


HVAC SENSORS

# A complete range of **high quality sensors**

usa.siemens.com/sensors

SIEMENS

# **Accurate sensors** easy to set and forget

Siemens offers a complete portfolio of sensors engineered to help ensure healthy and productive indoor climates. With sensors that measure air quality, flow, humidity, pressure and temperature, Siemens enables you to control the entire HVAC system effectively. This helps to ensure occupant comfort while also optimizing building efficiency and indoor air quality.

Our sensors are engineered for easy, simple installation and are maintenance-free. Built to Siemens standards, our rigorous testing ensures high quality sensors provide years of reliable, accurate performance in any HVAC or building automation system.

**Why use sensors?**



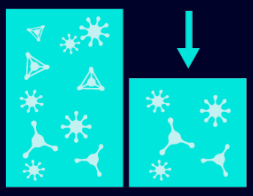
**$CO_2$ control**
**Increase occupant comfort and improve productivity**



**VOC control**
**Address offensive odors**



**Fine dust control**
**Reduce risk of lung diseases and other health issues**



**Humidity control**
**Limit spread of colds, flu and other viruses**




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

## Temperature Sensors

Measure temperature at nearly any point in the building, including room, outdoor, air side and water side.





## Humidity Sensors

From basic measurement in an HVAC system to more precise applications in critical environments, humidity sensors provide a cost-effective and reliable solution.

## Air Quality Sensors

Siemens offers a wide variety of air quality sensors including simple $CO_2$ measuring devices and more sophisticated units that measure volatile organic compounds (VOCs) and particulate matter.





## Pressure Sensors, Flow Sensors and Switches

An extensive range of pressure sensors, flow sensors and flow switches for both the air side and the water side of your HVAC system are offered in the Siemens portfolio.

# A full range of **temperature sensors**

Temperature is one of the most identifiable aspects of HVAC systems. With an emphasis on occupant comfort and promoting both productive and efficient environments. Our sensors are reliable, long-lasting and many are maintenance-free.

**Room Temperature Sensors**
Room temperature sensors enable HVAC control systems to address this fundamental comfort parameter accurately and efficiently. Temperature sensing room units add to the control and comfort of occupants with the addition of user-controlled settings built into the units.

**Duct Temperature Sensors**
Monitoring temperature in air ducts provides valuable insight into the performance of an HVAC system. Temperature sensors can be applied simply and easily in residential applications as well as the largest of commercial HVAC air ducts.

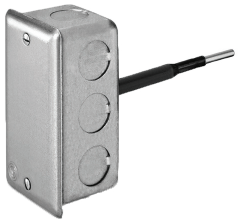
**Immersion Temperature Sensors**
Immersion temperature sensors are a staple in hydronic HVAC systems to monitor the health and performance of hydronic settings. These rugged sensors include a durable stainless steel thermowell that meets today's demands even with performance additives.

**Surface and Cable Temperature Sensors**
Surface temperature sensors are typically used in hydronic systems systems when circumstances inhibit the use of immersion sensors. Surface sensors feature a wide variety of output signals and are offered with traditional metal boxes or more modern polycarbonate housings.

Cable temperature sensors have a wide variety of uses in ductwork, on surfaces or installed in dry piping as slab temperature sensors. The go-to sensor for something reliable and easy to install at a low-cost.








**Outdoor Temperature Sensors**
Temperature sensors empower HVAC strategies and enable systems to operate at peak efficiency. Outdoor sensors have a robust construction to reliably operate in all climates.

**Rigid Probe Duct Temperature Sensors**
An economical sensor that is easy to install in many types of HVAC ductwork is the rigid probe duct temperature sensor. Most are point-type probes that measure air temp near the tip of the probe. For larger ducts, or ducts that are subject to temperature stratification, averaging probes provide an output signal that indicates the average temperature along multiple points on the probe.

**Flexible Probe Duct Temperature Sensors**
Large ducts require extended probes with multiple sensing elements to provide accurate average temperature reading. Siemens flexible duct sensors feature flexible probes and mounting clips that enable the sensor to be configured to register measurements at multiple elevations withing the duct.

Siemens also offers unique single point short-probe flexible sensors that are easy to install in both smaller ducts and ducts that are not rectangular in profile.

| Room Temperature Sensors | | | | Temperature Output | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Photo | Features | Model Number | Orderable Number | 1k Ω pt 375a RTD | 1k Ω Pt 385a RTD | 10k Ω Type II Thermistor | 10k Ω Type III Thermistor | 100k Ω Type II Thermistor | 1k Ω Ni @ 32F RTD (Siemens) | 1k Ω Ni @ 70F RTD (JCI) | 4-20mA | 0-10V | P1 (TEC) | PL-Link (DXR) | Modbus | Display | Color | Notes |
|  | Display | QAA2212.EWSN | QAA2212.EWSN | | X | | | | | | | | | | | | White | |
| | | QAA2220.EWSN | QAA2220.EWSN | | | | | | X | | | | | | | | White | |
| | | QAA2221.EWSN | QAA2221.EWSN | | | | | | | X | | | | | | | White | |
| | | QAA2230.EWSN | QAA2230.EWSN | | | X | | | | | | | | | | | White | |
| | | QAA2232.EWSN | QAA2232.EWSN | | | | X | | | | | | | | | | White | |
| | | QAA2235.EWSN | QAA2235.EWSN | | | | | X | | | | | | | | | White | |
| | | QAA2280.EWSN | QAA2280.EWSN | | | | | | | | | | X | | | | White | 1 |
| | | QAA22SS.EWSN | QAA22SS.EWSN | | | | | | | | X | X | | | | | White | |
| | | QAA2280.DWSC | QAA2280.DWSC | | | | | | | | | | X | | | X | White | 1 |
|  | Flush Mount | 536-984 | 536-984 | | | | | X | | | | | | | | | Metal | |
| | | 540-984 | 540-984 | | | X | | | | | | | | | | | Metal | |
| | | 540-995 | 540-995 | | | | | | | | | | X | | | | Metal | 1 |
| | | 544-973 | 544-973 | X | | | | | | | | | | | | | Metal | |
| | | 536-784B | 536-784B | | | | | X | | | | | | | | | White | |
| | | 536-994B | 536-994B | | | X | | | | | | | | | | | White | |
| | | 540-520B | 540-520B | | | | | | | | | | X | | | | White | 1 |
| | | 544-374B | 544-374B | X | | | | | | | | | | | | | White | |
| | | 536-784A | 536-784A | | | | | X | | | | | | | | | Beige | |
| | | 536-994A | 536-994A | | | X | | | | | | | | | | | Beige | |
| | | 540-520A | 540-520A | | | | | | | | | | X | | | | Beige | 1 |
| | | 544-374A | 544-374A | X | | | | | | | | | | | | | Beige | |
|  | Button Style w/Wall Plate | QAA1011.AASU | QAA1011.AASU | X | | | | | | | | | | | | | Metal | |
| | | QAA1031.AASU | QAA1031.AASU | | | | | | | | | | X | | | | Metal | 1 |
| | | QAA1011.AATU | QAA1011.AATU | X | | | | | | | | | | | | | Metal | |
| | | QAA1031.AATU | QAA1031.AATU | | | | | | | | | | X | | | | Metal | |
|  | | QMX3.P30 | S55624-H103-A | | | | | | | | | | | X | | | White | 2 |
| | | QMX3.P30-1BSC | S55624-H123 | | | | | | | | | | | X | | | Black | 2 |
|  | Semi-Flush Mount | QAA2570.2532 | QAA2570.2532 | | | | | | | | | | | X | | | White | 2 |

1) For use with Siemens TEC controllers only

2) For use with Siemens PL-Link compatible controllers only

| Temperature Sensing Room Units | | | | Temperature Output | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Photo | Features | Model Number | Orderable Number | 1k Ω pt 375a RTD | 1k Ω Pt 385a RTD | 10k Ω Type II Thermistor | 10k Ω Type III Thermistor | 100k Ω Type II Thermistor | 1k Ω Ni @ 32F RTD (Siemens) | 1k Ω Ni @ 70F RTD (JCI) | 4-20mA | 0-10V | P1 (TEC) | PL-Link (DXR) | Modbus | Display | Color | Notes |
|  | | QAA2212.FWSN | QAA2212.FWSN | | X | | | | | | | | | | | X | White | 1 |
| | | QAA2220.FWSN | QAA2220.FWSN | | | | | | X | | | | | | | X | White | 1 |
| | | QAA2221.FWSN | QAA2221.FWSN | | | | | | | X | | | | | | X | White | 1 |
| | | QAA2230.FWSN | QAA2230.FWSN | | | X | | | | | | | | | | X | White | 1 |
| | | QAA2232.FWSN | QAA2232.FWSN | | | | X | | | | | | | | | X | White | 1 |
| | | QAA2280.FWSN | QAA2280.FWSN | | | | | | | | | | X | | | X | White | 2 |
| | | QAA22SS.FWSN | QAA22SS.FWSN | | | | | | | | X | X | | | | X | White | 1 |
|  | | QMX3.P34 | S55624-H105-A | | | | | | | | | | | X | | X | White | 3 |
| | | QMX3.P34-1BSC | S55624_H126 | | | | | | | | | | | X | | X | Black | 3 |
|  | TRA Compatible | QMX3.P02 | QMX3.P02 | | | | | | | | | | | X | | | White | 3, 4 |
| | | QMX3.P02-1BSC | S55624-H128 | | | | | | | | | | | X | | | Black | 3, 4 |
|  | | QMX3.P37 | QMX3.P37 | | | | | | | | | | | X | | X | White | 3, 4 |
| | | QMX3.P37-1BSC | S55624-H129 | | | | | | | | | | | X | | X | Black | 3, 4 |

1) Temperature setpoint signal is 0-10V, 55°F to 95°F; Override signal is momentary contact rated for 1A max @ 24Vac.

2) For use with Siemens TEC controllers only.

3) For use with Siemens PL-Link compatible controller only.

4) Includes configurable touch keys for lighting and shade control in Total Room Automation.

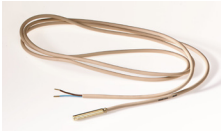
| Rigid Probe Duct Temperature Sensors | | | | Temperature Output | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Photo | Features | Model Number | Orderable Number | 1k Ω pt 375a RTD | 1k Ω Pt 385a RTD | 10k Ω Type II Thermistor | 10k Ω Type III Thermistor | 100k Ω Type II Thermistor | 1k Ω Ni @ 32F RTD (Siemens) | 1k Ω Ni @ 70F RTD (JCI) | 4-20mA | 0-10V | P1 (TEC) | Probe Length (Inches) | Probe Type | Measuring Range |
|  | | 535-741-18 | 535-741-18 | | | | | X | | | | | | 18 | Point | -40 to 180F |
| | | 535-741-4 | 535-741-4 | | | | | X | | | | | | 4 | Point | -40 to 180F |
| | | 535-741-8 | 535-741-8 | | | | | X | | | | | | 4 | Point | -40 to 180F |
| | | 538-871 | 538-871 | | | | | | | | | | X(1) | 4 | Point | -40 to 180F |
| | | 540-739 | 540-739 | | | | | | | | | | X(1) | 18 | Point | -40 to 180F |
| | | 544-339-18 | 544-339-18 | X | | | | | | | | | | 18 | Point | -40 to 180F |
| | | 544-339-4 | 544-339-4 | X | | | | | | | | | | 4 | Point | -40 to 180F |
| | | 544-339-8 | 544-339-8 | X | | | | | | | | | | 8 | Point | -40 to 180F |
| | | QAM2012.010 | QAM2012.010 | | X | | | | | | | | | 4 | Point | -40 to 180F |
| | | QAM2012.020 | QAM2012.020 | | X | | | | | | | | | 8 | Point | -40 to 180F |
| | | QAM2012.045 | QAM2012.045 | | X | | | | | | | | | 18 | Point | -40 to 180F |
| | | QAM2020.010 | QAM2020.010 | | | | | | X | | | | | 4 | Point | -40 to 180F |
| | | QAM2020.020 | QAM2020.020 | | | | | | X | | | | | 8 | Point | -40 to 180F |
| | | QAM2020.045 | QAM2020.045 | | | | | | X | | | | | 18 | Point | -40 to 180F |
| | | QAM2021.020 | QAM2021.020 | | | | | | | X | | | | 8 | Point | -40 to 180F |
| | | QAM2021.045 | QAM2021.045 | | | | | | | X | | | | 18 | Point | -40 to 180F |
| | | QAM2030.010 | QAM2030.010 | | | X | | | | | | | | 4 | Point | -40 to 180F |
| | | QAM2030.020 | QAM2030.020 | | | X | | | | | | | | 8 | Point | -40 to 180F |
| | | QAM2030.045 | QAM2030.045 | | | X | | | | | | | | 18 | Point | -40 to 180F |
| | | QAM2032.010 | QAM2032.010 | | | | X | | | | | | | 4 | Point | -40 to 180F |
| | | QAM2032.020 | QAM2032.020 | | | | X | | | | | | | 8 | Point | -40 to 180F |
| | | QAM2032.045 | QAM2032.045 | | | | X | | | | | | | 18 | Point | -40 to 180F |
| | | 533-376-18 | 533-376-18 | | | | | | | | X | | | 18 | Point | 20 to 120F |
| | | 533-376-4 | 533-376-4 | | | | | | | | X | | | 4 | Point | 20 to 120F |
| | | 533-376-8 | 533-376-8 | | | | | | | | X | | | 8 | Point | 20 to 120F |
| | | 533-377-18 | 533-377-18 | | | | | | | | X | | | 18 | Point | 30 to 250F |
| | | 533-377-4 | S55624-H123 | | | | | | | | X | | | 4 | Point | 30 to 250F |
| | | 533-377-8 | 533-377-8 | | | | | | | | X | | | 8 | Point | 30 to 250F |

| Rigid Probe Duct Temperature Sensors | | | | Temperature Output | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Photo | Features | Model Number | Orderable Number | 1k Ω pt 375a RTD | 1k Ω Pt 385a RTD | 10k Ω Type II Thermistor | 10k Ω Type III Thermistor | 100k Ω Type II Thermistor | 1k Ω Ni @ 32F RTD (Siemens) | 1k Ω Ni @ 70F RTD (JCI) | 4-20mA | 0-10V | P1 (TEC) | Probe Length (Inches) | Probe Type | Measuring Range |
| | | 544-560-18 | 544-560-18 | | | | | | | | X | | | 18 | Point | -4 to +122F |
| | | 544-560-4 | 544-560-4 | | | | | | | | X | | | 4 | Point | -4 to +122F |
| | | 544-560-8 | 544-560-8 | | | | | | | | X | | | 8 | Point | -4 to +122F |
|  | Bracket Mount | 536-811 | 536-811 | | | | | X | | | | | | 4 | Point | -40 to 180F |
| | | 540-128 | 540-128 | | | | | | | | | | X(1) | 4 | Point | -40 to 180F |
| | | QAM2030.010-BR | QAM2030.010-BR | | | X | | | | | | | | 4 | Point | -40 to 180F |
|  | | 535-490-18 | 535-490-18 | | | | | | | | X | | | 18 | Averaging | 20 to 120F |
| | | 535-490-24 | 535-490-24 | | | | | | | | X | | | 24 | Averaging | 20 to 120F |
| | | 535-490-36 | 535-490-36 | | | | | | | | X | | | 36 | Averaging | 20 to 120F |
| | | 535-490-48 | 535-490-48 | | | | | | | | X | | | 48 | Averaging | 20 to 120F |
| | | 540-244-18 | 540-244-18 | | | | | X | | | | | | 18 | Averaging | -40 to 180F |
| | | 544-343-18 | 544-343-18 | X | | | | | | | | | | 18 | Averaging | -40 to 180F |
| | | 544-343-24 | 544-343-24 | X | | | | | | | | | | 24 | Averaging | -40 to 180F |
| | | 544-343-36 | 544-343-36 | X | | | | | | | | | | 36 | Averaging | -40 to 180F |
| | | 544-343-48 | 544-343-48 | X | | | | | | | | | | 48 | Averaging | -40 to 180F |

1) For use with Siemens TEC controllers only

| Flexible Probe Duct Temperature Sensors | | | | Temperature Output | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Photo | Features | Model Number | Orderable Number | 1k Ω pt 375a RTD | 1k Ω Pt 385a RTD | 10k Ω Type II Thermistor | 10k Ω Type III Thermistor | 100k Ω Type II Thermistor | 1k Ω Ni @ 32F RTD (Siemens) | 1k Ω Ni @ 70F RTD (JCI) | 4-20mA | 0-10V | Modbus RTU | Probe Length (Inches) | Probe Type | Measuring Range |
|  | | QAM2012.250 | QAM2012.250 | | X | | | | | | | | | 96 | Averaging | -40 to 180F |
| | | QAM2012.500 | QAM2012.500 | | X | | | | | | | | | 192 | Averaging | -40 to 180F |
| | | QAM2012.750 | QAM2012.750 | | X | | | | | | | | | 288 | Averaging | -40 to 180F |
| | | QAM2020.500 | QAM2020.500 | | | | | | X | | | | | 192 | Averaging | -40 to 180F |
| | | QAM2020.750 | QAM2020.750 | | | | | | X | | | | | 288 | Averaging | -40 to 180F |
| | | QAM2021.750 | QAM2021.750 | | | | | | | X | | | | 288 | Averaging | -40 to 180F |
| | | QAM2030.250 | QAM2030.250 | | | X | | | | | | | | 96 | Averaging | -40 to 180F |
| | | QAM2030.500 | QAM2030.500 | | | X | | | | | | | | 192 | Averaging | -40 to 180F |
| | | QAM2030.750 | QAM2030.750 | | | X | | | | | | | | 288 | Averaging | -40 to 180F |
| | | QAM2032.250 | QAM2032.250 | | | | X | | | | | | | 36 | Averaging | -40 to 180F |
| | | QAM2032.500 | QAM2032.500 | | | | X | | | | | | | 72 | Averaging | -40 to 180F |
| | | QAM2032.750 | QAM2032.750 | | | | X | | | | | | | 192 | Averaging | -40 to 180F |
| | | 540-245-36 | 540-245-36 | | | | | X | | | | | | 288 | Averaging | -40 to 180F |
| | | 540-246-72 | 540-246-72 | | | | | X | | | | | | 96 | Averaging | -40 to 180F |
| | | 544-342-16 | 544-342-16 | X | | | | | | | | | | 192 | Averaging | -40 to 180F |
| | | 544-342-24 | 544-342-24 | X | | | | | | | | | | 288 | Averaging | -40 to 180F |
| | | 544-342-8 | 544-342-8 | X | | | | | | | | | | 96 | Averaging | -40 to 180F |
| | | 544-380-16 | 544-380-16 | | | | | | | | X | | | 192 | Averaging | 20 to 120F |
| | | 533-380-24 | 533-380-24 | | | | | | | | X | | | 288 | Averaging | 20 to 120F |
| | | 533-380-8 | 533-380-8 | | | | | | | | X | | | 96 | Averaging | 20 to 120F |
|  | Plastic Housing | QAM2120.040 | QAM2120.040 | | | | | | X | | | | | 16 | Point | -58 to 176F |
| | | QAM2130.040 | QAM2130.040 | | | X | | | | | | | | 16 | Point | -40 to 176F |
| | | QAM2151.040/MO | S55720-S466 | | | | | | | | | | X | 16 | Point | -58 to 122F |
| | | QAM2161.040 | QAM2161.040 | | | | | | | | | X | | 16 | Point | -58 to 122F |
| | | QAM2171.040 | QAM2171.040 | | | | | | | | X | | | 16 | Point | -58 to 122F |
| | | QAM2112.040 | QAM2112.040 | | X | | | | | | | | | 16 | Point | -58 to 122F |
| | | QAM2112.200 | QAM2112.200 | | X | | | | | | | | | 78 | Averaging | -58 to 176F |
| | | QAM2120.200 | QAM2120.200 | | | | | | X | | | | | 78 | Averaging | -58 to 176F |
| | | QAM2112.600 | QAM2112.600 | | X | | | | | | | | | 236 | Averaging | -58 to 176F |

| Immersion Temperature Sensors | | | | Temperature Output | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Photo | Features | Model Number | Orderable Number | 1k Ω pt 375a RTD | 1k Ω Pt 385a RTD | 10k Ω Type II Thermistor | 10k Ω Type III Thermistor | 100k Ω Type II Thermistor | 1k Ω Ni @ 32F RTD (Siemens) | 1k Ω Ni @ 70F RTD (JCI) | 4-20mA | Probe Length (Inches) | Measuring Range |
|  | | 536-777-25 | 536-777-25 | | | | | X | | | | 2.5 | 0 to 250F |
| | | 536-777-40 | 536-777-40 | | | | | X | | | | 4 | 0 to 250F |
| | | 536-777-60 | 536-777-60 | | | | | X | | | | 6 | 0 to 250F |
| | | 544-577-25 | 544-577-25 | X | | | | | | | | 2.5 | 0 to 250F |
| | | 544-577-40 | 544-577-40 | X | | | | | | | | 4 | 0 to 250F |
| | | 544-577-60 | 544-577-60 | X | | | | | | | | 6 | 0 to 250F |
| | | QAE2012.005 | QAE2012.005 | | X | | | | | | | 2.5 | 0 to 250F |
| | | QAE2012.10 | QAE2012.10 | | X | | | | | | | 4 | 0 to 250F |
| | | QAE2012.010 | QAE2012.010 | | X | | | | | | | 6 | 0 to 250F |
| | | QAE2020.005 | QAE2020.005 | | | | | | X | | | | |
| | | QAE2020.010 | QAE2020.010 | | | | | | X | | | | |
| | | QAE2020.015 | QAE2020.015 | | | | | | X | | | | |
| | | QAE2021.005 | QAE2021.005 | | | | | | | X | | 2.5 | 0 to 250F |
| | | QAE2021.010 | QAE2021.010 | | | | | | | X | | 4 | 0 to 250F |
| | | QAE2021.015 | QAE2021.015 | | | | | | | X | | 6 | 0 to 250F |
| | | QAE2030.005 | QAE2030.005 | | | X | | | | | | 2.5 | 0 to 250F |
| | | QAE2030.010 | QAE2030.010 | | | X | | | | | | 4 | 0 to 250F |
| | | QAE2030.015 | QAE2030.015 | | | X | | | | | | 6 | 0 to 250F |
| | | QAE2032.005 | QAE2032.005 | | | | X | | | | | 2.5 | 0 to 250F |
| | | QAE2032.010 | QAE2032.010 | | | | X | | | | | 4 | 0 to 250F |
| | | QAE2032.015 | QAE2032.015 | | | | X | | | | | 6 | 0 to 250F |
| | | 536-767-25 | 536-767-25 | | | | | | | | X | 2.5 | 30 to 250F |
| | | 536-767-40 | 536-767-40 | | | | | | | | X | 4 | 30 to 250F |
| | | 536-767-60 | 536-767-60 | | | | | | | | X | 6 | 30 to 250F |
| | | 536-774-25 | 536-774-25 | | | | | | | | X | 2.5 | 20 to 70F |
| | | 536-774-40 | 536-774-40 | | | | | | | | X | 4 | 20 to 70F |
| | | 536.774-60 | 536.774-60 | | | | | | | | X | 6 | 20 to 70F |
| | | 544-562-25 | 544-562-25 | | | | | | | | X | 2.5 | 32 to 212F |
| | | 544-562-40 | 544-562-40 | | | | | | | | X | 4 | 32 to 212F |
| | | 544-562-60 | 544-562-60 | | | | | | | | X | 6 | 32 to 212F |

| Surface and Cable Temperature Sensors | | | | Temperature Output | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Photo | Features | Model Number | Orderable Number | 1k Ω pt 375a RTD | 1k Ω Pt 385a RTD | 10k Ω Type II Thermistor | 10k Ω Type III Thermistor | 100k Ω Type II Thermistor | 3k Ohm Thermister | 1k Ω Ni @ 32F RTD (Siemens) | 1k Ω Ni @ 70F RTD (JCI) | 4-20mA | Housing Style | Measuring Range |
|  | | QAD2012 | QAD2012 | | X | | | | | | | | Plastic | -11 to 266F |
| | | QAD2030 | QAD2030 | | | X | | | | | | | Plastic | -11 to 257F |
| | | QAD22 | QAD22 | | | | | | | X | | | Plastic | 0 to 250F |
|  | | QAD2012U | QAD2012U | | X | | | | | | | | Metal | -40 to +240F |
| | | QAD2020U | QAD2020U | | | | | | | X | | | Metal | -40 to +240F |
| | | QAD2021U | QAD2021U | | | | | | | | X | | Metal | -40 to +240F |
| | | QAD2030U | QAD2030U | | | X | | | | | | | Metal | -40 to +240F |
| | | QAD20320U | QAD20320U | | | | X | | | | | | Metal | -40 to +240F |
| | | 536-780 | 536-780 | | | | | | | | | X | Metal | 30 to 250F |
| | | 544-089 | 544-089 | X | | | | | | | | | Metal | 30 to 250F |
|  | 8" Leads | 540-258 | 540-258 | | | | | X | | | | | Cable | -40 to 248F |
| | 78" Cable | QAP1030.200 | QAP1030.200 | | | X | | | | | | | Cable | -13 to +203F |
| | 60" Cable | QAP2012.150 | QAP2012.150 | | X | | | | | | | | Cable | -22 to 266F |
| | 72" Cable | QAP22 | QAP22 | | | | | | | X | | | Cable | -13 to +203F |
| | For use with RDG Thermostats; 96" Cable | QAH11.1 | QAH11.1 | | | | | | X | | | | Cable | 32 to 104F |

| Outdoor Temperature Sensors | | | | Temperature Output | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Photo | Features | Model Number | Orderable Number | 1k Ω pt 375a RTD | 1k Ω Pt 385a RTD | 10k Ω Type II Thermistor | 10k Ω Type III Thermistor | 100k Ω Type II Thermistor | 1k Ω Ni @ 32F RTD (Siemens) | 1k Ω Ni @ 70F RTD (JCI) | 4-20mA | 0-10V | Housing Style | Measuring Range |
|  | | QAC2012 | QAC2012 | | X | | | | | | | | Plastic | -40 to 158F |
| | | QAC2030 | QAC2030 | | | X | | | | | | | Plastic | -40 to 158F |
| | | QAC22 | QAC22 | | | | | | X | | | | Plastic | -40 to 158F |
| | | QAC3161 | QAC3161 | | | | | | | | | X | Plastic | -58 to 122F |
| | | QAC3171 | QAC3171 | | | | | | | | X | | Plastic | -58 to 122F |
|  | | 536-768 | 536-768 | | | | | | | | X | | Metal | -58 to 122F |
| | | 536-778 | 536-778 | | | | | X | | | | | Metal | -40 to 150F |
| | | 544-578 | 544-578 | X | | | | | | | | | Metal | -40 to 150F |
| | | QAC2012U | QAC2012U | | X | | | | | | | | Metal | -40 to 150F |
| | | QAC2020U | QAC2020U | | | | | | X | | | | Metal | -40 to 150F |
| | | QAC2021U | QAC2021U | | | | | | | X | | | Metal | -40 to 150F |
| | | QAC2030U | QAC2030U | | | X | | | | | | | Metal | -40 to 150F |
| | | QAC2032U | QAC2032U | | | | X | | | | | | Metal | -40 to 150F |

# **Proven accuracy** for any environment

Humidity is a key component to maintaining occupant comfort and health, as well as total air quality. Siemens offers relative humidity sensors for basic HVAC applications as well as specialized devices for laboratory and pharmaceutical environments, or other critical environments.

**Room Humidity Sensors**

Room mounted relative humidity sensors have been proven to perform in standard HVAC applications, as well as in the most demanding critical environments.

Two for one: our humidity sensing room unit contains both humidity and temperature sensors that allow room occupants to fine tune temperature setpoints and optimize comfort.

**Duct Humidity Sensors**

A robust lineup of duct mounted humidity sensors includes a combination RH & temperature variants and third-party certification to meet the requirements of critical environment installations.



| Room Humidity Sensors | | | | Output Signal(s) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Photo | Features | Model Number | Orderable Number | 4-20mA | 0-10V | ON/OFF (SPDT) | P1 (TEC) | PL-Link (DXR) | Modbus | RH Accuracy | Temp Output | Display | Certified | Color | Notes |
|  | | QFA3212.EWSN | QFA3212.EWSN | X | X | | | | | ±2% | X | | | White | 1 |
| | | QFA3280.DWSC | QFA3280.DWSC | | | | X | | | ±2% | X | X | | White | 2 |
| | | QFA3280.EWSC | QFA3280.EWSC | | | | X | | | ±2% | X | | | White | 2 |
| | | QFA32SS.EWSN | QFA32SS.EWSN | X | X | | | | | ±2% | X | | | White | |
|  | | QFA3100 | QFA3100 | | X | | | | | ±2% | | | | White | 3 |
| | | QFA3101 | QFA3101 | X | | | | | | ±2% | | | | White | 3 |
| | | QFA3160 | QFA3160 | | X | | | | | ±2% | X | | | White | 3 |
| | | QFA3160D | QFA3160D | | X | | | | | ±2% | X | X | | White | |
| | | QFA3171 | QFA3171 | X | | | | | | ±2% | X | | | White | 3 |
|  | | QFA3171D | QFA3171D | X | | | | | | ±2% | X | X | | White | |
| | | QFA4160 | QFA4160 | | X | | | | | ±2% | X | | X | White | 3, 4 |
| | | QFA4160D | QFA4160D | | X | | | | | ±2% | X | X | X | White | 4 |
| | | QFA4171 | QFA4171 | X | | | | | | ±2% | X | | X | White | 3, 4 |
| | | QFA4171D | QFA4171D | X | | | | | | ±2% | X | X | X | White | |
|  | | QFA2050/MO | S55720-S508 | | | | | | X | ±3% | X | | | White | |
| | | QFA2050D/MO | S55720-S509 | | | | | | X | ±3% | X | X | | White | |
|  | Semi Flush Mount | QFA2570.2535 | QFA2570.2535 | | | | | X | | ±3% | X | | | White | 5 |
|  | | QMX3.P40 | S55624-H116 | | | | | X | | ±4% | X | | | White | 5 |
| | | QMX3.P40-1BSC | S55624-H124 | | | | | X | | ±4% | X | | | Black | 5 |
|  | Hygrostat with Exposed Setpoint Dial | QFA1000 | QFA1000 | | | X | | | | | | | | White | |
| | Hygrostat with concea-led setpoint dial | QFA1001 | QFA1001 | | | X | | | | | | | | White | |
|  | Condensation Monitor | QXA2100 | QXA2100 | | | X | | | | | | | | White | |
| | Condensation Monitor with Remote Sensor | QXA2101 | QXA2101 | | | X | | | | | | | | White | |

1) Temperature output is 1k Ohm @ 32F Pt RTD (385a)

2) For use with Siemens BACnet TEC controllers only

3) Suitable for outdoor use with optional AQF3100 weathershield

4) Includes 3rd party three-point calibration certificate

5) For use with Siemens PL-Link compatible controllers only

| Humidity Sensing Room Units | | | | Output Signal(s) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Photo | Features | Model Number | Orderable Number | 4-20mA | 0-10V | P1 (TEC | PL-Link (DXR | Temperature Output | RH Accuracy | Display | Color | Notes |
|  | | QFA3212.FWSN | QFA3212.FWSN | X | X | | | X | ±2% | X | White | 1, 2 |
| | | QFA3230.FWSN | QFA3230.FWSN | X | X | | | X | ±2% | X | White | 1, 3 |
| | | QFA3232.FWSN | QFA3232.FWSN | X | X | | | X | ±2% | X | White | 1, 4 |
| | | QFA3280.FWSC | QFA3280.FWSC | | | X | | X | ±2% | X | White | 5 |
| | | QFA32SS.FWSN | QFA32SS.FWSN | X | X | | | X | ±2% | X | White | 1 |
|  | | QMX3.P44 | S55624-H143-A | | | | X | X | ±4% | X | White | 6 |
| | | QMX3.P44-1BSC | S55624-H144 | | | | X | X | ±4% | X | Black | 6 |

1) Setpoint output is 0-10V, 55-95F; Override is momentary contact, 1A @ 24 Vac max

2) Temperature output is output is 1k Ohm @ 32F Pt RTD

3) Temperature output is output is 10k Ohm type 2 thermistor

4) Temperature output is output is 10k Ohm type 3 thermistor

5) For use with Siemens BACnet TEC controllers only

6) For use with Siemens PL-Link compatible controllers only

| Duct Humidity Sensors | | | | Output Signal(s) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Photo | Features | Model Number | Orderable Number | 4-20mA | 0-10V | Modbus | ON/OFF (SPDT) | Accuracy | Temp Output | Display | Cerified | Notes |
|  | | QFM2100 | QFM2100 | | X | | | ±5% | | | | |
| | | QFM2101 | QFM2101 | X | | | | ±5% | | | | |
| | | QFM2120 | QFM2120 | | X | | | ±5% | X(2) | | | |
| | | QFM2150/MO | S55720-S467 | | | X | | ±5% | X | | | |
| | | QFM2160U | QFM2160U | | X | | | ±5% | X | | | |
| | | QFM2171 | QFM2171 | X | | | | ±5% | X | | | |
| | | QFM3100 | QFM3100 | | X | | | ±2% | | | | |
| | | QFM3101 | QFM3101 | X | | | | ±2% | | | | |
| | | QFM3150/MO | S55720-S468 | | | X | | ±2% | X | | | |
| | | QFM3160 | QFM3160 | | X | | | ±2% | X | | | |
| | | QFM3160D | QFM3160D | | X | | | ±2% | X | X | | |
| | | QFM3171 | QFM3171 | X | | | | ±2% | X | | | |
| | | QFM3171D | QFM3171D | X | | | | ±2% | X | X | | |
| | | QFM4160 | QFM4160 | | X | | | ±2% | X | | X | 1 |
| | | QFM4171 | QFM4171 | X | | | | ±2% | X | | X | 1 |
|  | Exposed Setpoint Dial | QFM81.2 | QFM81.2 | | | | X | | | | | |
| | Covered Setpoint Dial | QFM81.21 | QFM81.21 | | | | X | | | | | |

1) Includes 3rd party three-point calibration certificate

2) Temperature output is 1k Ohm @ 32F Ni RTD (Siemens)

# **Ensure the well-being** of your most important assets

Air quality is critical to maintaining occupant health, comfort and productivity. Our offering includes air quality sensors for carbon dioxide, particulate matter (PM) and volatile organic compounds (VOCs).

**Room Air Quality Sensors**

Room air quality sensors optimize room comfort by enabling demand-controlled ventilation. Our units feature non-dispersive IR $CO_2$ sensors that experience less than 1% of drift per year for the first two years, and negligible drift thereafter. Recalibration is never required so maintenance is worry-free.

Combination units allow one sensor to take the place of up to three individual units: $CO_2$, $CO_2$/Temp, $CO_2$/Temp/RH and $CO_2$/VOC.

**Duct Air Quality Sensors**

Duct air quality sensors monitor and transmit changes to the building control unit. Our offering includes $CO_2$, $CO_2$/Temp, $CO_2$/Temp/RH and $CO_2$/VOC. Duct air quality sensors feature NDIR sensors with less than 1% drift yearly for the first two years of operation.



| Room Air Quality Sensors | | | | Primary Measured Value | | | Output Signal(s) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Photo | Features | Model Number | Orderable Number | $CO_2$ | VOC | PM2.5 | 0-10V | 4-20mA | P1 (TEC) | P1 Link | Modbus RTU | RH Output | Temp Output | Display | Color | Notes |
|  | | QPA2000 | QPA2000 | X | | | X | X | | | | | | | White | 1 |
| | | QPA2002 | QPA2002 | X | X | | X | X | | | | | | | White | 1, 2 |
| | | QPA2002D | QPA2002D | X | X | | X | X | | | | | | X | White | 1, 2 |
| | | QPA2052/MO | S55720-S510 | X | | | | | | | X | X | X | | White | 1 |
| | | QPA2060 | QPA2060 | X | | | X | X | | | | | X | | White | 1 |
| | | QPA2060D | QPA2060D | X | | | X | X | | | | | X | X | White | 1 |
| | | QPA2062 | QPA2062 | X | | | X | X | | | | X | X | | White | 1 |
| | | QPA2062D | QPA2062D | X | | | X | X | | | | X | X | X | White | 1 |
| | | QPA2080 | QPA2080 | X | | | | | | | | | X | | White | 1, 6 |
| | | QPA2080D | QPA2080D | X | | | | | | | | | X | X | White | 1, 6 |
| | | QPA1000 | S55720-S119 | | X | | X | X | | | | | | | White | 2 |
|  | | QSA2700 | S55720-S457 | | | X | X | | | | X | | | | White | |
| | | QSA2700D | S55720-S458 | | | X | X | | | | X | | | X | White | |
|  | | QMX3.P70 | S55624-H104-A | X | | | | | | X | | X | X | | White | 3, 4 |
| | | QMX3.P70-1BSC | S55624-H125 | X | | | | | | X | | X | X | | Black | 3, 4 |
|  | Semi Flush Mount | QPA2576.2535 | QPA2576.2535 | X | | | | | | X | | X | X | | White | 3, 4 |
|  | | QPA2282.EWSC | QPA2282.EWSC | X | | | | | X | | | | X | | White | 1, 5 |
| | | QPA2284.EWSC | QPA2284.EWSC | X | | | | | X | | | X | X | | White | 1, 5 |

1) $CO_2$ Measuring accuracy = ±(50 ppm +2% of measured value)

2) VOC Measuring range = 0-100% of relative $CO_2$ equivalent (0-2000ppm)

3) $CO_2$ Measuring accuracy = ±(30 ppm +4% of measured value)

4) For use with Siemens PL-Link compatible controllers only

5) For use with Siemens BACnet TEC controllers only

6) Includes selectable resistive temperature sensing modules (10k Ohm Type 2 thermistor, LG-Ni RTD, 100k Pt RTD and 1000k Ohm @ 32F Pt RTD)

| Air Quality Sensing Room Units ($CO_2$) | | | | Output Signal(s) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Photo | Features | Model Number | Orderable Number | P1 (TEC) | PL-Link (DXR) | RH Output | Temp Output | Display | Color | Notes |
|  | | QMX3.P74 | S55624-H106-A | | X | X | X | X | White | 1, 3 |
| | | QMX3.P74-1BSC | S55624-H127 | | X | X | X | X | Black | 1, 3 |
|  | | QPA2284.FWSC | QPA2284.FWSC | X | | X | X | X | White | 2, 4 |

1) $CO_2$ Measuring accuracy = ±(30 ppm +4% of measured value)

2) $CO_2$ Measuring accuracy = ±(50 ppm +2% of measured value)

3) For use with Siemens PL-Link compatible controllers only

4) For use with Siemens BACnet TEC controllers only

| Duct Air Quality Sensors | | | | Primary Measured Value | | | Output Signal(s) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Photo | Features | Model Number | Orderable Number | $CO_2$ | VOC | PM2.5 | 0-10V | 4-20mA | Modbus RTU | RH Output | Temp Output | Display | Notes |
|  | | QPM2100 | QPM2100 | X | | | X | X | | | | | 1 |
| | | QPM2102 | QPM2102 | X | X | | X | X | | | | | 1, 2 |
| | | QPM2102/MO | S55720-S469 | X | X | | | | X | | | | 1, 2 |
| | | QPM2102D | QPM2102D | X | X | | X | X | | | | X | 1, 2 |
| | | QPM2150/MO | S55720-S470 | X | | | | | X | | X | | 1 |
| | | QPM2152/MO | S55720-S471 | X | | | | | X | X | X | | 1 |
| | | QPM2160 | QPM2160 | X | | | X | X | | | X | | 1 |
| | | QPM2160D | QPM2160D | X | | | X | X | | | X | X | 1 |
| | | QPM2162 | QPM2162 | X | | | X | X | | X | X | | 1 |
| | | QPM2162D | QPM2162D | X | | | X | X | | X | X | X | 1 |
| | | QPM2180 | QPM2180 | X | | | X | X | | | X | | 1, 3 |
| | | QPM1100 | S55720-S123 | | X | | X | X | | | | | 2 |
| | | QSM2100 | S55720-S491 | | | X | X | X | | | | | |
| | | QSM2162 | S55720-S492 | | | X | X | X | | X | X | | |

1) $CO_2$ Measuring accuracy = ±(50 ppm +2% of measured value)

2) VOC Measuring range = 0-100% of relative $CO_2$ equivalent (0-2000ppm)

3) Includes selectable resistive temperature sensing modules (10k Ohm Type 2 thermistor, LG-Ni RTD, 100k Pt RTD and 1000k Ohm @ 32F Pt RTD)

# **Reliable pressure and flow sensors** for all HVAC systems

Our wide range of differential pressure and flow sensors combine well-proven technology and extensive testing to provide you with accurate, reliable, maintenance-free functionality.

**Air Differential Pressure and Air Velocity Sensors**
Air differential pressure and air velocity sensors offer accurate, field tested, repeatable data in applications that require differential pressure monitoring.

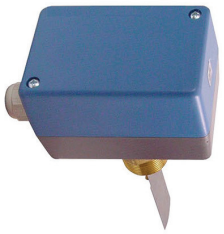
**Wet Differential Pressure Sensor**
Wet differential pressure sensors are low maintenance and feature industry established ceramic technology that are compatible with both water and water/glycol mixtures.

**Liquid Pressure Sensors**
Liquid pressure sensors feature a Piezo-resistive measuring system, which is unaffected by changes in temperature. Due to their high temperature stability and lack of mechanical aging or creepage, they reliably and effectively measure static and dynamic pressure in HVAC facilities.

**Liquid Flow Switches**
High pressure liquid flow switches excel in hydraulic systems, especially in refrigeration, heat pump and heating installations. They feature a nominal pressure maximum of 365 psi, and the housing is IP65 rated.









| Pressure and Flow Sensors | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Photo | Features | Model Number | Orderable Number | ON/OFF (SPDT) | 4-20mA | 0-10V | Modbus | Display | Measuring Range | Notes |
|  | Differential Pressure Sensor – Air<br>Selectable Range<br>Selectable Output<br>LCD Display | QBM3230U03UD | S55720-S522 | | X | X | | X | -0.3" to + 0.3" | |
| | | QBM3230U10D | S55720-S527 | | X | X | | X | 0 to 10" | |
| | | QBM3230U1D | S55720-S523 | | X | X | | X | 0 to 1" | |
| | | QBM3230U20D | S55720-S528 | | X | X | | X | 0 to 20" | |
| | | QBM3230U2D | S55720-S524 | | X | X | | X | 0 to 2" | |
| | | QBM3230U3D | S55720-S525 | | X | X | | X | 0 to 3" | |
| | | QBM3230U5D | S55720-S526 | | X | X | | X | 0 to 5" | |
|  | Differential Pressure Sensor – Air<br>Modbus RTU | QBM3700-13/MO | S55720-S485 | | | | X | | 0 to 5" | 1 |
| | | QBM3700-25/MO | S55720-S486 | | | | X | | 0-10" | 1 |
| | | QBM3700-5/MO | S55720-S487 | | | | X | | 0 to 2" | 1 |
|  | Differential Pressure Switch – Air<br>SPDT<br>Adjustable Range | QBM81-10 | QBM81-10 | X | | | | | 0.4 to 4" | 2 |
| | | QBM81-3 | QBM81-3 | X | | | | | 0.8 to 8" | 2 |
| | | QBM81-5 | QBM81-5 | X | | | | | 0.2 to 2" | 2 |
|  | Air Velocity Sensor | QVM62.1 | QVM62.1 | | X | X | | | 0 to 49 ft/s | |
|  | Differential Pressure – Liquid<br>With 3-Valve Manifold | QBE3190UD100 | QBE3190UD100 | | X | | | | 0 to 100 PSID | |
| | | QBE3190UD25 | QBE3190UD25 | | X | | | | 0 to 25 PSID | |
| | | QBE3190UD50 | QBE3190UD50 | | X | | | | 0 to 50 PSID | |
|  | Differential Pressure – Liquid | QBE3100UD100 | QBE3100UD100 | | X | | | | 0 to 100 PSID | |
| | | QBE3100UD25 | QBE3100UD25 | | X | | | | 0 to 25 PSID | |
| | | QBE3100UD50 | QBE3100UD50 | | X | | | | 0 to 50 PSID | |
|  | Liquid Flow Switch<br>(MAWP: 160 PSIG) | QVE1900U | QVE1900U | X | | | | | To 395 GPM<br>(1.25 - 8" Pipe) | |
| | Liquid Flow Switch<br>(MAWP: 365 PSIG) | QVE1901U | QVE1901U | X | | | | | To 800 GPM<br>(0.75 to 8" Pipe) | |
|  | Single Point Pressure Sensor – Liquid | 7MF15654BB005EA1 | 7MF15654BB005EA1 | | X | | | | 0 to 15 PSIG | |
| | | 7MF15654BB105EA1 | 7MF15654BB105EA1 | | | X | | | 0 to 15 PSIG | |
| | | 7MF15654BE005EA1 | 7MF15654BE005EA1 | | X | | | | 0 to 30 PSIG | |
| | | 7MF15654BE105EA1 | 7MF15654BE105EA1 | | | X | | | 0 to 30 PSIG | |
| | | 7MF15654BF005EA1 | 7MF15654BF005EA1 | | X | | | | 0 to 60 PSIG | |
| | | 7MF15654BF105EA1 | 7MF15654BF105EA1 | | | X | | | 0 to 60 PSIG | |
| | | 7MF15654BG005EA1 | 7MF15654BG005EA1 | | X | | | | 0 to 100 PSIG | |
| | | 7MF15654BG105EA1 | 7MF15654BG105EA1 | | | X | | | 0 to 100 PSIG | |
| | | 7MF15654CA005EA1 | 7MF15654CA005EA1 | | X | | | | 0 to 150 PSIG | |
| | | 7MF15654CA105EA1 | 7MF15654CA105EA1 | | | X | | | 0 to 150 PSIG | |
| | | 7MF15654CB005EA1 | 7MF15654CB005EA1 | | X | | | | 0 to 200 PSIG | |
| | | 7MF15654CB105EA1 | 7MF15654CB105EA1 | | | X | | | 0 to 200 PSIG | |
| | | 7MF15654CD005EA1 | 7MF15654CD005EA1 | | X | | | | 0 to 300 PSIG | |
| | | 7MF15654CD105EA1 | 7MF15654CD105EA1 | | | X | | | 0 to 300 PSIG | |

1) System connections are metric – order installation kit (S55843-Z220-A101) separately

2) System connections are metric – installation kit included

Siemens offers a complete portfolio of maintenance-free, easy to install sensors engineered to help promote a healthy and productive indoor climate. Our high-quality sensors enable you to control the entire HVAC system effectively and efficiently to ensure occupant comfort while optimizing building efficiency and indoor air quality.



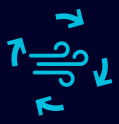
**Complete Product Portfolio**
Sensors for every HVAC application



**Quality**
Rigorous testing to meet Siemens high standards



**Less Effort**
Easy to install and maintenance-free



**Indoor Air Quality**
Ensure healthy indoor climates



**Maximize Comfort**
Ensure occupant comfort and productivity



**System Performance**
Optimize building efficiency

**Legal Manufacturer**

Siemens Industry, Inc.
Smart Infrastructure
1000 Deerfield Parkway
Buffalo Grove, IL 60089
Tel: (847) 215-1000

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