Wall & Duct
CO Sensor/Controller
Stand-alone or with multiple units, controls VFDs or across the line fans directly
LCD display with intuitive set up menu
Integrated set-point and alarm relays

DESCRIPTION
Senva CO Series carbon monoxide sensors maximize energy savings, while ensuring optimal ventilation. These sensors measure and control the amount of CO present in a location. The unit can act as stand alone controller with either relay output for DOL fan operation or 0 to 10VDC or 4 to 20mA outputs for directly controlling variable speed fans. Multiple sensors may be used in parallel sequence (0-10V) for cost effective coverage of large areas.

APPLICATIONS
▪ Ensure adequate air flow in parking lot garage
▪ Control VFDs or across the line fans

FEATURES
Cost-effective CO sensing and control in a compact unit
▪ Integrated display and push-button menus for field selectable scale, calibration, and operational modes
▪ Dual 4-20mA and 0-5V/0-10V output (jumper selectable) for direct control of variable frequency or as input to other controllers
▪ Integrated set-point relay is ideal for direct control applications of DOL fans
▪ 0-10VDC output is internally equipped for parallel connection of multiple sensor voltage outputs for large area coverage. Resulting voltage will be the greater of all connected sensors. Cost-effectively sensing and control of large areas.
High reliability reduces call backs
▪ UL2034 recognized electrochemical sensor element
▪ 5-year, long life sensor—no consumption of sensor active materials or electrodes
High accuracy for improved system performance
▪ Excellent selectivity to carbon monoxide—no false alarms +/-2% repeatability
▪ High sensitivity... accurately measure low concentrations as typically found in parking garages
▪ Long term stability > +/-5%
▪ Fast response time meets UL requirements

CO-EC-EC-D-A
Industrial Wall Mount
CO-EC-EC-W-A
Duct Mount

Replaceable long-life sensor
LCD and push button menu for easy set-up and readings
Selectable outputs for compatibility
Audible alarm
**SPECIFICATIONS**

Power Supply: 12-30VDC/24VAC(1), 100mA max.

Analog Outputs:
- Dual Analog: 3-wire 4-20mA and 0-5V/0-10V (2) (jumper)
- Output scaling: 0-100ppm (default), 0-200ppm (jumper)

Alarm Exposure Relay:
- Programmable (50/100 ppm)
- Form A, 5A@30VAC/DC

Setpoint (Fan) Relay:
- Programmable (5~45ppm)
- Form B, 1A@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
- Reproducibility: +/-2% same day
- Response time: 60 seconds to 90% reading
- Certifications: UL2034 recognized (sensor only)
- Long term stability: <+/-.5% per year
- Life expectancy: 5 years

**LCD Menu**

- Setup Parameters:
  - SP, Setpoint - Fan (Relay ON)
  - RP, Alarm Exposure (Relay ON)
  - FC, Fan cycle time (minimum)
  - CRL, Calibration
  - RTL, Run mode

- Operating Environment:
  - Temperature, continuous: -10 to 60°C
  - Temperature, intermittent: -40 to 70°C
  - Humidity: 5-99% RH, non-condensing

- Enclosure:
  - Material: Polycarbonate
  - Dimensions: 4.53"h x 3.55"w x 2.3"d

**ORDERING**

**CO-EC-**

- **Mounting Style**
  - D = Duct
  - W = Wall

**Replacement Sensor Elements**

- CO-EC-SEN Replacement CO element

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**TERMINAL CONNECTIONS**

**EXAMPLE OF WIRING CONFIGURATION FOR DIRECT CONTROL OF EXHAUST FAN**

- Power: Common
- V out: mA out
- Main Fan Power: 12-24VDC / 24VAC + Common -
- Starter Relays
- Fan Relay
- Alarm Relay
- More CO Sensors