



SPECIFICATION

Model Name :

PIST1080-EP SH-80-N

Description :

800W Mini Redundant Power Supply (PSII)

Version : B1

Issued Date : 20250704



1. General Description

This specification defines the characteristic of 1 + 1 redundant power supply with 4 Unit high. And **CRS** model name is PIST1080-EP SH-80-N for 800W 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	12A	30A
230Vac	6A	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	32A	±5%	50mV
+5V	1A	32A	±5%	50mV
+12V	1A	65A	±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 190W.
2. The max total power shall not exceed 800W.
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

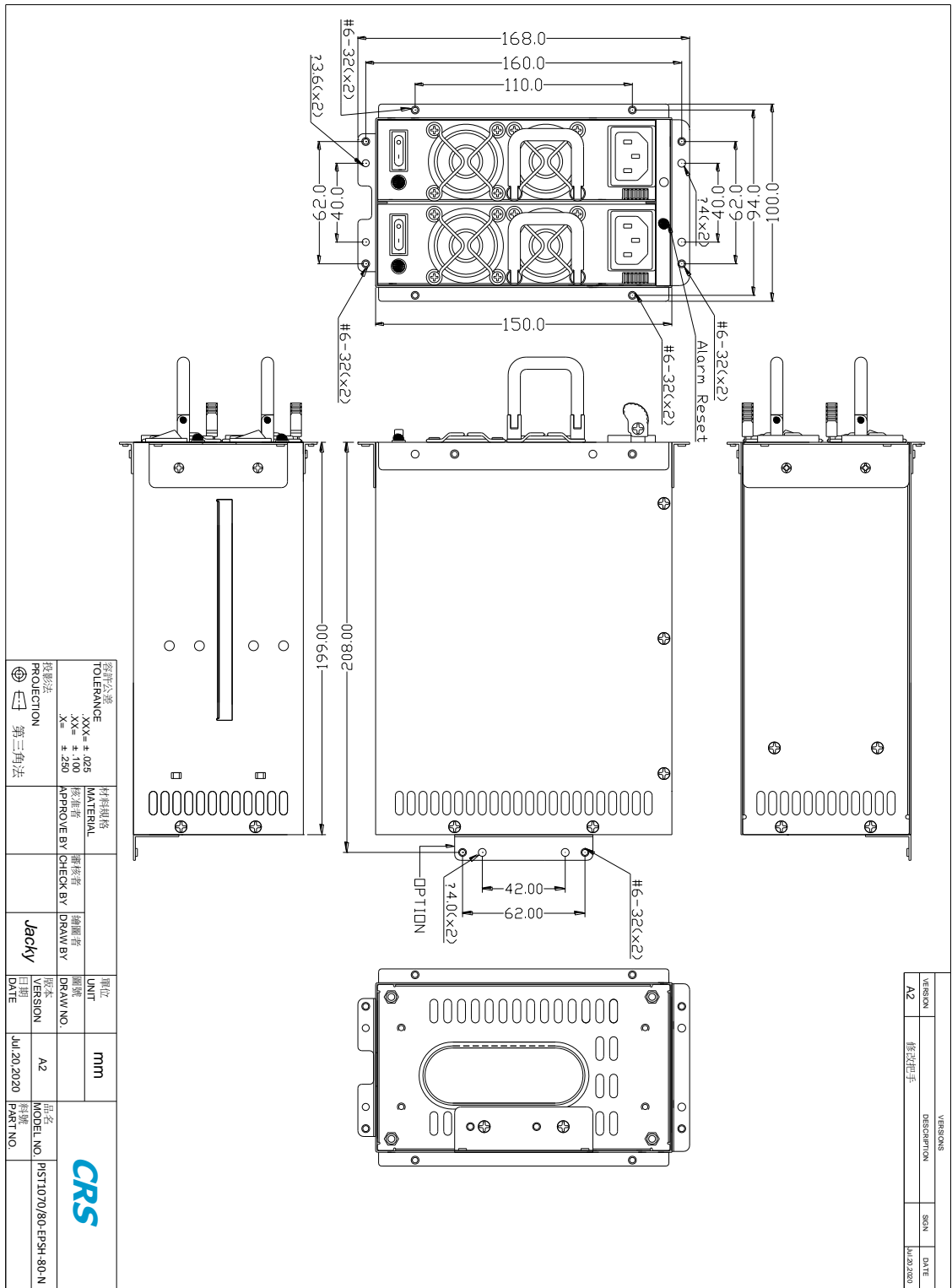
10.1. MTBF

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



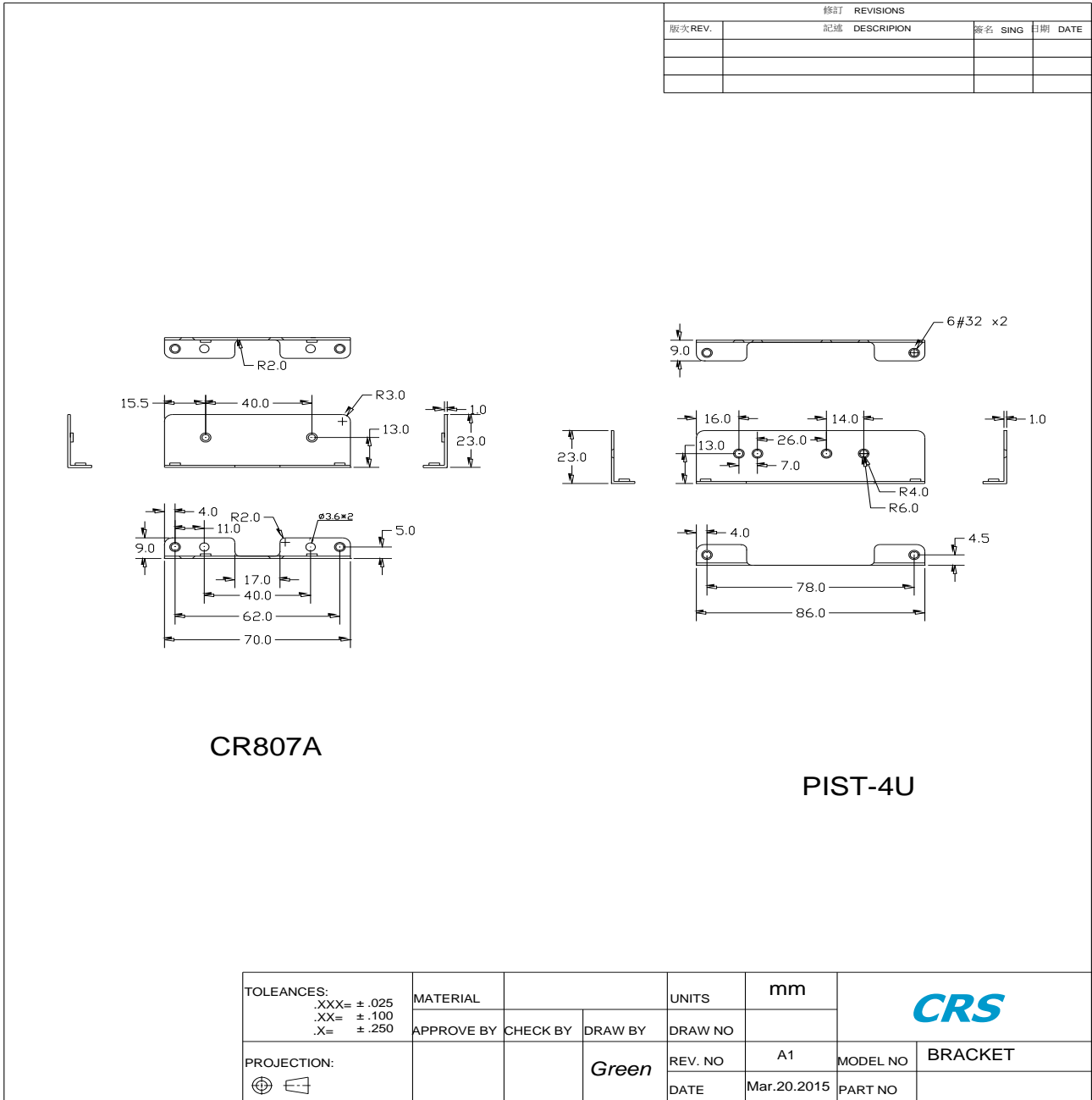
11. Mechanical Drawing and Output Wire

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

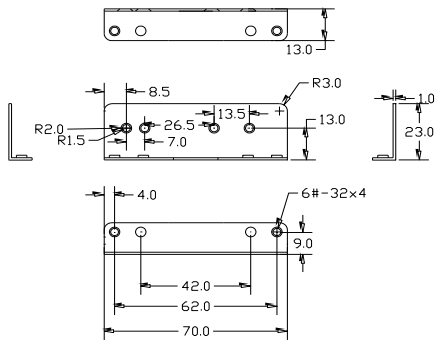




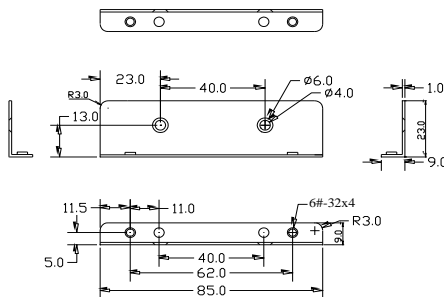
Brackets dimension:



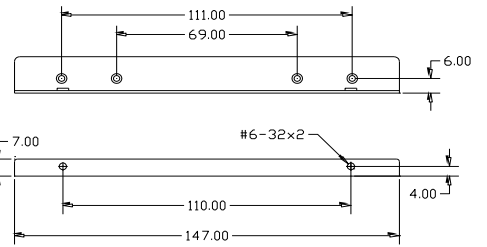
修訂 REVISIONS				
版次 REV.	記號 DESCRIPTION	簽名 SING	日期 DATE	



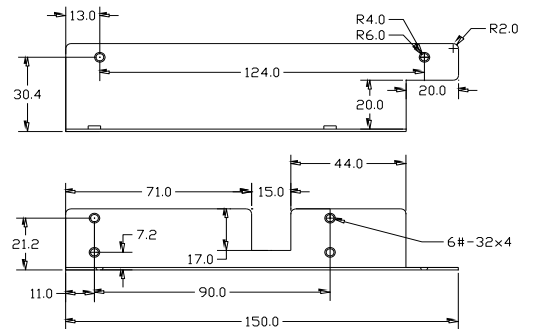
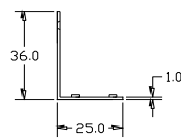
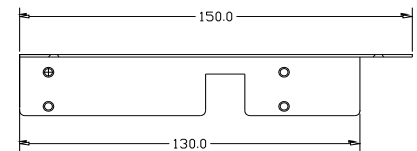
CR807-2



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 No.	Pin No.	WIRE COLOR	SIGNAL
S1	1	ORANGE	+5V
	2	RED	COM
	3	BLACK	COM
	4	YELLOW	+12V
	5	YELLOW	+12V
S2	1	ORANGE	+5V
	2	RED	COM
S3	1	ORANGE	+5V
	2	RED	COM
S4	1	ORANGE	+5V
	2	RED	COM
S5	1	ORANGE	+5V
	2	RED	COM
S6	1	ORANGE	+5V
	2	RED	COM

SATA HDD			
Housing No.	Pin No.	WIRE COLOR	SIGNAL
P24	1	ORANGE	+5V
	2	RED	COM
	3	BLACK	COM
	4	YELLOW	+12V
	5	YELLOW	+12V
	6	ORANGE	+5V
	7	RED	COM
	8	BLACK	COM
	9	YELLOW	+12V
	10	YELLOW	+12V
P16	1	ORANGE	+5V
	2	RED	COM
	3	BLACK	COM
	4	YELLOW	+12V
P12	1	ORANGE	+5V
	2	RED	COM
	3	BLACK	COM
	4	YELLOW	+12V
P10	1	ORANGE	+5V
	2	RED	COM
	3	BLACK	COM
	4	YELLOW	+12V
P8	1	ORANGE	+5V
	2	RED	COM
	3	BLACK	COM
	4	YELLOW	+12V
P6	1	ORANGE	+5V
	2	RED	COM
	3	BLACK	COM
	4	YELLOW	+12V
P4	1	ORANGE	+5V
	2	RED	COM
	3	BLACK	COM
	4	YELLOW	+12V
P2	1	ORANGE	+5V
	2	RED	COM
	3	BLACK	COM
	4	YELLOW	+12V
P1	1	ORANGE	+5V
	2	RED	COM
	3	BLACK	COM
	4	YELLOW	+12V
P0	1	ORANGE	+5V
	2	RED	COM
	3	BLACK	COM
	4	YELLOW	+12V
P-1	1	ORANGE	+5V
	2	RED	COM
	3	BLACK	COM
	4	YELLOW	+12V

VERSION	DESCRIPTION	SIGN	DATE
1.0			7/7

规格公差 TOLERANCE XXX mm X mm	材料规格 MATERIAL 塑胶壳 Plastic Case	检查员 CHECK BY 审核员 DRAWN BY 批准员 APPROVE BY	日期 DATE 2023/7/4	CRS
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12. Customization Note

Customization note shall be listed here.

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NOTE : This data is subject to change without notice.