Track-It™ Pressure/Vacuum 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 Pressure/Vacuum Temperature Loggers are sealed (IP67) Data Loggers used for measuring air or liquid pressure and ambient temperature. The units are self contained in a small 316L stainless steel enclosure with a threaded ¼" NPT port to connect to a pressure source. The Loggers can operate unattended for months or years. Recording parameters can be set in the Track-It ™ PC Software. The units can be set to record on instantly, at preset times, or on alarm conditions. Up to 64,000 readings can be saved in non-volatile memory at intervals from 2 seconds to 24 hours. Internally there is a USB port for direct connection to a laptop or PC, and a button and LED for user interaction as described below.

SPECIFICATIONS:

General

Record: **Sample Rates:** User configured 1 every 2 seconds up to 1 every 24 hours
No. of Samples: 32,000 or 64,000 (depends on setup)

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

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™.

Battery: Lithium 1/2AA 1.2Ah
Life: Up to 5 years typical @ 1 minute sample rate

Enclosure: Material: 316L Stainless Steel
Dimensions: 1.95" (5cm) diameter x 2.19" (5.6cm) excluding port thread

Measurement

Ranges: **Pressure:** 0-35, 0-150, 0-350, 0-550, 0-2000, 0-5800 PSI
Vacuum: 760-0 Torr and 760-380 Torr

Accuracy:	± 0.25%
Resolution:	0.01%
Repeatability:	± 0.05%
Overpressure Rating:	1.5 times max
Port connections:	1/4" NPT Male

Temperature Range: -20 to +85°C /-4 to 185°F

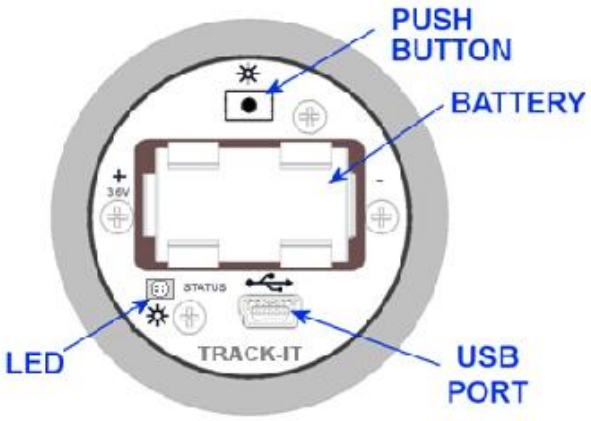
Accuracy:	± 0.5°C 0 to 50°C / 32 to 122°F
	± 2°C -20 to 85°C / -4 to 185°F
Resolution:	0.06°C / 0.11°F

INSTALLATION:

The logger screws into a ¼" NPT port. Use suitable tape or thread sealant/dope on the threads before inserting the logger into the port. Use an adjustable wrench on the nut to tighten the device into the port and test for leaks.

ACCESS:

To access the internals of the unit it is necessary to unscrew the lid (counterclockwise). 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.
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

REPLACING THE BATTERY:

Replace the battery as needed with type: ER14250 3.6V Lithium - Tadiran TL-5902 or similar. Remove threaded cap and insert battery as shown in diagram right (observe polarity):

O-RINGS:

Track-It™ Pressure/Vacuum 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-RING:

Remove threaded cap and use a small pointed tool to pry the old O-Ring out of its groove. Make sure that the O-Ring groove is free of any dirt or debris. Apply a thin coat of lubricant to the new O-Ring. Carefully install the new O-Ring into the threaded cap. Confirm cap screws back onto the case fully without binding.

ACCESSORIES:

Battery	Replacement Lithium 1/2AA 1.2 AH Battery (ER14250)
O-Rings	Replacement O-Ring Seal, 3-Pack
Garden Hose Adapter	Brass Coupling
Anti-Theft Cover	Locking Cover
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. This product is not waterproof.

Monarch Instrument's Limited Warranty applies.
Warranty Registration and Extended Warranty c