



QTS - 8000

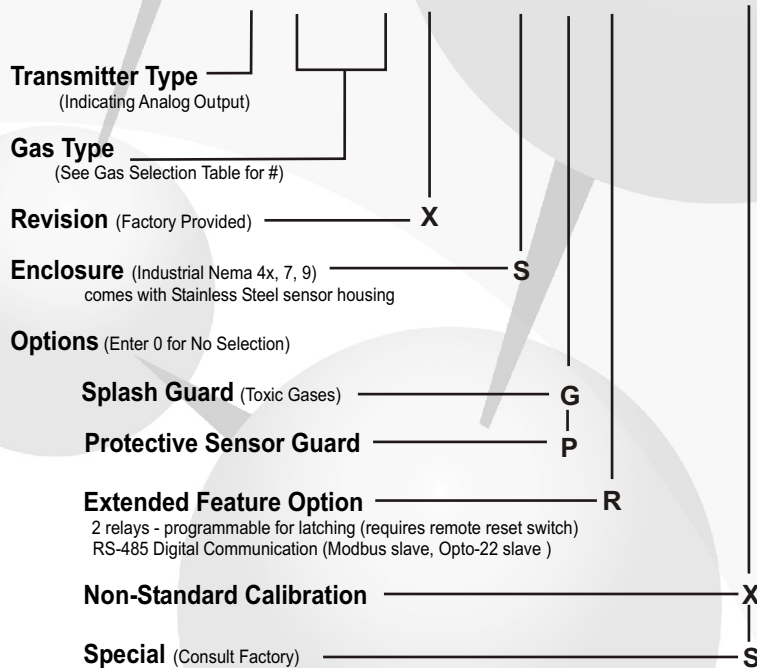
NON - INTRUSIVE TRANSMITTER / SENSORS

The QTS-8000 series is a digitally controlled, microprocessor based "Smart Sensor" for detection and data transmission of toxic or combustible gases. When configured with the extended feature option it acts as a controller with 2 relays, adjustable setpoints and RS-485 communication. Calibration and relay logic configuration is non-intrusive via a keypad activated through the glass cover by a magnetic tool. The electrochemical sensor elements, for detection of toxic gases, have a typical life of 2 to 3 years, are easily field replaceable, and do not require electrolyte replacement. The catalytic bead sensors for combustible gases are highly poison resistant and have a similar life expectancy.



MODEL NUMBER ORDERING CODE

Q T S - 8 1 X - S 0 0 0



GAS SELECTION TABLES

TOXIC GASES

| GAS TYPE | # | RANGE* |
|--------------------------------------|-----|----------------|
| Transmitter Only | 000 | NONE |
| Hydrogen Sulphide - H ₂ S | 110 | 0 - 25 ppm |
| Hydrogen Cyanide - HCN | 115 | 0 - 20 ppm |
| Chlorine - Cl ₂ | 120 | 0 - 3 ppm |
| Chlorine Dioxide - ClO ₂ | 123 | 0 - 1 ppm |
| Hydrogen Chloride - HCl | 125 | 0 - 10 ppm |
| Oxygen - O ₂ | 130 | 0 - 25% volume |
| Sulphur Dioxide - SO ₂ | 140 | 0 - 6 ppm |
| Nitrogen Dioxide - NO ₂ | 150 | 0 - 6 ppm |
| Carbon Monoxide - CO | 160 | 0 - 250 ppm |
| Nitric Oxide - NO | 190 | 0 - 100 ppm |
| Hydrogen - H ₂ | 211 | 0 - 2000 ppm |
| Ammonia - NH ₃ | 220 | 0 - 50 ppm |
| Ozone - O ₃ | 240 | 0 - 2 ppm |

* Standard ranges, please inquire for other possible ranges.

COMBUSTIBLE GASES

| GAS TYPE | # | 100% LEL IN % VOLUME | DETECTION CONSTANT |
|-----------|-----|----------------------|--------------------|
| Methane | 170 | 5.0 % | 112 |
| Acetylene | 171 | 2.5 % | 63 |
| Ethane | 172 | 3.0 % | 76 |
| Propane | 173 | 2.1 % | 62 |
| n-Butane | 174 | 1.6 % | 66 |
| n-Pentane | 175 | 1.5 % | 51 |
| n-Octane | 176 | 1.0 % | 42 |
| Hydrogen | 177 | 4.0 % | 86 |
| Gasoline | 178 | 1.3 % | 44 |
| Other | 179 | Advise | Advise |

PRINCIPLE OF OPERATION

ELECTROCHEMICAL SENSORS: are microfuel cells designed to be maintenance free and stable for long periods. Toxic gas continuously enter the self-contained cell through a diffusion barrier. The target gas reacts with oxygen within the electrodes creating a microamp current between them. No fluid replacement is required as these cells are not self-consuming. The cell electrodes degrade with time resulting in a typical life span of 2 to 3 years.

CATALYTIC SENSORS: consist of two matched pellistor beads, each encasing a coiled platinum wire. One pellistor acts as a reference and both are exposed to the same environmental conditions. Combustible gases undergo catalyzed combustion with atmospheric oxygen changing the resistance of the active bead. Measurement is taken across a Wheatstone bridge.

SPECIFICATIONS

STANDARD FEATURES

Power: 24 VDC
18 - 30 VDC

Fuse: 1.0 Amp socketed Pico fuse

Output signals: 4-20 mA or 0-10 V

Enclosure: Nema Type 4X, 7 and 9 Explosion Proof.
Class 1, Div 1, Group B,C,D,
Copper free aluminum
Epoxy coated.

Sensor housing: Stainless Steel

Display: Alphanumeric LCD backlit display
2 lines by 8 characters

Calibration: Non-Intrusive (Magnetic Keypad)

Sensor Technologies: Electrochemical Fuel Cell
Catalytic Bead



Humidity: Transmitter
0 - 99 %, non-condensing
Electrochemical
15 - 90 % non condensing

Pressure: Atmospheric +/- 10%

Repeatability: +/- 1 %

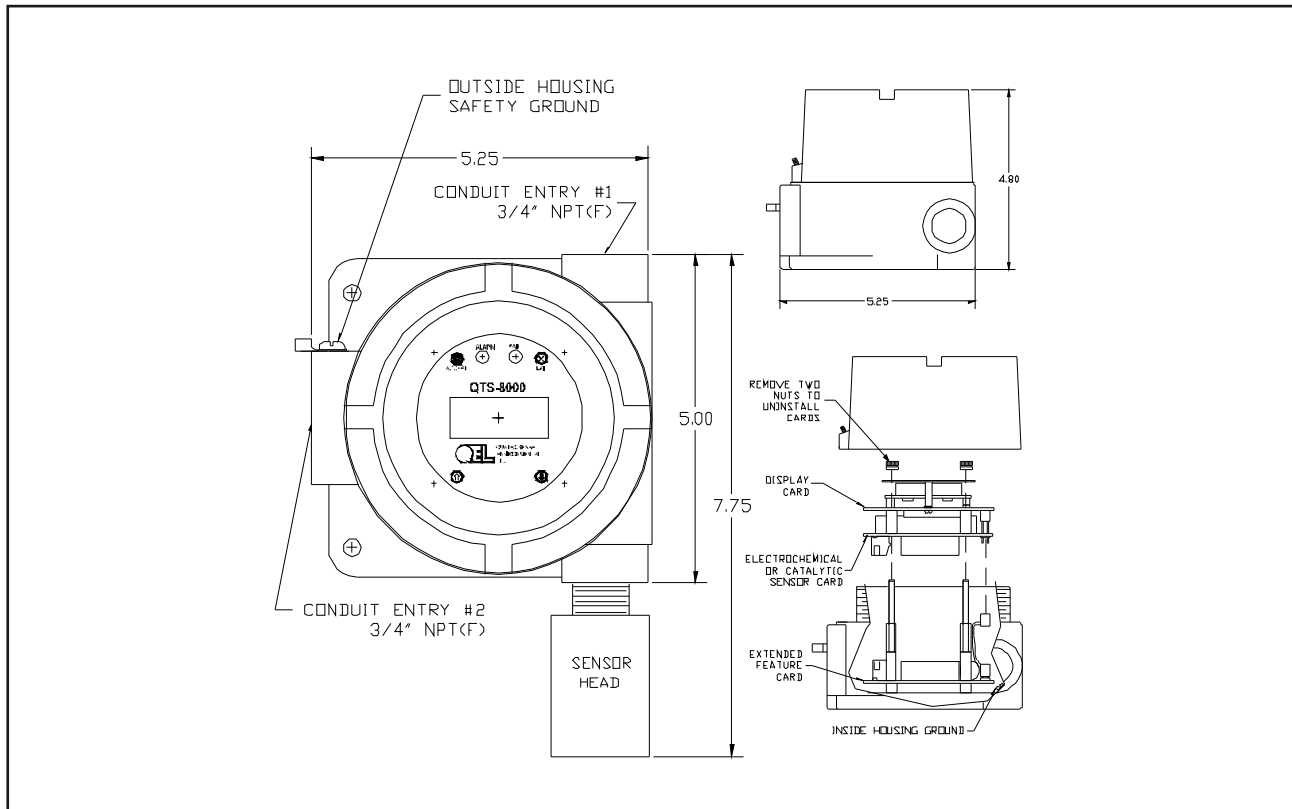
EXTENDED FEATURE OPTION

AC Power: 24 VAC Nominal
15 - 24 VAC

Relays: 2 SPDT, 115 VAC,
30 VDC, 1 amp

Communications: RS-485:
Modbus Slave
Opto-22 Slave

Approvals: C S A



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Ensure a complete understanding of all applicable Federal, State, Provincial and Local
Health and Safety laws and regulations before using these products.

Read and understand fully all instructions before using these products.

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