FEATURES

User Interface
• Large LCD 2 line display, Room Pressure and for room condition
• Membrane keypad for ease of configuration and menu navigation
• Password Protection for security

Audible and Visual Alarm
• Green (normal) and Red (Alarm) LEDs
• Audible Buzzer
• Alarm delay, mute timeout, alarm enable/disable, buzzer enable/disable

Ease of Installation and Calibration
• Flush mount, wipe down version and duct mount versions
• Snap on cover, no visible fasteners
• Modular Plug in design using sub-base. Simultaneous Electrical and plumbing connections reduce initial installation and calibration costs. Unit can be calibrated in house or sent to Calibration service without removing the wiring or plumbing.
• Push button zero and span calibration, no potentiometer adjustments
• PG9 and Conduit fitting in same unit, field selectable

Versatile
• True 2 wire 4-20 mA 0-5 VDC and 0-10 VDC field selectable
• Unidirectional or Bidirectional Ranges, field selectable
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1.0 INTENDED USE
The Setra SRIM Room Isolation Pressure Monitor is designed for critical low differential pressure applications that require stringent pressure monitoring and alarming. The SRIM can be configured to monitor positive, negative or neutral pressures in protected environments.

The SRIM is a complete system that includes a 2 line LCD display with large characters for the pressure indication and room status. The membrane keypad user interface enables access to setup, security, calibration, and alarm setups. Red and Green LED’s provide a local visual indication of the room pressure alarm status and a local audible alarm (with time delay feature) alert personnel to system status. Analog outputs are available in 4-20 mA, 0-5 or 0-10 VDC in the same unit. True differential pressure is displayed with a resolution of up to .0001” as well as the room status.

Setra’s patented very low pressure capacitance sensor is dead ended and avoids the potential for cross contamination of the room and reference space as well as eliminating drift that results from fouling of flow based sensors, which by nature have a flow path connecting the protected and reference spaces.

2.0 SRIM INCLUDED PARTS

![Figure 2-1: Parts](image)

The SRIM parts list includes:
- RIM Isolation Room Monitor
- Electrical Plugs for ½” conduit or PG9 strain relief connector.
- RPS pressure taps 0, 1 or 2 as ordered, including mounting screws.

The RPS is mounted to a single gang box. One is typically located in the isolation room and the second is mounted in a corridor (reference pressure). The back of the RPS has a barbed fitting for plastic tubing to be connected to the SRIM.
3.0 INSTALLATION

The SRIM is available in two models suitable for wall (flush mount) and surface mounting (or panel mounting). The front panel of the product and product rear housing are snapped together, the two snaps are located on the left and right sides of the front panel. A 1.5mm (1/16 inch) Allen wrench or paper clip can be used to open the concealed snap fastening system.

The rear housing can be used to mount to a wall or into a 3 gang “off the shelf” electrical box. Conduit (1/2”) or a PG9 cable connection are available for wiring to the terminals at the rear of the unit. The rear housing acts much like a sub-base that does not have to be removed once installed.

The front bezel contains the pressure sensor, PCBA and display. It is a complete module that can be calibrated. The pressure and electrical connectors are disconnected simultaneously when the front bezel is removed.

Before installing determine a good installation location.

For Flush mount applications, the corridor outside the isolation room is preferred.

For Surface mount applications the unit may be mounted on the duct work (avoid high vibration), a stable surface near the ductwork or inside a panel.
Figure 3-1: Wall (Flush) Mount Housing Dimensions

Figure 3-2: Surface Mount Housing Dimensions

Figure 3-3: Surface Mount Housing Mounting Hole Locations
Unpack the product box. Do not remove the protective film on the front panel until after installation to prevent scratching of the display during the installation process. Remove parts and place them on flat surface, Apply pressure on the side of the box to open the snap fit or use an allen wrench or paper clip as shown See Figure 1-2. First one side then the other, then pull the bezel forward to remove it from the housing.

Figure 3-4: Removing bezel from the base

**Plumbing and Wiring to the Electrical Box (Rough in)**  
Use a 3 gang electrical box RACO 697 or equivalent. The pressure ports will line up with each of 2 knockouts. It is very important to set the depth of the box so that it is either flush to the finished drywall surface or just below the finished drywall surface. This is important so that the SRIM cover will lock into the base and maintain minimum protrusion. Strain relief and seal box as required.

Figure 3-5: Rough Plumbing and Wiring to Rough-in box, Flush Mount Unit

Figure 3-6: Wiring diagrams for 4-20 mA and VDC outputs
Connect the pressure tubes to the high and low pressure ports. Wire to the electrical terminals on the back of the housing. Install the terminal cover to strain relieve the wires. If desired, place electrical plugs on the unused holes in the base.

Complete the installation by installing the bezel onto the base by aligning the two and pushing the bezel into the base until the bezel snaps to the base on the 2 sides.
Continue to the section on setting up the unit and room settings through the membrane keypad.

The installation of the surface mount unit is similar to the flush mount except that the wiring and plumbing get routed directly to the base and the metal electrical box is not required.

4.0 MENU NAVIGATION AND CONFIGURATION

The LCD display is standard on all SRIM products, the display provides valuable feedback during configuration and for user feedback in the normal and alarm modes.

Apply 24 VAC/VDC power.

The display goes through the initialization sequence, the LCD screens will be displayed in the following order.

Software version information

Product pressure range, in “WC or Pascal as ordered

Analog output mode, 4-20, 0-5 or 0-10 VDC
Unit in the normal state, line 1 is the indicated differential pressure and units. Line 2 indicates the room pressure status relative to the alarm limit settings. The green LED indicates that the room pressure is normal, within the allowable pressure limits.

Unit in the alarm state. Red LED, alarm message and audible buzzer if enabled.

- **LEDs, Normal and Alarm**
- **Current pressure value, or the current menu item settings**
- **Pressure units, or menu message**
- **Audible Alarm Silence**
- **Room Status**
- **Display and Menu Navigation keys**
4.1 Menu Operation

**Menu key** – Provides access to the menu structure

**Down Arrow Key** – Allows selection of numerical parameters. Pushing the down arrow cause the digits to move upwards in 1 digit count and will wrap around. The cursor below the indicated item in the current menu item indicates that this is the digit that is being changed. If you don’t need to make a change to that position press the enter key to move to the next position to the right.

**Enter Key** – Use this key to move left to right in a current menu screen, also used to save the current menu item selected settings, or the confirm current menu operation; press the Enter key to save the current settings, the display shows the current setting value and flashes twice, and to prompt the user that the currently set value has been saved.

**Mute Button** - When the buzzer alarm is enabled and pressure is outside of pressure limits and a timeout has been reached the audible alarm will sound. The user may mute the alarm to temporarily silence it. If the mute timeout setting is reached the audible will again sound.

Menu items, (in the order that they appear in the menu). These are placed in order of the anticipated most used functions near the top of the menu tree. It is suggested that in the initial configuration that the user progress through each section in order.

<table>
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<tr>
<th>Menu Items</th>
<th>Description</th>
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<tbody>
<tr>
<td>ALARM HIGH LIMIT</td>
<td>Sets the high pressure alarm limit</td>
</tr>
<tr>
<td>ALARM LOW LIMIT</td>
<td>Sets the low pressure alarm limit</td>
</tr>
<tr>
<td>ALARM DELAY</td>
<td>Sets the delay (sec) between the time that the alarm high or low limits are exceeded and when the alarm is indicated</td>
</tr>
<tr>
<td>MUTE TIMEOUT</td>
<td>Sets the time delay (sec) between when the buzzer mute button is pressed and when it will re-sound if the pressure is still out of range</td>
</tr>
<tr>
<td>ALARM ENABLE</td>
<td>Enables the audible and visual alarms indicators</td>
</tr>
<tr>
<td>BUZZER ENABLE</td>
<td>Enables the local audible buzzer</td>
</tr>
<tr>
<td>OUTPUT MODE</td>
<td>Sets the analog output mode, 4-20 ma, 0-5 VDC or 0-10 VDC</td>
</tr>
<tr>
<td><strong>PRESSURE MODE</strong></td>
<td>Sets the unit into uni-directional or bi-directional pressure modes, ex: +/-0.25” or 0-0.25”WC</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>FILTER SETTING</strong></td>
<td>(1-99), default is 10. Sets up a data averaging filter, the lowest numbers provide the fastest output response but highest analog output noise. In an extremely pressure noisy environment use higher numbers until the pressure display flickering is reduced.</td>
</tr>
<tr>
<td><strong>PASSWORD ADMIN</strong></td>
<td>Enables or disables the 4 digit numeric password, use backdoor password of 0159, if the password is lost</td>
</tr>
<tr>
<td><strong>ZERO CALIBRATION</strong></td>
<td>“Tares” out any 0 pressure error. This must be done with 0 pressure applied.</td>
</tr>
<tr>
<td><strong>SPAN CALIBRATION</strong></td>
<td>“Tares” out any Span pressure error. This must be done with the +Full Range (FR) pressure applied. For ex: if the pressure range is +/-0.1”WC, apply 0.1”WC.</td>
</tr>
<tr>
<td><strong>RESUME CAL VALUE</strong></td>
<td>Restores factory calibration settings in case a calibration may have been performed incorrectly</td>
</tr>
<tr>
<td><strong>RETURN</strong></td>
<td>Returns from the configuration mode to the normal operating mode</td>
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Example 1: Output mode setting

To enter the menu, press the Menu key. Continue pressing 7 times until the display indicates output mode. 4-20 mA is the default output mode, if you want to change to 0-5 or 0-10 press the down arrow and press the return key to select. The display will blink 2X to confirm the setting change.

Continue to press the menu key to progress all the way through the menu until you reach the RETURN screen. Press the Enter key to exit out of the menu and return to home screen.

Example 2: Setting the password (4 digit numerical) protection

Press the down key to select the menu item PASSWORD ADMIN, the system will prompt to input the password, when the input is complete press the Enter key to save the password and complete the setup. When password protection is enabled, you must enter the correct password before you can enter the menu the view or change parameters.

Save the password in a safe location. If you forget the password use the back-door password of 0159 and reset the password if desired.
Example 3 Calibration
Remove the pressure ports or shut off fans to the room and open the door so that zero differential pressure is applied to the monitor.

Select menu items ZERO CALIBRATION, the display shows the current pressure value, press the Enter key. If the reading is within allowed limits the unit will respond with the message that calibration was successful.

Full scale calibration:
Note: the full range adjustment should be completed after zero adjustment.

Span adjustment should only be performed if a very accurate and stable Full Range pressure can be applied, such as with a Setra Model 869 Calibrator. Apply full range pressure to the high and low pressure ports.

Select menu items SPAN CALIBRATION, the display will show the current pressure value, press the Enter key, if the applied pressure is within allowed limits then the unit respond that span calibration has been successful.
5.0 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 accompanied by Setra’s Calibration and Service Order Form found at www.setra.com/tra/repairs/pdf/webrepair.pdf, and shipped prepaid to:

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

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 calibration facility that is traceable to the National Institute of Standards & Technology (NIST). If you would like to recalibrate or re-certify your Setra pressure transducers, please call our Repair Department at 800-257-3872 (978-263-1400) for scheduling.
6.0 WARRANTY AND LIMITATION OF LIABILITY

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 writing and 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, Uhlandstr 49, 78554 Aldingen, Germany (Tel: +49-7424-890; Fax: +49-7424-89500).