

Room Pressure Monitor

Description

The Room Pressure Monitor (RPM) is designed for critical low differential pressure applications that require stringent pressure monitoring and alarming. The unit can be configured to monitor positive or negative pressure in protected environments and hospital isolation rooms per CDC guidelines.



Features

- Touchscreen display
- Password enabled
- Local audible alarm
- Visual red and green room status displays
- SPST alarm relay
- Door status monitor
- Variable alarm delay
- Positive and negative pressure monitoring
- Bar graph display
- CE and RoHS compliant
- Easy to install, set-up and calibrate
- Fingertip operation
- Password security
- Local display of room

Applications

- Hospital patient isolation wards
- Pharmaceutical manufacturing
- Semiconductor fabs
- Cleanrooms
- Research laboratories

Specifications

Performance Data

	547-xxxB	547-xxxA
Accuracy RSS *	± 0.25%	± 0.5%
(at constant temp)		
Non-linearity (BFSL based)	± 0.24%	± 0.49%
Hysteresis	± 0.05%	± 0.05%
Non-repeatability	± 0.05%	± 0.05%
Zero setting tolerance	± 0.5% FS	± 0.5% FS
Span setting tolerance	± 0.5% FS	± 0.5% FS
Thermal Effects **		
Compensated range °F (°C)	± 0.03%FS (± 0.05% FS)	
Overpressure	± 1 PSI	
	± 15" WC for ± 0.1 and ± 0.05 in WC	

* RSS of Non-linearity, non-repeatability, and hysteresis

** Units calibrated at nominal 70°F (21°C). Maximum thermal error computed from this datum.

Environmental Data

Temperature	
Operating *	32°F (0°C) to 120°F (50°C)
Storage	-20°F (-30°C) to 160°F (70°C)
Operating humidity	5% to 95% rh (non-condensing)

* Operating temperature limits of electronics only.

Physical Description

Case	Fire retardant plastic (NEMA 1, IP20 rated for indoor applications)
Dimensions	8" H x 5.1" W x 1.8" D (203 mm H x 130 mm W x 46 mm D)
Electrical connection	Removable terminal block
Pressure fittings	Barbed fittings for 1/4" OD tubing

Specifications, Continued

Weight (approx.) 1.5 lbs (680 g)
 Mounting 4 x 4 plaster ring
 (mounts to double gang electrical box)

Communications Option

BACnet MS/TP ASC
 P1 FLN trunk

Display

LCD 128 x 128 RGB backlit
 Status indicators Green LED – Normal
 Red LED – Alarm
 Backlit LCD

Electrical Data (Voltage)

Circuit 3-wire (Exc, Out, Com)
 Output * 0 to 5 Vdc
 0 to 10 Vdc
 Excitation 18 to 32 Vac, 50 to 60 Hz
 Power consumption 5 W
 Alarm output SPDT relay
 1A @ 24 Vdc

* Calibrated into a 50K ohm load, operable into a 5000 ohm load or greater.

Electrical Data (Current)

Circuit 2-wire
 Output 4 to 20 mA
 External load 0 to 510 ohms
 Excitation 18 to 32 Vac, 50 to 60 Hz

Pressure Media

Air or non-conductive, non-explosive gases.

Certifications

CSA Standard C22.2 No. 0-M91 General Requirements
 Canadian Electrical, Part 1
 CAN/CSA C22.2 N9. 0.4-04 Bonding of Electrical Equipment
 CAN/CSA-C22.2 No. 61010-1-04 Safety Requirements
 for Electrical Equipment for Measurement,
 Control and Laboratory Use
 Part 1: General Requirements
 ANSI/UL61010-1 (2nd Edition) Safety Requirements for
 Electrical Equipment for Measurement,
 Control

Accessories



547-100 Pressure Tap Plate

Ordering Information

Product Number	WC	Protocol	FS
547-101A	+/- 0.05" WC (12.5 Pa)	P1	0.5%
547-102A	+/- 0.1" WC (25 Pa)	P1	0.5%
547-103A	+/- 0.25" WC (62.5 Pa)	P1	0.5%
547-104A	+/- 0.50" WC (12.5 Pa)	P1	0.5%
547-105A	+/- 1.0" WC (250 Pa)	P1	0.5%
547-106A	+/- 2.55" WC (625 Pa)	P1	0.5%
547-107A	+/- 5.0" WC (1250 Pa)	P1	0.5%
547-101B	+/- 0.05" WC (12.5 Pa)	P1	0.25%
547-102B	+/- 0.1" WC (25 Pa)	P1	0.25%
547-103B	+/- 0.25" WC (62.5 Pa)	P1	0.25%
547-104B	+/- 0.50" WC (12.5 Pa)	P1	0.25%
547-105B	+/- 1.0" WC (250 Pa)	P1	0.25%
547-106B	+/- 2.55" WC (625 Pa)	P1	0.25%
547-107B	+/- 5.0" WC (1250 Pa)	P1	0.25%
547-201A	+/- 0.05" WC (12.5 Pa)	BACnet	0.5%
547-202A	+/- 0.1" WC (25 Pa)	BACnet	0.5%
547-203A	+/- 0.25" WC (62.5 Pa)	BACnet	0.5%
547-204A	+/- 0.50" WC (12.5 Pa)	BACnet	0.5%
547-205A	+/- 1.0" WC (250 Pa)	BACnet	0.5%
547-206A	+/- 2.55" WC (625 Pa)	BACnet	0.5%
547-207A	+/- 5.0" WC (1250 Pa)	BACnet	0.5%
547-201B	+/- 0.05" WC (12.5 Pa)	BACnet	0.25%
547-202B	+/- 0.1" WC (25 Pa)	BACnet	0.25%
547-203B	+/- 0.25" WC (62.5 Pa)	BACnet	0.25%
547-204B	+/- 0.50" WC (12.5 Pa)	BACnet	0.25%
547-205B	+/- 1.0" WC (250 Pa)	BACnet	0.25%
547-206B	+/- 2.55" WC (625 Pa)	BACnet	0.25%
547-207B	+/- 5.0" WC (1250 Pa)	BACnet	0.25%

Dimensions

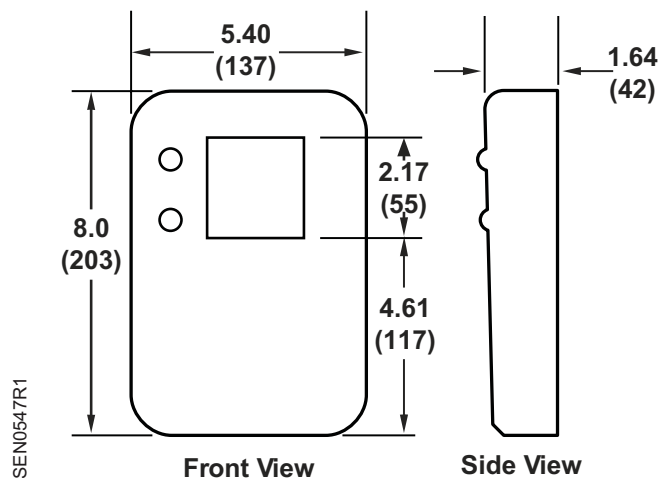
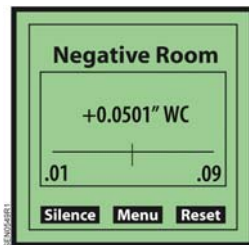
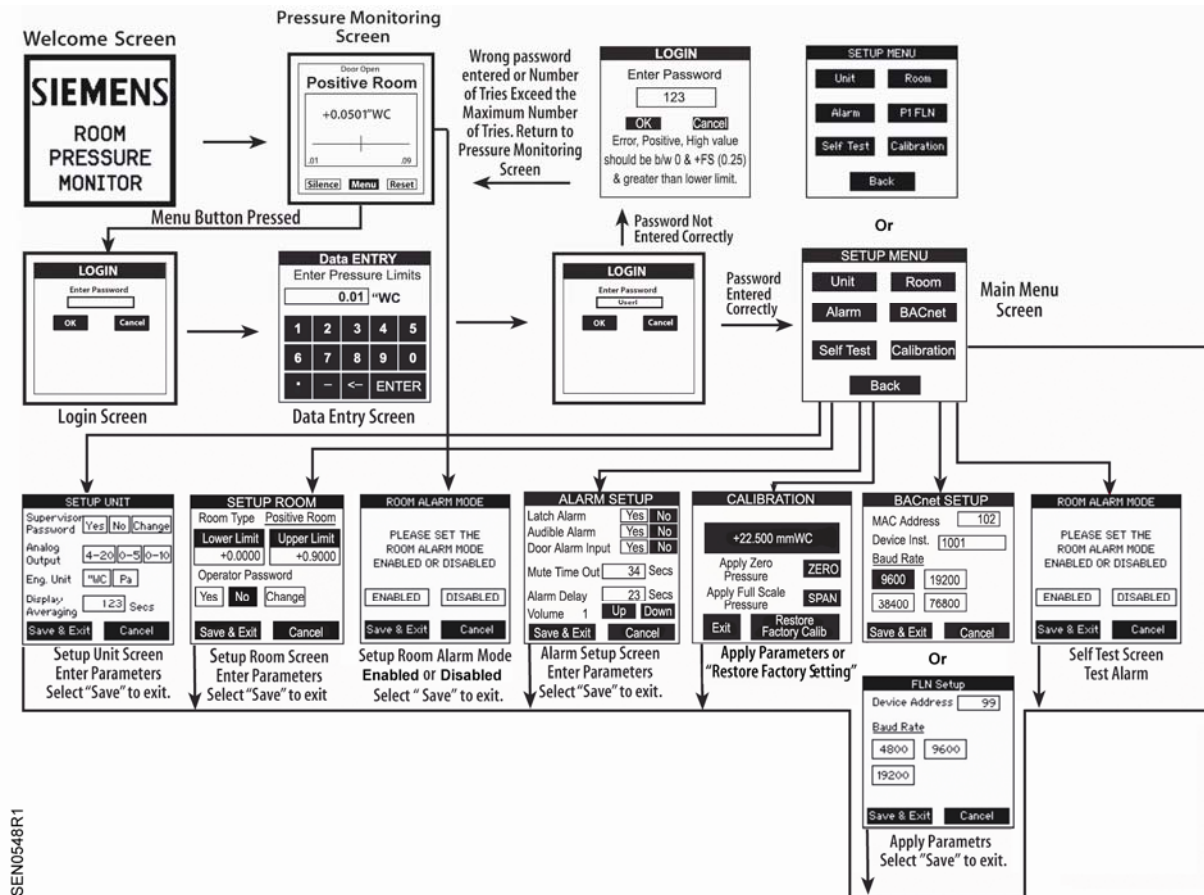


Figure 1. Dimensions in Inches (Millimeters).

RPM Menu Tree



If pressure is normal, the screen is green



When the door is open, the screen is yellow until the alarm delay is reached



If pressure falls outside of preset limits (Alarmed State), the screen is red

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