

Series 2200 Temperature Room Units for TEC and ATEC



Figure 1. QAA2280.FWSC Temperature Room Unit.

The Series 2200 Temperature Room Units from Siemens Industry, Inc. offer a wide range of features and functionality that work in concert with the APOGEE® Automation System to deliver exceptional occupant comfort in even the most demanding application environments. The product family includes plain, sensing-only variants, and fully interactive types with a graphical OLED (Organic Light Emitting Diode) displays. All room units incorporate precision temperature sensing elements to accurately and reliably measure room temperature. Their compact, low profile design results in an attractive, inconspicuous installation. Strategically placed ventilation slots in the housing optimize airflow through the cover for fast measurement response and superior control.

These room units provide accurate, reliable sensing of room temperature and some models also sense humidity. They can be used with Terminal Equipment Controllers (TECs) and Actuator Terminal Equipment Controllers (ATECs).

NOTE: Standard P1 TECs, and all ATECs do not have the ability to handle humidity data. If humidity is needed for monitoring or control, use the QFA3280 versions of this room unit line with a BACnet TEC.

NOTE: If there isn't an RM CO₂ point in the BACnet TEC, the sensor will display the CO₂, but it will not be available at the BACnet TEC.

For those sensors that support relative humidity, if there isn't an RM RH point, the sensor will display RM and RH, but it will not be available at the BACnet TEC.

Applications

The Series 2200 Temperature Room Unit applications incorporate a digital temperature sensor integrated circuit and plug-in HMI (Human-Machine Interface) port located on the bottom of the cover. The HMI port provides a convenient means of communicating with the controller to command or troubleshoot the system. These room units connect to the controller via a six-wire cable terminated with a plug-in RJ-11 connector. The cable transmits the temperature, the communication with the HMI, and the optional setpoint and override signals.

Available Features (QxAxxxx.F models only)

- Organic Light Emitting Diode Display: A 96 × 64 pixel graphical OLED allows simultaneous digital display of room temperature, and day/night operation status.
 - Standard Display Features:
 - Display of operating mode: Graphic symbols are displayed to indicate the controller's operating mode. A person in the house indicates occupied mode operation and a person outside the house indicates unoccupied mode.
 - Easy-to-read room temperature value to 1 decimal place.
 - Easy-to-read room humidity value (QFA models only).
 - Digital display.
 - Configurable Display Features:
 - Degrees Fahrenheit or Celsius,
 - Graphical or alphanumeric setpoint display.
 - Room temperature display on or off.
 - Room humidity display on or off (QFA models only).
- Digital setpoint adjustment: The room unit's keypad allows error-free digital setpoint adjustments in one-degree increments. Setpoint values momentarily display as changes are made.
- Override button: The override button allows an occupant to change to an occupied control schedule during the unoccupied cycle for a predetermined time period as defined by the controller. Occupancy graphic is shown on the display during occupied time periods.
- Maintenance-free: These room units draw a small amount of power directly from the controller.
- Backward compatibility: These room units are backward compatible with all TECs. The room units are wired with six-conductor phone cables and standard RJ-11 connectors.
- HMI port: RJ-11 connection allows laptop connection for commissioning and servicing the controller.

Specifications

Temperature Range	
Setpoint	55°F to 95°F (13°C to 35°C)
Operating	55°F to 95°F (13°C to 35°C)
Humidity Range (QFA types only)	0% to 100% rh
Output Signals	Proprietary digital protocol (.D, .F types) Resistive (QAAxxxx.E types).
Sensing Element Type	Digital Temperature Sensor IC (.D,.F types) 10K Ohm NTC Type 2 thermistor (QAAxxxx.E types)
Sensing Accuracy	
Digital Temperature Sensor IC element	
QAA types	32°F to 122°F (0°C to 50°C) ±0.9°F (±0.5°C)
QFA types	32°F to 122°F (0°C to 50°C) ±0.5°F (±0.3°C)
10K NTC Type 2 thermistor element	
55 to 80.6°F (13 to 27°C)	±0.5°F (±0.3°C)
80.6 to 95°F (27 to 35°C)	±1.0°F (±0.55°C)
Humidity Accuracy (QFA types only)	
10% - 90% rh	± 2% rh
< 10% rh; > 90% rh	± 4% rh
Calibration Features	
Temperature	Adjustable to +/- 5°F
Humidity	Adjustable to +/- 5% rh
Installation	
TEC	100 ft. Maximum cable length. 6C #24 AWG, Belden DFLEX3 or equal, NEC Class 2
Installation Adjustments	None required
Cover	
Dimensions	4.5" × 2.75" × 1.18" (115 mm × 70 mm × 30 mm)
Color	White
Power Supply	Supplied by TEC or ATEC

Product Ordering Information

Part Number	Comm Type	Comm Type	Logo	Display	Setpoint/ Occupancy	Temp	RH (2%)
QAA2280.EWSC	Analog	Resistive	Siemens			•	
QAA2280.DWSC	Digital	P1		•		•	
QAA2280.FWSC				•	•	•	
QFA3280.EWSC						•	•
QFA3280.DWSC				•		•	•
QFA3280.FWSC				•	•	•	•
QAA2280.EWNC	Analog	Resistive	None			•	
QAA2280.DWNC	Digital	P1		•		•	
QAA2280.FWNC				•	•	•	
QFA3280.EWNC						•	•
QFA3280.DWNC				•		•	•
QFA3280.FWNC				•	•	•	•

Accessories Ordering Information

Description	Product Part Number
25-foot (7.6 m) cable with connections	588-100A
50-foot (15.2 m) cable with connections	588-100B
100-foot (30.5 m) cable with connections	588-100C
Passkey Tool (Used to set room unit parameters)	544-643A
Replacement rh 2%+ Thermostat Element – TEC Room Unit	AQF3060
Replacement Housing Base	563-102-01
Room Unit Back Plate (10-pack)	AQA2200-INTL
Room Unit Back Plate (Single)	AQA2200-2X4
Room Sensor Insulating Gasket (10-pack) (Recommended for hollow wall installations.)	563-102 GSKT KIT

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