

SRCM Room Condition Monitor



Description

In a hospital, laboratory, or animal research facility, the integrity of the ventilation control system is at the heart of a contaminant-free environment. Whether a room is to be maintained at a negative pressure to prevent contaminants from escaping into adjacent areas or positive pressure to protect patients with compromised immune systems, the proper pressurization of the room is essential. To assure proper pressurization is maintained in these critical environments, a room pressure monitor is employed to measure and alert staff and personnel of any change in pressure—no matter how small. A fail-safe solution to monitoring these very low pressure changes is the Model SRCM Room Condition Monitor, which uses highly accurate capacitance sensing technology to measure and display true low pressure differential to a resolution of 0.00001. in water column (WC).

Features

- High resolution color touch-screen display
 - Immediate feedback on room status
 - Intuitive graphic interface
- "Two-in-One" eliminates the need for a second monitor
 - Display both pressure and room condition
 - On-board and remote sensing capability
- Flush-mount design
 - Low profile, easy-care wipe down
 - Snap-in cover plate—no visible fasteners
 - Face is sealed for cleaning or wipe-down

- True pressure measurement
 - High accuracy low differential capacitance technology
 - Dead ended solution—no contamination or clogging
 - Standard on-board sensor and optional remote sensor—"two measurements in one"
 - Pressure ranges between +/- 0.05" WC and +/- 5.00" WC
 - Clone configuration capability
 - Standard off-the-shelf electrical box
- Ease of installation
 - Mounts in off-the-shelf electrical gang box
 - Four-screw, self-leveling mount
 - Labeled, removable termination strips—ease of wiring
- Clone configuration
 - Cloning of configurations for multiple unit installation using USB port
- Multiple Communications Options
 - BACnet MSTP
 - Siemens P1
- Alarm capabilities
 - Local audible and visual alarming
 - Remote annunciator alarming capability
 - Alarm delay feature—prevent nuisance alarms
- Multiple Room Support
 - The SRCM can be used to display the status of two rooms.
 - Second pressure sensor is required

Applications

- Surgical suites
- Intensive care isolation rooms
- Research laboratories
- Pharmaceutical
- Organic laboratories
- Animal research facilities

Fingertip Access for Easy Setup

- Setup Display Banner
 - User-Defined Text: Free form data entry from room name
 - Room Status: Change room from Isolation to No Isolation

- Setup Display Advanced
 - Display Contrast: Change brightness of display
 - Display Averaging: Improve display resolution in unstable ambient pressure environments
 - Displayed Pressure: Display primary and secondary or toggle between two rooms
 - Enable Password: Administrator and Supervisor
- Setup Unit Operation
 - Setup primary and secondary room
 - Change analog output
 - Free form data entry for room name

Specifications

Performance Data		+/- 0.25 Full Scale	+/- 0.50 Full Scale
Accuracy RSS* (at constant temperature)		+/- 0.25%	+/- 0.50%
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
Thermal Effects**			
Compensated range °F (°C)		+/- 0.03% FS (+/- 0.05% FS)	
Overpressure		+/- 1 PSI (15" WC for \leq 0.10" WC FS)	
* RSS of non-linearity, non-repeatability and hysteresis			
** Units calibrated at nominal 70°F. Maximum thermal error computed from this datum.			
Environmental Data	Temperature		
	Operating*	32°F to 120°F (0° to 50°C)	
	Storage	-20°F to 160°F (-30°C to 70°C)	
	Operating humidity	5% to 95% RH (non-condensing)	
* Operating temperature limits of the electronics only.			
Pressure Media	Air or non-conductive, non-explosive gases		
Physical Description	Case	Fire retardant plastic UL94 V-0	
	Dimensions	5.84" H x 7.45" W x 0.38" D (14.84 cm x 18.92 cm x 0.95 cm)	
	Electrical connection	Removable terminal block	
	Pressure fittings	Barbed fittings for 1/4" tubing	
	Weight (approximate)	1 lb 3.2 oz (554 grams)	
	Mounting	Mounts to triple gang, double-deep electrical box	

Specifications (Continued)

Communications Option	BACnet Siemens P1	MS/TP ASC
Display	LCD	4.3" TFT, 480 × 272, dimmable
Electrical Data (Voltage)	Circuit Output* Excitation Power consumption Alarm output	3-wire (Exc, Out, Com) 0 to 5 Vdc, 0 to 10 Vdc 18 to 32 Vac, 50 to 60 Hz 10W maximum, 3 W typical SPDT relay: 0.6A @ 120 Vac 2A @ 30 Vdc
	D/A Resolution	14-bit
	* Calibrated into a 50K ohm load, operable into a 5000 ohm load or greater	
Electrical Data (Current)	Circuit Output External load Excitation D/A Resolution	2-wire 4 to 20 mA 0 to 510 ohms 18 to 32 Vac 14-bit
Inputs	1 internal pressure sensor 2 A/D's inputs for remote pressure sensors, temperature and humidity sensors (Resolution 16-bit) 1 digital input (door contact dedicated)	
Certifications	CE	Electro-magnetic Compatibility Directive 2004/108EC

Ordering Information

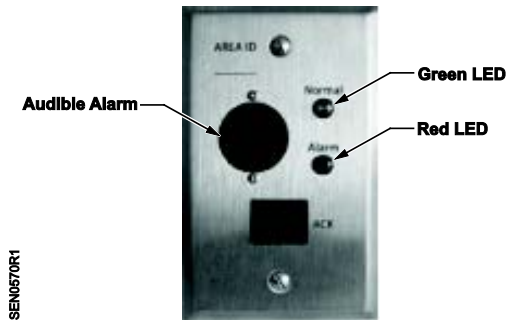
Product Number	Pressure Range	Protocol	Accuracy (Full Scale)
547-310A	+/- 500 Pa	P1	0.5%
547-311A	+/- 0.05" WC (12.5 Pa)	P1	0.5%
547-312A	+/- 0.10" WC (25 Pa)	P1	0.5%
547-313A	+/- 0.25" WC (62.5 Pa)	P1	0.5%
547-314A	+/- 0.50" WC (125 Pa)	P1	0.5%
547-315A	+/- 1.00" WC (250 Pa)	P1	0.5%
547-316A	+/- 2.50" WC (625 Pa)	P1	0.5%
547-317A	+/- 5.00" WC (1250 Pa)	P1	0.5%
547-318A	+/- 50 Pa	P1	0.5%
547-319A	+/- 100 Pa	P1	0.5%
547-310B	+/- 500 Pa	P1	0.25%
547-311B	+/- 0.05" WC (12.5 Pa)	P1	0.25%
547-312B	+/- 0.10" WC (25 Pa)	P1	0.25%
547-313B	+/- 0.25" WC (62.5 Pa)	P1	0.25%
547-314B	+/- 0.50" WC (125 Pa)	P1	0.25%
547-315B	+/- 1.00" WC (250 Pa)	P1	0.25%
547-316B	+/- 2.50" WC (625 Pa)	P1	0.25%
547-317B	+/- 5.00" WC (1250 Pa)	P1	0.25%
547-318B	+/- 50 Pa	P1	0.25%
547-319B	+/- 100 Pa	P1	0.25%
547-320A	+/- 500 Pa	BACnet	0.5%
547-321A	+/- 0.05" WC (12.5 Pa)	BACnet	0.5%
547-322A	+/- 0.10" WC (25 Pa)	BACnet	0.5%
547-323A	+/- 0.25" WC (62.5 Pa)	BACnet	0.5%
547-324A	+/- 0.50" WC (125 Pa)	BACnet	0.5%
547-325A	+/- 1.00" WC (250 Pa)	BACnet	0.5%
547-326A	+/- 2.50" WC (625 Pa)	BACnet	0.5%
547-327A	+/- 5.00" WC (1250 Pa)	BACnet	0.5%
547-328A	+/- 50 Pa	BACnet	0.5%
547-329A	+/- 100 Pa	BACnet	0.5%
547-320B	+/- 500 Pa	BACnet	0.25%
547-321B	+/- 0.05" WC (12.5 Pa)	BACnet	0.25%
547-322B	+/- 0.10" WC (25 Pa)	BACnet	0.25%

Ordering Information (Continued)

Product Number	Pressure Range	Protocol	Accuracy (Full Scale)
547-323B	+/- 0.25" WC (62.5 Pa)	BACnet	0.25%
547-324B	+/- 0.50" WC (125 Pa)	BACnet	0.25%
547-325B	+/- 1.00" WC (250 Pa)	BACnet	0.25%
547-326B	+/- 2.50" WC (625 Pa)	BACnet	0.25%
547-327B	+/- 5.00" WC (1250 Pa)	BACnet	0.25%
547-328B	+/- 50 Pa	BACnet	0.25%
547-329B	+/- 100 Pa	BACnet	0.25%

Accessories

Annunciator



Tap Plate



Specifications

Enclosure:	2.75 in. W x 4.5 in. H (69.85 mm W x 114.3 mm H)
External Supply:	15 Vdc, 50 mA max.
Display Panel:	Green and red LED indicators, and Acknowledged Switch
Audible Alarm:	0 to 85 dBA measured 4 inches from Annunciator
Acknowledge Switch:	Momentarily turns off the audible alarm.

Specifications

Dimensions:	2.75 in. W x 4.5 in. H (69.85 mm W x 114.3 mm H)
Materials:	Stainless Steel
Mounting:	Wall mounting using a standard electrical box

Product Number	Description
547-199	RPM Remote Annunciator Module
547-100	RPM Pressure Tap Plate

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BACnet Protocol Implementation Conformance Statement

Products

Product	Model Number	Protocol Revision
Siemens SRCM Room Pressure Monitor	547-320A, 547-321A, 547-322A, 547-323A, 547-324A, 547-325A, 547-326A, 547-327A, 547-328A, 547-329A, 547-320B, 547-321B, 547-322B, 547-323B, 547-324B, 547-325B, 547-326B, 547-327B, 547-328B, 547-329B	Revision 4 (135-2004)

Vendor Information

<p>Siemens Industry, Inc. Building Technologies Division 1000 Deerfield Parkway Buffalo Grove, IL 60089 www.buildingtechnologies.siemens.com/bt/us</p>

Product Description

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BACnet Standardized Device Profile

Product	Device Profile
SRCM	BACnet Application Specific Controller (B-ASC)

Supported BACnet Interoperability Building Block (BIBBs)

Product	BIBB	Name
Required for B-ASC Profile		
SRCM	DS-RP-B	Data Sharing-ReadProperty-B
	DS-WP-B	Data Sharing-WriteProperty-B
	DM-DDB-B	Device Management-Dynamic Device Binding-B
	DM-DOB-B	Device Management-Dynamic Object Binding-B
	DM-DDC-B	Device Management-DeviceCommunicationControl-B

Supported BACnet Interoperability Building Block (BIBBs), Continued

Product	BIBB	Name
Not Required for B-ASC Profile but supported in RPM		
SRCM	DS-RPM-B	Data Sharing-ReadPropertyMultiple-B
	DM-RD-B	Device Management-ReinitializeDevice-B
	DS-WPM-B	Data Sharing – Write Property Multiple-B
	AE-N-I-B	Alarm and Event-Notification Internal-B
	AE-INFO-B	Alarm and Event-Information-B
	DM-TS-B	Device Management – Time Synchronization-B
	DM-DDB-A	Device Management – Dynamic Device Binding-A
	DB-UTC-B	Device Management – UTC Time Synchronization-B
	DS-RP-A	Data Sharing – Read Property-A
	DS-WP-A	Data Sharing – Write Property-A

Standard Object Types Supported

Product	Object Type	Creatable	Deletable
SRCM	Analog Input	No	No
	Analog Value	No	No
	Binary Input	No	No
	Binary Value	No	No
	Device	No	No
	Event Enrollment	No	No
	Multi-State Input	No	No
	Multi-State Value	No	No
	Notification Class	No	No
	Proprietary Character String Value	No	No

Data Link Layer Options

Product	Data Link and Options
SRCM	MS/TP master (Clause 9), baud rate(s): 9600 bps, 19200 bps, 38400 bps, 76800 bps

Segmentation Capability

Product	Segmentation Type	Supported	Window Size: 32 (MS/TP product limited to 1)
SRCM	Can transmit segmented messages	No	
	Can receive segmented messages	No	

Device Address Binding

Product	Static Device Binding Supported
SRCM	No

Networking Options

Product	Network Options Supported	Supported
SRCM	Router, Clause 6:	No
	Annex H, BACnet Tunneling Router over IP	No
	BACnet/IP Broadcast Management Device (BBMD) Does the BMD support registrations by Foreign Devices?	No

Character Sets

Product	Charcter Sets Supported
SRCM	ANSI X3.4

Supported Services

Product	Application Service	Initiates Requests	Executes Requests
SRCM	ConfirmedEventNotification Service	Yes	No
	UnconfirmedEventNotification Service	Yes	No
	GetEventInformation Service	No	Yes
	ReadProperty Service	Yes	Yes
	ReadPropertyMultiple Service	No	Yes
	WriteProperty Service	Yes	Yes
	WritePropertyMultiple Service	No	Yes
	DeviceCommunicationControl Service	No	Yes
	ReinitializeDevice Service	No	Yes
	Timesynchronization Service	No	Yes

Supported Services, Continued

Product	Application Service	Initiates Requests	Executes Requests
SRCM	UTCTimesynchronization Service	No	Yes
	Who-Is	Yes	Yes
	Who-Has	No	Yes
	I-Am	Yes	Yes
	I-Have	Yes	No