



Statronics Power Supplies

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ISO 9001

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E100 Series

VERY WIDE INPUT 100W CONVERTER

FEATURES:

- Excellent Line Transient Immunity
- Exceptionally Wide Input Range
- 5mS Holdup (Shorted Input!)
- Wide Ambient Range
- High Input-Output Isolation
- High MTBF
- High efficiency
- Very low noise
- Low Inrush Charge
- Compact, Convenient Package
- 3U Pluggable Sub-Rack module



ELECTRICAL SPECIFICATIONS

INPUT	
DC Input Voltage Range	17.5V – 160V DC, (200V DC with reduced performance, see regulation)
Reverse Input Protection	Shunt Protection (blows fuse)
Inrush Current	Inrush charge less than 4.4µCoulombs, I Peak < 10A, 50µSec.
Input Fuse, Safety	10A HRC 250V SF, internal
Input Ripple Current	Less than 1A RMS – see EMC
Input Power	Less than 120 Watts at 100 Watts output
ON/OFF	Front size switch (options)
OUTPUT	
DC Output Power	100W Continuous, 150W surge
Voltage	12V single, 24V single, 12V dual isolated, ± 12V (user or factory set)
Voltage Adjustment Range	± 10% (Secondary-side) Front side trimmer (options)
Current	8.4A for 12V single, 4.2A for 24V & 12V dual
Current Adjustment Range	0.5-6A Current limit mode. Front side trimmer (options)
Surge Load	6A (5 minutes, each output)
Min Load	0A
Ripple & Noise	< 100mv P-P (Note 1)
Total Band Regulation	< ± 0.01% (17.5 to 160V in, 0 – 100W load, 12V configuration) < ± 0.1% (17.5 to 160V in, 0 – 100W load, 24V configuration)
Hold-up Time	> 5mS, full load, 17.5 to 200V input, I/P shorted or open.

OVERALL PERFORMANCE

Efficiency	> 85% at maximum load and any input voltage 24V to 160V
Temperature Coefficient	Any change in output voltage due to warm-up drift and operation temp does not exceed regulation limit.
Step Load Response	25% to 75% Step Load on output. Effect on output: <200mV peak or dip, <500μ s Settling Time to regulation limits
Output Signal (secondary-side, free voltage contact of relay.)	Output "Power Good" = open OFF, Output voltage out of tolerance = close
Indicators and test sockets	Front side: Power Good LED1. Input above 17.5V LED2. Test sockets output voltage
Nominal Switching Frequency	75KHz

PROTECTION

Short Circuit	Short circuit on output causes no damage.
No Load	Under no load operation, the power supply load causes no damage or hazard. No minimum load is required.
Over Load	Total power 120% to 150% automatic re-start on removal of overload.
Over Voltage	Output over voltage limited to 125% of nominal
Over temperature	Shutdown above 100°C with auto restart below 70°C.

ENVIRONMENT

Operating Temperature	Full Performance, 0°C to 60°C. Or -20°C to 70°C with automatic thermal de-rating or forced air. Relative Humidity: 10% to 95%
Cooling	Natural Convection (vents on long sides)
Vibration and Shock	IEC 68.2.6 resonance scan 10hz to 150hz 0.5g 1 octave/min 3 axis. IEC 68.2.27 shock test 15g 11ms 3 shocks per axis 3 axis. IEC 68.2.6 Endurance test 4hz to 150hz 0.07mm double amplitude 4hz-8.4hz 1.0g 8.4hz-150hz. IEC 68.2.29 bump test 10g 16ms 1000 per axis 2/second 3 axis.
Shipping and Storage	-40°C to 85°C , Relative Humidity 10% to 95%

SAFETY and EMI: Complies to following Standards:

Safety:	IEC 950, AS 3260, UL 1950, CSA22.2 No. 950.
EMI, conducted:	CISPR22, AS3548, FCC, VDE 0878 PT3 (All Class B)
EMC, susceptibility:	EN 61000-4-2 to -4-6, -4-9, -4-11, EN 50082-2, IEC 1326 part 10 and part 1, IEC 255-5, 255-22, 255-11.

GENERAL

TERMINATIONS	H15 DIN 41494 connector (Std) or 14 pins plug-In screw terminal block (option)
MTBF	>250,000 hours, full load, 40°C, MIL217F parts stress analysis
MOUNTING	Two M3 points on front and cover. Slides into standard IEC/DIN rack guides.
MATERIAL	Anodized Aluminium
DIMENSIONS	3U 5HP (4x1.4x6.7) inches, (100x35x170) mm (incl connector)

Connector (X1) Pin Configuration

H15 DIN	MSTBA2.5	E100S12 (single o/p)	E100S24 (single o/p)	E100D12 (dual o/p)
4	1	+VM (+12V MASTER)	+VM (+24V MASTER)	+VA (+12V-aux)
6	2	--VM (0V MASTER)	--VM (0V MASTER)	-VA (0V-aux)
8	3	+VM (+12V MASTER)	+VM (+24V MASTER)	+VM (+12V MASTER)
10	4	+VM (+12V MASTER)	+VM (+24V MASTER)	+VM (+12V MASTER)
12	5	-VM (0V MASTER)	--VM (0V MASTER)	- VM (0V MASTER)
14	6	-VM (0V MASTER)	--VM (0V MASTER)	--VM (0V MASTER)
16	7	ALARM COM	ALARM COM	ALARM COM
18	8	ALARM GOOD N/C	ALARM GOOD N/C	ALARM GOOD N/C
20	9	ALARM GOOD N/O	ALARM GOOD N/O	ALARM GOOD N/O
22	10			
24	11			
26				
28	13	+VIN	+VIN	+VIN
30	14	-VIN	-VIN	-VIN
32	12	EARTH	EARTH	EARTH