The Portable Pressure Logger is an industrial computer combined with the data acquisition electronics and batteries housed in a sealed IP65 plastic ‘Peli’ carry case. This harsh environment computer benefits from a ‘state of the art’ high brightness 7” LED display providing a screen resolution of 800 x 480. The screen will provide a clear display of digital pressure readings and pressure against time graph.

6 push button switches along the bottom of the screen will allow for simple software setup adjustments; i.e scale adjustment & graph scrolling.
One push button switch shall toggle the power of the unit ON & OFF. An LED with in this switch will flash when in power save mode to indicate the unit is on and logging.

A power save mode will automatically switch the display backlight off when the display is not required during logging. This is necessary to achieve long test results from the limited battery power. The user will press a switch to bring the display back on.

Five connectors will be located on the side of the case. These are for attaching the sensors, charger, memory stick and desktop/laptop connection.

The pressure and temperature transducer shall be plumbed into the pressure line. The sensor will be cabled back to the Portable Pressure Logger

After recording the pressure test the unit will be connected to a standard desktop or laptop via a USB lead for uploading and downloading of data. This will be carried out in a safe area. Software installed on the desktop/laptop will allow for test details to be entered, graph review, scale adjustments and printout of test reports.

Features

- Zone II Certified Harsh Environment Computer
- 7” High Brightness TFT IP65 Display
- Computer and data acquisition electronics all enclosed with display
- USB ports for standard PC connection & memory stick
- 4 Analogue Channel Inputs
- Records Pressure and Temperature
- High accuracy and resolution
- Real Time Recording software
- Enclosed Batteries for up to 30hr operation
- Safe Area Battery Charger unit
- -20 to +45 degC operation temperature range
- Simple operation
This system is supplied in 5 parts;

1. **Portable Pressure Logger (Zone II Harsh Environment Computer)** – Unit enclosed in sealed plastic ‘Peli’ carry case. Includes data acquisition electronics and batteries
2. **Transducers** - Suitable for Zone II hazardous area
3. **Battery Charger** – quick recharge unit for use in safe area
4. **Real-time Software** – Installed on Portable Pressure Logger, provides real-time logging of pressure test displayed as digital PSI value and pressure/time graph. Temperature is also displayed as Deg C and on the graph.
5. **Review/setup software** – Allows for pressure test data to be scaled, input of relevant test data, upload and download and print out of results. This is for use on standard PC in safe area.

**Hardware**

**Hardware Specification - Portable Pressure Logger**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display</td>
<td>7” LED TFT</td>
</tr>
<tr>
<td>Screen Resolution</td>
<td>800 x 480</td>
</tr>
<tr>
<td>Brightness</td>
<td>280 cd/m2</td>
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<tr>
<td>Viewing Angle</td>
<td>60°</td>
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<tr>
<td>Backlight type</td>
<td>LED</td>
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<td>CPU</td>
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<td>RAM</td>
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<td>SDCARD</td>
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<td>Ports</td>
<td>1 x USB Device</td>
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<tr>
<td></td>
<td>1 x USB Host</td>
</tr>
<tr>
<td>Operating System</td>
<td>Windows CE 5.0</td>
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<tr>
<td>Data Acquisition</td>
<td>Electronic Interface</td>
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<tr>
<td>Input Channels</td>
<td>4 x 4-20mA</td>
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<tr>
<td>Sample rate</td>
<td>1 – 60 seconds</td>
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<tr>
<td>Resolution</td>
<td>16 bit Sigma/Delta</td>
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<tr>
<td>Enclosure</td>
<td>‘Peli’ carry case</td>
</tr>
<tr>
<td>Seal Rating</td>
<td>IP 65</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0 to 50 °C</td>
</tr>
</tbody>
</table>
Continued

Harsh Environment Pressure Transducer

Rating: Zone II Hazardous Area
Pressure range: 20,000 PSI
Pressure Resolution: 0.5PSI
Pressure Accuracy: +/- 0.15% FS

Pressure Connection: 9/16" Female UNF High Pressure

Harsh Environment Temperature Transducer

Rating: Zone II Hazardous Area
Temperature range: -50 to +75 ºC
Temperature Resolution: 0.005 ºC

Software

A basic software package will be installed on the Portable Pressure Logger. This software version will be running on a Windows CE platform.

Pressure and temperature will be displayed as real-time digital values. All sensors will be recorded and curves displayed on an xy real-time graph.

The scrolling graph view allows the user to view over a time period defined within the setup.

Push button switches will allow the user to adjust pressure PSI and temperature DegC scales on the graph. They also allow the user to scroll back and forth through recorded graph pages.

The recorded data will be saved under a filename that combines the test start date and time.

Data can be extracted onto a memory stick within a safe area.

Full software version on standard PC

Attaching the Portable Pressure Logger via the USB Host connector to a standard desktop/laptop PC will allow for upload of data and setup of Portable Pressure Logger calibration, time and date.

With the uploaded data the user can playback recorded tests and add the following test data; Technician, Company Location, Well No., Assembly No., Job No. & Serial No.

All data will then be displayed within the report and printed if required.

An option allows for all recorded test data to be compressed onto a single graph. This displays the complete duration of the test from beginning to end.
System Specifications

Certification: Zone II
Pressure Range: 20,000 PSI
Temperature Sensor Range: -50 to +75 DegC
Operating Temperature: 0 to 50 Deg C
Data logging rate: 1 – 60 seconds
Cables for hazardous area: Low Smoke, Zero Halogen (LSZH) Def. Standard
Data Acquisition unit: Solid State (no moving parts)
16 bit resolution
Four 4-20mA analogue channel inputs
Battery Duration: Estimated 30hrs continuous usage
Charging Duration: 8hrs from flat
Battery Charger: 100 to 250 VAC (50 or 60 Hz) operations
Safe area operation only