QTS - 6000

QTS - 6000 TOXIC TRANSMITTER / SENSORS

The QTS-6000 Series is the latest advancement in economical analog output toxic gas transmitters. This universal transmitter can be easily configured via solderless shorting links for any of a wide variety of plug-in electrochemical sensors. The compact sensor elements have a typical life of two to three years, are easily field replaceable, and do not require electrolyte replenishment. With rapid response to target gas and stable zero readings, these sensors retain their sensitivity to gases such as H2S even after prolonged exposure to clean air. The two wire transmitters are available in a variety of ABS or explosion-proof Nema rated enclosures. The transmitter operates on a power supply range of 12-36 VDC with an output of 4-20 mA DC into 750 Ohms (at 24 VDC), making it useable with any standard intrinsic safety barrier. With integral RFI and EMI protection, this is the most robust transmitter available in its class.

MODEL NUMBER ORDERING CODE

Q	T	S	-	6	1				X	-		0	0				

Transmitter Type
Non-indicating Analog Output

Gas Type
(See Gas Selection Table for #)

Revision (Factory Provided) — **X**

Enclosure
- Commercial Nema 1 — **C**
- Commercial Nema 4x c/w splash guard — **N**
- Commercial Nema 1 Ductmount — **D**
- Industrial Nema 4x,7,9 c/w Alum. sensor housing — **E** (note 1)
- Industrial Nema 4x,7,9 c/w S.S. sensor housing — **S** (note 1)

Options (Enter 0 for No Selection)

- **Conformal Coating** — **W**
- **Splash Guard** for Industrial Enclosure — **G**
- **Low Temperature** Heater Option (-40°C, note 2) — **L**
- **Non-Standard Calibration** — **X**
- **Special** (Consult Factory) — **S**

Note 1 - Cl_2, ClO_2, HCl, SO_2, NO_2, NH_3, O_3 sensor assemblies are NOT explosion - proof rated.
Note 2 - Available only in type C enclosure ONLY. Requires a power supply.

GAS SELECTION TABLE

GAS TYPE	#	RANGE**	TEMP°C*
Transmitter Only	000	NONE	- - -
Hydrogen Sulphide - H_2S	110	0 - 25 ppm	-40 to +50
Hydrogen Cyanide - HCN	115	0 - 20 ppm	-20 to +50
Chlorine - Cl_2	120	0 - 3 ppm	-20 to +50
Chlorine Dioxide - ClO_2	123	0 - 1 ppm	-20 to +50
Hydrogen Chloride - HCl	125	0 - 10 ppm	-20 to +50
Sulphur Dioxide - SO_2	140	0 - 6 ppm	-20 to +50
Nitrogen Dioxide - NO_2	150	0 - 6 ppm	-20 to +50
Carbon Monoxide - CO	160	0 - 250 ppm	-20 to +50
Nitric Oxide - NO	190	0 - 100 ppm	-20 to +50
Hydrogen - H_2	211	0 - 2000 ppm	-20 to +50
Ammonia - NH_3	220	0 - 50 ppm	-25 to +30
Ozone - O_3	240	0 - 3 ppm	-20 to +50

* Temperature operating range given in degrees Celcius.
See chart below for Fahrenheit equivalent

°C	-40°	-25°	-20°	0°	+30°	+50°
°F	-40°	-13°	-4°	32°	+86°	+122°

** Standard ranges, please inquire for other possible ranges.

PRINCIPLE OF OPERATION

Electrochemical gas sensors are micro-fuel cells designed to be maintenance free and stable for long periods. Gas continuously enters the self-contained cell through a flow limiting diffusion barrier. The target gas reacts within the electrolyte creating a microamp current flow between the electrodes. No fluid replenishment is required as these cells are not self-consuming. They work by catalyzing the combustion of the target gas using atmospheric oxygen. The cell electrodes degrade with time, resulting in typical life span of 2 to 3 years.

The QTS-6000 transmitter is powered by a nominal 24 VDC external power supply in a two-wire connection. It transmits through the same two wires a 4-20 mA DC signal over the calibrated range of the sensor selected. The transmitter is factory configured and calibrated for the sensor selected when ordered as a complete assembly. This universal transmitter accepts any of the listed sensors into a plug-in socket on the board, or an integrally mounted sensor assembly on the industrial enclosure. Solderless shorting links configure the board for a specific sensor type. Calibration is achieved through a simple zero and span adjustment using the appropriate calibration gases for the sensor installed.

SPECIFICATIONS

Input Power: 12 to 36 VDC

Fuse: 0.5 Amp socketed pico fuse

Output Signal: 4 to 20 mA DC into 750 ohms at 24 VDC, Two-wire configuration

RFI / EMI Protection: 4.0 Watt at 1 meter radiated

Enclosure Rating: C, D - NEMA Type 1 General Purpose
N - NEMA Type 4X Weatherproof
E - NEMA Type 4X Weatherproof, Type 7 and 9 Explosion Proof; Class 1, Div. 1, Groups B,C,D Aluminum Sensor Housing also Group A rated.
S - Same as E above except with 316 Stainless Steel Sensor Housing

Encl. Materials: C, N, D - ABS Plastic
E,S - Cast Aluminum, Epoxy Coated

Sensor Technology: Electrochemical, non-consuming

Response Time: Typical less than 60 seconds for 90% response to a step change

Sensor Life: Typical 2 to 3 years

Sensor Gas Types: Field configurable for any sensor from Sensor Selection Table

Temperature - Sensor: See Sensor Selection Table

Temp. - Transmitter: -40° to +50° C (-40° to +122° F)

Humidity - Sensor: 15 to 90% RH continuous operating, non-condensing,

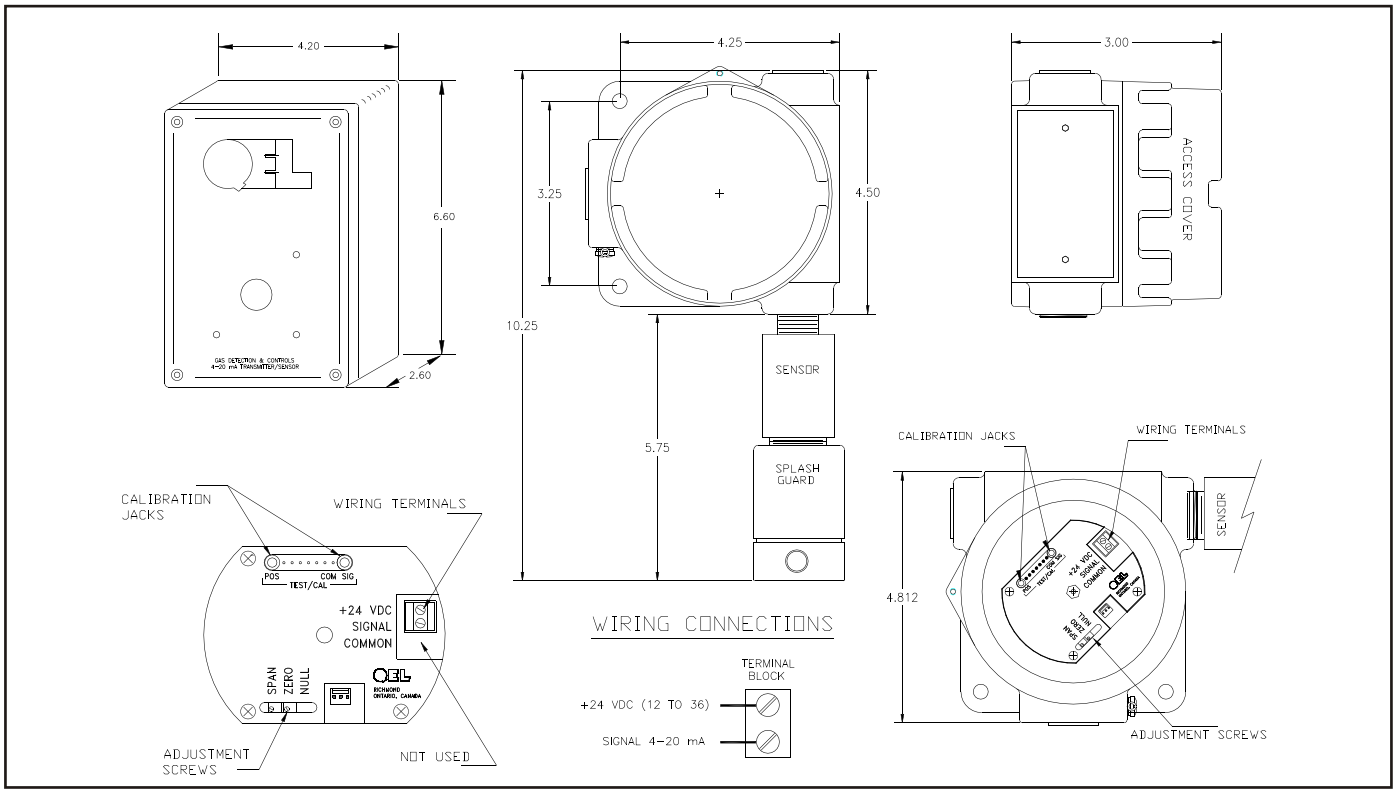
Humidity - Transmitter: 0 to 99% RH, non-condensing, operating and storage

Pressure: Atmospheric ± 10%

Accuracy: ± 2.5% of Reading

Repeatability: ± 1.0%

Approvals: CSA



QUATROSENSE ENVIRONMENTAL LTD.
5935 OTTAWA STREET,
RICHMOND, ONTARIO
CANADA K0A 2Z0
PHONE 1 613 838 4005
FAX 1 613 838 4018
email QEL@QELsafety.com
www.QELsafety.com

H/Sales/Marketing/Specification/6000/Aug08.cdr

DISTRIBUTED BY

71050-012-000A