SIEMENS

Technical Specification Sheet
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QPA20… Series Room Air Quality Sensors

Description

The QPA20… series room air quality sensors optimize room comfort by enabling demand-controlled ventilation. The sensors can acquire: CO_2 and volatile organic compound (VOC) concentrations, relative humidity, and temperature. Models are available for CO_2, CO_2/VOC, CO_2/T, and CO_2/T/RH.

The sensor evaluates the CO_2/VOC concentrations and transforms it to a 0 to 10 Vdc linear proportional output signal.

For models with humidity, a capacitive humidity sensing element changes capacitance as a function of the relative humidity. An electronic measuring circuit converts the humidity signal to a continuous 0 to 10 Vdc signal that corresponds to a relative humidity range of 0 to 100%. For models with temperature, the sensor acquires room temperature with a sensing element that changes electrical resistance as a function of the temperature. The resistance is converted to an active 0 to 10 Vdc output signal that corresponds to a temperature range of 32°F to 122°F (0°C to 50°C) or -31°F to 95°F (–35°C to 35°C).

Sensors with an LCD window display the following measured values:

- CO_2 in ppm
- CO_2 and VOC as a bar chart (4 bars ≈ 2V, 20 bars ≈ 10V)
- Temperature in °C or °F
- Relative humidity in %

The wall-mounted sensors are suited for use with all systems and devices capable of acquiring and handling a 0 to 10 Vdc output signal.

Features

- Multisensor for CO_2/VOC, temperature, and humidity-temperature
- Maintenance-free infrared CO_2sensing element, VOC sensing element based on a heated tin dioxide semiconductor
- 24 Vac operating voltage, 0 to 10 Vdc output signals

QPA20… Series Room Air Quality Sensor.

QPA20… Series Room Air Quality Sensor with Display.

General Specifications

Power Supply:

Operating voltage (SELV): 24 Vac ±20%
Frequency: 50/60 Hz
Power consumption: ≤2 VA

Electrical:

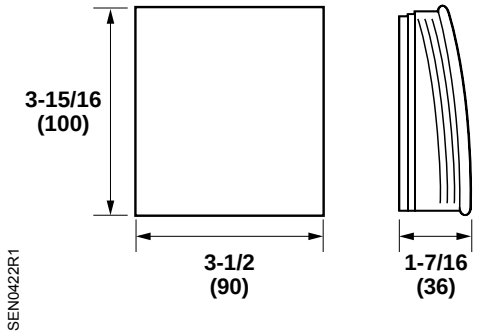
Screw terminals: 2 × 16 AWG or 1 × 14 AWG

Environmental:

Temperature
Operating: 23°F to 113°F (-5° to 45°C)
Storage: -13°F to 158°F (-25° to 70°C)
Humidity:
Operating: 0 to 95% rh (noncondensing)
Storage: <95% rh

Physical:

Mounting: In 2 × 4 inch (5 × 10 cm) electrical conduit box
Weight in lb (kg):
Without display: 0.22 lb (0.10 kg)
With display: 0.26 lb (0.12 kg)



Dimensions in Inches (mm).

Product Numbers and Specifications

Specification \ Product Number	QPA2000	QPA2002	QPA2002D	QPA2060	QPA2060D	QPA2062	QPA2062D
CO_2 measuring range: 0 to 2000 ppm Accuracy: ≤±50 ppm +2% of measured value Output signal: 0 to 10 Vdc, linear Recalibration free: 8 years	●	●	●	●	●	●	●
VOC sensitivity: Low (R1), Normal (R2), High (R3)		●	●				
Temperature measuring range (slope and intercept): R2 and R3: 32°F to 122°F (0°C to 50°C) R1: -31°F to 95°F (-35°C to 35°C) Temperature measuring element: QPA2060: PT1000 QPA2062: NTC 10 kΩ Measuring accuracy in the range of: -31°F to 59°F (-35°C to 15°C): ±1K 59°F to 95°F (15°C to 35°C): ±0.8K 95°F to 122°F (35°C to 50°C): ±1K				●	●	●	●
Humidity range of use: 0 to 95% rh (noncondensing) Humidity measuring range: (slope and intercept) 0 to 100% rh Measuring accuracy at 73°F (23°C), 24 Vac: 0 to 30% rh: ±5% rh 30 to 70% rh: ±3% rh 70 to 95% rh: ±5% rh						●	●
Display (LCD) of measured value			●		●		●

Ordering Information

			Q	P	A	2	0	x	x	.	x
UNIVERSAL SENSOR PROGRAM			Q	P	A	2	0	x	x	.	x
TYPE	SENSOR	Q									
MEASURING FAMILY	CO2/VOC	P									
APPLICATION/LOCATION	ROOM	A									
SENSOR TYPE	CO2	2									
HOUSING TYPE	CO2 HOUSING	0									
TEMPERATURE OUTPUT SIGNAL	NONE	0									
	0 TO 10 VOLT	6									
RH SIGNAL PRESENT											
CO2 OR VOC ONLY:	0 TO 10 VOLT	0									
CO2/VOC AND RH:	0 TO 10 VOLT	2									
SEPARATOR		.									
FEATURE DESCRIPTION - ROOM TYPES											
	WITHOUT DISPLAY	<BLANK>									
	WITH LCD DISPLAY	D									