INSTALLATION INSTRUCTIONS

CO2R, Designer Series

Room CO2 sensor

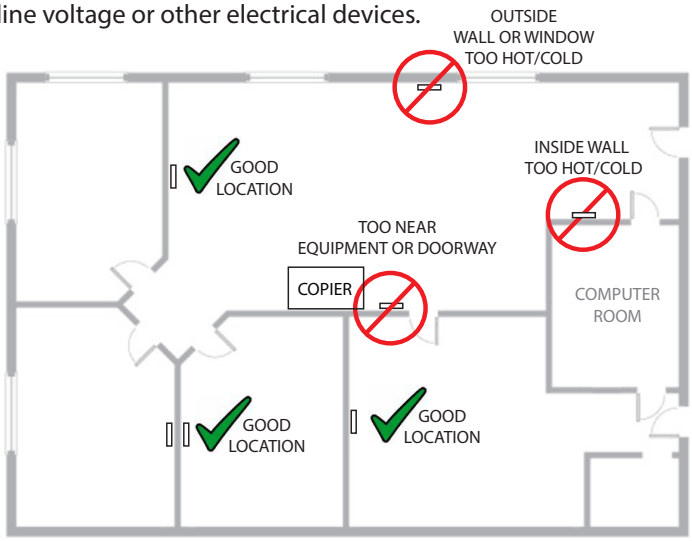
IMPORTANT WARNINGS

- Only qualified trade installers should install this product
- This product is not intended for life-safety applications
- Do not install in hazardous or classified locations
- The installer is responsible for all applicable codes
- De-energize power supply prior to installation or service

INSTALLATION

① IMPORTANT! Locate sensor in an area away from ventillation sources and heat generating equipment and appliances. Sensor should be mounted at light switch height in a vertical orientation. Use insulating material behind sensor to ensure reading accuracy.

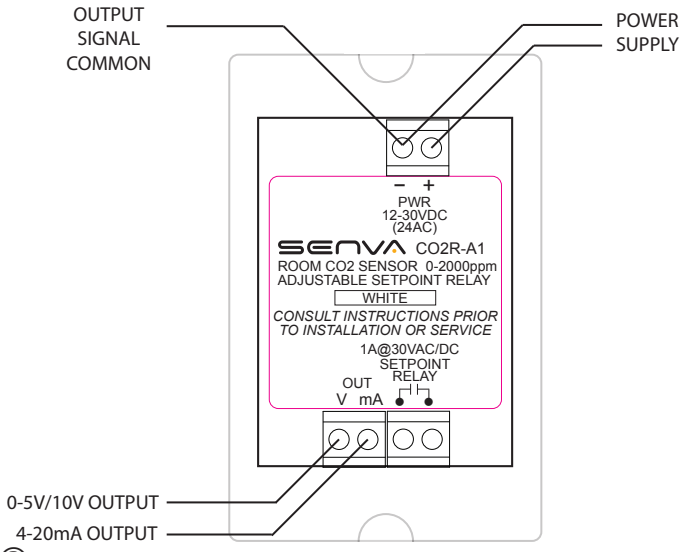
NOTE: Do not install sensor in multi-gang electrical boxes with line voltage or other electrical devices.



PRODUCT APPLICATION LIMITATION:
Senva products are not designed for life or safety applications. Senva products are not intended for use in critical applications such as nuclear facilities, human implantable device or life support. Senva is not liable, in whole or in part, for any claims or damages arising from such uses.

INSTALLATION (CONTINUED)

② Wire sensor according to the product labeling:



③ Install sensor to low-voltage bracket using screws provided.

④ For voltage output operation, move jumper to 5v or 10v.

5V  10V

⑤ Apply power to sensor to complete optional setup functions:

SETUP MENU GUIDE

HOLD ▼AND▲ FOR 5-SECONDS TO ENTER SETUP MENU.

PRESS ▼ OR ▲ TO CHOOSE PARAMETER TO ADJUST.

SPH	Setpoint, Hi (Closed above this level)
SPL	Setpoint, Lo (Open below this level)
SCL	Scaling "2" = 2000ppm, "5" = 5000ppm
ADJ	Manual calibration adjustment +/-250ppm
CAL	Automatic calibration - ON/OFF/RST (reset)
RUN	Exit setup mode - display actual CO2 ppm

PRESS **SELECT** TO EDIT SELECTED PARAMETER

PRESS ▼ OR ▲ TO CHANGE VALUE

PRESS **SELECT** TO RETURN TO PARAMETER MENU

WHEN SETUP IS COMPLETE, SELECT RUN, OR WAIT FOR SETUP MODE TO AUTOMATICALLY TIME-OUT AND REVERT TO RUN MODE.

⑥ Install cover plate. To remove cover plate, gently pry apart from bottom slot using coin or flat-blade screwdriver.

SPECIFICATIONS

Power supply		12-30vdc/24vac (1), 100mA max.
Outputs	Dual analog	3-wire 4-20mA and 0-5v/0-10v (2) (jumper)
Output scaling	Selectable	0-2000ppm (default), 0-5000ppm (option)
Setpoint contact output	Programmable	Solid-state, 1A@30VAC/DC, N.O.
Sensor Performance	Type	Non-dispersive Infrared (NDIR)
	Accuracy	+/-40ppm, +/-3% of reading
	Response time	60 seconds to 90% reading
	Update rate	3 seconds
LCD Menu Setup	SPH, Setpoint, Hi (On point)	500ppm to full-scale (800ppm default)
	SPL, Setpoint, Lo (Off point)	400ppm to full-scale-50 (700ppm default)
	SCL, Scaling	0-2000ppm or 0-5000ppm (2000ppm default)
	ADJ, Adjustment	Offset adjustment +/-250ppm (0 default)
	CAL, Calibration mode	Automatic mode ON, OFF, RST (reset) (default=ON)
	RUN, Run mode	Displays CO2 in ppm
Operating Environment	Temperature	32 to 122ºF (0-50ºC)
	Humidity	0-95%RH, non-condensing
Enclosure	Material	ABS Plastic
	Dimensions (fits low-voltage bracket)	4.7"h x 2.9"w x 1.24"d (0.48" wall profile)

(1) One side of transformer secondary is connected to signal common. Dedicated transformer is recommended.
(2) 15-30vdc/24vac power supply voltage required for 10 volt output.

Automatic Calibration feature:

When CAL mode is set to ON, the sensor will automatically track low ambient CO2 levels and gradually make adjustments to compensate for sensor drift due to long-term aging of the IR light source. In applications where CO2 levels are continuously elevated, or spaces are occupied day and night, it is recommended to leave the automatic calibration OFF. If the sensor module is replaced in the field, the automatic adjustments can be reset by selecting the RST (reset) option in the CAL menu.

TROUBLESHOOTING

Symptom	Solution
No output	Check wiring. Ensure power supply meets requirements.
CO2 reading error	Verify control panel software is configured for correct output scaling.
	Verify accuracy of test instrument. Observe installation and calibration guidelines
	Install insulation behind sensor to prevent air flow from inside wall.
	Perform calibration only if necessary.

CALIBRATION

Senva CO2 sensors are factory calibrated to controlled test gasses. No field calibration is necessary or recommended. However, to facilitate compliance with job requirements and commissioning procedures, provisions for field calibration are provided:

1. Locate calibration instrument and sensor in close proximity to each other in a controlled environment.

2. Compare output or display reading of sensor to calibration instrument, and note difference.

3. Using the built-in setup tool (pushbuttons and LCD) adjust sensor reading as needed.

In extreme cases where the sensor module has been damaged, a new module may be installed in the field. Consult factory for replacement module and instructions.

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