

# C7232A,B Sensor and Controller

CARBON DIOXIDE SENSOR

PRODUCT DATA



## FEATURES

- Used for CO<sub>2</sub> based ventilation control.
- Models available with LCD that provides sensor readings and status information.
- Non-Dispersion-Infrared (NDIR) technology used to measure carbon dioxide gas.
- Gold-plated sensor provides long-term calibration stability.
- Device provides voltage or current output based on CO<sub>2</sub> levels.
- Models available with SPST relay output.
- Automatic Background Calibration (ABC) algorithm based on long-term evaluation reduces required typical zero-drift check maintenance.

## APPLICATION

The C7232 Sensor and Controller is a stand-alone carbon dioxide (CO<sub>2</sub>) sensor for use in determining ventilation necessity with HVAC controllers. The C7232 measures the CO<sub>2</sub> concentration in the ventilated space or duct. The C7232 is used in ventilation and air conditioning systems to control the amount of fresh outdoor air supplied to maintain acceptable levels of CO<sub>2</sub> in the space.

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## SPECIFICATIONS

**Models:** C7232 Sensor and Controller. A stand-alone carbon dioxide (CO<sub>2</sub>) sensor with two jumper-adjustable outputs (one analog and one SPST relay).

C7232A: Wall mount model.

C7232B: Duct mount model.

**NOTE:** Models are available with or without a 4-digit LCD that indicates the current CO<sub>2</sub> concentration.

### Dimensions:

C7232A: See Fig. 1.

C7232B: See Fig. 2.

### Sensor Performance Ratings:

Response Time: 1 min.

Carbon Dioxide Sensor:

Operation: Non-dispersive infrared (NDIR).

Sampling: Diffusion.

Range: 0 to 2000 ppm

Accuracy:  $\pm$  (30 ppm +2% of reading)\*.

\* This product complies with Title 24 Part 6, CEC Standard for Residential and Non-Residential Buildings— 2005, when installed according to instructions.

### Electrical Ratings:

Power Supply: 24 Vac/dc  $\pm$ 20%, 50/60 Hz (Class 2).

Maximum Power Consumption: 3W.

Peak Current (at 20 ms): 600 mA.

Relay:

Configuration: Shipped N.O.

Contact Rating: 1A at 50 Vac/24 Vdc.

Minimum Permissible Load: 1 mA at 5 Vdc.

Linear Analog Output:

Voltage: 0/2-10 Vdc (resistive load greater than 5000 ohms).

Current: 0/4-20 mA (resistive load less than 500 ohms).

### Outputs (Jumper Adjustable, see Table 2):

Analog: 0-10 Vdc (Default: 2-10 Vdc, 500 to 1500 ppm).

Relay: Normally Open SPST (Default: Close at 800 ppm).

### Ambient Ratings:

Temperature:

Operating: +32°F to +122°F (0°C to +50°C).

Storage: -4°F to +158°F (-20°C to +70°C).

Relative Humidity (non-condensing): 0 to 95 percent.

**CO<sub>2</sub> Pressure Dependence:** 1.4% change in reading per 1 kPa deviation from 100 kPa.

## ORDERING INFORMATION

When purchasing replacement and modernization products from your TRADELINE® wholesaler or distributor, refer to the TRADELINE® Catalog or price sheets for complete ordering number.

If you have additional questions, need further information, or would like to comment on our products or services, please write or phone:

1. Your local Honeywell Automation and Control Products Sales Office (check white pages of your phone directory).
2. Honeywell Customer Care  
1885 Douglas Drive North  
Minneapolis, Minnesota 55422-4386

In Canada—Honeywell Limited/Honeywell Limitée, 35 Dynamic Drive, Toronto, Ontario M1V 4Z9.

International Sales and Service Offices in all principal cities of the world. Manufacturing in Australia, Canada, Finland, France, Germany, Japan, Mexico, Netherlands, Spain, Taiwan, United Kingdom, U.S.A.

### Wiring Connections:

C7232A: 20-gauge cable with six 8 in. leadwires.

C7232B: 20-gauge cable with six 6 in. leadwires.

### Mounting:

C7232A: Vertical surface with standard single-gang junction box.

C7232B: Sheet metal duct with a sampling tube.

**Automatic Background Calibration (ABC) default:** On.

**Calibration:** This product is factory calibrated. No field calibration is necessary for the life of this product.

### Approvals:

CE

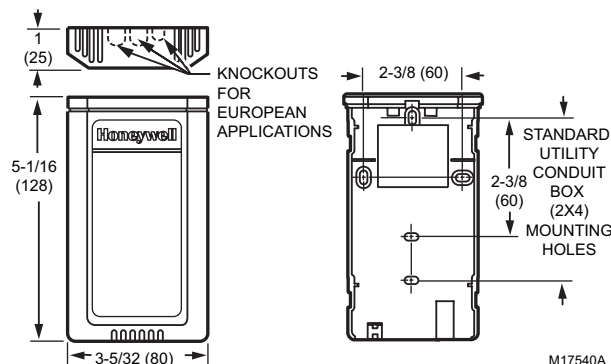
Underwriters Laboratories Inc. Listed, File No. E4436

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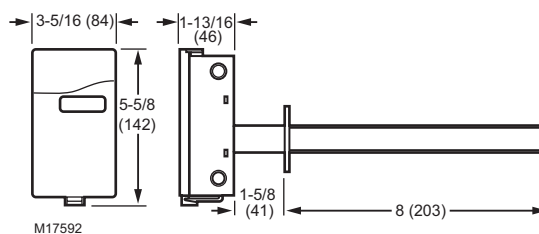
C7232B: Flammability Rating, UL94-5V

C7232A: NEMA1

C7232B: NEMA3



**Fig. 1. C7232A dimensions in inches (mm).**



**Fig. 2. C7232B dimensions in inches (mm).**