



Installation and Operation Instructions ACI/TUCH Room Unit

GENERAL INFORMATION

The ACI/TUCH Room Unit is factory-configured to support your specific requirements.

CAUTION

- CHECK THAT THE ACI/TUCH ROOM UNIT IS CORRECTLY CONFIGURED FOR THE APPLICATION; CONTACT ACI IF YOU ARE UNSURE.
- THE ACI/TUCH ROOM UNIT IS A PRECISION INSTRUMENT; PLEASE HANDLE IT WITH CARE!

MOUNTING INSTRUCTIONS

Separate the cover from the base. Attach the base directly to drywall, or to a standard 2" x 4" junction box using the mounting hardware provided. Refer to the wiring instructions to make the necessary connections. After wiring, attach the cover to the base and turn the (2) hex-screws at the bottom of the base until the cover cannot be removed.

WARNING

- REMOVE POWER BEFORE WIRING! NEVER CONNECT OR DISCONNECT WIRING WITH POWER APPLIED. DO NOT ALLOW LIVE WIRES TO TOUCH THE CIRCUIT BOARD!

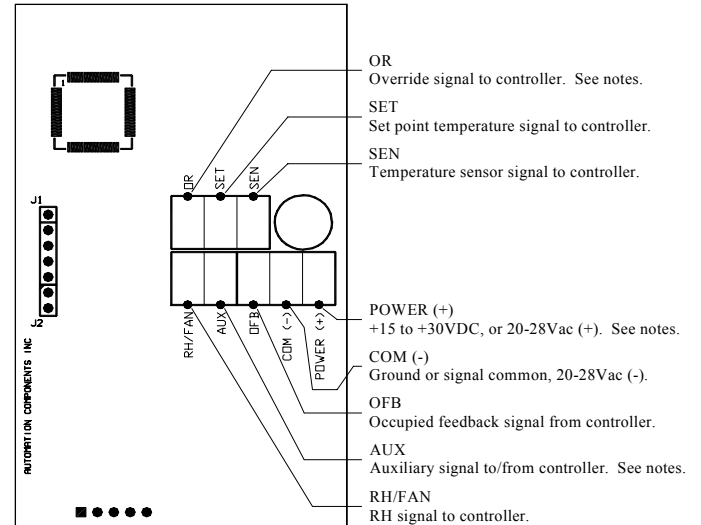
CAUTION

- WIRING MUST COMPLY WITH APPLICABLE LOCAL AND NATIONAL ELECTRICAL REGULATIONS.
- DO NOT RUN THE ACI/TUCH ROOM UNIT WIRING IN ANY CONDUIT WITH MAINS POWER SYSTEM WIRING.
- ACI RECOMMENDS USING A SEPARATE UL-LISTED CLASS 2 TRANSFORMER WHEN POWERING THE ACI/TUCH ROOM UNIT WITH 24VAC! FAILURE TO WIRE DEVICES WITH THE CORRECT POLARITY WHEN USING A SHARED TRANSFORMER MAY RESULT IN DAMAGE TO ANY DEVICE POWERED BY THE SHARED TRANSFORMER.

WIRING INSTRUCTIONS

The number of wires needed to connect the ACI/TUCH Room Unit to a controller depends on the application. Most applications require five wires to support the temperature output, the set point output, the RH output, power, and ground (common); although some applications will require additional wires. All signals are common ground referenced. **ACI recommends 16-22 AWG twisted pair wires or shielded cable for all sensor installations. Be sure to connect the cable shield to the ground at the controller ONLY.**

WIRING DIAGRAM



NOTES:

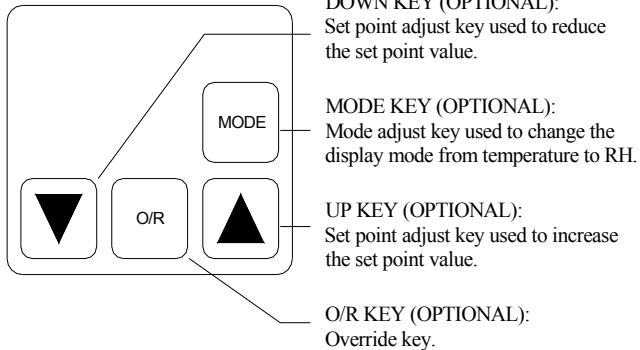
1. The OR signal can be factory configured to short the SEN or SET terminals to COM(-) to eliminate the need for a wire jumper between terminals OR and SEN or SET outputs.
2. If the ACI/TUCH Room Unit has any output configured as 0-10V or 2-10V, the voltage at the POWER(+) terminal must be at least +18VDC.
3. The AUX output/input is normally not used. For special applications, the AUX output/input can be factory configured to support various functions.



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KEY PAD

The ACI/TUCH Room Unit can be configured with various keypad options containing from 1 to 4 keys that operate the different functions, or an optional blank insert may be provided if no control is desired.



OPERATIONAL MODES

The following diagrams show the operational modes of the ACI/TUCH Room Unit. The ACI/TUCH Room Unit normally displays the room temperature, or the room temperature alternating with the room RH.

Temperature display



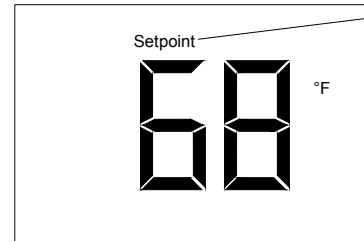
Normally, the ACI/TUCH Room Unit shows the room temperature. The ACI/TUCH Room Unit returns to this screen 5 seconds after the last key-press activity.

RH display



%RH icon.
In alternate temperature and RH display mode, or when the optional MODE key is pressed, the ACI/TUCH Room Unit shows the current %RH value.

Setpoint display



Setpoint icon.
When the UP or DOWN keys are pressed, the ACI/TUCH Room Unit shows the current set point temperature.

SET POINT OPERATION

When the UP or DOWN key is pressed, the word “Setpoint” appears and the current set point temperature is displayed. Additional UP or DOWN key presses increment or decrement the set point temperature, while continuously depressing the UP or DOWN key auto-increments or auto-decrements the set point temperature. The display continues to show the current set point temperature for 5 seconds after the last UP or DOWN key press and then returns to the temperature display or the RH display.

RH MODE OPERATION

When the MODE key is pressed, the current %RH value is displayed. The display continues to show the current %RH value for 5 seconds after the last MODE key press and then returns to the temperature display.