

Carbon Monoxide (CO) Digital LON Gas Transmitters



**PolyGard
DT-1110 V1**

DESCRIPTION

Digital LON gas transmitters for the detection of carbon monoxide (CO) in the ambient air for direct link to LONWORKS® network.

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 interoperable LON-bus system.

FEATURES

- LONWORKS® *interfacing*
- LONWORKS® *functional profile*
- *Continuous monitoring*
- *Easy plug-in sensor*
- *Electrochemical gas sensor, gas specific, long-life*
- *Temperature compensated*
- *4-20 mA input from remote analog transmitter*
- *Polarity protected*
- *Overload & short circuit protected*
- *RFI/EMI protected*
- *Modular plug-in technology*
- *Easy maintenance*



City of Los Angeles
Approved



SPECIFICATIONS

Electrical

Power supply 10-28 VDC, polarity protected
 Power consumption 28 mA (0.7 VA)
 RFI/EMI protection 5.0 W @ 1 ft. (0.31 m) radiated

Sensor Performance

Gas detected Carbon monoxide (CO)
 Sensor element Electrochemical, diffusion
 Range 0-300 ppm, factory set
 Resolution ± 3 ppm of reading
 Repeatability ± 3% of reading
 Long term output drift < 0.4% signal loss/month
 Response time $t_{90} < 50$ sec.
 Sensor life expectancy 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 sensor signal
 LONWORKS® Standard network variables
 SNVTs according LONMARK® application layer, Interoperability directives, version 3.2
 - transceiver FTT-10A

AT series remote gas transmitter input capability
 - analog input

(1) 4-20 mA, overload and short circuit protected
 24 VDC, max. load 100 mA

Environmental

Permissible ambient
 - working temperature
 - storage temperature
 - humidity, continuous
 - humidity, intermitted
 - working pressure

14°F to 122°F (-10°C to 50°C)
 41°F to 86°F (5°C to 30°C)
 15 to 90% RH, non-condensing
 0 to 99% RH, non-condensing
 Atmospheric ± 10%

Physical

Enclosure, standard

- material Galvanized steel w/zinc coating, corrosion resistant
 - color Light gray
 - protection NEMA 1 (IP 42), general purpose
 - installation Wall (surface) mounted, or single gang electrical box

Dimensions (H x W x D)

5.59 x 5.59 x 2.48 in.
 (142 x 142 x 63 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

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SPECIFICATIONS

Physical (cont...)

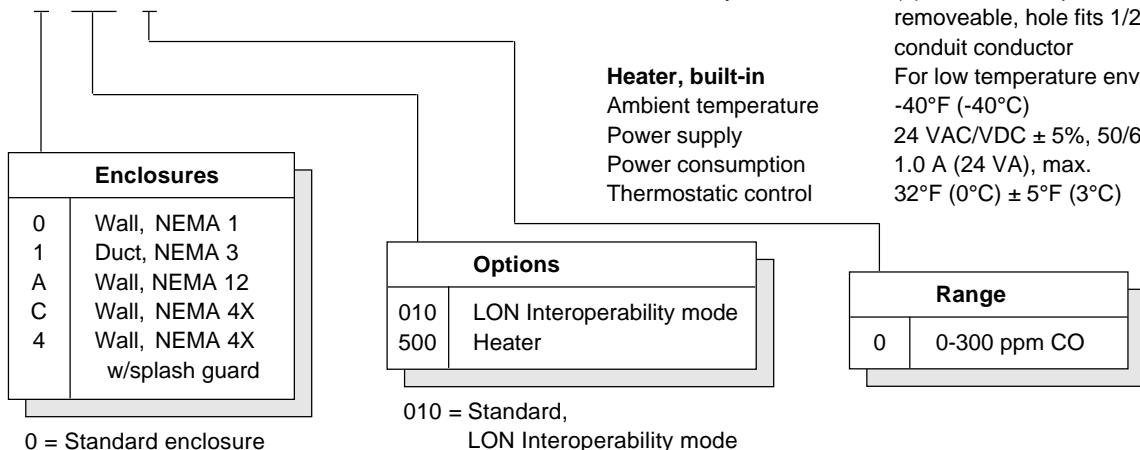
Wire connection	Terminal blocks, screw type for lead wire
Wire size	Min. 24 AWG (0.25 mm ²), Max. 14 AWG (2.5 mm ²)
Weight	0.7 lbs. (0.3 kg)
Approvals/Listings	
- sensor element	UL Recognized CO Sensor
- unit rating	City of Los Angeles CE Conformity according LONMARK® Interoperability Association VDI 2053, air treatment systems for garages and tunnels EMV-Compliance 89/336/EWG, low voltage directives 73/23/EWG
Warranty	Two years material and workmanship

OPTIONS

Enclosures	
Duct mounted "1"	NEMA 3 (IP45) 7/8 in. (22 mm) diameter and 7.16 in. (182 mm) length 1 hole for 1/2 in. conduit
- w/probe	
- cable entry	
Wall mounted "A"	NEMA 12 (IP55) Polycarbonate, UL 94-HB, fire-retardant
- material	
- conformity	UL 50
- color	Light gray
- 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
- enclosure approval	UL Listed, E208470 CSA Certified, E208470
Wall mounted "C"	NEMA 4X (IP65) Polycarbonate, UL 94-HB, fire-retardant
- material	
- conformity	UL 50
- color	Light gray
- gas inlet	Special moisture filter protection
- installation	Wall (surface) mount
- dimensions (H x W x D)	5.12 x 5.12 x 2.95 in. (130 x 130 x 75 mm)
- cable entry	(1) PG 13.5 compression fitting, removeable, hole fits 1/2 in. conduit conductor
- enclosure approval	UL Listed, E208470 CSA Certified, E208470
Wall mounted "4"	NEMA 4X, (IP65) w/splash guard
- material	ABS UL94 V0
- color	Light gray
- installation	Wall (surface) mount
- dimensions (H x W x D)	4.80 x 4.72 x 3.42 in. (122 x 120 x 87 mm)
- cable entry	(1) PG 13.5 compression fitting, removeable, hole fits 1/2 in. conduit conductor
Heater, built-in	
Ambient temperature	For low temperature environment -40°F (-40°C)
Power supply	24 VAC/VDC ± 5%, 50/60 Hz
Power consumption	1.0 A (24 VA), max.
Thermostatic control	32°F (0°C) ± 5°F (3°C)

ORDERING INFORMATION

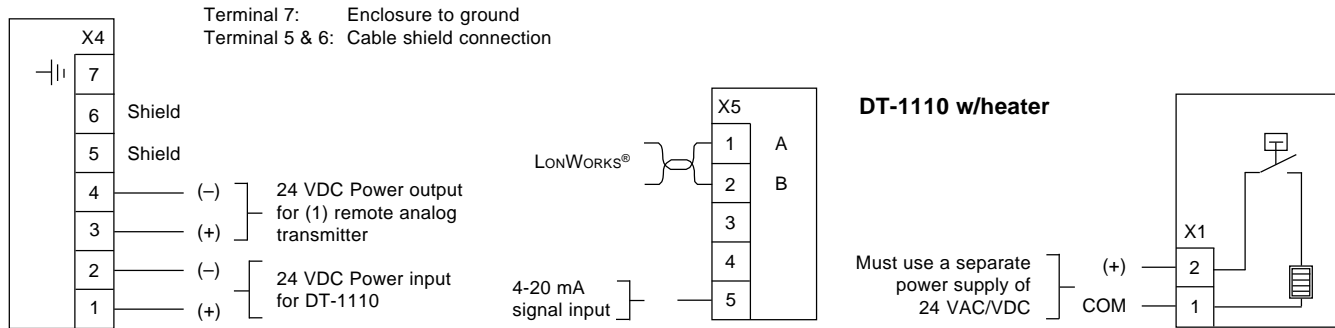
DT-1110 - 0 - 010 - 0 (Product label "DT-1110-x-x10-0 V1")



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WIRING CONFIGURATION

DT-1110



LONMARK®, PRODUCT DETAILS

Product data sheet	PolyGard digital transmitter DT
Device category	Gas Concentration
Communicaton	TP/FT-10
LONMARK® version	3.2

LONMARK® object	0000 - Node object 0001 - Open loop sensor object 0002 - Open loop sensor object
Download files	8000230A50060402.zip XIF (external interface file)
Standard program ID	8000230A50060402
Certificates	TÜV, VDI 2053

Standard Network and Configuration Variables

The DT-1110 LON gas transmitters are for direct link to LONWORKS® network. The transmitter functions are made available to the LONWORKS® network as standard network variables according to LONMARK®.

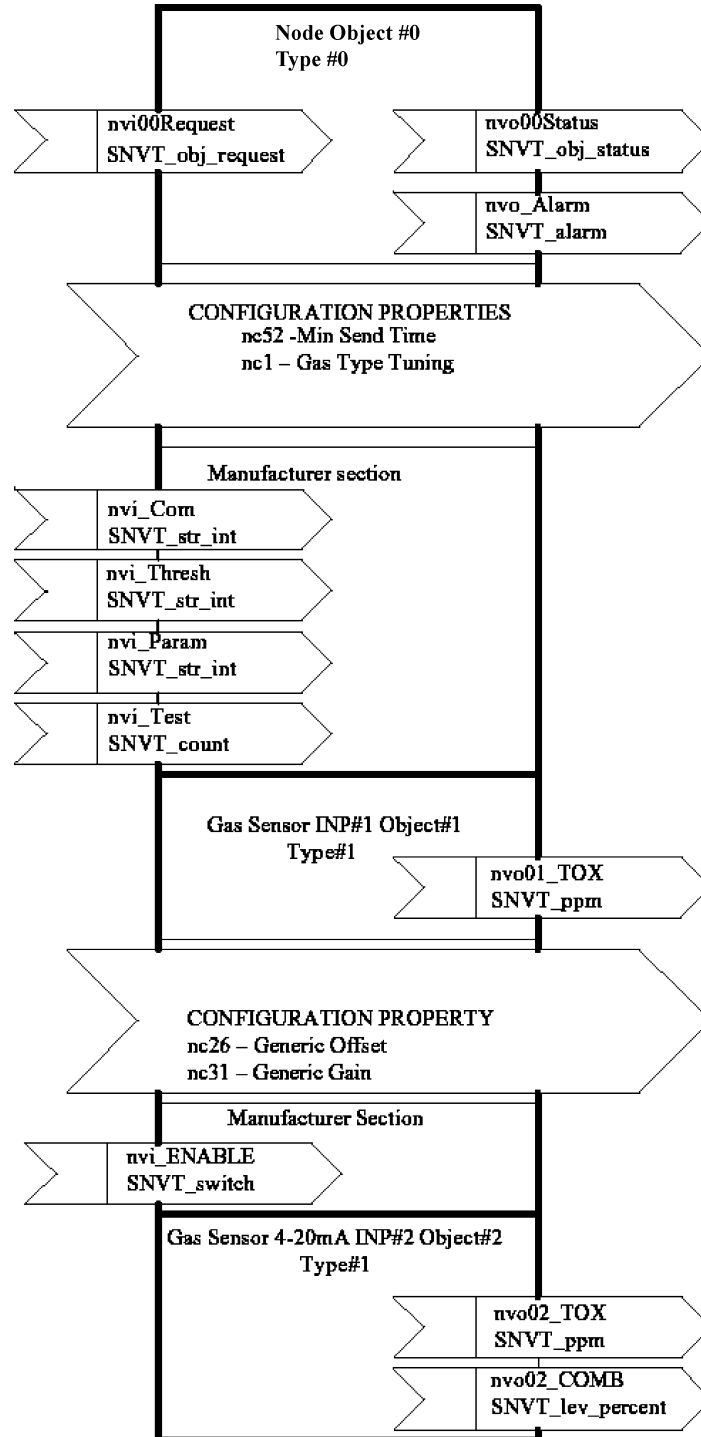


Figure 1.
Measuring Head