



SPECIFICATION

Model Name :

PIST1050-EPSH-80-N

PIST1060-EPSH-80-N

Description :

500W 、 600W Mini Redundant Power Supply (PSII)

Version : B0

Issued Date : 20201207



1. General Description

This specification defines the characteristic of 1 + 1 redundant power supply with 4 Unit high. And **CRS** model name is PIST1050-EP SH-80-N for 500W、PIST1060-EP SH-80-N for 600W output.

2. Input Characteristic

2.1. Input connector

The input connector shall be an IEC60320 C14 inlet, rated for 15A/250Vac.

2.2. Input Voltage and Frequency

<i>Minimum</i>	<i>Nominal</i>	<i>Maximum</i>	<i>Measure</i>
90	100~240	264	Vac
47	50~60	63	Hz

2.3. Input Current and Inrush Current

<i>Input Voltage</i>	<i>Max. Input Current</i>	<i>Inrush Current</i>
115Vac	10A	30A
230Vac	5A	60A

2.4. Power Factor

The minimum power factor shall be 0.95 with full load and input 230Vac/50Hz.

3. Output Characteristic

3.1. DC Output Characteristic

<i>Output Voltage</i>	<i>Min. Current</i>	<i>Max. Current</i>	<i>Regulation</i>	<i>Ripple & Noise</i>
+3.3V	1A	25A	±5%	50mV
+5V	1A	25A	±5%	50mV
+12V	1A	41A/49A	±5%	120mV
-12V	0A	0.8A	±5%	120mV
+5VSB	0.1A	3.5A	±5%	50mV

Note :

1. The combined power from +3.3V and +5V shall not exceed 170W/180W.
2. The max total power shall not exceed 500W/600W.
3. Ripple and noise bandwidth is set to 20MHz.
4. Add a 0.1uF ceramic capacitor in parallel with a 10uF tantalum capacitor at output connector terminals for ripple and noise measurement.



3.2. Efficiency

The minimum efficiency of power supply is 80% with full load and 115Vac/60Hz input.

3.3. Hold up Time

The output voltages stay in regulation at least 16ms with 100% load after loss of AC input.

3.4. Rise Time

The output voltages rise from 10% to 90% with full load shall be in 20ms maximum.

3.5. Dynamic Loading

The output voltages shall remain in regulation for the step loading, and in the limits for the capacitive loading specified below :

<i>Output</i>	<i>Step Load Size</i>	<i>Load Slew Rate</i>	<i>Capacitive Load</i>
+3.3V	30% of max load	0.5A / μ sec	1000uF
+5V	30% of max load	0.5A / μ sec	1000uF
+12V	65% of max load	0.5A / μ sec	2200uF
+5VSB	25% of max load	0.5A / μ sec	1uF

3.6. PSON Remote on/off Control

The PSON signal is required to remotely turn on/off the power supply.

PSON is an active low TTL compatible signal that turns on the main power rails.

	<i>PSU On</i>	<i>PSU Off</i>
PSON Signal	LOW (0.8V max.)	HI (2V min.)

3.7. Power Good Signal

Power Good, also called PG or PWOK, is an active high TTL compatible signal.

PG signal is to indicate that all output voltages are in regulation and ready for use.

Below is for a representation of the timing characteristics of PG signal.

Power Good on delay time	100ms to 500ms
Power Good off delay time	1ms (min.)



4. Protection

4.1. Over Current Protection

<i>Output</i>	<i>Min.</i>	<i>Max.</i>	<i>Comment</i>
+3.3V	110%	150%	PSU shutdown
+5V	110%	150%	PSU shutdown
+12V	110%	150%	PSU shutdown

4.2. Over Voltage Protection

<i>Output</i>	<i>Min.</i>	<i>Max.</i>	<i>Comment</i>
+3.3V	3.7V	4.1V	PSU shutdown
+5V	5.7V	6.5V	PSU shutdown
+12V	13.1V	14.5V	PSU shutdown

4.3. Short Circuit Protection

<i>Output</i>	<i>Comment</i>
+3.3V	PSU shutdown
+5V	PSU shutdown
+12V	PSU shutdown

4.4. Over Temperature Protection

The power supply would be protected against over temperature condition by loss of cooling or excessive ambient temperature. The PSU will shutdown in an OTP condition.



5. Power System Signal Status

5.1. Buzzer Status

<i>Power Supply Condition</i>	<i>Buzzer Status</i>
No input power to PSU	OFF
Input present/ only standby output on	OFF
Power supply outputs ON and OK	OFF
Power supply failure	Beeping

5.2. LED Indicator

<i>Power Supply Condition</i>	<i>Module LED</i>	<i>System LED</i>	<i>PW1/PW2 LED</i>
No input power to PSU	OFF	OFF	OFF
Input present/ only standby output on	Red	Amber	OFF
Power supply outputs ON and OK	Green	Green	Amber
Power supply failure	Red or OFF	Green Blinking	OFF

System LED and PW1 PW2 LED are optional.

5.3. TTL Signal

<i>Power Supply Condition</i>	<i>Output Condition</i>	
	<i>Min.</i>	<i>Max.</i>
Normal (Power Supply ON)	3V	5.25V
Failure (Power Supply OFF)	0V	1V

6. Insulation

6.1. Dielectric Withstand Voltage

Primary to Ground	1500Vac (10mA) for 1 second
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6.2. Leakage Current

Leakage current is 3.5mA maximum at 240Vac/50Hz.

7. Safety

CB、CE、TUV、UL、BSMI、CCC。

Please visit our website and get the latest safety certificate.

8. EMC

CE、FCC、BSMI、CCC。(Class B)

Please visit our website and get the latest EMC certificate.



9. Environmental Requirement

9.1. Temperature

Operating : 0°C to +50°C.

Non Operating : -20°C to +70°C.

9.2. Humidity

Operating : 20% to 90% , non-condensing.

Non Operating : 5% to 95% , non-condensing.

9.3. Altitude

Operating : Up to 5000m.

9.4. Cooling Method

By DC fan.

10. Reliability

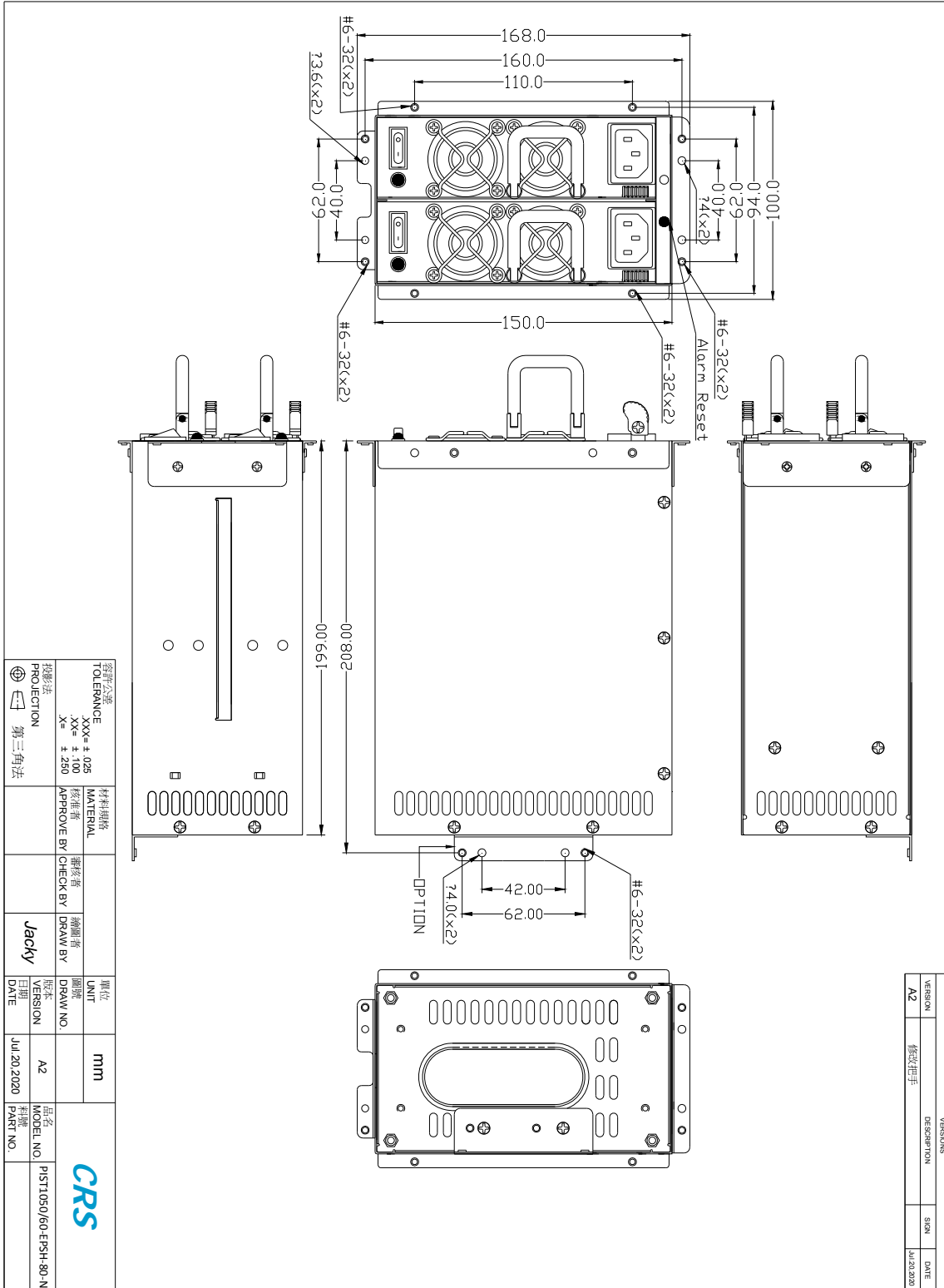
10.1. MTBF

Using MIL - HDBK -217F the calculated MTBF > 100,000 hours at 25°C.



11. Mechanical Drawing and Output Wire

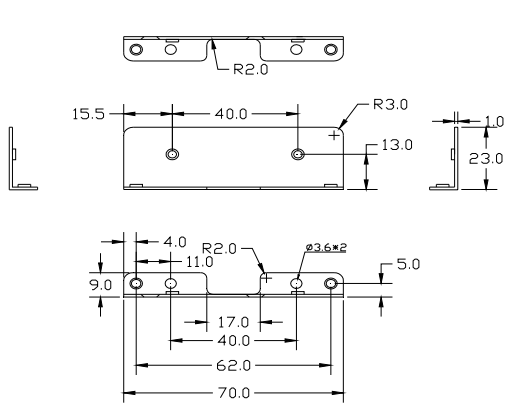
11.1. Outline (bracket optional) : W150 * H86 * D199mm.



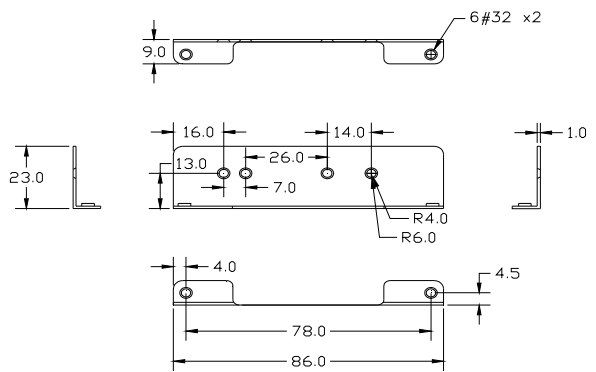


Brackets dimension:

修訂 REVISIONS			
版次 REV.	記述 DESCRIPTION	簽名 SING	日期 DATE



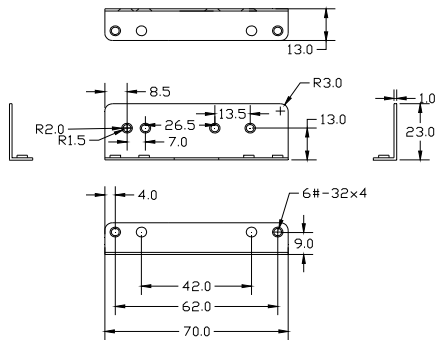
CR807A



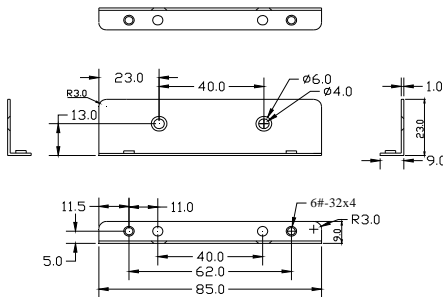
PIST-4U

TOLERANCES: .XXX= ± .025 .XX= ± .100 .X= ± .250	MATERIAL			UNITS	mm		
	APPROVE BY	CHECK BY	DRAW BY	DRAW NO			
PROJECTION: 			Green	REV. NO	A1	MODEL NO	BRACKET
				DATE	Mar.20.2015	PART NO	

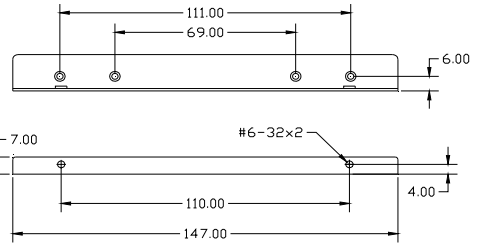
修訂 REVISIONS			
版次 REV.	記述 DESCRIPTION	簽名 SING	日期 DATE



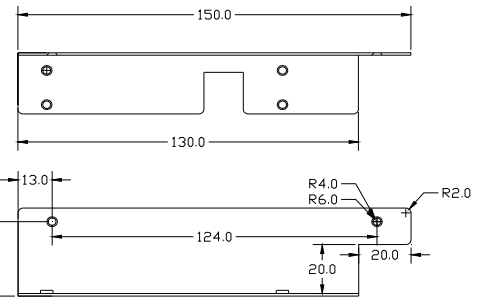
CR807-2



CR807-1A



CR-808-1



PIST-4UL

TOLERANCES: .XXX= ± .025 .XX= ± .100 .X= ± .250	MATERIAL			UNITS	mm		
	APPROVE BY	CHECK BY	DRAW BY	DRAW NO			
PROJECTION: 			Green	REV. NO	A1	MODEL NO	BRACKET
				DATE	Mar.20.2015	PART NO	

11.2. Output Wire (could be customization) :

SATA HDD
HOUSING : MOLEX 67582 series or equivalent
TERMINAL : MOLEX 67581 series or equivalent

Housing No.	Pin Wire No.	Color	Signal	Type	Wire	Length
S1	1	ORANGE	+3.3V	18AWG	480mm±20mm	
	2	BLACK	COM	18AWG		
	3	RED	+5V	18AWG		
	4	BLACK	COM	18AWG		
	5	YELLOW	+12V	18AWG		
S2	1	ORANGE	+3.3V	18AWG	150mm±15mm	
	2	BLACK	COM	18AWG		
	3	RED	+5V	18AWG		
	4	BLACK	COM	18AWG		
	5	YELLOW	+12V	18AWG		
S3	1	ORANGE	+3.3V	18AWG	150mm±15mm	
	2	BLACK	COM	18AWG		
	3	RED	+5V	18AWG		
	4	BLACK	COM	18AWG		
	5	YELLOW	+12V	18AWG		
S4	1	ORANGE	+3.3V	18AWG	150mm±15mm	
	2	BLACK	COM	18AWG		
	3	RED	+5V	18AWG		
	4	BLACK	COM	18AWG		
	5	YELLOW	+12V	18AWG		
S5	1	ORANGE	+3.3V	18AWG	150mm±15mm	
	2	BLACK	COM	18AWG		
	3	RED	+5V	18AWG		
	4	BLACK	COM	18AWG		
	5	YELLOW	+12V	18AWG		
S6	1	ORANGE	+3.3V	18AWG	150mm±15mm	
	2	BLACK	COM	18AWG		
	3	RED	+5V	18AWG		
	4	BLACK	COM	18AWG		
	5	YELLOW	+12V	18AWG		

P6
TTL Signal Connector HOUSING : Molex 22-01-3027 or equivalent

Pin No.	Wire Color	Signal	Wire Type	Length
1	YELLOW	+12V	18AWG	480mm±20mm
2	YELLOW	+12V	18AWG	
3	YELLOW	+12V	18AWG	
4	YELLOW	+12V	18AWG	
5	BLACK	COM	18AWG	
6	BLACK	COM	18AWG	
7	BLACK	COM	18AWG	
8	BLACK	COM	20AWG	

P2
TTL Signal Connector HOUSING : Molex 22-01-3027 or equivalent

Pin No.	Wire Color	Signal	Wire Type	Length
1	BLACK	COM	24AWG	880mm±20mm
2	RED	+5V	24AWG	

6+2Pin(PQ Express)
HOUSING : MOLEX 4556 series or equivalent
TERMINAL : MOLEX 5556 series or equivalent

Housing No.	Pin No.	Wire Color	Signal	Wire Type	Length
S8	1	YELLOW	+12V	18AWG	480mm±20mm
	2	YELLOW	+12V	18AWG	
	3	YELLOW	+12V	18AWG	
	4	YELLOW	+12V	18AWG	
S4	1	YELLOW	+12V	18AWG	150mm±15mm
	2	BLACK	COM	18AWG	
	3	RED	+5V	18AWG	
	4	YELLOW	+12V	18AWG	

6+4Pin(ATX12V For P4)
HOUSING : MOLEX 5557 series or equivalent
TERMINAL : MOLEX 5557 series or equivalent

Housing No.	Pin No.	Wire Color	Signal	Wire Type	Length
P4A	1	BLACK	COM	18AWG	480mm±20mm
	2	BLACK	COM	18AWG	
	3	YELLOW	+12V	18AWG	
	4	YELLOW	+12V	18AWG	
P4B	1	BLACK	COM	20AWG	150mm±15mm
	2	BLACK	COM	20AWG	
	3	YELLOW	+12V	20AWG	
	4	YELLOW	+12V	20AWG	
P4C	1	YELLOW	+12V	18AWG	480mm±20mm
	2	BLACK	COM	18AWG	
	3	RED	+5V	18AWG	
	4	RED	+5V	18AWG	
P4D	1	YELLOW	+12V	18AWG	150mm±15mm
	2	BLACK	COM	18AWG	
	3	BLACK	COM	24AWG	
	4	RED	+5V	24AWG	
P4E	1	YELLOW	+12V	18AWG	150mm±15mm
	2	BLACK	COM	24AWG	
	3	BLACK	COM	24AWG	
	4	RED	+5V	24AWG	
P4F	1	YELLOW	+12V	18AWG	480mm±20mm
	2	BLACK	COM	18AWG	
	3	RED	+5V	18AWG	
	4	RED	+5V	18AWG	
P4G	1	YELLOW	+12V	18AWG	480mm±20mm
	2	BLACK	COM	18AWG	
	3	RED	+5V	18AWG	
	4	RED	+5V	18AWG	
P4H	1	YELLOW	+12V	18AWG	150mm±15mm
	2	BLACK	COM	18AWG	
	3	BLACK	COM	18AWG	
	4	RED	+5V	18AWG	
P4I	1	YELLOW	+12V	18AWG	150mm±15mm
	2	BLACK	COM	18AWG	
	3	BLACK	COM	18AWG	
	4	RED	+5V	18AWG	
P4J	1	YELLOW	+12V	18AWG	150mm±15mm
	2	BLACK	COM	24AWG	
	3	BLACK	COM	24AWG	
	4	RED	+5V	24AWG	

6+4Pin(ATX12V For P4)
HOUSING : MOLEX 5557 series or equivalent
TERMINAL : MOLEX 5557 series or equivalent

Housing No.	Pin No.	Wire Color	Signal	Wire Type	Length
P4A	1	BLACK	COM	18AWG	480mm±20mm
	2	BLACK	COM	18AWG	
	3	YELLOW	+12V	18AWG	
	4	YELLOW	+12V	18AWG	
P4B	1	BLACK	COM	20AWG	150mm±15mm
	2	BLACK	COM	20AWG	
	3	YELLOW	+12V	20AWG	
	4	YELLOW	+12V	20AWG	
P4C	1	YELLOW	+12V	18AWG	480mm±20mm
	2	BLACK	COM	18AWG	
	3	RED	+5V	18AWG	
	4	RED	+5V	18AWG	
P4D	1	YELLOW	+12V	18AWG	150mm±15mm
	2	BLACK	COM	18AWG	
	3	BLACK	COM	18AWG	
	4	RED	+5V	18AWG	
P4E	1	YELLOW	+12V	18AWG	480mm±20mm
	2	BLACK	COM	18AWG	
	3	RED	+5V	18AWG	
	4	RED	+5V	18AWG	
P4F	1	YELLOW	+12V	18AWG	150mm±15mm
	2	BLACK	COM	18AWG	
	3	BLACK	COM	18AWG	
	4	RED	+5V	18AWG	
P4G	1	YELLOW	+12V	18AWG	480mm±20mm
	2	BLACK	COM	18AWG	
	3	RED	+5V	18AWG	
	4	RED	+5V	18AWG	
P4H	1	YELLOW	+12V	18AWG	150mm±15mm
	2	BLACK	COM	18AWG	
	3	BLACK	COM	18AWG	
	4	RED	+5V	18AWG	
P4I	1	YELLOW	+12V	18AWG	150mm±15mm
	2	BLACK	COM	18AWG	
	3	BLACK	COM	18AWG	
	4	RED	+5V	18AWG	
P4J	1	YELLOW	+12V	18AWG	150mm±15mm
	2	BLACK	COM	24AWG	
	3	BLACK	COM	24AWG	
	4	RED	+5V	24AWG	

VERSIONS		DATE
VER	DESCRIPTION	/ /

规格	UNIT	mm
公差	公差	公差
TOLERANCE	TOLERANCE	TOLERANCE

材料规格	规格	材料规格	规格
MATERIAL	规格	MATERIAL	规格

图号	图号	图号	图号
DRAW NO.	DRAW NO.	DRAW NO.	DRAW NO.

日期	日期	日期	日期
DATE	DATE	DATE	DATE

版本	日期	描述
版本	日期	描述
VERSION	DATE	DESCRIPTION

图号	图号	图号	图号
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12. Customization Note

Customization note shall be listed here.

End of File

NOTE : This data is subject to change without notice.