

INSTALLATION INSTRUCTIONS

CO20, Outside Outside CO2 sensor

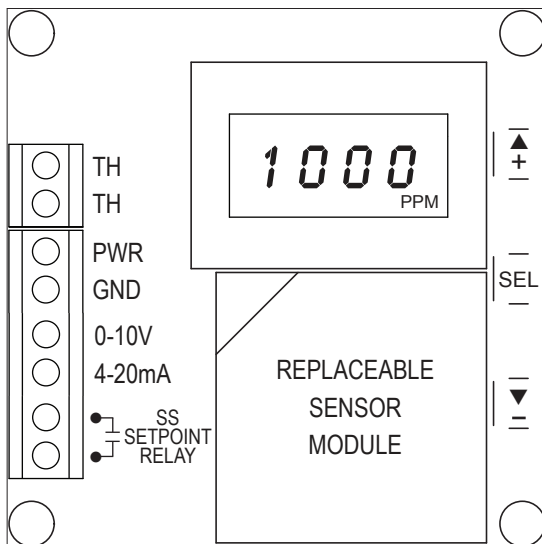


IMPORTANT WARNINGS

- 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 Locate sensor away from direct sunlight and exposure to heavy rainfall. Secure sensor to building or other outdoor location.
- ② Wire sensor according to the product labeling:

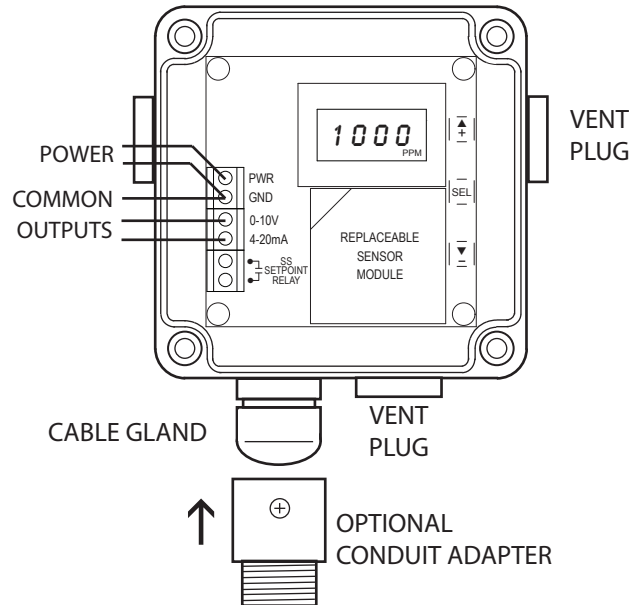


PRODUCT APPLICATION LIMITATION:

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)

Tighten the cable gland around the field wiring to prevent air from entering the enclosure from the conduit and affecting the CO2 reading. For conduit connection, install NPT terminal adapter over cable gland fitting.



- ③ For voltage output operation, move jumper to 5v or 10v.



- ④ 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 mode - 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.

- ⑤ Install housing cover and tighten screws. Make sure cover is securely installed to prevent rain and insects from entering the enclosure.

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	+/-2% full scale to 1400 ppm. (5000 ppm f.s.)
	Response time	60 seconds to 90% reading
	Update rate	3 seconds
LCD Menu Setup	<i>SPH</i> , Setpoint, Hi (On point)	500ppm to full-scale (800ppm default)
	<i>SPL</i> , Setpoint, Lo (Off point)	400ppm to full-scale-50 (700ppm default)
	<i>SCL</i> , Scaling	0-2000ppm or 0-5000ppm (2000ppm default)
	<i>ADJ</i> , Adjustment	Offset adjustment +/-250ppm (0 default)
	<i>CAL</i> , Calibration mode	Automatic mode ON/OFF/RST (reset) (default=ON)
Operating Environment	<i>RUN</i> , Run mode	Displays CO2 in ppm
	Temperature	0 to 122°F (-18-50°C) ⁽³⁾
	Humidity	0-95%RH, non-condensing
Enclosure	Material	Polycarbonate, aluminum tube
	Dimensions	3.7" h x 3.7" w x 2.24" d (+8" probe)

(1) One side of transformer secondary is connected to signal common. Dedicated transformer is recommended.

(2) 15vdc power supply voltage required for 10 volt output.

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

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
	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.

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.