

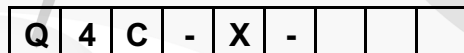


# Q4C

## Q4C SERIES DIGITAL CONTROLLER

The Q4C is a multi-channel controller display and alarm unit that utilizes digital communications to interface with a maximum of four remote digital QEL transmitter/sensors. These are used to measure a wide variety of toxic gases such as CO, NO<sub>2</sub>, NH<sub>3</sub>, H<sub>2</sub>S, SO<sub>2</sub>, Refrigerants, and Combustibles. The RS-485 communication is connected via a 4-wire multidrop daisy chain configuration to reduce the overall installation costs of the system. Alarm setpoints are set through the front keypad or through QEL supplied software that is downloaded to the controller from a PC or laptop computer. Common relay configurations include voting, averaging, delay on actuation and de-actuation, normally or not-normally energized and latching. The audible alarm has three buzzer settings, continuous, intermittent and double-tap intermittent. An additional feature includes 24 VDC transistor outputs for a horn and strobe. Available options are a four SPDT relay board, an analog output board that features 4-20 mA, or 2-10 VDC outputs assignable as averaging or peak mode, and an RS-485 output board to communicate with our powerful M-CONTROLLER forty input controller. Each controller comes standard with a 2 x 8 character back-lit display, key pad, software CD and interface cable.

## MODEL NUMBER ORDERING CODE



**Revision** — X  
(Factory Provided)

**Options\***  
(Enter 0 for display unit only)

**Relay Board** — R  
4 x SPDT, 10Amps

**Analog Board** — T  
Isolated 4-20 mA or 2-10 VDC output

**RS-485 Board** — 4  
Isolated to communicate with M-CONTROLLER

\* Maximum of two option boards only



## TRANSMITTER/SENSOR WIRING

The Q4C controller provides a serial port for digital communication with QEL transmitter/sensors. A maximum of four sensors can be arranged in any gas configuration to this port. From this port, four wires are connected to the first sensor, from this sensor to the next sensor, and so forth in a daisy chain arrangement. Two of the wires are for power, and two are used for the digital communications. This arrangement reduces the amount of wire, conduit and conduit size, providing for a significant installation cost reduction. Equally the Q4C controller provides additional options such as a relay output board, an analog output board, and an RS-485 board. QEL Engineering can review a proposed system layout and provide recommendations to optimize cost reduction efforts.

# SPECIFICATIONS

**Input Power:** 24V +/- 4V AC or DC

**Fuse:** F1: 4A slo-blo. F2: 1A very fast

**Enclosure:** NEMA 4X Type General Purpose

**Enclosure Material:** ABS plastic

**Dimensions:** 7" X 4.7" X 3.5" (180 X 120 X 90 mm )

**Temperature:** Industrial - 20° to +50° C (-4° to +122° F)

**Humidity:** Continuous 5 to 95% RH, non-condensing  
Intermittent 0 to 99% RH, non-condensing

**Input Types:** RS-485 digital port for up to 4 QEL transmitter/sensors.  
RS-232 programming port using RJ-11 connector

**Output Ports:** RS-485 to host M-CONTROLLER  
RS-232 programming port using RJ-11 connector  
4-20 mA signals scalable

**LED Status Lights:** TX/RX  
Relay 1  
Relay 2  
Relay 3  
Relay 4

**Recommended Cable:** Power - Twisted shielded pair  
Communication (RS-485) - Belden 9841 or equivalent twisted shielded pair, 120 ohm

**Panel Controls:** 4 tactile and audible keypad

**Audio Indicator:** 24 VDC transistor outputs, buzzer, strobe, horn

**Relay Outputs:** 4 SPDT rated 10 Amps resistive  
250 VAC / 30 VDC

**Relay Assignment:** Independent, individually set to one or all transmitter/sensors

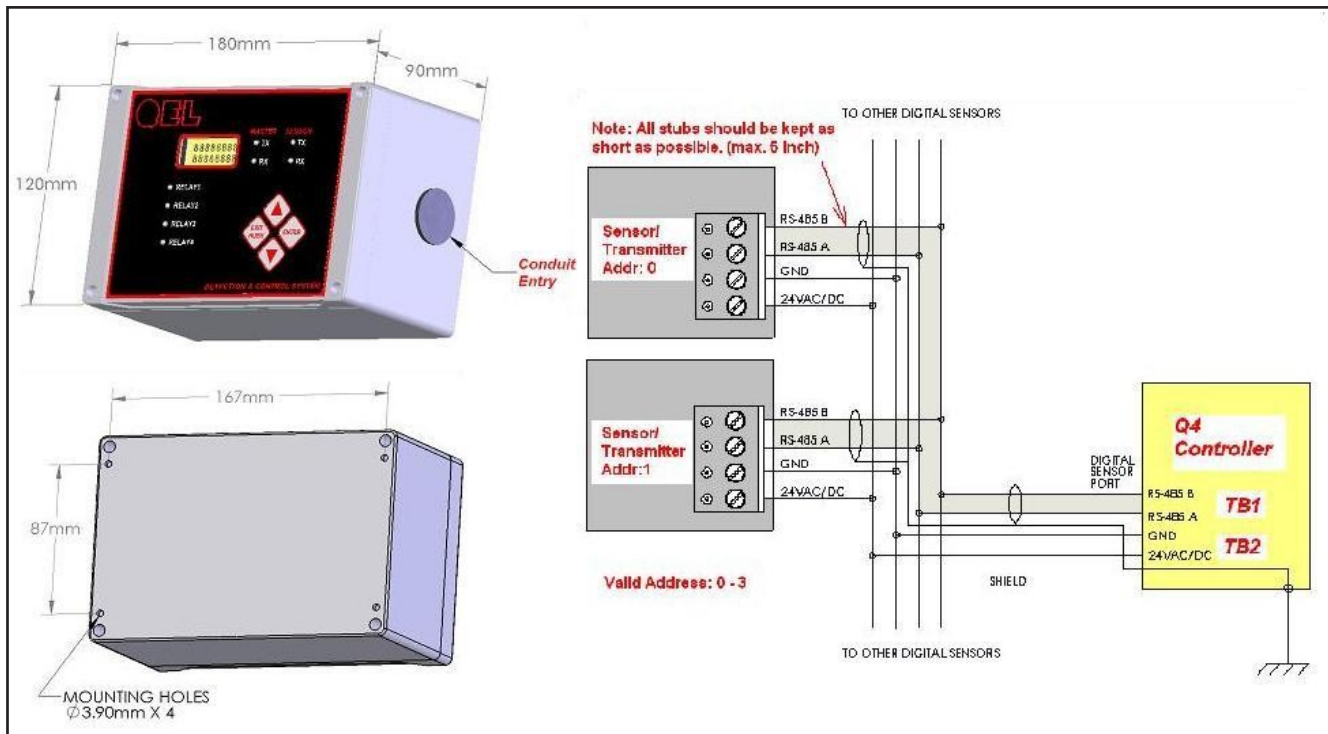
**Time Delays:** Individually set, make, break, average, and voting, 0 to 59 minutes

**LCD Digital Display:** 2 x 8 back-lit LCD displaying transmitter address, gas type, concentration and alarm status

**Display Scroll Rate:** Adjustable 1 - 9 seconds

**Power Supply Output:** 24V supplied externally through controller

**Approvals:** CSA NRTL/C C22-205 pending



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Read and understand fully all instructions before using these products

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