MONARCH INSTRUMENT

Instruction Manual

Track-It™ Pressure/Temp Vacuum/Temp Data Logger

$C \mathcal{E}$

SAFEGUARDS AND PRECAUTIONS

1. Read and follow all instructions in this manual carefully, and retain this manual for future reference.

2. Do not open the unit in a high humidity environment; it will cause condensation inside the unit.

3. Do not operate this device in flammable or explosive atmospheres.

4. This device has no power switch. It will be in operation as soon as power is connected or battery is inserted.

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

6. There are no user serviceable parts in this instrument. Refer service to a qualified technician.

In order to comply with EU Directive 2012/19/EU 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.

Track-It is a trademark of Monarch Instrument.

Android and Google Play are trademarks of Google Inc.

The Android robot is reproduced or modified from work created and shared by Google and used according to terms described in the Creative Commons 3.0 Attribution License.

Excel is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.

TABLE OF CONTENTS:

ENERMAK
www.enermak.com
YERALTINDAN HABERLER
www.enermak.com
Enermak Enerji Mak. ve İnş. San. Tic. Ltd. Şti.

1.0 DESCRIPTION

Track-It™ Pressure/Temperature or Vacuum/ Temperature Loggers are battery-powered, standalone, watertight data loggers that can record up to 64.000 samples. They can be set to record both pressure and temperature or vacuum and temperature or either parameter alone to maximize data storage space. The onboard data storage is nonvolatile so data will not be lost in the event of a depleted battery.

The loggers can be easily configured using the free downloadable Track-It™ DataLogger Software. There is a mini-USB connector within the unit allowing connection to a PC for programming and data upload. Data upload can also be done with an Android™ device using the Transporter App available on the Google Play store.

Configure the unit to start or stop recording immediately, at a predetermined time and date, or only when an alarm condition is sensed. The sample storage rate can be set from 1 sample every 2 seconds up to 1 samples every 24 hours.

Track-It™ Pressure/Temperature or Vacuum/Temperature Loggers can be ordered in several pressure or vacuum ranges. The loggers are packaged in a rugged submersible (IP67) 316L stainless steel housing and have a standard ¼" NPT fitting for vacuum up to 5800 PSI and ½" NPT for higher pressure ranges. The replaceable internal lithium battery has up to a 1-year life.

2.0 TRACK-IT™ DATALOGGER SOFTWARE INSTALLATION

IMPORTANT: Before using your Track-It Data Logger, you must first download and install the USB Drivers and DataLogger Software. Please refer to the Quick Start Guide that was provided with your Data Logger, or you can download the Quick Start Guide*.*

The free Track-It DataLogger Software gives the user complete control in programming the Logger and allows for the upload, examination, and archiving of data recorded on the Logger.

Advanced features include:

- Real-time data view and data retrieval when connected via USB
- Delayed recordings, fixed duration recordings by time or number of samples, multiple record times, manual record by button press, record on alarms
- Sample storage rate can be set from 1 sample every 2 seconds up to 1 sample every 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 CSV formats for import into Excel®; filter data to be exported

Track-It DataLogger Software is available for download here:
https://monarchinstrument.com/Software/Track-It_Software.zip

3.0 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.

To download, scan QR code with your mobile device or use link:
https://play.google.com/store/apps/details?id=com.trackit.transporter

www.enermak.com

2

Enermak Enerji Mak. ve İnş. San. Tic. Ltd. Şti.

4.0 INSTALLATION

The logger can be ordered with various pressure sensors to cover most applications. Pressure ranges up to 5800 PSI have a ¼" male NPT thread intended to screw into the pressure source. Ranges 8700 to 14,500 PSI use ½" NPT. Make sure to use suitable tape or thread sealant/dope on the threads before inserting the Logger into the port. Use an adjustable wrench on the **SENSOR NUT** to tighten the device into the port and test for leaks.

5.0 INTERNAL CONTROL PANEL

To access the internals of the unit, it is necessary to unscrew the lid (counterclockwise). This exposes the internal control panel (shown right). The functions of these controls are described in the following sections.
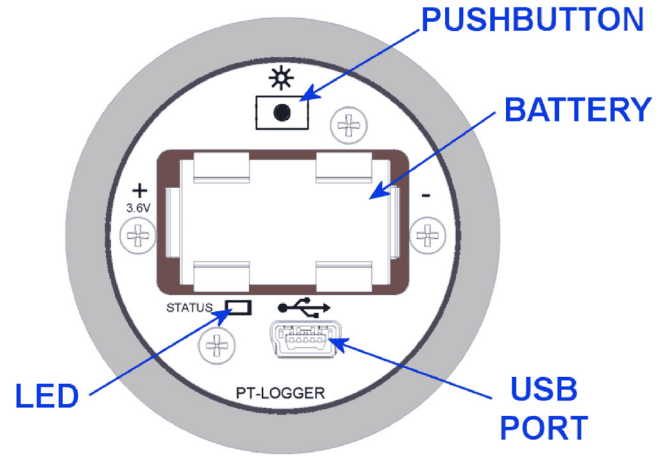
5.1 Pushbutton/LED Functionality

With visual indication from the LED, the pushbutton can be used to check status or to change the state of the data logger. For instance, the pushbutton 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.

5.1.1 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.

5.1.2 To Change State

Change Record State (on/off)   Press and hold button, release when LED turns steady green

Reset Alarm Indication   Press and hold button, release when LED turns steady red

No Change   Press and hold button, release after LED goes off

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

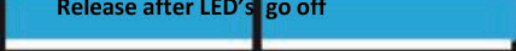| CHANGE STATE—Press & Hold Button		RESULT OF BUTTON RELEASE
		LED pattern
Release		Release button while LED GREEN - Turn record mode on/off*
	Release	Release button while LED RED - Reset alarm indication*
Release after LED's go off		Release button when LED goes off - No change

*NOTE: Feature must be enabled in software

5.2 USB Port (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 free software needs to be installed in order to work with the logger (see section 2.0 TRACK-IT™ datalogger SOFTWARE INSTALLATION).

www.enermak.com   4

Enermak Enerji Mak. ve İnş. San. Tic. Ltd. Şti.

5.3 Battery

Track-It™ Pressure/Temp and Vacuum/Temp Data Loggers come with a 1/2AA Lithium Thionyl Chloride 3.6 V non-rechargeable battery installed. Refer to section 7.0 REPLACING THE BATTERY for more information.

6.0 TRACK-IT™ DATALOGGER SOFTWARE - LOGGER SPECIFIC

The Track-It™ DataLogger Software runs on a PC and allows the user to connect the logger through a USB connection to program the logger or review the data. The operation of the Track-It™ DataLogger Software is described in its own manual which is accessed via the Help – Manual option.

There are a few unique options specifically for this Pressure Logger which are covered below.

6.1 Preferences

Select Preferences then the Eng Units tab. You will see the pop-up box shown right.

These Engineering Units apply to the data read from the Logger and displayed on the graph or in the data table. Select your desired Pressure Engineering Units.

Note: The Units for Logger check box is only for Pressure Display Loggers
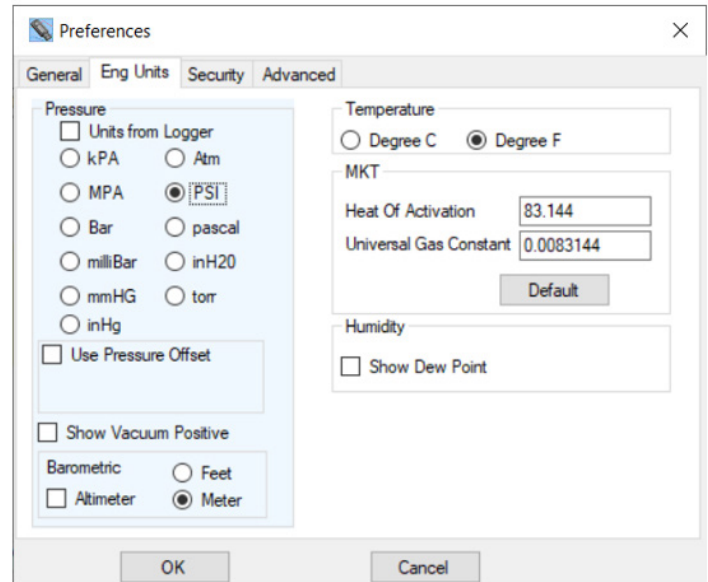
For Absolute pressure ranges, Use Pressure Offset can be enabled to mathematically subtract atmospheric pressure providing gauge values. For more information about Absolute versus Gauge measurements, refer to our refer to our App Note found here: click to link.

For Vacuum/Temperature Loggers, the user can decide to *Show Vacuum Positive* (or Negative, if not checked).

www.enermak.com

Enermak Enerji Mak. ve İnş. San. Tic. Ltd. Şti.

6.2 Input Setup

Under the Device Setup tab, select the Input tab and the Chan 1 tab.

The Pressure Channel Type will be listed as set in Preferences (see section 6.1 Preferences).

While the Pressure channel can be disabled, it is not recommended.
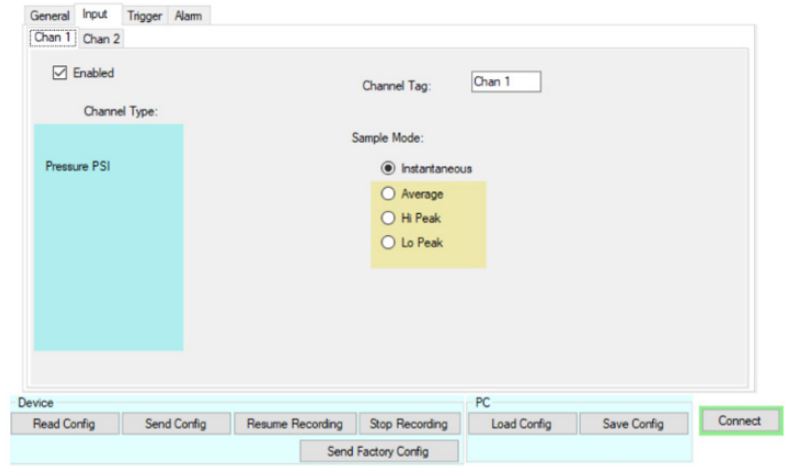
Note that selecting anything other than Instantaneous for Sample Mode (the Logger only takes a reading at the Record Rate) will cause the Logger to take readings at the highest sample rate and will have an adverse effect on the battery life.

The Chan 2 tab is similar but for the Temperature channel. The Temperature channel can be disabled; in which case, the Logger will only record Pressure, not Pressure and Temperature.

www.enermak.com

Enermak Enerji Mak. ve İnş. San. Tic. Ltd. Şti.

6

7.0 REPLACING THE BATTERY

Replace the battery as needed with type: ER14250, 1/2AA 3 Lithium Thionyl Chloride 3.6V. Remove threaded cap and insert battery as shown in diagram right (observe polarity).

8.0 O-RING

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 regularly for signs of failure (nicks, cuts, gashes, flattening, cracking, discoloration, deformation, etc.). Do not poke, jab, or pry the O-ring with sharp or pointed objects. Do not expose the O-ring to harsh chemicals or pressure/temperature beyond specifications.
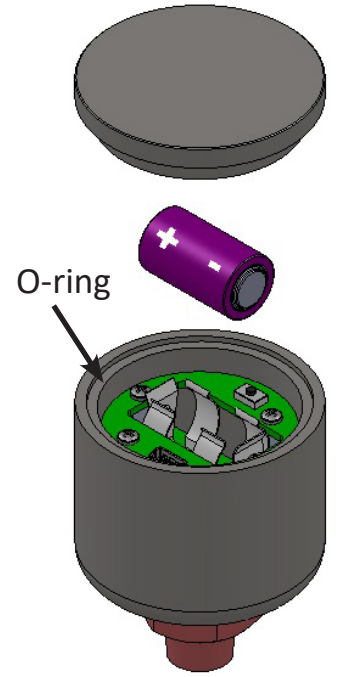
O-ring

8.1 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.

9.0 SPECIFICATIONS

Specifications*	Track-It™ Pressure/Temp Vacuum/Temp Data Logger
General:	
Record: **Sample Rates**	User-configured 1 every 2 seconds to 1 every 24 hours
Record: **No. of Samples**	32,000 or 64,000 (dependent upon 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 or cyclic, number of samples, and time duration
Alarms	Two (2) user-programmable alarms (High or Low)
Communication	Mini USB connection
Software	Track-It Software—Program device, view data (historic or real-time), export to spreadsheet.
Battery	Lithium 1/2AA 1.2Ah Life: Up to 1 year typical @ 1 minute sample rate
Enclosure	Material: 316L stainless steel, IP67
Dimensions	1.95 in. diameter x 2.19 in. [5 cm diameter x 5.6 cm] (excludes port thread)
Safety	Meets the safety requirements of IEC61010-1. This product is not waterproof.

www.enermak.com

ENERMAK
YERALTINDAN HABERLER

Enermak Enerji Mak. ve İnş. San. Tic. Ltd. Şti.

8

Specifications*	Track-It™ Pressure/Temp Vacuum/Temp Data Logger
Measurement:	
Pressure Ranges	0-3, 0-35, 0-150, 0-350, 0-550, 0-2000, 0-5800, 0-8700, 0-14,500 PSI
Vacuum Ranges	0 to -380 Torr, 0 to -760 Torr
Accuracy	±0.25% FS
Resolution	0.01%
Repeatability	±0.5%
Overpressure Rating	1.5X max
Port Connection	¼" NPT male; ½" NPT male for 8700 and 14,500 ranges
Temperature Range	-20 to +85°C /-4 to 185°F
Accuracy	± 1.0 °C 0 to 50 °C / 32 °F to 122 °F ± 2 °C -20 to 85 °C / -4 °F to 185°F
Resolution	0.6°C / 0.11°F

*Specifications are subject to change without notice.

ENERMAK
www.enermak.com
YERALTINDAN HABERLER

www.enermak.com

Enermak Enerji Mak. ve İnş. San. Tic. Ltd. Şti.

9.1 Compliance

9.1.1 Battery Compliance

The Lithium battery used in this product meets the requirements of UN DOT 38.3.

Tested by XenoEnergy Co., Ltd (Report Xeno Q110612)

9.1.2 EU Declaration of Conformity

CE Compliant. Please visit our website's Certificate, Regulatory Compliance and CE Declaration page to download our EU Declaration of Conformity for this product.

www.enermak.com

ENERMAK
www.enermak.com
YERALTINDAN HABERLER

Enermak Enerji Mak. ve İnş. San. Tic. Ltd. Şti.

10

10.0 ACCESSORIES

For additional accessories and details, see webpage.

PN	Model/Description
5396-9906	Replacement lithium 1/2AA 1.2 AH battery (ER14250)
5396-9908	Replacement O-Ring Seals, 2-pack
5396-9901	USB Extension Cable, 3 ft.
5396-9911	Replacement Mini USB Cable USB 2.0 to USB 2.0, 6 ft. cable
5396-9913	USB on-the-go cable for Android devices
5396-9902	Track-It Software on CD
5396-9915	Track-It Pressure Calibration Software
5396-9918	Kit Case Heavy-duty, watertight, O-ring sealed protective case
5396-9907	Garden Hose Adapter with brass coupling ¼" NPT
5396-9912	Anti-Theft Locking Cover (lock not included)
5396-9914	Anti-Theft Cover Lock (cover not included)

ENERMAK
www.enermak.com
YERALTINDAN HABERLER

www.enermak.com

Enermak Enerji Mak. ve İnş. San. Tic. Ltd. Şti.

The Professional's Choice

Monarch Instrument is committed to excellence and quality in manufacturing, sales, and service.

Portable Tachometers
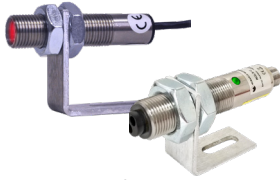
Track-It™ Data Loggers

Panel Tachometers

Fixed Mounted Strobes

Portable Strobes

Frequency Converters

Speed Sensors

DataChart™ Paperless Recorders

MONARCH
INSTRUMENT

TÜRKİYE

ENERMAK ENERJİ MAK. ve İNŞ. SAN.
TİC. LTD. ŞTİ.
Adress: 1234. Sokak No: 125, 06374 Ostim
OSB Mah. Yenimahalle - ANKARA
Phone: +90 (312) 385 1102
Faks: +90 (312) 385 11 95
info@enermak.com

Daha fazla bilgi için : **www.enermak.com**