ExactLogic BACnet Communicating Thermostat
EXL01621 Sequence Datasheet
Under Floor Fan Coil Units, with VAV Modulating Outputs

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Operating Sequence

Standard Occupied

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

The EXL-01621 thermostat can run in EXL-01620 or EXL-01621 mode. The mode is controlled by BV-60. Setting BV-60 to zero (0) sets the thermostat to EXL-1621 mode. Setting BV-60 to a one (1) sets the thermostat to EXL-1620 mode.

In EXL-1620 mode AO-0 will modulate a fan coil's fan speed, and AO-1 will modulate an electric heat SCR. Cooling is provided by the fan coils supply air.

In EXL-1621 mode AO-0 is used to modulate an infloor damper, and AO-1 will modulate a radiation valve. Also, the AO-1 signal is used to control BO-1; which can be used for a unit heater application.

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EXL-1621 Mode Detail

The occupancy of the thermostat is controlled by BO-5. When active the thermostat will maintain its occupied setpoint. The deadband is controlled by the cooling/heating offset (default 1 degree). The fan will run during occupied times or with a Night Heat/Cool Request. The heating and cooling signals are determined by a PI control loop.

Heating is providing by output AO-1. The heating control signal is determined by a PI control loop and directly controls the modulation of a radiation valve. The AO-1 signal also controls BO-1. This output can be used for addition zone heat. (i.e. Unit Heater/Cabinet Unit Heater) BV-61 is used to set the valve to NO or NC.

The thermostat has analog and digital control of a in floor diffuser/damper. The analog control is used for cooling only. The digital control can be used for heating and cooling. Under analog control the damper position will modulate from 0-100% and is controlled by the cooling signal. Under digital control (PO/PC) the damper position will modulate from 0-100% and is controlled by the heating or cooling signal. In a heating mode the Warm Air in Duct signal (BV-8) needs to be ON, or the damper will set to full closed position.

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 Overrride

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.

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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.

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. Once the motion sensor does not sense motion, the delay at AV-81 is used to delay the ACTIVE to INACTIVE command to the Scheduled Occupied command at BO-5, priority array entry 10. 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

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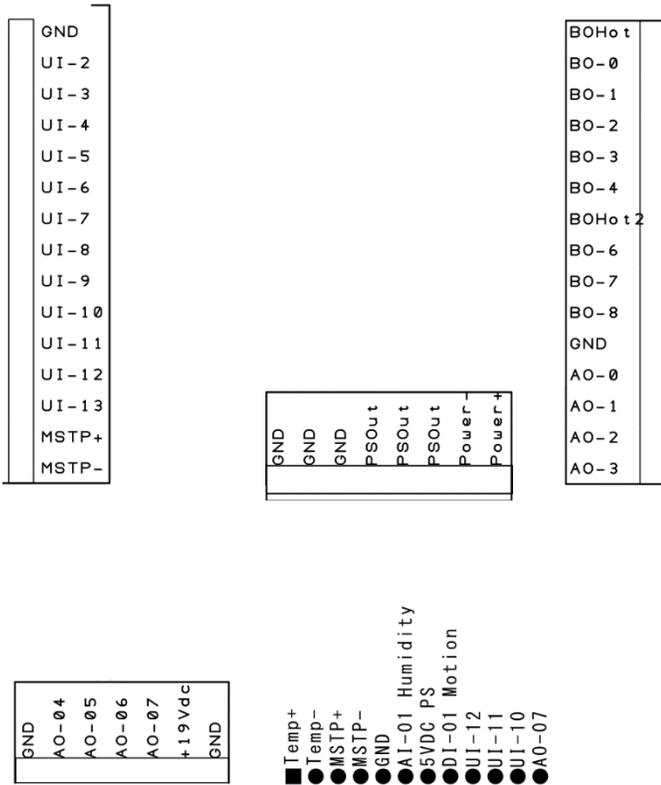1-866-714-0522 | www.exactlogic.com

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Installation

Fig. 4

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

*Note: AI-2 through AI-5 and BI-2 through BI-5 are wired to UI-2 through UI-5. Each universal Input can only be used as an AI or a BI

GND .... Neutral/Ground
UI-2 ....Universal Input 2
UI-3 ....Universal Input 3
UI-4 ....Universal Input 4
UI-5 ....Universal Input 5
UI-6 ....Universal Input 6
UI-7 ....Universal Input 7
UI-8 ....Universal Input 8
UI-9 ....Universal Input 9
UI-10 ....Universal Input 10
UI-11 ....Universal Input 11
UI-12 ....Universal Input 12
UI-13 ....Universal Input 13
MSTP + ... Network Line Positive
MSTP - ....Network Line Negative

BO Hot .... 24VAC/DC Input for Relays 1-5*
BO-0 .... Relay 1 Output, 24VAC/DC
BO-1 .... Relay 2 Output, 24VAC/DC
BO-2 .... Relay 3 Output, 24VAC/DC
BO-3 .... Relay 4 Output, 24VAC/DC
BO-4 .... Relay 5 Output, 24VAC/DC
BO Hot 2 .... 24VAC/DC Input for Relays 7-9*
BO-6 .... Relay 7 Output, 24VAC/DC
BO-7 .... Relay 8 Output, 24VAC/DC
BO-8 .... Relay 9 Output, 24VAC/DC
GND .... Neutral/Ground
AO-0 .... Analog Output 0, 0-10V
AO-1 .... Analog Output 1, 0-10V
AO-2 .... Analog Output 2, 0-10V
AO-3 .... Analog Output 3, 0-10V

GND .... Neutral/Ground
GND .... Neutral/Ground
GND .... Neutral/Ground
PSOut ....24VAC/DC Hot
PSOut ....24VAC/DC Hot
PSOut ....24VAC/DC Hot
Power - .... Neutral/Ground
Power + ...24VAC/DC Hot

GND .... Neutral/Ground
AO-04 .... Analog Output 4, 0-10V
AO-05 .... Analog Output 5, 0-10V
AO-06 .... Analog Output 6, 0-10V
AO-07 .... Analog Output 7, 0-10V
+19Vdc .... 19V DC
GND .... Neutral/Ground

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Output Wiring

Output/Label	Function
BO0	Fan
BO1	Digital Radiant Heat
BO2	
BO3	Damper Open
BO4	Damper Close
AO0	Fan Speed 0-10 Vdc 0-100%/Infloor Damper
AO1	Electric Heat 0-10 Vdc 0-100%/Radiation

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	Reading from the Humidity sensor add-on card	R	variable
AI-2	Ext. Room Temp	Optional external room temperature input	R	variable
AI-3	Supply Air Temp	Supply Air Sensor input	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	Fan Speed / Infloor Heat	0-10V output for control of fan speed or infloor heat	R/W	0.0
AO-1	Electric Heat SCR / Radiation	0-10V output for control of electric heat or radiation	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			

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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	Occupied 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	Occupied 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	Heat Signal	Current heating signal as a percent	R	0%
AV-9	Cool 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	Analog Value 015			
AV-16	Analog Value 016			
AV-17	Analog Value 017			
AV-18	Analog Value 017			
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	Electric Ht Signal	This is the control signal for the electric heat when the thermostat is in EXL-01620 mode	R	0%
AV-23	Fan Speed Signal	This is the control signal for the fan speed when the thermostat is in EXL-01620 mode	R	0%
AV-24	Heat Cycle Divisor	Multiplied with the electric heat signal to determine the time the heat command is off or on. (Value is AV-42/100)	R	0.1
AV-25	Damper Motor % Open	The current position of the supply air damper	R	0%
AV-26	Cooling Deviation	The difference in the zone temperature from cooling setpoint		Varies
AV-27	Heating Deviation	The difference in the zone temperature from heating setpoint		Varies
AV-28	Deviation from SP	The difference in the zone temperature from setpoint, determined by whether the zone is heating or cooling	R	Varies
AV-29	Zone Scan	Numerical representation to tell the mode the zone is in. Used for workstation graphics (100 = Full Heat, -100 = Full Cool	R	0%

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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	Electric Heat %	The electric heat control signal	R	0%
AV-37	Elec Heat ON Time	The amount of time to keep the heating output ON.	R	0 sec
AV-38	Elec Heat OFF Time	The amount of time to keep the heating output OFF.	R	0 sec
AV-39	Ht Mode Current SAT SP	The current supply air temperature setpoint	R	68˚F
AV-40	Motor Deadband	Maximum percentage difference between the current damper position and the heating/cooling signal before the damper will adjust its position.	R/W	10%
AV-41	Motor Time	Amount of time to drive the damper full open/close	R/W	45 sec
AV-42	Elec Ht Cycle Period	Maximum cycle time for the Heat ON/OFF command	R/W	10 sec
AV-43	Ht SAP Lo Limit	The minimum supply air setpoint for heat mode	R/W	68˚F
AV-44	Ht SAP Hi Limit	The maximum supply air setpoint for heat mode	R/W	100˚F
AV-45	Filter Alarm SP	Maximum runtime for the filter before triggering an alarm (BV-28).	R/W	3000 hrs
AV-46	Max Heat Fan Speed	The maximum speed for the fan during heat mode	R/W	75%
AV-47	Max Fan Speed	The maximum speed for the fan during cool mode	R/W	100%
AV-48	Min Fan Speed	The minimum speed for the fan during heat or cool mode	R/W	40%
AV-49	Analog Value 049			
AV-50	Supply Temp Ki	Ki constant used for the PI control of the electric heat signal	R/W	0.03
AV-51	Supply Temp Kp	Kp constant used for the PI control of the electric heat signal	R/W	0
AV-52	Fan Speed Scalar In1	Minimum setpoint used to scale the heating signal used to control the fan speed.	R.W	0
AV-53	Fan Speed Scalar In2	Maximum setpoint used to scale the heating signal used to control the fan speed.	R/W	100
AV-54	Reheat Scalar In1	Minimum setpoint used to scale the heating signal used to control the electric heat supply air setpoint. (20 means do not modulate discharge setpoint until the heating signal is 20%)	R/W	20
AV-55	Reheat Scalar In2	Maximum setpoint used to scale the heating signal used to control the electric heat discharge setpoint.	R/W	100
AV-56	Filter Runtime	The number of runtime hours on the filter. Set to zero (0) after changing filter.	R/W	0 hrs
AV -57	Fan Runtime	The number of runtime hours on the fan.	R/W	0 hrs
AV-58	Reserved	This point is reserved for internal thermostat use and its value cannot be changed	R	0
AV-59	Pseudo Ave Time Base	Factor used to average the room temperature. A small number will allow the room temperature to	R	100

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		change faster over time. A large number will cause the room temperature to change slower over time.		
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	1
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 below 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	80.0˚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	0
AV-76	Reserved	This point is reserved for internal thermostat use and its value cannot be changed	R	0
AV-77	Reserved	This point is reserved for internal thermostat use and its value cannot be changed	R	0
AV-78	Reserved	This point is reserved for internal thermostat use and its value cannot be changed	R	0
AV-79	Reserved	This point is reserved for internal thermostat use and its value cannot be changed	R	0
AV-80	Reserved	This point is reserved for internal thermostat use and its value cannot be changed	R	0

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AV-81	Motion OFF Delay	The amount of time to delay the ON->OFF transition of the motion sensor occupied command after no motion is detected	R/W	900 sec
AV-82	Analog Value 082			
AV-83	Analog Value 083			
AV-84	Analog Value 084			
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	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	

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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	Motion sensor status from the add-on card	R	
BI-2	Binary Input 02		R	
BI-3	Binary Input 03		R	
BI-4	Binary Input 04		R	
BI-5	Opt. Occupied Relay	Optional occupancy relay input	R	

Binary Outputs

Instance	Object Name	Description	Read/Write	Default
BO-0	Fan	Output for Fan Control	R/W	OFF
BO-1	Unit Heater	Unit Heater output	R/W	OFF
BO-2	Binary Output 1			
BO-3	Damper Open	Damper Open command	R/W	OFF
BO-4	Damper Closed	Damper Closed 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

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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	Warm Air in Duct	Signal used to determine if warm air is in the supply duct. This point is written to the thermostat from an external device.	R/W	OFF
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	Night Heat Request	BV-16 is ACTIVE and the zone has been unoccupied for a minimum of 5 minutes.	R	OFF
BV-15	Night Cool Request	BV-17 is ACTIVE and the zone has been unoccupied for a minimum of 5 minutes.	R	OFF
BV-16	Night Heat Status	Status of the heating signal used for night heating	R	OFF
BV-17	Night Cool Status	Status of the cooling signal used for night cooling	R	OFF
BV-18	Binary Value 018			
BV-19	Binary Value 019			
BV-20	Binary Value 020			
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 below 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 above the Room Set point (AV-66) + Space Alarm Offset (AV-61) for at least 7200 seconds.	R	OFF
BV-26	Binary Value 026			
BV-27	Binary Value 027			
BV-28	Filter Alarm	The filter runtime has exceeded the alarm setpoint (AV-45).	R	OFF
BV-29	Binary Value 029			
BV-30	Binary Value 030			
BV-31	Binary Value 031			
BV-32	Heat ON Command	Status of the Heat ON command	R	OFF
BV-33	Heat OFF Command	Status of the Heat OFF command	R	OFF
BV-34	Binary Value 034			

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BV-35	Binary Value 035			
BV-36	Binary Value 036			
BV-37	Binary Value 037			
BV-38	Heating Lockout	Status for this point is transfer to the thermostat to lockout the heating	R	OFF
BV-39	Cooling Lockout	Status for this is transfer to the thermostat to lockout the cooling	R	OFF
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 after hours 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-5 for Occupancy	ON = BI will be used to indicate zone occupancy OFF = BI is not used for occupancy	R/W	OFF
BV-52	Binary Value 052			
BV-53	Binary Value 053			
BV-54	Binary Value 054			
BV-55	Binary Value 055			
BV-56	Binary Value 056			
BV-57	Disable Splash	When ACTIVE, the "EXACTLOGIC" splash will not show after key presses	R/W	OFF
BV-58	Disable Setup Menu	When ACTIVE, there will be no access to the Setup Menu where the Network/MAC/Baud Rate is set	R/W	OFF
BV-59	Disable FSM Menu	When ACTIVE, there will be not access to the Field Service Mode where the Time/Schedule/Point Access is set	R/W	OFF
BV-60	Model Select	Used to change operation of the analog outputs. 0 = EXL-01621 1 = EXL-01620	R/W	0
BV-61	Valve Type	Select the valve type connected to BO-1 0 = Normally Closed 1 = Normally Open	R/W	0
BV-62	Binary Value 062			
BV-63	Binary Value 063			

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BV-64	Enable Motion	When ACTIVE, the power to the Motion add-on card is set to the proper voltage	R/W	OFF
BV-65	Binary Value 065			
BV-66	Binary Value 066			
BV-67	Room Temp Select	When OFF, the internal thermistor is selected for the control sequence. When ON, an external thermistor attached to AI-1 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	Binary Value 069			
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	Binary Value 072			
BV-73	Binary Value 073			
BV-74	Hotel Mode	This point is reserved for internal 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

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