# QEL Q-Controller

The **new Q-Controller** includes features that are unique to the gas detection industry. The system uses an RS-485 communication protocol that accommodates 128 channels through four digital ports. In addition there are 128 analog inputs from any 4-20 mA device and equally 128 4-20 mA outputs. There are also up to 128 binary inputs and 128 binary outputs. Standard is a Modbus output from the controller as well as an available BACnet IP output.

The system communicates wirelessly for programming and downloading of data through your smartphone or tablet device. Input/output boxes can be installed anywhere in the RS-485 network for ease of installation of additional sensors. A touch screen graphic display is used for programming. All relevant gas detection data, such as relay status, historical data, location and addresses of sensors are displayed by scrolling through multiple screens.

The controller has a scheduler that can be programmed to activate relays and deactivate relays several times a day based on a frequency of day, weekday or weekend only. It also has an auto-configure program that searches for connected devices. As the unit can accept any 4-20 mA signal it is ideal for additional monitoring such as temperature humidity and other parameters that may be of interest.

Several Q-Controllers can be connected together to a centralized system that will display gas detection concentrations of an entire facility. Remote monitors are an optional item that can be used to observe the concentration of gases prior to entering the space.

## KEY FEATURES:

▶ 128 RS-485 channels

▶ 128 mA inputs and outputs

▶ 128 relay inputs and outputs

▶ Modbus and BACnet outputs

▶ Wireless Communication with smart devices

▶ Seven-inch touchscreen display

▶ Data-logging

▶ Eight event scheduler for daily, weekday or weekend events

▶ Auto-configure feature

▶ 24 VAC/VDC operation

▶ 4 x10 Amp DPDT relays on main board up to 124 remote

▶ On board and remote annunciation

▶ Nema 4X enclosure with clear window

QEL
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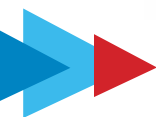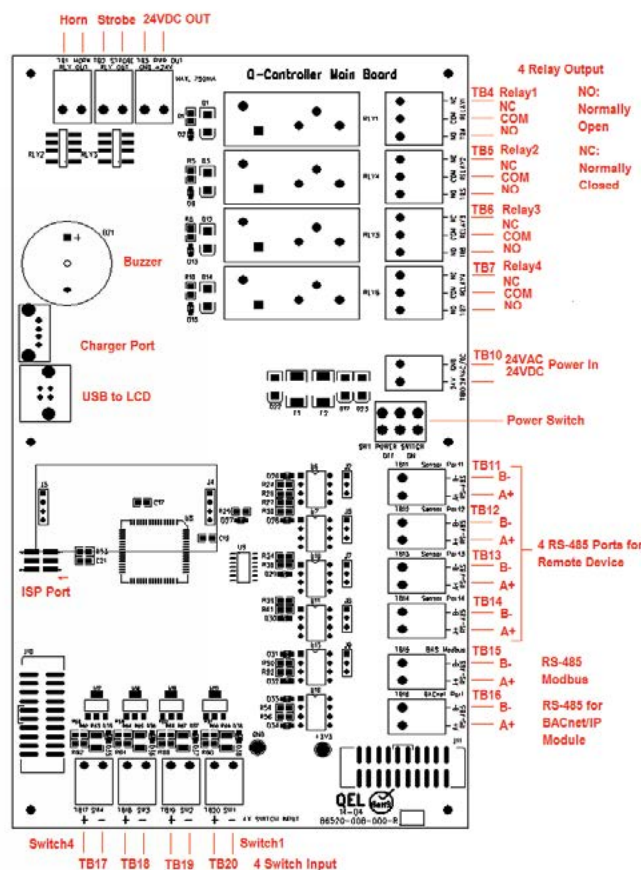




# ELECTRICAL AND MECHANICAL SPECIFICATIONS

**Voltage:** 24 VDC nominal, range 18 to 30 VDC
24 VAC nominal, range 15 to 24 VAC 50/60 HZ

**Current:** Q-Controller: Max. 0.75 A (fuse protected)
Strobe & Horn: Max. 0.75 A (fuse protected)

**Fuse:** F1, F2 on Main Board: Polyswitch 750 mA
Polyswitch device resets after the fault is
cleared and power to the circuit is removed

**Display:** 7-inch LCD touchscreen display 800 X 480
resolution and capacitive multi-touch TN panel
for easy screen navigation

**Panel Indicators:** 15 Status LED's
- ▶ Power Status
- ▶ USB TX/RX status
- ▶ 4 RS-485 port TX/RX Status for Sensor Network
- ▶ 1 RS-485 port TX/RX Status for Modbus
- ▶ 1 RS-485 port TX/RX Status for BACnet Module or AUX

**Relays:** On-board 4 pluggable Relays SPDT, Dry contacts
Resistive load: 10 A at 250 VAC
10 A at 30 VDC
Inductive load: 7.5 A at 250 VAC
5A at 30 VDC

**Switch Inputs:** 4-channel switch inputs
The switch can be Q-Switch or any
ON-OFF switch

**Buzzer:** 100 dBA at 10 cm, 3700 Hz Continuous

**Horn and Strobe:** Two relay contacts are dedicated max 750 mA
on 24 VDC supply

**Remote Devices:** 4 X RS-485 ports with QEL
Protocol: M5, Q5, Q8, QIRF
AI, AO, BI, BO (relays) boxes

**Modbus Slave:** RS-485

**Port:** Responds as Modbus Slave
RTU Protocol Q-Controller supplies read status only

**BACnet Port:** RS-485 Port
Connects to QEL/BACnet IP Module

**Approvals:** Conforms to UL2017

*This brochure includes general specifications which are subject to change.*