

Carbon Monoxide (CO) Analog Gas Transmitters

Specifications subject to change without notice. | USA 200428 | Page 1 of 3



DESCRIPTION

Analog gas transmitters for the detection of carbon monoxide (CO) in the ambient air.

APPLICATION

To sense carbon monoxide (CO) 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 transmit to any compatible electronic analog control, DDC/PLC control or automation system.

FEATURES

- Continuous monitoring
- (0)4-20 mA, (0)2-10 VDC output, selectable
- Easy plug-in sensor
- Electrochemical gas sensor, gas specific
- Polarity protected
- Overload & short circuit protected
- High-impact polycarbonate enclosure, NEMA 4X standard
- Modular plug-in technology
- Easy maintenance
- Heater for low temperature operation, optional

PolyGard® LC-1112 V3



- NRTL Performance Tested to UL 2075 Standards
- EMC Directives 2004/108/EC
- EN 61010-1:2010
- ANSI/UL 61010-1
- CAN/CSA-C22.2 No. 61010-1
- CE
- City of Los Angeles Approved

SPECIFICATIONS

Electrical

Power supply 18-28 VDC, polarity protected
Power consumption 22 mA (0.6 VA), max.

Sensor Performance

Gas detected Carbon monoxide (CO)
Sensor element Electrochemical, diffusion
Range Span field adjustable from 0-200 to 0-300 ppm via calibration,

0-250 ppm factory set
Stability & Resolution ± 3.0 ppm of reading
Repeatability ± 3.0% of reading
Long term output drift < 0.4% signal loss/month
Response time $t_{90} < 50$ sec.

Sensor life expectancy 3-5 years, normal operating environment

Sensor coverage 5,000 sq.ft., max. 10,000 sq.ft. (465 m², max. 930 m²), under "ideal conditions"

Installation Location

Mounting height 5 to 6 ft. (1.5 to 1.8 m) above floor

Type of Control

General Continuous proportional analog sensor signal output

Analog output

(0)4-20 mA, load < 450 Ω;
(0)2-10 VDC, load > 50K Ω;
jumper selectable, polarity protected

Environmental

Permissible ambient
- working temperature 14°F to 122°F (-10°C to 50°C)
- intermittent temperature -4°F to 122°F (-20°C to 50°C)
- storage temperature 41°F to 86°F (5°C to 30°C)
- humidity, continuous 15 to 95% RH, non-condensing
- humidity, intermittent 0 to 99% RH, non-condensing
- working pressure Atmospheric ± 10%

Physical

Enclosure "A", standard

- material Polycarbonate, UL 94 V2, fire-retardant
- conformity UL 50
- color Light gray
- protection NEMA 4X (IP65)
- installation Wall (surface) mounted, or single gang electrical box

Dimensions (H x W x D) 5.12 x 3.70 x 2.25 in. (130 x 94 x 57 mm)

Cable entry

1 hole for 1/2 in. conduit for wall (surface) mounting, and 1 hole on back side of base plate for single gang electrical box mounting

SPECIFICATIONS

Physical (cont...)

Wire connection Terminal blocks, screw type terminal

Wire size Min. 24 AWG (0.25 mm²), Max. 14 AWG (2.5 mm²); *each terminal connection can handle two 18 AWG wires*

Weight 0.6 lb (0.25 kg)

Conforms to

NRTL Performance Tested to UL 2075 Standards
 EMC Directives 2004/108/EC
 EN 61010-1:2010
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 CE

Warranty

City of Los Angeles Approved
 Two years material and workmanship, 12 months normal exposure for sensor element

OPTION

Heater, built-in For low temperature environment

Ambient temperature -40°F (-40°C)

Power consumption 0.2 A (5 VA), max.

Thermostatic control 32°F (0°C) ± 5°F (3°C)

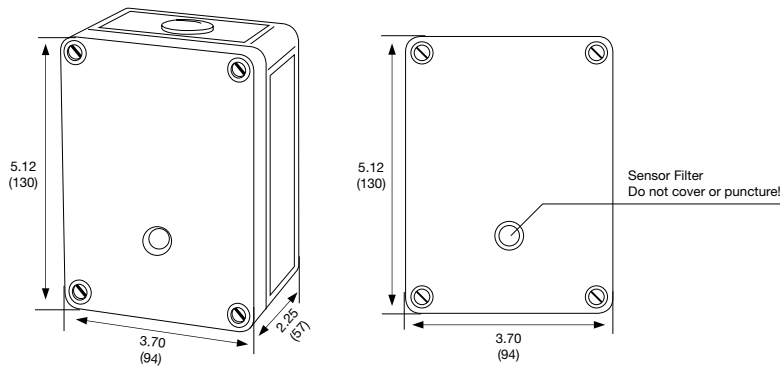
ACCESSORIES

ADT-ENCL-DKIT-A Duct Kit for Type "A" Enclosure: replacement enclosure, 10 in. probe, 6 ft. of tubing

CALKIT-PG1-CO-LC Calibration Kit includes: Sensor calibration adapter w/ tube and cup, 150 mL/min regulator, 17 L 200 ppm carbon monoxide gas bottle, 17 L 99.99% nitrogen gas bottle, carrying case

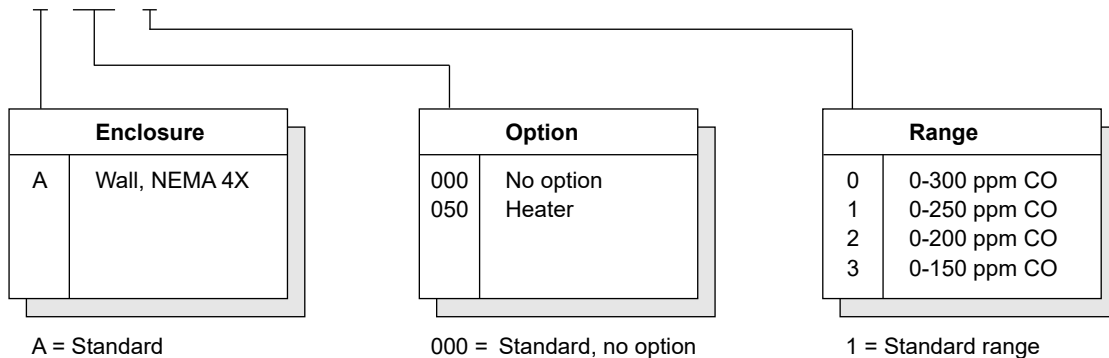
DIMENSIONS

inches (mm)



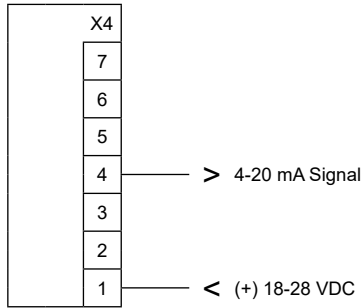
ORDERING INFORMATION

LC-1112 - A - 000 - 1 (Product label "LC-1112-A-000-x V3")

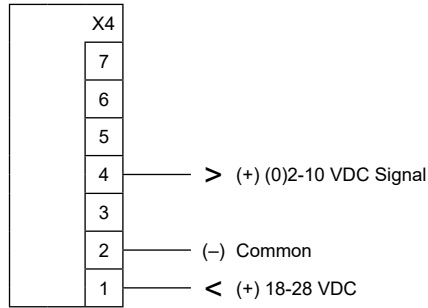


WIRING CONFIGURATION

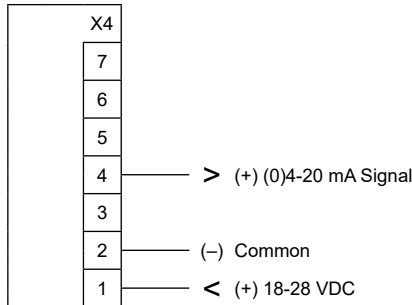
LC-1112
4-20 mA signal, 2-wire, loop-powered, 24 VDC



LC-1112
(0)2-10 VDC signal, 3-wire, 24 VDC



LC-1112
(0)4-20 mA signal, 3-wire, 24 VDC**



Jumper output signal range selectors:

- V-A Over both pins = VDC
Pins not covered = mA
- 0-20% Over both pins = 4-20 mA / 2-10 VDC
Pins not covered = 0-20 mA / 0-10 VDC

Notes:

2-wire loop-powered wire configuration allow only 4-20 mA signal.

Signal range jumper selection:

- V-A Pins not covered
- 0-20% Pins both covered

**** For (0)4-20 mA signal with optional heater, the 3-wire configuration must be applied.**

Twisted, shielded wire is recommended for 2- or 3-wire configurations.

Shield should be grounded only at the controller. DO NOT ground shield at both ends!

With optional heater:

The wiring must be sized appropriately for a power of 0.3 A, 24 VDC.