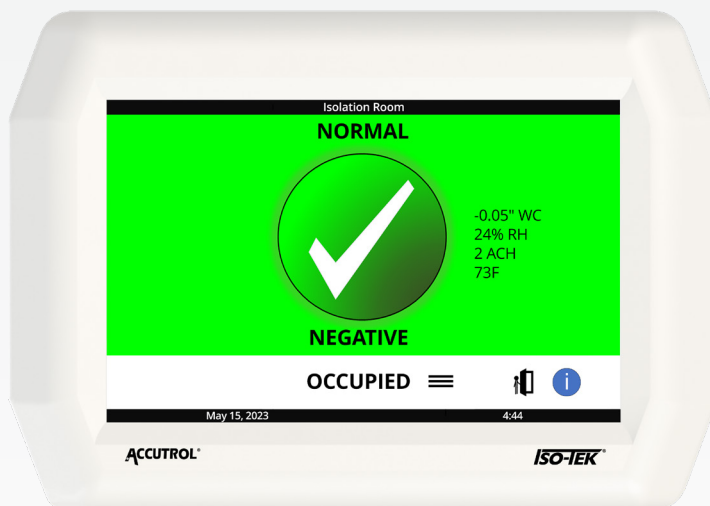




# ISO-TEK<sup>®</sup>

## Room Pressure Monitor

*Advanced Pressure Monitor Technology  
Healthcare, Laboratories, Life Sciences*



### Innovative features for the Iso-Tek<sup>®</sup>

- 7-inch Color Touchscreen
- Intuitive Graphical User Interface
- Bluetooth<sup>®</sup> Configuration Optional
- Detailed Event Tracking Capabilities
- BACnet<sup>®</sup> MS/TP Compatible with Any BAS
- Industry-Leading High Pneumatic Impedance Sensor (HPIS<sup>®</sup>)
- Monitor Up to 4 Rooms on the Same Display
- Monitor Up to 6 Parameters per Room
- Precise, Accurate and Stable Measurement for Isolation Rooms, Operating Rooms, Laboratories and Support Spaces

The Accutrol Iso-Tek® provides the latest in technology in room pressure monitors designed for health care and laboratories. The Iso-Tek provides high-accuracy pressure monitoring in isolation rooms, operating rooms and other hospital applications as well as in laboratories and support spaces.

### High Stability HPIS® Pressure Sensor

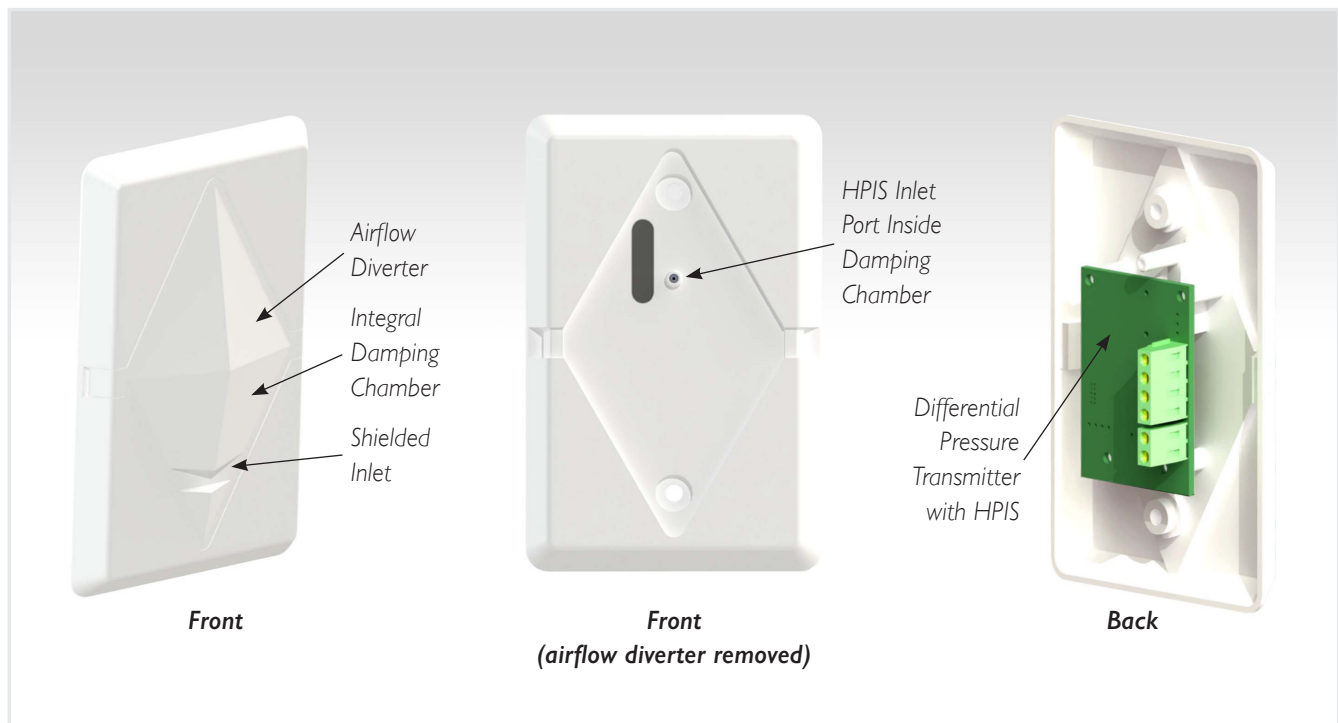
The heart of any room pressure monitor is the sensing device being used. Accutrol utilizes a High Pneumatic Impedance Sensor (HPIS). HPIS combines the best performance features of the diaphragm-based-dead-ended and thermal-based-flow-through type sensors. The high input pneumatic impedance of the micro-flow channel virtually eliminates airflow through the sensor, making contamination nearly impossible. This overcomes the disadvantage that is normally associated with flow-through sensor technology. The airflow through the microchannel with a DP = 0.10" WC (25 Pa) is only **0.000005 CFM** resulting in an inlet velocity of **0.000473 FPM**. The Micro-flow Channel inlet opening is only 5 microns wide, which can be put into perspective when compared to a human red blood cell which is 6-8 microns wide.

### Key advantages resulting from the ultra-low inlet velocity:

- Not susceptible to contamination.
- Not affected by humidity.
- Not affected by tubing length variations.
- Excellent accuracy at ultra-low pressures where room pressure monitors operate.
  - The accuracy of the Iso-Tek using the HPIS sensor is better than 3.0% of reading at 0.01" WC as compared to 16% of reading for a diaphragm-based sensor with a published accuracy of 0.8% of span.
- Excellent long-term stability.
- Not position sensitive.
- No zero drift.

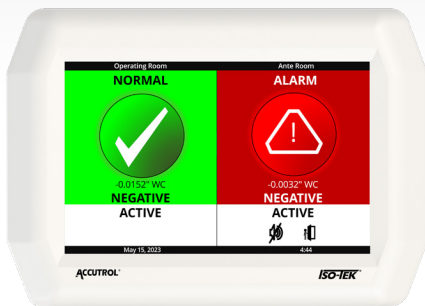
### Iso-Tek Wall-Mounted Pressure Probe

The HPIS Sensor is enclosed in a specially designed wall-mounted enclosure to minimize the influence of room air currents using a unique airflow diverter with a shielded inlet leading to a damping chamber that provides an ideal pressure zone with virtually no possibility for infiltration of contaminants.



## Multiple Pressure Display Capability

The Iso-Tek offers a 7" resistive touchscreen display which can be used with nitrile gloves or bare hands. Bold bright visual indicators ensure the room status is clearly indicated from a distance. The Iso-Tek is capable of monitoring and displaying up to four independent pressures simultaneously. A single tap of the touchscreen allows the user to drill into each individual room for more detailed information on ACH, relative humidity, temperature, alarm status, pressure, room mode, door status, and polarity.



## Bluetooth® Configuration

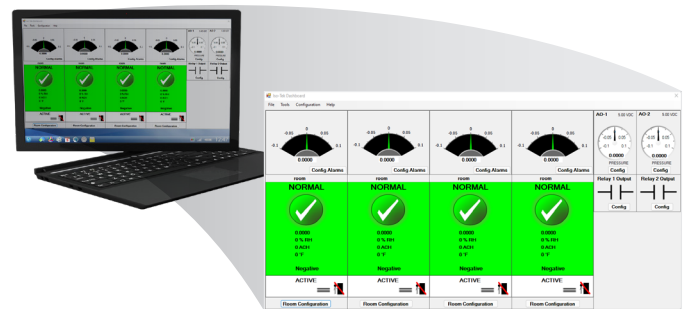
The Iso-Tek is available with a Bluetooth® configuration option, which alleviates the requirement for a USB connector when accessing the monitor via Accutrol's Insight graphical user interface software.

## BACnet® MS/TP Configuration

The optional BACnet® MS/TP allows direct communication to the Building Automation System (BAS) where desired.

## Insight Software with Intuitive Graphical User Interface

The Iso-Tek also incorporates a simple and intuitive graphical user interface which enables the user to configure the monitor for their specific room and alarm requirements. Accutrol Insight software, provided free of charge, ensures that the owner is not required to contact the manufacturer of the system when changes are required in the field.



## Specifications

### PRESSURE SENSOR

<b>Pressure Range</b>	± 0.100"wc (± 25Pa)
<b>Pressure Measurement Resolution</b>	0.00000335"wc (0.00083Pa)
<b>Accuracy</b>	± 3% of reading
<b>Long Term Stability</b>	± 0.00008"wc (± 0.02Pa) per year max
<b>Status Indicators</b>	Green LED to indicate status
<b>Connections</b>	4-pos. screw terminal Note: connect to I/O Module using Windy City Wire #042003 only
<b>Operating Temperature</b>	-4° to 176° F (-20° to 80° C)
Storage Temperature	-40° to 185° F (-40° to 85° C)
Humidity	0 to 95% non-condensing

### DISPLAY (LOCAL HMI)

<b>Display Type</b>	7" LCD-TFT resistive touchscreen display with LED backlight
<b>Color</b>	RGB 65K colors
<b>Active Area</b>	6.49" W x 3.937" H (164.9mm W x 100mm H)
<b>Installation</b>	Mounts on triple-gang standard dept electrical box
<b>Resolution</b>	800 x 480 pixels
<b>Speaker</b>	Audible notifications, 550~18KHz, 83dBA SPL @ 1W/0.5M
<b>Connections</b>	RJ-45 connector Note: connect to I/O module using factory-provided cable only
<b>Configuration Port</b>	USB 2.0, Isolated, Type C Connector; connect to PC with Iso-Tek Insight
<b>Operating Temperature</b>	-4° to 150° F (-20° to 65° C)
Storage Temperature	-40° to 185° F (-40° to 85° C)
Humidity	10 to 95% non-condensing

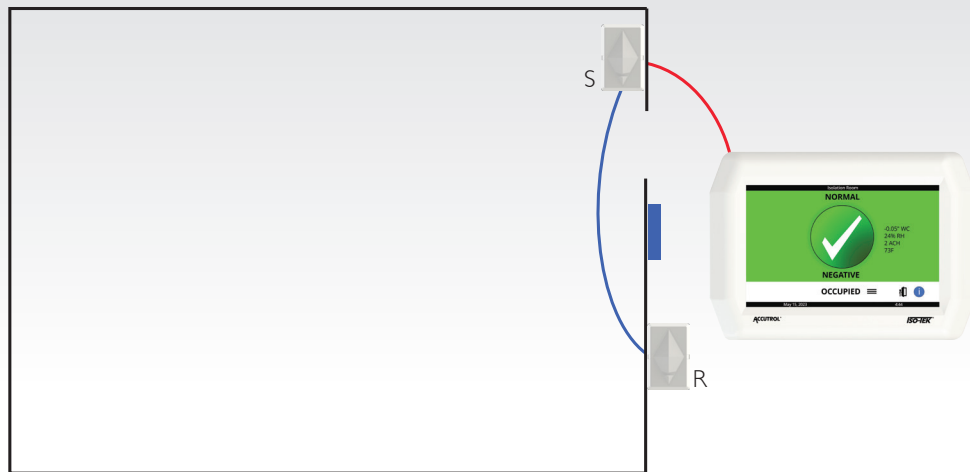
### I/O MODULE

<b>System Input Power</b>	24 VAC ± 20% 50-60Hz or 24VDC ± 10% Max power requirements for fully loaded system: 15VA or 9 W
<b>Relay Outputs</b>	2 independent SPST relay contacts (software configurable) Contact Rating: 2A @ 30VDC, 0.5A @ 60VDC, 0.3A @ 125VAC
<b>Analog Outputs</b>	2 analog outputs for room pressure (software configurable) 0-5v, 1-5v, 0-10v, 2-10v, 0-20mA or 4-20mA capable of driving 1 K-ohm load
<b>Door Switch Input</b>	Dry contact input for primary room door switch (software configurable)
<b>Sensor Port</b>	5-pos. pluggable screw terminal Note: Connect to pressure sensor network using Windy City Wire #042003 or equivalent
<b>Display Port</b>	RJ-45 connector Note: Connect to display module using factory-provided cable only
<b>BACnet MS/TP (optional)</b>	EIA 485 2-wire, BACnet MS/TP, galvanically isolated 1/8 unit load transceiver impedance full master Node state machine data rates 9600, 19200, 38400, 76800 and 115200 MAC address is software configurable
<b>BACnet IP (optional)</b>	Future
<b>Status Indicators</b>	LED indicators for power; pressure sensor; display, BACnet, and Bluetooth
I/O Terminal Blocks	Removable vertical plugs, wire size range 12-30AWG
Bluetooth (optional)	Bluetooth v4.2 or later; connect to PC with Iso-Tek Insight
<b>Operating Temperature</b>	-20° to 176° F (-29° to 80° C)
Storage Temperature	-40° to 185° F (-40° to 85° C)
Humidity	0 to 95% non-condensing

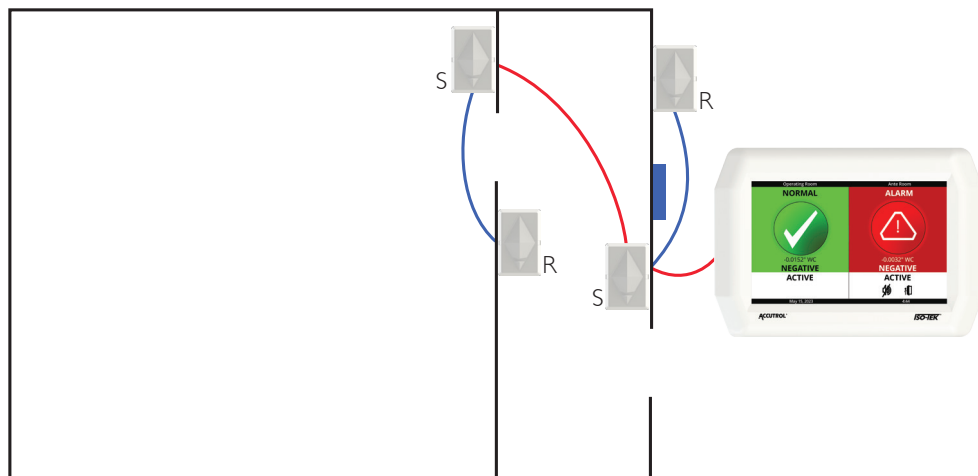
Applications (Typical)

— Tubing  
 — Communication  
 S – Sensor  
 R – Reference

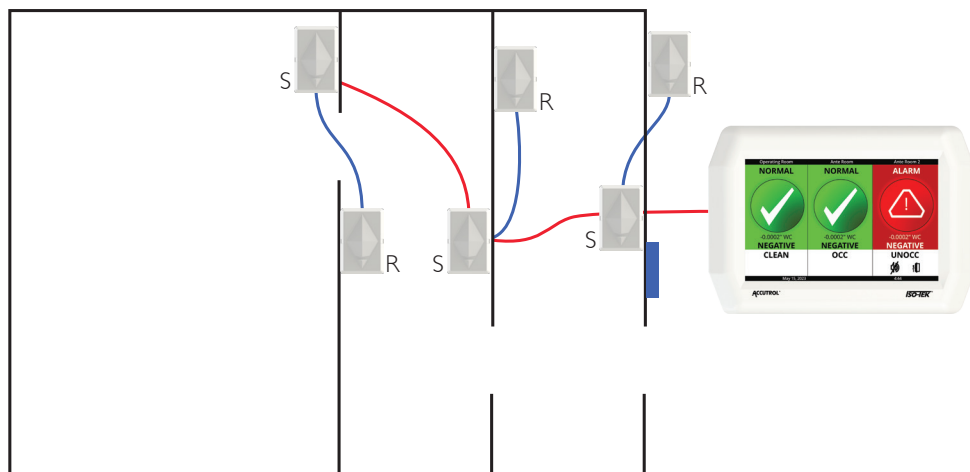
Single Space



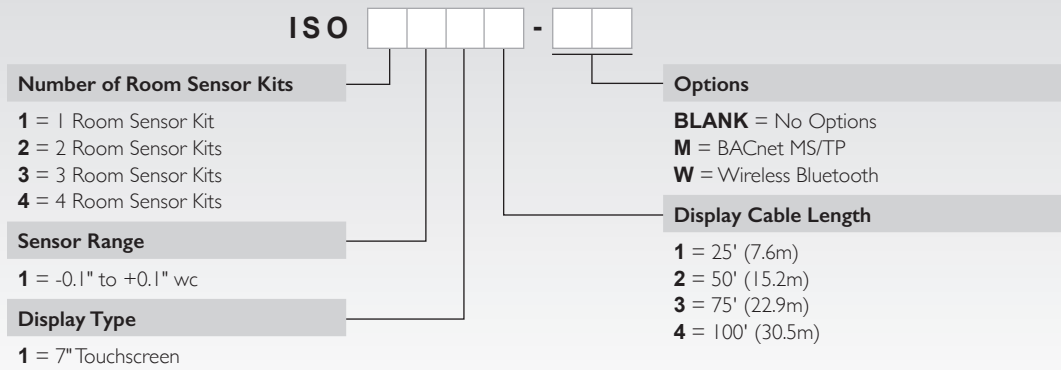
Two Space



Three Space



## Room Pressure Monitor Ordering Guide



### Each Iso-Tek System Includes:

- I/O assembly, optional BACnet® digital communications
- 7" color touchscreen display/alarm
- Display cable (selectable length)
- Wall-mount room pressure sensor (selectable quantity)
- Wall-mount room pressure reference probe(s)

Your representative is:

