Track-It™ Pressure/Temp and Vacuum/Temp Data Loggers with Display

SAFEGUARDS AND PRECAUTIONS:

Read and follow all instructions in these instructions carefully, and retain them 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.

DESCRIPTION:



The Track-It™ Pressure/Temperature and Vacuum/Temperature Data Loggers with Display are battery powered standalone watertight compact data loggers that emulate a pressure gauge. They can be configured to record both Pressure or Vacuum and Temperature up to 130,000 samples or either parameter alone to maximize data storage space. Real time data, alarms and min/max information can be displayed on the multi-line LCD. The unit is easily configured using the free downloadable Track-It™ PC Software. There is a mini-USB connector on the rear of 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.

The logger can be programmed to record data from once every two seconds to once a day. The recording can be initiated by the user to commence immediately, manually via the keypad buttons, at some preset time in the future, or on an alarm condition.

The display can be programmed to display pressure in various engineering units depending on pressure range. It can also display temperature, minimum and maximum values, percentage of memory used, time and date.

Track-It™ Pressure/Temp and Vacuum/Temp Data Loggers are packaged in a rugged submersible anodized aluminum and stainless steel housing and have a standard 1/4" NPT fitting. The replaceable internal lithium battery has up to a 3 year life.

Track-It ™ PC Software:

The Track-It™ PC software allows the user complete control in programming the logger and allows for the upload, examination and archiving of data recorded on the logger.

The Track-It software is available at:

http://monarchinstrument.com/Software/Track-It_Software.zip

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.

GET IT ON Google play

https://play.google.com/store/apps/details?id=com.trackit.transporter

Scan for Android software

INSTALLATION:



The logger can be ordered with various pressure sensors to cover most applications. Sensors have a ¼" NPT thread that is intended to screw into the pressure source. 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 nut to tighten the device into the port and test for leaks.

Once installed the dial can be rotated 300 degrees about the sensor to the intended viewing direction. The gauge face can also be rotated 360 degrees by undoing the blue bezel, lifting the front panel and associated electronics and rotating it to the desired position. Ensure the O-ring is in place before replacing the bezel. Do not stress any of the wiring.

BATTERY:



The unit operates off a 1/2 AA 3.6V Lithium battery. The battery is accessed by removing the rear bezel ring and cover. Gently extract the battery and replace as needed. NOTE POLARITY WHEN REPLACING – the unit will not operate if the battery is reversed. Ensure the O-ring is in place before replacing the bezel. Do not stress any of the wiring.

MENU INFORMATION:



If the display is off, pressing any button will turn it on for the duration set in the Track-It ™ PC software. If the backlight is turned on, it will light for approximately 5 seconds.

There are 3 buttons: ◄ (left arrow), MENU and ► (right arrow).

Pressing the ◄ or ► buttons will scroll the display through the various display values as set in the Track-It ™ PC software. This includes Pressure, Temperature, Date/Time, Memory Usage, Max/Min for Pressure and/or Temperature.

MENU MODE:

There are two menu modes: the **Regular** menu and the **Admin** menu. What is visible in each menu is a function of how the device is programmed using the PC software. Some menu items are context sensitive.

The **Regular** menu is accessed by pressing the MENU button.
The **Admin** menu is accessed by pressing and holding the ◄ (left arrow) button then pressing the MENU button.

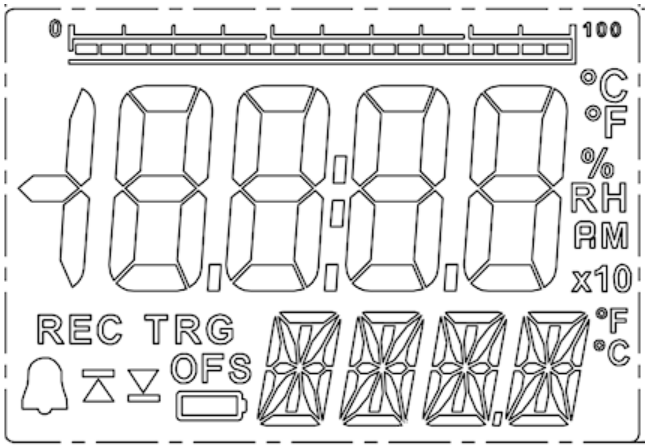
In the menu mode the ◄ button is the escape or exit button, the ► button is the accept/change button and the MENU button will move to the next menu item. The display will automatically exit back to the real time display if there is no activity for 10 seconds.

The content of each menu is set up in the Track-It™ PC software. In addition, the admin menu can be locked in which case the user at the logger cannot enter this menu and will receive a LOCK message.

MENU ITEMS:

Back Light	**BKLT** – AUtO/OFF – In Auto Mode the backlight will come on for 5 seconds each time a button is pressed. Turn off to conserve battery. Press ► button to toggle auto/off status.
Clear Alarm	**Clr ALRM** – Will clear any pending Alarm. Press ► button to clear. (Only visible during Alarm.)
Clear Minimum	**Clr MIN** – Will clear minimum values for Pressure and/or Temperature. Press ► button to clear. It depends on whether Pressure or Temperature is displayed when menu is pressed and if Pressure maximum is selected in the display menu in the Track-It™ software.
Clear Maximum	**Clr MAX** – Same as above for Maximum.
Cycle Mode	**CYCL** – On/OFF – If on display will toggle between Pressure and Temperature.
Bar Graph	**BAR** – On/OFF – Turns the bar graph on or off. Press ► button to toggle on/off status.
Decimal Point	**DCPT** – AUtO, 0, 1 – Used to set preferred number of decimal places.
Engineering Units	**Unit** – Used to change the engineering units for the pressure display. The lower line will show the current engineering units. Use the ► to scroll through the available units and press ◄ to accept.
Record On/Off	**rEC** – **ON/OFF** – Will toggle the record mode of the unit (Only visible if record mode set to "Button Press" in the Track-It™ PC Software). Press ► button to toggle on/off status.
Zero Mode	**ZERO** – **OFF/EnAb** – Will enable the zero offset feature. Available only in the **Admin** menu. If Off (not enabled) the Zero Set menu item will not display.
Zero Set	**ZERO** – **SEt/OFF** – Will set the current Pressure value to zero (offset into relative mode). Press ► button to toggle between modes. Set will activate relative mode, OFF will set to absolute mode. NOTE: When set, the OFS icon will show on the display. This menu item is only visible if the Zero Mode is **enabled** in the Admin menu.

LCD DISPLAY:



The display has 4½ 7-segment digits to show actual values of pressure and temperature. There is also a line of 4 alphanumeric digits used to display ASCII text (e.g. Pressure Units). The display is optionally backlit; the back light is initiated for 5 seconds by pressing any button. If the pressure is greater than 1999, the resolution is set to 10 units and is indicated by the x10 icon. The maximum value displayed is therefore 19990.

There is a bar graph at the top of the display (which can be turned off by the user) giving an analog indication of values relative to 100% which is the full scale value of the sensor. Note that in the pressure offset mode the bar graph indicates the absolute value of the pressure as a function of full scale.

In addition to these values, the display can be scrolled using the ◄ or ► buttons and may show (depending on configuration) minimum and maximum values of pressure and temperature, date as day/month - 24.07 or month/day - 07.24, time in 12 or 24 hour format (12 hour format will be indicated by AM or PM – 08:30 AM), and memory usage as a % of available memory. Values shown are set in the display setup using the Track-It™ PC software.

There are various icon indications on the display that indicate the following:

REC Indicates the unit is currently recording. This icon will blink at a 2 second rate.

TRG Indicates the unit is currently triggered and waiting to record. Record is initiated by time delay or button depending on configuration.

Indicates an Alarm condition. Indicates High Alarm. Indicates Low Alarm.

On its own indicates Maximum value. Visible when scrolling through display if set.

On its own indicates Minimum value. Visible when scrolling through display if set.

OFS Indicates the reading has been offset and is relative. (Zero mode active).

If present, this indicates the battery is low and should be replaced. If it is blinking it indicates readings may be compromised, unit may shut down and the battery should be replaced immediately.

x10 Indicates the current numerical value displayed must be multiplied by 10.



Bar graph shows percentage of full scale (0 to 100%) of the value indicated. This can indicate Pressure, Temperature or percentage of memory used when recording. Note that in the Pressure offset mode the bar graph will show the percentage of full scale of the absolute value not the offset value currently displayed.

LED:

There is an LED (Light Emitting Diode) above the display to the left. This LED is user programmable using the Track-It™ PC software and can indicate that the unit is recording (Green blink) or an Alarm condition exists (Red blink). It will also blink green when serial communication is taking place through the USB port.

SPECIFICATIONS:

General

Record: **Sample Rates:** User configured 1 every 2 seconds up to 1 every 24 hours
No. of Samples: 130,000 (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 or cyclic, number of samples, time duration

Display: Two line, 4½ 7-digit segment LCD and 5-digit alphanumeric display with custom icons, multi-segment bar graph for 0-100% indication, backlit

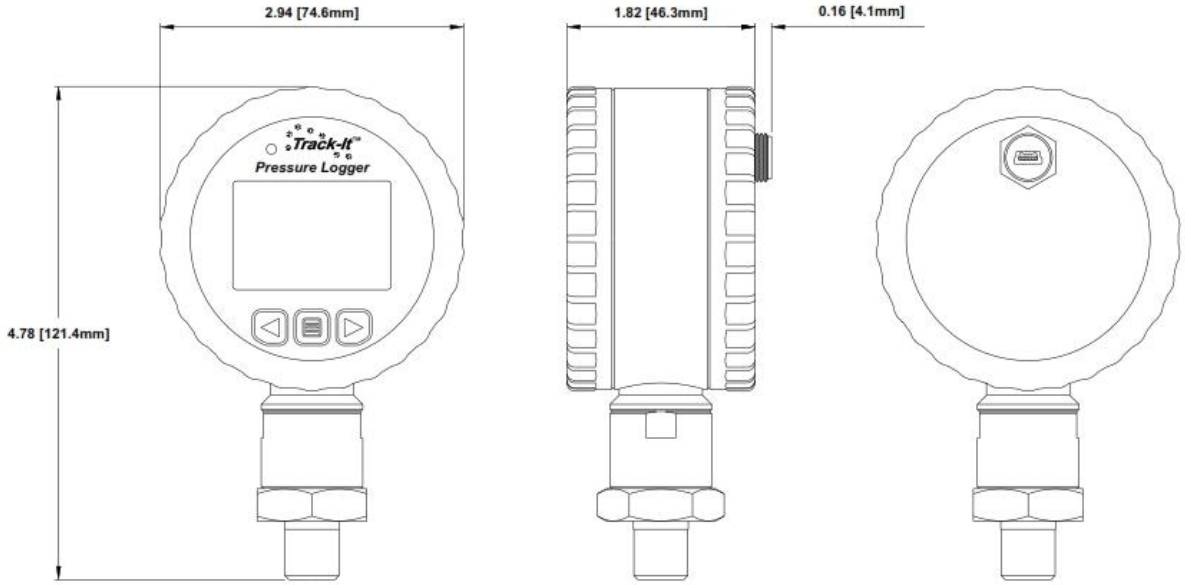
Alarms: 2 user programmable alarms. High or Low

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 3 years typical @ 1 minute sample rate

Enclosure: Material: Anodized Aluminum and 316L Stainless Steel
Dimensions: 2.94” (74.6mm) diameter x 1.82” (46.3mm) deep x 4.78” (121.4mm) tall including port threads



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%
Overpressure Rating: 1.5 times max
Port connection: 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: 0.1°C / 0.2°F

ACCESSORIES:

Battery	Replacement Lithium 1/2AA 1.2 AH Battery (ER14250)
O-Rings	Replacement O-Ring Seal, 2-Pack
Garden Hose Adapter	Brass Coupling
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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