

## SC-ST-EC Smart Temperature Controller: BACnet Object table

Object Name	Type & Instance	Object Property (R/W)	Range
ST-SC-EC	Example - Device 662001	Model_Name (R)	
		Application_Software_Version (R)	
		Object_Identifier (R)	
		Object_Name (R,W)	32 characters (max.)
		Max_Master (R,W)	1- 127

Object Name	Type & Instance	Object Property (R/W)	Description	Range & Definition
<b>Binary Values</b>				
Cooling Direct/Reverse Acting	BV-0	R/W	Cooling Direct/Reverse Acting	0: direct 1: reverse
Heating Direct/Reverse Acting	BV-1	R/W	Heating Direct/Reverse Acting	0: direct 1: reverse
Temp/SP Displaying	BV-2	R/W	Display present value of temperature or setpoint for default display	0: display temperature 1: display SP
Device On-Off Control	BV-3	R/W	Thermostat On/Off	0: Off, 1: On
Temperature Scale	BV-4	R/W	°C/ °F	0: °C 1: °F
ESI contact definition	BV-5	R/W	ESI contact definition	0:-N.O., 1: N.C.
ESI contact type	BV-6	R/W	ESI contact type	0: PIR, 1: Window switch
Fan DPS Contact Definition	BV-7	R/W	Fan diff. pressure switch (DPS) Contact Definition	0: N.O., 1: N.C.

<b>Binary Inputs</b>				
Windows Status	BI-0	R	Status of Windows	0: Close or Not Applicable 1: Open
Fan DPS Status	BI-1	R	Status of fan DPS contact	0: Fan Stop 1: Fan Run
Cooling-heating Status	BI-2	R	Status of cooling/heating control output	0: Close & Off 1: Open & On

<b>Analogue Values</b>				
User Setpoint Temperature	AV-0	R/W	User setpoint temperature (SP)	°C: 0.0 - 50.0°C °F: 32.0 - 122.0° Resolution: 0.5°C/°F High limit defined by AV11 Low limit defined by AV10.
Temperature override	AV-1	R/W	Assigned current temperature	-99.9~999.9°C /°F
Timer Off	AV-2	R/W	Countdown timer	1 - 24 if timer available 0 if OFF

				Resolution: 1
Hr-Running Time	AV-3	R/W	Running time of Valve (Hr.)	0 - 65535 for reading 0 - 30000 for writing Resolution: 1
M-Running Time	AV-4	R/W	Running time of Valve (M.)	0 - 59 Resolution: 1
Sec-Running Time	AV-5	R/W	Running time of Valve (Sec.)	0 - 59 Resolution: 1
Occupied Deadband	AV-6	R/W	Occupied deadband	°C: 0.0 - 10.0 °C °F: 0.0 - 18.0 °F Resolution: 0.5
Integral Time	AV-7	R/W	Integral Time and output cycle time	0 - 500 (sec.) Resolution: 10
Minimum Analog Output	AV-8	R/W	Minimum output voltage in digital value for AO when reach Low limit	0 - 125 (LSB) Resolution: 1
Span Offset	AV-9	R/W	Span offset	-55~0 (LSB) Resolution: 1
Low Setpoint Limit	AV-10	R/W	Low limit for setpoint temperature	°C: 0.0°C ~ AV-11 °F: 32.0°F ~ AV-11 Resolution: 1
High Setpoint Limit	AV-11	R/W	High limit for setpoint temperature	°C: AV-10~ 50.0°C °F: AV-10 ~ 122.0°F Resolution: 1
Temperature Offset	AV-12	R/W	Offset for current temperature	°C: -10.0 - 10.0 °C °F: -18.0 - 18.0 °F Resolution: 0.1
Proportional Band	AV-13	R/W	Proportional band	°C: 0.0 - 10.0 °C °F: -0.0 - 18.0 °F Resolution: 0.1
Lock	AV-14	R/W	Lock	Bit Definition --- Bit 0: MODE button 1~5: Reserved 6: Disable PIR/occupancy detection 7: Disable Window open detection 8: Lock the modification for communication parameters, i.e. baud rate, MAC address and device instance 9: Override/DOS set by device (0) or BMS (1) 10: Disable local thermostat on/off setting 11: Disable local Fan speed setting *Bit Value 0: Unlock / enable 1: Lock / disable Examples: 0 - Unlock/enable all 1 - Lock MODE Button ... 64 - Disable PIR/occupancy contact detection ... 256 - Lock the modification for communication parameters ...

				512: Override/DOs set by BMS ... 4095 - Lock/disable all
Minimum Fan Speed	AV-15	R/W	Minimum Fan Speed	0 - 100 Resolution: 1
MAC Address	AV-16	R/W	MAC address	0 - 127 (confined by Max-master) Resolution: 1 <b>(Note:</b> Changing this value requires bit 8 of AV-15 to be unlocked. See LOCK (AV-15) for details)
Device Instance	AV-17	R/W	Device instance	0 - 4194302 Resolution: 1 <b>(Note:</b> Changing this value requires bit 8 of AV-15 to be unlocked. See LOCK (AV-15) for details)
Standby Cooling/ Heating Setpoint Gap	AV-18	R/W	Standby Cooling/ Heating Setpoint Gap from Occupied Cooling/ Heating Setpoint	°C: -10.0 - 10.0 °C °F: -18.0 - 18.0 °F Resolution: 0.5
Unoccupied Cooling/ Heating Setpoint Gap	AV-19	R/W	Unoccupied Cooling/ Heating Setpoint Gap from Occupied Cooling/ Heating Setpoint	°C: -10.0 - 10.0 °C °F: -18.0 - 18.0 °F Resolution: 0.5
Standby timer	AV-20	R/W	Standby timer	0 - 24 Hours Resolution: 0.5
Unoccupied timer	AV-21	R/W	Unoccupied timer	0 - 24 Hours Resolution: 0.5
Window switch grace timer	AV-22	R/W	Window switch grace timer	10 - 120 secs Resolution: 10
Low fan speed	AV-23	R/W	Fan Low speed Output Percentage	0 - 70% Resolution: 5
High fan speed	AV-24	R/W	Fan High speed Output Percentage	10 - 100% Resolution: 5

**Multistate Values**

Fan Mode	MSV-0	R/W	Fan Mode	1: Off 2: Low 3: Med 4: High 5: Auto
System Mode	MSV-1	R/W	System Mode	1 - 4 but not all selectable depending on model and working status.  Example: Mode is 1 or 3 available if working in cooling Mode is 2 or 4 available if working in heating.  1: Cooling mode 2: Heat mode 3: Ventilation & cooling mode 4: Ventilation & heating mode

Sleep	MSV-2	R/W	Sleep	1: Disable, 2: 0 hr. sleep 3: 0.5 hr. sleep 4: 1 hr. sleep 5: 1.5 hrs. sleep 6: 2 hrs. sleep
Source of Current Temperature	MSV-3	R/W	Present Temperature is getting from built-in temperature Sensor, remote temperature sensor, or assigned through Network	0: built-in temp. sensor 1: remote temp. sensor 2: assigned through Network
Occupancy Mode	MSV-4	R	Current Occupancy Mode	1: Occupied 2: Standby 3: Unoccupied
Baud Rate	MSV-5	R/W	Baud Rate	1: 9600 bps 2: 19200 bps 3: 38400 bps 4: 57600 bps 5: 76800 bps 6: Auto  <b>(Note:</b> Changing this value requires bit 8 of AV-15 to be unlocked. See LOCK (AV-15) for details)

Analogue Inputs				
Current temperature	AI-0	R	Current Temperature	-99.9 - 999.9°C/°F
Current Active Setpoint	AI-1	R	Current Setpoint Used	-99.9 - 999.9°C/°F
Built-in Sensor	AI-2	R	Built-in Sensor Temperature	-99.9 - 999.9°C/°F
Remote Sensor	AI-3	R	Remote Sensor Temperature	-99.9 - 999.9°C/°F
Cooling Output	AI-4	R	Cooling Output Percentage	0 – 100%
Heating Output	AI-5	R	Heating Output Percentage	0 – 100%
Fan Output	AI-6	R	Fan Output Percentage	0 – 100%
Standby Cooling Setpoint	AI-7	R	Standby Cooling Setpoint	-99.9 - 999.9°C/°F
Standby Heating Setpoint	AI-8	R	Standby Heating Setpoint	-99.9 - 999.9°C/°F
Unoccupied Cooling Setpoint	AI-9	R	Unoccupied Cooling Setpoint	-99.9 - 999.9°C/°F
Unoccupied Heating Setpoint	AI-10	R	Unoccupied Heating Setpoint	-99.9 - 999.9°C/°F

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