

Ammonia (NH₃) Digital LON Gas Transmitters



DESCRIPTION

Digital LON gas transmitters for the detection of ammonia (NH₃) in the ambient air for direct link to LONWORKS® network.

**PolyGard NH₃
DT-1120**

APPLICATION

To sense ammonia (NH₃) in a wide variety of commercial and industrial applications such as chiller equipment rooms, food storages, freezers, arenas, brewers 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



LONMARK
ASSOCIATE



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	Ammonia (NH ₃)
Sensor element	Electrochemical, diffusion
Range	0-1000 ppm, factory set
Resolution	< 12 ppm
Long term sensitivity drift	< 10% / 6 months
Response time	t ₅₀ < 20 sec., t ₉₀ < 90 sec.
Sensor life expectancy	2 years, normal operating environment
Sensor coverage	2,000 sq.ft., max. 3,000 sq.ft. (180 m ² , max. 280 m ²), under "ideal conditions"

Installation Location

Mounting height	1 foot (0.3 m) below ceiling
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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, continuous	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 mm ²), Max. 14 AWG (2.5 mm ²)
Weight	0.7 lbs. (0.3 kg)

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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

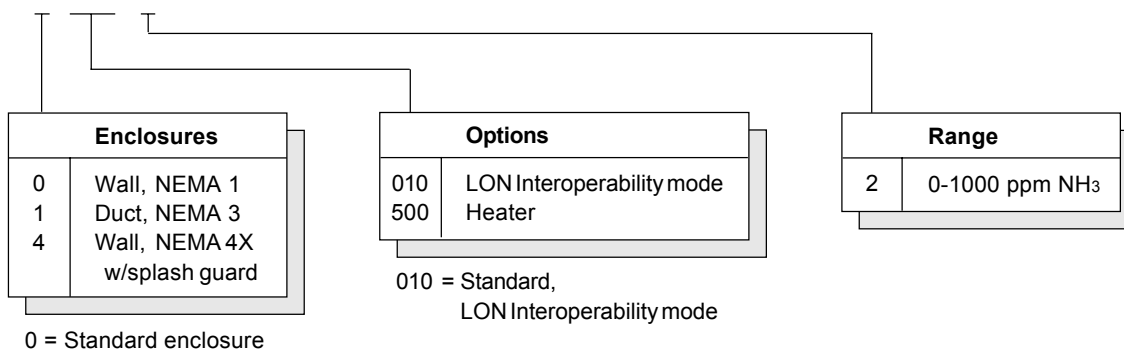
Enclosures
Duct mounted NEMA 3
 7/8 in. (22 mm) diameter and
 7.16 in. (182 mm) length
 1 hole for 1/2 in. conduit

Wall mounted NEMA 4X, w/splash guard
 ABS UL94 V0
 Light gray
 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)

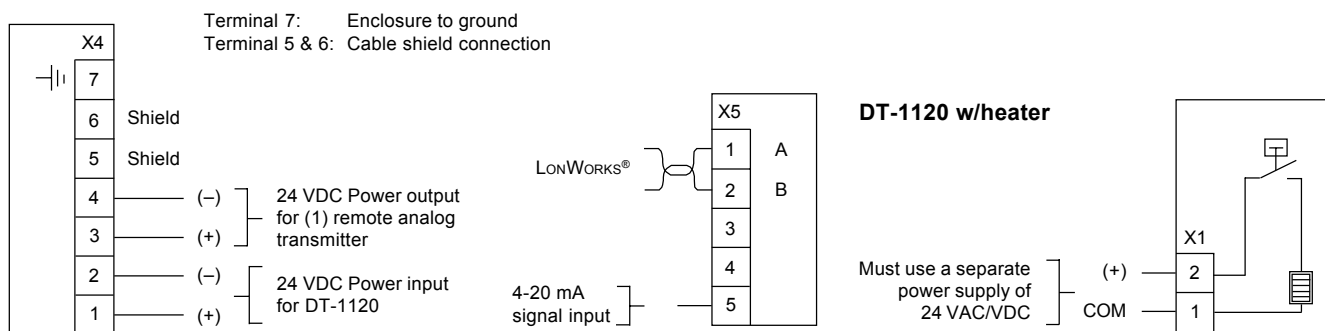
ORDERING INFORMATION

DT-1120 - 0 - 010 - 2



WIRING CONFIGURATION

DT-1120



LONMARK®, PRODUCT DETAILS

Product data sheet PolyGard digital transmitter DT
 Device category Gas Concentration
 Communication 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-1120 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®.

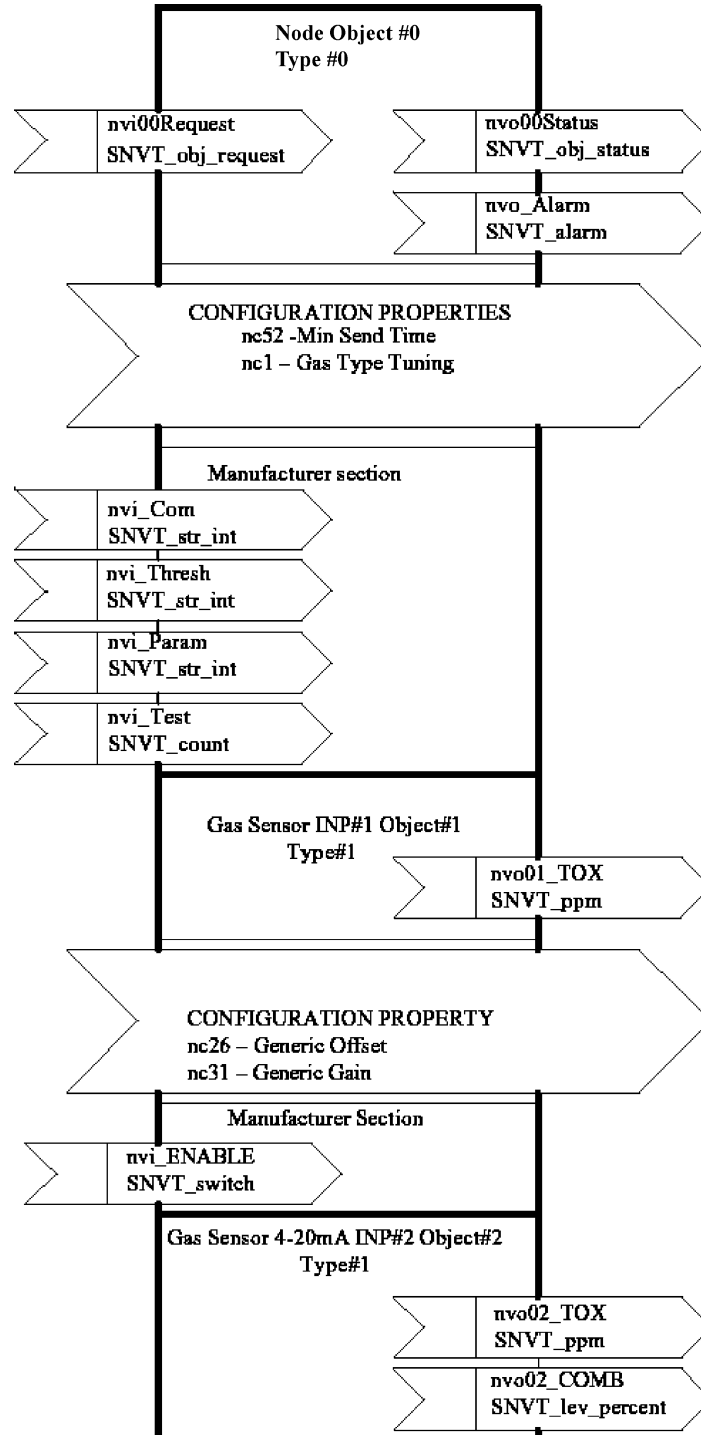


Figure 1.
Measuring Head