



Synergy Global Technology Inc

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MODEL : PS2016 (> 80%)

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: 520W 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	40A	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 170W.

1.6. PS-ON

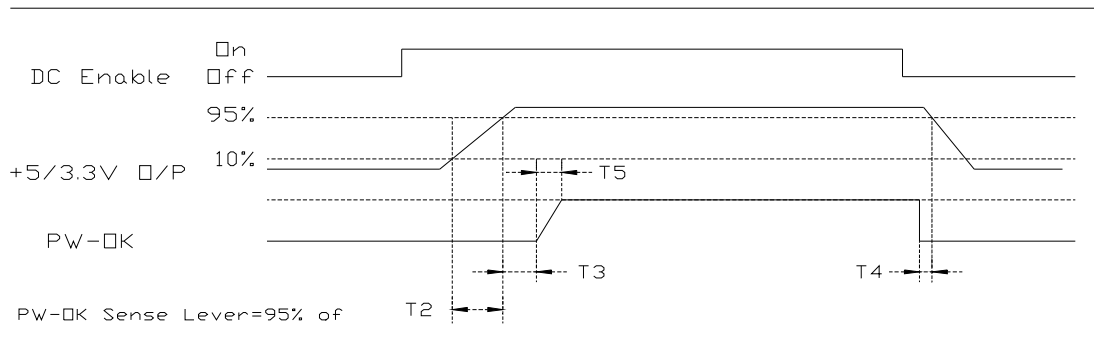
Remote On/Off Control:

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 >80% 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

3. ENVIRONMENT TEMPERATURE

3.1 Operation Temperature: 0°C to 45°C

3.2 Cooling: ONE 40mm 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)

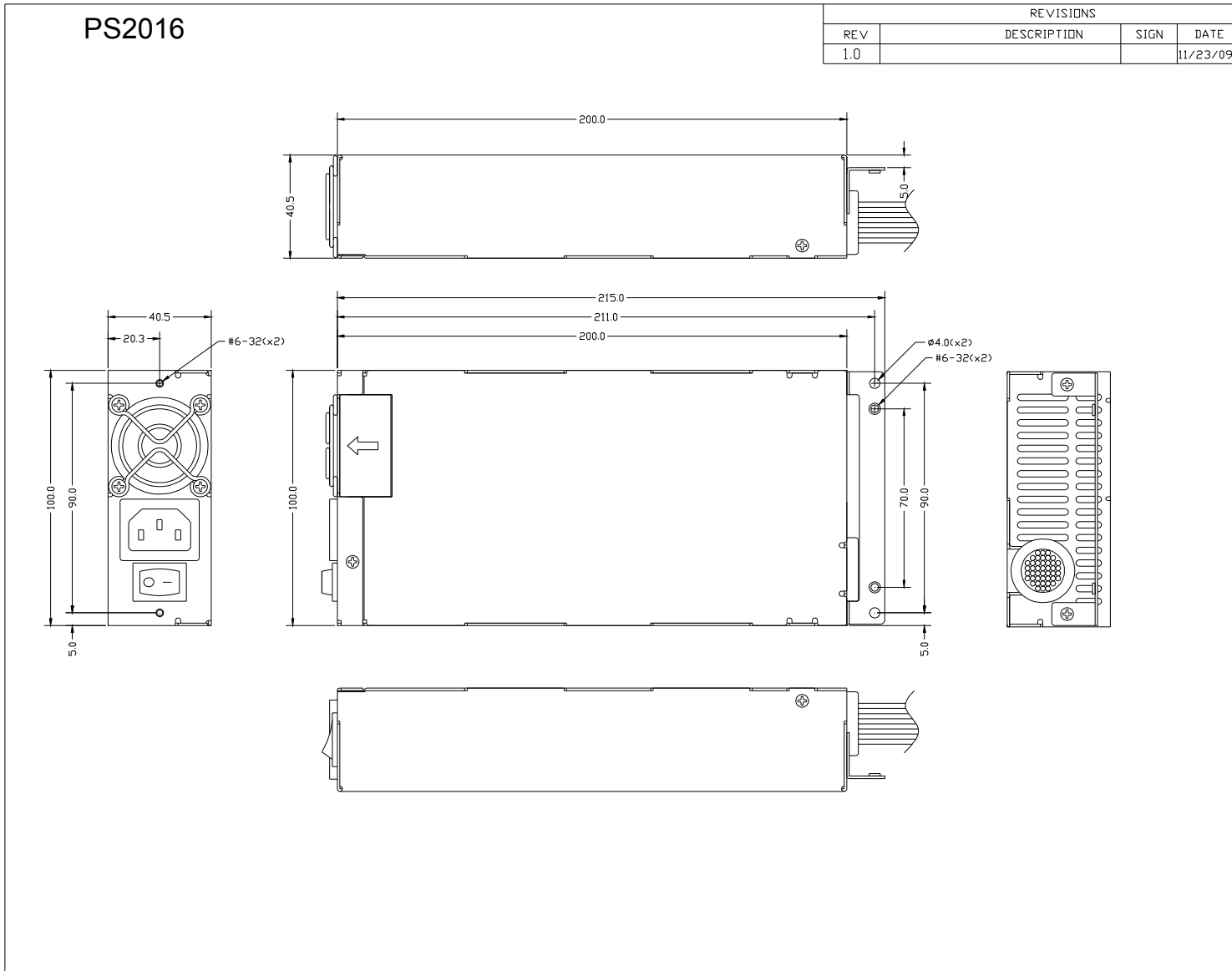
Using MIL - HDBK -217F the calculated MTBF=100,000 hours at 25°C 75% loading.

5. SAFETY: TO MEET UL, CUL, TUV.

6. EMI NOISE FILTER: FCC CLASS A, CISPR22 CLASS A.

7. DIMENSION

L 200 x W 100 x H 40.5 mm



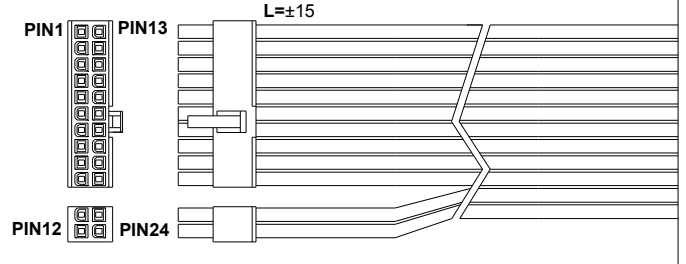
8. PINOUTS OF CONNECTORS

- ATX or EPS (20+4)Pin x 1 ,
- M8P +12V Power Connector x 1 ,
- M4P +12V Power Connector x 1 ,
- H.D.D. x 6 ,
- Floppy x 1.
- SATA x 2

修訂 REVISIONS				
版次 REV	記述 DESCRIPTION	簽名 SING	日期 DATE	

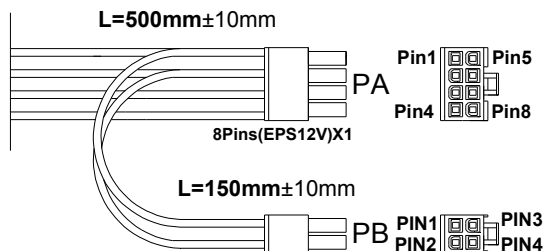
20+4P(公座)

Pin No.	WIRE COLOR	線長 (LENGTH)	Pin No.	WIRE COLOR	線長 (LENGTH)
1	ORANGE	500mm/18AWG	13	ORANGE ORANGE	500mm/18AWG 500mm/22AWG
2	ORANGE	500mm/18AWG	14	BLUE	520mm/18AWG
3	BLACK	500mm/18AWG	15	BLACK	500mm/18AWG
4	RED	500mm/18AWG	16	GREEN	520mm/20AWG
5	BLACK	500mm/18AWG	17	BLACK	500mm/18AWG
6	RED	500mm/18AWG	18	BLACK	500mm/18AWG
7	BLACK	500mm/18AWG	19	BLACK	500mm/18AWG
8	GRAY	520mm/20AWG	20	NC	
9	PURPLE	500mm/18AWG	21	RED	500mm/18AWG
10	YELLOW	500mm/18AWG	22	RED	500mm/18AWG
11	YELLOW	500mm/18AWG	23	RED	500mm/18AWG
12	ORANGE	500mm/18AWG	24	BLACK	500mm/18AWG



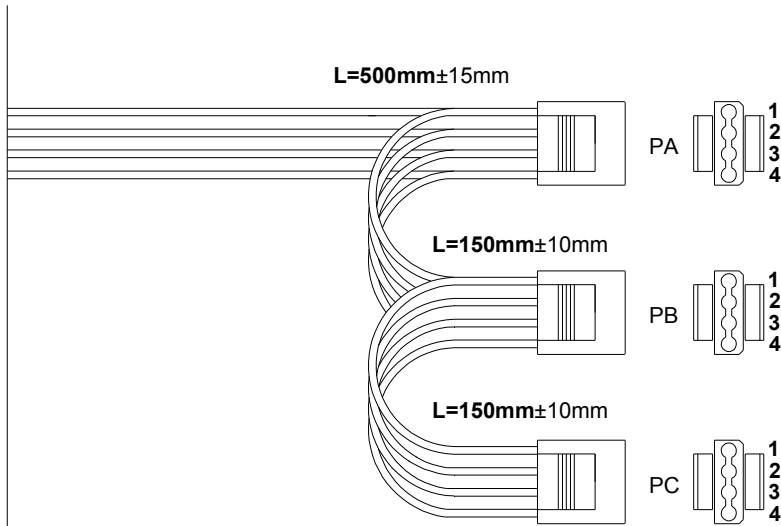
Connector HOUSING: MOLEX 39-01-2200 or equivalent

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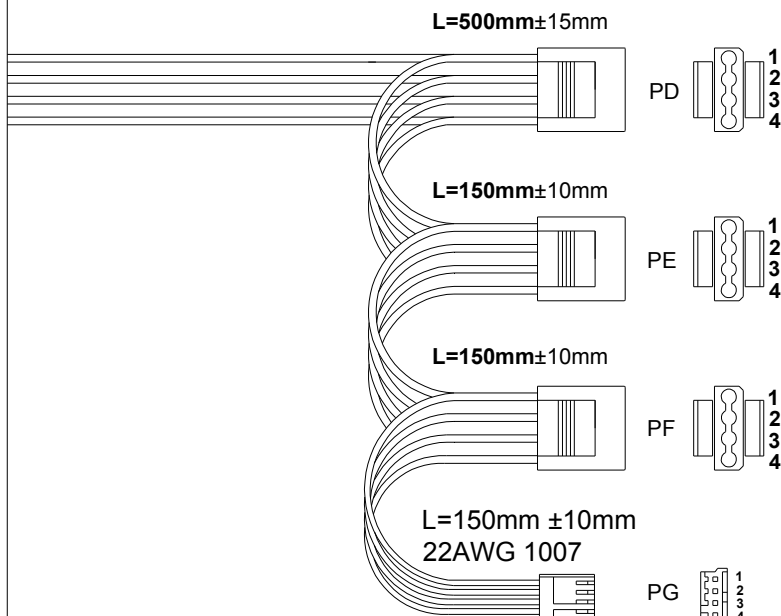
HOUSING	Pin	WIRE COLOR	線長 (LENGTH)	Pin	WIRE COLOR	線長 (LENGTH)
PA	1	BLACK	500mm / 18AWG	5	YELLOW	500mm / 18AWG
	2	BLACK	500mm / 18AWG	6	YELLOW	500mm / 18AWG
	3	BLACK	500mm / 18AWG	7	YELLOW	500mm / 18AWG
	4	BLACK	500mm / 18AWG	8	YELLOW	500mm / 18AWG
PB	1	BLACK	150mm / 18AWG	3	YELLOW	150mm / 18AWG
	2	BLACK	150mm / 18AWG	4	YELLOW	150mm / 18AWG

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



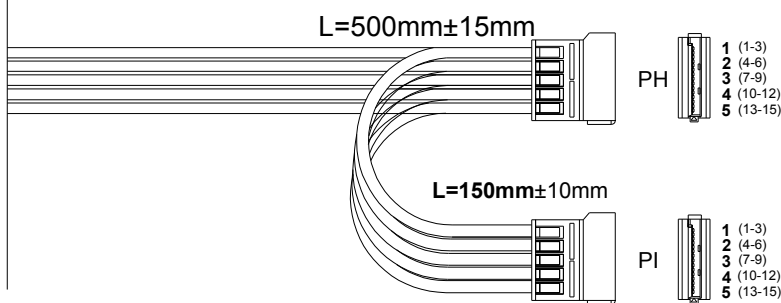
HOUSING	Pin No.	WIRE COLOR	線長 (LENGTH)	Pin No.	WIRE COLOR	線長 (LENGTH)
PA	1	YELLOW	500mm/18AWG	3	BLACK	500mm/18AWG
	2	BLACK	500mm/18AWG	4	RED	500mm/18AWG
PB	1	YELLOW	150mm/18AWG	3	BLACK	150mm/18AWG
	2	BLACK	150mm/18AWG	4	RED	150mm/18AWG
PC	1	YELLOW	150mm/18AWG	3	BLACK	150mm/18AWG
	2	BLACK	150mm/18AWG	4	RED	150mm/18AWG

Connector HOUSING: 大4P易抽拔



HOUSING	Pin No.	WIRE COLOR	線長 (LENGTH)	Pin No.	WIRE COLOR	線長 (LENGTH)
PD	1	YELLOW	500mm/18AWG	3	BLACK	500mm/18AWG
	2	BLACK	500mm/18AWG	4	RED	500mm/18AWG
PE	1	YELLOW	150mm/18AWG	3	BLACK	150mm/18AWG
	2	BLACK	150mm/18AWG	4	RED	150mm/18AWG
PF	1	YELLOW	150mm/18AWG	3	BLACK	150mm/18AWG
	2	BLACK	150mm/18AWG	4	RED	150mm/18AWG
PG	1	YELLOW	150mm/22AWG	3	BLACK	150mm/22AWG
	2	BLACK	150mm/22AWG	4	RED	150mm/22AWG

Connector HOUSING: 大4P易抽拔



HOUSING	Pin No.	WIRE COLOR	線長 (LENGTH)	Pin No.	WIRE COLOR	線長 (LENGTH)
PH	1	ORANGE	500mm/18AWG			
	2	BLACK	500mm/18AWG			
	3	RED	500mm/18AWG			
	4	BLACK	500mm/18AWG			
	5	YELLOW	500mm/18AWG			
PI	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

S.ATA-500L+ S.ATA-150L