

A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	2	Point Description Name	BACnet Name	Type ID	MODBUS Object Type	Register	Type	ID	SNVT #	Name	SNVT	Read Only	Description
BASIC UNIT OPERATION SETUP AND STATUS POINTS													
1	Control Source	ctrl_source_1	AV.15	Holding Register(Float)	40023	Internal Float	12	3	rviChlSource	SNVT_count_inc(9)			Control Source for Occupancy Setup 0 = Digital Input Enable (e.g. Room Occupancy Sensor) 1 = Keypad Schedule 2 = BAS Occupancy Command (Default) 3 = Factory Use Only 4 = Manual On-Continuous
2	Occupancy Command (BAS)	occupancy_cmd_1	BV.1	Coil	1	Binary Output	1	12	rviOccupancyCmd	SNVT_switch(95)			BAS Occupancy Command 0 = Unoccupied (Default) 1 = Occupied (Enables Unit Operation)
3	BAS Smoke Input / Emergency Shutdown	bas_smoke_1	BV.75	Coil	00013	Binary Data	73	59	rviBasSmoke	SNVT_switch(95)			Smoke Detector or Emergency Shutdown Alarm Network Input 0 = Normal (Default) 1 = Alarm/Emergency Shutdown
4	Zone Mode Status	zone_mode_stat_1	MSV.4	Input Register(Signed)	30060	Internal Integer	4	56	rvoZoneModeStat	SNVT_count_inc(9)		✓	Zone Mode Status 1 = Auto (Default) 2 = Heat 3 = Cool 5 = Off
5	Unit Mode Status	mode_status_1	AV.24	Input Register(Float)	30027	Internal Float	34	25	rvoModeStatus	SNVT_count_inc(9)		✓	Unit Mode Status 0 = Straight Cool 2 = Heat pump (Default)
6	Set Zone Mode	zone_mode_1	MSV.3	Holding Register(Signed)	40124	Internal Integer	3	55	rviZoneMode	SNVT_count_inc(9)			Setup Zone Mode 1 = Auto (Default) 2 = Heat 3 = Cool 5 = Off
7	Compressor Control Mode	comp_mode_1	AV.64	Holding Register(Float)	40013	Internal Float	8	-	-	-			Compressor Mode Setup 0 = Zone Control - ZS (Default) 1 = Discharge Air Control 2 = Zone Control - BAS Sensor 3 = Zone Control - Remote Sensor
8	Analog Output 3 Options Configuration	ao3_cfg_sel_1	AV.108	Holding Register(Float)	40111	Internal Float	73	60	rviAo3CfgSel	SNVT_count_inc(9)			Options Configuration - Controller Analog Output #3 (AO-3) 0 = Not Used (Default) 1 = Modulating Outdoor Air Damper Control
9	Analog Output 2 Options Configuration	ao2_cfg_sel_1	AV.83	Holding Register(Float)	40089	Internal Float	65	52	rviAo2CfgSel	SNVT_count_inc(9)			Options Configuration - Controller Analog Output #2 (AO-2) 0 = Not Used (Default) 1 = Modulating Hot Gas Reheat Valve Control
10	Analog Output 1 Options Configuration	ao1_cfg_sel_1	AV.82	Holding Register(Float)	40087	Internal Float	64	51	rviAo1CfgSel	SNVT_count_inc(9)			Options Configuration - Controller Analog Output #1 (AO-1) 0 = Not Used (Default) 1 = Variable Frequency Drive Signal Control 2 = Mixed Air SCR Preheat Control 3 = SCR Controlled Aux Electric Heat
11	Output 5 Options Configuration	bo5_cfg_sel_1	AV.113	Holding Register(Float)	40101	Internal Float	78	-	-	-			Options Configuration - Controller Binary Output #5 (BO-5) 0 = Not Used (Default) 1 = Hot Gas Reheat for Humidity Control 2 = Auxiliary Electric Heat Control 3 = Fresh Air Damper Control 4 = Condenser Water Valve (Loop Valve) Control 6 = Water-Side Economizer Control 7 = Boilerless Electric Heat Control
12	Output 4 Options Configuration	bo4_cfg_sel_1	AV.112	Holding Register(Float)	40099	Internal Float	77	-	-	-			Options Configuration - Controller Binary Output #4 (BO-4) #155 - "1" 0 = Not Used (Default) 1 = Economizer Valve 2 = Boilerless Control 3 = Fresh Air Damper Control
13	Input 1 Configuration	in1_cfg_sel_1	AV.110	Holding Register(Float)	40095	Internal Float	75	-	-	-			Controller Input #1 (IN-1) Configuration Setup 0 = Not Used (Default) 2 = Digital Input Enable (e.g. Room Occupancy Sensor) 3 = RH Probe Sensor
14	Input 2 Configuration	in2_cfg_sel_1	AV.111	Holding Register(Float)	40097	Internal Float	76	-	-	-			Controller Input #2 (IN-2) Configuration Setup 0 = Not Used 1 = Zone Remote Sensor 2 = Outdoor Air Temperature Sensor 3 = Entering Water Temperature Sensor (Default) 4 = Mixed Air Temperature Sensor 5 = Relative Humidity Sensor (Probe) 6 = Digital Enable (e.g. Room Occupancy Sensor) 7 = Return Air Temperature Sensor
15	DI5 Mode (Digital Input 5)	di5_mode_1	AV.60	Holding Register(Float)	40015	Internal Float	10	-	-	-			Controller Input #5 (IN-5) Configuration Setup 0 = Dirty Filter Switch 1 = Entering Water Temp Sensor - Economizer/Boilerless 2 = Differential Pressure Switch 3 = Secondary Condensate Fan 4 = Fan Status Switch 5 = Valve End Switch 6 = Damper End Switch 7 = Smoke Detector Switch 8 = Pump Status Switch 9 = Mixed Air Temp Sensor - Mixed Air Control 10 = Input Expansion Module (IEM) 11 = Not Used (Default)
16	Fan Response for Comp Lockout	lckout_resp_1	BV.7	Coil	00004	Binary Data	33	48	rviLckoutResp	SNVT_switch(95)			Configures Fan Response during Compressor Lockout by system 0 = Do not lock fan upon compressor lockout (Default) 1 = Lock fan upon compressor lockout
17	ZS Sensor Enable	zs_sensor_en_1	AV.41	Holding Register(Float)	40077	Internal Float	60	-	-	-			Used to configure controller to recognize a connected ZS Sensor(s) 0 = No ZS Sensors 1 = ZS Sensors Enabled (Default)
18	Equipment Touch RH	eq_rh_1	AV.1904	Select	0	0	0	-	-	-			
19	Equipment Touch Temp	eq_temp_1	AV.1902	Select	0	0	0	-	-	-			
20	ZS Sensor Combo Selector	zs_sen_combo_sel_1	AV.40	Holding Register(Float)	40075	Internal Float	59	-	-	-			ZS Sensor Combination Selection (sensor must be compatible to selection) 0 = Temp Only 1 = RH Only 2 = CO2 Only 3 = Temp + RH 4 = Temp + CO2 5 = RH + CO2 6 = Temp + RH + CO2 (Default) 7 = No ZS Sensor
21	ZS Sensor Setpoint Adjustment Limit	stp_adj_lim_1	AV.42	Holding Register(Float)	40081	Internal Float	61	-	-	-			Used to set the allowable range of setpoint manipulation from a ZS sensor in the space Default: +/- 3 °F
22	Sensor Override Enable/Disable	enable_push_button_1	BV.95	Coil	00010	Binary Data	70	-	-	-			Used to enable or disable ZS Plus/Pro Sensor Override in the space 0 = ZS Sensor Override NOT Allowed 1 = ZS Sensor Override Allowed (Default)
23	Override Status	override_status_1	BV.94	Discrete Input	10072	Binary Data	69	-	-	-		✓	Reports status of override button on ZS Plus/Pro Sensor 0 = Normal 1 = ZS Sensor in Override Mode
24	Override Time Remaining	fo_rem_1	AV.115	Input Register(Float)	30047	Internal Float	82	58	rvoToRem	SNVT_count_inc(9)		✓	Reports time remaining since ZS Plus/Pro sensor in the space was placed in manual override mode
25	Setpoint	occ_clg_stpt_1	AV.4	Holding Register(Float)	40103	Internal Float	52	9	rviOccClgStpt	SNVT_temp_p(105)			Occupied Cooling Setpoint Setup in °F Default: 74 °F
26	Setpoint	occ_htg_stpt_1	AV.2	Holding Register(Float)	40105	Internal Float	53	10	rviOccHtgStpt	SNVT_temp_p(105)			Occupied Heating Setpoint Setup in °F Default: 70 °F
27	Setpoint	unocc_clg_stpt_1	AV.1	Holding Register(Float)	40131	Internal Float	66	13	rviUnoccClgStpt	SNVT_temp_p(105)			Unoccupied Cooling Setpoint Setup in °F Default: 90 °F
28	Setpoint	unocc_htg_stpt_1	AV.3	Holding Register(Float)	40133	Internal Float	67	14	rviUnoccHtgStpt	SNVT_temp_p(105)			Unoccupied Heating Setpoint Setup in °F Default: 55 °F
29	Effective Cooling Setpoint	eff_clg_stpt_1	AV.5	Holding Register(Float)	40039	Internal Float	20	4	rvoEffClgStpt	SNVT_temp_p(105)		✓	Effective Cooling Setpoint (after setpoint adjustment applied) in °F
30	Effective Heating Setpoint	eff_htg_stpt_1	AV.6	Holding Register(Float)	40045	Internal Float	23	5	rvoEffHtgStpt	SNVT_temp_p(105)		✓	Effective Heating Setpoint (after setpoint adjustment applied) in °F
31	Zone Temperature	eff_zone_temp_1	AV.7	Holding Register(Float)	40057	Internal Float	29	38	rviContFan	SNVT_switch(95)		✓	Effective Zone Temperature Status in °F
32	Night Setback (NSB) Status	nsb_status_1	BV.22	Discrete Input	10013	Binary Input	13	8	rvoNsbStatus	SNVT_switch(95)		✓	Night Setback Status 0 = Night Setback disabled 1 = Night Setback enabled
33	High ZS Zone Sensor Temperature Alarm	zmp_hi_1	BV.26	Discrete Input	10062	Binary Input	62	-	-	-		✓	Zone Temperature Alarm (High) 0 = Normal 1 = High Zone Temperature (Default: 10 °F Above Setpoint)
34	Low ZS Zone Sensor Temperature Alarm	zmp_lo_1	BV.27	Discrete Input	10063	Binary Input	63	-	-	-		✓	Zone Temperature Alarm (Low) 0 = Normal 1 = Low Zone Temperature (Default: 10 °F Below Setpoint)
35	ZS Zone Sensor Hardware Failure Alarm	zone_sen_1	BV.28	Discrete Input	10058	Binary Input	58	-	-	-		✓	Zone Sensor Failure Alarm 0 = Normal 1 = Sensor Failure (Check: ZS Sensor Hardware)
36	Effect Zone Remote Temperature	eff_remzone_temp_1	AV.9	Input Register(Float)	30019	Internal Float	25	-	-	-		✓	Reports the Effective Temperature from a Zone Remote Temp Sensor after any offsets have been applied
37	Remote Temp or Return Air Temp Value	zone_rem_sen_val_1	AV.31	Input Register(Float)	30035	Internal Float	58	-	-	-		✓	Reports the Return Air Temperature or Zone Remote Temperature at the Sensor

ZONE CONTROL SETUP & STATUS

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
41		38	System Status	sys_status_1	AV.16	Input Register (Float)	30031	Internal Float	54	28	nvoSysStatus	SNVT_count_inc(9)	✓	General System Status 0 = Unoccupied 1 = Occupied 2 = Fan Only 3 = Heating 4 = Cooling 5 = Transition to Cool 6 = Transition to Heat 7 = Air Economizer 8 = Unit Locked 9 = Aux Heat 10 = Re-Heat 11 = Manual Re-Heat 12 = Transition to Re-Heat 13 = Free Cooling 14 = Transition to Free Cooling 15 = Water-Side Economizer
42		39	Cooling Demand Percentage	dg_pct_1	AV.13	Holding Register(Float)	40025	Internal Float	13	-	-	-	✓	Cooling Status in Demand Percent, %
43		40	Heating Demand Percentage	htg_pct_1	AV.12	Holding Register(Float)	40073	Internal Float	37	-	-	-	✓	Heating Capacity in %
44		41	Leaving Water Temperature (LWT)	eff_lwt_1	AV.11	Input Register (Float)	30015	Internal Float	21	23	nvoEffLwt	SNVT_temp_p(105)	✓	Effective Leaving Water Temperature Status in °F
45		42	Effect Disch Air Temp	eff_dat_1	AV.10	Input Register (Float)	30011	Internal Float	18	21	nvoEffDat	SNVT_temp_p(105)	✓	Discharge Air Temperature (DAT) in °F
46		43	Outdoor Air Temperature (OAT)	eff_oat_1	AV.75	Holding Register(Float)	40055	Internal Float	28	6	nvoEffOat	SNVT_temp_p(105)	✓	Effective Outdoor Temperature Status in °F
47		44	Discharged Air Temperature Setpoint	dat_stpt_1	AV.30	Holding Register(Float)	40017	Internal Float	11	18	nviDatStpt	SNVT_temp_p(105)	✓	Discharged Air Temperature Setpoint Setup in °F Default: 65 °F
48		45	Temperature Reset Source	rst_temp_source_1	AV.8	Holding Register(Float)	40083	Internal Float	62	-	-	-	✓	Temperature Reset Source Selection 0 = Outside Air Temperature Reset (Default) 1 = Mixed Air (or Return Air) Temperature Reset
49	DISCHARGE AIR CONTROL SETUP & STATUS	46	Outside Air Temperature Sensor Source Status	oat_sel_sta_1	AV.78	Input Register (Float)	30029	Internal Float	43	-	-	-	✓	Outside Air Temperature Sensor Source Status 1 = BAS OAT Sensor 2 = Hard-Wired OAT Sensor (Default)
50		47	Temperature Reset Mode	oat_rst_mode_1	AV.71	Holding Register(Float)	40037	Internal Float	41	-	-	-	✓	Outside Air Temperature Reset Setup 0 = Single 1 = Multiple (Default)
51		48	Single Reset/Free Cooling Reset Temperature	oat_reset1_1	AV.69	Holding Register(Float)	40027	Internal Float	35	-	-	-	✓	Outside Air Temperature (Free Cooling Temperature) Operation in °F or Single Reset Temperature Default: 50 °F
52		49	Part Cool Reset Temperature	oat_reset2_1	AV.72	Holding Register(Float)	40029	Internal Float	36	-	-	-	✓	Outside Air Temperature (Stage 1 Cooling Temperature) Operation in °F Default: 60 °F
53		50	Full Cool Reset Temperature	oat_reset3_1	AV.74	Holding Register(Float)	40033	Internal Float	38	-	-	-	✓	Outside Air Temperature (Stage 2 Cooling Temperature) Operation in °F Default: 75 °F
54		51	Heating Reset Temperature	oat_reset_ht_1	AV.92	Holding Register(Float)	40035	Internal Float	39	-	-	-	✓	Outside Air Temperature Reset Mixed Air (Stage 1 Heating) Operation in °F Default: 40 °F
55		52	Outside Air Temperature Sensor	oat_sel_1	AV.73	Holding Register(Float)	40041	Internal Float	42	-	-	-	✓	Outside Air Temperature Sensor Source Setup 1 = BAS OAT Sensor 2 = Hard-Wired OAT Sensor (Default)
56		53	Outside Air Temperature Sensor Failure	oat_sen_1	BV.87	Discrete Input	10046	Binary Data	48	-	-	-	✓	Outside Air Temperature Alarm (Sensor) 0 = Normal 1 = Sensor Failure (Check Sensor Hardware Configuration)
57		54	Hot Gas Reheat Modulating Valve Status	eff_hgr_mod_viv1_1	AV.28	Input Register (Float)	30005	Internal Float	14	19	nvoEffHgrModViv1	SNVT_lev_percent(81)	✓	Effective Hot Gas Reheat Modulating Valve Output Status
58		55	Compressor Enabled Stages	enabled_clstages_1	AV.68	Input Register (Float)	30023	Internal Float	27	-	-	-	✓	Compressor Stages Enabled 0 = No Stages Enabled 1 = 1 Stage Enabled 2 = 2 Stages Enabled
59	56	Supply Air Setpoint Differential	dat_stpt_diff_1	AV.58	Holding Register(Float)	40067	Internal Float	51	-	-	-	✓	Supply Air Temperature Setpoint Differential Setup Default: 2.0 °F	
60	57	Supply Air High Differential Trip	sat_hi_trip_1	AV.63	Holding Register(Float)	40063	Internal Float	50	-	-	-	✓	Supply Air Temperature High Trip Differential Setpoint Setup Default: 2.0 °F	
61	58	Supply Air Low Differential Trip	sat_lo_trip_1	AV.77	Holding Register(Float)	40061	Internal Float	49	-	-	-	✓	Supply Air Temperature Low Trip Differential Setpoint Setup Default: 2.0 °F	
62	59	High Cooling Supply Air Temperature in DAC	csat_hi_1	BV.86	Discrete Input	10016	Binary Data	17	-	-	-	✓	High Cooling Supply Air Temperature during Discharge Air Control Alarm 0 = Normal 1 = Alarm Active	
63	60	Low Heating Supply Air Temperature in DAC	hsat_lo_1	BV.149	Discrete Input	10037	Binary Data	38	-	-	-	✓	Heating Supply Air Temp Alarm (Low) 0 = Normal 1 = Active (Default: -80 °F)	
64	ALARMS	61	Effective Discharge Air Temperature Setpoint	eff_dat_stpt_1	AV.67	Input Register (Float)	30049	Internal Float	83	-	-	-	✓	Effective Discharged Air Temperature Setpoint in °F after any resets are applied (for Discharge Air Control with Zone Temp Reset)
65		62	Effective ZS Sensor Temperature	zt_reset_1	AV.116	Input Register (Float)	30051	Internal Float	84	-	-	-	✓	Effective Zone Temperature reading from ZS sensor after any offsets have been applied (for Discharge Air Control with Zone Temp Reset)
66		63	Occupancy Status	occ_status_1	BV.21	Discrete Input	10014	Binary Input	14	11	nvoOccStatus	SNVT_switch(95)	✓	Occupancy Status 0 = Unoccupied 1 = Occupied
67		64	Fan Output Cmd	fan_cmd_1	BV.17	Discrete Input	10011	Binary Input	11	7	nvoFanCmd	SNVT_switch(95)	✓	Fan Output Status (G) 0 = Fan Output Off 1 = Fan Output On
68		65	Reversing Valve Output Status	rev_vv_cmd_1	BV.15	Discrete Input	10050	Binary Data	54	-	-	-	✓	Reversing Valve Output Status 0 = Reversing Valve De-energized 1 = Reversing Valve Energized
69		66	Comp Stage1 Output Cmd	cmp_stg1_cmd_1	BV.11	Discrete Input	10008	Binary Data	8	33	nvoCompStg1Cmd	SNVT_switch(95)	✓	Compressor Stage 1 Output Status 0 = Compressor 1 Off 1 = Compressor 1 On
70		67	Comp Stage2 Output Cmd	cmp_stg2_cmd_1	BV.12	Discrete Input	10009	Binary Data	9	34	nvoCompStg2Cmd	SNVT_switch(95)	✓	Compressor Stage 2 Output Status 0 = Compressor 2 Off 1 = Compressor 2 On
71		68	Compressor Stages	cmp_stgs_1	AV.14	Input Register (Float)	30001	Internal Float	7	16	nvoCompStgs	SNVT_count_inc(9)	✓	Reports Configuration Status of Compressor Stages 1 = 1 Compressor 1 Stage 2 = 2 Compressor 2 Stages 5 = 1 Compressor 2 Stages
72		69	Compressor Status	comp_state_1	AV.120	Input Register (Float)	30053	Internal Float	90	47	nvoCompState	SNVT_count_inc(9)	✓	Reports compressor state for heat pump units: 0 = Normal/Off 1 = Compressor Locked 2 = Compressor Overridden "ON" 3 = Compressor Shutdown/Alarm
73		70	Alarm Status	alm_status_1	BV.24	Discrete Input	10002	Binary Data	2	-	-	-	✓	Network Status indicating alarm condition in unit (see "Current Alarm" for more information) 0 = System Normal 1 = System in Alarm
74	71	Current Alarm Condition Status	current_alarm_1	AV.17	Input Register (Float)	30003	Internal Float	9	17	nvoCurrentAlarm	SNVT_count_inc(9)	✓	Alarm Status of unit: 0 = No Alarm, 1-10 = UPM Fault Code (See UPM Alarms below) 20 = Output Overridden via Keypad 30 = Sensor Failure 40 = Leaving Water Temp Alarm 50 = Zone Temp Alarm 60 = Discharge Air Temperature Alarm 70 = Filter Alarm/Compressors 1 & 2 Runtime 80 = Zone Humidity Alarm 90 = High CO2 Level Alarm 100 = Differential Pressure Switch (DPS) Alarm	
75	72	High Leaving Water Temperature	lvw_hi_1	BV.32	Discrete Input	10041	Binary Data	43	-	-	-	✓	High Leaving Water Temperature Alarm (LWT) 0 = Normal 1 = Alarm (Default: +135 °F)	
76	73	Low Leaving Water Temperature	lvw_lo_1	BV.33	Discrete Input	10042	Binary Data	44	-	-	-	✓	Low Leaving Water Temperature (LWT) 0 = Normal 1 = Alarm (Default: <40 °F)	
77	74	High Discharge Air Temperature	dat_hi_1	BV.29	Discrete Input	10021	Binary Data	22	-	-	-	✓	Discharge Air Temperature Sensor Alarm (High Threshold - Cooling) 0 = Normal 1 = Alarm (Default: >70 °F)	
78	75	Discharge Air Temperature Alarm	dat_lo_1	BV.30	Discrete Input	10022	Binary Data	23	-	-	-	✓	Discharge Air Temperature Sensor Alarm (Low Threshold - Heating) 0 = Normal 1 = Low DAT Alarm (Default: <75 °F)	
79	76	UPM Safety - High Pressure Alarm	hp1_2st_1	BV.5	Discrete Input	10035	Binary Data	36	44	nvoHp12st	SNVT_switch(95)	✓	UPM High Pressure Alarm Status 0 = Normal 1 = High Pressure Alarm (UPM-I code = 1; UPM-II codes = 1,3)	
80	77	UPM Safety - Low Pressure Alarm	lp1_2st_1	BV.4	Discrete Input	10039	Binary Data	41	46	nvoLp12st	SNVT_switch(95)	✓	UPM Low Pressure Alarm Status 0 = Normal 1 = Low Pressure Alarm (UPM-I code = 2; UPM-II codes = 2,4)	
81	78	UPM Safety - Condenser Coil Freeze Alarm	frz_2st_1	BV.8	Discrete Input	10030	Binary Data	31	42	nvoFrz2st	SNVT_switch(95)	✓	UPM Condenser Coil Freeze Alarm Status 0 = Normal 1 = Condenser Freeze Alarm (UPM-I code = 3; UPM-II codes = 5,9)	
82	79	UPM Safety - High Condensate Alarm	con_2st_1	BV.9	Discrete Input	10010	Binary Data	12	37	nvoCon2st	SNVT_switch(95)	✓	UPM Condensate Drain Alarm Status 0 = Normal 1 = Condensate Overflow Alarm (UPM-I code = 4; UPM-II code = 6)	
83	80	UPM Safety - Brownout Alarm	brn_2st_1	BV.10	Discrete Input	10004	Binary Data	4	32	nvoBm2st	SNVT_switch(95)	✓	UPM Brownout Alarm Status 0 = Normal 1 = Brownout Alarm (UPM-I code = 5; UPM-II code = 7)	
84	81	UPM Safety - Evaporator Coil Freeze Alarm	frz_evap_2st_1	BV.90	Discrete Input	10031	Binary Data	32	43	nvoFrzEvap2st	SNVT_switch(95)	✓	UPM Evaporator Coil Freeze Alarm Status 0 = Normal 1 = Evaporator Freeze Alarm (UPM-I code = 6; UPM-II codes = 8,10)	
85	82	UPM Reset	upm_rst_1	BV.25	Coil	00009	Binary Data	61	50	nviUpmRst	SNVT_switch(95)	✓	UPM Reset (Momentary On/Off) 0 = Reset Off (Default) 1 = Reset On	
86	83	UPM Input Alarm	upm_input_1	BV.39	Discrete Input	10064	Binary Data	60	-	-	-	✓	UPM Input Failure Alarm 0 = UPM Connected 1 = UPM Connection Failure (Check Alarm Hardware Configuration)	

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87	84	Leaving Water Temperature Sensor Failure	lvg_sen_1	BV.34	Discrete Input	10043	Binary Data	45	-	-	-	✓	Leaving Water Temperature Alarm (Sensor) 0 = Normal 1 = Sensor Failure (Check Sensor Hardware Configuration)
88	85	Discharge Air Temperature Sensor	da_sen_1	BV.31	Discrete Input	10018	Binary Data	19	-	-	-	✓	Discharge Air Temperature Sensor Alarm 0 = Sensor Normal 1 = Sensor Failure Alarm (Check Sensor Hardware Configuration)
89	86	Digital Override Lock Alarm	do_lock_1	BV.37	Discrete Input	10023	Binary Data	24	-	-	-	✓	Digital Override Lock Alarm 0 = Normal 1 = Digital Override Enabled Alarm
90	87	Inputs Override Status	input_lock_1	BV.38	Discrete Input	10038	Binary Data	39	-	-	-	✓	Software Input Lock 0 = Normal 1 = Software Lock Enabled
91	88	Duplicate Input 1&2 Alarm	dup_in12_1	BV.2	Discrete Input	10001	Binary Data	1	-	-	-	✓	Duplicated Sensor Configuration for IN-1 and IN-2 Alarm 0 = Normal 1 = Alarm (Check input configuration for conflicts)
OPTIONAL SETUP AND STATUS POINTS													
92	89	Compressor 1 Runtime	comp1_rtm_1	BV.35	Discrete Input	10006	Binary Data	6	-	-	-	✓	Fan Mode 1 = Auto (cycle with compressor) 4 = On (Default)
93	90	Compressor 2 Runtime	comp2_rtm_1	BV.36	Discrete Input	10007	Binary Data	7	-	-	-	✓	Compressor 2 Runtime Alarm Status 0 = Normal 1 = Timer Has Expired (Default: >9760 Hours)
94	91	Compressor 1 Runtime Reset	cmp1_rtm_rst_1	BV.13	Coil	00002	Binary Data	10	35	nviCmp1RntmRst	SNVT_switch(95)	✓	Compressor 1 Runtime Reset. Momentary On/Off required. 0 = Reset Off (Default) 1 = Reset On
95	92	Compressor 2 Runtime Reset	cmp2_rtm_rst_1	BV.14	Coil	00003	Binary Data	11	36	nviCmp2RntmRst	SNVT_switch(95)	✓	Compressor 2 Runtime Reset. Momentary On/Off required. 0 = Reset Off (Default) 1 = Reset On
96	93	High Remote Temperature Alarm	zrem_hi_1	BV.41	Discrete Input	10060	Binary input	60	-	-	-	✓	Remote Sensor Zone Temperature Alarm (High) 0 = Normal 1 = High Zone Temperature (Default: 10 °F Above Setpoint)
97	94	Low Remote Temperature Alarm	zrem_lo_1	BV.42	Discrete Input	10061	Binary input	61	-	-	-	✓	Remote Sensor Zone Temperature Alarm (Low) 0 = Normal 1 = Low Zone Temperature (Default: 10 °F Below Setpoint)
98	95	Remote Temperature Sensor Hardware Failure Alarm	zrem_sen_1	BV.43	Discrete Input	10059	Binary input	59	-	-	-	✓	Remote Temperature Zone Sensor Failure Alarm 0 = Normal 1 = Sensor Failure (Check Remote Sensor Hardware)
99	96	Entering Water Temperature Sensor Alarm	ewt_sen_1	BV.80	Discrete Input	10026	Binary Data	27	26	nvoEwtSen	SNVT_switch(95)	✓	Entering Water Temperature Sensor Alarm 0 = Normal 1 = Sensor Failure Alarm (Check Hardware)
100	97	Air Economizer Status	aecon_status_1	BV.6	Discrete Input	10032	Binary Data	13	-	-	-	✓	Air Economizer Option Status 0 = Inactive 1 = Active
101	98	OAT high limit for Air Econ	oat_hi_lim_aecon_1	AV.100	Holding Register(Float)	40113	Internal Float	86	-	-	-	✓	Air Economizer Option: range setting for Outside Air Temperature (High Limit) in °F Default: 60 °F
102	99	OAT low limit for Air Econ	oat_lo_lim_aecon_1	AV.117	Holding Register(Float)	40115	Internal Float	87	-	-	-	✓	Air Economizer Option: range setting for Outside Air Temperature (Low Limit) in °F Default: 50 °F
103	100	Outdoor RH high limit for Air Econ	rh_hi_lim_aecon_1	AV.118	Holding Register(Float)	40117	Internal Float	88	-	-	-	✓	Air Economizer Option: range setting for Outside Air Relative Humidity (High Limit) in % Default: 50 %
104	101	Outdoor RH low limit for Air Econ	rh_lo_lim_aecon_1	AV.119	Holding Register(Float)	40119	Internal Float	89	-	-	-	✓	Air Economizer Option: range setting for Outside Air Relative Humidity (Low Limit) in % Default: 40 %
105	102	Boilerless Status	htg_econ_1	BV.91	Discrete Input	10034	Binary Data	35	30	nvoHtgEcon	SNVT_switch(95)	✓	Boilerless Control Status 0 = Off 1 = On (Electric Heating)
106	103	Economizer Cooling Command	clg_econ_1	BV.92	Discrete Input	10015	Binary Data	16	-	-	-	✓	Cooling Economizer Status 0 = On 1 = Off
107	104	Entering Water Temperature	eff_ewt_1	AV.62	Input Register (Float)	30013	Internal Float	19	22	nvoEffEwt	SNVT_temp_p(105)	✓	Water Side Economizer Effective Entering Water Temperature in °F
108	105	Condenser Water Valve Output	cwv_cmd_1	BV.79	Discrete Input	10017	Binary Data	18	-	-	-	✓	Condenser Water Valve Status 0 = Closed 1 = Open
109	106	Valve End Switch Status	ves_status_1	BV.68	Discrete Input	10065	Binary Data	62	-	-	-	✓	Valve End Switch Status 0 = Off 1 = Valve End Switch Detected
110	107	Valve Switch Hand	ves_hand_1	BV.150	Discrete Input	10066	Binary Data	63	-	-	-	✓	Valve End Switch Hand Mode Condenser Water Valve engaged but not commanded by controller.
111	108	Valve End Switch Alarm	ves_fail_1	BV.151	Discrete Input	10067	Binary Data	64	-	-	-	✓	Valve End Switch Fail Alarm 0 = Normal 1 = Active
112	109	Differential Pressure Switch (DPS) Alarm	dps_alarm_1	BV.77	Discrete Input	10024	Binary Data	25	-	-	-	✓	Differential Pressure Switch Alarm 0 = Normal 1 = Alarm
113	110	Aux Heat Output Cmd	aux_htg_cmd_1	BV.20	Discrete Input	10003	Binary Data	3	31	nvoAuxHtgCmd	SNVT_switch(95)	✓	Auxiliary Heat Output Status 0 = Aux Heat Off 1 = Aux Heat On
114	111	Pre-Heat Output Override	pre_htg_ovrde_1	AV.175	Holding Register(Float)	40049	Internal Float	45	-	-	-	✓	Pre-Heat Output Override Allow/Do not Allow 0 = Do not allow override (Default) 1 = allow override
115	112	SCR Electric Heat Output	mat_pid_1	AV.121	Input Register (Float)	30055	Internal Float	91	-	-	-	✓	SCR controlled Electric Heat Output in %
116	113	Filter Service Alarm	filter_1	BV.40	Discrete Input	10029	Binary Data	30	-	-	-	✓	Filter Alarm 0 = Off 1 = Service Filter Alarm
117	114	Reset Fan Runtime	fan_rtm_rst_1	BV.19	Coil	00007	Binary Data	52	-	-	-	✓	Reset Fan Runtime. Momentary On/Off required for reset 0 = Reset Off (Default) 1 = Reset On
118	115	Set Fan Mode	fan_mode_1	MSV.2	Holding Register(Signed Integer)	40123	Internal Integer	2	54	nviFanMode	SNVT_count_inc(9)	✓	Set Fan Mode 1 = Auto (Cycle with Compressor) 4 = On (Default)
119	116	Fan Mode Status	fan_mode_stat_1	MSV.1	Input Register(Signed Integer)	30059	Internal Integer	1	53	nvoFanModeStat	SNVT_count_inc(9)	✓	Fan Mode Status 1 = Auto (Cycle with Compressor) 4 = On (Default)
120	117	Fan Running Status	fan_status_1	BV.66	Discrete Input	10028	Binary Data	29	41	nvoFanStatus	SNVT_switch(95)	✓	Fan Running Status 0 = Off 1 = On - Fan Running
121	118	Fan Hand Mode Alarm	saf_hand_1	BV.83	Discrete Input	10027	Binary Data	28	-	-	-	✓	Fan Hand Mode Alarm Fan is running but not being commanded by controller.
122	119	Supply Air Fan Switch Failure	saf_switch_fail_1	BV.82	Discrete Input	10052	Binary Data	56	-	-	-	✓	Supply Air Fan Status Alarm 0 = Normal 1 = Alarm (Check Fan Hardware)
123	120	Zone Humidity	eff_zone_humid_1	AV.20	Input Register (Float)	30021	Internal Float	26	24	nvoEffZoneHumid	SNVT_lev_percent(81)	✓	Effective Zone Humidity in Percent RH (%)
124	121	Occupied Zone Humidity Setpoint	occ_zhumid_stpt_1	AV.21	Holding Register(Float)	40043	Internal Float	44	-	-	-	✓	Occupied Humidity Setpoint Setup in % Default: 55%, Minimum: 20%, Maximum: 95%
125	122	Zone Humidity Setpoint Differential	zhumid_stpt_dif_1	AV.22	Holding Register(Float)	40071	Internal Float	57	-	-	-	✓	Zone Humidity Setpoint Differential Setup in RH % Default: 2%, Minimum: 1%, Maximum: 5%
126	123	Hot Gas ReHeat Valve Status	eff_hgrv_cmd_1	BV.44	Discrete Input	10025	Binary Data	26	-	-	-	✓	Hot Gas ReHeat Valve Status (Start/Stop) 0 = Valve Off 1 = Valve On
127	124	High Humidity Alarm	zhumid_hi_1	BV.45	Discrete Input	10068	Binary Data	65	-	-	-	✓	Zone Humidity Alarm (High) 0 = Normal 1 = High Humidity (Default: 10% above Setpoint)
128	125	Low Humidity Alarm	zhumid_lo_1	BV.46	Discrete Input	10069	Binary Data	66	-	-	-	✓	Zone Humidity Alarm (Low) 0 = Normal 1 = Low Humidity (Default: 30% below Setpoint)
129	126	Humidity Sensor Hardware Failure Alarm	zhumid_sen_1	BV.47	Discrete Input	10070	Binary Data	67	-	-	-	✓	Zone Humidity Sensor Alarm 0 = Normal 1 = Sensor Failure (Check RH Sensor Hardware Configuration)
130	127	Input Expansion Module Mode	iem_mode_1	AV.50	Holding Register(Float)	40085	Internal Float	63	-	-	-	✓	IEM in Controller Input #5 (IN-5) Configuration Setup 0 = Dirty Filter Switch, Fan Status Switch, Valve End Switch (Default) 1 = Smoke Detector Switch, Fan Status Switch, Valve End Switch 2 = Dirty Filter Switch, Fan Status Switch, Differential Pressure Switch 3 = Smoke Detector Switch, Fan Status Switch, Dirty Filter Switch 4 = Dirty Filter Switch, Fan Status Switch, Damper End Switch 5 = Smoke Detector Switch, Fan Status Switch, Secondary Drain Fan 6 = Dirty Filter Switch, Fan Status Switch, Pump Status Switch 7 = None
131	128	Enable/Disable Fan Status Switch in IEM	allow_fan_alm_1	BV.67	Coil	00011	Binary Data	71	-	-	-	✓	Must be set to enable Fan Status Switch when using IEM in IN-5 0 = FSS on IEM disabled (Default) 1 = FSS on IEM Enabled
132	129	Enable/Disable Valve Switch in IEM	allow_val_alm_1	BV.69	Coil	00012	Binary Data	72	-	-	-	✓	Must be set to enable Valve End Switch when using IEM in IN-5 0 = VES on IEM disabled (Default) 1 = VES on IEM Enabled
133	130	Smoke Alarm Enable/Disable	smoke_alm_enable_1	BV.71	Coil	00014	Binary Data	74	-	-	-	✓	Must be set to enable Smoke Detector Switch when using IEM in IN-5 0 = SDS on IEM disabled (Default) 1 = SDS on IEM Enabled
134	131	Mixed Air Temperature (MAT)	eff_mat_1	AV.87	Input Register (Float)	30017	Internal Float	22	-	-	-	✓	Effective Mixed Air Temperature in °F
135	132	Mix Air Temperature Source Status	mat_sel_status_1	AV.84	Input Register (Float)	30025	Internal Float	30	-	-	-	✓	Mixed Air Temperature Sensor Source Status 0 = BAS MAT 1 = Wired MAT
136													

A	B	C	D	E	F	G	H	I	J	K	L	M	N
137	MIXED AIR CONTR.	133	Mixed Air Temperature Sensor	mat_sel_1	AV:85	Holding Register(Float)	40019	Internal Float	31	-	-	-	Mixed Air Temperature Sensor Source Setup 0 = BAS WAT Sensor 1 = HardWired MAT Sensor (Default)
		134	Mixed Air Temperature Setpoint	mat_stpt_1	AV:90	Holding Register(Float)	40021	Internal Float	32	-	-	-	Mixed Air Temperature Setpoint Default: 42 °F, Minimum: 40°F, Maximum: 60°F
		135	Electric Preheat Output	ma_preheat_1	AV:61	Input Register(Float)	30041	Internal Float	85	-	-	-	✓ SCR Electric Preheat Output for Mixed Air Control Option in V
		136	Low Mixed Air Temperature	mat_low_1	BV:89	Discrete Input	10044	Binary Data	46	-	-	-	✓ Mixed Air Low Temperature Alarm (Low) 0 = Normal 1 = Alarm (Default: +38 °F)
		137	Mix Air Temperature Sensor Failure	mat_sen_1	BV:88	Discrete Input	10045	Binary Data	47	-	-	-	✓ Mixed Air Low Temperature Alarm (Sensor) 0 = Normal 1 = Sensor Failure (Check Sensor Hardware Configuration)
		138	Circulation Pump Output Command	pump_cmd_1	BV:3	Discrete Input	10005	Binary Data	5	-	-	-	✓ Loop Water Pump Status 0 = Pump Running 1 = Pump Off
142	PUMP	139	Circulation Pump Switch Failure Alarm	pss_fail_1	BV:56	Discrete Input	10047	Binary Data	49	-	-	-	✓ Pump Status Switch Fail Alarm 0 = Normal 1 = Active
		140	Pump Switch Status	pump_status_1	BV:57	Discrete Input	10048	Binary Data	50	-	-	-	✓ Pump Switch Status 0 = Off 1 = Pump Switch Detected
		141	Circulation Pump Switch In Hand Alarm	pss_hand_1	BV:58	Discrete Input	10049	Binary Data	51	-	-	-	✓ Pump Status Switch Hand Mode Pump running but not being commanded by controller.
146	SDP	142	Secondary Condensate Pump Alarm	compump_1	BV:50	Discrete Input	10012	Binary Data	14	-	-	-	✓ Secondary Condensate Pump Alarm 0 = Normal 1 = Alarm Active
		143	Smoke Event Alarm Notification	smoke_1	BV:81	Discrete Input	10054	Binary Data	58	49	nvoSmoke	SNVT_switch(95)	✓ Smoke Detector Alarm 0 = Normal 1 = Alarm
148	SMOKE	144	Smoke Event Status	smoke_status_1	BV:70	Discrete Input	10055	Binary Data	59	-	-	-	✓ Smoke Alarm Status 0 = Normal 1 = Smoke Detector Active
		145	Zone CO2 Level	eff_zn_co2_lev_1	AV:25	Holding Register(Float)	40065	Internal Float	33	-	-	-	✓ Effective Zone CO2 Levels in PPM
149	DEMAND CONTROLLED VENTILATION	146	Zone CO2 High Trip	zn_co2_hi_trip_1	AV:27	Holding Register(Float)	40135	Internal Float	68	-	-	-	Set level of CO2 reported as a High Level Alarm Default: 1200 PPM
		147	CO2 Hardware Failure Alarm	zn_co2_fail_1	BV:51	Discrete Input	10056	Binary Input	56	-	-	-	✓ CO2 Zone Sensor Alarm (Sensor) 0 = Normal 1 = Sensor Failure (Check CO2 Hardware Configuration)
		148	High CO2 Alarm	zn_co2_hi_1	BV:48	Discrete Input	10057	Binary Input	57	-	-	-	✓ CO2 Zone Sensor Alarm (High) 0 = Normal 1 = High CO2 Level (Default: >1200 PPM)
		149	Damper Option Selection	dmp_opt_sel_1	AV:107	Holding Register(Float)	40093	Internal Float	72	-	-	-	Used to configure how on/off damper is enabled when not enabled by CO2 0 = Damper Opens when Fan Runs (Default) 1 = Damper Opens when Occupied 2 = Damper Opens for Free Cooling (Air Economizer)
		150	Damper Command	damper_cmd_1	BV:49	Discrete Input	10020	Binary Data	21	39	nvoDamperCmd	SNVT_switch(95)	✓ Damper Position Output Status 0 = Closed 1 = Open
		151	Damper End Switch	des_status_1	BV:93	Discrete Input	10019	Binary Data	20	-	-	-	✓ Damper End Switch Status 0 = Damper Closed 1 = Damper Open
155	DEMAND CONTROLLED VENTILATION	152	Modulating Damper Position	eff_dpr_pos_screen_1	AV:81	Holding Register(Float)	40047	Internal Float	24	-	-	-	✓ Effective Outside Air Modulating Damper Position in %
		153	Minimum Damper Position	min_mdpr_pos_1	AV:79	Holding Register(Float)	40079	Internal Float	40	-	-	-	Minimum Modulating Damper Position Setup Default: 10% Open
		154	Damper Occupancy Selection	mdpr_occ_sel_1	AV:97	Holding Register(Float)	40031	Internal Float	16	-	-	-	Modulating Damper Occupancy Selection Setup 0 = Disabled 1 = Occupied (Default) 2 = Unoccupied 3 = Any Occupancy
		155	Static Air Fan Speed	eff_sa_fan_speed_1	AV:55	Input Register(Float)	30007	Internal Float	15	20	nvoE#SaFanSpeed	SNVT_lev_percent(81)	✓ Effective Static Air Fan Speed in %
159	VFD	156	Supply Air Duct Static Pressure	eff_sa_sta_press_1	AV:53	Input Register(Float)	30009	Internal Float	17	-	-	-	✓ Effective Static Air Pressure Sensor Status in H2O°
		157	Static Press Setpoint	sta_press_stpt_1	AV:52	Holding Register(Float)	40053	Internal Float	47	27	nviStaPressStpt	SNVT_press_p(113)	Static Pressure Setpoint in inches of H2O Setup Default: 1.00 "H2O
		158	Supply Air Fan Minimum Speed	sa_fan_min_speed_1	AV:59	Holding Register(Float)	40059	Internal Float	48	-	-	-	Minimum VFD Fan Speed Setpoint Setup Default: 40%
		159	Supply Air Static Pressure High Trip	sa_sta_hi_trip_1	AV:54	Holding Register(Float)	40051	Internal Float	46	-	-	-	High Static Air Pressure Alarm Trip Setpoint in inches of H2O Default: 2.75 "H2O
		160	Static Air Pressure Sensor Hardware Alarm	sas_sen_1	BV:65	Discrete Input	10051	Binary Data	55	-	-	-	✓ Static Air Pressure Sensor Alarm (Sensor) 0 = Normal 1 = Sensor Failure (Check Static Pressure Hardware Configuration)
		161	High Static Pressure Alarm	sas_hi_1	BV:64	Discrete Input	10053	Binary Data	57	-	-	-	✓ Static Air Pressure Alarm (High) 0 = Normal 1 = High Static Pressure (Default: > 2.75" H2O)
UNIT CONFIGURATION (FACTORY SETUP)													
166	BAS VALUES	162	Unit Mode	unit_mode_1	AV:23	Holding Register(Float)	40069	Internal Float	56	29	nviUnitMode	SNVT_count_inc(9)	Unit Mode Setup 0 = Cooling only 1 = Heat Pump (Default) 2 = Heat Pump (Default)
		163	Compressor Stages Selection	stages_1	AV:114	Holding Register(Float)	40107	Internal Float	79	-	-	-	Selected Compressor Stages 1 = 1 Compressor 1 Stage (UPM-I Alarm Codes Used) 2 = 2 Compressor 2 Stages (UPM-II Alarm Codes Used) 3 = 3 Compressor 3 Stages (UPM-III Alarm Codes Used) 4 = 4 Compressor 4 Stages (UPM-IV Alarm Codes Used) 5 = 5 Compressor 5 Stages (UPM-V Alarm Codes Used) (Default)
		164	Evaporator Coil Configuration Selection	coil_cfg_1	AV:94	Holding Register(Float)	40011	Internal Float	6	-	-	-	Coil Configuration Setup 0 = Parallel (Default) 1 = Series
		165	BAS Loop Enable/Disable	loop_enabled_1	BV:23	Coil	00006	Binary Data	40	45	nviLoopEnabled	SNVT_switch(95)	Loop Status 0 = Disable Heat/Cool 1 = Allow Heat/Cool Operation (Default)
		166	BAS Relative Humidity Enable/Disable	rh_bas_sel_1	AV:51	Holding Register(Float)	40109	Internal Float	80	57	nviRHBasSel	SNVT_count_inc(9)	RH Sensor Source Selection 0 = BAS RH Sensor 1 = Hard-Wired RH Sensor (Default)
		167	CO2 BAS Enable/Disable	co2_bas_ena_1	AV:106	Holding Register(Float)	40091	Internal Float	71	-	-	-	CO2 Sensor Source Selection 0 = BAS CO2 Sensor 1 = Hard-Wired CO2 Sensor (Default)
		168	BAS CO2 Sensor Value	bas_co2_val_1	AV:49	Holding Register(Float)	40001	Internal Float	1	1	nviBasCo2Val	SNVT_ppm(29)	BAS CO2 Sensor Value in PPM Default: 1001 PPM
		169	BAS Mixed Air Temp	bas_mat_1	AV:86	Holding Register(Float)	40003	Internal Float	2	-	-	-	BAS Mixed Air Temperature Value in °F Default: 66.5 °F
		170	BAS Outside Air Temperature	bas_oat_1	AV:56	Holding Register(Float)	40005	Internal Float	3	0	nviEffectiveOAT	SNVT_temp_p(105)	Effective Outside Air Temperature in °F Default: 60 °F
		171	BAS RH Sensor Value	bas_rh_sen_val_1	AV:56	Holding Register(Float)	40007	Internal Float	4	15	nviBasRhSenVal	SNVT_lev_percent(81)	RH Sensor Value Supplied by BAS in % Default: 56 %RH
		172	BAS Temperature Sensor Value	bas_sen_val_1	AV:19	Holding Register(Float)	40009	Internal Float	5	2	nviBasSenVal	SNVT_temp_p(105)	BAS Zone Temperature Sensor Value in °F Default: 74 °F