



Industrial NEMA 4X



Commercial NEMA 4X

QTS-6000 SERIES Toxic Gas Transmitter

The QTS-6000 Series features a 2-Wire, 4 to 20 mA loop powered output signal and is available in both Commercial and Industrial style enclosures without a display. This series incorporates an Electrochemical sensor which has a typical two to three year life expectancy. All of the sensors can be easily replaced in the field since the sensors are plugged into an on-board socket or with an integrated sensor assembly for use in the Industrial enclosures. The QTS-6000 is factory configured and can be field calibrated using the Zero and Span adjustment potentiometers. The commercial grade unit is offered in either a general purpose wall or a duct mount version that includes a flow through pitot tube sampling kit with 18" (0.46 m) of tubing. The tubing length on the duct mount versions should be kept to less than a maximum of 5' (1.53m) in length in order to not affect the response time. The Industrial grade units include an Aluminum or 316 Stainless Steel enclosure that should be selected based upon the type of gas and environment

being monitored. General calibration and bump testing should be completed every 3 months in Hazardous or Explosive type atmospheres while the Commercial grade products should be tested every 6 months. Calibration gases and 0.5 liter/minute gas regulators are not available through ACI. These should be purchased through your local gas supply company or companies such as Portagas® (Praxair®, Inc.) or Mesa Specialty Gases®. Refer to all applicable Federal, State, Provincial and Local Health and Safety laws and regulations before using these products.

Applications: Mechanical Rooms, Warehouses, Refrigeration Plants, Industrial Plants, Process Monitoring, Leak Detection, Parking Garages, Auto/Truck Maintenance Facilities

The QTS-6000 Series Gas Transmitters are covered by ACI's Two (2) Year Limited Warranty. The warranty can be found in the front of ACI's Sensors & Transmitters catalog, as well as on ACI's website, www.workaci.com.

PRODUCT SPECIFICATIONS

Supply Voltage Protection:	+24 VDC nominal (+12 to 36 VDC Load Dependent) 0.5A Socketed Pico Fuse
Supply Current Power Consumption:	25 mA maximum 0.9 Watts maximum
Maximum Load @ 24 VDC:	600 Ohms
Output Signal:	4-20 mA (2-Wire, Loop Powered)
Factory Set Range:	See Gas Sensor Selection & Specification Table on back of data sheet
Accuracy Repeatability:	+/- 2.5% of Reading +/- 1% of Reading
Response Time (T90):	< 60 Seconds, typical
RFI/EMI Protection:	4.0 Watts @ 1m (3.28 ft) Radiated
Sensor Type:	Electrochemical, non-consuming
Sensor Life Expectancy:	2 to 3 years, typical
Unit Shelf Life:	6 Months from date of purchase (Must be installed and operational)
Replacement Sensor:	Contact ACI
Recommended Maintenance:	Accuracy & Bump test every 3 to 6 months or as required by Code Replace sensor as needed
Enclosure Specifications (Type, Material Type, Flammability, NEMA/IP Rating, Explosion Proof):	Commercial "C": General Purpose (Wall Mount); ABS Plastic, UL94 V-0; NEMA 1 (IP10) Commercial "D": General Purpose (Duct Mount); ABS Plastic, UL94 V-0; NEMA 1 (IP10) Commercial "N": Weatherproof (Wall Mount); ABS Plastic; UL94 V-0; NEMA 4X (IP56) Industrial "E": Industrial Connection Head; Aluminum (Epoxy Coated); NEMA 4X (IP56) and Enclosure meets Type 7 & 9 Explosion Proof Class 1 Div. 1, Groups B, C, D also Group A; CSA, FM (Factory Mutual), EX (Explosion Proof), UL listed Industrial "S": Industrial Connection Head; 316 Stainless Steel; NEMA 4X (IP56) and Enclosure meets Type 7 & 9 Explosion Proof Class 1 Div. 1, Groups B, C, D also Group A; CSA, FM (Factory Mutual), EX (Explosion Proof), UL listed
Intrinsic Safety Barrier Requirement ²:	28.5 VDC maximum and 300 minimum load
Operating Temperature:	See Gas Sensor Selection & Specification Table on back of data sheet
Operating Humidity:	0 to 90% RH, non-condensing (Continuous); 0 to 95% RH, non-condensing (Intermittent)
Operating Atmospheric Pressure ³:	14.696 psi (1.0132 bar) +/- 10%
Recommended Storage Temperature/Humidity:	32 to 68°F (0 to 20°C) 15 to 90% RH, Non-Condensing
Wiring Connections Wire Size:	Screw Terminal Blocks, 16 to 24 AWG (0.51 to 1.30 mm) Shielded Twisted Pair
Terminal Block Torque Rating:	0.37 ft-lb (0.502 Nm) Nominal
Coverage Area Mounting Height:	See Gas Sensor Selection & Specification Table on back of data sheet
Approvals:	RoHS, CSA-4828-02 (CSA File #: 088890 0 000 for Industrial Enclosure Options Only)
Product Weight:	Industrial "E"/"S" Enclosures: 5.00 lbs (2.27kg) Commercial "C"/"D"/"N" Enclosures: 2.00 lbs (0.91kg)
Product Dimensions (L x W x H):	Commercial "C" Enclosure: 6.60" (167.64 mm) x 4.23" (107.44 mm) x 2.60" (66.04 mm) Commercial "D" & "N" Enclosure: 6.60" (167.64 mm) x 4.23" (107.44 mm) x 3.70" (93.98 mm) Industrial "E" & "S" Enclosure: 10.70" (271.78 mm) x 5.71" (145.04 mm) x 4.25" (107.95 mm)

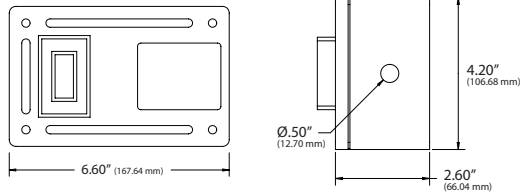
Note¹: The Cl2, ClO2, HCl, SO2, NO2, NH3, and O3 sensor assemblies are NOT explosion-proof rated | **Note²:** Requirements to meet when installed with CSA Approved Intrinsic Safety Barriers in Class A, B, C & D Certified environments | **Note³:** When installed @ > 3000' above sea level, the gas transmitters must be verified for accuracy & re-calibrated as needed after installation





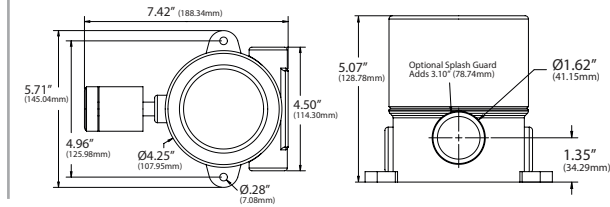
DIMENSIONAL DRAWING

Commercial NEMA 4X



Top & Front View

Industrial NEMA 4X



Top & Front View

SENSOR SELECTION AND SPECIFICATION

Gas Type	Symbol	Gas Type	Measurement	Square Footage	Radius	Operating Temp	Mounting Height
Transmitter Only	N/A	000	N/A	N/A	N/A	N/A	N/A
Hydrogen Sulphide	H2S	110	0 to 25 ppm	5000 ft ² (464.5 m ²)	40 ft (12.2 m)	-40 to 122°F (-40 to 50°C)	Low**
Hydrogen Cyanide	HCN	115	0 to 20 ppm	5000 ft ² (464.5 m ²)	40 ft (12.2 m)	-4 to 122°F (-20 to 50°C)	Mid**
Chlorine	Cl2	120	0 to 3 ppm	5000 ft ² (464.5 m ²)	40 ft (12.2 m)	-4 to 122°F (-20 to 50°C)	Low**
Chlorine Dioxide	ClO2	123	0 to 1 ppm	5000 ft ² (464.5 m ²)	40 ft (12.2 m)	-4 to 122°F (-20 to 50°C)	Low**
Sulphur Dioxide	SO2	140	0 to 6 ppm	5000 ft ² (464.5 m ²)	40 ft (12.2 m)	-4 to 122°F (-20 to 50°C)	Low**
Nitrogen Dioxide	NO2	150	0 to 6 ppm	7500 ft ² (696.7 m ²)	49 ft (14.9 m)	-4 to 122°F (-20 to 50°C)	Low**
Carbon Monoxide	CO	160	0 to 250 ppm	7500 ft ² (696.7 m ²)	49 ft (14.9 m)	-4 to 122°F (-20 to 50°C)	Mid**
Hydrogen	H2	211	0 to 2000 ppm	7500 ft ² (696.7 m ²)	49 ft (14.9 m)	-4 to 122°F (-20 to 50°C)	High**
Ammonia	NH3	220	0 to 50 ppm	7500 ft ² (696.7 m ²)	49 ft (14.9 m)	-13 to 86°F (-25 to 30°C)	High**
Ozone	O3	240	0 to 3 ppm	5000 ft ² (464.5 m ²)	40 ft (12.2 m)	-4 to 122°F (-20 to 50°C)	MID**

Note**: Low = 0.5 to 1.5' (0.15 to 0.46m) above floor | Mid = 4.0 to 6.0' (1.20 to 1.83m) above floor | High = 0.5 to 1.5' (0.15 to 0.46m) below ceiling

CUSTOM ORDERING

Model # Example: **QTS 61 120 X S 0 0 0 0 G 0 0 0**

MODEL #

A. Sensor Series <i>No Selection Required</i>	QTS	QTS
B. Gas Transmitter <i>No Selection Required</i>	61 = Non Indicating 4-20 mA Analog Output	61
C. Configuration <i>Select One (1)</i>	000 = Transmitter Only 140 = Sulphur Dioxide 211 = Hydrogen 110 = Hydrogen Sulphide 150 = Nitrogen Dioxide 220 = Ammonia 115 = Hydrogen Cyanide 160 = Carbon Monoxide 240 = Ozone 120 = Chlorine 123 = Chlorine Dioxide	
D. Revision <i>No Selection Required</i>	X = Factory Provided	X
E. Enclosure <i>Select One (1)</i>	C = Commercial NEMA 1 E = Industrial NEMA 4X, 7, 9 (Aluminum) N = Commercial NEMA 4X, Splash Guard S = Industrial NEMA 4X, 7, 9 (316 S.S.) D = Commercial NEMA 1 (Duct Mount; Pitot Tube)	
F. Factory Supplied <i>No Selection Required</i>	0 = Default	0
G. Factory Supplied <i>No Selection Required</i>	0 = Default	0
H. Factory Supplied <i>No Selection Required</i>	0 = Default	0
I. Splash Guard <i>Select One (1)</i>	0 = No Splash Guard G = Splash Guard (Industrial Enclosures, options E & S above only)	
J. Factory Supplied <i>No Selection Required</i>	0 = Default	0
K. Special Features <i>Select One (1)</i>	0 = No Special Calibration X = Non-Standard Calibration S = Special (Consult Factory)	

ACCESSORIES ORDERING

Model # Example: **6395-0003 -OR- 126254**

Model #	Item #	Description
6395-0003	126254	Gas Calibration Adaptor

