



SmartVu™ Controls Version 1.X for Light Commercial and Applied Rooftop Gas Heat/Electric Cooling and Electric Heat/Electric Cooling Units with Puron® (R-410A) Refrigerant

Integration Guide

IMPORTANT: This literature covers Gas Heat/Electric Cooling and Electric Heat/Electric Cooling Units for Light Commercial and Applied Rooftop applications with SmartVu controls version 1.X (factory-installed option).

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INTRODUCTION

General

The Carrier SmartVu™ control system is a product integrated control for select Carrier rooftop units, including:

- Carrier 48/50LC*H light commercial high outdoor air units with Puron® (R-410A) refrigerant
- Carrier 48/50V2,3,4,5 applied rooftop units with Puron (R-410A) refrigerant

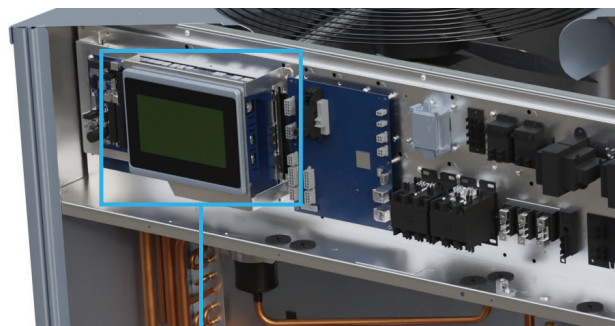
This document provides instruction on integrating Carrier SmartVu™ (PIC 6.0) controls into the following building automation system (BAS) protocols:

- Carrier Comfort Network (CCN)
- BACnet MS/TP (master-slave token pass)
- BACnet IP (internet protocol)

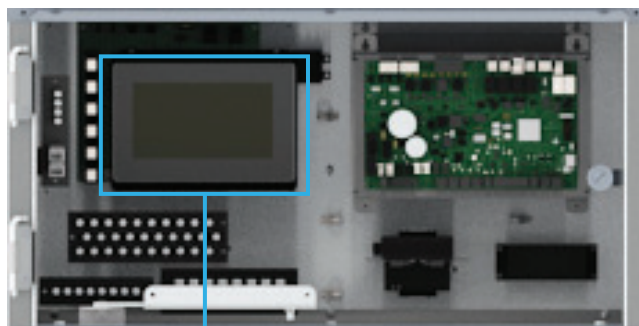
Wiring

Communication wiring is field provided and installed. Communication wiring connections are made in the unit control box. The unit control box location varies by unit model and size. Refer to the unit installation instructions for control box location and wiring access details.

Most communication wiring connections are made at the SmartVu touchscreen display in the control box. See Fig. 1 for SmartVu touchscreen display locations, Fig. 2 for port layout, and Table 1 for port details.



48/50LC*H
SmartVu™ Touchscreen Display



48/50V
SmartVu™ Touchscreen Display

Fig. 1 — SmartVu™ Display Locations

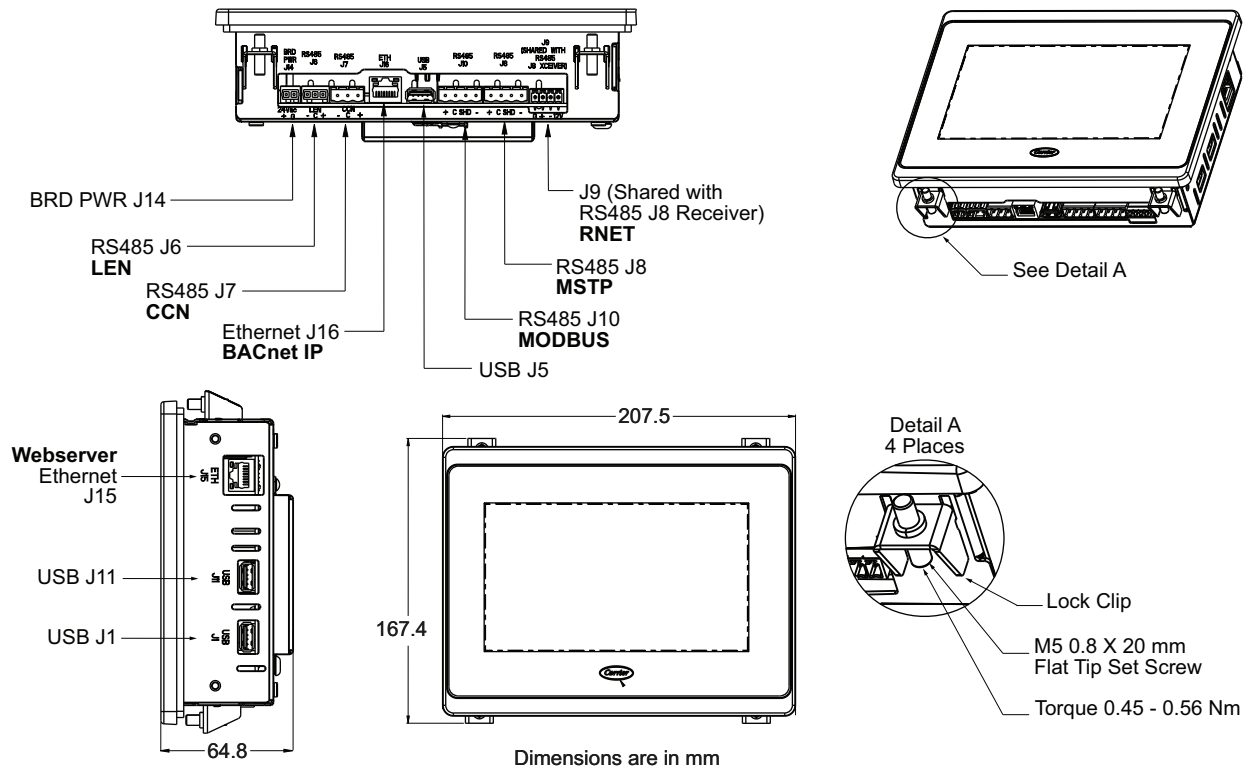


Fig. 2 — Carrier SmartVu™ Touchscreen Display Interface and Connections

Table 1 — SmartVu Display Port Connections

CONNECTOR	TYPE/ PINOUT	FUNCTION
J1	TYPE A	USB-3: Firmware/Software Upgrade
J5	TYPE A	USB-1: Firmware/Software Upgrade
J6	+	RS485-1: LEN System Internal I/O Boards
	C	
	-	
J7	+	RS485-2: CCN
	C	
	-	
J8	-	RS485-4: BMS Interface, BACnet
	SHD	
	C	
	+	
J9	12V	RNET Port to Support RNET Devices
	-	
	+	
	G	
J10	-	RS485-3: Not used
	SHD	
	C	
	+	
J11	TYPE A	USB-2: Firmware/Software Upgrade
J14	G	24vac Power
	+	
J15	RJ45	Ethernet 0 Service Tool, BMS Interface, BACnet, WAN (connectivity)
J16	RJ45	Ethernet 1 WAN (connectivity)

Signal Noise

Avoid running communication wires next to power wires or the controller's relay output wires. Other sources of noise can include:

- Spark igniters
- Radio transmitters
- Variable speed drives
- Large electric motors
- Generators
- Relays
- Transformers
- Induction heaters
- Large contactors (i.e., motor starters)
- Video display devices
- Lamp dimmers
- Fluorescent lights
- Parallel runs with power lines
- Other electronic devices

These can be sources of noise that can affect signal quality. If noise is a problem and you cannot move the wiring, use ferrite clamp-on chokes on the cabling to improve signal quality.

Control Interface

Configuring the SmartVu control for network communication can be done from the touchscreen display or web user interface. Refer to the unit installation instruction (SI) or advanced controls operation and troubleshooting guide (T) for details on control operation, navigation, and web UI configuration.

Communication configuration is done from the Controller Config Menu.

Control Password

User access level or higher is required to configure the control for communications. See the Table 2 for the SmartVu Passwords. Refer to the unit installation instruction (SI) or advanced controls operation and troubleshooting guide (T) for details on login.

NOTE: The Controller Config screen required for communication configuration is hidden with basic access. Login with user access or higher is required to show the Controller Config screen.

Table 2 – Control Access Levels

ACCESS LEVEL	PASSWORD	DESCRIPTION
Basic	None	Access level at initial start-up or after a timeout has expired. Provides view only access to select setpoints and settings. Not all screens will be viewable. Basic access can disable the unit.
User	1111	Intermediate access to adjust setpoints and settings and access most screens. User can enable/disable the unit, enable component and system tests, and acknowledge alarms.
Service		The service password is not required for communication configuration. Contact your local Carrier Service or Applied Sales office if the service password is required.

Communication Configuration Report

Once communication configuration is complete, fill out Appendix B – Network Communication Report and Appendix C – Unit Communication Report to record the unit communication configurations. A copy of the communication reports should be saved for record and a copy provided to the customer. It is also a good practice to save a copy of the unit communication report in the unit control box.

CARRIER COMFORT NETWORK (CCN)

Communication Wiring

All units with SmartVu controls can be connected to a CCN communication bus. See Table 3 for CCN wire specification.

Table 3 – CCN Wiring Specification

DESCRIPTION	Shielded, 3 conductor cable with drain wire, CM or CMP rated (as needed)
CONDUCTOR	Minimum 20 AWG, stranded copper (tin plated)
INSULATION	PVC (polyvinyl chloride), PVC/ nylon, vinyl, Teflon, or polyethylene
COLOR CODE	Red/White/Black
SHIELDING	Aluminum/polyester 100% foil shield
JACKET	PVC (polyvinyl chloride), PVC/ nylon, vinyl, Teflon, or polyethylene
TEMPERATURE	-4°F to 140°F (-20°C to 60°C) or higher, if required by application
VOLTAGE	Cable voltage must match the application

For 48/50LC*H units, the CCN bus connection is made at the SmartVu touchscreen display at port J7. See Fig. 2 for SmartVu port layout and Table 1 for J7 port details.

For 48/50V units, the CCN bus connection is made at a terminal board with screw terminals next to the touchscreen display in the control box. See Fig. 3 for 48/50V CCN terminal location.



Fig. 3 – 48/50V CCN Terminal Location

CCN devices are connected to the communication bus in a daisy chain arrangement. The positive pin of each system element communication connector must be wired to the positive pins of the CCN devices on either side of it. The negative and signal ground pins of each system element must also be wired in the same manner. See Fig. 4. for a typical daisy chain CCN bus wiring arrangement.

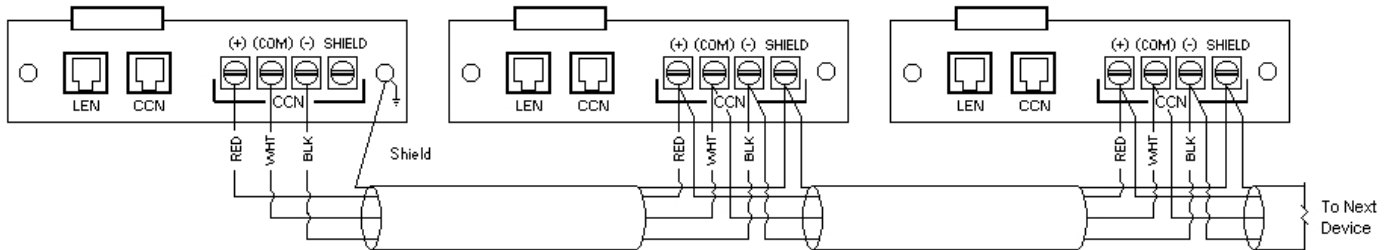


Fig. 4 – Typical CCN Bus Wiring

When connecting to a CCN communication bus, it is important that a color-coding scheme be used for the entire network to simplify the installation. It is recommended that red be used for the signal positive, black for the signal negative, and white for the signal ground. Use a similar scheme for cables containing different colored wires.

At each system element, the shields of its communication bus cables must be tied together. If the communication bus is entirely within one building, the resulting continuous shield must be connected to a ground at one point only. If the communication bus cable exits from one building and enters another, the shields must be connected to grounds at the lightning suppressor in each building where the cable enters or exits the building (one point per building only).

To connect the CCN wiring to the network:

1. Turn off power to the unit and unit controller.
2. Partially cut, then bend and pull off approximately 3 in. of the outer jacket of the cable(s). Do not nick the inner insulation.
3. Strip about 1/4 in. of the inner insulation from each wire.
4. For 48/50LC*H units, remove the plug from the J7 port.
5. Connect the red wire to (+) terminal, the white wire to COM terminal, and the black wire to the (–) terminal on the CCN terminal board (substitute appropriate colors for different colored cables) on the plug (48/50LC*H) or CCN terminal strip (48/50V).
6. Make sure that the wires are electrically isolated and make sure no more than 1/8-in. of the bare wire is exposed.
7. Connect the cable shield to the SHIELD terminal on the CCN terminal board or to a ground (if at the start or end of a bus or segment in a building. Twist both shields together if part of a daisy chain.

IMPORTANT: A shorted CCN bus cable will prevent some routines from running and may prevent the unit from starting. If abnormal conditions occur, disconnect the CCN bus. If conditions return to normal, check the CCN connector and cable. Run new cable if necessary. A short in one section of the bus can cause problems with all system elements on the bus.

Communication Configuration

CCN Communication configuration is done from the Controller Config screen, which will only show with user or higher access level. To access the Controller Config screen:

1. From the Home screen, press the login icon () to access the Login screen.
2. Login with the user access password (1111).
3. Press the unlock button () to accept the login and return to the Home screen.

4. From the Home screen, press the link for the Main Menu ()
5. From the Main Menu, press the Controller Config icon () to go to the Controller Config screen.
NOTE: If the controller config screen does not show, then login may have failed. Try login again.
6. From the Controller Config screen, press the CCN configuration icon () to go to the CCN Configuration screen.
7. Adjust the CCN configuration as needed. See Table 4 for CCN configuration parameters.
8. Once configuration is complete, click on the save icon () to save configuration changes.

NOTE: A controller reboot may be required for some configuration changes to take effect.

Table 4 — CCN Communication Configurations

NAME	DESCRIPTION
Primary BAS Network	Selects the BAS communication protocol. Selectable between None, BACnet IP, CCN, and MS/TP. NOTE: This configuration must be set to CCN for CCN communication.
CCN Address	Selects the address of the device. NOTE: This address must be different from all other devices on the bus.
CCN Bus	Selects the network bus number.
Baud Rate	Selects the communication rate. Selectable between 9600, 19200, and 38400. NOTE: All devices on a bus should have the same baud rate.
Broadcast Alerts	When selected On, broadcasts the unit alerts and alarms to the CCN network.
Schedule Number	Selects the schedule number. NOTE: Global schedule broadcasters must have a schedule set between 65 and 99.
Global Schedule Broadcast	When selected On, the control broadcasts its schedule. NOTE: One, and only one, global schedule broadcaster is allowed per network. All other devices must have global schedule broadcast set to off.
Broadcast ACK	When selected On, the control acknowledges a time broadcast. NOTE: One, and only one, broadcast acknowledger is required per CCN bus. The time broadcaster cannot be the acknowledger.
Time Broadcast	When selected On, the control broadcast the unit time and date on the CCN bus once per minute. NOTE: Only one time broadcaster is allowed per bus.

Network Points

See Appendix A for CCN and BACnet points, and select Multi-State Values for the 48/50LCH and 48/50V.

NOTE: Not all network points will be available for every unit. Point availability will vary by model, unit type, size, and configuration.

BACNET MS/TP

Communication Wiring

All units with SmartVu controls can be connected to a BACnet MS/TP bus. See Table 5 for BACnet MS/TP wire specification.

Table 5 — BACnet MS/TP Wiring Specification

DESCRIPTION	Single twisted pair, low capacitance, CL2P, 22 AWG (7x30), TC foam FEP, plenum rated cable
CONDUCTOR	22 or 24 AWG stranded copper (tin plated)
INSULATION	Foamed FEP
COLOR CODE	Black/White
SHIELDING	Aluminum/Mylar shield with 24 AWG TC drain wire
JACKET	SmokeGard (SmokeGard PVC) • 0.021 in. (0.5334 mm) wall • 0.175 in. (4.445 mm) O.D. Halar (E-CTFE) • 0.010 in. (0.254 mm) wall • 0.144 in. (3.6576 mm) O.D.
RATING	CMP rated
TEMPERATURE	SmokeGard: 167°F (75°C) Halar: -40 to 302°F (-40 to 150°C)
VOLTAGE	300 vac, power limited
MAXIMUM LENGTH	2000 ft (610 m)

The BACnet MS/TP bus connection is made at the SmartVu touchscreen display at port J8. See Fig. 2 for SmartVu port layout and Table 1 for J8 port details.

The BACnet MS/TP device are connected to the communication bus in a daisy chain arrangement. The positive pin of each system element communication connector must be wired to the positive pins of the system elements on either side of it. The negative and signal ground pins of each system element must also be wired in the same manner. Wiring connections for BACnet MS/TP should be made at the J8 plug on the SmartVu display. See Fig. 5 for typical daisy chain MS/TP bus wiring arrangement.

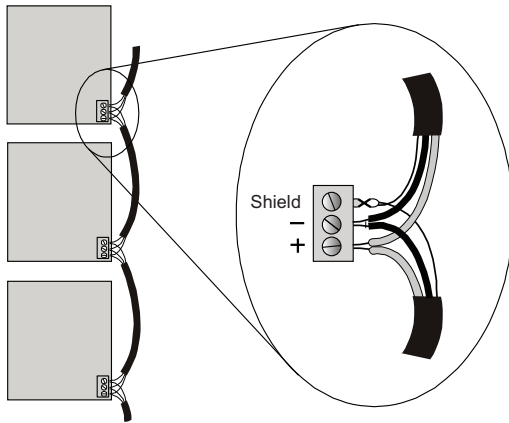


Fig. 5 — Typical BACnet MS/TP Bus Wiring

To connect the BACnet MS/TP wiring to the network:

1. Turn off power to the unit and unit controller.
2. Remove the plug from the J8 port on the touchscreen display.
3. Partially cut, then bend and pull off approximately 1 in. of the outer jacket of the cable(s). Do not nick the inner insulation.
4. Strip about 1/4 in. of the inner insulation from each wire.
5. Connect the white wire to (+) terminal and the black wire to the (-) terminal on the plug (substitute appropriate colors for different colored cables). Make sure that the wires are electrically isolated and make sure no more than 1/8 in. of the bare wire is exposed.

6. If the unit is the first or last node on the network, a termination resistor of 120 ohms should be wired across positive and negative terminals.
7. Connect the cable shield to the SHIELD terminal on the plug or to a ground (if at the start or end of a bus or segment in a building. Twist both shields together if part of a daisy chain. Do not connect the shield to the ground for the control power.
8. Re-insert the plug to the J8 port on the touchscreen display.

Communication Configuration

BACnet MS/TP Communication configuration is done from the Controller Config screen, which will only show with user or higher access level. To access the Controller Config screen:

1. From the Home screen, press the login icon (🔑) to access the Login screen.
2. Login with the user access password (1111).
3. Press the unlock button (🔓) to accept the login and return to the Home screen.
4. From the Home screen, press the link for the Main Menu (☰).
5. From the Main Menu, press the Controller Config icon (⚙️) to go to the Controller Config screen.

NOTE: If the controller config screen doesn't show, then login may have failed. Try login again.

6. From the Controller Config screen, press the BACnet configuration icon (🔌) to go to the BACnet Configuration screen.
7. Adjust the BACnet configuration as needed. See Table 6 for BACnet configuration parameters.
8. Once configuration is complete, click on the save icon (💾) to save configuration changes before leaving the screen.

NOTE: A controller reboot may be required for some configuration changes to take effect.

Table 6 — BACnet MS/TP Communication Configurations

NAME	DESCRIPTION
Primary BAS Network	Primary BAS Sets the occupancy Schedule priority to either BACnet, CCN or a CCN Local schedule or NONE. The Schedule zero on the CCN screen makes the controller always occupied.
BACnet Enable	Selects the type of BACnet communication. Selectable between IP, MS/TP, and disable. NOTE: This configuration must be set at MS/TP for BACnet MS/TP.
Serial Port Config	Selects the configuration of the J8 port. Selectable between MS/TP, Modbus, and Rnet. Must be set to MS/TP for BACnet MS/TP communication. NOTE: Modbus BAS communication is not supported by SmartVu.
Metric Units	Selects the units type. Selectable between Off for imperial units and On for metric units.
Network	Selects the address of the device. NOTE: This address must be different from all other devices on the bus.
Identifier	Selects the address of the device. NOTE: This address must be different from all other devices on the bus.
Percentage Conversion	Selects the method of communicating percentages. Selectable between 0.00-1.00 for decimal or 0-100 for percentage.

Network Points

See Appendix A for CCN and BACnet points, and select Multi-State Values for the 48/50LCH and 48/50V.

NOTE: Not all network points will be available for every unit. Point availability will vary by model, unit type, size, and configuration.

BACNET IP

Communication Wiring

All units with SmartVu controls can be connected to a BACnet IP bus. See Table 7 for BACnet IP wire specification.

Table 7 — BACnet IP Cable Specification

DESCRIPTION	CAT5e or higher Ethernet cable
RATING	CM or CMP rated, as required
MAXIMUM LENGTH	328 ft (100 m)

The BACnet IP cable connection is made at the SmartVu touchscreen display at Ethernet 0 (J15) or Ethernet 1 (J16). See Fig. 2 for SmartVu port layout and Table 1 for ethernet port details. The Ethernet cable can be plugged into the SmartVu control while the controller is powered. Ethernet pass through is not supported.

Communication Configuration

BACnet IP Communication configuration is done from the Controller Config screen, which will only show with user or higher access level. To access the Controller Config screen:

1. From the Home screen, press the login icon () to access the Login screen.
2. Login with the user access password (1111)
3. Press the unlock button () to accept the login and return to the Home screen
4. From the Home screen, press the link for the Main Menu ()
5. From the Main Menu, press the Controller Config icon () to go to the Controller Config screen

NOTE: If the controller config screen doesn't show, then login may have failed. Try login again.

6. From the Controller Config screen, press the Gateway/DNS icon () to go to the Gateway/DNS IP configuration screen.
7. Adjust the Gateway and DNS configuration as needed. See Table 8 for Gateway/DNS IP configuration parameters.

NOTE: Only Gateway IP 2 and DNS IP 2 are utilized.

8. Once configuration is complete, click on the dropdown that says Not Applied and select Applied to save configuration changes before leaving the screen.
9. Press the Back button twice () to go back to the Controller Config screen.
10. From the Controller Config screen, press the ethernet configuration icon () to go to the Ethernet Configuration screen.
11. Adjust the Ethernet configuration as needed. See Table 9 for Ethernet configuration parameters.
12. Once configuration is complete, click on the dropdown that says Not Applied and select Applied to save configuration changes before leaving the screen.
13. Press the Back button twice () to go back to the Controller Config screen.
14. From the Controller Config screen, press the BACnet configuration icon () to go to the BACnet Configuration screen.
15. Adjust the BACnet configuration as needed. See Table 10 for BACnet configuration parameters.

16. Once configuration is complete, click on the save icon () to save configuration changes before leaving the screen.

NOTE: After the IP configuration and selection for BACnet IP are made the PIC must be rebooted for the IP configurations to be applied. After a reboot, ping the controller. When you can ping the controller successfully and find the BACnet device or PIC at that IP, check to make sure the identity sent to a "Who is" command is the same. Otherwise, wait until the PIC is pinged and responds as a BACnet device as the assigned IP on either ethernet connector (it may be necessary to cycle the power). Proceed with BACnet discovery over that ethernet connector.

Table 8 — Gateway/DNS IP Configurations

NAME	DESCRIPTION
Gateway 2 IP	Selects the gateway IP address.
Gateway 2 Mask	Selects the gateway 2 subnet mask. The gateway setting can allow both ports to be pinged from one ethernet connector, but not from the other, when the same subnets are used for both eth0 and eth1.
DNS IP 2	Selects the domain name service IP address.

Table 9 — Ethernet IP Configurations

NAME	DESCRIPTION
Set IP	Selects the control IP address.
Set Net Mask	Selects the control subnet mask.

Table 10 — BACnet IP Communication Configurations

NAME	DESCRIPTION
Primary BAS Network	Selects the BAS communication protocol. NOTE: This configuration must be set to BACnet for BACnet IP communication
BACnet Enable	Selects the type of BACnet communication. Selectable between IP, MS/TP, and Disable. NOTE: This configuration must be set at BACnet IP for BACnet IP
Metric Units	Selects the units type. Selectable between Off for imperial units and On for metric units.
Percentage Conversion	Selects the method of communicating percentages. Selectable between 0.00-1.00 for decimal or 0-100 for percentage.
Ethernet Adapter	Selects which ethernet port to use for BACnet IP. Selectable between Ethernet 0 (right side if touchscreen) or Ethernet 1 (bottom of touchscreen).
UDP Port	Selects the user datagram protocol for BACnet. Default UDP port for BACnet is 47808.
BACnet Mgmt Device	Selects the BACnet management device. Selectable between None, Foreign Device, and BACnet Broadcast Management Device (BBMD)
BBMD Address	Selects the BBMD address.
BBMD Time to Live	Selects how long a device can stay registered (in seconds) with the BBMD.

Network Points

See Appendix A for CCN and BACnet points, and select Multi-State Values for the 48/50LCH and 48/50V.

NOTE: Not all network points will be available for every unit. Point availability will vary by model, unit type, size, and configuration.

APPENDIX A — BACNET, CCN NETWORK AND MULTI-STATE POINTS FOR 48/50LC*H AND 48/50V

48/50LC*H, 48/50V — BACnet, CCN and Multi-State Points

OBJECT NAME	DESCRIPTION	TYPE	INSTANCE	LOW LIMIT	HIGH LIMIT	MULTI-VALUE TEXT	OPTION	WRITABLE	CCN NAME
AIRPRESS_BP	Building Pressure (BP)	AV	3	0	0		Type6	No	BP
AIRPRESS_BPNET	Network Building Pressure (BP)	AV	341	0	0		Type6	Yes	BPNET
AIRPRESS_RAP	Return Air Pressure (RP)	AV	1	-1	1		Type6	No	RAP
AIRPRESS_SDP	Supply Pressure (SP)	AV	2	0	0		Type6	No	SDP
AIRPRESS_SDP_NET	Network Supply Pressure (SP)	AV	348	0	0		Type6	Yes	SDP_NET
AIRTEMP_DXLAT	Direct Expansion LAT	AV	15	0	0		Type6	No	DXLAT
AIRTEMP_EAT	Exhaust Air Temp (EAXT)	AV	11	0	0		Type6	No	EAT
AIRTEMP_EFF_CP	Effective SAT Control Point	AV	14	0	0		Type6	No	EFF_CP
AIRTEMP_MAT	Mixed Air Temp (MAT)	AV	10	0	0		Type6	No	MAT
AIRTEMP_OADP	Outside Air Dew Point (OADP)	AV	107	0	0		Type6	No	OADP
AIRTEMP_OAT	Outside Air Temp (OAT)	AV	9	0	0		Type6	No	OAT
AIRTEMP_OATNET	Network Outside Air Temp (OAT)	AV	350	0	0		Type6	Yes	OATNET
AIRTEMP_RAT	Return Air Temp (RAT)	AV	6	0	0		Type6	No	RAT
AIRTEMP_SADP	Supply Air Dew Point	AV	204	40	100		Type6	Yes	SADP
AIRTEMP_SAT	Supply Air Temp (SAT)	AV	4	0	0		Type6	No	SAT
AIRTEMP_SATO	Supply Air Temp Offset	AV	5	0	0		Type6	No	SATO
AIRTEMP_SPT	Space Temp (SPT)	AV	7	0	0		Type6	No	SPT
AIRTEMP_SPTNET	Network Space Temp (SPT)	AV	349	0	0		Type6	Yes	SPTNET
AIRTEMP_SPTO	Space Temp Offset (SPTO)	AV	8	0	0		Type6	No	SPTO
ALARMRST_RST_ALM	Alarm Reset Config	BV	1	0	1	1=NO, 2=YES	Type4	Yes	RST_ALM
ALERTCFG_BP_HLMT	BP High Limit Config	AV	35	0	0.15		Type6	Yes	BP_HLMT
ALERTCFG_BP_LLMT	BP Low Limit Config	AV	34	-0.15	0		Type6	Yes	BP_LLMT
ALERTCFG_CMPCMD_T	Compressor Cmd Time Config	AV	51	1	30		Type6	Yes	CMPCMD_T
ALERTCFG_COFS_ACT	COFS Action Config	AV	66	0	0		Type6	Yes	COFS_ACT
ALERTCFG_COFS_TME	COFS Time Config	AV	68	1	20		Type6	Yes	COFS_TME
ALERTCFG_COFS_TRP	COFS Trips Config	AV	67	1	20		Type6	Yes	COFS_TRP
ALERTCFG_CP_C_TH	Comp Cycling Threshold Config	AV	57	0	0		Type6	Yes	CP_C_TH
ALERTCFG_ECMINCFM	OAD Min CFM Config	AV	53	0	0		Type6	Yes	ECMINCFM
ALERTCFG_HCDELAY	T24 Heat-Cool Delay Config	AV	76	0	60		Type6	Yes	HCDELAY
ALERTCFG_HIGH_SST	High SST Time Config	AV	47	0	0		Type6	Yes	HIGH_SST
ALERTCFG_IAQ_HLMT	IAQ High Limit Config	AV	40	0	5000		Type6	Yes	IAQ_HLMT
ALERTCFG_LOCK_OUT	Lockout Notification Config	BV	4	0	0	1=OFF, 2=ON	Type4	Yes	LOCK_OUT
ALERTCFG_LPRL	Low Press Ratio Limit Config	AV	65	1	2		Type6	Yes	LPRL
ALERTCFG_LSSHTIME	Low SSH Alert Time Config	AV	64	5	120		Type6	Yes	LSSHTIME
ALERTCFG_LSST1T	Low SST 1Min Threshold Config	AV	60	-30	40		Type6	Yes	LSST1T
ALERTCFG_LSST20sT	Low SST 20Sec Threshold Config	AV	61	-30	40		Type6	Yes	LSST20sT
ALERTCFG_LSST2T	Low SST 2Min Threshold Config	AV	59	-30	40		Type6	Yes	LSST2T
ALERTCFG_LSST4T	Low SST 4Min Threshold Config	AV	58	-30	40		Type6	Yes	LSST4T
ALERTCFG_MAINFLT	Pre-Filter Change Time Config	AV	41	168	8760		Type6	Yes	MAINFLT
ALERTCFG_MIN_DISD	Min Discharge Change Config	AV	49	0	99		Type6	Yes	MIN_DISD
ALERTCFG_MIN_SUCT	Min Suction Change Config	AV	48	0	99		Type6	Yes	MIN_SUCT
ALERTCFG_MOVEDTEC	T24 Move Detect Config	AV	72	1	10		Type6	Yes	MOVEDTEC
ALERTCFG_MSDPT	Static Duct Press Limit Config	AV	78	0	5		Type6	Yes	MSDPT
ALERTCFG_OARADIFF	T24 OA RA diff Config	AV	69	5	20		Type6	Yes	OARADIFF
ALERTCFG_OAT_HLMT	OAT High Limit Config	AV	39	0	0		Type6	Yes	OAT_HLMT
ALERTCFG_OAT_LLMT	OAT Low Limit Config	AV	38	0	0		Type6	Yes	OAT_LLMT
ALERTCFG_OCFMSENS	Outdoor Air CFM Config	AV	52	0	1		Type6	Yes	OCFMSENS
ALERTCFG_OFF_PRES	Off Press Ratio Config	AV	50	-1	1		Type6	Yes	OFF_PRES
ALERTCFG_POSTFL	Final Filter Reminder Config	AV	56	0	43200		Type6	Yes	POSTFL
ALERTCFG_RARH_HT	RARH High Limit Config	AV	31	0	100		Type6	Yes	RARH_HT
ALERTCFG_RARH_LT	RARH Low Limit Config	AV	30	0	100		Type6	Yes	RARH_LT
ALERTCFG_RATHLMTO	RAT High Occu Limit Config	AV	27	-40	245		Type6	Yes	RATHLMTO
ALERTCFG_RATHLMTU	RAT High Unoc Limit Config	AV	28	-40	245		Type6	Yes	RATHLMTU
ALERTCFG_RATLLMTO	RAT Low Occu Limit Config	AV	26	-40	245		Type6	Yes	RATLLMTO
ALERTCFG_RATLLMTU	RAT Low Unoc Limit Config	AV	29	-40	245		Type6	Yes	RATLLMTU
ALERTCFG_SASETTLE	T24 SAT Settle Config	AV	73	5	450		Type6	Yes	SASETTLE
ALERTCFG_SAT_HTMP	SAT High Limit Config	AV	37	105	120		Type6	Yes	SAT_HTMP
ALERTCFG_SAT_LTMP	SAT Low Limit Config	AV	36	0	50		Type6	Yes	SAT_LTMP
ALERTCFG_SATCHNGE	T24 Sat Change Config	AV	71	0	5		Type6	Yes	SATCHNGE
ALERTCFG_SATHLMTO	SAT High Occu Limit Config	AV	23	-40	245		Type6	Yes	SATHLMTO
ALERTCFG_SATHLMTU	SAT High Unoc Limit Config	AV	25	-40	245		Type6	Yes	SATHLMTU
ALERTCFG_SATLLMTO	SAT Low Occu Limit Config	AV	22	-40	245		Type6	Yes	SATLLMTO

APPENDIX A — BACNET, CCN NETWORK AND MULTI-STATE POINTS FOR 48/50LC*H AND 48/50V (cont)

48/50LC*H, 48/50V — BACnet, CCN and Multi-State Points (cont)

OBJECT NAME	DESCRIPTION	TYPE	INSTANCE	LOW LIMIT	HIGH LIMIT	MULTI-VALUE TEXT	OPTION	WRITABLE	CCN NAME
ALERTCFG_SATLLMTU	SAT Low Unoc Limit Config	AV	24	-40	245		Type6	Yes	SATLLMTU
ALERTCFG_SATMOVE	T24 SAT Move Chk Config	AV	70	10	20		Type6	Yes	SATMOVE
ALERTCFG_SP_HLMT	SP High Limit Config	AV	33	1.5	2.2		Type6	Yes	SP_HLMT
ALERTCFG_SP_LLMT	SP Low Limit Config	AV	32	0	0.5		Type6	Yes	SP_LLMT
ALERTCFG_SPRHHL	SPRelative Humidity High Limit Config	AV	16	0	100		Type6	Yes	SPRHHL
ALERTCFG_SPRHLL	SPRelative Humidity Low Limit Config	AV	17	0	100		Type6	Yes	SPRHLL
ALERTCFG_SPTLHMTU	SPT High Occu Limit Config	AV	19	-10	245		Type6	Yes	SPTLHMTU
ALERTCFG_SPTLLMTU	SPT High Unoc Limit Config	AV	21	-10	245		Type6	Yes	SPTLLMTU
ALERTCFG_SPTLLMTO	SPT Low Occu Limit Config	AV	18	-10	245		Type6	Yes	SPTLLMTO
ALERTCFG_SPTLLMTU	SPT Low Unoc Limit Config	AV	20	-10	245		Type6	Yes	SPTLLMTU
ALERTCFG_SSHALLOW	Low SSH A Alert Config	AV	62	2	10		Type6	Yes	SSHALLOW
ALERTCFG_SSHBLOW	Low SSH B Alert Config	AV	63	2	10		Type6	Yes	SSHBLOW
ALERTCFG_T24ECMAX	T24 Econ Max Pos Config	AV	75	50	100		Type6	Yes	T24ECMAX
ALERTCFG_T24ECMIN	T24 Econ Min Pos Config	AV	74	0	50		Type6	Yes	T24ECMIN
ALERTCFG_T24ENAB	T24 Diagnostic Config	BV	5	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	T24ENAB
ALERTCFG2_ERV_ALRT	ERV Frost Alert Limit Config	AV	44	25	40		Type6	Yes	NA
ANALGOUT_CMPA1CMD	Comp A1 Command	AV	86	0	0		Type6	No	CMPA1CMD
ANALGOUT_CMPA2CMD	Comp A2 Command	AV	87	0	0		Type6	No	CMPA2CMD
ANALGOUT_CMPB1CMD	Comp B1 Command	AV	88	0	0		Type6	No	CMPB1CMD
ANALGOUT_CMPB2CMD	Comp B2 Command	AV	89	0	0		Type6	No	CMPB2CMD
ANALGOUT_DAMPCMD	OAD Command	AV	79	0	0		Type6	No	DAMPCMD
ANALGOUT_DAMPCMD2	RAD Cmd	AV	80	0	0		Type6	No	DAMPCMD2
ANALGOUT_EFCMD	Exhaust Fan Cmd	AV	84	0	0		Type6	No	EFCMD
ANALGOUT_EXVA1CMD	EXV A1 Cmd	AV	94	0	0		Type6	No	EXVA1CMD
ANALGOUT_EXVA2CMD	EXV A2 Cmd	AV	95	0	0		Type6	No	EXVA2CMD
ANALGOUT_EXVB1CMD	EXV B1 Cmd	AV	96	0	0		Type6	No	EXVB1CMD
ANALGOUT_EXVB2CMD	EXV B2 Cmd	AV	97	0	0		Type6	No	EXVB2CMD
ANALGOUT_HEATCMD	Actual heat command	AV	81	0	0		Type6	No	HEATCMD
ANALGOUT_HMV	HGRH Command	AV	82	0	100		Type6	No	HMV
ANALGOUT_IDFCMD	IDF1 Control Command	AV	90	0	0		Type6	No	IDFCMD
ANALGOUT_ODF1CMD	CF 1 Command	AV	91	0	0		Type6	No	ODF1CMD
ANALGOUT_ODF2CMD	CF 2 Command	AV	92	0	0		Type6	No	ODF2CMD
ANALGOUT_ODF3CMD	CF 3 Command	AV	93	0	0		Type6	No	ODF3CMD
ANALOGIN_CMPA1SPD	Comp A1 Speed	AV	118	0	0		Type6	No	CMPA1SPD
ANALOGIN_CMPA2SPD	Comp A2 Speed	AV	119	0	0		Type6	No	CMPA2SPD
ANALOGIN_CMPB1SPD	Comp B1 Speed	AV	120	0	0		Type6	No	CMPB1SPD
ANALOGIN_CMPB2SPD	Comp B2 Speed	AV	121	0	0		Type6	No	CMPB2SPD
ANALOGIN_DAMPALRM	CDD:DAMP628 - Combined Dampers Not Open Enough	BV	416	0	0	1=NORMAL, 2=ALARM	Type5	No	NA
ANALOGIN_DAMPPOS	OAD Feedback	AV	114	0	0		Type6	No	DAMPPOS
ANALOGIN_DAMPPOS2	RAD Feedback	AV	115	0	0		Type6	No	DAMPPOS2
ANALOGIN_DLC	Demand Limit Control	AV	133	0	0		Type6	No	DLC
ANALOGIN_EF3P_CMD	EXF 3rd Party Modulation	AV	101	0	0		Type6	No	EF3P_CMD
ANALOGIN_EF3P_NET	Network 3rd Party EXF Modulation	AV	342	0	0		Type6	Yes	EF3P_NET
ANALOGIN_EFSPD	Exhaust Fan Speed	AV	127	0	0		Type6	No	EFSPD
ANALOGIN_EXV_A1	EXV A1	AV	128	0	100		Type6	No	EXV_A1
ANALOGIN_EXV_A2	EXV A2	AV	129	0	100		Type6	No	EXV_A2
ANALOGIN_EXV_B1	EXV B1	AV	130	0	100		Type6	No	EXV_B1
ANALOGIN_EXV_B2	EXV B2	AV	131	0	100		Type6	No	EXV_B2
ANALOGIN_FFPD	Final Filter Press Drop	AV	135	0	0		Type6	No	FFPD
ANALOGIN_HMD	HGRH Valve Feedback	AV	116	0	0		Type6	No	HMD
ANALOGIN_IAQ	Indoor Air Quality	AV	104	0	0		Type6	No	IAQOPRST
ANALOGIN_IAQNET	Network Indoor Air Quality	AV	346	0	0		Type6	Yes	IAQNET
ANALOGIN_IAQOPRST	IAQ OAD Pos Reset	AV	103	0	0		Type6	No	IAQOPRST
ANALOGIN_IAQORNET	Network IAQ OAD Position Reset	AV	340	0	0		Type6	Yes	IAQORNET
ANALOGIN_IAQRNET	Network IAQ Reset	AV	347	0	0		Type6	Yes	IAQRNET
ANALOGIN_IDFRPM	IDF Speed RPM	AV	126	0	0		Type6	No	IDFRPM
ANALOGIN_IDFSPD	IDF Speed	AV	125	0	0		Type6	No	IDFSPD
ANALOGIN_OACFM	Outdoor Air CFM	AV	98	0	0		Type6	No	OACFM
ANALOGIN_OACFMNET	Network Outdoor Air CFM	AV	338	0	0		Type6	Yes	OACFMNET
ANALOGIN_OACFMRST	Outdoor Air CFM Reset	AV	99	0	0		Type6	No	OACFMRST
ANALOGIN_OAQ	Outdoor Air Quality	AV	105	0	0		Type6	No	OAQ
ANALOGIN_OAQNET	Network Outdoor Air Quality	AV	345	0	0		Type6	Yes	OAQNET
ANALOGIN_OARH	Outdoor Air Relative Humidity (OARH)	AV	106	0	0		Type6	No	OARH
ANALOGIN_OCFMRNET	Network OA CFM Reset	AV	339	0	0		Type6	Yes	OCFMRNET

APPENDIX A — BACNET, CCN NETWORK AND MULTI-STATE POINTS FOR 48/50LC*H AND 48/50V (cont)

48/50LC*H, 48/50V — BACnet, CCN and Multi-State Points (cont)

OBJECT NAME	DESCRIPTION	TYPE	INSTANCE	LOW LIMIT	HIGH LIMIT	MULTI-VALUE TEXT	OPTION	WRITABLE	CCN NAME
ANALOGIN_OD3P_CMD	OAD 3rd Party Modulation	AV	100	0	0		Type6	No	OD3P_CMD
ANALOGIN_OD3P_NET	Network 3rd Party OAD Modulation	AV	343	0	0		Type6	Yes	OD3P_NET
ANALOGIN_ODF1SPD	CF 1 Speed	AV	122	0	0		Type6	No	ODF1SPD
ANALOGIN_ODF2SPD	CF 2 Speed	AV	123	0	0		Type6	No	ODF2SPD
ANALOGIN_ODF3SPD	CF 3 Speed	AV	124	0	0		Type6	No	ODF3SPD
ANALOGIN_PFPD	Pre Filter Press Drop	AV	134	0	0		Type6	No	PFPD
ANALOGIN_RARH	Return Air Relative Humidity (RARH)	AV	108	0	0		Type6	No	RARH
ANALOGIN_RARHNET	Network Return Air Relative Humidity (RARH)	AV	337	0	0		Type6	Yes	RARHNET
ANALOGIN_SARH	Supply Air RH (SARH)	AV	109	0	0		Type6	No	SARH
ANALOGIN_SF3P_CMD	IDF 3rd Party Modulation	AV	102	0	0		Type6	No	SF3P_CMD
ANALOGIN_SF3P_NET	Network 3rd Party IDF Modulation	AV	344	0	0		Type6	Yes	SF3P_NET
ANALOGIN_SPRH	Space Relative Humidity (SPRH)	AV	111	0	0		Type6	No	SPRH
ANALOGIN_SPRHNET	Network Space Relative Humidity (SPRH)	AV	336	0	0		Type6	Yes	SPRHNET
ANALOGIN_SPSR	Supply Pressure (SP) Reset	AV	132	0	3		Type6	No	SPSR
ANALOGIN_SPSR_NET	Network Supply Pressure (SP) Reset	AV	352	0	3		Type6	Yes	SPSR_NET
ANALOGIN_ZDP	Zone Damper Position	AV	113	0	0		Type6	No	ZDP
ANALOGIN_ZDPNET	Network Zone Damper Position	AV	353	0	0		Type6	Yes	ZDPNET
BACNET_ALC_COLOR	Operation Status Color	MV	27	0	14	1=Gray, 2=Red, 3=DarkBlue, 4=LightBlue, 5=Green, 6=LightGreen, 7=Yellow, 8=Orange, 9=Red, 10=White, 13=Coral, 14=Charcoal, 15=Purple	Type5	No	NA
BACNET_ALC_PRIME	Value of Prime variable	AV	549	-999999	999999		Type6	No	NA
BACNET_LOC_OCC	Local Sched Occ Request	AV	284	0	1		Type6	No	NA
BACNET_SCH_OBJ	Sched Linked BACNetwork Obj	AV	283	0	1		Type6	No	NA
CMPA1STS_LOADREQ	Load Request Comp A1	AV	495	0	0		Type6	No	A1LOADRQ
CMPA2STS_LOADREQ	Load Request Comp A2	AV	496	0	0		Type6	No	A2LOADRQ
CMFASTS_BOOSTSTA	Cir A VSC Boost State	AV	335	0	0		Type6	No	BOOSTSTA
CMFASTS_OILRECAC	Oil Recovery Actv Cir A	AV	447	0	0		Type6	No	NA
CMFASTS_ORECTREM	CirA Oil Recov Time Left	AV	448	0	0		Type6	No	ORECTRA
CMFASTS_SDTABSMN	SDT Abs Min Cir A	AV	514	0	0		Type6	No	SDTABMNA
CMFASTS_SDTABSMX	SDT Abs Max Cir A	AV	515	0	0		Type6	No	SDTABMXA
CMFASTS_SDTENVMN	SDT Env Min CirA	AV	506	0	0		Type6	No	SDTENMNA
CMFASTS_SDTENVMX	SDT Env Max CirA	AV	507	0	0		Type6	No	SDTENMXA
CMFASTS_SSTABSMN	SST Abs Min CirA	AV	512	0	0		Type6	No	SSTABMNA
CMFASTS_SSTABSMX	SST Abs Max CirA	AV	513	0	0		Type6	No	SSTABMXA
CMFASTS_SSTENVMN	SST Env Min CirA	AV	504	0	0		Type6	No	SSTENMNA
CMFASTS_SSTENVMX	SST Env Max CirA	AV	505	0	0		Type6	No	SSTENMXA
CMPB1STS_LOADREQ	Load Request Comp B1	AV	497	0	0		Type6	No	B1LOADRQ
CMPB2STS_LOADREQ	Load Request Comp B2	AV	498	0	0		Type6	No	B2LOADRQ
CMPBSTS_OILRECAC	Oil Recovery Actv Cir B	AV	449	0	0		Type6	No	CBORECAC
CMPBSTS_ORECTREM	CirB Oil Recov Time Left	AV	450	0	0		Type6	No	ORECTRB
CMPBSTS_SDTABSMN	SDT Abs Min Cir B	AV	518	0	0		Type6	No	SDTABMNB
CMPBSTS_SDTABSMX	SDT Abs Max Cir B	AV	519	0	0		Type6	No	SDTABMXB
CMPBSTS_SDTENVMN	SDT Env Min Cir B	AV	510	0	0		Type6	No	SDTENMNB
CMPBSTS_SDTENVMX	SDT Env Max Cir B	AV	511	0	0		Type6	No	SDTENMXB
CMPBSTS_SSTABSMN	SST Abs Min Cir B	AV	516	0	0		Type6	No	SSTABMNB
CMPBSTS_SSTABSMX	SST Abs Max Cir B	AV	517	0	0		Type6	No	SSTABMXB
CMPBSTS_SSTENVMN	SST Env Min Cir B	AV	508	0	0		Type6	No	SSTENMNB
CMPBSTS_SSTENVMX	SST Env Max Cir B	AV	509	0	0		Type6	No	SSTENMXB
CNDSTP_SDTSTPEN	SDT Setpoint Enable	BV	163	0	0	1=DISABLE, 2=ENABLE	Type4	Yes	SDTSTPEN
CNDSTP_SDTTEMP1	SDT Setpoint 1	AV	479	0	0		Type6	Yes	SDTTEMP1
CNDSTP_SDTTEMP2	SDT Setpoint 2	AV	480	0	0		Type6	Yes	SDTTEMP2
CNDSTP_SDTTEMP3	SDT Setpoint 3	AV	481	0	0		Type6	Yes	SDTTEMP3
CNDSTP_SPDSTPEN	CF User Start Spd Enab	BV	164	0	0	1=DISABLE, 2=ENABLE	Type4	Yes	SPDSTPEN
COOLCFG_CCHTHA	CCH A OAT Lockout Config	AV	457	50	90		Type6	Yes	CCHTHA
COOLCFG_CCHTHB	CCH B OAT Lockout Config	AV	458	50	90		Type6	Yes	CCHTHB
COOLCFG_CFSPDMN1	CF Speed MIN Config	AV	482	0	0		Type6	Yes	CFSPDMN1

APPENDIX A — BACNET, CCN NETWORK AND MULTI-STATE POINTS FOR 48/50LC*H AND 48/50V (cont)

48/50LC*H, 48/50V — BACnet, CCN and Multi-State Points (cont)

OBJECT NAME	DESCRIPTION	TYPE	INSTANCE	LOW LIMIT	HIGH LIMIT	MULTI-VALUE TEXT	OPTION	WRITABLE	CCN NAME
COOLCFG_CFSPDMX1	CF Speed MAX Config	AV	483	0	0		Type6	Yes	CFSPDMX1
COOLCFG_CFSTSPD1	CF User Start Speed Config	AV	484	0	0		Type6	Yes	CFSTSPD1
COOLCFG_CLTNDTM	Cool Trend Time Config	AV	177	1	5		Type6	Yes	CLTNDTM
COOLCFG_CLTREND	Cool Trend Level Config	AV	176	0.1	5		Type6	Yes	CLTREND
COOLCFG_DEMAND	Cool/Heat Demand Source Config	AV	171	0	5		Type6	Yes	DEMAND
COOLCFG_DOHICLON	Hi Cool On DB Config	AV	188	0.5	20		Type6	Yes	DOHICLON
COOLCFG_DOLOCLOF	Lo Cool Off DB Config	AV	187	0.5	2		Type6	Yes	DOLOCLOF
COOLCFG_DOLOCLOF	Lo Cool On DB Config	AV	186	0	2		Type6	Yes	DOLOCLOF
COOLCFG_DOVAVCOF	VAV Cool Off DB Config	AV	191	1	25		Type6	Yes	DOVAVCOF
COOLCFG_DOVAVCON	VAV Cool On DB Config	AV	190	0	25		Type6	Yes	DOVAVCON
COOLCFG_GAP_CLHT	Cool Heat Gap Config Config	AV	178	2	10		Type6	Yes	GAP_CLHT
COOLCFG_LCRCO	Low Cap Req Comp On Config	BV	166	0	1	1=NO, 2=YES	Type4	Yes	LCRCO
COOLCFG_RSTLMIT	SAT Reset Limit Config	AV	175	0	20		Type6	Yes	RSTLMIT
COOLCFG_RSTRTIO	SAT Reset Ratio Config	AV	174	0	10		Type6	Yes	RSTRTIO
COOLCFG_SATHI_DB	SAT High Deadband Config	AV	469	2.5	10		Type6	Yes	SATHI_DB
COOLCFG_SATLO_DB	SAT Lo Deadband Config	AV	468	5	15		Type6	Yes	SATLO_DB
COOLCFG_SCT_HLIM	SCT High Limit Config	AV	471	100	140		Type6	Yes	SCT_HLIM
COOLCFG_SCT_LLIM	SCT Low Limit Config	AV	472	40	90		Type6	Yes	SCT_LLIM
COOLCFG_SPLYDB	Vent Deadband Config	AV	172	10	30		Type6	Yes	SPLYDB
COOLCFG_TMPDVNT	Cool Tempered Venting Config	BV	6	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	TMPDVNT
COOLCFG_TPCTLRST	SAT Reset Source Config	AV	173	0	5		Type6	Yes	TPCTLRST
COOLCFG_VSCFS_OR	VSC Fixed Speed Override Config	BV	8	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	VSCFS_OR
COOLSTP_ACTV_SP	SAT Setpoint	AV	503	0	0		Type6	No	ACTV_SP
COOLSTP_CAPLIMS1	Cool Capacity Limit S1 Setpoint	AV	217	0	100		Type6	Yes	NA
COOLSTP_CAPLIMS2	Cool Capacity Limit S2 Setpoint	AV	218	0	100		Type6	Yes	CCPLIMS2
COOLSTP_CLCAPSTP	Max Cool Capacity Setpoint	AV	216	50	100		Type6	Yes	CLCAPSTP
COOLSTP_CLSP_OCC	Occupied Cooling Setpoint	AV	180	55	80		Type6	Yes	CLSP_OCC
COOLSTP_CLSP_UNO	Unoccupied Cooling Setpoint	AV	181	55	110		Type6	Yes	CLSP_UNO
COOLSTP_CMPMAXA1	Cmp Nominal Spd Max A1 Setpoint	AV	460	0	0		Type6	Yes	CMPMAXA1
COOLSTP_CMPMAXA2	Cmp Nominal Spd Max A2 Setpoint	AV	462	0	0		Type6	Yes	CMPMAXA2
COOLSTP_CMPMAXB1	Cmp Nominal Spd Max B1 Setpoint	AV	464	0	0		Type6	Yes	CMPMAXB1
COOLSTP_CMPMAXB2	Cmp Nominal Spd Max B2 Setpoint	AV	466	0	0		Type6	Yes	CMPMAXB2
COOLSTP_CMPMINA1	Cmp Nominal Spd Min A1 Setpoint	AV	461	0	0		Type6	Yes	CMPMINA1
COOLSTP_CMPMINA2	Cmp Nominal Spd Min A2 Setpoint	AV	463	0	0		Type6	Yes	CMPMINA2
COOLSTP_CMPMINB1	Cmp Nominal Spd Min B1 Setpoint	AV	465	0	0		Type6	Yes	CMPMINB1
COOLSTP_CMPMINB2	Cmp Nominal Spd Min B2 Setpoint	AV	467	0	0		Type6	Yes	CMPMINB2
COOLSTP_DMDLIMS1	Cool Demand Limit S1 Setpoint	AV	219	0	10		Type6	Yes	CDLIMS1
COOLSTP_DMDLIMS2	Cool Demand Limit S2 Setpoint	AV	220	0	10		Type6	Yes	CDLIMS2
COOLSTP_DMDRSTCL	Demand Limit SPT Setpoint	AV	226	0	10		Type6	Yes	DMDRSTCL
COOLSTP_HODAHCL	100% OA High Cool SAT Setpoint	AV	185	55	75		Type6	Yes	HODAHCL
COOLSTP_HODALCL	100% OA Low Cool SAT Setpoint	AV	184	55	75		Type6	Yes	HODALCL
COOLSTP_SAHICLSP	Hi Cool SAT Setpoint	AV	183	55	75		Type6	Yes	SAHICLSP
COOLSTP_SALOCCLSP	Lo Cool SAT Setpoint	AV	182	55	75		Type6	Yes	SALOCCLSP
COOLSTP_SPLYAVSP	Vent SAT Setpoint	AV	192	55	85		Type6	Yes	SPLYAVSP
COOLSTP_VAVCLSP	VAV Cooling SAT Setpoint	AV	189	45	75		Type6	Yes	VAVCLSP
DHUMCFG_CCBYPTME	Con Coil Bypass Time	AV	197	0	0		Type6	Yes	CCBYPTME
DHUMCFG_CCPRGPOS	Cond Coil Purge Pos	AV	198	0	0		Type6	Yes	CCPRGPOS
DHUMCFG_CCPRGTME	Cond Coil Purge Time	AV	199	0	0		Type6	Yes	CCPRGTME
DHUMCFG_DHMATLCK	High Mixed Air Temp (MAT) Dehum Lockout	AV	194	90	115		Type6	Yes	DHMATLCK
DHUMCFG_DHUMHICL	High Cool Dehum	BV	13	0	0	1=DISABLE, 2=ENABLE	Type4	Yes	DHUMHICL
DHUMCFG_DHUMHIHT	High Heat Dehum	BV	15	0	0	1=DISABLE, 2=ENABLE	Type4	Yes	DHUMHIHT
DHUMCFG_DHUMLOCL	Low Cool Dehum	BV	14	0	0	1=DISABLE, 2=ENABLE	Type4	Yes	DHUMLOCL
DHUMCFG_DHUMLOHT	Low Heat Dehum	BV	16	0	0	1=DISABLE, 2=ENABLE	Type4	Yes	DHUMLOHT
DHUMCFG_DHUMMODE	Dehum Control Mode	AV	470	0	3		Type6	Yes	DHUMMODE
DHUMCFG_DHUMVAV	VAV Cool Dehum	BV	12	0	0	1=DISABLE, 2=ENABLE	Type4	Yes	DHUMVAV
DHUMCFG_DHUMVENT	Vent/None Dehum	BV	11	0	0	1=DISABLE, 2=ENABLE	Type4	Yes	DHUMVENT
DHUMCFG_DLOS_OFF	Dehum DP Off DB	AV	204	1	20		Type6	Yes	DLOS_OFF
DHUMCFG_DLOS_ON	Dehum DP On DB	AV	203	0	20		Type6	Yes	DLOS_ON
DHUMCFG_DMD_SRC	Dehum Demand Source	AV	193	0	8		Type6	Yes	DMD_SRC

APPENDIX A — BACNET, CCN NETWORK AND MULTI-STATE POINTS FOR 48/50LC*H AND 48/50V (cont)

48/50LC*H, 48/50V — BACnet, CCN and Multi-State Points (cont)

OBJECT NAME	DESCRIPTION	TYPE	INSTANCE	LOW LIMIT	HIGH LIMIT	MULTI-VALUE TEXT	OPTION	WRITABLE	CCN NAME
DHUMCFG_OFDHUMEN	Occupied Free Dehum	AV	200	0	0	1=DISABLE, 2=ENABLE	Type6	Yes	NA
DHUMCFG_RHMAXPOS	HGRH Valve Max Pos	AV	474	50	100		Type6	Yes	RHMAXPOS
DHUMCFG_RHMINPOS	HGRH Valve Min Pos	AV	473	0	50		Type6	Yes	RHMINPOS
DHUMCFG_RHSTART	HGRH Start Pos	AV	475	0	100		Type6	Yes	RHSTART
DHUMCFG_RHTCLTME	HGRH Coil Closed Time	AV	196	5	120		Type6	Yes	RHTCLTME
DHUMCFG_RHTIME	HGRH Startup Time	AV	476	0	120		Type6	Yes	RHTIME
DHUMCFG_RHTOPTME	HGRH Coil Open Time	AV	195	1	5		Type6	Yes	RHTOPTME
DHUMCFG_RLOS_OFF	Dehum Relative Humidity Off DB	AV	207	1	20		Type6	Yes	RLOS_OFF
DHUMCFG_RLOS_ON	Dehum Relative Humidity On DB	AV	206	0	20		Type6	Yes	RLOS_ON
DHUMCFG_SUPPHEAT	Supplemental Heat	BV	10	0	0	1=DISABLE, 2=ENABLE	Type4	Yes	SUPPHEAT
DHUMCFG_UFDHUMEN	Unoccupied Free Dehum	AV	201	0	0	1=DISABLE, 2=ENABLE	Type6	Yes	NA
DHUMCFG_UNOCENAB	Unoccupied Dehum	BV	9	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	UNOCENAB
DHUMSTP_CCTSTP	Dehum CCT	AV	209	0	0		Type6	Yes	CCTSTP
DHUMSTP_DHUMDPSP	Dehum DP	AV	202	50	75		Type6	Yes	DHUMDPSP
DHUMSTP_DHUMRHSP	Dehum RH	AV	205	40	100		Type6	Yes	DHUMRHSP
DHUMSTP_DHUMSADP	Dehum SADP	AV	286	0	0		Type6	No	NA
DISCIN_CMPFBKA1	Comp A1 Feedback	BV	32	0	1	1=OFF, 2=ON	Type4	No	CMPFBKA1
DISCIN_CMPFBKA2	Comp A2 Feedback	BV	33	0	1	1=OFF, 2=ON	Type4	No	CMPFBKA2
DISCIN_CMPFBKB1	Comp B1 Feedback	BV	34	0	1	1=OFF, 2=ON	Type4	No	CMPFBKB1
DISCIN_CMPFBKB2	Comp B2 Feedback	BV	35	0	1	1=OFF, 2=ON	Type4	No	CMPFBKB2
DISCIN_CNDOSW	Condensate Overflow Switch (COFS)	BV	30	0	1	1=OPEN, 2=CLOSE	Type4	No	CNDOSW
DISCIN_DEHUMSW	Dehumidify Switch	BV	31	0	1	1=OPEN, 2=CLOSE	Type4	No	DEHUMSW
DISCIN_DLS1	Demand Limit Switch 1	BV	42	0	1	1=OFF, 2=ON	Type4	No	DLS1
DISCIN_DLS2	Demand Limit Switch 2	BV	43	0	1	1=OFF, 2=ON	Type4	No	DLS2
DISCIN_ENEGPRES	OAD Neg Pressure	BV	53	0	1	1=OFF, 2=ON	Type4	No	ENEGPRES
DISCIN_ERV_FRST	ERV Frost Indicator	BV	39	0	1	1=OFF, 2=ON	Type4	No	ERV_FRST
DISCIN_ERVFSS	ERV OD Filt Stat Switch	BV	41	0	1	1=OFF, 2=ON	Type4	No	ERVFSS
DISCIN_EVACSW	Fire Evac Switch	BV	47	0	1	1=OFF, 2=ON	Type4	No	EVACSW
DISCIN_FILTSTAT	Filter Status	BV	27	0	1	1=CLEAN, 2=DIRTY	Type4	No	FILTSTAT
DISCIN_FIRESW	Fire Shutdown Switch	BV	22	0	1	1=OPEN, 2=CLOSE	Type4	No	FIRESW
DISCIN_FRZSW	Hydronic Freeze Switch	BV	48	0	1	1=OFF, 2=ON	Type4	No	FRZSW
DISCIN_HPSA	Cir A HPS Switch	BV	36	0	1	1=OPEN, 2=CLOSE	Type4	No	HPSA
DISCIN_HPSB	Cir B HPS Switch	BV	37	0	1	1=OPEN, 2=CLOSE	Type4	No	HPSB
DISCIN_HT_ALARM	Heat Alarm	BV	29	0	1	1=OPEN, 2=CLOSE	Type4	No	HT_ALARM
DISCIN_IAQSW	IAQ Switch	BV	50	0	1	1=OFF, 2=ON	Type4	No	IAQSW
DISCIN_IDF_LSM	Indoor Fan Limit Switch	BV	28	0	1	1=OPEN, 2=CLOSE	Type4	No	IDF_LSM
DISCIN_IGCFANSW	IGC IDF Switch	BV	44	0	1	1=OFF, 2=ON	Type4	No	IGCFANSW
DISCIN_OAQSW	OAQ Switch	BV	51	0	1	1=OFF, 2=ON	Type4	No	OAQSW
DISCIN_PFPSS	Pre Filter Switch	BV	45	0	1	1=OFF, 2=ON	Type4	No	PFPSS
DISCIN_PMR_STAT	Phase Monitor	BV	25	0	1	1=OPEN, 2=CLOSE	Type4	No	PMR_STAT
DISCIN_PPSS	Pressure Safety	BV	49	0	1	1=OFF, 2=ON	Type4	No	PPSS
DISCIN_PRESSSW	Fire Press Switch	BV	46	0	1	1=OFF, 2=ON	Type4	No	PRESSSW
DISCIN_RESW	Remote Switch	BV	38	0	1	1=OPEN, 2=CLOSE	Type4	No	RESW

APPENDIX A — BACNET, CCN NETWORK AND MULTI-STATE POINTS FOR 48/50LC*H AND 48/50V (cont)

48/50LC*H, 48/50V — BACnet, CCN and Multi-State Points (cont)

OBJECT NAME	DESCRIPTION	TYPE	INSTANCE	LOW LIMIT	HIGH LIMIT	MULTI-VALUE TEXT	OPTION	WRITABLE	CCN NAME
DISCIN_RFGLEAK1	Indoor RFG Sensor ALM	AV	210	0	1		Type6	No	RFGLEAK1
DISCIN_RFGLEAK2	Outdoor RFG Sensor ALM	AV	211	0	1		Type6	No	RFGLEAK2
DISCIN_SHTDWNWSW	Shutdown Switch	BV	26	0	1	1=OFF, 2=ON	Type4	No	SHTDWNWSW
DISCIN_SMKPRGSW	Smoke Purge Switch	BV	24	0	1	1=OPEN, 2=CLOSE	Type4	No	SMKPRGSW
DISCIN_SMOKE SW	Smoke Detector	BV	23	0	1	1=OPEN, 2=CLOSE	Type4	No	SMOKE SW
DISCIN_TSTAT_G	Indoor Fan Input (G)	BV	17	0	1	1=OPEN, 2=CLOSE	Type4	No	TSTAT_G
DISCIN_TSTAT_W1	Lo Heat Input (W1)	BV	20	0	1	1=OPEN, 2=CLOSE	Type4	No	TSTAT_W1
DISCIN_TSTAT_W2	Hi Heat Input (W2)	BV	21	0	1	1=OPEN, 2=CLOSE	Type4	No	TSTAT_W2
DISCIN_TSTAT_Y1	Lo Cool Input (Y1)	BV	18	0	1	1=OPEN, 2=CLOSE	Type4	No	TSTAT_Y1
DISCIN_TSTAT_Y2	Hi Cool Input (Y2)	BV	19	0	1	1=OPEN, 2=CLOSE	Type4	No	TSTAT_Y2
DISCIN_VSOLSWA	VS Oil Level Switch A	BV	54	0	1	1=OFF, 2=ON	Type4	No	VSOLSWA
DISCIN_WHEEL_ST	ERV Motion Sensor	BV	40	0	1	1=OFF, 2=ON	Type4	No	WHEEL_ST
DISCOUT_ALMOUT	Alarm	BV	77	0	1	1=OFF, 2=ON	Type4	No	ALMOUT
DISCOUT_AUTOADDR	Fan Auto Address	BV	84	0	1	1=OFF, 2=ON	Type4	No	AUTOADDR
DISCOUT_BYP_DAMP	ERV Bypass Damper	BV	75	0	1	1=OFF, 2=ON	Type4	No	BYP_DAMP
DISCOUT_CCHRA	CCH A	BV	64	0	1	1=OFF, 2=ON	Type4	No	CCHRA
DISCOUT_CCHRB	CCH B	BV	65	0	1	1=OFF, 2=ON	Type4	No	CCHRB
DISCOUT_CMPRELA1	Comp A1 Modulation RLY	BV	56	0	1	1=OPEN, 2=CLOSE	Type4	No	CMPRELA1
DISCOUT_CMPRELA2	Comp A2 Modulation RLY	BV	58	0	1	1=OPEN, 2=CLOSE	Type4	No	CMPRELA2
DISCOUT_CPA1	Compressor A1	BV	55	0	1	1=OFF, 2=ON	Type4	No	CPA1
DISCOUT_CPA2	Compressor A2	BV	57	0	1	1=OFF, 2=ON	Type4	No	CPA2
DISCOUT_HIR	Heat Interlock Relay	BV	78	0	0	1=OFF, 2=ON	Type4	No	HIR
DISCOUT_HMFR	Humidifier	BV	79	0	0	1=OFF, 2=ON	Type4	No	HMFR
DISCOUT_CPB1	Compressor B1	BV	59	0	1	1=OFF, 2=ON	Type4	No	CPB1
DISCOUT_HRR	Heat Reclaim	BV	80	0	0	1=OFF, 2=ON	Type4	No	HRR
DISCOUT_CPB2	Compressor B2	BV	60	0	1	1=OFF, 2=ON	Type4	No	CPB2
DISCOUT_ERVWHEEL	ERV Wheel	BV	68	0	1	1=OFF, 2=ON	Type4	No	ERVWHEEL
DISCOUT_HMS	Reheat 3-way valve	BV	66	0	1	1=OFF, 2=ON	Type4	No	HMS
DISCOUT_ODF1	CF 1 Relay	BV	61	0	1	1=OFF, 2=ON	Type4	No	ODF1
DISCOUT_ODF2	CF 2 Relay	BV	62	0	1	1=OFF, 2=ON	Type4	No	ODF2
DISCOUT_ODF3	CF 3 Relay	BV	63	0	1	1=OFF, 2=ON	Type4	No	ODF3
DISCOUT_PEA	Power Exh A	BV	81	0	1	1=OFF, 2=ON	Type4	No	PEA
DISCOUT_PEB	Power Exh B	BV	82	0	1	1=OFF, 2=ON	Type4	No	PEB
DISCOUT_PEC	Power Exh C	BV	83	0	1	1=OFF, 2=ON	Type4	No	PEC
DISCOUT_POWEXH1	Power Exhaust Enable	AV	212	0	1		Type6	No	POWEXH1
DISCOUT_RH3PRLY	3rd Party Reheat Relay	BV	67	0	1	1=OFF, 2=ON	Type4	No	RH3PRLY
DISCOUT_STGHEAT1	Heat Enable 1	BV	69	0	1	1=OFF, 2=ON	Type4	No	STGHEAT1
DISCOUT_STGHEAT2	Heat Enable 2	BV	70	0	1	1=OFF, 2=ON	Type4	No	STGHEAT2

APPENDIX A — BACNET, CCN NETWORK AND MULTI-STATE POINTS FOR 48/50LC*H AND 48/50V (cont)

48/50LC*H, 48/50V — BACnet, CCN and Multi-State Points (cont)

OBJECT NAME	DESCRIPTION	TYPE	INSTANCE	LOW LIMIT	HIGH LIMIT	MULTI-VALUE TEXT	OPTION	WRITABLE	CCN NAME
DISCOUT_STGHEAT3	Heat Enable 3	BV	71	0	1	1=OFF, 2=ON	Type4	No	STGHEAT3
DISCOUT_STGHEAT4	Heat Enable 4	BV	72	0	1	1=OFF, 2=ON	Type4	No	STGHEAT4
DISCOUT_STGHEAT5	Heat Enable 5	BV	73	0	1	1=OFF, 2=ON	Type4	No	STGHEAT5
DISCOUT_STGHEAT6	Heat Enable 6	BV	74	0	1	1=OFF, 2=ON	Type4	No	STGHEAT6
DISCOUT_ZDOR	Zone Damper Override Relay (ZDOR)	BV	76	0	1	1=OFF, 2=ON	Type4	No	ZDOR
DMDLMCFG_AICLSEL	Analog Limit Mode	AV	214	0	2		Type6	Yes	AICLSEL
DMDLMCFG_CAPLMSRC	Capacity Limit Source	AV	215	0	3		Type6	Yes	CAPLMSRC
DMDLMCFG_DLSWSEN	Demand Switch Enable	BV	85	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	DLSWSEN
DMDLMCFG_DMDCPEN	Capacity Limit Enable	AV	294	0	1		Type6	No	NA
DMDLMCFG_DMDLMEN	Demand Limit Enable	AV	293	0	1		Type6	No	NA
DMDLMCFG_DMDLMSRC	Demand Limit Source	AV	213	0	3		Type6	Yes	DMDLMSRC
EFCFG_CONTROL	EXF Control Config	AV	227	0	3		Type6	Yes	CONTROL
EFCFG_DAMPPOS1	EXF OAD Pos 1	AV	232	0	100		Type6	Yes	DAMPPOS1
EFCFG_DAMPPOS2	EXF OAD Pos 2	AV	233	0	100		Type6	Yes	DAMPPOS2
EFCFG_EXFIRESF	Exhaust Fan Fire Spd	AV	238	0	100		Type6	Yes	EXFIRESF
EFCFG_MAXSPD	EXF Max Speed	AV	229	20	100		Type6	Yes	MAXSPD
EFCFG_MINSPD	EXF Min Speed	AV	228	0	100		Type6	Yes	MINSPD
EFCFG_PEOAD1	EXF OAD Position 1	AV	234	0	100		Type6	Yes	PEOAD1
EFCFG_PEOAD2	EXF OAD Position 2	AV	235	0	100		Type6	Yes	PEOAD2
EFCFG_PEOAD3	EXF OAD Position 3	AV	236	0	100		Type6	Yes	PEOAD3
EFCFG_PEOAD4	EXF OAD Position 4	AV	237	0	100		Type6	Yes	PEOAD4
EFCFG_RAMPRATE	EXF Ramp Rate	AV	485	0	1800		Type6	Yes	RAMPRATE
EFCFG_RAP_TH	Ret Air Press Threshold	AV	77	-1	1		Type6	Yes	RAP_TH
EFCFG_SPEED1	EXF Speed OAD Pos 1	AV	230	0	100		Type6	Yes	SPEED1
EFCFG_SPEED2	EXF Speed OAD Pos 2	AV	231	0	100		Type6	Yes	SPEED2
EFSTP_EFBPSPT	Building Pressure	AV	239	-0.3	0.3		Type6	Yes	EFBPSPT
EQUIPCFG_ALARMEN	Alarm Output Config	BV	94	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	ALARMEN
EQUIPCFG_AUXRELAY	Auxiliary Relay Config	AV	245	0	2	1=NONE, 2=ALARM STAT, 3=OCC STAT	Type6	Yes	AUXRELAY
EQUIPCFG_CONDEN	Condensate Overflow Switch (COFS) Config	BV	115	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	CONDEN
EQUIPCFG_DMDLIM	Demand/Capacity Analog Input Config	BV	86	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	DMDLIM
EQUIPCFG_DMDRSTEN	Demand Reset Switch Config	BV	114	0	0	1=DISABLE, 2=ENABLE	Type4	Yes	DMDRSTEN
EQUIPCFG_DOREN	Zone Damper Override Relay (ZDOR) Config	BV	92	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	DOREN
EQUIPCFG_EATEN	EAT Sensor	BV	95	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	EATEN
EQUIPCFG_ECONEN	Economizer (OAD)	BV	109	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	ECONEN
EQUIPCFG_EF3PEN	EXF 3rd Party Mod	BV	99	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	EF3PEN
EQUIPCFG_EFEN	Exhaust Fan	BV	108	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	EFEN
EQUIPCFG_ENTHSWEN	Enthalpy Switch	BV	116	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	ENTHSWEN
EQUIPCFG_ERVBYPEN	ERV Bypass Damper	BV	104	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	ERVBYPEN
EQUIPCFG_ERVEN	ERV	BV	102	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	ERVEN
EQUIPCFG_ERVOAFEN	ERV OAF	BV	103	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	ERVOAFEN
EQUIPCFG_EVACEN	Evacuation Switch	BV	106	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	EVACEN
EQUIPCFG_FILTSWEN	Pre-Filter Switch	BV	90	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	FILTSWEN
EQUIPCFG_FIRESWEN	Fire Switch	BV	105	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	FIRESWEN
EQUIPCFG_FRZSWEN	Freeze Switch	AV	292	0	1	1=DISABLE, 2=ENABLE	Type6	No	NA
EQUIPCFG_HT1EN	Heat Stage 1 Relay	BV	110	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	HT1EN

APPENDIX A — BACNET, CCN NETWORK AND MULTI-STATE POINTS FOR 48/50LC*H AND 48/50V (cont)

48/50LC*H, 48/50V — BACnet, CCN and Multi-State Points (cont)

OBJECT NAME	DESCRIPTION	TYPE	INSTANCE	LOW LIMIT	HIGH LIMIT	MULTI-VALUE TEXT	OPTION	WRITABLE	CCN NAME
EQUIPCFG_HT2EN	Heat Stage 2 Relay	BV	111	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	HT2EN
EQUIPCFG_HT3EN	Heat Stage 3 Relay	BV	112	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	HT3EN
EQUIPCFG_HT4EN	Heat Stage 4 Relay	BV	113	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	HT4EN
EQUIPCFG_HUMSWEN	Humidistat	BV	89	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	HUMSWEN
EQUIPCFG_IAQOREN	IAQ-OD Pos Reset Enable	BV	117	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	IAQOREN
EQUIPCFG_IAQSWEN	IAQ Switch	BV	119	0	0	1=DISABLE, 2=ENABLE	Type4	Yes	IAQSWEN
EQUIPCFG_OACFMEN	OACFM Sensor	BV	96	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	OACFMEN
EQUIPCFG_OAD3PEN	OAD 3rd Party Mod	BV	101	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	OAD3PEN
EQUIPCFG_OAQSWEN	OAQ Switch	BV	118	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	OAQSWEN
EQUIPCFG_PMREN	Phase Monitor	BV	91	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	PMREN
EQUIPCFG_PRESSEN	Pressurization Switch	BV	107	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	PRESSEN
EQUIPCFG_RESWEN	Remote Input	AV	244	0	2	1=NONE, 2=REMOTE SD, 3=OCC SW	Type6	Yes	RESWEN
EQUIPCFG_RH3PEN	3rd Party Reheat Enable	BV	100	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	RH3PEN
EQUIPCFG_SF3PEN	IDF 3rd Party Mod	BV	97	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	SF3PEN
EQUIPCFG_SHTDWNEN	Emergency Shutdown En	BV	92	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	SHTDWNEN
EQUIPCFG_SIO1AI10	IAQ/OAD Input Config	AV	246	0	5	1=NONE, 2=IAQ SENS, 3=OAD MOD, 4=IAQ RESET	Type6	Yes	NA
EQUIPCFG_SMOKEEN	Smoke Detector	BV	87	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	SMOKEEN
EQUIPCFG_SPSR	SPSR Sensor	BV	98	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	SPSR
EQUIPCFG_TSTATEN	Thermostat	BV	88	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	TSTATEN
EQUIPCFG_VFDODFNM	Num of ODF VFDs in Unit	AV	489	1	3		Type6	Yes	VFDODFNM
EQUIPCFG_ZDOREN	ZDOR	BV	93	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	ZDOREN
ERVCFG_CHKTYPE	ERV Check Type	AV	248	0	2		Type6	Yes	CHKTYPE
ERVCFG_ENTTOL	ERV Enthalpy Tolerance	AV	250	0	2		Type6	Yes	ENTTOL
ERVCFG_ERVEFMIN	ERV Wheel Exh Min Speed	AV	255	0	100		Type6	Yes	ERVEFMIN
ERVCFG_ERVMINPS	ERV Fan Damper Min Pos	AV	253	0	100		Type6	Yes	ERVMINPS
ERVCFG_MAXBYPCL	ERV Fan Max Bypass Close	AV	252	0	100		Type6	Yes	MAXBYPCL
ERVCFG_MAXBYPOP	ERV Fan Max Bypass Open	AV	251	0	100		Type6	Yes	MAXBYPOP
ERVCFG_OFFENTDB	ERV Off Enthalpy DB	AV	257	0	2		Type6	Yes	OFFENTDB
ERVCFG_OFFTMPDB	ERV Off Temp DB	AV	256	0	10		Type6	Yes	OFFTMPDB
ERVCFG_TMPTOL	ERV Temp Tolerance	AV	249	0	20		Type6	Yes	TMPTOL
ERVCFG_WHMINPOS	ERV Wheel-Minimum Pos	AV	254	0	100		Type6	Yes	WHMINPOS
EXVSTP_EXVSTA1	A1 Start Pos	AV	262	0	100		Type6	Yes	EXVSTA1
EXVSTP_EXVSTA2	A2 Start Pos	AV	263	0	100		Type6	Yes	EXVSTA2
EXVSTP_EXVSTB1	B1 Start Pos	AV	264	0	100		Type6	Yes	EXVSTB1
EXVSTP_EXVSTB2	B2 Start Pos	AV	265	0	100		Type6	Yes	EXVSTB2
EXVSTP_EXVSTENB	Manual Start Pos Enable	BV	121	0	0	1=DISABLE, 2=ENABLE	Type4	Yes	EXVSTENB
EXVSTP_SETPTENB	User Setpoint Enable	BV	120	0	0	1=DISABLE, 2=ENABLE	Type4	Yes	SETPTENB
EXVSTP_SUPHTA1	A1 Superheat Setpoint	AV	258	0	0		Type6	Yes	SUPHTA1
EXVSTP_SUPHTA2	A2 Superheat Setpoint	AV	259	0	0		Type6	Yes	SUPHTA2
EXVSTP_SUPHTB1	B1 Superheat Setpoint	AV	260	0	0		Type6	Yes	SUPHTB1
EXVSTP_SUPHTB2	B2 Superheat Setpoint	AV	261	0	0		Type6	Yes	SUPHTB2
FILTER_STATUS	Filter Status	AV	286	0	1		Type6	No	NA
FRECLCFG_CHNGSEL	Changeover Select	AV	266	0	3		Type6	Yes	CHNGSEL
FRECLCFG_DEWLIM	OADP Limit Check	BV	125	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	DEWLIM
FRECLCFG_DEWLIMTH	OADP Threshold	AV	269	50	62		Type6	Yes	DEWLIMTH
FRECLCFG_DIFFDBTH	Diff Dry Bulb Threshold	AV	270	0	10		Type6	Yes	DIFFDBTH

APPENDIX A — BACNET, CCN NETWORK AND MULTI-STATE POINTS FOR 48/50LC*H AND 48/50V (cont)

48/50LC*H, 48/50V — BACnet, CCN and Multi-State Points (cont)

OBJECT NAME	DESCRIPTION	TYPE	INSTANCE	LOW LIMIT	HIGH LIMIT	MULTI-VALUE TEXT	OPTION	WRITABLE	CCN NAME
FRECLCFG_DIFFENTH	Diff Enthalpy Threshold	AV	267	0	2		Type6	Yes	DIFFENTH
FRECLCFG_DRYBLB	Dry Bulb Chngeover (OAT)	BV	124	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	DRYBLB
FRECLCFG_DRYBLBTH	OAT Dry Bulb Threshold	AV	268	-40	120		Type6	Yes	DRYBLBTH
FRECLCFG_FCOOL_TG	Free Cool Timeguard	AV	459	0	30		Type6	Yes	FCOOL_TG
FRECLCFG_FREECLEN	Occ Free Cool	BV	122	0	0	1=DISABLE, 2=ENABLE	Type4	Yes	FREECLEN
FRECLCFG_IAQOADDRS	IAQ Switch OAD Pos Reset	AV	272	-100	0		Type6	Yes	IAQOADDRS
FRECLCFG_ODAIRQ	OAQ Check	BV	139	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	ODAIRQTH
FRECLCFG_ODAIRQTH	OAQ Lockout	AV	271	1000	2000		Type6	Yes	ODAIRQTH
FRECLCFG_UFC	Unocc Free Cooling	BV	123	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	UFC
GENUNIT_FILT_RT	Filter Minutes	AV	452	0	0		Type6	No	NA
GENUNIT_FLTR_RST	Reset Filter Hours	BV	159	0	0	1=NO, 2=YES	Type4	Yes	NA
GENUNIT_HEATCOOL	Heat/Cool status	AV	281	0	2		Type6	No	NA
GENUNIT_NETOCC	Network Occupancy	AV	351	0	2		Type6	Yes	NETOCC
GENUNIT_OCCUPIED	Occupied	AV	278	0	1		Type6	No	OCCUPIED
GENUNIT_PREFLTR_LIM	Pre-Filter Press Limit	AV	43	0.5	5		Type6	Yes	PFLTRLIM
GENUNIT_PREFLTR_SRC	Pre-Filter Source	AV	42	0	3		Type6	Yes	PFLTRSRC
GENUNIT_SMAXCCAP	System Max Cool Capacity Limit	AV	543	0	100		Type6	No	SMAXCCAP
GENUNIT_SMAXHCAP	System Max Heat Capacity Limit	AV	544	0	100		Type6	No	SMAXHCAP
HCSTATUS_CAPACT	Cooling Capacity	AV	275	0	0		Type6	No	NA
HCSTATUS_HEATREQ	Heat Request from UI	AV	273	0	0		Type6	No	HEATREQ
HCSTATUS_SATCTLPT	SAT Control Point	AV	274	0	0		Type6	No	NA
HEATCFG_DOHIHTON	Hi Heat On DB Config	AV	311	0.5	20		Type6	Yes	DOHIHTON
HEATCFG_DOLOHTOF	Lo Heat Off DB Config	AV	310	0.5	2		Type6	Yes	DOLOHTOF
HEATCFG_DOLOHTON	Lo Heat On DB Config	AV	309	0	2		Type6	Yes	DOLOHTON
HEATCFG_HEAT_EBL	Morning Warmup Only Config	BV	129	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	HEAT_EBL
HEATCFG_HEAT_FOD	Heat Fan Off Delay Timer Config	AV	302	30	120		Type6	Yes	HEAT_FOD
HEATCFG_HEATTTDB	Heat Tempered Cooling DB Config	AV	295	0	0		Type6	Yes	HEATTTDB
HEATCFG_HT2DTG	Heat 2Stage Dn Timeguard Config	AV	299	30	300		Type6	Yes	HT2DTG
HEATCFG_HT2UTG	Heat 2Stage Up Timeguard Config	AV	300	30	300		Type6	Yes	NA
HEATCFG_HTMPDVNT	Heat Tempered Venting Config	BV	126	0	0	1=DISABLE, 2=ENABLE	Type4	Yes	HTMPDVNT
HEATCFG_HTEMPCL	Heat Tempered Cooling Config	BV	127	0	0	1=DISABLE, 2=ENABLE	Type4	Yes	HTEMPCL
HEATCFG_HTTNDTM	Heat Trend Time Config	AV	297	30	600		Type6	Yes	HTTNDTM
HEATCFG_HTTREND	Heat Trend Level Config	AV	296	0.1	5		Type6	Yes	HTTREND
HEATSTP_CAPLIMS1	Heat Capacity Limit S1 Config	AV	222	0	100		Type6	Yes	HCPLIMS1
HEATSTP_CAPLIMS2	Heat Capacity Limit S2 Config	AV	223	0	100		Type6	Yes	HCPLIMS2
HEATSTP_DMDLIMS1	Heat Demand Limit S1 Config	AV	224	0	10		Type6	Yes	HDLIMS1
HEATSTP_DMDLIMS2	Heat Demand Limit S2 Config	AV	225	0	10		Type6	Yes	HDLIMS2
HEATSTP_DMDRSTHT	Dmd Reset Heat Adjust Config	AV	298	0	10		Type6	Yes	DMDRSTHT
HEATSTP_HODAHHT	100% OA High Heat SAT Config	AV	308	65	125		Type6	Yes	HODAHHT
HEATSTP_HODALHT	100% OA Low Heat SAT Config	AV	307	65	125		Type6	Yes	HODALHT
HEATSTP_HTCAPSTP	Max Heat Capacity Config	AV	221	50	100		Type6	Yes	HTCAPSTP
HEATSTP_HTSP_OCC	Occupied Heating Config	AV	303	55	80		Type6	Yes	HTSP_OCC
HEATSTP_HTSP_UNO	Unoccupied Heating Config	AV	304	40	99		Type6	Yes	HTSP_UNO
HEATSTP_SAHHTSP	Hi Heat SAT Setpoint	AV	306	60	125		Type6	Yes	SAHHTSP
HEATSTP_SALOHTSP	Lo Heat SAT Setpoint	AV	305	60	125		Type6	Yes	SALOHTSP
HMZR_CONDPURG	Humidizer Purge Config	AV	290	0	0		Type6	No	NA
IDFCFG_IDFCSPD1	Lo Cool IDF Speed Config	AV	316	0	100		Type6	Yes	IDFCSPD1
IDFCFG_IDFCSPD2	Hi Cool IDF Speed Config	AV	318	0	100		Type6	Yes	IDFCSPD2
IDFCFG_IDFHSPD1	Lo Heat IDF Speed Config	AV	322	0	100		Type6	Yes	IDFHSPD1
IDFCFG_IDFHSPD2	Hi Heat IDF Speed Config	AV	323	0	100		Type6	Yes	IDFHSPD2
IDFCFG_IDFIRES	Indoor Fan Fire Speed Config	AV	324	0	100		Type6	Yes	IDFIRES
IDFCFG_IDFMCSPD	Med Cool IDF Speed Config	AV	317	0	100		Type6	Yes	IDFMCSPD
IDFCFG_IDFMNSPD	Indoor Fan Min Speed Config	AV	314	0	100		Type6	Yes	IDFMNSPD
IDFCFG_IDFMXSPD	Indoor Fan Max Speed Config	AV	315	0	100		Type6	Yes	IDFMXSPD
IDFCFG_OCCUCFG	Occupied Fan Config	AV	325	0	1		Type6	Yes	OCCUCFG
IDFCFG_OPSELECT	IDF Control Config	AV	312	0	8		Type6	Yes	OPSELECT
IDFCFG_SAVHCCTH	SAV High Cool Cap Thresh Config	AV	321	0	100		Type6	Yes	SAVHCCTH
IDFCFG_SAVLCCTH	SAV Low Cool Cap Thresh Config	AV	319	0	100		Type6	Yes	SAVLCCTH
IDFCFG_SAVMCCTH	SAV Med Cool Cap Thresh Config	AV	320	0	100		Type6	Yes	SAVMCCTH
IDFCFG_SAVTYPE	SAV Mode Selection Config	AV	313	0	1		Type6	Yes	SAVTYPE

APPENDIX A — BACNET, CCN NETWORK AND MULTI-STATE POINTS FOR 48/50LC*H AND 48/50V (cont)

48/50LC*H, 48/50V — BACnet, CCN and Multi-State Points (cont)

OBJECT NAME	DESCRIPTION	TYPE	INSTANCE	LOW LIMIT	HIGH LIMIT	MULTI-VALUE TEXT	OPTION	WRITABLE	CCN NAME
IDFCFG_SDPRLMIT	SP Reset Limit Config	AV	277	0	3		Type6	No	SDPRLMIT
IDFCFG_SDPRTTIO	SP Reset Ratio Config	AV	328	0	3		Type6	Yes	SDPRTTIO
IDFCFG_SDPRS	SP Reset Source Config	AV	327	0	5		Type6	Yes	SDPRS
IDFCFG_SDPRTIME	SDP Reset Time Config	AV	329	5	30		Type6	Yes	SDPRTIME
IDFCFG_SDPZRZDP	SDP Reset ZDP Threshold Config	AV	330	40	100		Type6	Yes	SDPZRZDP
IDFCFG_UNOCCFG	Unoccupied Fan Config	AV	326	0	1		Type6	Yes	UNOCCFG
IDFCFG_VENTSPD1	IDF Vent Speed 1 Config	AV	361	0	100		Type6	Yes	VENTSPD1
IDFCFG_VENTSPD2	IDF Vent Speed 2 Config	AV	362	0	100		Type6	Yes	VENTSPD2
IDFCFG_VENTSPD3	IDF Vent Speed 3 Config	AV	363	0	100		Type6	Yes	VENTSPD3
IDFCFG_VENTSPD4	IDF Vent Speed 4 Config	AV	364	0	100		Type6	Yes	VENTSPD4
IDFSTP_CO2LVL	CO2 Level Setpoint	AV	331	0	2000		Type6	Yes	CO2LVL
IDFSTP_DUCTSET	Supply Pressure Setpoint	AV	332	0	2.5		Type6	Yes	DUCTSET
IDFSTP_ZPSETPT	Zone Pressure Setpoint	AV	271	-0.25	0.25		Type6	No	ZPSETPT
LINK_ACT	Linkage Active	BV	131	0	0	1=NO, 2=YES	Type4	No	LINK_ACT
MDESTS_CIRCAMDN	Circuit A Mode	MV	1	0	0	1=NORMAL, 2=TEST	Type5	No	CIRCAMDN
MDESTS_CIRCBMDN	Circuit B Mode	MV	2	0	0	1=NORMAL, 2=TEST	Type5	No	CIRCBMDN
MDESTS_CMPA1MDN	Comp A1 Mode	MV	3	0	0	1=NONE, 2=MANUAL, 3=FLD_TEMP, 4=DP_HIGH, 5=DP_LOW, 6=SP_HIGH, 7=SP_LOW, 8=DT_HIGH, 9= MOTTMPHI, 10=FLDTMPHI, 11=INVTMPHI, 12=RCTTMPHI, 13=OILVISLO, 14=MOTCURHI, 15=CMPSURGE, 16=MODE_MAX, 17=DP_HIGHF, 18=SP_LOWF	Type5	No	CMPA1MDN
MDESTS_CMPA2MDN	Comp A2 Mode	MV	4	0	0	1=NONE, 2=MANUAL, 3=FLD_TEMP, 4=DP_HIGH, 5=DP_LOW, 6=SP_HIGH, 7=SP_LOW, 8=DT_HIGH, 9= MOTTMPHI, 10=FLDTMPHI, 11=INVTMPHI, 12=RCTTMPHI, 13=OILVISLO, 14=MOTCURHI, 15=CMPSURGE, 16=MODE_MAX, 17=DP_HIGHF, 18=SP_LOWF	Type5	No	CMPA2MDN
MDESTS_CMPB1MDN	Comp B1 Mode	MV	5	0	0	1=NONE, 2=MANUAL, 3=FLD_TEMP, 4=DP_HIGH, 5=DP_LOW, 6=SP_HIGH, 7=SP_LOW, 8=DT_HIGH, 9= MOTTMPHI, 10=FLDTMPHI, 11=INVTMPHI, 12=RCTTMPHI, 13=OILVISLO, 14=MOTCURHI, 15=CMPSURGE, 16=MODE_MAX, 17=DP_HIGHF, 18=SP_LOWF	Type5	No	CMPB1MDN

APPENDIX A — BACNET, CCN NETWORK AND MULTI-STATE POINTS FOR 48/50LC*H AND 48/50V (cont)

48/50LC*H, 48/50V — BACnet, CCN and Multi-State Points (cont)

OBJECT NAME	DESCRIPTION	TYPE	INSTANCE	LOW LIMIT	HIGH LIMIT	MULTI-VALUE TEXT	OPTION	WRITABLE	CCN NAME
MDESTS_CMPB2MDN	Comp B2 Mode	MV	6	0	0	1=NONE, 2=MANUAL, 3=FLD_TEMP, 4=DP_HIGH, 5=DP_LOW, 6=SP_HIGH, 7=SP_LOW, 8=DT_HIGH, 9= MOTTMPHI, 10=FLDTMPHI, 11=INVTMPHI, 12=RCTTMPHI, 13=OILVISLO, 14=MOTCURHI, 15=CMPSURGE, 16=MODE_MAX, 17=DP_HIGHF, 18=SP_LOWF	Type5	No	CMPB2MDN
MDESTS_DHUMPURG	Reheat Oil Purge	BV	130	0	1	1=OFF, 2=ON	Type4	No	DHUMPURG
MDESTS_DMD_DET	Demand Determination	AV	279	0	0		Type6	No	DMD_DET
MDESTS_ECONMNUM	OAD Mode	MV	12	0	0	1=NONE, 2=MANUAL, 3=AMB_FLOW, 4=MNAIRQLY, 5=NOM_TRAC, 6=SAT, 7=IAQ_OVR, 8=AMBFWSW	Type5	No	ECONMNUM
MDESTS_ERVCHECK	ERV Check Status	BV	132	0	1	1=FALSE, 2=TRUE	Type4	No	ERVCHECK
MDESTS_HEATRMDN	Heater Mode	MV	11	0	0	1=NONE, 2=SAT, 3=RAT, 4= ZONE, 5=MAT, 6=EXTERNAL, 7=MANUAL, 8=SAT, 9=RAT, 10=ZONE, 11=MAT, 12=EXTERNAL, 13=MANUAL	Type5	No	HEATRMDN
MDESTS_IDFMDNUM	Indoor Fan Mode	MV	10	0	0	1=NONE, 2=MANUAL, 3=SDP_NOM, 4=SDP_HIGH, 5=SDP_LOW, 6=CO2_NOM, 7=CO2_LOW, 8=CTLFLUID, 9=SST_LOW, 10=ST_LOW, 11=FLOW_NOM, 12=BP_NOM, 13=BP_HIGH, 14=BP_LOW, 15=TRACK, ON	Type5	No	IDFMDNUM
MDESTS_MODETCST	Temp Compensated Start	BV	168	0	0	1=OFF, 2=ON	Type4	No	MODETCST
MDESTS_ODF1MDN	CF 1 Mode	MV	7	0	0	1=NONE, 2=MANUAL, 3= DP_OPT, 4=DP_LOW, 5=DP_LOW, 6=DP_HIGH, 7=DT_HIGH	Type5	No	ODF1MDN
MDESTS_ODF2MDN	CF 2 Mode	MV	8	0	0	1=NONE, 2=MANUAL, 3= DP_OPT, 4=DP_LOW, 5=DP_LOW, 6=DP_HIGH, 7=DT_HIGH	Type5	No	ODF2MDN

APPENDIX A — BACNET, CCN NETWORK AND MULTI-STATE POINTS FOR 48/50LC*H AND 48/50V (cont)

48/50LC*H, 48/50V — BACnet, CCN and Multi-State Points (cont)

OBJECT NAME	DESCRIPTION	TYPE	INSTANCE	LOW LIMIT	HIGH LIMIT	MULTI-VALUE TEXT	OPTION	WRITABLE	CCN NAME
MDESTS_ODF3MDN	CF 3 Mode	MV	9	0	0	1=NONE, 2=MANUAL, 3= DP_OPT, 4=DP_LOW, 5=DP_LOW, 6=DP_HIGH, 7=DT_HIGH	Type5	No	ODF3MDN
MDESTS_OP_STATE	Operational State	AV	280	0	0		Type6	No	OP_STATE
NETIN_G_NET	Network G	BV	137	0	1	1=OFF, 2=ON	Type4	Yes	G_NET
NETIN_HSTATNET	Network HSTAT	BV	138	0	1	1=OFF, 2=ON	Type4	Yes	HSTATNET
NETIN_W1_NET	Network W1	BV	135	0	1	1=OFF, 2=ON	Type4	Yes	W1_NET
NETIN_W2_NET	Network W2	BV	136	0	1	1=OFF, 2=ON	Type4	Yes	W2_NET
NETIN_Y1_NET	Network Y1	BV	133	0	1	1=OFF, 2=ON	Type4	Yes	Y1_NET
NETIN_Y2_NET	Network Y2	BV	134	0	1	1=OFF, 2=ON	Type4	Yes	Y2_NET
OADCFCF_CFMSP	OACFM Setpoint Config	AV	385	0	20000		Type6	Yes	CFMSP
OADCFCF_ECONCTRL	Ventilation Control Config	AV	356	0	5		Type6	Yes	ECONCTRL
OADCFCF_FLTGAP	OAD Fault Detect Gap Config	AV	54	2	100		Type6	Yes	FLTGAP
OADCFCF_FLTTIME	OAD Fault Detect Time Config	AV	55	10	240		Type6	Yes	FLTTIME
OADCFCF_IAQCFMRS	IAQ OA CFM Reset Config	AV	379	-40000	0		Type6	Yes	IAQCFMRS
OADCFCF_IAQOCFG	IAQ Override Conf Config	AV	357	0	2		Type6	Yes	IAQOCFG
OADCFCF_IAQODB	IAQ Override Deadband Config	AV	371	100	1000		Type6	Yes	IAQODB
OADCFCF_IAQOPOS	IAQ Override Position Config	AV	372	0	100		Type6	Yes	IAQOPOS
OADCFCF_IAQOTH	IAQ Override Threshold Config	AV	370	400	2000		Type6	Yes	IAQOTH
OADCFCF_IAQPDUR	IAQ Purge Duration Config	AV	373	5	60		Type6	Yes	IAQPDUR
OADCFCF_IAQPHITP	IAQ Purge Hi Temp Pos Config	AV	378	0	100		Type6	Yes	IAQPHITP
OADCFCF_IAQPLOCK	IAQ Purge Lockout Config	AV	374	35	70		Type6	Yes	IAQPLOCK
OADCFCF_IAQPLOTP	IAQ Purge Lo Temp Pos Config	AV	377	0	100		Type6	Yes	IAQPLOTP
OADCFCF_IAQPOP	IAQ Pre-Occ Purge Config	BV	141	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	IAQPOP
OADCFCF_IAQPRGHL	IAQ Purge OAT Hi Lockout Config	AV	376	85	115		Type6	Yes	IAQPRGHL
OADCFCF_IAQPRGLL	IAQ Purge OAT Lo Lockout Config	AV	375	0	50		Type6	Yes	IAQPRGLL
OADCFCF_IAQRESET	IAQ Reset Source Config	AV	369	0	3		Type6	Yes	IAQRESET
OADCFCF_IASBVEN	IAQ Vent Standby Demand Config	BV	140	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	IASBVEN
OADCFCF_MAXPOS	OAD Max Position Config	AV	359	0	100		Type6	Yes	MAXPOS
OADCFCF_MINOADCP	Min OAD Control Point Config	AV	360	0	100		Type6	Yes	MINOADCP
OADCFCF_MINPOS	OAD Min Position Config	AV	358	0	100		Type6	Yes	MINPOS
OADCFCF_OABPORDB	Bld Pressure Deadband Config	AV	384	0	0.05		Type6	Yes	OABPORDB
OADCFCF_OABPOREN	Bld Pressure Override En Config	AV	382	0	1		Type6	Yes	OABPOREN
OADCFCF_OABPORTH	Bld Pressure Threshold Config	AV	383	0	0.2		Type6	Yes	OABPORTH
OADCFCF_OADPOS1	OA Damper Vent Pos 1 Config	AV	365	0	100		Type6	Yes	OADPOS1
OADCFCF_OADPOS2	OA Damper Vent Pos 2 Config	AV	366	0	100		Type6	Yes	OADPOS2
OADCFCF_OADPOS3	OA Damper Vent Pos 3 Config	AV	367	0	100		Type6	Yes	OADPOS3
OADCFCF_OADPOS4	OA Damper Vent Pos 4 Config	AV	368	0	100		Type6	Yes	OADPOS4
OADCFCF_PRGLONG	Purge Long Duration Config	AV	381	10	60		Type6	Yes	PRGLONG
OADCFCF_PRGSHORT	Purge Short Duration Config	AV	380	5	30		Type6	Yes	PRGSHORT
OCCSBNET	Occupied Standby Net	AV	354	0	0		Type6	Yes	OCCSBNET
OUTPUTS_EXVA1OBJ	EXV A1 Objective	AV	499	0	0		Type6	No	EXVA1OBJ
OUTPUTS_EXVA2OBJ	EXV A2 Objective	AV	500	0	0		Type6	No	EXVA2OBJ
OUTPUTS_EXVB1OBJ	EXV B1 Objective	AV	501	0	0		Type6	No	EXVB1OBJ
OUTPUTS_EXVB2OBJ	EXV B2 Objective	AV	502	0	0		Type6	No	EXVB2OBJ
RFGPRESS_DPA	Cir A Discharge Pressure	AV	388	0	0		Type6	No	DPA
RFGPRESS_DPB	Cir B Discharge Pressure	AV	389	0	0		Type6	No	DPB
RFGPRESS_SPA	Cir A Suction Pressure	AV	386	0	0		Type6	No	SPA
RFGPRESS_SPB	Cir B Suction Pressure	AV	387	0	0		Type6	No	SPB
RFGTEMP_CCT	Cooling Coil Temp	AV	282	0	0		Type6	No	CCT
RFGTEMP_DGTA	Discharge Gas Temp A	AV	289	0	0		Type6	No	NA
RFGTEMP_OILTSPA	Oil Sump Temp	AV	402	0	0		Type6	No	OILTSPA
RFGTEMP_SDTA	Saturated Discharge CirA	AV	392	0	0		Type6	No	SDTA
RFGTEMP_SDTB	Saturated Discharge CirB	AV	393	0	0		Type6	No	SDTB
RFGTEMP_SGT1	Suction Gas Temp 1	AV	288	0	0		Type6	No	NA
RFGTEMP_SGTA1	Suction Gas Temp Cir A1	AV	398	0	0		Type6	No	SGTA1
RFGTEMP_SGTA2	Suction Gas Temp Cir A2	AV	399	0	0		Type6	No	SGTA2
RFGTEMP_SGTB1	Suction Gas Temp Cir B1	AV	400	0	0		Type6	No	SGTB1

APPENDIX A — BACNET, CCN NETWORK AND MULTI-STATE POINTS FOR 48/50LC*H AND 48/50V (cont)

48/50LC*H, 48/50V — BACnet, CCN and Multi-State Points (cont)

OBJECT NAME	DESCRIPTION	TYPE	INSTANCE	LOW LIMIT	HIGH LIMIT	MULTI-VALUE TEXT	OPTION	WRITABLE	CCN NAME
RFGTEMP_SGTB2	Suction Gas Temp Cir B2	AV	401	0	0		Type6	No	SGTB2
RFGTEMP_SSHA1	A1 Superheat Temp	AV	394	0	0		Type6	No	SSHA1
RFGTEMP_SSHA2	A2 Superheat Temp	AV	395	0	0		Type6	No	SSHA2
RFGTEMP_SSHB1	B1 Superheat Temp	AV	396	0	0		Type6	No	SSHB1
RFGTEMP_SSHB2	B2 Superheat Temp	AV	397	0	0		Type6	No	SSHB2
RFGTEMP_SSTA	Saturated Suction A	AV	390	0	0		Type6	No	SSTA
RFGTEMP_SSTB	Saturated Suction B	AV	391	0	0		Type6	No	SSTB
RUNTIME_CCHRA_RC	CCH A Reset Count	AV	441	0	0		Type6	No	NA
RUNTIME_CCHRA_RT	CCH A Minutes	AV	439	0	0		Type6	No	NA
RUNTIME_CCHRA_SC	CCH A Start Count	AV	440	0	0		Type6	No	NA
RUNTIME_CCHRB_RC	CCH B Reset Count	AV	444	0	0		Type6	No	NA
RUNTIME_CCHRB_RT	CCH B Minutes	AV	442	0	0		Type6	No	NA
RUNTIME_CCHRB_SC	CCH B Start Count	AV	443	0	0		Type6	No	NA
RUNTIME_CND1_RC	CF 1 Reset Count	AV	417	0	0		Type6	No	NA
RUNTIME_CND1_RT	CF 1 Minutes	AV	415	0	0		Type6	No	NA
RUNTIME_CND1_SC	CF 1 Start Count	AV	416	0	0		Type6	No	NA
RUNTIME_CND2_RC	CF 2 Reset Count	AV	420	0	0		Type6	No	NA
RUNTIME_CND2_RT	CF 2 Minutes	AV	418	0	0		Type6	No	NA
RUNTIME_CND2_SC	CF 2 Start Count	AV	419	0	0		Type6	No	NA
RUNTIME_CND3_RC	CF 3 Reset Count	AV	423	0	0		Type6	No	NA
RUNTIME_CND3_RT	CF 3 Minutes	AV	421	0	0		Type6	No	NA
RUNTIME_CND3_SC	CF 3 Start Count	AV	422	0	0		Type6	No	NA
RUNTIME_COMPA1RC	Comp A1 Reset Count	AV	405	0	0		Type6	No	NA
RUNTIME_COMPA1RT	Comp A1 Minutes	AV	403	0	0		Type6	No	NA
RUNTIME_COMPA1SC	Comp A1 Start Count	AV	404	0	0		Type6	No	NA
RUNTIME_COMPA2RC	Comp A2 Reset Count	AV	408	0	0		Type6	No	NA
RUNTIME_COMPA2RT	Comp A2 Minutes	AV	406	0	0		Type6	No	NA
RUNTIME_COMPA2SC	Comp A2 Start Count	AV	407	0	0		Type6	No	NA
RUNTIME_COMPB1RC	Comp B1 Reset Count	AV	411	0	0		Type6	No	NA
RUNTIME_COMPB1RT	Comp B1 Minutes	AV	409	0	0		Type6	No	NA
RUNTIME_COMPB1SC	Comp B1 Start Count	AV	410	0	0		Type6	No	NA
RUNTIME_COMPB2RC	Comp B2 Reset Count	AV	414	0	0		Type6	No	NA
RUNTIME_COMPB2RT	Comp B2 Minutes	AV	412	0	0		Type6	No	NA
RUNTIME_COMPB2SC	Comp B2 Start Count	AV	413	0	0		Type6	No	NA
RUNTIME_DAMP_RC	OAD Reset Count	AV	438	0	0		Type6	No	NA
RUNTIME_DAMP_RT	OAD Minutes	AV	436	0	0		Type6	No	NA
RUNTIME_DAMP_SC	OAD Start Count	AV	437	0	0		Type6	No	NA
RUNTIME_EFAN_RC	Exhaust Fan Reset Count	AV	429	0	0		Type6	No	NA
RUNTIME_EFAN_RT	Exhaust Fan Minutes	AV	427	0	0		Type6	No	NA
RUNTIME_EFAN_SC	Exhaust Fan Start Count	AV	428	0	0		Type6	No	NA
RUNTIME_HMVLV_RC	HGRH Valve Reset Count	AV	435	0	0		Type6	No	NA
RUNTIME_HMVLV_RT	HGRH Valve Minutes	AV	433	0	0		Type6	No	NA
RUNTIME_HMVLV_SC	HGRH Valve Start Count	AV	434	0	0		Type6	No	NA
RUNTIME_HUMPUSC	Humdimizer Cycle Cnt	AV	451	0	0		Type6	No	NA
RUNTIME_IDF_RC	Indoor Fan Reset Count	AV	426	0	0		Type6	No	NA
RUNTIME_IDF_RT	Indoor Fan Minutes	AV	424	0	0		Type6	No	NA
RUNTIME_IDF_SC	Indoor Fan Start Count	AV	425	0	0		Type6	No	NA
RUNTIME_OILACYSC	Oil Cir A Count	AV	445	0	0		Type6	No	NA
RUNTIME_OILBCYSC	Oil Cir B Count	AV	446	0	0		Type6	No	NA
RUNTIME_SHEAT_RC	Heat Reset Count	AV	432	0	0		Type6	No	NA
RUNTIME_SHEAT_RT	Heat Minutes	AV	430	0	0		Type6	No	NA
RUNTIME_SHEAT_SC	Heat Start Count	AV	431	0	0		Type6	No	NA
SERVICE_DISABLEM	Service Lock Out	BV	165	0	1	1=DISABLE, 2=ENABLE	Type4	Yes	DISABLEM
SERVICE_LLAGCFG	Lead Lag Config	AV	488	1	2		Type6	Yes	LLAGCFG
SERVICE_MAXOACFM	OACFM Sensor Max Range	AV	453	1	40000		Type6	Yes	MAXOACFM
SERVICE_NETINTO	Network Input Timeout	AV	487	1	30		Type6	Yes	NETINTO
SERVICE_RCYCDB	Recycle DB	AV	491	0	10		Type6	Yes	RCYCDB
SERVICE_RCYCLIM	Recycle Limit	AV	490	35	50		Type6	Yes	RCYCLIM
SERVICE_TCSTCOOL	Temp.Cmp.Strt.Cool Factr	AV	179	0	60		Type6	Yes	TCSTCOOL
SERVICE_TCSTHEAT	Temp.Cmp.Strt.Heat Factr	AV	301	0	60		Type6	Yes	TCSTHEAT
SERVICE1_CLTOHT	Cool to Heat Guard	AV	455	0	20		Type6	Yes	CLTOHT
SERVICE1_CMPMATL	Comp MAT Lockout	AV	477	-20	70		Type6	Yes	CMPMATL
SERVICE1_CMPOATL	Comp OAT Lock	AV	478	-20	70		Type6	Yes	CMPOATL
SERVICE1_HTTACL	Heat to Cool Guard	AV	454	0	20		Type6	Yes	HTTACL
SERVICE1_M_FILTER	Pre-Filter Hours	AV	287	0	0		Type6	No	NA
SERVICE1_SVTESTMT	Test Mode Timeout	AV	486	0	120		Type6	Yes	NA

APPENDIX A — BACNET, CCN NETWORK AND MULTI-STATE POINTS FOR 48/50LC*H AND 48/50V (cont)

48/50LC*H, 48/50V — BACnet, CCN and Multi-State Points (cont)

OBJECT NAME	DESCRIPTION	TYPE	INSTANCE	LOW LIMIT	HIGH LIMIT	MULTI-VALUE TEXT	OPTION	WRITABLE	CCN NAME
SERVICE1_ZDORCAP	ZDOR Heat Cap Thresh	AV	456	50	100		Type6	Yes	ZDORCAP
STATES_CIRCASTN	Circuit A State	MV	13	0	0	1=OFF, 2=NOT_RDY, 3=READY, 4=STARTING, 5=RUNNING, 6=STOPPING, 7=DISABLE, 8=TRIPOUT	Type5	No	CIRCASTN
STATES_CIRCBSTN	Circuit B State	MV	14	0	0	1=OFF, 2=NOT_RDY, 3=READY, 4=STARTING, 5=RUNNING, 6=STOPPING, 7=DISABLE, 8=TRIPOUT	Type5	No	CIRCBSTN
STATES_CMPA1STN	Comp A1 State	MV	15	0	0	1=OFF, 2=NOT_RDY, 3=READY, 4=STARTING, 5=RUNNING, 6=STOPPING, 7=DISABLE, 8=TRIPOUT	Type5	No	CMPA1STN
STATES_CMPA2STN	Comp A2 State	MV	16	0	0	1=OFF, 2=NOT_RDY, 3=READY, 4=STARTING, 5=RUNNING, 6=STOPPING, 7=DISABLE, 8=TRIPOUT	Type5	No	CMPA2STN
STATES_CMPB1STN	Comp B1 State	MV	17	0	0	1=OFF, 2=NOT_RDY, 3=READY, 4=STARTING, 5=RUNNING, 6=STOPPING, 7=DISABLE, 8=TRIPOUT	Type5	No	CMPB1STN
STATES_CMPB2STN	Comp B2 State	MV	18	0	0	1=OFF, 2=NOT_RDY, 3=READY, 4=STARTING, 5=RUNNING, 6=STOPPING, 7=DISABLE, 8=TRIPOUT	Type5	No	NA
STATES_ECONNUM	OAD State	MV	25	0	0	1=OFF, 2=NOT_RDY, 3=READY, 4=STARTING, 5=RUNNING, 6=STOPPING, 7=DISABLE, 8=TRIPOUT	Type5	No	ECONNUM
STATES_HEATRSTN	Heater State	MV	24	0	0	1=OFF, 2=NOT_RDY, 3=READY, 4=STARTING, 5=RUNNING, 6=STOPPING, 7=DISABLE, 8=TRIPOUT	Type5	No	HEATRSTN
STATES_IDFNUM	Indoor Fan State	MV	22	0	0	1=OFF, 2=NOT_RDY, 3=READY, 4=STARTING, 5=RUNNING, 6=STOPPING, 7=DISABLE, 8=TRIPOUT	Type5	No	IDFNUM
STATES_MINTILOC	Time Until Next Occupied	AV	492	0	0		Type6	No	MINTILOC

APPENDIX A — BACNET, CCN NETWORK AND MULTI-STATE POINTS FOR 48/50LC*H AND 48/50V (cont)

48/50LC*H, 48/50V — BACnet, CCN and Multi-State Points (cont)

OBJECT NAME	DESCRIPTION	TYPE	INSTANCE	LOW LIMIT	HIGH LIMIT	MULTI-VALUE TEXT	OPTION	WRITABLE	CCN NAME
STATES_OCCSRNUM	Occupancy Source	MV	26	0	0	1=DefaultSchedule, 2=LocalSchedule, 3=BMSSchedule, 4=RemoteSwitch, 5=TimedOverride, 6=Linkage, 7=Forced, 8=MotionSensing	Type5	No	OCCSRNUM
STATES_ODF1STN	CF 1 State	MV	19	0	0	1=OFF, 2=NOT_RDY, 3=READY, 4=STARTING, 5=RUNNING, 6=STOPPING, 7=DISABLE, 8=TRIPOUT	Type5	No	ODF1STN
STATES_ODF2STN	CF 2 State	MV	20	0	0	1=OFF, 2=NOT_RDY, 3=READY, 4=STARTING, 5=RUNNING, 6=STOPPING, 7=DISABLE, 8=TRIPOUT	Type5	No	ODF2STN
STATES_ODF3STN	CF 3 State	MV	21	0	0	1=OFF, 2=NOT_RDY, 3=READY, 4=STARTING, 5=RUNNING, 6=STOPPING, 7=DISABLE, 8=TRIPOUT	Type5	No	ODF3STN
STATES_OKTOFDHM	Free Dehum Status	BV	170	0	0	1=DISABLE, 2=ENABLE	Type4	No	NA
STATES_OKTOFRCL	Free Cooling Available	BV	167	0	0	1=YES, 2=NO	Type4	No	OKTOFRCL
STATES_PURGEACT	Pre-Occ Purge State	BV	169	0	1	1=OFF, 2=ON	Type4	No	PURGEACT
STATES_RHTSTNUM	HGRH State	MV	23	0	0	1=OFF, 2=NOT_RDY, 3=READY, 4=STARTING, 5=RUNNING, 6=STOPPING, 7=DISABLE, 8=TRIPOUT	Type5	No	RHTSTNUM
SVCOUT_CMTRNDAC	Cool Comfort Trending	BV	7	0	0	1=DISABLE, 2=ENABLE	Type4	Yes	CMTRNDAC
SVCOUT_CMTRNDAH	Heat Comfort Trending	BV	128	0	0	1=DISABLE, 2=ENABLE	Type4	Yes	CMTRNDAH
SWTCHCFG_ALARMINV	Alarm Relay Config	BV	196	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_CCHRAINV	Crankcase Heater A Config	BV	192	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_CMPA1INV	Compressor A1 Config	BV	190	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_CMPA2INV	Compressor A2 Config	BV	191	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_CNDSWINV	Condensate Ovrlw Switch Config	BV	172	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_DHMSWINV	Humidistat Switch Config	BV	179	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_DORINV	Damper Override Relay Config	BV	189	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_ERVINV	ERV Wheel Config	BV	195	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_EVBYPINV	ERV Bypass Damper Config	BV	194	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_FLTSWINV	Filter Status Switch Config	BV	182	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_FRESWINV	Fire Shutdown Config	BV	185	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_FRSTINV	ERV Frost Indication Config	BV	186	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_HPSAINV	High Pressure Switch Config	BV	175	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_HTALMINV	Heat Alarm/Limit Switch Config	BV	171	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA

APPENDIX A — BACNET, CCN NETWORK AND MULTI-STATE POINTS FOR 48/50LC*H AND 48/50V (cont)

48/50LC*H, 48/50V — BACnet, CCN and Multi-State Points (cont)

OBJECT NAME	DESCRIPTION	TYPE	INSTANCE	LOW LIMIT	HIGH LIMIT	MULTI-VALUE TEXT	OPTION	WRITABLE	CCN NAME
SWTCHCFG_HTENINV	Heat Enable Config	BV	188	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_IDFSWINV	Indoor Fan Limit Switch Config	BV	174	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_PEENINV	EXF Enable Config	BV	193	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_PMRSWINV	Phase Monitor Config	BV	184	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_RESWINV	Remote Input Config	BV	183	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_SMKSWINV	Smoke Detector Config	BV	173	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_TSTGINV	Thermostat G Config	BV	176	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_TSTW1INV	Thermostat W1 Config	BV	180	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_TSTW2INV	Thermostat W2 Config	BV	181	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_TSTY1INV	Thermostat Y1 Config	BV	177	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_TSTY2INV	Thermostat Y2 Config	BV	178	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
SWTCHCFG_WHLSTINV	ERV Wheel Motion Sensor Config	BV	187	0	0	1=NORMAL, 2=INVERTED	Type4	Yes	NA
UNITCFG_AUTRST	Auto Restart Config	BV	197	0	1	1=OFF, 2=ON	Type4	Yes	AUTRST
UNITCFG_OCC_OT	Occupancy Override Time Config	AV	247	0	4		Type6	Yes	OCC_OT
ZS_OCCSB	Occupied Standby ZS	AV	355	0	0		Type6	Yes	ZS_OCCSB

APPENDIX B — NETWORK COMMUNICATION REPORT

The communication details are to be recorded by the installing contractor or controls contractor that configures the unit for communication. A copy of the communication details should be saved for record and shared with the customer. It may also be beneficial to store a copy in the unit control panel.

PROJECT INFORMATION

Project Name	_____	Controls Installer	_____
Address	_____	Contact Name	_____
City	_____	Contact Phone	_____
State/Providence	_____ Zip Code	Contact Email	_____

Building Automation System

Make	_____	Model	_____	Version	_____
Communication Type	☐ CCN	☐ BACnet MS/TP	☐ BACnet IP	☐	_____

Communication Details

APPENDIX C — UNIT COMMUNICATION REPORT

UNIT INFORMATION

Model Number _____
Unit Tag/Name _____

Serial Number _____
Unit Location _____

CCN Communication

NAME	CONFIGURATION
Primary BAS Network	CCN
CCN Address	
CCN Bus	
Baud Rate	
Broadcast Alerts	On / Off
Schedule Number	
Global Schedule Broadcast	
Broadcast ACK	On / Off
Time Broadcast	On / Off

BACnet MS/TP Communication

NAME	CONFIGURATION
Primary BAS Network	BACnet
BACnet Enable	MS/TP
Serial Port Config	MS/TP
Metric Units	On / Off
Network	
Identifier	
Percentage Conversion	0.00-1.00 / 0-100%

BACnet IP Communication

NAME	CONFIGURATION
Gateway 2 IP	
Gateway 2 Mask	
Set IP	
Set Net Mask	
Primary BAS Network	BACnet
BACnet Enable	BACnet IP
Metric Units	On / Off
Percentage Conversion	0.00-1.00 / 0-100%
Ethernet Adapter	Eth0 / Eth 1
UDP Port	
BACnet Mgmt Device	None / Foreign Device / BBMD
BBMD Address	
BBMD Time to Live	
MAC Address	