

SC-ST-AC Smart Temperature Controller: BACnet Object table

| Object Name | Type & Instance | Object Property (R/W) | Range |
|-------------|-------------------------|----------------------------------|----------------------|
| ST-SC-AC | 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 |
|----------------------------|-----------------|-----------------------|--|--|
| Binary Values | | | | |
| Temp/SP Displaying | BV-0 | R/W | Display present value of temperature or setpoint for default display | 0: display temperature 1: display SP |
| Device On-Off Control | BV-1 | R/W | Thermostat On/Off | 0: Off, 1: On |
| Temperature Scale | BV-2 | R/W | °C/ °F | 0: °C 1: °F |
| ESI contact definition | BV-3 | R/W | ESI contact definition | 0: N.O., 1: N.C. |
| ESI contact type | BV-4 | R/W | ESI contact type | 0: PIR, 1: Window switch |
| Fan DPS Contact Definition | BV-5 | R/W | Fan diff. pressure switch (DPS) Contact Definition | 0: N.O., 1: N.C. |
| Cooling Relay Control | BV-6 | R/W | Relay 1 On/Off Control | 0: Off, 1: On Note: This is writable only when the value of AV15 equals 512 (or larger than 512 but the bit 9 of AV15 should be 1.) |
| Heating Relay Control | BV-7 | R/W | Relay 2 On/Off Control | 0: Off, 1: On Note: This is writable only when the value of AV15 equals 512 (or larger than 512 but the bit 9 of AV15 should be 1.) |

| Binary Inputs | | | | |
|------------------------|------|---|--|---------------------------------------|
| 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 |
| Cooling Relay Status | BI-3 | R | Status of Relay 1 | 0: Off, 1: On |
| Heating Relay Status | BI-4 | R | Status of Relay 2 | 0: Off, 1: On |

| Analogue Values | | | | |
|---------------------------|-------|-----|---|--|
| 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 |
| Stage Differential | AV-14 | R/W | Stage differential | °C: 0.1 - 1.0 °C °F: 0.1 - 1.8 °F Resolution: 0.1 |
| Lock | AV-15 | 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 |

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| | | | | 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-16 | R/W | Minimum Fan Speed | 0 - 100 Resolution: 1 |
| MAC Address | AV-17 | R/W | MAC address | 0 - 127 (confined by Max-master) Resolution: 1 (Note: Changing this value requires bit 8 of AV-15 to be unlocked. See LOCK (AV-15) for details) |
| Device Instance | AV-18 | R/W | Device instance | 0 - 4194302 Resolution: 1 (Note: Changing this value requires bit 8 of AV-15 to be unlocked. See LOCK (AV-15) for details) |
| Standby Cooling/Heating Setpoint Gap | AV-19 | 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-20 | 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-21 | R/W | Standby timer | 0 - 24 Hours Resolution: 0.5 |
| Unoccupied timer | AV-22 | R/W | Unoccupied timer | 0 - 24 Hours Resolution: 0.5 |
| Window switch grace timer | AV-23 | R/W | Window switch grace timer | 10 - 120 secs Resolution: 10 |
| Low fan speed | AV-24 | R/W | Fan Low speed Output Percentage | 0 - 70% Resolution: 5 |
| High fan speed | AV-25 | R/W | Fan High speed Output Percentage | 10 - 100% Resolution: 5 |

Multistate Values

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|----------|-------|-----|----------|--|
| Fan Mode | MSV-0 | R/W | Fan Mode | 1: Off 2: Low 3: Med 4: High 5: Auto |
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|-------------------------------|-------|-----|---|---|
| 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 (Note: 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 |
| Fan Output | AI-4 | R | Fan Output Percentage | 0 – 100% |
| Standby Cooling Setpoint | AI-5 | R | Standby Cooling Setpoint | -99.9 - 999.9°C/°F |
| Standby Heating Setpoint | AI-6 | R | Standby Heating Setpoint | -99.9 - 999.9°C/°F |
| Unoccupied Cooling Setpoint | AI-7 | R | Unoccupied Cooling Setpoint | -99.9 - 999.9°C/°F |
| Unoccupied Heating Setpoint | AI-8 | R | Unoccupied Heating Setpoint | -99.9 - 999.9°C/°F |

Whilst every effort has been made to ensure the accuracy of this specification, Sontay cannot accept responsibility for damage, injury, loss or expense from errors or omissions. In the interest of technical improvement, this specification may be altered without notice.