Series 2300 Relative Humidity and Temperature Room Units

Figure 1. Series 2300 Relative Humidity and Temperature Room Unit.

The Series 2300 Relative Humidity and Temperature Room Units from Siemens Industry, Inc. offer a simple temperature sensing functionality. These devices work with virtually any building automation control system to deliver exceptional occupant comfort. All room units incorporate precision humidity and 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 humidity and temperature. Various models can be used with all equipment controllers that accept the respective NTC thermistor or RTD inputs for primary control.

Applications

These room units connect to the controller's input points via free wire cabling, which is terminated on the controller's terminal block connector.

Specifications

Temperature Specifications	
Signal Selectable Models:	
Operating Range, Selectable*	32°F to 122°F (0°C to 50°C)
	55°F to 95°F (13°C to 35°C)
	40°F to 90°F (4°C to 32°C)
Output Signal	Select 0-5V, 0-10V, 4-20 mA
Setpoint Output Range	55°F to 95°F (13°C to 35°C) selectable, 0-10V or 0-5V, 4-20 mA
Sensing Element Type	Digital Sensor IC (band gap) (QFA33SS types)
Sensing Element Accuracy Voltage Mode Current Mode	± 0.9°F (± 0.5°C) ± 1.8°F (± 1°C) 2° to 4°F (1° to 3°C) low
Override Signal	Relay/dry contact (1 amp @ 30 Vdc max.)

* Selectable operating range is only possible on display versions (QFA3332.FWNN, QFA3330.FWNN, QFA3312.FWNN, and QFA33SS.FWN). Sensing only versions (QFAxxSS.E types) measure a fixed range of 32°F to 122°F (0°C to 50°C) over the selected output signal.

Resistive Output Models:	
Operating Range	32°F to 122°F (0°C to 50°C)
Output Signal	Changing resistance
Setpoint Output Range	55°F to 95°F (13°C to 35°C) 0-10V
Sensing Element Type	1K Ohm Platinum RTD (QFA3312 types) 10K Ohm NTC Type II thermistor (QFA3330 types)
Sensing Element Accuracy 10K ohm Thermistor	
55°F to 80.6°F (13°C to 27°C)	±0.5°F (±0.3°C)
80.6°F to 95°F (27°C to 35°C)	±1.0°F (±0.5°C)
1K ohm RTD mid-range	
75°F (24°C)	±0.75°F (± 0.4°C)
Override Signal	Relay/dry contact (1 amp @ 30 Vdc max.)

Specifications, Continued

Humidity Specifications	
Humidity Range	0% to 100% rh
Output Signal	Select 0-5V, 0-10V, 4-20 mA
Sensing Element Type	Digital Sensor IC (capacitive)
Humidity Accuracy	
10% - 90% rh	± 2% rh
< 10% rh; > 90% rh	± 4% rh
Calibration Features	
Temperature	Adjustable to +/- 5°F
Humidity	Adjustable to +/- 5% rh
Installation	
NTC Types	100 ft. Maximum cable length. 6C #24 AWG, Belden DFLEX3 or equal, NEC Class 2

RTD Types	300 to 750 ft Maximum cable length 18 to 22 AWG twisted pair NEC Class 2
Installation Adjustments	None required
Cover Dimensions	4.5" × 2.75" × 1.18" (115 mm × 70 mm × 30 mm)
Color	White
Weight	4 oz (0.11 kg)
Regulatory Agencies	UL 916
Input Power	18 to 36 Vdc or 24 Vac ± 20%
VA Rating	1.5 VA, max.

Product Ordering Information

Description	Product Part Number
Humidity and Temperature Room Unit, 2%, RH: 0-10/0-5 Volt or 4-20 mA selectable, 2% T: 10K Type 3 NTC, Display, Setpoint, Override, No Logo	QFA3332.FWNN
Humidity and Temperature Room Unit, 2%, RH: 0-10/0-5 Volt or 4-20 mA selectable, 2% T: 10K Type 2 NTC, Display, Setpoint, Override, No Logo	QFA3330.FWNN
Humidity and Temperature Room Unit, 2%, RH: 0-10/0-5 Volt or 4-20 mA selectable, 2% T: 1K Platinum (385) RTD, Display, Temp Setpoint, Override, White, No Logo	QFA3312.FWNN
Humidity and Temperature Room Unit, 2%, RH: 0-10/0-5 Volt or 4-20 mA selectable, 2% T: 1K Platinum (385) RTD, White, No Logo	QFA3312.EWNN
Humidity and Temperature Room Unit, 2%, 0-10/0-5 Volt or 4-20 mA selectable outputs, Display, Temp Setpoint, Override, White, No Logo, No Comm Port	QFA33SS.FWNN
Humidity and Temperature Room Unit, 2%, 0-10/0-5 Volt or 4-20 mA selectable outputs, White, No Logo	QFA33SS.EWNN

Accessories Ordering Information

Description	Product Part Number
Replacement Sensor Housing Base for QFA33xx.EWNN	563-102-03
Replacement Sensor Housing Base for QFA33xx.FWNN	563-102-04
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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