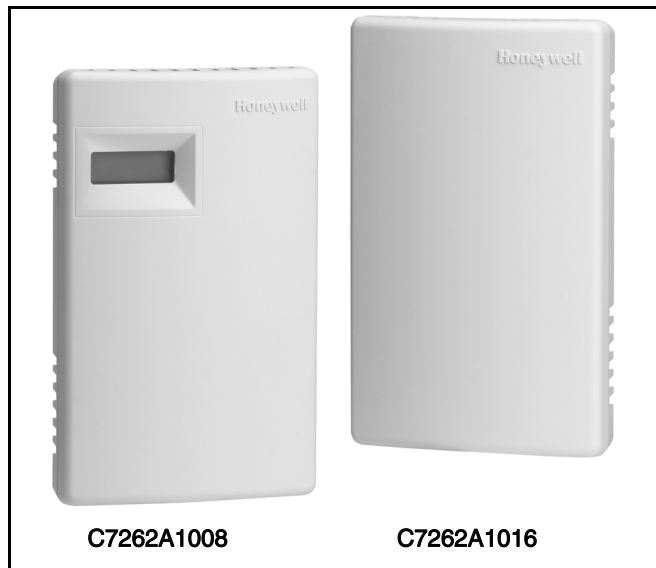


## C7262A Sensor and Controller

### CARBON DIOXIDE/TEMPERATURE SENSOR

#### PRODUCT DATA



C7262A1008

C7262A1016

- Automatic Background Calibration (ABC) algorithm based on long-term evaluation reduces required typical zero-drift check maintenance.

## SPECIFICATIONS

**Models:** C7262 Sensor. A stand-alone carbon dioxide (CO<sub>2</sub>) and temperature sensor with two jumper-adjustable CO<sub>2</sub> outputs (one analog and one SPST relay).

C7262A1008: Wall module with display.

C7262A1016: Wall module without display.

**Dimensions:** See Fig. 1.

#### Sensor Performance Ratings:

Response Time: Less than 3 min.

Carbon Dioxide Sensor:

Operation: Non-dispersive infrared (NDIR).

Sampling: Diffusion.

CO<sub>2</sub> Range: 0 to 2000 ppm

Accuracy: ± (30 ppm + 3% of reading) from 59°F to 85°F (15°C to 30°C).\*

#### Temperature Sensor:

Thermistor: 20K ohms NTC.

Operating temperature range: 22°F to 122°F (-6°C to +50°C).

- \* 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 ±20%, 50/60 Hz (Class 2).

Maximum Power Consumption: 1W.

Peak Current (20 ms duration): At rated voltages it is 120mA or less.

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):

CO<sub>2</sub> outputs

## APPLICATION

The C7262 Sensor is a stand-alone carbon dioxide (CO<sub>2</sub>) and temperature sensor for use in determining ventilation necessity with HVAC controllers. The C7262 measures the CO<sub>2</sub> concentration and temperature in the ventilated space. The C7262 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 and to sense the temperature of the space.

## FEATURES

- Used for CO<sub>2</sub> based ventilation control.
- Integral 20K ohm NTC temperature output.
- Models available with LCD that provides CO<sub>2</sub> ppm level.
- Non-Dispersion-Infrared (NDIR) technology used to measure carbon dioxide gas.
- Device provides voltage or current output based on CO<sub>2</sub> levels.
- Models available with SPST relay output.



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Analog: 0-10 Vdc (Default: 0-10 Vdc, 0 to 2000 ppm),  
2-10 Vdc, 4-20mA.  
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:** 1.6% change in reading per  
1 kPa deviation from 100 kPa.

**Wiring Connections:** Terminals (16 gauge maximum)

**Mounting:**

Vertical surface with standard single-gang junction box.

**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

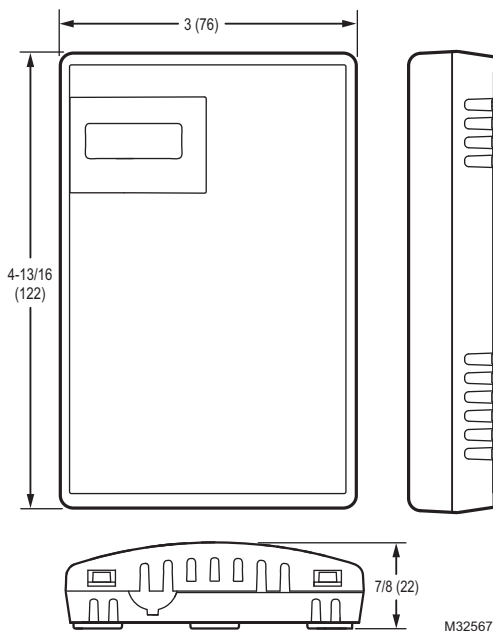


Fig. 1. C7262A dimensions in inches (mm).

## INSTALLATION

### When Installing this Product...

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings given in the instructions and on the product to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. After installation is complete, check out product operation as provided in these instructions.

**IMPORTANT**

*All wiring must agree with applicable codes, ordinances and regulations.*



### CAUTION

**Health Hazard.**  
**Improper use can create dangerous situations.**  
Use in application for sensing carbon dioxide and temperature only.  
For life-safety applications, this device can function only as a secondary or lesser device.



### CAUTION

**Electrical Shock or Equipment Damage Hazard.**  
**Can shock individuals or short equipment circuitry.**  
Disconnect power supply before installation.



### CAUTION

**Equipment Damage Hazard.**  
**Electrostatic discharge can short equipment circuitry.**  
Ensure that you are properly grounded before handling the unit.

### C7262A Cover Removal/Replacement

A snap-fit locking mechanism is used to attach the cover of the wall module to its subbase. To disassemble the cover from the subbase:

## 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 Environmental and Combustion Controls Sales Office (check white pages of your phone directory).
2. Honeywell Customer Care  
1885 Douglas Drive North  
Minneapolis, Minnesota 55422-4386
3. <http://customer.honeywell.com> or <http://customer.honeywell.ca>

International Sales and Service Offices in all principal cities of the world. Manufacturing in Belgium, Canada, China, Czech Republic, Germany, Hungary, Italy, Mexico, Netherlands, United Kingdom, and United States.

1. Insert a thin, flat blade screwdriver into each of the two slots at the bottom of the module to release the two locking tabs.
2. Tilt the cover out and away from the subbase to release the top two locking tabs.

## Location and Mounting

C7262 Sensors mount directly on the wall, sheet metal duct, or a panel. When planning the installation, allow enough clearance for maintenance and service. Mount the sensor in a well-ventilated area.

### NOTES:

Do not install the sensor where it can be affected by:  
 — drafts or dead spots behind doors and in corners.  
 — air from ducts.

Sensor must be mounted in a location which sees at least one 4-hour unoccupied period per week so that the CO<sub>2</sub> level drops to outdoor levels. Automatic Background Calibration will not work properly in locations without four hours of unoccupied time per week, or where there are sources of CO<sub>2</sub> other than people (breweries, mushroom farms, etc).

### IMPORTANT

*This sensor is not for use in highly corrosive environments.*

## Wall Mounting

The C7262 Wall Mount models can be mounted using two or four screws:

1. Remove C7262 cover.
2. Mount the subbase to the wall using washers and two or four screws (not supplied) appropriate for the wall material.

NOTE: When mounting on a junction box, see Fig. 2.

3. Replace the cover.

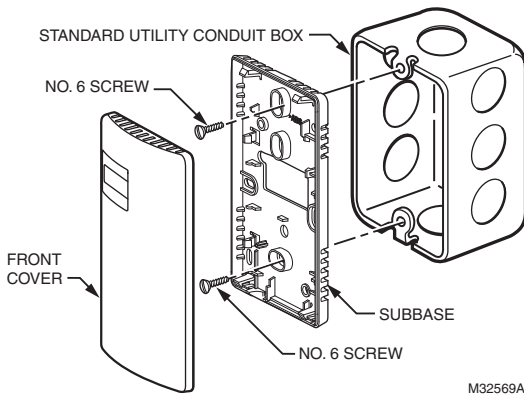


Fig. 2. Junction box mounting (C7262A).

## WIRING

The factory ships the device with the output default settings shown in Tables 2 and 3. Set the jumpers and wire the device (see Table 1 and Fig. 3).



### CAUTION

**Electrical Shock or Equipment Damage Hazard.**  
 Can shock individuals or short equipment circuitry.  
 Disconnect power supply before installation.



### CAUTION

**Equipment Damage Hazard.**  
 Electrostatic Discharge Can Short Equipment Circuitry.  
 Ensure that you are properly grounded before handling the unit.

### IMPORTANT

1. All low voltage connections to this device must be 24 Vac Class 2.
2. All wiring must comply with applicable local codes, ordinances and regulations.

Table 1. C7262 Terminal Connections (see Fig. 3).

Designation	Function
V+	24V Hot
Com AC/DC	24V Common for OUT1 and OUT2
TEMP	20k ohm NTC temperature output
TEMP	
OUT1: CO2	Analog Output, CO2
OUT2: CO2	Analog Output, CO2
RELAY NO	Normally Open potential free relay contacts
RELAY NO	

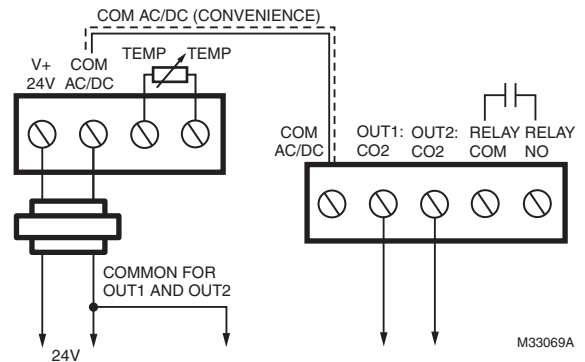


Fig. 3. Wiring the C7262.

## Input Signal

The C7262 Sensors have an adjustable range. These ranges are determined by the SW1 and SW2 jumper settings (see Table 2).

Table 2. CO<sub>2</sub> Range Jumper Settings

SW1 <sup>a</sup>	SW2 <sup>a</sup>	OUT1 & OUT2 (ppm)	Relay <sup>b</sup> (ppm)
On	On	500 to 1500	1200
On	Off	500 to 2000	1200
Off	On	0 to 1000	1000
Off <sup>c</sup>	Off <sup>c</sup>	0 to 2000	800

- <sup>a</sup> SW1 ON and SW2 ON state means jumper is set in upper position and OFF state means jumper is set in lower position.
- <sup>b</sup> When the level reaches this value, the contacts close; when the level drops 100 ppm below this value, the contacts open.
- <sup>c</sup> Setting when shipped from the factory.

## Output Signal

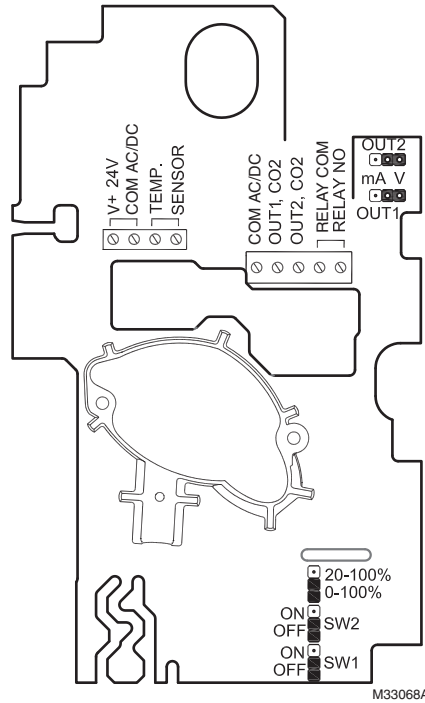
The output signal can be adjusted for 0/2-10 Vdc or 0/4-20 mA (see Table 3).

**Table 3. Output Signal Jumper Settings**

AN OUT1 & OUT2	OUT 1 & OUT 2	
	0-100%	20-100%
Voltage	0-10Vdc	2-10Vdc
Current	0-20 mA	4-20 mA

**NOTES:**

- Jumpers are shown on the sticker on the inside of the cover.
- Use needle nose pliers to carefully reposition jumpers.
- The CO<sub>2</sub> settings and the output signal settings are independent of each other. 0-100% and 20-100% are simply markings for the OUT jumper settings on the sensor (to differentiate between the two voltage and the two current ranges) and do not refer to or alter the ppm range chosen.



**Fig. 4. C7262 default jumper settings.**

## Example

For a CO<sub>2</sub> setting of 0-2000 ppm and a voltage output of 0-10 Vdc, the output would be as shown in Table 4 (arbitrary points along the analog curve).

**Table 4. 0-10 Vdc Output Example.**

CO <sub>2</sub> Level (ppm)	0	200	400	600	800	1000	1200	1400	1600	1800	2000
Voltage Output (Vdc)	0	1	2	3	4	5	6	7	8	9	10

For a CO<sub>2</sub> setting of 0-2000 ppm and a voltage output of 2-10 Vdc, the output would be as shown in Table 5 (arbitrary points along the analog curve).

**Table 5. 2-10 Vdc Output Example.**

CO <sub>2</sub> Level (ppm)	0	250	500	750	1000	1250	1500	1750	2000
Voltage Output (Vdc)	2	3	4	5	6	7	8	9	10

## CHECKOUT

Perform a quick test of the unit with the unit powered:

1. Stand close to the unit and breathe air into the sensor.
2. Check the CO<sub>2</sub> level registered by the controller to ensure a strong rise.
3. When connected to a damper in a ventilation system, the controller typically signals an increase in air flow.

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