## Model Q-2 \& Q-4

Two and Four Channel Power Supply


Ordering Information:
Model Q - X (XXXX - XXXX)
$\mathbf{5 0 H z}$ or $\mathbf{6 0 H z}: 50 \mathrm{~Hz}=50 \mathrm{~Hz}$ input voltage frequency, $60 \mathrm{~Hz}=60 \mathrm{~Hz}$ input voltage frequency
$\mathbf{1 2 0 V}$ or $\mathbf{2 4 0 V}$ : $120 \mathrm{~V}=120 \mathrm{VAC}$ input voltage, $240 \mathrm{~V}=240 \mathrm{VAC}$ input voltage 2 or 4: $2=$ Two outputs, 4 = Four outputs

The Model Q-2 and Model Q-4 power supplies transform 120 / 240 VAC, $50 / 60 \mathrm{~Hz}$ input power into unregulated 24 VDC. Each output is rated for 300 mA of load current and can be paralleled (via the rack wiring) for increased current capacity. The Model Q-2 has two outputs, the Model Q-4 has four outputs. The Model Q-2 and Model Q-4 are available in four input voltage configurations: $120 \mathrm{VAC} / 50 \mathrm{~Hz}, 120 \mathrm{VAC} / 60 \mathrm{~Hz}, 240 \mathrm{VAC} / 50 \mathrm{~Hz}$, and 240 VAC / 60 Hz . When ordering, be certain that the power supply input voltage and frequency match the card rack input voltage and frequency configuration.

## Model Q-2 \& Q-4 Specifications

This is a Performance Specification. It is not intended to be used as Operating Instructions.
General Description: The Model Q-2 and Model Q-4 power supplies transform 120 / 240 VAC, 50 / 60 Hz input power into unregulated 24 VDC. The Model Q-2 has two outputs, the Model Q-4 has four outputs. Each output is rated for 300 mA of load current and can be paralleled (via the rack wiring) for increased current capability. The Model Q-2 and Model Q-4 are available in four input voltage configurations; $120 \mathrm{VAC} / 50 \mathrm{~Hz}, 120 \mathrm{VAC} / 60 \mathrm{~Hz}, 240$ VAC / 50 Hz , and 240 VAC / 60 Hz .
Detector Channel Capacity: The Model Q-2 can provide power for up to eight (8) detector channels. The Model Q-4 can provide power for up to sixteen (16) detector channels. Detector channel capacity ratings are per NEMATS 1 /TS 2 standards.
Output Indicators: Each output circuit has a high intensity, red light emitting diode (LED) that provides an indication of the output status. The indicators are illuminated when the circuit output voltage is greater than or equal to $20.0 \pm 0.2 \mathrm{VDC}$ and are extinguished when the circuit output voltage is less than $20.0 \pm 0.2 \mathrm{VDC}$.
Power Switch: A power switch mounted on the front panel controls the input line voltage.
Fuse Protection: Each output circuit is protected by a 0.375 Amp fuse mounted in a PC board mounted fuse holder. The Model Q-2 has two (2) fuses, the Model Q-4 has four (4) fuses.

Circuit Board: Printed circuit boards are 0.062 inch thick FR4 material with 2 oz. copper on both sides and plated through holes. Circuit boards and components are conformal coated with polyurethane
Connector: $2 \times 22$ contact edge card connector with 0.156 inch ( 0.396 cm ) contact centers. Key slots located between pins B/2 \& C/3, E/5 \& F/6, and M/11 \& N/12. (See Pin Assignments table.)
Operating Temperature: $-40^{\circ} \mathrm{F}$ to $+180^{\circ} \mathrm{F}\left(-40^{\circ} \mathrm{C}\right.$ to $\left.+82^{\circ} \mathrm{C}\right)$.
Weight: Model Q-2: $1.50 \mathrm{lb}(0.68 \mathrm{~kg})$.
Model Q-4: $2.65 \mathrm{lb}(1.20 \mathrm{~kg})$.
Size: 4.50 inches ( 11.43 cm ) high $\times 2.00$ inches ( 5.08 cm ) wide $\times 6.88$ inches ( 17.48 cm ) deep (including connector, excluding handle). Handle adds 1.00 inches ( 2.54 cm .) to depth measurement.

## DC Output Voltage and Output Load Current

120 VAC / 50 Hz


NOTE: DC Output Voltage / Output Load Current shown for single output. 120 VAC / 60 Hz


NOTE: DC Output Voltage / Output Load Current shown for single output.

## 240 VAC / 50 Hz



NOTE: DC Output Voltage / Output Load Current shown for single output.
$240 \mathrm{VAC} / 60 \mathrm{~Hz}$


NOTE: DC Output Voltage / Output Load Current shown for single output.

| Pin Assignments |  |  |
| :---: | :---: | :---: |
| PIN | Model Q-2 |  |
| $1 \& A$ | DC Common | Model Q-4 |
| $2 \& B$ | Output 1 (+24 VDC) | DC Common |
| $3 \& C$ | Output 2 (+24 VDC) | Output 1 (+24 VDC) |
| $4 \& D$ | No Connection | No Connection |
| $5 \& E$ | No Connection | No Connection |
| $6 \& F$ | No Connection | No Connection |
| $7 \& H$ | No Connection | No Connection |
| $8 \& J$ | No Connection | No Connection |
| $9 \& K$ | No Connection | No Connection |
| $10 \& L$ | Chassis Ground | Chassis Ground |
| $11 \& M$ | AC Neutral | AC Neutral |
| $12 \& N$ | AC Line | AC Line |
| $13 \& P$ | No Connection | No Connection |
| $14 \& R$ | No Connection | No Connection |
| $15 \& S$ | No Connection | No Connection |
| $16 \& T$ | No Connection | No Connection |
| $17 \& U$ | No Connection | Output 3 ( +24 VDC) |
| $18 \& V$ | No Connection | Output 4 (+24 VDC) |
| $19 \& W$ | No Connection | No Connection |
| $20 \& X$ | No Connection | No Connection |
| $21 \& Y$ | No Connection | No Connection |
| $22 \& Z$ | No Connection | No Connection |

