# 300W Single Output with PFC Function — SPV-300 series



## ■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Forced air cooling by built-in DC Fan
- Output voltage programmable from 20~110% by 1~5.5VDC external control signal
- Built-in remote ON-OFF control
- Built-in fan speed control
- Fixed switching frequency at 100KHz
- 3 years warranty

User's Manual

## ■ GTIN CODE

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

## SPECIFICATION

| MODEL | | SPV-300-12 | SPV-300-24 | SPV-300-48 |
|---|---|---|---|---|
| OUTPUT | DC VOLTAGE | 12V | 24V | 48V |
| | RATED CURRENT | 25A | 12.5A | 6.25A |
| | CURRENT RANGE | 0 ~ 25A | 0 ~ 12.5A | 0 ~ 6.25A |
| | RATED POWER | 300W | 300W | 300W |
| | RIPPLE & NOISE (max.) Note.2 | 150mVp-p | 150mVp-p | 240mVp-p |
| | VOLTAGE ADJ. RANGE | 10.8 ~ 13.2V | 20 ~ 26.4V | 41 ~ 52.8V |
| | VOLTAGE TOLERANCE Note.3 | ±1.0% | ±1.0% | ±1.0% |
| | LINE REGULATION | ±0.3% | ±0.2% | ±0.2% |
| | LOAD REGULATION | ±0.5% | ±0.5% | ±0.5% |
| | SETUP, RISE TIME | 800ms, 50ms/230VAC 2500ms, 50ms/115VAC at full load | | |
| | HOLD UP TIME (Typ.) | 16ms/230VAC 16ms/115VAC at full load | | |
| INPUT | VOLTAGE RANGE Note.5 | 88 ~ 264VAC 124 ~ 370VDC | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | |
| | POWER FACTOR (Typ.) | PF>0.95/230VAC PF>0.98/115VAC at full load | | |
| | EFFICIENCY (Typ.) | 83.5% | 85% | 86.5% |
| | AC CURRENT (Typ.) | 3.6A/115VAC 1.8A/230VAC | | |
| | INRUSH CURRENT (Typ.) | 20A/115VAC 45A/230VAC | | |
| | LEAKAGE CURRENT | <1mA / 240VAC | | |
| PROTECTION | OVERLOAD | 105 ~ 135% rated output power | | |
| | | Protection type : Constant current limiting, recovers automatically after fault condition is removed | | |
| | OVER VOLTAGE | 13.8 ~ 16.2V | 27.6 ~ 32.4V | 57.6 ~ 67.2V |
| | | Protection type : Shut down o/p voltage, re-power on to recover | | |
| | OVER TEMPERATURE | Shut down o/p voltage, recovers automatically after temperature goes down | | |
| FUNCTION | REMOTE CONTROL | 4 ~ 10VDC power off, <0 ~ 0.8VDC power on | | |
| | OUTPUT VOLTAGE TRIM | 2.4 ~ 13.2V | 4.8 ~ 26.4V | 9.6 ~ 52.8V |
| ENVIRONMENT | WORKING TEMP. | -20 ~ +65℃ (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℃) | | |
| SAFETY EMC (Note 4) | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes | | |
| | SAFETY STANDARDS | UL60950-1, TUV BS EN/EN62368-1, IEC62368-1, 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, EAC TP TC 020 | | |
| | EMC IMMUNITY | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55024, light industry level, EAC TP TC 020 | | |
| OTHERS | MTBF | 2116.3K hrs min. Telcordia SR-332 (Bellcore) ; 210.6K hrs min. MIL-HDBK-217F (25℃) | | |
| | DIMENSION | 215*115*50mm (L*W*H) | | |
| | PACKING | 1.1Kg; 12pcs/14Kg/0.92CUFT | | |

**NOTE**

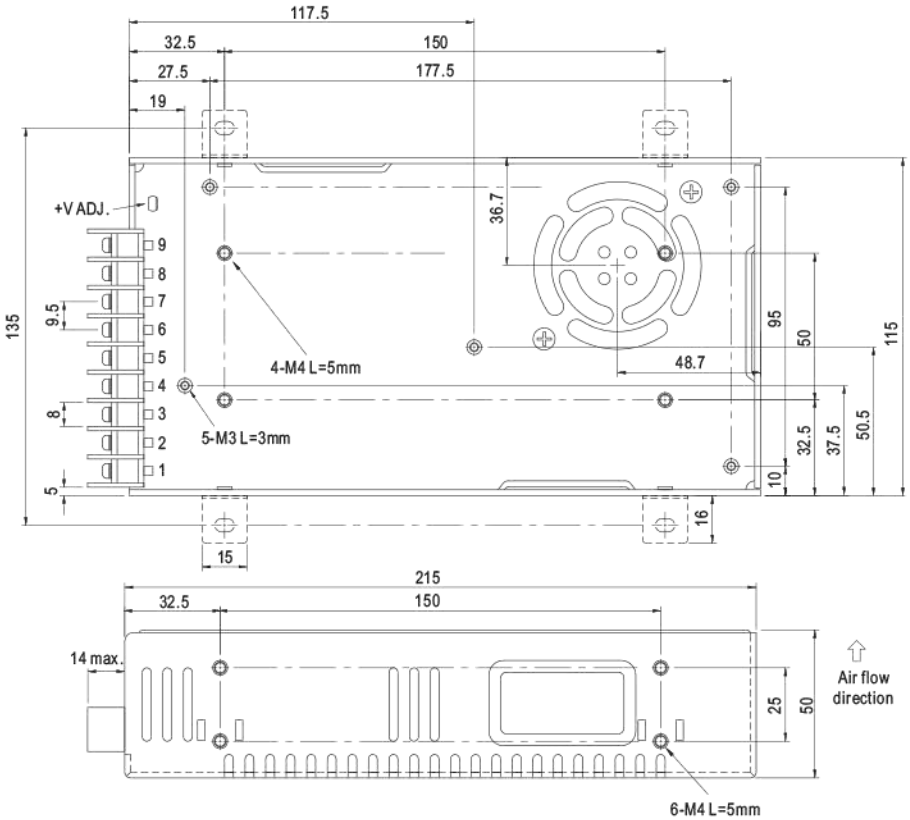
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μF & 47 μF parallel capacitor.
3. Tolerance : includes set up tolerance, line 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 ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).

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

## ■ Mechanical Specification

(Unit: mm , tolerance ± 1mm)

Case No. 912G

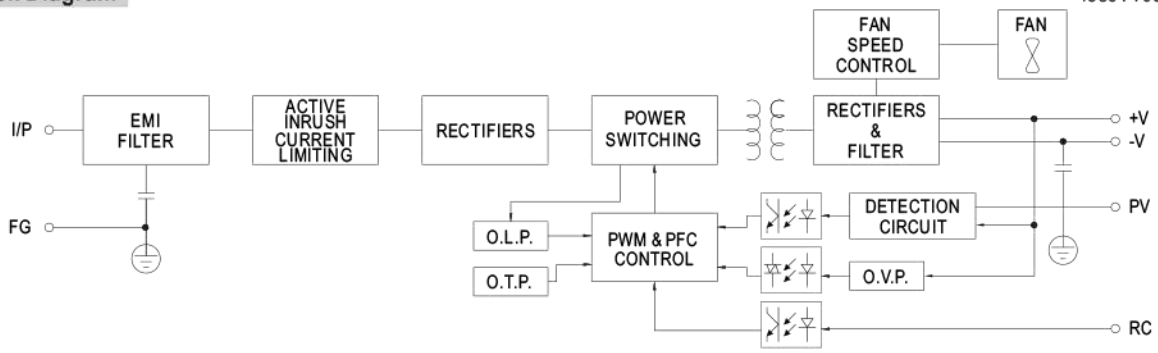



Terminal Pin No. Assignment :

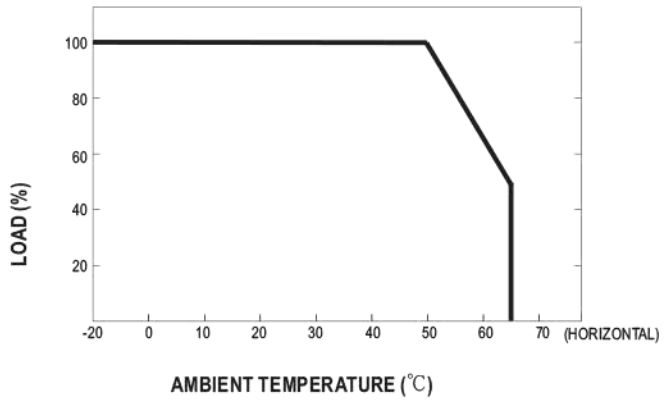
| Pin No. | Assignment | Pin No. | Assignment |
|---|---|---|---|
| 1 | AC/L | 5 | PV |
| 2 | AC/N | 6~7 | DC OUTPUT -V |
| 3 | FG ⏚ | 8~9 | DC OUTPUT+V |
| 4 | RC | | |

## ■ Block Diagram

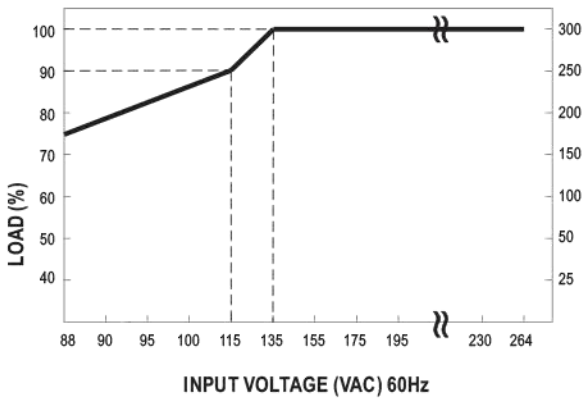
fosc : 100KHz




## ■ Derating Curve




## ■ Static Characteristics



## ■ Function Manual

### 1.External Voltage Control

