TOTAL POWER INT'L

500W with PFC and Parallel Function

PSP-500 series

■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections:Short circuit/Over load/Over voltage/Over temperature
- Foced air cooling by built-in DC fan
- Current sharing up to 2000W(3+1)
- With power good and fail signal output
- Built-in remote ON-OFF control
- Built-in remote sense function
- 3 years warranty

SPECIFICATION

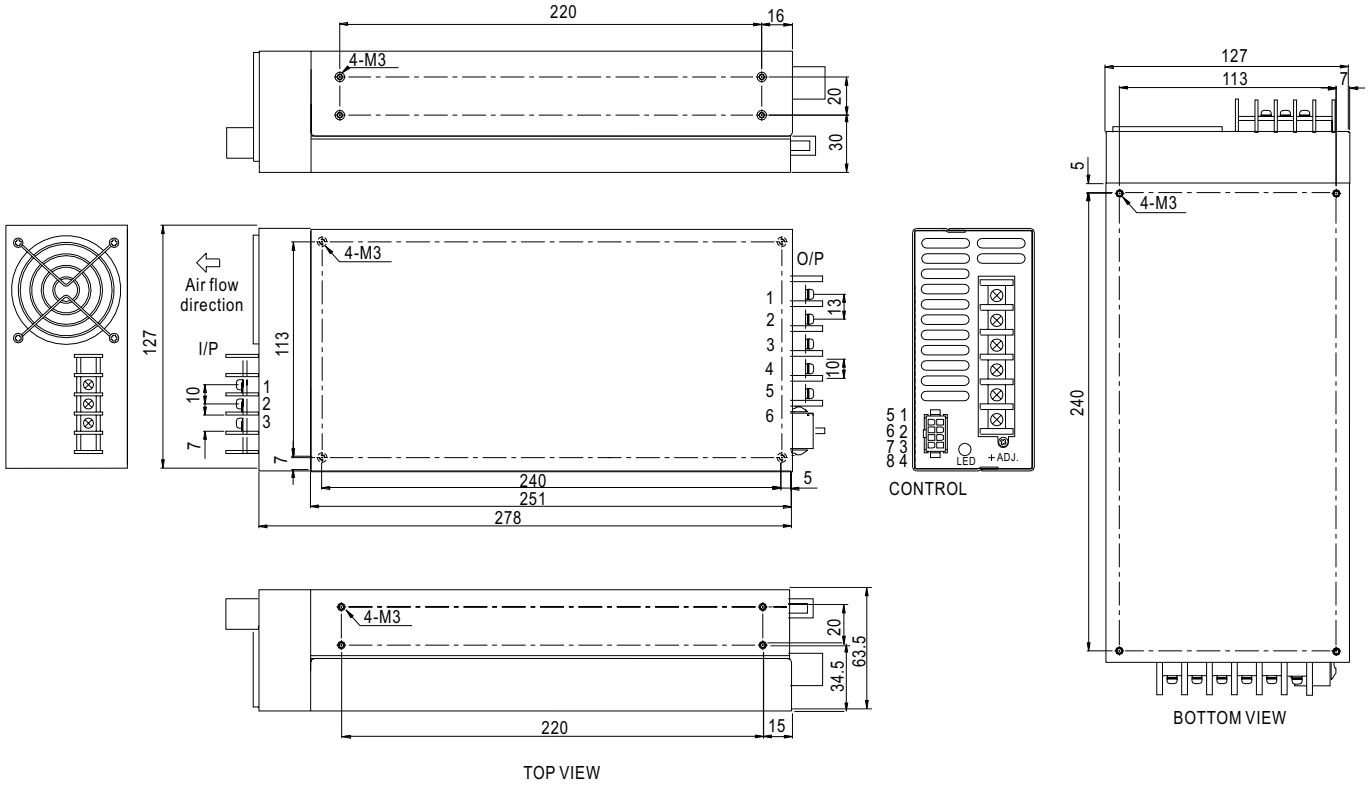
MODEL		PSP-500-5	PSP-500-12	PSP-500-13.5	PSP-500-15	PSP-500-24	PSP-500-27	PSP-500-48
OUTPUT	DC VOLTAGE	5V	12V	13.5V	15V	24V	27V	48V
	RATED CURRENT	80A	41.5A	37A	33A	20.8A	18.5A	10.5A
	CURRENT RANGE	0 ~ 80A	0 ~ 41.5A	0 ~ 37A	0 ~ 33A	0 ~ 20.8A	0 ~ 18.5A	0 ~ 10.5A
	RATED POWER	400W	498W	499.5W	495W	499.2W	499.5W	504W
	RIPPLE & NOISE (max.) Note.2	100mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE	4.75 ~ 5.5V	10 ~ 13.2V	12 ~ 15V	13.5 ~ 18V	20 ~ 26.4V	24 ~ 30V	41 ~ 56V
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.3%	±0.3%	±0.3%	±0.2%	±0.2%	±0.2%
	LOAD REGULATION	±2.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	1500ms, 50ms at full load						
	HOLD TIME (Typ.)	24ms at full load						
INPUT	VOLTAGE RANGE Note.6	90 ~ 264VAC 127 ~ 370VDC						
	FREQUENCY RANGE	47 ~ 63Hz						
	POWER FACTOR (Typ.)	0.95/230VAC 0.98/100VAC at full load						
	EFFICIENCY (Typ.)	76%	82%	82%	82%	84%	84%	86%
	AC CURRENT (Typ.)	7A/115AVC 3.5A/230VAC						
	INRUSH CURRENT (Typ.)	20A/115VAC 40A/230VAC						
	LEAKAGE CURRENT	<1mA / 240VAC						
PROTECTION	OVER LOAD	110 ~ 125% rated output power						
		Protection type : Constant current limiting, recovers automatically after fault condition is removed						
	OVER VOLTAGE	5.75 ~ 6.75V	13.8 ~ 16.2V	15.5 ~ 18.2V	18 ~ 21V	27.6 ~ 32.4V	31 ~ 36.5V	57.6 ~ 67.2V
		Protection type : Shut down o/p voltage, re-power on to recover						
	OVER TEMPERATURE	RTH2≧95℃ Detect on heatsink of Q1,Q7 power transistor & L3 output choke						
		Protection type : Shut down o/p voltage, recovers automatically after temperature goes down						
FUNCTION	REMOTE CONTROL	RC+/RC-: 0 ~ 0.8V=power on ; 4 ~ 10V=power off sink current <4 ~ 10mA						
ENVIRONMENT	WORKING TEMP.	-10 ~ +60℃ (Refer to output load derating curve)						
	WORKING HUMIDITY	20 ~ 90% RH with 30CFM forced air non-condensing						
	STORAGE TEMP., HUMIDITY	-20 ~ +85℃, 10 ~ 95% RH						
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)						
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes						
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 Approved						
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC						
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC						
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B						
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3						
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, Light industry level, criteria A						
OTHERS	MTBF	130.1K hrs min. MIL-HDBK-217F (25℃)						
	DIMENSION	278*129*63.5mm (L*W*H)						
	PACKING	2.6Kg; 6pcs/15.7Kg/0.89CUFT						

NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.
5. In parallel connection, maybe only one unit operated, if the total output load less than 5% of rated load condition.
6. Derating may be needed under low input voltages. Please check the derating curve for more details.

■ Mechanical Specification

Case No. 919A Unit:mm



AC Input Terminal Pin. No. Assignment

Pin No.	Assignment
1	AC/L
2	AC/N
3	FG ⏚

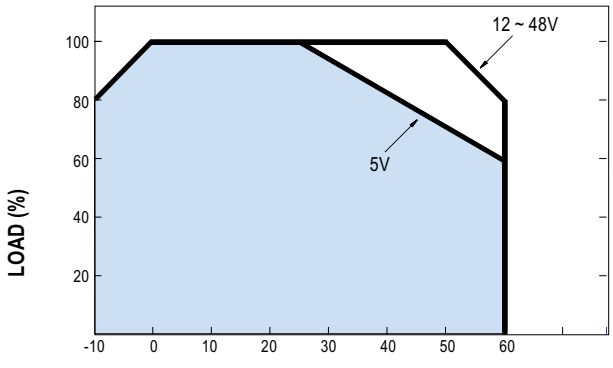
DC Output Terminal Pin. No Assignment

Pin No.	Assignment
1~3	DC OUTPUT +V
4~6	DC OUTPUT -V

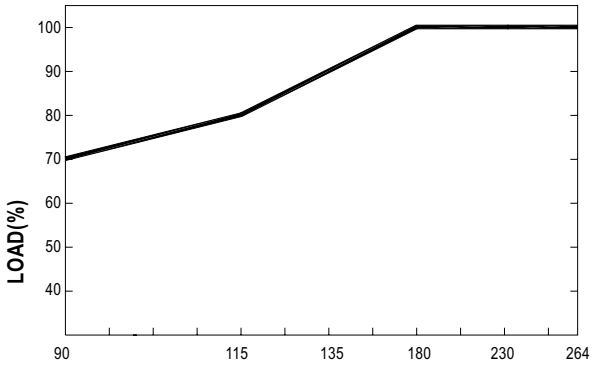
Control Pin. No Assignment : MOLEX 5559-NP uses 5558 male crimp terminal

Pin No.	Assignment	Pin No.	Assignment	Mating connector	Terminal
1	P(Current share)	5	NC	MOLEX 5557-NR	MOLEX 5556 Female crimp Terminal receptacle
2	-S	6	PF(Power fail signal)		
3	G	7	+S		
4	RC-	8	RC+		

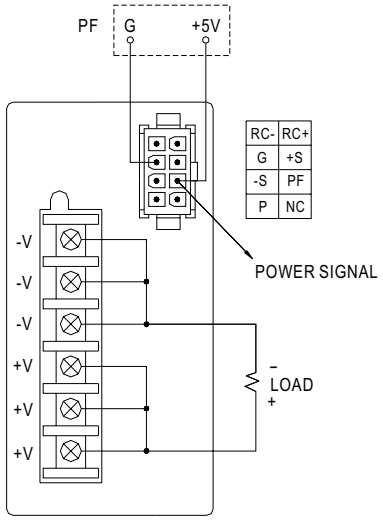
■ Derating Curve



■ Output Derating VS Input Voltage

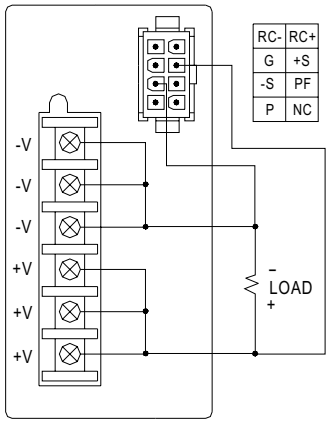


■ Control terminal instruction manual

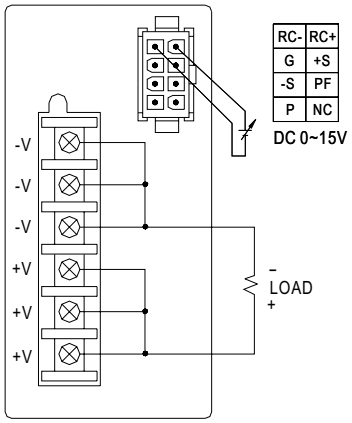


Power Fail Signal

PF Signal is the voltage difference between "G" and "PF" pin output



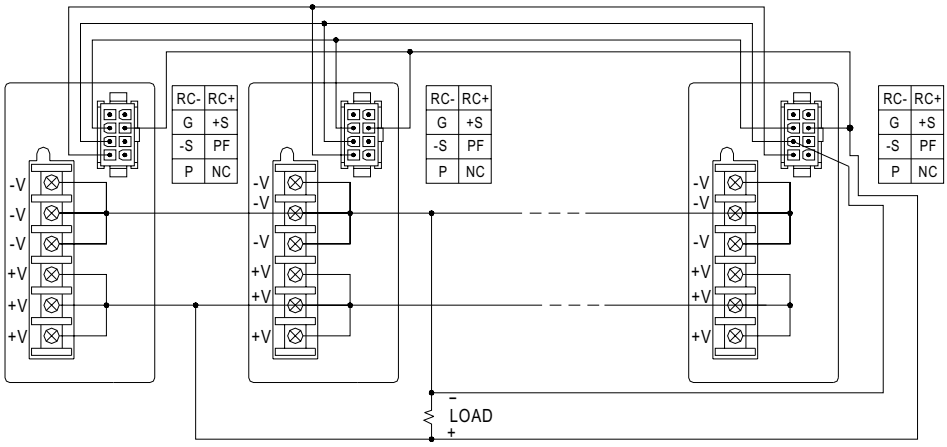
Remote Sensing



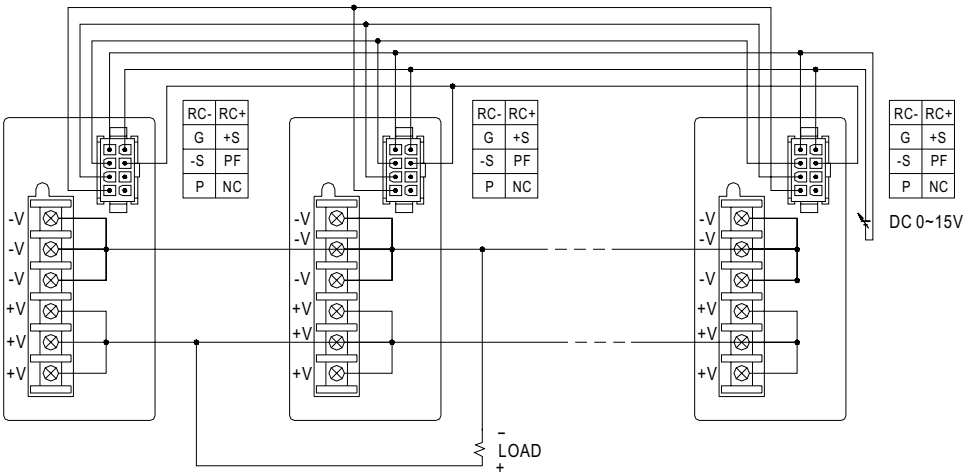
Remote Control

Power ON: When $V_{RC+,RC-}$=0 ~ 0.8V or Open
Power OFF: When $V_{RC+,RC-}$=4 ~ 10V

■ Parallel Operation



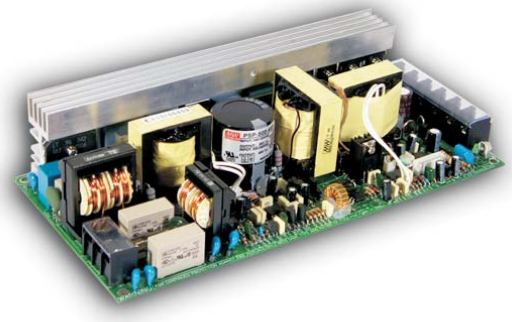
Parallel Operation With Remote Sensing



Parallel Operation With Remote Control

500W with PFC and Parallel Function

PSP-500-P series



Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections:Short circuit/Over load/Over voltage/Over temperature
- Foced air cooling by built-in DC fan
- Current sharing up to 2000W(3+1)
- With power good and fail signal output
- Built-in remote ON-OFF control
- Built-in remote sense function
- 3 years warranty

SPECIFICATION

MODEL		PSP-500-5P	PSP-500-12P	PSP-500-13.5P	PSP-500-15P	PSP-500-24P	PSP-500-27P	PSP-500-48P
OUTPUT	DC VOLTAGE	5V	12V	13.5V	15V	24V	27V	48V
	RATED CURRENT	80A	41.5A	37A	33A	20.8A	18.5A	10.5A
	CURRENT RANGE	0 ~ 80A	0 ~ 41.5A	0 ~ 37A	0 ~ 33A	0 ~ 20.8A	0 ~ 18.5A	0 ~ 10.5A
	RATED POWER	400W	498W	499.5W	495W	499.2W	499.5W	504W
	RIPPLE & NOISE (max.) Note.2	100mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE	4.75 ~ 5.5V	10 ~ 13.2V	12 ~ 15V	13.5 ~ 18V	20 ~ 26.4V	24 ~ 30V	41 ~ 56V
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.3%	±0.3%	±0.3%	±0.2%	±0.2%	±0.2%
	LOAD REGULATION	±2.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	1500ms, 50ms at full load						
	HOLD TIME (Typ.)	24ms at full load						
INPUT	VOLTAGE RANGE Note.5	90 ~ 264VAC 127 ~ 370VDC						
	FREQUENCY RANGE	47 ~ 63Hz						
	POWER FACTOR (Typ.)	0.95/230VAC 0.98/100VAC at full load						
	EFFICIENCY (Typ.)	76%	82%	82%	82%	84%	84%	86%
	AC CURRENT (Typ.)	7A/115AVC 3.5A/230VAC						
	INRUSH CURRENT (Typ.)	20A/115VAC 40A/230VAC						
	LEAKAGE CURRENT	<1mA / 240VAC						
PROTECTION	OVER LOAD	110 ~ 125% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed						
	OVER VOLTAGE	5.75 ~ 6.75V	13.8 ~ 16.2V	15.5 ~ 18.2V	18 ~ 21V	27.6 ~ 32.4V	31 ~ 36.5V	57.6 ~ 67.2V
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	OVER TEMPERATURE	RTH2≧95℃ Detect on heatsink of Q1,Q7 power transistor & L3 output choke						
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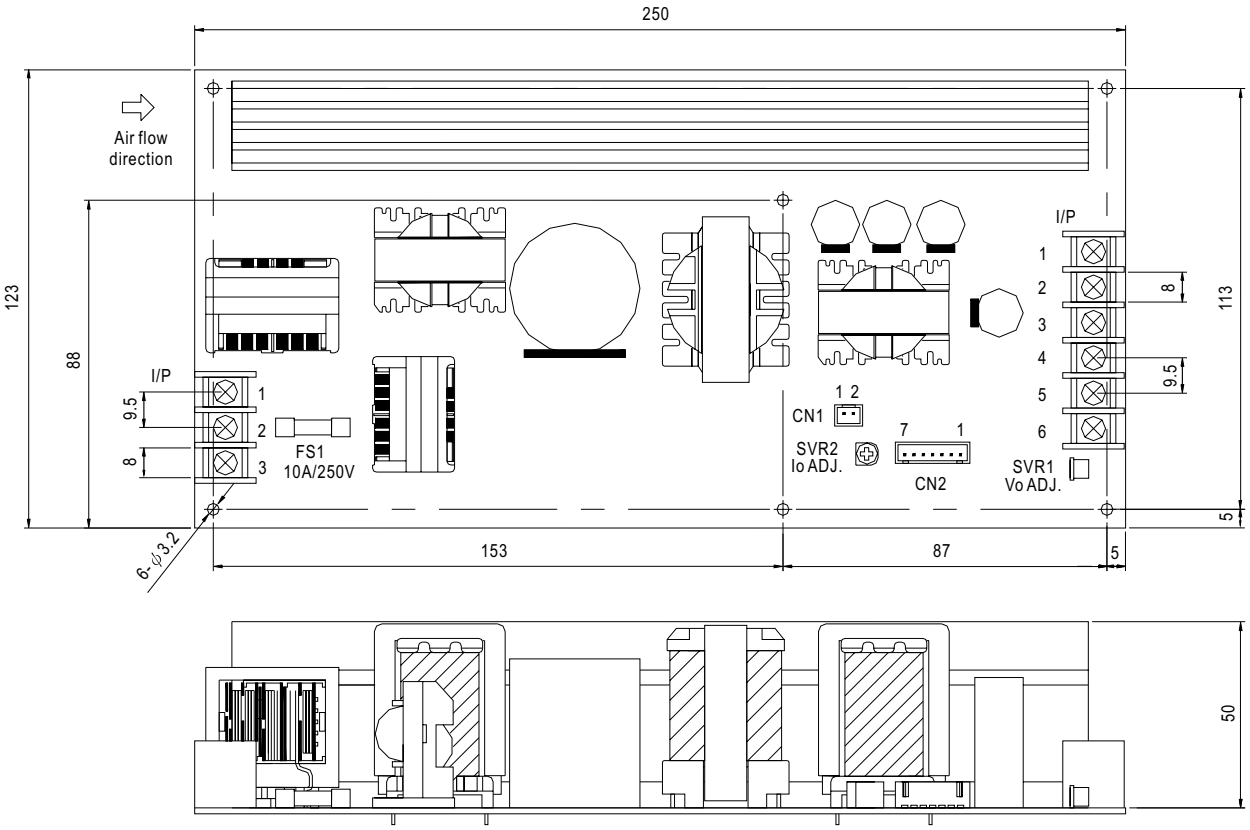
FUNCTION	REMOTE CONTROL	RC+/RC-: 0 ~ 0.8V=power on ; 4 ~ 10V=power off sink current <4 ~ 10mA						
ENVIRONMENT	WORKING TEMP.	-10 ~ +60℃ (Refer to output load derating curve)						
	WORKING HUMIDITY	20 ~ 90% RH with 30CFM forced air non-condensing						
	STORAGE TEMP., HUMIDITY	-20 ~ +85℃, 10 ~ 95% RH						
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)						
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes						
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL1950, TUV EN60950-1 Approved						
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC						
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC						
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B						
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3						
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, Light industry level, criteria A						
OTHERS	MTBF	130.1K hrs min. MIL-HDBK-217F (25℃)						
	DIMENSION	250*123*50mm (L*W*H)						
	PACKING	1.3Kg; 6pcs/7.8Kg/0.89CUFT						
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 5. Derating may be needed under low input voltages. Please check the derating curve for more details.							

■ Mechanical Specification

Unit:mm



AC Input Terminal Pin. No. Assignment

Pin No.	Assignment
1	AC/L
2	AC/N
3	FG ⏚

DC Output Terminal Pin. No Assignment

Pin No.	Assignment
1~3	DC OUTPUT +V
4~6	DC OUTPUT -V

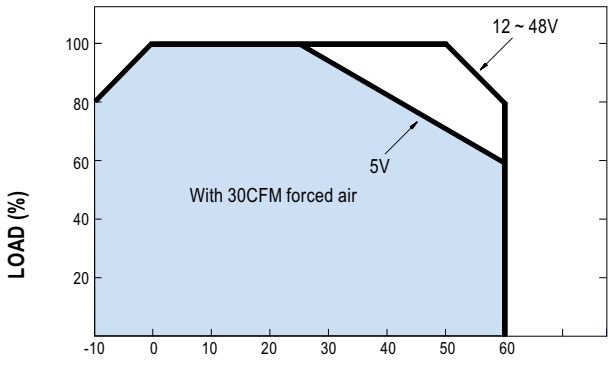
Connector Pin. No. Assignment(CN1) : JST B2B-XH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	GND	JST XHP or equivalent	JST SXH-001T-P0.6 or equivalent
2	+12V		

Connector Pin. No. Assignment (CN2) : JST B7B-XH or equivalent

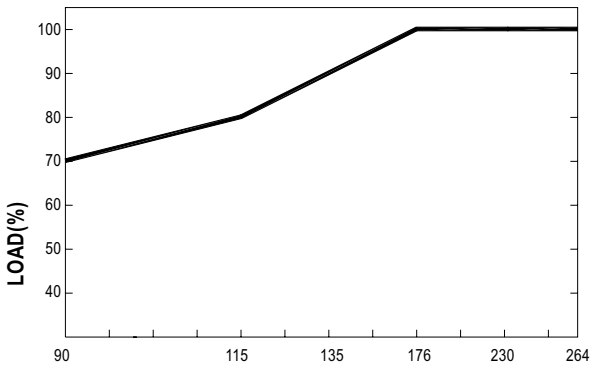
Pin No.	Assignment	Pin No.	Assignment	Mating Housing	Terminal
1	P(Current share)	5	Power fail signal	JST XHP or equivalent	JST SXH-001T-P0.6 or equivalent
2	+S	6	RC+		
3	-S	7	RC-		
4	GND				

■ Derating Curve



AMBIENT TEMPERATURE (℃)

■ Output Derating VS Input Voltage



INPUT VOLTAGE (V) 60Hz