



Setra Lite Construction Kit

Installation & Operating Guide

Setra Systems, Inc.
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1.0 Introduction

The Setra LITE Construction Kit provides everything needed to monitor pressurized spaces around on-site construction or fume-extraction. The kit can also be used to verify pressurized isolation of temporary spaces such as renovations, loss of power conditions, and temporary isolation rooms. Simply place the kit outside the work area and run the flexible tubing inside the pressurized space to provide continuous differential pressure readings and visual alarming.

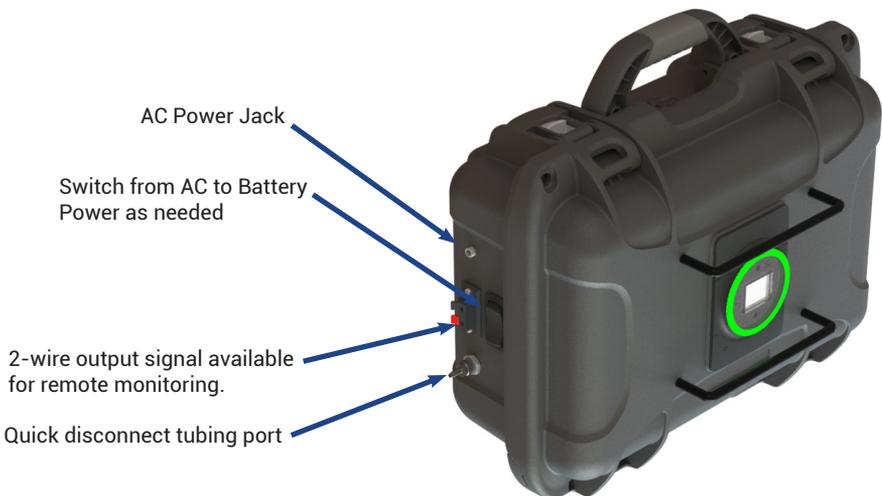
The visual indication on the kit is provided via the Setra LITE pressure monitor. The Setra LITE features an LED light ring that will glow red if room pressurization violates the configured alarm threshold. The design of the light ring allows the room status to be visible from a distance, even from down a hallway. With a simple press of the front lens of the unit, the LCD displays the reading of the current differential pressure. Configuration of the unit can be performed on the device via buttons located behind the removable front lens. The unit can be put into and taken out of "Standby" mode by pressing the front lens 3 times in quick succession.

2.0 Key Features

2.1 Case

The Setra LITE Construction Kit comes in a convenient easy to carry case which is designed for the most rugged applications but still compact enough to provide pressure monitoring in a minimally invasive footprint (12" x 15" x 7"). The case is IP67 (NEMA 6) rated and includes auto venting for air travel. The lockable case is also padlock-ready for added security while travelling or while on site.

Conveniently located on the outer side of the case are all the connections needed for power, pressure sensing, and signal wiring. As shown in the image below, the AC power jack (provided) plugs into the side or the toggle button can be used to operate on battery power (provided) instead. The 2-wire output signal is available to connect to from the side of the case to run an analog output to a local BAS or monitoring system for advanced visualization and data logging of the pressure readings. The pressure tubing (provided) connects to the quick disconnect tubing port on the side to be run into the pressurized space being monitored.



2.2 Case contents

Inside the case is everything needed to set up differential pressure monitoring of your space. Details of the case contents are listed in the image below:



3.0 Unit set up

3.1 Power

Remove pluggable AC power pack from the case and snap on the plug adapter needed for your location (USA/UK/EU/Canada/Mexico/Asia). The adapters can be switched out with the quick release button on the power pack as seen in Image 1.

Connect the adapter to the outer side of the case via the power jack as shown in Image 2.

Turn on via the Power Switch located as shown in Image 2. The power switch functions as follows:

Center = OFF

Up = ON via AC Power (up direction is towards case handle)

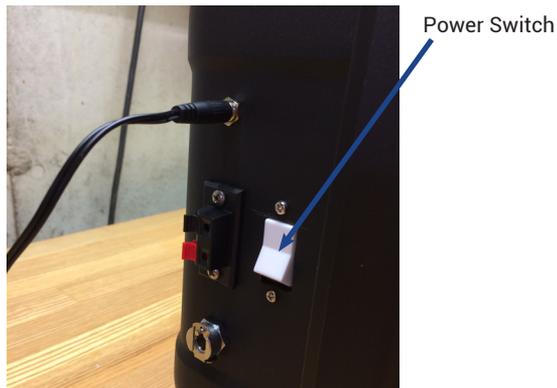
Down = ON via Battery Power

If power is lost or unavailable, simply move Power Switch to downward position. The battery pack will begin to power the unit and last 10 – 12 hrs. Replacement batteries are any standard retail 9V batteries (qty 4).

Image 1



Image 2



3.2 Pressure Sensing Tubing

Remove the pressure sensing tubing from the case. One end of the tubing has the sintered filter to be placed inside the pressurized space and the other end has the connection for the Quick Disconnect Tubing Port. Connect to the Quick Disconnect Tubing Power as shown in Image 1.

Note: Unit should be placed in such a manner as to reach the sensing space within 15 feet. Tubing can be routed over or under isolation tarp as needed and secured in the space such that the sintered filter, seen in Image 2, is present in the space. The pressure in the space will be compared to the pressure where the field case is located.

Tubing Connector

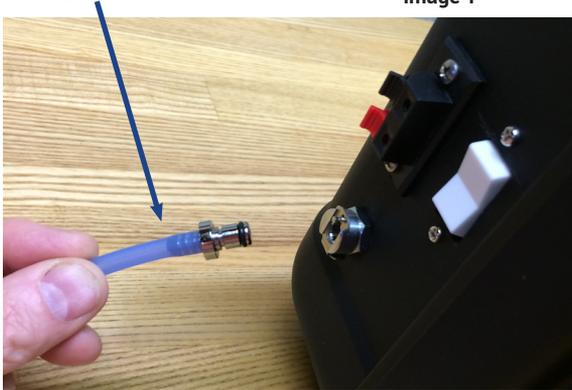


Image 1

Sintered Filter End



Image 2

3.3 Monitor Interface

With power connected, silicon tubing in place and power switch in the upward position, the unit will begin sensing the differential pressure between the case environment and the isolation area immediately. In order to set up the visual green / red alarming and set up the desired monitoring features proceed with the following steps:

3.4 Removal

With the unit powered on, grab the lens by the left and right edge, then pull away from the unit.



Locate the 3 buttons located below the LCD display.



Press and hold the LEFT button for 3 seconds to access the configuration menu (the LED ring should shut off after the configuration menus are accessed).



Press the RIGHT button ("✓") to navigate to the next screen.

Press the LEFT button ("↶") to navigate to the previous screen and eventually exit the configuration menu. The unit will also automatically timeout and return to normal operation if no buttons are pressed for a set period of time.

To change a setting, navigate to the desired setting screen, and press and hold the RIGHT button("✓"). The screen text should flash 3 times, indicating ability adjust the setting.

Use the LEFT ("←") and MIDDLE ("→") buttons to adjust the selected setting.

When finished, press the RIGHT button ("✓") to save the setting. The screen text should flash 3 times to indicate return to the main configuration selection screens.

To exit configuration, press the LEFT button ("↶") to navigate to the previous screen and eventually exit the configuration menu. The unit will also automatically timeout and return to normal operation if no buttons are pressed for a set period of time.

3.5 Configuration menus

This section will describe the function of each of the configuration menus.

3.5.1 Zero



Press and hold the RIGHT button ("✓") to zero the onboard pressure sensor. The unit contains an onboard valve to automatically equalize the pressure differential across the sensor.



Zeroing is complete when the screen reads "ZERO DONE".

3.5.2 Alarm limits



Press and hold the RIGHT button ("✓") to adjust the alarm limits (i.e. pressure at which the LED ring will turn red); the screen text will flash 3 times to indicate that the setting is ready to be adjusted.

Use the LEFT ("←") and MIDDLE ("→") buttons to adjust.

When finished, press the RIGHT button ("✓") to save the setting. The screen text should flash 3 times to indicate return to the main configuration selection screens.

3.5.3 Door delay



Press and hold the RIGHT button ("✓") to adjust the alarm door delay (i.e. number of seconds before the LED ring will turn red when pressure alarm limits are exceed); the screen text will flash 3 times to indicate that the setting is ready to be adjusted.

Use the LEFT ("←") and MIDDLE ("→") buttons to adjust between 000 and 999 seconds. If you hold the adjustment button, numbers will accelerate for convenience.

When finished, press the RIGHT button ("✓") to save the setting. The screen text should flash 3 times to indicate return to the main configuration selection screens.

3.5.4 Room



Press and hold the RIGHT button ("✓") to adjust the room pressurization (i.e. whether the room is positively or negatively pressured); the screen text will flash 3 times to indicate that the setting is ready to be adjusted.

Use the LEFT ("←") and MIDDLE ("→") buttons to adjust between positive ("POS"), negative ("NEG"), or neutral ("OFF").

When finished, press the RIGHT button ("✓") to save the setting. The screen text should flash 3 times to indicate return to the main configuration selection screens.

3.5.5 Display



Press and hold the RIGHT button ("✓") to adjust display behavior (i.e. whether the LCD display shows the digital pressure reading by default); the screen text will flash 3 times to indicate that the setting is ready to be adjusted.

Use the LEFT ("←") and MIDDLE ("→") buttons to adjust between showing a digital reading by default ("ON"), or showing a blank screen ("OFF").

Note: When display is set to "OFF", the digital pressure reading is still viewable by pressing the front lens and then numbers will vanish after 3 seconds.

When finished, press the RIGHT button ("✓") to save the setting. The screen text should flash 3 times to indicate return to the main configuration selection screens.

3.5.6 Digits



Press and hold the RIGHT button ("✓") to adjust the number of decimal places displayed on the LCD screen; the screen text will flash 3 times to indicate that the setting is ready to be adjusted.

Use the LEFT ("←") and MIDDLE ("→") buttons to adjust between 0 ("0.000"), tenths ("0.000"), hundredths ("0.000"), or thousandths ("0.000").

When finished, press the RIGHT button ("✓") to save the setting. The screen text should flash 3 times to indicate return to the main configuration selection screens.

3.5.7 Rings



Press and hold the RIGHT button ("✓") to select between no ring light, alarm (red) ring light only or both green/red light ring indicators. The screen text will flash 3 times to indicate that the setting is ready to be adjusted.

Use the LEFT ("←") and MIDDLE ("→") buttons to adjust between always off, on only in alarm, or always on.

When finished, press the RIGHT button ("✓") to save the setting. The screen text should flash 3 times to indicate return to the main configuration selection screens.

3.5.9 Units



Press and hold the RIGHT button ("✓") to adjust the measuring units used for the digital display and alarm thresholds; the screen text will flash 3 times to indicate that the setting is ready to be adjusted.

Use the LEFT ("←") and MIDDLE ("→") buttons to adjust between pascals ("Pa") and inches of water ("WC").

When finished, press the RIGHT button ("✓") to save the setting. The screen text should flash 3 times to indicate return to the main configuration selection screens.

3.5.10 Light level



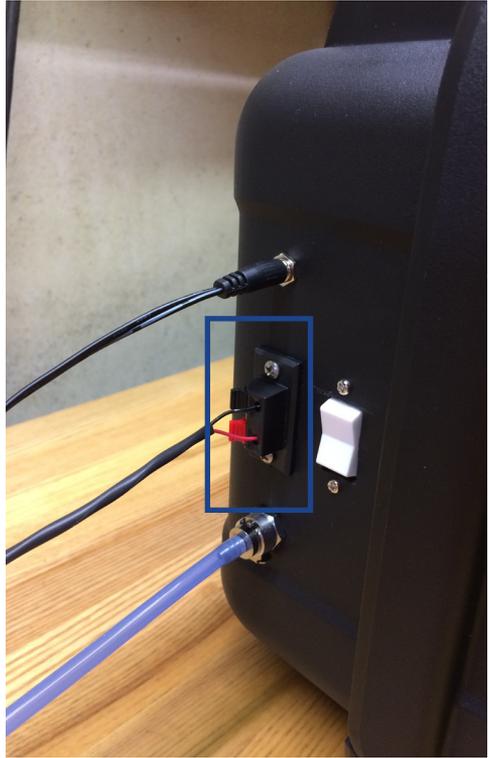
Press and hold the RIGHT button ("✓") to adjust the brightness of the LED light ring; the screen text will flash 3 times to indicate that the setting is ready to be adjusted.

Use the LEFT ("←") and MIDDLE ("→") buttons to adjust between 1 ("dimpest") and 5 ("brightest").

When finished, press the RIGHT button ("✓") to save the setting. The screen text should flash 3 times to indicate return to the main configuration selection screens.

3.6 Monitor Signal Out

The differential pressure signal can be transmitted via analog output to any central monitoring system or BAS (building automation system) if desired. Simply connect to the terminals provided on the outer side of the case as shown in Image 1. The user can select the desired analog output: 4-20 mA, 0-5V, or 0-10V via the monitor menu as described below:



Note: *If the monitoring signal out is being used, the battery life will be closer to 10 hrs.*

4.0 Returning products for repair

Please contact a Setra application engineer (800-257-3872, 978-263-1400) before returning unit for repair to review information relative to your application. Many times only minor field adjustments may be necessary. When returning a product to Setra, the material should be carefully packaged and shipped prepaid to:

Setra Systems, Inc.
159 Swanson Road
Boxborough, MA 01719-1304
Attn: Repair Department

To ensure prompt handling, please supply the following information and include it inside the package or returned material:

- Name and phone number of person to contact.
- Shipping and billing instructions.
- Full description of the malfunctions.
- Identify any hazardous material used with the product.

NOTES:

Please remove any pressure fittings and plumbing that you have installed and enclose any required mating electrical connectors and wiring diagrams.

Allow approximately 3 weeks after receipt at Setra for the repair and return of the unit. Non-warranty repairs will not be made without customer approval and a purchase order to cover repair charges.

Calibration Services

Setra maintains a complete calibrations facility that is traceable to the National Institute of Standards and Technology (NIST). If you would like to recalibrate or recertify your Setra pressure transducers or transmitters, please call our Repair Department at 800-257-3872 (978-263-1400) for scheduling.

5.0 Limited warranty & limitation of repair

SETRA warrants its products to be free from defects in materials and workmanship, subject to the following terms and conditions: Without charge, SETRA will repair or replace products found to be defective in materials or workmanship within the warranty period; provided that:

- a) the product has not been subjected to abuse, neglect, accident, incorrect wiring not our own, improper installation or servicing, or use in violation of instructions furnished by SETRA;
- b) the product has not been repaired or altered by anyone except SETRA or its authorized service agencies;
- c) the serial number or date code has not been removed, defaced, or otherwise changed; and
- d) examination discloses, in the judgment of SETRA, the defect in materials or workmanship developed under normal installation, use and service;
- e) SETRA is notified in advance of and the product is returned to SETRA transportation prepaid.

Unless otherwise specified in a manual or warranty card, or agreed to in a writing signed by a SETRA officer, SETRA pressure and acceleration products shall be warranted for one year from date of sale.

The foregoing warranty is in lieu of all warranties, express, implied or statutory, including but not limited to, any implied warranty of merchantability for a particular purpose.

SETRA's liability for breach of warranty is limited to repair or replacement, or if the goods cannot be repaired or replaced, to a refund of the purchase price.

SETRA's liability for all other breaches is limited to a refund of the purchase price. In no instance shall SETRA be liable for incidental or consequential damages arising from a breach of warranty, or from the use or installation of its products.

No representative or person is authorized to give any warranty other than as set out above or to assume for SETRA any other liability in connection with the sale of its products.

For all CE technical questions, contact Setra Systems, USA. EU customers may contact our EU representative Hengstler GmbH, Uhländstr 49, 78554 Aldingen, Germany (Tel: +49-7424-890; Fax: +49-7424-89500).



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