



Zecks Power Co., Ltd.

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Specification
of
1U Industrial Power Supply
; **ATX TYPE** ;

⊗ **ATX 12V FOR Pentium 4** ⊗

Model No. ZKS-250WX-1U

; **Total Wattage 250W** ;

Prepared By	Designed By	Approved By	Issued By

1.0 INPUT :

- 1.1 VOLTAGE; 90VAC ~ 240VAC (Universals Input ; Auto Switch)
- 1.2 FREQUENCY; 47Hz ~ 63Hz
- 1.3 CURRENT; 60A max.115Vrms/60Hz; 8.0A max. 230Vrms/50Hz
- 1.4 INRUSH CURRENT REGULATION; (at 25°C Jambient cold start)
45A maximum; 115Vrms , 70A maximum; 230Vrms.
- 1.5 EFFICENCY

The power supply is a minimum of 60% efficient under typical load. The “Energy Star” efficiency of the power supply is a minimum of 50% when the AC input power is 30W.

2.0 OUTPUT :

VOLTAGE	+3.3V	+5V	+12V	-5V	-12V	+5Vsb
Max. Load	14A	25A	10A	0.5A	1A	1.5A
Min. Load	1.4A	2.5A	1A	0A	0.1A	0.1A
Line Regulation	±0%	±0%	±0%	±2%	±2%	±0%
Load Regulation	±5%	±5%	±5%	±10%	±10%	±5%
Cross Regulation	±5%	±5%	±5%	±10%	±10%	±5%
Ripple & Noise	50mV	50mV	50mV	150mV	150mV	50mV

NOTE; The continuous max. DC output power shall not exceed 250W, (+3.3V & +5V total 125W Max.)

Peak surge current 15sec. max. Add 0.1uF and 22uF tantalum capacitors should be put across output terminals during ripple & noise test. The oscilloscope bandwidth is set at 20 MHz
coaxial probe will be used to measure it.

2.1 HOLD-UP TIME

The power supply will maintain output regulation despite a loss of a minimum of 16ms while under full load. Test to be performed at nominal input voltage.

2.2 POWER GOOD SIGNAL

A “power good” signal is asserted by the supply to indicate that the +5VDC output is within regulation limits.

3 PROTECTION :

3.1 OVER CURRENT PROTECTION

Overload currents applied to the +5V and +12V outputs will cause the power supply to latch at 130% - 150% of rated output power.

3.2 OVER VOLTAGE PROTECTION

The power supply prods latch-mode over-voltage protection as defined below:

Output Voltage	Trigger Voltage
+5V	5.6V – 6.8V

3.3 SHORT CIRCUIT PROTECTION

A short circuit on any DC output will cause the power to latch. The power supply will withstand a continuous short circuit to the output without damage or overcurrent to the unit. The +5VSB can be shorted indefinitely and will recover automatically when the short is removed.

3.4 NO LOAD OPERATION

No hazardous conditions or damage to the supply will occur with all of the DC output connectors disconnected from the load.

3.5 OVER SHOOT AT TURN-ON/TURN-OFF

The output voltage overshoot upon the application or removal of the input voltage is less than 10%.

4 TIME SEQUENCE

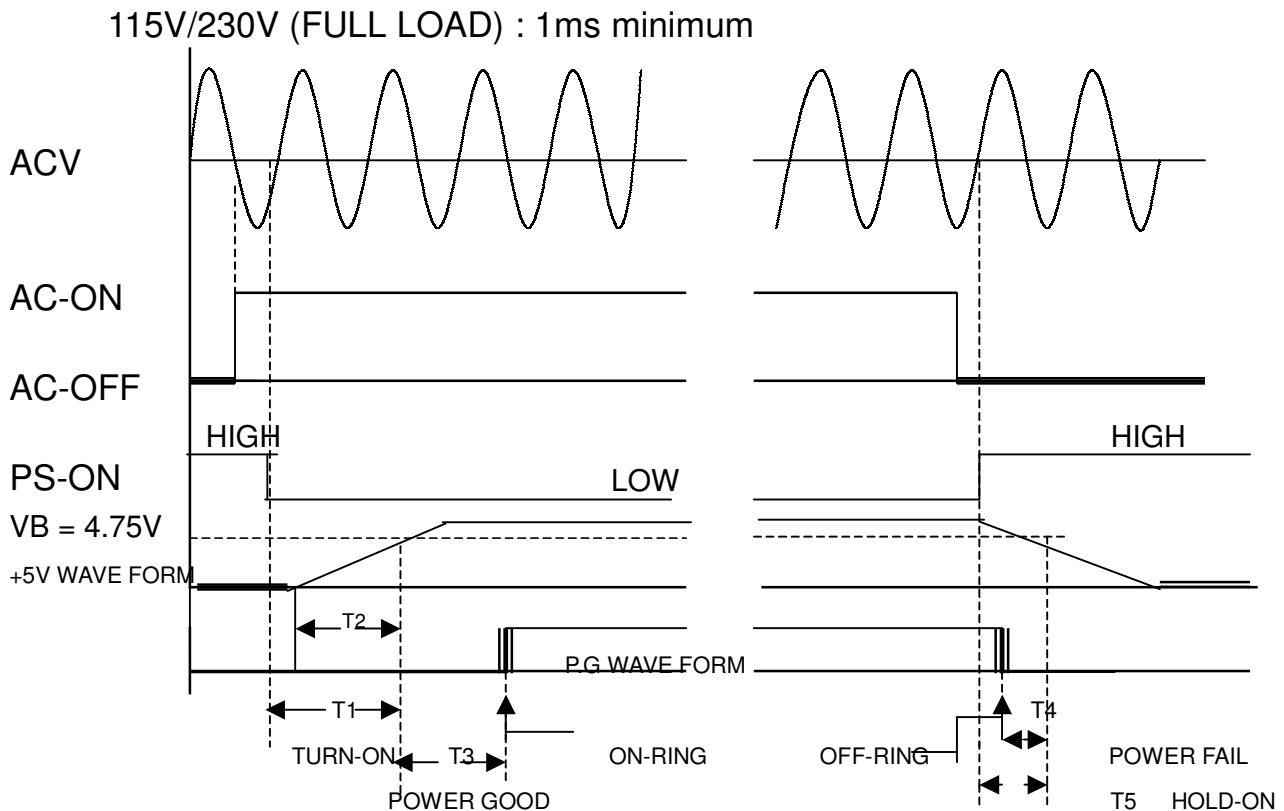
T1 Turn On Time (2000msec.max.)

T2 Output Voltage Sequencing (35msec.max.)

T3 Power Good Delay Time (100msec < t3 < 500msec.)

T4 Power Fail Delay Time (1msec.min.)

T5 Power Good Hold-Up time (16msec.min)



4.1 REMOTE ON/OFF CONTROL

The power supply DC output (with the exception of +5VSB which is always available) are enabled with an active-low, TTL-compatible signal 'PS-ON', When PS-ON is pulled to TTL low, the DC outputs are enabled. When PS-ON is pulled to TTL high or open-circuited, the DC outputs are disabled. PS-ON may be active by either electronic means or a mechanical switch.

5.0 PHYSICAL ENVIRONMENT

OPERATING CONDITIONS

The power supply shall be capable of continuous operation and meet all electrical specification without need for adjustment when subjected to the following environ-mental conditions.

5.1 AMBIENT OPERATION TEMPERATURE 0°C J~ 50°C J

(Output maximum 220W at 50°C J)

5.2 AMBIENT OPERATION RELATIVE HUMIDITY 10% ~ 90%

5.3 AMBIENT STORAGE TEMPERATURE -20°C J~ 80°C J

5.4 AMBIENT STORAGE RELATIVE HUMIDITY 5% ~ 90%

6.0 REGULATORY COMPLIANCE

6.1 SAFETY REQUIREMENTS

- i · CSA C222
- i · UL 1950
- i · cUL 1950
- i · TUV 60950
- i · CE
- i · CB

6.2 DIELECTRIC STRENGTH

Primary to Secondary; 500 Vac for 3 sec.

Primary to Frame Ground; 500 Vac for 3 sec.

6.3 INSULATION RESISTANCE

Primary to Secondary: 20 Meg. Ohms Minimum.

Primary to Frame Ground: 20 Meg. Ohms Minimum.

6.4 GROUND LEAKAGE CURRENT

The power supply ground leakage current shall be less than 3.5mA.

6.5 GROUND CONTINUITY

The power supply grounding continuity shall be less than 100mΩ when the test current is at 25A.

6.6 INPUT LINE CURRENT HARMONIC CONTENT (Optional)

The power supply meet the requirements of IEC 1000-3-2, class A, at full rated power.

7.0 OTHER REQUIREMENTS

INPUT CONNECTIONS

Refer to Mechanical Specifications for placement.

The AC mains input are through a three-circuit IEC type connector mounted on the rear of the power supply chassis.

8.0 RELIABILITY; (MTBF at 25°C J100,000 hours minimum.)

When the power supply is operation within any of the limits of this specification, the power supply have a minimum predicted MTBF (MIL-STD-217E) of 100,000 hours of conditions operation at 25°C ,maximum-output load, and nominal AC input voltage.

9.0 SHOCK AND VIBRATION

The power supply will withstand the following imposed conditions without experiencing non-recoverable failure or deviation form specified output characteristics.

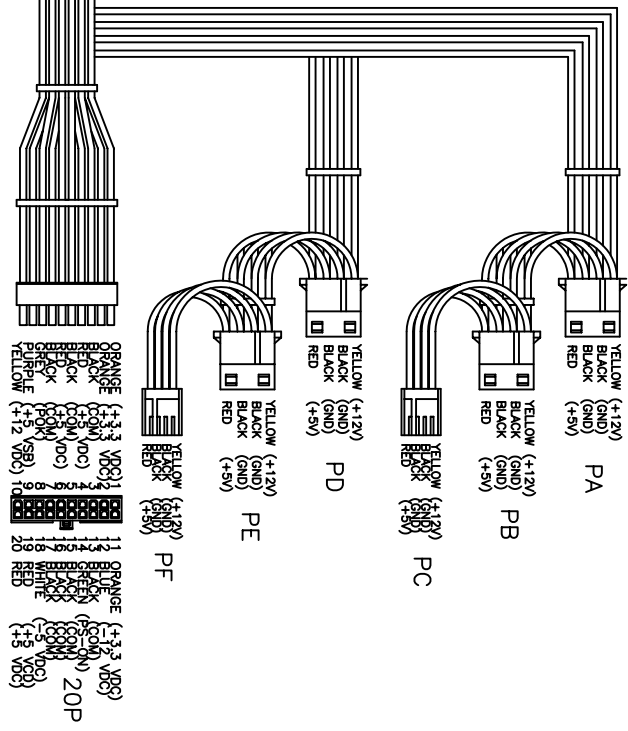
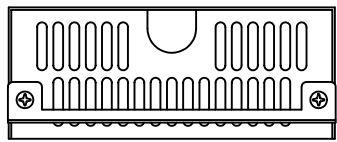
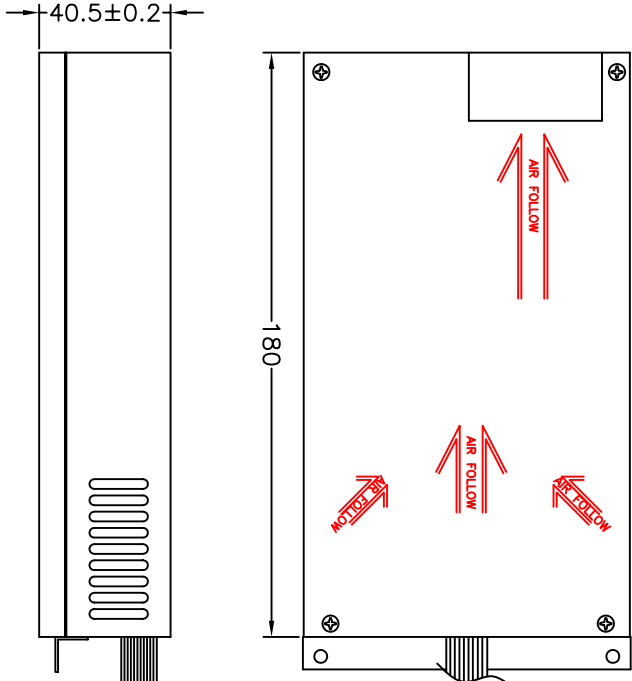
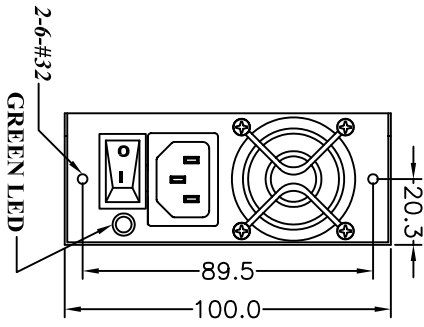
Storage –40G, 11mSec. half-sine wave pulse in both directions on three mutually perpendicular axes.

Operating –10G, 11mSec. half-sine wave pulse in both directions on three mutually perpendicular axes.

Vibration Operation-Sine wave excited, 0.25G maximum acceleration, 10 to 250Hz swept at one octave/mine. Fifteen-minaret dwell at all frequencies at which the device under test experience excursions two times large than non-resonant excursions.

10. MECHANICAL RIQUIREMENTS

Physical dimension : (L) 180mm; (W) 100mm; (H) 40.5mm



- ORANGE (+3.3 VDC) 1
- RED (+5V) 2
- BLACK (COM) 3
- BLACK (COM) 4
- ORANGE (+3.3 VDC) 5
- GREEN (+5V) 6
- YELLOW (+12 VDC) 7
- YELLOW (+12V) 8
- BLACK (GND) 9
- BLACK (GND) 10
- RED (+5V) 11
- ORANGE (+3.3 VDC) 12
- RED (+5V) 13
- BLACK (COM) 14
- BLACK (COM) 15
- WHITE (+5 VDC) 16
- RED (+5 VDC) 17
- RED (+5 VDC) 18
- RED (+5 VDC) 19
- RED (+5 VDC) 20

Zecks Power Co., Ltd.



REV: 1 新版發行。

MATERIAL

DESCRIPTION	UNIT	MM	APPROVED	CHECKED	DRAWN
PART NO.	SCALE	NON			
MODEL	TOLERANCE				