

QEL Q5 Series Smart Gas Transmitters



The **Q5 Series smart toxic/combustible gas sensor/transmitters** use various sensing technologies to detect a wide assortment of gases. The units are housed in a NEMA 4X enclosure with an integral buzzer that will meet the most stringent of applications. All Models feature an LCD display of gas concentration, LED indication of each of the SPDT relays and TX/RX for the RS-485 or Modbus communications. Pre-calibrated sensors can be purchased and installed by the user, thereby reducing calibration costs and minimizing downtime. Should a client wish to switch from one gas to another, all that is needed is to purchase a sensor/board and install it. The user can select multiple screens from the menu that display relay status, time, TWA, STEL, concentration, and other data. Programming and calibration is non-proprietary and is accessed through a user-selectable password that protects system integrity. The units can be installed as stand-alone, digitally networked with QEL or other controllers through an RS-485 or Modbus communication port that is standard. Equally a 4-20 mA, 2-10 VDC and a 1-5 VDC analog output that is fully assignable over a chosen range is standard. User-programmable relays and a buzzer are also standard allowing several options to energize relays through instantaneous activation upon a pre-selected concentration or activation through a time-waited average concentration.

KEY FEATURES:

- ▶ Uses Electrochemical, Catalytic Bead and Infrared Sensors
- ▶ Pre-calibrated sensors available for easy replacement without calibration
- ▶ Three on-board user-programmable relays
- ▶ Non-proprietary set-up and calibration procedures
- ▶ Removable terminal blocks for easy wiring
- ▶ Digital display of TWA, STEL, concentration and relay status
- ▶ Stand-alone operation
- ▶ Analog communication to BAS or through RS-485 digital communication protocols
- ▶ Integral buzzer with three tones
- ▶ NEMA 4X enclosure with knock-outs
- ▶ Sensor housing sealed from electronics
- ▶ Duct mount available
- ▶ Splash guard available
- ▶ Flow through/calibration cap available
- ▶ Operates on 24 VAC/VDC

MODEL NUMBER ORDERING CODE

Q5 - [] - [] - [] - [] - [] - [] - [] - [] - [] - [] - X



Gas Ordering Code
(See Below for Code)

Span Ordering Code
(See Below for Code)

Enclosure Type

- Enclosure, Standard.....**O**
- Enclosure w/Pump-thru Cap Kit**P**
- Enclosure w/Splash Guard Kit**S**
- Enclosure w/Duct-Mount Kit**D**
- Factory Provided**X**

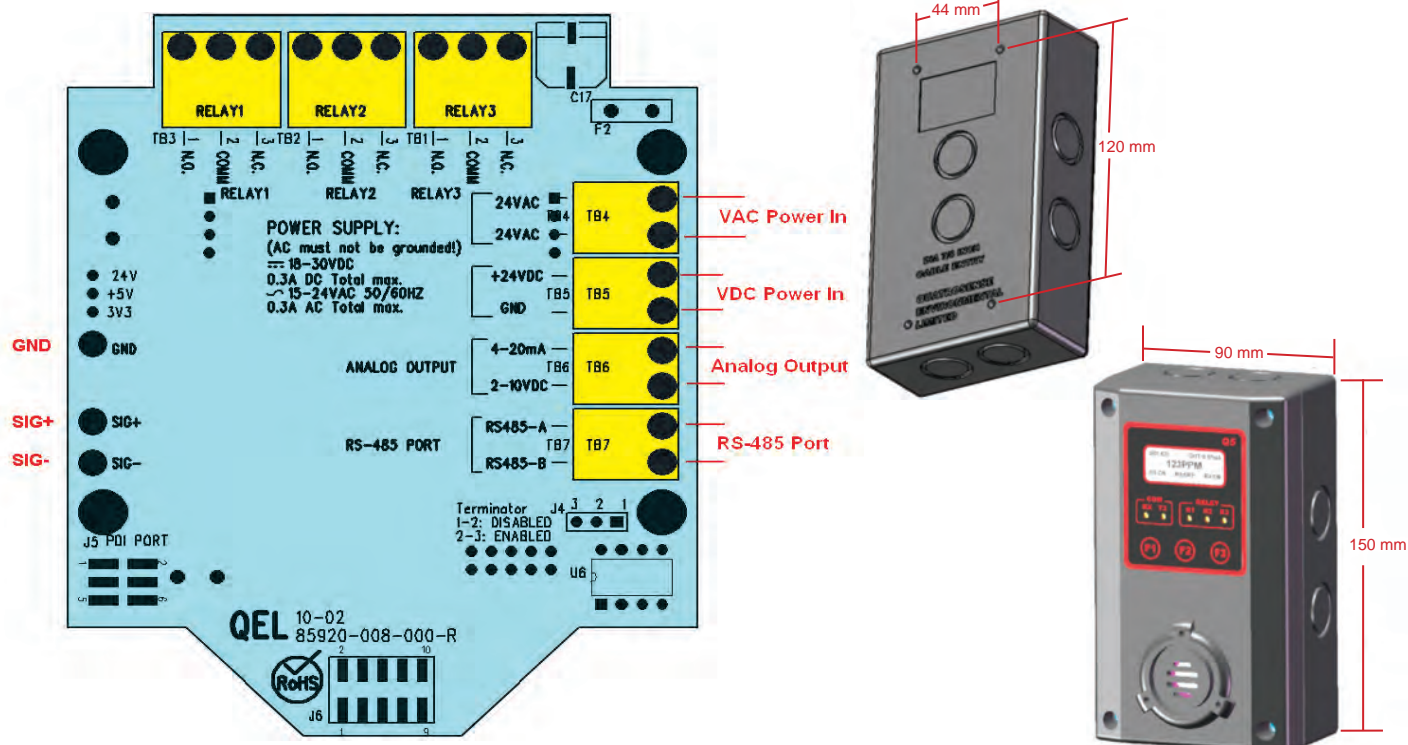
Gas Type, Technology, Span Range	Gas Ordering Code	Span Ordering Code
Acetone, Catalytic Bead, 0-100%LEL	CH3CO	100L
Ammonia, Electrochemical, 0-100PPM	NH3	100P
Ammonia, Electrochemical, 0-1000PPM	NH3	1000P
Arsine, Electrochemical, 0-1PPM	ASH3	1P
Benzene, Catalytic Bead, 0-100%LEL	C6H6	100L
Iso-Butane, Catalytic Bead, 0-100%LEL	C4H10	100L
Butanol, n-Butane, Catalytic Bead, 0-100%LEL	BUTAN	100L
Carbon Dioxide, Infrared, 0-5000PPM	CO2	5000P
Carbon Dioxide, Infrared, 0-5%VOL	CO2	5V
Carbon Dioxide, Infrared, 0-20%VOL	CO2	20V
Carbon Dioxide, Infrared, 0-100%VOL	CO2	100V
Carbon Monoxide, Electrochemical, 0-250PPM	CO	250P
Carbon Monoxide, Electrochemical, 0-1000PPM	CO	1000P
Chlorine, Electrochemical, 0-5PPM	Cl2	5P
Chlorine Dioxide, Electrochemical, 0-2PPM	ClO2	2P
Combustibles, Catalytic Bead, 0-100%LEL	GENL	100L
Diborane, Electrochemical, 0-2 PPM	B2H6	2P
Ethylene Catalytic Bead, 0-100%LEL	C2H4	100L
Ethylene Oxide, Electrochemical, 0-20PPM	ETO	20P
Germane, Electrochemical, 0-2PPM	GeH4	2P
Hydrogen, Electrochemical, 0-1000PPM	H2	1000P
Hydrogen, Electrochemical, 0-2000PPM	H2	2000P
Hydrogen, Catalytic Bead, 0-100%LEL	H2	100L
Hydrogen Bromide, Electrochemical, 0-30PPM	HBR	30P
Hydrogen Chloride, Electrochemical, 0-30PPM	HCl	30P
Hydrogen Cyanide, 0-50PPM	HCN	50P
Hydrogen Sulphide, Electrochemical, 0-25PPM	H2S	25P
Hydrogen Sulphide, Electrochemical, 0-100PPM	H2S	100P
Methane, Catalytic Bead, 0-100%LEL	CH4	100L
Methanol, Catalytic Bead, 0-100%LEL	CH3OH	100L
Nitric Oxide, Electrochemical, 0-100PPM	NO	100P
Nitrogen Dioxide, Electrochemical, 0-10PPM	NO2	10P
Oxygen, Electrochemical, 0-25% VOL	O2	25V
Ozone, Electrochemical, 0-1PPM	O3	1P
Iso-Pentane, Catalytic Bead, 0-100%LEL	C5H12	100L
Phosphine, Electrochemical, 0-1PPM	PH3	1P
Phosphine, Electrochemical, 0-5PPM	PH3	5P
Propane Catalytic Bead, 0-100%LEL	C3H8	100L
Silane, Electrochemical, 0-50PPM	SiH4	50P
Sulphur Dioxide, Electrochemical, 0-6PPM	SO2	6P



QUATROSENSE
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QEL Q5 Series Toxic/Combustible Smart Gas Transmitters



ELECTRICAL AND MECHANICAL SPECIFICATIONS

Input Power:

24 VDC Nominal, range 18-30 VDC, 0.3 A DC Total Max
24 VAC Nominal, range 15-24 VAC, 0.3 A AC Total Max
AC Must **Not** be grounded

Fuse:

F2 on Main Board: Polyswitch 750 mA
Polyswitch resets after Fault 15 cleared and powered up

Sensor:

Combustible Gases: Catalytic Bead
Toxic Gases: Electrochemical, Infrared

Sampling: Diffusion or Pump-through

Panel Indicators:

5 Status LED's

- ▶ RS-485 TX Status (Green)
- ▶ RS-485 RX Status (Green)
- ▶ Relay 1 Status (Red)
- ▶ Relay 2 Status (Red)
- ▶ Relay 2 Status (Red)

Display:

LCD graphic display c/w backlight

Keypad:

3 Capacitive touch sensing keys: F1, F2, F3

Relays:

- 3 Relays SPDT, dry contacts
- ▶ 1.0 A maximum at 30 VDC (resistive load)
- ▶ 0.3 A maximum at 125 VAC (resistive load)

Buzzer: 80 db at 10 cm, 2700 Hz
Buzzer with 3 programmable tones

Output signal:

RS-485 with QEL Controller
Protocol Connects to Q4C
Controller, M-Controller, and
Q-Controller 4-20 mA, 2-10 VDC,
1-5 VDC Analog Signal Output

Enclosure Rating:

IP 66 & NEMA 4, 4X, 12 & 13

Operating Temperature:

-40° C to 70° C, depends on sensor specification

Ambient Humidity:

5% to 95% RH (non-condensing)

Storage Temperature:

0° C to 40° C, depends on sensor specification

Size: 150 mm x 90 mm x 65 mm

Weight: Less than 0.5 lbs

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



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This brochure includes general specifications which are subject to change.