Series 2300 Temperature Room Units

**Figure 1. QAA2312.BWNN and QAA23xx FWNN
Temperature Room Units.**

The Series 2300 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 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. 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 controllers input points via free wire cabling, which is terminated on the controllers' 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
Sensing Element Type	Digital Sensor IC (band gap) (QAA23SS types)
Sensing Element Accuracy	± 0.9°F (± 0.5°C)
Override Signal	Relay/dry contact (1 amp @ 30 Vdc max.)
* Selectable operating range is only possible on display versions (QAAxxSS.F types). Sensing only versions (QAAxxSS.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:	
Active Output	55°F to 95°F (13°C to 35°C) 0-10V
Bi-metallic	~ 1.5K to 20K Ohms
Sensing Element Type	
QAA2312 types	1K ohm Platinum RTD
QAA2330 types	10K ohm NTC Type II thermistor
QAA2332 types	10K ohm NTC Type III thermistor
QAA2320 types	1K ohm Nickel RTD @ 32°F
QAA2321 types	1K ohm Nickel RTD @ 70°F
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:	
Active Output	Relay/dry contact (1 amp @ 30 Vdc max.)
Bi-metallic	50mA @ 12Vdc

Specifications, Continued

Installation		Installation Adjustments	None required
NTC Types	100 ft. Maximum cable length.	Cover	
		Dimensions	4.5" × 2.75" × 1.18" (115 mm × 70 mm × 30 mm)
	6C #24 AWG, Belden DFLEX3 or equal, NEC Class 2	Color	White
		Weight	4 oz (0.11 kg)
RTD Types	300 to 750 ft Maximum cable length 18 to 22 AWG twisted pair NEC Class 2	Regulatory Agencies	UL 916
		Input Power	18 to 36 Vdc or 24 Vac ± 20%
		VA Rating	1.5 VA, max.
		Country of Origin	Made in USA

Product Ordering Information

Temperature Room Unit Description	Product Part Number
1K Ω Platinum RTD, 385 Alpha, Warmer/Cooler Setpoint Adjustment, Bi-metallic Display, No Logo	QAA2312.BWNN
1K Ω Platinum RTD, 385 Alpha, Sensing, No Logo	QAA2312.EWNN
1K Ω Platinum RTD, 385 Alpha, Sensing, Digital Display, Setpoint Adjustment, Override, No Logo	QAA2312.FWNN
1K Ω Nickel RTD @ 32°F, Override, Warmer/Cooler Setpoint Adjustment, Bi-metallic Display, No Logo	QAA2320.BWNN
1K Ω Nickel RTD @ 32°F, Sensing, No Logo	QAA2320.EWNN
1K Ω Nickel RTD @ 32°F, Sensing, Digital Display, Setpoint Adjustment, Override, No Logo	QAA2320.FWNN
1K Ω Nickel RTD @ 70°F, Override, Warmer/Cooler Setpoint Adjustment, Bi-metallic Display, No Logo	QAA2321.BWNN
1K Ω Nickel RTD @ 70°F, Sensing, No Logo	QAA2321.EWNN
1K Ω Nickel RTD @ 70°F, Sensing, Digital Display, Setpoint Adjustment, Override, No Logo	QAA2321.FWNN
10K Ω NTC Type II Thermistor, Override, Warmer/Cooler Setpoint Adjustment, Bi-metallic Display, No Logo	QAA2330.BWNN
10K Ω NTC Type II Thermistor, Sensing, No Logo	QAA2330.EWNN
10K Ω NTC Type II Thermistor, Sensing, Digital Display, Setpoint Adjustment, Override, No Logo	QAA2330.FWNN
10K Ω NTC Type III Thermistor, Override, Warmer/Cooler Setpoint Adjustment, Bi-metallic Display, No Logo	QAA2332.BWNN
10K Ω NTC Type III Thermistor, No Logo, Sensing	QAA2332.EWNN
10K Ω NTC Type III Thermistor, Sensing, Digital Display, Setpoint Adjustment, Override, No Logo	QAA2332.FWNN
0-10V/0-5V/4-20 mA Selectable Temperature, Sensing, No Logo	QAA23SS.EWNN
0-10V/0-5V/4-20 mA Selectable Temperature, Digital Display, Temperature Setpoint, Override, No Logo	QAA23SS.FWNN

Accessories Ordering Information

Description	Product Part Number
Replacement Sensor Housing Base for QAA23xx.EWNN models	563-102-02
Replacement Sensor Housing Base for QAA23xx.BWNN and QAA32SS.EWNN models)	563-102-03
Replacement Sensor Housing Base for QAA23xx.FWNN models	563-102-04
Room Unit Back Plate (10-pack)	AQA2200-INTL

Siemens Industry, Inc.
Building Technologies Division
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

Document No. 149-710
Printed in the USA
Page 2 of 2