MEAN WELL

600W with PFC and Parallel Function

PSP-600 series

Features :

- Universal AC input / Full range
- Built-in active PFC function
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Forced air cooling by built-in DC fan
- With DC OK Signal output
- Current sharing up to 2400W(3+1)
- Built-in remote ON-OFF control
- Built-in remote sense function
- Fixed switching frequency at PFC:88KHz PWM:100KHz
- 3 years warranty

Parallel

SPECIFICATION

MODEL		PSP-600-5	PSP-600-12	PSP-600-13.5	PSP-600-15	PSP-600-24	PSP-600-27	PSP-600-48
OUTPUT	DC VOLTAGE	5V	12V	13.5V	15V	24V	27V	48V
	RATED CURRENT	80A	50A	44.5A	40A	25A	22.2A	12.5A
	CURRENT RANGE	0 ~ 80A	0 ~ 50A	0 ~ 44.5A	0 ~ 40A	0 ~ 25A	0 ~ 22.2A	0 ~ 12.5A
	RATED POWER	400W	600W	600W	600W	600W	600W	600W
	RIPPLE & NOISE (max.) Note.2	180mVp-p	240mVp-p	240mVp-p	240mVp-p	240mVp-p	240mVp-p	300mVp-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%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	1500ms, 50ms at full load						
	HOLD UP TIME (Typ.)	20ms at full load						
INPUT	VOLTAGE RANGE Note.5	88 ~ 264VAC	124 ~ 370VDC					
	FREQUENCY RANGE	47 ~ 63Hz						
	POWER FACTOR (Typ.)	0.95/230VAC	0.99/115VAC at full load					
	EFFICIENCY(Typ.)	79%	84%	85%	85%	86%	86%	87%
	AC CURRENT (Typ.)	6.8A/115VAC	3.4A/230VAC					
	INRUSH CURRENT (Typ.)	20A/115VAC	40A/230VAC					
	LEAKAGE CURRENT	<1.3mA/240VAC						
PROTECTION	OVERLOAD	105 ~ 135% 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	+5V: 95℃(TSW1) detect on heatsink of power transistor; 95℃(TSW51) detect on heatsink of power diode						
		+12V ~ +48V: 85℃(TSW1) detect on heatsink of power transistor; 80℃(TSW51) detect on heatsink of power diode						
		Protection type : Shut down o/p voltage, re-power on to recover						
FUNCTION	REMOTE CONTROL	RC+/RC-: Short = power on ; Open = power off						
	POK SIGNAL	PSU turn on: 3.3V ~ 5.6V PSU turn off: 0V ~ 1V						
ENVIRONMENT	WORKING TEMP.	-20 ~ +60℃ (Refer to output load derating curve)						
	WORKING HUMIDITY	20 ~ 90% RH non-condensing						
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH						
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)						
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 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 / 25℃/ 70% RH						
	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, light industry level, criteria A						
OTHERS	MTBF	116.4K hrs min. MIL-HDBK-217F (25℃)						
	DIMENSION	170*120*93mm (L*W*H)						
	PACKING	1.9Kg; 8pcs/15.5Kg/1.06CUFT						

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

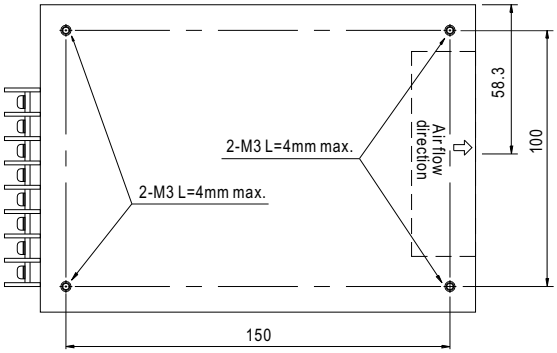
Case No.910A Unit:mm

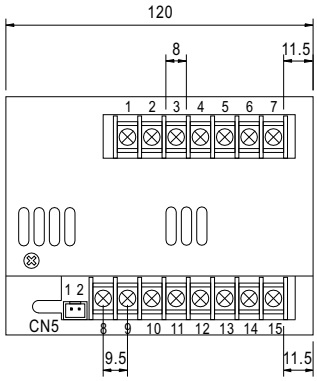
RS Connector(CN5) : JST B-XH or equivalent

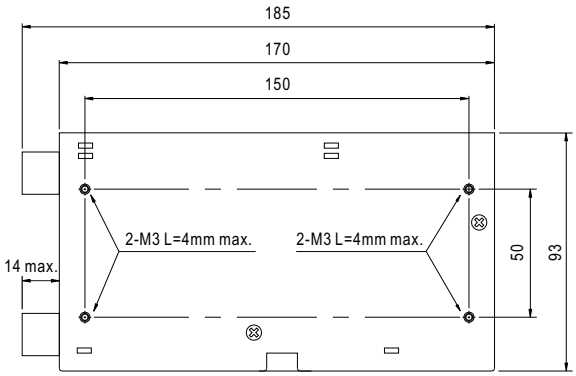
Pin No.	Assignment	Mating Housing	Terminal
1	RS+	JST XHP or equivalent	JST SXH-001T or equivalent
2	RS-		

Terminal Pin No. Assignment

Pin No.	Assignment
1	AC/L
2	AC/N
3	FG ⏚
4	P(Current Share)
5	POK
6	R.C. G
7	R.C.
8~11	DC OUTPUT +V
12~15	DC OUTPUT -V

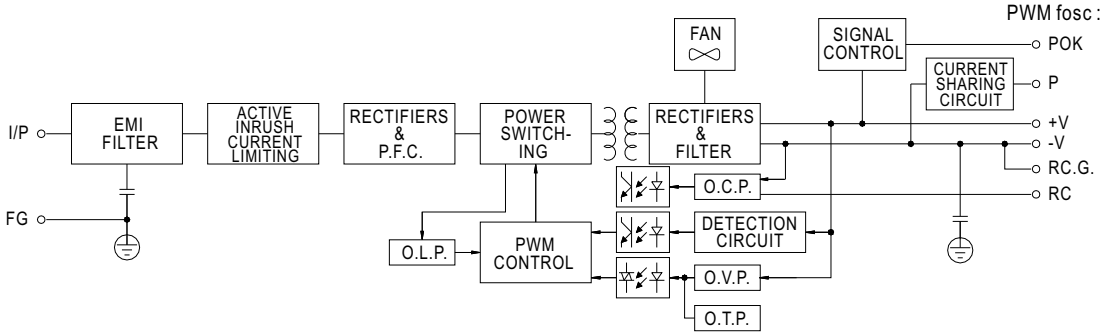




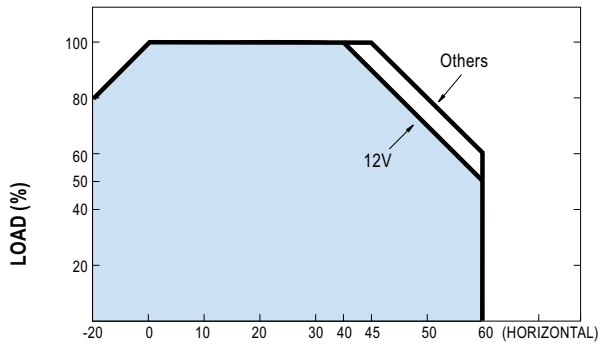


■ Block Diagram

PFC fosc : 88KHz
PWM fosc : 100KHz

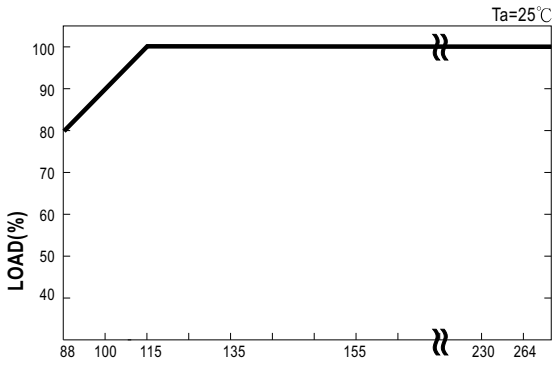


■ Derating Curve



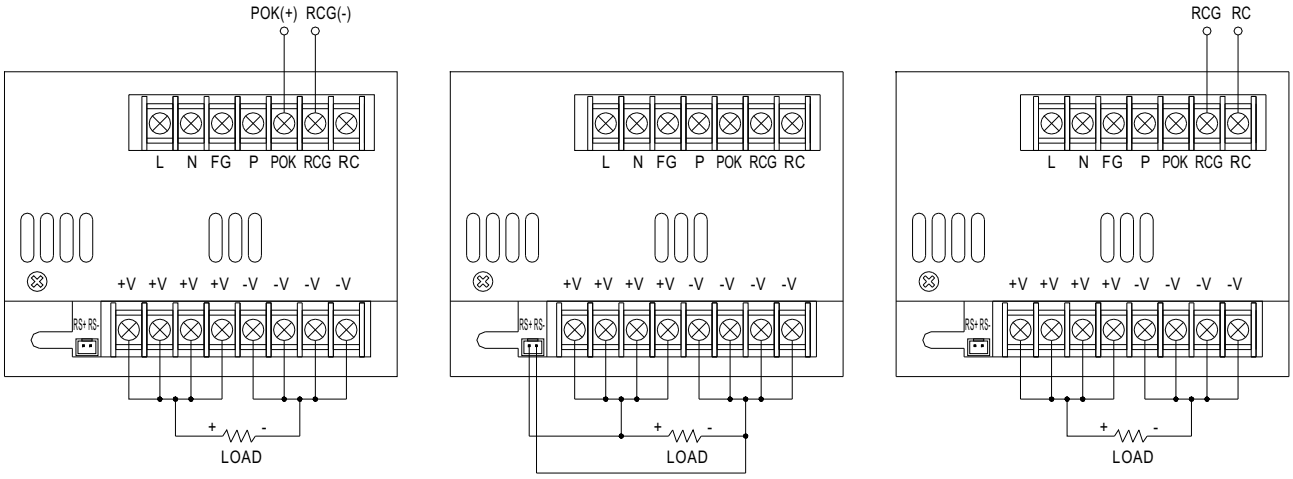
AMBIENT TEMPERATURE (℃)

■ Output Derating VS Input Voltage



INPUT VOLTAGE (V) 60Hz

■ Control Terminal Instruction Manual



POK Signal

POK Signal is the voltage difference between
"RCG" and "POK" pin output POK Signal for TTL level signal
PSU turn on: 3.3V ~ 5.6V
PSU turn off: 0V ~ 1V

Remote Sensing

Remote Control

Power ON: RCG and RC for short
Power OFF: RCG and RC for open

■ Parallel Operation with Remote Sensing

(1)Parallel operation is available by connecting the units shown as below (+S,-S and P are connected mutually in parallel) :
(2)The voltage difference among each output should be minimized that less than ±2% is required.
(3)The total output current must not exceed the value determined by the following equation (Output current at parallel operation)
=(The rated current per unit) x (Number of unit) x 0.9.
(4) In parallel operation 4 units is the maximum, please consult the manufacture for other applications.
(5) When remote sensing is used in parallel operation, the sensing wire must be connected only to the master unit.
(6) When in parallel operation, the minimum output load should be greater than 3% of total output load.
(Min. load > 3% rated current per unit x number of unit)