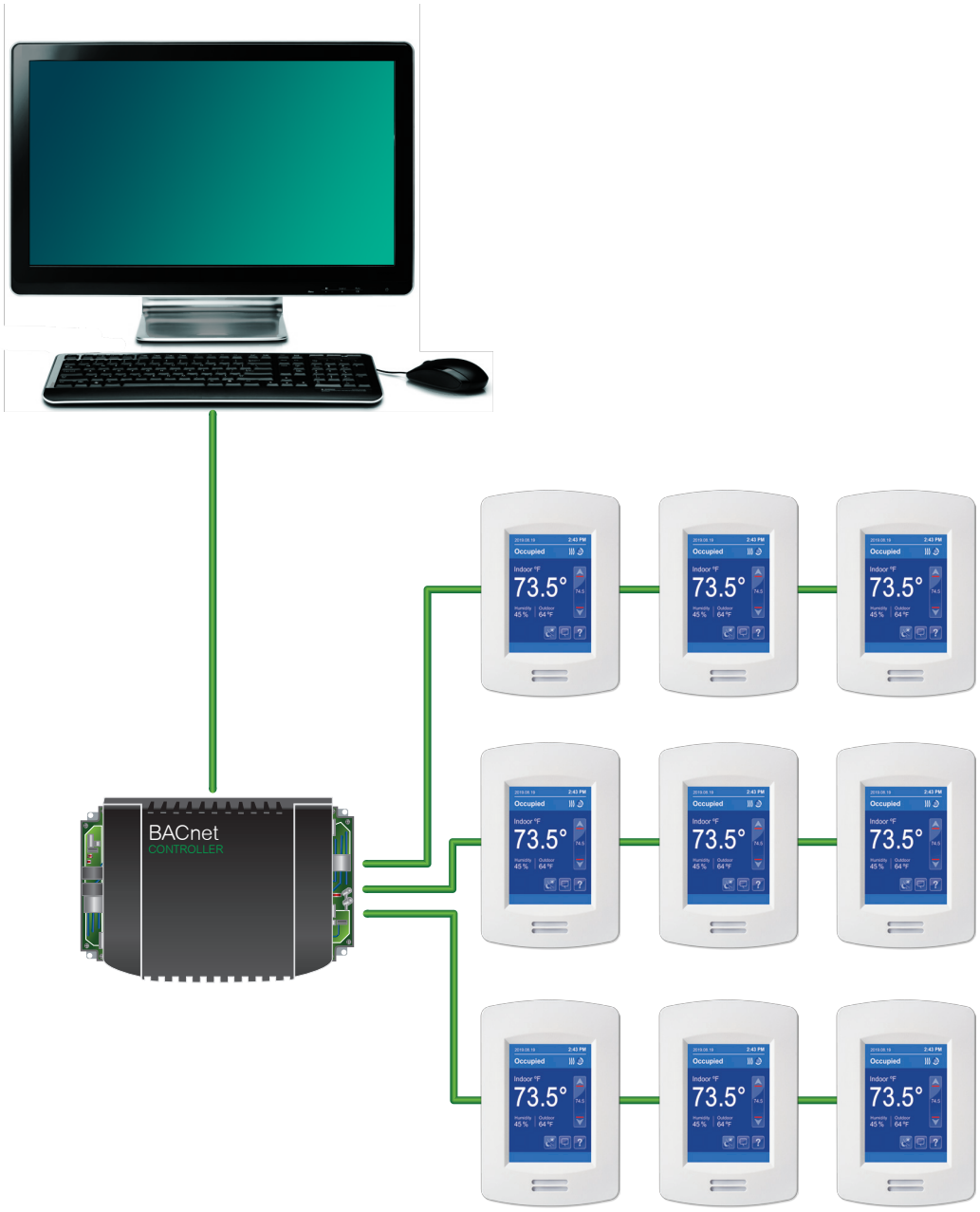
VT8000 Room Controllers

VZ8250 BACnet Integration Guide

Variable Air Volume (VAV)

Firmware Revision 2.6



VICONICS
Beyond Comfort

Version 4

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Compatibility Specifications

Note: This document contains BACnet compatibility specifications of the Viconics Technologies VZ8250 Room Controllers and follows the BACnet PICS format. Objects common to all three models of VAV Room Controllers appear in one table, whereas objects which are model specific appear in separate tables.

Supported BACnet® Services: The BACnet® communicating controller meets all requirements for designation as an Application Specific Controller (B-ASC). The BACnet controller supports the following BACnet Interoperability Building Blocks (BIBBs).

Note: The controller does not support segmented requests or responses

Application Service	Designation
Data Sharing-COV-B	DS-COV-B
Data Sharing – Read Property - B	DS-RP-B
Data Sharing – Read Property Multiple - B	DS-RPM-B
Data Sharing – Write Property - B	DS-WP-B
Data Sharing - Write Property Multiple Service - B	DS-WPM-B
Device Management - Time Synchronization - B	DM-TS-B
Device Management - Device Communication Control - B	DM-DCC-B
Device Management – Dynamic Device Binding - B	DM-DDB-B
Device Management – Dynamic Object Binding - B	DM-DOB-B
Scheduling-Internal-B	SCHED-I-B

Object Name	Type and Instance	Object Property	Controller Parameter
VZ8250 (all models)	Device	Object_Identifier Property 75 (R,W)	Unique ID number of a device on a network
		Object_Name Property 77 (R,W)	Unique name of a device on a network
		Model Name Property 70 (R)	Controller model number
		Firmware Revision Property 44 (R)	Current BACnet® firmware revision used by controller
		Protocol Version Property 98 (R)	Current BACnet® firmware protocol version Default is Version 1
		Protocol Revision Property 139 (R)	Current BACnet® firmware protocol revision Default is Version 2
		Max ADPU Length Property 62 (R)	Maximum ADPU Length accepted Default is 480
		ADPU Timeout Property 10 (R)	ADPU timeout value Default is 3000 ms
		Application-Software-Version Property 12 (R)	Controller base application software version Default is based on current released version
		Max_Master (R,W)	Maximum master devices allowed to be part of network. 0 to 127, default is 127
		Description Property 28 (R,W)	String of printable characters (Same as “Long Screen Message” CSV2)
		Location Property 58 (R,W)	String of printable characters (Same as “Short Screen Message” CSV1)
		Local Date Property 56 (R)	Indicates date to best of device knowledge
		Local Time Property 57 (R)	Indicated time of day best of the device knowledge

Object Properties

NOTE for BACnet Priorities:

- 1-3: Written in eeprom memory, the value cannot be changed at the thermostat and will remain after a power-cycle. To release it, do a "Restore Factory default" or from BACnet at same priority level.
  Usage: System configuration parameters that should not be changed.
- 4-16: Written in ram memory, the values are lost after a power-cycle.
  Usage: Active writes from LUA script and/or from a BMS.
- 17: Relinquish default, the values can be changed at the thermostat and will remain in the thermostat after a power-cycle.
  Usage: Temperature setpoints, fan-mode, system-mode, etc.

Analog Objects

Object Type Read/Write Settings			Object Property	Controller Parameter
Input AI	Output AO	Values AV		
Read Only	Read Only	Read Only	Event State Property 36	Indicates if object has an active event state associated with it
Read Only	Read Only	Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Read Only	Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Read Only	Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read / Write	Read / Write	Read / Write	Out of Service Property 81	Indicates whether (TRUE/FALSE) the physical input object represents is not in service
Read / Write*	Read / Write	Read / Write	Present Value Property 85	Contains values of all properties specified
N/A	Read Only	Read Only	Priority Array Property 87	Read-only array of prioritized values
Read Only	Read Only	Read Only	Reliability Property 103	Indicates if Present_Value is "reliable"
N/A	Read Only	Read / Write †	Relinquish Default Property 104	Default value used for Present_Value when values in Priority_Array have a NULL value
Read Only	Read Only	Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object
Read Only	Read Only	Read Only	Units Property 177	Indicates measurement units of Present_Value
N/A	Read / Write	Read / Write	Hight Limit Property 1101	Specifies a limit Present_Value must exceed before an event is generated
N/A	Read / Write	Read / Write	Low Limit Property 1100	Specifies a limit Present_Value must fall below before an event is generated

N/A = Not Applicable, property not used for objects of that type

* The Present_Value is only writeable when Out_Of_Service is TRUE.

† Relinquish default, the values can be changed at the thermostat and will remain in the thermostat after a power-cycle. Usage: Temperature set-points, fan-mode, system-mode, etc.

Binary Objects

Object Type Read/Write Settings			Object Property	Controller Parameter
Input BI	Output BO	Values BV		
Read Only	Read Only	Read Only	Active Text Property 4	Characterizes intended effect of the ACTIVE state of Present_Value property
Read Only	Read Only	Read Only	Event State Property 36	Indicates if object has an active event state associated with it
Read Only	Read Only	Read Only	Inactive Text Property 46	Characterizes intended effect of INACTIVE state of Present_Value property
Read Only	Read Only	Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Read Only	Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Read Only	Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read / Write	Read / Write	Read / Write	Out of Service Property 81	Indicates whether (TRUE/FALSE) physical input object represents is not in service
Read Only	Read Only	N/A	Polarity Property 84	Indicates relationship between physical state of input and Present_Value
Read / Write	Read / Write	Read / Write	Present Value Property 85	Contains values of all properties specified
Read Only	Read Only	Read Only	Priority Array Property 87	Read-only array of prioritized values
N/A	Read Only	Read / Write	Relinquish Default Property 104	Default value to be used for Present Value when values in Priority_Array have a NULL value
Read Only	Read Only	Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object

N/A = Not Applicable, property not used for objects of that type

NOTE for BACnet Priorities:

- 1-3: Written in eeprom memory, the value cannot be changed at the thermostat and will remain after a power-cycle. To release it, do a "Restore Factory default" or from BACnet at same priority level.
  Usage: System configuration parameters that should not be changed.
- 4-16: Written in ram memory, the values are lost after a power-cycle.
  Usage: Active writes from LUA script and/or from a BMS.
- 17: Relinquish default, the values can be changed at the thermostat and will remain in the thermostat after a power-cycle.
  Usage: Temperature setpoints, fan-mode, system-mode, etc.

CAL Objects

Read/Write	Object Property	Controller Parameter
Read / Write	Date List Property 23	List of calender entries.
Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read Only	Present Value Property 85	This property is TRUE when current date matches an entry.

CSV Objects

Read/Write	Object Property	Controller Parameter
Read Only	Event State Property 36	Indicates object has an active event state associated with it
Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read / Write	Present Value Property 85	Contains values of all properties specified
Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object

File Objects

Read/Write	Object Property	Controller Parameter
Read Only	Archive Property 13	Set to FALSE when the Modification_Date property changes for any reason. An archiving process to set the value of this property to TRUE when it completes.
Read Only	File Access Method Property 41	Indicates the type(s) of file access supported for this object. Supported: "1: Stream Access".
Read / Write	File Size Property 42	Indicates the size of the file data in octets. Writing a value of 0 erases file data contents.
Read Only	File Type Property 43	Identifies the intended use of this file
Read Only	Modification Date Property 71	Indicates the last time the underlying file data or File_Size of this object was modified
Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Object Type Property 79	File type object
Read Only	Read Only Property 99	Whether FALSE or TRUE the file data may be changed through the use of the AtomicWriteFile service
Read Only	Profile Name Property 168	Name of an object profile to which this object conforms

Multi-State Objects

Object Type Read/Write Settings		Object Property	Controller Parameter
Input MSI	Values MV		
Read Only	Read Only	Event State Property 36	Indicates if object has an active event state associated with it
Read Only	Read Only	Number of States Property 74	Defines number of states Present_Value may have
Read Only	Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Read Only	Object Type Property 79	Indicates membership in a particular object type class

Object Type Read/Write Settings		Object Property	Controller Parameter
Input MSI	Values MV		
Read / Write	Read / Write	Out of Service Property 81	Indicates whether (TRUE/FALSE) physical input object represents is not in service
Read / Write*	Read / Write	Present Value Property 85	Contains values of all properties specified
N/A	Read Only	Priority Array Property 87	Indicates relationship between physical state of input and Present_Value
N/A	Read / Write	Relinquish Default Property 104	Default value used for Present_Value when values in Priority_Array have a NULL value
Read Only	Read Only	State Text Property 110	Represents descriptions of all possible states of Present_Value
Read Only	Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object

N/A = Not Applicable, property not used for objects of that type
* The Present_Value is only writeable when Out_Of_Service is TRUE.

PG Objects

Read/Write	Object Property	Controller Parameter
Read Only	Description Property 28	String of printable characters whose content is not restricted. Contains up to 480 bytes of the LUA program script.
Read Only	Description Of Halt Property 29	Describes the reason why a program has been halted Text is also displayed in the HMI debug log
Read Only	Instance Of Property 48	Local name of the application program being executed by this process
Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read Only	Out Of Service Property 81	Indicates whether (TRUE/FALSE) the process this object represents is not in service
Write Only	Program Change Property 90	Used to request changes to the operating state of the program. Writing to property affects all 10 PG objects
Read Only	Program State Property 92	Current logical state of the PG objects executing application programs
Read Only	Reason For Halt Property 100	If program halts, this property reflects the reason for halt
Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object

SCH Objects

Read/Write	Object Property	Controller Parameter
Read Only	Effective Period Property 32	Range of dates within which the Schedule object is active. All dates are in range, so always Effective
Read / Write	Exception Schedule Property 38	Sequence of schedule actions that takes precedence over normal behavior on a specific day or days. By default, this property refers to the calendar
Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read / Write	Present Value Property 85	Contains the current value of the schedule (0:unoccupied, 1:occupied). Only writeable when Out Of Service is TRUE .
Read / Write	Out Of Service Property 81	Indicates whether (TRUE/FALSE) the internal calculations of the schedule object are used to determine the value of the Present Value property
Read Only	Reliability Property 103	Indicates if Present Value is "reliable"
Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object
Read / Write	Weekly Schedule Property 123	7 elements that describe the sequence of schedule actions for each day of the week
Read Only	Schedule Default Property 174	Default value to be used when no other scheduled value is in effect. Always Unoccupied

User Interface Guide References

To simplify cross-referencing between the Bacnet Integration Guide and the User Interface Guide, Room Controller screen names are included in parentheses in the Object Properties tables. Where applicable, the HMI Dispaly and Configuration Web Page names are also included.

Analog Output Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
PI Heating Demand (2/9 Service View Screen)	21	0	0	100	Percent

Room Controller screen name

Analog Objects

Analog Input Properties

Analog Input Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Light Sensor Level	2	0	0	30000	
Relative Humidity Raw Value	4	0	0	1000	
UI20 Raw Value	5	0	0	4095	
UI23 Raw Value	7	0	0	4095	
UI22 Raw Value	8	0	0	4095	
UI24 Raw Value	9	0	0	4095	
UI19 Raw Value	31	0	0	4095	
Temperature Raw Value	32	0	-400	1220	
UI16 Raw Value	33	0	0	4095	
UI17 Raw Value	34	0	0	4095	
Wireless Device 1 - Temperature (Device 1 Screen)	315	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 2 - Temperature (Device 2 Screen)	316	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 3 - Temperature (Device 3 Screen)	317	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 4 - Temperature (Device 4 Screen)	318	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 5 - Temperature (Device 5 Screen)	319	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 6 - Temperature (Device 6 Screen)	320	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 7 - Temperature (Device 7 Screen)	321	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 8 - Temperature (Device 8 Screen)	322	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 9 - Temperature (Device 9 Screen)	323	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 10 - Temperature (Device 10 Screen)	324	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Effective Setpoint (8/9 Service View Screen)	329	0°F(-18°C)	40°F(4°C)	100°F(38°C)	Fahrenheit/Celsius
Paired ZigBee Devices (Ecosystem Settings Screen)	330	0	0	20	
Therm. Raw Value	340	0	-400	1220	
SH Therm. Raw Value	341	0	-400	1220	
Wi-Fi Module Boot Count	343	0	0	32767	

Analog Input Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Airflow Setpoint (1/2 Balancing Screen PI) (2/2 Balancing Screen PI)	350	0	0	10000	Cubic feet per minute
Wireless Device 11 - Temperature (Device 11 Screen)	355	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 12 - Temperature (Device 12 Screen)	356	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 13 - Temperature (Device 13 Screen)	357	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 14 - Temperature (Device 14 Screen)	358	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 15 - Temperature (Device 15 Screen)	359	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 16 - Temperature (Device 16 Screen)	360	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 17 - Temperature (Device 17 Screen)	361	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 18 - Temperature (Device 18 Screen)	362	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 19 - Temperature (Device 19 Screen)	363	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 20 - Temperature (Device 20 Screen)	364	-40°F(-40°C)	-40°F(-40°C)	185°F(85°C)	Fahrenheit/Celsius
Wireless Device 1 - Humidity (Device 1 Screen)	365	0	0	100	Percent Relative Humidity
Wireless Device 2 - Humidity (Device 2 Screen)	366	0	0	100	Percent Relative Humidity
Wireless Device 3 - Humidity (Device 3 Screen)	367	0	0	100	Percent Relative Humidity
Wireless Device 4 - Humidity (Device 4 Screen)	368	0	0	100	Percent Relative Humidity
Wireless Device 5 - Humidity (Device 5 Screen)	369	0	0	100	Percent Relative Humidity
Wireless Device 6 - Humidity (Device 6 Screen)	370	0	0	100	Percent Relative Humidity
Wireless Device 7 - Humidity (Device 7 Screen)	371	0	0	100	Percent Relative Humidity
Wireless Device 8 - Humidity (Device 8 Screen)	372	0	0	100	Percent Relative Humidity
Wireless Device 9 - Humidity (Device 9 Screen)	373	0	0	100	Percent Relative Humidity
Wireless Device 10 - Humidity (Device 10 Screen)	374	0	0	100	Percent Relative Humidity
Wireless Device 11 - Humidity (Device 11 Screen)	375	0	0	100	Percent Relative Humidity
Wireless Device 12 - Humidity (Device 12 Screen)	376	0	0	100	Percent Relative Humidity
Wireless Device 13 - Humidity (Device 13 Screen)	377	0	0	100	Percent Relative Humidity
Wireless Device 14 - Humidity (Device 14 Screen)	378	0	0	100	Percent Relative Humidity
Wireless Device 15 - Humidity (Device 15 Screen)	379	0	0	100	Percent Relative Humidity

Analog Input Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Wireless Device 16 - Humidity (Device 16 Screen)	380	0	0	100	Percent Relative Humidity
Wireless Device 17 - Humidity (Device 17 Screen)	381	0	0	100	Percent Relative Humidity
Wireless Device 18 - Humidity (Device 18 Screen)	382	0	0	100	Percent Relative Humidity
Wireless Device 19 - Humidity (Device 19 Screen)	383	0	0	100	Percent Relative Humidity
Wireless Device 20 - Humidity (Device 20 Screen)	384	0	0	100	Percent Relative Humidity
Wireless Device 1 - CO2 (Device 1 Screen)	385	0	0	5000	Parts per Million
Wireless Device 2 - CO2 (Device 2 Screen)	386	0	0	5000	Parts per Million
Wireless Device 3 - CO2 (Device 3 Screen)	387	0	0	5000	Parts per Million
Wireless Device 4 - CO2 (Device 4 Screen)	388	0	0	5000	Parts per Million
Wireless Device 5 - CO2 (Device 5 Screen)	389	0	0	5000	Parts per Million
Wireless Device 6 - CO2 (Device 6 Screen)	390	0	0	5000	Parts per Million
Wireless Device 7 - CO2 (Device 7 Screen)	391	0	0	5000	Parts per Million
Wireless Device 8 - CO2 (Device 8 Screen)	392	0	0	5000	Parts per Million
Wireless Device 9 - CO2 (Device 9 Screen)	393	0	0	5000	Parts per Million
Wireless Device 10 - CO2 (Device 10 Screen)	394	0	0	5000	Parts per Million
Wireless Device 11 - CO2 (Device 11 Screen)	395	0	0	5000	Parts per Million
Wireless Device 12 - CO2 (Device 12 Screen)	396	0	0	5000	Parts per Million
Wireless Device 13 - CO2 (Device 13 Screen)	397	0	0	5000	Parts per Million
Wireless Device 14 - CO2 (Device 14 Screen)	398	0	0	5000	Parts per Million
Wireless Device 15 - CO2 (Device 15 Screen)	399	0	0	5000	Parts per Million
Wireless Device 16 - CO2 (Device 16 Screen)	400	0	0	5000	Parts per Million
Wireless Device 17 - CO2 (Device 17 Screen)	401	0	0	5000	Parts per Million
Wireless Device 18 - CO2 (Device 18 Screen)	402	0	0	5000	Parts per Million
Wireless Device 19 - CO2 (Device 19 Screen)	403	0	0	5000	Parts per Million
Wireless Device 20 - CO (Device 20 Screen)2	404	0	0	5000	Parts per Million

Analog Output Properties

Analog Output Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
PI Heating Demand (2/9 Service View Screen)	21	0	0	100	Percent
PI Cooling Demand (2/9 Service View Screen)	22	0	0	100	Percent
PI Zoning Demand (2/9 Service View Screen)	25	0	-100	100	Percent
UO11 Analog Output (2/2 Test Outputs Screen)	123	0	0	10	Voltage
UO12 Analog Output (2/2 Test Outputs Screen)	124	0	0	10	Voltage
UO9 Analog Output (2/2 Test Outputs Screen)	125	0	0	10	Voltage
UO10 Analog Output (1/2 Test Outputs Screen)	126	0	0	10	Voltage

Analog Value Properties

Analog Value Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
User HMI (1/3 Display Screen)	2	2	0	12	
Low Backlight (2/3 Display Screen)	3	60	0	100	Percent
Night Backlight (2/3 Display Screen)	4	5	0	100	Percent
Calibrate Room Temperature Sensor (8/9 Configuration Screen)	7	0°F(0.0°C)	-5°F(-2.5°C)	5°F(2.5°C)	Delta Fahrenheit/Celsius
Calibrate Humidity Sensor (8/9 Configuration Screen)	8	0	-15	15	Percent Relative Humidity
COM Address (2/3 ZigBee Network Screen)	10	254	0	254	
BACnet Stack Poll Rate (1/2 BACnet Network Screen)	16	4	1	5	
Minimum CO2 (2/2 Setpoints Screen)	23	800	0	4800	Parts per million
Maximum CO2 (2/2 Setpoints Screen)	24	1200	200	5000	Parts per million
Lua Parameter A (AV25) (3/4 Lua Screen)	25	0	-32768	32767	
Lua Parameter B (AV26) (3/4 Lua Screen)	26	0	-32768	32767	
Lua Parameter C (AV27) (3/4 Lua Screen)	27	0	-32768	32767	
Lua Parameter D (AV28) (3/4 Lua Screen)	28	0	-32768	32767	
Lua Parameter E (AV29) (3/4 Lua Screen)	29	0	-32768	32767	
Lua Parameter F (AV30) (3/4 Lua Screen)	30	0	-32768	32767	
Occupied Heat Setpoint (1/2 Setpoints Screen)	39	72°F(22°C)	40°F(4°C)	90°F(32°C)	Fahrenheit/Celsius

Analog Value Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Occupied Cool Setpoint (1/2 Setpoints Screen)	40	75°F(24°C)	54°F(12°C)	100°F(38°C)	Fahrenheit/Celsius
Standby Heat Setpoint (1/2 Setpoints Screen)	41	69°F(21°C)	40°F(4°C)	90°F(32°C)	Fahrenheit/Celsius
Standby Cool Setpoint (1/2 Setpoints Screen)	42	78°F(26°C)	54°F(12°C)	100°F(38°C)	Fahrenheit/Celsius
Unoccupied Heat Setpoint (1/2 Setpoints Screen)	43	62°F(17°C)	40°F(4°C)	90°F(32°C)	Fahrenheit/Celsius
Unoccupied Cool Setpoint (1/2 Setpoints Screen)	44	80°F(27°C)	54°F(12°C)	100°F(38°C)	Fahrenheit/Celsius
Default Heating Setpoint (2/2 Setpoints Screen)	45	72°F(22°C)	65°F(18°C)	80°F(27°C)	Fahrenheit/Celsius
Standby Temperature Differential (6/9 Configuration Screen)	46	4°F(2.0°C)	1°F(0.5°C)	5°F(2.5°C)	Delta Fahrenheit/Celsius
Main Password (7/9 Configuration Screen)	56	0	0	9999	
User Password (7/9 Configuration Screen)	57	0	0	9999	
Heating Setpoint Limit (2/2 Setpoints Screen)	58	90°F(32°C)	40°F(4°C)	90°F(32°C)	Fahrenheit/Celsius
Cooling Setpoint Limit (2/2 Setpoints Screen)	59	54°F(12°C)	54°F(12°C)	100°F(38°C)	Fahrenheit/Celsius
Temporary Occupancy Time (6/9 Configuration Screen)	62	2	0	24	Hours
Deadband (2/2 Setpoints Screen)	63	3°F(1.5°C)	2°F(1.0°C)	5°F(2.5°C)	Delta Fahrenheit/Celcius
Proportional Band (5/9 Configuration Screen)	65	3	3	10	
Standby Time (6/9 Configuration Screen)	67	0.5	0.5	24	Hours
Unoccupied Time (6/9 Configuration Screen)	68	0	0	24	Hours
Heating Demand Limit (2/9 Service View Screen)	88	0	0	100	Percent
Cooling Demand Limit (2/9 Service View Screen)	89	0	0	100	Percent
Keyboard Value	92	0	0	35	
Room Temperature (1/9 Service View Screen)	100	-40°F(-40°C)	-40°F(-40°C)	122°F(50°C)	Fahrenheit/Celsius
Outdoor Temperature (1/9 Service View Screen)	101	-40°F(-40°C)	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
UI22 Supply Temperature (1/9 Service View Screen)	102	-40°F(-40°C)	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
Room Humidity (1/9 Service View Screen)	103	0	0	100	Percent Relative Humidity
UI19 Changeover Temperature (1/9 Service View Screen)	104	-40°F(-40°C)	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
UI20 Remote Temperature (1/9 Service View Screen)	105	-40°F(-40°C)	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
CO2 Level (7/9 Service View Screen)	106	0	0	5000	Parts per million
UI24 Analog Input (5/9 Service View Screen)	107	0	0	10	Voltage

Analog Value Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
UI19 Analog Input	108	0	0	10	Voltage
UI24 Temperature	109	-40°F(-40°C)	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
Airflow Level (1/2 Balancing Screen PI) (2/2 Balancing Screen PI)	110	0	0	20000	Cubic feet per minute
UI16 Analog Input	111	0	0	10	Voltage
UI17 Analog Input	112	0	0	10	Voltage
UI20 Analog Input	113	0	0	10	Voltage
UI22 Analog Input	114	0	0	10	Voltage
UI23 Analog Input	115	0	0	10	Voltage
UI16 Temperature	117	-40°F(-40°C)	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
UI17 Temperature	118	-40°F(-40°C)	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
UI19 Temperature	119	-40°F(-40°C)	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
UI20 Temperature	120	-40°F(-40°C)	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
UI22 Temperature	121	-40°F(-40°C)	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
UI23 Temperature	122	-40°F(-40°C)	-40°F(-40°C)	180°F(82°C)	Fahrenheit/Celsius
UI19 Lua	202	0	-3276.8	3276.7	
UI20 Lua	203	0	-3276.8	3276.7	
UI22 Lua	204	0	-3276.8	3276.7	
UI23 Lua	205	0	-3276.8	3276.7	
UI24 Lua	206	0	-3276.8	3276.7	
Ambient Low Temperature Threshold (2/2 Temperature Screen)	209	40°F(4°C)	32°F(0°C)	50°F(10°C)	Fahrenheit/Celsius
Temperature Alarm Hysteresis (1/2 Temperature Screen)	210	2°F(1°C)	0°F(0°C)	10°F(5.5°C)	Delta Fahrenheit/Celsius
Load Shedding Offset (ADR Screen)	211	4°F(2°C)	4°F(2°C)	10°F(5.5°C)	Delta Fahrenheit/Celsius
ECM Fan Low Voltage (2/9 Configuration Screen)	212	2.2	2	4	Voltage
ECM Fan High Voltage (2/9 Configuration Screen)	214	8.6	7.1	10	Voltage
Zone Heating PI Weight (4/9 Configuration Screen)	220	100	0	100	Percent
Zone Cooling PI Weight (4/9 Configuration Screen)	221	100	0	100	Percent

Analog Value Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Flow @ 1 inch wc (K) (1/9 Configuration Screen)	222	800	150	7500	Cubic feet per minute
Pressure Sensor Range (1/9 Configuration Screen)	223	1	0.5	5	
Lua Parameter G (AV225) (4/4 Lua Screen)	225	0	-32768	32767	
Lua Parameter H (AV226) (4/4 Lua Screen)	226	0	-32768	32767	
Lua Parameter I (AV227) (4/4 Lua Screen)	227	0	-32768	32767	
Lua Parameter J (AV228) (4/4 Lua Screen)	228	0	-32768	32767	
Lua Parameter K (AV229) (4/4 Lua Screen)	229	0	-32768	32767	
Lua Parameter L (AV230) (4/4 Lua Screen)	230	0	-32768	32767	
Actuator Timing (1/9 Configuration Screen)	240	1.5	0.5	9	Minutes
Floating Reheat Timing (3/9 Configuration Screen)	241	1.5	0.5	9	Minutes
Outside Air Temperature Duct Heater Lockout (3/9 Configuration Screen)	242	60°F(16°C)	30°F(-1°C)	90°F(32°C)	Fahrenheit/Celsius
Outside Air Temperature Baseboard Lockout (3/9 Configuration Screen)	243	60°F(16°C)	30°F(-1°C)	90°F(32°C)	Fahrenheit/Celsius
Damper Minimum Position (Balancing Screen PD)	250	10	0	100	Percent
Damper Maximum Cooling Position (Balancing Screen PD)	251	100	0	100	Percent
Damper Maximum Heating Position (Balancing Screen PD)	252	100	0	100	Percent
Damper Maximum Reheat Position (Balancing Screen PD)	253	30	0	100	Percent
Minimum Airflow (1/2 Balancing Screen PI)	254	50	0	10000	Cubic feet per minute
Maximum Cooling Airflow (1/2 Balancing Screen PI)	255	200	0	10000	Cubic feet per minute
Maximum Heating Airflow (1/2 Balancing Screen PI)	256	200	0	10000	Cubic feet per minute
Maximum Reheat Airflow (1/2 Balancing Screen PI)	257	50	0	10000	Cubic feet per minute
Minimum Airflow Offset (2/2 Balancing Screen PI)	258	0	-5000	5000	Cubic feet per minute
Maximum Airflow Offset (2/2 Balancing Screen PI)	259	0	-5000	5000	Cubic feet per minute
Standby Screen Delay	270	150	5	300	Seconds
Ambient High Temperature Threshold (2/2 Temperature Screen)	275	86°F(30°C)	32°F(0°C)	122°F(50°C)	Fahrenheit/Celsius
Refrigeration High Temperature Threshold (2/2 Temperature Screen)	276	40°F(4°C)	32°F(0°C)	60°F(16°C)	Fahrenheit/Celsius

Analog Value Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Refrigeration Low Temperature Threshold (2/2 Temperature Screen)	277	32°F(0°C)	32°F(0°C)	50°F(10°C)	Fahrenheit/Celsius
Freezer High Temperature Threshold (2/2 Temperature Screen)	278	0°F(-18°C)	-40°F(-40°C)	32°F(0°C)	Fahrenheit/Celsius

Binary Objects

Binary Input Properties

Binary Input Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
UI16 Binary Input (3/9 Service View Screen)	29	0	0	1	0=Activated 1=Not activ.
UI17 Binary Input (3/9 Service View Screen)	30	0	0	1	0=Activated 1=Not activ.
UI19 Binary Input (3/9 Service View Screen)	91	0	0	1	0=Activated 1=Not activ.
UI20 Binary Input	94	0	0	1	0=Activated 1=Not activ.
UI22 Binary Input	95	0	0	1	0=Activated 1=Not activ.
UI23 Binary Input	96	0	0	1	0=Activated 1=Not activ.
UI24 Binary Input	97	0	0	1	0=Activated 1=Not activ.

Binary Output Properties

Binary Output Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
UO9 Binary Output (2/2 Test Outputs Screen)	93	0	0	1	0=Off 1=On
UO10 Binary Output (2/2 Test Outputs Screen)	94	0	0	1	0=Off 1=On
BO4 High Speed Fan Output (1/2 Test Outputs Screen)	95	0	0	1	0=Off 1=On
BO8 Auxiliary Binary Output (1/2 Test Outputs Screen)	98	0	0	1	0=Off 1=On
UO11 Binary Output (2/2 Test Outputs Screen)	101	0	0	1	0=Off 1=On
UO12 Binary Output (2/2 Test Outputs Screen)	102	0	0	1	0=Off 1=On

Binary Value Properties

Binary Value Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Door Contact Status (Device X Screen)	1	0	0	1	0=Closed 1=Opened
Door Contact Installed (Device Groups Screen)	2	0	0	1	0=No 1=Yes
Window Contact Status (Device X Screen)	3	0	0	1	0=Closed 1=Opened
Window Contact Installed (Device Groups Screen)	4	0	0	1	0=No 1=Yes
Low Battery Alarm (Alarms Screen)	5	0	0	1	0=Off 1=On
Force High Backlight	6	0	0	1	0=Off 1=On
Display Long Screen Message	7	0	0	1	0=Off 1=On
Clock Alarm	8	0	0	1	0=Off 1=On
Exception Status	10	0	0	1	0=Off 1=On
PIR Local Motion (4/9 Service View Screen)	32	0	0	1	0=No motion 1=Motion
Window Alarm (4/9 Service View Screen)	35	0	0	1	0=Off 1=On
Filter Alarm (4/9 Service View Screen)	36	0	0	1	0=Off 1=On
Service Alarm (4/9 Service View Screen)	37	0	0	1	0=Off 1=On
Smart Recovery Status (4/9 Service View Screen)	40	0	0	1	0=Off 1=On
CO2 Alarm	41	0	0	1	0=Off 1=On
Water Leak (Alarms Screen)	44	0	0	1	0=Off 1=On
Water Leak Sensor Installed (Device Groups Screen)	45	0	0	1	0=No 1=Yes
Water leak sensor status (Device X Screen)	46	0	0	1	0=Normal 1=Leak
Low Temperature (Alarms Screen)	47	0	0	1	0=Off 1=On
Load Shedding Demand (ADR Screen)	48	0	0	1	0=Off 1=On
Load Shedding Status (ADR Screen)	49	0	0	1	0=Off 1=On
Load Shedding Override (ADR Screen)	50	0	0	1	0=Off 1=On
High Temperature (Alarms Screen)	53	0	0	1	0=Off 1=On
ZigBee PIR Sensor Installed (3/9 Service View Screen)	200	0	0	1	0=Off 1=On
ZigBee Sensor Motion (3/9 Service View Screen)	201	0	0	1	0=No motion 1=Motion

CSV Objects

CSV Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Short Screen Message Text	1	0	0	26	Characters
Long Screen Message Text	2	0	0	480	Characters
External Memory Revision	3	0	0	N/A	
Wi-Fi Device Name (1/5 Wi-Fi Screen) (Admin - Config Web Page)	4	0	0	N/A	
Wi-Fi Firmware Version (1/5 Wi-Fi Screen)	5	0	0	N/A	
MAC Address (1/5 Wi-Fi Screen)	6	0	0	N/A	
Wi-Fi Network SSID (3/5 Wi-Fi Network Screen) (Network - Config Web Page)	7	0	0	N/A	
Wi-Fi Network IP Address (3/5 Wi-Fi Network Screen) (Network - Config Web Page)	8	0	0	N/A	
Zigbee Firmware Revision (2/3 ZigBee Network Screen)	9	0	0	N/A	
Zigbee IEEE Address (2/3 ZigBee Network Screen)	10	0	0	N/A	
Wireless Device 1 - Address (Device 1 Screen)	11	0	0	N/A	
Wireless Device 2 - Address (Device 2 Screen)	12	0	0	N/A	
Wireless Device 3 - Address (Device 3 Screen)	13	0	0	N/A	
Wireless Device 4 - Address (Device 4 Screen)	14	0	0	N/A	
Wireless Device 5 - Address (Device 5 Screen)	15	0	0	N/A	
Wireless Device 6 - Address (Device 6 Screen)	16	0	0	N/A	
Wireless Device 7 - Address (Device 7 Screen)	17	0	0	N/A	
Wireless Device 8 - Address (Device 8 Screen)	18	0	0	N/A	
Wireless Device 9 - Address (Device 9 Screen)	19	0	0	N/A	
Wireless Device 10 - Address (Device 10 Screen)	20	0	0	N/A	
Wireless Device 11 - Address (Device 11 Screen)	21	0	0	N/A	
Wireless Device 12 - Address (Device 12 Screen)	22	0	0	N/A	
Wireless Device 13 - Address (Device 13 Screen)	23	0	0	N/A	
Wireless Device 14 - Address (Device 14 Screen)	24	0	0	N/A	

CSV Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Wireless Device 15 - Address (Device 15 Screen)	25	0	0	N/A	
Wireless Device 16 - Address (Device 16 Screen)	26	0	0	N/A	
Wireless Device 17 - Address (Device 17 Screen)	27	0	0	N/A	
Wireless Device 18 - Address (Device 18 Screen)	28	0	0	N/A	
Wireless Device 19 - Address (Device 19 Screen)	29	0	0	N/A	
Wireless Device 20 - Address (Device 20 Screen)	30	0	0	N/A	

File Objects

File Object Properties		
Object name	Instance	Description
Custom Lua File	1	Read/write access to the LUA4RC script. The script can be written via this object, or via USB. Note: “Program Objects” on page 39 can be used to monitor and control the script execution.

Multi-State Objects

Multi-State Input Properties

Multi-State Input Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
ZigBee Network Status (1/3 ZigBee Network) (Ecosystem Settings Screen)	2	1	1	5	1=Not det. 2=Pwr on 3=No NWK 4=Joined 5=Online
Effective Occupancy (2/9 Service View Screen)	33	1	1	4	1=Occupied 2=Unoccupied 3=Override 4=Standby
Wireless Device 1 - Sensor Type (Device 1 Screen)	180	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2

Multi-State Input Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Wireless Device 2 - Sensor Type (Device 2 Screen)	181	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2
Wireless Device 3 - Sensor Type (Device 3 Screen)	182	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2
Wireless Device 4 - Sensor Type (Device 4 Screen)	183	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2
Wireless Device 5 - Sensor Type (Device 5 Screen)	184	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2
Wireless Device 6 - Sensor Type (Device 6 Screen)	185	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2
Wireless Device 7 - Sensor Type (Device 7 Screen)	186	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2
Wireless Device 8 - Sensor Type (Device 8 Screen)	187	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2

Multi-State Input Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Wireless Device 9 - Sensor Type (Device 9 Screen)	188	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2
Wireless Device 10 - Sensor Type (Device 10 Screen)	189	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2
Wireless Device 11 - Sensor Type (Device 11 Screen)	190	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2
Wireless Device 12 - Sensor Type (Device 12 Screen)	191	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2
Wireless Device 13 - Sensor Type (Device 13 Screen)	192	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2
Wireless Device 14 - Sensor Type (Device 14 Screen)	193	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2
Wireless Device 15 - Sensor Type (Device 15 Screen)	194	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2

Multi-State Input Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Wireless Device 16 - Sensor Type (Device 16 Screen)	195	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2
Wireless Device 17 - Sensor Type (Device 17 Screen)	196	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2
Wireless Device 18 - Sensor Type (Device 18 Screen)	197	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2
Wireless Device 19 - Sensor Type (Device 19 Screen)	198	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2
Wireless Device 20 - Sensor Type (Device 20 Screen)	199	1	1	8	1=None 2=Unknown 3=Motion 4=Contact 5=Water 6=Temp. 7=Temp./RH 8=CO2
Wireless Device 1 - Status (Device 1 Screen)	210	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 1 - Battery (Device 1 Screen)	211	1	1	3	1=None 2=Normal 3=Low
Wireless Device 1 - Communication Status (Device 1 Screen)	212	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline

Multi-State Input Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Wireless Device 2 - Status (Device 2 Screen)	220	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 2 - Battery (Device 2 Screen)	221	1	1	3	1=None 2=Normal 3=Low
Wireless Device 2 - Communication Status (Device 2 Screen)	222	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline
Wireless Device 3 - Status (Device 3 Screen)	230	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 3 - Battery (Device 3 Screen)	231	1	1	3	1=None 2=Normal 3=Low
Wireless Device 3 - Communication Status (Device 3 Screen)	232	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline
Wireless Device 4 - Status (Device 4 Screen)	240	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 4 - Battery (Device 4 Screen)	241	1	1	3	1=None 2=Normal 3=Low
Wireless Device 4 - Communication Status (Device 4 Screen)	242	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline
Wireless Device 5 - Status (Device 5 Screen)	250	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 5 - Battery (Device 5 Screen)	251	1	1	3	1=None 2=Normal 3=Low
Wireless Device 5 - Communication Status (Device 5 Screen)	252	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline

Multi-State Input Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Wireless Device 6 - Status (Device 6 Screen)	260	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 6 - Battery (Device 6 Screen)	261	1	1	3	1=None 2=Normal 3=Low
Wireless Device 6 - Communication Status (Device 6 Screen)	262	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline
Wireless Device 7 - Status (Device 7 Screen)	270	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 7 - Battery (Device 7 Screen)	271	1	1	3	1=None 2=Normal 3=Low
Wireless Device 7 - Communication Status (Device 7 Screen)	272	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline
Wireless Device 8 - Status (Device 8 Screen)	280	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 8 - Battery (Device 8 Screen)	281	1	1	3	1=None 2=Normal 3=Low
Wireless Device 8 - Communication Status (Device 8 Screen)	282	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline
Wireless Device 9 - Status (Device 1 Screen)	290	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 9 - Battery (Device 9 Screen)	291	1	1	3	1=None 2=Normal 3=Low
Wireless Device 9 - Communication Status (Device 9 Screen)	292	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline

Multi-State Input Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Wireless Device 10 - Status (Device 10 Screen)	300	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 10 - Battery (Device 10 Screen)	301	1	1	3	1=None 2=Normal 3=Low
Wireless Device 10 - Communication Status (Device 10 Screen)	302	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline
Effective temperature sensor (8/9 Configuration Screen)	309	1	1	23	1=Wired 2=Internal 3=WL IO 4=WL 1 5=WL 2 6=WL 3 7=WL 4 8=WL 5 9=WL 6 10=WL 7 11=WL 8 12=WL 9 13=WL 10 14= WL 11 15= WL 12 16= WL 13 17= WL 14 18= WL 15 19= WL 16 20= WL 17 21= WL 18 22= WL 19 23= WL 20
Wireless Device 11 - Status (Device 11 Screen)	310	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 11 - Battery (Device 11 Screen)	311	1	1	3	1=None 2=Normal 3=Low
Wireless Device 11 - Communication Status (Device 11 Screen)	312	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline

Multi-State Input Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Effective Relative Humidity sensor (8/9 Configuration Screen)	313	1	1	22	1=None 2=Internal 3=WL 1 4=WL 2 5=WL 3 6=WL 4 7=WL 5 8=WL 6 9=WL 7 10=WL 8 11=WL 9 12=WL 10 13=WL 11 14=WL 12 15= WL 13 16= WL 14 17= WL 15 18= WL 16 19= WL 17 20= WL 18 21= WL 19 22= WL 20
Effective System Mode (8/9 Service View Screen)	314	1	1	2	1=Cool 2=Heat
Wi-Fi Module Status (1/5 Wi-Fi Screen)	315	1	1	7	1=Offline 2=Initializing 3=Ready 4=Booting 5=Resetting 6=Fail 7=Testing
Wi-Fi Status (3/5 Wi-Fi Network Screen)	316	1	1	7	1=Idle 2=Associate 3=Config. 4=Ready 5=Online 6=Disconn. 7=Failure
BACnet IP Status (BACnet/IP - Config Web Page)	317	1	1	2	1=Disabled 2=Enabled
SMTP Server Status (3/5 Wi-Fi Network Screen) (Notifications - Config Web Page)	318	1	1	4	1=Unknown 2=Disabled 3=Offline 4=Online
Facility Expert Enabled (4/5 Wi-Fi: Facility Expert Screen)	319	1	1	2	1=Disabled 2=Enabled
Wireless Device 12 - Status (Device 12 Screen)	320	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 12 - Battery (Device 12 Screen)	321	1	1	3	1=None 2=Normal 3=Low
Wireless Device 12 - Communication Status (Device 12 Screen)	322	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline

Multi-State Input Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Facility Expert Status (4/5 Wi-Fi: Facility Expert Screen)	323	1	1	6	1=Disabled 2=Offline 3=Connect. 4=Online 5=Failure 6=Unknown
CO2 Effective Source (7/9 Service View Screen)	324	1	1	24	1=None 2=Internal 3=Error 4=Wired 5=WL 1 6=WL 2 7=WL 3 8=WL 4 9=WL 5 10=WL 6 11=WL 7 12=WL 8 13=WL 9 14=WL 10 15=WL 11 16=WL 12 17=WL 13 18=WL 14 19=WL 15 20=WL 16 21=WL 17 22=WL 18 23=WL 19 24=WL 20
Time source (2/2 Clock Screen)	325	1	1	5	1=None 2=Local 3=BACnet 4=NTP 5=Cloud
Fan Speed Status (HMI Display)	326	1	1	4	1 = Off 2 = Low 3 = Medium 4 = High
Wi-Fi Network Signal Strength (3/5 Wi-Fi Network Screen)	327	1	1	5	1=Unknown 2=Weak 3=Fair 4=Good 5=Excellent
Wireless Device 13 - Status (Device 13 Screen)	330	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 13 - Battery (Device 13 Screen)	331	1	1	3	1=None 2=Normal 3=Low
Wireless Device 13 - Communication Status (Device 13 Screen)	332	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline

Multi-State Input Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Wireless Device 14 - Status (Device 14 Screen)	340	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 14 - Battery (Device 14 Screen)	341	1	1	3	1=None 2=Normal 3=Low
Wireless Device 14 - Communication Status (Device 14 Screen)	342	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline
Wireless Device 15 - Status (Device 15 Screen)	350	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 15 - Battery (Device 15 Screen)	351	1	1	3	1=None 2=Normal 3=Low
Wireless Device 15 - Communication Status (Device 15 Screen)	352	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline
Wireless Device 16 - Status (Device 16 Screen)	360	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 16 - Battery (Device 16 Screen)	361	1	1	3	1=None 2=Normal 3=Low
Wireless Device 16 - Communication Status (Device 16 Screen)	362	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline
Wireless Device 17 - Status (Device 17 Screen)	370	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 17 - Battery (Device 17 Screen)	371	1	1	3	1=None 2=Normal 3=Low
Wireless Device 17 - Communication Status (Device 17 Screen)	372	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline

Multi-State Input Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Wireless Device 18 - Status (Device 18 Screen)	380	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 18 - Battery (Device 18 Screen)	381	1	1	3	1=None 2=Normal 3=Low
Wireless Device 18 - Communication Status (Device 18 Screen)	382	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline
Wireless Device 19 - Status (Device 19 Screen)	390	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 19 - Battery (Device 19 Screen)	391	1	1	3	1=None 2=Normal 3=Low
Wireless Device 19 - Communication Status (Device 19 Screen)	392	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline
Wireless Device 20 - Status (Device 20 Screen)	400	1	1	7	1=None 2=Closed 3=Opened 4=No motion 5=Motion 6=Normal 7=Leak
Wireless Device 20 - Battery (Device 20 Screen)	401	1	1	3	1=None 2=Normal 3=Low
Wireless Device 20 - Communication Status (Device 20 Screen)	402	1	1	4	1=Not paired 2=Online 3=Invalid 4=Offline

Multi-State Value Properties

Multi-State Value Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Long Message Background Colour	1	1	1	11	1=White 2=Green 3=Blue 4=Grey 5=Dark grey 6=Pink 7=Purple 8=Red 9=Orange 10=Black 11=Default
HMI Color (1/3 Display Screen)	2	1	1	10	1=White 2=Green 3=Blue 4=Grey 5=Dark grey 6=Pink 7=Purple 8=Red 9=Orange 10=Black
Main Display (1/3 Display Screen)	3	3	1	3	1=Temp. 2=Setpoint 3=T. + set.
Display Language (2/3 Display Screen)	4	1	1	23	1=English 2=French 3=Spanish 4=Chinese 5=Russian 6=Arabic 7=Bulgarian 8=Czech 9=Danish 10=Dutch 11=Finnish 12=German 13=Hungarian 14=Indones. 15=Italian 16=Norwegian 17=Polish 18=Portug. 19=Slovak 20=Swedish 21=Turkish 22=Japanese 23=Hebrew
Time Format (1/2 Clock Screen)	5	1	1	2	1=AM-PM 2=24 Hours
Network Units (1/2 BACnet Network Screen)	6	2	1	2	1=SI 2=Imperial
Network Language (1/2 BACnet Network Screen)	7	1	1	3	1=English 2=French 3=Spanish

Multi-State Value Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
BACnet Baud Rate (1/2 BACnet Network Screen)	8	7	1	7	1=9600 2=19200 3=38400 4=57600 5=76800 6=115200 7=Auto
No Activity Sleep Mode Time	9	1	1	2	1=Disabled 2=Enabled
Occupancy Command (Options Screen)	10	2	1	3	1=Loc occ. 2=Occupied 3=Unocc.
Standby Mode Configuration (6/9 Configuration Screen)	11	1	1	2	1=Absolute 2=Offset
System Mode (HMI Display)	16	2	1	2	1=Off 2=Auto
Use Standby Screen (1/3 Display Screen)	32	1	1	4	1=No 2=Yes 3=Occ. only 4=Screen sav
UI16 Configuration (5/9 Configuration Screen)	46	1	1	5	1=None 2=Rem NSB 3=Motion NO 4=Motion NC 5=Window
UI17 Configuration (5/9 Configuration Screen)	47	1	1	5	1=None 2=Door dry 3=Override 4=Filter 5=Service
UI19 Configuration (5/9 Configuration Screen)	49	1	1	4	1=None 2=COC/NH 3=COC/NC 4=COS
Temperature Scale (2/3 Display Screen)	51	2	1	2	1=°C 2=°F
Room Humidity Display (2/3 Display Screen)	70	1	1	2	1=Disabled 2=Enabled
Enable Smart Recovery (5/9 Configuration Screen)	71	1	1	2	1=Off 2=On
Schedule Menu (7/9 Configuration Screen)	73	3	1	4	1=Disabled 2=Enabled 3=Dis.no.clk 4=En.no.clk
Actuator Type (1/9 Configuration Screen)	81	1	1	5	1=0-10V DA 2=0-10V RA 3=2-10V DA 4=2-10V RA 5=Floating
Baseboard Configuration (3/9 Configuration Screen)	92	1	1	4	1=Relay 2=PWM Vac 3=Valve NC 4=Valve NO
UO9 Configuration (5/9 Service View Screen)	96	2	1	4	1=Analog 2=Binary 3=Relay RC 4=Relay RH

Multi-State Value Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
UO10 Configuration (5/9 Service View Screen)	97	2	1	3	1=Analog 2=Binary 3=Relay RC
UO11 Configuration (5/9 Service View Screen)	98	2	1	2	1=Analog 2=Binary
UO12 Configuration (5/9 Service View Screen)	99	2	1	2	1=Analog 2=Binary
French (1/4 Language Selection Screen)	101	2	1	2	1=Disabled 2=Enabled
Spanish (1/4 Language Selection Screen)	102	2	1	2	1=Disabled 2=Enabled
Chinese (1/4 Language Selection Screen)	103	2	1	2	1=Disabled 2=Enabled
Russian (1/4 Language Selection Screen)	104	2	1	2	1=Disabled 2=Enabled
Occupancy Source (5/9 Configuration Screen)	110	1	1	4	1=Motion 2=Schedule 3=Mot. occ. 4=Mot. unoc.
Control Status (HMI Display)	112	1	1	2	1=Off 2=Cool 3=Heat
Custom button icon	114	1	1	17	1=Default Button 2=No Button 3=System Mode Heat/Cool 4=System Mode On/Off 5=Fan Mode 6=Override Button 7=Units Button 8=Help Button 9=Language Button 10=Schedule Button 11=Lighting Button 12=Blind Button 13=Lamp Button 14=Energy Button 15=Make Room Button 16=Setting Button 17=Timer Button
Custom button behavior	115	1	1	12	1=Default function 2=No function 3=System mode function 4=Fan function 5=Override function 6=Schedule function 7=Units function 8=Help function 9=Language function 10=Configuration function 11=Custom function 12=Standby function
Arabic (1/4 Language Selection Screen)	120	1	1	2	1=Disabled 2=Enabled
Czech (1/4 Language Selection Screen)	122	1	1	2	1=Disabled 2=Enabled
Danish (2/4 Language Selection Screen)	123	1	1	2	1=Disabled 2=Enabled

Multi-State Value Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Dutch (2/4 Language Selection Screen)	124	1	1	2	1=Disabled 2=Enabled
Finnish (2/4 Language Selection Screen)	125	1	1	2	1=Disabled 2=Enabled
German (2/4 Language Selection Screen)	126	1	1	2	1=Disabled 2=Enabled
Hungarian (2/4 Language Selection Screen)	127	1	1	2	1=Disabled 2=Enabled
Indonesian (3/4 Language Selection Screen)	128	1	1	2	1=Disabled 2=Enabled
Italian (3/4 Language Selection Screen)	129	1	1	2	1=Disabled 2=Enabled
Norwegian (3/4 Language Selection Screen)	130	1	1	2	1=Disabled 2=Enabled
Polish (3/4 Language Selection Screen)	131	1	1	2	1=Disabled 2=Enabled
Portuguese (3/4 Language Selection Screen)	132	1	1	2	1=Disabled 2=Enabled
Slovak (4/4 Language Selection Screen)	133	1	1	2	1=Disabled 2=Enabled
Swedish (4/4 Language Selection Screen)	134	1	1	2	1=Disabled 2=Enabled
Turkish (4/4 Language Selection Screen)	135	1	1	2	1=Disabled 2=Enabled
Schedule Type (Options Screen)	136	1	1	3	1=7 days 2=5+2 days 3=5+1+1 day
UI16 Input Type	138	2	1	3	1=Therm. 2=Binary 3=Voltage
UI17 Input Type	139	2	1	3	1=Therm. 2=Binary 3=Voltage
UI19 Input Type (6/9 Service View Screen)	140	1	1	3	1=Therm. 2=Binary 3=Voltage
UI20 Input Type (6/9 Service View Screen)	141	1	1	3	1=Therm. 2=Binary 3=Voltage
UI22 Input Type (6/9 Service View Screen)	142	1	1	3	1=Therm. 2=Binary 3=Voltage
UI23 Input Type (6/9 Service View Screen)	143	1	1	3	1=Therm. 2=Binary 3=Voltage
UI24 Input Type (6/9 Service View Screen)	144	3	1	3	1=Therm. 2=Binary 3=Voltage

Multi-State Value Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Room Temperature Sensor (8/9 Configuration Screen)	145	1	1	23	1=Wired 2=Internal 3=WL IO 4=WL 1 5=WL 2 6=WL 3 7=WL 4 8=WL 5 9=WL 6 10=WL 7 11=WL 8 12=WL 9 13=WL 10 14=WL 11 15=WL 12 16=WL 13 17=WL 14 18=WL 15 19=WL 16 20=WL 17 21=WL 18 22=WL 19 23=WL 20
CO2 Display (2/3 Display Screen)	146	2	1	2	1=Disabled 2=Enabled
CO2 Autocalibration	147	2	1	2	1=Disabled 2=Enabled
Lock Screen (1/3 Display Screen)	148	1	1	2	1=No 2=Yes
Relative humidity sensor (8/9 Configuration Screen)	149	2	1	22	1=None 2=Internal 3=WL 1 4=WL 2 5=WL 3 6=WL 4 7=WL 5 8=WL 6 9=WL 7 10=WL 8 11=WL 9 12=WL 10 13=WL 11 14=WL 12 15=WL 13 16=WL 14 17=WL 15 18=WL 16 19=WL 17 20=WL 18 21=WL 19 22=WL 20

Multi-State Value Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
CO2 source (8/9 Configuration Screen)	150	2	1	22	1=None 2=Local 3=WL 1 4=WL 2 5=WL 3 6=WL 4 7=WL 5 8=WL 6 9=WL 7 10=WL 8 11=WL 9 12=WL 10 13=WL 11 14=WL 12 15=WL 13 16=WL 14 17=WL 15 18=WL 16 19=WL 17 20=WL 18 21=WL 19 22=WL 20
Temperature Alarm Enabled (1/2 Temperature Screen)	151	1	1	2	1=Off 2=On
ADR Permission (ADR Screen)	152	1	1	2	1=Off 2=On
Fan Type (2/9 Configuration Screen)	154	1	1	5	1=None 2=Par. on/off 3=Ser. on/off 4=Par. ECM 5=Ser. ECM
Japanese (3/4 Language Selection Screen)	155	1	1	2	1=Disabled 2=Enabled
Hebrew (2/4 Language Selection Screen)	156	1	1	2	1=Disabled 2=Enabled
Duct Heater Configuration (3/9 Configuration Screen)	160	1	1	9	1=0-10V DA 2=0-10V RA 3=2-10V DA 4=2-10V RA 5=Floating 6=On/Off 7=PWM Vac 8=Valve NC 9=Valve NO
VAV Box Type (1/9 Configuration Screen)	170	2	1	2	1=PD 2=PI
Reheat Configuration (3/9 Configuration Screen)	171	1	1	5	1=None 2=Duct only 3=Base only 4=Duct+base 5=Base+duct
Damper Override (2/2 Balancing Screen PI) (Balancing Screen PD)	172	1	1	6	1=None 2=Minimum 3=Max. cool 4=Close 5=Reheat 6=Open
Zone Control Mode (4/9 Configuration Screen)	173	1	1	2	1=Cool 2=Heat

Multi-State Value Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Display the Fan Status icon (3/3 Display Screen)	180	2	1	2	1=Disabled 2=Enabled
Display the System Status icon (3/3 Display Screen)	181	2	1	2	1=Disabled 2=Enabled
Display the Help button (3/3 Display Screen)	182	2	1	2	1=Disabled 2=Enabled
Wireless Device 1 - Function (Device 1 Screen)	210	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer
Wireless Device 2 - Function (Device 2 Screen)	220	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer
Wireless Device 3 - Function (Device 3 Screen)	230	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer
Wireless Device 4 - Function (Device 4 Screen)	240	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer
Wireless Device 5 - Function (Device 5 Screen)	250	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer
Wireless Device 6 - Function (Device 6 Screen)	260	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer

Multi-State Value Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Wireless Device 7 - Function (Device 7 Screen)	270	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer
Wireless Device 8 - Function (Device 8 Screen)	280	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer
Wireless Device 9 - Function (Device 9 Screen)	290	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer
Wireless Device 10 - Function (Device 10 Screen)	300	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer
Wireless Device 11 - Function (Device 11 Screen)	310	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer
Wireless Device 12 - Function (Device 12 Screen)	320	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer

Multi-State Value Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Wireless Device 13 - Function (Device 13 Screen)	330	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer
Wireless Device 14 - Function (Device 14 Screen)	340	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer
Wireless Device 15 - Function (Device 15 Screen)	350	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer
Wireless Device 16 - Function (Device 16 Screen)	360	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer
Wireless Device 17 - Function (Device 17 Screen)	370	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer
Wireless Device 18 - Function (Device 18 Screen)	380	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer

Multi-State Value Properties					
Object name	Instance	Default Value	Minimum Range Value	Maximum Range Value	Description
Wireless Device 19 - Function (Device 19 Screen)	390	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer
Wireless Device 20 - Function (Device 20 Screen)	400	1	1	9	1=None 2=Window 3=Door 4=Motion 5=Env. data 6=Remove 7=Water 8=Refrig. 9=Freezer

NOTE for BACnet Priorities:

- 1-3: Written in eeprom memory, the value cannot be changed at the thermostat and will remain after a power-cycle. To release it, do a "Restore Factory default" or from BACnet at same priority level.
  Usage: System configuration parameters that should not be changed.
- 4-16: Written in ram memory, the values are lost after a power-cycle.
  Usage: Active writes from LUA script and/or from a BMS.
- 17: Relinquish default, the values can be changed at the thermostat and will remain in the thermostat after a power-cycle.
  Usage: Temperature setpoints, fan-mode, system-mode, etc.

Program Objects

Program Object Properties		
Object name	Instance	Description
Lua Program 1	1	Monitors and controls the internal LUA4RC script. Note: Script can be read/written via "File Objects" on page 19.