



## Q-24

### POWER SUPPLY UNIT FOR NEMA CABINETS

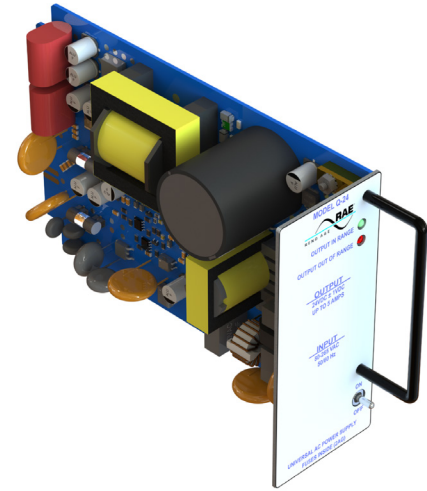
Ideally suited for large detector racks or power hungry video and radar detection applications.

#### FEATURES

- 24VDC output @ 5 Amps
- Load Regulation <  $\pm 1\%$
- Input Voltage Range: 80 VAC to 265 VAC, 43 to 63 Hz
- Line Regulation <  $\pm 0.1\%$
- Power factor correction  $\geq 0.95$
- Operating Temperature:  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

#### HIGHLIGHTS

- High efficiency design for low or high power demands
- Able to handle excessive capacitive loads
- Emissions far better than Class A, FCC Sub Part 15 Standard
- Pin connections compatible with NEMA TS-2 traffic cabinet detector racks
- Fuse protected + LED Indications



### NEMA CABINET COMPATIBLE

#### Overview

The power supply incorporates an advanced switch mode design to achieve high efficiency, outstanding load and AC line regulation with excellent transient response even under very heavy capacitive loading. It comes in a standard card and pin out utilized by NEMA TS-2 traffic cabinets.

#### 24VDC Output

The DC output voltage (24VDC) is super clean of electronic noise (far better than Class A of FCC sub part 15 standard) and is able to source high amperage of up to 5 Amps and therefore very suitable for supporting large detector racks, video detection, or radar detection.

#### High Efficiency

Active power factor correction provides lower operating cost and keeps the AC line clean of unwanted conductive emissions and transients. On loss of AC power, the Q-24 power supply maintains far longer hold-times than NEMA standard even under heavy loadings.

#### Output Indicators

A Green LED indicates output voltage is within 1 VDC of the ideal output voltage. A second and distinct Red LED indicates the voltage is outside this range. Both LEDs are off if output DC voltage is not present (for example, an output blown fuse).



**Power Switch**

A front panel toggle switch; it removes the AC line voltage.

**Fuse Protection**

The AC line is protected with a 2 Amp slow blow 2AG fuse. The DC output is protected with a 5 Amp slow blow fuse. Fuses are located on the PC board and easily replaced.

**Input Line Voltage**

80 VAC to 265 VAC

**Input Line Frequency**

45 to 65 Hz

**Power Factor**

Greater than 0.95

**Output Voltage**

24VDC  $\pm$  2%

**Maximum Output Current**

5 Amps. Derated with inncreasing ambient temperature: 5 A for <30C, 4A <40C, 3A <60C, and 2A <85C.

**Output Ripple Voltage**

<80 mV (peak to peak)

**Load Regulation**

Equal to or less than  $\pm$  1%

**Line Regulation**

Equal to or less than  $\pm$  0.1%

**Minimum Efficiency**

76%

**Operating Temperature**

-40F to 180F

**Environmental**

Complies with NEMA TS-2 2003 and CALTRAN TEES Standards.

**Connector**

2 x 22 contact edge card connector with 0.156 inch contact centers. Key slots located between pins B/2 & C/3, E/5 & F/6, and M/11 & N/12. (See Pin Assignment Table).

**Size**

4.50 inches high x 2.00 inches wide x 6.88 inches deep. Handle adds 1.00 inch to depth.

**Weight**

0.862 lb.

**Pin Assignment**

Pin	Pin	Function
1	A	Output (DC Common)
2	B	Output (+12 VDC / +24 VDC)
3	C	Output (+12 VDC / +24 VDC)
4	D	No Contact Pad
5	E	No Contact Pad
6	F	No Contact Pad
7	G	No Contact Pad
8	H	No Contact Pad
9	J	No Contact Pad
10	L	Chassis Ground
11	M	AC Neutral
12	N	AC Line
13	P	No Contact Pad
14	R	No Contact Pad
15	S	No Contact Pad
16	T	No Contact Pad
17	U	Output (+12 VDC / +24 VDC)
18	V	Output (+12 VDC / +24 VDC)
19	W	No Contact Pad
20	X	No Contact Pad
21	Y	No Contact Pad
22	Z	No Contact Pad

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