



**neptronic®**

# **SKH4 High-Pressure Atomizer**

## BACnet Communication Module User Guide



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## Introduction

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The SKH4 High-Pressure Atomizer BACnet Communication Module User Guide provides information about using the humidifiers with BACnet communications feature. The BACnet communication protocol for building automation and control networks enables communication between client devices within a network. The humidifier provides a BACnet network interface between BACnet client devices and Neptronic humidifiers. It uses the BACnet Master Slave/Token Passing (MS/TP) protocol and BACnet IP at the BACnet MAC layer.

## Pre-requisites

The BACnet communication user guide assumes that you are familiar with the concepts of BACnet and its terminology.

## Advantages of BACnet

BACnet enabled humidifiers have the following advantages:

- *Quick Message Transmission.* The humidifier uses a synchronous implementation for BACnet messages making it quick and efficient. Each BACnet confirmed service request is answered as quickly as possible without using the **Reply Postponed** frame. The MS/TP implementation is performed within **Tusage\_delay** of 15 minutes to ensure a **Tusage\_timeout** value within 20 minutes.
- *MS/TP Support.* The humidifier supports a Full Master Node state machine for MS/TP. The Max\_Master and the instances are configured to the device object through **BACnet WriteProperty** service or via the device's Programming Mode. The MAC address and the MS/TP baud rate setting of 9600, 19200, 38400, and 76800 are also set through the **BACnet Write Property** service or via the device's Programming Mode. In Programming mode, the device is configured through the device's keypad. For more information about the WriteProperty, refer to Table 3 - Object Types Supported.
- *BIBB Support.* The humidifier functions the same way as the B-ASC type profile server and supports the specific BIBB as per their relevant definitions.
  - DS-RP-B
  - DS-RPM-B
  - DS-WP-B
  - DS-WPM-B
  - DM-DCC-B
  - DM-DDB-B
  - DM-DOB-B
  - DM-RD-B
  - DM-TS-B
  - DM-UTC-B
  - DS-COV-B
  - DS-COVP-B
  - SCHED-WS-I-B
- *Object Support.* The humidifier supports a fixed list of BACnet visible values, which appear as Present\_Values of various BACnet standard object types in addition to a device object. For more information, refer to Table 3 - Object Types Supported.
- *Alarms.* The humidifier supports indication of various alarm conditions through value changes in properties of several objects. However, it does not generate BACnet event notifications.

## BACnet Properties Configuration

To establish communication on the network, and guarantee a unique ID of devices in a BACnet system, the following properties may have to be configured.

**Table 1 - BACnet Properties Configuration**

Property	Default Value	Configuration
MAC Address	001	<ul style="list-style-type: none"> <li>Set to a unique address on the network between 000 and 254.</li> <li>The value can be set manually via the menu.</li> <li>The values from 128-254 represent MS/TP non-token passing slave devices.</li> </ul>
Device Instance	Auto	<ul style="list-style-type: none"> <li>The humidifier automatically configures its device instance to 153,000 + MAC address.</li> <li>The value can be set manually via the menu.</li> <li>The value can be set manually through the <b>WriteProperty</b> service to <b>Device Object.Object_Identifier</b>.</li> <li>The device's <b>Object_Identifier</b> is a combination of the <b>Device Object_Type</b> (8) and the <b>Device_Instance</b> (0-4194302), therefore its decimal or hexadecimal representation tends to be incomprehensible.</li> <li>For example, the <b>Device_Instance</b>=1000 has an equivalent <b>Object_Identifier</b> of 0x020003E8 hexadecimal or 33555432 decimal.</li> </ul>
Baud Rate	0 = Auto	<ul style="list-style-type: none"> <li>The humidifier configures its baud rate automatically by detecting the network upon connection.</li> <li>The value can be set manually from the available values of (0) Auto, 9600, 19200, 38400, and 76800.</li> </ul>
Max_Master	127	<ul style="list-style-type: none"> <li>Configure <b>Max_Master</b> value to increase network efficiency when there are less than 127 devices on the network.</li> <li>The <b>Max_Master</b> value can be changed through the <b>WriteProperty</b> service to <b>Device Object.Max_Master</b>.</li> </ul> <p>For more information, refer to the MAC Address and Max_Master section.</p>
Device Object.Object_Name	Name of the device	<ul style="list-style-type: none"> <li>Configure the name of the device through the <b>WriteProperty</b> service to <b>Device Object.Object_Name</b>. For example, SKH4.</li> </ul>

# Configuration Options

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The following Configuration options enable you to configure and run the BACnet features of the humidifiers quickly.

## Quick Setup

Configure the humidifier for BACnet communication without programming.

1. Ensure that no other device on the network has a MAC address of 1 (the humidifier's default address).
2. Connect the humidifier to the network and power it up.
3. The humidifier automatically configures the baud rate and device instance allowing BACnet Property Configuration through the Write Property service. See Table 1 - BACnet Properties Configuration.
4. Repeat the steps for each humidifier.

## Manual Setup

Configure the humidifier for BACnet communication using the SKH4 controller, by using the following steps:

1. Press the Enter key.
2. Enter the Integration menu password: **5544**.
3. Select the Network or Communication sub-menus to set appropriate values.
4. Follow the instructions to configure the Device, BACnet Server, BACnet MSTP/IP and so on, manually.
5. Disconnect the power to the humidifier, connect the humidifier to the network, and connect the power again.

### MAC Address and Max\_Master

The MAC address must be unique on the entire MS/TP network. However, having a unique MAC address and a high baud rate does not guarantee efficient operation of the humidifier and other MS/TP units on the MS/TP network. Some MAC address and Max\_Master combinations are more efficient than others. BACnet requires token-passing units to occasionally "poll" for other masters based on the MAC address and Max\_Master.

A poor combination of MAC addresses and Max\_Master can lead to a slower network due to lost time polling for masters that are not present. Unless there are 126 other units on the MS/TP network, the default Max\_Master value of 127 is not the most efficient choice for the humidifier. The Max\_Master default value of 127 was selected to ensure that any master, specifically a BACnet client can be found when the humidifier is initially started.

### Examples of MAC Address and Max\_Master Configurations

The following are some of the examples to indicate the optimum combination of MAC address and Max\_Master configurations to ensure a quick and efficient output.

#### Example 1

- MAC=0. Max\_Master=127
- MAC=1, Max\_Master=127

This configuration is slow and inefficient because every time either unit is required to find another master unit, it has to poll 126 units until it finds the right one to pass the token.

#### Example 2

- MAC=0. Max\_Master=5
- MAC=1 to MAC=4 are not used
- MAC=5, Max\_Master=5

This configuration is better than Example 1 but it is still not optimal. The Max\_Master is set to the most efficient value but the gap between the two MAC addresses is high. Therefore, each unit must poll four units until it finds the right one to pass the token.

**Example 3**

- MAC=0, Max\_Master=1
- MAC=2, Max\_Master=2

This is an incorrect configuration. The MAC=0 will never find MAC=2 because it will never poll for the master MAC address=2.

**Example 4**

- MAC=0, Max\_Master=3
- MAC=1, Max\_Master=3
- MAC=2, Max\_Master=3
- MAC=3, Max\_Master=3

This is an efficient configuration as the units are numbered consecutively and the MAX\_Master is set to the most efficient value. As a general guideline, the most efficient setup for an MS/TP network is one in which the units are consecutively numbered starting at MAC address 0 and having Max\_Master=the maximum MAC address in the system. If consecutive numbering is not possible, then the next most efficient setup is one in which all units have Max\_Master=the maximum MAC address in the system.

## IP Port

For IP communication, a port number of **47808 (0xBAC0)** is used by default. Ensure that the BMS accesses the port with which the humidifier communicates. Generally, in situations with multiple networks, different ports may be used such as 47809 (0xBAC1) or 47810 (0xBAC2) to separate traffic.

## Network Reset

Reset the humidifier via BACnet using the **Reinitialize Device** service. The Reinitialize Device service can be accessed using the following password: **nep**.

The Reinitialize Device service has two types of reset such as:

- *Warm Reset.* The Warm Reset changes the humidifier to its initial state.
- *Cold Reset.* The Cold Reset restarts the humidifier.

# Device Object Properties

The following table lists all the BACnet properties supported for the device object. The W indicates that the property is writable using the BACnet **WriteProperty** service.

**Table 2 - Device Object Properties**

Property	Value	Writable
Object_Identifier	<ul style="list-style-type: none"> <li>Programmable where the instance part of the Object_Identifier is in the range of 0-4194302</li> <li>The device instance must be unique system-wide</li> <li>The default value for the device instance= 153001 (Vendor_Identifier*1000 + MAC)</li> </ul>	W
Object_Name	SKH4, programmable up to 32 Bytes	W
Description	Programmable up to 32 Bytes (default: SKH4 Controller)	W
Object_Type	Device	
System_Status	Operational	
Vendor_Identifier	Always 153	
Vendor_Name	Always Neptronic	
Model_Name	Example, SKH4	
Firmware_Revision	2.03.202401240818	
Application_Software_Version	1.00.20240124	
Protocol_Version	Always 1	
Protocol_Revision	Always 14	
DataBase_Revision	Default 0; incremented if Object Name, Object List and/or device ID change	
Max_APDU_Length_Accepted	Always 480	
Segmentation_Supported	(3) = No Segmentation	
APDU_Timeout	3,000	W
Number_of_APDU_Retries	Always 3	
Local_Time	00:00:00	W
Local_Date	01-Jan-2015 (Thu)	W
Utc_Offset	-300 minutes	W
Daylight_Savings_Status	False	W
Backup_Failure_Timeout	10	W
Configuration_Files	File-1 through File-17	
Last_Restore_Time	2015-01-01 (Thu), 00:00:00:00	
Backup_And_Restore_State	IDLE	
Backup_Preparation_Time	0	
Restore_Completion_Time	0	
Restore_Preparation_Time	0	
Protocol_Services_Supported	<ul style="list-style-type: none"> <li>confirmedCOVNotification</li> <li>subscribeCOV</li> <li>atomicReadFile</li> <li>atomicWriteFile</li> <li>readProperty</li> <li>readPropertyMultiple</li> <li>WriteProperty</li> <li>writePropertyMultiple</li> <li>deviceCommunicationControl</li> <li>reinitializeDevice</li> <li>i-Am</li> <li>i-Have</li> <li>unconfirmedCOVNotification</li> <li>unconfirmedPrivateTransfer</li> <li>timeSynchronization</li> <li>who-Has</li> <li>who-Is</li> <li>utcTimeSynchronization</li> <li>subscribeCOVProperty</li> </ul>	
Protocol_Object_Types_Supported	<ul style="list-style-type: none"> <li>analog-input</li> <li>analog-output</li> <li>analog-value</li> <li>binary-input</li> <li>binary-output</li> <li>binary-value</li> <li>device</li> <li>file</li> <li>group</li> <li>multi-state-input</li> <li>multi-state-output</li> <li>program</li> <li>Schedule</li> <li>multi-state-value</li> <li>characterstring-value</li> <li>date-value</li> <li>datetime-value</li> <li>positive-integer-value</li> <li>time-value</li> </ul>	
Object_List	132	
Device_Address_Binding	Depends on configuration	
Max_Master	Programmable in the range of 1 to 127 (default: 127)	W
Max_Info_Frames	Always 1	
Active_COV_Subscription	Empty by default. COV subscription will be lost on a power cycle.	



Property	Value	Writable
Property_List	List of properties that exist within the object.	

## Object Types Supported

The following table lists all the BACnet properties supported for each object type. Most of the properties are locked. The exception is **Present\_Value**, which represents the dynamic operating values of the device, and the Status\_Flag, Event\_State, and Reliability properties, which reflect the availability of the **Present\_Value**. Unless otherwise specified, properties are not changeable.

**Table 3 - Object Types Supported**

Object Type	Enabled	Optional Properties Supported	Writable Properties	Notes
<i>Note: Writable properties are different for some objects. Refer to the respective Object Table information to know the writable property for objects.</i>				
Analog Input	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>Reliability</li> <li>Description</li> <li>Min_Present_Value</li> <li>Max_Present_Value</li> <li>Resolution</li> <li>COV_Increment</li> </ul>	<ul style="list-style-type: none"> <li>Out_of_Service</li> <li>COV_Increment</li> <li>Units</li> </ul>	If "Out_of_Service" is true, Present_Value becomes a writable property. Refer to Out_of_Service Property section on page 7 for more information.
Analog Value	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>Reliability</li> <li>Description</li> <li>Min_Present_Value</li> <li>Max_Present_Value</li> <li>Resolution</li> <li>COV_Increment</li> <li>Priority_Array</li> <li>Relinquish_Default</li> </ul>	<ul style="list-style-type: none"> <li>Present_Value</li> <li>Out_of_Service</li> <li>COV_Increment</li> <li>Relinquish_Default</li> <li>Units</li> </ul>	Refer to Out_of_Service Property section on page 7 for more information.
Analog Output	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>Description</li> <li>Reliability</li> <li>Min-Pres-Value</li> <li>Max-Pres-Value</li> <li>Resolution</li> <li>COV_Increment</li> </ul>	<ul style="list-style-type: none"> <li>Present_Value</li> <li>COV_Increment</li> <li>Out_of_Service</li> <li>Relinquish_Default</li> <li>Units</li> </ul>	
Binary Input	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>Reliability</li> <li>Active_Text</li> <li>Inactive_Text</li> <li>Description</li> </ul>	<ul style="list-style-type: none"> <li>Out_of_Service</li> <li>Polarity</li> </ul>	<ul style="list-style-type: none"> <li>If "Out_of_Service" is true, Present_Value becomes a writable property. Refer to Out_of_Service Property section on page 7 for more information.</li> </ul>
Binary Value	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>Reliability</li> <li>Active_Text</li> <li>Inactive_Text</li> <li>Description</li> <li>Priority_Array</li> <li>Relinquish_Default</li> <li>Minimum_Off_Time</li> <li>Minimum_On_Time</li> </ul>	<ul style="list-style-type: none"> <li>Present_Value</li> <li>Out_of_Service</li> <li>Relinquish_Default</li> <li>Minimum_Off_Time</li> <li>Minimum_On_Time</li> </ul>	Refer to Out_of_Service Property section on page 7 for more information.
Binary Output	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>Description</li> <li>Reliability</li> <li>Inactive-text</li> <li>Active-text</li> <li>Minimum_Off_Time</li> <li>Minimum_On_Time</li> </ul>	<ul style="list-style-type: none"> <li>Present_Value</li> <li>Out_of_Service</li> <li>Polarity</li> <li>Relinquish_Default</li> <li>Minimum_Off_Time</li> <li>Minimum_On_Time</li> </ul>	
Device	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>Max_Master</li> <li>Max_Info_Frame</li> <li>Description</li> <li>active-COV-subscriptions</li> <li>Local_Time</li> <li>Local_Date</li> <li>UTC_Offset</li> <li>Daylight_Savings_Status</li> <li>Backup_Failure_Timeout</li> <li>Configuration_Files</li> <li>Last_Restore_Time</li> <li>Backup_And_Restore_State</li> <li>Backup_Preparation_Time</li> <li>Restore_Completion_Time</li> <li>Restore_Preparation_Time</li> <li>Location</li> <li>Serial_Number</li> <li>Profile_Name</li> </ul>	<ul style="list-style-type: none"> <li>Object_Identifier</li> <li>Object_Name</li> <li>Max_Master</li> <li>Description</li> <li>Local_Time</li> <li>Local_Date</li> <li>UTC_Offset</li> <li>Daylight_Savings_Status</li> <li>Apdu_Timeout</li> <li>Backup_Failure_Timeout</li> <li>Location</li> </ul>	





Object Type	Enabled	Optional Properties Supported	Writable Properties	Notes
File	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>Description</li> </ul>	File_Size	Only 0 is the accepted value to be written to the file size.
Group	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Description</li> </ul>		
Multi-State Input	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Description</li> <li>Reliability</li> <li>State_Text</li> </ul>	<ul style="list-style-type: none"> <li>Out_of_Service</li> </ul>	
Multi-State Output	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Description</li> <li>Reliability</li> <li>State_Text</li> </ul>	<ul style="list-style-type: none"> <li>Present_Value</li> <li>Out_of_Service</li> <li>Relinquish_Default</li> </ul>	
Program	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>Description</li> <li>Reliability</li> </ul>	<ul style="list-style-type: none"> <li>Program_Change</li> <li>Out_of_Service</li> </ul>	Only LOAD and RESTART are supported for program change. Use LOAD to apply the new firmware.
Schedule	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>Description</li> <li>Weekly_Schedule</li> </ul>	<ul style="list-style-type: none"> <li>Effective_Period</li> <li>Schedule_Default</li> <li>List_of_Object_Property_References</li> <li>Priority_for_Writing</li> <li>Out_of_Service</li> <li>Weekly_Schedule</li> </ul>	If Out_of_Service is True, Present_Value becomes writable.
Multi-State Value	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>Description</li> <li>Reliability</li> <li>States_Text</li> <li>Priority_Array</li> <li>Relinquish_Default</li> </ul>	<ul style="list-style-type: none"> <li>Present_Value</li> <li>Relinquish_Default</li> <li>Out_of_Service</li> </ul>	
CharacterString Value	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>Description</li> </ul>	<ul style="list-style-type: none"> <li>Present_Value</li> </ul>	
Date	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Description</li> <li>Reliability</li> <li>Event_State</li> <li>Out_of_Service</li> </ul>	<ul style="list-style-type: none"> <li>Present_Value</li> <li>Out_of_Service</li> </ul>	
DateTime	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Description</li> <li>Reliability</li> <li>Event_State</li> <li>Out_of_Service</li> </ul>	<ul style="list-style-type: none"> <li>Present_Value</li> <li>Out_of_Service</li> </ul>	
Positive-Integer Value	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Description</li> <li>Reliability</li> <li>Event_State</li> <li>Out_of_Service</li> <li>Priority_Array</li> <li>Relinquish_Default</li> <li>Minimum_Present_Value</li> <li>Maximum_Present_Value</li> </ul>	<ul style="list-style-type: none"> <li>Present_Value</li> <li>Units</li> <li>Out_of_Service</li> <li>Relinquish_Default</li> </ul>	
Time	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Description</li> <li>Reliability</li> <li>Event_State</li> <li>Out_of_Service</li> </ul>	<ul style="list-style-type: none"> <li>Present_Value</li> <li>Out_of_Service</li> </ul>	

## Out\_of\_Service Property

Neptronic humidifiers offer the use of the Out\_of\_Service writable property. When the value of this property is set to True, it disconnects the object from the physical input, enabling you to input other values. This is useful for special applications or while troubleshooting. For example, you can ignore the temperature read from a sensor and input the desired temperature value in order to perform specific tests.



**Warning:** If the Out\_of\_Service property is set to **True**, Out\_of\_Service remains true until set to **False**.

## Object Table Information

The SKH4 uses the following BACnet object tables, categorized on the basis of their ID. The type is the BACnet Object type, the instance is the BACnet Object. Together, the type and instance form the **BACnet Object\_Identifier** for an object according to the following C-language algorithm:

- object\_identifier=(unsigned long)((unsigned long)type<<22)+instance

### Analog Input (AI)

**Table 4 - Object Table Information: Analog Input (AI)**

ID	Name	List	Description	W?	Notes
AI.5	Control Signal	Integrator	Value of the control demand analog input signal.	Out_of_Service COV_Increment	0V to 15V, Resolution: 0.001V
AI.6	Room RH Signal	Integrator	Value of the room humidity analog input signal.	Out_of_Service COV_Increment	0V to 15V, Resolution: 1V
AI.7	Supply RH Signal	Integrator	Value of the duct or supply high limit humidity analog input signal.	Out_of_Service COV_Increment	0V to 15V, Resolution: 0.001V
AI.15	Water Temperature Signal	Integrator	Value of the water temperature sensor signal.	Out_of_Service COV_Increment	0V to 10V, Resolution 0.001V
AI.16	Pressure Sensor Signal	Integrator	Value of the pressure sensor signal.	Out_of_Service COV_Increment	0V to 10V, Resolution 0.001V
AI.24	Board Temperature Signal	Integrator	Value of the board temperature sensor signal.	Out_of_Service COV_Increment	0V to 10V, Resolution 0.001V
AI.25	Main Power Supply	Integrator	Value of the measured voltage in the power supply.	Out_of_Service COV_Increment	0V to 40V, Resolution 0.1V
AI.28	Room Temperature Signal	Integrator	Value of the room temperature sensor signal.	Out_of_Service COV_Increment	0V to 15V, Resolution 0.001V
AI.29	Supply Temperature Signal	Integrator	Value of the room temperature sensor signal.	Out_of_Service COV_Increment	0V to 15V, Resolution 0.001V
AI.30	Control Signal	Integrator	Value of the control signal.	Out_of_Service COV_Increment	0V to 15V, Resolution: 1V

## Analog Output (AO)

**Table 5 - Object Table Information: Analog Output (AO)**

ID	Name	List	Description	W?	Notes
AO.1	Power Output Feedback Signal	Integrator	Value of the power output feedback signal.	Out_of_Service Relinquish_Default COV_Increment	0V to 10V, Resolution 0.001V
AO.16	Drive Signal	Integrator	Value of the drive signal.	Out_of_Service Present_Value Relinquish_Default COV_Increment	0V to 10V, Resolution 0.001V

## Analog Value (AV)

**Table 6 - Object Table Information: Analog Value (AV)**

ID	Name	List	Description	W?	Notes
AV.10	MCU Load	Integrator	Value of the current microcontroller load.	Out_of_Service COV_Increment	0% to 100%, Resolution 0.1%
AV.11	Memory Load	Integrator	Value of the current memory load.	Out_of_Service COV_Increment	0% to 100%, Resolution 0.1%
AV.21	Demand	Integrator	Value of the demand.	Out_of_Service COV_Increment	0% to 100%, Resolution 0.01%
AV.41	Control Input	Integrator	Value of the current control input reading.	Out_of_Service COV_Increment	0% to 100%, Resolution 1%
AV.42	Control Min	Integrator	Minimum value of the control demand analog input.	Out_of_Service Present_Value COV_Increment	0% to 100%, Resolution 1%
AV.43	Control Max	Integrator	Maximum value of the control demand analog input.	Out_of_Service Present_Value COV_Increment	0% to 100%, Resolution 1%
AV.44	Control Bias	Integrator	Bias value for the control demand analog input.	Present_Value Out_of_Service COV_Increment	-10% to 10%, Resolution 0.1%
AV.49	Room RH	Integrator	Value of the room humidity reading.	Out_of_Service COV_Increment	0% RH to 100% RH, Resolution 1% RH
AV.50	Room RH Min	Integrator	Minimum value of the room humidity analog input.	Out_of_Service Present_Value COV_Increment	0% to 100%, Resolution 1%

ID	Name	List	Description	W?	Notes
AV.51	Room RH Max	Integrator	Maximum value of the room humidity analog input.	Out_of_Service Present_Value COV_Increment	0% to 100%, Resolution 1%
AV.52	Room RH Bias	Integrator	Bias value of the room humidity analog input.	Out_of_Service Present_Value COV_Increment	-10% RH to 10% RH, Resolution 0.1% RH
AV.57	Supply High Limit RH	Integrator	Value of the duct or supply high limit humidity analog input.	Out_of_Service COV_Increment	0% RH to 100% RH, Resolution 1% RH
AV.58	Supply High Limit RH Min	Integrator	Minimum value of the duct or supply high limit humidity analog input.	Out_of_Service Present_Value COV_Increment	0% RH to 100% RH, Resolution 1% RH
AV.59	Supply High Limit RH Max	Integrator	Maximum value of the duct or supply high limit humidity analog input.	Out_of_Service Present_Value COV_Increment	0% RH to 100% RH, Resolution 1% RH
AV.60	Supply High Limit RH Bias	Integrator	Bias value of the duct or supply high limit humidity analog input.	Out_of_Service Present_Value COV_Increment	-10% RH to 10% RH, Resolution 0.1% RH
AV.69	Run Time	Integrator	Displays the number of seconds that the system has been powered on. This value is reset every time the system is shut off.	Present_Value Out_of_Service COV_Increment Relinquish_Default Units	0 to 21474836.47 hours, Resolution 0.01 hour
AV.70	On Time	Integrator	Value of the total operating time of the humidifier.	Present_Value Out_of_Service COV_Increment Relinquish_Default Units	0 to 21474836.47 hours, Resolution 0.01 hour
AV.72	Service On Time	Integrator	Value of the operating time of the humidifier since the last servicing.	Present_Value Out_of_Service COV_Increment Relinquish_Default Units	0 to 21474836.47 hours, Resolution 0.01 hour
AV.75	Water Temperature	Integrator	Value of temperature of water in the evaporation chamber.	Out_of_Service COV_Increment Units	32°F to 257°F or 0°C to 125°C Resolution 0.18°F or 0.10°C
AV.82	Service Interval	Integrator	Value of the system service interval.	Out_of_Service COV_Increment Units	500 to 3000 hours, Resolution 100 hour
AV.85	Power Output Feedback Bias	Integrator	Bias value for the power output feedback signal.	Out_of_Service Present_Value COV_Increment	-1V to 1V, Resolution: 0.001V

ID	Name	List	Description	W?	Notes
AV.86	Power Output Feedback Min	Integrator	Minimum value of the power output feedback signal.	Out_of_Service Present_Value COV_Increment	0V to 10V, Resolution: 0.001V
AV.87	Power Output Feedback Max	Integrator	Maximum value of the power output feedback signal.	Out_of_Service Present_Value COV_Increment	0V to 10V, Resolution: 0.001V
AV.88	Power Output Feedback	Integrator	Feedback value of the power output analog output.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0% to 100%, Resolution 1%
AV.94	Motor Speed	Integrator	Value of the motor speed.	Out_of_Service Present_Value COV_Increment	0% to 100%, Resolution 0.01%
AV.106	Room RH Network Reading	Integrator	Value of the room relative humidity reading received from the network.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0% RH to 100% RH, Resolution 0.01% RH
AV.107	Room RH Setpoint	Integrator	Value of the room relative humidity setpoint received from the network.	Present_Value Out_of_Service COV_Increment	0% RH to 100% RH, Resolution 0.10% RH
AV.108	Room RH Unoccupied Setpoint	Integrator	Value of the room relative humidity reading received from the network during no occupancy state.	Present_Value Out_of_Service COV_Increment	0% RH to 100% RH, Resolution 0.10% RH
AV.109	Room RH Vacant Setpoint	Integrator	Value of the room relative humidity reading received from the network during vacancy.	Present_Value Out_of_Service COV_Increment	0% RH to 100% RH, Resolution 0.10% RH
AV.110	Room RH Demand Proportional Gain	Integrator	Value of the room demand proportional gain.	Present_Value Out_of_Service COV_Increment	1 to 200, Resolution 0.1
AV.111	Room RH Demand Integral Time	Integrator	Value of the room demand integral time.	Present_Value Out_of_Service COV_Increment	0 to 900 seconds, Resolution 0.5 seconds
AV.112	Room RH Demand Derivative Time	Integrator	Value of the room demand derivative time.	Present_Value Out_of_Service COV_Increment	0 to 60 seconds, Resolution 0.1 second
AV.120	Room RH Demand	Integrator	Value of the humidity demand within the room.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0% to 100%, Resolution 1%

ID	Name	List	Description	W?	Notes
AV.122	RH Supply High Limit Network Reading	Integrator	Value of the supply high limit reading received from the network.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0% RH to 100% RH, Resolution 1% RH
AV.123	RH Supply High Limit Setpoint	Integrator	Value of the supply high limit setpoint received from the network.	Present_Value Out_of_Service COV_Increment	0% RH to 100% RH, Resolution 0.50% RH
AV.124	RH Supply High Limit Unoccupied Setpoint	Integrator	Value of the supply high limit setpoint during the unoccupied mode.	Present_Value Out_of_Service COV_Increment	0% RH to 100% RH, Resolution 0.50% RH
AV.125	RH Supply High Limit Vacant Setpoint	Integrator	Value of the supply high limit setpoint during the occupied mode.	Present_Value Out_of_Service COV_Increment	0% RH to 100% RH, Resolution 0.50% RH
AV.126	RH Supply High Limit Proportional Gain	Integrator	Value of the supply high limit demand proportional gain.	Present_Value Out_of_Service COV_Increment	1 to 200, Resolution 0.1
AV.127	RH Supply High Limit Integral Time	Integrator	Value of the supply high limit demand integral time.	Present_Value Out_of_Service COV_Increment	0 to 900 seconds, Resolution 0.5 seconds
AV.128	RH Supply High Limit Derivative Time	Integrator	Value of the supply high limit demand derivative time.	Present_Value Out_of_Service COV_Increment	0 to 60 seconds, Resolution 0.1 second
AV.136	RH Supply High Limit Demand	Integrator	Supply high limit humidity demand value.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0% to 100%, Resolution 1%
AV.138	Control Network Demand	Integrator	Value of the humidity control demand received from the network.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0% to 100%, Resolution 1%
AV.139	Control Network High Limit	Integrator	Value of the humidity control high limit received from the network.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0% to 100%, Resolution 0.01%
AV.143	User Demand	Integrator	Value of the measured humidity demand of the humidifier.	Out_of_Service COV_Increment Relinquish_Default	0% to 100%, Resolution 1%
AV.151	Room Temperature Min	Integrator	Minimum value of the room temperature signal.	Present_Value Out_of_Service COV_Increment Relinquish_Default	-40°F to 302°F or -40°C to 150°C Resolution 0.018.°F or 0.01°C

ID	Name	List	Description	W?	Notes
AV.152	Room Temperature Max	Integrator	Maximum value of the room temperature signal.	Present_Value Out_of_Service COV_Increment Relinquish_Default	-40°F to 302°F or -40°C to 150°C Resolution 0.018.°F or 0.01°C
AV.153	Room Temperature Bias	Integrator	Bias value of the room temperature signal.	Present_Value Out_of_Service COV_Increment Relinquish_Default	-18.0Δ°F to 18.0Δ°F or -10.0Δ°C to 10.0Δ°C, Resolution 0.18Δ°F or 0.1Δ°C
AV.155	Room Temperature Network Reading	Integrator	Value of the room temperature network.	Present_Value Out_of_Service COV_Increment Relinquish_Default	-40°F to 212°F or -40°C to 100°C Resolution 0.018.°F or 0.01°C
AV.156	Room Temperature Setpoint	Integrator	Configuration value of the room temperature setpoint	Present_Value Out_of_Service COV_Increment Relinquish_Default	32°F to 104°F or 0°C to 40°C Resolution 0.9.°F or 0.5°C
AV.157	Room Temperature Unoccupied Setpoint	Integrator	Configuration value of room temperature setpoint value used during unoccupied state.	Present_Value Out_of_Service COV_Increment Relinquish_Default	32°F to 104°F or 0°C to 40°C Resolution 0.9.°F or 0.5°C
AV.158	Room Temperature Vacant Setpoint	Integrator	Configuration value of room temperature setpoint value used during occupied state.	Present_Value Out_of_Service COV_Increment Relinquish_Default	32°F to 104°F or 0°C to 40°C Resolution 0.9.°F or 0.5°C
AV.159	Room Temperature Demand Proportional Gain	Integrator	Configuration value of the room demand proportional gain.	Present_Value Out_of_Service COV_Increment Relinquish_Default	1 to 200, Resolution 0.1
AV.160	Room Temperature Demand Integral Time	Integrator	Configuration value of the room demand integral time.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 900 seconds, Resolution: 0.5 second
AV.161	Room Temperature Demand Derivative Time	Integrator	Configuration value of the room demand derivative time.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 60 seconds, Resolution: 0.1 second
AV.169	Room Temperature Demand	Integrator	Configuration value of the room demand temperature.	Out_of_Service COV_Increment Relinquish_Default	0% to 100%, Resolution 0.01%

ID	Name	List	Description	W?	Notes
AV.170	HRL Temperature	Integrator	Displays the room temperature value measured by the HRL24 controller.	Out_of_Service COV_Increment Relinquish_Default	-40°F to 500°F or -40°C to 260°C Resolution 0.18.°F or 0.1°C
AV.171	HRL Humidity	Integrator	Displays the room humidity value measured by the HRL24 controller.	Out_of_Service COV_Increment Relinquish_Default	0% to 100%, Resolution 0.1%
AV.174	Room Temp Demand Proportional Band	Integrator	Configuration value of the room demand proportional band.	Present_Value Out_of_Service COV_Increment Relinquish_Default	1% to 100%, Resolution 0.1%
AV.175	Temp Supply High Limit Network Reading	Integrator	Configuration value of the temperature supply high limit network reading.	Present_Value Out_of_Service COV_Increment Relinquish_Default	-40°F to 212°F or -40°C to 100°C Resolution 0.018.°F or 0.01°C
AV.176	Temp Supply High Limit Setpoint	Integrator	Configuration value of the supply high limit temperature setpoint value.	Present_Value Out_of_Service COV_Increment Relinquish_Default	32°F to 104°F or 0°C to 40°C Resolution 0.018.°F or 0.01°C
AV.177	Temp Supply High Limit Unoccupied Setpoint	Integrator	Configuration value of the supply high limit temperature setpoint value used during unoccupied state.	Present_Value Out_of_Service COV_Increment Relinquish_Default	32°F to 104°F or 0°C to 40°C Resolution 0.018°F or 0.01°C
AV.178	Temp Supply High Limit Vacant Setpoint	Integrator	Configuration value of the supply high limit temperature setpoint value used during occupied state.	Present_Value Out_of_Service COV_Increment Relinquish_Default	32°F to 104°F or 0°C to 40°C Resolution 0.018°F or 0.01°C
AV.179	Temp Supply High Limit Proportional Gain	Integrator	Configuration value of the supply high limit temperature proportional gain.	Present_Value Out_of_Service COV_Increment Relinquish_Default	1 to 200, Resolution 0.1
AV.180	Temp Supply High Limit Integral Time	Integrator	Configuration value of the supply high limit demand integral time.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 900 seconds, Resolution: 0.5 second
AV.181	Modbus TCP IP Keep Alive Time Out	Integrator	Set the amount of time the communication stays open before connection is cut out, when no signal is received from the device.	Present_Value Out_of_Service COV_Increment Relinquish_Default	1 minute to 1440 minutes, Resolution: 1 minute



ID	Name	List	Description	W?	Notes
AV.182	Temp Supply High Limit Derivative Time	Integrator	Configuration value of the supply high limit temperature derivative time.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 60 seconds, Resolution: 0.1 second
AV.190	Temp Supply High Limit Demand	Integrator	Displays the value of the supply high limit demand temperature.	Out_of_Service COV_Increment Relinquish_Default	0% to 100%, Resolution 0.01%
AV.193	Temp Supply High Limit Proportional Band	Integrator	Displays the value of the supply high limit demand proportional band.	Out_of_Service COV_Increment Relinquish_Default	1% to 100%, Resolution 1%
AV.196	Supply High Limit Temperature	Integrator	Displays the value of the supply high limit temperature.	Out_of_Service COV_Increment Relinquish_Default	-40°F to 302°F or -40°C to 150°C Resolution 0.018.°F or 0.01°C
AV.197	Supply High Limit Temperature Min	Integrator	Configuration minimum value of the supply high limit temperature.	Present_Value Out_of_Service COV_Increment Relinquish_Default	-40°F to 302°F or -40°C to 150°C Resolution 0.018.°F or 0.01°C
AV.198	Supply High Limit Temperature Max	Integrator	Configuration maximum value of the supply high limit temperature.	Present_Value Out_of_Service COV_Increment Relinquish_Default	-40°F to 302°F or -40°C to 150°C Resolution 0.018.°F or 0.01°C
AV.199	Supply High Limit Temperature Bias	Integrator	Configuration bias value of the supply high limit temperature.	Present_Value Out_of_Service COV_Increment Relinquish_Default	-18.0Δ°F to 18.0Δ°F or -10.0Δ°C to 10.0Δ°C, Resolution 0.18Δ°F or 0.1Δ°C
AV.220	Demand Low Dead Band	Integrator	Set the lower limit dead band value for the humidity demand.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0% to 100%, Resolution 0.01%
AV.223	Network Timeout	Integrator	Set the amount of time the humidifier may attempt to connect to the BACnet or Modbus network before it stops operating due to a communication error.	Present_Value Out_of_Service COV_Increment Relinquish_Default	1 second to 900 seconds, Resolution: 1 second
AV.230	Room RH Demand Proportional Band	Integrator	Configuration value of the room demand humidity proportional band.	Present_Value Out_of_Service COV_Increment Relinquish_Default	1% to 100%, Resolution 0.1%
AV.231	RH Supply High Limit Proportional Band	Integrator	Displays the value of the supply high limit humidity proportional band.	Out_of_Service COV_Increment Relinquish_Default	1% to 100%, Resolution 0.1%

ID	Name	List	Description	W?	Notes
AV.234	Control Timer	Integrator	Configuration value of the control timer.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 120 seconds, Resolution: 1 second
AV.235	Zone A Demand	Integrator	Displays the value of the demand for Zone A.	Out_of_Service COV_Increment Relinquish_Default	0% to 100%, Resolution 0.01%
AV.236	Zone A Temperature	Integrator	Configuration value of the temperature for Zone A.	Present_Value Out_of_Service COV_Increment Relinquish_Default	-40°F to 302°F or -40°C to 150°C Resolution 0.018.°F or 0.01°C
AV.237	Zone A Humidity	Integrator	Configuration value of the humidity for Zone A.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0%RH to 100%RH, Resolution 0.1%RH
AV.240	Zone B Demand	Integrator	Displays the value of the demand for Zone B.	Out_of_Service COV_Increment Relinquish_Default	0% to 100%, Resolution 0.01%
AV.241	Zone B Temperature	Integrator	Configuration value of the temperature for Zone B.	Present_Value Out_of_Service COV_Increment Relinquish_Default	-40°F to 302°F or -40°C to 150°C Resolution 0.018.°F or 0.01°C
AV.242	Zone B Humidity	Integrator	Configuration value of the humidity for Zone B.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0%RH to 100%RH, Resolution 0.1%RH
AV.245	Zone C Demand	Integrator	Displays the value of the demand for Zone C.	Out_of_Service COV_Increment Relinquish_Default	0% to 100%, Resolution 0.01%
AV.246	Zone C Temperature	Integrator	Configuration value of the temperature for Zone C.	Present_Value Out_of_Service COV_Increment Relinquish_Default	-40°F to 302°F or -40°C to 150°C Resolution 0.018.°F or 0.01°C
AV.247	Zone C Humidity	Integrator	Configuration value of the humidity for Zone C.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0%RH to 100%RH, Resolution 0.1%RH
AV.250	Zone D Demand	Integrator	Displays the value of the demand for Zone D.	Out_of_Service COV_Increment Relinquish_Default	0% to 100%, Resolution 0.01%

ID	Name	List	Description	W?	Notes
AV.251	Zone D Temperature	Integrator	Configuration value of the temperature for Zone D.	Present_Value Out_of_Service COV_Increment Relinquish_Default	-40°F to 302°F or -40°C to 150°C Resolution 0.018.°F or 0.01°C
AV.252	Zone D Humidity	Integrator	Configuration value of the humidity for Zone D.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0%RH to 100%RH, Resolution 0.1%RH
AV.255	Zone E Demand	Integrator	Displays the value of the demand for Zone E.	Out_of_Service COV_Increment Relinquish_Default	0% to 100%, Resolution 0.01%
AV.256	Zone E Temperature	Integrator	Configuration value of the temperature for Zone E.	Present_Value Out_of_Service COV_Increment Relinquish_Default	-40°F to 302°F or -40°C to 150°C Resolution 0.018.°F or 0.01°C
AV.257	Zone E Humidity	Integrator	Configuration value of the humidity for Zone E.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0%RH to 100%RH, Resolution 0.1%RH
AV.260	Zone F Demand	Integrator	Displays the value of the demand for Zone F.	Out_of_Service COV_Increment Relinquish_Default	0% to 100%, Resolution 0.01%
AV.261	Zone F Temperature	Integrator	Configuration value of the temperature for Zone F.	Present_Value Out_of_Service COV_Increment Relinquish_Default	-40°F to 302°F or -40°C to 150°C Resolution 0.018.°F or 0.01°C
AV.262	Zone F Humidity	Integrator	Configuration value of the humidity for Zone F.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0%RH to 100%RH, Resolution 0.1%RH
AV.263	Stage 1 Capacity	Integrator	Configuration value of the capacity for stage 1.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0l/h to 3000l/h, Resolution 1l/h
AV.264	Stage 1 Drain Volume	Integrator	Configuration value of the drain volume for stage 1.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0l to 99999999l , Resolution 1l

ID	Name	List	Description	W?	Notes
AV.265	Stage 2 Capacity	Integrator	Configuration value of the capacity for stage 2.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0l/h to 3000l/h, Resolution 1l/h
AV.266	Stage 2 Drain Volume	Integrator	Configuration value of the drain volume for stage 2.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0l to 99999999l , Resolution 1l
AV.267	Stage 3 Capacity	Integrator	Configuration value of the capacity for stage 3.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0l/h to 3000l/h, Resolution 1l/h
AV.268	Stage 3 Drain Volume	Integrator	Configuration value of the drain volume for stage 3.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0l to 99999999l , Resolution 1l
AV.269	Stage 4 Capacity	Integrator	Configuration value of the capacity for stage 4.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0l/h to 3000l/h, Resolution 1l/h
AV.270	Stage 4 Drain Volume	Integrator	Configuration value of the drain volume for stage 4.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0l to 99999999l , Resolution 1l
AV.271	Stage 5 Capacity	Integrator	Configuration value of the capacity for stage 5.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0l/h to 3000l/h, Resolution 1l/h
AV.272	Stage 5 Drain Volume	Integrator	Configuration value of the drain volume for stage 5.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0l to 99999999l , Resolution 1l
AV.273	Stage 6 Capacity	Integrator	Configuration value of the capacity for stage 6.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0l/h to 3000l/h, Resolution 1l/h
AV.278	Stage 6 Drain Volume	Integrator	Configuration value of the drain volume for stage 6.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0l to 99999999l , Resolution 1l

ID	Name	List	Description	W?	Notes
AV.279	Stage 1 Drain Time	Integrator	Displays the value of the drain time for stage 1.	Out_of_Service COV_Increment Relinquish_Default	0 second to 9999 seconds, Resolution: 1 second
AV.280	Stage 2 Drain Time	Integrator	Configuration value of the drain time for stage 2.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 9999 seconds, Resolution: 1 second
AV.281	Stage 3 Drain Time	Integrator	Configuration value of the drain time for stage 3.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 9999 seconds, Resolution: 1 second
AV.282	Stage 4 Drain Time	Integrator	Configuration value of the drain time for stage 4.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 9999 seconds, Resolution: 1 second
AV.283	Stage 5 Drain Time	Integrator	Configuration value of the drain time for stage 5.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 9999 seconds, Resolution: 1 second
AV.284	Stage 6 Drain Time	Integrator	Configuration value of the drain time for stage 6.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 9999 seconds, Resolution: 1 second
AV.307	Stage 1 Idle Time	Integrator	Displays the value of the idle time for stage 1.	Out_of_Service COV_Increment Relinquish_Default	0 second to 21474836.47 seconds, Resolution: 0.01 second
AV.308	Stage 2 Idle Time	Integrator	Displays the value of the idle time for stage 2.	Out_of_Service COV_Increment Relinquish_Default	0 second to 21474836.47 seconds, Resolution: 0.01 second
AV.309	Stage 3 Idle Time	Integrator	Displays the value of the idle time for stage 3.	Out_of_Service COV_Increment Relinquish_Default	0 second to 21474836.47 seconds, Resolution: 0.01 second
AV.310	Stage 4 Idle Time	Integrator	Displays the value of the idle time for stage 4.	Out_of_Service COV_Increment Relinquish_Default	0 second to 21474836.47 seconds, Resolution: 0.01 second
AV.311	Stage 5 Idle Time	Integrator	Displays the value of the idle time for stage 5.	Out_of_Service COV_Increment Relinquish_Default	0 second to 21474836.47 seconds, Resolution: 0.01 second
AV.312	Stage 6 Idle Time	Integrator	Displays the value of the idle time for stage 6.	Out_of_Service COV_Increment Relinquish_Default	0 second to 21474836.47 seconds, Resolution: 0.01 second

ID	Name	List	Description	W?	Notes
AV.313	Stage 1 Run Time	Integrator	Displays the value of the run time for stage 1.	Out_of_Service COV_Increment Relinquish_Default	0 second to 21474836.47 seconds, Resolution: 0.01 second
AV.314	Stage 2 Run Time	Integrator	Displays the value of the run time for stage 2.	Out_of_Service COV_Increment Relinquish_Default	0 second to 21474836.47 seconds, Resolution: 0.01 second
AV.315	Stage 3 Run Time	Integrator	Displays the value of the run time for stage 3.	Out_of_Service COV_Increment Relinquish_Default	0 second to 21474836.47 seconds, Resolution: 0.01 second
AV.316	Stage 4 Run Time	Integrator	Displays the value of the run time for stage 4.	Out_of_Service COV_Increment Relinquish_Default	0 second to 21474836.47 seconds, Resolution: 0.01 second
AV.317	Stage 5 Run Time	Integrator	Displays the value of the run time for stage 5.	Out_of_Service COV_Increment Relinquish_Default	0 second to 21474836.47 seconds, Resolution: 0.01 second
AV.318	Stage 6 Run Time	Integrator	Displays the value of the run time for stage 6.	Out_of_Service COV_Increment Relinquish_Default	0 second to 21474836.47 seconds, Resolution: 0.01 second
AV.319	Stage 1 Cycle Count	Integrator	Displays the value of the cycle count for stage 1.	Out_of_Service COV_Increment Relinquish_Default	0 to 999999999, Resolution: 1
AV.320	Stage 2 Cycle Count	Integrator	Displays the value of the cycle count for stage 2.	Out_of_Service COV_Increment Relinquish_Default	0 to 999999999, Resolution: 1
AV.321	Stage 3 Cycle Count	Integrator	Displays the value of the cycle count for stage 3.	Out_of_Service COV_Increment Relinquish_Default	0 to 999999999, Resolution: 1
AV.322	Stage 4 Cycle Count	Integrator	Displays the value of the cycle count for stage 4.	Out_of_Service COV_Increment Relinquish_Default	0 to 999999999, Resolution: 1
AV.323	Stage 5 Cycle Count	Integrator	Displays the value of the cycle count for stage 5.	Out_of_Service COV_Increment Relinquish_Default	0 to 999999999, Resolution: 1
AV.324	Stage 6 Cycle Count	Integrator	Displays the value of the cycle count for stage 6.	Out_of_Service COV_Increment Relinquish_Default	0 to 999999999, Resolution: 1
AV.325	Cool Drain Timer	Integrator	Configuration value of the cool drain timer.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 minute to 60 minutes, Resolution: 1 minute

ID	Name	List	Description	W?	Notes
AV.382	Stage 1 Max On Time	Integrator	Set the maximum on time for stage 1.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 1200 seconds, Resolution: 1 second
AV.383	Stage 2 Max On Time	Integrator	Set the maximum on time for stage 2.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 1200 seconds, Resolution: 1 second
AV.384	Stage 3 Max On Time	Integrator	Set the maximum on time for stage 3.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 1200 seconds, Resolution: 1 second
AV.385	Stage 4 Max On Time	Integrator	Set the maximum on time for stage 4.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 1200 seconds, Resolution: 1 second
AV.386	Stage 5 MaxOn Time	Integrator	Set the maximum on time for stage 5.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 1200 seconds, Resolution: 1 second
AV.387	Stage 6 Max On Time	Integrator	Set the maximum on time for stage 6.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 1200 seconds, Resolution: 1 second
AV.388	Stage 1 Pause Time	Integrator	Set the pause time for stage 1.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 1200 seconds, Resolution: 1 second
AV.389	Stage 2 Pause Time	Integrator	Set the pause time for stage 2.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 1200 seconds, Resolution: 1 second
AV.390	Stage 3 Pause Time	Integrator	Set the pause time for stage 3.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 1200 seconds, Resolution: 1 second
AV.391	Stage 4 Pause Time	Integrator	Set the pause time for stage 4.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 1200 seconds, Resolution: 1 second

ID	Name	List	Description	W?	Notes
AV.392	Stage 5 Pause Time	Integrator	Set the pause time for stage 5.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 1200 seconds, Resolution: 1 second
AV.393	Stage 6 Pause Time	Integrator	Set the pause time for stage 6.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 1200 seconds, Resolution: 1 second
AV.394	Zone A Stage Opening Delay	Integrator	Set the stage opening delay for zone A.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 900 seconds, Resolution: 1 second
AV.395	Zone B Stage Opening Delay	Integrator	Set the stage opening delay for zone B.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 900 seconds, Resolution: 1 second
AV.396	Zone C Stage Opening Delay	Integrator	Set the stage opening delay for zone C.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 900 seconds, Resolution: 1 second
AV.397	Zone D Stage Opening Delay	Integrator	Set the stage opening delay for zone D.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 900 seconds, Resolution: 1 second
AV.398	Zone E Stage Opening Delay	Integrator	Set the stage opening delay for zone E.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 900 seconds, Resolution: 1 second
AV.399	Zone F Stage Opening Delay	Integrator	Set the stage opening delay for zone F.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 second to 900 seconds, Resolution: 1 second
AV.400	Drain 1 Cycle Count	Integrator	Displays the value of the drain cycle count for stage 1.	Out_of_Service COV_Increment Relinquish_Default	0 to 999999999, Resolution: 1
AV.401	Drain 2 Cycle Count	Integrator	Displays the value of the drain cycle count for stage 2.	Out_of_Service COV_Increment Relinquish_Default	0 to 999999999, Resolution: 1
AV.402	Drain 3 Cycle Count	Integrator	Displays the value of the drain cycle count for stage 3.	Out_of_Service COV_Increment Relinquish_Default	0 to 999999999, Resolution: 1



ID	Name	List	Description	W?	Notes
AV.403	Drain 4 Cycle Count	Integrator	Displays the value of the drain cycle count for stage 4.	Out_of_Service COV_Increment Relinquish_Default	0 to 999999999, Resolution: 1
AV.404	Drain 5 Cycle Count	Integrator	Displays the value of the drain cycle count for stage 5.	Out_of_Service COV_Increment Relinquish_Default	0 to 999999999, Resolution: 1
AV.405	Drain 6 Cycle Count	Integrator	Displays the value of the drain cycle count for stage 6.	Out_of_Service COV_Increment Relinquish_Default	0 to 999999999, Resolution: 1
AV.406	Stage 1 On Time	Integrator	Displays the value of the operating time of the humidifier since the last servicing for stage 1.	Out_of_Service COV_Increment Relinquish_Default	0 hour to 21474836.47 hours, Resolution: 0.01 hour
AV.407	Stage 2 On Time	Integrator	Displays the value of the operating time of the humidifier since the last servicing for stage 2.	Out_of_Service COV_Increment Relinquish_Default	0 hour to 21474836.47 hours, Resolution: 0.01 hour
AV.408	Stage 3 On Time	Integrator	Displays the value of the operating time of the humidifier since the last servicing for stage 3.	Out_of_Service COV_Increment Relinquish_Default	0 hour to 21474836.47 hours, Resolution: 0.01 hour
AV.409	Stage 4 On Time	Integrator	Displays the value of the operating time of the humidifier since the last servicing for stage 4.	Out_of_Service COV_Increment Relinquish_Default	0 hour to 21474836.47 hours, Resolution: 0.01 hour
AV.410	Stage 5 On Time	Integrator	Displays the value of the operating time of the humidifier since the last servicing for stage 5.	Out_of_Service COV_Increment Relinquish_Default	0 hour to 21474836.47 hours, Resolution: 0.01 hour
AV.411	Stage 6 On Time	Integrator	Displays the value of the operating time of the humidifier since the last servicing for stage 6.	Out_of_Service COV_Increment Relinquish_Default	0 hour to 21474836.47 hours, Resolution: 0.01 hour
AV.412	Diagnostic Period	Integrator	Set the value of the diagnostic period.	Present_Value Out_of_Service COV_Increment Relinquish_Default	1 minute to 60 minutes, Resolution: 1 minute
AV.414	Zone A MAC	Integrator	Set the value of the MAC address for Zone A.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 to 127, Resolution: 1
AV.415	Zone B MAC	Integrator	Set the value of the MAC address for Zone B.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 to 127, Resolution: 1

ID	Name	List	Description	W?	Notes
AV.416	Zone C MAC	Integrator	Set the value of the MAC address for Zone C.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 to 127, Resolution: 1
AV.417	Zone D MAC	Integrator	Set the value of the MAC address for Zone D.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 to 127, Resolution: 1
AV.418	Zone E MAC	Integrator	Set the value of the MAC address for Zone E.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 to 127, Resolution: 1
AV.419	Zone F MAC	Integrator	Set the value of the MAC address for Zone F.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 to 127, Resolution: 1
AV.420	Control Input	Integrator	Set the value of the control input.	Present_Value Out_of_Service COV_Increment Relinquish_Default	-40°F to 302°F or -40°C to 150°C Resolution 0.018.°F or 0.01°C
AV.423	Control Min	Integrator	Set the minimum value of the control input.	Present_Value Out_of_Service COV_Increment Relinquish_Default	-40°F to 302°F or -40°C to 150°C Resolution 0.018.°F or 0.01°C
AV.424	Control Max	Integrator	Set the maximum value of the control input.	Present_Value Out_of_Service COV_Increment Relinquish_Default	-40°F to 302°F or -40°C to 150°C Resolution 0.018.°F or 0.01°C
AV.425	Control Bias	Integrator	Set the bias value of the control input.	Present_Value Out_of_Service COV_Increment Relinquish_Default	-18.0Δ°F to 18.0Δ°F or -10.0Δ°C to 10.0Δ°C, Resolution 0.18Δ°F or 0.1Δ°C
AV.441	Zone Communication Timeout Delay	Integrator	Set the zone communication timeout delay.	Present_Value Out_of_Service COV_Increment Relinquish_Default	0 sec to 600 sec, Resolution 1 second

## Binary Input (BI)

**Table 7 - Object Table Information: Binary Input (BI)**

ID	Name	List	Description	W?	Notes
BI.1	Air Flow	Integrator	Displays the status of the airflow switch. If the switch is Open, it indicates that the airflow is not detected by the air pressure switch.	Out_of_Service Polarity	0 = Closed 1 = Open
BI.2	Supply High Limit	Integrator	Displays the status of the high limit contact. If the switch is Open, it indicates that the humidity level has exceeded the setpoint on the high limit humidistat.	Out_of_Service Polarity	0 = Closed 1 = Open
BI.3	Interlock	Integrator	Displays the status of the interlock. If the switch is Open, it indicates that the humidifier is stopped as a result of the interlock safety being open.	Out_of_Service Polarity	0 = Closed 1 = Open
BI.4	Binary External Demand	Integrator	Displays the status of the binary external demand.	Out_of_Service Polarity	0 = 0% 1 = 100%
BI.8	Water Leak Detection	Integrator	Displays whether a water leak has been detected.	Out_of_Service Polarity	0 = OK 1 = Leak
BI.14	Drive Status	Integrator	Displays the status of the drive.	Out_of_Service Polarity	0 = Ok 1 = Fault
BI.19	Inlet Pressure Switch	Integrator	Displays whether the inlet pressure switch is available or not.	Out_of_Service Polarity	0 = Low 1 = Ok
BI.20	RS485 Interface	Integrator	Displays whether the RS485 interface is available or not.	Out_of_Service Polarity	0 = No 1 = Yes
BI.21	Ethernet Interface	Integrator	Displays whether the Ethernet interface is available or not.	Out_of_Service Polarity	0 = No 1 = Yes
BI.22	Relay Fuse	Integrator	Displays the current status of the relay fuse. If Blown Fuse is displayed, the fuse must be replaced.	Out_of_Service Polarity	0 = Normal 1 = Open Fuse
BI.23	Control PCB Fuse	Integrator	Displays the current status of the control PCB fuse. If Blown Fuse is displayed, the fuse must be replaced.	Out_of_Service Polarity	0 = Normal 1 = Open Fuse

## Binary Output (BO)

**Table 8 - Object Table Information: Binary Output (BO)**

ID	Name	List	Description	W?	Notes
BO.2	Alarm Warning Relay	Integrator	Status value for the alarm warning relay.	Present_Value Out_of_Service Polarity Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BO.3	Service Warning Relay	Integrator	Status value for the service warning relay.	Present_Value Out_of_Service Polarity Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BO.4	Valve 1	Integrator	Status value for valve 1.	Present_Value Out_of_Service Polarity Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BO.5	Valve 2	Integrator	Status value for valve 2.	Present_Value Out_of_Service Polarity Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BO.6	Valve 3	Integrator	Status value for valve 3.	Present_Value Out_of_Service Polarity Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BO.7	Valve 4	Integrator	Status value for valve 4.	Present_Value Out_of_Service Polarity Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BO.8	Valve 5	Integrator	Status value for valve 5.	Present_Value Out_of_Service Polarity Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On

ID	Name	List	Description	W?	Notes
BO.10	Valve 6	Integrator	Status value for valve 6.	Present_Value Out_of_Service Polarity Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BO.11	Valve 7	Integrator	Status value for valve 7.	Present_Value Out_of_Service Polarity Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BO.12	Valve 8	Integrator	Status value for valve 8.	Present_Value Out_of_Service Polarity Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BO.13	Valve 9	Integrator	Status value for valve 9.	Present_Value Out_of_Service Polarity Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BO.14	Valve 10	Integrator	Status value for valve 10.	Present_Value Out_of_Service Polarity Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BO.15	Valve 11	Integrator	Status value for valve 11.	Present_Value Out_of_Service Polarity Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BO.16	Valve 12	Integrator	Status value for valve 12.	Present_Value Out_of_Service Polarity Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BO.18	Alarm LED	Integrator	Status value for the alarm LED.	Present_Value Out_of_Service Polarity Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On

ID	Name	List	Description	W?	Notes
BO.19	Power LED	Integrator	Status value for the power LED.	Present_Value Out_of_Service Polarity Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BO.20	Buzzer	Integrator	Status value for the buzzer.	Present_Value Out_of_Service Polarity Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BO.21	Contactora Pump	Integrator	Status value of the contactora pump.	Present_Value Out_of_Service Polarity Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BO.22	Drive Enable	Integrator	Status value of the drive enable.	Present_Value Out_of_Service Polarity Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On

## Binary Value (BV)

**Table 9 - Object Table Information: Binary Value (BV)**

ID	Name	List	Description	W?	Notes
BV.3	Alarm Buzzer	Integrator	Configuration value that enables or disables the alarm buzzer sound when there is a system warning.	Present_Value Out_of_Service Minimum_Off_Time Minimum_On_Time	0 = Normal 1 = Disabled
BV.17	Service Due	Integrator	Displays whether the humidifier is due for servicing.	Out_of_Service Minimum_Off_Time Minimum_On_Time	0 = No 1 = Yes
BV.30	Startup Line Rinse	Integrator	Select whether to perform an automatic tank rinse cycle upon each start-up of the humidifier.	Present_Value Out_of_Service Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BV.32	Run While Service Alarm	Integrator	Select the status of the run while service alarm.	Present_Value Out_of_Service Minimum_Off_Time Minimum_On_Time	0 = Not Allowed 1 = Allowed
BV.38	HRL Lock Setpoint	Integrator	Select whether the setpoint obtained from the HRL24 controller can be modified.	Present_Value Out_of_Service Relinquish_Default Minimum_Off_Time Minimum_On_Time	0 = Unlock 1 = Lock
BV.44	Network Control State	Integrator	Indicates the state of the control communication between the device and the BACnet network.	Present_Value Out_of_Service Minimum_Off_Time Minimum_On_Time	0 = Normal 1 = Fault
BV.52	SMTP SSL	Integrator	Select whether to use a secure socket layer encrypt the communication between the device and the email server or to use the default socket. If turned to <i>On</i> , SMTP Port value must be set to <i>587</i> and <i>SMTP Username</i> and <i>SMTP Password</i> settings must be filled out. If turned to <i>Off</i> , use SMTP Port <i>25</i> to use server without login account or SMTP Port <i>587</i> if login details for email account have been entered.	Present_Value Out_of_Service Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BV.53	SMTP Port	Integrator	Select the port number to be used for email transfer. If set to <i>25</i> , server to server email transfer is enabled (can only be used if SMTP SSL is set to <i>Off</i> ). If set to <i>587</i> , client to server email transfer is enabled.	Present_Value Out_of_Service Minimum_Off_Time Minimum_On_Time	0 = 25 1 = 587
BV.54	Notify Alarm	Integrator	Select whether to get notified of all humidifier alarm messages by email.	Present_Value Out_of_Service Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BV.55	Notify Warning	Integrator	Select whether to get notified of all humidifier warning messages by email.	Present_Value Out_of_Service Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BV.56	Notify App Msg	Integrator	Select whether to get notified of all humidifier event messages by email.	Present_Value Out_of_Service Minimum_Off_Time Minimum_On_Time	0 = Off 1 = On
BV.68	Drive State	Integrator	Displays the status of the drive.	Out_of_Service Minimum_Off_Time Minimum_On_Time	0 = Ok 1 = Fault

ID	Name	List	Description	W?	Notes
BV.70	Stage 1 Diagnostic Enable	Integrator	Select the status of the diagnostic enable for stage 1.	Present_Value Out_of_Service Minimum_Off_Time Minimum_On_Time	0 = No 1 = Yes
BV.71	Stage 2 Diagnostic Enable	Integrator	Select the status of the diagnostic enable for stage 2.	Present_Value Out_of_Service Minimum_Off_Time Minimum_On_Time	0 = No 1 = Yes
BV.72	Stage 3 Diagnostic Enable	Integrator	Select the status of the diagnostic enable for stage 3.	Present_Value Out_of_Service Minimum_Off_Time Minimum_On_Time	0 = No 1 = Yes
BV.73	Stage 4 Diagnostic Enable	Integrator	Select the status of the diagnostic enable for stage 4.	Present_Value Out_of_Service Minimum_Off_Time Minimum_On_Time	0 = No 1 = Yes
BV.74	Stage 5 Diagnostic Enable	Integrator	Select the status of the diagnostic enable for stage 5.	Present_Value Out_of_Service Minimum_Off_Time Minimum_On_Time	0 = No 1 = Yes
BV.75	Stage 6 Diagnostic Enable	Integrator	Select the status of the diagnostic enable for stage 6.	Present_Value Out_of_Service Minimum_Off_Time Minimum_On_Time	0 = No 1 = Yes
BV.86	Zone A Communication Timeout	Integrator	Displays the status of the communication timeout for zone A.	Read Only	0 = Ok 1 = Timeout
BV.87	Zone B Communication Timeout	Integrator	Displays the status of the communication timeout for zone B.	Read Only	0 = Ok 1 = Timeout
BV.88	Zone C Communication Timeout	Integrator	Displays the status of the communication timeout for zone C.	Read Only	0 = Ok 1 = Timeout
BV.89	Zone D Communication Timeout	Integrator	Displays the status of the communication timeout for zone D.	Read Only	0 = Ok 1 = Timeout
BV.90	Zone E Communication Timeout	Integrator	Displays the status of the communication timeout for zone E.	Read Only	0 = Ok 1 = Timeout
BV.91	Zone F Communication Timeout	Integrator	Displays the status of the communication timeout for zone F.	Read Only	0 = Ok 1 = Timeout
BV.98	Low Water Temperature Warning	Integrator	Displays the status of the low water temperature warning.	Out_of_Service Minimum_Off_Time Minimum_On_Time	0 = Ok 1 = Timeout



## Character String Value (CV)

**Table 10 - Object Table Information: Character String Value (CV)**

ID	Name	List	Description	W?	Notes
CV.10	HMI Overwrite	Integrator	Overwrite the value displayed on the local display menu.	Present_Value	-
CV.22	SMTP Server IP Address	Integrator	Configure the server IP address for the email account.	Present_Value	-
CV.24	SMTP Mail From	Integrator	Set the email address that will be sending the humidifier notification messages.	Present_Value	-
CV.25	SMTP Mail To	Integrator	Set the email address that will be receiving the humidifier notification messages.	Present_Value	-
CV.26	SMTP Username	Integrator	Set the login username for the email account.	Present_Value	-
CV.37	SMTP Password	Integrator	Set the login password for the email account.	Present_Value	-
CV.62	EthernetMacAdd	Integrator	Value of the MAC address of the Ethernet interface.	Present_Value	-

## Multi State Value (MSV)

**Table 11 - Object Table Information: Multi State Value (MSV)**

ID	Name	List	Description	W?	Notes
MSV.5	System Log Verbose Level	Integrator	Configuration value to select the type of information to be stored on the log file.	Present_Value Out_of_Service	1 = None 2 = Emergency 3 = Alert 4 = Critical 5 = Error 6 = Warning 7 = Notice 8 = Info 9 = Debug
MSV.9	BACnet Server Language	Integrator	Value of the BACnet server language.	Present_Value Out_of_Service	1 = English
MSV.10	BACnet Server List Mode	Integrator	Configuration value to select the category of BACnet objects to display.	Present_Value Out_of_Service	1 = Integrator 2 = Advanced 3 = Factory
MSV.11	BACnet Server Units	Integrator	Configuration value to select the display units for the BACnet server.	Present_Value Out_of_Service	1 = Metric 2 = Imperial
MSV.24	Control Signal Type	Integrator	Configuration value to select the signal type for the control demand analog input.	Present_Value Out_of_Service	1 = 0-10Vdc 2 = 2-10Vdc 3 = 4-20mA 4 = 0-20mA
MSV.25	Room RH Signal Type	Integrator	Configuration value to select the signal type for the room humidity analog input.	Present_Value Out_of_Service	1 = 0-10Vdc 2 = 2-10Vdc 3 = 4-20mA 4 = 0-20mA
MSV.26	Supply RH Signal Type	Integrator	Configuration value to signal type for the duct or supply high limit humidity analog input.	Present_Value Out_of_Service	1 = 0-10Vdc 2 = 2-10Vdc 3 = 4-20mA 4 = 0-20mA
MSV.27	Request	Integrator	Configuration value to select the request for the humidifier.	Present_Value Out_of_Service	1 = None 2 = ResetAlarms 3 = Drain 4 = ResetServCnt
MSV.28	Control Profile	Integrator	Configuration value to select the control profile.	Present_Value Out_of_Service	1 = ExternAnalog 2 = ExternNetwork 3 = InternHumAnalog 4 = InternHumNetwork 5 = InternCoolAnalog 6 = InternCoolNetwork 7 = HRL Hum 8 = HRL Cool

ID	Name	List	Description	W?	Notes
MSV.29	Modulating High Limit Profile	Integrator	Configuration value to select a preconfigured control mode profile for the modulating high limit demand. Select the Custom option to configure individual settings.	Out_of_Service	1 = Disabled 2 = ExternAnalog 3 = ExternNetwork 4 = InternHumAnalog 5 = InternHumNetwork 6 = InternCoolAnalog 7 = InternCoolNetwork 8 = Custom
MSV.32	Occupancy State	Integrator	Displays the current occupancy state.	Read Only	1 = Occupied 2 = Unoccupied 3 = Vacant 4 = Off
MSV.33	Room RH Source	Integrator	Configuration value to select the reading source for the room demand.	Present_Value Out_of_Service	1 = None 2 = RoomRH 3 = Network 4 = HRL
MSV.34	Room RH Setpoint Source	Integrator	Configuration value to select the room demand setpoint source.	Present_Value Out_of_Service	1 = None 2 = Internal 3 = ControlInput
MSV.38	RH Supply High Limit Reading Source	Integrator	Configuration value to select the reading source for the supply high limit demand.	Present_Value Out_of_Service	1 = None 2 = SupplyHLRH 3 = Network
MSV.39	RH Supply High Limit Setpoint Source	Integrator	Configuration value to select the supply high limit demand setpoint source.	Present_Value Out_of_Service	1 = None 2 = Internal 3 = ControlInput
MSV.43	Control Demand Source	Integrator	Configuration value to select the humidity control demand source.	Present_Value Out_of_Service	1 = None 2 = ControlInput 3 = HumRoomDemand 4 = Network 5 = TempRoomDemand
MSV.44	Control High Limit Source	Integrator	Configuration value of the current state of the safety control circuit and whether the circuit has been disconnected due to a safety switch.	Present_Value Out_of_Service	1 = None 2 = ControlInput 3 = RHSupplyHLDemand 4 = Network 5 = TempSupplyHLDemand
MSV.46	Control Binary Demand Source	Integrator	Configuration value to select the binary demand source.	Present_Value Out_of_Service	1 = None 2 = BinaryExtDemand

ID	Name	List	Description	W?	Notes
MSV.67	Room Temperature Setpoint Source	Integrator	Configuration value to select the room temperature setpoint source.	Present_Value Out_of_Service	1 = None 2 = Internal 3 = ControlInput
MSV.71	Temp Supply High Limit Reading Source	Integrator	Configuration value to select the temperature supply high limit reading source.	Present_Value Out_of_Service	1 = None 2 = SupplyHLTemp 3 = Network
MSV.72	Temp Supply High Limit Setpoint Source	Integrator	Configuration value to select the temperature supply high limit setpoint source.	Present_Value Out_of_Service	1 = None 2 = Internal 3 = ControlInput
MSV.76	Room Temperature Source	Integrator	Configuration value to select the room temperature source.	Present_Value Out_of_Service	1 = None 2 = RoomTemp 3 = Network 4 = HRL
MSV.77	Room Temperature Signal Type	Integrator	Configuration value to select the room temperature signal type.	Present_Value Out_of_Service	1 = 0-10Vdc 2 = 2-10Vdc 3 = 4-20mA 4 = 0-20mA
MSV.78	Supply Temperature Signal Type	Integrator	Configuration value to select the supply temperature signal type.	Present_Value Out_of_Service	1 = 0-10Vdc 2 = 2-10Vdc 3 = 4-20mA 4 = 0-20mA
MSV.83	System Power State	Integrator	Displays whether the system is powered on or off.	Out_of_Service	1 = Off 2 = On
MSV.95	Zone A Control	Integrator	Select the control mode for zone A.	Present_Value Out_of_Service	1 = Off 2 = Normal 3 = Airflow 4 = SupplyHighLimit 5 = Interlock
MSV.96	Zone A Occupancy	Integrator	Select the occupied status for zone A.	Present_Value Out_of_Service	1 = Occupied 2 = Unoccupied 3 = Off
MSV.97	Zone B Control	Integrator	Select the control mode for zone B.	Present_Value Out_of_Service	1 = Off 2 = Normal 3 = Airflow 4 = SupplyHighLimit 5 = Interlock

ID	Name	List	Description	W?	Notes
MSV.98	Zone B Occupancy	Integrator	Select the occupied status for zone B.	Present_Value Out_of_Service	1 = Occupied 2 = Unoccupied 3 = Off
MSV.99	Zone C Control	Integrator	Select the control mode for zone C.	Present_Value Out_of_Service	1 = Off 2 = Normal 3 = Airflow 4 = SupplyHighLimit 5 = Interlock
MSV.100	Zone C Occupancy	Integrator	Select the occupied status for zone C.	Present_Value Out_of_Service	1 = Occupied 2 = Unoccupied 3 = Off
MAV.101	Zone D Control	Integrator	Select the control mode for zone D.	Present_Value Out_of_Service	1 = Off 2 = Normal 3 = Airflow 4 = SupplyHighLimit 5 = Interlock
MSV.102	Zone D Occupancy	Integrator	Select the occupied status for zone D.	Present_Value Out_of_Service	1 = Occupied 2 = Unoccupied 3 = Off
MSV.103	Zone E Control	Integrator	Select the control mode for zone E.	Present_Value Out_of_Service	1 = Off 2 = Normal 3 = Airflow 4 = SupplyHighLimit 5 = Interlock
MSV.104	Zone E Occupancy	Integrator	Select the occupied status for zone E.	Present_Value Out_of_Service	1 = Occupied 2 = Unoccupied 3 = Off
MSV.105	Zone F Control	Integrator	Select the control mode for zone F.	Present_Value Out_of_Service	1 = Off 2 = Normal 3 = Airflow 4 = SupplyHighLimit 5 = Interlock
MSV.106	Zone F Occupancy	Integrator	Select the occupied status for zone F.	Present_Value Out_of_Service	1 = Occupied 2 = Unoccupied 3 = Off
MSV.107	Stage 1 Zone	Integrator	Select the stage 1 zone.	Present_Value Out_of_Service	1 = ZoneA 2 = ZoneB 3 = ZoneC 4 = ZoneD 5 = ZoneE 6 = ZoneF

ID	Name	List	Description	W?	Notes
MSV.108	Stage1 Drain	Integrator	Select the stage 1 drain.	Present_Value Out_of_Service	1 = Drain7 2 = Drain8 3 = Drain9 4 = Drain10 5 = Drain11 6 = Drain12
MSV.109	Stage 2 Zone	Integrator	Select the stage 2 zone.	Present_Value Out_of_Service	1 = ZoneA 2 = ZoneB 3 = ZoneC 4 = ZoneD 5 = ZoneE 6 = ZoneF
MSV.110	Stage 2 Drain	Integrator	Select the stage 2 drain.	Present_Value Out_of_Service	1 = Drain7 2 = Drain8 3 = Drain9 4 = Drain10 5 = Drain11 6 = Drain12
MSV.111	Stage 3 Zone	Integrator	Select the stage 3 zone.	Present_Value Out_of_Service	1 = ZoneA 2 = ZoneB 3 = ZoneC 4 = ZoneD 5 = ZoneE 6 = ZoneF
MSV.112	Stage 3 Drain	Integrator	Select the stage 3 drain.	Present_Value Out_of_Service	1 = Drain7 2 = Drain8 3 = Drain9 4 = Drain10 5 = Drain11 6 = Drain12
MSV.113	Stage 4 Zone	Integrator	Select the stage 4 zone.	Present_Value Out_of_Service	1 = ZoneA 2 = ZoneB 3 = ZoneC 4 = ZoneD 5 = ZoneE 6 = ZoneF
MSV.114	Stage 4 Drain	Integrator	Select the stage 4 drain.	Present_Value Out_of_Service	1 = Drain7 2 = Drain8 3 = Drain9 4 = Drain10 5 = Drain11 6 = Drain12

ID	Name	List	Description	W?	Notes
MSV.115	Stage 5 Zone	Integrator	Select the stage 5 zone.	Present_Value Out_of_Service	1 = ZoneA 2 = ZoneB 3 = ZoneC 4 = ZoneD 5 = ZoneE 6 = ZoneF
MSV.116	Stage 5 Drain	Integrator	Select the stage 5 drain.	Present_Value Out_of_Service	1 = Drain7 2 = Drain8 3 = Drain9 4 = Drain10 5 = Drain11 6 = Drain12
MSV.117	Stage 6 Zone	Integrator	Select the stage 6 zone.	Present_Value Out_of_Service	1 = ZoneA 2 = ZoneB 3 = ZoneC 4 = ZoneD 5 = ZoneE 6 = ZoneF
MSV.118	Stage 6 Drain	Integrator	Select the stage 6 drain.	Present_Value Out_of_Service	1 = Drain7 2 = Drain8 3 = Drain9 4 = Drain10 5 = Drain11 6 = Drain12
MSV.120	Cooling Drain Control Mode	Integrator	Select the cooling drain control mode.	Present_Value Out_of_Service	1 = Off 2 = TimeLatch
MSV.135	Low Water Temperature Alarm	Integrator	Status of the low water temperature alarm.	Present_Value Out_of_Service	1 = Alarm 2 = Warning
MSV.160	Diagnostic State	Integrator	Status of the diagnostic state.	Present_Value Out_of_Service	1 = Off 2 = On
MSV.161	Diagnostic Command	Integrator	Status of the diagnostic command.	Present_Value Out_of_Service	1 = Spray 2 = Drain
MSV.162	Control Signal Type	Integrator	Select the control signal type.	Present_Value Out_of_Service	1 = 0-10Vdc 2 = 2-10Vdc 3 = 4-20mA 4 = 0-20mA

## Other

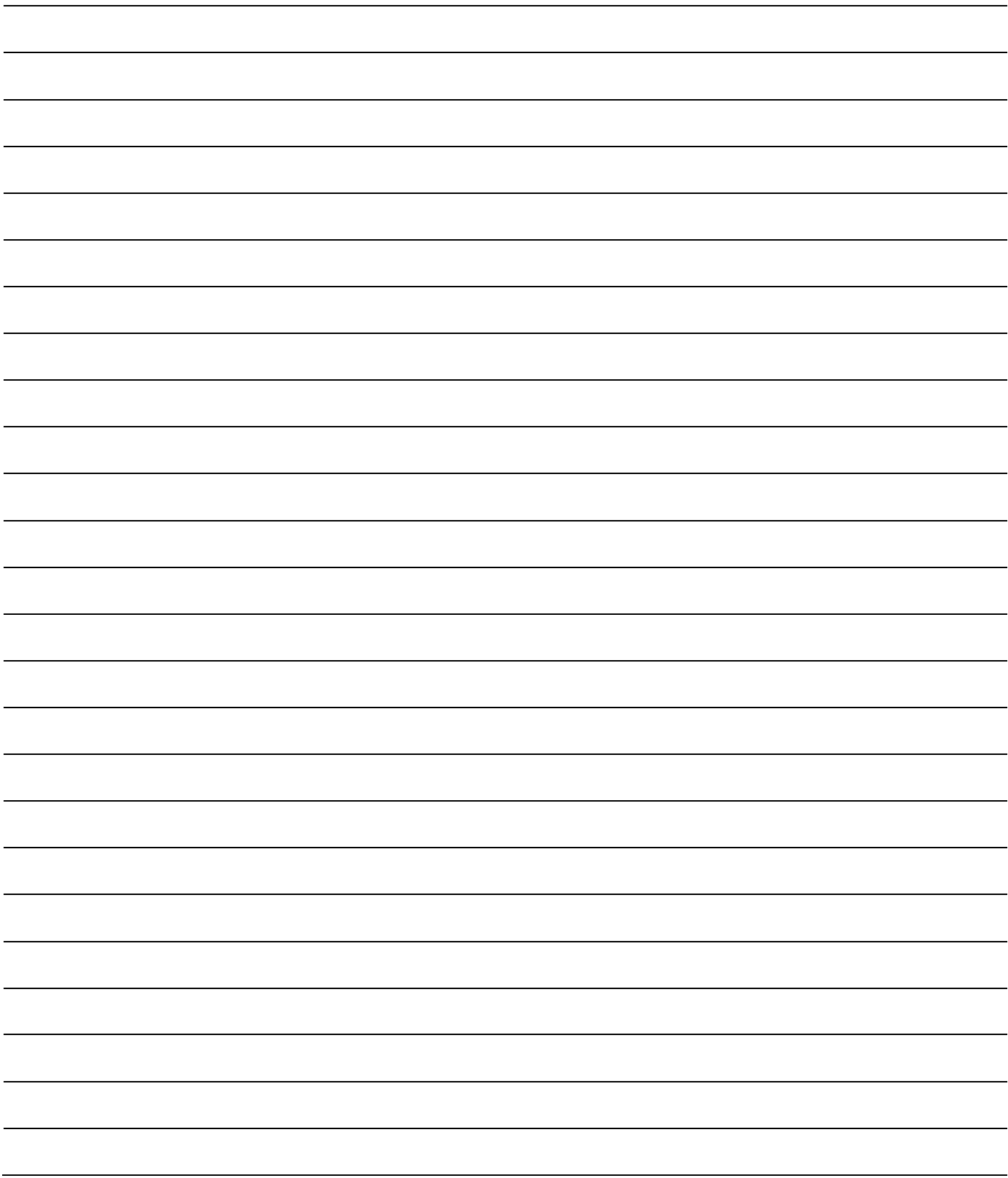
**Table 12 - Object Table Information: Other**

ID	Name	List	Description	W?	Notes
PGM.1	NSDF Core Program	Advanced	NSDF Core Program.	Program_Change Out_of_Service	Program Change, only LOAD (1) and RESTART (4) are supported.
PGM.2	Module 1	Advanced	Module 1.	Program_Change Out_of_Service	Program Change, only LOAD (1) and RESTART (4) are supported.
PGM.3	Module 2	Advanced	Module 2.	Program_Change Out_of_Service	Program Change, only LOAD (1) and RESTART (4) are supported.
PGM.4	Module 3	Advanced	Module 3.	Program_Change Out_of_Service	Program Change, only LOAD (1) and RESTART (4) are supported.
PGM.5	Module 4	Advanced	Module 4.	Program_Change Out_of_Service	Program Change, only LOAD (1) and RESTART (4) are supported.
PGM.6	Module 5	Advanced	Module 5.	Program_Change Out_of_Service	Program Change, only LOAD (1) and RESTART (4) are supported.
PGM.7	Module 6	Advanced	Module 6.	Program_Change Out_of_Service	Program Change, only LOAD (1) and RESTART (4) are supported.
PGM.8	Module 7	Advanced	Module 7.	Program_Change Out_of_Service	Program Change, only LOAD (1) and RESTART (4) are supported.
PGM.9	Module 8	Advanced	Module 8.	Program_Change Out_of_Service	Program Change, only LOAD (1) and RESTART (4) are supported.
PGM.10	Module 9	Advanced	Module 9.	Program_Change Out_of_Service	Program Change, only LOAD (1) and RESTART (4) are supported.
PGM.11	Module 10	Advanced	Module 10.	Program_Change Out_of_Service	Program Change, only LOAD (1) and RESTART (4) are supported.
PGM.12	Module 11	Advanced	Module 11.	Program_Change Out_of_Service	Program Change, only LOAD (1) and RESTART (4) are supported.
PGM.13	Module 12	Advanced	Module 12.	Program_Change Out_of_Service	Program Change, only LOAD (1) and RESTART (4) are supported.
PGM.14	Module 13	Advanced	Module 13.	Program_Change Out_of_Service	Program Change, only LOAD (1) and RESTART (4) are supported.
PGM.15	NSDF Database	Advanced	NSDF Database.	Program_Change Out_of_Service	Program Change, only LOAD (1) and RESTART (4) are supported.
FIL.1	Core File.	Integrator	Core File.	File_Size	File size is accepted for 0 value only.
FIL.2	SysLogAlarm	Integrator	System Log Alarm.	File_Size	File size is accepted for 0 value only.
FIL.7	USB System Log File	Integrator	USB System Log file.	File_Size	File size is accepted for 0 value only.
FIL.8	USB System Alarm Log File	Integrator	USB System Alarm Log file.	File_Size	File size is accepted for 0 value only.



ID	Name	List	Description	W?	Notes
FIL.16	System Log File	Integrator	System Log file.	File_Size	File size is accepted for 0 value only.
FIL.19	UpdatePackageFile	Advanced	Update Package file.	File_Size	File size is accepted for 0 value only.
SCH.1	Occupancy Schedule	Integrator	Weekly occupancy schedule to specify which occupancy state is active during specific periods of day. Create a customized occupancy schedule with up to six events per day.	Effective_Period Schedule_Default List_of_Object_Property_ References Priority_for_Writing Out_of_Service Weekly_Schedule	Monday to Sunday, Event 1 to Event 6
SCH.2	Drain Schedule	Integrator	Customized draining schedule with up to six events per day.	Effective_Period Schedule_Default List_of_Object_Property_ References Priority_for_Writing Out_of_Service Weekly_Schedule	Monday to Sunday, Event 1 to Event 6







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