

# SPV-150 Series

150W Single Output with PFC Function



## ■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.94
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Output voltage programmable from 20~110% by 1~5.5VDC external control signal
- Built-in remote ON-OFF 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-150-12	SPV-150-24	SPV-150-48
OUTPUT	DC VOLTAGE	12V	24V	48V
	RATED CURRENT	12.5A	6.25A	3.125A
	CURRENT RANGE	0 ~ 12.5A	0 ~ 6.25A	0 ~ 3.125A
	RATED POWER	150W	150W	150W
	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>0.94/230VAC    PF>0.98/115VAC at full load		
	EFFICIENCY (Typ.)	82%	83%	83%
	AC CURRENT (Typ.)	2.5A/115VAC    1.25A/230VAC		
	INRUSH CURRENT (Typ.)	20A/115VAC    45A/230VAC		
LEAKAGE CURRENT	<1mA / 240VAC			
PROTECTION	OVERLOAD	105 ~ 150% 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
	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°C (Refer to "Derating Curve")		
	WORKING HUMIDITY	20 ~ 90% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing		
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)		
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes		
SAFETY EMC (Note 4)	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°C / 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	2112.6K hrs min.    Telcordia SR-332 (Bellcore) ; 210.3K hrs min.    MIL-HDBK-217F (25°C)		
	DIMENSION	215*115*50mm (L*W*H)		
	PACKING	1.1Kg; 12pcs/14Kg/0.92CUFT		
NOTE	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μF &amp; 47 μF parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>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 <a href="https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf</a> )</li> <li>5. Derating may be needed under low input voltages. Please check the derating curve for more details.</li> <li>6. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</li> </ol> ※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>			

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# SPV-150 Series

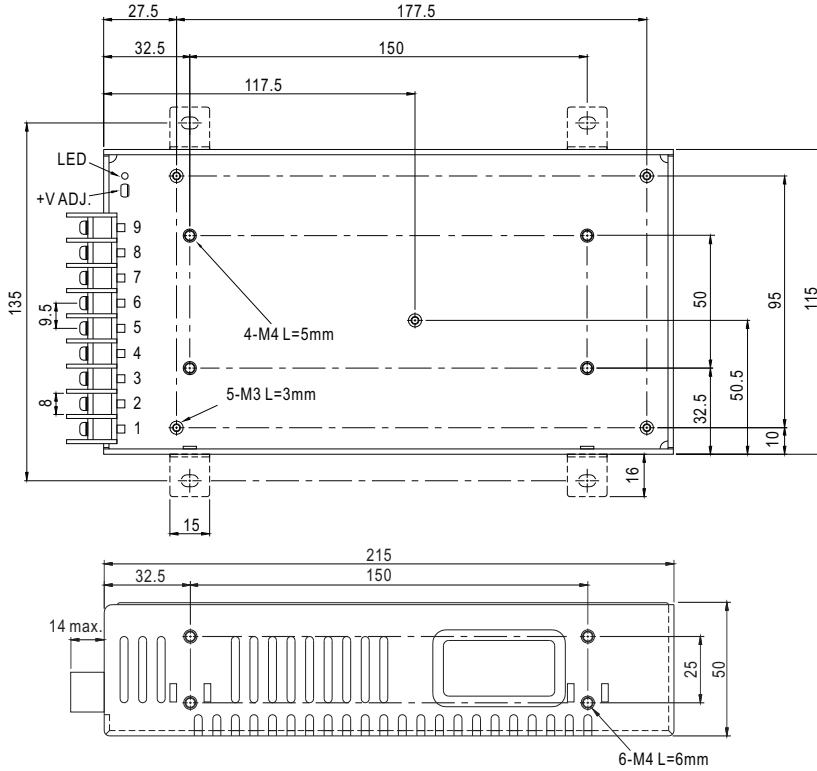
150W Single Output with PFC Function



## Mechanical Specification

(Unit: mm, tolerance  $\pm 1$ mm)

Case No. 912L

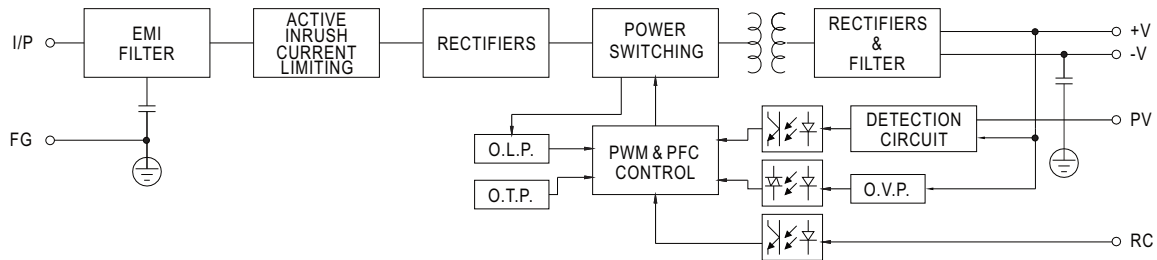


Terminal Pin No. Assignment :

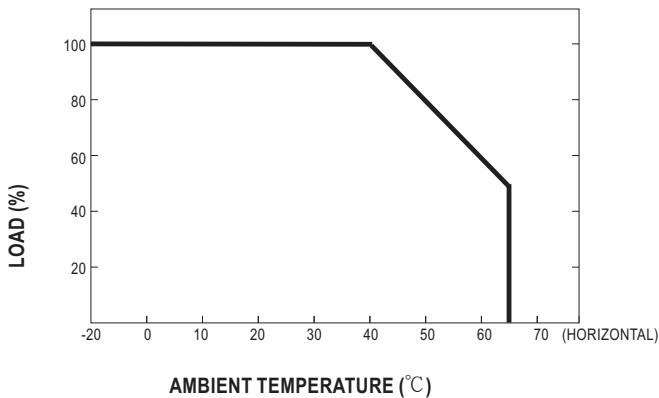
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	5	PV
2	AC/N	6-7	DC OUTPUT -V
3	FG $\perp$	8-9	DC OUTPUT +V
4	RC		

## Block Diagram

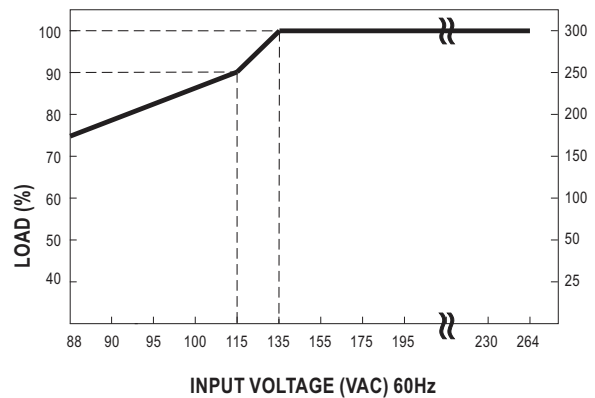
fosc : 100KHz



## Derating Curve



## Static Characteristics



## Function Manual

### 1. External Voltage Control

