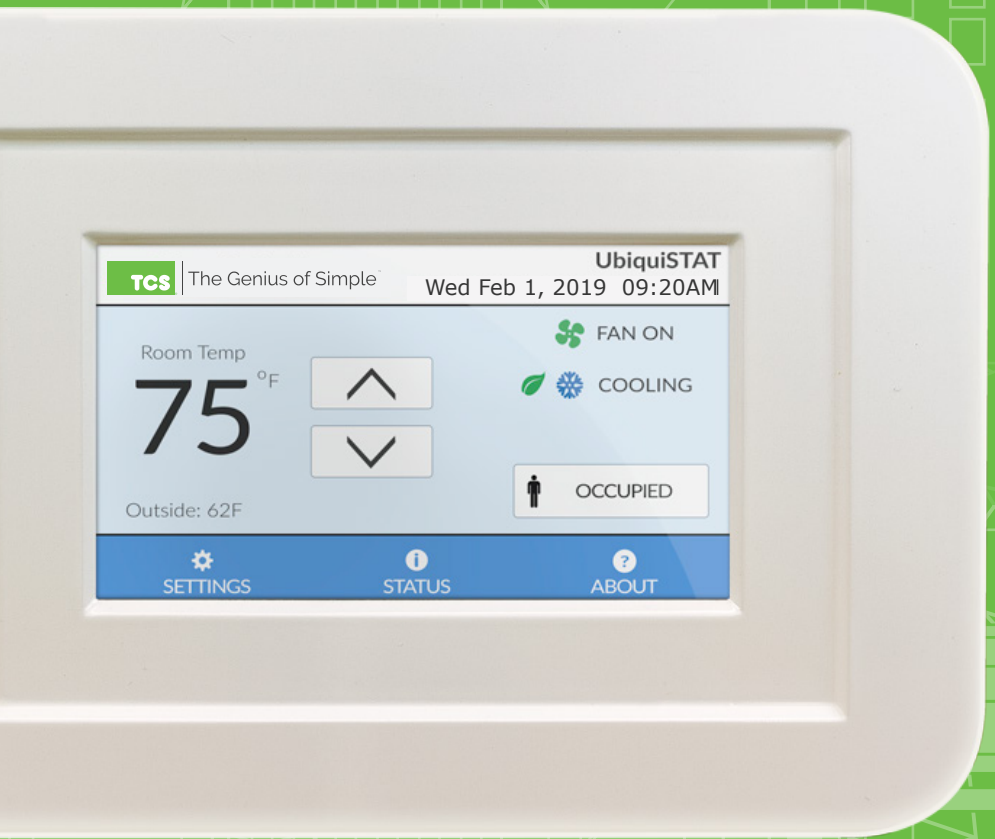
UbiquiSTAT™

Commercial BACnet Thermostat

The UbiquiSTAT is a feature rich, multi-purpose touchscreen thermostat for a wide variety of applications. This series of thermostats can be configured for a variety of conventional, heat pump, and modulating control applications.

Models:

US4010 - Single-Stage RTU / Zoning Thermostat
US4020 - Multi-Stage RTU Thermostat
US4040 - Advanced RTU Thermostat
US4050 - Advanced Application Thermostat



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Features

- Powerful touchscreen user interface
  - Internal BACnet explorer
  - Quick start wizard
  - System test screen for rapid commissioning
  - Highly detailed status reporting and diagnostics
  - Service status indication with custom messaging
  - Calibration of temperature inputs
  - 4.3" color touchscreen
- Selectable BACnet or TCSbus communication
  - BACnet BTL Listed (B-ASC)
  - Backward compatible with existing TCSbus networks
  - All inputs/outputs fully commandable via network
- Full-featured BACnet scheduling (SCHED-I-B)
  - 5 Heat/Cool setpoint groups
- Includes all TCS Basys SZ Series thermostat features
  - Includes many additional features and enhancements
- 4 temperature inputs (1 built-in, 3 remote)
  - Outdoor, discharge, remote room
  - Configurable weighted averaging of built-in and remote room
- Conventional or heat pump control
- Discharge setpoint reset on modulating heat/cool control
- Configurable Smart Recovery™
- Configurable P+I relay stage anticipator
- Setpoint setback based on DI
- Network upgradeable firmware
- Built-in equipment protection delays and sequencing
- Programmable fan control
  - Auto/on/cool/recirculation modes for occupied and unoccupied
  - Adjustable recirculation
  - Fan proving with automatic retries
- User management controls
  - Occupancy override enable/disable
  - Setpoint adjust range limit
  - Optional access code locks out on-screen programming
- Outdoor air heating and cooling lockouts
- Discharge air protection limits
- Fahrenheit or Celsius temperature display
- External time clock input/output
- Adjustable delay on power up and occupancy
- Stand-alone or network operation
- Backup & Restore of all settings (DM-BR-B)

Model Specific Features:

Feature / Model	4010	4020	4040	4050
Stage Configuration: Total stages # [Heat # / Cool # / Configurable #]	2 [1/1/0]	6 [2/2/2]	6 [2/2/2]	6 [2/2/2]
Analog Inputs / Outputs (0-20mA or 4-20mA)	0/2	0/0	1/1	2/2
Mixed Air on T1	-	✔	✔	✔

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Applications

Common application set:

- Built-in application programming with simple configuration
- Advanced fan control
  - Recirculation mode to meet minimum fresh air requirements
- Demand response setback
- Door status response setback

Model specific application set:

Feature / Model	4010	4020	4040	4050
Conventional staging: heat / cool / selectable	1/1/0	2/2/2	2/2/2	2/2/2
Heat pump control: compressors / aux heat • Emergency heat • Cold climate automatic auxiliary heat switch-over w/compressor lockout	1/1	2/2	2/2	2/2
Analog Inputs				
CO_2 control	-	-	✔	✔
Humidity monitoring	-	-	-	✔
General purpose monitoring	-	-	✔	✔
Analog Outputs				
Hot and chilled water valve control	-	-	-	✔
Zone damper control w/ reheat	✔	-	-	✔
Economizer control	-	-	✔	✔
Demand ventilation (CO_2 control)	-	-	✔	✔
Digital or Analog heat/cool changeover based control	✔	-	-	✔
Hot deck / Cold deck zone control	✔	-	-	✔
Mixing valve control	-	-	-	✔

Specifications

Communications:

RS-485
- Protocol: BACnet MS/TP and/or TCSbus
- Baud Rates: 9600, 19200, 38400, 57600, 76800, 115200
- Wire: 22 AWG 3-conductor twisted/shielded

Additional:

Power Requirement
- Input: 24V AC +15%, -5%, 50/60 Hz
- Device Consumption: 10 VA max
- Wire: 18 AWG 2-conductor

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Specifications (CONT)

Additional:

Mechanical

- **Exterior Dimensions: 6.7" x 4.9" x 1.4"**
- **(171mm x 123mm x 37mm)**
- **Color: Glossy white**
- **Mounting: 1 gang (vertical or horizontal) & 2 gang**
- **(4" x 4") hole patterns, accepts #6 to #10 screws**
- **Wiring Terminals: De-pluggable blocks with screw connections**

User Interface

- **4.3" color touchscreen display**
- **Backlight with auto-dimming**

Environmental

- **Operating temperature: 32F to 131F (0C to 55C)**
- **Storage temperature: -22F to 176F (-30C to 80C)**
- **Operating Humidity: 0 – 100% RH (non-condensing)**
- **Air Quality: Non-corrosive (i.e. use remote sensor**

Model specific specification set:

Outputs Feature / Model	4010	4020	4040	4050
Relays: Type: **SPST mechanical contact** Contact Rating: **2A max @ 24V AC (50/60Hz)** Wire: **18 AWG**	**5**	**7**	**7**	**7**
Analog Outputs: Range: **0-20mA or 4-20mA (programmable)** Accuracy: **±0.2mA (1% of full scale)** Resolution: **0.1mA** Max Load: **1000Ù** Wire: **18 AWG 2-conductor**	**2**	**0**	**1**	**2**

Inputs Feature / Model	4010	4020	4040	4050
Analog Inputs: Range: **0-20mA or 4-20mA (programmable)** Accuracy: **±0.2mA (1% of full scale)** Resolution: **0.1mA** Wire: **18 AWG 2-conductor twisted/ shielded**	**-**	**-**	**1**	**2**
3 Remote Temperature Inputs: Sensor Type: **Pt1000 RTD, Alpha=0.00385 Ω/ Ω/°C** **Accuracy:** **±1°F** Resolution: **0.1°F** Range: **-40°F to 160°F** Wire: **18 AWG 2-conductor twisted/shielded**				
1 Built-In Temperature Sensor: Sensor Type: **Digital** Digital Accuracy: **±1°F** Resolution: **0.1°F** Range: **-40°F to 160°F**				

NOTE: All specifications subject to change without notice.

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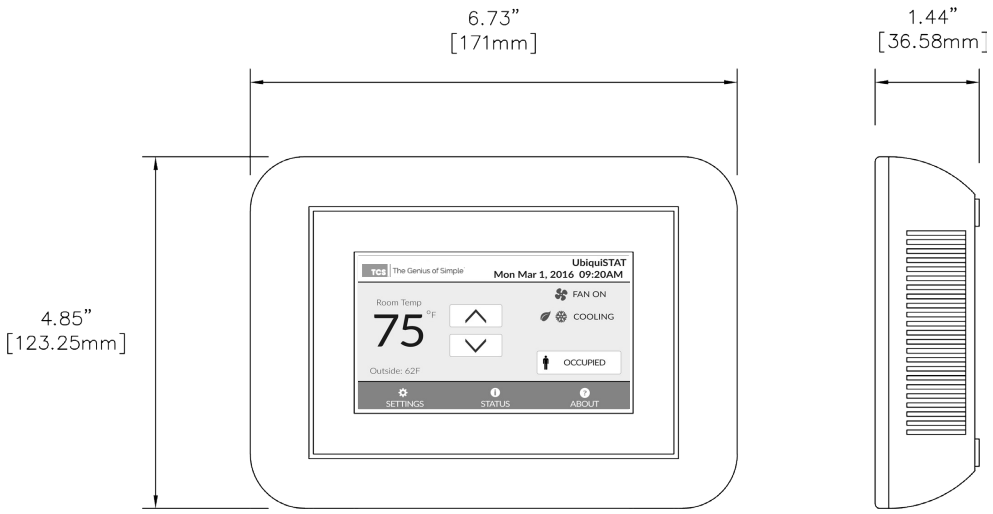
Specification Suggestion

Room thermostats shall have a touchscreen display for programming, scheduling, and monitoring. The thermostat shall have a built-in 365-day time clock with full-featured BACnet scheduling (SCHED-I-B). Thermostats shall be of the low voltage type.

Thermostats shall have a limited temporary setpoint adjustment, a local override feature, and remote override capability. The status of all outputs shall be monitored locally and available to view using the touchscreen display. An adjustable delay on power up shall be available for soft start of systems on power loss and upon occupancy schedule changes. The ability to edit operating control parameters shall be protected via a user-definable security access code. Thermostats must incorporate non-volatile memory, so that in the event of power loss, all programmed operating parameters shall be unaffected without the use of battery backup. All control functions shall continue in the event of any/all communication failures.

Thermostats shall provide local communications in accordance with BACnet MS/TP ASHRAE 135. All BACnet objects and properties shall be published, open, and non-proprietary. Room thermostats shall be model UbiquiSTAT as manufactured by TCS.

Dimensions



Ordering

Product Family	Part #	Description
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UbiquiSTAT	**US4020**	**Multi-Stage RTU Thermostat**
UbiquiSTAT	**US4040**	**Advanced RTU Thermostat**
UbiquiSTAT	**US4050**	**Advanced Application BACnet Thermostat**

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Accessories

Carbon Dioxide Sensors

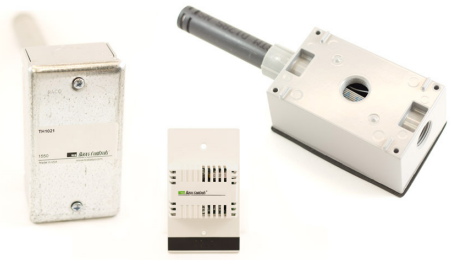
Current Switches

Platinum RTD Temperature Sensors

Occupancy Sensors

Photocell and Light Sensors

Humidity Transmitters



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