

# ROOM PRESSURE MONITOR

PM Series



MANUAL V102  
FIRMWARE V3.84

# ROOM PRESSURE MONITOR

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## CAUTION ▾

Short circuit or incorrect wiring may permanently damage the controls or other equipment. Ensure proper wiring practices. The PM is a 24 VAC monitor. Do not apply any voltage above 24 VAC.

# ROOM PRESSURE MONITOR

## PRODUCT OVERVIEW

### General

The Room Pressure Monitor (PM) is intended to provide intelligent pressure monitoring of isolation room and critical environments. Using the latest in microcontroller and sensor technologies the PM can measure extremely small pressures and display the readings on the local LCD display.

### Room Pressure Monitor (PM) Features

- Simple connection to room pressure sensor (RPS) using RJ-12 jack
- Pluggable terminal blocks
- Backlit 14x2 LCD Interface with true character display
- LED side bars offer 180 degree viewing of current room status
- Green – Safe
- Red – Danger (exceeding low or high alarm set points)
- Blue - Unoccupied
- Password protected menu
- Easy to use MENU system for fast and simple setup of system
- Setup Wizard – walk through setup of PM when first powered up

### Room Pressure Sensor (RPS) Features

- High accuracy room pressure sensor, Range: +0.1 in.w.c. (25 pa) to -0.1 in.w.c. (25 pa)
- Quick keyed cable connection
- Indicator LED on sensor and PM shows proper connection
- Stainless steel louvered plate for accurate readings and protection from cleaning

#### ROOM PRESSURE MONITOR (PM) ▼



#### ROOM PRESSURE SENSOR (RPS) ▼



# ROOM PRESSURE MONITOR

## PRODUCT OVERVIEW

### Included in Package

Each PM ships with the following items:

1. RPI-Standard (with backlit LCD screen)  
QTY: 1 (250000-860)
2. Room Pressure Sensor – Main  
QTY: 1 (250000-840)
3. Room Pressure Sensor – Ref  
QTY: 1 (250000-842)
4. Plenum rated green 25 foot (RJ-12 to round) RPS cable  
QTY: 1 (019943-020)
5. Kink resistant air tubing – 18”  
QTY: 1 (041467-001-bulk)
6. 120/24 VAC 40 VA Transformer  
QTY: 1 (019604-003) OPTIONAL
7. Instruction Manual  
QTY: 1

Please ensure you have all components before proceeding. Inspect components for shipping damage. Do not install any components that appear damaged, contact your local Antec Controls Representative for replacements.

For further information, please visit: [AntecControls.com](http://AntecControls.com).

### INCLUDED ITEMS ▼



1. RPI-STANDARD



5. KINK RESISTANT AIR TUBING 18"



2. ROOM PRESSURE SENSOR - MAIN



6. 120/24 VAC 40 VA TRANSFORMER



3. ROOM PRESSURE SENSOR - REF.



7. INSTRUCTION MANUAL



4. PLENUM RATED GREEN 25 FOOT

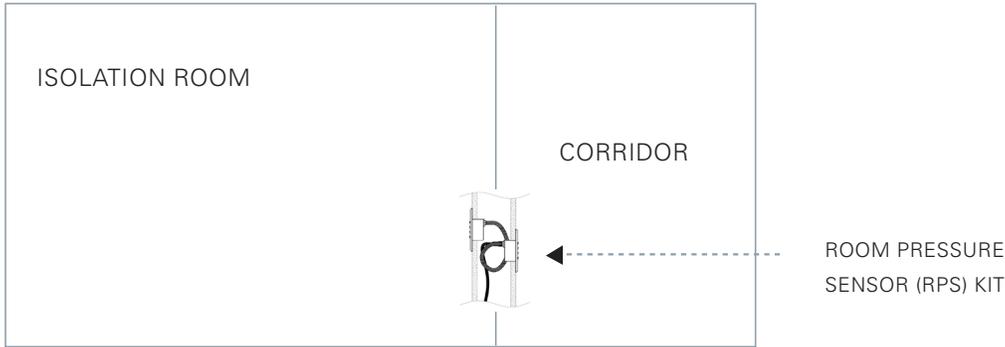
# ROOM PRESSURE MONITOR

## INSTALLATION AND MOUNTING INSTRUCTIONS

### Isolation Room

The PM can monitor the pressure difference between two spaces.

1. PM monitoring Isolation Room referenced to Corridor

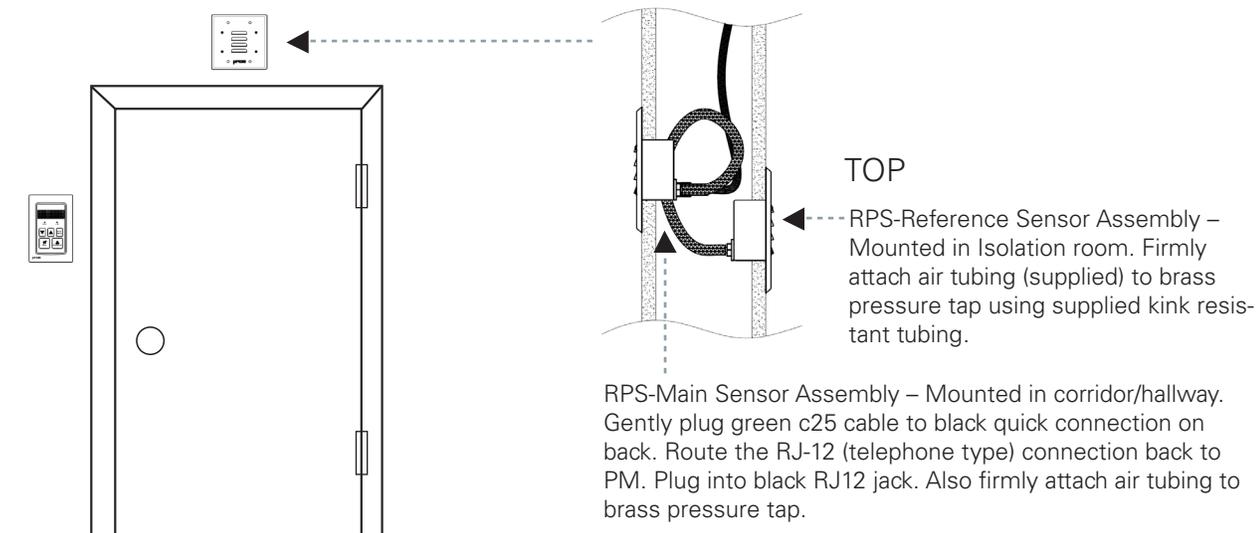


### Single Isolation Room

Ensure you have all components necessary for installation. Inspect components for signs of shipping/handling damage. Do not proceed if you suspect any components are damaged.

1. Mount the Room Pressure Monitor (PM) near the doorway using a standard single-gang electrical box (by others) at a height of 5 feet. Ensure LED bars are not blocked by other devices on wall.
2. Next install the Room Pressure Sensor (RPS) assembly. The RPS-Main Sensor should be installed in the hallway using the drywall bracket supplied. The RPS-Reference Sensor must be installed within 12 inches of the Main sensor. Note: The Main Sensor has a black cable connector and brass airflow nipple, while the Reference Sensor only has a brass airflow nipple.

### TYPICAL INSTALLATION



# ROOM PRESSURE MONITOR

## INSTALLATION AND MOUNTING INSTRUCTIONS

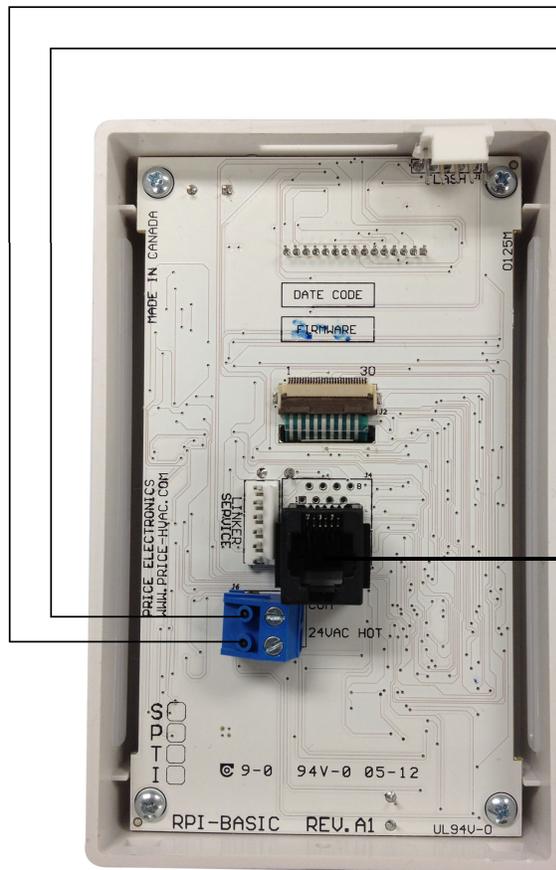
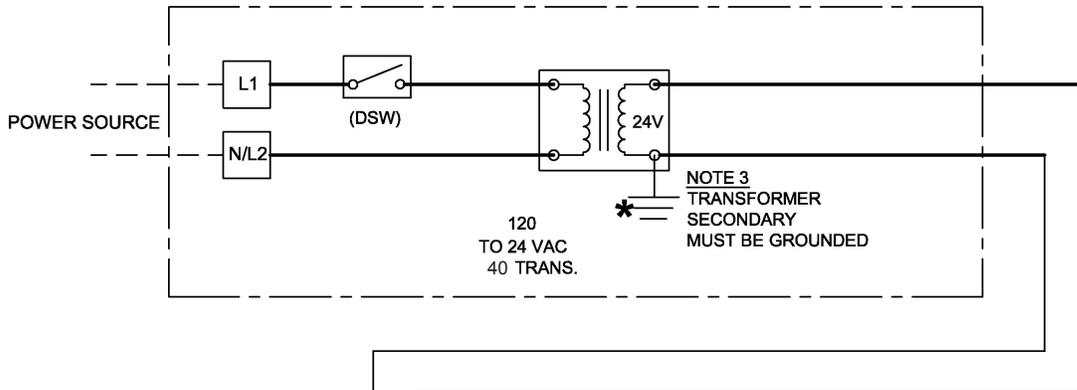
### TYPICAL WIRING ▼

Ensure proper voltage is available for the PM. Double check all labels and wiring before applying high voltage. Note: the PM is a 24 VAC low voltage monitor. Do not apply any voltage above 24 VAC.

1. Ensure mains (high voltage) power is off and locked out at panel.
2. Connect main power to transformer. Confirm voltage input matches transformer label (either 120 VAC or 277 VAC).
3. Wire 24 VAC hot and common to PM. Note the hot and common polarity.

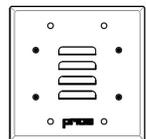


Image is shown for optional 24 VAC transformer. If power is not provided by Antec Controls, ensure proper 24 VAC power is supplied to the PM with a minimum of 20 VA per unit.



TO PRIMARY ROOM PRESSURE SENSOR

PLUG & PLAY 25FT PLENUM RATED CABLE INCLUDED. RJ12 / LOCKING CIRCULAR CONNECTION



# ROOM PRESSURE MONITOR

## INSTALLATION AND MOUNTING INSTRUCTIONS

### PM Default Sequence of Operations

The PM functions as a standalone device (not networked to any building automation systems (BAS)).

When fully setup the PM can be set to monitor POSITIVE or NEGATIVE pressure. Alarms for LOW/HIGH pressure are fully field configurable.

The PM has 3 primary modes:

Mode	Status	LCD Display	LED Bars	Alarm
Negative/Positive Pressure Monitoring (Room Occupied)	SAFE - Pressure reading within LOW / HIGH set points	Primary Room +0.0123 in.w.c.	GREEN	OFF
Negative/Positive Pressure Monitoring (Room Occupied)	ALARM - Pressure reading within LOW / HIGH set points	ALARM! +0.0001 in.w.c.	RED	ON
Neutral (Room Unoccupied)	UNOCCUPIED – Pressure measured but no alarms	Primary Room Unoccupied	BLUE	OFF

Occupied – SAFE (proper pressure detected)

Occupied – ALARM (pressure out of range – either low or high set point)

Unoccupied – Pressure monitored and displayed but no alarms

When occupied the PM will monitor and display the primary room pressure. If the pressure reading is within the LOW and HIGH alarm set points the LED bars will be green and the alarm will be off. If the pressure reading is outside of either the LOW or HIGH alarm set points the LED bars will turn RED and the local alarm will turn on.

If the Room Pressure Sensor (RPS) is unplugged from the PM while in occupied mode the LED bars will turn RED and the local alarm will turn on.

# ROOM PRESSURE MONITOR

## DISPLAY NAVIGATION

### RPI Initial Startup

When the RPI is first powered from the PM monitor, it will display the following information: (Also press both UP/DOWN at same time to show this screen anytime.)

PRICE ELECTRONICS	Start-up screen
LCD STANDARD MODEL	PM interface
LOADING: 0-100%	Loading Screen
PM VERSION 3.84	PM - Firmware Version 1.xx or higher
AWAITING SETUP	Displays only on first power up, until the Wizard has been completed.
PRIMARY ROOM UNOCCUPIED	After start up LCD will display default screens depending on mode of operation

### Occupancy Modes / Service Menu

The PM has 2 operating modes - occupied and unoccupied (sometimes referred to as setback). To change Occupancy mode: Quickly press Enter/Menu Button. Occ. Passcode is displayed. Enter Down-Up-Up-Down. Using UP/Down key select either Occupied (alarms active) or Unoccupied (alarms disabled). Press Enter to save and exit.

### ROOM PRESSURE INTERFACE

#### Up/Down Button

Used for menu selection and adjustment  
- press both up and down at same time to display RPI Startup screens.

#### Menu/Enter

Used to Enter service menu(s). The menu(s) are password protected.

#### Mute

Used to temporarily mute the local alarm for a certain number of minutes.

#### Emergency

Used to trigger emergency mode. Local Alarm will sound and BACnet point will change to Alarm alerting the front end system.



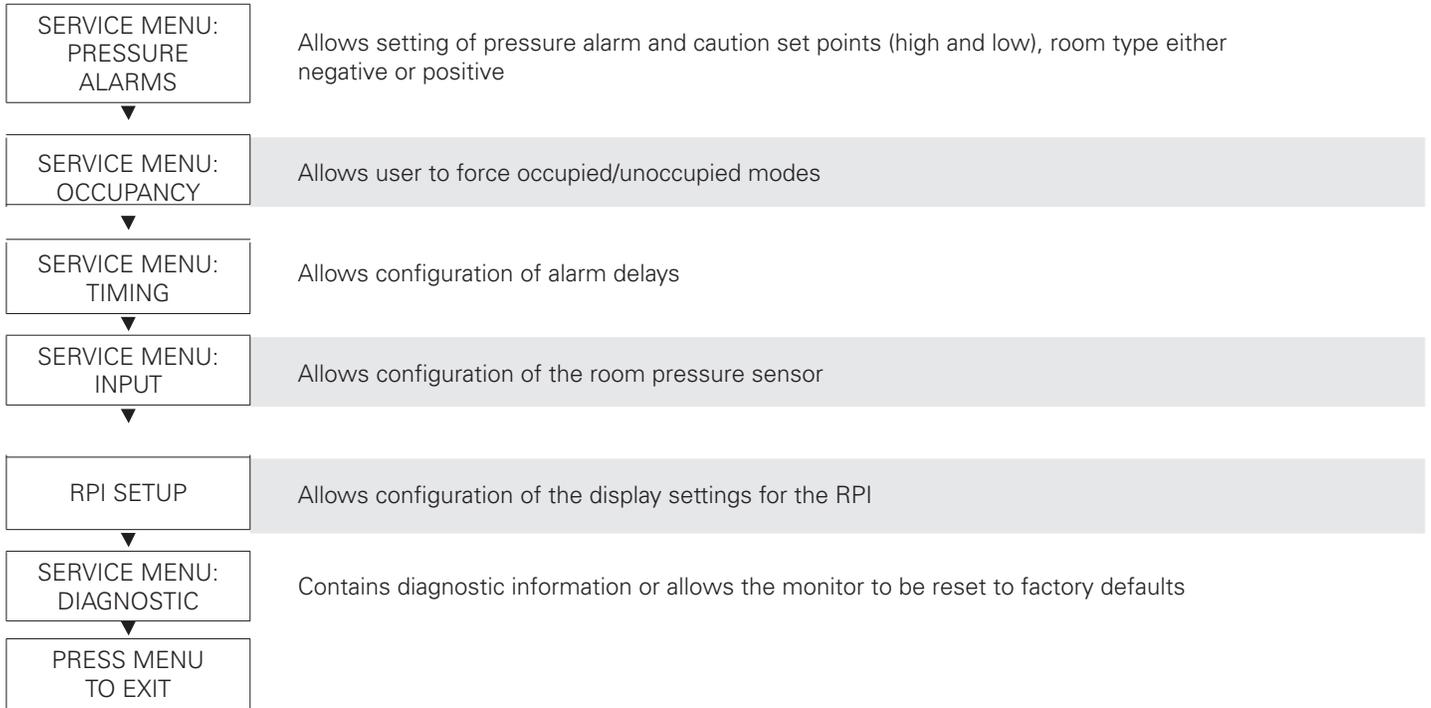
# ROOM PRESSURE MONITOR

## DISPLAY NAVIGATION

### Service Menu

The service menu contains all setup and configuration parameters. Each PM ships with factory defaults, but virtually all settings can be adjusted in the field. All MAIN menus are listed on this page. Use the WIZARD and/or below menus to setup the PM for your application.

To access Service Menu hold enter/menu for 5 seconds. The passcode is DOWN - EMERGENCY - EMERGENCY - MUTE.

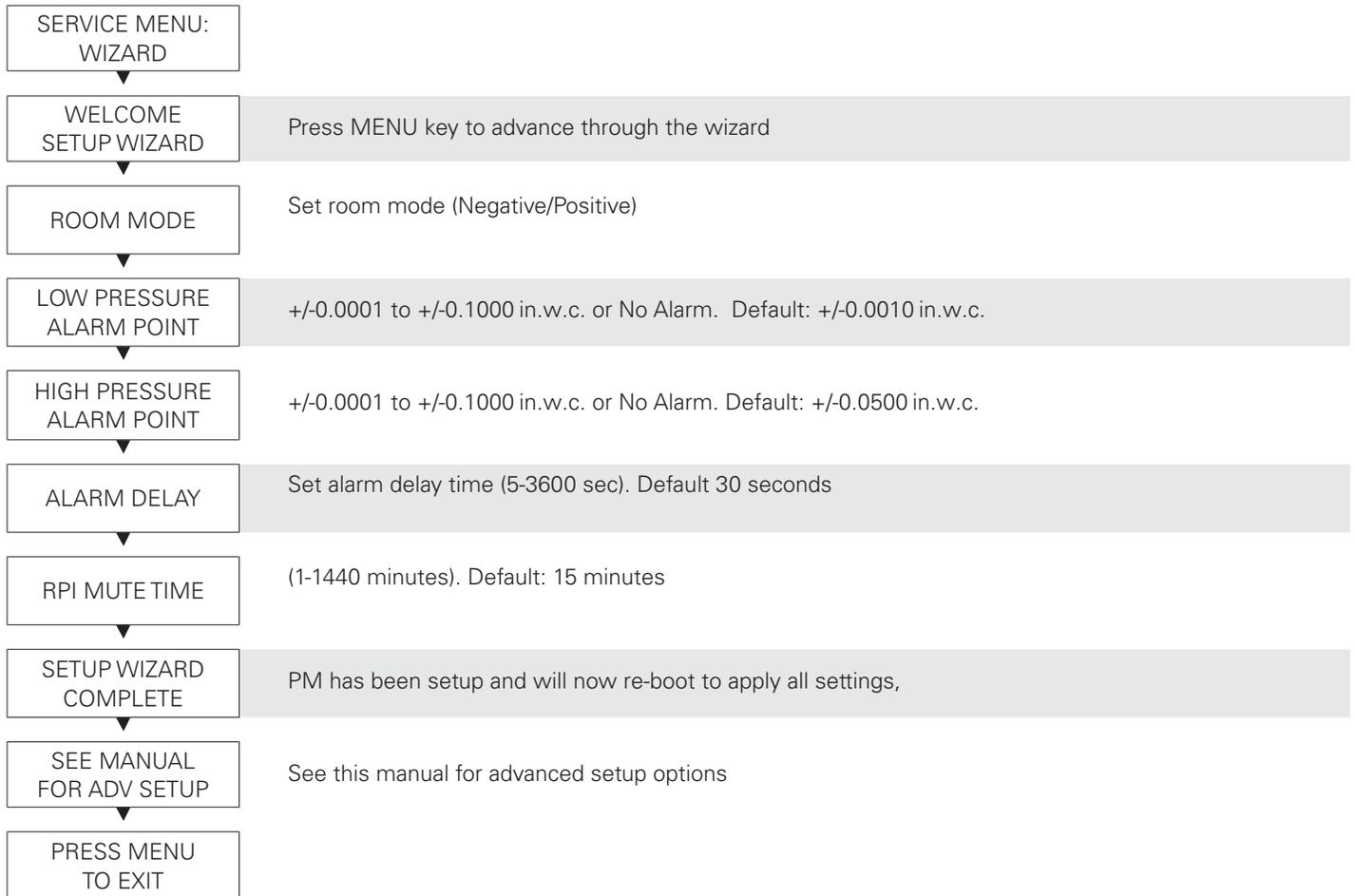


# ROOM PRESSURE MONITOR

## DISPLAY NAVIGATION

### Wizard Menu

The first time the PM is powered on, the RPI will step through the setup wizard. This allows a quick setup of the parameters needed. To enter the Setup Wizard, use the passcode DOWN - EMERGENCY - EMERGENCY - MUTE.



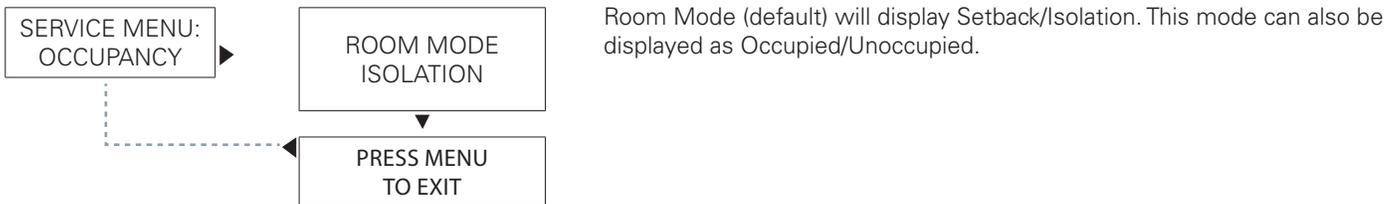
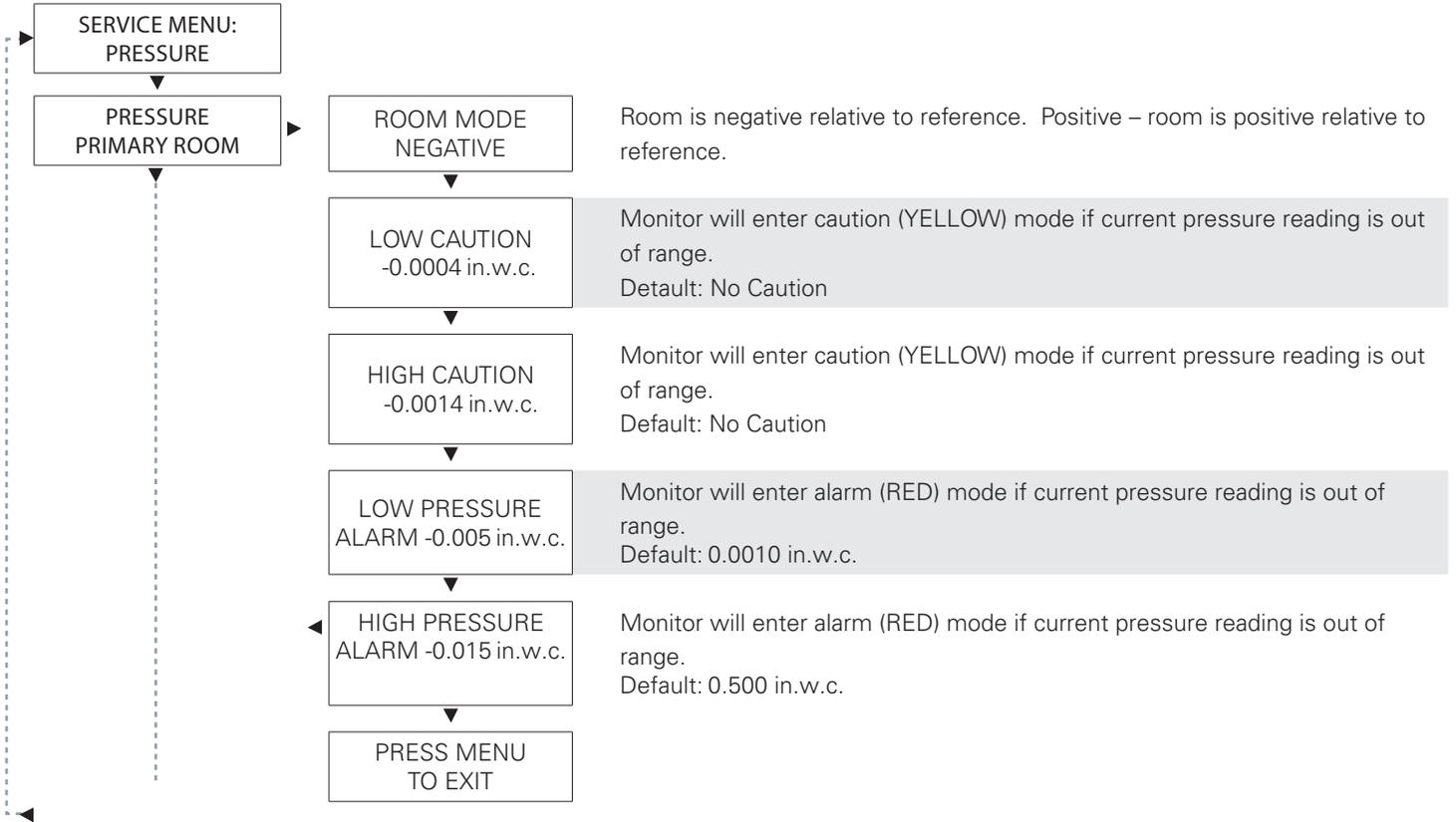
**NOTE:** The Wizard will force you to go through all settings in order. You can re-run the wizard at any time by Loading Defaults in the Diagnostics Menu. Once you have gone through the Wizard fully, the PM will reset.

# ROOM PRESSURE MONITOR

## DISPLAY NAVIGATION

### Pressure Menu

Once in Service Menu, scroll down and press Enter/Menu to enter the Pressure Menu.

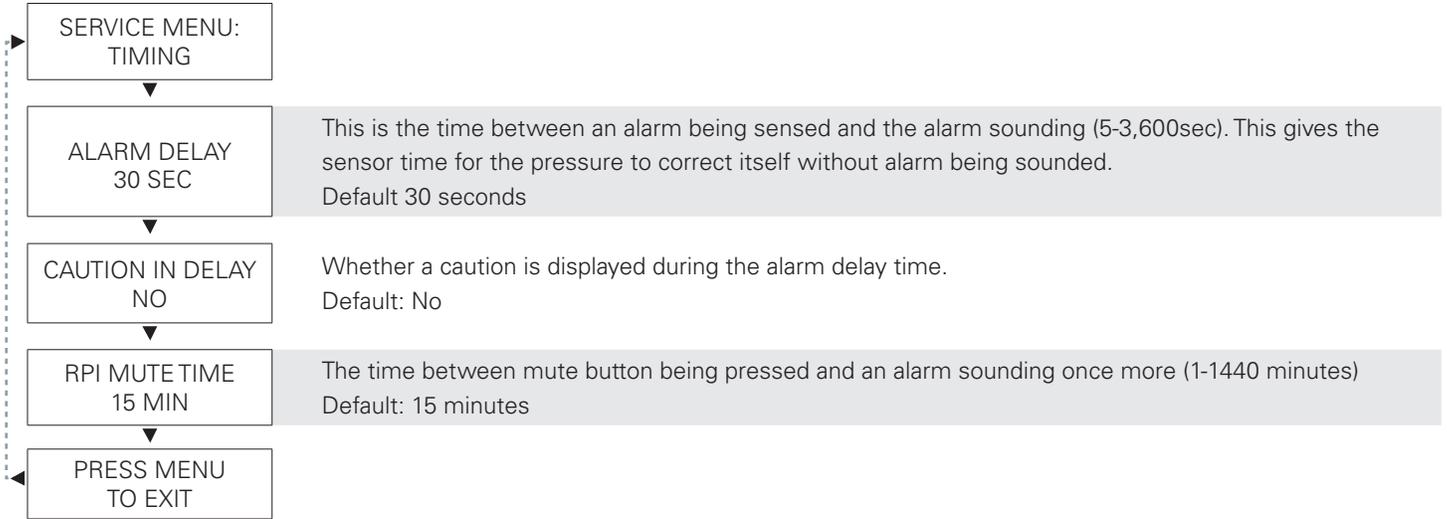


# ROOM PRESSURE MONITOR

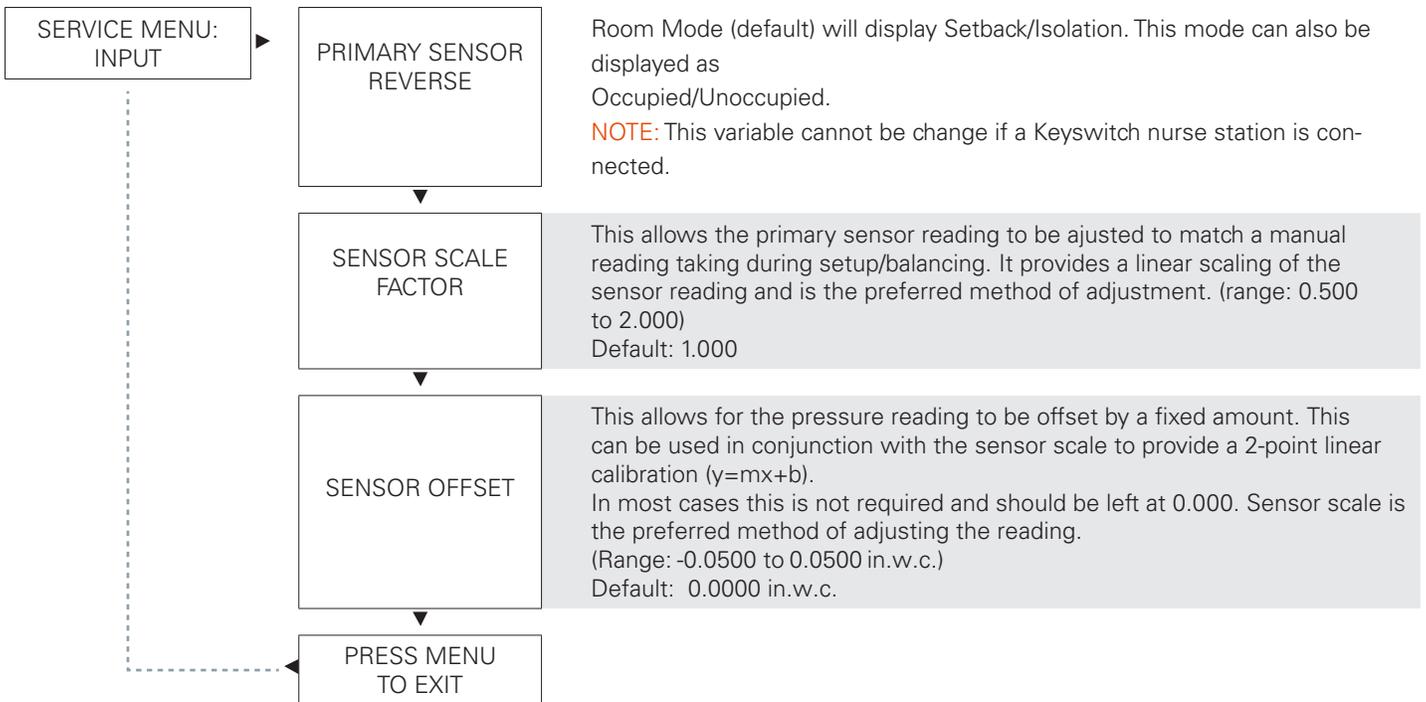
## DISPLAY NAVIGATION

### Timing Menu

Once in Service Menu, scroll down and press Enter/Menu to enter the Occupancy Menu.



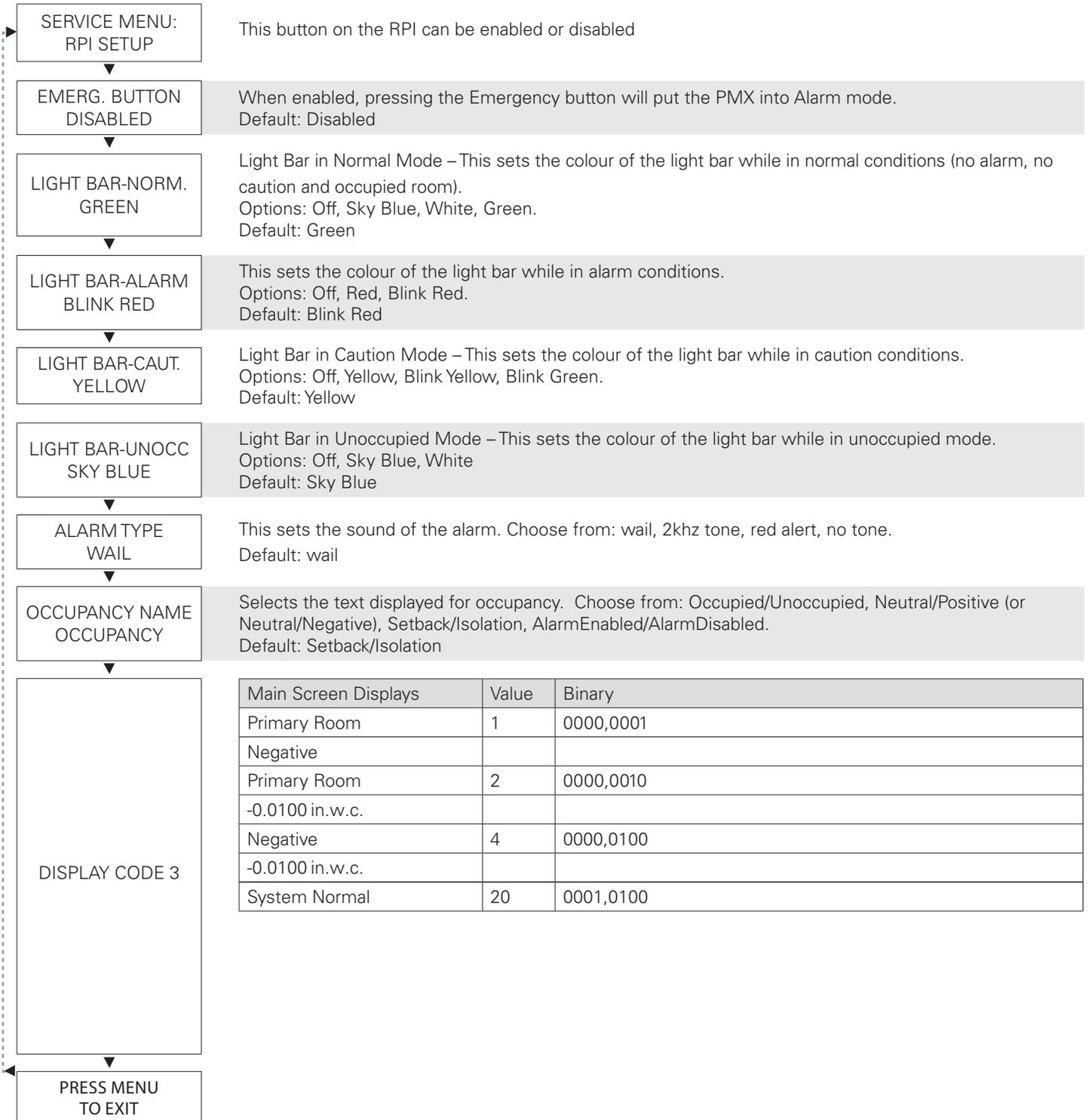
### Input



# ROOM PRESSURE MONITOR

## DISPLAY NAVIGATION

### RPI Setup





Product Improvement is a continuing endeavour at Antec Controls by Price. Therefore, specifications are subject to change without notice.

Consult your Sales Representative for current specifications or more detailed information. Not all products may be available in all geographic areas. All goods described in this document are warranted as described in the Limited Warranty.

The complete product catalog can be viewed online at [AntecControls.com](http://AntecControls.com)

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