

# Model CPS - TS2

## TS 2 Cabinet Power Supply

Meets NEMA TS 2 2003 Standards



Dimensions: 3.4" W x 7.1" H x 7.4" D

- AC Line Input Voltage - 80 VAC to 135 VAC, 43/65 Hz

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- AC Input - Fuse Protected

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- Power Factor Correction  $\geq 0.95$

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- 12 VDC Output - 5 Amps

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- 24 VDC Output - 5 Amps

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- DC Outputs -- Fuse Protected + LED Indications

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- 12 VAC Unregulated Output @ 250 mA

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- Line Frequency Square Wave Output

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- Advanced Switch Mode Design Provides High Efficiency

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- Low Conducted and Radiated Emissions

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- Operating Temperature:  $-40^{\circ}$  C to  $+85^{\circ}$  C

# CPS-TS2 Specifications

**General:** The power supply incorporates an advanced switch mode design. Efficiency is 80% or greater, nominally 90% or greater at 120 VAC input. Both 12 VDC outputs are rated at 5 Amps. Output load regulation is  $\geq 2\%$

**Environmental:** Complies with NEMA TS-2 2003 Standards

**Operating Ambient Temperature:**  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

**Power Factor:**  $\geq 0.95$

**Efficiency:**  $\geq 80\%$

**Front Panel Connector:** MS3106a-18-1SW

**Input Voltage Indication:** When AZ Line Voltage is present ( $\geq 70$  VAC ) the front panel LED illuminates green. The LED extinguishes when AC Voltage is absent or low.

**Input Line Frequency:** 43 Hz to 65 Hz

**Input Line Voltage:** 80 VAC to 135 VAC

**Line Regulation:**  $\pm 0.1\%$

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

**Over Current Protection:** The AC input and DC outputs are fused with front panel accessible 3AG slow blow fuses. If the DC load exceeds 10 Amps for longer than 100 milliseconds the DC output is shut-down. Once the excessive load is removed the power supply recovers.

**Output Voltage Indication:** When either the 12 VDC or 24 VDC output voltage varies by more than  $\pm 1$  VDC, their respective front panel LED changes from green to red. If the power supply shuts down due to a fault, the front panel LED turns off.

**DC Outputs:** 12 VDC  $\pm 2\%$  @ 5 Amps and 24 VDC  $\pm 2\%$  @ 5 Amps

**Output Ripple:** Less than 100 mV Peak to Peak

**Fuse Protection:** DC outputs are protected with 5 Amps 3AG fast blow fuses (front panel).

**Output - 12 VAC 60 Hz:** The sine wave output is referenced to AC neutral and provides up to 250 mA<sub>RMS</sub>. The output is protected with a 0.25 Amp 3AG front panel slow blow fuse.

**Output - Line Frequency Reference:** The Line frequency reference output is a 60 Hz square wave with amplitude of 24 VDC  $\pm 2\%$  referenced to DC common. The output can source or sink 100 mA. Transitions of the square wave occur within  $\pm 50$  microseconds of the AC zero crossing.

**Initial Start-Up:** A soft start feature is provided for the starting up under heavy loads. Power draw from the AC line is ramped up over a 4 millisecond period.

**In-Rush Current:** In-Rush Current is limited to less than 3 Amps AC.

**Self-Checking:** Self-monitoring feature shuts down the DC output in the event of a failure or excessive load.

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

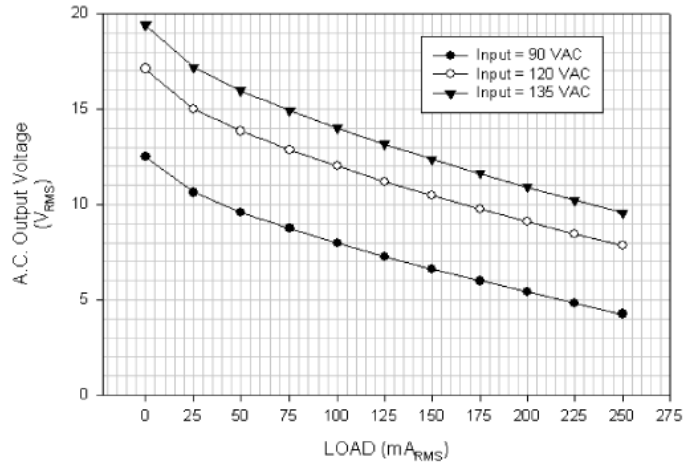
**Circuit Board:** The printed circuit board is 0.062 inch thick FR4 material with 2 Oz. Copper. All holes are plated through circuit boards and components are conformal coated with a polyurethane coating.

**Enclosure:** The enclosure is fabricated with powder coated aluminum. Attachment points are located on top and bottom for rigid mounting.

**Size:** 3.4 inches wide x 7.1 inches high x 7.4 inches deep

**Weight:** 2.71 pounds

## 12 VAC Unregulated Output



## Pin Assignments

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

