SIEMENS

Operator Interface Guide
Document No. 125-706
June 5, 2024

Series 2200/3200 Room Units with Analog Outputs

Overview

This document explains the set up and operation of the Series 2200 and 3200 Room Units with analog outputs. It explains the various features and operating modes available and describes the procedure for programming the display, according to user preferences.

Product Numbers

QAA2212.FWxN
QAA2220.FWxN
QAA2221.FWxN
QAA2230.FWxN
QAA2232.FWxN
QAA2230.FWxC
QAA22SS.FWxN
QFA3212.FWxN
QFA3232.FWxN
QFA3230.FWxN
QFA3212.FWxN
QFA32SS.FWxN

Accessories

Product Number	Description
AQF3060	Replacement sensing humidity/temperature element for QFA room unit types
563-102 GSKT KIT	Wall Gasket (10-pack)
AQA2200-INTL	Room Unit Back Plate (10-pack)

Operation

Operation modes

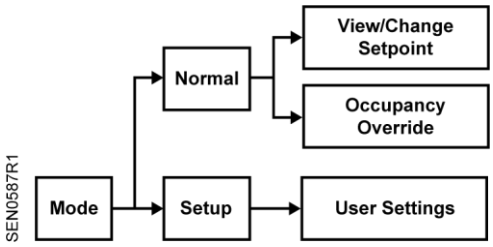


Figure 1. Operation Modes.

Normal Mode

In Normal Mode, the display is updated with temperature and humidity, (where applicable) on a set time cycle.

The display shows temperature in units of degrees Fahrenheit, or in degrees Celsius if the jumper (resistor R64) on the printed circuit assembly (PCA) is clipped (See *Setup of Displayed Temperature Units*). Depending on the model, the humidity is displayed as well. When both of these variables must be displayed (temperature and relative humidity) the display will cycle through the required values at a rate of one change every three to five seconds.

Override

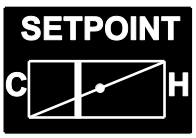
These room units provide a dry contact closure function, which may be used to signal the controller to change the night setback or occupancy state. The contact is made by pressing the override button (button designated by an image of a man inside a house). When the button is pressed, the word **OVERRIDE** appears in the display. After three seconds, the text disappears.

Operation modes, Continued

Setpoint Adjustment

The temperature setpoint is adjusted by using the plus and minus buttons. The resulting changes in setpoint are displayed on the display in 1.0°F or 0.5°C increments.

The setpoint adjustment will display for three seconds. If during those three seconds a setpoint button is pressed again, the setpoint will be adjusted accordingly and be displayed, and the three-second countdown will restart. If there is no user input for more than three seconds, the room unit will return to Normal Mode.



Setup Mode

Press the plus (+) and minus (-) buttons on the device simultaneously to access the setup mode, and setup all of the user functionality listed below. For each parameter, use the following sequence:

- Press the override button to advance to the next setup parameter.
- Press the plus/minus buttons to scroll through or toggle the various options available for each parameter to display the desired option.
- Press the occupancy override button again to move to the next user-adjustable parameter.
- When finished, press the plus (+) and minus (-) buttons on the device simultaneously to exit the setup mode. User setting changes will be saved. The device will also save changes and exit the setup mode automatically if no buttons are pressed for 15 seconds.

Settings

- **Set Pt Disp** - determines how the user views the temperature setpoint adjustment. The default setting is **NUMERIC**, and displays in degrees. The user can select between a **NUMERIC** and a **GRAPHIC** setpoint display.
- **Set Pt Min** - determines the minimum temperature setpoint value that may be adjusted by the occupant. The default setting is 55°F (13°C). The user selects the minimum setpoint the room unit should request. The setpoint limit is ultimately defined in the controller. If the setpoint is displayed graphically as a sliding bar, this sets the left end of the slider bar. The limits are 55°F (13°C) to the Set Pt Max value. The adjustment step size is 1°F (0.5°C).
- **Set Pt Max** - determines the maximum temperature setpoint value that may be adjusted by the occupant. The default setting is 95°F (35°C). The user selects the maximum setpoint the sensor should request. The setpoint limit is ultimately defined in the controller. If the setpoint is displayed graphically as a sliding bar, this sets the right end of the slider bar. The limits are Set Pt Min to 95°F (35°C). The adjustment step size is 1°F (0.5°C).
- **Output Range** - determines the temperature span over the selected voltage or current output range. Temperature range options are as follows:

  32°F to 122°F (0°C to 50°C if in Celsius mode)
  55°F to 95°F (13°C to 35°C if in Celsius mode)
  40°F to 90°F (4°C to 32°C if in Celsius mode)

  The default range is 32°F to 122°F (0°C to 50°C if in Celsius mode)
- **Disp RH?** - determines whether the humidity value should be displayed. The default value is **YES**, if the device is a humidity room unit. (This option is conditional based on the presence of humidity measurement capability, and only offered with QFA3xxx.F types.)
- **T CAL V or T CAL I** (dependent on the position of the voltage/current switch, as per Figure 3) **-** allows the user to field calibrate the temperature display and output through a bias adjustment. The default value is + 0°F (0°C). Adjustments can be made between -5°F (-3°C) and + 5°F (+3°C), in 0.5°F (1°C) increments.

- **Disp Temp? -** determines whether the temperature value should be displayed. The default value is **YES**.

- **RH CAL V or RH CAL I** [dependent on the position of the voltage/current switch, as per Figure 3) - allows the user to field calibrate the humidity display and output through a bias adjustment. The default value is + 0%. Adjustments can be made between -5% and + 5%, in 0.5% increments

- **Brightness** - allows the user to adjust the display brightness. Valid values are 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10, with 1 being dimmest and 10 being brightest. The default setting is 5.

- **Scr Saver** - allows the user to activate or deactivate the display screen saver. Available options are: NONE, OFF, and FADING. The default value is NONE.

  - **NONE** - The display operates at the programmed brightness level without any interruption.
  - **Off** – The display will turn off after 30 seconds. Any button that the user presses will wake it up (without doing anything else), and then the device will operate in Normal Mode for 30 seconds until the display turns off again.
  - **Fading** – Within 30 seconds of no operator interaction, the entire display will fade to a display brightness of 1. The display will operate at this brightness until the user presses a button. At that time, the programmed display brightness will be restored.

- **Factory Defaults** - allows the user to reset all parameters to factory defaults. Available options for this parameter are **YES** and **NO**. The default setting is **NO**.

Parameter	Default Value
Set Pt Disp	NUMERIC
Set Pt Min	55°F (13°C)
Set Pt Max	95°F (35°C)
Output Range	32°F to 122°F (0°C to 50°C)
Disp RH?	YES
T CAL V or TCAL I	+ 0°F (0°C)
DISP Temp?	YES
RH CAL V or RH CAL I	+ 0%
Brightness	5
Scr Saver	NONE
Factory Defaults	NO

Error Messages

Message	Meaning
NO SENSOR	No temperature or humidity sensor detected on the PCA. This error will display until it is corrected. Either the sensing element should be replaced (where possible) or the device should be replaced. This error may also display if the cable is miswired between controller and the room unit or if the replacement sensor element is incorrectly installed on the PCA.
0xx	Room unit firmware revision is visible for five seconds upon power-up.

Set-up of Displayed Temperature Units

The factory default for displayed temperature units is °F. To change the display to °C, snip the wire jumper (0 Ohm resistor R64) on the back of the PCA (the visible side when the unit is taken off the wall).

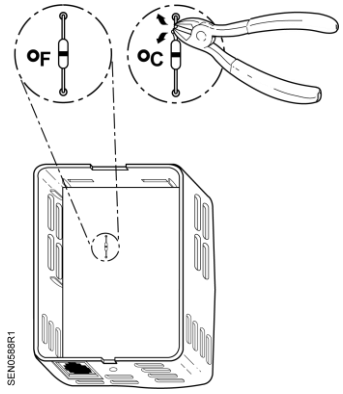


Figure 2. Jumper Location.

Sensor Set-up

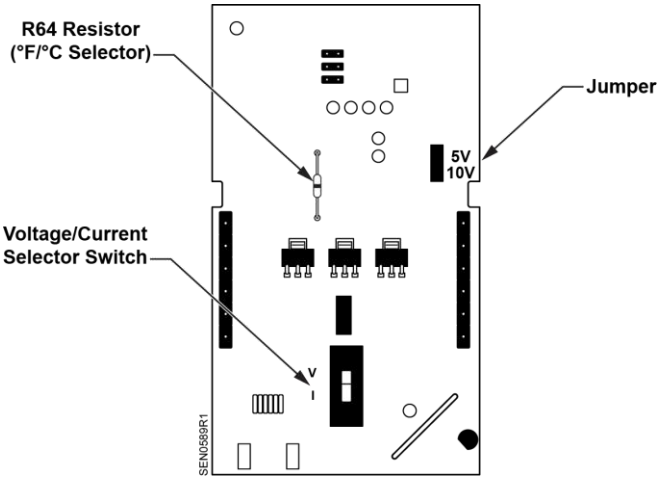


Figure 3. Circuit Board
(Located inside Room Unit Cover.

1. If the device has a switch, determine if voltage or current output is needed.
   - For current, set the switch in the down position (I).
   - For voltage, set the switch in the up position (V).
2. If selecting voltage, set the jumper as follows:
   - Use the top and middle pins for 0 to 5V.
   - Use the bottom and middle pins for 0 to 10V.

Siemens Industry, Inc.
Smart Infrastructure
1000 Deerfield Parkway
Buffalo Grove, IL 60089-4513
USA
+1-847-215-1000

Your feedback is important to us. If you have comments about this document, please send them to SBT_technical.editor.us.sbt@siemens.com