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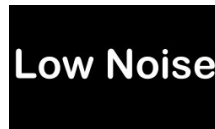
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Model Name: SS-2U40ES

(400W power supply for 2U Single **Efficiency $\geq 86\%$**)



1. Specification

1.1.AC Input Voltage Range: 100VAC ~ 240VAC, $\pm 10\%$, 47 to 63 Hz.

1.2.INPUT CURRENT:8.0 A (RMS) FOR 115VAC /4.0 A (RMS) FOR 230VAC.

1.3. Input Power Factor: The minimum power factor at full load shall be
0.98/115V 60 Hz and 0.95/230V 50 Hz.

1.4. Inrush current: 35A MAX. FOR 115 VAC / 55A MAX. FOR 230 VAC.

1.5.DC Output: 400W maximum.

	Output-1	Output-2	Output-3	Output-4	Output-5
Output Voltage	+5V DC	+12V DC	-12V DC	+3.3V DC	+5VSB
Output Current(Max)	25A	32A	0.8A	25A	3.5A
Output Current(Min.)	0.5A	2A	0A	0.5A	0.1A
Ripple/Noise Max.(P-P):	60mv	120mv	120mv	60mV	60mV
Line Regulation:	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$
Load Regulation:	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$

Note:

1. Noise Test – Noise bandwidth is from DC to 20 MHz.

2. Ripple frequencies greater than 1MHz shall be attenuated by the measurement System.

3.Add 0.1uF/10uF capacitor at output connector terminals for ripple and noise measurements.

4.The combined total power from 5V & 3.3V shall not exceed 160W.

1.6 PS-ON

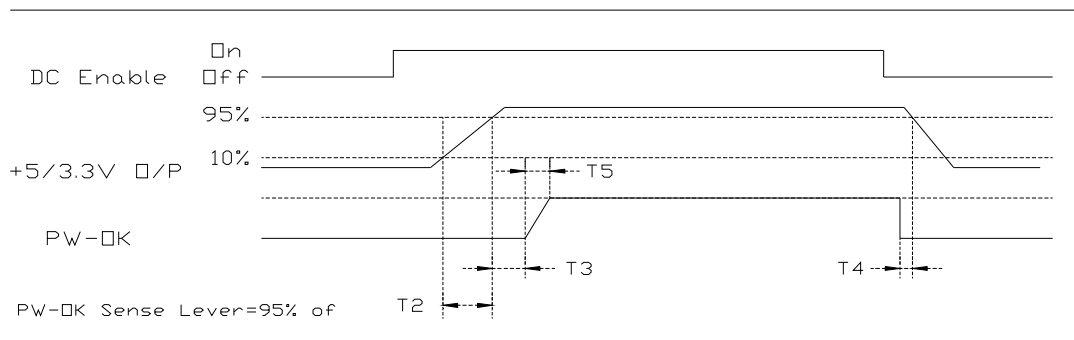
Remote On/Off Control:

When PS-ON is pulled to TTL Low, the DC output is to be enabled.

When PS-OFF is pulled to TTL high, the DC output is to be disabled.

1.7 PW-OK

PW-OK is power good signal and should be asserted high by the power supply to indicate that +5VDC and +3.3VDC output are above the under voltage thresholds of the power supply TTL. compatible signal out with 100ms to 500ms.



Timing of PS-ON, PW-OK, and Germane Voltage Rails

Although there is no requirement to meet specific timing parameters,

The following signal timings are recommended:

$$2\text{ms} \leq T2 \leq 200\text{ms}$$

$$100\text{ms} \leq T3 \leq 500\text{ms}$$

$$T4 > 1\text{ms}$$

$$T5 \leq 10\text{ms}$$

1.8 Efficiency: TYPICAL >86% AT 115VAC , FULL LOAD.

1.9.Hold-Up Time: 16ms at maximum load & normal input voltage.

2. PROTECTIONS

2.1 OVER-VOLTAGE PROTECTION

OUTPUT	Min	Max
+3.3V	3.7V	4.1V
+5V	5.7V	6.5V
+12V	13.1V	14.5V

2.2 SHORT CIRCUIT PROTECTION

A short circuit placed between the DC Return and the output shall cause No damage and the power supply shall shutdown.

2.3 OVER POWER PROTECTION

The power supply shall shut down when output power exceeds 110% to 160% of full load and require a power on cycle be performed by the operate

2.4 NO LOAD OPERATION

No parts shall be damaged on the power supply.

3. ENVIRONMENT TEMPERATURE

3.1 Operation Temperature: 0°C to 45°C

3.2 Cooling: ONE 60mm DC FANS.

3.3 Storage Temperature:-20°C to 70°C

3.4 Humidity: 5 to 90% non-condensing.

4. Mean Time Between Failure(MTBF)

Using MIL - HDBK -217F the calculated MTBF=100,000 hours at 25°C 75% loading.

5. SAFETY:

UL 60950-1, 2ND Edition, CSA C 22.2 No. 60950-1-07, 2nd Edition, 2007-03

TUV EN60950-1: 2006+A11+A1+A12

CB IEC60950-1: 2005

BSMI CNS14336-1, CNS13438

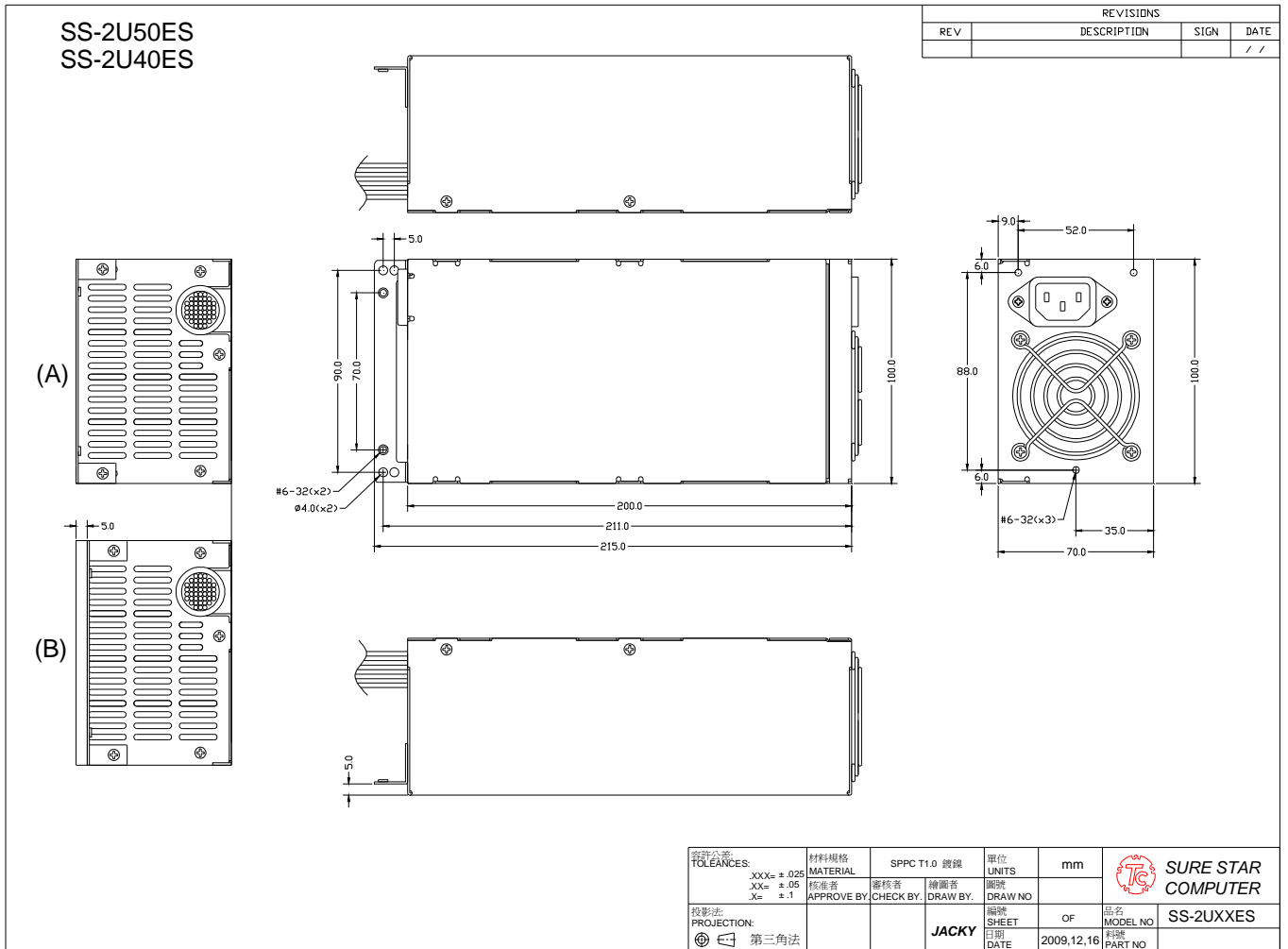
6. EMI NOISE FILTER:

EN55022:2006+A1:2007, EN55024:1998+A1:2001+A2:2003

EN61000-3-2: 2006+A2:2009 EN61000-3-3: 2008, IEC61000-4-2,-3,-4,-5,-6,-8,-11

7. DIMENSION

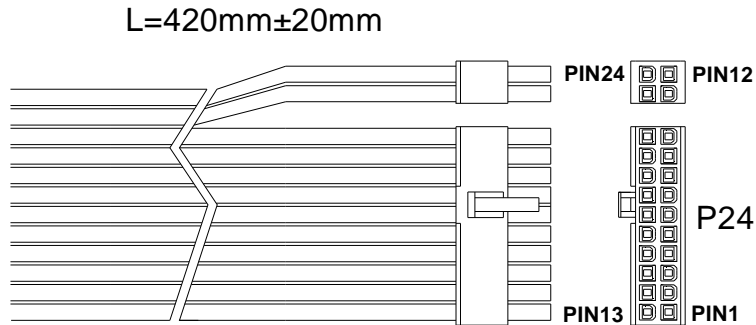
L 200 x W 100 x H 70 mm



8. PINOUTS OF CONNECTORS

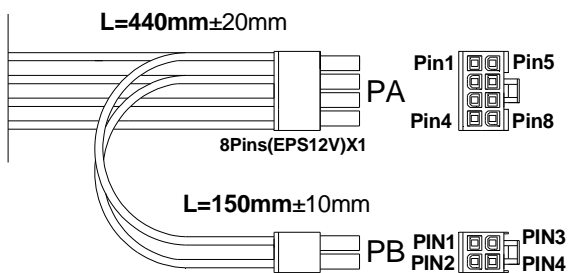
- ATX or EPS (20+4)Pin x 1 ,
- M8P +12V Power Connector x 1 ,
- M4P +12V Power Connector x 1 ,
- H.D.D. x 9 ,
- Floppy x 1
- SATA x 2.

Below cable length start from Outer cage:



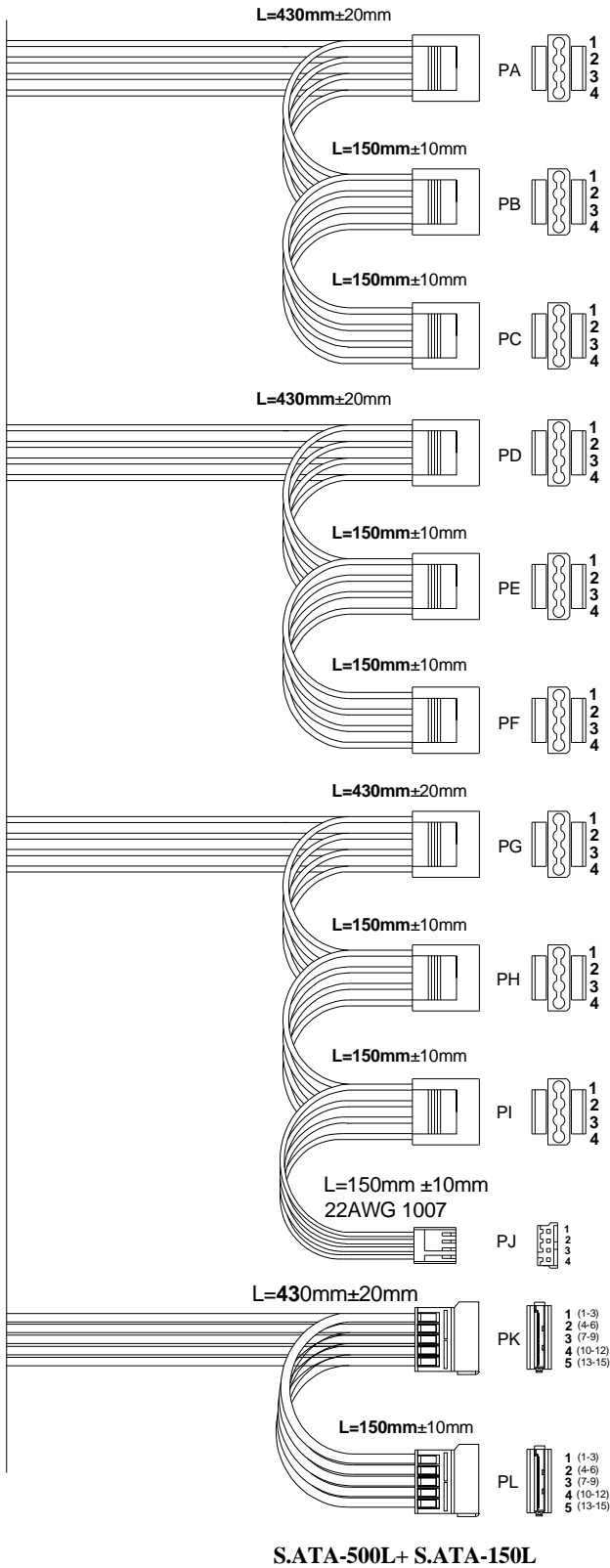
24Pins(EPS12V)
Connector HOUSING: MOLEX 39-01-2240 or equivalent
TERMINAL: MOLEX 39-00-0039 or equivalent

Housing	Pin No.	WIRE COLOR	LENGTH	Pin No.	WIRE COLOR	LENGTH
P24	1	ORANGE(+3.3V)	420mm/18AWG	13	ORANGE(+3.3V)	420mm/18AWG
	2	ORANGE(+3.3V)	420mm/18AWG	14	BLUE(-12V)	420mm/18AWG
	3	BLACK(GND)	420mm/18AWG	15	BLACK(GND)	420mm/18AWG
	4	RED(+5V)	420mm/18AWG	16	GREEN(PS-ON)	420mm/20AWG
	5	BLACK(GND)	420mm/18AWG	17	BLACK(GND)	420mm/18AWG
	6	RED(+5V)	420mm/18AWG	18	BLACK(GND)	420mm/18AWG
	7	BLACK(GND)	420mm/18AWG	19	BLACK(GND)	420mm/18AWG
	8	GRAY(PG)	420mm/20AWG	20	NC	
	9	PURPLE(+5VSB)	420mm/18AWG	21	RED(+5V)	420mm/18AWG
	10	YELLOW(+12V)	420mm/18AWG	22	RED(+5V)	420mm/18AWG
	11	YELLOW(+12V)	420mm/18AWG	23	RED(+5V)	420mm/18AWG
	12	ORANGE(+3.3V)	420mm/18AWG	24	BLACK(GND)	420mm/18AWG



Housing	Pin	WIRE COLOR	LENGTH	Pin	WIRE COLOR	LENGTH
PA	1	Black/Black	440mm/18AWG	5	Yellow/Yellow	440mm/18AWG
	2	Black/Black		6	Yellow/Yellow	
	3	Black		7	Yellow	
	4	Black		8	Yellow	
PB	1	Black	150mm/18AWG	3	Yellow	150mm/18AWG
	2	Black	150mm/18AWG	4	Yellow	150mm/18AWG

Connector HOUSING: MOLEX 39-01-0280 or equivalent
 Connector HOUSING: MOLEX 39-01-0240 or equivalent



Housing	Pin No.	WIRE COLOR	LENGTH	Pin No.	WIRE COLOR	LENGTH
PA	1	Yellow / Yellow	430mm/18AWG	3	Black / Black	430mm/18AWG
	2	Black / Black	430mm/18AWG	4	Red / Red	430mm/18AWG
PB	1	Yellow / Yellow	150mm/18AWG	3	Black / Black	150mm/18AWG
	2	Black / Black	150mm/18AWG	4	Red / Red	150mm/18AWG
PC	1	Yellow	150mm/18AWG	3	Black	150mm/18AWG
	2	Black	150mm/18AWG	4	Red	150mm/18AWG

Connector Housing: H.D.D. for easy plug

Housing	Pin No.	WIRE COLOR	LENGTH	Pin No.	WIRE COLOR	LENGTH
PD	1	Yellow / Yellow	430mm/18AWG	3	Black / Black	430mm/18AWG
	2	Black / Black	430mm/18AWG	4	Red / Red	430mm/18AWG
PE	1	Yellow / Yellow	150mm/18AWG	3	Black / Black	150mm/18AWG
	2	Black / Black	150mm/18AWG	4	Red / Red	150mm/18AWG
PF	1	Yellow	150mm/18AWG	3	Black	150mm/18AWG
	2	Black	150mm/18AWG	4	Red	150mm/18AWG

Connector Housing: H.D.D. for easy plug

Housing	Pin No.	WIRE COLOR	LENGTH	Pin No.	WIRE COLOR	LENGTH
PG	1	Yellow / Yellow	430mm/18AWG	3	Black / Black	430mm/18AWG
	2	Black / Black	430mm/18AWG	4	Red / Red	430mm/18AWG
PH	1	Yellow / Yellow	150mm/18AWG	3	Black / Black	150mm/18AWG
	2	Black / Black	150mm/18AWG	4	Red / Red	150mm/18AWG
PI	1	Yellow / Yellow	150mm/18AWG	3	Black / Black	150mm/18AWG
	2	Black / Black	150mm/18AWG	4	Red / Red	150mm/18AWG
PJ	1	Yellow	150mm/22AWG	3	Black	150mm/22AWG
	2	Black	150mm/22AWG	4	Red	150mm/22AWG

Connector Housing: H.D.D. for easy plug

Connector HOUSING: AMP 171822-4 or equivalent

Housing	Pin No.	WIRE COLOR	LENGTH
PK	1	Orange / Orange	430mm/18AWG
	2	Black / Black	430mm/18AWG
	3	Red / Red	430mm/18AWG
	4	Black / Black	430mm/18AWG
	5	Yellow / Yellow	430mm/18AWG
PL	1	Orange	150mm/18AWG
	2	Black	150mm/18AWG
	3	Red	150mm/18AWG
	4	Black	150mm/18AWG
	5	Yellow	150mm/18AWG

HOUSING: MOLEX 675820000 or equivalent

TERMINAL: MOLEX 675810000 or equivalent

Note: Specification and wiring diagram subject to change without notice.

Dec. 25, 2012