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The Modus Model RPM-1 takes advantage of our time-proven sensor technology to monitor, alarm and/or control critical room to room differential pressures. The same instrument monitors either positive or negative room pressures.

Monitoring of hospital rooms such as operating rooms and isolation rooms for housing contagious patients is a typical application. Other applications requiring differential pressure monitoring are fume hoods, clean rooms, computer rooms, asbestos abatement projects etc. This monitor is extremely sensitive and performs reliably at very low room pressures.

It is easily mounted on a wall and the installer has the choice of rear or bottom knockouts for electrical and pressure connections. All electrical and mechanical components are housed in a tough polycarbonate Type 13/IEC529, IP65 enclosure with a clear, gasketed polycarbonate cover for easy viewing of display and room status.

Pressure is displayed on the front panel with a resolution of 0.001 in of water (or 0.1 Pascals). The unit measures positive or negative pressure. A minus sign indicates a negative room pressure. A small light, next to the digital display, indicates the selected units of measurement (inches of water or Pascals). A bright red and a bright green LED alert those approaching of the status of the room. The pressure at which the lights change state can be adjusted from the front panel.

The room pressure monitor comes standard with a SPDT relay (for supplemental controls such as audible alarm or remote status indication), and 3 analog output signals, 0 to 5 VDC, 0 to 10 VDC and 4 to 20 mA. These analog outputs are proportional to the room pressure.

A selector switch allows field setup for either 120 VAC or 240 VAC 50/60Hz service. 24 VAC operation is optional.

Modus Model RPM-1

General Eastern Room Pressure Monitor

Modus Model RPM-1 is a General Eastern product. General Eastern has joined other GE high-technology sensing businesses under a new name—GE Industrial, Sensing.

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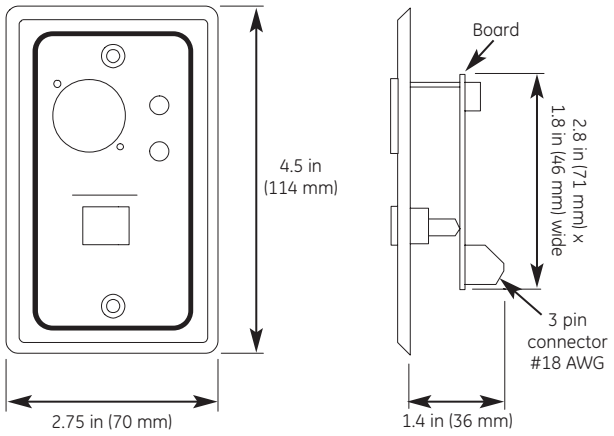
Model AN-1A Specifications

This single-point annunciator provides a visual and audible warning of an alarm condition occurring at a remote location. It operates, either with the Room Pressure Monitor Model RPM-1 which supplies the necessary power to the annunciator, or with any dry contact and an external power supply.



Model AN-1A dimensions

Alarm Sequence
Under normal conditions, the green LED is "steady on". When an alarm condition occurs, the green LED turns off, the red LED "flashes on" and the audible alarm "pulses on". Momentarily pressing the acknowledge button silences the audible alarm but the red LED stays "flashing on", as a reminder, until the alarm fault is corrected. When the conditions are normal again, the annunciator resets itself. The green LED returns to "steady on", the red LED and audible alarm are "off".

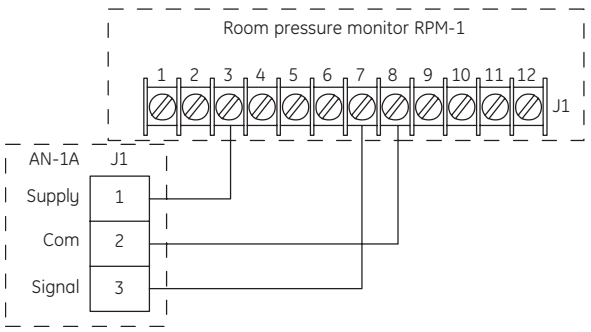
Behind the front panel are two potentiometers. One potentiometer provides a variable time delay from the moment the alarm is received by the annunciator, until it responds to the alarm condition. This delay may be adjusted between 5 and 45 seconds. The annunciator will not change to the alarm mode if the alarm condition disappears before the end of the time delay. This eliminates nuisance alarms caused by short transients.

The other potentiometer sets the volume of the audible alarm, from zero to maximum. The volume is also a function of the power supply voltage. The external power supply to the annunciator can be between 5 and 32 VDC, with a maximum supply current of 13 mA. The maximum volume levels that can be expected from a distance of 1 m at various supply voltages are outlined below:

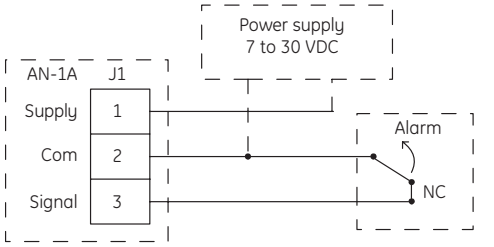
External Supply	Maximum Volume
5 VDC	80 db
8 VDC	92 db
12 VDC	98 db
18 VDC	103 db
24 VDC	108 db

The input signal may be either a dry contact or a voltage. The input voltage may be as high as the supply voltage. The alarm mode occurs when the input signal exceeds 2.5 V. When the signal is a dry contact, the contact must be closed under normal conditions. The current through the contact is 1 mA.

The annunciator is designed for flush installation in a wall. The front panel is the same size as the standard electrical wall plate (2.75 in x 4.5 in) (69.85 mm x 114.30 mm). It is supplied with a standard plastic (PVC) switch box, 2.81 in deep. This box includes four integral clamps, swing arms and ears. Other boxes with a minimum depth of 1.25 in (31.75 mm) may be substituted by the user.



A. Wiring to the room pressure monitor model RPM-1



B. Wiring to dry relay contact with external power supply

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Model AN-1A Specifications

Ordering Information

Order Number
AN-1A

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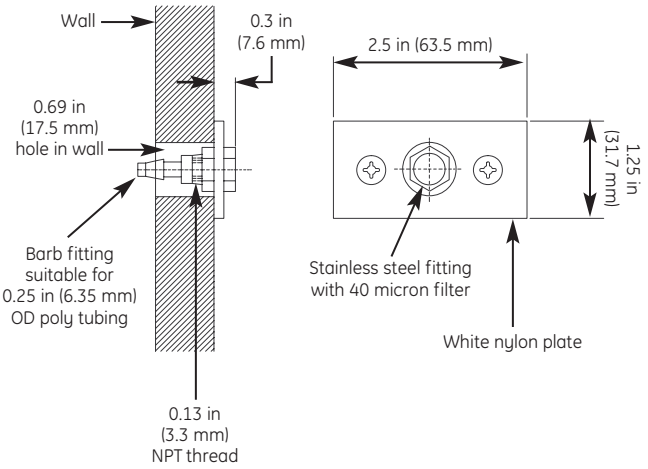
Model AST-1 Specifications

Static Pressure Probe
This pressure probe conveniently terminates the end of a 1/4 in (6.35 mm) OD plastic tubing at the point where static pressure is being measured.

Ordering Information

Order Number
AST-1



Typical installation of Model AST-1

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Power Supply Specifications

Modus offers three models of small AC to DC power supplies. The low output ripple and good voltage stability under varying load and line power conditions make these power supplies well suited for powering control instruments and transmitters, such as 4 to 20 mA current loops.

These power supplies are conservatively rated for long life and do not require derating within the temperature, current output and line voltage operating ranges.

120 VAC in/VDC out

Performance

All power supplies are current-limited and internally protected to prevent damage from accidental short circuits. A status light (LED) indicates the presence of an output voltage on the PS2- and PS3- models. Isolation between input and output is 1500 Vrms minimum and the output is floating to allow grounding where it is most convenient. The Input voltage range is 105 to 135 VAC 50/60 Hz.

Environmental

Operating Temperature
32°F to 125°F (0°C to 52°C)

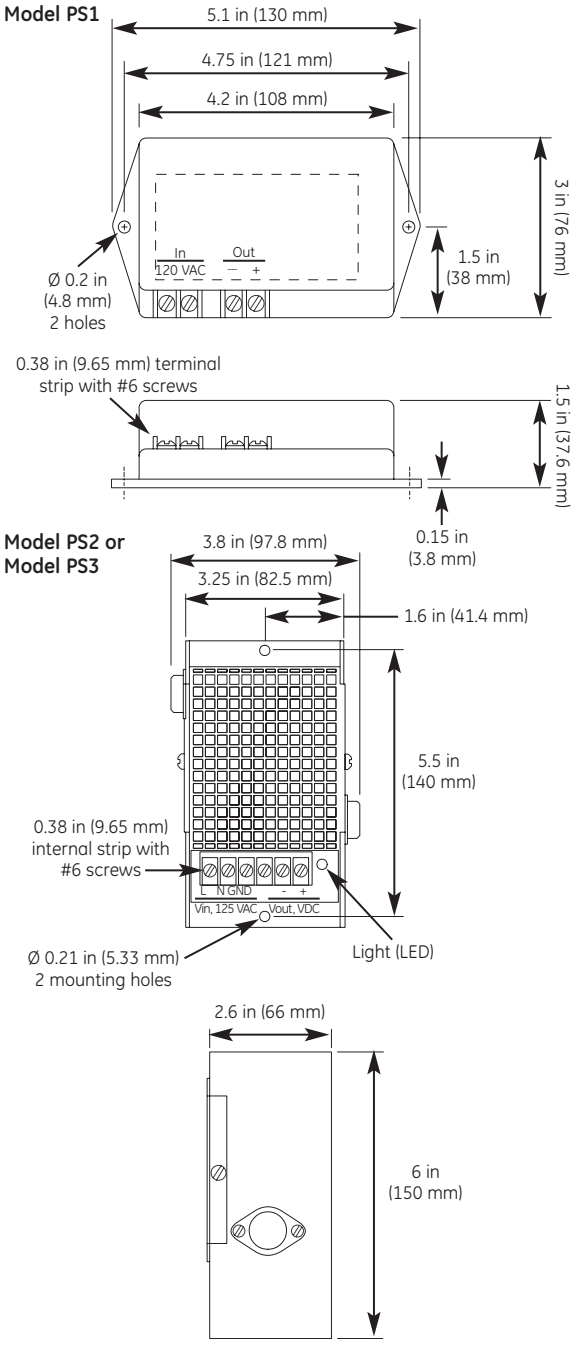
Electrical Connections

Wiring is by means of 3/8 in terminal strip with #6 screws

Physical

Weights

- PS1: 0.5 lb (236 g)
- PS2: 1.4 lb (625 g)
- PS3: 1.6 lb (707 g)



Power Supply dimensions

Ordering Information

Order by model number

Model No	Output Current	Output Voltage	Typ. Load Regulation*
PS1-12	150 mA	12 VDC ± 0.5 V	10 mV
PS1-24	70 mA	24 VDC ± 1.2 V	22 mV
PS2-12	625 mA	12 VDC ± 0.5 V	18 mV
PS2-24	365 mA	24 VDC ±1.0 V	25 mV
PS3-24	625 mA	24 VDC ±1.0 V	25 mV

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Model RPM-1 Specifications

General

- Resolution to 0.001 in of water or 0.1 Pa
- Dependable solid state design
- Rugged Type 13/IP 65 Enclosure
- Cost effective and easy to install

Performance

Accuracy of Reading
±1% full scale (FS)

Accuracy of Alarm Output
±1% of setpoint (lights and relay)

Standard Range
±0.1 in of water (or ± 25 Pa)

Resolution
0.001 in (0.02 mm) of water (or 0.1 Pa)

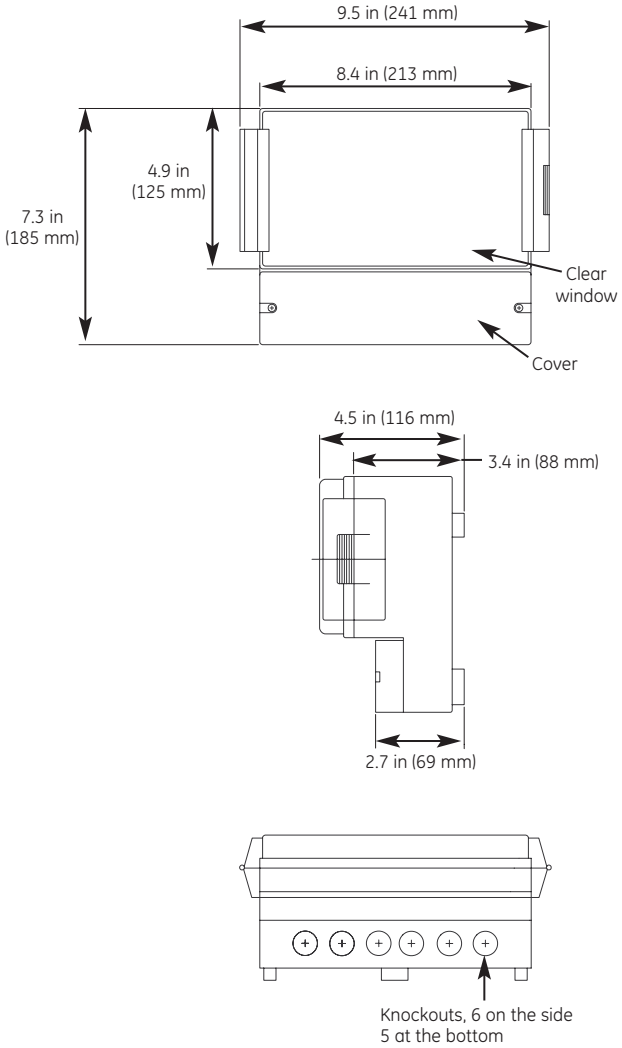
Panel Indicator Lights
One red and one green LED

Display
LCD three digits 0.5 in (12.70 mm) digit height

Alarm Output
SPDT relay contacts rated at 5A at 30 VDC or 120 VAC, 4A at 240 VAC resistive

Deadband
Preset at 5% of range, field adjustable from 1 to 20%

Analog Outputs
- 0 to 5 VDC, 2.5 V at zero pressure 2 mA maximum, 0 to 10 VDC, 5 V at zero pressure 2 mA maximum
- 4 to 20 mA sourcing, 12mA at zero pressure, maximum loop resistance is 580 Ω
- Power requirements 95-135/190-270 VAC 50/60 Hz or 19.5 to 30 VAC 50/60 Hz



Modus Model RPM-1 dimensions

Maximum Power Consumption
5 Watts

Electrical connections

3/4 in (19.05 mm) terminal strip with # 6 screws

Operating Medium
Air or non-corrosive, non-explosive gas

Maximum Momentary Pressure Limit
±6.0 in (±1.5 kPa) of water

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Model RPM-1 Specifications

Environmental

Operating Temperature
32°F to 120°F (0°C to 50°C)

Storage Temperature
-20°F to 160°F (-30°C to 70°C)

Effect of Temperature on Reading
±0.05%/°C

Operating Humidity Range
10% to 90% RH

Physical

Color
Light grey

Construction
Glass filled polycarbonate, flammability rating of UL94 V-1

Cover
Clear polycarbonate, flammability rating of UL94 V2

Knockouts
6 in lower front and 5 in back of enclosure

Hinges
Strong and removable, allow hinging from either side, open 180°

Mounting
Three-point mounting

Physical Dimensions
See outline drawing

Weight
2.6 lb (1160 g)

Calibration
Traceable to National Institute of Standards and Technology (NIST)

Ordering Information

RPM-1 **(P = Power, R = Range)**

Code	Power Range
A	120/240 VAC, 50/60 Hz
B	24 VAC, 50/60 Hz

Code	Pressure Range	Resolution wc/Pa
01E	-0.1 to 0.1 in wc (-25 to 25 Pa)	0.001 in (0.1 Pa)
04E	-0.5 to 0.5 in wc (-125 to 125Pa)	0.001 in (1 Pa)
05E	-1.0 to 1.0 in wc (-250 to 250 Pa)	0.01 in (1 Pa)

RPM-1 - ___ - ___ Typical model number.

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920-246A

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