INSTALLATION INSTRUCTIONS

CO2O, Outside Air

CO2 Transmitter

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

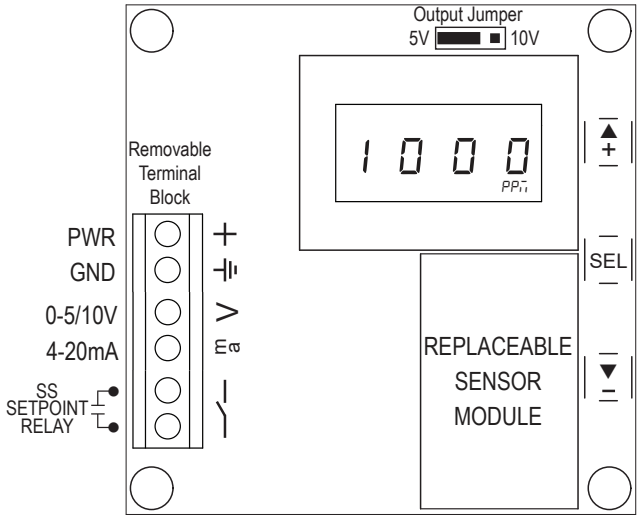
PRODUCT APPLICATION LIMITATION:
Senva products are not designed for life or safety applications. Senva products are not intended for use in critical applications such as nuclear facilities, human implantable device or life support. Senva is not liable, in whole or in part, for any claims or damages arising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

INSTALLATION

1. Locate sensor away from direct sunlight and exposure to heavy rainfall. Secure sensor to building or other outdoor location.

2. Determine if cable gland or conduit adapter (not provided) will be utilized for installation. For conduit connection, remove cable gland and replace with conduit adapter.

3. Wire sensor according to the product labeling:



4. Tighten cable gland firmly around wires. If using conduit adapter, seal wire entry to avoid airflow entering enclosure via conduit.

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

5V ■ 10V

INSTALLATION (CONTINUED)

6. Apply power to sensor.

7. Optional setup functions:

SETUP MENU GUIDE

HOLD ▼ AND ▲ FOR 10 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 mode - ON/OFF/RST (reset)
RUN Exit setup mode - display actual CO2 ppm

PRESS **SEL** (SELECT) TO EDIT SELECTED PARAMETER

PRESS ▼ OR ▲ TO CHANGE VALUE

PRESS **SEL** (SELECT) TO RETURN TO PARAMETER MENU

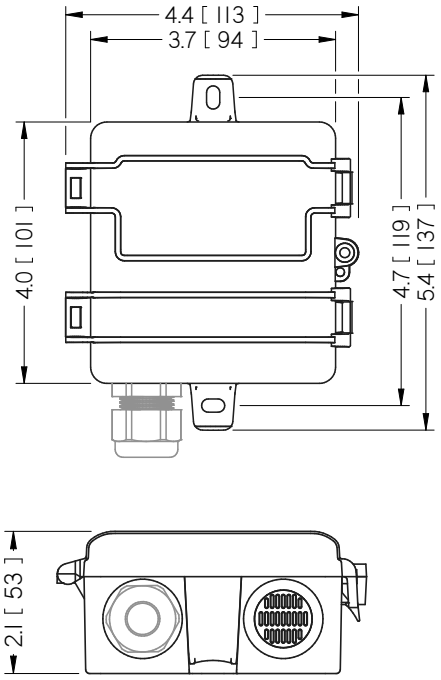
WHEN SETUP IS COMPLETE, SELECT RUN, OR WAIT FOR SETUP MODE TO AUTOMATICALLY TIME-OUT AND REVERT TO RUN MODE.

8. Close/latch housing cover and tighten screw.

OPERATION

In normal operation, display reads CO2 ppm. If levels are above the high setpoint, display will toggle between reading and On until the reading drops below the low setpoint.

DIMENSIONS



SPECIFICATIONS

Power supply		12-30VDC/24VAC (1), 200mA 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	2 minutes to 90% reading
	Update rate	3 seconds
LCD Menu Setup	SPH, Setpoint, Hi (On point)	Adjustable up to 1999ppm (800ppm default)
	SPL, Setpoint, Lo (Off point)	Adjustable up to 1999ppm (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	0 to 122ºF (-18 to 50ºC) (3)
	Humidity	0-95%RH, non-condensing
Enclosure	Material	ABS/Polycarbonate
	Dimensions	4.0"h x 4.4"w x 2.1"d

(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.
(3) Internal heater/thermostat extends operating range below freezing conditions.

Automatic Calibration:

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 RSE (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
	Verify no air is leaking from conduit wire entry.
	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.

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