

Combustible Gas Digital LON Gas Transmitters



DESCRIPTION

Digital LON gas transmitters for the detection of combustible gases and vapors in the ambient air for direct link to LONWORKS® network.

APPLICATION

To sense combustible gases and vapors in a wide variety of commercial and industrial applications such as boiler rooms (i.e. Methane), dry cell battery rooms (i.e. Hydrogen), gas/fuel spill locations (i.e. Gasoline, Hexane), laboratories and industries (i.e. Butane, Propane) and transmit to any compatible interoperable LON-bus system.

FEATURES

- LONWORKS® *interfacing*
- LONWORKS® *functional profile*
- *Continuous monitoring*
- *Easy plug-in sensor*
- *Catalytic bead (pellistor) long-life sensor*
- *Temperature compensated*
- *Polarity protected*
- *Overload & short circuit protected*
- *RFI/EMI protected*
- *Modular plug-in technology*
- *Easy maintenance*

PolyGard Combustible DT-3300



City of Los Angeles Approved



LONMARK ASSOCIATE



SPECIFICATIONS

Electrical

Power supply	10-28 VAC or VDC, polarity protected
Power consumption	55 mA (1.6 VA)
RFI/EMI protection	5.0 W @ 1 ft. (0.31 m) radiated

Sensor Performance

Gas detected	Combustible gases and vapors (refer to table)
Sensor element	Catalytic bead (pellistor), diffusion

Range	0-100% LEL; linear 0-60% LEL
Detection limit	0.5% LEL
Accuracy	± 1% of reading
Repeatability	± 2% of reading
Long term zero point drift	< 2.5% LEL _{methane} /year
Long term sensitivity drift	< 2% LEL _{methane} /month
Response time	t ₉₀ < 10 sec. _{methane}
Sensor life expectancy	3 yrs., normal operating environ.
Sensor coverage	Dependent on the target gas

Installation Location

Mounting height	Dependent on the target gas
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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

Environmental

Permissible ambient	
- working temperature	14°F to 122°F (-10°C to 50°C)
- storage temperature	41°F to 86°F (5°C to 30°C)
- humidity, continuous	15 to 90% RH, non-condensing
- humidity, intermitted	0 to 99% 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

Combustible Gases/Vapors		% v/v*
Acetone	(CH ₃) ₂ CO	2.6
Ammonia	NH ₃	15.0
Benzene	C ₆ H ₆	1.2
Carbon Monoxide	CO	12.5
Ethylene	CH ₂	2.3
Ethyl Acetate	CH ₃ COOC ₂ H ₅	2.2
Ethyl Alcohol	C ₂ H ₅ OH	3.3
Hydrogen	H ₂	4.0
Isopropyl Alcohol	(CH ₃) ₂ CHOH	2.2
JP8	-	0.9
Methane	CH ₄	5.0
Methanol	CH ₃ OH	6.7
Methyl Ethyl Ketone	C ₄ H ₈ O	1.9
n-Butane	C ₄ H ₁₀	1.8
n-Heptane	C ₇ H ₁₆	1.05
n-Hexane	C ₆ H ₁₄	1.1
n-Octane	C ₈ H ₁₈	0.95
n-Pentane	C ₅ H ₁₂	1.4
Propane	C ₃ H ₈	2.1
Toluene	C ₇ H ₈	1.2

* x% v/v = 100% LEL
LEL = Lower Explosive Limit
v/v = Volume by Volume

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SPECIFICATIONS

Physical (cont...)

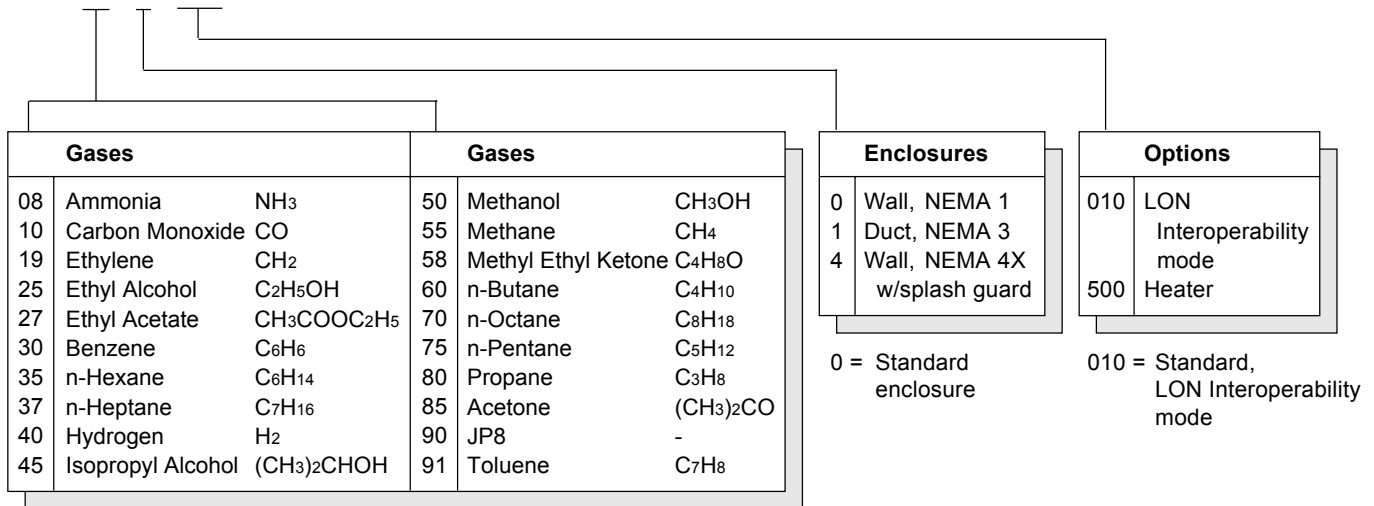
Dimensions	5.59 x 5.59 x 2.48 in. (142 x 142 x 63 mm)
Cable entry	1 hole for 1/2 in. conduit for wall (surface) mounting and 1 hole on back side of base plate for single gang electrical box mounting
Wire connection	Terminal blocks, screw type for lead wire
Wire size	Min. 24 AWG (0.25 mm ²), Max. 14 AWG (2.5 mm ²)
Weight	0.7 lbs. (0.3 kg)
Approvals/Listings	UL Recognized and CSA Certified combustible sensor 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

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
- w/probe	
- cable entry	
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)
- material	
- color	
- dimensions	
Heater, built-in	For low temperature environment -40°F (-40°C)
Ambient temperature	
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-3300 - 0 - 010 - 0 (Product label "DT-33xx-x-xxx-0 V2")



Standard Network and Configuration Variables

The DT-3300 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®.

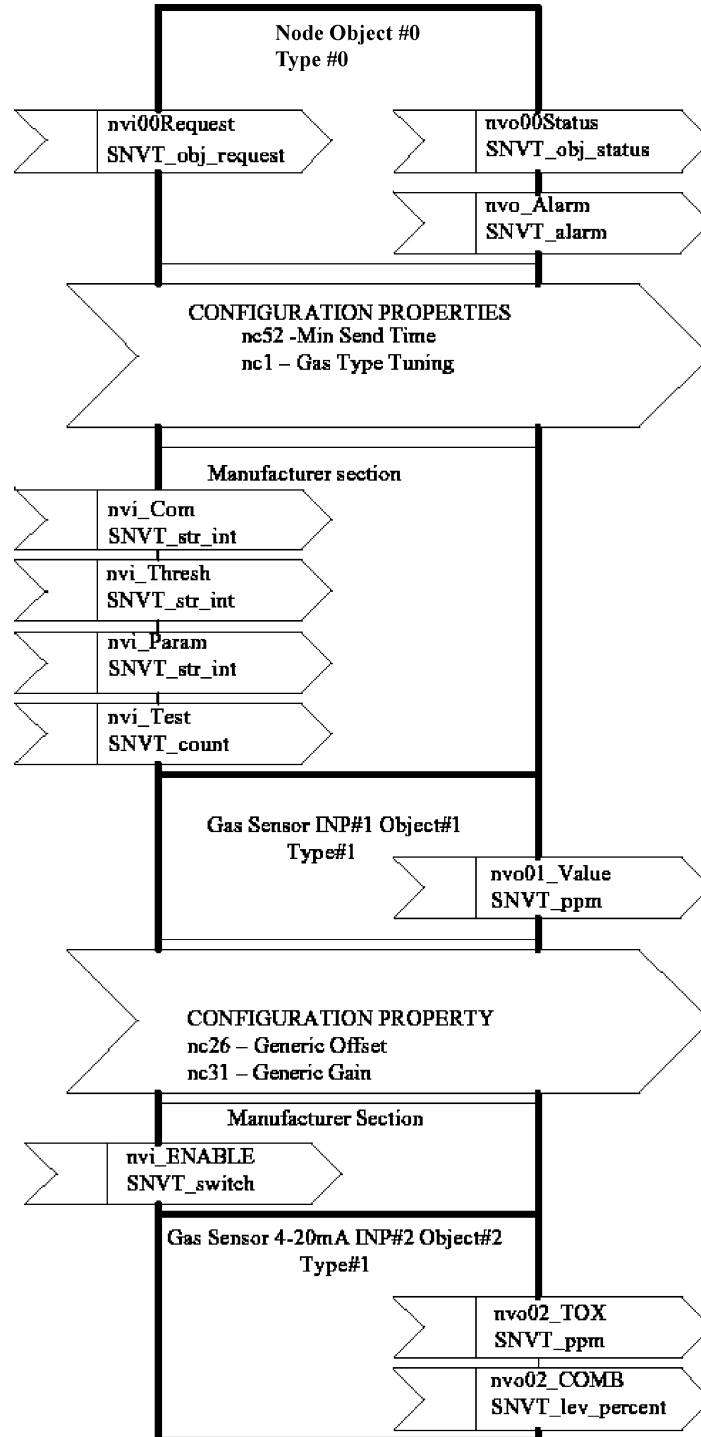


Figure 1.
Measuring Head