



QTS - 8000

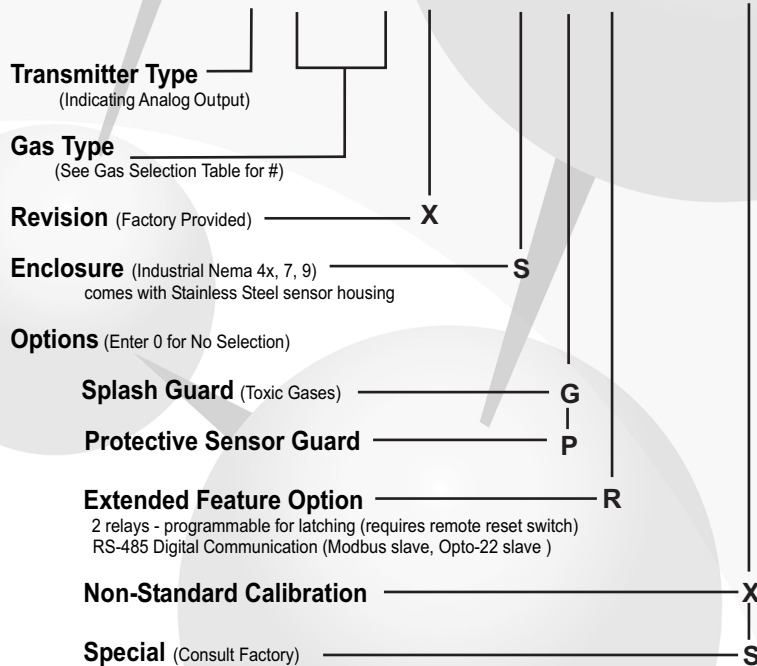
NON - INTRUSIVE TRANSMITTER / SENSORS

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

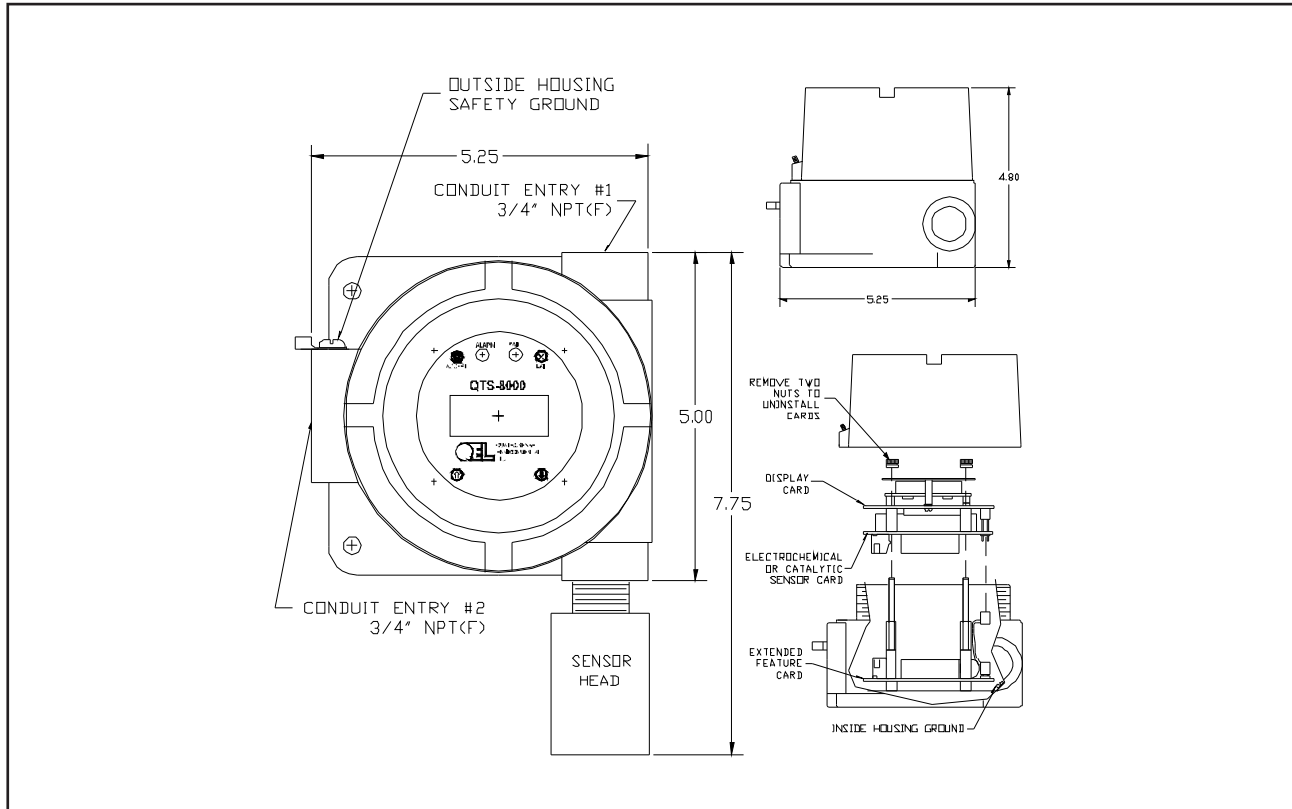
- Power:** 24 VDC
18 - 30 VDC
- Fuse:** 1.0 Amp socketed Pico fuse
- Output signals:** 4-20 mA or 0-10 V
- Enclosure:** Nema Type 4X, 7 and 9 Explosion Proof.
Class 1, Div 1, Group B,C,D,
Copper free aluminum
Epoxy coated.
- Sensor housing:** Stainless Steel
- Display:** Alphanumeric LCD backlit display
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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Health and Safety laws and regulations before using these products.

Read and understand fully all instructions before using these products.

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