QTS - 1300

QTS - 1300 OXYGEN TRANSMITTER / SENSORS

The QTS-1300 Series is the latest advancement in low cost analog output oxygen transmitters. The compact sensor elements have a typical life span of two to ten years, are easily field replaceable, and do not require electrolyte replenishment. With rapid response to the target gas and stable zero readings, these sensors retain their sensitivity to oxygen. 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 4-20mA 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	-	1	3			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 - Model Code 10 not available in explosion proof enclosures
Note 2 - Available only in type N or C enclosures ONLY. Requires a power supply.

SENSOR SELECTION AND SPECIFICATION TABLE

GAS	Sym	Model Code	Standard Cal (v/v)	Temp Range °C (Note 3)
Oxygen	O_2	00	0 to 25%	-20°to +50°
Oxygen	O_2	10	0 to 25%	+5° to +40°

Note 3: -20°C = -4°F +40°C = +104°F
+5°C = +41°F +50°C = +122°F

QTS-13101 is recommended for unoccupied areas such as mechanical rooms or chiller rooms.

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°

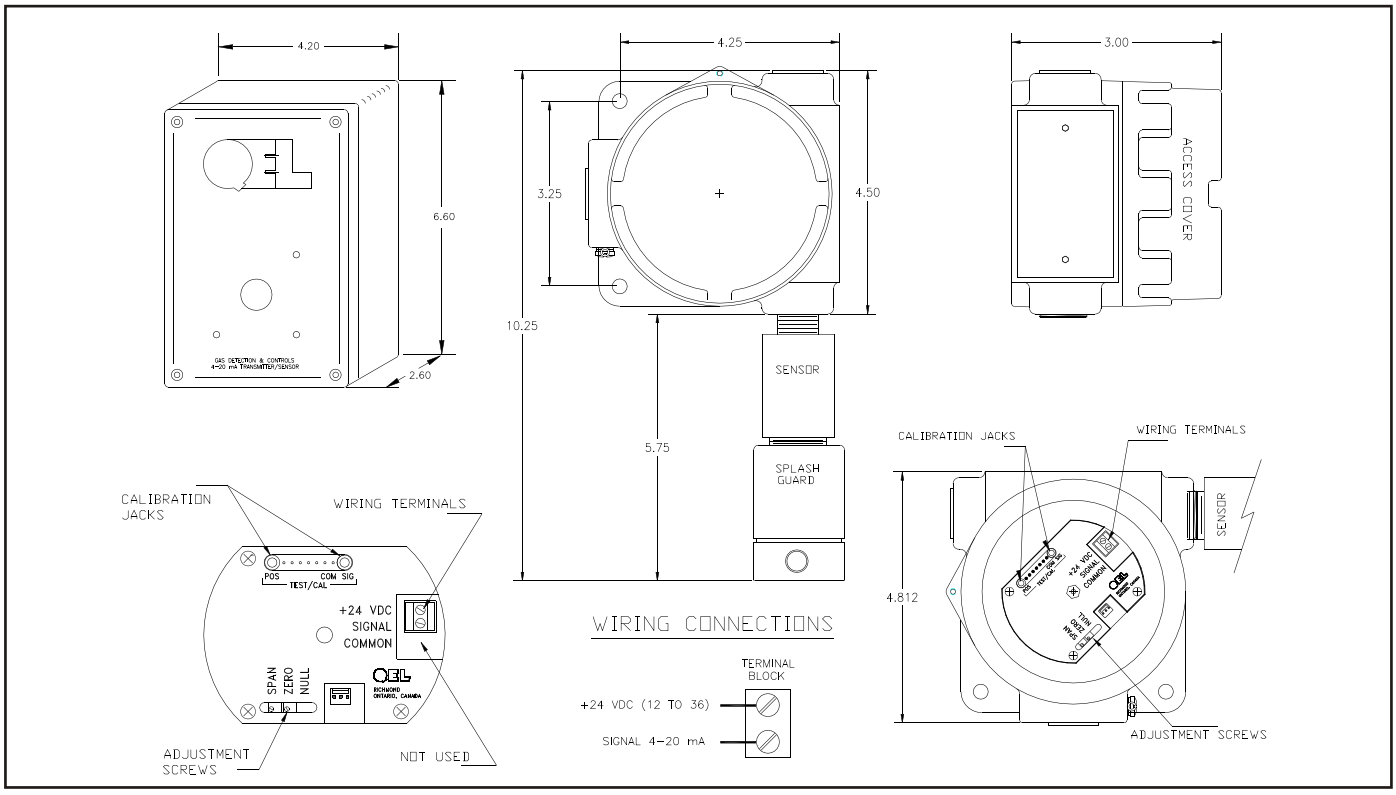
PRINCIPLE OF OPERATION

Electrochemical Oxygen 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, setting up a microamp current flow between the electrodes. No fluid replenishment is necessary as theses cells are not self consuming. The cell electrodes degrade with time, resulting in typical working lifetimes of 2 to 10 years depending upon the model selected.

The QTS-1300 Series transmitter is powered by a nominal 24 VDC external power supply in a two wire connection. It transmits a 4 to 20 mA signal through the 2 wires 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. The model QTS-13001 sensor plugs into the transmitter board or into an integrally mounted sensor assembly on the industrial enclosure. The QTS 13101 sensor assembly is lid-mounted with leads and connector for board connection. 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 gas.

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 10 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%



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