DESCRIPTION

The CBT-STAT and CBT-STAT-H provide visually appealing room control display for use with Cylon’s CB Line BACnet® field controllers. The intelligent temperature sensor CBT-STAT and the CBT-STAT-H with integrated humidity sensor allow users to view and adjust selected parameters within the field controller to which it is connected.

Use of the CBT-STAT(H) avoids the need for any special tools of software to fully configure and commission a VAV controller. The configuration and commissioning is password-protected to prevent unauthorized changes. Each CB Line field controller automatically detects the presence of the CBT-STAT, and self-configures to utilize the CBT-STAT as the control interface. In Engineering Mode, the display can be used as the setup and commissioning tool. The CBT-STAT can be used to setup the communications parameters, all the default settings and do complete balancing of the VAV box.

While the display can be used for local control, the CBT-STAT can be easily integrated into the Cylon BACnet system architecture. Pairing the CBT-STAT a CB Line field controller can significantly reduce setup and commissioning time, resulting in overall reduced installation cost.

APPLICATIONS

Provides temperature and humidity sensing for the following systems:
- Variable Air Volume (VAV) box
- Roof top unit
- Fan coil unit
- Heat pump
- Unit ventilator
- Air Handling Unit (AHU)
- Heating and Cooling Plant

Remote access to controller state, setpoints and commands
- Fast VAV commissioning: no special hardware needed
- Password protected
- Sleek, modern and nonintrusive design
- Visual indication of system status
- Backlit LCD display
- Access to configuration parameters
- Local alarming
- Optional internal humidity sensor (CBT-STAT-H)
- Fits in a standard junction box or drywall mountable

Ordering Information

<table>
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<th>Model</th>
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SPECIFICATIONS

GENERAL

OPA Dimensions (H x W x D)
Front: 4.4 x 2.9 x 0.6 in. (112 x 73 x 15 mm)
Power Case: ø 2.3 x 1.3 in. (ø 58 x 32 mm)

Housing Material
Fireproof ABS Plastic

Mounting Plate
Zinc-coated Steel

Standard Color
White RAL 9003

Weight (including package)
8.8 oz (250 g)

POWER SUPPLY

Note: Use Copper or Copper Clad Aluminum 70 °C conductors only.

Terminal Connectors
AWG 24 ... 12 (wire 0.2 ... 3.3 mm²)

Operating Voltage
10 ... 28 V DC

Power Consumption
Max 0.5 VA

TEMPERATURE INPUT

Type
NTC 10 KΩ @ 77˚ F (25˚ C)

Range
32 ... 122˚ F (0˚ ... 50˚ C)

Accuracy
0.5 K

COMMUNICATION

Communication Type
EIA-485: MAX 1,600 ft. (500 m)

DIMENSIONS & WIRING

HUMIDITY SENSOR INPUT (OPTIONAL)

Type
Polymer-based Capacity Sensor

Range
0 ... 100% RH

Accuracy
3%

ENVIRONMENT

Operation
To IEC 721-3-3

Climatic Conditions
Class 3 K3

Temperature
32 … 122˚ F (0˚ … 50˚ C)

Humidity
< 95% RH non-condensing

Transport & Storage
To IEC 721-3-2 and IEC 721-3-1

Climatic Conditions
Class 3 K3 and Class 1 K3

Temperature
-13˚ ... 158˚ F (-25˚ ... 70˚ C)

Humidity
< 95% RH non-condensing

Mechanical Conditions
Class 2M2

STANDARDS

Conforms according to
UL 916 (UL File Number E95642) EMC Standard 89/336/EEC
EN 61 000-6-1 / EN 61 000-6-3
EME I Standard 73/23/EEC

Pollution Class
Normal according to EN 60 730

Degree of Protection
IP30 to EN 60 529

Safety Class
III
INSTALLATION AND OPERATION GUIDE

MOUNTING

- Install the CBT-STAT or CBT-STAT-H on an easily accessible interior wall, approximately 60” (1.5 m) above the floor in an area of average temperature.
- Avoid direct sunlight or other heat sources (e.g. the area above radiators or other heat-emitting equipment).
- Avoid locations behind doors, on outside walls and above or below air discharge grills and diffusers.

INSTALLATION

1. Connect the CB Line field controller to the terminals of the power case according to the wiring diagram.
2. Attach the mounting plate to the flush-mounting box. Make sure that the nipple with the front-holding screw is facing to the ground. Make sure the mounting screw heads do not stand out more than 0.2” (5 mm) off the surface of the mounting plate.
3. Slide the two latches located on the top of the front part into the hooks at the upper side of the mounting plate.
4. Carefully lower the front part and continue pressing gently until the front part is fully connected.
5. With a Phillips-type screwdriver (size #2), carefully tighten the front holding screw to secure the front part to the mounting plate. This screw is located on the front lower-side of the unit.

IMPORTANT NOTICE AND SAFETY ADVICE

This device is for use as an operating control. It is NOT a safety device. Where a device failure endangers human life and/or property, it is the responsibility of the client, installer and system designer to add additional safety devices to prevent a system failure caused by such a device failure.

Ignoring specifications and local regulations may cause equipment damage and endangers life and property. Tampering with the device or misapplication will void warranty.

USER & ENGINEERING MODES

USER MODE

If the Controller Strategy has been configured to permit it, the user can adjust the temperature setpoint or occupancy status. Enter the User Mode by pressing any button until the temperature setpoint is displayed on the second line with a flashing unit symbol.

- When in User Mode, press the up button ▲ or down button ▼ to adjust the setpoint value by the span defined in the Controller configuration until the desired temperature setpoint is displayed.
- When in User Mode, the right button ► can also be used to request the Strategy to override the schedule and force occupancy mode. “Permit Occupancy Override” must be enabled in the controller configuration.

ENGINEERING MODE

In Engineering Mode, the keypad can be used as a commissioning tool; adjusting preconfigured parameters within the controller strategy. To enter Engineering Mode:

- Hold both the up button ▲ and down button ▼ for 3 seconds, until the text PASS is displayed on the top line (large text).
- Enter the password (a series of digits) using the left ◀ and right ◁ buttons to select each digit, and then the up ▲ and down ▼ buttons to increment or decrement the selected digit. The default password is 9999, which can be changed over the network.
- When the password is complete, press and hold the right button ► for 3 seconds. If the password is accepted, the Engineering menu will be displayed.

For additional information, please see MAN0120US CBT-STAT User Manual.
OPERATION OF THE DISPLAY

1st Line (large digits)
In User Mode, this displays the current temperature reading
In Engineering Mode, this displays menu text

2nd Line (small digits)
In User Mode, this displays one of the following:
• Humidity (CBT-STAT-H)
• Temperature Setpoint (CBT-STAT)
In Engineering Mode, this displays menu text

OPERATION MODE INDICATORS
- Indicates that the controller is operating in “heating” mode
- Indicates that the controller is operating in “cooling” mode
- Indicates that the controller strategy is currently operating in “occupancy” mode
- Indicates whether the occupancy mode is controlled by a time schedule, or is manually overridden
- Indicated that an alarm state is detected in the controller strategy
- Indicates that the fan is operating
- Indicates that the keypad is operating in Engineering Mode

KEYPAD
- Left Button
  User Mode: No function
  Engineering Mode: Change menu page
- Up Button
  User Mode: Increase setpoint
  Engineering Mode: Change menu line, increase value
- Right Button
  User Mode: Toggle occupancy mode (if “Permit Occupancy Override” is enabled)
  Engineering Mode: Change menu page, start parameter editing, accept changes
- Down Button
  User Mode: Decrease setpoint
  Engineering Mode: Change menu line, decrease value