Procurement Specification for
Model CPS-TS2-LED Power Supply

The following specification describes the minimum acceptable requirements for a TS-2 Power Supply.

The Power supply shall meet or exceed NEMA TS-2 2003 specifications. In addition the power supply shall also meet the specific features defined in this detailed specification.

The power supply shall be manufactured by an ISO registered company. A copy of the manufacturer's ISO registration certificate shall be included with any bid submission.

The Power Supply shall be a Model CPS-TS2-LED manufactured by Reno A&E or an approved equal. Approved equals shall not be allowed unless approved prior to bid submission.

The power supply must have the following specific extended features.

The power supply must have a 12 VDC ±2% output rated for 5 Amps and a 24 VDC ±2% output rated for 5 Amps.

The power supply must have a 12 VAC output rated for 250 milliAmps.

The power supply shall provide a four LED bar graph to display approximate voltages for AC Line, 24 VDC output, 12 VDC output, and 12 VAC output. The AC Line four LED bar graph shall indicate when voltage exceeds 100, 110, 120, and 130 VAC. The 24 VDC four LED bar graph shall indicate when voltage exceeds 18, 22, 24, and 26 VDC. The 12 VDC four LED bar graph shall indicate when voltage exceeds 10, 11, 12, and 13 VDC. The 12 VAC four LED bar graph shall indicate when voltage exceeds 10, 11, 12, and 13 VAC.

The power supply shall provide a five LED bar graph to display approximate currents for AC Line, 24 VDC output, and 12 VDC output. The five LED AC Line bar graph shall indicate when the current exceeds 1 Amp, 2 Amps, 3 Amps, 4 Amps, and 5 Amps (RED LED provides a warning of over current condition). The five LED 24 VDC bar graph shall indicate when the current exceeds 1 Amp, 2 Amps, 3 Amps, 4 Amps, and 5 Amps (RED LED provides a warning of over current condition). The five LED 12 VDC bar graph shall indicate when the current exceeds 1 Amp, 2 Amps, 3 Amps, 4 Amps, and 5 Amps (RED LED provides a warning of over current condition).

The power supply shall have Over Current Protection for the 12 and 24 VDC Outputs. If a DC output reaches 6 Amps, that output shall shut off. If the over current condition corrects, the power supply shall operate normally.

The power supply shall have Over Temperature Protection. If temperatures approach 300°F (150°C) inside the power supply, both DC channels shall shut off until temperature drops below 284°F (140°C).

A Line Frequency Reference (LFR) LED shall indicate LFR is operational.

Electrical

Input Line Voltage: 80 VAC to 135 VAC

Input Line Frequency: 43 Hz to 65 Hz

Fuse Protection: The AC line is protected with a 4 Amp slow blow 3AG fuse (front panel)

Line Regulation: ±0.1%

Power Factor: ≥0.95

Full Load Efficiency: ≥75%

Operating Ambient Temperature: -40º C to +85º C

Emissions: Radiated and conductive emissions are in compliance with FCC part 15, Class A. An aluminum enclosure and EMI filter minimize radiated and conductive emissions.

Physical

Circuit Board: The printed circuit board is 0.062 inch thick FR4 material with 2 Oz. Copper. All holes are plated

through. Circuit boards and components are conformal coated with a polyurethane coating.

Enclosure: The enclosure is fabricated with powder coated aluminum.

Size: 2.5 inches (6.35 cm) wide x 6.3 inches (16 cm) high x 6.8 inches (17.27 cm) deep

Weight: 2.70 pounds (1.22 kgm)

Front Panel Connector: MS3106A-18-1SW

Pin Assignments

Pin	Function	Pin	
A	AC Neutral	F	Not Used
B	Line Freq. Ref.	G	Logic Ground
C	AC Line	H	Earth Ground
D	+12VDC output	I	12VAC output
E	+24VDC output	J	Not Used