Track-It™ Rugged Temperature Logger

SAFEGUARDS AND PRECAUTIONS:

Read and follow all instructions in this instruction sheet carefully, and retain this sheet for future reference.

Do not use this instrument in any manner inconsistent with these operating instructions or under any conditions that exceed the environmental specifications stated.

This instrument is not user serviceable. For technical assistance, contact the sales organization from which you purchased the product.

DESCRIPTION:

The Rugged Temperature Logger is a sealed (IP68) Data Logger used for measuring temperature in the range of -40°C to +125°C (-40°F to +257°F). The Logger can operate unattended for months or years. It is self contained in a small 316L stainless steel tubular enclosure with removable ends. One end is the battery compartment and the other is to access the internal controls. The logger can be set to record instantly, at preset times, or on alarm conditions via the USB port using Track-It ™ PC Software. Up to 32,000 readings can be saved in non-volatile memory at intervals from 2 seconds to 24 hours. The internal controls include the USB port for direct connection to a laptop or PC, a button control, and an LED. Recording parameters can be set in the Track-It ™ PC Software.

SPECIFICATIONS:

General

Record:	**Sample Rates:** User configured 1 every 2 seconds up to 1 every 24 hours **No. of Samples:** 32,000
Record Trigger:	Two independent triggers. Multiple trigger modes: Instantaneous, button control, on alarm, time and date (start and stop), day of week
Record Mode:	Fill to end of memory, cyclic, number of samples, time duration
LED:	User programmable: Indications of alarms, recording, triggered
Button:	User programmable: Record on/off, reset alarms, view status
Alarms:	2 user programmable alarms. High or Low
Communication:	Direct USB connection
Software:	Track-It™ Software - Program device, view data (historic or real time), export to Excel™ MKT Calculation Included
Battery:	Lithium 1/2AA 3.6V High Temperature Model TLH-5902 or equal Life: Up to 3 years typical @ 1 minute sample rate
Enclosure:	Material: 316L Stainless Steel Dimensions: 3.585" (91.06mm) L x 0.787" (20mm) diameter

Measurement

Temperature Range:	-40 to +125°C /-40 to 257°F
Accuracy:	± 0.2°C / ±0.4°F
Resolution:	0.06°C / 0.11°F
Clock Accuracy:	±1 minute/year

ACCESS:

To access the internal controls it is necessary to unscrew the end with the ring counter clockwise. This exposes the control panel shown right. The function of the parts is as follows:

Push Button/LED functionality:

The push button can be used to check status or to change the state of the data logger. For instance, it can be used to start and stop recording if desired. This feature can also be disabled to ensure the data logger state remains unchanged until connected to a PC.

TO CHECK STATUS
Short press and release: LED will flash in various patterns to indicate data logger status:

> The flash sequence is: Battery status > Record status > Alarm status

> One long red flash at the beginning of the flash sequence indicates low battery. (no red flash = battery ok)
> One long red flash at the end of the flash sequence indicates an alarm. (no red flash = no alarm)
> Slow red/green blink: Connect to PC. Unit is NOT set up or memory is full.

TO CHANGE STATE
Press and hold button, release when LED turns steady green: Changes record state on/off
Press and hold button, release when LED turns steady red: Reset alarm indication
Press and hold button, release after LED goes off: No change

The table below summarizes the push-button / LED functionality.

STATUS—Press & Release Button			STATUS
LED Pattern			
Lo Batt.	>>>> Record >>>>>	Alarm	LED Sequence
			Low battery - one **RED** blink (No red if battery OK)
			Recording or triggered to record - *fast* **GREEN**/**RED** blink
			Idle/Not recording - one long **GREEN** blink
			Alarm occurred - one long **RED** blink (No red if no alarm)
			Not set up or memory full - *slow* **RED**/**GREEN** blink, connect to PC

CHANGE STATE—Press & Hold Button		RESULT OF BUTTON RELEASE
		LED pattern
Release		Release button while LED **GREEN** - Turn record mode on/off*
	Release	Release button while LED **RED** - Reset alarm indication*
Release after LED's go off		Release button when LED goes off - No change

*NOTE: Feature must be enabled in software

SERIAL COMMUNICATION:

The logger has a mini USB port. Plug the cable into this port and the other end into the USB port on your PC/Laptop. The provided software needs to be installed in order to work with the logger.
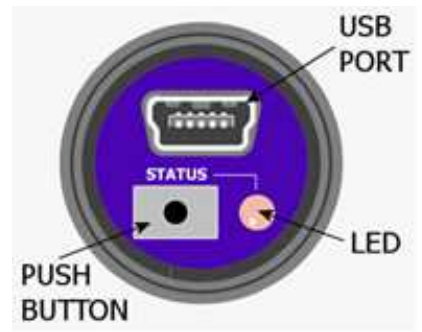
Track-It ™ PC Software:

The Track-It ™ PC Software allows the Data Logger to be programmed, allows the data to be retrieved, displayed, saved to disk or exported to Excel ™. Data can also be displayed in real time (on devices using internal sensors). Some of the features are:
- Delayed recordings, fixed duration recordings by time or number of samples, multiple record times, manual record by button press, record on alarms
- Sample rates from 2 seconds to 24 hours. Instantaneous, average, maximum or minimum values
- Two Alarms, high or low, latched or momentary and record under these alarm conditions
- Display of data graphically, digitally or tabular formats with alarm indication
- Export user selected data in Excel ™ or CSV formats. Filter data to be exported

Track-It ™ Transport App:

Track-It™ Transport is a free Android Application that allows you to use your Android device to start and stop recording and transfer data using a USB On-the-Go cable.

REPLACING THE BATTERY:

Replace the battery as needed with a high temperature 3.6V Lithium - Tadiran TLH-5902 or similar rated to 125°C. Use a coin to remove the battery cover (counterclockwise). Insert the battery POSITIVE END first as shown in the diagram shown right:

O-RINGS:

Track-It™ Rugged Temperature Loggers come directly from the factory with high quality O-Rings that have been properly installed. As a user, it is up to you to maintain a functional O-Ring seal. Make sure to clean them frequently, lubricate them regularly and inspect the O-Ring regulary for signs of failure (nicks, cuts, gashes, flattening, cracking, discoloration, deformation, etc.). Don't poke, jab, pry the O-Ring with sharp or pointed objects. Don't expose the O-Ring to harsh chemicals or pressure/temperature beyond specifications.

REPLACING THE O-RINGS:

Remove threaded ends and use a small pointed tool to pry the old O-Rings out of their groove. Make sure that the O-Ring grooves are free of any dirt or debris. Apply a thin coat of lubricant to the new O-Rings. Carefully install the new O-Rings into each threaded end cap. Confirm ends screw back onto the tube fully without binding.

ACCESSORIES:

Battery	Replacement Lithium 1/2AA 3.6V Battery (TLH-5902 or equal)
O-Rings	Replacement O-Ring Seals, 4-Pack
USB 2.0 Cable	USB 2.0 to 2.0 mini 3-foot cable
USB On-The-Go Cable	USB Cable for use with Android devices
Track-It ™ Software	Track-It ™ Software on CD

In order to comply with EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE):
This product may contain material which could be hazardous to human health and the environment. DO NOT DISPOSE of this product as unsorted municipal waste. This product needs to be RECYCLED in accordance with local regulations, contact your local authorities for more information. This product may be returnable to your distributor for recycling - contact the distributor for details.

CE Compliant. RoHS Compliant. Meets the safety requirements of IEC61010-1.

Monarch Instrument's Limited Warranty applies. See www.monarchinstrument.com for details.
Warranty Registration and Extended Warranty coverage available online at www.monarchinstrument.com.

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