

## Room Relative Humidity and Relative Humidity/Temperature Sensors



Energy & Atmosphere



Indoor Environmental Quality



QFA Series Room Relative Humidity and Relative Humidity/Temperature Sensor.



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### Description

The QFA Series Room 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 available in either dual current or voltage versions, transmitting proportional signals back to the controller.

### Features

#### Standard Features

- 4 to 20 mA and 0 to 10 Vdc output signals
- High degree of accuracy

#### Full-featured Models

- Liquid Crystal Display (LCD in degrees F or C)
- Digital temperature setpoint adjustment in 0.5 degree increments
- Override button
- Removable, replaceable humidity element

### Applications

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

# QFA Series 1000 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)

**CE and UL listed** ..... UL 873 Standard for Temperature Indicating and Regulating Equipment

**Housing**

Material Type..... Polycarbonate Plastic

Color ..... Desert Beige or White

Dimensions..... 3-11/32" H x 2-1/2" W x 1-1/2" D (85 mm H x 63 mm W x 38 mm D)

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

**Measurement Range** ..... 0 to 100% RH

**Accuracy at room temperature (73°F, 20°C)**..... ±2% 0 to 100% 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** ..... 4 to 20 mA or 0 to 10 Vdc, 0 to 100% Linear, Proportional

**Polarity Protection**..... Yes

## Humidity Element

**Temperature Element (for combination RH/T units only)**

**Operating Temperature** ..... 32 to 122°F (0 to 50°C)

**Time Constant at 0 to 50°C and 10-80%RH** ..... Approx. 20 Seconds in Moving Air

**Accuracy** ..... at 32 to 122°F (0 to 50°C): ±1 K  
at -31 to +95°F (-35 to +35°C): ±0.8 K  
at -31 to +140°F (-35 to +60°C): ±1 K

**Output Signal** ..... 4 to 20 mA or 0 to 10 Vdc, 0 to 100% Linear, Proportional, (Terminal U2)

**Calibration Adjustments** ..... None

## QFA Series 1000 Product Ordering

Application	Description	Part No.
Room Relative Humidity 2%	0 to 10 Vdc, No LCD, Beige	QFA3000.BU
Room Relative Humidity 2%	0 to 10 Vdc, No LCD, White	QFA3000.WU
Room Relative Humidity 2%	0 to 10 Vdc, with LCD, Beige	QFA3000.DBU
Room Relative Humidity 2%	0 to 10 Vdc, with LCD, White	QFA3000.DWU
Room Relative Humidity 2%	4 to 20 mA, No LCD, Beige	QFA3001.BU
Room Relative Humidity 2%	4 to 20 mA, No LCD, White	QFA3001.WU
Room Relative Humidity 2% & Temperature	0 to 10 Vdc, No LCD, Beige	QFA3060.BU
Room Relative Humidity 2% & Temperature	0 to 10 Vdc, No LCD, White	QFA3060.WU
Room Relative Humidity 2% & Temperature	0 to 10 Vdc, LCD, Temp Setpoint, Occupant Override, Beige	QFA3060.FBU
Room Relative Humidity 2% & Temperature	0 to 10 Vdc, LCD, Temp Setpoint, Occupant Override, White	QFA3060.FWU
Room Relative Humidity 2% & Temperature	4 to 20 mA, No LCD, Beige	QFA3071.BU
Room Relative Humidity 2% & Temperature	4 to 20 mA, No LCD, White	QFA3071.WU
Room Relative Humidity 2% & Temperature	4 to 20 mA, LCD, Temp Setpoint, Occupant Override, Beige	QFA3071.FBU
Room Relative Humidity 2% & Temperature	4 to 20 mA, LCD, Temp Setpoint, Occupant Override, White	QFA3071.FWU

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