

# TruTrack Data Logger

## Pressure Logger Model P-LCD

High Resolution (16 bit) Pressure Data Logger with LCD Display.

The P-LCD is a handheld, high resolution (16 bit) pressure data logger with a liquid crystal display. The logger connects to an external gage pressure sensor and also has an internal temperature sensor. The logger accepts a range of pressure sensors from 100psi to 500psi.

The sensors are suitable for the measurement of liquid or gas pressure including difficult media such as contaminated water, steam and mildly corrosive liquids or gasses.

The pressure sensor (with 500mm of cable) connects to a miniature connector socket on the P-LCD. This socket is used to connect the logger to any of the following pressure sensors:

Type	Min	Max	Overload	Burst
<b>P100-PS</b>	-15psi	100psi	200psi	500psi
<b>P250-PS</b>	-15psi	250psi	500psi	1250psi
<b>P500-PS</b>	-15psi	500psi	1000psi	2500psi

Other pressure ranges may be available on request.

The P-LCD can be set to display the pressure in kPa, Bar or psi on the LCD screen. It can be set to display the pressure in Atmos, Bar, hPa, kPa, Pa, mBar, cm water, in Hg, in water, psi, mm water or mm Hg in the Omni7/Omnilog software.

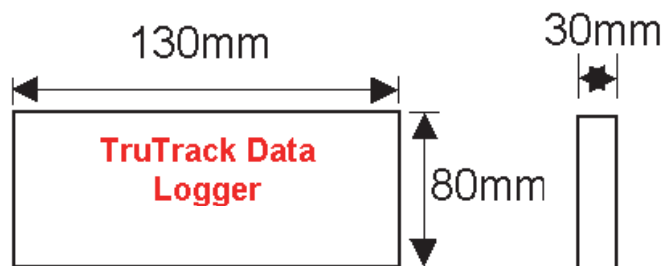


### Features:

- Massive storage capacity of over 500,000 samples!
- Easy to use LCD menu options.
- LCD display shows logger status and alarm status continuously.
- LCD display can be set to show; pressure, internal temperature, battery voltage, number of logged samples and alarm status.
- The battery voltage of the logger can be logged if required.
- The logger can be run in either "Stop when memory is Full", "Loop Around" mode or set to stop at a future time.
- The logger can be started "Now", at a given time in the future, on a condition (e.g. temperature >20°C) or on Trigger (push button on logger).

**Ordering Information:**    **P-LCD**    LCD Pressure data logger  
                                  **Pxxx-PS**    Pressure sensor (as listed under 'Type' above)

### P-LCD Dimensions:



### Putting into service (Using Omni7 - the original OmniLog differs slightly):

1. From the SWDL-DLC Omni7 software and Download cable kit, **first install the Omni7 software**, then plug the Download cable into a spare USB or serial port on your PC (depending on which type you have). The Omni7 has an excellent "Help". This will need to be read to enable successful operation of the Omni7 Data Management Program and gain familiarisation of the many advanced features available.
2. Connect the data logger to the download cable. Select the correct connection type on the Omni7 screen. Omni7 requires manual connection and disconnection to the data logger using the Green 'Connect' and Red 'Disconnect' buttons. It will not connect to a data logger automatically. (Refer to "Help" for further assistance.)
3. On the "Logger Control" screen, click on "Channel and Probe Setup" button, and check the Battery Condition, plus other configurations.
4. Now click on the "Start Logger" tab for the final configurations, before putting the logger into service.

## Specifications:

### Pressure Sensor:

Combined Linearity, Hysteresis and Repeatability	Type	Calibrated	Uncalibrated
	<b>P100-PS</b>	±1psi	±3psi
	<b>P250-PS</b>	±3psi	±9psi
	<b>P500-PS</b>	±5psi	±15psi
Temperature Coefficient	±3% from 0°C to 55°C		
Long term stability	±0.25% per year		
Resolution	0.16psi (1kPa)		
Thread	1/8 inch NPT		
Material	17-4 PH Stainless Steel		
Cable length	500mm		

Internal Temperature:	Sensor Type	Thermister
	Linear accuracy over range	±0.3°C (0°C to 70°C)
	Repeatability	±0.1°C
	Long term stability	±0.1°C

Logger:	Working Temperature	-20°C to +70°C
	Storage Temperature	-30°C to +70°C
	Sampling Rate	1 second minimum, 10 hours maximum; in 1 second intervals
	Storage capacity	522,240 samples logging Pressure only 362 days with 1 min logging interval 4.9 years with 5 min logging interval

Alarms	Two independent Alarms
	Both alarms can be configured to send SMS messages if connected to a cell modem
	Two Open Collector Alarm Outputs
	Alarms can be visually checked on the LCD Display or by using the Omni7/OmniLog Software

Start modes	Start immediately; Start on date/time; Start on Condition (eg temperature >20°C); Start on trigger (push button on logger)
-------------	--

Stop modes	Stop when memory is full / Stop on date/time / Loop around (continues logging)
------------	--

Logging modes	Each channel can be set to log any combination of:
---------------	--

- Point readings
- Average reading
- Maximum reading
- Minimum reading

**Warning:** When using the Average, Maximum or Minimum reading(s), the logger reads the attached sensor(s) every second. **This will reduce battery life.**

Battery	One to Five years life depending on usage as above Using the logger in temperatures below -5°C (23°F) will reduce battery life User Replaceable; Two 3.6 volts Lithium AA cells The data is retained in the case of battery failure Battery Status Monitor on LCD display and in Omni7/OmniLog software
---------	---

Download time	9 minutes, 30 seconds for Full Logger
---------------	---------------------------------------

Case material	ABS Plastic
---------------	-------------

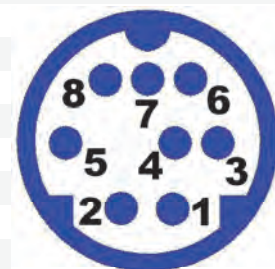
IP Rating	40
-----------	----

Weight	185g
--------	------

Size	130mm x 80mm x 30mm
------	---------------------

Communication Connector	The Tc-LCD has a 8 pin Mini-DIN female socket
-------------------------	---

Pinout	Pin 1 Common
	Pin 2 RS232 RX (out of logger)
	Pin 3 RS232 TX (into logger)
	Pin 4 RS232 CTS (out of logger)
	Pin 5 RS232 RTS (into logger)
	Pin 6 Alarm 1 Open Collector Output
	Pin 7 Alarm 2 Open Collector Output
	Pin 8 Power 9 to 16V dc



A **DLC8USB [USB]** or **DLC8 [RS232] download cable** is required to connect the P-LCD to a computer.

**Product Liability.** This information describes our products. It does not constitute guaranteed properties and is not intended to affirm the suitability of a product for a particular application. Due to ongoing research and development, designs, specifications, and documentation are subject to change without notification. Regrettably, omissions and exceptions cannot be completely ruled out. No liability will be accepted for errors, omissions or amendments to this specification. Technical data are always specified by their average values and are based on Standard Calibration Units, unless otherwise specified. Each product is subject to the 'Conditions of Sale'.

**Warning: These products are not designed for use in, and should not be used for patient connected applications. In any critical installation an independent fail-safe back-up system must always be implemented.**

## ***Liquid Crystal Display Operation:***

The P-LCD displays logger status and alarm status continuously and can be set to show the pressure (displayed in kPa, Bar or psi), the internal temperature, the battery voltage and the number of logged samples.

Logger status is shown as:

- **Running**
- **Stopped**
- **Waiting** (Waiting for “Start on Condition”)
- **Waiting Trigger** (Waiting for “Start on Trigger”)

If the logger is waiting for “Start on Trigger” it can be started in the field from the Menu provided on the display.

If an Alarm has been triggered the display will show

- **Alarm 1**
- **Alarm 2**

If both Alarms are triggered “**Alarm**” will be displayed continuously and “**1**” and “**2**” will flash consecutively.

**Low Batt** will be displayed if the internal battery requires replacement.

## ***P-LCD Menu Options:***

Pressing the **Enter** button on the front panel of the P-LCD activates the Menu Display. The **Down Arrow** can then be used to scroll down through the various Menu Options. When the required menu option is displayed, press **Enter** to select this option.

Menu Options on the P-LCD are:

- Channel 1 (Display Pressure)
- Channel 2 (Display Internal Temperature)
- Channel 5 (Display Battery Voltage)
- Samples (Display number of samples logged)
- Trigger (If logger is waiting for Start on Trigger)
- Alarm 1 (Reset/Trigger) Trigger is used to test
- Alarm 2 (Reset/Trigger) the Alarms
- °C / °F toggle
- kPa / Bar / psi toggle

The display will update at 1 second intervals for 1 minute after any button is pushed. It will then slow down to 10 second display updates (this is a power saving feature).

