

PRESSURA™ MODEL RPC30

PIC STATEMENT

Date: August 1, 2013
Vendor Name: TSI Inc.
Product Name: Pressura Room Pressure Controller
Product Model Number: RPC30-BAC
Applications Software Version: 1.0
Firmware Revision: 1.2
BACnet Protocol Revision: 2

Product Description:

TSI's PRESSURA™ Room Pressure Controllers accurately measure the actual room pressure differential, helping to ensure the proper operation of your HVAC system to maintain patient safety. This model monitor is capable of acting as a stand-alone device or as part of a building automation system via BACnet™ MS/TP protocol.

BACnet Standardized Device Profile (Annex L):
BACnet Application Specific Controller (B-ASC)

List all BACnet Interoperability Building Blocks Supported (Annex K):

Segmentation Capability:
None

DS-RP-B **DM-DDB-B**
DS-WP-B **DM-DOB-B**
DS-RPM-B **DM-DCC-B**

Standard Object Types Supported:

	Dynamically Creatable	Dynamically Deletable	Optional Properties Supported	Writable Properties (Data Type)
Analog Input	No	No		
Analog Value	No	No		Present_Value (Real)
Binary Input	No	No	Active_Text, Inactive_Text	
Binary Value	No	No	Active_Text, Inactive_Text	Present_Value (Enumerated)
Multi-state Input	No	No	State_Text	
Multi-state Value	No	No	State_Text	Present_Value (Unsigned Int)
Device Object	No	No		Object Name (Char String) Max Master (Unsigned Int)

Data Link Layer Options:

☒ MS/TP master (Clause 9), baud rate(s): 76.8k 38.4k, 19.2k, 9600 bps

Device Address Binding:

Not Supported

Networking Options:

None

Character Sets Supported:

☒ ANSI X3.4



Object Type	Device Instance	*Units	Description	Writable		Notes and Range
				Object	Value	
Analog Input	1	in H ₂ O, Pa	Room1 Pressure			
Analog Input	2	cfm, l/s, CMH	Supply Flow Rate			
Analog Input	3		Air Changes Per Hour			
Analog Input	4	% RH	Relative Humidity			
Analog Input	5	°F, °C	Room Temperature			
Analog Input	6	cfm, l/s, CMH	Exhaust Flow Rate			
Analog Input	7	in H ₂ O, Pa	Anteroom Pressure			1 room with Anteroom configuration only
Analog Input	9	°F, °C	Supply Air Temperature			
Analog Input	10		Room 1 Label	Y		Writing to Object name will change Rm1 Label item. Room 1 Label object has not applicable in H ₂ O units. Updating Room 1 Label Object name will not affect other Room 1 Object names.
Analog Input	11		Anteroom Label	Y		Writing to Object name will change AnteRm Label item. Anteroom Label object has not applicable in H ₂ O units. Updating Anteroom Label Object name will not affect other Anteroom Object names.
Analog Value	1	in H ₂ O, Pa	Room 1 Neg Low Alarm		Y	-0.19500 to + 0.19500 in H ₂ O
Analog Value	2	in H ₂ O, Pa	Room 1 Neg High Alarm		Y	-0.19500 to + 0.19500 in H ₂ O
Analog Value	3	in H ₂ O, Pa	Room 1 Pos Low Alarm		Y	-0.19500 to + 0.19500 in H ₂ O
Analog Value	4	in H ₂ O, Pa	Room 1 Pos High Alarm		Y	-0.19500 to + 0.19500 in H ₂ O
Analog Value	5	cfm, l/s, CMH	Room 1 Low Exhaust Alarm		Y	0 to 30,000 cfm
Analog Value	6	cfm, l/s, CMH	Room 1 Low Supply Alarm		Y	0 to 30,000 cfm
Analog Value	7	°F, °C	Room 1 Low Temperature Alarm		Y	50 to 85 °F
Analog Value	8	°F, °C	Room 1 High Temperature Alarm		Y	50 to 85 °F
Analog Value	9	% RH	Room 1 Low RH Alarm		Y	0 to 100

Object Type	Device Instance	*Units	Description	Writable		Notes and Range
				Object	Value	
Analog Value	10	% RH	Room 1 High RH Alarm		Y	0 to 100
Analog Value	11	ft ³ , m ³	Room 1 Volume		Y	0 to 20,000
Analog Value	12		Room 1 Neg Setpoint		Y	-0.19500 to + 0.19500 in H ₂ O
Analog Value	13		Room 1 Pos Setpoint		Y	-0.19500 to + 0.19500 in H ₂ O
Analog Value	14	cfm, l/s, CMH	Room 1 No Isolation Setpoint		Y	Flow: 0 to 30,000 % Open: 0 to 100
Analog Value	15	°F, °C	Occupied Mode Heating Setpoint		Y	55 to 85 °F
Analog Value	16	°F, °C	Occupied Mode Cooling Setpoint		Y	55 to 85 °F
Analog Value	17	°F, °C	Unoccupied Mode Heating Setpoint		Y	55 to 85 °F
Analog Value	18	°F, °C	Unoccupied Mode Cooling Setpoint		Y	55 to 85 °F
Analog Value	19	°F, °C	Heating Mode Supply Temperature Delta		Y	10 to 40°F
Analog Value	20	cfm, l/s, CMH	Occupied Mode Minimum Supply Flow		Y	0 to 10,000 cfm
Analog Value	21	cfm, l/s, CMH	Maximum Supply Flow		Y	0 to 10,000 cfm
Analog Value	22	cfm, l/s, CMH	Occupied Mode Heating Flow		Y	0 to 10,000 cfm
Analog Value	23	cfm, l/s, CMH	Occupied Mode Cooling Flow		Y	0 to 10,000 cfm
Analog Value	24	cfm, l/s, CMH	Unoccupied Mode Minimum Supply Flow		Y	0 to 10,000 cfm
Analog Value	25	% Open	Minimum Supply Control Output		Y	0 to 100
Analog Value	26	% Open	Maximum Supply Control Output		Y	0 to 100
Analog Value	27	cfm, l/s, CMH	Min Exhaust Flow		Y	0 to 10,000 cfm
Analog Value	28	cfm, l/s, CMH	Max Exhaust Flow		Y	0 to 10,000 cfm
Analog Value	29	% Open	Minimum Exhaust Control Out		Y	0 to 100
Analog Value	30	% Open	Maximum Exhaust Control Output		Y	0 to 100
Analog Value	31	in H ₂ O, Pa	Anteroom Neg Low Alarm		Y	2 room configuration only -0.19500 to + 0.19500 in H ₂ O
Analog Value	32	in H ₂ O, Pa	Anteroom Neg High Alarm		Y	2 room configuration only -0.19500 to + 0.19500 in H ₂ O
Analog Value	33	in H ₂ O, Pa	Anteroom Pos Low Alarm		Y	2 room configuration only -0.19500 to + 0.19500 in H ₂ O

Object Type	Device Instance	*Units	Description	Writable		Notes and Range
				Object	Value	
Analog Value	34	in H ₂ O, Pa	Anteroom Pos High Alarm		Y	2 room configuration only -0.19500 to + 0.19500 in H ₂ O
Analog Value	39		Alarm Delay		Y	20 to 600 seconds
Analog Value	40		Mute Timeout		Y	1 to 60 minutes
Analog Value	41		Door Delay		Y	20 to 600 seconds
Analog Value	42		Address		Y	1 to 127
Analog Value	43		MAC ID		Y	0 to 999 BACnet Device = MAC ID * 1000 + Address
Binary Input	1		Room 1 Door Switch			0 Door Closed (Normal) 1 Door Open
Binary Input	2		Anteroom Door Switch			0 Door Closed (Normal) 1 Door Open
Binary Input	4		Room 1 Occupancy			0 Occupied (Normal) 1 Unoccupied
Binary Input	5		Anteroom Occupancy			0 Occupied (Normal) 1 Unoccupied
Binary Value	1		Room 1 High Alarm		Y	0 Disable 1 Enable
Binary Value	2		Room 1 Low Alarm		Y	0 Disable 1 Enable
Binary Value	3		Anteroom High Alarm		Y	0 Disable 1 Enable
Binary Value	4		Anteroom Low Alarm		Y	0 Disable 1 Enable
Multi-State Value	1		Number of Rooms			1 Single 2 Single + Anteroom
Multi-State Value	2		Devices Controlled			1 None 2 Exhaust 3 Exhaust / Supply / Temp
Multi-State Value	3		Passcode Enable		Y	1 No Password 2 Room Mode Password 3 Menu Password 4 Menu & Room Mode Passwords
Multi-State Value	4		Input 1 Configuration			1 TSI Sensor 2 Pressure Transducer
Multi-State Value	5		Input 2 Configuration			1 TSI Sensor 2 Pressure Transducer 3 Temperature Setpoint 4 None
Multi-State Value	6		Input 3 Configuration			1 Supply Pressure Flow 2 Supply Linear Flow 3 Supply Venturi Flow 4 Supply Switch 7 None
Multi-State Value	7		Input 4 Configuration			1 Room 1 Door Switch 2 Room 1 Occupancy Sensor 3 None

Object Type	Device Instance	*Units	Description	Writable		Notes and Range
				Object	Value	
Multi-State Value	8		Input 5 Configuration			1 Room 1 Keyswitch 2 Relative Humidity 3 None
Multi-State Value	9		Input 6 Configuration			1 Room 1 Temp Sensor 2 Anteroom Occupancy Sensor 5 Anteroom Door Switch 6 None
Multi-State Value	10		Input 7 Configuration			1 Room 1 Supply Air Temp 2 Exhaust Pressure Flow 3 Exhaust Linear Flow 4 Exhaust Venturi Flow 5 Exhaust Switch 7 Anteroom Keyswitch 8 None
Multi-State Value	11		Room 1 Mode		Y	1 Positive 2 Negative 3 No Isolation
Multi-State Value	12		ACH Duct		Y	1 Supply 2 Exhaust 3 Off
Multi-State Value	13		No Isolation Control Type		Y	1 Position 2 Flow 3 Pressure
Multi-State Value	14		Anteroom Mode		Y	1 Positive 2 Negative 3 No Isolation

Object Type	Device Instance	*Units	Description	Writable		Notes and Range
Multi-State Value	16		Status Index			1 Normal 2 Room 1 Negative Low Alarm 3 Room 1 Negative High Alarm 4 Room 1 Positive Low Alarm 5 Room 1 Positive High Alarm 6 Low Exhaust Alarm 7 Low Supply Alarm 8 Low Temperature Alarm 9 High Temperature Alarm 10 Low RH Alarm 11 High RH Alarm 12 Anteroom Negative Low Alarm 13 Anteroom Negative High Alarm 14 Anteroom Positive Low Alarm 15 Anteroom Positive High Alarm 20 Data Error
Multi-State Value	17		Device Type			1 RPC30
Multi-State Value	18		Units Value		Y	1 in H ₂ O, cfm, F 2 Pa, lps, C 3 Pa, CMH, C

* The units are based on the value of the Units Value object. When the Units Value is set to 1, the units are in English form. When the Units Value is set to 2 or 3, the units are metric. English is the default value.

** The Device Instance defaults 606, The device index is the Device Instance multiplied by 1000 plus the MAC Address The default device index is therefore 606001.

TSI and TSI logo are registered trademarks of TSI Incorporated.
PresSura is a trademark of TSI Incorporated.
BACnet is a trademark of ASHRAE.



TSI Incorporated – Visit our website www.tsi.com for more information.

USA	Tel: +1 800 874 2811	India	Tel: +91 80 67877200
UK	Tel: +44 149 4 459200	China	Tel: +86 10 8219 7688
France	Tel: +33 491 11 87 64	Singapore	Tel: +65 6595 6388
Germany	Tel: +49 241 523030		