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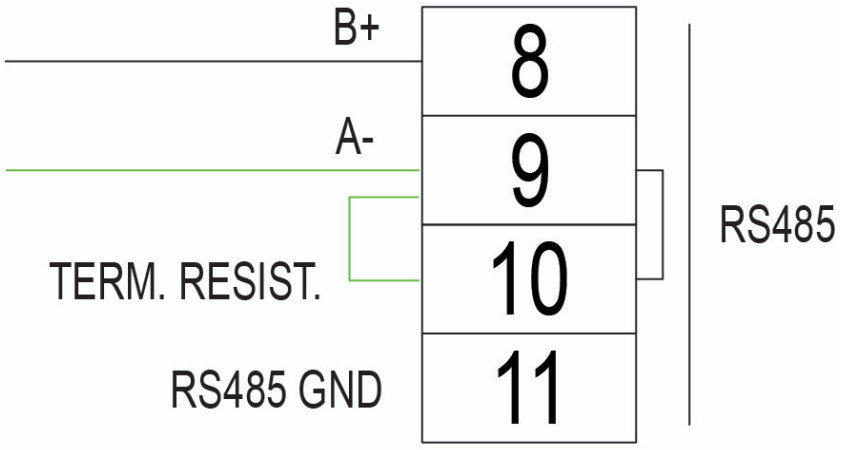
Series RSME/RSMC BACnet/Modbus® Operating Instructions

Communication Overview

The Series RSME/RSMC supports BACnet MS/TP and Modbus RTU over 2-wire RS485. Selection of protocol and configuration of serial parameters is performed via the Network menu (CONFIGURATION<NETWORK)

Network Termination Jumper

The Series RSME/RSMC contains an optional internal 120 ohm termination resistor. In order to enable this resistor, a jumper wire must be connected between terminals 9 and 10.



BACnet Services

Device Communication Control Service (DM-DCC-B)

This device supports the Device Communication Control Service BIBB. The optional time duration in minutes is also supported. This device is configured with a password that must be provided to successfully execute this command. The password is “Dwyer”.

Reinitialize Device Service (DM-RD-B)

This device supports the Reinitialize Device Service BIBB. The supported device states are COLDSTART and WARMSTART. All other states return error. This device is configured with a password that must be provided to successfully execute this command. The password is “Dwyer”.

SubscribeCOV Service (DS-COV-B)

This device supports the SubscribeCOV Service BIBB to allow easy monitoring of input data.

- Up to seven (7) concurrent subscriptions
- Confirmed and Unconfirmed COV Notifications
- Fixed lifetime value up to 86400 seconds (24 hours).
- Indefinite lifetime supported.

TimeSynchronization Service (DM-TS-B)

This device supports the time synchronization service for easy time management and update. In order to utilize the time synchronization, it must be enabled in the “Date and time” menu under “Maintenance”. Make sure the slider toggle next to “Get from BACnet” is in the ON position.

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BACnet Object Overview

Table 1: Supported BACnet Objects

Object Type	Object Identifier	Object Name
Device	607127	“RSME”
Analog Input	AI1	“Pressure”
	AI2	“UI1 Value”
	AI3	“UI2 Value”
Analog Value	AV1	“Pressure High Alarm Limit”
	AV2	“Pressure High Alarm Warning”
	AV3	“Pressure Low Alarm Limit”
	AV4	“Pressure Low Alarm Warning”
	AV5	“Pressure Alarm Deadband”
	AV6	“UI1 Max Signal”
	AV7	“UI1 Min Signal”
	AV8	“UI1 Max Scale Value”
	AV9	“UI1 Min Scale Value”
	AV10	“UI1 High Alarm Limit”
	AV11	“UI1 High Alarm Warning”
	AV12	“UI1 Low Alarm Limit”
	AV13	“UI1 Low Alarm Warning”
	AV14	“UI1 Alarm Deadband”
	AV15	“UI2 Max Signal”
	AV16	“UI2 Min Signal”
	AV17	“UI2 Max Scale Value”

Object Type	Object Identifier	Object Name
Analog Value	AV18	“U12 Min Scale Value”
	AV19	“UI2 High Alarm Limit”
	AV20	“UI2 High Alarm Warning”
	AV21	“UI2 Low Alarm Limit”
	AV22	“UI2 Low Alarm Warning”
	AV23	“UI2 Alarm Deadband”
	AV24	“Duct Area”
	AV25	“Room Volume”
	AV26	“ES1 Value”
	AV27	“ES1 High Alarm Limit”
	AV28	“ES1 High Alarm Warning”
	AV29	“ES1 Low Alarm Limit”
	AV30	“ES1 Low Alarm Warning”
	AV31	“ES1 Alarm Deadband”
	AV32	“ES2 Value”
	AV33	“ES2 High Alarm Limit”
	AV34	“ES2 High Alarm Warning”
	AV35	“ES2 Low Alarm Limit”
	AV36	“ES2 Low Alarm Warning”
	AV37	“ES2 Alarm Deadband”
	AV38	“ES3 Value”
	AV39	“ES3 High Alarm Limit”
	AV40	“ES3 High Alarm Warning”
	AV41	“ES3 Low Limit”

Object Type	Object Identifier	Object Name
Analog Value	AV42	“ES3 Low Alarm Warning”
	AV43	“ES3 Alarm Deadband”
Binary Value	BV1	“Pressure Enable”
	BV2	“Pressure High Alarm Enable”
	BV3	“Pressure Low Alarm Enable”
	BV4	“UI1 Enable”
	BV5	“UI1 High Alarm Enable”
	BV6	“UI1 Low Alarm Enable”
	BV7	“UI2 Enable”
	BV8	“UI2 High Alarm Enable”
	BV9	“UI2 Low Alarm Enable”
	BV10	“Binary Input Enable”
	BV11	“Binary Input Alarm Enable”
	BV12	“Digital UI1 Enable”
	BV13	“Digital UI1 Alarm Enable”
	BV14	“Digital UI2 Enable”
	BV15	“Digital UI2 Alarm Enable”
	BV16	“Relay Status”
	BV17	“Password Security Enable”
	BV18	“Alarm Latch Enable”
	BV19	“Alarm Buzzer Enable”
	BV20	“Alarm Mute Button Enable”
	BV21	“Mute Alarms”
	BV22	“Reset Alarms”

Object Type	Object Identifier	Object Name
Binary Value	BV23	“ES1 Enable”
	BV24	“ES1 High Alarm Enable”
	BV25	“ES1 Low Alarm Enable”
	BV26	“ES2 Enable”
	BV27	“ES2 High Alarm Enable”
	BV28	“ES2 Low Alarm Enable”
	BV29	“ES3 Enable”
	BV30	“ES3 High Alarm Enable”
	BV31	“ES3 Low Alarm Enable”
	BV32	“ED1 Enable”
	BV33	“ED1 Alarm Enable”
	BV34	“ED2 Enable”
	BV35	“ED2 Alarm Enable”
	BV36	“ED3 Enable”
	BV37	“ED3 Alarm Enable”
Multi-State Value	MSV1	“Pressure Unit”
	MSV2	“Pressure Display Format”
	MSV3	“Pressure Alarm Status”
	MSV4	“UI1 Signal Type”
	MSV5	“UI1 Media Type”
	MSV6	“UI1 Unit”
	MSV7	“UI1 Display Format”
	MSV8	“UI1 Alarm Status”
	MSV9	“UI2 Signal Type”

Object Type	Object Identifier	Object Name
Multi-State Value	MSV10	“UI2 Media Type”
	MSV11	“UI2 Unit”
	MSV12	“UI2 Display Format”
	MSV13	“UI2 Alarm Status”
	MSV14	“Binary Input Usage”
	MSV15	“Binary Input Polarity”
	MSV16	“Binary Input Alarm Enable”
	MSV17	“Digital UI1 Usage”
	MSV18	“Digital UI1 Polarity”
	MSV19	“Digital UI1 Status”
	MSV20	“Digital UI2 Usage”
	MSV21	“Digital UI2 Polarity”
	MSV22	“Digital UI2 Status”
	MSV23	“Relay Operation”
	MSV24	“Relay Source”
	MSV25	“Analog Output Type”
	MSV26	“Analog Output Source”
	MSV27	“Display Mode”
	MSV28	“Room 1 Sensor 1 Select Analog”
	MSV29	“Room 1 Sensor 2 Select Analog”
	MSV30	“Room 1 Sensor 3 Select Analog”
	MSV31	“Room 2 Sensor 1 Select Analog”
	MSV32	“Room 3 Sensor 1 Select Analog”
	MSV33	“Room 1 Select Digital”

Object Type	Object Identifier	Object Name
Multi-State Value	MSV34	“Room 2 Select Digital”
	MSV35	“Room 3 Select Digital”
	MSV36	“Room 1 Mode”
	MSV37	“Room 2 Mode”
	MSV38	“Room 3 Mode”
	MSV39	“Language”
	MSV40	“ES1 Object Type”
	MSV41	“ES1 Media Type”
	MSV42	“ES1 Unit”
	MSV43	“ES1 Display Format”
	MSV44	“ES1 Alarm Status”
	MSV45	“ES2 Object Type”
	MSV46	“ES2 Media Type”
	MSV47	“ES2 Unit”
	MSV48	“ES2 Display Format”
	MSV49	“ES2 Alarm Status”
	MSV50	“ES3 Object Type”
	MSV51	“ES3 Media Type”
	MSV52	“ES3 Unit”
	MSV53	“ES3 Display Format”
	MSV54	“ES3 Alarm Status”
	MSV55	“ED1 Object Type”
	MSV56	“ED1 Usage”
	MSV57	“ED1 Polarity”

Object Type	Object Identifier	Object Name
Multi-State Value	MSV58	“ED1 Status”
	MSV59	“ED2 Object Type”
	MSV60	“ED2 Usage”
	MSV61	“ED2 Polarity”
	MSV62	“ED2 Status”
	MSV63	“ED3 Object Type”
	MSV64	“ED3 Usage”
	MSV65	“ED3 Polarity”
	MSV66	“ED3 Status”
Positive Integer Value	PIV1	“Pressure Alarm Delay”
	PIV2	“Pressure Alarm To Normal Delay”
	PIV3	“UI1 Alarm Delay”
	PIV4	“UI1 Alarm To Normal Delay”
	PIV5	“UI2 Alarm Delay”
	PIV6	“UI2 Alarm To Normal Delay”
	PIV7	“Binary Input Alarm Delay”
	PIV8	“Digital UI1 Alarm Delay”
	PIV9	“Digital UI2 Alarm Delay”
	PIV10	“Alarm Buzzer Volume”
	PIV11	“Alarm Mute Timeout”
	PIV12	“ES1 Device Instance”
	PIV13	“ES1 Object Instance”
	PIV14	“ES1 Alarm Delay”
	PIV15	“ES1 Alarm To Normal Delay”

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Object Type	Object Identifier	Object Name
Positive Integer Value	PIV16	“ES2 Device Instance”
	PIV17	“ES2 Object Instance”
	PIV18	“ES2 Alarm Delay”
	PIV19	“ES2 Alarm To Normal Delay”
	PIV20	“ES3 Device Instance”
	PIV21	“ES3 Object Instance”
	PIV22	“ES3 Alarm Delay
	PIV23	“ES3 Alarm To Normal Delay”
	PIV24	“ED1 Device Instance”
	PIV25	“ED1 Object Instance”
	PIV26	“ED1 Alarm Delay”
	PIV27	“ED2 Device Instance”
	PIV28	“ED2 Object Instance”
	PIV29	“ED2 Alarm Delay”
	PIV30	“ED3 Device Instance”
	PIV31	“ED3 Object Instance”
	PIV32	“ED3 Alarm Delay”
Character String Value	CSV1	“Pressure Display Name”
	CSV2	“UI1 Display Name”
	CSV3	“UI2 Display Name”
	CSV4	“Room 1 Name”
	CSV5	“Room 2 Name”
	CSV6	“Room 3 Name”
	CSV7	“Operator Password”

Object Type	Object Identifier	Object Name
Character String Value	CSV8	“Administrator Password”
	CSV9	“ES1 Display Name”
	CSV10	“ES2 Display Name”
	CSV11	“ED2 Display Name”

BACnet Objects:

Device Object

Property	Default Value	Property Data Type	Access
Object Identifier	607127	BACnetObjectIdentifier	Read/Write
Object Name	“RSME”	CharacterString(32)	Read/Write
Object Type	DEVICE(8)	BACnetObjectType	Read
System Status	Operational(0)	BACnetDevice Status	Read
Vendor Name	“Dwyer Instruments, Inc.”	CharacterString	Read
Vendor Identifier	607	Unsigned	Read
Model Name	“RSME-?-???-??”	CharacterString	Read
Firmware Revision	“1.2”	CharacterString	Read
Application Software Version	“1.0.10R”	CharacterString	Read
Location	“”	CharacterString(32)	Read/Write
Description	“”	CharacterString(32)	Read/Write
Protocol Version	1	Unsigned	Read
Protocol Revision	16	Unsigned	Read
Protocol Services Supported	See PICS	BACnetServicesSupported	Read
Protocol Object Types Supported	See Table 1	BACnetObjectTypesSupported	Read
Object List	See Table 1	BACnetArray	Read
Active COV Subscriptions		List of BACnetCOVSubscription	Read
Maximum APDU Length Accepted	480	Unsigned	Read
Segmentation Supported	NO_SEGMENTATION(3)	BACnetSegmentation	Read
Local Time		Time	Read
Local Date		Date	Read
APDU Timeout	0	Unsigned	Read/Write
Number of APDU Retries	0	Unsigned	Read/Write
Max Master	127	Unsigned	Read/Write

Max Info Frames	1	Unsigned	Read/Write
Device Address Binding	Empty	BACnetAddressBinding	Read
Database Revision	0	Unsigned	Read
Property List		BACnetARRAY[n] of BACnetPropertyIdentifier	Read
Serial Number	“xxxxxx”	CharacterString	Read

APDU Timeout values are rounded to the nearest second (1000ms). Values less than 500 will be rounded to 0 and Number of APDU Retries will be set to 0.

Due to the large number of objects in the BACnet database and lack of segmentation support, the entire Object List property cannot be read with a single ReadProperty request.

Internal Pressure (“Built in DP”) Objects

Binary Value 1 - Pressure Enable

Property	Default Value	Property Data Type	Access
Object Identifier	BV1	BACnetObjectIdentifier	Read
Object Name	“Pressure Enable”	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Active (1)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object determines if the internal pressure sensor is monitored.

Analog Input 1 - Pressure

Property	Default Value	Property Data Type	Access
Object Identifier	AI1	BACnetObjectIdentifier	Read
Object Name	“Pressure”	CharacterString	Read
Object Type	Analog Input(0)	BACnetObjectType	Read
Present Value	Current reading	Real	Read
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	inches-of-water(58)	BACnetEngineeringUnits	Read
COV Increment	1	Read	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object provides the pressure measurement from the internal pressure sensor (“Built in DP”).

This object supports Change Of Value (COV) subscription with a COV Increment according to the table below. Note that the COV value is unit-less and may need to be modified if the unit of measurement is changed.

Default Value	Minimum Value	Maximum Value
1.0	0.001	10000.0

Multi-State Value 1 - Pressure Unit

Property	Default Value	Property Data Type	Access
Object Identifier	MSV1	BACnetObjectIdentifier	Read
Object Name	“Pressure Unit”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	5	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	5	Unsigned	Read
State Text	{“Pa”, ”kPa”, “cmWC”, “mmWC”, “inWC”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object controls the unit of pressure used by all objects in the Internal Pressure group. The selected pressure unit will also be used to display pressure on the LCD.

Multi-State Value 2 - Pressure Display Format

Property	Default Value	Property Data Type	Access
Object Identifier	MSV2	BACnetObjectIdentifier	Read
Object Name	“Pressure Display Format”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	4	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	4	Unsigned	Read
State Text	{“0”, ”0.0”, “0.00”, “0.000”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object controls how the value of the internal pressure sensor is displayed on the LCD.

Character String Value 1 - Pressure Display Name

Property	Default Value	Property Data Type	Access
Object Identifier	CSV1	BACnetObjectIdentifier	Read
Object Name	“Pressure Display Name”	CharacterString	Read
Object Type	Character String Value(40)	BACnetObjectType	Read
Present Value	“Pressure”	CharacterString(32)	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object sets the label of the internal pressure measurement displayed on the LCD. Note that while the maximum length is 32 characters, some character may not be visible depending on the size of the measurement tile.

Binary Value 2 - Pressure High Alarm Enable

Property	Default Value	Property Data Type	Access
Object Identifier	BV2	BACnetObjectIdentifier	Read
Object Name	“Pressure High Alarm Enable”	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Inactive (0)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object controls whether or not the “Pressure High Alarm Limit” and “Pressure High Alarm Warning” values produce a change in the “Pressure Alarm Status” value.

Analog Value 1 - Pressure High Alarm Limit

Property	Default Value	Property Data Type	Access
Object Identifier	AV1	BACnetObjectIdentifier	Read
Object Name	“Pressure High Alarm Limit”	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	0	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	inches-of-water(58)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

If “Pressure High Alarm Enable” is Active and the pressure exceeds the value specified, the internal pressure measurement will enter alarm status. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0.0	“Pressure Low Alarm Limit”	10000.0

Analog Value 2 - Pressure High Alarm Warning

Property	Default Value	Property Data Type	Access
Object Identifier	AV2	BACnetObjectIdentifier	Read
Object Name	“Pressure High Alarm Warning”	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	0	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	inches-of-water(58)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

If “Pressure High Alarm Enable” is Active and the pressure exceeds the value specified, the internal pressure measurement will enter warning status. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0.0	“Pressure Low Alarm Warning”	10000.0

Binary Value 3 - Pressure Low Alarm Enable

Property	Default Value	Property Data Type	Access
Object Identifier	BV3	BACnetObjectIdentifier	Read
Object Name	“Pressure Low Alarm Enable”	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Inactive (0)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object controls whether or not the “Pressure Low Alarm Limit” and “Pressure Low Alarm Warning” values produce a change in the “Pressure Alarm Status” value.

Analog Value 3 - Pressure Low Alarm Limit

Property	Default Value	Property Data Type	Access
Object Identifier	AV3	BACnetObjectIdentifier	Read
Object Name	“Pressure Low Alarm Limit”	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	0	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	inches-of-water(58)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

If “Pressure Low Alarm Enable” is Active and the pressure falls below the value specified, the internal pressure measurement will enter alarm status. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0.0	-10000.0	“Pressure High Alarm Limit”

Analog Value 4 - Pressure Low Alarm Warning

Property	Default Value	Property Data Type	Access
Object Identifier	AV4	BACnetObjectIdentifier	Read
Object Name	"Pressure Low Alarm Warning"	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	0	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	inches-of-water(58)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

If "Pressure Low Alarm Enable" is Active and the pressure falls below the value specified, the internal pressure measurement will enter alarm status. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0.0	-10000.0	"Pressure High Alarm Warning"

Multi-State Value 3 - Pressure Alarm Status

Property	Default Value	Property Data Type	Access
Object Identifier	MSV3	BACnetObjectIdentifier	Read
Object Name	“Pressure Alarm Status”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	1	Unsigned	Read
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	3	Unsigned	Read
State Text	{“OK”, ”Warning”, “Alarm”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object indicates the alarm status associated with the internal pressure measurement. This object supports COV subscription.

Positive Integer Value 1 - Pressure Alarm Delay

Property	Default Value	Property Data Type	Access
Object Identifier	PIV1	BACnetObjectIdentifier	Read
Object Name	“Pressure Alarm Delay”	CharacterString	Read
Object Type	Positive Integer Value (48)	BACnetObjectType	Read
Present Value	0	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	seconds(73)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object provides the ability to specify a delay (in seconds) between the pressure going outside the limits and the alarm status changing to “Alarm”. This allows short violations of the configured limits to be ignored if necessary to prevent spurious alarm events. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0 s	0 s	5000 s

Positive Integer Value 2 - Pressure Alarm To Normal Delay

Property	Default Value	Property Data Type	Access
Object Identifier	PIV2	BACnetObjectIdentifier	Read
Object Name	“Pressure Alarm To Normal Delay”	CharacterString	Read
Object Type	Positive Integer Value (48)	BACnetObjectType	Read
Present Value	0	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	seconds(73)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object provides the ability to specify a delay (in seconds) between the pressure returning to within the limits and the alarm status changing from “Alarm”. This can be used to verify the pressure is with the limit and stable. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0 s	0 s	5000 s

Analog Value 5 - Pressure Alarm Deadband

Property	Default Value	Property Data Type	Access
Object Identifier	AV5	BACnetObjectIdentifier	Read
Object Name	“Pressure Alarm Deadband”	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	0	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	inches-of-water(58)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value puts a band around the limit values to prevent rapidly transiting in and out of alarm state. Setting this to a non-zero value is recommended whenever the pressure alarm is selected as the relay source. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0.0	0.0	1000.0

User Input (UI1, UI2) Objects

Binary Value 4/7 - UIx Enable

Property	Default Value	Property Data Type	Access
Object Identifier	BV4, BV7	BACnetObjectIdentifier	Read
Object Name	“UIx Enable”	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Active (1)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object determines if the analog input, UIx, is monitored.

Multi-State Value 4/9 - UIx Signal Type

Property	Default Value	Property Data Type	Access
Object Identifier	MSV4, MSV9	BACnetObjectIdentifier	Read
Object Name	“UIx Signal Type”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	4(UI1), 2(UI2)	Unsigned	Read
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	4	Unsigned	Read
State Text	{“Digital”, ”4-20mA”, “0-5V”, “0-10V”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object selects the type of analog input signal connected to the UIx terminals.

Analog Value 6/15 - UIx Max Signal

Property	Default Value	Property Data Type	Access
Object Identifier	AV6, AV15	BACnetObjectIdentifier	Read
Object Name	“UIx Max Signal”	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	10(UI1), 20(UI2)	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	volts(5,UI1), milliamps(2,UI2)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value sets the maximum analog input level for the user input. The unit of this value changes based on the Signal Type selected. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
5, 10 or 20	UIx Min Signal	20

Analog Value 7/16 - UIx Min Signal

Property	Default Value	Property Data Type	Access
Object Identifier	AV7, AV16	BACnetObjectIdentifier	Read
Object Name	“UIx Min Signal”	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	0(UI1), 4(UI2)	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	volts(5,UI1), milliamps(2,UI2)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value sets the minimum analog input level for the user input. The unit of this value changes based on the Signal Type selected. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0 or 4	0	UIx Max Signal

Multi-State Value 5/10 - UIx Media Type

Property	Default Value	Property Data Type	Access
Object Identifier	MSV5, MSV10	BACnetObjectIdentifier	Read
Object Name	“UIx Media Type”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	1	Unsigned	Read
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	4	Unsigned	Read
State Text	{“Temperature”, “Relative Humidity”, “Pressure”, “Flow”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object selects the type of measurement represented by the analog input signal connected to the UIx terminals. This selection determines what units are available for the UIx Value. In order to compute Air Changes per Hour (ACH), the remote sensor must measure velocity or volume flow. This value should be set to 4 (“Flow”) and the values of “Duct Area” (if velocity sensor) and “Room Volume” must be set.

Analog Value 8/17 - UIx Max Scale Value

Property	Default Value	Property Data Type	Access
Object Identifier	AV8, AV17	BACnetObjectIdentifier	Read
Object Name	"UIx Max Scale Value"	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	100	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	varies	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value sets the maximum sensor value represented by the UIx Max Signal for this user input. The unit of this value changes based on UIx Media Type and UIx Unit. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
100	UIx Min Scale Value	10000

Analog Value 9/18 - UIx Min Scale Value

Property	Default Value	Property Data Type	Access
Object Identifier	AV9, AV18	BACnetObjectIdentifier	Read
Object Name	"UIx Min Scale Value"	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	0	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	varies	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value sets the minimum sensor value represented by the UIx Min Signal for this user input. The unit of this value changes based on UIx Media Type and UIx Unit. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0	-10000	UIx Max Scale Value

Analog Input 2/3 - UIx Value

Property	Default Value	Property Data Type	Access
Object Identifier	AI2, AI3	BACnetObjectIdentifier	Read
Object Name	"UIx Value"	CharacterString	Read
Object Type	Analog Input(0)	BACnetObjectType	Read
Present Value	Current reading	Real	Read
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	Degrees Fahrenheit(64)	BACnetEngineeringUnits	Read
COV Increment	1	Read	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value represents the converted and scaled analog input signal connected to the UIx terminals. The unit of this value depends on the values of UIx Media Type and UIx Unit.

This object supports Change Of Value (COV) subscription with a COV Increment according to the table below. Note that the COV value is unit-less and may need to be modified if the unit of measurement is changed.

Default Value	Minimum Value	Maximum Value
1.0	0.001	10000.0

Multi-State Value 6/11 - UIx Unit

Property	Default Value	Property Data Type	Access
Object Identifier	MSV6, MSV11	BACnetObjectIdentifier	Read
Object Name	“UIx Unit”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	2	Unsigned	Read
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	2	Unsigned	Read
State Text	{“degrees C”, “degrees F”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value selects the unit used by the other objects associated with this user input and the unit used to display this value on the LCD. The units available change based on the value of UIx Media Type. See table below for possible options.

UIx Media Type	Available Units				
“Temperature”	“degrees C”	“degrees F”			
“Relative Humidity”	“% Relative Humidity”				
“Pressure”	“Pa”	“kPa”	“cmWC”	“mmWC”	“inWC”
“Flow”	“Air Changes Per Hour”				

Multi-State Value 7/12 - UIx Display Format

Property	Default Value	Property Data Type	Access
Object Identifier	MSV7, MSV12	BACnetObjectIdentifier	Read
Object Name	“UIx Display Format”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	1	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	4	Unsigned	Read
State Text	{“0”, ”0.0”, “0.00”, “0.000”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object controls how the value of UIx Value is displayed on the LCD.

Character String Value 2/3 - UIx Display Name

Property	Default Value	Property Data Type	Access
Object Identifier	CSV2, CSV3	BACnetObjectIdentifier	Read
Object Name	“UIx Display Name”	CharacterString	Read
Object Type	Character String Value(40)	BACnetObjectType	Read
Present Value	“Temperature”	CharacterString(32)	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object sets the label of the UIx measurement displayed on the LCD. Note that while the maximum length is 32 characters, some character may not be visible depending on the size of the measurement tile.

Binary Value 5/8 - UIx High Alarm Enable

Property	Default Value	Property Data Type	Access
Object Identifier	BV5, BV8	BACnetObjectIdentifier	Read
Object Name	"UIx High Alarm Enable"	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Inactive (0)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object controls whether or not the "UIx High Alarm Limit" and "UIx High Alarm Warning" values produce a change in the "UIx Alarm Status" value.

Analog Value 10/19 - UIx High Alarm Limit

Property	Default Value	Property Data Type	Access
Object Identifier	AV10, AV19	BACnetObjectIdentifier	Read
Object Name	"UIx High Alarm Limit"	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	0	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	Degrees Fahrenheit(64)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

If "UIx High Alarm Enable" is Active and the UIx Value exceeds the value specified, the UIx measurement will enter alarm status. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0.0	"UIx Low Alarm Limit"	10000.0

Analog Value 11/20 - UIx High Alarm Warning

Property	Default Value	Property Data Type	Access
Object Identifier	AV11, AV20	BACnetObjectIdentifier	Read
Object Name	"UIx High Alarm Warning"	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	0	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	Degrees Fahrenheit(64)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

If "UIx High Alarm Enable" is Active and the UIx Value exceeds the value specified, the UIx measurement will enter warning status. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0.0	"UIx Low Alarm Warning"	10000.0

Binary Value 6/9 - UIx Low Alarm Enable

Property	Default Value	Property Data Type	Access
Object Identifier	BV6, BV9	BACnetObjectIdentifier	Read
Object Name	"UIx Low Alarm Enable"	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Inactive (0)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object controls whether or not the "UIx Low Alarm Limit" and "UIx Low Alarm Warning" values produce a change in the "UIx Alarm Status" value.

Analog Value 12/21 - UIx Low Alarm Limit

Property	Default Value	Property Data Type	Access
Object Identifier	AV12, AV21	BACnetObjectIdentifier	Read
Object Name	"UIx Low Alarm Limit"	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	0	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	Degrees Fahrenheit(64)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

If "UIx Low Alarm Enable" is Active and UIx Value falls below the value specified, the UIx measurement will enter alarm status. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0.0	-10000.0	"UIx High Alarm Limit"

Analog Value 13/22 - UIx Low Alarm Warning

Property	Default Value	Property Data Type	Access
Object Identifier	AV13, AV22	BACnetObjectIdentifier	Read
Object Name	"UIx Low Alarm Warning"	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	0	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	Degrees Fahrenheit(64)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

If "UIx Low Alarm Enable" is Active and UIx Value falls below the value specified, the UIx measurement will enter warning status. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0.0	-10000.0	"UIx High Alarm Warning"

Multi-State Value 8/13 - UIx Alarm Status

Property	Default Value	Property Data Type	Access
Object Identifier	MSV8, MSV13	BACnetObjectIdentifier	Read
Object Name	“UIx Alarm Status”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	1	Unsigned	Read
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	3	Unsigned	Read
State Text	{“OK”, ”Warning”, “Alarm”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object indicates the alarm status associated with the UIx measurement. This object supports COV subscription.

Positive Integer Value 3/5 - UIx Alarm Delay

Property	Default Value	Property Data Type	Access
Object Identifier	PIV3, PIV5	BACnetObjectIdentifier	Read
Object Name	"UIx Alarm Delay"	CharacterString	Read
Object Type	Positive Integer Value (48)	BACnetObjectType	Read
Present Value	0	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	seconds(73)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object provides the ability to specify a delay (in seconds) between the UIx Value going outside the limits and the alarm status changing to "Alarm". This allows short violations of the configured limits to be ignored if necessary to prevent spurious alarm events. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0 s	0 s	5000 s

Positive Integer Value 4/6 - UIx Alarm To Normal Delay

Property	Default Value	Property Data Type	Access
Object Identifier	PIV4, PIV6	BACnetObjectIdentifier	Read
Object Name	“UIx Alarm To Normal Delay”	CharacterString	Read
Object Type	Positive Integer Value (48)	BACnetObjectType	Read
Present Value	0	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	seconds(73)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object provides the ability to specify a delay (in seconds) between the UIx Value returning to within the limits and the alarm status changing from “Alarm”. This can be used to verify the measured value is within the limit and stable. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0 s	0 s	5000 s

Analog Value 14/23 - UIx Alarm Deadband

Property	Default Value	Property Data Type	Access
Object Identifier	AV14, AV23	BACnetObjectIdentifier	Read
Object Name	"UIx Alarm Deadband"	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	0	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	Degrees Fahrenheit(64)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value puts a band around the limit values to prevent rapidly transiting in and out of alarm state. Setting this to a non-zero value is recommended whenever the UIx alarm is selected as the relay source. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0.0	0.0	1000.0

Digital Input Objects

Binary Value 10 - Binary Input Enable

Property	Default Value	Property Data Type	Access
Object Identifier	BV10	BACnetObjectIdentifier	Read
Object Name	“Binary Input Enable”	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Active (1)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value determines if the signal on the Digital Input terminal will be monitored.

Multi-State Value 14 - Binary Input Usage

Property	Default Value	Property Data Type	Access
Object Identifier	MSV14	BACnetObjectIdentifier	Read
Object Name	“Binary Input Usage”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	2	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	2	Unsigned	Read
State Text	{“Remote Switch”, “Door Contact”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This setting determines how the digital input is represented on the LCD and what action takes place as a result of changes in the input.

Multi-State Value 15 - Binary Input Polarity

Property	Default Value	Property Data Type	Access
Object Identifier	MSV14	BACnetObjectIdentifier	Read
Object Name	“Binary Input Polarity”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	1	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	2	Unsigned	Read
State Text	{“Reverse”, “Direct”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This setting determines what happens when the digital input is logic HIGH and LOW. See table below for details.

Binary Input Usage = “Remote Switch”(1)		
Binary Input Polarity = “Occupied”(1)	External Switch Closed → Binary Input Status = “Occupied”	External Switch Open → Binary Input Status = “Unoccupied”
Binary Input Polarity = “Unoccupied”(2)	External Switch Closed → Binary Input Status = “Unoccupied”	External Switch Open → Binary Input Status = “Occupied”
Binary Input Usage = “Door Contact”(2)		
Binary Input Polarity = “Reverse”(1)	Door Contact Closed → Binary Input Status = “Door Open”	Door Contact Open → Binary Input Status = “Door Closed”
Binary Input Polarity = “Direct”(2)	Door Contact Closed → Binary Input Status = “Door Closed”	Door Contact Open → Binary Input Status = “Door Open”

Multi-State Value 16 - Binary Input Status

Property	Default Value	Property Data Type	Access
Object Identifier	MSV16	BACnetObjectIdentifier	Read
Object Name	“Binary Input Status”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	Current Value	Unsigned	Read
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	2	Unsigned	Read
State Text	{“Door Open”, “Door Closed”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value indicates the current status of the digital input. This object supports COV subscription.

Binary Value 11 - Binary Alarm Enable

Property	Default Value	Property Data Type	Access
Object Identifier	BV11	BACnetObjectIdentifier	Read
Object Name	“Binary Alarm Enable”	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Inactive (0)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value determines whether or not an alarm is triggered when the door is open. This setting has no effect if Binary Input Usage is “Remote Switch”.

Positive Integer Value 7 - Binary Input Alarm Delay

Property	Default Value	Property Data Type	Access
Object Identifier	PIV7	BACnetObjectIdentifier	Read
Object Name	“Binary Input Alarm Delay”	CharacterString	Read
Object Type	Positive Integer Value (48)	BACnetObjectType	Read
Present Value	0	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	seconds(73)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object provides the ability to specify a delay (in seconds) between the external digital input value changing to door open state and Binary Input Status value indicating “Door Open”. This allows a door to be opened for a short duration or to prevent spurious events. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0 s	0 s	5000 s

Digital User Input Objects (UI1, UI2)

Binary Value 12/14 - Digital UIx Enable

Property	Default Value	Property Data Type	Access
Object Identifier	BV12, BV14	BACnetObjectIdentifier	Read
Object Name	“Digital UIx Enable”	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Inactive (0)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value determines if the signal on the UIx terminal will be monitored and considered a digital value. Note that in order to use the UIx terminal as a digital input, the corresponding UIx Enable value must be set to Inactive(0) and the UIx Signal Type must be set to “Digital”(1).

Multi-State Value 17/20 - Digital UIx Usage

Property	Default Value	Property Data Type	Access
Object Identifier	MSV17, MSV20	BACnetObjectIdentifier	Read
Object Name	“Digital UIx Usage”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	2	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	2	Unsigned	Read
State Text	{“Remote Switch”, “Door Contact”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This setting determines how the digital UIx input is represented on the LCD and what action takes place as a result of changes in the input.

Multi-State Value 18/21 - Digital UIx Polarity

Property	Default Value	Property Data Type	Access
Object Identifier	MSV18, MSV21	BACnetObjectIdentifier	Read
Object Name	“Digital UIx Polarity”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	1	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	2	Unsigned	Read
State Text	{“Reverse”, “Direct”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This setting determines what happens when the UIx input is logic HIGH and LOW. See table below for details.

Digital UIx Usage = “Remote Switch”(1)		
Digital UIx Polarity = “Occupied”(1)	External Switch Closed → Digital UIx Status = “Occupied”	External Switch Open → Digital UIx Status = “Unoccupied”
Digital UIx Polarity = “Unoccupied”(2)	External Switch Closed → Digital UIx Status = “Unoccupied”	External Switch Open → Digital UIx Status = “Occupied”
Digital UIx Usage = “Door Contact”(2)		
Digital UIx Polarity = “Reverse”(1)	Door Contact Closed → Digital UIx Status = “Door Open”	Door Contact Open → Digital UIx Status = “Door Closed”
Digital UIx Polarity = “Direct”(2)	Door Contact Closed → Digital UIx Status = “Door Closed”	Door Contact Open → Digital UIx Status = “Door Open”

Multi-State Value 19/22 - Digital UIx Status

Property	Default Value	Property Data Type	Access
Object Identifier	MSV19, MSV22	BACnetObjectIdentifier	Read
Object Name	“Digital UIx Status”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	Current Value	Unsigned	Read
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	2	Unsigned	Read
State Text	{“Door Open”, “Door Closed”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value indicates the current status of the digital UIx input. These objects support COV subscription.

Binary Value 13/15 - Digital UIx Alarm Enable

Property	Default Value	Property Data Type	Access
Object Identifier	BV13, BV15	BACnetObjectIdentifier	Read
Object Name	“Digital UIx Alarm Enable”	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Inactive (0)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value determines whether or not an alarm is triggered when the door is open. This setting has no effect if Digital UIx Usage is “Remote Switch”.

Positive Integer Value 8/9 - Digital UIx Alarm Delay

Property	Default Value	Property Data Type	Access
Object Identifier	PIV8, PIV9	BACnetObjectIdentifier	Read
Object Name	“Digital UIx Alarm Delay”	CharacterString	Read
Object Type	Positive Integer Value (48)	BACnetObjectType	Read
Present Value	0	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	seconds(73)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object provides the ability to specify a delay (in seconds) between the external digital input value changing to door open state and Digital UIx Status value indicating “Door Open”. This allows a door to be opened for a short duration or to prevent spurious events. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0 s	0 s	5000 s

Air Change Per Hour Objects

Analog Value 24 - Duct Area

Property	Default Value	Property Data Type	Access
Object Identifier	AV24	BACnetObjectIdentifier	Read
Object Name	“Duct Area”	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	1	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	square-feet(1)	BACnetEngineeringUnits	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value sets the area of the supply duct in order to compute the volumetric flow. This value is only required when a Media Type of “Flow” is selected and the unit is a velocity. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
1.0	0.08	25.0

Analog Value 25 - Room Volume

Property	Default Value	Property Data Type	Access
Object Identifier	AV25	BACnetObjectIdentifier	Read
Object Name	“Room Volume”	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	1000	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	cubic-feet(79)	BACnetEngineeringUnits	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value sets the volume of the room being monitored. This value is required when a Media Type of “Flow” is selected in order to compute Air Changes per Hour. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
1000.0	32.0	1000000.0

Relay Objects

Multi-State Value 23 - Relay Operation

Property	Default Value	Property Data Type	Access
Object Identifier	MSV23	BACnetObjectIdentifier	Read
Object Name	“Relay Operation”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	2	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	2	Unsigned	Read
State Text	{“Normally Closed”, “Normally Open”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This setting controls the behavior of the normally open (NO) relay terminal when the Relay Status object is Inactive.

Multi-State Value 24 - Relay Source

Property	Default Value	Property Data Type	Access
Object Identifier	MSV24	BACnetObjectIdentifier	Read
Object Name	“Relay Source”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	4	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	11	Unsigned	Read
State Text	{“Disabled”, “Master Alarm”, “Door Alarm”, “Pressure Alarm”, “Analog Alarm”, “Room 1 Alarm”, “Room 2 Alarm”, “Room 3 Alarm”, “Room 1 Door Alarm”, “Room 2 Door Alarm”, “Room 3 Door Alarm”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This setting determines which input(s) will change the Relay Status to Active. See table below for a description of each option.

Relay Source	Description
“Disabled”(1)	Relay disabled
“Master Alarm”(2)	Any active alarm will trigger relay active state
“Door Alarm”(3)	Any door alarm will trigger relay active state
“Pressure Alarm”(4)	The internal pressure sensor alarm state will trigger relay active state
“Analog Alarm”(5)	Either UI1 or UI2 alarm state will trigger relay active state
“Room X Alarm”(6,7,8)	Any alarm associated with Room X will trigger relay active state
“Room X Door Alarm”(9,10,11)	The door alarm associated with Room X will trigger relay active state

Binary Value 16 - Relay Status

Property	Default Value	Property Data Type	Access
Object Identifier	BV16	BACnetObjectIdentifier	Read
Object Name	“Relay Status”	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Inactive (0)	BACnetBinaryPV	Read
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value indicates whether or not the relay is “Active” according to the value of Relay Operation. This object supported COV subscription.

Analog Output Objects

Multi-State Value 25 - Analog Output Type

Property	Default Value	Property Data Type	Access
Object Identifier	MSV25	BACnetObjectIdentifier	Read
Object Name	“Analog Output Type”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	2	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	2	Unsigned	Read
State Text	{“0-10V”, “4-20mA”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value selects the type of analog signal output on the OUTPUT+ and OUTPUT GND terminals.

Multi-State Value 26 - Analog Output Source

Property	Default Value	Property Data Type	Access
Object Identifier	MSV26	BACnetObjectIdentifier	Read
Object Name	“Analog Output Source”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	1	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	3	Unsigned	Read
State Text	{“Built-in DP”, “User I1”, “User I2”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value selects the source of the analog output signal. Selecting “User I1” or “User I2” allows an analog signal from a remote sensor to be retransmitted and potentially converted from voltage to current or current to voltage.

Display Configuration Objects

Multi-State Value 27 - Display Mode

Property	Default Value	Property Data Type	Access
Object Identifier	MSV27	BACnetObjectIdentifier	Read
Object Name	“Display Mode”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	3	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	5	Unsigned	Read
State Text	{“1 Room 1 Sensor”, “1 Room 2 Sensors”, “1 Room 3 Sensors”, “2 Rooms 2 Sensors”, “3 Rooms 3 Sensors”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

The Series RSME/RSMC can display up to 3 sensor readings. This setting determines how those sensors will be distributed and displayed.

Multi-State Value 28/29/30/31/32 - Room X Sensor Y Select Analog

Property	Default Value	Property Data Type	Access
Object Identifier	MSV28, MSV29, MSV30, MSV31, MSV32	BACnetObjectIdentifier	Read
Object Name	“Room X Sensor Y Select Analog”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	1, 2, 3, 2, 3	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	7	Unsigned	Read
State Text	{“Built-in DP”, “User I1”, “User I2”, “ES1”, “ES2”, “ES3”, “None”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

These settings provide a mapping between the available sensor inputs and the room they are associated with. Note that options “ESx” refer to remote BACnet devices and will be discussed later.

Multi-State Value 33/34/35 - Room X Sensor Select Digital

Property	Default Value	Property Data Type	Access
Object Identifier	MSV33, MSV34, MSV35	BACnetObjectIdentifier	Read
Object Name	“Room X Sensor Select Digital”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	4, 1, 1	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	7	Unsigned	Read
State Text	{“None”, “User I1”, “User I2”, “Digital I1”, “ED1”, “ED2”, “ED3”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

These settings provide a mapping between the available digital inputs and the room they are associated with. Note that options “EDx” refer to remote BACnet devices and will be discussed later.

Character String Value 4/5/6 - Room X Name

Property	Default Value	Property Data Type	Access
Object Identifier	CSV4, CSV5, CSV6	BACnetObjectIdentifier	Read
Object Name	“Room X Name”	CharacterString	Read
Object Type	Character String Value(40)	BACnetObjectType	Read
Present Value	“Room X”	CharacterString(32)	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object sets the label of the room displayed on the LCD. Note that while the maximum length is 32 characters, some characters may not be visible due to space constraints on the display.

Multi-State Value 36/37/38 - Room X Mode

Property	Default Value	Property Data Type	Access
Object Identifier	MSV36, MSV37, MSV38	BACnetObjectIdentifier	Read
Object Name	“Room X Sensor Select Digital”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	1	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	3	Unsigned	Read
State Text	{“Occupied”, “Unoccupied”, “Cleaning”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

These settings determine whether or not a given room will produce an alarm output. See table below for a description of each option.

Option	Effect
“Occupied”(1)	Normal operation; the background of the measurement tile(s) change color based on alarm settings and alarm output is generated when necessary.
“Unoccupied”(2)	The background of the measurement tile(s) change color based on alarm settings, but no alarm output is generated.
“Clearning”(3)	Measurement tile(s) in the associated room are blue, no alarm output is generated.

Multi-State Value 39 - Language

Property	Default Value	Property Data Type	Access
Object Identifier	MSV39	BACnetObjectIdentifier	Read
Object Name	“Language”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	1	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	2	Unsigned	Read
State Text	{“English”, “Espanol”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value selects the language used on the LCD.

Security Objects

Binary Value 17 - Password Security Enable

Property	Default Value	Property Data Type	Access
Object Identifier	BV17	BACnetObjectIdentifier	Read
Object Name	“Password Security Enable”	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Inactive (0)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This settings determines if a passcode is required to enter the setup menu.

Character String Value 7 - Operator Password

Property	Default Value	Property Data Type	Access
Object Identifier	CSV7	BACnetObjectIdentifier	Read
Object Name	“Operator Password”	CharacterString	Read
Object Type	Character String Value(40)	BACnetObjectType	Read
Present Value	“1234”	CharacterString(8)	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object sets the pin code required by an operator to enter anytime the setup menu is entered. The string is required to be numeric only, an error will be returned if non-numeric characters are present.

Character String Value 8 - Administrator Password

Property	Default Value	Property Data Type	Access
Object Identifier	CSV8	BACnetObjectIdentifier	Read
Object Name	“Administrator Password”	CharacterString	Read
Object Type	Character String Value(40)	BACnetObjectType	Read
Present Value	“1234”	CharacterString(8)	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object sets the pin code required by an administrator to enter anytime the setup menu is entered. The string is required to be numeric only, an error will be returned if non-numeric characters are present.

Alarm Objects

Binary Value 18 - Alarm Latch Enable

Property	Default Value	Property Data Type	Access
Object Identifier	BV18	BACnetObjectIdentifier	Read
Object Name	“Alarm Latch Enable”	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Inactive (0)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This setting, when active, requires alarms to be manually reset. This may be useful if an alarm condition requires other actions within the room. The alarm can be manually reset via the LCD or object Reset Alarms (BV21)

Binary Value 19 - Alarm Buzzer Enable

Property	Default Value	Property Data Type	Access
Object Identifier	BV19	BACnetObjectIdentifier	Read
Object Name	“Alarm Buzzer Enable”	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Inactive (0)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This setting enables or disables the internal audible buzzer. If enabled, an active alarm will cause the buzzer to sound.

Positive Integer Value 10 - Alarm Buzzer Volume

Property	Default Value	Property Data Type	Access
Object Identifier	PIV10	BACnetObjectIdentifier	Read
Object Name	“Alarm Buzzer Volume”	CharacterString	Read
Object Type	Positive Integer Value (48)	BACnetObjectType	Read
Present Value	100	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	no-units(95)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object allows the volume of the internal buzzer to be adjusted. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
100	0	255

Binary Value 20 - Alarm Mute Button Enable

Property	Default Value	Property Data Type	Access
Object Identifier	BV20	BACnetObjectIdentifier	Read
Object Name	“Alarm Mute Button Enable”	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Inactive (0)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This setting, when active, shows an additional button on the LCD to allow an operator to mute/silence an active alarm.

Positive Integer Value 11 - Alarm Mute Timeout

Property	Default Value	Property Data Type	Access
Object Identifier	PIV11	BACnetObjectIdentifier	Read
Object Name	“Alarm Mute Timeout”	CharacterString	Read
Object Type	Positive Integer Value (48)	BACnetObjectType	Read
Present Value	0	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	seconds(73)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object sets the duration of the alarm mute. After the specified time, if the alarm is still active, the buzzer will sound again. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0	0	5000

Binary Value 21 - Mute Alarms

Property	Default Value	Property Data Type	Access
Object Identifier	BV21	BACnetObjectIdentifier	Read
Object Name	"Mute Alarms"	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Inactive (0)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object, when set Active(1), will mute internal buzzer for a period of Alarm Mute Timeout seconds. Writing Inactive(0) to this object has no effect.

Binary Value 22 - Reset Alarms

Property	Default Value	Property Data Type	Access
Object Identifier	BV22	BACnetObjectIdentifier	Read
Object Name	"Reset Alarms"	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Inactive (0)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object, when set Active(1), will reset any latched alarms. Writing Inactive(0) to this object has no effect.

External BACnet Sensor (ES1, ES2, ES3) Objects

Binary Value 23/26/29 - ESx Enable

Property	Default Value	Property Data Type	Access
Object Identifier	BV23, BV26, BV29	BACnetObjectIdentifier	Read
Object Name	“ESx Enable”	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Inactive (0)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object determines if this external BACnet sensor, ESx, is monitored. This value should remain “Inactive” until all related settings have been set correctly. The BACnet sensors are referred to as “BACnet A1”, “BACnet A2”, and “BACnet A3” on the LCD.

Positive Integer Value 12/16/20 - ESx Device Instance

Property	Default Value	Property Data Type	Access
Object Identifier	PIV12, PIV16, PIV20	BACnetObjectIdentifier	Read
Object Name	“ESx Device Instance”	CharacterString	Read
Object Type	Positive Integer Value (48)	BACnetObjectType	Read
Present Value	4194303	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	no-units(95)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object sets the BACnet device object instance of the external device being monitored. The remote device must be able to respond to a directed WhoIs request. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
4194303	0	4194303

Positive Integer Value 13/17/21 - ESx Object Instance

Property	Default Value	Property Data Type	Access
Object Identifier	PIV13, PIV17, PIV21	BACnetObjectIdentifier	Read
Object Name	“ESx Object Instance”	CharacterString	Read
Object Type	Positive Integer Value (48)	BACnetObjectType	Read
Present Value	4194303	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	no-units(95)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object sets the BACnet instance of the object to be monitored on the external device. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
4194303	0	4194303

Multi-State Value 40/45/50 - ESx Object Type

Property	Default Value	Property Data Type	Access
Object Identifier	MSV40, MSV45, MSV50	BACnetObjectIdentifier	Read
Object Name	“ESx Object Type”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	1	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	2	Unsigned	Read
State Text	{“Analog Input”, “Analog Value”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value selects the BACnet object type that will be monitored on the external device. This value together with the object instance forms the BACnet object ID that will be requested from the external device.

Multi-State Value 41/46/51 - ESx Media Type

Property	Default Value	Property Data Type	Access
Object Identifier	MSV41, MSV46, MSV51	BACnetObjectIdentifier	Read
Object Name	“ESx Media Type”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	1	Unsigned	Read
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	4	Unsigned	Read
State Text	{“Temperature”, “Relative Humidity”, “Pressure”, “Flow”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object selects the type of measurement represented by the external BACnet sensor. This selection determines what units are available for the ESx Value. In order to compute Air Changes per Hour (ACH), the external sensor must measure velocity or volume flow. This value should be set to 4 (“Flow”) and the values of “Duct Area” (if velocity sensor) and “Room Volume” must be set.

Multi-State Value 42/47/52 - ESx Unit

Property	Default Value	Property Data Type	Access
Object Identifier	MSV42, MSV47, MSV52	BACnetObjectIdentifier	Read
Object Name	“ESx Unit”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	2	Unsigned	Read
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	2	Unsigned	Read
State Text	{“degrees C”, “degrees F”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value selects the unit used by the other objects associated with this external BACnet sensor and the unit used to display this value on the LCD. The units available change based on the value of ESx Media Type. See table below for possible options.

ESx Media Type	Available Units				
“Temperature”	“degrees C”	“degrees F”			
“Relative Humidity”	“% Relative Humidity”				
“Pressure”	“Pa”	“kPa”	“cmWC”	“mmWC”	“inWC”
“Flow”	“Air Changes Per Hour”				

Note that the unit of measure on the external BACnet sensor does not have to match the ESx Unit value. See below for supported external units.

ESx Media Type	Compatible External Units						
“Temperature”	degrees C	degrees F	degrees Kelvin				
“Relative Humidity”	“% Relative Humidity						
“Pressure”	Pascals	Kilopascals	inWC	PSI	mmWC	cmWC	cmHg
“Flow”	ft^3/min	ft/min	m^3/hr	m/s			

Multi-State Value 43/48/53 - ESx Display Format

Property	Default Value	Property Data Type	Access
Object Identifier	MSV43, MSV48, MSV53	BACnetObjectIdentifier	Read
Object Name	“ESx Display Format”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	1	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	4	Unsigned	Read
State Text	{“0”, ”0.0”, “0.00”, “0.000”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object controls how the value of ESx Value is displayed on the LCD.

Character String Value 9/10/11 - ESx Display Name

Property	Default Value	Property Data Type	Access
Object Identifier	CSV9, CSV10, CSV11	BACnetObjectIdentifier	Read
Object Name	“ESx Display Name”	CharacterString	Read
Object Type	Character String Value(40)	BACnetObjectType	Read
Present Value	“Temperature”	CharacterString(32)	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object sets the label of the ESx measurement displayed on the LCD. Note that while the maximum length is 32 characters, some character may not be visible depending on the size of the measurement tile.

Analog Value 26/32/38 - ESx Value

Property	Default Value	Property Data Type	Access
Object Identifier	AV26, AV32, AV38	BACnetObjectIdentifier	Read
Object Name	“ESx Value”	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	Current reading	Real	Read
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	Degrees Fahrenheit(64)	BACnetEngineeringUnits	Read
COV Increment	1	Read	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value represents the value read from the external BACnet sensor. The unit of this value depends on the values of ESx Media Type and ESx Unit.

This object supports Change Of Value (COV) subscription with a COV Increment according to the table below. Note that the COV value is unit-less and may need to be modified if the unit of measurement is changed.

Default Value	Minimum Value	Maximum Value
1.0	0.001	10000.0

Binary Value 24/27/30 - ESx High Alarm Enable

Property	Default Value	Property Data Type	Access
Object Identifier	BV24, BV27, BV30	BACnetObjectIdentifier	Read
Object Name	“ESx High Alarm Enable”	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Inactive (0)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object controls whether or not the “ESx High Alarm Limit” and “ESx High Alarm Warning” values produce a change in the “ESx Alarm Status” value.

Analog Value 27/33/39 - ESx High Alarm Limit

Property	Default Value	Property Data Type	Access
Object Identifier	AV27, AV33, AV39	BACnetObjectIdentifier	Read
Object Name	"ESx High Alarm Limit"	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	0	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	Degrees Fahrenheit(64)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

If "ESx High Alarm Enable" is Active and the ESx Value exceeds the value specified, the ESx measurement will enter alarm status. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0.0	"ESx Low Alarm Limit"	10000.0

Analog Value 28/34/40 - ESx High Alarm Warning

Property	Default Value	Property Data Type	Access
Object Identifier	AV28, AV34, AV40	BACnetObjectIdentifier	Read
Object Name	"ESx High Alarm Warning"	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	0	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	Degrees Fahrenheit(64)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

If "ESx High Alarm Enable" is Active and the ESx Value exceeds the value specified, the ESx measurement will enter warning status. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0.0	"ESx Low Alarm Warning"	10000.0

Binary Value 25/28/31 - ESx Low Alarm Enable

Property	Default Value	Property Data Type	Access
Object Identifier	BV25, BV28, BV31	BACnetObjectIdentifier	Read
Object Name	“ESx Low Alarm Enable”	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Inactive (0)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object controls whether or not the “ESx Low Alarm Limit” and “ESx Low Alarm Warning” values produce a change in the “ESx Alarm Status” value.

Analog Value 29/35/41 - ESx Low Alarm Limit

Property	Default Value	Property Data Type	Access
Object Identifier	AV29, AV35, AV41	BACnetObjectIdentifier	Read
Object Name	"ESx Low Alarm Limit"	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	0	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	Degrees Fahrenheit(64)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

If "ESx Low Alarm Enable" is Active and ESx Value falls below the value specified, the ESx measurement will enter alarm status. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0.0	-10000.0	"ESx High Alarm Limit"

Analog Value 30/36/42 - ESx Low Alarm Warning

Property	Default Value	Property Data Type	Access
Object Identifier	AV30, AV36, AV42	BACnetObjectIdentifier	Read
Object Name	“ESx Low Alarm Warning”	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	0	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	Degrees Fahrenheit(64)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

If “ESx Low Alarm Enable” is Active and ESx Value falls below the value specified, the ESx measurement will enter warning status. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0.0	-10000.0	“ESx High Alarm Warning”

Multi-State Value 44/49/54 - ESx Alarm Status

Property	Default Value	Property Data Type	Access
Object Identifier	MSV44, MSV49, MSV54	BACnetObjectIdentifier	Read
Object Name	“ESx Alarm Status”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	1	Unsigned	Read
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	3	Unsigned	Read
State Text	{“OK”, ”Warning”, “Alarm”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object indicates the alarm status associated with the ESx measurement. This object supports COV subscription.

Positive Integer Value 14/18/22 - ESx Alarm Delay

Property	Default Value	Property Data Type	Access
Object Identifier	PIV314, PIV18, PIV22	BACnetObjectIdentifier	Read
Object Name	“ESx Alarm Delay”	CharacterString	Read
Object Type	Positive Integer Value (48)	BACnetObjectType	Read
Present Value	0	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	seconds(73)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object provides the ability to specify a delay (in seconds) between the ESx Value going outside the limits and the alarm status changing to “Alarm”. This allows short violations of the configured limits to be ignored if necessary to prevent spurious alarm events. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0 s	0 s	5000 s

Positive Integer Value 15/19/23 - ESx Alarm To Normal Delay

Property	Default Value	Property Data Type	Access
Object Identifier	PIV15, PIV19, PIV23	BACnetObjectIdentifier	Read
Object Name	“ESx Alarm To Normal Delay”	CharacterString	Read
Object Type	Positive Integer Value (48)	BACnetObjectType	Read
Present Value	0	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	seconds(73)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object provides the ability to specify a delay (in seconds) between the ESx Value returning to within the limits and the alarm status changing from “Alarm”. This can be used to verify the measured value is within the limit and stable. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0 s	0 s	5000 s

Analog Value 31/37/43 - ESx Alarm Deadband

Property	Default Value	Property Data Type	Access
Object Identifier	AV31, AV37, AV43	BACnetObjectIdentifier	Read
Object Name	“ESx Alarm Deadband”	CharacterString	Read
Object Type	Analog Value(2)	BACnetObjectType	Read
Present Value	0	Real	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	Degrees Fahrenheit(64)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value puts a band around the limit values to prevent rapidly transiting in and out of alarm state. Setting this to a non-zero value is recommended whenever the ESx alarm is selected as the relay source. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0.0	0.0	1000.0

External BACnet Digital (ED1, ED2, ED3) Objects

Binary Value 32/34/36 - EDx Enable

Property	Default Value	Property Data Type	Access
Object Identifier	BV32, BV34, BV36	BACnetObjectIdentifier	Read
Object Name	“EDx Enable”	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Inactive (0)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object determines if this external BACnet digital input, EDx, is monitored. This value should remain “Inactive” until all related settings have been set correctly. The BACnet digital inputs are referred to as “BACnet D1”, “BACnet D2”, and “BACnet D3” on the LCD.

Positive Integer Value 24/27/30 - EDx Device Instance

Property	Default Value	Property Data Type	Access
Object Identifier	PIV24, PIV27, PIV30	BACnetObjectIdentifier	Read
Object Name	“EDx Device Instance”	CharacterString	Read
Object Type	Positive Integer Value (48)	BACnetObjectType	Read
Present Value	4194303	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	no-units(95)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object sets the BACnet device object instance of the external device being monitored. The remote device must be able to respond to a directed WhoIs request. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
4194303	0	4194303

Positive Integer Value 25/28/31 - EDx Object Instance

Property	Default Value	Property Data Type	Access
Object Identifier	PIV25, PIV28, PIV31	BACnetObjectIdentifier	Read
Object Name	“EDx Object Instance”	CharacterString	Read
Object Type	Positive Integer Value (48)	BACnetObjectType	Read
Present Value	4194303	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	no-units(95)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object sets the BACnet instance of the object to be monitored on the external device. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
4194303	0	4194303

Multi-State Value 55/59/63 - EDx Object Type

Property	Default Value	Property Data Type	Access
Object Identifier	MSV55, MSV59, MSV63	BACnetObjectIdentifier	Read
Object Name	“EDx Object Type”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	2	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	2	Unsigned	Read
State Text	{“Binary Input”, “Binary Value”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value selects the BACnet object type that will be monitored on the external device. This value together with the object instance forms the BACnet object ID that will be requested from the external device.

Multi-State Value 56/60/64 - EDx Usage

Property	Default Value	Property Data Type	Access
Object Identifier	MSV56, MSV60, MSV64	BACnetObjectIdentifier	Read
Object Name	“EDx Usage”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	2	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	2	Unsigned	Read
State Text	{“Remote Switch”, “Door Contact”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This setting determines how this external BACnet digital input is represented on the LCD and what action takes place as a result of changes in the value.

Multi-State Value 57/61/65 - EDx Polarity

Property	Default Value	Property Data Type	Access
Object Identifier	MSV57, MSV61, MSV65	BACnetObjectIdentifier	Read
Object Name	“EDx Polarity”	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	1	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	2	Unsigned	Read
State Text	{“Reverse”, “Direct”}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This setting determines what happens when the external BACnet value is ACTIVE(1) and Inactive(0). See table below for details.

EDx Usage = “Remote Switch”(1)		
EDx Polarity = “Occupied”(1)	BACnet value Active(1) → EDx Status = “Occupied”	BACnet value Inactive(0) → EDx Status = “Unoccupied”
EDx Polarity = “Unoccupied”(2)	BACnet value Active(1) → EDx Status = “Unoccupied”	BACnet value Inactive(0) → EDx Status = “Occupied”
EDx Usage = “Door Contact”(2)		
EDx Polarity = “Reverse”(1)	BACnet value Active(1) → EDx Status = “Door Open”	BACnet value Inactive(0) → EDx Status = “Door Closed”
EDx Polarity = “Direct”(2)	BACnet value Active(1) → EDx Status = “Door Closed”	BACnet value Inactive(0) → EDx Status = “Door Open”

Multi-State Value 58/62/66 - EDx Status

Property	Default Value	Property Data Type	Access
Object Identifier	MSV58, MSV62, MSV66	BACnetObjectIdentifier	Read
Object Name	"EDx Status"	CharacterString	Read
Object Type	Multi-State Value(19)	BACnetObjectType	Read
Present Value	Current Value	Unsigned	Read
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Number Of States	2	Unsigned	Read
State Text	{"Door Open", "Door Closed"}	BACnetARRAY[N] of CharacterString	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value indicates the current status of the external BACnet digital input. These objects support COV subscription.

Binary Value 33/35/37 - EDx Alarm Enable

Property	Default Value	Property Data Type	Access
Object Identifier	BV33, BV35, BV37	BACnetObjectIdentifier	Read
Object Name	"EDx Alarm Enable"	CharacterString	Read
Object Type	Binary Value(5)	BACnetObjectType	Read
Present Value	Inactive (0)	BACnetBinaryPV	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This value determines whether or not an alarm is triggered when the door is open. This setting has no effect if EDx Usage is "Remote Switch".

Positive Integer Value 26/29/32 - EDx Alarm Delay

Property	Default Value	Property Data Type	Access
Object Identifier	PIV26, PIV29, PIV32	BACnetObjectIdentifier	Read
Object Name	“EDx Alarm Delay”	CharacterString	Read
Object Type	Positive Integer Value (48)	BACnetObjectType	Read
Present Value	0	Unsigned	Read/Write
Status Flags	{0,0,0,0}	BACnetStatusFlags	Read
Event State	NORMAL(0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED(0)	BACnetReliability	Read
Out Of Service	FALSE(0)	Boolean	Read/Write
Units	seconds(73)	BACnetEngineeringUnits	Read
Property List		BACnetARRAY[N] of BACnetPropertyIdentifier	Read

This object provides the ability to specify a delay (in seconds) between the external BACnet digital input value changing to door open state and EDx Status value indicating “Door Open”. This allows a door to be opened for a short duration or to prevent spurious events. See table below for accepted input range.

Default Value	Minimum Value	Maximum Value
0 s	0 s	5000 s

Modbus®

Modbus® Functions

The Series RSME/RSMC supports the following Modbus® functions. All defined registers are holding registers.

Function Name	Function Code
Read Holding Registers	03
Write Single Register	06
Write Multiple Registers	16

Modbus® Registers - Internal Pressure

Register(s)	Description	Data Type	Range	Default Value
0	Enable Measurement	signed 16-bit	0-1	1
3	Measurement Unit	signed 16-bit	0=Pa,1=kPa,2=cmWC,3=mmWC,4=inWC	4
19	Display Format	signed 16-bit	0=”0”,1=”0.0”,2=”0.00”,3=”0.000”	3
20	Alarm High Enable	signed 16-bit	0-1	0
21-22	Alarm High Limit	32-bit float	Alarm Low Limit - 100000	0
23-24	Alarm High Warning	32-bit float	Alarm Low Warning - 100000	0
25	Alarm Low Enable	signed 16-bit	0-1	0
26-27	Alarm Low Limit	32-bit float	-100000 - Alarm High Limit	0
28-29	Alarm Low Warning	32-bit float	-100000 - Alarm High Warning	0
30	Alarm Delay	signed 16-bit	0 - 5000	0
31	Alarm To Normal Delay	signed 16-bit	0 - 5000	0
32-33	Alarm Deadband	32-bit float	0 - 1000	0
34-49	Display Name	string(32)		“Pressure”
4096-4097	Internal Pressure	32-bit float	Read-Only	

Modbus® Registers - User Input 1 (UI1)

Register(s)	Description	Data Type	Range	Default Value
80	Enable Measurement	signed 16-bit	0-1	1
81	Signal Type	signed 16-bit	0=Digital,1=4-20mA,2=0-5V,3=0-10V	3
82	Media Type	signed 16-bit	0=Temperature, 1=Humidity, 2=Pressure, 3=Flow	0
83	Measurement Unit	signed 16-bit	Media Type=0; 0=C, 1=F Media Type=1; 0=%RH Media Type=2; 0=Pa,1=kPa,2=cmWC,3=mmWC,4=inWC Media Type=3; 0=ft^3/min,1=ft/min,2=m^3/hr,3=m/s	4
84-85	Max Signal	32-bit float	0-20	10
86-87	Min Signal	32-bit float	0-20	0
88-89	Max Scale Value	32-bit float	Min Scale Value - 10000	100
90-91	Min Scale Value	32-bit float	-10000 - Max Scale Value	0
99	Display Format	signed 16-bit	0=”0”,1=”0.0”,2=”0.00”,3=”0.000”	0
100	Alarm High Enable	signed 16-bit	0-1	0
101-102	Alarm High Limit	32-bit float	Alarm Low Limit - 100000	0
103-104	Alarm High Warning	32-bit float	Alarm Low Warning - 100000	0
105	Alarm Low Enable	signed 16-bit	0-1	0
106-107	Alarm Low Limit	32-bit float	-100000 - Alarm High Limit	0
108-109	Alarm Low Warning	32-bit float	-100000 - Alarm High Warning	0
110	Alarm Delay	signed 16-bit	0 - 5000	0
111	Alarm To Normal Delay	signed 16-bit	0 - 5000	0
112-113	Alarm Deadband	32-bit float	0 - 1000	0
114-129	Display Name	string(32)		“Temperature”
4100-4101	Value	32-bit float	Read-Only	

Modbus® Registers - User Input 2 (UI2)

Register(s)	Description	Data Type	Range	Default Value
160	Enable Measurement	signed 16-bit	0-1	1
161	Signal Type	signed 16-bit	0=Digital,1=4-20mA,2=0-5V,3=0-10V	2
162	Media Type	signed 16-bit	0=Temperature, 1=Humidity, 2=Pressure, 3=Flow	0
163	Measurement Unit	signed 16-bit	Media Type=0; 0=C, 1=F Media Type=1; 0=%RH Media Type=2; 0=Pa,1=kPa,2=cmWC,3=mmWC,4=inWC Media Type=3; 0=ft^3/min,1=ft/min,2=m^3/hr,3=m/s	4
164-165	Max Signal	32-bit float	0-20	20
166-167	Min Signal	32-bit float	0-20	4
168-169	Max Scale Value	32-bit float	Min Scale Value - 10000	100
170-171	Min Scale Value	32-bit float	-10000 - Max Scale Value	0
179	Display Format	signed 16-bit	0=”0”,1=”0.0”,2=”0.00”,3=”0.000”	0
180	Alarm High Enable	signed 16-bit	0-1	0
181-182	Alarm High Limit	32-bit float	Alarm Low Limit - 100000	0
183-184	Alarm High Warning	32-bit float	Alarm Low Warning - 100000	0
185	Alarm Low Enable	signed 16-bit	0-1	0
186-187	Alarm Low Limit	32-bit float	-100000 - Alarm High Limit	0
188-189	Alarm Low Warning	32-bit float	-100000 - Alarm High Warning	0
190	Alarm Delay	signed 16-bit	0 - 5000	0
191	Alarm To Normal Delay	signed 16-bit	0 - 5000	0
192-193	Alarm Deadband	32-bit float	0 - 1000	0
194-209	Display Name	string(32)		“Temperature”
4106-4107	Value	32-bit float	Read-only	

Modbus® Registers - Digital Input (Digital I1)

Register(s)	Description	Data Type	Range	Default Value
512	Enable Input	signed 16-bit	0-1	1
513	Usage	signed 16-bit	0=Remote Switch,1=Door	1
514	Polarity	signed 16-bit	0=Reverse, 1=Direct	0
515	Alarm Delay	signed 16-bit	0-5000	0
516	Alarm Enable	signed 16-bit	0-1	0
4118	Input Status	signed 16-bit	0=Door Open,1=Door Closed Read-Only	

Modbus® Registers - Digital User Input 1 (Digital UI1)

Register(s)	Description	Data Type	Range	Default Value
544	Enable Input	signed 16-bit	0-1	0
545	Usage	signed 16-bit	0=Remote Switch,1=Door	1
546	Polarity	signed 16-bit	0=Reverse, 1=Direct	0
547	Alarm Delay	signed 16-bit	0-5000	0
548	Alarm Enable	signed 16-bit	0-1	0
4120	Input Status	signed 16-bit	0=Door Open,1=Door Closed Read-Only	

In order to treat User Input 1 as a digital input, User Input 1: Enable Measurement and User Input 1: Signal Type must be 0.

Modbus® Registers - Digital User Input 2 (Digital UI2)

Register(s)	Description	Data Type	Range	Default Value
576	Enable Input	signed 16-bit	0-1	0
577	Usage	signed 16-bit	0=Remote Switch,1=Door	1
578	Polarity	signed 16-bit	0=Reverse, 1=Direct	0
579	Alarm Delay	signed 16-bit	0-5000	0
580	Alarm Enable	signed 16-bit	0-1	0
4122	Input Status	signed 16-bit	0=Door Open,1=Door Closed Read-Only	

In order to treat User Input 2 as a digital input, User Input 2: Enable Measurement and User Input 2: Signal Type must be 0.

Modbus® Registers - Relay Configuration

Register(s)	Description	Data Type	Range	Default Value
780	Normally Open Contact Behavior	signed 16-bit	0 = Normally Closed 1 = Normally Open	1
781	Relay Source	signed 16-bit	0 = None, 1 = Master, 2 = Door, 3 = Pressure, 4 = Analog, 5 = Room 1 Alarm, 6 = Room 2 Alarm, 7 = Room 3 Alarm, 8 = Room 1 Door, 9 = Room 2 Door, 10 = Room 3 Door	3

Modbus® Registers - Analog Configuration

Register(s)	Description	Data Type	Range	Default Value
790	Output Type	signed 16-bit	0 = 0-10V, 1 = 4-20mA	1
791	Output Source	signed 16-bit	0 = Built-in DP, 1 = User Input 1, 2 = User Input 2	0

Modbus® Registers - Display Configuration

Register(s)	Description	Data Type	Range	Default Value
768	Display Mode	signed 16-bit	0 = 1 Room 1 Sensor, 1 = 1 Room 2 Sensors, 2 = 1 Room 3 Sensors, 3 = 2 Rooms 2 Sensors, 4 = 3 Rooms 3 Sensors,	2
769	Room 1 Sensor 1 Select	signed 16-bit	0 = Built-in DP, 1 = User Input 1, 2 = User Input 2, 6 = None	0
770	Room 1 Sensor 2 Select	signed 16-bit	0 = Built-in DP, 1 = User Input 1, 2 = User Input 2, 6 = None	1
771	Room 1 Sensor 3 Select	signed 16-bit	0 = Built-in DP, 1 = User Input 1, 2 = User Input 2, 6 = None	2
772	Room 2 Sensor 2 Select	signed 16-bit	0 = Built-in DP, 1 = User Input 1, 2 = User Input 2, 6 = None	1
773	Room 3 Sensor 3 Select	signed 16-bit	0 = Built-in DP, 1 = User Input 1, 2 = User Input 2, 6 = None	2
774	Room 1 Digital Select	signed 16-bit	0 = None, 1 = User Input 1, 2 = User Input 2, 3 = Digital Input	3
775	Room 2 Digital Select	signed 16-bit	0 = None, 1 = User Input 1, 2 = User Input 2, 3 = Digital Input	0
776	Room 3 Digital Select	signed 16-bit	0 = None, 1 = User Input 1, 2 = User Input 2, 3 = Digital Input	0
777	Room 1 Mode	signed 16-bit	0 = Occupied, 1 = Unoccupied, 2 = Cleaning	0
778	Room 2 Mode	signed 16-bit	0 = Occupied, 1 = Unoccupied, 2 = Cleaning	0
779	Room 3 Mode	signed 16-bit	0 = Occupied, 1 = Unoccupied, 2 = Cleaning	0
792	Language	signed 16-bit	0 = English, 1 = Español	0
1024-1039	Room 1 Name	string(32)		“Room 1”
1056-1072	Room 2 Name	string(32)		“Room 2”
1088-1103	Room 3 Name	string(32)		“Room 3”

Modbus® Registers - Alarm Configuration

Register(s)	Description	Data Type	Range	Default Value
795	Alarm Interlock Enable	signed 16-bit	0 = False, 1 = True	0
796	Alarm Buzzer Enable	signed 16-bit	0 = False, 1 = True	0
797	Alarm Buzzer Volume	signed 16-bit	0-255	100
798	Alarm Mute Button Enable	signed 16-bit	0 = False, 1 = True	0
799	Alarm Mute Timeout	signed 16-bit	0 - 5000	0

Modbus® Registers - Security Configuration

Register(s)	Description	Data Type	Range	Default Value
802	Pin Security Enabled	signed 16-bit	0 = False, 1 = True	0
1312-1315	Supervisor Pin	string(8)	numeric only	“1234”
1344-1347	Operator Pin	string(8)	numeric only	“1234”

Modbus® Registers - Air Change Per Hour Configuration

Register(s)	Description	Data Type	Range	Default Value
821-822	Duct Area	32-bit float	0.08 - 25	1 ft^2
823	Area Unit	signed 16-bit	0 = in^2, 1 = ft^2	1
824-825	Room Volume	32-bit float	32 - 1000000	1000 ft^3

Modbus® Registers - Time Configuration

Register(s)	Description	Data Type	Range	Default Value
4133	Time: Hour	unsigned 16-bit	0-23	0
4134	Time: Minute	unsigned 16-bit	0-59	0
4135	Date: Day	unsigned 16-bit	1-31	1
4136	Date: Month	unsigned 16-bit	1-12	1
4137	Date: Year	unsigned 16-bit	2020-2156	2020

Modbus® Registers - Device Information

Register(s)	Description	Data Type	Range	Default Value
1216-1223	Firmware Version	string(16)	Read-Only	“1.0.10”
1248-1255	Serial Number	string(16)	Read-Only	“XXXXXX”
1280-1295	Model Number	string(32)	Read-Only	“RSMx-x-xxx”
1376-1383	Calibration Date	string(16)	Read-Only	“XX-XX-XX”