QEL 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_2, NH_3, H_2S, SO_2, 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.

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.

MODEL NUMBER ORDERING CODE

Q	4	C	–	X	–			

Revision
(Factory Provided)

Options*
(Enter 0 for display unit only)

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

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

QUATROSENSE ENVIRONMENTAL LIMITED

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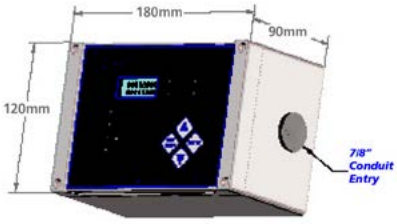
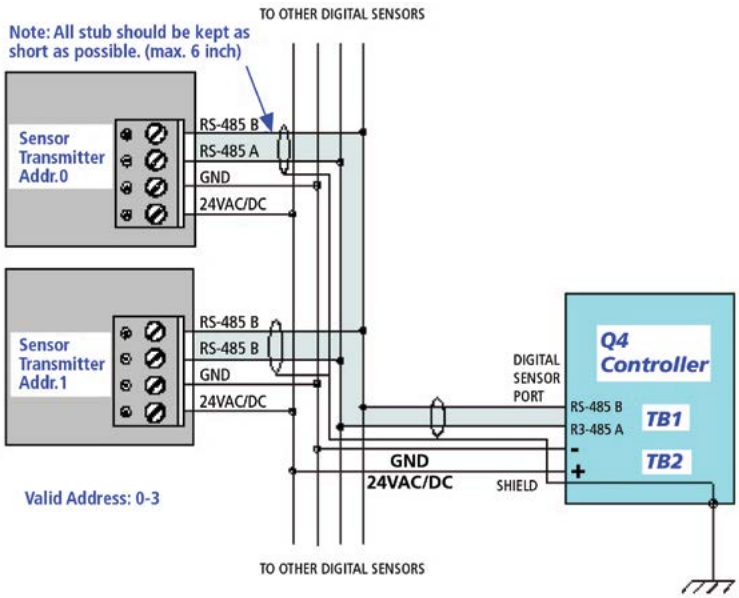
Physical Dimensions:



Installation Holes:



ELECTRICAL AND MECHANICAL 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

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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