Table of Contents

(Continued on next page)

Standard Room Temperature Systems

Full HMI

Blank Front

Description

Please note that the Series 2200 Room Temperature Sensors have entered retirement.

Series 2200 Room Temperature Sensors provide a simple and accurate means of monitoring room temperature. Units are offered with a variety of output signal formats for compatibility with any building automation system. Basic units feature a blank front to prevent unauthorized access. Full HMI units enable temperature setpoint and override signals to be transmitted to the receiving controller.

Features

- Universal signal formats for compatibility with any HVAC control system
- Compact, low profile design seamlessly blends into any décor
- Strategically placed ventilation slots optimize airflow for fast response and superior control
- Units with display feature a configurable readout
- Includes installation hardware for mounting on 2" x 4" electrical box or directly to drywall

Applications

Compatible with any Building Automation System (BAS).

Siemens offers a 5-year warranty on sensors.*

* Not applicable to PL-link devices, IAQ multi-sensor or Series 2200/3200 units with display.

Specifications

Measuring Range
Setpoint & Operating.....55° to 95°F (13° to 35°C)

Accuracy
1k Ω Pt RTD (385a).....±0.54°F @ 32°F (±0.3°C @ 0°C)
1k Ω Ni @ 32F RTD .....±0.72°F @ 32°F (±0.4°C @ 0°C)
1k Ω Ni @ 70F RTD .....±0.75°F @ 75°F (±0.4°C @ 24°C)
10k Ω Type 2 Thermistor.....±0.4°F @ 77°F (±0.2°C @ 25°C)
10k Ω Type 3 Thermistor.....±0.4°F @ 77°F (±0.2°C @ 25°C)
100k Ω Thermistor.....±0.36°F @ 77°F (±0.2°C @ 25°C)
Analog ..... ±0.9°F (±0.5°C)

Dimensions .....4.5" x 2.75" x 1/18" (115 mm x 70 mm x 30 mm)
Color ..... White
Agency Approvals .....UL (916)

Product Ordering

Temp Output	Description	Part No.
1k Ω Pt RTD (385a)	Sensing only	**QAA2212.EWSN**[1]
1k Ω Pt RTD (385a)	Display and Setpoint Adjustment	**QAA2212.FWSN**[1, 4]
1k Ω Ni @ 32F RTD	Sensing only	**QAA2220.EWSN**[1]
1k Ω Ni @ 70F RTD	Sensing only	**QAA2221.EWSN**[1]
1k Ω Ni @ 70F RTD	Display and Setpoint Adjustment	**QAA2221.FWSN**[1, 4]
10k Ω Type 2 Thermistor	Sensing only	**QAA2230.EWSN**[1]
10k Ω Type 2 Thermistor	Sensing only with Tool Port	**QAA2230.EWSC**[1, 2]
10k Ω Type 2 Thermistor	Display and Setpoint Adjustment	**QAA2230.FWSN**[1, 4]
10k Ω Type 2 Thermistor	Display, Setpoint Adjustment, with Tool Port	**QAA2230.FWSC**[1, 2, 4]
100k Ω Thermistor	Sensing only	**QAA2235.EWSN**[1]
Analog	Sensing only	**QAA22SS.EWSN**[1, 3]
Analog	Display and Setpoint Adjustment	**QAA22SS.FWSN**[1, 3, 4]

Ordering Notes:
1) For no-logo versions, change "S" in 10th position to "N"
2) For use with Siemens TALON® Controllers
3) Analog output can be configured as 0-10V or 4-20mA
4) Temperature setpoint signal is 0-10V; Override signal is momentary dry contact (1A @ 30 Vdc max.)

Accessories Ordering

Description	Part No.
Wall Gasket Kit – Package of 10	**563-102 GSKT KIT**
Room Sensor Wall Plate (3-3/16" x 4-15/16")	**AQA2200-2x4**
Room Sensor Wall Plate (3-3/16" x 4-15/16") – Package of 10	**AQA2200-INTL**
OLED Replacement Kit – Package of 5	**AQA2232**

Standard Room Humidity and Temperature Sensors

Full HMI

Blank Front

Description

Please note that the Series 3200 Room Humidity and Temperature Sensors have entered retirement.

Series 3200 Room Humidity and Temperature Sensors provide a simple and accurate means of monitoring both room humidity and temperature. Units are offered with a variety of output signal formats for compatibility with any building automation system. Basic units feature a blank front to prevent unauthorized access. Full HMI units enable temperature setpoint and override signals to be transmitted to the receiving controller.

Features

- Single device monitors both relative humidity and temperature
- Universal signal formats for compatibility with any HVAC control system
- Compact, low profile design seamlessly blends into any décor
- Strategically placed ventilation slots optimize airflow for fast response and superior control
- Units with display feature a configurable OLED readout
- Includes installation hardware for mounting on 2" x 4" electrical box or directly to drywall

Applications

Compatible with any Building Automation System (BAS).

Siemens offers a 5-year warranty on sensors.*

* Not applicable to PL-link devices, IAQ multi-sensor or Series 2200/3200 units with display.

Specifications

Measuring Range
Relative Humidity ..... 0 to 100%
Temperature (Setpoint & Operating) .....55° to 95°F (13° to 35°C)

Accuracy
Humidity ..... ±2% between 10-90%

Temperature
1k Ω Pt RTD (385a).....±0.54°F @ 32°F (±0.3°C @ 0°C)
10k Ω Type 2 Thermistor.....±0.4°F @ 77°F (±0.2°C @ 25°C)
10k Ω Type 3 Thermistor.....±0.4°F @ 77°F (±0.2°C @ 25°C)
Analog ..... ±0.9°F (±0.5°C)

Dimensions ..... 4.5" x 2.75" x 1/18" (115 mm x 70 mm x 30 mm)
Color ..... White
Agency Approvals .....UL (916)

Product Ordering

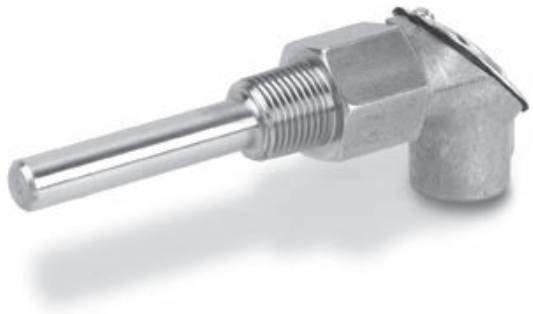
RH Output	Temp Output	Description	Part No.
Analog	1k Ω Pt RTD (385a)	Sensing only	**QFA3212.EWSN**[1]
Analog	1k Ω Pt RTD (385a)	Display and Setpoint Adjustment	**QFA3212.FWSN**[1, 2]
Analog	10k Ω Type 2 Thermistor	Display and Setpoint Adjustment	**QFA3230.FWSN**[1, 2]
Analog	0-10 V/4-20 mA	Sensing only	**QFA32SS.EWSN**[1]
Analog	0-10 V/4-20 mA	Display and Setpoint Adjustment	**QFA32SS.FWSN**[1, 2]

Ordering Notes:
1) For no-logo versions, change “S” in 10th position to “N”
2) Temperature setpoint signal is 0-10V; Override signal is momentary dry contact (1A @ 30 Vdc max.)

Accessories Ordering

Description	Part No.
Wall Gasket Kit – Package of 10	**563-102 GSKT KIT**
Room Sensor Wall Plate (3-3/16" x 4-15/16")	**AQA2200-2x4**
Room Sensor Wall Plate (3-3/16" x 4-15/16") – Package of 10	**AQA2200-INTL**
OLED Replacement Kit – Package of 5	**AQA2232**

Immersion Temperature Sensors – Various Outputs



Liquid Immersion Temperature Sensor with Thermowell

Description

Siemens Immersion Temperature Sensors include a stainless steel thermowell and are offered in a variety of output signals to ensure compatibility with any HVAC control system.

Features

- Stainless steel well enables sensing element to be removed without draining the system
- Wide variety of output signals available
- Wide operating range makes them suitable for use throughout the HVAC system

NOTE: Not for use with potable water.

Specifications

Operating Range ..... 0° to 250°F (-18° to 120°C)

Accuracy

1k Ω Pt RTD (385a)..... ±0.54°F @ 32°F (±0.3°C @ 0°C)
1k Ω Pt RTD (375a)..... ±0.54°F @ 32°F (±0.3°C @ 0°C)
1k Ω Ni @ 32F RTD ..... ±0.72°F @ 32°F (±0.4°C @ 0°C)
1k Ω Ni @ 70F RTD ..... ±0.75°F @ 75°F (±0.4°C @ 24°C)
10k Ω Type 2 Thermistor..... ±0.4°F @ 77°F (± 0.2°C @ 25°C)
10k Ω Type 3 Thermistor..... ±0.4°F @ 77°F (± 0.2°C @ 25°C)
100k Ω Thermistor..... ±0.36°F @ 77°F (± 0.2°C @ 25°C)
4-20mA..... ±0.54°F @ 32°F (±0.3°C @ 0°C)

System Connection..... ½" – 14 NPT

Thermowell Material.....300 Series Stainless Steel

Product Ordering

Output Signal	Probe Length	Range	Part Number
100k Ω	2.5" (63.5 mm)	0° to 250°F (-18° to 121°C)	**536-777-25**
	4" (101.6 mm)		**536-777-40**
	6" (152.4 mm)		**536-777-60**
10k Ω Type II	2.5" (63.5 mm)		**QAE2030.005**
	4" (101.6 mm)		**QAE2030.010**
	6" (152.4 mm)		**QAE2030.015**
1k Ω Ni @ 32F	2.5" (63.5 mm)		**QAE2020.005**
	4" (101.6 mm)		**QAE2020.010**
	6" (152.4 mm)		**QAE2020.015**
1k Ω Pt (375a)	2.5" (63.5 mm)		**544-577-25**
	4" (101.6 mm)		**544-577-40**
	6" (152.4 mm)		**544-577-60**
1k Ω Pt (385a)	2.5" (63.5 mm)		**QAE2012.005**
	4" (101.6 mm)		**QAE2012.010**
	6" (152.4 mm)		**QAE2012.015**
4-20 mA	2.5" (63.5 mm)	20° to 70°F (-7° to 21°C)	**536-774-25**
	4" (101.6 mm)	20° to 70°F (-7° to 21°C)	**536-774-40**
	6" (152.4 mm)	20° to 70°F (-7° to 21°C)	**536-774-60**
	2.5" (63.5 mm)	30° to 250°F (-1° to 121°C)	**536-767-25**
	4" (101.6 mm)	30° to 250°F (-1° to 121°C)	**536-767-40**
	6" (152.4 mm)	30° to 250°F (-1° to 121°C)	**536-767-60**
	2.5" (63.5 mm)	32° to 212°F (0° to 100°C)	**544-562-25**
	4" (101.6 mm)	32° to 212°F (0° to 100°C)	**544-562-40**
	6" (152.4 mm)	32° to 212°F (0° to 100°C)	**544-562-60**

Accessories Ordering

Description	Part No.
Immersion Sensor Repair Kit, 4-20mA, 30° to 250°F	**536-767-RK**
Immersion Sensor Repair Kit, 4-20mA, 20° to 70°F	**536-774-RK**
Immersion Sensor Repair Kit, 4-20mA, 20° to 70°F	**544-562-RK**
Immersion Sensor Repair Kit, 100k Ohm	**536-777-RK**
Immersion Sensor Repair Kit, Pt 1k Ohm, (375a)	**544-577-RK**
Immersion Sensor Repair Kit, Pt 1k Ohm, (385a)	**AQE2012**
Immersion Sensor Repair Kit, Ni 1k Ohm @ 32°F	**AQE2020**
Immersion Sensor Repair Kit, 10k Ohm, Type 2	**AQE2030**
Thermowell, 2.5"	**AQE2000.005**
Thermowell, 4"	**AQE2000.010**
Thermowell, 6"	**AQE2000.015**

Note:
Repair kit consists of sensing element, transmitter (4-20 mA models only), and assorted hardware.

Go Wireless!

Wireless connectivity with flexible integration

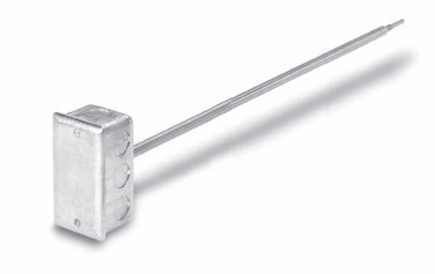
Wireless sensors simplify installation by minimizing wiring efforts. Versatile placement options offer optimal positioning and flexible integration. Easily collect room data wirelessly and integrate it seamlessly into your automation, BMS, Cloud, or third-party system.

Visit usa.siemens.com/sensors to learn more.

Siemens offers a 5-year warranty on valves, actuators, damper actuators, sensors and thermostats.

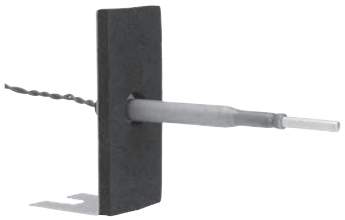
SIEMENS

Duct Temperature Sensors – Various Outputs



Duct Sensor
with Rigid Probe

Duct Sensor
with Flexible Probe



536-811 Bracket Mounted
Duct Sensor

Description

Siemens Duct Temperature Sensors are available in lengths from 4 inches to 24 feet. A variety of output signals is available to ensure compatibility with any HVAC control system.

Features

- Wide variety of output signals available
- Wide operating range makes them suitable for use throughout the HVAC system
- Units for large ducts feature flexible probes and probe mounting clips for easy installation

Specifications

Operating Range ..... 0° to 250°F (-18° to 120°C)

Accuracy

1k Ω Pt RTD (385a)	±0.54°F @ 32°F (±0.3°C @ 0°C)
1k Ω Pt RTD (375a)	±0.54°F @ 32°F (±0.3°C @ 0°C)
1k Ω Ni @ 32F RTD	±0.72°F @ 32°F (±0.4°C @ 0°C)
1k Ω Ni @ 70F RTD	±0.75°F @ 75°F (±0.4°C @ 24°C)
10k Ω Type 2 Thermistor	±0.4°F @ 77°F (±0.2°C @ 25°C)
10k Ω Type 3 Thermistor	±0.4°F @ 77°F (±0.2°C @ 25°C)
100k Ω Thermistor	±0.36°F @ 77°F (±0.2°C @ 25°C)
4-20mA	±0.54°F @ 32°F (±0.3°C @ 0°C)

Siemens offers a 5-year warranty on sensors.*

* Not applicable to PL-link devices, IAQ multi-sensor or Series 2200/3200 units with display.

Product Ordering

Output Signal	Sensing Type	Probe Length	Primary MV Range	Part Number
100k Ω Thermistor	Point	4 inches (rigid)	-40° to 180°F (-40° to 82°C)	**535-741-4**
	Point (Bracket Mount)	4 inches (rigid)		**536-811**
	Point	8 inches (rigid)		**535-741-8**
		18 inches (rigid)		**535-741-18**
	Averaging	18 inches (rigid)		**540-244-18**
		3 feet (flexible)		**540-245-36**
		6 feet (flexible)		**540-246-72**
10k Ω Type II Thermistor	Point	4 inches (rigid)		**QAM2030.010**
	Point (Bracket Mount)	4 inches (rigid)		**QAM2030.010-BR**
	Point	8 inches (rigid)		**QAM2030.020**
		18 inches (rigid)		**QAM2030.045**
	Averaging	8 feet (flexible)		**QAM2030.250**
		16 feet (flexible)		**QAM2030.500**
		24 feet (flexible)		**QAM2030.750**
1k Ω Ni @ 32F RTD	Point	4 inches (rigid)		**QAM2020.010**
		8 inches (rigid)		**QAM2020.020**
		18 inches (rigid)		**QAM2020.045**
	Averaging	24 feet (flexible)		**QAM2020.750**
1k Ω Pt (375a) RTD	Point	4 inches (rigid)		**544-339-4**
		8 inches (rigid)		**544-339-8**
		18 inches (rigid)		**544-339-18**
	Averaging	18 inches (rigid)		**544-343-18**
		2 feet (rigid)		**544-343-24**
		3 feet (rigid)		**544-343-36**
		4 feet (rigid)		**544-343-48**
		8 feet (flexible)		**544-342-8**
		16 feet (flexible)		**544-342-16**
		24 feet (flexible)		**544-342-24**
1k Ω Pt (385a) RTD	Point	4 inches (rigid)		**QAM2012.010**
		8 inches (rigid)		**QAM2012.020**
		18 inches (rigid)		**QAM2012.045**
	Averaging	8 feet (flexible)		**QAM2012.250**
		16 feet (flexible)		**QAM2012.500**
		24 feet (flexible)		**QAM2012.750**
4-20 mA	Point	4 inches (rigid)	20° to 120°F (-7° to 49°C)	**533-376-4**
		8 inches (rigid)		**533-376-8**
		18 inches (rigid)		**533-376-18**
	Averaging	18 inches (rigid)	20° to 120°F (-7° to 49°C)	**535-490-18**
		2 feet (rigid)		**535-490-24**
		3 feet (rigid)		**535-490-36**
		4 feet (rigid)		**535-490-48**
		8 feet (flexible)		**533-380-8**
		16 feet (flexible)		**533-380-16**
		24 feet (flexible)		**533-380-24**
	Point	4 inches (rigid)	30° to 250°F (-1° to 121°C)	**533-377-4**
		8 inches (rigid)	30° to 250°F (-1° to 121°C)	**533-377-8**
		18 inches (rigid)	30° to 250°F (-1° to 121°C)	**533-377-18**
		4 inches (rigid)	-4° to 122°F (-20° to 50°C)	**544-560-4**
		8 inches (rigid)	-4° to 122°F (-20° to 50°C)	**544-560-8**
		18 inches (rigid)	-4° to 122°F (-20° to 50°C)	**544-560-18**

Flush Mount Room Temperature Sensors – Various Outputs

Plastic Flush Mount Sensor

Metal Flush Mount Sensor

Button Sensor with Wall Plate

Button Sensor without Wall Plate

Description

Flush Mount Room Temperature Sensors provide a resistance signal to the controller that varies proportionally with temperature. The sensors are available with Platinum 1k Ω 375, NTC 100k Ω Type 2, or NTC 10k Ω Type 2 passive output signals.

The wall plate version is designed to mount to a 2-inch × 4-inch electrical box. The tamper-proof screws used to install the sensor to the utility box protects the sensor from removal by unauthorized personnel. The sensors may be painted after installation.

Features

- Tamper-proof screws
- Can be painted after installation
- Designed for mounting to a 2 x 4 electrical box
- Option of brushed stainless steel finish or beige or white plastic (except for button sensor)

Applications

Flush mount temperature sensors are used to monitor air temperature throughout the facility. Flush mounted sensors are ideally suited to high traffic areas and in facilities where vandalism / tampering is a concern.

Siemens offers a 5-year warranty on sensors.*

* Not applicable to PL-link devices, IAQ multi-sensor or Series 2200/3200 units with display.

Specifications

Output Signals ..... Changing Resistance

10K Ohm Thermistor

Calibration Point Factory Setting ..... 77°F (25°C)
Accuracy ..... ±0.5°F (±0.3°C)
Resistance Value @ Cal. Temp 10k

100K Ohm Thermistor

Calibration Point ..... 77°F (25°C)
Accuracy ..... ±0.36°F (±0.2°C)
Resistance Value @ Cal. Temp ..... 100k Ohm

1K Ohm RTD (375 alpha)

Calibration Point ..... 32°F (0°C)
Accuracy ..... ±0.54°F (±0.3°C)
Resistance Value @ Cal. Temp ..... 1K Ohm

Product Ordering

Application	Description	Output Signal	Part Number	Range
Room Temp	Button Style Room Temp Sensor without Wall Plate	Platinum 1k Ω 375 alpha	**QAA1011.AASU**	32º to 122º F (0º to 50ºC)
	Button Style Room Temp Sensor with Wall Plate		**QAA1011.AATU**	
	Flush Mount Room Temp Sensor Beige Plastic		**544-374A**	
	Flush Mount Room Temp Sensor White Plastic		**544-374B**	
	Flush Mount Room Temp Sensor Metal		**544-973**	
	Flush Mount Room Temp Sensor Beige Plastic	NTC 100k Ω Type 2	**536-784A**	
	Flush Mount Room Temp Sensor White Plastic		**536-784B**	
	Flush Mount Room Temp Sensor Metal		**536-984**	
	Flush Mount Room Temp Sensor Beige Plastic	NTC 10k Ω Type 2	**536-994A**	
	Flush Mount Room Temp Sensor White Plastic		**536-994B**	
	Flush Mount Room Temp Sensor Metal		**540-984**	

Accessories Ordering

Description	Part No.
Metal Guard for Plastic Flush Mount Sensors (Not for use with button style sensors)	**540-538**

Room Units

For Use With Siemens Terminal Equipment Controllers (TEC)*

Full HMI | Blank Front | Display

*Not compatible with non-Siemens controllers/automation systems.

Description

Please note that the Series 2200/3200 Communicating Room Units have entered retirement.

Siemens 2200/3200 Communicating Room Units connect to the Terminal Equipment Controller via a single RJ-11 cable with RJ-11 plugs on either end for simple installation. Data is transferred quickly and reliably via a proven Siemens protocol.

Units are available for temperature only, temperature and humidity, or temperature and humidity and air quality. Full HMI units enable occupant control of temperature setpoint within limits configured by the building management operator, while blank front units prevent users from forcing the system into a potentially inefficient operating strategy.

Features

- Plug & play with Siemens Terminal Equipment Controllers
- Simple installation with RJ-11 ports on room unit and TEC
- Tool Port enables connection of commissioning and configuration tools
- Strategically placed ventilation slots optimize airflow for fast response and superior control
- Units with display feature a configurable readout
- Includes installation hardware for mounting on 2" x 4" electrical box or directly to drywall

Specifications

Measuring Range
- CO_2 ..... 0 to 2000 Parts per Million (ppm)
- Relative Humidity ..... 0 to 100%
- Temperature (Setpoint & Operating) .....55° to 95°F (13° to 35°C)

Accuracy
- CO_2 ..... ± (50 ppm + 2% of MV)
- Humidity ..... ±2% between 10 to 90%
- Temperature (units without display)..... ±0.50°F (±0.28°C) between 56° to 80°F (15° to 27°C)
- Temperature (units with display)..... ±0.9°F (±0.5°C)

Dimensions ..... 4.5" x 2.75" x 1/18" (115 mm x 70 mm x 30 mm)
Color ..... White
Agency Approvals .....UL (916)

Product Ordering

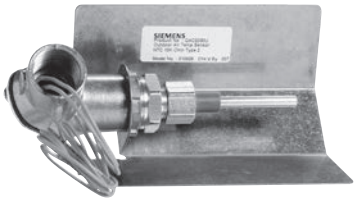
Temp Output	RH Output	CO2 Output	Description	Part No.
RJ-11	—	—	Sensing Only	**QAA2280.EWSC[1]**
RJ-11	—	—	Display	**QAA2280.DWSC[1]**
RJ-11	—	—	Display and Setpoint Adjustment	**QAA2280.FWSC[1]**
RJ-11	RJ-11	—	Sensing Only	**QFA3280.EWSC[1,2]**
RJ-11	RJ-11	—	Display	**QFA3280.DWSC[1,2]**
RJ-11	RJ-11	—	Display and Setpoint Adjustment	**QFA3280.FWSC[1,2]**
RJ-11	RJ-11	RJ-11	Display and Setpoint Adjustment	**QPA2284.FWSC[1,2,3]**

Ordering Notes:
1) For no-logo versions, change “S” in 10th position to “N”
2) For use with BACnet TECs; P1 TECs cannot process Humidity or CO_2 signals.
3) Requires AQM2200 24V Power Dongle

Accessories Ordering

Description	Part No.
Wall Gasket Kit – Package of 10	**563-102 GSKT KIT**
Room Sensor Wall Plate 3-3/16" x 4-15/16" (81 mm x 125 mm)	**AQA2200-2x4**
Room Sensor Wall Plate 3-3/16" x 4-15/16" (81 mm x 125 mm) – Pkg of 10	**AQA2200-INTL**
Passkey Tool for HMI Configuration	**544-643A**
25 Ft. (7.6 M) Communication Cable	**588-100A**
50 Ft. (15.2 M) Communication Cable	**588-100B**
100 Ft. (30.5 M) Communication Cable	**588-100C**
24V Power Dongle for CO_2 units **(REQUIRED FOR QPA2282 and QPA2284)**	**AQM2200**
OLED Replacement Kit – Package of 5	**AQA2232**

Outdoor and Surface Mount Temperature Sensors – Various Outputs



Outdoor Temperature Sensor – Metal

Pipe Surface Temperature Sensor

Cable

Outdoor Temperature Sensor – Plastic

Description

Standard temperature Sensors monitor and transmit changes in temperature to the building control system. Specific devices within the range are compatible with most North American building automation systems. All sensors incorporate precision temperature sensing elements to accurately and reliably measure temperature.

Features

- Variety of output signals available
- Outdoor sensors are ruggedly constructed for use in all climates
- Responsive to temperature change
- Accurate and reliable indication of temperature
- Simple installation requires no special tools

Applications

Outdoor temperature sensors are used to monitor the temperature of outdoor air. This variable is often used in a variety of HVAC control strategies, including outdoor reset and building ventilation.

Pipe surface temperature sensors are often used in place of immersion type sensors, particularly in cases where sensor installation occurs after the system if filled.

Cable temperature sensors provide a quick and economical means of measuring temperature in a variety of locations, including ducts and other difficult to reach spaces.

Specifications

Output Signals

Active.....0 to 10 V or 4 to 20 mA
Passive..... Pt 1k Ω (375 alpha)
Pt 1k Ω (385 alpha)
Ni 1k Ω @32F
Ni 1k Ω @70F
NTC 100k Ω
NTC 10k Ω Type II
NTC 10k Ω Type III

Accuracy

NTC Thermistors, mid-range..... ±1.0°F (±0.5°C)
Pt RTD and Ni RTD, mid-range..... ±0.75°F (±0.4°C)

Product Ordering

Mounting Location	Output Signal	Measuring Range	Accuracy	Material	Part Number
Outdoor	0 to 10V	-58° to 122°F (-50° to 50°C)	±1.6°F (±0.89°C)	Plastic	**QAC3161**
	100k Ω	-40° to 150°F (-40° to 65°C)	±0.50°F (±0.28°C) @ 77°F (25°C)	Metal	**536-778**
	10k Ω Type II	-40° to 158°F (-40° to 70°C)	±0.81°F (±0.45°C) @ 77°F (25°C)	Plastic	**QAC2030**
	10k Ω Type II	-40° to 150°F (-40° to 65°C)	±0.4°F (±0.21°C) @ 77°F (25°C)	Metal	**QAC2030U**
	1k Ω Ni @ 32F	-40° to 150°F (-40° to 65°C)	±0.72°F (±0.4°C) @ 32°F (0°C)	Metal	**QAC2020U**
	1k Ω Ni @ 32F	-58° to 158°F (-50° to 70°C)	±0.36°F (±0.2°C) @ 32°F (0°C)	Plastic	**QAC22**
	1k Ω Pt (375a)	-40° to 150°F (-40° to 65°C)	±0.54°F (±0.3°C) @ 32°F (0°C)	Metal	**544-578**
	1k Ω Pt (385a)	-40° to 158°F (-40° to 70°C)	±0.54°F (±0.3°C) @ 32°F (0°C)	Plastic	**QAC2012**
	1k Ω Pt (385a)	-40° to 150°F (-40° to 65°C)	±0.54°F (±0.3°C) @ 32°F (0°C)	Metal	**QAC2012U**
	4 to 20 mA	-58° to 122°F (-50° to 50°C)	±0.54°F (±0.3°C) @ 32°F (0°C)	Metal	**536-768**
	4 to 20 mA	-58° to 122°F (-50° to 50°C)	±1.6°F (±0.89°C)	Plastic	**QAC3171**

Mounting Location	Output Signal	Measuring Range	Accuracy	Part Number
Cable	10k Ω Type II	-13° to 203°F (-25° to 95°C)	±0.81°F (±0.45°C) @ 77°F (25°C)	**QAP1030.200**
	Ni 1k Ohm @ 32F		±0.72°F (±0.4°C) @ 32°F (0°C)	**QAP22**
	Pt 1k Ohm (385a)		±1.35°F (±0.75°C) @ 32° to175°F (0° to 80°C)	**QAP2012.150**
	3k Ohm Thermistor	32° to 104°F (0° to 40°C)	±0.54°F (±0.3°C) @ 77°F (25°C)	**QAH11.1***
	100k Ω	-40° to 240°F (-40° to 121°C)	±0.50°F (± 0.28°C) @ 77°F (25°C)	**540-258**

*For use with RDG Series Room Thermostats

Mounting Location	Output Signal	Measuring Range	Accuracy	Material	Part Number
Surface	10k Ω Type II	-11° to 257°F (-30° to 125°C)	±0.81°F (±0.45°C) @ 77°F (25°C)	Plastic	**QAD2030**
	10k Ω Type II	-40° to 240°F (-40° to 121°C)	±0.4°F (±0.21°C) @ 77°F (25°C)	Metal	**QAD2030U**
	1k Ω Ni @ 32F	-40° to 240°F (-40° to 121°C)	±0.72°F (±0.4°C) @ 32°F (0°C)	Metal	**QAD2020U**
	1k Ω Ni @ 32F	-40° to 240°F (-40° to 121°C)	±0.72°F (±0.4°C) @ 32°F (0°C)	Plastic	**QAD22**
	1k Ω Pt (375a)	-40° to 240°F (-40° to 121°C)	±0.54°F (±0.3°C) @ 32°F (0°C)	Metal	**544-089**
	1k Ω Pt (385a)	-11° to 266°F (-30° to 130°C)	±0.54°F (±0.3°C) @ 32°F (0°C)	Plastic	**QAD2012**
	1k Ω Pt (385a)	-40° to 240°F (-40° to 121°C)	±0.54°F (±0.3°C) @ 32°F (0°C)	Metal	**QAD2012U**
	4 to 20 mA	30° to 250°F (-1° to 121°C)	±0.54°F (±0.3°C) @ 32°F (0°C)	Metal	**536-780**

*Does not include electrical box

Cable-Style Sensor Accessories

Description	Part No.
Fixed Mounting Bracket (QAP sensors only, must order multiples of 10)	**ARG22.1**
Adjustable Mounting Bracket (QAP sensors only, must order multiples of 5)	**BPZ:ARG22.2**

Relative Humidity Sensors for Critical Environments and Outdoor Use

AQY2010
Remote Sensing Cable
Shown with QFA3100

QFA3100 Series
Outdoor Air Relative Humidity and
Relative Humidity/Temperature Sensor

AQF3100
Sunshield for Sensor.
Sold Separately

Description

The QFA Series Outdoor Air Relative Humidity and Relative Humidity/Temperature Sensors monitor and transmit changes in humidity and temperature to the building control systems. Standard models available are 2% and 2% certified, for both humidity only and combination humidity with temperature sensing. Sensors are offered with either 4 to 20 mA or 0 to 10 Volt output signals.

Features

- 4-20mA, 0-10Vdc, or Modbus RTU output
- High degree of accuracy
- “D” suffix models include LCD Display*

** Units with display are not intended for outdoor use.*

Applications

The QFA Series Relative Humidity and Relative Humidity/Temperature Sensors are especially suited for applications where precise, stable humidity sensing is required.

For outdoor applications, an AQF3100 sunshield is required (sold separately).

Certified sensors include a calibration certificate meeting United States FDA requirements for pharmaceutical facilities.

Siemens offers a 5-year warranty on sensors.*

* Not applicable to PL-link devices, IAQ multi-sensor or Series 2200/3200 units with display.

Specifications

General

Installation..... 18 AWG cable length shared in conduit with other sensor wiring 750 ft. (229 m) max

Connections ..... Screw Terminals

Voltage Requirement..... 13.5 to 35 Vdc and 24 Vac (for sensors with 0-10 Vdc outputs)

Material Type..... Polycarbonate plastic

CE and UL listed.....UL 873 standard for Temperature Indicating and Regulating Equipment

Humidity Element

Operating Range..... 0 to 100% RH

Measurement Range ..... 0 to 95% RH

Accuracy at Room Temperature (73°F, 20°C)..... ±2% RH, 0-95% RH

Operating Temperature ..... -31° to 140°F (-35° to 60°C)

Temperature Effect.....Less than 0.1% per degree C

Sensing Element..... Capacitive humidity sensing element

Output Signal

RH only units.. 4 to 20 mA or 0 to 10 Vdc, 0 -100% Linear, Proportional

RH & T units ... 4 to 20 mA or 0 to 10 Vdc, 0 -100% Linear, Proportional

Polarity Protection.....Yes

Temperature Element (for Combination RH/T Units Only)

Application	Temperature
Operating Temperature Jumper Selectable	32° to 122°F (0° to 50°C) or -31° to 95°F (-35° to 35°C) 32° to 122°F (0° to 50°C) or -31° to 140°F (-35° to 60°C)
Time Constant at 0° to 50°C and 10 to 80% RH	Approx. 20 seconds in moving air
Accuracy	at 59° to 95°F (15° to 35°C): ±0.8 K
	at 31° to 122°F (-35° to 50°C): ±1 K
	at 31° to 140°F (-35° to 60°C): ±1 K
Output Signal	4 to 20 mA or 0 to 10 Vdc, 0 -100% linear, proportional, (terminal U2)
Calibration Adjustments	None

Product Ordering

Application	RH	Description	Part No.
Room/Outdoor Air Humidity	2%	0 to 10 Vdc	**QFA3100**
Room/Outdoor Air Humidity	2%	4 to 20 mA	**QFA3101**
Room/Outdoor Air Humidity & Temperature	2%	0 to 10 Vdc / Temp 0 to 10 Vdc	**QFA3160**
Room Air Humidity & Temperature	2%	0 to 10 Vdc / Temp 0 to 10 Vdc with Display	**QFA3160D**
Room/Outdoor Air Humidity & Temperature	2%	4 to 20 mA / Temp 4 to 20 mA	**QFA3171**
Room Air Humidity & Temperature	2%	4 to 20 mA / Temp 4 to 20 mA with Display	**QFA3171D**
Room Air Humidity & Temperature	2%	Modbus RTU QFA3150/MO	**S55720-S535**
Room Air Humidity & Temperature	2%	0-10Vdc, Temp 0-10Vdc (Certified) with Display	**QFA4160D**
Room/Outdoor Air Humidity & Temperature	2%	4 to 20 mA / Temp 4 to 20 mA (Certified)	**QFA4171**
Room Air Humidity & Temperature	2%	4 to 20 mA / Temp 4 to 20 mA (Certified) with Display	**QFA4171D**
Room Outdoor Air Humidity & Temperature	2%	0 to 10 Vdc, Temp 0 to 10 Vdc (Certified)	**QFA4160**
Room Air Humidity & Temperature	2%	0-10Vdc, Temp 0-10Vdc (Certified) with Display	**QFA4160D**

Accessories Ordering

Description	Part No.
Weather Shield (required for outdoor use)	**AQF3100**
Remote Sensing Cable, 10 Foot	**AQY2010**
Remote Sensing Cable, 30 Foot	**AQY2030**
Replacement Sensing Element	**AQF3150**
Replacement Sensing Element – Certified Units	**AQF4150**
Wall Plate for 2" x 4" Box	**ARG70**
Replacement Filter	**AQF3101**

Duct Relative Humidity / Temperature Sensors

QFM Series Duct Relative Humidity Sensor

QFM Series Duct Relative Humidity and Relative Humidity/Temperature Sensor

Description

The QFM Series Duct Relative Humidity and Relative Humidity/Temperature Sensors monitor and transmit changes in humidity and temperature to the building control systems. Several models are available for humidity only or for humidity and temperature sensing. The humidity only units are available in either 4 to 20 mA or 0 to 10 Volt signal versions. Combination humidity and temperature units are also available in either dual current or voltage versions, transmitting proportional signals back to the controller. Nickel 1000 Ohm (Siemens type) temperature outputs on combination versions are also offered.

Features

- 4-20mA, 0-10Vdc, or Modbus RTU output
- High degree of accuracy
- Removable, replaceable sensing tip (QFM31xx and QFM41xx)
- Versions with LCD display also available

Applications

The QFM Series Duct Relative Humidity and Relative Humidity/Temperature Sensors are especially suited for applications where precise, stable humidity sensing is required.

Certified sensors include a calibration certificate meeting United States FDA requirements for pharmaceutical facilities.

Siemens offers a 5-year warranty on sensors.*

* Not applicable to PL-link devices, IAQ multi-sensor or Series 2200/3200 units with display.

Specifications

General

Installation..... 18 AWG cable length shared in conduit with other sensor wiring 750 ft. (229 m) max

Connections ..... Screw Terminals

Dimensions

Probe..... 0.6" O.D. x 7.2" L (15 mm O.D. x 183 mm L)

Housing ..3.1" L x 2.3" W x 1.5" O.D. (80 mm L x 60 mm W x 40 mm D)

Voltage Requirement..... 13.5 to 35 Vdc and 24 Vac (for sensors with 0-10 Vdc outputs)

Input Impedance (4 to 20 mA versions only) ..... Less than 500 Ohms

Housing Material Type .....Polycarbonate plastic, UL 94-5VB rated, suitable for plenum installations

Housing Protection Class..... IP 65 (QFM3xxx, QFM4xxx types), IP54 (QFM2xxx types), NEMA 1 (all types)

Filter Material and Specification ..... Teflon, 10 micron filter

Agency Certification..... UL listed to UL 873 for Temperature Indicating and Regulating Equipment

CE Conformance ..... EC Directive on electromagnetic compatibility: 89/336/EEC

Humidity Element

Operating Range..... 0 to 100% RH

Measurement Range ..... 0 to 95% RH

Accuracy at Room Temperature ≈ 73°F (20°C):

QFM21xx:.....±3% RH (30-70% RH); ±5% Other

QFM31xx/QFM41xx ..... ±2% full scale

Operating Temperature Jumper Selectable.....32° to 122°F (0° to 50°C) or -31° to 95°F (-35° to 35°C) or -31° to 140°F (-35° to 60°C)

Temperature Effect.....Less than 0.1% per degree C

Sensing Element..... Capacitive humidity sensing element

Output Signal

RH only units.....4 to 20 mA and 0 to 10 Vdc, 0-100% Linear, Proportional

RH/T units .....0 to 10 Vdc, 0-100% Linear, Proportional

Polarity Protection.....Yes

Temperature Element Specifications (for Combination RH/T Units Only)

		QFM2120	QFM2160 QFM2171	QFM31xx QFM41xx
Operating Temperature		-31° to 140°F (-35° to 60°C)	-31° to 122°F (-35° to 50°C)	-31° to 158°F (-35° to 70°C)
Time Constant		Approximately 20 seconds in moving air		
Accuracy	±0.6K	—	—	59° to 95°F (15° to 35°C)
	±0.8K	59° to 95ºF (15° to 35ºC)	59° to 95ºF (15° to 35ºC)	31° to 158ºF (-35° to 70ºC)
	±1.0K	31° to 140°F (-35° to 60°C)	-31° to 122°F (-35° to 50°C)	—
Output Signal		—	0 to 10 Vdc (QFMx160)	
		Nickel 1K @ 32°F Ohm RTD (Siemens)	4 to 20 mA (QFMx171)	
Calibration		None		

Product Ordering

Application	Description	Part No.
Duct Humidity 5%	0 to 10 Vdc	**QFM2100**
Duct Humidity 5%	4 to 20 mA	**QFM2101**
Duct Humidity 5% & Temperature	0 to 10 Vdc / Temp 1K Ohm Nickel RTD (L&S Type)	**QFM2120**
Duct Humidity 5% & Temperature	0 to 10 Vdc / Temp 0 to 10 Vdc	**QFM2160U**
Duct Humidity 5% & Temperature	4 to 20 mA / Temp 4 to 20 mA	**QFM2171**
Duct Humidity 5% & Temperature	Modbus RTU QFM2150/MO	**S55720-S467**
Duct Humidity 2%	0 to 10 Vdc	**QFM3100**
Duct Humidity 2%	4 to 20 mA	**QFM3101**
Duct Humidity 2% & Temperature	0 to 10 Vdc, Temp 0 to 10 Vdc	**QFM3160**
Duct Humidity 2% & Temperature	0 to 10 Vdc, Temp 0 to 10 Vdc, w/Display	**QFM3160D**
Duct Humidity 2% & Temperature	4 to 20 mA / Temp 4 to 20 mA	**QFM3171**
Duct Humidity 2% & Temperature	4 to 20 mA / Temp 4 to 20 mA, w/Display	**QFM3171D**
Duct Humidity 2% & Temperature	Modbus RTU QFM3150/MO	**S55720-S468**
Duct Humidity 2% & Temperature	0 to 10 Vdc, Temp 0 to 10 Vdc (Certified)	**QFM4160**
Duct Humidity 2% & Temperature	4 to 20 mA / Temp 4 to 20 mA (Certified)	**QFM4171**

Accessories Ordering

Description	Part No.
Replacement Sensing Element (QFM31xx only)	**AQF3150**
Replacement Sensing Element – Certified Units	**AQF4150**
Replacement Filter (QFM31xx only)	**AQF3101**

Electronic Duct Hygrostats

QFM81.21 Electronic Duct Hygrostat with Internal Setpoint

QFM81.2 Electronic Duct Hygrostat with External Setpoint

Description

On/off hygrostat with microswitch, and temperature-compensated humidity sensor for temperature-independent humidity measurements.

Features

- Stabilized sensing strip
  (good linearity, very stable even at high humidity, insensitive to dust and contaminated air)
- Can be mounted in ventilation ducts or rooms

Applications

For controlling humidification and dehumidification equipment.

Specifications

Setpoint Range ..... 30 to 90% rh
Control Mode ..... On/off
Type of Switch ..... Potential-free Microswitch (SPDT)
Contact Rating
Maximum ..... 5 (3) A, 24 Vac/Vdc
Minimum ..... 100 mA, 24 Vac/Vdc
Temperature Influence ..... Compensated
Long-term Stability ..... Approximately -1.5% rh/a
Balancing ..... At 55% rh, 73°F (23°C)
Time Constant (v = 0.2 m/s) ..... Approx. 3 minutes
Permissible Air Velocity ..... 10 m/s
Permissible Ambient Temperature
Operation ..... 32° to 158°F (0° to 70°C)
Storage/transport ..... -22° to 158°F (-30 to 70°C)
Degree of Housing Protection
FM81.2 ..... IP 30 to EN 60 529
QFM81.21 ..... IP 55 to EN 60 529
Safety Class ..... II to EN 60 730
Electrical Connection
Screw Terminals ..... 20 AWG Minimum
2 x 16 AWG Maximum
Materials and Colors
Sensing Element ..... Polymer
Casing with Stem ..... PPS, Fortron 1140L6, Fiberglass Reinforced
Cover ..... PC Lexan 940
Transparent Cover (QFM81.21) ..... PC Makrolon 2014R
Agency Approvals ..... UL listed for UL873
cUL Canadian Standard C22.2 No. 24-93
Weight ..... Approx. 12 ounces (0.34 kg)

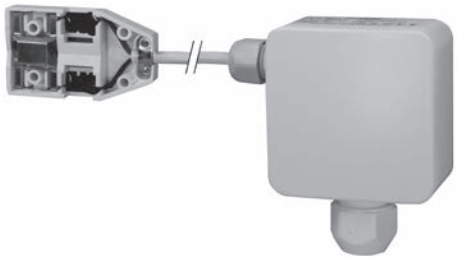
Product Ordering

Description	Control Range	Type of Control	Part No.
Duct	15 to 95% RH	Humidity Switch with External Setpoint	**QFM81.2**
Duct	15 to 95% RH	Humidity Switch with Internal Setpoint	**QFM81.21**

Note:
Includes a mounting flange (for duct or wall mounting) and a sealing ring (for duct mounting).

Condensation Sensors

QXA2100
Condensation Sensor



QXA2101 Condensation Sensor
with Remote Sensing Element

Description

The QXA Series Condensation Sensors are used to avoid damage due to condensation on chilled ceilings and in HVAC installations.

On humidity rise, the SPDT contacts switch at approximately 95% RH (+/-4% RH). All feature a fixed switching differential of approximately 5% RH.

All operate on AC/DC 24V and have a NO/NC changeover dry contact relay output.

- 1 Amp @ 24 Vac
- 0.5 Amp @ 24 Vdc

Features

- Come complete with a strap-on band for pipe diameters from 0.5 to 4 inches (12.7 to 102 mm), and thermal conductive paste

Specifications

Power Supply G (G+), G0 (G-)
- Operating Voltage ..... AC/DC 24V + 20%
- Frequency ..... 50/60 Hz
- Power consumption ..... Maximum 1 VA

Switching Point on Humidity Increase ..... 95% ±4% rh

Switching Differential (Fixed) ..... Approximately 5% rh

Response Time in Static Air
- From 80 to 99% rh ..... Maximum 3 minutes
- From 99 to 80% rh ..... Maximum 3 minutes

Condensation ..... Maximum 30 minutes

Output Q11, Q12, Q14
- Relay Output ..... NO/NC Changeover Dry Contact
- Current Range at AC/DC 24V ..... 0.02 to 1 (1) A
- Starting Current at AC/DC 24V ..... < /- 10 A for < /- 20 ms
- Switching Capacity ..... Minimum AC/DC 1V, 1 mA
  Maximum A/DC,48V, 0.5 A

Degree of Protection of Housing ..... IP 40 to EN 60529

Safety Class ..... III to EN 60 730

Connections
- Mechanical ..... Strap-on Band for Pipe Diameter
  0.39 to 3.94 inches (10 to 100 mm)
- Electrical
  - Screw Terminals for ..... (2) 16 AWG or (1) 14 AWG
    (max 2 x 1.5 mm2 or 1 x 2.5 mm2)

Environmental Conditions
- Operation to ..... IEC 60721-3-3
  - Climatic Conditions ..... Class 3K5
  - Temperature (Housing & Electronics) ..... -23° to 122°F (-5° to 50°C)
  - Humidity ..... 5 to 95% rh (Non-condensing)
  - Mechanical Conditions ..... Class 3M2
- Transport to ..... IEC 60721-3-2
  - Climatic Conditions ..... Class 2K2
  - Temperature (Housing & Electronics) ... -13° to 150°F (-25° to 60°C)
  - Humidity ..... <95% rh
  - Mechanical Conditions ..... Class 2M2

Housing Materials and Colors ..... Thermoplastics, pure-white

Product Safety
- Automatic Electrical Controls for
  Domestic Use and Similar Applications ..... EN 60730-1

Electromagnetic Compatibility
- Immunity ..... EN 61000-6-2
- Emissions ..... EN 61000 6-3

CE Conformity
- Electromagnetic Compatibility 2004/108/EC
- Low-voltage Directive 2006/95/EC

Weight ..... 4.4 ounces (0.126 kg) w/Packaging

Product Ordering

Description	Part No.
Condensation Sensor	**QXA2100**
Condensation Sensor with Remote Sensing Element	**QXA2101**

Wireless Sensors

Wireless Sensor
Temp. or Temp. & RH

Description

The wireless sensor solution enables smooth connectivity and flexible integration in commercial buildings. Based on KNX IoT via Thread communication, your building's information is quickly collected without wiring and can be integrated into your automation, building management systems (BMS), cloud or third-party system.

Wireless room sensors simplify installation by minimizing wiring efforts and offering versatile placement options for optimal positioning. Choose from either Temperature or Temperature & Relative Humidity (RH) variants. Sensors are battery operated with 2x AAA batteries. A BACnet IP gateway and optional thread mesh extender are available.

Features

- Super slim design (14mm / 18 mm)
- Easy mounting (wall, conduit box, tape mounting)
- High measurement accuracy
- Configurable transmission rate and changes of values (COV)
- Protocol: KNX IoT Thread
- Up to 10 years battery lifetime

Applications

- Wireless

Specifications

Measuring Range ..... 32…122°F (0…50°C)

Accuracy
Temperature ..... ±0.54F @ 70-77F (±0.3C @ 21-25C)
..... ±1.3F @ 59-70F (±0.7C @ 15-21C)
..... ±1.8F @ 32-59F (±1.0C @ 0-15C)
Humidity ..... ±2% r.h. @ 30-70% r.h.
..... ±3% r.h. @ 0-30% r.h. and 70-100% r.h.

Dimensions ..... 88 mm x 88 mm x 14 mm
Color ..... White
Agency Approvals ..... UL listed to UL 873
..... CE conformity to A5W00277721A

Product Ordering

Description	Product No.	Orderable Part No. (SSN)
Temperature only	QAA2890/WI	**S55720-S550**
Temperature and Relative Humidity	QFA2890/WI	**S55720-S551**

Accessories Ordering

Type of Units	Product No.	Orderable Part No. (SSN)
KNX IoT to BACnet gateway	OCT200.KNBA	**S55812-Y102**
Thread Mesh Extender	OCT100-R	**S55812-Y101**

Room Air Quality Sensors

BACnet IP/MSTP
IAQ multi-sensor

LoRaWAN
IAQ multi-sensor

Description

The QNA Series IAQ multi-sensors measure everything you need in order to ensure the highest comfort and safety for occupant well-being and productivity. Accurately measure temperature, humidity, PM2.5, CO_2, TVOCs, noise and light with one device. Complete with BACnet IP/MSTP and LoRaWAN connectivity for simple connection and installation.

Features

IAQ multi-sensors acquire the following values in ventilation and air conditioning plants:

- Temperature
- Relative humidity
- CO_2 concentrations
- VOC concentrations
- PM2.5 concentrations
- PM10 estimated value
- Sound pressure
- Illuminance

Applications

The QNA Series IAQ multi-sensors offer comprehensive indoor air quality measurement and insight into room conditions. They are easy to install and are suitable for any space.

Siemens offers a 5-year warranty on sensors.*

* Not applicable to PL-link devices, IAQ multi-sensor or Series 2200/3200 units with display.

Specifications

General

Installation ..... Drywall mounting, conduit box mounting and surface mounting
Connections ..... Screw terminals (BACnet MSTP), Ethernet jack (BACnet IP)
Dimensions ..... 3.85" H x 3.85" W x 1.35" D (98 mm x 98 mm x 34 mm)
Voltage Requirement ..... USB type C / AC/DC 12...24 V
Housing Protection Class ..... IP30 according to EN60529

Carbon Dioxide (CO_2)

Type ..... nondispersive infrared sensor
Range ..... 400 - 5000 ppm
Accuracy ..... ±75 ppm or ±10% of reading (whichever is greater)
Resolution ..... 1 ppm dedicated sensor, not estimated

Temperature (°C/°F)

Type ..... complementary metal-oxide semiconductor (CMOS) sensor
Range ..... -40 to 125°C (-40 to 257°F)
Accuracy ..... ±0.2°C
Resolution ..... 0.015°C selectable °For °C display

Relative Humidity (%RH)

Type ..... complementary metal-oxide- semiconductor (CMOS) sensor
Range ..... 0 - 100 %RH
Accuracy ..... ±2 %RH
Resolution ..... 0.01 %RH

Backup Battery

Type ..... rechargeable Lithing-Ion battery
Capacity and Voltage ..... 2250mAh@3.7V
Runtime ..... 5.5 - 9 hours(depending on settings)

Power Consumption

Operating ..... 1.76W (max: 2.6W, 6.5W w/battery charging
Total ..... less than 1.3kWh per month (operating for 30 days)

Particulate Matter <2.5 microns (PM2.5) (µg/m3)

Type ..... optical laser, light scattering sensor
Range ..... 0 - 1,000 µg/m'
Accuracy ..... ±15 µg/m' (0 - 100 µg/m'), ±15% of reading (100 - 1,000 µg/m')
Resolution ..... 1 µg/m' calibrated to cigarette smoke

Particulate Matter <10 microns (PM10) (µg/m3)

Type ..... optical laser, light scattering sensor
Range ..... 0 - 1,000 µg/m'
Accuracy ..... ±15 µg/m' (0 - 100 µg/m'), ±15% of reading (100 - 1,000 µg/m')
Resolution ..... 1 µg/m' estimated from PM2.5

Illuminance (lux)

Type ..... photodiode, integrated ambient and infrared light to digital converter
Range ..... 0.96 - 64,000 lux
Accuracy ..... ±10%
Resolution ..... 0.1 lux

Sound Pressure Level (dBA)

Type ..... analog MEMS microphone
Range ..... 48 - 90 dBA
Accuracy ..... ±3 dBA Leq
Resolution ..... 0.1 dBA
Sensitivity ..... -26 dBFS
SNR ..... Typical 61 dBA (20Hz - 20kHz)
Sample Rate ..... 46.875 KHz
Recordings ..... 1 x 44ms

Certification

Environmental ..... ROHS, REACH, WEEE
Electronic Safety ..... FCC,CE,KCC, SRRC, Telec
Outlet Adapter ..... UL

Building Certification

RESET Air Accredited Indoor Monitor & Data Provider
IWBI WELL & WELLv2
LEED 4.1 (ARC)
Living Building Challenge (LBC)
Fitwel

Product Ordering

Description	Model Number	Part No.
BACnet IP	**QNA2700D.BA1**	**S55720-S572**
BACnet MSTP	**QNA2700D.BA2**	**S55720-S573**
LoRaWAN	**QNA2820D.US**	**S55720-S575**

Room Air Quality Sensors

QPA2060D Q Series
Room Carbon Dioxide & Temperature Sensor

Description

The QPA Series Room Carbon Dioxide Sensors monitor and transmit changes in CO_2 to the building control systems. No calibration of the CO_2 sensor is necessary – these microprocessor-based units consist of a non-dispersive infrared CO_2 sensor that experiences less than 1% drift per year for the first two years of operation and negligible drift thereafter.

Features

- LCD display option
- Various models:
  Particulate Matter (PM2.5)
  CO_2
  CO_2/VOC
  CO_2/Temp
  CO_2/Temp/RH
  VOC
- Built-in test function for troubleshooting
- Jumper selectable °C/°F units for temp models w/display
- Selectable output (0-01V / 4-20mA)
- Modbus RTU output (optional)

Applications

Combination CO_2 and Volatile Organic Compound (VOC) Sensors (QPA2002 and QPA2002D) measure both CO_2 and VOCs with a single output signal that automatically switches to reflect the higher of the two valves. These sensors seamlessly integrate into any Demand Control Ventilation strategy and help address odorless (CO_2) and odorous (VOCs) air quality issues.

VOC sensors measure volatile organic compounds and provide an excellent means of measuring air quality from an estimated comfort perspective. Output does not indicate a specific ppm count of VOCs.

QSA Series fine dust sensors are designed to measure and transmit indoor concentrations of particulate matter within the PM2.5 and PM10 classifications.

Siemens offers a 5-year warranty on sensors.*

* Not applicable to PL-link devices, IAQ multi-sensor or Series 2200/3200 units with display.

Specifications

General

Installation ..... 18 AWG cable length shared in conduit with other sensor wiring 750 ft. (229 m) max

Connections ..... Screw terminals

Dimensions ..... 3.94" H x 3.54" W x 1.65" D (100 mm x 90 mm x 42 mm)

Voltage Requirement ..... 13.5 to 35 Vdc

Housing Protection Class ..... NEMA 1 (all types)

CO_2 Element

Operating Range ..... 0 to 2000 ppm

Accuracy at Room Temperature ≈ 73°F (20°C) .... +2% Measured Value

Operating Temperature ..... -23° to 113°F (-5° to 45°C)

Temperature Effect ..... Less than 0.1% per degree C

Sensing Element ..... NDIR CO_2 sensing module

Output Signal ..... 0 to 10 Vdc, 0-100% Linear, Proportional

Polarity Protection ..... Yes

Permissible Air Velocity in the Room ..... <26.2 ft./s

Temperature Element (for Combination CO_2/T unit only)

Operating Temperature ..... 23° to 113°F (-5° to 45°C)

Time Constant ..... <1 minute

Accuracy ..... ±0.8K

Output Signal ..... Selectable (0-10V / 4-20mA)

Calibration ..... None Required

Humidity Element

Measuring Range ..... 0 to 100% RH

Accuracy ..... ±5% RH

PM2.5

Measuring Range ..... Selectable (0-50 micrograms/m^3 to 0-500 micrograms/m^3)

Product Ordering

Application	Description	Part No.
CO_2	Selectable (0-10V / 4-20mA)	**QPA2000**
CO_2 and VOC*	Selectable (0-10V / 4-20mA)	**QPA2002**
CO_2 and VOC*	Selectable (0-10V / 4-20mA), with Display	**QPA2002D**
CO_2 and Temp	Selectable (0-10V / 4-20mA)	**QPA2060**
CO_2 and Temp	Selectable (0-10V / 4-20mA), with Display	**QPA2060D**
CO_2, Temp and RH	Selectable (0-10V / 4-20mA)	**QPA2062**
CO_2, Temp and RH	Selectable (0-10V / 4-20mA), with Display	**QPA2062D**
CO_2, Temp and RH	Modbus RTU QPA2052/MO	**S55720-S510**
VOC*	Selectable Output (0-10V / 4-20mA) QPA1000	**S55720-S119**
PM2.5	0-10V / Modbus RTU QSA2700	**S55720-S457**
PM2.5	0-10V / Modbus RTU, with display QSA2700D	**S55720-S458**

* VOC sensors are for maintaining comfort and are not for use as safety devices.

Accessories Ordering

Description	Part No.
Wall Plate for 2" x 4" Box	**ARG70**

Duct Air Quality Sensors

QPM 2100 CO_2 only Sensor

Description

The QPM Series Duct CO_2 Sensors monitor and transmit changes in CO_2 to the building control systems. Several models are available for CO_2 only, CO_2/Temp, CO_2/Temp/RH and CO_2/VOC. All variants for CO_2 and combination versions with Temperature or Volatile Organic Compounds (VOCs) deliver 0 to 10 Volt to 5 Volt (field selectable) proportional signals to the controller.

No calibration of the CO_2 sensor is necessary – these microprocessor-based units consist of an NDIR sensor that experiences less than 1% drift per year for the first two years of operation and negligible drift thereafter.

Features

- LCD display option
- Various models:
  Particulate Matter (PM2.5)
  CO_2
  CO_2/VOC
  CO_2/Temp
  CO_2/Temp/RH
  VOC
- Jumper selectable °C/°F units for temp models w/display
- Selectable output (0-01V / 4-20mA)
- Modbus RTU (optional)

Applications

These units are especially suited for applications where precise, stable CO_2 sensing is required.

Combination CO_2 and Volatile Organic Compound (VOC) Sensors (QPM2102 and QPM2102D) measure both CO_2 and VOCs with a single output signal that automatically switches to reflect the higher of the two valves. These sensors seamlessly integrate into any Demand Control Ventilation strategy and help address odorless (CO_2) and odorous (VOCs) air quality issues.

VOC sensors measure volatile organic compounds and provide an excellent means of measuring air quality from an estimated comfort perspective. Output does not indicate a specific ppm count of VOCs.

QSM Series fine dust sensors are designed to measure and transmit indoor concentrations of particulate matter within the PM2.5 and PM10 classifications.

Siemens offers a 5-year warranty on sensors.*

* Not applicable to PL-link devices, IAQ multi-sensor or Series 2200/3200 units with display.

Specifications

General

Installation..... 18 AWG cable length shared in conduit with other sensor wiring 750 ft. (229 m) max.

Connections ..... Screw terminals

Voltage Requirement..... 13.5 to 35 Vdc
Q Series sensors with 0-10 Vdc outputs can also operate on 24 Vac

Input Impedance (4 to 20 mA versions only) ..... Less than 500 Ohms

CO_2 Element

Operating Range.....0 to 2000 ppm

Accuracy at Room Temperature ≈ 73°F (20°C) .....+2% mean value

Operating Temperature..... -31° to 113°F (-35° to 45°C)

Temperature Effect.....Less than 0.1% per degree C

Sensing Element.....NDIR CO_2 sensing module

Output Signal..... 0 to 10 Vdc, 0-100% linear, proportional

Polarity Protection.....Yes

Permissible Air Velocity in the Duct .....<26.2 ft./s

Temperature Element (for Combination CO_2/T unit only)

Operating Temperature ..... -31° to 113°F (-35° to 45°C)

Time Constant .....<1 min

Accuracy ..... ±1K

Output Signal..... Selectable (0-10V / 4-20mA)

Calibration ..... None Required

PM2.5

Measuring Range..... Selectable (0-50 micrograms/m^3 to 0-500 micrograms/m^3)

Product Ordering

Application	Description	Part No.
Duct Sensor, CO_2	Selectable (0-10V / 4-20mA)	**QPM2100**
Duct Sensor, CO_2 and VOC*	Selectable (0-10V / 4-20mA)	**QPM2102**
Duct Sensor, CO_2 and VOC*	Modbus RTU QPM2102/MO	**S55720-S469**
Duct Sensor, CO_2 and VOC*	Selectable (0-10V / 4-20mA) with Display	**QPM2102D**
Duct Sensor, CO_2 and Temp.	Modbus RTU QPM2150/MO	**S55720-S470**
Duct Sensor, CO_2 and Temp.	Selectable (0-10V / 4-20mA)	**QPM2160**
Duct Sensor, CO_2 and Temp.	Selectable (0-10V / 4-20mA) with Display	**QPM2160D**
Duct Sensor, CO_2, RH and Temp	Selectable (0-10V / 4-20mA)	**QPM2162**
Duct Sensor, CO_2, RH and Temp.	Selectable (0-10V / 4-20mA) with Display	**QPM2162D**
Duct Sensor, CO_2, RH and Temp.	Modbus RTU QPM2152/MO	**S55720-S471**
PM2.5	0-10V QSM2100	**S55720-S491**
PM2.5, Temp, RH	0-10V QSM2162	**S55720-S492**

* VOC sensors are for maintaining comfort and are not for use as safety devices.

Wireless Sensors

Wireless Sensor
Temp., RH & CO_2

Description

The wireless sensor solution enables smooth connectivity and flexible integration in commercial buildings. Based on KNX IoT via Thread communication, your building's information is quickly collected without wiring and can be integrated into your automation, building management systems (BMS), cloud or third-party system.

Wireless room sensors simplify installation by minimizing wiring efforts and offering versatile placement options for optimal positioning. This sensor measures Temperature, Relative Humidity (RH), and CO_2. It is battery operated with 2x AA batteries. A BACnet IP gateway and optional thread mesh extender are also available.

Features

- Super slim design (14mm / 18 mm)
- Easy mounting (wall, conduit box, tape mounting)
- High measurement accuracy
- Configurable transmission rate and changes of values (COV)
- Protocol: KNX IoT Thread
- Up to 10 years battery lifetime

Applications

- Wireless

Siemens offers a 5-year warranty on sensors.*

* Not applicable to PL-link devices, IAQ multi-sensor or Series 2200/3200 units with display.

Specifications

Measuring Range..... 32…122°F (0…50°C)

Accuracy
Temperature.....±0.54F @ 70-77F (±0.3C @ 21-25C)
.....±1.3F @ 59-70F (±0.7C @ 15-21C)
.....±1.8F @ 32-59F (±1.0C @ 0-15C)
Humidity..... ±2% r.h. @ 30-70% r.h.
.....±3% r.h. @ 0-30% r.h. and 70-100% r.h.
CO_2.....±2% m.v. / ±50ppm @ 0-2000 ppm

Dimensions.....88 mm x 88 mm x 14 mm
Color..... White
Agency Approvals..... UL listed to UL 873
..... CE conformity to A5W00277721A

Product Ordering

Description	Product No.	Orderable Part No. (SSN).
Temperature, Relative Humidity, and CO_2	QPA2892/WI	**S55720-S552**

Accessories Ordering

Type of Units	Product No.	Orderable Part No. (SSN).
KNX IoT to BACnet gateway	OCT200.KNBA	**S55812-Y102**
Thread Mesh Extender	OCT100-R	**S55812-Y101**

Air Differential Pressure Sensors / Switches

QBM3230 Series

QBM81 Series

Description

The Siemens QBM Series Air Differential Pressure Devices use a proven sensing technology to delivery accurate and repeatable data in applications that require monitoring of differential pressure.

Features

- Selectable output signal and measuring range (QBM3230)
- SPDT contact output (QBM81)
- Compact construction
- Integral mounting bracket and snap-on cover with a single screw for fast and easy installation
- Resettable zero point for different mounting positions (QBM3230)
- Low susceptibility to temperature
- No mechanical aging

Applications

QBM Series Differential Pressure Devices can be used in a wide range of HVAC and general building management applications where differential air pressure monitoring in required.

Typical applications for the QBM3230 include control of variable speed fans in VAV systems and monitoring of pressure differentials in clean room applications.

The QBM81 can be wired NO or NC and provide a digital output with adjustable differential pressure trip point. Common applications include monitoring of air filters and general indication of high/low differential pressure situations.

Note: QBM81 includes two pressure ports and 2 meters of tubing (metric).

Specifications

QBM3230 Series Sensors

Input Power ..... 8 to 33 Vdc
Accuracy ..... ±1% Full Scale
Permitted Media ..... Air and other non-corrosive gases
Process/Ambient Operating Temp ..... 32° to 160°F (0° to 71°C)
Ambient Humidity ..... Non-condensing
Enclosure ..... Polycarbonate
Diaphragm ..... Silicone
Measuring Element ..... Ceramic

QBM81 Series Switches (SPDT Relay Output)

Contact Rating ..... AC 250V, 5A max (3A inductive)*
Maximum Pressure ..... 20" WC
Ambient Operating Temp. ..... -22º to 185°F
Humidity (Max) ..... 90% rh, non-condensing
Permitted Media ..... Air and other non-corrosive gases
Mounting Orientation ..... Any
Housing/Cover ..... Polycarbonate
Diaphragm ..... Emission free silicone
Bracket ..... Galvanized Steel

*Consult local codes for voltages over 24V

Product Ordering

Pressure measuring ranges			Output Signal	Model Number	Part Number
Range 1	Range 2	Range 3			
-0.3” to +0.3”	-0.2” to +0.2”	-0.1” to +0.1”	0-10V / 4-20mA (selectable)	**QBM3230U03UD**	**S55720-S522**
0” to 0.3”	0” to 0.5”	0” to 1”		**QBM3230U1D**	**S55720-S523**
0” to 0.5”	0” to 1”	0” to 2”		**QBM3230U2D**	**S55720-S524**
0” to 1”	0” to 2”	0” to 3”		**QBM3230U3D**	**S55720-S525**
0” to 2”	0” to 3”	0” to 5”		**QBM3230U5D**	**S55720-S526**
0” to 3”	0” to 5”	0” to 10”		**QBM3230U10D**	**S55720-S527**
0” to 5”	0” to 10”	0” to 20		**QBM3230U20D**	**S55720-S528**
0.08” to 1.2”			SPDT	**QBM81-3**	**QBM81-3**
0.2” to 2”				**QBM81-5**	**QBM81-5**
0.4” to 4”				**QBM81-10**	**QBM81-10**
0” to 5”			Modbus RTU	**QBM3700-13/MO**	**S55720-S485**
0” to 10”				**QBM3700-25/MO**	**S55720-S486**
0” to 2”				**QBM3700-5/MO**	**S55720-S487**

Air Velocity Sensor

QVM62.1-HE Air Velocity Sensor

Description

This sensor is used to control the air velocity to a constant value, balance out pressure fluctuations (supply or exhaust air control), or to monitor the flow in air ducts. It is designed with a thin film sensing element and its unique, sleek housing guarantees product recognition. This unit is compatible with all Siemens systems and controllers.

Features

- Mounting flange allows the installer to vary the probe insertion length into the duct space for best control
- Mounting flange dampening gasket minimizes vibration
- Graduated probe ensures maximum flow accuracy
- Flow directional arrow provides for the most accurate reading
- Connection cable provides mounting flexibility
- Three jumper selectable flow measuring ranges accommodate any application or environment
- Field selectable output (4 to 20 mA or 0 to 10V)

Applications

This sensor is primarily used to set the basic volumetric flow rate for modulating fan control.

Specifications

Power Supply
- Operating Voltage ..... 24 Vac ± 20%
- Frequency ..... 50/60 Hz
- Power Consumption ..... ≤ 5 VA (maximum 200 mA)
- Output Impedance ..... <20 ohm

Measuring Data
- Measuring Ranges, Adjustable ..... 0 to 16 ft/s (0 to 5 m/s)
  0 to 33 ft/s (0 to 10 m/s)
  (factory setting)
  0 to 49 ft/s (0 to 15 m/s)
- Measuring Accuracy at 68°F (20°C), 45% rh, ... ± 0.7 ft/s
  1013 hPa ..... (0.2 m/s + 3% of measured value)
- Permissible Air Velocity ..... 66 ft/s (20 m/s)
- Direction Dependence ..... <3% of measured value at ≤ + 10°
- Time Constant t_{90} at 10 m/s ..... 4 seconds

Signal Output U1
- Voltage ..... 4 to 20 mA or 0 to 10 Vdc
- Current ..... ± 1 mA

Line Length

Permissible Length to Controller at:
- 20 AWG Copper Cable ..... 164 ft (50 m)
- 18 AWG Copper Cable ..... 492 ft (150 m)
- 16 AWG Copper Cable ..... 984 ft (300 m)
- Line Length to the Sensor Head ..... 3 ft (1 m) (prewired)

Connections
- Mechanical ..... Screw Connection
- Electric ..... Screw Terminal, Maximum 2 x 18 AWG

Degree of Protection

Degree of Protection Provided by Enclosures as per EN 60 529
- Transducer IP65/NEMA 4X
- Sensor head ..... IP 20
- Degree of protection as per EN 60 730 III

Climatic Conditions
- Temperature ..... 23° to 113°F (-5° to 45°C)
- Humidity (non-condensing) ..... <95% rh
- Mechanical Conditions ..... Class 3M2
- Chemical Conditions ..... Class 3C2

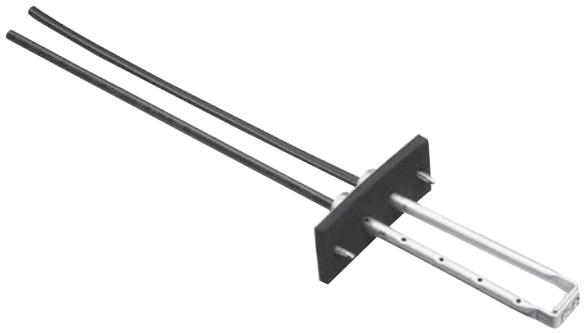
Storage (Transducer and Immersion Stem)
- Temperature ..... -22°F to 140°F (-30°C to 60°C)
- Humidity (Non-condensing) ..... <95% rh
- Mechanical Conditions ..... Class 1M2

Weight with Packaging ..... 12 oz (0.352 kg)

Product Ordering

Application	Description	Part No.
Air Velocity Sensor	0 to 3000 FPM	**QVM62.1**

Pitot Tube Sensor Kits



536 Pitot Tube Sensor Kit

Description

The Pitot Tube Sensor Kit is used with either static or differential air pressure sensing devices, to measure average static or differential pressure across a duct.

Features

- Thin steel construction
- Mounting flange is easily bent to conform to round or oval ducts

Applications

This kit is used in situations where a terminal box manufacturer-supplied sensor (flow pick-up) is not available, or where the existing flow pick-up has been damaged.

Specifications

Material
- Probe ..... 6061 aluminum
- Gasket ..... 1/4-in (6 mm) closed-cell neoprene
- Tubing ..... FR polyethylene
- Mounting Flange ..... 26 GA galvanized sheet steel

Mounting
- Screws ..... #8 self-tapping 1/4-in (6 mm) hex washer head
- Flange Hub ..... #10 pan head, slotted

Dimensions ..... 1.50" x 3.75" (38 mm x 95 mm)

Product Ordering

Duct Size	Maximum Probe Length	Part No.
6" (152 mm)	5.75" (146 mm)	**536-376**
8" (203 mm)	7.75" (197 mm)	**536-378**
10" (254 mm)	9.75" (248 mm)	**536-380**
12" (305 mm)	11.75" (298 mm)	**536-382**
14" (356 mm)	13.75" (349 mm)	**536-384**

Wet Differential Pressure Sensors

QBE3100 Series

QBE3190 Series
(includes manifold)

Description

QBE Series Wet Differential Pressure Sensors utilize a well-proven ceramic technology making them an ideal choice across a broad spectrum of applications. These sensors can be ordered individually or pre-assembled with an optional three-valve manifold

Features

- Loop powered 4 to 20 mA output signal
- Compatible with water and water/glycol mixtures
- Ultra-low susceptibility to temperature
- Maintenance free

Applications

The QBE Sensor is particularly suitable for use in HVAC systems where continuous monitoring of flow rate or differential pressure across a control valve is required.

Specifications

Input Power ..... 7.5V to 33 Vdc
Output Signal ..... 4 to 20 mA
Long-Term Stability ..... ±0.5% Full Scale
Resolution ..... 0.1% Full Scale
Sum of Linearity, Hysteresis and Repeatability ..... <±0.5% Full Scale
Manifold ..... Aluminum (6061-T6511)
Tubing ..... Copper (UNS C12200)
Fitting ..... Brass (C36000)
Valve Stem ..... High-performance thermoplastic polymer
O-rings ..... Ethylene Propylene Rubber (EPS, EPDM)

Suitable Process Media ..... Air, water, water and glycol mixtures
Process Temperature (Sensor) ..... 5° to 185°F (-15° to 85°C)
Process Temperature (Manifold) ..... 40° to 185°F (5° to 85°C)
Ambient Operating Temperature ..... 5° to 185°F (-15° to 85°C)
Enclosure IP65/NEMA 4
Electrical Connections ..... 1/2" FNPT conduit (kit included for non-conduit installations)
Process Connections ..... 1/4" FNPT
Mounting Orientation ..... Any orientation is allowable (avoid orientations that may be susceptible to air pockets)
Maximum Working Pressure (Sensor) ..... 540 PSIG
Maximum Working Pressure (Manifold) ..... 250 PSIG

Product Ordering

Description	Output Signal	Differential Pressure Range	Part Number
Wet DP Sensor	4 to 20 mA	0 to 25 PSID	**QBE3100UD25**
		0 to 50 PSID	**QBE3100UD50**
		0 to 100 PSID	**QBE3100UD100**
Wet DP Sensor with 3-Valve Manifold	4 to 20 mA	0 to 25 PSID	**QBE3190UD25**
		0 to 50 PSID	**QBE3190UD50**
		0 to 100 PSID	**QBE3190UD100**

Solar Impact Sensor

QLS60 Solar Impact Sensor

Description

The outdoor wall-mounted Solar Impact Sensor (QLS60) is used as a demand sensor for heating, ventilation and air-conditioning in facilities where compensation of solar radiation is required or desired. Solar compensation is necessary where buildings or building sections with large window areas are subjected to strong solar radiation, especially in installations where thermostatic radiator valves cannot be used.

To determine the impact of solar radiation, the sensor uses a solar cell that acquires the level of radiation. That cell generates an electrical current depending on the extent of radiation, which is then evaluated by the sensor. As a result, the sensor delivers an output signal of 4 to 20 mA or 0 to 10 Vdc, which is proportional to the solar radiation range.

Applications

This sensor can be used in connection with all types of systems and devices capable of acquiring and handling the sensor's 4 to 20 mA or 0 to 10 Vdc output signal.

Features

- Configurable 0-10 Vdc, 4-20 mA output signal
- 24 Vac or 18-30 Vdc power source
- Output signal linear over entire measuring range
- Measuring range of 0-93 w/ft2 (0-1000 w/m2)
- Rain- and moisture-resistant NEMA 4 enclosure
- Compact housing (2" x 3.62" x 1.8")

Specifications

Rated Voltage Range ..... 24 Vac (± 20% SELV)
or 24 Vdc (18 to 30V)

Power Supply (G+, M)
Rated Frequency at 24 Vac 50/60Hz
Rated Power Consumption ..... Max. 2.5 VA (1 W)

Measuring Range ..... 0 to 1000 W/m^2

Time Constant t_{63} ..... </- 2 seconds

Measured Value Outputs (U, I)
Voltage Signal Output (U) ..... 0 to 10 Vdc 0 = 1000 W/m^2
Current Signal Output (I) ..... 4 to 30 mA 0 to 1000 W/m^2

Permissible Cable Lengths With Copper Cable
18 AWG ..... 164 feet (50 m)
16 AWG ..... 492 feet (150 m)
12 AWG ..... 984 feet (300 m)

Electrical Connections
Screw Terminals for ..... 2 x 16 AWG or 1 x 12 AWG

Degree of Protection of Housing ..... IP 65 to IEC 60 529

Insulation Class ..... III to EN 60 730

Environmental Conditions
Operation to ..... IEC 60 721-3
Climatic Conditions ..... Class 3K5
Temperature ..... -13° to 131°F (-25° to 55°C)
Humidity (Non-condensing) ..... 5 to 95% rh
Mechanical Conditions ..... Class 3M2
Transportation to ..... IEC 60 721-3-2
Climatic Conditions ..... Class 2K3
Temperature ..... -13° to 158°F (-25° to 70°C)
Humidity ..... <95% rh
Mechanical Conditions ..... Class 2M2

Agency Standards ..... UL Listed to UL 873
cUL Listed to Canadian Standard C22.2 No. 24-93
CE conformity to EMC directive 2004/108/EC

Product Ordering

Description	Output Signal	Part No.
Solar Impact Sensor	4 to 20 mA or 0 to 10 Vdc	**QLS60**

HVAC Sensors with Modbus RTU Capability

Description

Siemens offers a full range of Modbus RTU Sensors. The QxA room mounted sensors and the QxM duct mounted sensors are offered in a variety of configurations to measure temperature, humidity, CO_2 and VOC.

The QBM3700 Series differential pressure sensors are designed for the air side of the HVAC system. The sensor also features 2 analog inputs and 2 analog outputs, allowing it to serve as decentralized Modbus node to simplify the overall system wiring.

The QSA2700 Series sensors monitor particulate concentrations in the space. It features 2 0-10V outputs for PM2.5 and PM10 particles in µg/m3. Additional data, including individual particle counts is available via Modbus.

Features

- Modbus RTU via RS-485 simplifies wiring via a straightforward 2 wire communication bus
- Wide variety of sensor types enables a complete Modbus sensor network
- Compatible with most HVAC controllers and building automation systems that are Modbus RTU capable

Siemens offers a 5-year warranty on sensors.*

* Not applicable to PL-link devices, IAQ multi-sensor or Series 2200/3200 units with display.

Ordering Information

Temperature Sensors

	Model Number	Part Number	Description	Measuring Range	Accuracy
	**QAM2150/MO**	**S55720-S466**	Duct Temperature Sensor, 15.75" Flexible Probe	-58° - 122°F	±1.6°F

Humidity Sensors

	Model Number	Part Number	Description	Measuring Range	Accuracy
	**QFA2050/MO**	**S55720-S508**	Room Humidity / Temperature Sensor, General Purpose	RH: 0-95% Temp: -40 - 158°F	RH: ±3% (30-70%) Temp: ±0.54°F @ 73°F
	QFA2050D/MO	**S55720-S509**	Room Humidity / Temperature Sensor, Display, General Purpose		
	**QFA3150/MO**	**S55720-S535**	Room Humidity / Temperature Sensor, High Performance	RH: 0-100% Temp: -40 - 158°F	RH: ±2% Full Scale Temp: ±0.54°F @ 73°F
	**QFM2150/MO**	**S55720-S467**	Duct Humidity / Temperature Sensor, General Purpose	RH: 0-95% Temp: -40 - 158°F	RH: ±3% (30-70%) Temp: ±0.54°F @ 73°F
	QFM3150/MO	**S55720-S468**	Duct Humidity / Temperature Sensor, High Performance	RH: 0-100% Temp: -40 - 158°F	RH: ±2% Full Scale Temp: ±0.54°F @ 73°F

Air Quality Sensor

	Model Number	Part Number	Description	Measuring Range	Accuracy
	**QPA2052/MO**	**S55720-S510**	Room CO2 / Humidity / Temperature Sensor	CO2: 0-2000 PPM RH: 0-95% Temp: -40 - 158°F	CO2: ≤ ±(50 ppm + 2 % of measured value) RH: ±3% (30-70 %) Temp: ±0.54°F @ 73°F
	**QPM2102/MO**	**S55720-S469**	Duct CO2 / VOC Sensor	CO2: 0-2000 PPM VOC: 0-100%	CO2: ≤ ±(50 ppm + 2 % of measured value)
	QPM2150/MO	**S55720-S470**	Duct CO2 / Temperature Sensor	CO2: 0-2000 PPM Temp: 23 - 113°F	CO2: ≤ ±(50 ppm + 2 % of measured value) Temp: ±0.54°F @ 73°F
	QPM2152/MO	**S55720-S471**	Duct CO2 / Humidity / Temperature Sensor	CO2: 0-2000 PPM RH: 0-95% Temp: 23 - 113°F	CO2: ≤ ±(50 ppm + 2 % of measured value) RH: ±3% (30-70 %) Temp: ±0.54°F @ 73°F
	QPM2153/MO	**S55720-S530**	Duct CO2 / VOC / Humidity / Temperature Sensor	CO2: 0-2000 PPM VOC: 0-100% RH: 0-95% Temp: 23 - 113°F	CO2: ≤ ±(50 ppm + 2 % of measured value) RH: RH: ±3% (30-70 %) Temp: ±0.54°F @ 73°F
	**QSA2700**[1]	**S55720-S457**	Room Dust (PM2.5) Sensor	0 to 500 µg/m³	Max of ±15 µg/m³ and ±15% of reading (unit-to-unit variability)
	QSA2700D[1]	**S55720-S458**	Room Dust (PM2.5) Sensor, Display		

Differential Pressure Sensor

	Model Number		Description	Measuring Range	Accuracy
	**QBM3700-5/MO**[2]	**S55720-S487**	Diff. Pressure Sensor, Air	0-2" WC	≤ ± 1% FS @ 68°F
	QBM3700-13/MO[2]	**S55720-S485**	Diff. Pressure Sensor, Air	0-5" WC	≤ ± 0.5% FS @ 68°F
	QBM3700-25/MO[2]	**S55720-S486**	Diff. Pressure Sensor, Air	0-10" WC	≤ ± 0.5% FS @ 68°F

1. QSA units include 0-10V outputs for PM2.5 and PM10 measurements.
2. QBM3700 requires AQB9120/101A installation kit.

Table of Contents

Accessories & Service Kits

	Description	Product Group	Quantity	Part No.
Legacy Room Sensor Accessories				
	**Lockable Thermostat or Sensor Guard** • 10 × 6-1/4 × 3-3/4 inches (254 × 158.75 × 95.25 mm) • Desert beige mounting base • One key and mounting screws included	Any Siemens T-Stat or Sensor	1	**141-570**
Legacy Sensors Repair Parts				
	Replacement Occupancy/ Override Buttons	540, 544, 550 and 587 Series Room Sensors	Pkg of 25	**544-480A** (Beige) **544-480B** (White)
	Replacement Setpoint Door	540, 544, 550 and 587 Series Room Sensors	Pkg of 25	**544-481A** (Beige) **544-481B** (White)
	Replacement Front Bezel	540, 544, 550 and 587 Series Room Sensors	Pkg of 25	**544-482A** (Beige) **544-482B** (White)
	Repair Kit Containing slide switch components, reset & override buttons, setpoint door, and bezels. Repairs one sensor.	540, 544, 550 and 587 Series Room Sensors	1	**544-483A** (Beige) **544-483B** (White)
	Replacement Blanking Buttons	540, 544, 550 and 587 Series Room Sensors	Pkg of 25	**544-484B** (White)
Wireless				
	**KNX IoT / BACnet IP Gateway**	QAA, QFA, QPA Wireless Sensors	1	**S55812-Y102** (White)
	**Wireless Thread Mesh Extender**	QAA, QFA, QPA Wireless Sensors	1	**S55812-Y101** (White)