QEL Q4C-II Series Digital Controller

The Q4C-II 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 by QEL supplied software that can be downloaded by 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. Four addressable relays are standard with user programmable on and off delays. The Controller also equips a USB port to allow traditional Windows PC software, M-View, to access the Controller configuration database. An additional RS-485 port can be programmed through the Menu to either work as a Modbus RTU port for BAS or SCADA (as default) or work as a BACnet port to connect a QEL BAC-BOX, that supports a BACnet/IP protocol. Each controller comes standard with a 4 x 8 character back-lit display, keypad, software, and interface cable.

TRANSMITTER/SENSOR WIRING

The Q4C-II 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-II Controller provides 4 relays and BAS outputs. QEL Engineering can review a proposed system layout and provide recommendations to optimize cost reduction efforts.

MODEL NUMBER ORDERING CODE

Q	4	C	–	II	–	X

Revision
(Factory Provided)

OPTION

BACnet IP..... **BAC-BOX-X**

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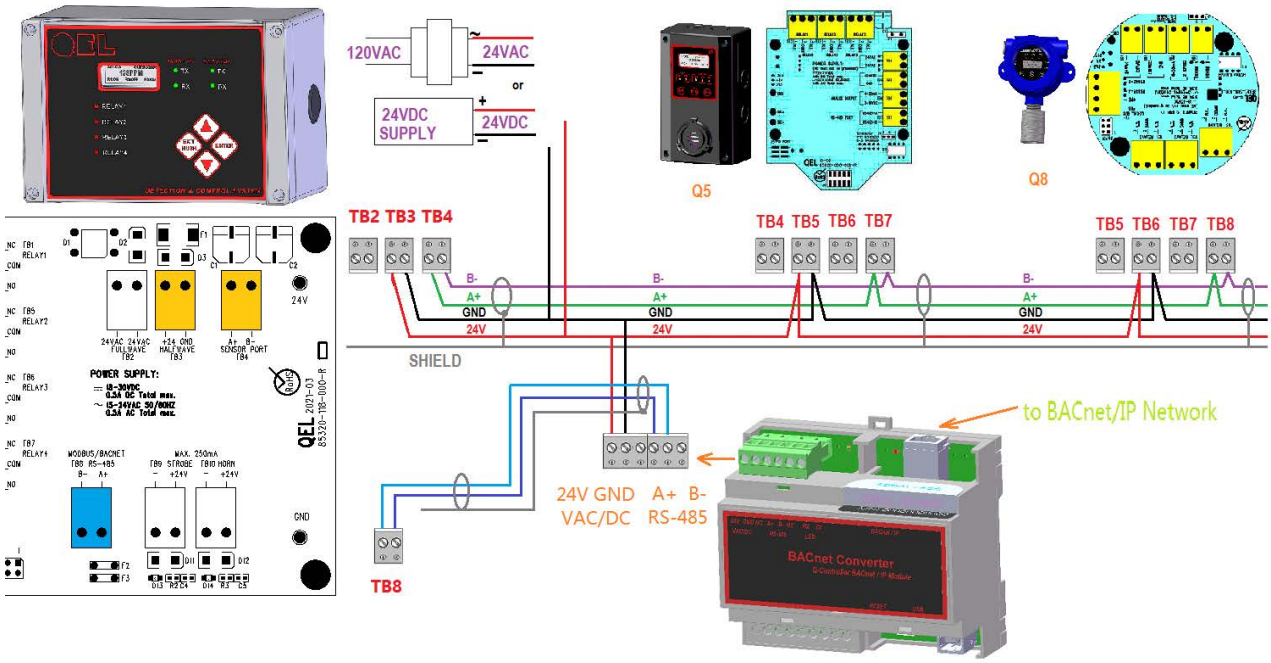

ELECTRICAL AND MECHANICAL SPECIFICATIONS

Input Power: 24 V +/- 4 VAC or DC

Fuse: F1: 4 A slo-blo. F2: 1 A 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°C to +50°C (-4°F 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.
USB Port for programming

Output Ports: Modbus port
BACnet port (requires optional BAC-BOX)

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: 4 x 8 back-lit LCD displaying transmitter address, gas type, concentration and alarm status

Display Scroll Rate: Adjustable 1–9 seconds

Power Supply Output: 24 V 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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