

# NES Series 300 Carbon Monoxide (CO) / Nitrogen Dioxide (NO<sub>2</sub>) Transmitters

## **DESCRIPTION**

The NES Series 300 Carbon Monoxide/Nitrogen Dioxide Transmitters monitor gas concentration in underground parking garages and loading docks. The carbon monoxide transmitter is used to measure the exhaust of gasoline engines, while the nitrogen dioxide transmitter is used for diesel engines. With Dwyer Instruments<sup>®</sup> technology built in, the NES Series 300 is compatible with either BACnet or MODBUS<sup>®</sup> communication protocol via RS-485 wire, allowing the transmitters to be used with almost any building management controller.

To maximize the accuracy of the transmitters, the sensors can be field-calibrated using the A-449 remote LCD display (see below). When the sensor reaches the end of its life, the display will indicate that the sensor needs to be replaced.



## **APPLICATION**

To sense carbon monoxide (CO) and nitrogen dioxide (NO<sub>2</sub>) in a wide variety of commercial and industrial applications, such as vehicle exhaust in parking structures, engine repair shops, tunnels, equipment rooms and ventilation systems, etc., and to transmit to the NES central controller.

#### **FEATURES**

- Industrial grade electrochemical sensor means longer sensor life and less frequent sensor replacements.
- Field replaceable sensors extend transmitter's working life.
- Remote LCD display makes select models more cost effective by only needing one display for multiple transmitters.
- BACnet or MODBUS<sup>®</sup> communication protocol on GSTC allow for gas sensing solutions to be used with almost any building management controller.

#### SPECIFICATIONS (Wall Mounted)

Sensor	Field replaceable electrochemical, 4 years typical lifespan.
Range	NO <sub>2</sub> : 10 PPM; GSTA CO: Switch selectable 200 or 500 PPM; GSTC CO: 500 PPM.
Output Drift	<5% per year in air.
Coverage Area	5000 to 7500 ft <sup>2</sup> typical.
Accuracy	CO: 2% FS; NO <sub>2</sub> : 3% FS, at the time of calibration.
Resolution	CO: 1 PPM; NO <sub>2</sub> : 0.1 PPM.
Temperature Limits	-4 to 122°F (-20 to 50°C).
Storage Temperature	For best sensor life 32 to 68°F (0 to 20°C).
Humidity Limits	15 to 90% RH constant; 0 to 99% RH intermittent.
Response Time	<45 seconds to 90% CO; <25 seconds to 90% NO <sub>2</sub> .
Span and Zero Adjustments	Via pushbutton, using optional A-449 display.
Housing	UV resistant glass filled polycarbonate
Output	GSTA: Switch selectable 4 to 20 mA, 0 to 5 V or 0 to 10 V; GSTC: BACnet MS/TP or MODBUS® RTU (switch selectable) communication protocol.
Power Supply	GSTA: Current Output: 10 to 35 VDC, Voltage Output: 15 to 35 VDC or 15 to 29 VAC; GSTC: 10 to 36 VDC or isolated 21.6 to 33 VAC.
Electrical Connection	Removable terminal block, knock outs for conduit fitting.
Calibration	Via pushbuttons using A-449 display. Span gas concentration is field selectable on CO units.
Weight	1 lb (0.45 kg).
Agency Approvals	CE.

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