**SPECIFICATION**

**INPUT POWER:**
- 24VDC nominal, range: 18 to 30VDC
- 24VAC nominal, range: 15 to 24VAC

AC Power must be non-grounded (Floating)

**FUSE:**
- F1: Not used
- F2: 1.0A VERY FAST Littelfuse P/N: 0251001

**DISPLAY:**
- 8 x 2 Character Display c/w Backlight

**INDICATOR:**
- Master RX TX, Slave RX TX, Relay 1 to Relay4 status

**KEYPAD:**
- 4 Tactile & Audible Keypad

**BUZZER, STROBE, HORN:**
- 24 VDC Transistor Output Terminals

**RELAY OUTPUT:**
- Relay Board: 4 x Relay 10A max. Resistive 250VAC, 30VDC

**ENCLOSURE:**
- IP 66 & NEMA 4*, 4X*, 12 & 13

**OPERATING TEMPERATURE:**
- -20 °C TO 50 °C

**AMBIENT HUMIDITY:**
- 5% TO 95% RH (NON-CONDENSING)

**STORAGE TEMPERATURE:**
- -40 °C TO 70 °C

**SIZE:**
- 180mm X 120mm X 90mm

**WEIGHT:**
- LESS THAN 1.5lbs (0.680 kg)
QRP operates on 24VAC 50/60HZ or 24VDC. There are no selections required by the user to select the input power. The input power is connected to the Power Supply Board using the Terminal Block TB3 located inside the unit. **NOTE:** AC Power must be non-grounded (floating).

**Connection:**

Power Supply:

QRP operates on 24VAC 50/60HZ or 24VDC. There are no selections required by the user to select the input power. The input power is connected to the Power Supply Board using the Terminal Block TB3 located inside the unit. **NOTE:** AC Power must be non-grounded (floating).
The QRP is designed and certified for installation in a fixed location where it is not subject to shock and vibration. Please observe the temperature and humidity specifications above for ambient conditions. Observe the possibility of leaks or possible water damage from cleaning done in the area.

Terminator Enable/Disable?

The terminator on each end of the RS485 loop is designed to match the electrical impedance characteristic of the twisted pair loop, and will prevent signal echoes from corrupting the data on the line. The terminator should be enabled on BOTH ends of the RS485 loop. Short and medium length modbus/485 loops can operate without the terminating resistor. Longer runs may require the terminating resistors. But adding terminator dramatically increases power consumption.

Twisted Pair?

We recommend using BELDEN 9841 for communications. This wire has 120 ohm input impedance, which will eliminate RS-485 communication problems.

Controller Location:

The QRP is designed and certified for installation in a fixed location where it is not subject to shock and vibration. Please observe the temperature and humidity specifications above for ambient conditions. Observe the possibility of leaks or possible water damage from cleaning done in the area.

The mounting height and location should provide easy access to the wiring terminals and front-panel. Backlighting is provided for the display in case of low lighting conditions.

It is recommended that controllers be installed 5 feet (1.5m) above the floor.
Buzzer, Strobe and Horn Connection: I/O Motherboard

Relay Board:

Tips:
You might drill an additional access hole to bring the wires into the NEMA 4X enclosure. The access hole should be drilled on the side of the enclosure.

Warning:
Be sure to look inside the unit prior to drilling so that to make sure there is sufficient clearance for the hole and fitting that you are using.

Seal conduit to prevent foreign material from entering the enclosure.

NC: Normally Closed
COM: Common
NO: Normally Open

Relay1-4:
10.0 A maximum resistive 250VAC, 30 VDC
7.5 A maximum inductive 240VAC
5.0 A maximum inductive 30 VDC