

Viconics Room Controller

TRCn500nnnn-VC BACnet Integration Guide

Firmware Revision 2.2

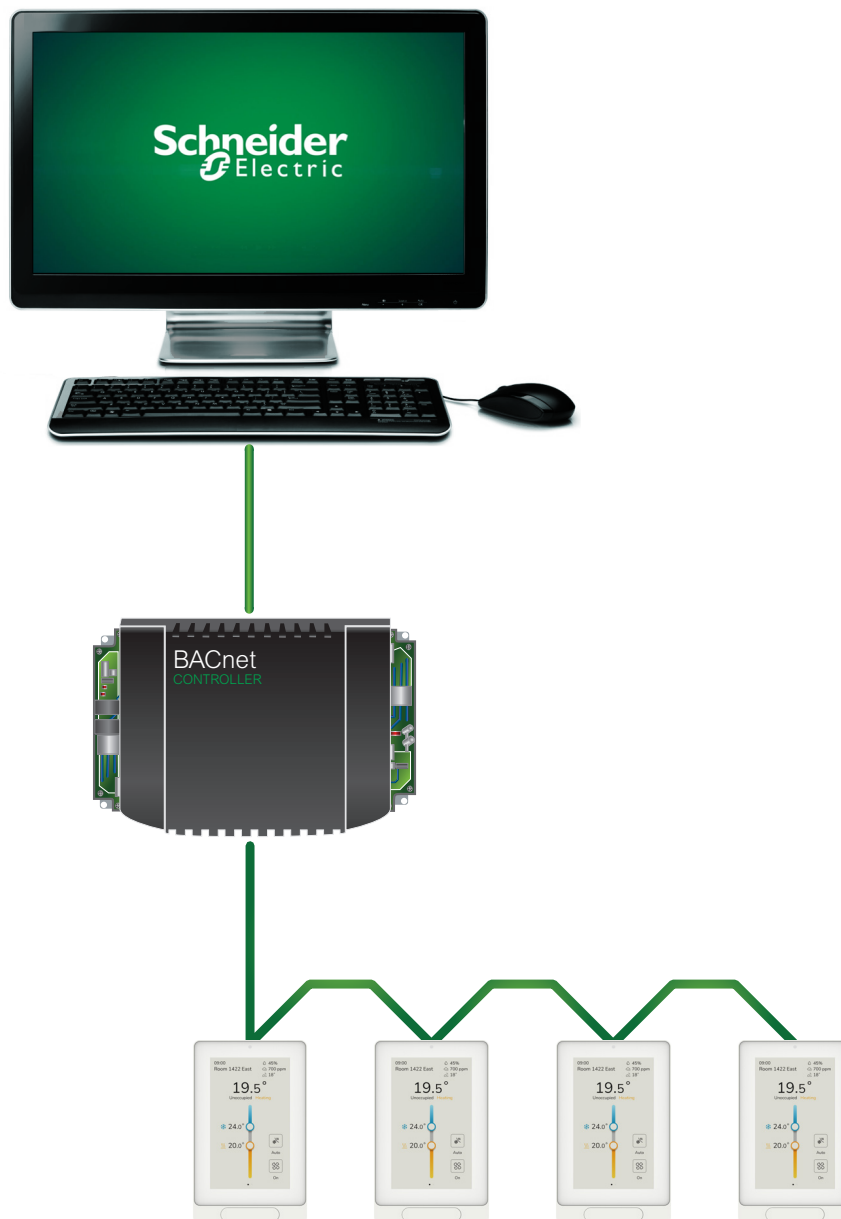


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Compatibility Specifications

Note: This document contains BACnet compatibility specifications of the Viconics Room Controller TRCn500nnnn-VC and follows the BACnet PICS format. Objects common to all models 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

Device Objects

Object	Property	R/W	Description
ADPU Timeout	11	R	ADPU timeout value – Default is 3000 ms
Application-Software-Version	12	R	Controller base application software version – Default is based on current released version
Daylight Savings Status	24	R	Indicates whether daylight saving time is in effect (TRUE) or not (FALSE)
Description	28	R/W	String of printable characters describing the object instance
Device Address Binding	30	R	Addresses that will be used when a remote device must be accessed via a BACnet service request
Firmware Revision	44	R	Current BACnet® firmware revision used by controller
Local Date	56	R	Indicates date to best of device knowledge
Local Time	57	R	Indicated time of day best of the device knowledge
Location	58	R/W	String of printable characters
Max ADPU Length	62	R	Maximum ADPU Length accepted – Default is 480
Max Info Frames	63	R/W	MSTP Only: Specifies the maximum number of information frames the node may send on this port before it must pass the token
Max Master	64	R/W	MSTP Only: Should be set to the highest COM address of devices within the MSTP network – Optimizes token passing
Model Name	70	R	Controller model number
Number of APDU Retries	73	R/W	Maximum number of times that an APDU shall be retransmitted
Object Identifier	75	R/W	Unique ID number of a device on a network
Object List	76	R	List of objects present within the device
Object Name	77	R/W	Unique name of a device on a network
Object Type	79	R	Indicates membership in a particular object type class
Protocol Object Types Supported	96	R	Indicates which standardized object types can be present in this device
Protocol Services Supported	97	R	Indicates which standardized protocol services are executed by this device
Protocol Version	98	R	Current BACnet® firmware protocol version – Default is Version 1
Segmentation Supported	107	R	Segmentation not supported
System Status	112	R	Operating State of the device
UTC Offset	119	R	The number of minutes (-1440 to +1440) offset between local standard time and Universal Time Coordinated. The time zones to the west of the zero degree meridian will be positive values, and those to the east will be negative values.
Vendor Identifier	120	R	140
Vendor Name	121	R	Viconics Technologies

Object	Property	R/W	Description
Protocol Revision	139	R	Current BACnet® firmware protocol revision – Default is Version 14
Active Change Of Value Subscriptions	152	R	List of CoV subscriptions
Database Revision	155	R	Logical revision number for the device's database
Profile Name	168	R	Name of an object profile to which this object conforms
Serial Number	372	R	Serial number of the device
Bootloader 1 Version	1103	R	Version of bootloader 1
Bootloader 2 Version	1104	R	Version of bootloader 2
Part Number	1105	R	Part number (SKU) of device
Firmware Activation Time	1858	R/W	Time to apply firmware upgrade

Object Properties

NOTES 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	Property	Object Type R/W Settings						Description
		Analog Input	Analog Output		Analog Value			
			AO ¹	AHO ²	AV ³	AHV ⁴	ALV ⁵	
CoV Increment	22	R/W	R/W	R/W	R/W	R/W	R/W	Size of change that will generate a change of value notification
Description	28	N/A	N/A	N/A	R	R	R/W	String of printable characters describing the object instance
Event State	35	R	R	R	R	R	R	Indicates if object has an active event state associated with it
Object Identifier	75	R	R	R	R	R	R	Unique ID number of an object on a network
Object Name	77	R	R	R	R	R	R	Unique name of an object on a network
Object Type	79	R	R	R	R	R	R	Indicates membership in a particular object type class
Out of Service	81	R/W	R/W	R/W	R/W	R/W	R/W	Indicates whether (TRUE/FALSE) the physical input object represents is not in service
Present Value	85	R/W*	R/W	R/W	R/W	R/W	R/W	Contains values of all properties specified
Priority Array	87	N/A	R	R	R	R	R	Read-only array of prioritized values
Reliability	103	R	R	R	R	R	R	Indicates if Present_Value is "reliable"
Relinquish Default	104	N/A	R	R	R/W†	R	R/W†	Default value used for Present_Value when values in Priority_Array have a NULL value
Status Flags	111	R	R	R	R	R	R	Represents flags that indicate general health of life safety point object
Units	117	R	R	R	R	R	R	Indicates measurement units of Present_Value
Profile Name	168	R	R	R	R	R	R	Name of an object profile to which this object conforms
Current Command Priority	431	N/A	R	R	R	R	R	Indicates the currently active priority
Low Limit	1100	N/A	R/W	N/A	N/A	R/W	R/W	Specifies a limit Present_Value must fall below before an event is generated
High Limit	1101	N/A	R/W	N/A	N/A	R/W	R/W	Specifies a limit Present_Value must exceed 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 setpoints, fan-mode, system-mode, etc.

1. AO = AnalogOutput
2. AHO = AnalogHardwareOutput
3. AV = AnalogValue
4. AHV = AnalogHardwareValue
5. ALV = AnalogLuaValue

Binary Objects

Object	Property	Object Type R/W Settings			Description
		Binary Input	Binary Output	Binary Value	
Active Text	4	R	R	R	Characterizes intended effect of the ACTIVE state of Present_Value property
Event State	35	R	R	R	Indicates if object has an active event state associated with it
Inactive Text	46	R	R	R	Characterizes intended effect of INACTIVE state of Present_Value property
Object Identifier	75	R	R	R	Unique ID number of an object on a network
Object Name	77	R	R	R	Unique name of an object on a network
Object Type	79	R	R	R	Indicates membership in a particular object type class
Out of Service	81	R/W	R/W	R/W	Indicates whether (TRUE/FALSE) physical input object represents is not in service
Polarity	84	R	R	N/A	Indicates relationship between physical state of input and Present_Value
Present Value	85	R/W	R/W	R/W	Contains values of all properties specified
Priority Array	87	N/A	R	R	Read-only array of prioritized values
Relinquish Default	104	N/A	R	R/W	Default value to be used for Present Value when values in Priority_Array have a NULL value
Status Flags	111	R	R	R	Represents flags that indicate general health of life safety point object
Profile Name	168	R	R	R	Name of an object profile to which this object conforms
Current Command Priority	431	N/A	R	R	Indicates the currently active priority

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

Calendar Objects

Object	Property	R/W	Description
Date List	23	R/W	List of calendar entries.
Object Identifier	75	R	Unique ID number of an object on a network
Object Name	77	R	Unique name of an object on a network
Object Type	79	R	Indicates membership in a particular object type class
Present Value	85	R	This property is TRUE when current date matches an entry.
Profile Name	168	R	Name of an object profile to which this object conforms

CharacterStringValue (CSV) Objects

Object	Property	R/W	Description
Event State	35	R	Indicates object has an active event state associated with it
Object Identifier	75	R	Unique ID number of an object on a network
Object Name	77	R	Unique name of an object on a network
Object Type	79	R	Indicates membership in a particular object type class
Present Value	85	R/W	Contains values of all properties specified
Status Flags	111	R	Represents flags that indicate general health of life safety point object
Profile Name	168	R	Name of an object profile to which this object conforms

File Objects

Object	Property	Object Type R/W Settings				Description
		Lua ¹	Image ²	Log ³	Upgrade ⁴	
Archive	13	R/W	R/W	R/W	R/W	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.
File Access Method	41	R	R	R	R	Indicates the type(s) of file access supported for this object. Supported: "1: Stream Access".
File Size	42	R/W	R/W	R/W	R/W	Indicates the size of the file data in octets. Writing a value of 0 erases file data contents.
File Type	43	R	R	R	R	Identifies the intended use of this file
Modification Date	71	R	R	R	R	Indicates the last time the underlying file data or File_Size of this object was modified
Object Identifier	75	R	R	R	R	Unique ID number of an object on a network
Object Name	77	R	R	R	R	Unique name of an object on a network
Object Type	79	R	R	R	R	Indicates membership in a particular object type class
Read Only	99	R	R	R	R	When FALSE, the file may be changed through the use of the AtomicWriteFile service
Profile Name	168	R	R	R	R	Name of an object profile to which this object conforms
Apply Firmware Upgrade	1102	N/A	N/A	N/A	R/W	Apply Firmware Upgrade Package
File Hash	1826	N/A	N/A	N/A	R/W	Hash of firmware upgrade package file
Firmware Activation Time	1858	N/A	N/A	N/A	R/W	Time to apply firmware upgrade

1. Lua = LuaFile

2. Image = ImageFile

3. Log = LogFile

4. Upgrade = UpgradePackage

Multi-State Objects

Object	Property	Object Type R/W Settings		Description
		Input MSI ¹	Values MV ²	
Description	28	N/A	R	String of printable characters describing the object instance
Event State	35	R	R	Indicates if object has an active event state associated with it
Number of States	74	R	R	Defines number of states Present_Value may have
Object Identifier	75	R	R	Unique ID number of an object on a network
Object Name	77	R	R	Unique name of an object on a network
Object Type	79	R	R	Indicates membership in a particular object type class
Out of Service	81	R/W	R/W	Indicates whether (TRUE/FALSE) physical input object represents is not in service
Present Value	85	R/W*	R/W	Contains values of all properties specified
Priority Array	87	N/A	R	Indicates relationship between physical state of input and Present_Value
Relinquish Default	104	N/A	R/W	Default value used for Present_Value when values in Priority_Array have a NULL value
State Text	110	R	R	Represents descriptions of all possible states of Present_Value
Status Flags	111	R	R	Represents flags that indicate general health of life safety point object
Profile Name	168	R	R	Name of an object profile to which this object conforms
Current Command Priority	431	N/A	R	Indicates the currently active priority

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 setpoints, fan-mode, system-mode, etc.

1. MSI = MultistateInput

2. MV = MultistateValue

Program Objects

Object	Property	R/W	Description
Description	28	R	String of printable characters describing the object instance
Description Of Halt	29	R	Describes the reason why a program has been halted Text is also displayed in the HMI debug log
Instance Of	48	R	Local name of the application program being executed by this process
Object Identifier	75	R	Unique ID number of an object on a network
Object Name	77	R	Unique name of an object on a network
Object Type	79	R	Indicates membership in a particular object type class
Out Of Service	81	R	Indicates whether (TRUE/FALSE) the process this object represents is not in service
Program Change	90	R/W	Used to request changes to the operating state of the program. Writing to property affects all 10 PG objects
Program State	92	R	Current logical state of the PG objects executing application programs
Reason For Halt	100	R	If program halts, this property reflects the reason for halt
Status Flags	111	R	Represents flags that indicate general health of life safety point object
Profile Name	168	R	Name of an object profile to which this object conforms

Schedule Objects

Object	Property	R/W	Description
Effective Period	32	R	Range of dates within which the Schedule object is active. All dates are in range, so always Effective
Exception Schedule	38	R/W	Sequence of schedule actions that takes precedence over normal behavior on a specific day or days. By default, this property refers to the calendar
List of Object Property References	54	R	Specifies the Device Identifiers, Object Identifiers and Property Identifiers of the properties to be written with the output of the schedule
Object Identifier	75	R	Unique ID number of an object on a network
Object Name	77	R	Unique name of an object on a network
Object Type	79	R	Indicates membership in a particular object type class
Out of Service	81	R/W	Indicates whether (TRUE/FALSE) the internal calculations of the schedule object are used to determine the value of the Present Value property
Present Value	85	R/W	Contains the current value of the schedule (0:unoccupied, 1:occupied). Only writeable when Out Of Service is TRUE .
Priority for Writing	88	R/W	Identifies the priority at which the object will perform writes
Reliability	103	R	Indicates if Present Value is "reliable"
Status Flags	111	R	Represents flags that indicate general health of life safety point object
Weekly Schedule	123	R/W	7 elements that describe the sequence of schedule actions for each day of the week
Profile Name	168	R	Name of an object profile to which this object conforms
Schedule Default	174	R	Default value to be used when no other scheduled value is in effect. Always Unoccupied

Network Port Objects

Object	Property	R/W	Description
Max Info Frames	63	R/W*	MSTP Only: Specifies the maximum number of information frames the node may send on this port before it must pass the token
Max Master	64	R/W*	MSTP Only: Should be set to the highest COM address of devices within the MSTP network – Optimizes token passing
Object Identifier	75	R	Unique ID number of an object on a network
Object Name	77	R	Unique name of an object on a network
Object Type	79	R	Indicates membership in a particular object type class
Out of Service	81	R	Indicates whether (TRUE/FALSE) the internal calculations of the schedule object are used to determine the value of the Present Value property
Reliability	103	R	Indicates if Present Value is "reliable"
Status Flags	111	R	Represents flags that indicate general health of life safety point object
Profile Name	168	R	Name of an object profile to which this object conforms
APDU Length	399	R	The maximum number of octets that may be contained in a single indivisible application protocol data unit sent or received on this port
IP Address	400	R**	IP address of the device

Object	Property	R/W	Description
Default Gateway	401	R**	Default IP Gateway of the device
DHCP Enable	402	R**	Indicates whether or not this network is configured via DHCP
DNS Server	406	R**	DNS server for the device
BACnet/IP Mode	408	R/W**	Indicates the BACnet/IP mode of this network port
IP Subnet Mask	411	R**	Subnet mask for this network
BACnet/IP UDP Port	412	R**	UDP port number of this network port
Changes Pending	416	R	Indicates whether the configuration settings in the Network Port object map to the current configuration settings. TRUE indicates the configuration settings have been modified but have not yet been activated on the port.
Foreign Device Registration - BBMD Address	418	R/W†	Indicates the BBMD with which the local device is to register as a foreign device when BACnet_IP_Mode is FOREIGN
Foreign Device Registration - Subscription Lifetime	419	R/W†	Indicates the Time-To-Live value, in seconds, to be used in the Register-Foreign-Device BVLL message
MAC Address	423	R	The BACnet MAC address used on this network
Network Number	425	R	The BACnet network number associated with this network
Network Number Quality	426	R	Represents the current quality of the Network_Number property
Network Type	427	R	The type of network this Network Port object is representing
Protocol Level	482	R	Indicates whether the object represents a physical network interface (PHYSICAL), a non-BACnet protocol (PROTOCOL), the BACnet use of the protocol (BACNET_APPLICATION), or a non BACnet use of the protocol (NON_BACNET_APPLICATION)

* MSTP only.

** IP only.

† IP only + FDR enabled.

Analog Objects

Analog Input Properties

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
UI1 Raw Value	AI	1	0	0 to 4095		All
UI2 Raw Value	AI	2	0	0 to 4095		All
UI3 Raw Value	AI	3	0	0 to 4095		All
UI4 Raw Value	AI	4	0	0 to 4095		All
UI5 Raw Value	AI	5	0	0 to 4095		All
UI6 Raw Value	AI	6	0	0 to 4095		All
UI7 Raw Value	AI	7	0	0 to 4095		All
UI8 Raw Value	AI	8	0	0 to 4095		All
Thermistor 1	AI	11	-40 °F (-40.0 °C)	-40 to 180 °F (-40 to 82 °C)		All
Thermistor 2	AI	12	-40 °F (-40.0 °C)	-40 to 180 °F (-40 to 82 °C)		All
Thermistor 3	AI	13	-40 °F (-40.0 °C)	-40 to 180 °F (-40 to 82 °C)		All
Thermistor 4	AI	14	-40 °F (-40.0 °C)	-40 to 180 °F (-40 to 82 °C)		All
Thermistor 5	AI	15	-40 °F (-40.0 °C)	-40 to 180 °F (-40 to 82 °C)		All
MCU Temperature	AI	16	-40 °F (-40.0 °C)	-40 to 180 °F (-40 to 82 °C)		All
Light Sensor Level	AI	20	0	0 to 30000		All
RH Temperature Raw Value	AI	32	-40 °F (-40.0 °C)	-40 to 180 °F (-40 to 82 °C)		All
Relative Humidity Raw Value	AI	40	0 % RH	0 to 100 % RH		All
Wireless Device 1 - Temperature	AI	315	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 1	All (W)
Wireless Device 2 - Temperature	AI	316	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 2	All (W)
Wireless Device 3 - Temperature	AI	317	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 3	All (W)
Wireless Device 4 - Temperature	AI	318	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 4	All (W)
Wireless Device 5 - Temperature	AI	319	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 5	All (W)
Wireless Device 6 - Temperature	AI	320	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 6	All (W)
Wireless Device 7 - Temperature	AI	321	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 7	All (W)
Wireless Device 8 - Temperature	AI	322	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 8	All (W)
Wireless Device 9 - Temperature	AI	323	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 9	All (W)
Wireless Device 10 - Temperature	AI	324	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 10	All (W)
Effective Setpoint	AI	329	40 °F (4.5 °C)	40 to 100 °F (4.5 to 37.5 °C)	Operating Status	All
Paired ZigBee Devices	AI	330	0	0 to 20	Network	All (W)
WiFi Network Signal Strength Percentage	AI	342	0 %	0 to 100 %		All (W)
Wireless Device 11 - Temperature	AI	355	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 11	All (W)
Wireless Device 12 - Temperature	AI	356	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 12	All (W)
Wireless Device 13 - Temperature	AI	357	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 13	All (W)
Wireless Device 14 - Temperature	AI	358	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 14	All (W)
Wireless Device 15 - Temperature	AI	359	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 15	All (W)
Wireless Device 16 - Temperature	AI	360	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 16	All (W)
Wireless Device 17 - Temperature	AI	361	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 17	All (W)
Wireless Device 18 - Temperature	AI	362	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 18	All (W)
Wireless Device 19 - Temperature	AI	363	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 19	All (W)
Wireless Device 20 - Temperature	AI	364	-40 °F (-40.0 °C)	-40 to 185 °F (-40 to 85 °C)	Zigbee Device 20	All (W)
Wireless Device 1 - Humidity	AI	365	0 % RH	0 to 100 % RH	Zigbee Device 1	All (W)
Wireless Device 2 - Humidity	AI	366	0 % RH	0 to 100 % RH	Zigbee Device 2	All (W)
Wireless Device 3 - Humidity	AI	367	0 % RH	0 to 100 % RH	Zigbee Device 3	All (W)
Wireless Device 4 - Humidity	AI	368	0 % RH	0 to 100 % RH	Zigbee Device 4	All (W)
Wireless Device 5 - Humidity	AI	369	0 % RH	0 to 100 % RH	Zigbee Device 5	All (W)
Wireless Device 6 - Humidity	AI	370	0 % RH	0 to 100 % RH	Zigbee Device 6	All (W)

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
Wireless Device 7 - Humidity	AI	371	0 % RH	0 to 100 % RH	Zigbee Device 7	All (W)
Wireless Device 8 - Humidity	AI	372	0 % RH	0 to 100 % RH	Zigbee Device 8	All (W)
Wireless Device 9 - Humidity	AI	373	0 % RH	0 to 100 % RH	Zigbee Device 9	All (W)
Wireless Device 10 - Humidity	AI	374	0 % RH	0 to 100 % RH	Zigbee Device 10	All (W)
Wireless Device 11 - Humidity	AI	375	0 % RH	0 to 100 % RH	Zigbee Device 11	All (W)
Wireless Device 12 - Humidity	AI	376	0 % RH	0 to 100 % RH	Zigbee Device 12	All (W)
Wireless Device 13 - Humidity	AI	377	0 % RH	0 to 100 % RH	Zigbee Device 13	All (W)
Wireless Device 14 - Humidity	AI	378	0 % RH	0 to 100 % RH	Zigbee Device 14	All (W)
Wireless Device 15 - Humidity	AI	379	0 % RH	0 to 100 % RH	Zigbee Device 15	All (W)
Wireless Device 16 - Humidity	AI	380	0 % RH	0 to 100 % RH	Zigbee Device 16	All (W)
Wireless Device 17 - Humidity	AI	381	0 % RH	0 to 100 % RH	Zigbee Device 17	All (W)
Wireless Device 18 - Humidity	AI	382	0 % RH	0 to 100 % RH	Zigbee Device 18	All (W)
Wireless Device 19 - Humidity	AI	383	0 % RH	0 to 100 % RH	Zigbee Device 19	All (W)
Wireless Device 20 - Humidity	AI	384	0 % RH	0 to 100 % RH	Zigbee Device 20	All (W)
Wireless Device 1 - CO2	AI	385	0 ppm	0 to 5000 ppm	Zigbee Device 1	All (W)
Wireless Device 2 - CO2	AI	386	0 ppm	0 to 5000 ppm	Zigbee Device 2	All (W)
Wireless Device 3 - CO2	AI	387	0 ppm	0 to 5000 ppm	Zigbee Device 3	All (W)
Wireless Device 4 - CO2	AI	388	0 ppm	0 to 5000 ppm	Zigbee Device 4	All (W)
Wireless Device 5 - CO2	AI	389	0 ppm	0 to 5000 ppm	Zigbee Device 5	All (W)
Wireless Device 6 - CO2	AI	390	0 ppm	0 to 5000 ppm	Zigbee Device 6	All (W)
Wireless Device 7 - CO2	AI	391	0 ppm	0 to 5000 ppm	Zigbee Device 7	All (W)
Wireless Device 8 - CO2	AI	392	0 ppm	0 to 5000 ppm	Zigbee Device 8	All (W)
Wireless Device 9 - CO2	AI	393	0 ppm	0 to 5000 ppm	Zigbee Device 9	All (W)
Wireless Device 10 - CO2	AI	394	0 ppm	0 to 5000 ppm	Zigbee Device 10	All (W)
Wireless Device 11 - CO2	AI	395	0 ppm	0 to 5000 ppm	Zigbee Device 11	All (W)
Wireless Device 12 - CO2	AI	396	0 ppm	0 to 5000 ppm	Zigbee Device 12	All (W)
Wireless Device 13 - CO2	AI	397	0 ppm	0 to 5000 ppm	Zigbee Device 13	All (W)
Wireless Device 14 - CO2	AI	398	0 ppm	0 to 5000 ppm	Zigbee Device 14	All (W)
Wireless Device 15 - CO2	AI	399	0 ppm	0 to 5000 ppm	Zigbee Device 15	All (W)
Wireless Device 16 - CO2	AI	400	0 ppm	0 to 5000 ppm	Zigbee Device 16	All (W)
Wireless Device 17 - CO2	AI	401	0 ppm	0 to 5000 ppm	Zigbee Device 17	All (W)
Wireless Device 18 - CO2	AI	402	0 ppm	0 to 5000 ppm	Zigbee Device 18	All (W)
Wireless Device 19 - CO2	AI	403	0 ppm	0 to 5000 ppm	Zigbee Device 19	All (W)
Wireless Device 20 - CO2	AI	404	0 ppm	0 to 5000 ppm	Zigbee Device 20	All (W)
WiFi Channel	AI	405	0	0 to 165		All (W)

Analog Output Properties

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s)
PI Heating Demand	AO	21	0 %	0 to 100 %	System Status	All
PI Cooling Demand	AO	22	0 %	0 to 100 %	System Status	All
Economizer Demand	AO	23	0 %	0 to 100 %	System Status	6500
Analog Output Heat Demand	AO	24	0 %	0 to 100 %	Terminals	6500
AO1 Voltage	AO	101	0 V	0 to 10 V	Terminals	All
AO2 Voltage	AO	102	0 V	0 to 10 V	Terminals	All
AO3 Voltage	AO	103	0 V	0 to 10 V	Terminals	All
AO4 Voltage	AO	104	0 V	0 to 10 V	Terminals	All

Analog Value Properties

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
Low Backlight	AV	3	60 %	0 to 100 %	Display	All
Night Backlight	AV	4	5 %	0 to 100 %	Display	All
Purge Sample Period	AV	5	2 h	0 to 4 h	Fan Coil Unit	3500
Purge Open	AV	6	2 m	1 to 3 m	Fan Coil Unit	3500
Calibrate Room Temperature Sensor	AV	7	0 Δ°F (0.0 Δ°C)	-5 to 5 Δ°F (-2.5 to 2.5 Δ°C)	Inputs	All
Calibrate Humidity Sensor	AV	8	0 % RH	-15 to 15 % RH	Inputs	All
COM Address	AV	10	254	0 to 254	BACnet or Modbus	All
BACnet Stack Poll Rate	AV	16	4	1 to 5		All
Supply Temperature Low Limit	AV	20	45 °F (7.0 °C)	35 to 65 °F (2 to 18 °C)	Heat Pump and Rooftop	6500
Minimum Fresh Air	AV	21	0 cfm	0 to 20000 cfm	IAQ	6500
Maximum Fresh Air	AV	22	0 cfm	0 to 20000 cfm	IAQ	6500
Minimum CO2	AV	23	800 ppm	0 to 4800 ppm	IAQ	6500
Maximum CO2	AV	24	1200 ppm	200 to 5000 ppm	IAQ	6500
Lua Parameter A (AV25)	AV	25	0	-32768 to 32767	Lua Variables	All
Lua Parameter B (AV26)	AV	26	0	-32768 to 32767	Lua Variables	All
Lua Parameter C (AV27)	AV	27	0	-32768 to 32767	Lua Variables	All
Lua Parameter D (AV28)	AV	28	0	-32768 to 32767	Lua Variables	All
Lua Parameter E (AV29)	AV	29	0	-32768 to 32767	Lua Variables	All
Lua Parameter F (AV30)	AV	30	0	-32768 to 32767	Lua Variables	All
Lua Parameter G (AV31)	AV	31	0	-32768 to 32767	Lua Variables	All
Lua Parameter H (AV32)	AV	32	0	-32768 to 32767	Lua Variables	All
Lua Parameter I (AV33)	AV	33	0	-32768 to 32767	Lua Variables	All
Lua Parameter J (AV34)	AV	34	0	-32768 to 32767	Lua Variables	All
Lua Parameter K (AV35)	AV	35	0	-32768 to 32767	Lua Variables	All
Lua Parameter L (AV36)	AV	36	0	-32768 to 32767	Lua Variables	All
Occupied Heat Setpoint	AV	39	72 °F (22.5 °C)	40 to 90 °F (4.5 to 32 °C)	Setpoints	All
Occupied Cool Setpoint	AV	40	75 °F (24.0 °C)	54 to 100 °F (12.5 to 37.5 °C)	Setpoints	All
Standby Heat Setpoint	AV	41	69 °F (20.5 °C)	40 to 90 °F (4.5 to 32 °C)	Setpoints	All
Standby Cool Setpoint	AV	42	78 °F (25.5 °C)	54 to 100 °F (12.5 to 37.5 °C)	Setpoints	All
Unoccupied Heat Setpoint	AV	43	62 °F (16.5 °C)	40 to 90 °F (4.5 to 32 °C)	Setpoints	All
Unoccupied Cool Setpoint	AV	44	80 °F (26.5 °C)	54 to 100 °F (12.5 to 37.5 °C)	Setpoints	All
Default Cooling Setpoint	AV	45	75 °F (24.0 °C)	54 to 100 °F (12.5 to 37.5 °C)	Setpoints	All
Standby Temperature Differential	AV	46	4 Δ°F (2.0 Δ°C)	1 to 5 Δ°F (1 to 2.5 Δ°C)	Setpoint Configuration	All
Default Heating Setpoint	AV	47	72.5 °F (22.5 °C)	40 to 90 °F (4.5 to 32 °C)	Setpoints	All
Number of Pipes	AV	52	2	0 (Reheat Only), 2 or 4	Fan Coil Unit	3500
Maximum Heating Setpoint Limit	AV	58	90 °F (32.0 °C)	40 to 90 °F (4.5 to 32 °C)	Setpoint Configuration	All
Minimum Cooling Setpoint Limit	AV	59	54 °F (12.5 °C)	54 to 100 °F (12.5 to 37.5 °C)	Setpoint Configuration	All
Minimum Occupied Heating Setpoint Limit	AV	60	40 °F (4.5 °C)	40 to 90 °F (4.5 to 32 °C)	Setpoint Configuration	All
Maximum Occupied Cooling Setpoint Limit	AV	61	100 °F (37.5 °C)	54 to 100 °F (12.5 to 37.5 °C)	Setpoint Configuration	All
Temporary Occupancy Time	AV	62	2 h	0 to 24 h	Occupancy Configuration	All
Minimum Deadband	AV	63	3 Δ°F (1.5 Δ°C)	2 to 5 Δ°F (1 to 2.5 Δ°C)	Setpoint Configuration	All
Proportional Band	AV	65	3 Δ°F (2.0 Δ°C)	3 to 10 Δ°F (2 to 5.5 Δ°C)	3500: Fan Coil Unit, 6500: Heat Pump and Rooftop	All

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
Standby Time	AV	67	0.5 h	0.5 to 24 h	Occupancy Configuration	All
Unoccupied Time	AV	68	0 h	0 to 24 h	Occupancy Configuration	All
Dehumidification Setpoint	AV	71	50 % RH	30 to 95 % RH	Dehumidifier and Setpoints	All
Dehumidification Hysteresis	AV	72	5 % RH	2 to 20 % RH	Dehumidifier	All
Dehumidification Max Cooling Limit	AV	73	100 %	20 to 100 %	Dehumidifier	3500
Calibrate Outside Temperature Sensor	AV	74	0 Δ°F (0.0 Δ°C)	-5 to 5 Δ°F (-2.5 to 2.5 Δ°C)	Inputs	All
Number of Cooling Stages	AV	75	2	1 to 2	Heat Pump and Rooftop	6500
Power-up Delay	AV	76	10 s	10 to 120 s	3500: Fan Coil Unit, 6500: Heat Pump and Rooftop	All
Economizer Minimum Position	AV	78	0 %	0 to 99 %	Economizer	6500
Economizer Maximum Position	AV	81	100 %	1 to 100 %	Economizer	6500
High balance point	AV	82	90 °F (32.0 °C)	34 to 90 °F (1.5 to 32 °C)	Heat Pump	6500
Low balance point	AV	83	-12 °F (-24.5 °C)	-40 to 30 °F (-40 to -1.5 °C)	Heat Pump	6500
Heating CPH	AV	84	4	3 to 8	3500: Fan Coil Unit, 6500: Heat Pump and Rooftop	All
Cooling CPH	AV	85	4	3500: 3 to 8, 6500: 3 to 4	3500: Fan Coil Unit, 6500: Heat Pump and Rooftop	All
Anti Short Cycle Time	AV	86	2 m	0 to 5 m	Heat Pump and Rooftop	6500
Number of Heating Stages	AV	87	2	0 to 2	Heat Pump and Rooftop	6500
Heating Demand Limit	AV	88	100 %	0 to 100 %	System Status	All
Cooling Demand Limit	AV	89	100 %	0 to 100 %	System Status	All
Floating Actuator Time	AV	90	1.5 m	0.5 to 9 m	Fan Coil Unit	3500
Heating Lockout from Outside Air Temperature	AV	91	120 °F (48.5 °C)	-15 to 120 °F (-26 to 48.5 °C)	Heat Pump and Rooftop	6500
Cooling Lockout	AV	93	-40 °F (-40.0 °C)	-40 to 95 °F (-40 to 35 °C)	Heat Pump and Rooftop	6500
Supply Air Temperature Setpoint	AV	94	55 °F (13.0 °C)	50 to 90 °F (10 to 32 °C)	Economizer	6500
Changeover Setpoint	AV	95	55 °F (13.0 °C)	14 to 70 °F (-10 to 21 °C)	Economizer	6500
Fresh Air Range Upper Limit	AV	96	0 cfm	0 to 20000 cfm	IAQ	6500
Minimum Supply Heat	AV	97	64 °F (18.0 °C)	50 to 72 °F (10 to 22 °C)	Heat Pump and Rooftop	6500
Supply Heat Lockout	AV	98	32 °F (0.0 °C)	-15 to 120 °F (-26 to 48.5 °C)	Heat Pump and Rooftop	6500
Supply Temperature High Limit	AV	99	120 °F (49.0 °C)	70 to 150 °F (21.5 to 65.5 °C)	Heat Pump and Rooftop	6500
Room Temperature	AV	100	-40 °F (-40.0 °C)	-40 to 122 °F (-40 to 50 °C)	Environment	All
Outdoor Temperature	AV	101	-40 °F (-40.0 °C)	-40 to 180 °F (-40 to 82 °C)	Environment	All
Supply Temperature	AV	102	-40 °F (-40.0 °C)	-40 to 180 °F (-40 to 82 °C)	Environment	All
Room Humidity	AV	103	0 % RH	0 to 100 % RH	Environment	All
Changeover Temperature	AV	104	-40 °F (-40.0 °C)	-40 to 180 °F (-40 to 82 °C)	Environment	3500
Wired Temperature Sensor	AV	105	-40 °F (-40.0 °C)	-40 to 180 °F (-40 to 82 °C)	Environment	All
CO2 Level	AV	106	0 ppm	0 to 5000 ppm	Environment	All
Airflow Level	AV	107	0 cfm	0 to 20000 cfm	System Status	All
UI1 Voltage	AV	111	0 V	0 to 10 V	Terminals	All
UI2 Voltage	AV	112	0 V	0 to 10 V	Terminals	All

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
UI3 Voltage	AV	113	0 V	0 to 10 V	Terminals	All
UI4 Voltage	AV	114	0 V	0 to 10 V	Terminals	All
UI5 Voltage	AV	115	0 V	0 to 10 V	Terminals	All
UI6 Voltage	AV	116	0 V	0 to 10 V	Terminals	All
UI7 Voltage	AV	117	0 V	0 to 10 V	Terminals	All
UI8 Voltage	AV	118	0 V	0 to 10 V	Terminals	All
UI1 Temperature	AV	121	-40 °F (-40.0 °C)	-40 to 180 °F (-40 to 82 °C)	Terminals	All
UI2 Temperature	AV	122	-40 °F (-40.0 °C)	-40 to 180 °F (-40 to 82 °C)	Terminals	All
UI3 Temperature	AV	123	-40 °F (-40.0 °C)	-40 to 180 °F (-40 to 82 °C)	Terminals	All
UI4 Temperature	AV	124	-40 °F (-40.0 °C)	-40 to 180 °F (-40 to 82 °C)	Terminals	All
UI5 Temperature	AV	125	-40 °F (-40.0 °C)	-40 to 180 °F (-40 to 82 °C)	Terminals	All
UI6 Temperature	AV	126	-40 °F (-40.0 °C)	-40 to 180 °F (-40 to 82 °C)	Terminals	All
UI7 Temperature	AV	127	-40 °F (-40.0 °C)	-40 to 180 °F (-40 to 82 °C)	Terminals	All
UI8 Temperature	AV	128	-40 °F (-40.0 °C)	-40 to 180 °F (-40 to 82 °C)	Terminals	All
Ambient Low Temperature Threshold	AV	209	40 °F (4.5 °C)	32 to 50 °F (0 to 10 °C)		All
Temperature Alarm Hysteresis	AV	210	2 Δ°F (1.0 Δ°C)	0 to 10 Δ°F (0 to 5.5 Δ°C)		All
ECM Fan Low Voltage	AV	212	2.2 V	0 to 9.8 V	Fan	3500
ECM Fan Medium Voltage	AV	213	6 V	0.1 to 9.9 V	Fan	3500
ECM Fan High Voltage	AV	214	8.6 V	0.2 to 10 V	Fan	3500
Inactivity Time	AV	231	3 m	1 to 10 m	Display	All
Backlight Brightness	AV	232	60 %	0 to 100 %	Display	All
Halo Red Color	AV	233	0	0 to 255		All (W)
Halo Green Color	AV	234	0	0 to 255		All (W)
Halo Blue Color	AV	235	0	0 to 255		All (W)
Halo Maximum Brightness	AV	236	100 %	0 to 100 %	Halo	All (W)
Ambient High Temperature Threshold	AV	275	86 °F (30.0 °C)	32 to 122 °F (0 to 50 °C)		All
Refrigeration High Temperature Threshold	AV	276	40 °F (4.5 °C)	32 to 60 °F (0 to 15.5 °C)		All
Refrigeration Low Temperature Threshold	AV	277	32 °F (0.0 °C)	32 to 50 °F (0 to 10 °C)		All
Freezer High Temperature Threshold	AV	278	-40 °F (-40.0 °C)	-40 to 32 °F (-40 to 0 °C)		All
ADR Setpoint Offset - Load Shedding	AV	280	4 Δ°F (2.0 Δ°C)	1 to 10 Δ°F (1 to 5.5 Δ°C)	ADR	All
ADR Setpoint Offset - Pricing	AV	281	4 Δ°F (2.0 Δ°C)	1 to 10 Δ°F (1 to 5.5 Δ°C)	ADR	All
Temperature compensation matrix	AV	282	-100 °F (-73.5 °C)	-100 to 100 °F (-73 to 37.5 °C)		All
Timezone Offset	AV	283	0 m	-1440 to 1440 m		All
Light 1 Status	AV	284	0	0 to 201	Lights (Main)	All
Light 2 Status	AV	285	0	0 to 201	Lights (Main)	All
Light 3 Status	AV	286	0	0 to 201	Lights (Main)	All
Light 4 Status	AV	287	0	0 to 201	Lights (Main)	All
Light 5 Status	AV	288	0	0 to 201	Lights (Main)	All
Light 6 Status	AV	289	0	0 to 201	Lights (Main)	All
Light 7 Status	AV	290	0	0 to 201	Lights (Main)	All
Light 8 Status	AV	291	0	0 to 201	Lights (Main)	All
Blind 1 Status	AV	292	0	0 to 201	Blinds (Main)	All
Blind 2 Status	AV	293	0	0 to 201	Blinds (Main)	All
Blind 3 Status	AV	294	0	0 to 201	Blinds (Main)	All
Blind 4 Status	AV	295	0	0 to 201	Blinds (Main)	All
Blind 5 Status	AV	296	0	0 to 201	Blinds (Main)	All
Blind 6 Status	AV	297	0	0 to 201	Blinds (Main)	All
Blind 7 Status	AV	298	0	0 to 201	Blinds (Main)	All
Blind 8 Status	AV	299	0	0 to 201	Blinds (Main)	All
Light 1 Cmd	AV	300	0	0 to 201	Lights (Main)	All

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
Light 2 Cmd	AV	301	0	0 to 201	Lights (Main)	All
Light 3 Cmd	AV	302	0	0 to 201	Lights (Main)	All
Light 4 Cmd	AV	303	0	0 to 201	Lights (Main)	All
Light 5 Cmd	AV	304	0	0 to 201	Lights (Main)	All
Light 6 Cmd	AV	305	0	0 to 201	Lights (Main)	All
Light 7 Cmd	AV	306	0	0 to 201	Lights (Main)	All
Light 8 Cmd	AV	307	0	0 to 201	Lights (Main)	All
Blind 1 Cmd	AV	308	0	0 to 201	Blinds (Main)	All
Blind 2 Cmd	AV	309	0	0 to 201	Blinds (Main)	All
Blind 3 Cmd	AV	310	0	0 to 201	Blinds (Main)	All
Blind 4 Cmd	AV	311	0	0 to 201	Blinds (Main)	All
Blind 5 Cmd	AV	312	0	0 to 201	Blinds (Main)	All
Blind 6 Cmd	AV	313	0	0 to 201	Blinds (Main)	All
Blind 7 Cmd	AV	314	0	0 to 201	Blinds (Main)	All
Blind 8 Cmd	AV	315	0	0 to 201	Blinds (Main)	All
Light 1 Cfg	AV	316	0=Disabled	0=Non dimmable, Disabled; 1=Non dimmable, Enabled; 2=Dimmable, Disabled; 3=Dimmable, Enabled	Light Configuration	All
Light 2 Cfg	AV	317	0=Disabled	0=Non dimmable, Disabled; 1=Non dimmable, Enabled; 2=Dimmable, Disabled; 3=Dimmable, Enabled	Light Configuration	All
Light 3 Cfg	AV	318	0=Disabled	0=Non dimmable, Disabled; 1=Non dimmable, Enabled; 2=Dimmable, Disabled; 3=Dimmable, Enabled	Light Configuration	All
Light 4 Cfg	AV	319	0=Disabled	0=Non dimmable, Disabled; 1=Non dimmable, Enabled; 2=Dimmable, Disabled; 3=Dimmable, Enabled	Light Configuration	All
Light 5 Cfg	AV	320	0=Disabled	0=Non dimmable, Disabled; 1=Non dimmable, Enabled; 2=Dimmable, Disabled; 3=Dimmable, Enabled	Light Configuration	All
Light 6 Cfg	AV	321	0=Disabled	0=Non dimmable, Disabled; 1=Non dimmable, Enabled; 2=Dimmable, Disabled; 3=Dimmable, Enabled	Light Configuration	All
Light 7 Cfg	AV	322	0=Disabled	0=Non dimmable, Disabled; 1=Non dimmable, Enabled; 2=Dimmable, Disabled; 3=Dimmable, Enabled	Light Configuration	All
Light 8 Cfg	AV	323	0=Disabled	0=Non dimmable, Disabled; 1=Non dimmable, Enabled; 2=Dimmable, Disabled; 3=Dimmable, Enabled	Light Configuration	All
Blind 1 Cfg	AV	324	0=Disabled	0=Disabled, 1=Enabled	Blind Configuration	All
Blind 2 Cfg	AV	325	0=Disabled	0=Disabled, 1=Enabled	Blind Configuration	All
Blind 3 Cfg	AV	326	0=Disabled	0=Disabled, 1=Enabled	Blind Configuration	All
Blind 4 Cfg	AV	327	0=Disabled	0=Disabled, 1=Enabled	Blind Configuration	All
Blind 5 Cfg	AV	328	0=Disabled	0=Disabled, 1=Enabled	Blind Configuration	All
Blind 6 Cfg	AV	329	0=Disabled	0=Disabled, 1=Enabled	Blind Configuration	All
Blind 7 Cfg	AV	330	0=Disabled	0=Disabled, 1=Enabled	Blind Configuration	All
Blind 8 Cfg	AV	331	0=Disabled	0=Disabled, 1=Enabled	Blind Configuration	All
Lua Parameter M (AV332)	AV	332	0	-32768 to 32767	Lua Variables	All
Lua Parameter N (AV333)	AV	333	0	-32768 to 32767	Lua Variables	All
Lua Parameter O (AV334)	AV	334	0	-32768 to 32767	Lua Variables	All

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
Lua Parameter P (AV335)	AV	335	0	-32768 to 32767	Lua Variables	All
Lua Parameter Q (AV336)	AV	336	0	-32768 to 32767	Lua Variables	All
Lua Parameter R (AV337)	AV	337	0	-32768 to 32767	Lua Variables	All
Lua Scratchpad 1	AV	338	0	-32768 to 32767		All
Lua Scratchpad 2	AV	339	0	-32768 to 32767		All
Lua Scratchpad 3	AV	340	0	-32768 to 32767		All
Lua Scratchpad 4	AV	341	0	-32768 to 32767		All
Lua Scratchpad 5	AV	342	0	-32768 to 32767		All
Lua Scratchpad 6	AV	343	0	-32768 to 32767		All
Lua Scratchpad 7	AV	344	0	-32768 to 32767		All
Lua Scratchpad 8	AV	345	0	-32768 to 32767		All
Lua Scratchpad 9	AV	346	0	-32768 to 32767		All
Lua Scratchpad 10	AV	347	0	-32768 to 32767		All
Lua Scratchpad 11	AV	348	0	-32768 to 32767		All
Lua Scratchpad 12	AV	349	0	-32768 to 32767		All
Lua Scratchpad 13	AV	350	0	-32768 to 32767		All
Lua Scratchpad 14	AV	351	0	-32768 to 32767		All
Lua Scratchpad 15	AV	352	0	-32768 to 32767		All
Lua Scratchpad 16	AV	353	0	-32768 to 32767		All
Lua Scratchpad 17	AV	354	0	-32768 to 32767		All
Lua Scratchpad 18	AV	355	0	-32768 to 32767		All

Binary Objects

Binary Input Properties

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s)
UI1 Binary	BI	1	0=Activated	0=Activated, 1=Not activ.	Terminals	All
UI2 Binary	BI	2	0=Activated	0=Activated, 1=Not activ.	Terminals	All
UI3 Binary	BI	3	0=Activated	0=Activated, 1=Not activ.	Terminals	All
UI4 Binary	BI	4	0=Activated	0=Activated, 1=Not activ.	Terminals	All
UI5 Binary	BI	5	0=Activated	0=Activated, 1=Not activ.	Terminals	All
UI6 Binary	BI	6	0=Activated	0=Activated, 1=Not activ.	Terminals	All
UI7 Binary	BI	7	0=Activated	0=Activated, 1=Not activ.	Terminals	All
UI8 Binary	BI	8	0=Activated	0=Activated, 1=Not activ.	Terminals	All

Binary Output Properties

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s)
DO1 Binary Output	BO	1	0=Off	0=Off, 1=On	Terminals	All
DO2 Binary Output	BO	2	0=Off	0=Off, 1=On	Terminals	All
DO3 Binary Output	BO	3	0=Off	0=Off, 1=On	Terminals	All
DO4 Binary Output	BO	4	0=Off	0=Off, 1=On	Terminals	All
DO5 Binary Output	BO	5	0=Off	0=Off, 1=On	Terminals	All
DO6 Binary Output	BO	6	0=Off	0=Off, 1=On	Terminals	All
DO7 Binary Output	BO	7	0=Off	0=Off, 1=On	Terminals	All
DO8 Binary Output	BO	8	0=Off	0=Off, 1=On	Terminals	All
DO9 Binary Output	BO	9	0=Off	0=Off, 1=On	Terminals	All

Binary Value Properties

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
Door Contact Status	BV	1	0=Closed	0=Closed, 1=Opened	Zigbee Device #	All
Door Contact Installed	BV	2	0=No	0=No, 1=Yes	Environment and Operating Status	All
Window Contact Status	BV	3	0=Closed	0=Closed, 1=Opened	Zigbee Device #	All
Window Contact Installed	BV	4	0=No	0=No, 1=Yes	Environment and Operating Status	All
Low Battery Alarm	BV	5	0=Off	0=Off, 1=On	Alarms	All (W)
Clock Alarm	BV	8	0=Off	0=Off, 1=On	Alarms	All
Exception Status	BV	10	0=Off	0=Off, 1=On		All
AI Eco Schedule Warning	BV	11	0=Off	0=Off, 1=On	Home	All
AI Eco Setpoint Warning	BV	12	0=Off	0=Off, 1=On	Home	All
AI Eco Dehumidification Warning	BV	13	0=Off	0=Off, 1=On	Home	All
PIR Local Motion	BV	32	0=No motion	0=No motion, 1=Motion	Operating Status	All
PIR Local Proximity	BV	33	0=No proximity	0=No proximity, 1=Proximity		All (W)
Window Alarm	BV	35	0=Off	0=Off, 1=On	Alarms	All
Filter Alarm	BV	36	0=Off	0=Off, 1=On	Alarms	All
Service Alarm	BV	37	0=Off	0=Off, 1=On	Alarms	All
Dehumidification Status	BV	38	0=Off	0=Off, 1=On	Dehumidifier and System Status	All
Fan Lock Alarm	BV	39	0=Off	0=Off, 1=On	Alarms	6500
Smart Recovery Status	BV	40	0=Off	0=Off, 1=On	System Status	All
CO2 Alarm	BV	41	0=Off	0=Off, 1=On	Alarms	6500
Low Fresh Air Alarm	BV	42	0=Off	0=Off, 1=On	Alarms	6500
Frost Protection Alarm	BV	43	0=Off	0=Off, 1=On	Alarms	6500
Water Leak Alarm	BV	44	0=Off	0=Off, 1=On	Alarms	All
Water Leak Sensor Installed	BV	45	0=No	0=No, 1=Yes	Environment and Operating Status	All
Water Leak Sensor Status	BV	46	0=Normal	0=Normal, 1=Leak	Zigbee Device #	All
Low Temperature	BV	47	0=Off	0=Off, 1=On		All
High Temperature	BV	48	0=Off	0=Off, 1=On		All
Wireless Sensor Communication Alarm	BV	50	0=Off	0=Off, 1=On	Alarms	All (W)
Purge Status	BV	60	0=Off	0=Off, 1=On	Operating Status	All
Activity Status	BV	65	0=Inactive	0=Inactive, 1=Active		All
ADR Utility Signal - Load Shedding	BV	80	0=Off	0=Off, 1=On	ADR	All
ADR Status - Load Shedding	BV	81	0=Off	0=Off, 1=On	ADR	All
ADR Override - Load Shedding	BV	82	0=Off	0=Off, 1=On	ADR	All
ADR Utility Signal - Pricing	BV	83	0=Off	0=Off, 1=On	ADR	All
ADR Status - Pricing	BV	84	0=Off	0=Off, 1=On	ADR	All
ADR Override - Pricing	BV	85	0=Off	0=Off, 1=On	ADR	All
ZigBee Motion Sensor Installed	BV	200	0=Off	0=Off, 1=On	Environment and Operating Status	All (W)
ZigBee Sensor Motion	BV	201	0=No motion	0=No motion, 1=Motion	Zigbee Device #	All (W)

CSV Objects

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
Short Screen Message Text	CSV	1	0	0 to 160 characters	Home Notifications	All

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
Long Screen Message Text	CSV	2	0	0 to 480 characters	Home Notifications	All
WiFi Device Name	CSV	4	0	0 to 63 characters		All (W)
WiFi Firmware Version	CSV	5	0	0 to 63 characters		All (W)
MAC Address	CSV	6	0	0 to 18 characters		All
WiFi Network SSID	CSV	7	0	0 to 33 characters	Hidden Network	All (W)
ZigBee IEEE Address	CSV	10	0	0 to 18 characters	Zigbee Network	All (W)
Wireless Device 1 - Address	CSV	11	0	0 to 18 characters	Zigbee Device 1	All (W)
Wireless Device 2 - Address	CSV	12	0	0 to 18 characters	Zigbee Device 2	All (W)
Wireless Device 3 - Address	CSV	13	0	0 to 18 characters	Zigbee Device 3	All (W)
Wireless Device 4 - Address	CSV	14	0	0 to 18 characters	Zigbee Device 4	All (W)
Wireless Device 5 - Address	CSV	15	0	0 to 18 characters	Zigbee Device 5	All (W)
Wireless Device 6 - Address	CSV	16	0	0 to 18 characters	Zigbee Device 6	All (W)
Wireless Device 7 - Address	CSV	17	0	0 to 18 characters	Zigbee Device 7	All (W)
Wireless Device 8 - Address	CSV	18	0	0 to 18 characters	Zigbee Device 8	All (W)
Wireless Device 9 - Address	CSV	19	0	0 to 18 characters	Zigbee Device 9	All (W)
Wireless Device 10 - Address	CSV	20	0	0 to 18 characters	Zigbee Device 10	All (W)
Wireless Device 11 - Address	CSV	21	0	0 to 18 characters	Zigbee Device 11	All (W)
Wireless Device 12 - Address	CSV	22	0	0 to 18 characters	Zigbee Device 12	All (W)
Wireless Device 13 - Address	CSV	23	0	0 to 18 characters	Zigbee Device 13	All (W)
Wireless Device 14 - Address	CSV	24	0	0 to 18 characters	Zigbee Device 14	All (W)
Wireless Device 15 - Address	CSV	25	0	0 to 18 characters	Zigbee Device 15	All (W)
Wireless Device 16 - Address	CSV	26	0	0 to 18 characters	Zigbee Device 16	All (W)
Wireless Device 17 - Address	CSV	27	0	0 to 18 characters	Zigbee Device 17	All (W)
Wireless Device 18 - Address	CSV	28	0	0 to 18 characters	Zigbee Device 18	All (W)
Wireless Device 19 - Address	CSV	29	0	0 to 18 characters	Zigbee Device 19	All (W)
Wireless Device 20 - Address	CSV	30	0	0 to 18 characters	Zigbee Device 20	All (W)
Active User Id	CSV	31	0	0 to 33 characters	Add User, Change PIN, Profile and User Info	All
Location	CSV	35	0	0 to 49 characters	Device Info	All
Install Code	CSV	36	0	0 to 46 characters		All
Timezone	CSV	40	Etc/UTC	0 to 32 characters	Time Zone	All
Custom Standby Heading Text	CSV	41	0	0 to 65 characters	Standby Screen	All
Custom Standby Body Text	CSV	42	0	0 to 161 characters	Standby Screen	All
WiFi Country Code	CSV	43	0	0 to 64 characters		All (W)
Light 1 Display Name	CSV	44	Light 1	0 to 32 characters	Light Configuration	All
Light 2 Display Name	CSV	45	Light 2	0 to 32 characters	Light Configuration	All
Light 3 Display Name	CSV	46	Light 3	0 to 32 characters	Light Configuration	All
Light 4 Display Name	CSV	47	Light 4	0 to 32 characters	Light Configuration	All
Light 5 Display Name	CSV	48	Light 5	0 to 32 characters	Light Configuration	All
Light 6 Display Name	CSV	49	Light 6	0 to 32 characters	Light Configuration	All
Light 7 Display Name	CSV	50	Light 7	0 to 32 characters	Light Configuration	All
Light 8 Display Name	CSV	51	Light 8	0 to 32 characters	Light Configuration	All
Blind 1 Display Name	CSV	52	Blind 1	0 to 32 characters	Blind Configuration	All

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
Blind 2 Display Name	CSV	53	Blind 2	0 to 32 characters	Blind Configuration	All
Blind 3 Display Name	CSV	54	Blind 3	0 to 32 characters	Blind Configuration	All
Blind 4 Display Name	CSV	55	Blind 4	0 to 32 characters	Blind Configuration	All
Blind 5 Display Name	CSV	56	Blind 5	0 to 32 characters	Blind Configuration	All
Blind 6 Display Name	CSV	57	Blind 6	0 to 32 characters	Blind Configuration	All
Blind 7 Display Name	CSV	58	Blind 7	0 to 32 characters	Blind Configuration	All
Blind 8 Display Name	CSV	59	Blind 8	0 to 32 characters	Blind Configuration	All
AI Model Weights	CSV	60	0	0 to 153 characters		All
AI Model Version	CSV	61	0	0 to 16 characters	AI Eco Configuration	All
Alerts Title	CSV	62	0	0 to 33 characters		All
Alerts Description	CSV	63	0	0 to 134 characters		All

File Objects

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 26 can be used to monitor and control the script execution.

Multi-State Objects

Multi-State Input Properties

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
ZigBee Network Status	MSI	2	1=Disabled	1=Disabled, 2=Initializing, 3=Upgrading, 4=Searching, 5=Joining, 6=Forming, 7=Resuming, 8=Online, 9=Failed	Network and Zigbee Network	All (W)
Effective Occupancy	MSI	33	1=Occupied	1=Occupied, 2=Unoccupied, 3=Override, 4=Standby	Operating Status	All
Wireless Device 1 - Status	MSI	210	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 1	All (W)
Wireless Device 1 - Battery	MSI	211	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 1	All (W)
Wireless Device 1 - Communication Status	MSI	212	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 1	All (W)
Wireless Device 2 - Status	MSI	220	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 2	All (W)
Wireless Device 2 - Battery	MSI	221	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 2	All (W)
Wireless Device 2 - Communication Status	MSI	222	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 2	All (W)
Wireless Device 3 - Status	MSI	230	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 3	All (W)
Wireless Device 3 - Battery	MSI	231	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 3	All (W)

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
Wireless Device 3 - Communication Status	MSI	232	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 3	All (W)
Wireless Device 4 - Status	MSI	240	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 4	All (W)
Wireless Device 4 - Battery	MSI	241	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 4	All (W)
Wireless Device 4 - Communication Status	MSI	242	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 4	All (W)
Wireless Device 5 - Status	MSI	250	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 5	All (W)
Wireless Device 5 - Battery	MSI	251	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 5	All (W)
Wireless Device 5 - Communication Status	MSI	252	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 5	All (W)
Wireless Device 6 - Status	MSI	260	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 6	All (W)
Wireless Device 6 - Battery	MSI	261	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 6	All (W)
Wireless Device 6 - Communication Status	MSI	262	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 6	All (W)
Wireless Device 7 - Status	MSI	270	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 7	All (W)
Wireless Device 7 - Battery	MSI	271	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 7	All (W)
Wireless Device 7 - Communication Status	MSI	272	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 7	All (W)
Wireless Device 8 - Status	MSI	280	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 8	All (W)
Wireless Device 8 - Battery	MSI	281	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 8	All (W)
Wireless Device 8 - Communication Status	MSI	282	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 8	All (W)
Wireless Device 9 - Status	MSI	290	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 9	All (W)
Wireless Device 9 - Battery	MSI	291	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 9	All (W)
Wireless Device 9 - Communication Status	MSI	292	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 9	All (W)
Wireless Device 10 - Status	MSI	300	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 10	All (W)
Wireless Device 10 - Battery	MSI	301	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 10	All (W)
Wireless Device 10 - Communication Status	MSI	302	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 10	All (W)
Effective temperature sensor	MSI	309	1=Wired	1=Wired, 2=Internal, 3=Wireless Sensor 1, 4=Wireless Sensor 2, 5=Wireless Sensor 3, 6=Wireless Sensor 4, 7=Wireless Sensor 5, 8=Wireless Sensor 6, 9=Wireless Sensor 7, 10=Wireless Sensor 8, 11=Wireless Sensor 9, 12=Wireless Sensor 10, 13=Wireless Sensor 11, 14=Wireless Sensor 12, 15=Wireless Sensor 13, 16=Wireless Sensor 14, 17=Wireless Sensor 15, 18=Wireless Sensor 16, 19=Wireless Sensor 17, 20=Wireless Sensor 18, 21=Wireless Sensor 19, 22=Wireless Sensor 20	Environment	All
Wireless Device 11 - Status	MSI	310	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 11	All (W)
Wireless Device 11 - Battery	MSI	311	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 11	All (W)
Wireless Device 11 - Communication Status	MSI	312	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 11	All (W)

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
Effective relative humidity sensor	MSI	313	1=None	1=None, 2=Internal, 3=Wireless Sensor 1, 4=Wireless Sensor 2, 5=Wireless Sensor 3, 6=Wireless Sensor 4, 7=Wireless Sensor 5, 8=Wireless Sensor 6, 9=Wireless Sensor 7, 10=Wireless Sensor 8, 11=Wireless Sensor 9, 12=Wireless Sensor 10, 13=Wireless Sensor 11, 14=Wireless Sensor 12, 15=Wireless Sensor 13, 16=Wireless Sensor 14, 17=Wireless Sensor 15, 18=Wireless Sensor 16, 19=Wireless Sensor 17, 20=Wireless Sensor 18, 21=Wireless Sensor 19, 22=Wireless Sensor 20	Environment	All
Effective System Mode	MSI	314	1=Cool	1=Cool, 2=Heat	Operating Status	All
IP Status	MSI	315	1=Offline	1=Offline, 2=Initializing, 3=Ready, 4=Booting, 5=Resetting, 6=Fail, 7=Testing	BACnet	All
WiFi Network Status	MSI	316	1=Offline	1=Offline, 2=Associate, 3=Online, 4=Failure		All (W)
SMTP Server Status	MSI	318	1=Unknown	1=Unknown, 2=Disabled, 3=Offline, 4=Online	BACnet	All
Wireless Device 12 - Status	MSI	320	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 12	All (W)
Wireless Device 12 - Battery	MSI	321	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 12	All (W)
Wireless Device 12 - Communication Status	MSI	322	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 12	All (W)
CO2 Effective Source	MSI	324	1=None	1=None, 2=Internal, 3=Error, 4=Wired, 5=Wireless Sensor 1, 6=Wireless Sensor 2, 7=Wireless Sensor 3, 8=Wireless Sensor 4, 9=Wireless Sensor 5, 10=Wireless Sensor 6, 11=Wireless Sensor 7, 12=Wireless Sensor 8, 13=Wireless Sensor 9, 14=Wireless Sensor 10, 15=Wireless Sensor 11, 16=Wireless Sensor 12, 17=Wireless Sensor 13, 18=Wireless Sensor 14, 19=Wireless Sensor 15, 20=Wireless Sensor 16, 21=Wireless Sensor 17, 22=Wireless Sensor 18, 23=Wireless Sensor 19, 24=Wireless Sensor 20	Environment	All
Time source	MSI	325	1=None	1=None, 2=Local, 3=BACnet, 4=NTP, 5=Cloud		All
Fan Speed Status	MSI	326	1=Off	1=Off, 2=Low, 3=Medium, 4=High	Operating Status	All
WiFi Network Signal Strength	MSI	327	1=Poor	1=Poor, 2=Fair, 3=Good, 4=Excellent		All (W)
Wireless Device 13 - Status	MSI	330	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 13	All (W)
Wireless Device 13 - Battery	MSI	331	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 13	All (W)
Wireless Device 13 - Communication Status	MSI	332	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 13	All (W)
Wireless Device 14 - Status	MSI	340	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 14	All (W)
Wireless Device 14 - Battery	MSI	341	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 14	All (W)
Wireless Device 14 - Communication Status	MSI	342	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 14	All (W)
Wireless Device 15 - Status	MSI	350	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 15	All (W)
Wireless Device 15 - Battery	MSI	351	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 15	All (W)
Wireless Device 15 - Communication Status	MSI	352	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 15	All (W)
Wireless Device 16 - Status	MSI	360	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 16	All (W)
Wireless Device 16 - Battery	MSI	361	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 16	All (W)
Wireless Device 16 - Communication Status	MSI	362	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 16	All (W)
Wireless Device 17 - Status	MSI	370	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 17	All (W)

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
Wireless Device 17 - Battery	MSI	371	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 17	All (W)
Wireless Device 17 - Communication Status	MSI	372	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 17	All (W)
Wireless Device 18 - Status	MSI	380	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 18	All (W)
Wireless Device 18 - Battery	MSI	381	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 18	All (W)
Wireless Device 18 - Communication Status	MSI	382	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 18	All (W)
Wireless Device 19 - Status	MSI	390	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 19	All (W)
Wireless Device 19 - Battery	MSI	391	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 19	All (W)
Wireless Device 19 - Communication Status	MSI	392	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 19	All (W)
Wireless Device 20 - Status	MSI	400	1=None	1=None, 2=Closed, 3=Opened, 4=No motion, 5=Motion, 6=Normal, 7=Leak	Zigbee Device 20	All (W)
Wireless Device 20 - Battery	MSI	401	1=None	1=None, 2=Normal, 3=Low	Zigbee Device 20	All (W)
Wireless Device 20 - Communication Status	MSI	402	1=Not paired	1=Not paired, 2=Online, 3=Invalid, 4=Offline	Zigbee Device 20	All (W)
WiFi Band	MSI	406	1=None	1=None, 2=5 GHz, 3=2.4 GHz		All (W)

Multi-State Value Properties

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
Color Theme	MV	2	2=Dark	1=Light, 2=Dark, 3=Gray	Preferences (Main)	All
HMI Main Display Value	MV	3	2=Temperature	1=None, 2=Temperature	Display	All
Display Language	MV	4	1=English	1=English, 2=French, 3=Spanish, 4=Chinese, 5=Russian, 6=Arabic, 7=Danish, 8=Italian, 9=German, 10=Indonesian, 11=Polish, 12=Swedish, 13=Norwegian, 14=Finnish, 15=Hungarian, 16=Turkish, 17=Dutch, 18=Czech, 19=Portuguese, 20=Bulgarian, 21=Slovak, 22=Japanese, 23=Hebrew	Preferences (Main)	All
Time Format	MV	5	1=12 Hour (AM-PM)	1=12 Hour (AM-PM), 2=24 Hour	Display	All
Network Units	MV	6	2=Imperial	1=SI, 2=Imperial	BACnet or Modbus	All
BACnet Baud Rate	MV	8	7=Auto	1=9600, 2=19200, 3=38400, 4=57600, 5=76800, 6=115200, 7=Auto	BACnet	All
Occupancy Command	MV	10	2=Occupied	1=Loc occ., 2=Occupied, 3=Unocc.	Occupancy Configuration	All
Standby Mode Configuration	MV	11	1=Absolute	1=Absolute, 2=Offset	Setpoint Configuration	All
Fan Delay	MV	12	2=On	1=Off, 2=On	Heat Pump and Rooftop	6500
Dehumidification Enabled	MV	13	1=Disabled	1=Disabled, 2=Enabled	Dehumidifier	All
Sequence of Operation	MV	15	2=Heating Only	1=Cooling Only, 2=Heating Only, 3=Reheat Only, 4=Cooling/Heating, 5=Cooling/Reheat, 6=Heating/Reheat, 7=Cooling/Heating/Reheat	Fan Coil Unit	3500
System Mode	MV	16	4=Heat	1=Off, 2=Auto, 3=Cool, 4=Heat	Home	All
Fan Mode	MV	17	3=Smart	1=On, 2=Auto, 3=Smart, 4=Low, 5=Medium, 6=High	Home	All
Use Standby Screen	MV	32	1=Disabled	1=Disabled, 2=Custom Image	Display	All
UI1 Configuration	MV	46	1=None	1=None, 2=Rem NSB, 3=Motion NO, 4=Motion NC, 5=Window, 6=Fan lock	Inputs	All

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
UI2 Configuration	MV	47	1=None	1=None, 2=Door dry, 3=Override, 4=Filter, 5=Service	Inputs	All
UI3 Configuration	MV	49	1=None	1=None, 2=CO2, 3=COC/NH, 4=COC/NC, 5=COS	Inputs	All
Temperature Scale	MV	51	1=°C	1=°C, 2=°F		All
Frost Protection	MV	55	1=Off	1=Off, 2=On	Heat Pump and Rooftop	6500
Fan Sequence	MV	57	5=Speeds-Smart	1=Auto, 2=Smart, 3=Auto-Smart, 4=Speeds-Auto, 5=Speeds-Smart, 6=Speeds-Auto-Smart	Fan	3500
Setpoint Function	MV	58	1=Dual SP	1=Dual SP, 2=Attach SP	Setpoint Configuration	All
Enable Smart Recovery	MV	71	1=Off	1=Off, 2=On	Occupancy Configuration	All
Economizer Configuration	MV	72	1=Off	1=Off, 2=On	Economizer	6500
Mechanical Cooling Allowed	MV	79	1=Off	1=Off, 2=On	Economizer	6500
Valve 1 Type	MV	81	2=Floating	1=On/Off, 2=Floating, 3=0-10V Direct Acting, 4=0-10V Reverse Acting	Fan Coil Unit	3500
Valve 2 Type	MV	82	2=Floating	1=On/Off, 2=Floating, 3=0-10V Direct Acting, 4=0-10V Reverse Acting	Fan Coil Unit	3500
Reheat Time Base	MV	91	1=On/Off (4 CPH)	1=On/Off (4 CPH), 2=PWM (10s Duty Cycle)	Fan Coil Unit	3500
Auxiliary Output	MV	92	1=Reheat (Normally Open)	1=Reheat (Normally Open), 2=Occupancy (Normally Open), 3=Occupancy (Normally Closed), 4=Aux Fan (Normally Open), 5=Aux Fan (Normally Closed), 6=Reheat (Normally Closed)	3500: Fan Coil Unit, 6500: Occupancy Configuration	All
Fan Control in Heating Mode	MV	95	1=Enabled	1=Enabled, 2=Forced Off-Auto/Smart, 3=Forced Off-All Modes	3500: Fan, 6500: Heat Pump and Rooftop	All
DO6-AO1 Configuration	MV	96	2=Binary RC	1=Analog, 2=Binary RC, 3=Binary RH	Terminals	All
DO7-AO2 Configuration	MV	97	2=Binary RC	1=Analog, 2=Binary RC	Terminals	All
DO8-AO3 Configuration	MV	98	2=Binary RC	1=Analog, 2=Binary RC	Terminals	All
DO9-AO4 Configuration	MV	99	2=Binary RC	1=Analog, 2=Binary RC	Terminals	All
French	MV	101	2=Enabled	1=Disabled, 2=Enabled	Language Selection	All
Spanish	MV	102	2=Enabled	1=Disabled, 2=Enabled	Language Selection	All
Chinese	MV	103	2=Enabled	1=Disabled, 2=Enabled	Language Selection	All
Russian	MV	104	2=Enabled	1=Disabled, 2=Enabled	Language Selection	All
Occupancy Source	MV	110	1=Motion	1=Motion, 2=Schedule, 3=Motion during Schedule, 4=Motion or Schedule	Occupancy Configuration	All
Control Status	MV	112	1=Off	1=Off, 2=Cool, 3=Heat		All
Comfort or economy mode	MV	116	1=Comfort	1=Comfort, 2=Economy	Heat Pump	6500
Reversing valve operation	MV	117	1=O	1=O, 2=B	Heat Pump	6500
Compressor - auxiliary interlock	MV	118	1=Off	1=Off, 2=On	Heat Pump	6500
Application	MV	119	3=FCU	1=Rooftop Unit, 2=Heat Pump, 3=FCU	HVAC Configuration	All
Arabic	MV	120	1=Disabled	1=Disabled, 2=Enabled	Language Selection	All
Czech	MV	122	1=Disabled	1=Disabled, 2=Enabled	Language Selection	All
Danish	MV	123	1=Disabled	1=Disabled, 2=Enabled	Language Selection	All
Dutch	MV	124	1=Disabled	1=Disabled, 2=Enabled	Language Selection	All

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
Finnish	MV	125	1=Disabled	1=Disabled, 2=Enabled	Language Selection	All
German	MV	126	1=Disabled	1=Disabled, 2=Enabled	Language Selection	All
Hungarian	MV	127	1=Disabled	1=Disabled, 2=Enabled	Language Selection	All
Indonesian	MV	128	1=Disabled	1=Disabled, 2=Enabled	Language Selection	All
Italian	MV	129	1=Disabled	1=Disabled, 2=Enabled	Language Selection	All
Norwegian	MV	130	1=Disabled	1=Disabled, 2=Enabled	Language Selection	All
Polish	MV	131	1=Disabled	1=Disabled, 2=Enabled	Language Selection	All
Portuguese	MV	132	1=Disabled	1=Disabled, 2=Enabled	Language Selection	All
Slovak	MV	133	1=Disabled	1=Disabled, 2=Enabled	Language Selection	All
Swedish	MV	134	1=Disabled	1=Disabled, 2=Enabled	Language Selection	All
Turkish	MV	135	1=Disabled	1=Disabled, 2=Enabled	Language Selection	All
Schedule Type	MV	136	1=7 days	1=7 days, 2=5+2 days, 3=5+1+1 day	Occupancy Schedule	All
UI1 Type	MV	141	2=Binary	1=Therm., 2=Binary, 3=Voltage		All
UI2 Type	MV	142	2=Binary	1=Therm., 2=Binary, 3=Voltage		All
UI3 Type	MV	143	1=Therm.	1=Therm., 2=Binary, 3=Voltage		All
UI4 Type	MV	144	1=Therm.	1=Therm., 2=Binary, 3=Voltage		All
UI5 Type	MV	145	1=Therm.	1=Therm., 2=Binary, 3=Voltage		All
UI6 Type	MV	146	1=Therm.	1=Therm., 2=Binary, 3=Voltage		All
UI7 Type	MV	147	3=Voltage	1=Therm., 2=Binary, 3=Voltage		All
UI8 Type	MV	148	3=Voltage	1=Therm., 2=Binary, 3=Voltage		All
Room Temperature Sensor	MV	150	1=Wired	1=Wired, 2=Internal, 3=Wireless Sensor 1, 4=Wireless Sensor 2, 5=Wireless Sensor 3, 6=Wireless Sensor 4, 7=Wireless Sensor 5, 8=Wireless Sensor 6, 9=Wireless Sensor 7, 10=Wireless Sensor 8, 11=Wireless Sensor 9, 12=Wireless Sensor 10, 13=Wireless Sensor 11, 14=Wireless Sensor 12, 15=Wireless Sensor 13, 16=Wireless Sensor 14, 17=Wireless Sensor 15, 18=Wireless Sensor 16, 19=Wireless Sensor 17, 20=Wireless Sensor 18, 21=Wireless Sensor 19, 22=Wireless Sensor 20	Inputs	All
CO2 Autocalibration	MV	152	2=Enabled	1=Disabled, 2=Enabled		All
Relative humidity sensor	MV	154	2=Internal	1=None, 2=Internal, 3=Wireless Sensor 1, 4=Wireless Sensor 2, 5=Wireless Sensor 3, 6=Wireless Sensor 4, 7=Wireless Sensor 5, 8=Wireless Sensor 6, 9=Wireless Sensor 7, 10=Wireless Sensor 8, 11=Wireless Sensor 9, 12=Wireless Sensor 10, 13=Wireless Sensor 11, 14=Wireless Sensor 12, 15=Wireless Sensor 13, 16=Wireless Sensor 14, 17=Wireless Sensor 15, 18=Wireless Sensor 16, 19=Wireless Sensor 17, 20=Wireless Sensor 18, 21=Wireless Sensor 19, 22=Wireless Sensor 20	Inputs	All

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
CO2 source	MV	155	2=Local	1=None, 2=Local, 3=Wireless Sensor 1, 4=Wireless Sensor 2, 5=Wireless Sensor 3, 6=Wireless Sensor 4, 7=Wireless Sensor 5, 8=Wireless Sensor 6, 9=Wireless Sensor 7, 10=Wireless Sensor 8, 11=Wireless Sensor 9, 12=Wireless Sensor 10, 13=Wireless Sensor 11, 14=Wireless Sensor 12, 15=Wireless Sensor 13, 16=Wireless Sensor 14, 17=Wireless Sensor 15, 18=Wireless Sensor 16, 19=Wireless Sensor 17, 20=Wireless Sensor 18, 21=Wireless Sensor 19, 22=Wireless Sensor 20	Inputs	All
Temperature Alarm Enabled	MV	156	1=Off	1=Off, 2=On		All
ADR Permission	MV	157	1=Disabled	1=Disabled, 2=Enabled	ADR	All
Fan Type	MV	158	3=3 Speed (L-M-H)	1=1 Speed (H), 2=2 Speed (L-H), 3=3 Speed (L-M-H), 4=ECM	Fan	3500
Japanese	MV	159	1=Disabled	1=Disabled, 2=Enabled	Language Selection	All
Hebrew	MV	160	1=Disabled	1=Disabled, 2=Enabled	Language Selection	All
Enable Static IP	MV	183	1=Dynamic	1=Dynamic, 2=Static	Hidden Network and Network Name	All
Enable WIFI	MV	184	1=Disabled	1=Disabled, 2=Enabled	Network	All (W)
Hidden WIFI	MV	185	1=Disabled	1=Disabled, 2=Enabled		All (W)
Notification Type	MV	186	1=Disabled	1=Disabled, 2=Critical, 3=Warning, 4=Ok, 5=Informative	Home Notifications	All
Notification Display Type	MV	187	3=All	1=Disabled, 2=Custom Only, 3=All	Display	All
Occupancy Sensor	MV	188	4=High	1=Off, 2=Low, 3=Medium, 4=High	Occupancy Configuration	All
Proximity Sensor	MV	189	4=High	1=Off, 2=Low, 3=Medium, 4=High		All (W)
Custom Standby Text Color	MV	190	1=White	1=White, 2=Black	Standby Screen	All
HMI Setpoint	MV	192	2=Slider	1=None, 2=Slider, 3=Buttons (Attached SP Only)	Display	All
Remote Device Access	MV	193	1=Disabled	1=Disabled, 2=Enabled	Lua Status	All
Halo Mode	MV	194	2=Heat/Cool	1=Disabled, 2=Heat/Cool	Halo	All (W)
Button 1	MV	195	2=System Mode	1=Disabled, 2=System Mode, 3=Fan Mode, 4=AI Eco Mode, 5=Do Not Disturb, 6=Make Up Room	Display	All
Button 2	MV	196	3=Fan Mode	1=Disabled, 2=System Mode, 3=Fan Mode, 4=AI Eco Mode, 5=Do Not Disturb, 6=Make Up Room	Display	All
Button 3	MV	197	4=AI Eco Mode	1=Disabled, 2=System Mode, 3=Fan Mode, 4=AI Eco Mode, 5=Do Not Disturb, 6=Make Up Room	Display	All
Button 4	MV	198	1=Disabled	1=Disabled, 2=System Mode, 3=Fan Mode, 4=AI Eco Mode, 5=Do Not Disturb, 6=Make Up Room	Display	All
Info Item 1	MV	200	3=Humidity	1=Disabled, 2=Outdoor Air Temperature, 3=Humidity, 4=CO2 Level	Display	All
Info Item 2	MV	201	4=CO2 Level	1=Disabled, 2=Outdoor Air Temperature, 3=Humidity, 4=CO2 Level	Display	All
Info Item 3	MV	202	2=Outdoor Air Temperature	1=Disabled, 2=Outdoor Air Temperature, 3=Humidity, 4=CO2 Level	Display	All
Default Setpoints	MV	205	1=Disabled	1=Disabled, 2=Enabled	Setpoint Configuration	All
WiFi Security Type	MV	206	6=UNKNOWN SECURITY	1=WPA2 AES PSK, 2=WPA2 TKIP PSK, 3=WPA2 MIXED PSK, 4=WPA3 SAE, 5=WPA3 WPA2 PSK, 6=UNKNOWN SECURITY	Hidden Network	All (W)
BBMD Status	MV	207	1=Offline	1=Offline, 2=DNS Lookup, 3=DNS Fail, 4=Registering, 5=Registered, 6=Registration Failed	BACnet	All

Object Name	BACnet		Default Value	Range Value	Room Controller	
	Type	Inst.			Screen Name	Model(s) ¹
Wireless Device 1 - Function	MV	210	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 1	All (W)
Enable AI Eco Setpoint Control	MV	211	1=Disabled	1=Disabled, 2=Enabled	AI Eco Configuration	All
AI Eco Mode	MV	212	1=Disabled	1=Disabled, 2=Enabled	Home	All
AI Eco Optimal Setpoint	MV	213	1=Disabled	1=Disabled, 2=Enabled	AI Eco Configuration	All
AI Eco Optimal Start	MV	214	1=Disabled	1=Disabled, 2=Enabled	AI Eco Configuration	All
AI Eco Optimal Stop	MV	215	1=Disabled	1=Disabled, 2=Enabled	AI Eco Configuration	All
AI Eco Verbose Logging	MV	216	1=Disabled	1=Disabled, 2=Enabled	AI Eco Configuration	All
Alerts Mode	MV	217	1=Disabled	1=Disabled, 2=Critical, 3=Warning, 4=Informative, 5=All Clear		All
Do Not Disturb	MV	218	1=Off	1=Off, 2=On	Home	All
Make Up Room	MV	219	1=Off	1=Off, 2=On	Home	All
Wireless Device 2 - Function	MV	220	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 2	All (W)
Wireless Device 3 - Function	MV	230	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 3	All (W)
Wireless Device 4 - Function	MV	240	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 4	All (W)
Wireless Device 5 - Function	MV	250	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 5	All (W)
Wireless Device 6 - Function	MV	260	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 6	All (W)
Wireless Device 7 - Function	MV	270	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 7	All (W)
Wireless Device 8 - Function	MV	280	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 8	All (W)
Wireless Device 9 - Function	MV	290	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 9	All (W)
Wireless Device 10 - Function	MV	300	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 10	All (W)
Wireless Device 11 - Function	MV	310	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 11	All (W)
Wireless Device 12 - Function	MV	320	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 12	All (W)
Wireless Device 13 - Function	MV	330	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 13	All (W)
Wireless Device 14 - Function	MV	340	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 14	All (W)
Wireless Device 15 - Function	MV	350	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 15	All (W)
Wireless Device 16 - Function	MV	360	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 16	All (W)
Wireless Device 17 - Function	MV	370	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 17	All (W)
Wireless Device 18 - Function	MV	380	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 18	All (W)
Wireless Device 19 - Function	MV	390	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 19	All (W)
Wireless Device 20 - Function	MV	400	1=None	1=None, 2=Window, 3=Door, 4=Motion, 5=Env. data, 6=Remove, 7=Water, 8=Refrig., 9=Freezer	Zigbee Device 20	All (W)

Program Objects

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 18.

Endnotes

- 1 In the Model(s) column, (W) designates that the BACnet object applies to wireless models only.