bar code data (Linear & QR Codes) while recording air and product temperatures. Combining these pieces of data simplifies the testing process and prevents problems associated with data silos.**

Included with your purchase is access to the dashboard to view and download reports. See the license card in the Docking Station box to access the dashboard.

The T Probe is capable of real-time data capture and monitoring when programmed with your internal Wi-Fi credentials. Updating the Wi-Fi and other T Probe settings can be done via the Dashboard or the built-in barcode scanner of the T Probe.

When combined with the T Probe Docking Station, it is not strictly necessary to program the T Probe with your Wi-Fi information, as the Docking Station can communicate with the T Probe and upload collected data to the Dashboard. Live View, Lost Mode, and alerts will not be available when not connected to Wi-Fi.

### Calibration and Accuracy

The T Probe utilizes medical-grade digital temperature sensors. There are no calibration settings. The accuracy of the sensors is +/- 0.5°C at 0°C. Live-Wire can provide certified temperature probes upon request at an additional cost. Certification documentation is stored in the Dashboard, which can be accessed easily.

### T Probe Maintenance

Other than sanitizing the probe, no maintenance is required. We recommend confirming the accuracy of the product temperature sensor on a regular basis, according to your food safety procedures.

# Dashboard

The Dashboard is an online web app that displays the data collected by the T Probes. It is also used to update T Probes settings and set up alerts.

## Initial Login & Setup

The URL for the dashboard is [qfmonitoring.com](http://qfmonitoring.com)

There is a label on the Docking Station with your username and password. Once you have logged in, your email address and password can be changed.

No data will appear on the dashboard until the docking station is connected to the internet. When a T Probe is added to the powered and connected docking station, it automatically appears in the dashboard.

The screenshot displays the T-Probe Dashboard interface. At the top, a blue header bar contains the 'T-PROBE' logo and the text 'Dock List'. Below this, four probe cards are shown, each representing a different T-Probe. Each card displays the following information:

- Probe SN: E89F6D5A9884
- Nickname: Bob
- State: TEMP PREP
- Product Temp: 70.1 °F
- Air Temp: 70.6 °F
- QFM SN
- LPN
- SKU
- Rack
- Barcode 1
- Barcode 2
- Barcode 3

Below the probe cards, there is a search bar with the text '2a' and a 'CYCLE SUMMARY' section. The 'CYCLE SUMMARY' section is titled 'REALTIME - LAST 30 DAYS' and contains a table with the following data:

Nickname	active	Start Time	End Time	Cycle Time	LPN	SKU	Rack	Barcode 1	Barcode 2	Barcode 3	Avg Air Temp	Start Temp	Target Temp	Nickname	Tprobe SN
	false	9/19/2023, 4:16:20 PM	9/19/2023, 5:00:34 PM	0.7 Hours							28.4 °F	71.0 °F	-0.4 °F		factoryTestTprobe2

As you use the T Probes, Freeze Cycle Summaries will appear in that area of the dashboard.

At the bottom of the dashboard, you will find three buttons to change user settings, contact us, and help videos.

User Management

Contact Support

Help

Under the Docking Stations Section in the lower left corner, a 'gear' icon allows you to update system settings such as Wi-Fi and alerts.

#### DOCKING STATIONS



Nickname	active ↓	
C049EF2D29A7	true	

In the top right corner of each T Probe across the top of the dashboard is an icon that looks like this:



**Click on this icon to see an individual graph for each T Probe.**

## Docking Station

The Docking Station is an essential part of the T Probe System. It is the primary source of settings and instructions for the T Probe. The Docking Station charges T Probes through a magnetic connection on one of the four charging positions. Docking Stations "own" T Probes that are docked on it, and any probe placed on the Docking Station will automatically appear on the corresponding online Dashboard. The Docking Station sends vital information to the T Probes, such as Wi-Fi SSID, Wi-Fi Password, and other configurable settings that can be changed through the Dashboard.

The Docking Station requires only one cable, an ethernet cable that is PoE (Power Over Ethernet). Power over Ethernet is the sending of both power and data connections through one ethernet cable. If the ethernet cable is not PoE capable and only transfers data and not power, then a PoE injector will be required. (PoE injector not included)

## Docking Station Settings

**Wi-Fi SSID** - This is the Wi-Fi SSID that the Docking Station sends to the T Probes that connect to it. The T Probes will use this SSID to connect to your facility's Wi-Fi network. Case Sensitive

**Wi-Fi Password** - This is the Wi-Fi password that authorizes the T Probe to connect to the assigned Wi-Fi SSID. (PLEASE NOTE: SSID and password for the site must match your station's SSID and Password, or else your devices will not connect to the network) Case Sensitive

**Target Temperature** - Target Temperature (Can be set in Celsius or Fahrenheit, depending on user preferences) is used for two different functions. It is used in freeze test reports and for alerts so that users may receive a text or email to know that the product is finished freezing.

**Delay before data collection - Delay time is set in minutes.** The delay allows time for the operator to remove the T Probe from the Docking Station, scan barcodes, and insert the probe. This improves the data collection of the T Probes as the average air temperature and starting product temperature will be more accurate.

**Delay before Target Check - Delay time is set in minutes.** This delay prevents premature completion of a freeze cycle by ignoring product temperature readings that are below the target temperature early in a freeze cycle. It is useful when placing probes inside a freezer rather than on a shipping dock.

**Docking Station Nickname** - This is a name that users can assign to their Docking Station, allowing easier distinction between Docking Stations if multiple stations are utilized.

**Alerts** - These are the notifications that your T Probe will send to the SMS numbers or Email addresses specified in the settings. See the **T Probe Alerts** section for more information on the different alerts that users can receive.

## T Probe Operation

**Always On** - When the T Probe is charged, it is constantly measuring and recording temperature. It is "always on," and nothing is required to turn it on.

**Single Button** - The single button on the T Probe performs multiple functions, from barcode scanning to extractions.

**Fixed and Remote Probe Options** - Whether you have the detachable remote probe or the fixed T Probe, the operation is the same. The remote probe must be connected to the T Probe Case to measure product temperature.

## Freeze Test Cycle

T Probe is primarily designed for use in collecting all pertinent freeze test data, including product temperature, air temperature, SKU, License Plate Number (if freezing palletized product), Rack Location (if applicable), and QFM (if using the QuickFreeze QFM Freezing System).

To automate the data collection of freeze testing, T Probe utilizes the Docking Station to start and finish the freeze test. See Figure A to utilize the automatic collection of freeze data.

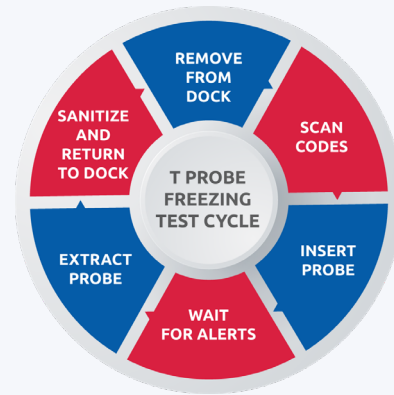


Figure A

## The Freeze Test Cycle

- 1. Remove from the Docking Station** - Removing the T Probe from the Docking Station begins the cycle for collecting data. While docked, temperatures are not recorded.
- 2. Scan codes** - Generally, three types of data are collected with the barcode scanner. The SKU of the product being frozen, the "License Plate" of the pallet, and the rack location. For more information, see the "Collecting Data" section of this manual.
- 3. Insert the Probe** - When deploying the probe, the best practice is to place the sharp point of the probe into the "center mass" of the product you are measuring (the slowest part to achieve the target temp). The stainless-steel probe should not be exposed to air temperature as it can affect the product temperature reading. T Probe is only designed to be inserted into unfrozen products. Attempting to place T Probes into frozen products will damage the probe. The probe will insert easily into the product, do not use excessive force when inserting the probe. The housing of the T Probe contains the air temperature sensor located near the button.
- 4. Wait until target temp is achieved** - Live View the data being collected by the T Probe on the Dashboard. You can set an alert to receive a text message or email that will be sent when your target temperature is achieved. Wi-Fi connection is required for alerts; messaging fees may apply through your carrier.
- 5. Extract the Probe** - When using the T Probe in a freezing test, the probe will be difficult to remove from the product until you activate "Extraction Mode." This is accomplished by "double-clicking" the button. The LED indicator will 'breathe' slowly as the probe is prepared for removal. The 'breathing' will increase in speed until it is ready for removal. When the LED shines brightly, it is ready for Extraction. Twist the handle and gently pull the probe straight out of the product. Do not bend the probe or pull with excessive force, as it will damage the probe. Turn off Extraction Mode by double-clicking the button again. The LED light will turn off.
- 6. Sanitize and Return to the Docking Station** - Follow your company's established sanitation procedures to clean the T Probe (Note: NOT DISHWASHER SAFE, do not exceed temperatures of 60°C/140°F). The freeze test cycle is complete once the T Probe is returned to the docking station. The T Probe will summarize the data collected and be available on the Dashboard. While on the Docking Station, it will also recharge T Probe, upload any missed temp data to the Dashboard, and attempt to clear any errors.

## Collecting Data





Data Collection is performed using the built-in barcode scanner. Many types of barcodes, including UPC codes and QR Codes, can be read using the scanner. These values are stored as part of the freeze cycle and cleared from the T Probe when returned to the Docking Station.

## Categorizing Data

The data collected with the barcode scanner can be categorized or uncategorized. Categorizing your data makes it easier to filter by the types of data you collect. For example, if you want to filter your test results by SKU, categorizing makes this possible. It does add some extra steps.



### Prefix QR Codes

Prefix QR Codes are used to categorize barcode data. Two scans are required to collect and categorize the data. The first scan is the prefix QR code, which lets the T Probe know what type of data is about to be collected. The second scan is for the barcode of that type. There are 2 different types of prefix QR Codes: SKU and License Plate (or LPN). The License Plate is generally a one-time use barcode, unique to a single pallet, where a SKU is used multiple times for identical products. These values are saved to the dashboard for a single freeze test only and are cleared from the T Probe when it is returned to the docking station.

1st Scan (Prefix QR Code)	2nd Scan (Data to be collected, example text only)	Result in Dashboard
 SKU	 2 07901 76000 6	SKU: 207901760006
 LICENSE PLATE	 13032020060002171182198	LPN: 13032020060002171182198

## Uncategorized Barcode Scans

When scanning linear barcodes without the Prefix QR Codes, the text data is stored as uncategorized. The order in which the barcodes are scanned determines where they are stored in the dashboard. There are 3 slots available for uncategorized scans. If more than three barcodes are scanned, only the last three are saved to the dashboard. These values are saved to the dashboard for a single freeze test only and cleared from the T Probe when returned to the docking station.

Uncategorized Scan (Data to be collected, example text only)	Result in Dashboard
	Uncat1: 207901760006
	Uncat2: 13032020060002171182198

## T Probe Alerts

There are 2 ways to change the settings on the T Probe, through the Dashboard or by scanning QR Codes.

NOTE: Create QR Codes for free with the generator at <https://live-wire.com/qr-code-generator/>

### Text Alerts

Set the T Probe to send an SMS by creating a QR Code with a link formatted like this:



SMS: 8088675309

### Email alerts

Set the T Probe to send an email by creating a QR with link, formatted like this:



EMAIL: test@live-wire.com

## Target Temp

Target temp is used for alerts and controlling other equipment (like shutting off fans). To set the target temp, you can use a QR code or the Dashboard. Target temp can be set in Fahrenheit or Celsius when formatted like this:



TARGETF: 0



TARGETF: -18

All of these settings (SMS, EMAIL, TARGETF, and TARGETC) will remain the same until the next time you change them.

## LED Signals

T Probe has 2 lights. One is used in the barcode scanner to illuminate labels in low-light environments. The other is the indicator LED light located on top of the T Probe. The LED can indicate many different things, depending on the mode of the T Probe.

### Mode: Docked

When the T Probe is sitting in the docking station, connected to the magnetic connector, and the docking station is powered, the T Probe will enter “Docked” Mode. When not in use, we recommend that the T Probe is left in Docked Mode.

## Docked Mode LED Signals

### Low Temp (Rapid Flash)

While in Docked mode, the T Probe will attempt to recharge its battery. The T Probe contains a lithium-ion battery, which requires the battery to be between +2°C (+35.6°F) and +45°C (113°F) to accept a charge. If the battery is above or below the required temp, the LED will flash rapidly, letting the user know that it is unable to charge. Once the battery has reached minimum charging conditions, the T Probe will begin charging automatically.

### Charging (Light on constantly, increasing and decreasing in brightness)

While charging, the LED light is constantly on but changes in brightness from dim to bright in a slow “breathing” pattern.

### Charged (Light on constantly, constant brightness)

When the T Probe is fully charged, the LED will stop changing brightness and stay on constantly.

### Wi-Fi Instructions Updated (3 blinks, off for 3 seconds)

When first activating your T Probe and programming it with your facility’s Wi-Fi instructions from the Dashboard, those settings are received by the T Probe only when docked. This light signal confirms for the user that the Wi-Fi update has been received. This repeats for up to 5 minutes or until the T Probe is removed from the Docking Station.

## Freeze Test Mode LED Signals

When removed from the Docking Station, the T Probe enters “Freeze Test Mode.” During Freeze Test Mode, the T Probe LED provides different information.

### Test in Progress (No light)

Before the target temp is reached and after the T Probe is removed from the dock, the T Probe is actively measuring temps, but the LED light is not lit.

### Barcode Accepted (1 Flash)

When the T Probe bar code scanner receives a bar code successfully, the T Probe LED indicates the event with a single flash.

### Target temperature reached (1 Flash, Bright, wait 5 seconds)

Once the T Probe has reached the product target temperature, the LED will indicate this by flashing once, very brightly, every 5 seconds. This flash can be acknowledged by pressing the button once, and the flashing will stop.

### Extraction Preparing (Dim to bright)

When the button is “double clicked,” extraction mode starts, and the T Probe is prepared for extraction. The ‘sawtooth’ pattern of dim to bright begins to accelerate as it approaches ‘Extraction Ready’.

### Extraction Ready (2 flashes, then off for 5 seconds)

After 15-30 seconds of preparing for extraction, the T Probe is ready for extraction. Twist and pull on the housing to remove from the product. Once you have removed the T Probe from the product, double-click the button again to turn off extraction mode. It will stay in the extraction ready state until extraction is turned off, the T Probe is docked, or 5 minutes elapse.

### Extraction Off (No Light)

After removing the T Probe from the product being tested, double-click the button to turn off Extraction. The double flash will turn off.

## Other LED Signals

### Trouble Mode (5 rapid, very bright flashes, off for 10 seconds)

There are multiple ways this LED code is activated. If you activate Lost Mode from the Dashboard, if the Wi-Fi signal is lost, or if the battery is too low. While in this mode, press the button one time to acknowledge the Beacon (and turn off the very bright LED). The T Probe will remain in the trouble state until returned to the docking station or the T Probe is reset.

### Hard Reset (Charging Light Turns off)

If the T Probe locks up, a hard reset may be required to resolve the issue. Dock the T Probe and hold down the button for 30 seconds. The LED on the T Probe will turn off. Release the button, and the unit will reboot.

## Freeze Test Results & Data Use

Now that data has been collected from multiple freeze tests; the T Probe Docking Station has compiled the summary of each test into a table for reference. This can be viewed on the main dashboard in the table at the bottom. This data can be downloaded from the dashboard in Excel format (.xls or .xlsx) or in csv format. There are multiple ways to use this data.

### SKU Profiling

When determining the run time for a particular SKU, multiple tests are required in order to get a reliable baseline. Using the table, the test results can be sorted by SKU, or use the search box to filter the results and see only tests involving that SKU. The cycle time of the freezing system can then be programmed to produce reliable results based on a particular SKU.

### Traceability

If you consistently use the T Probes when operating a freezing system, the freeze test data can be very useful in confirming that a particular product or batch of products was frozen in a timely fashion.

### Visualizations

From the results table, each individual test can be visualized with a temperature chart to see both product temp and air temp throughout the test. It can be downloaded as a pdf or png image file. Every temperature recorded can also be downloaded in .xlsx, .xls or .csv file types.

## Managing Freezing Systems

The T Probe is designed to help users manage their freezing systems, from providing live visibility to determining the instant that the product has reached target temp. Notifications from the T Probe can be SMS, email, or directly into other software systems (API). With API notifications, new methods of blast freeze management are available. Here are some examples.

### Monitored Pallet Control

When using a freezing system that freezes multiple pallets at the same time, it is recommended to monitor a single pallet that will represent the rest of the batch. We refer to this pallet as the “Monitored Pallet.” This single pallet can be used to determine when the entire batch of pallets are finished freezing. Not all pallets freeze at the same rate. There are multiple variables that can affect the freeze time. In some freezing systems, identical pallets will freeze at different rates. Determining the pallet which will be slowest to freeze is critical to managing your system. It is usually the pallet that is positioned to receive the least amount of air or the warmest air. It may also be the pallet with the tallest cases or a SKU with a known long dwell time. Determine which pallet is expected to be the slowest to reach the target temperature. This will be used as the “Monitored” pallet, which will represent the batch. Deploy the T Probe in the slowest part to freeze the “Monitored” pallet (usually one of the center-most cases on the pallet). The T Probe with a 1-meter cable (Remote T Probe) may be best suited for this application.

## Blast Cell Management

This describes using the T Probe to control a batch of pallets in a conventional blast cell. When utilizing T Probe with a Blast Cell, determine which pallet will be used as the “Monitored Pallet.” Instead of scanning a single rack location, scan in blast cell location information (for example, “Blast 3”). Insert the T Probe according to the “Monitored Pallet” guidelines in this manual. The Monitored Pallet should be the final pallet moved into the blast cell. As long as there is a good Wi-Fi connection inside the blast cell, freeze-finish notifications can be used to terminate the blast cell. The API functionality can be used to send a signal to the blast cell’s control system to stop the fans automatically or send a signal to the refrigeration control system to turn off the blast cell, and another signal can be sent to the Warehouse Management Software (WMS) to create tasks to remove the pallets from the blast cell. If API functionality is not available with the refrigeration system or WMS, an SMS message or Email message may be sent to operators in order to achieve the same results.

## QuickFreeze Shared Plenum (QF+®) Management

This describes using the T Probe to control a zone of pallets with an In-Rack Freezing System in which multiple pallets share a common air plenum.

When using the T Probe in an in-rack freezing system with a shared air plenum, determine which pallet will be used as the “Monitored Pallet.” Deploy the T Probe in the slowest part to freeze of the Monitored pallet. Place the Monitored pallet last in the zone, scanning in the SKU and Zone information. As long as there is an adequate Wi-Fi connection to the T Probe, freeze finish notifications from the Monitored pallet can be used to make decisions about when to remove each pallet from the freezing system.

## Other Freeze Systems

Other Freeze Systems, such as QFM® (where there is a singular fan per pallet position) can utilize T Probe to ensure that the cold chain integrity is preserved. Scan in the load information and place the T Probe in the last pallet placed into the system. When the last pallet reaches the target temperature, the entire load will be finished and can be removed from the system.

## Managing Freeze Systems Summary

The API functionality can be used to integrate the T Probe data with warehouse management systems, allowing for more efficient space and energy usage management in the in-rack freezing process.

By utilizing the T Probe system in managing your freezing systems, you can ensure a more reliable, efficient and precise freezing process. Ultimately resulting in better product quality, reduced product claims, and reduced energy consumption. The data collected and the alerts provided by the T Probe provide unprecedented documentation of each frozen batch, which enables you to make data-driven decisions about your freezing processes, improving overall operational efficiency.

## Troubleshooting

Issue	Possible Cause	Solution
Barcode Scanner does not turn on	Dead battery	Ensure the battery is fully charged
	Button not held long enough	Hold down the T Probe button for approximately 2 seconds to activate the barcode scanner
Inaccurate temperature reading	Dirty or damaged probe	Clean the probe and ensure it is free of debris; if damaged, contact customer support for a replacement
Device is not responding	Device Locked-Up	Perform a hard reset. Dock the T Probe and hold down the button for 30 seconds. The LED on the T Probe will turn off. Release the button and the unit will reboot.
When docked rapid flashing and not charging	Too Cold	Let the T Probe warm up by leaving it on the docking station. When it has reached an acceptable charging temperature, charging will begin. The battery must be at least +2°C (35.6°F) to accept a charge.
	Too Warm	Allow the device to cool down before using it again. The battery must not exceed +45°C (113°F) to accept a charge. Contact customer support if the issue persists.

Note: Always refer to the user manual and visit [www.live-wire.com](http://www.live-wire.com) for additional support and troubleshooting tips. If you continue to experience issues with your T Probe, please do not hesitate to contact our customer support team for further assistance.

## Safety

Safety is of paramount importance when using the T Probe by Live-Wire. To ensure your safety and the proper functioning of the device, always adhere to the guidelines provided in this manual. Prior to using the device, meticulously inspect it for any signs of damage or wear. Refrain from attempting to repair or modify the device on your own, as doing so may compromise its integrity and create a hazardous situation. When positioning the probe, avoid contact with electrical wiring, moving parts, or any other potential hazards that could result in injury or damage to the device. Always use the T Probe by Live-Wire in compliance with local regulations and within its specified operating range. If you have any concerns about the device, cease its use immediately and get in touch with the manufacturer for assistance. By following these safety precautions, you can confidently use the T Probe by Live-Wire to monitor temperature-sensitive environments while minimizing any potential risks.

The T Probe by Live-Wire includes a lithium-ion battery, which requires special care and attention to ensure safe and proper usage. To prevent overheating, fire, or explosion, do not expose the battery to extreme temperatures or direct sunlight for extended periods. Avoid puncturing, crushing, or bending the battery, as this can lead to internal short circuits and potential hazards. When charging the T Probe by Live-Wire, only use the provided charger or a compatible charger approved by the manufacturer. Do not attempt to charge a damaged or swollen battery, as this may result in serious injury or property damage. In the event that the battery leaks or emits an unusual odor, discontinue use immediately and contact the manufacturer for further guidance. Dispose of the battery according to your local regulations and never place it in regular trash or recycling bins. By following these precautions, you can maintain the safety and longevity of the lithium-ion battery included in your T Probe by Live-Wire.

The T Probe by Live-Wire features a sharp probe end designed for efficient and accurate temperature detection. However, it is crucial to handle the device with care to avoid puncture wounds or damage to the probe. When using the T Probe, always hold it by the insulated handle and avoid direct contact with the sharp end. Do not apply excessive force or use the probe for any purpose other than its intended function, as this may lead to injuries or damage to the device. Store the T Probe by Live-Wire securely in its protective case when not in use, and keep it out of reach of children and unauthorized personnel. In the event of an accidental puncture wound, seek immediate medical attention and follow appropriate first aid procedures. By being cautious and mindful of the sharp probe end, you can ensure a safe and effective use of the T Probe by Live-Wire.

## Contact Information

For any questions, concerns, or assistance with your T Probe by Live-Wire, our dedicated customer support team is here to help. To find the most relevant contact information, please visit our website at [www.live-wire.com](http://www.live-wire.com).

On our website, you will find various options for reaching out to us, including phone numbers, email addresses, and live chat support. To ensure that your query is directed to the appropriate department, please make sure to choose the contact method that best matches your needs.

In addition to our direct contact options, our website also offers a comprehensive FAQ section, where you can find answers to common questions and helpful tips for using your T Probe by Live-Wire.

We value your satisfaction and strive to provide exceptional customer support. Please do not hesitate to reach out to us if you require assistance or have any feedback about the T Probe by Live-Wire.

## Glossary

1. **Contact Measurement:** A method of measuring temperature that requires physical contact between the temperature-sensitive probe and the object being measured.
2. **Probe:** The sharp, temperature-sensitive end of the T Probe by Live-Wire, designed for contact-based temperature measurement.
3. **Lithium-ion Battery:** A rechargeable battery used to power the T Probe by Live-Wire. These batteries have a high energy density, long lifespan, and are lightweight compared to other battery types.
4. **Calibration:** The process of confirming the accuracy of the T Probe temperature sensors. The sensor's calibration is not adjustable, but should be confirmed on a regular basis.
5. **Celsius (°C):** A unit of temperature measurement in the metric system. Water freezes at 0°C and boils at 100°C under standard atmospheric pressure.
6. **Fahrenheit (°F):** A unit of temperature measurement in the Imperial system. Water freezes at 32°F and boils at 212°F under standard atmospheric pressure.
7. **API:** Application Programming Interface; a set of protocols, routines, and tools that enable different software applications to communicate and share data with each other.
8. **8WMS:** Warehouse Management System; a software solution that helps manage and optimize warehouse operations, from inventory tracking and storage to order fulfillment.
9. **Refrigeration Controls:** Devices or systems used to manage and maintain the temperature and operation of refrigeration equipment.

Remember to consult the user manual for detailed explanations and instructions regarding the use and maintenance of your T Probe by Live-Wire. If you have any questions or require assistance, please visit [www.live-wire.com](http://www.live-wire.com) or contact our customer support team.

## IMPORTANT SAFETY INFORMATION

PLEASE READ CAREFULLY AND FOLLOW ALL INSTRUCTIONS BEFORE USING THE T PROBE BY LIVE-WIRE



# WARNING

Safety is of paramount importance when using the T Probe by Live-Wire. **TO ENSURE YOUR SAFETY AND THE PROPER FUNCTIONING OF THE DEVICE, YOU MUST ALWAYS ADHERE TO THE GUIDELINES PROVIDED IN THIS MANUAL.** By following the below safety precautions, you can confidently use the T Probe by Live-Wire to monitor temperature-sensitive environments while minimizing any potential risks.

- Prior to using the device, meticulously inspect it for any signs of damage or wear.
- Refrain from attempting to repair or modify the device on your own, as doing so may compromise its integrity and create a hazardous situation.
- When positioning the probe, avoid contact with electrical wiring, moving parts, or any other potential hazards that could result in injury or damage to the device.
- Always use the T Probe by Live-Wire in compliance with local regulations and within its specified operating range.
- If you have any concerns about the device, cease its use immediately and get in touch with the manufacturer for assistance.

**The T Probe by Live-Wire includes a lithium-ion battery, which requires special care and attention to ensure safe and proper usage.** By following these precautions, you can maintain the safety and longevity of the lithium-ion battery included in your T Probe by Live-Wire.



- To prevent overheating, fire, or explosion, **DO NOT EXPOSE THE BATTERY TO EXTREME TEMPERATURES OR DIRECT SUNLIGHT FOR EXTENDED PERIODS.**
- Avoid puncturing, crushing, or bending the battery, as this can lead to internal short circuits and potential hazards.
- When charging the T Probe by Live-Wire, only use the provided charger or a compatible charger approved by the manufacturer.
- **DO NOT ATTEMPT TO CHARGE A DAMAGED OR SWOLLEN BATTERY, AS THIS MAY RESULT IN SERIOUS INJURY OR PROPERTY DAMAGE.**
- In the event that the battery leaks or emits an unusual odor, discontinue use immediately and contact the manufacturer for further guidance.
- Dispose of the battery according to your local regulations and **NEVER PLACE IT IN REGULAR TRASH OR RECYCLING BINS.**



## CAUTION

Sharp Object

**The T Probe by Live-Wire features a sharp probe end designed for efficient and accurate temperature detection.** By being cautious and mindful of the sharp probe end, you can ensure a safe and effective use of the T Probe by Live-Wire.

- It is crucial to handle the device with care to avoid puncture wounds or damage to the probe.
- When using the T Probe, always hold it by the insulated handle and avoid direct contact with the sharp end. Do not apply excessive force or use the probe for any purpose other than its intended function, as this may lead to injuries or damage to the device.
- Store the T Probe by Live-Wire securely in its protective case when not in use, and keep it out of reach of children and unauthorized personnel.
- In the event of an accidental puncture wound, seek immediate medical attention and follow appropriate first aid procedures.

**FAILURE TO FOLLOW THIS IMPORTANT SAFETY INFORMATION COULD RESULT IN PROPERTY DAMAGE OR SERIOUS INJURY.**

## Liability and Assumption of the Risk

As set forth in the “Important Safety Information” section of this manual, using and operating the T Probe by Live-Wire can be hazardous and involves the risk of personal injury and/or property damage. It is impossible to eliminate all risks inherently associated with use of this product.

The risks of the T Probe by Live-Wire include, but are not limited to, the following: overheating, burning, fire, or explosion caused by improper use, monitoring, and/or maintenance of the lithium-ion battery; personal injuries caused by mishandling the sharp probe end; contamination of food products caused by a failure to remove the T Probe by Live-Wire, or a failure to properly sanitize the T Probe by Live-Wire prior to use; and electrical shock caused by a failure to properly utilize the charging/docking station. Personal injuries, property damage, or other unintended consequences may result from your use of the T Probe by Live-Wire, **all of which are beyond the control of Live-Wire.**

BY PURCHASING AND USING THE T PROBE BY LIVE-WIRE, YOU ACKNOWLEDGE AND ASSUME ANY AND ALL RISKS—INCLUDING RISKS NOT SPECIFICALLY IDENTIFIED HEREIN—ASSOCIATED WITH USE OF THE T PROBE BY LIVE-WIRE. **YOU FURTHER ASSUME ALL RESPONSIBILITY FOR ANY DAMAGES OR INJURIES THAT MAY RESULT FROM YOUR USE OF THE T PROBE BY LIVE-WIRE, INCLUDING BUT NOT LIMITED TO ALL LIABILITY, CLAIMS (WHETHER RELATED TO PERSONAL INJURY OR PROPERTY DAMAGE), ALLEGED DAMAGES, FEES, COSTS, LIENS, EXPENSES, AND COMPENSATION OF ALL KINDS.**

**TO THE FULLEST EXTENT PERMITTED BY LAW, LIVE-WIRE’S LIABILITY FOR ANY AND ALL CLAIMS RELATED TO YOUR USE OF THE T PROBE BY LIVE-WIRE WILL BE LIMITED TO THE PURCHASE PRICE OF THE PRODUCT. IN NO EVENT WILL LIVE-WIRE BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS OR LOSS OF USE, RESULTING FROM YOUR USE OF THE T PROBE BY LIVE-WIRE, EVEN IF LIVE-WIRE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.**