

X-Series BACnet Points List

Name	Type	ID	Notes	FW Revision
Indoor Temperature	AI	1	0.01 degree precision, 1 degree change COV	
Indoor Humidity	AI	2	Relative humidity as a percentage	
System Mode	MV	1	OFF (1), COOL (2), HEAT (3), AUTO (4), or EMER (5)	
Fan Mode	MV	2	Fan mode, <i>writable values</i> are AUTO (1) or ON (2) only	
Manual Occupied Cool Setpoint	AV	1	COOL setpoint which will be active in the Occupied state <i>when</i> the device is operating in Manual Mode	
Manual Occupied Heat Setpoint	AV	2	HEAT setpoint which will be active in the Occupied state <i>when</i> the device is operating in Manual Mode	
Manual Unoccupied Cool Setpoint	AV	3	COOL setpoint which will be active in the Unoccupied state <i>when</i> the device is operating in Manual Mode	
Manual Unoccupied Heat Setpoint	AV	4	HEAT setpoint which will be active in the Unoccupied state <i>when</i> the device is operating in Manual Mode	
Occupancy Toggle	BV	1	Toggles the occupied (1)/ unoccupied (0) state (commandable)	

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Manual Operation	BV	2	If enabled (1) the device operates in Manual Mode (disabling advanced scheduling, relying on the BACnet the schedule object instead). It is <i>recommended</i> to use Manual Mode when controlling the device via BACnet.
Cool/Heat State	BI	1	The last active state COOL (0) or HEAT (1)
Stages Active	PIV	1	Number of currently active stages
Override System Mode	MV	3	OFF (1), COOL (2), HEAT (3), AUTO (4), or EMER (5)
Override Fan Mode	MV	4	Override fan mode, <i>writable values</i> are AUTO (1) or ON (2) only
Override Cool Setpoint	AV	5	COOL setpoint value during an override
Override Heat Setpoint	AV	6	HEAT setpoint value during an override
Override Status	BI	2	Indicates if an override is active (1) or not (0)
Override Time Remaining	PIV	2	Time remaining until the end of an active override in minutes
BACnet Temperature Units	BV	3	Units to use via BACnet, these may be different from the ones used on the ASCII protocol as well as the ones displayed on screen, (0) for F and (1) for C
Display Temperature Units	BV	4	Units used on the physical display, (0) for F and (1) for C
HVAC Type Setting	BV	5	Conventional (0) or Heat Pump (1)

Name	Type	ID	Notes
HVAC Cooling Stages Setting	PIV	3	Number of cooling stages present
HVAC Heating Stages Setting	PIV	4	Number of heating stages present
HVAC Heat Type Setting	BV	6	Heating type, Gas (0) or Electric (1)
HVAC Min On Time Setting	PIV	5	Minimum system operating ON time in minutes
HVAC Min Off Time Setting	PIV	6	Minimum system operating OFF time in minutes
HVAC Emer Heat Enabled Setting	BV	7	Disabled (0) or Enabled (1)
HVAC Heat Pump Dual Fuel Setting	BV	8	Normal (0) or Dual Fuel (1)
HVAC Adaptive Recovery Setting	BV	9	Disabled (0) or Enabled (1)
HVAC Remote Indoor Sensor Averaging Setting	BV	10	Derive the remote indoor sensor value from the Remote Only (0) or Averaged (1) with the integrated sensor
HVAC Fan Purge Time Setting	PIV	7	Fan purge time in minutes
HVAC Lock Screen Setting	BV	11	Lock (1) or Unlock (0) front-plate display user interaction
HVAC Lock Screen Code Setting	PIV	8	A 4 digit code to manage the screen lock 0000 to 9999

Name	Type	ID	Notes
HVAC Stage 1 Differential Setting	AV	7	
HVAC Stage 2 Differential Setting	AV	8	
HVAC Stage 2 Delay Setting	PIV	9	In minutes
HVAC Aux Heat Delay Setting	PIV	10	In minutes
HVAC Temperature Override Range Setting	AV	9	Range allowed for setpoint changes during an override while the display is locked, from 2F (+/- 1F) to 8F (+/- 4F), or 1-4 C if BACnet units are in Celsius (see BV3)
HVAC Override Time Setting	PIV	11	Duration of an override when started in minutes 0-1440, with 0 disabling overrides entirely
HVAC Temperature Calibration Offset Setting	AV	10	
HVAC Balance Point High Setting	AV	11	
HVAC Balance Point Low Setting	AV	12	
HVAC Cool Setpoint High Limit Setting	AV	13	

Name	Type	ID	Notes
HVAC Cool Setpoint Low Limit Setting	AV	14	
HVAC Heat Setpoint High Limit Setting	AV	15	
HVAC Heat Setpoint Low Limit Setting	AV	16	
Network Time Protocol Auto-Sync Setting	BV	12	If true, periodically fetches date and time from the currently configured NTP server, or allows setting date and time manually if false
Digital Input 1	BI	3	LED 1 digital input state
Digital Input 2	BI	4	LED 2 digital input state
Occupancy Input	BI	5	State of the occupancy input
Outdoor Temperature	AI	3	Outdoor temperature (read only) coming from either AV-23 being written periodically, or otherwise the weather service (if the zipcode is set) or an external sensor
Outdoor Humidity	AI	4	Outdoor humidity (read only) coming from either AV-24 being written periodically, or otherwise the weather service (if the zipcode is set)
Remote Indoor Temperature	AI	5	
Remote Outdoor Temperature	AI	6	

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Remote Indoor Humidity	AI	7	
Remote Aux 1 Temperature	AI	8	Remote Aux 1 (typically supply) sensor reading, if present
Remote Aux 2 Temperature	AI	9	Remote Aux 2 (typically) sensor reading, if present
Remote Aux 3 Temperature	AI	10	Remote Aux 3 (typically) sensor reading, if present
Remote Aux 4 Temperature	AI	11	Remote Aux 4 sensor reading, if present
Remote Aux 5 Temperature	AI	12	Remote Aux 5 sensor reading, if present
Remote Aux 6 Temperature	AI	13	Remote Aux 6 sensor reading, if present
Remote Aux 7 Temperature	AI	14	Remote Aux 7 sensor reading, if present
Remote Water Leak	BI	6	Remote water leak sensor state (true is tripped), if present
Remote Door/Window	BI	7	Remote door window sensor state (true is tripped), if present
Remote Occupancy	BI	8	Remote occupancy sensor state (true is tripped), if present
Occ/Unocc Weekly Schedule	SC	1	Occupied/Unoccupied BACnet schedule, note it will only be used if in Manual Mode (see BV2, Manual Operation above)
CO2 Sensor Value	AI	15	Current sensor value in parts per million (ppm)

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CO2 Sensor Max Reading	AV	17	Maximum recorded sensor value in parts per million (ppm)	
CO2 High Limit Setting	AV	18	Configurable from 500 to 2000 ppm	
CO2 High Level Detected	BI	9	Whether there is currently a high CO2 level (1) as defined by the limit AV18, or not (0)	
CO2 Max Reset Setting	BV	13	Reset the maximum CO2 detected Manually (0) or Daily (1) at midnight	
CO2 Display Setting	MV	5	Do not show on display OFF, show ON, or only show alerts ALERT	
Active Cool Setpoint	AI	16	Current cool setpoint regardless of whether the thermostat is in Manual Operation or not, or if there's an override active or not. This field will always yield the cool setpoint in use by the thermostat at any given time.	4.59+, 10.29+, 11.5+, 12.45+
Active Heat Setpoint	AI	17	Current heat setpoint regardless of whether the thermostat is in Manual Operation or not, or if there's an override active or not. This field will always yield the heat setpoint in use by the thermostat at any given time.	4.59+, 10.29+, 11.5+, 12.45+
Active Setpoint	AI	18	Currently active heat/cool setpoint depending on the mode and status of the thermostat. If the mode is HEAT or EMER the Active Heat Setpoint is returned, if it's COOL then Active Cool Setpoint is returned, and in any other mode (AUTO / OFF), the last active state (cooling/heating) associated active setpoint is returned.	4.59+, 10.29+, 11.5+, 12.45+
Recirc Fan Timer Mins/Hr	PIV	12	Fan recirculation timer in minutes per hour, the valid range is 0-30, inclusive	4.59+, 10.29+, 11.5+, 12.45+

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BAS Outdoor Temp	AV	19	<p>Writable version of Outdoor Temperature AI-3. If data is written periodically within a 30 minute period, it will be taken as the source for Outdoor temperature, as long as no external outdoor temperature sensor is enabled. The origin priority for the data is external sensor (if enabled), BAS data point (when kept updated periodically), and outdoor weather from the cloud (if enabled).</p> <p>NOTE the cloud weather service can be completely disabled if desired from the Service Settings --> Enable Weather Services on the embedded web pages of the device.</p>	4.61+, 10.30+, 11.6+, 12.46+
BAS Outdoor Hum	AV	20	<p>Writable version of Outdoor Temperature AI-4. If data is written periodically within a 30 minute period, it will be taken as the source for Outdoor humidity, as long as no external outdoor humidity sensor is enabled. The origin priority for the data is external sensor (if enabled), BAS data point (when kept updated periodically), and outdoor weather from the cloud (if enabled).</p> <p>NOTE the cloud weather service can be completely disabled if desired from the Service Settings --> Enable Weather Services on the embedded web pages of the device.</p>	4.61+, 10.30+, 11.6+, 12.46+

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KHD Relay Operation	MV	6	<p>KHD relay operating mode: OFF, DAMPER, DEHUM, HUM, MANUAL, SCHEDULE, IAQ, CO2.</p> <p>Note only KHD supports DEHUM and HUM, and the following modes can only be active on either KHD or K2 at any given point: DAMPER, SCHEDULE, IAQ, CO2, otherwise a value out of range error will be returned, and CO2 may only be set if a sensor is installed.</p>	4.61+, 10.30+, 11.6+, 12.46+
K2 Relay Operation	MV	7	<p>K2 relay operating mode: OFF, DAMPER, MANUAL, SCHEDULE, IAQ, CO2.</p> <p>Note the following modes can only be active on either KHD or K2 at any given point: DAMPER, SCHEDULE, IAQ, CO2, otherwise a value out of range error will be returned, and CO2 may only be set if a sensor is installed.</p>	4.61+, 10.30+, 11.6+, 12.46+
KHD Manual Operation	BV	14	<p>KHD relay ON / OFF status and toggle. If it's written to while KHD is not in MANUAL relay operation, it will not take effect.</p>	4.61+, 10.30+, 11.6+, 12.46+
K2 Manual Operation	BV	15	<p>K2 relay ON / OFF status and toggle. If it's written to while K2 is not in MANUAL relay operation, it will not take effect.</p>	4.61+, 10.30+, 11.6+, 12.46+