

Nitrogen Dioxide (NO₂) Digital LON Gas Transmitters



DESCRIPTION

Digital LON gas transmitters for the detection of nitrogen dioxide (NO₂) in the ambient air for direct link to LONWORKS® network.

**PolyGard NO₂
DT-1130**

APPLICATION

To sense nitrogen dioxide (NO₂) 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*
- *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 Nitrogen dioxide (NO₂)
 Sensor element Electrochemical, diffusion
 Range 0-20 ppm, factory set
 Stability & resolution ± 0.1 ppm of reading
 Repeatability ± 2% of reading
 Long term output drift < 2% signal loss/month
 Response time τ₉₀ < 60 sec.
 Sensor life expectancy 2 years, normal operating environment
 Sensor coverage 4,000 sq.ft., max. 6,000 sq.ft. (372 m², max. 558 m²), under "ideal conditions"

Installation Location

Mounting height 1 to 3 ft (0.3 to 1.0 m) above floor for standard garage applications, consult with factory for other applications

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
- power output 24 VDC, max. load 100 mA

Environmental

Permissible ambient
 - working temperature 14°F to 104°F (-10°C to 40°C)
 - storage temperature 41°F to 86°F (5°C to 30°C)
 - humidity 15 to 95% RH, non-condensing
 - working pressure Atmospheric ± 10%

Physical

Enclosure, standard
 - material Galvanized steel w/zinc coating, corrosion resistant
 - color Light gray
 - protection NEMA 1, general purpose
 - installation Wall (surface) mounted, or single gang electrical box
 Dimensions 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
 Wire connection Terminal blocks, screw type for lead wire
 Wire size Min. 24 AWG (0.25 mm²), Max. 14 AWG (2.5 mm²)
 Weight 0.7 lbs. (0.3 kg)

SPECIFICATIONS

Approvals/Listings CE
 City of Los Angeles
 Conformity according LONMARK®
 Interoperability Association
 EMV-Compliance 89/336/EWG,
 low voltage directives 73/23/EWG

Warranty Two years material and
 workmanship,
 12 months normal exposure for
 sensor element

OPTIONS

Enclosures
Duct mounted NEMA 3 (IP 45)
 - w/probe 7/8 in. (22 mm) diameter and
 7.16 in. (182 mm) length
 1 hole for 1/2 in. conduit

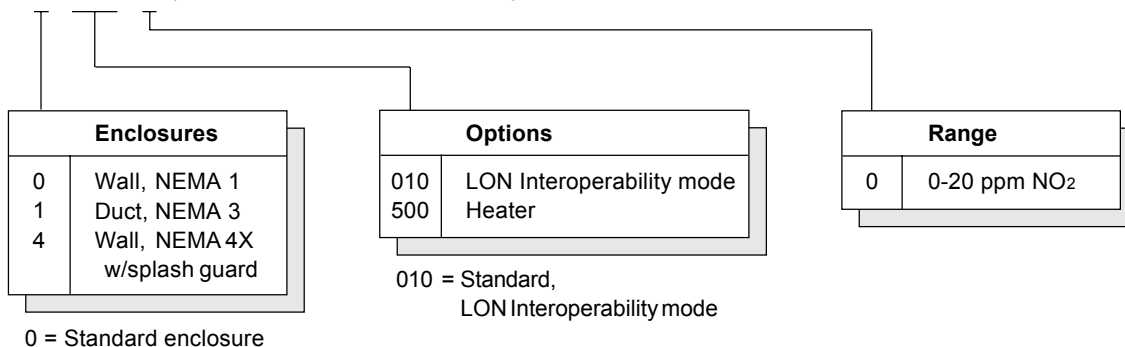
- cable entry

Wall mounted NEMA 4X, w/splash guard (IP 65)
 - material ABS UL94 V0
 - color Light gray
 - dimensions 4.80 x 4.72 x 3.42 in.
 (122 x 120 x 87 mm)

Heater, built-in For low temperature environment
 Ambient temperature -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)

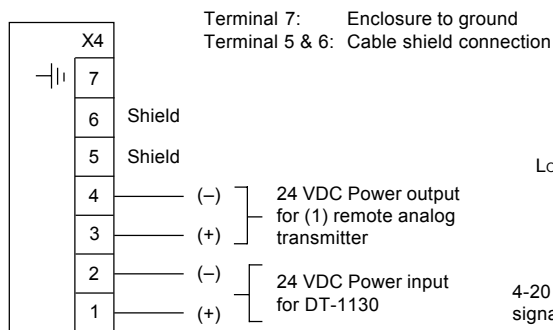
ORDERING INFORMATION

DT-1130 - 0 - 010 - 0 (Product label "DT-1130-x-xxx-0 V2")

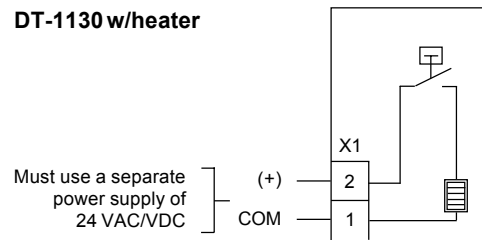


WIRING CONFIGURATION

DT-1130



DT-1130 w/heater



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

Standard Network and Configuration Variables

The DT-1130 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®.

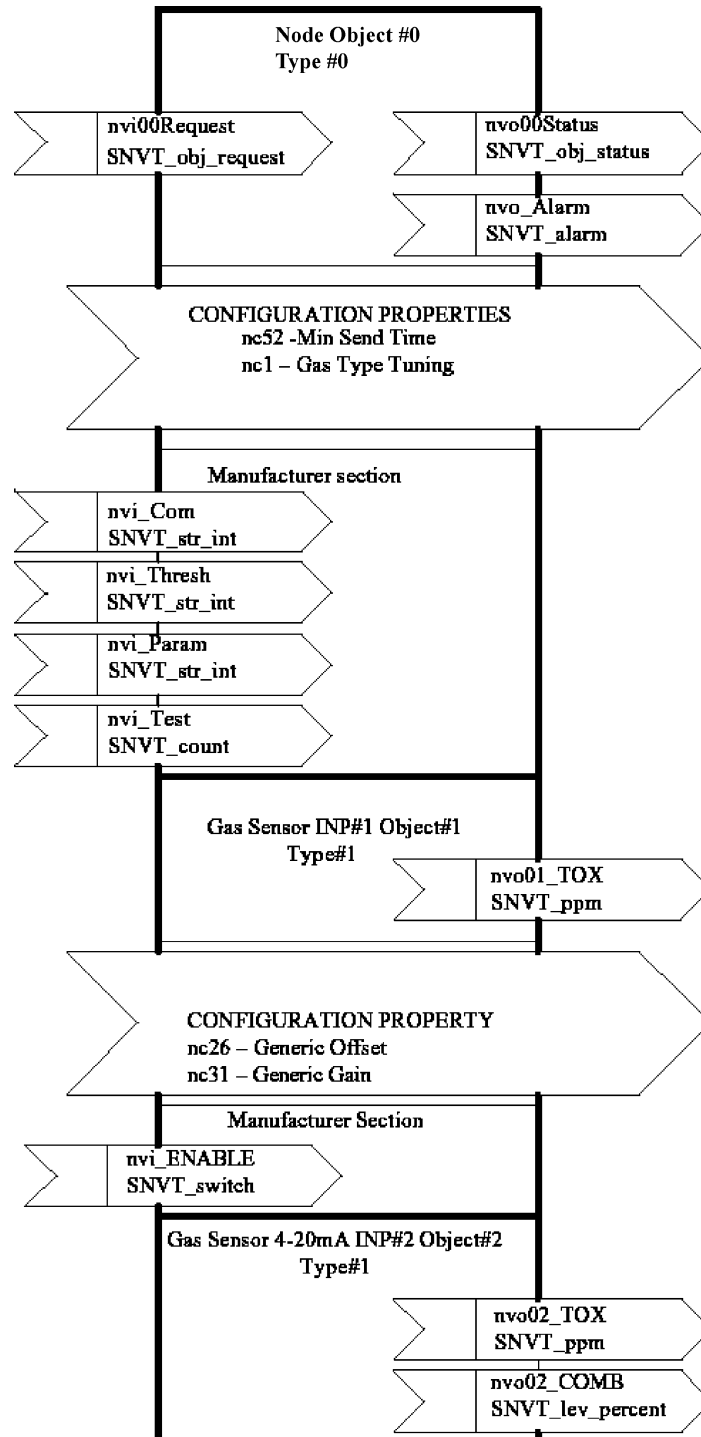


Figure 1.
Measuring Head