# PSP-600 series

600W with PFC and Parallel Function



■ 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
- Operating altitude up to 3000 meters (Note.6)
- 3 years warranty

User's Manual Click Me

## ■ GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

## 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 | 600.75W | 600W | 600W | 599.4W | 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 | 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 "Derating Curve") | | | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85℃, 10 ~ 95% RH non-condensing | | | | | | |
| | 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 | UL62368-1, TUV BS EN/EN62368-1, CCC GB4943.1, BSMI CNS15598-1, AS/NZS62368.1, EAC TP TC 004 approved | | | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC | | | | | | |
| | ISOLATION RESISTANCE | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH | | | | | | |
| | EMC EMISSION | Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2,-3, GB9245, GB17625.1, BSMI CNS15936, EAC TP TC 020 | | | | | | |
| | EMC IMMUNITY | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, light industry level, EAC TP TC 020 | | | | | | |
| OTHERS | MTBF | 1132.9K hrs min. Telcordia SR-332 (Bellcore) ; 142.2K hrs min. MIL-HDBK-217F (25℃) | | | | | | |
| | DIMENSION | 170*120*93mm (L*W*H) | | | | | | |
| | PACKING | 1.9Kg; 8pcs/15.5Kg/1.00CUFT | | | | | | |

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. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)
5. Derating may be needed under low input voltages. Please check the derating curve for more details.
6. The operating altitude is 2000 meters for CCC, 3000 meters for UL,TUV. The ambient temperature derating of 5℃/1000m is needed for operating altitude greater than 2000m (6500ft).

※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

## ■ Mechanical Specification

(Unit: mm , tolerance ±0.5mm)

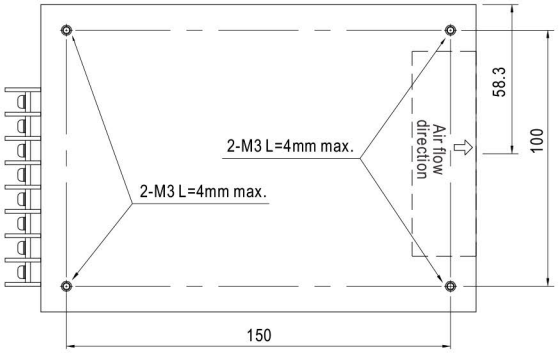
Case No.910A

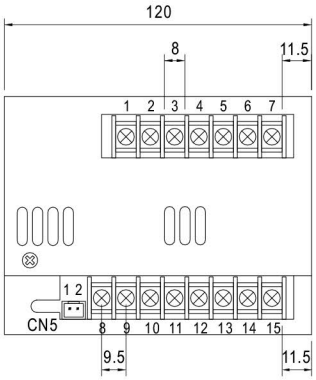
RS Connector(CN5) : JST B-XH or equivalent

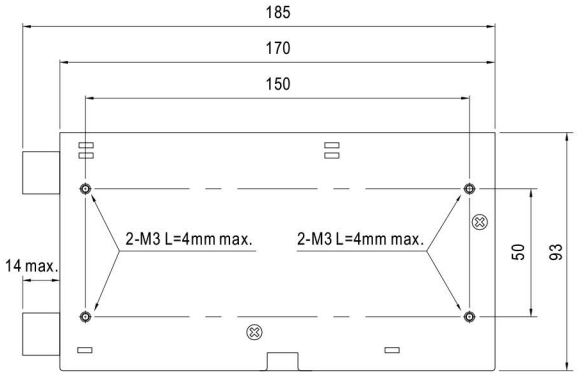
| Pin No. | Assignment | Mating Housing | Terminal |
|---|---|---|---|
| 1 | RS+ | JST XHP or equivalent | JST SXH-001T or equivalent |
| 2 | RS- | | |

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 |

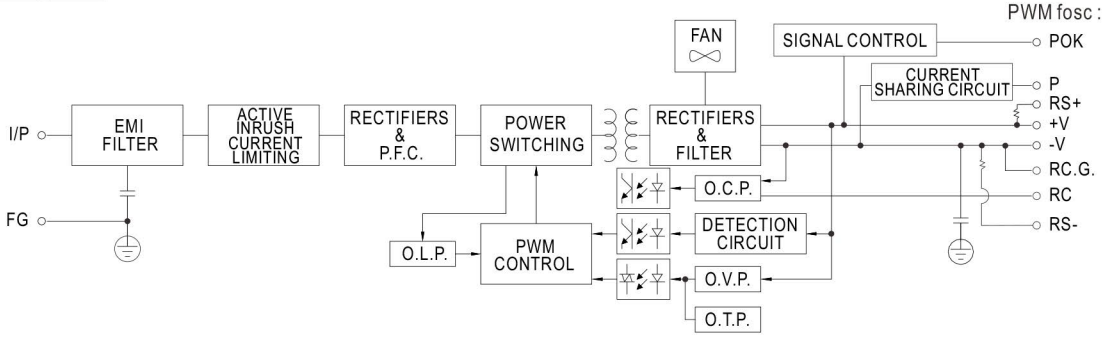


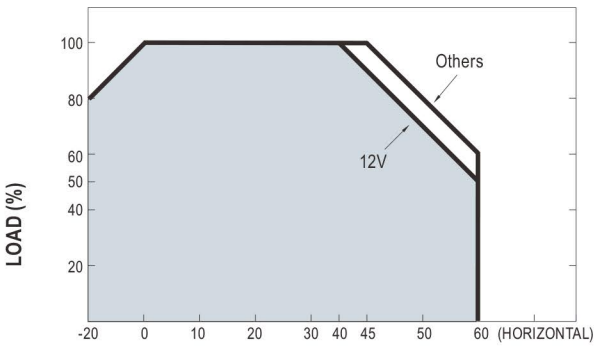




## ■ Block Diagram

PFC fosc : 88KHz
PWM fosc : 100KHz

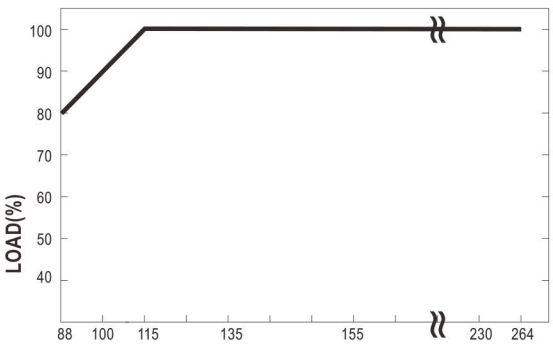



## ■ Derating Curve



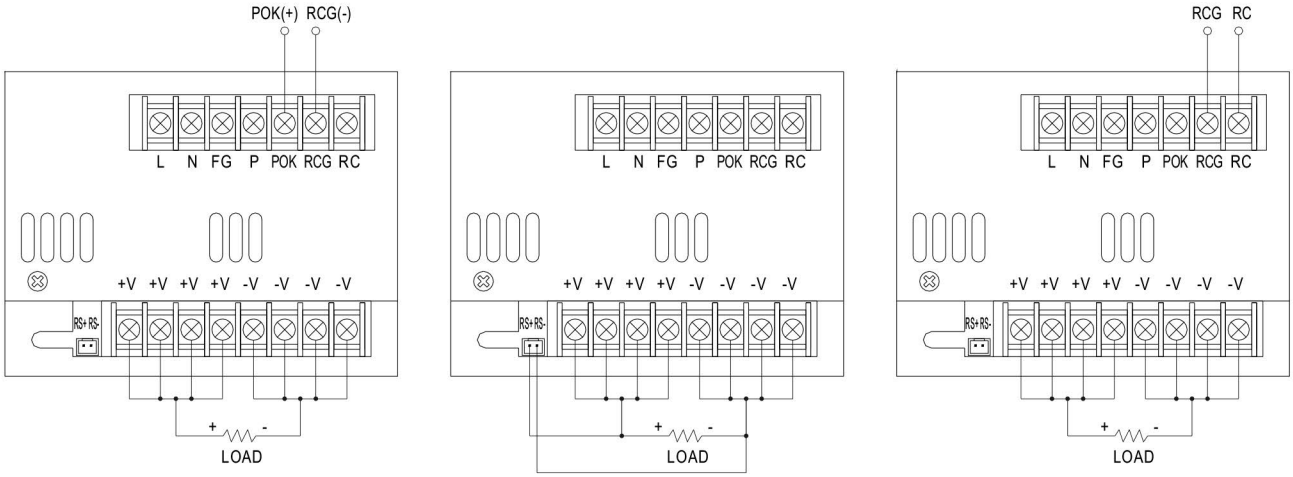

AMBIENT TEMPERATURE (℃)

## ■ 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 0.2V 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)

