ExactLogic BACnet Communicating Thermostat
EXL01617 Sequence Datasheet

Heat Pump with Condenser Valve Command

DataSheet Rev 1.12.301/4.1.01
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Operating Sequence

Standard Occupied

Thermostat occupancy can be set from a number of different sources. The Occupied Schedule Command at BO-5, a Warmup Command at BV-41, a Cooldown Command at BV-42, an External Occupancy Sensor at BI-5, the Optional Internal Occupancy Sensor at BI-1, or from the Field Service Mode. The External Occupancy Sensor is enabled with BV-51, and the Internal Occupancy Sensor is enabled at BV-64. See the separate Installation documentation to set the occupancy from the Field Service Mode.

During normal occupied operation the display will show the current room temperature. The first press of either right pair of keys will show the current room setpoint. Additional presses will adjust the setpoint up or down by 0.5 degrees. The thermostat keypad will time out after 5 seconds without a key press, and the display will switch back to displaying the room temperature.

The left pair of keys allows for the adjustment of the fan speed. The current mode is shown with the first key press; additional key presses will show the adjustment to the mode. AV-62 is used to select the number of fan speeds, and AV-63 will show what speed the fan is currently set to. Refer to the table below for the values of AV-62 (Fan Mode Status) and AV-63 (Fan Speed Status)

AV-62	Mode
0	AUTO Only
1	AUTO-ON
2	OFF-AUTO-ON
3	OFF-1-2-AUTO
4	OFF-1-2-3-AUTO

AV-63	Fan Speed
0	OFF
1	Fan Speed 1
2	Fan Speed 2
3	Fan Speed 3
4	AUTO
5	ON

Internal/External Thermistor Control

The thermostat control sequence can use the internal thermistor or an external thermistor connected to AI-2. Setting BV-67 to OFF (default) the thermostat will use the internal thermistor. Setting BV-67 to ON the control sequence will use the external thermistor.

The current controlling temperature is located at AV-20. This value will be displayed on the LCD of the thermostat and should be used on any workstation displays.

Control Sequence – Heat / Cool

For Heat/Cool applications, such as RTU's or Heat/Cool type Heat Pumps set BV-72 active. The control sequence is as follows.

When scheduled to be occupied, the thermostat will maintain its occupied set point. When scheduled to be occupied, the thermostat will maintain its occupied setpoint. The deadband is controlled by the cooling/heating offset (default 1 degree). Should the room temperature get 0.5 degrees above or below the current cooling/heating setpoints, the fan will turn on and the cooling or heating will turn on. Stage one cooling/heating will turn off when the room temperature is 0.2 degrees below or above the cooling/heating setpoint.

This sequence also has an output for the Condenser Valve. The Condenser Valve will be commanded to 100% or 0% via BO-3 or BO-4, and the valve position can be found at AV-15. The Compressor is not allowed to be commanded ACTIVE until the Condenser Valve to fully open. This is done either by a time delay or an End Switch; this is set by BV-52. When

set ACTIVE the End Switch controls the delay. When set INACTIVE a time delay will control the Compressor command delay.

Note: All digital outputs have a 180 second ON/OFF anti-short cycle.

Control Sequence – Compressor / Reversing Valve

For Heat Pumps of a compressor/reversing valve type, set BV-72 inactive. The control sequence is as follows.

The fan will engage when the room temperature is 0.5 degrees above or below the cooling/heating setpoint. The reversing valve command is on BV-73, 0 = Heat and 1 = Cool. The reversing valve command will determine if the reversing valve will be engaged for a cooling call or a heating call. The command for the reversing value is held until the thermostat switches modes. For instance, if the reversing valve to set to engage with heat, the command is held until the thermostat enters a cooling mode.

This sequence also has an output for the Condenser Valve. The Condenser Valve will be commanded to 100% or 0% via BO-3 or BO-4, and the valve position can be found at AV-15. The Compressor is not allowed to be commanded ACTIVE until the Condenser Valve is fully open. This is done either by a time delay or an End Switch; this is set by BV-52. When set ACTIVE the End Switch controls the delay. When set INACTIVE a time delay will control the Compressor command delay.

Note: All outputs for a 180 second ON/OFF anti-short cycle.

Fan Status

There is an option Fan Status that can be used to disable the outputs should the fan not run when commanded. BI-5 is used as the Fan Status Input, and BV-51 set INACTIVE is used to select this option. (BV-51 ACTIVE is used for an external Occupancy Relay) The Fan Alarm, BV-20, is triggered after 20 seconds of no fan status with the fan command ACTIVE (BO-0). To reset the alarm set BV-32 ACTIVE.

To disable the Fan Status option (i.e. no fan status or external occupancy), jumper UI-5 to GROUND.

Standard Unoccupied

During unoccupied operation the thermostat will continue to display the room temperature. When in an unoccupied state pressing one of the right pair of keys will display a message indicating the thermostat is in night mode, preventing the setpoint from being adjusted. To adjust the room setpoint when unoccupied the thermostat must be set to night override.

Control Sequence

When in the unoccupied mode, the room will be controlled by the unoccupied cooling/heating setpoints. The fan and cooling/heating stages will operate the same as the occupied control sequence.

Vacancy

If a room is known to be vacant, vacant setpoints can be used to override the unoccupied setpoints. By setting BV-70, a room will be controlled by the vacant cooling/heating setpoints (AV-64/65).

Night Override

Set the night override by pressing one of the left pair of keys. The display will switch to allow the user to set the night override time. Additional presses of the keys will adjust the time up or down by 0.5 hour increments. The night override can be increased up to the override limit set at AV-73, the default is 5 hours. When the thermostat is in night override, the

first press of one of the left pair of keys will display the override time remaining. Additional key presses will add/subtract 0.5 hours to the time that was remaining. When the timer reaches zero the thermostat will return to the unoccupied mode.

In the night override mode, the right pair of keys can be used to adjust the room setpoint. The thermostat keypad will time out after 5 seconds without a key press, and the display will switch back to displaying the room temperature.

The thermostat can be set to a night override by writing a value to AV-74 through BACnet. The value can not exceed the night override limit set at AV-73. If the night override time is set higher than the limit, the night override timer will be set to the limit. The night override limit default is 5 hours.

If the thermostat is commanded to the occupied mode while in night override, the override timer will be cleared to zero and the thermostat will enter the occupied mode.

Control Sequence

When the thermostat is in the override mode, the room will be controlled by the occupied cooling/heating setpoints. The fan and cooling/heating stages will operate the same as the occupied control sequence.

Note: There is no fan control in the override mode. The fan will run in the AUTO mode.

Vacancy

If a room is known to be vacant, vacant setpoints can be used to override the unoccupied setpoints. By setting BV-70 to active, a room will be controlled by the vacant cooling/heating setpoints (AV-64/65).

Motion/Humidity Option Card

The Motion/Humidity Option Card can be used for Motion Only, Humidity Only, or Motion/Humidity together. In order to use the Motion Sensor (either stand alone or with Humidity), BV-64 must be set to ACTIVE. The Humidity Sensor can be enabled by setting AV-31 to 4. These settings will automatically provide the required voltage to power the sensors. The motion sensor status will show on BI-1.

When the motion sensor, senses motion, it puts the unit in occupied “Active” Mode by writing to the Scheduled Occupied Command BO-5 at priority array entry 11, this will remain active until it does not see any motion for the entire duration of the time delay (AV-81 Units=seconds), it will then return to an inactive state.

When the internal occupancy sensor is enabled by setting BV-64 to ACTIVE, the occupied mode is controlled only by the occupancy sensor. The optimum start warmup point, BV-41, and optimum start cooldown point, BV-42, will set the unit to the occupied mode and then return to the unoccupied mode until motion is sensed.

The Humidity value is shown on AI-1. The Humidity Sensor will automatically be scaled by setting AV-31 to 4.

Disabling of the Splash, Setup Menu, or Field Service Mode

When the thermostat is installed in a public location there may be times when the setup of the thermostat will need to be disabled to prevent tenants from changing the configuration while still giving them access to change the setpoints and control after hours modes. The following points have been added to allow this:

BV-57 = Setting ACTIVE will disable the “EXACTLOGIC” splash display after key presses
BV-58 = Setting ACTIVE will disable access to the Setup Menu where the Network/MAC/Baud Rate/etc are set
BV-59 = Setting ACTIVE will disable access to the Field Service Mode where Time/Schedule/Setpoints/etc are set

Installation

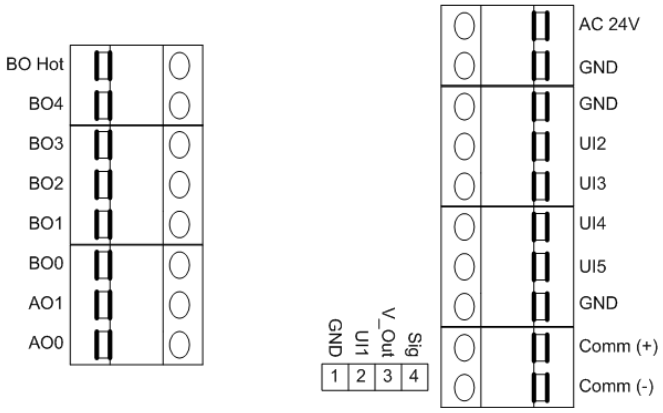

Fig. 4

*Note: Thermostat Common Relay point (BO Hot) usually 24VAC/DC or R

AC 24V.....24VAC/DC Hot
GND ..... Neutral/Ground
GND ..... Neutral/Ground
UI2 .....Universal Input 2
UI3 .....Universal Input 3
UI4 .....Universal Input 4
UI5 .....Universal Input 5
GND ..... Neutral/Ground
Comm (+)..... Network Positive Line
Comm (-).....Network Negative Line
BO Hot ..... Com, 24VAC Hot for relays*
BO4..... Relay 5 Output, 24VAC/DC
BO3..... Relay 4 Output, 24VAC/DC
BO2..... Relay 3 Output, 24VAC/DC
BO1..... Relay 2 Output, 24VAC/DC
BO0..... Relay 1 Output, 24VAC/DC
AO1..... Analog Output 1, 0-10V
AO0..... Analog Output 0, 0-10V

1 ..... Neutral/Ground
2 .....Universal Input 1
3 .....Analog Output 2
4 .....Reserved

Output Wiring

Output/Label	Heat / Cool Mode	Compressor / Reversing Mode
BO0	Fan	Fan
BO1	Cooling Stage 1	Compressor
BO2	Heating Stage 1	Reversing Valve
BO3	Condenser Valve Open	Condenser Valve Open
BO4	Condenser Valve Close	Condenser Valve Close
AO0	0-10 Vdc 0-100%	0-10 Vdc 0-100%
AO1	0-10 Vdc 0-100%	0-10 Vdc 0-100%

Reserved BACnet Points

The following are points reserved by the thermostat for operation.

Analog Inputs

Instance	Object Name	Description	Read/Write	Default
AI-0	Room Temp	Reading of the internal thermistor in counts. 0-1024	R	variable
AI-1	Humidity	Humidity reading for add-on card	R	variable
AI-2	Ext. Room Temp	Optional external room temperature input	R	variable
AI-3	Analog Input 03	Reading of the external input 3 in counts. 0-1024	R	variable
AI-4	Analog Input 04	Reading of the external input 4 in counts. 0-1024	R	variable
AI-5	Analog Input 05	Reading of the external input 5 in counts. 0-1024	R	Variable

Analog Outputs

Instance	Object Name	Description	Read/Write	Default
AO-0	Analog Output 0	0-10V output	R/W	0.0
AO-1	Analog Output 1	0-10V output	R/W	0.0
AO-2	Analog Output 2	Variable 0-14VDC, 150mA output	R/W	0.0

Analog Values

Instance	Object Name	Description	Read/Write	Default
AV-0	Mode of Operation	The mode that the thermostat is currently in. 0 = Heat Mode 1 = Cool Mode 2 = Idle 3 = Afterhours 4 = Unoccupied Idle 5 = Unoccupied Heat Mode 6 = Unoccupied Cool Mode	R	4
AV-1	Analog Value 001			
AV-2	Analog Value 002			
AV-3	Analog Value 003			
AV-4	Current Htg SP	The setpoint that controls heating. If the room temperature goes below this setpoint the thermostat will enter heating mode.	R	80.0°F
AV-5	Current Clg SP	The setpoint that controls cooling. If the room temperature goes above this setpoint the thermostat will enter cooling mode.	R	60.0°F
AV-6	Heating SP	The setpoint used for heating during occupied mode. This setpoint is calculated by AV-66 (Current SP) – AV-70 (Heating Offset)	R	72.0°F
AV-7	Cooling SP	The setpoint used for cooling during occupied mode. This setpoint is calculated by AV-66 (Current SP) + AV-69 (Cooling Offset)	R	74.0°F
AV-8	Heating Signal	Current heating signal as a percent	R	0%
AV-9	Cooling Signal	Current cooling signal as a percent	R	0%
AV-10	Analog Value 010			
AV-11	Analog Value 011			

AV-12	Analog Value 012			
AV-13	Analog Value 013			
AV-14	Analog Value 014			
AV-15	Condenser Valve Position	Position that the condenser valve has been commanded too.	R	0%
AV-16	Analog Value 016			
AV-17	Analog Value 017			
AV-18	Analog Value 018			
AV-19	Analog Value 019			
AV-20	Room Temp	Selected from either AI-0 or AI-2. BV-67 is used for selection. This is the value displayed on the LCD of the thermostat and should be used to display the temperature on any workstation display.	R	variable
AV-21	Analog Value 021			
AV-22	Analog Value 022			
AV-23	Analog Value 023			
AV-24	Analog Value 024			
AV-25	Analog Value 025			
AV-26	Cooling Deviation	Number of degrees that the room temperature is away from the cooling setpoint	R	variable
AV-27	Heating Deviation	Number of degrees that the room temperature is away from the heating setpoint	R	variable
AV-28	Deviation from SP	Number of degrees that the room temperature is away from the room setpoint	R	variable
AV-29	Zone Scan	Numerical representation of the thermostats mode. 100 = full heat, -100 = full cool	R	0
AV-30	AI-0 Setup	Parameter used to set the input type. 0 = counts 1 = temperature 2 = 4-20mA 3 = 0-5V 4 = 0-10V 5 = pulse	R	1
AV-31	AI-1 Setup	See AV-30	R	0
AV-32	AI-2 Setup	See AV-30	R	0
AV-33	AI-3 Setup	See AV-30	R	0
AV-34	AI-4 Setup	See AV-30	R	0
AV-35	AI-5 Setup	See AV-30	R	0
AV-36	Analog Value 036			
AV-37	Analog Value 037			
AV-38	Analog Value 038			
AV-39	Analog Value 039			
AV-40	Analog Value 040			
AV-41	Analog Value 041			
AV-42	Analog Value 042			
AV-43	Analog Value 043			
AV-44	Analog Value 044			
AV-45	Analog Value 045			
AV-46	Analog Value 046			
AV-47	Analog Value 047			
AV-48	Analog Value 048			
AV-49	Analog Value 049			
AV-50	Analog Value 050			
AV-51	Analog Value 051			

AV-52	Analog Value 052			
AV-53	Analog Value 053			
AV-54	Analog Value 054			
AV-55	Analog Value 055			
AV-56	Condenser Valve Motor Time	The time configured for the valve to drive fully open or fully closed	R/W	60 sec
AV -57	Cdr Valve Open Delay	Delay used to allow the condenser valve to open. After the delay expires, the compressor is commanded ON.	R/W	60 sec
AV-58	Reserved	This point is reserved for internal thermostat use and its value cannot be changed	R	1.6
AV-59	Ave Time Base	Factor used to average the room temperature. A small number will allow the room temperature to change faster over time. A large number will cause the room temperature to change slower over time.	R	100
AV-60	Calibration Offset	The calibration offset for the internal thermistor.	R	variable
AV-61	Space Alarm Offset	This offset +/- the Current Cooling/Heating SP is used to determine if the space is too warm/cold, and set an alarm if necessary.	R/W	5.0°F
AV-62	# of Fan Speeds	Select the number of fan speeds for a multispeed fan. 0 = Auto Only 1 = AUTO - ON 2 = Off - AUTO - ON 3 = Off-1-2-AUTO 4 = Off-1-2-3-AUTO	R/W	0
AV-63	Current Fan Speed	The fan speed the thermostat is currently running. 0 = OFF 1 = Fan Speed 1 2 = Fan Speed 2 3 = Fan Speed 3 4 = AUTO 5 = ON	R	4
AV-64	Vacant Clg SP	Used in Hotel Mode. When a room is known vacant, the setpoint can be set above the unoccupied setpoint.	R/W	85.0°F
AV-65	Vacant Htg SP	Used in Hotel Mode. When a room is known vacant, the setpoint can be set below the unoccupied setpoint.	R/W	55.0°F
AV-66	Room Setpoint	The occupied room setpoint	R/W	73.0°F
AV-67	Occupied SP Hi Limit	The maximum occupied room setpoint allowed.	R/W	85.0°F
AV-68	Occupied SP Lo Limit	The minimum occupied room setpoint allowed	R/W	55.0°F
AV-69	Clg Offset	The offset from Room Setpoint used to calculate the Occupied Cooling SP	R/W	1.0°F
AV-70	Htg Offset	The offset from Room Setpoint used to calculate the Occupied Heating SP	R/W	1.0°F
AV-71	Unoccupied Clg SP	The cooling setpoint used when the thermostat is unoccupied.	R/W	90.0°F
AV-72	Unoccupied Htg SP	The heating setpoint used when the thermostat is unoccupied.	R/W	60.0°F
AV-73	After Hours Limit	The maximum hours the thermostat is allowed to run during afterhours time. Setting this will set the thermostat to occupied operation. (0-99.9 hrs)	R/W	5.0 hrs

AV-74	After Hours Timer	The current amount of afterhours time left.	R	0.0 hrs
AV-75	Reserved	This point is reserved for internal thermostat use and its value cannot be changed	R	OFF
AV-76	Reserved	This point is reserved for internal thermostat use and its value cannot be changed	R	OFF
AV-77	Reserved	This point is reserved for internal thermostat use and its value cannot be changed	R	OFF
AV-78	Reserved	This point is reserved for internal thermostat use and its value cannot be changed	R	OFF
AV-79	Reserved	This point is reserved for internal thermostat use and its value cannot be changed	R	OFF
AV-80	Reserved	This point is reserved for internal thermostat use and its value cannot be changed	R	OFF
AV-81	Motion OFF Delay	This is the delay used to transition the Occupied Command from ACTIVE to INACTIVE after no motion is detected from the sensor	R/W	900 sec
AV-82	Analog Value 82			
AV-83	Analog Value 83			
AV-84	Analog Value 84			
AV-100	Analog Value 100	Internal thermistor display descriptor. The present value is automatically transferred. The AV description holds the descriptor to display.	R	variable
AV-101	Analog Value 101	Display descriptor. Transfer the value to display to the present value. The AV description holds the descriptor to display.	R/W	
AV-102	Analog Value 102	Display descriptor. Transfer the value to display to the present value. The AV description holds the descriptor to display	R/W	
AV-103	Analog Value 103	Display descriptor. Transfer the value to display to the present value. The AV description holds the descriptor to display	R/W	
AV-104	Analog Value 104	Display descriptor. Transfer the value to display to the present value. The AV description holds the descriptor to display	R/W	
AV-105	Analog Value 105	Display descriptor. Transfer the value to display to the present value. The AV description holds the descriptor to display	R/W	
AV-106	Analog Value 106	Display descriptor. Transfer the value to display to the present value. The AV description holds the descriptor to display	R/W	
AV-107	Analog Value 107	Display descriptor. Transfer the value to display to the present value. The AV description holds the descriptor to display	R/W	
AV-108	Analog Value 108	Display descriptor. Transfer the value to display to the present value. The AV description holds the descriptor to display	R/W	
AV-109	Analog Value 109	Display descriptor. Transfer the value to display to the present value. The AV description holds the descriptor to display	R/W	
AV-110	Analog Value 110	Display descriptor. Transfer the value to display to the present value. The AV description holds the descriptor to display	R/W	

AV-111	Analog Value 111	Display descriptor. Transfer the value to display to the present value. The AV description holds the descriptor to display	R/W	
AV-112	Analog Value 112	Outside Air Display descriptor. Transfer the value to display to the present value. The AV description holds the descriptor to display	R/W	

Binary Inputs

Instance	Object Name	Description	Read/Write	Default
BI-0	Binary Input 00		R	
BI-1	Motion Status	Current status of the motion add-on sensor	R	OFF
BI-2	Binary Input 02		R	
BI-3	End Switch	Status of the condenser valve, if used when the end switch is made the compressor is commanded ON.	R	OFF
BI-4	Binary Input 04		R	
BI-5	Opt. Occupied Relay/Fan Status	Optional occupancy relay input or fan current sensor status	R	OFF

Binary Outputs

Instance	Object Name	Description	Read/Write	Default
BO-0	Fan	Output for Fan Control	R/W	OFF
BO-1	Compressor/Clg	Output for Compressor in Comp/Rev Mode. Output for Cooling Stage 1 in Htg/Clg Mode.	R/W	OFF
BO-2	Rev. Valve/Htg	Output for Reversing Valve when in Comp/Rev Mode. Output for Heating Stage 1 when in Htg/Clg Mode.	R/W	OFF
BO-3	Condenser Valve Open	Output for condenser valve open command	R/W	OFF
BO-4	Condenser Valve Close	Output for condenser valve close command	R/W	OFF
BO-5	Scheduled Occupied	Logical point only. Used for scheduling purposes. INACTIVE is unoccupied.	R/W	OFF

Binary Values

Instance	Object Name	Description	Read/Write	Default
BV-0	Bad Sensor Alarm	Alarm for a bad internal thermistor	R	OFF
BV-1	H/C Mode	Sequence point to show analog heating or cooling. OFF = Cooling ON = Heat	R	OFF
BV-2	Binary Value 002			
BV-3	Binary Value 003			
BV-4	Binary Value 004			
BV-5	Binary Value 005			
BV-6	Binary Value 006			
BV-7	Binary Value 007			
BV-8	Binary Value 008			
BV-9	Space Alarm Delay	Delay used to prevent a space alarm after receiving an occupied command. The delay is 7200 sec	R	OFF

BV-10	Program Status	Used to determine if the sequence was loaded correctly on a BACnet Restore or power up.	R	OFF
BV-11	Binary Value 011			
BV-12	Binary Value 012			
BV-13	Binary Value 013			
BV-14	Binary Value 014			
BV-15	Supply Fan Status	Current status of the supply fan, from BI-3	R	OFF
BV-16	Htg Stage 1 Request	Stage 1 heat is requested. The sequence determines if this is a Htg/Clg request or a Comp/Rev request	R	OFF
BV-17	Clg Stage 1 Request	Stage 1 cool is requested. The sequence determines if this is a Htg/Clg request or a Comp/Rev request	R	OFF
BV-18	Binary Value 018			
BV-19	Binary Value 019			
BV-20	Supply Fan Alarm	If the fan status does not show the fan running after 20 seconds of the fan commanded ON, the alarm will trigger	R	OFF
BV-21	Binary Value 021			
BV-22	Too Warm Status	Status of the Too Warm Alarm before checking the Space Alarm Delay	R	OFF
BV-23	Too Cool Status	Status of the Too Warm Alarm before checking the Space Alarm Delay	R	OFF
BV-24	Space To Warm Alarm	The space temperature has been above the Room Set point (AV-66) – Space Alarm Offset (AV-61) for at least 7200 seconds.	R	OFF
BV-25	Space To Cool Alarm	The space temperature has been below the Room Set point (AV-66) + Space Alarm Offset (AV-61) for at least 7200 seconds.	R	OFF
BV-26	Heat Stage 1 Status	The status of the stage 1 heat request before the 180 second anti-short cycle delay.	R	OFF
BV-27	Cool Stage 1 Status	The status of the stage 1 cool request before the 180 second anti-short cycle delay.	R	OFF
BV-28	Binary Value 028			
BV-29	Binary Value 029			
BV-30	Binary Value 030			
BV-31	Binary Value 031			
BV-32	Fan Alarm Reset	Setting to ACTIVE will reset the supply fan alarm	R/W	OFF
BV-33	Binary Value 033			
BV-34	Binary Value 034			
BV-35	Binary Value 035			
BV-36	Binary Value 036			
BV-37	Binary Value 037			
BV-38	Binary Value 038			
BV-39	Binary Value 039			
BV-40	Occupied Status	The status of this point switches the thermostats occupancy settings. When ON, the thermostat is in Occupied Setpoint Mode or After Hours Mode.	R	OFF
BV-41	Opt. Start Warmup	A Warmup command has been sent to the thermostat. When ON the thermostat will switch to occupied settings.	R/W	OFF
BV-42	Opt. Start Cooldown	A Cooldown command has been sent to the thermostat. When ON the thermostat will switch to occupied settings.	R/W	OFF

BV-43	Occ Set point Mode	The thermostat has been commanded occupied via BO-5, or a Warmup/Cooldown command has been sent via BV-41/BV-42.	R	OFF
BV-44	After Hours Status	The thermostat has been set to afterhours mode. When ON the thermostat will switch to occupied settings.	R	OFF
BV-45	Reserved	This point is reserved for internal thermostat use and its value cannot be changed	R	OFF
BV-46	Binary Value 046			
BV-47	Binary Value 047			
BV-48	Binary Value 048			
BV-49	Update Descriptors	When ON descriptor changes are sent to the thermostats LCD, this point will auto reset to OFF.	R/W	OFF
BV-50	Binary Value 050			
BV-51	BI for Occupancy/Fan	ON = BI-5 will be used to indicate occupancy OFF = BI-5 is used for fan status	R/W	OFF
BV-52	ValveDelay/ EndSwitch	ON = Use End Switch for condenser valve delay OFF = Use time delay for condenser valve delay	R/W	OFF
BV-53	Binary Value 053			
BV-54	Binary Value 054			
BV-55	Binary Value 055			
BV-56	Binary Value 056			
BV-57	Disable Splash	ON = The splash screen will be disabled after key presses	R/W	OFF
BV-58	Disable Setup Menu	ON = The Setup Mode to configure the Network/MAC/Baud Rate/etc will be disabled	R/W	OFF
BV-59	Disable FSM Menu	ON = The Field Service Mode to configure the Time/Schedule/etc will be disabled	R/W	OFF
BV-60	Binary Value 060			
BV-61	Binary Value 061			
BV-62	Binary Value 062			
BV-63	Binary Value 063			
BV-64	Enable Motion	Set this BV to ACTIVE to enable the motion and/or humidity option card.	R/W	OFF
BV-65	Binary Value 065			
BV-66	Disable Unit	When ON this point will disable and lockout all analog and binary outputs.	R/W	OFF
BV-67	Room Temp Select	When OFF, the internal thermistor is selected for the control sequence. When ON, an external thermistor attached to AI-2 is selected for control of the sequence	R/W	OFF
BV-68	Backlight Off/On	When ON the LCD backlight will remain on	R/W	OFF
BV-69	Fan Op Mode	Controls if the fan will cycle or run continuously. OFF = Cycle, ON = Continuous, BV-40 must also be ON.	R/W	OFF
BV-70	Room Vacant Status	When ON the thermostat will run on Vacant Heating/Cooling setpoints, AV-64/AV-65.	R/W	OFF
BV-71	C/F	Sets the thermostat to display temperatures in Celsius or Fahrenheit. This point is set through the setup menu. ON = F, OFF = C	R	ON
BV-72	HP Type	OFF = Compressor/Reversing Valve Mode	R/W	ON

		ON = Heat/Cool Mode		
BV-73	Rev Valve	Set which mode to turn on the reversing value. OFF = Heat, ON = Cool	R/W	OFF
BV-74	Reserved	This point is reserved for internal thermostat use and its value cannot be changed	R	OFF
BV-100	Binary Value 100	Enable internal thermistor descriptor	R/W	ON
BV-101	Binary Value 101	Enable descriptor	R/W	OFF
BV-102	Binary Value 102	Enable descriptor	R/W	OFF
BV-103	Binary Value 103	Enable descriptor	R/W	OFF
BV-104	Binary Value 104	Enable descriptor	R/W	OFF
BV-105	Binary Value 105	Enable descriptor	R/W	OFF
BV-106	Binary Value 106	Enable descriptor	R/W	OFF
BV-107	Binary Value 107	Enable descriptor	R/W	OFF
BV-108	Binary Value 108	Enable descriptor	R/W	OFF
BV-109	Binary Value 109	Enable descriptor	R/W	OFF
BV-110	Binary Value 110	Enable descriptor	R/W	OFF
BV-111	Binary Value 111	Enable descriptor	R/W	OFF
BV-112	Binary Value 112	Enable outside air descriptor	R/W	OFF