APPLICATION GUIDE

Simplicity®LINC GATEWAY

OVERVIEW

The Simplicity®LINC Gateway operates as a Modbus® Client providing an interface between a BACnet® MS/TP control system and devices that communicate using the Modbus RTU protocol. The Simplicity®LINC allows monitoring and control by a third-party BACnet Building Automation System (BAS).

The Simplicity®LINC is preconfigured to provide an interface to UP products equipped with Simplicity® controllers manufactured after 4/2/2008 as well as prior Simplicity®Elite™ and Simplicity® with Intelli-Comfort™ controllers.

The Simplicity®LINC mounts inside the control panel of the UP unit and utilizes 24 VAC power from the unit's control transformer. One port is connected to the UP controller. The other port must be connected to the BACnet MS/TP network.

The Simplicity®LINC Gateway is preconfigured to obtain operational data points from the controller and expose them on a BACnet MS/TP network.

NOTE: Not all Simplicity® operating parameters are controlled/ monitored by the Simplicity®LINC.

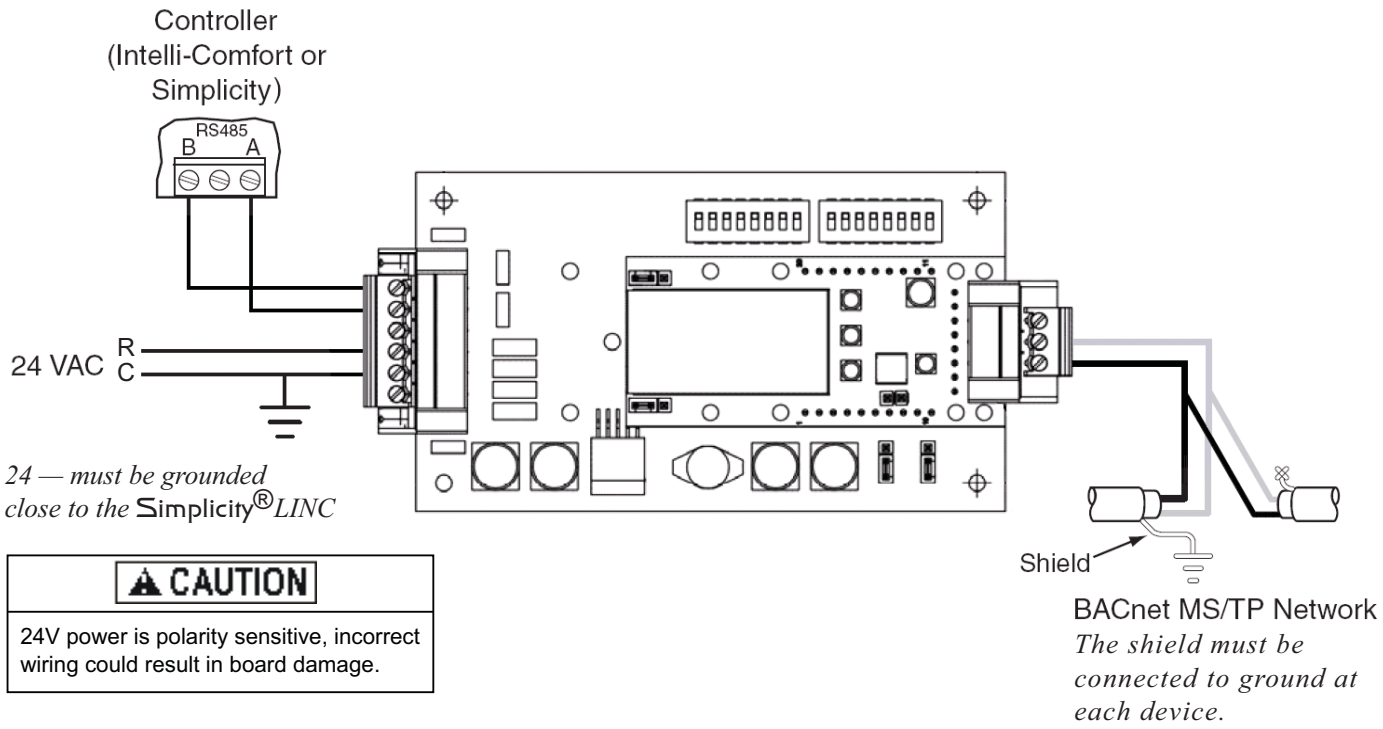

FIGURE 1: WIRE CONNECTIONS

CONNECTION

The Simplicity®LINC has 2 ports, one for connection to the BAS network (BACnet) and one to the Simplicity® board (Modbus).

BACNET NETWORK

The only connection required in the field is to the BACnet (BAS) network.

NOTE: Proper termination and grounding of the shields must be observed.

DIP switches A0-A7 on the Simplicity®LINC board allow selection of the MAC Address. The MAC Address identifies the Simplicity®LINC to other devices and must be between 1 and 99. The default DIP switch setting is 1.

A Device Instance (DE) Modifier is used by the Simplicity®LINC and defaulted to 230. The combination of the DE Modifier and the default DIP switch setting creates a default DE of 23001. The default Unit Name is YORK_RTU.

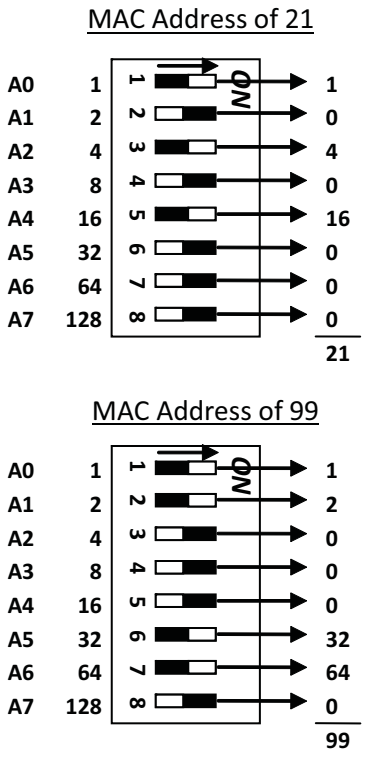

FIGURE 2: MAC ADDRESS EXAMPLES

DIP switches B0-B3 on the Simplicity®LINC board allow for selection of the BACnet transfer speed.The default speed is set at 38.4k baud. Other speeds can be chosen as shown in Table 1.

TABLE 1: BAUD RATE SELECTION SETTINGS

DIP Setting	Baud Rate
1	110
2	300
3	600
4	1200
5	2400
6	4800
7	9600
8	19200
9	20833
10	28800
11	38400
12	57600
13	76800
14	115200

MODBUS CONNECTION

The UP device communicates with the Simplicity®LINC using the Modbus RTU protocol on an RS485 connection. Connection and addressing of the UP product is completed at the factory. No further adjustment should be done.

⚠ CAUTION

The default Simplicity® board address is 1. Do not engage the Address button on the Simplicity® board. This changes the address and causes a Modbus communication failure.

If a problem arises with the Simplicity®LINC or a parameter not exposed by the Simplicity®LINC requires modification, the UP controller software can be manipulated using a Microsoft© Windows-based PC with the Simplicity® PC software (downloadable from the UP website). To connect the PC to the UP controller, a FREEnet USB adaptor (Part No. S103101967000), which is an RS232 to RS485 adapter, and FREEnet adapter cable (S102538682000) are required and available through SOURCE1 (Toll-free at 1-800-536-6112).

SOFTWARE SETUP

The control sequence is managed by the Simplicity® controller. The data points on these systems are mapped to standard AV and BV BACnet Objects. As a preconfigured application, no configuration is necessary in the Simplicity®LINC Gateway.

FLASH MEMORY MANAGEMENT

The Flash Memory chip used in the Simplicity® controllers has a 1,000,000 write cycle rating.

To prevent premature failure of the flash memory, it should not be written to more often than once every 10 minutes, on average.

⚠ CAUTION

Under unusual circumstances it could take up to two minutes for newly updated data to be seen.

ADDITIONAL CAPABILITY

MODBUS COMMUNICATION ALARM

One digital point is available to indicate communication problems between the Simplicity®LINC and the UP controller. BI 84 (MODBUS_ALARM) is used to indicate Modbus communication problems between the Simplicity®LINC Gateway and the UP controller. When "on" this point indicates loss of Modbus communication. The last data received from the UP controller remains in the Simplicity®LINC and it continues to function as if communications were normal.

NOTE: The MODBUS ALARM (BI84) is the only method to verify communication between the Simplicity®LINC and UP controller.

TABLE 2: POINTS LIST IN DESCRIPTION ORDER

Read/ Write	BACnet Object Type	BACnet Object Inst	Descriptor	Default	Min	Max	Point Description
R	(2) AV	14	ACC_OVER_TME	–	–	–	Accumulated Unoccupied Override Time (in hours)
R	(2) AV	15	ACTIVE_ALARM	–	–	–	Active Alarm
R	(5) BV	16	AIR_PROOF_SW	–	–	–	Air Proving Switch Status (1=closed, 0=open/no air flow)
R/W	(2) AV	79	OAQ_STPT	1000	0	5000	Air Quality Setpoint Outside
R	(5) BV	85	ALARM_1_ON	–	–	–	Alarm Buffer #1 (0=Alarm has cleared, 1=Alarm is still active)
R	(5) BV	86	ALARM_2_ON	–	–	–	Alarm Buffer #2 (0=Alarm has cleared, 1=Alarm is still active)
R	(5) BV	87	ALARM_3_ON	–	–	–	Alarm Buffer #3 (0=Alarm has cleared, 1=Alarm is still active)
R	(5) BV	88	ALARM_4_ON	–	–	–	Alarm Buffer #4 (0=Alarm has cleared, 1=Alarm is still active)
R	(5) BV	89	ALARM_5_ON	–	–	–	Alarm Buffer #5 (0=Alarm has cleared, 1=Alarm is still active)
R	(2) AV	33	BLDG_STATIC	–	–	–	Building Static Pressure
R	(5) BV	29	BP_SENS_INST	–	–	–	Building Static Pressure Sensor Installed
R/W	(2) AV	57	BLDG_SP_STPT	0.1	-0.25	0.25	Building Static Pressure Setpoint
R/W	(2) AV	25	COM_V_LOW_SP	70	60	85	Comfort Ventilation LowerSetpoint (degrees F)
R	(5) BV	34	CVM_COOLING	–	–	–	Comfort Ventilation Mode for Cooling Enabled
R	(5) BV	35	CVM_HEATING	–	–	–	Comfort Ventilation Mode for Heating Enabled
R	(5) BV	33	COM_VENT_STA	–	–	–	Comfort Ventilation Mode Status (1=control is in Comfort Vent mode, 0= it is not)
R/W	(2) AV	24	COM_V_HI_SP	80	60	85	Comfort Ventilation Upper Setpoint (degrees F)
R	(5) BV	23	COOLING_ENA	–	–	–	Cooling Mode Enabled
R	(5) BV	21	FAN_ON_W_SEN	–	–	–	CV - Indoor Fan Operates with Space Sensor Present Option Enabled
R	(2) AV	56	CV_VAV_SELEC	–	–	–	CV/VAV Selected (0= Valid CV, 1=Valid VAV, 2= Invalid Value)
R	(2) AV	8	IAQ_VALUE	–	–	–	Demand Ventilation (IAQ) Value (PPM)
R	(5) BV	39	DEMAND_VENT	–	–	–	Demand Ventilation (using Inside Sensor) Enabled
R/W	(2) AV	18	DEMVENT_STPT	1000	0	5000	Demand Ventilation Setpoint
R	(2) AV	67	REVISION	–	–	xx	Device Revision
R	(5) BV	90	DF_SW_INST	–	–	–	Dirty Filter Switch Installed
R	(5) BV	15	DIRT_FILT_SW	–	–	–	Dirty Filter Switch Status (0=open,1=closed/ fault)
R	(2) AV	35	DUCT_STATIC	–	–	–	Duct Static Pressure
R/W	(2) AV	58	DUCT_SP_STPT	1.5	0	5	Duct Static Pressure Setpoint
R/W	(2) AV	59	DUCT_SD_STPT	4.5	0	5	Duct Static Pressure Shutdown Setpoint
R	(2) AV	31	ECO_DAMP_OUT	–	–	–	Economizer Damper Output Status (0-100%)

TABLE 2: POINTS LIST IN DESCRIPTION ORDER (CONTINUED)

Read/ Write	BACnet Object Type	BACnet Object Inst	Descriptor	Default	Min	Max	Point Description
R/W	(2) AV	20	ECO_1ST_STPT	55	40	65	Economizer First Stage Setpoint
R	(5) BV	7	ECONO_INST	–	–	–	Economizer Installed
R	(5) BV	36	ECO_L_TO_SAT	–	–	–	Economizer Loading to Control Supply Air Temperature Enabled
R/W	(2) AV	19	ECON_MIN_POS	20	0	100	Economizer Minimum Position
R	(5) BV	31	ECONO_STATUS	–	–	–	Economizer Output Status (0=not Free Cooling, 1= Free Cooling)
R/W	(2) AV	22	ECON_OAEN_SP	27	10	50	Economizer Outside Air Enthalpy Setpoint
R/W	(2) AV	23	ECON_OAT_ENA	55	40	80	Economizer Outside Air Temperature Enable Setpoint
R/W	(2) AV	84	ECON_RAEN_SP	27	10	50	Economizer Return Air Enthalpy Setpoint
R/W	(2) AV	21	ECO_2ND_STPT	50	40	65	Economizer Second Stage Setpoint
R	(2) AV	41	E_C1_ACM_HRS	–	–	–	Elite Compressor #1 Accumulated Run Time (in hours)
R	(5) BV	42	E_COMP1_STAT	–	–	–	Elite Compressor #1 Output Status (0=output is OFF, 1=output is ON)
R	(5) BV	45	E_C1_OVRLOAD	–	–	–	Elite Compressor #1 Overload Switch Input Status (1=closed, 0=open/fault)
R	(2) AV	42	E_C2_ACM_HRS	–	–	–	Elite Compressor #2 Accumulated Run Time (in hours)
R	(5) BV	46	E_COMP2_STAT	–	–	–	Elite Compressor #2 Output Status (0=output is OFF, 1=output is ON)
R	(5) BV	49	E_C2_OVRLOAD	–	–	–	Elite Compressor #2 Overload Switch Input Status (1=closed, 0=open/fault)
R	(2) AV	43	E_C3_ACM_HRS	–	–	–	Elite Compressor #3 Accumulated Run Time (in hours)
R	(5) BV	51	E_COMP3_STAT	–	–	–	Elite Compressor #3 Output Status (0=output is OFF, 1=output is ON)
R	(5) BV	54	E_C3_OVRLOAD	–	–	–	Elite Compressor #3 Overload Switch Input Status (1=closed, 0=open/fault)
R	(2) AV	44	E_C4_ACM_HRS	–	–	–	Elite Compressor #4 Accumulated Run Time (in hours)
R	(5) BV	55	E_COMP4_STAT	–	–	–	Elite Compressor #4 Output Status (0=output is OFF, 1=output is ON)
R	(5) BV	58	E_C4_OVRLOAD	–	–	–	Elite Compressor #4 Overload Switch Input Status (1=closed, 0=open/fault)
R	(5) BV	50	E_CFAN1_STAT	–	–	–	Elite Condenser Fan #1 Output Status (0=output is OFF, 1=output is ON)
R	(5) BV	59	E_CFAN2_STAT	–	–	–	Elite Condenser Fan #2 Output Status Input Status (0=output is OFF, 1=output is ON)
R	(5) BV	41	E_FAN_ OVER	–	–	–	Elite Fan Overload Switch Input Status (1=closed, 0=open/fault)
R	(5) BV	60	E_GAS_VLVE1	–	–	–	Elite Gas Valve #1 Input Status (1=energized, 0=not energized)
R	(5) BV	62	E_GAS_VLVE2	–	–	–	Elite Gas Valve #2 Input Status (1=energized, 0=not energized)
R	(5) BV	64	E_GAS_VLVE3	–	–	–	Elite Gas Valve #3 Input Status (1=energized, 0=not energized)

TABLE 2: POINTS LIST IN DESCRIPTION ORDER (CONTINUED)

Read/ Write	BACnet Object Type	BACnet Object Inst	Descriptor	Default	Min	Max	Point Description
R	(5) BV	44	E_HPS1	–	–	–	Elite High Pressure Switch for Compressor #1 Input Status (1=closed, 0=open/fault)
R	(5) BV	48	E_HPS2	–	–	–	Elite High Pressure Switch for Compressor #2 Input Status (1=closed, 0=open/fault)
R	(5) BV	53	E_HPS3	–	–	–	Elite High Pressure Switch for Compressor #3 Input Status (1=closed, 0=open/fault)
R	(5) BV	57	E_HPS4	–	–	–	Elite High Pressure Switch for Compressor #4 Input Status (1=closed, 0=open/fault)
R	(5) BV	40	E_IFAN_STAT	–	–	–	Elite Indoor Fan Output Status (0=output is OFF, 1=output is ON)
R	(5) BV	61	E_LIMIT_ 1	–	–	–	Elite Limit Switch #1 Input Status (1=closed, 0=open/fault)
R	(5) BV	63	E_LIMIT_ 2	–	–	–	Elite Limit Switch #2 Input Status (1=closed, 0=open/fault)
R	(5) BV	65	E_LIMIT_ 3	–	–	–	Elite Limit Switch #3 Input Status (1=closed, 0=open/fault)
R	(5) BV	43	E_LPS1	–	–	–	Elite Low Pressure Switch for Compressor #1 Input Status (1=closed, 0=open/fault)
R	(5) BV	47	E_LPS2	–	–	–	Elite Low Pressure Switch for Compressor #2 Input Status (1=closed, 0=open/fault)
R	(5) BV	52	E_LPS3	–	–	–	Elite Low Pressure Switch for Compressor #3 Input Status (1=closed, 0=open/fault)
R	(5) BV	56	E_LPS4	–	–	–	Elite Low Pressure Switch for Compressor #4 Input Status (1=closed, 0=open/fault)
R	(2) AV	32	EXH_DAMP_OUT	–	–	–	Exhaust Damper Output Status (0-100%)
R	(5) BV	30	EX_FAN_STAT	–	–	–	Exhaust Fan Output Status (0=output is OFF, 1=output is ON)
R	(5) BV	10	EX_VFD_INST	–	–	–	Exhaust VFD Installed
R	(5) BV	32	FRECOOL_STAT	–	–	–	Free Cooling Mode Status (0=comps not overridden by Econo, 1=comps overridden)
R	(5) BV	68	HEAT_1_STAT	–	–	–	H1 Heating Output #1 Status (0=output is OFF, 1=output is ON)
R	(5) BV	69	HEAT_2_STAT	–	–	–	H2 Heating Output #2 Status (0=output is OFF, 1=output is ON)
R	(5) BV	70	HEAT_3_STAT	–	–	–	H3 Heating Output #3 Status (0=output is OFF, 1=output is ON)
R	(2) AV	76	H1_ACCUM_HRS	–	–	–	Heating #1 Accumulated Run Time (in hours)
R	(2) AV	77	H2_ACCUM_HRS	–	–	–	Heating #2 Accumulated Run Time (in hours)
R	(2) AV	78	H3_ACCUM_HRS	–	–	–	Heating #3 Accumulated Run Time (in hours)
R	(5) BV	25	HEATING_ENA	–	–	–	Heating Mode Enabled
R/W	(2) AV	27	HGR_HUM_STPT	50	0	100	Hot Gas Reheat Humidity Setpoint (percent Humidity)
R	(5) BV	18	HGR_STAT	–	–	–	Hot Gas Reheat Output Status (0=output is OFF, 1=output is ON)
R	(2) AV	47	HGR_VLV_OUT	–	–	–	Hot Gas Reheat Valve Output Status (0-100%)

TABLE 2: POINTS LIST IN DESCRIPTION ORDER (CONTINUED)

Read/ Write	BACnet Object Type	BACnet Object Inst	Descriptor	Default	Min	Max	Point Description
R	(5) BV	66	E_FREEZE_ST	–	–	–	Hot H2O Freeze Thermostat Switch #1 Input Status (1=closed, 0=open/fault)
R	(2) AV	55	HW_VLV_OUT	–	–	–	Hot Water Valve Output Status (0-100%)
R	(5) BV	2	HYDRONC_HEAT	–	–	–	Hydronic Heat Enabled
R	(5) BV	3	HH_REVER_VLV	–	–	–	Hydronic Heat Reverse Actuated Valve Installed
R/W	(2) AV	62	HYD_S1_SA_SP	120	80	180	Hydronic Heating Stage #1 Supply Air Setpoint (degrees F)
R/W	(2) AV	63	HYD_S2_SA_SP	150	80	180	Hydronic Heating Stage #2 Supply Air Setpoint (degrees F)
R/W	(2) AV	80	IO_DVNT_STPT	700	0	2000	Indoor/Outdoor Demand Ventilation Setpoint
R	(2) AV	45	I_C1_ACM_HRS	–	–	–	Intelli-Comfort Compressor #1 Accumulated Run Time (in hours)
R	(5) BV	73	I_COMP1_STAT	–	–	–	Intelli-Comfort Compressor #1 Input Status (0=output is OFF, 1=output is ON)
R	(2) AV	46	I_C2_ACM_HRS	–	–	–	Intelli-Comfort Compressor #2 Accumulated Run Time (in hours)
R	(5) BV	76	I_COMP2_STAT	–	–	–	Intelli-Comfort Compressor #2 Input Status (0=output is OFF, 1=output is ON)
R	(5) BV	79	I_CFAN_STAT	–	–	–	Intelli-Comfort Condenser Fan #1 Input Status (0=output is OFF, 1=output is ON)
R	(5) BV	72	I_FAN_OVER	–	–	–	Intelli-Comfort Fan Overload Switch Input Status (0=open,1=closed)
R	(5) BV	82	I_FREEZE_1	–	–	–	Intelli-Comfort Freeze Thermostat Switch #1 Input Status (0=open,1=closed)
R	(5) BV	83	I_FREEZE_2	–	–	–	Intelli-Comfort Freeze Thermostat Switch #2 Input Status (0=open,1=closed)
R	(5) BV	80	I_GAS_VLVE1	–	–	–	Intelli-Comfort Gas Valve #1 Input Status
R	(5) BV	75	I_HPS1	–	–	–	Intelli-Comfort High Pressure Switch for Compressor #1 Input Status (1=closed, 0=open/fault)
R	(5) BV	78	I_HPS2	–	–	–	Intelli-Comfort High Pressure Switch for Compressor #2 Input Status (1=closed, 0=open/fault)
R	(5) BV	71	I_IFAN_STAT	–	–	–	Intelli-Comfort Indoor Fan Output Status (0=output is OFF, 1=output is ON)
R	(5) BV	81	I_LIMIT_1	–	–	–	Intelli-Comfort Limit Switch #1 Input Status
R	(5) BV	74	I_LPS1	–	–	–	Intelli-Comfort Low Pressure Switch for Compressor #1 Input Status (1=closed, 0=open/fault)
R	(5) BV	77	I_LPS2	–	–	–	Intelli-Comfort Low Pressure Switch for Compressor #2 Input Status (1=closed, 0=open/fault)
R	(5) BV	28	INTELLI-STRT	–	–	–	Intelli-Start Enabled
R/W	(5) BV	13	LOADSHED	–	–	–	Loadshed (0=clear loadshed, 1=set load-shed operation)
R	(5) BV	19	LOW_AMB_OVRD	–	–	–	Low Ambient Temperature (0=comps not overridden by LAT, 1=comps overridden)

TABLE 2: POINTS LIST IN DESCRIPTION ORDER (CONTINUED)

Read/ Write	BACnet Object Type	BACnet Object Inst	Descriptor	Default	Min	Max	Point Description
R	(5) BV	14	LOW_SUP_VOLT	–	–	–	Low Supply Voltage (0=comps not overridden by LSV, 1=comps overridden)
R/W	(5) BV	96	MANUAL_WRITE	–	–	–	Manual Write Command to ModIINC
R/W	(2) AV	28	MAX_TH_OFSET	3	0	5	Max Temperature/Humidity Setpoint Offset
R/W	(2) AV	30	MAX_DMV_ECON	50	0	100	Maximum Demand Ventillation Economizer Position
R	(5) BV	11	MODBUS_ALARM	–	–	–	Modbus Communication Alarm
R	(5) BV	9	MOD_EX_INST	–	–	–	Modulating Exhaust Installed
R/W	(2) AV	61	MWU_RAT_STPT	70	50	85	Morning Warm-Up and VAV Heating: Return Air Temperature Setpoint (degrees F)
R	(5) BV	6	MORN_WARM-UP	–	–	–	Morning Warm-Up Enabled
R	(2) AV	16	NUMBER_COMPS	–	–	–	Number of Compressors Available
R	(2) AV	48	NUMBER_HEAT	–	–	–	Number of Heat Stages Available
R/W	(2) AV	1	OCC_COOL_SP	72	45	99	Occupied Cooling Setpoint
R/W	(5) BV	1	OCCUPIED_ENA	–	–	–	Occupied Enabled
R/W	(2) AV	50	OCC_HEAT_SP	68	45	99	Occupied Heating Setpoint
R	(5) BV	93	OCC_COMS_ENA	–	–	–	Occupied Thermostat or Communication Input Enabled
R	(2) AV	17	OP_COOL_STPT	–	–	–	Operating Cooling Setpoint
R	(2) AV	49	OP_HEAT_STPT	68	45	99	Operating Heating Setpoint
R/W	(2) AV	69	OP_STPT_DIF	1	1	5	Operating Setpoint Differential
R/W	(2) AV	74	OAT_COOL_L_O	45	0	100	Outdoor Air Temperature Cooling Lockout Temperature
R/W	(2) AV	54	OAT_HEAT_L_O	75	0	100	Outdoor Air Temperature HeatingLockout Temperature
R	(2) AV	11	AMB_AIR_ENTH	–	–	–	Outside Air Enthalpy
R	(2) AV	10	AMB_AIR_HUM	–	–	–	Outside Air Humidity
R	(5) BV	37	OAH_SENSOR	–	–	–	Outside Air Humidity Sensor Enabled
R	(2) AV	7	AMB_TEMP	–	–	–	Outside Air Temperature
R	(2) AV	9	OAQ_VALUE	1000	0	5000	Outside Demand Ventilation (OAQ) Value (PPM)
R	(5) BV	8	PWR_EX_INST	–	–	–	Power Exhaust Installed
R	(5) BV	20	POP_ENABLED	–	–	–	Pre-Occupancy Purge Enabled
R/W	(2) AV	81	POP_HOURS	4	0	23	Pre-Occupancy Purge Time (hours)
R/W	(2) AV	82	POP_MINUTES	0	0	59	Pre-Occupancy Purge Time (minutes)
R	(5) BV	17	PURGE_SWITCH	–	–	–	Purge Switch Status (0=open,1=closed)
R/W	(5) BV	12	REDLINE	–	–	–	Redline (0=clear redline, 1=set redline operation)
R	(5) BV	4	REM_CONT_ENA	–	–	–	Remote Control Enabled
R	(2) AV	13	RET_AIR_ENTH	–	–	–	Return Air Enthalpy
R	(2) AV	12	RET_AIR_HUM	–	–	–	Return Air Humidity
R	(2) AV	5	RET_AIR_TEMP	–	–	–	Return Air Temperature
R	(5) BV	38	RAH_SENSOR	–	–	–	Return/Inside Air Humidity Sensor Enabled
R	(2) AV	6	SPACE_TEMP	–	–	–	Space (Indoor) Air Temperature

TABLE 2: POINTS LIST IN DESCRIPTION ORDER (CONTINUED)

Read/ Write	BACnet Object Type	BACnet Object Inst	Descriptor	Default	Min	Max	Point Description
R/W	(2) AV	71	SPCE_ALM_TMP	0	0	25	Space Sensor Alarm Temperature (degrees F, 0 = disabled)
R/W	(2) AV	72	SPCE_ALM_TIM	0	0	120	Space Sensor Alarm Time (minutes F, 0 = disabled)
R	(5) BV	26	SEN_FAULT_EN	–	–	–	Space Sensor Fault Override (Construction Mode) Enabled
R/W	(2) AV	73	SP_OFF_RANGE	3	0	5	Space Temprature Sensor Offset Range (0-5 degrees)
R	(2) AV	4	SUP_AIR_TEMP	–	–	–	Supply Air Temperature
R/W	(2) AV	70	SAT_ALM_COOL	0	0	80	Supply Air Temperature Alarm Setpoint for Cooling
R/W	(2) AV	53	SAT_ALM_HEAT	0	0	120	Supply Air Temperature Alarm Setpoint for Heating
R	(5) BV	22	SAT_COOLING	–	–	–	Supply Air Temperature Limit for Cooling Enabled
R/W	(2) AV	3	SAT_COOL_SP	50	40	65	Supply Air Temperature Limit for Cooling Setpoint (degrees F)
R	(5) BV	24	SAT_HEATING	–	–	–	Supply Air Temperature Limit for Heating Enabled
R/W	(2) AV	52	SAT_HEAT_SP	135	100	180	Supply Air Temperature Limit for Heating Setpoint (degrees F)
R	(2) AV	34	SFAN_VFD_OUT	–	–	–	Supply Fan VFD Output Status (0-100%)
R	(2) AV	36	ALARM_1	–	–	–	System Alarm #1
R	(2) AV	37	ALARM_2	–	–	–	System Alarm #2
R	(2) AV	38	ALARM_3	–	–	–	System Alarm #3
R	(2) AV	39	ALARM_4	–	–	–	System Alarm #4
R	(2) AV	40	ALARM_5	–	–	–	System Alarm #5
R/W	(2) AV	29	TH_OFFSET	5	1	10	Temperature/Humidity % Humidity that = 1°F of Offset
R/W	(2) AV	26	TEM_HUM_STPT	50	20	80	Temperature/Humidity Setpoint (percent Humidity)
R	(5) BV	67	FAN_HEAT	–	–	–	Turn OFF Continuous Fan when Starting Heat Enabled (0=Continuous Fan ON)
R/W	(2) AV	2	UNOC_COOL_SP	85	45	99	Un-Occupied Cooling Setpoint
R/W	(2) AV	51	UNOC_HEAT_SP	60	45	99	Un-Occupied Heating Setpoint
R/W	(2) AV	75	UNOC_OVR_TP	60	0	240	Unoccupied Override Time Period
R/W	(2) AV	65	VAV_CL_LO_SP	55	40	70	VAV Cooling Supply Air Temperature: Lower Setpoint (degrees F)
R/W	(2) AV	66	VAV_SAT_RSET	72	40	85	VAV Cooling Supply Air Temperature: Reset Setpoint (Space Temperature)(degrees F)
R/W	(2) AV	64	VAV_CL_HI_SP	60	40	70	VAV Cooling Supply Air Temperature: Upper Setpoint (degrees F)
R	(5) BV	5	VAV_OCC_HEAT	–	–	–	VAV Occupied Heating Enabled
R/W	(2) AV	60	VAV_OHEAT_SP	68	40	85	VAV Occupied Heating Setpoint (degrees F)

TABLE 3: POINTS LIST IN OBJECT ORDER

Read/ Write	BACnet Object Type	BACnet Object Inst	Descriptor	Default	Min	Max	Point Description
R/W	(2) AV	1	OCC_COOL_SP	72	45	99	Occupied Cooling Setpoint
R/W	(2) AV	2	UNOC_COOL_SP	85	45	99	Un-Occupied Cooling Setpoint
R/W	(2) AV	3	SAT_COOL_SP	50	40	65	Supply Air Temperature Limit for Cooling Setpoint (degrees F)
R	(2) AV	4	SUP_AIR_TEMP	–	–	–	Supply Air Temperature
R	(2) AV	5	RET_AIR_TEMP	–	–	–	Return Air Temperature
R	(2) AV	6	SPACE_TEMP	–	–	–	Space (Indoor) Air Temperature
R	(2) AV	7	AMB_TEMP	–	–	–	Outside Air Temperature
R	(2) AV	8	IAQ_VALUE	–	–	–	Demand Ventilation (IAQ) Value (PPM)
R	(2) AV	9	OAQ_VALUE	1000	0	5000	Outside Demand Ventilation (OAQ) Value (PPM)
R	(2) AV	10	AMB_AIR_HUM	–	–	–	Outside Air Humidity
R	(2) AV	11	AMB_AIR_ENTH	–	–	–	Outside Air Enthalpy
R	(2) AV	12	RET_AIR_HUM	–	–	–	Return Air Humidity
R	(2) AV	13	RET_AIR_ENTH	–	–	–	Return Air Enthalpy
R	(2) AV	14	ACC_OVER_TME	–	–	–	Accumulated Unoccupied Override Time (in hours)
R	(2) AV	15	ACTIVE_ALARM	–	–	–	Active Alarm
R	(2) AV	16	NUMBER_COMPS	–	–	–	Number of Compressors Available
R	(2) AV	17	OP_COOL_STPT	–	–	–	Operating Cooling Setpoint
R/W	(2) AV	18	DEMVENT_STPT	1000	0	5000	Demand Ventilation Setpoint
R/W	(2) AV	19	ECON_MIN_POS	20	0	100	Economizer Minimum Position
R/W	(2) AV	20	ECO_1ST_STPT	55	40	65	Economizer First Stage Setpoint
R/W	(2) AV	21	ECO_2ND_STPT	50	40	65	Economizer Second Stage Setpoint
R/W	(2) AV	22	ECON_OAEN_SP	27	10	50	Economizer Outside Air Enthalpy Setpoint
R/W	(2) AV	23	ECON_OAT_ENA	55	40	80	Economizer Outside Air Temperature Enable Setpoint
R/W	(2) AV	24	COM_V_HI_SP	80	60	85	Comfort Ventilation Upper Setpoint (degrees F)
R/W	(2) AV	25	COM_V_LOW_SP	70	60	85	Comfort Ventilation LowerSetpoint (degrees F)
R/W	(2) AV	26	TEM_HUM_STPT	50	20	80	Temperature/Humidity Setpoint (percent Humidity)
R/W	(2) AV	27	HGR_HUM_STPT	50	0	100	Hot Gas Reheat Humidity Setpoint (percent Humidity)
R/W	(2) AV	28	MAX_TH_OFSET	3	0	5	Max Temperature/Humidity Setpoint Offset
R/W	(2) AV	29	TH_OFFSET	5	1	10	Temperature/Humidity % Humidity that = 1°F of Offset
R/W	(2) AV	30	MAX_DMV_ECON	50	0	100	Maximum Demand Ventillation Economizer Position
R	(2) AV	31	ECO_DAMP_OUT	–	–	–	Economizer Damper Output Status (0-100%)
R	(2) AV	32	EXH_DAMP_OUT	–	–	–	Exhaust Damper Output Status (0-100%)
R	(2) AV	33	BLDG_STATIC	–	–	–	Building Static Pressure
R	(2) AV	34	SFAN_VFD_OUT	–	–	–	Supply Fan VFD Output Status (0-100%)
R	(2) AV	35	DUCT_STATIC	–	–	–	Duct Static Pressure
R	(2) AV	36	ALARM_1	–	–	–	System Alarm #1
R	(2) AV	37	ALARM_2	–	–	–	System Alarm #2

TABLE 3: POINTS LIST IN OBJECT ORDER (CONTINUED)

Read/ Write	BACnet Object Type	BACnet Object Inst	Descriptor	Default	Min	Max	Point Description
R	(2) AV	38	ALARM_3	–	–	–	System Alarm #3
R	(2) AV	39	ALARM_4	–	–	–	System Alarm #4
R	(2) AV	40	ALARM_5	–	–	–	System Alarm #5
R	(2) AV	41	E_C1_ACM_HRS	–	–	–	Elite Compressor #1 Accumulated Run Time (in hours)
R	(2) AV	42	E_C2_ACM_HRS	–	–	–	Elite Compressor #2 Accumulated Run Time (in hours)
R	(2) AV	43	E_C3_ACM_HRS	–	–	–	Elite Compressor #3 Accumulated Run Time (in hours)
R	(2) AV	44	E_C4_ACM_HRS	–	–	–	Elite Compressor #4 Accumulated Run Time (in hours)
R	(2) AV	45	I_C1_ACM_HRS	–	–	–	Intelli-Comfort Compressor #1 Accumulated Run Time (in hours)
R	(2) AV	46	I_C2_ACM_HRS	–	–	–	Intelli-Comfort Compressor #2 Accumulated Run Time (in hours)
R	(2) AV	47	HGR_VLV_OUT	–	–	–	Hot Gas Reheat Valve Output Status (0-100%)
R	(2) AV	48	NUMBER_HEAT	–	–	–	Number of Heat Stages Available
R	(2) AV	49	OP_HEAT_STPT	68	45	99	Operating Heating Setpoint
R/W	(2) AV	50	OCC_HEAT_SP	68	45	99	Occupied Heating Setpoint
R/W	(2) AV	51	UNOC_HEAT_SP	60	45	99	Un-Occupied Heating Setpoint
R/W	(2) AV	52	SAT_HEAT_SP	135	100	180	Supply Air Temperature Limit for Heating Setpoint (degrees F)
R/W	(2) AV	53	SAT_ALM_HEAT	0	0	120	Supply Air Temperature Alarm Setpoint for Heating
R/W	(2) AV	54	OAT_HEAT_L_O	75	0	100	Outdoor Air Temperature HeatingLockout Temperature
R	(2) AV	55	HW_VLV_OUT	–	–	–	Hot Water Valve Output Status (0-100%)
R	(2) AV	56	CV_VAV_SELEC	–	–	–	CV/VAV Selected (0= Valid CV, 1=Valid VAV, 2= Invalid Value)
R/W	(2) AV	57	BLDG_SP_STPT	0.1	-0.25	0.25	Building Static Pressure Setpoint
R/W	(2) AV	58	DUCT_SP_STPT	1.5	0	5	Duct Static Pressure Setpoint
R/W	(2) AV	59	DUCT_SD_STPT	4.5	0	5	Duct Static Pressure Shutdown Setpoint
R/W	(2) AV	60	VAV_OHEAT_SP	68	40	85	VAV Occupied Heating Setpoint (degrees F)
R/W	(2) AV	61	MWU_RAT_STPT	70	50	85	Morning Warm-Up and VAV Heating: Return Air Temperature Setpoint (degrees F)
R/W	(2) AV	62	HYD_S1_SA_SP	120	80	180	Hydronic Heating Stage #1 Supply Air Setpoint (degrees F)
R/W	(2) AV	63	HYD_S2_SA_SP	150	80	180	Hydronic Heating Stage #2 Supply Air Setpoint (degrees F)
R/W	(2) AV	64	VAV_CL_HI_SP	60	40	70	VAV Cooling Supply Air Temperature: Upper Setpoint (degrees F)
R/W	(2) AV	65	VAV_CL_LO_SP	55	40	70	VAV Cooling Supply Air Temperature: Lower Setpoint (degrees F)
R/W	(2) AV	66	VAV_SAT_RSET	72	40	85	VAV Cooling Supply Air Temperature: Reset Setpoint (Space Temperature) (degrees F)
R	(2) AV	67	REVISION	0	0	xx	Device Revision

TABLE 3: POINTS LIST IN OBJECT ORDER (CONTINUED)

Read/ Write	BACnet Object Type	BACnet Object Inst	Descriptor	Default	Min	Max	Point Description
R/W	(2) AV	69	OP_STPT_DIF	1	1	5	Operating Setpoint Differential
R/W	(2) AV	70	SAT_ALM_COOL	0	0	80	Supply Air Temperature Alarm Setpoint for Cooling
R/W	(2) AV	71	SPCE_ALM_TMP	0	0	25	Space Sensor Alarm Temperature (degrees F, 0 = disabled)
R/W	(2) AV	72	SPCE_ALM_TIM	0	0	120	Space Sensor Alarm Time (minutes F, 0 = disabled)
R/W	(2) AV	73	SP_OFF_RANGE	3	0	5	Space Temprature Sensor Offset Range (0-5 degrees)
R/W	(2) AV	74	OAT_COOL_L_O	45	0	100	Outdoor Air Temperature Cooling Lockout Temperature
R/W	(2) AV	75	UNOC_OVR_TP	60	0	240	Unoccupied Override Time Period
R	(2) AV	76	H1_ACCUM_HRS	–	–	–	Heating #1 Accumulated Run Time (in hours)
R	(2) AV	77	H2_ACCUM_HRS	–	–	–	Heating #2 Accumulated Run Time (in hours)
R	(2) AV	78	H3_ACCUM_HRS	–	–	–	Heating #3 Accumulated Run Time (in hours)
R/W	(2) AV	79	OAQ_STPT	1000	0	5000	Air Quality Setpoint Outside
R/W	(2) AV	80	IO_DVNT_STPT	700	0	2000	Indoor/Outdoor Demand Ventilation Setpoint
R/W	(2) AV	81	POP_HOURS	4	0	23	Pre-Occupancy Purge Time (hours)
R/W	(2) AV	82	POP_MINUTES	0	0	59	Pre-Occupancy Purge Time (minutes)
R/W	(2) AV	84	ECON_RAEN_SP	27	10	50	Economizer Return Air Enthalpy Setpoint
R/W	(5) BV	1	OCCUPIED_ENA	–	–	–	Occupied Enabled
R	(5) BV	2	HYDRONC_HEAT	–	–	–	Hydronic Heat Enabled
R	(5) BV	3	HH_REVER_VLV	–	–	–	Hydronic Heat Reverse Actuated Valve Installed
R	(5) BV	4	REM_CONT_ENA	–	–	–	Remote Control Enabled
R	(5) BV	5	VAV_OCC_HEAT	–	–	–	VAV Occupied Heating Enabled
R	(5) BV	6	MORN_WARM-UP	–	–	–	Morning Warm-Up Enabled
R	(5) BV	7	ECONO_INST	–	–	–	Economizer Installed
R	(5) BV	8	PWR_EX_INST	–	–	–	Power Exhaust Installed
R	(5) BV	9	MOD_EX_INST	–	–	–	Modulating Exhaust Installed
R	(5) BV	10	EX_VFD_INST	–	–	–	Exhaust VFD Installed
R	(5) BV	11	MODBUS_ALARM	–	–	–	Modbus Communication Alarm
R/W	(5) BV	12	REDLINE	–	–	–	Redline (0=clear redline, 1=set redline operation)
R/W	(5) BV	13	LOADSHED	–	–	–	Loadshed (0=clear loadshed, 1=set loadshed operation)
R	(5) BV	14	LOW_SUP_VOLT	–	–	–	Low Supply Voltage (0=comps not overridden by LSV, 1=comps overridden)
R	(5) BV	15	DIRT_FILT_SW	–	–	–	Dirty Filter Switch Status (0=open,1=closed/ fault)
R	(5) BV	16	AIR_PROOF_SW	–	–	–	Air Proving Switch Status (1=closed, 0=open/no air flow)
R	(5) BV	17	PURGE_SWITCH	–	–	–	Purge Switch Status (0=open,1=closed)
R	(5) BV	18	HGR_STAT	–	–	–	Hot Gas Reheat Output Status (0=output is OFF, 1=output is ON)

TABLE 3: POINTS LIST IN OBJECT ORDER (CONTINUED)

Read/ Write	BACnet Object Type	BACnet Object Inst	Descriptor	Default	Min	Max	Point Description
R	(5) BV	19	LOW_AMB_OVRD	–	–	–	Low Ambient Temperature (0=comps not overridden by LAT, 1=comps overridden)
R	(5) BV	20	POP_ENABLED	–	–	–	Pre-Occupancy Purge Enabled
R	(5) BV	21	FAN_ON_W_SEN	–	–	–	CV - Indoor Fan Operates with Space Sensor Present Option Enabled
R	(5) BV	22	SAT_COOLING	–	–	–	Supply Air Temperature Limit for Cooling Enabled
R	(5) BV	23	COOLING_ENA	–	–	–	Cooling Mode Enabled
R	(5) BV	24	SAT_HEATING	–	–	–	Supply Air Temperature Limit for Heating Enabled
R	(5) BV	25	HEATING_ENA	–	–	–	Heating Mode Enabled
R	(5) BV	26	SEN_FAULT_EN	–	–	–	Space Sensor Fault Override (Construction Mode) Enabled
R	(5) BV	28	INTELLI-STRT	–	–	–	Intelli-Start Enabled
R	(5) BV	29	BP_SENS_INST	–	–	–	Building Static Pressure Sensor Installed
R	(5) BV	30	EX_FAN_STAT	–	–	–	Exhaust Fan Output Status (0=output is OFF, 1=output is ON)
R	(5) BV	31	ECONO_STATUS	–	–	–	Economizer Output Status (0=not Free Cooling, 1= Free Cooling)
R	(5) BV	32	FRECOOL_STAT	–	–	–	Free Cooling Mode Status (0=comps not overridden by Econo, 1=comps overridden)
R	(5) BV	33	COM_VENT_STA	–	–	–	Comfort Ventilation Mode Status (1=control is in Comfort Vent mode, 0= it is not)
R	(5) BV	34	CVM_COOLING	–	–	–	Comfort Ventilation Mode for Cooling Enabled
R	(5) BV	35	CVM_HEATING	–	–	–	Comfort Ventilation Mode for Heating Enabled
R	(5) BV	36	ECO_L_TO_SAT	–	–	–	Economizer Loading to Control Supply Air Temperature Enabled
R	(5) BV	37	OAH_SENSOR	–	–	–	Outside Air Humidity Sensor Enabled
R	(5) BV	38	RAH_SENSOR	–	–	–	Return/Inside Air Humidity Sensor Enabled
R	(5) BV	39	DEMAND_VENT	–	–	–	Demand Ventilation (using Inside Sensor) Enabled
R	(5) BV	40	E_IFAN_STAT	–	–	–	Elite Indoor Fan Output Status (0=output is OFF, 1=output is ON)
R	(5) BV	41	E_FAN_ OVER	–	–	–	Elite Fan Overload Switch Input Status (1=closed, 0=open/fault)
R	(5) BV	42	E_COMP1_STAT	–	–	–	Elite Compressor #1 Output Status (0=output is OFF, 1=output is ON)
R	(5) BV	43	E_LPS1	–	–	–	Elite Low Pressure Switch for Compressor #1 Input Status (1=closed, 0=open/fault)
R	(5) BV	44	E_HPS1	–	–	–	Elite High Pressure Switch for Compressor #1 Input Status (1=closed, 0=open/fault)
R	(5) BV	45	E_C1_OVRLOAD	–	–	–	Elite Compressor #1 Overload Switch Input Status (1=closed, 0=open/fault)
R	(5) BV	46	E_COMP2_STAT	–	–	–	Elite Compressor #2 Output Status (0=output is OFF, 1=output is ON)

TABLE 3: POINTS LIST IN OBJECT ORDER (CONTINUED)

Read/ Write	BACnet Object Type	BACnet Object Inst	Descriptor	Default	Min	Max	Point Description
R	(5) BV	47	E_LPS2	–	–	–	Elite Low Pressure Switch for Compressor #2 Input Status (1=closed, 0=open/fault)
R	(5) BV	48	E_HPS2	–	–	–	Elite High Pressure Switch for Compressor #2 Input Status (1=closed, 0=open/fault)
R	(5) BV	49	E_C2_OVRLOAD	–	–	–	Elite Compressor #2 Overload Switch Input Status (1=closed, 0=open/fault)
R	(5) BV	50	E_CFAN1_STAT	–	–	–	Elite Condenser Fan #1 Output Status (0=output is OFF, 1=output is ON)
R	(5) BV	51	E_COMP3_STAT	–	–	–	Elite Compressor #3 Output Status (0=output is OFF, 1=output is ON)
R	(5) BV	52	E_LPS3	–	–	–	Elite Low Pressure Switch for Compressor #3 Input Status (1=closed, 0=open/fault)
R	(5) BV	53	E_HPS3	–	–	–	Elite High Pressure Switch for Compressor #3 Input Status (1=closed, 0=open/fault)
R	(5) BV	54	E_C3_OVRLOAD	–	–	–	Elite Compressor #3 Overload Switch Input Status (1=closed, 0=open/fault)
R	(5) BV	55	E_COMP4_STAT	–	–	–	Elite Compressor #4 Output Status (0=output is OFF, 1=output is ON)
R	(5) BV	56	E_LPS4	–	–	–	Elite Low Pressure Switch for Compressor #4 Input Status (1=closed, 0=open/fault)
R	(5) BV	57	E_HPS4	–	–	–	Elite High Pressure Switch for Compressor #4 Input Status (1=closed, 0=open/fault)
R	(5) BV	58	E_C4_OVRLOAD	–	–	–	Elite Compressor #4 Overload Switch Input Status (1=closed, 0=open/fault)
R	(5) BV	59	E_CFAN2_STAT	–	–	–	Elite Condenser Fan #2 Output Status Input Status (0=output is OFF, 1=output is ON)
R	(5) BV	60	E_GAS_VLVE1	–	–	–	Elite Gas Valve #1 Input Status (1=energized, 0=not energized)
R	(5) BV	61	E_LIMIT_ 1	–	–	–	Elite Limit Switch #1 Input Status (1=closed, 0=open/fault)
R	(5) BV	62	E_GAS_VLVE2	–	–	–	Elite Gas Valve #2 Input Status (1=energized, 0=not energized)
R	(5) BV	63	E_LIMIT_ 2	–	–	–	Elite Limit Switch #2 Input Status (1=closed, 0=open/fault)
R	(5) BV	64	E_GAS_VLVE3	–	–	–	Elite Gas Valve #3 Input Status (1=energized, 0=not energized)
R	(5) BV	65	E_LIMIT_ 3	–	–	–	Elite Limit Switch #3 Input Status (1=closed, 0=open/fault)
R	(5) BV	66	E_FREEZE_ST	–	–	–	Hot H2O Freeze Thermostat Switch #1 Input Status (1=closed, 0=open/fault)
R	(5) BV	67	FAN_HEAT	–	–	–	Turn OFF Continuous Fan when Starting Heat Enabled (0=Continuous Fan ON)
R	(5) BV	68	HEAT_1_STAT	–	–	–	H1 Heating Output #1 Status (0=output is OFF, 1=output is ON)
R	(5) BV	69	HEAT_2_STAT	–	–	–	H2 Heating Output #2 Status (0=output is OFF, 1=output is ON)
R	(5) BV	70	HEAT_3_STAT	–	–	–	H3 Heating Output #3 Status (0=output is OFF, 1=output is ON)

TABLE 3: POINTS LIST IN OBJECT ORDER (CONTINUED)

Read/ Write	BACnet Object Type	BACnet Object Inst	Descriptor	Default	Min	Max	Point Description
R	(5) BV	71	I_IFAN_STAT	–	–	–	Intelli-Comfort Indoor Fan Output Status (0=output is OFF, 1=output is ON)
R	(5) BV	72	I_FAN_OVER	–	–	–	Intelli-Comfort Fan Overload Switch Input Status (0=open,1=closed)
R	(5) BV	73	I_COMP1_STAT	–	–	–	Intelli-Comfort Compressor #1 Input Status (0=output is OFF, 1=output is ON)
R	(5) BV	74	I_LPS1	–	–	–	Intelli-Comfort Low Pressure Switch for Compressor #1 Input Status (1=closed, 0=open/fault)
R	(5) BV	75	I_HPS1	–	–	–	Intelli-Comfort High Pressure Switch for Compressor #1 Input Status (1=closed, 0=open/fault)
R	(5) BV	76	I_COMP2_STAT	–	–	–	Intelli-Comfort Compressor #2 Input Status (0=output is OFF, 1=output is ON)
R	(5) BV	77	I_LPS2	–	–	–	Intelli-Comfort Low Pressure Switch for Compressor #2 Input Status (1=closed, 0=open/fault)
R	(5) BV	78	I_HPS2	–	–	–	Intelli-Comfort High Pressure Switch for Compressor #2 Input Status (1=closed, 0=open/fault)
R	(5) BV	79	I_CFAN_STAT	–	–	–	Intelli-Comfort Condenser Fan #1 Input Status (0=output is OFF, 1=output is ON)
R	(5) BV	80	I_GAS_VLVE1	–	–	–	Intelli-Comfort Gas Valve #1 Input Status
R	(5) BV	81	I_LIMIT_1	–	–	–	Intelli-Comfort Limit Switch #1 Input Status
R	(5) BV	82	I_FREEZE_1	–	–	–	Intelli-Comfort Freeze Thermostat Switch #1 Input Status (0=open,1=closed)
R	(5) BV	83	I_FREEZE_2	–	–	–	Intelli-Comfort Freeze Thermostat Switch #2 Input Status (0=open,1=closed)
R	(5) BV	85	ALARM_1_ON	–	–	–	Alarm Buffer #1 (0=Alarm has cleared, 1=Alarm is still active)
R	(5) BV	86	ALARM_2_ON	–	–	–	Alarm Buffer #2 (0=Alarm has cleared, 1=Alarm is still active)
R	(5) BV	87	ALARM_3_ON	–	–	–	Alarm Buffer #3 (0=Alarm has cleared, 1=Alarm is still active)
R	(5) BV	88	ALARM_4_ON	–	–	–	Alarm Buffer #4 (0=Alarm has cleared, 1=Alarm is still active)
R	(5) BV	89	ALARM_5_ON	–	–	–	Alarm Buffer #5 (0=Alarm has cleared, 1=Alarm is still active)
R	(5) BV	90	DF_SW_INST	–	–	–	Dirty Filter Switch Installed
R	(5) BV	93	OCC_COMS_ENA	–	–	–	Occupied Thermostat or Communication Input Enabled
R/W	(5) BV	96	MANUAL_WRITE	–	–	–	Manual Write Command to ModIINC

TROUBLESHOOTING

The Simplicity®LINC Gateway consists of two printed circuit boards.

TABLE 4: SIMPLICITY®LINC GATEWAY

RS485 BOARD (Bottom)	BacNET Board (Top)
Normal Board Operation	**Normal Board Operation**
The PWR LED should be on during operation. The RX and TX LEDs should flash when a signal is either received or sent.	LEDs LA and LB flash about once per second. LED GP105 will remain on within 45-60 seconds after power up, signifying normal operation. The PWR LED should be on during operation. The RX and TX LEDs should flash when a signal is either received or sent.
Faulty Board Operation	**Faulty Board Operation**
If the PWR LED does not come on but the RX and TX flash, then the PWR LED is broken. If the TX and / or RX LEDs do not flash, it may represent a problem with the field wiring or configuration problems in the field side of the BacNET board. It may also indicate incorrect polling parameters such as baud rate or parity.	If the PWR LED does not come on but the RX and TX flash, then the PWR LED is broken. If the TX and / or RX LEDs do not flash, it may represent a problem with the field wiring or confguration problems in the field side of the BacNet board. It may also indicate incorrect polling parameters such as baud rate or parity. If the PWR LED does not come on and LA and LB do not flash, call UP Tech Services at 1-877-874-7378. If GP105 never comes on, call UP Tech Services at 1-877-874-7378.

General	
Power Source	24 ± 15% VAC (Obtained from the Roof Top Unit)
Frequency	45 to 65 HZ
Power Consumption	Nominal >2 VA
Operating Environment	-40 to 160° F (-40 to 70° C) 10 to 95% non-condensing
Size (H x W x D)	5.0 x 2.4 x 1.8 in. (128 x 61 x 45.75 cm)
Weight	0.2 lb. (0.09 kg)

Processor	
Type	Microchip
SDRAM Memory	2048 bytes
FLASH Memory	1024 bytes w/1,000,000 write cycle capability

Interface	
Port 1 Type	BACnet MS/TP
Port 1 Speeds	9.6, 19.2, 38.4, 76.8 kbaud
Port 1 Connector	3-pin screw terminals
Port 2 Type	Modbus RTU (RS485)
Port 2 Speeds	9.6, 19,2 kbaud
Port 2 Connector	6-pin screw terminals
LAN Cable	Screened Twisted-Pair (Belden 9272 or 89272)
LEDs	Controller Status; BACnet; Modbus
Switch Selections	MAC Address (1-99), Baud Rate

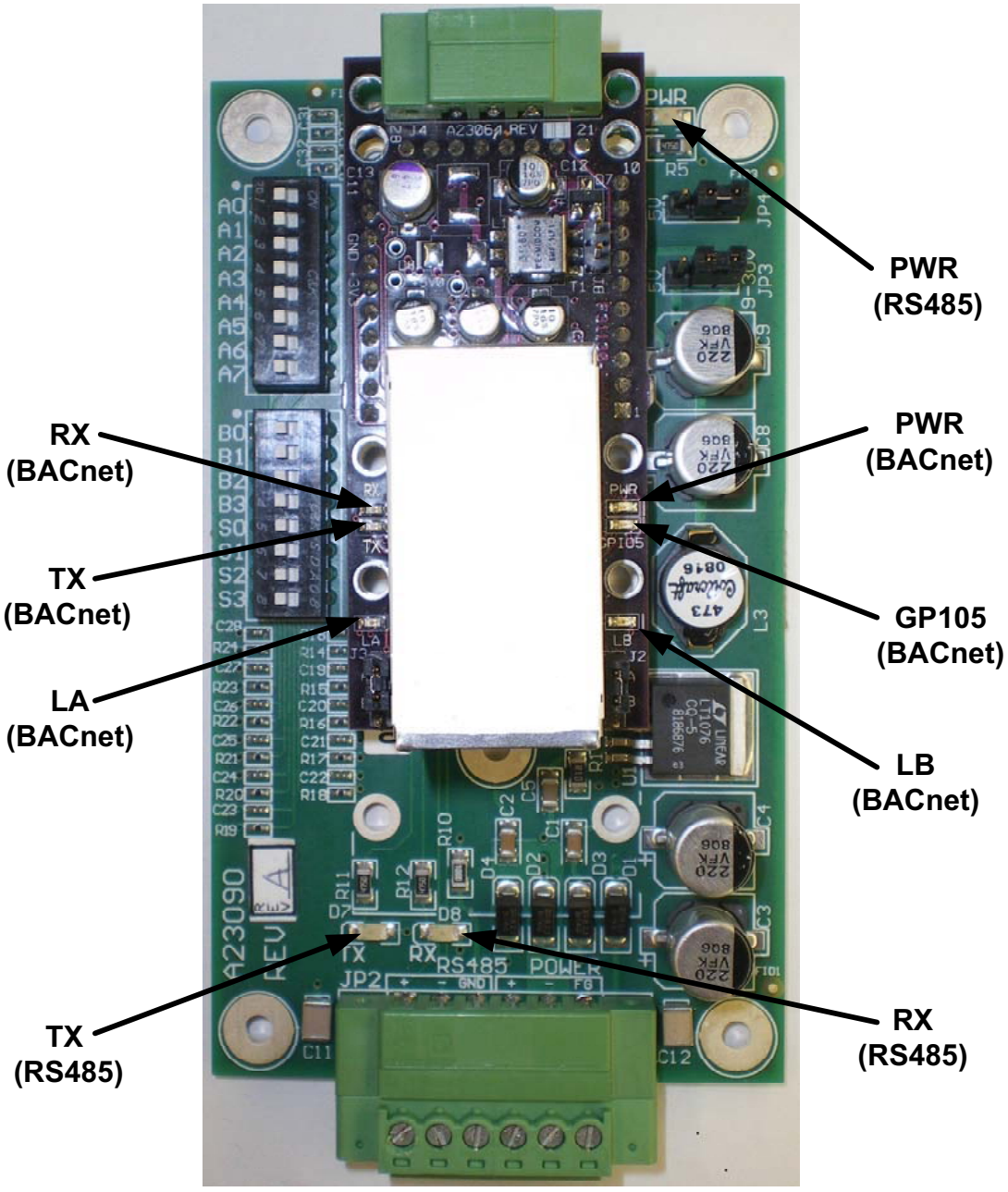

FIGURE 3: SIMPLICITY® LINC GATEWAY LED LOCATION

514067-UAD-A-0509
Supersedes: Nothing

Johnson Controls Unitary Products
5005 York Drive
Norman, OK 73069