

Electrochemical Toxic Gas Analog Transmitters

Specifications subject to change without notice. | USA 200131 | Page 1 of 2



ITS-6000

DESCRIPTION

Analog gas transmitters for the detection of toxic gases in the ambient air.

APPLICATION

To sense toxic gases in a wide variety of commercial and industrial applications and transmit to any compatible electronic analog control, DDC/PLC control or automation system.

FEATURES

- Continuous monitoring
- 4-20 mA analog signal output
- Fuse and polarity protected
- RFI/EMI protected
- Industry standard
- Easy maintenance



SPECIFICATIONS

Electrical

Power supply	12-36 VDC
Fuse protection	0.5 A, socketed pico fuse
Power consumption	0.6 VA, max.
RFI/EMI protection	4.0 W @ 3.3 ft. (1.0 m) radiated

Sensor Performance

Gas detected	Toxic gases (refer to table)
Sensor element	Electrochemical, diffusion
Range	ppm (refer to table)
Accuracy/resolution	± 2.5% of reading
Repeatability	± 1% of reading
Output drift	< 0.4% signal loss/month
Response time	< 60 sec. @ t90
Sensor life expectancy	2-3 years, normal service

Type of Control

General	Continuous proportional analog sensor signal output
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Analog output	4-20 mA, 2-wire, into 750 Ohm
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Environmental

Permissible ambient	
- humidity, sensor element	15 to 90% RH, non-condensing
- humidity, transmitter	0-99% RH, non-condensing
- working pressure	Atmospheric ± 10%
- temperature, transmitter	-40°F to 122°F (-40°C to 50°C)

Physical

Enclosure, commercial	
- material	C, D, N Heavy duty ABS, fire retardant, UL 94-V-0
- color	C, D, N Beige
- protection	C, D NEMA 1 N NEMA 4X, weather proof
- installation	C, N Wall (surface) mounted, or single gang electrical box D Duct mounted
Dimensions	C, N 4.2 x 6.6 x 2.6 in. (107 x 168 x 66 mm)
Cable entry	C, N 1/2 in. conduit entry holes supplied on top and rear of enclosure

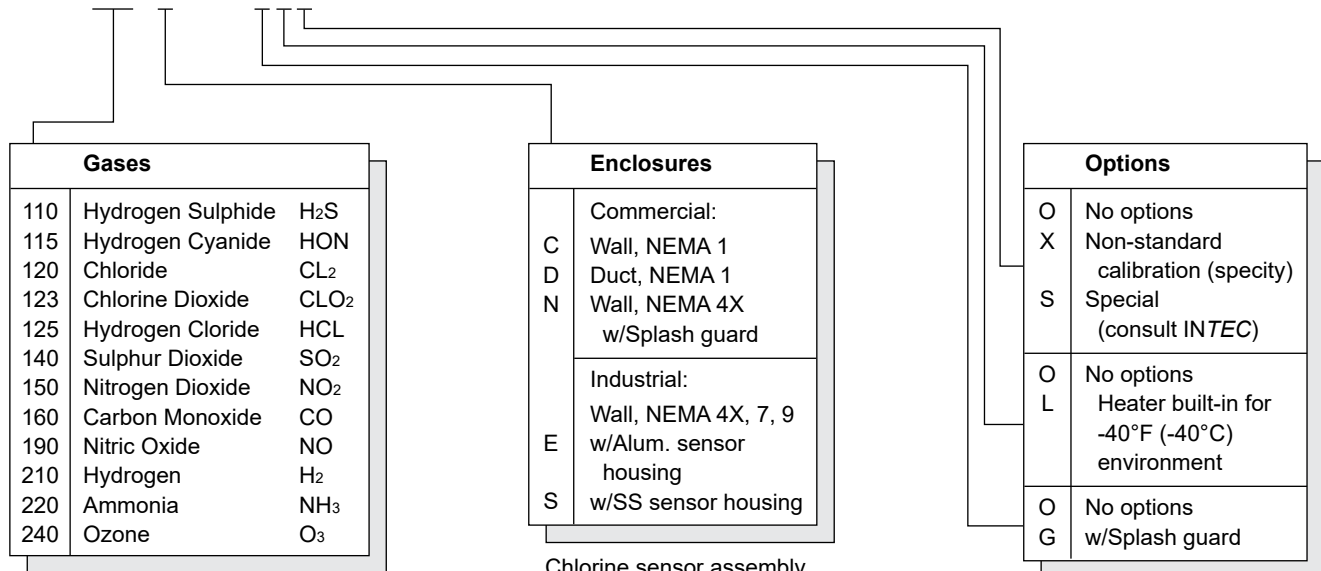
Enclosure, industrial

"Explosion proof"	
- material	E Cast aluminum, epoxy painted S As before, but w/316 SS sensor housing
- color	E, S Blue and silver for 316 SS sensor housing
- protection	E, S NEMA 4X, weather proof Type 7 and 9 explosion proof, Class 1, Div. 1, Groups B, C, D, CSA, FM, UL Listed
- installation	E, S Surface mounted
Dimensions	E, S 4.9 x 8.4 x 4.9 in. (124 x 213 x 124 mm)
Cable entry	E, S For 3/4 in. NPT conduit
Wire connection	Terminal block, screw type for lead wire
Wire size	Min. 24 AWG (0.25 mm ²), Max. 14 AWG (2.5 mm ²)
Wire distance	Loop resistance @ 750 Ohms max. with 24 VDC (= wire resistance plus controller input resistance)
Weight	C 1.00 lb (0.45 kg) D 1.50 lb (0.68 kg) N 1.30 lb (0.59 kg) E 3.50 lb (1.59 kg) S 3.70 lb (1.68 kg)
Approvals/Listings	CSA – C22.2-30 C22.2-142 C22.2-157 (pending)
Warranty	Limited two years, 6 months sensing element

Part Number ITS-61...	Toxic Gas	Std. Range ppm	Sensor Element Working* Temperature °F (°C)	Recommended		Sensor Coverage "ideal conditions" (m2)	
				Alarm Settings			Mounting Height A.F. = Above Floor ft (m) B.C. = Below Ceilingft (m)
				Low ppm	High ppm		
110	Hydrogen Sulphide	0-25	-40 to 122 (-40 to 50)	10.0	20.0	A.F. 0.75 to 1.5 (0.23 to 0.45)	xx – xx (-xx to xx)
115	Hydrogen Cyanide	0-20	-4 to 122 (-20 to 50)	10.0	15.0	A.F. 4.00 to 6.0 (1.20 to 1.80)	xx – xx (-xx to xx)
120	Chlorine	0-3	-4 to 122 (-20 to 50)	0.5	2.0	A.F. 0.75 to 1.5 (0.23 to 0.45)	xx – xx (-xx to xx)
123	Chlorine Dioxide	0-1	-4 to 122 (-20 to 50)	0.1	0.3	A.F. 0.75 to 1.5 (0.23 to 0.45)	xx – xx (-xx to xx)
125	Hydrogen Chloride	0-10	-4 to 122 (-20 to 50)	5.0	7.0	A.F. 4.00 to 6.0 (1.20 to 1.80)	xx – xx (-xx to xx)
140	Sulphur Dioxide	0-6	-4 to 122 (-20 to 50)	2.0	5.0	A.F. 0.75 to 1.5 (0.23 to 0.45)	xx – xx (-xx to xx)
150	Nitrogen Dioxide	0-6	-4 to 122 (-20 to 50)	1.0	3.0	A.F. 0.75 to 1.5 (0.23 to 0.45)	xx – xx (-xx to xx)
160	Carbon Monoxide	0-250	-4 to 122 (-20 to 50)	10.0	100.0	A.F. 4.00 to 6.0 (1.20 to 1.80)	xx – xx (-xx to xx)
190	Nitric Oxide	0-100	-4 to 122 (-20 to 50)	25.0	50.0	A.F. 4.00 to 6.0 (1.20 to 1.80)	xx – xx (-xx to xx)
211	Hydrogen	0-2000	-4 to 122 (-20 to 50)	500.0	1000.0	B.C. 0.75 to 1.5 (0.23 to 0.45)	xx – xx (-xx to xx)
220	Ammonia	0-50	-13 to 86 (-25 to 30)	25.0	35.0	B.C. 0.75 to 1.5 (0.23 to 0.45)	xx – xx (-xx to xx)
240	Ozone	0-3	-4 to 122 (-20 to 50)	0.5	2.0	B.C. 0.75 to 1.5 (0.23 to 0.45)	xx – xx (-xx to xx)

ORDERING INFORMATION

ITS-61110 - C 000 000



Example: ITS-61110-C000000
 Analog hydrogen sulphide transmitter,
 w/wall NEMA 1 enclosure,
 0-25 ppm range, no options

Chlorine sensor assembly
 (E,S) not explosion-proof
 listed

Heater built-in available only
 for enclosure type C and N

WIRING CONFIGURATION

ITS-6000
24 VDC, 2-wire configuration

