ACCUSTAT™

Room Pressure Monitoring, without room for guesswork.

ACCUSTAT P2 Portable

ACCUSTAT Stationary

ACCUSTAT P2DL Data Logger

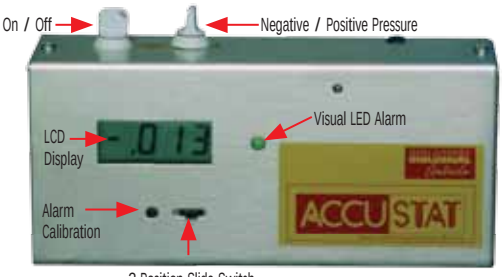
MADE IN USA

Applications

- Hospital Room Isolation
- Bone Marrow Suites
- Medical Labs
- Intensive Care Units
- Clean Rooms
- Emergency Rooms
- HVAC Systems
- Laundry Areas
- Research Facilities
- Hospital Labs
- Pharmaceutical Manufacturing
- Laboratory Pressurization
- Schools and Universities
- Construction & Renovation

ACCUSTAT™ Stationary Model

The ACCUSTAT™ room pressure monitor is designed specifically for monitoring low negative or positive pressure differentials. Accurate pressurization is a vital step in creating a compliant, controlled and safe environment. Ideally suited for monitoring hospital isolation rooms or pressure differentials in other critical applications.



3 Position Slide Switch
Alarm Set Function Audio On

AC-022

State-of-the-art microprocessor design operates from a single positive supply power source. Temperature compensation provides for consistent predictable performance within specified temperature ranges. Pressure readings are instantaneous and accurate with many optional features to allow for custom designed installations.

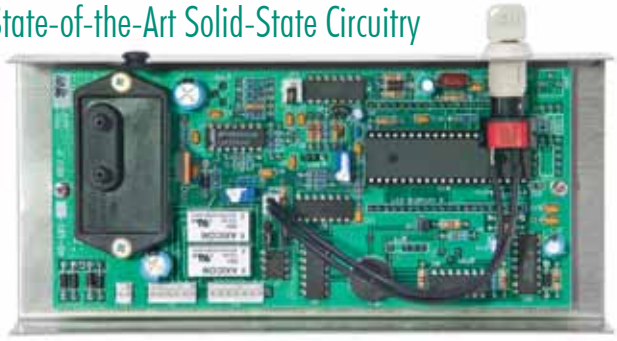
ACCUSTAT™ Wallplate
Stainless steel, wall mounted probe plate secures tube for thru the wall monitoring.

ACCUSTAT™ Differential Pressure Monitors, Stationary, BMS, Portable & Data Logger

Meets all CDC Guidelines

- Accurate to .001" W.G.
- Status LED
- Large scale display
- Keyed On/Off
- User alarm set point
- Audible alarm with mute
- One minute delay
- 4/20 MA output available
- Monitor negative or positive

State-of-the-Art Solid-State Circuitry



A large lighted digital display readout identifies instantaneous sub-fractional pressure changes when compared to the adjoining areas. Pressure readings are accurate to within .001" WG with audio and visual alarms identifying unsatisfactory conditions. The ACCUSTAT™ utilizes a highly sensitive pressure transducer eliminating the varying inconsistencies of "airflow" monitors. Air pressure tends to be more consistent and less corrupted by airflow direction disruption, thereby reducing the frequency of false alarms and inconsistent readings.

The need for monitoring pressure differentials between areas has a broad range of applications throughout many critical environments. From the concerns and safety of health care personnel to the protection of processes, products and equipment, maintaining a positive or a negative pressurization environment satisfies industry compliance. ACCUSTAT™ pressure monitoring capabilities include:

For Negative Pressure

Autopsy Room, Body Holding Room, Laboratory, Isolation Rooms, Decontamination Areas, Linen Sorting, ETO Sterilizer Room, Soiled Utility Rooms, X-Ray.

For Positive Pressure

Clean linen storage, Clean workroom and holding areas, Delivery ICU, Med Rooms, Pharmacy, OR, Nursery, Recovery, Trauma.

Some of these areas need continual monitoring, while others need periodic monitoring. CDC Guidelines for TB Control of 1994 recommend, and OSHA enforces that "TB isolation rooms should be checked daily for negative pressure while being used for TB isolation". Three different ACCUSTAT™ versions are designed for these varying needs.

ACCUSTAT™ P2 Portable

Same reliable accuracy, but built to go places

ACP2-200

Compact Case, 5 lbs
Dimensions 10"x10"x5"

Biological Controls introduces its next generation ACCUSTAT P2 portable differential pressure monitor. For over 12 years the original ACCUSTAT P1 has provided reliable service, versatility and convenience as the original portable pressure monitoring device. The P2 has evolved with state-of -the-art instrumentation and lots of new features. Virtually all of it's components have been redesigned, re-engineered and upgraded. Monitor either positive or negative pressure by the flick of the switch. Measure pressures from .001" WG (inches of water) or display in Pascals. The ACCUSTAT P2 is a true pressure transducer and not an airflow meter. You get true direct accurate pressure readings regardless of the air quality and without recalibration or inconsistencies within the measured space. .

The original P1 stainless steel case was tough, but the new P2 case is virtually indestructible and comes with its own unconditional lifetime warranty. New electronic state-of-art components are housed in this all new weatherproof compact polycarbonate case. We're still lightweight at less than 5 lbs. but more durable, compact and totally self-contained in its lockable enclosure. The new P2 case has been designed to accommodate all of its accessories so they stow neatly, safely and conveniently inside the case. No loose accessories to get lost or damaged. Makes traveling with the unit, especially on a plane far easier and more convenient.

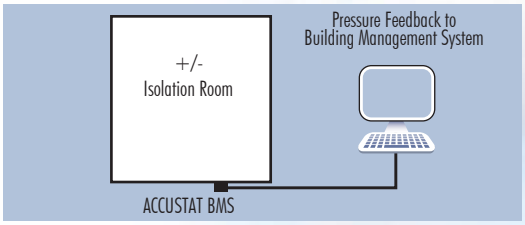
Being portable, extended battery life for the P2 was a major objective. So a new NiMH (Nickel-Metal Hydride) battery design was incorporated more than tripling the original battery life to over 48 hrs. on a single charge. A new battery status monitoring display provides up to the second remaining power usage. Unit can also operate on plug-in 100VAC-240VAC 50/60Hz power input. (international plug adapters are included) Automobile power port option is available for on-the-road charging using a car cigarette lighter port. New temperature compensation micro-circuits help improve reading stability between field use operations. Simple dial "zero" calibration feature makes occasional adjustment easy yet precise. All the data you need to know is easy to view and access and is directly at your fingertips. User friendly display panel with operational instructions permanently mounted makes set-up, operation and pressure monitoring easy, accurate and consistent. A large LCD display and LED indicators allow the user to adjust custom alert set points (both audible and visual.) The new P2 provides you instantaneous readings, unparalleled accuracy with incredible ease of operation.

Expect the same level of reliability and accuracy as from the original P1, but expect a new experience in versatility and portability with the new P2. The next generation of portable pressure monitoring instrumentation has just arrived.

ACCUSTAT™ BMS

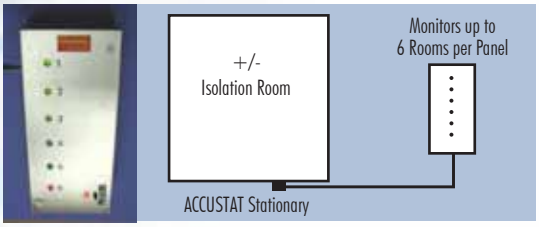
Building Management System Tie-in (AC-BMS-002)

There are two remote monitoring possibilities with the ACCUSTAT™: A direct interface with the building management system (ACCUSTAT™ BMS) or a localized remote module (following section). The BMS is a built-in module to allow transmission of a 4-20 mA analog output. This can be tied into a BAS/EMCD system. An alarm contact is also provided by the monitor for visual or audible remote annunciation. The time-delayed audible alarm feature is activated after a one minute time expiration.



Remote Monitoring Panel (RMPR-002)

This option allows the status of up to six rooms to be individually monitored from a single monitoring station. The stainless steel panel contains six red and green status LEDs, which conform to the status of the individual stationary ACCUSTAT's monitoring the rooms. An audible alarm signal with mute feature and bi-color LED for visual references, identify any room in non-compliance. Additional mute switches can be included to disable indications for individual rooms in the event the room isn't being utilized to monitor negative pressure.



Remote Monitoring Panel - Remotely monitor up to 6 locations with bi-color visual and audio alarm features

ACCUSTAT™ P2DL Data Logger

Compact, self contained, reliable, with brains and a great memory

For most applications the features of the ACCUSTAT P2 are more than adequate, but when verification and confirmation of measurements are required (especially gathering data over long periods or in an unmanned environment), the new ACCUSTAT P2DL provides a data logging feature. Utilizing all of the same features and functions of the ACCUSTAT P2 the ACCUSTAT P2DL adds a very easy-to-use Data Logger.

ACP2DL-200

The Logger allows for storage of over 32,000 pressure readings that are time-stamped in permanent non-volatile memory so the data is safe regardless of what happens to P2DL power or the time needed to retrieve the data. Sampling rates from once-a-second to once-every-12 hours may be selected thereby providing data records that may extend from 9 hours to over 2 years.

The User Software provided on a CD (also downloadable from the WEB) is compatible with most Windows OS computers including laptops and presented with a simple icon-driven menu. This allows start-up, select units and sampling rates, query current status, stop, or reset the logging, as well as viewing the stored P2DL data in an auto-scaling X-Y graphical-format that can be named, printed or exported to Microsoft EXCEL for custom presentations.

Just plug the provided USB cable from the P2DL faceplate to your computer and start logging. The P2DL can continue to log or suspend logging without the computer interface once started. This allows readings to be gathered when it is not convenient to be connected to a computer. The data can then be retrieved at your convenience.

Status indicators (LEDs) are provided on the P2DL to identify Logging-Active, Suspended-Logging, Memory Full, and System Diagnostic Verification.

If you need to know what the status is now or what the status was later, there's an ACCUSTAT that measures up.

Side Panel USB Connection

Accessories included, battery charger, 10' probe tubing, 6' USB cable, software program CD, storage pouch and adjustment tool.

ACCUSTAT™ Specifications (All Models)

ACCUSTAT™ Stationary Model

Electrical Data:
Operating power: 12V
Minimum/maximum voltage: 12V to 16V
Current Draw: 100 mA
Maximum draw: <2W

Monitoring Data:
Microswitch pressure transducer
Pressure range: -0.100 to +0.100 inches water
Display update: 1.0 second
Maximum over pressure: 5.0 psi
Accuracy of reading: ±1% F.S.

Mechanical Data:
LCD display: 1 line
LCD character height: 0.5"
Cabinet: stainless steel
Dimensions: 7.367"(w) x 3.25"(h) x 2.25"(d)
Weight : 22 oz.
Mounting : Surface/wall mount
Operating temperature: 55-105ºF (13ºC to 41ºC)
Operating humidity: 10% to 94% RH non-condensing
Pressure range: -0.001 to + 0.999WG
Sampling hole requirement: ¼ inch hole needed for sampling tube into room, ambient sensed directly from monitor.

Operation Data:
Bi-colored visual alarm LED: green normal, red alarm mode
Visual alarm: immediate upon reaching setpoint
Audible alarm: one minute delay
Dry contact relay outputs
Alarm setpoint storage: non-volatile memory
Alarm setpoint: user determined adjusted from front panel
Alarm calibration: from front panel
Accuracy of alarm output: ±1% of setpoint
Standard range: ±0.1 inches of water (or ±25 Pascals)
Resolution: 0.001" of water (or 0.1 Pascals)
Alarm output: SPDT relay contacts rated at 1A at 30m VDC or 120 VAC Resistive

Analog outputs:	0-5VDC, 2.5V at zero pressure 2mA max 0-10VDC, 5V at zero pressure 2mA max Max loop resistance is 580 ohms
Operating medium:	Air or non-corrosive, non-explosive gas
Tamperproof controls:	On/Off keypad switch Positive or negative indicator keyed switch

ACCUSTAT™ BMS

Pressure Range:
Range: -.100 to ± .100 inches water (display)
Resolution: 1% of reading
Display Update: 1.0 second
Maximum Over Pressure: 5 psi

Electrical Outputs:
Alarm: One SPDT relay can be set over range of -.05 to +.05 inches water. Contacts can be set for fail-safe operation (i.e. contact closed power loss.) Alarm output has built-in 1-minute delay, both red LED and piezo alarm.

Remote:	4-20 mA, Standard Range 0-10 volts -.100 to + .100 inches water 7 mA + -.100 inches water 12 mA + .000 inches water 17 mA + .100 inches water

Maximum Range: 1000 ft ≠ 20 awg wire into 250 ohms load
Maximum Power: 1.3 watts @ 24VDC 3 wire 4-20mA output
115VAC to 24VDC, step-down transformer provided (option)

Mechanical:
LCD Display: 1 line
LCD Character Height: 0.50 inches
Cabinet: stainless steel
Dimensions: 7.37"(w) x 3.25"(h) x 2.25"(d)
Weight: 28 oz.
Shipping Weight: 3 lbs

Environmental:
Operating Temperature : 55-105ºF
Operating Humidity: 10% to 94% RH non-condensing

ACCUSTAT™ P-2 (Portable)

Pressure Monitoring Range Units: Pascal or Water Column:
2 Selectable Ranges:
High - .000 - ± 1" WC or 0.00 Pa - ±300 Pa
Low - .000 - ± .250" WC or 0.00 Pa - ±62.5 Pa
Accuracy: ± 1% Full Scale
Data Sample Rate: 1 per second (Display or Log Memory)
Overload Pressure: ±138" WC or ±34K Pa Maximum
Panel Display:
LCD .1/2" Character Height
Differential Pressure Ports
2 Input Ports (P1 and P2 – Brass .125" OD Connectors)
Accommodates ¼" (.250") OD flexible tubing.
10 feet Black UV resistant flex tubing included

Zero Calibration:
Display: ± Manual Dial Adjustment
Data Logger: ± Software Control

Electrical:
12VDC Input Power Port (12-15VDC) @ 288mW
Panel Jack 2.1mm ID x 5.5mm OD x 12 mm (Male)
Wall Power Module Accessory (powers unit and recharges battery)
Input: 100VAC-240VAC 50/60 Hz @ 600Ma eq/w 6' power cord (Includes International Plug Adaptors)
Output: 12VDC @1.5A (cord plug 2.1mm)
ID x 5.5mm OD x 12mm (Female)

Battery:
7.2VDC Ni-MH type 2200mAh
+48 hrs continuous Battery operation
Recharge to 100% 6-24 hrs
Automobile Power Port (cigarette lighter) adaptor-cable accessory option

Battery Monitor and Charging Circuits:
Regulates Charge rates and prevents overcharge
Displays % Charge and illuminates Charge LED

Pressure Alert Function:
Visual and Audible (with mute)
Accuracy: 1% of set point
User manual Adjust ±
Alert LED (select Green or blinking Red)

Operational Environment:
Temperature: 55ºF-105ºF (13ºC- 41ºC)
Humidity: 10% - 94% RH non-condensing
Sampling Medium: Air or non-corrosive, non-explosive gas only

Enclosure Dimensions and Weight:
Size: 9.60" X 7.42" X 4.00" (LxWxH)
Molded PVC Plastic Box
Water, Dust, Corrosion Proof, Airtight, and UV protected
Padlock Ready
Color: Gunmetal Gray
Lid equipped with Quick-Start Instruction Panel and flex-tubing storage area
Accessories Storage Compartment (all accessories fit within enclosure)
(Optional) External access ports/covers for power and pressure tube access permitting use with the cover closed
Unit Weight: 5 lbs. Including accessories

ACCUSTAT™ P2DL (Data Logger)

Data Logging Function: (optional)
User Interface Software/Drivers CD PC (Windows™/XP/VISTA (32bit) Interface and Accustat P2 USB to PC USB Cable included
Auto Graph-Scaling and labeling functions for PC viewing or data printing Export of raw data to Excel

Log LED Indicators:
Flashing Green LED – Logging Data
Solid Green LED – Log Suspend Mode
Red – Memory Full

Logger Storage Capacity:
34,500 Pressure Reading saved in nonvolatile memory (no data loss if power fails)

Sampling Rates vs Memory Full	
1 Sec - 9 Hours	30 Min - 1.8 Yrs
10 Sec - 3.7 Days	1 Hour > 2 Yrs
1 Min - 22 Days	6 Hour > 2 Yrs
5 Min - 3 Mths	12 Hour > 2 Yrs

Accessories Included:
1- Manual
10'- Flexible Tubing
1-Automobile Power Adaptor Cord (optional)
1-Wall Power Module eq/w international adaptors
1-Accessory storage bag
1- Software CD (eq/w optional Data Logger)
1- Calibration adjustment tool

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