INSTALLATION INSTRUCTIONS

CO-EC-D, CO Gas Monitor

Duct-mount

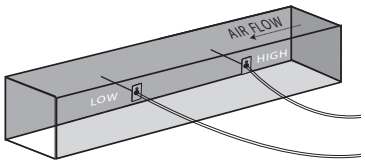
IMPORTANT WARNINGS

- 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

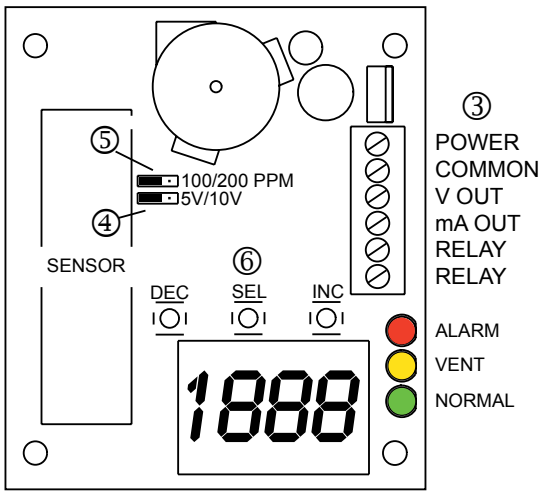
① Mount sensor on or near duct and secure using holes inside enclosure, or using external mounting feet provided.

② Install and plumb pickup tubes as shown:



Connect tubes to hose barb fittings on sensor.

③ Wire sensor according to the product labeling. Terminal block is removeable for wiring convenience.



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)

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

5V [■ ▪] 10V

⑤ Select desired span range by moving jumper to 100 or 200ppm span position.

100 PPM [■ ▪] 200 PPM

⑥ Power on sensor and follow setup menu guide to configure product options"

SETUP MENU GUIDE

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

PRESS ▼ OR ▲ TO CHOOSE PARAMETER TO ADJUST.

SP	Setpoint, (Relay open above this level) 10/25/35ppm Default setpoint is 25ppm
FC	Fan Cycle minimum time. 1 to 10 minutes. Default time is 3 minutes.
CAL	Calibration. Factory set to supplied sensor element. For sensor replacement, enter new number printed on side of sensor (e.g. 1575)
RUN	Exit setup mode - display actual CO 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.

⑦ Install enclosure cover using socket head screws provided.

Consult factory for test gas kit if verification is required.

OPERATION

Display:
LCD reads CO concentration in PPM in normal mode.

Status LED'S:
Green = Normal. Yellow = Vent relay on. Red = Exposure alarm

Relay:
Closed below setpoint. Energized and open above setpoint.

Alarm:
Audible alarm after 30 minutes above 100ppm

Outputs:
0-5v/10v and 4-20mA scaled 0-100 or 0-200ppm

SPECIFICATIONS

Power supply		15-30vdc/24vac (1), 100mA max.
Outputs	Dual analog	3-wire 4-20mA and 0-5v (2)/0-10v (jumper)
Output scaling	Selectable	0-100ppm (default), 0-200ppm (jumper)
Setpoint contact output	Programmable (10/25/35ppm)	Form B, 5A@30VAC/DC
Display	3-1/2 digit LCD	Indicates CO ppm, setup menu features
LED's	Green, Yellow, Red	Green = Normal, Yellow = Relay, Red = Alarm
Audible exposure alarm	90dB Piezo transducer	30 minutes above 100ppm per UL2034
Sensor Performance	Type	Long-life Electrochemical
	Accuracy	+/-10% full scale to 200ppm
	Response time	60 seconds to 90% reading
	Certifications	UL2034 recognized (sensor only)
	Repeatability	<+/-5%
	Life expectancy	5 years
LCD Menu Setup	SP, Setpoint (Relay ON)	10/25/35ppm selectable (25ppm default)
	FC, Fan cycle time (minimum)	1 to 10 minutes (3 minutes default)
	CAL, Calibration	Sensor calibration value (printed on sensor)
	RUN, Run mode	Displays CO in ppm
Operating Environment	Temperature	-10 to 60ºC continuous -40 to 70ºC intermittent
	Humidity	5-99%RH, non-condensing
Enclosure	Material	Polycarbonate
	Dimensions	4.53"h x 3.55"w x 2.3"d

(1) One side of transformer secondary is connected to signal common. Dedicated transformer is recommended.
(2) 12-30vdc/24vac power supply permissible for 0-5v output.

TROUBLESHOOTING

Symptom	Solution
No output	Check wiring. Ensure power supply meets requirements.
CO reading error	Verify control panel software is configured for correct output scaling.
	Verify test gas concentration. Use only factory supplied test gas. Observe proper test procedures
	Sensor contaminated or at end of 5-year life. Replace sensor.
Relay not opening	Verify setpoint. Verify test gas concentration. Cover sensor to prevent drafts and dilution during test.

SENSOR CALIBRATION/REPLACEMENT

Senva CO 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, a test gas verification kit is availble. Sensor elements may also be replaced in the field.

Sensor replacement procedure:

1. Disconnect power.

2. Remove sensor from battery holder.

3. Note 4-digit number on new sensor. (e.g. 1571)

4. Install new sensor in battery holder. Observe polarity. Button end (+) should face up.

5. Cut away metal ribbon from sensor.

6. Follow SETUP MENU GUIDE to enter 4-digit CAL number from sensor.

7. Apply power and allow several minutes warm-up time.