

Model TS2

TS 2 Cabinet Power Supply

Meets NEMA TS 2 2003 Standards



Dimensions: 3.34" W x 5.95" H x 8.20" D

- AC line input voltage – 85 VAC to 135 VAC, 50/60Hz

- AC input - fuse protected

- Power factor correction ≥ 0.95

- 12 VDC Output – 5 Amps

- 24VDC Output – 5 Amps

- DC outputs – fuse protection + LED Indications

- 12 VAC unregulated output @ 250 mA

- Line frequency square wave output

- Advanced switch mode design provides high efficiency

- Low conducted and radiated emissions

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

TS2 Specifications

General: The TS-2 power supply incorporates a switch mode design providing small size, lightweight, and high efficiency. The two D.C. outputs are rated for 12VDC at 5 Amps and 24VDC at 5 Amps. Regulation is $\pm 2\%$ and efficiency is 75% or greater. The load on the A.C. power line has a power factor ≥ 0.95 .

Over current protection: The A.C. input, A.C. output, and D.C. outputs are fused with front panel accessible 3AG slow blow fuses. If either D.C. output experiences excessive load (≥ 5 Amps) lasting longer than 100 milliseconds, the D.C. output will be turned off and remain off until the A.C. input voltage is removed and restored.

Output voltage indication: When the 12 VDC output voltage drops below 10.8 VDC, or the 24 VDC output drops below 21.6 VDC, or if an output fuse blows, the corresponding front panel LED will turn off.

Output - 12 VAC 60 Hz: The sine wave output is referenced to A.C. neutral and provides up to 250 mARMS. The output is protected with a 0.25 Amp 3AG front panel slow blow fuse.

Output – Line Freq. Ref.: The line frequency reference output is a 60 Hz square wave with amplitude of 24VDC $\pm 2\%$ referenced to D.C. common. The output can source or sink 100 mA. Transitions of the square wave occur within ± 50 microseconds of the A.C. zero crossing.

Initial start-up: When the power supply is shut-down for longer than one minute, a soft start feature is implemented. Power draw from the A.C. line is ramped up over several A.C. lines cycles.

Self-checking: Critical self-monitoring features ensure shut-down of the D.C. output in the event of a component failure or excessive load.

Emissions: An aluminum enclosure and EMI filter minimize conductive and radiated emissions. Input Line Voltage: 85 VAC to 135 VAC

Input Line Frequency: 47 Hz to 63 Hz

Efficiency: $\geq 75\%$

Power Factor: ≥ 0.95

DC Outputs: 12 VDC $\pm 2\%$, 5 Amps max
24 VDC $\pm 2\%$, 5 Amps max

Output Indicators: Two LEDs provide front panel indications when the 12 VDC output is ≥ 10.8 VDC, and the 24 VDC output is ≥ 21.6 VDC.

Load Regulation: $\pm 2\%$

Line Regulation: $\pm 0.1\%$

Output Ripple: Less than 80 mV Peak to Peak

12 VAC Unregulated Output: 0.25 ARMS max.

Line Frequency Reference: 24 VDC 60 Hz Square Wave capable of sinking or sourcing 100 mA

Fuse Protection: The AC line is protected with a 2 Amp slow blow fuse. The DC outputs are protected with 5 Amp slow blow fuses. The 12 VAC unregulated output is protected with a $\frac{1}{4}$ A slow blow fuse.

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

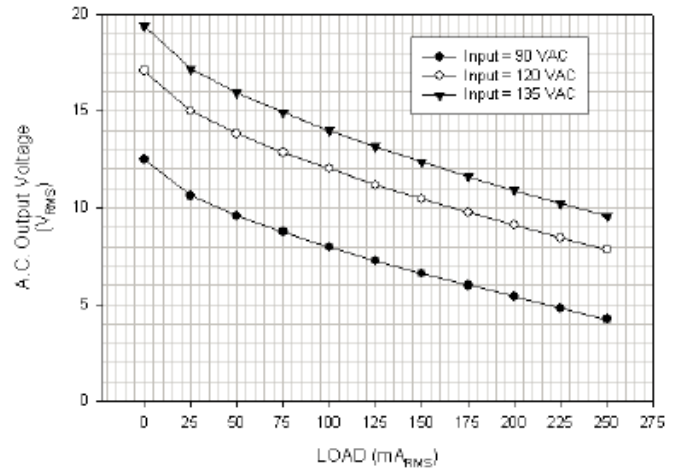
Circuit Board: The printed circuit board is 0.062 inch thick FR4 material with 2 Oz. Copper. All holes are plated through. Circuit boards and components are conformal coated with polyurethane

Size: 3.3 inches wide x 6.0 inches high x 8.2 inches deep

Weight: 2.71 lb

Connector: MS3106A-18-1SW

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