



## MEAN WELL SP-150 Series 150W Single Output with PFC Function Instruction Manual

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**MEAN WELL SP-150 Series 150W Single Output with PFC Function**



## Features

- Universal AC input / Full range
- Built-in active PFC function, PF>0.93
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in constant current limiting circuit
- Remote ON-OFF control(Optional)
- LED indicator for power on
- 100% full load burn-in test
- Fixed switching frequency at PFC:67KHz PWM:134KHz
- 3 years warranty

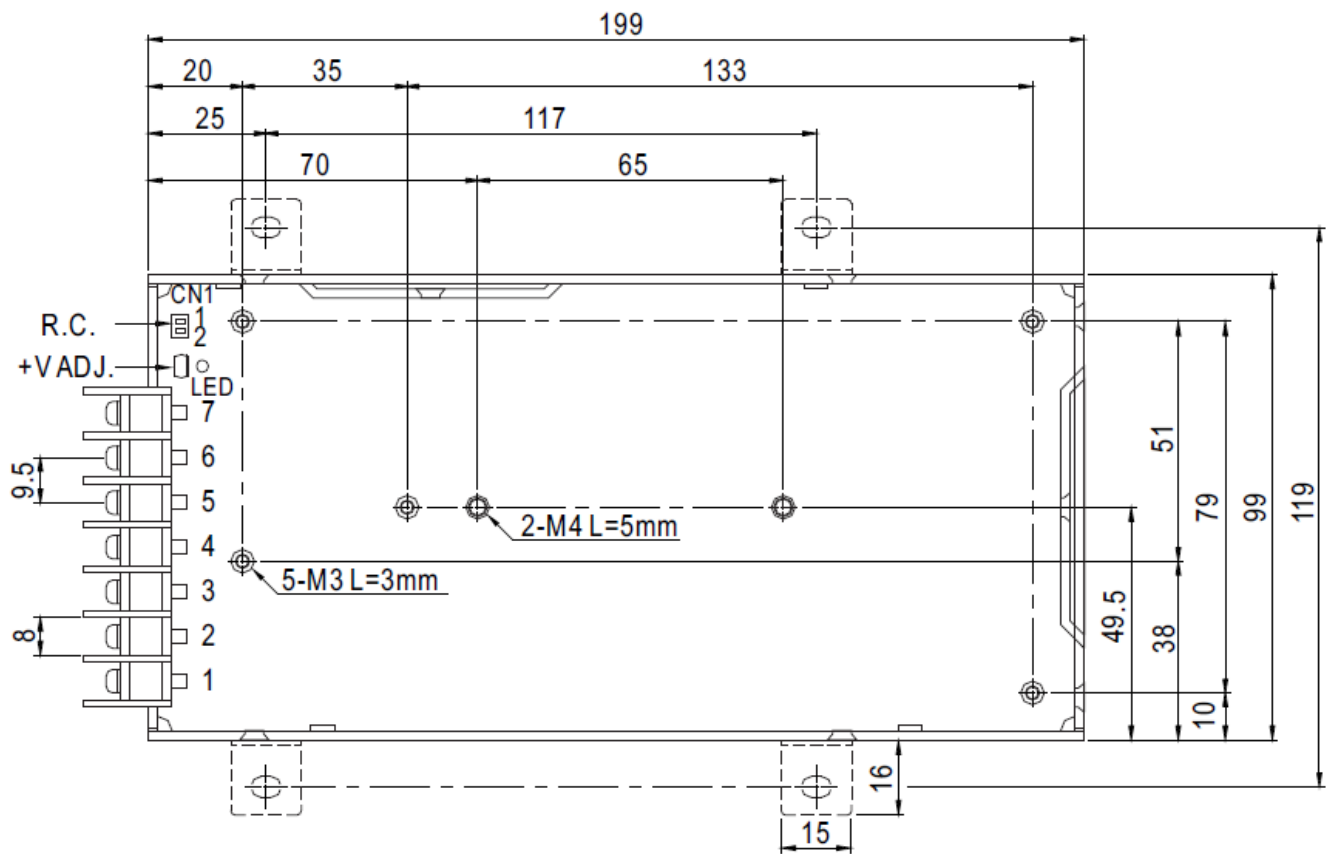
## SPECIFICATION

MODEL		SP-15 0-3.3	SP-15 0-5	SP-15 0-7.5	SP-15 0-12	SP-15 0-13.5	SP-15 0-15	SP-15 0-24	SP-15 0-27	SP-15 0-48
	DC VOLTAGE	3.3V	5V	7.5V	12V	13.5V	15V	24V	27V	48V
	RATED CURRENT	30A	30A	20A	12.5A	11.2A	10A	6.3A	5.6A	3.2A
	CURRENT RANGE	0 ~ 30 A	0 ~ 30 A	0 ~ 20 A	0 ~ 12.5 A	0 ~ 11.2 A	0 ~ 10 A	0 ~ 6.3 A	0 ~ 5.6 A	0 ~ 3.2 A
	RATED POWER	99W	150W	150W	150W	151.2 W	150W	150W	151.2 W	153.6 W

OUTPUT	RIPPLE & NOISE (max.) Note.2	100mV p-p	100mV p-p	100mV p-p	100mV p-p	100mV p-p	100mV p-p	150mV p-p	150mV p-p	250mV p-p
	VOLTAGE ADJ. RANGE	3.14 ~ 3.63V	4.75 ~ 5.5V	7.13 ~ 8.25V	11.4 ~ 13.2V	12.8 ~ 14.9V	14.3 ~ 16.5V	22.8 ~ 26.4V	25.7 ~ 29.7V	45.6 ~ 52.8V
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	700ms, 40ms at full load								
	HOLD UP TIME (Typ.)	20ms at full load								
INPUT	VOLTAGE RANGE	85 ~ 264VAC      120 ~ 370VDC								
	FREQUENCY RANGE	47 ~ 63Hz								
	POWER FACTOR (Typ.)	PF>0.93/230VAC      PF>0.97/115VAC at full load								
	EFFICIENCY (Typ.)	73%	77.5%	81%	84%	84%	85%	85%	85%	85%
	AC CURRENT (Typ.)	2.5A/115VAC      1.2A/230VAC								
	INRUSH CURRENT (Typ.)	COLD START 45A/230VAC								
	LEAKAGE CURRENT	<2mA / 240VAC								
PROTECTION	OVERLOAD	105 ~ 150% rated output power								
		Protection type : Constant current limiting, recovers automatically after fault condition is removed								
	OVER VOLTAGE	3.63 ~ 4.46V	5.5 ~ 6.75V	8.25 ~ 10.13V	13.2 ~ 16.2V	14.85 ~ 18.2V	16.5 ~ 20.25V	26.4 ~ 32.4V	29.7 ~ 36.45V	52.8 ~ 64.8V
		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(OPTION)	CN1:4 ~ 10VDC POWER ON, <0 ~ 0.8VDC POWER OFF								
	WORKING TEMP.	-10 ~ +55°C (Refer to output load derating curve)								

<b>ENVIRONMENT</b>	<b>WORKING HUMIDITY</b>	20 ~ 90% RH non-condensing
	<b>STORAGE TEMP. , HUMIDITY</b>	-20 ~ +85°C, 10 ~ 95% RH
	<b>TEMP. COEFFICIENT</b>	±0.05%/°C (0 ~ 50°C)
	<b>VIBRATION</b>	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes
<b>SAFETY &amp; EMC</b>	<b>SAFETY STANDARDS</b>	UL60950-1 approved
	<b>WITHSTAND VOLTAGE</b>	I/P-O/P:3KVAC    I/P-FG:2KVAC    O/P-FG:0.5KVAC
	<b>ISOLATION RESISTANCE</b>	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C/ 70% RH
	<b>EMC EMISSION</b>	Compliance to EN55032 (CISPR32) Class B, EN61000-3-2, -3
	<b>EMC IMMUNITY</b>	Compliance to EN61000-4-2,3,4,5,6,8,11; EN50204, EN55024, light industry level, criteria A
<b>OTHERS</b>	<b>MTBF</b>	191.2K hrs. min.    MIL-HDBK-217F (25°C)
	<b>DIMENSION</b>	199*99*50mm (L*W*H)
	<b>PACKING</b>	0.76Kg; 20pcs/16.4Kg/1.21CUFT
<b>NOTE</b>	<ul style="list-style-type: none"> <li>• All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>• Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>• Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>• 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="http://www.meanwell.com">http://www.meanwell.com</a>)</li> <li>• Derating may be needed under low input voltages. Please check the derating curve for more details.</li> <li>• Product Liability Disclaimer For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></li> </ul>	

## Mechanical Specification



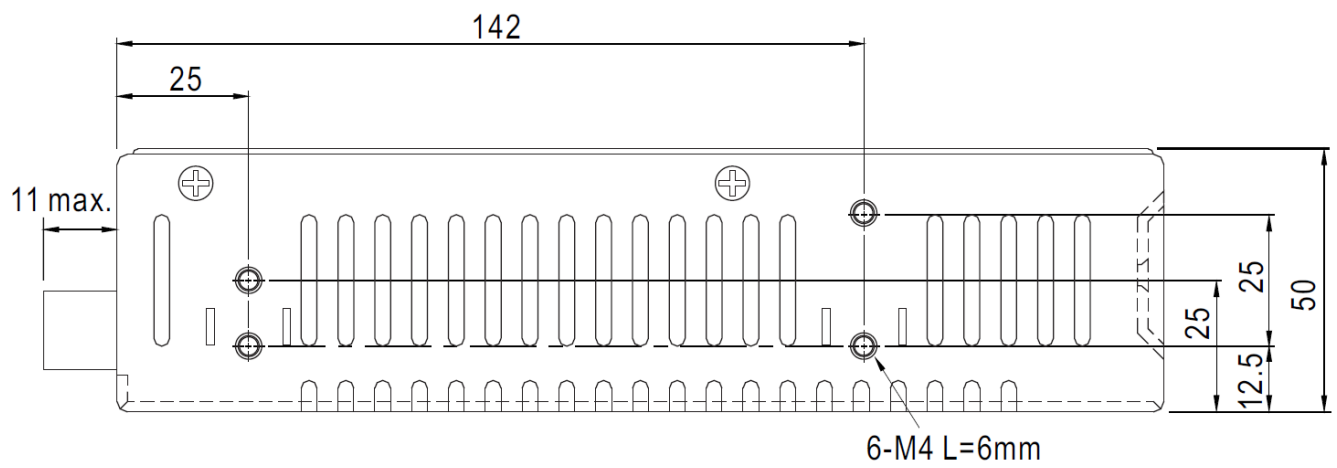
I/P

L1

18CFM

FAN

15 mm



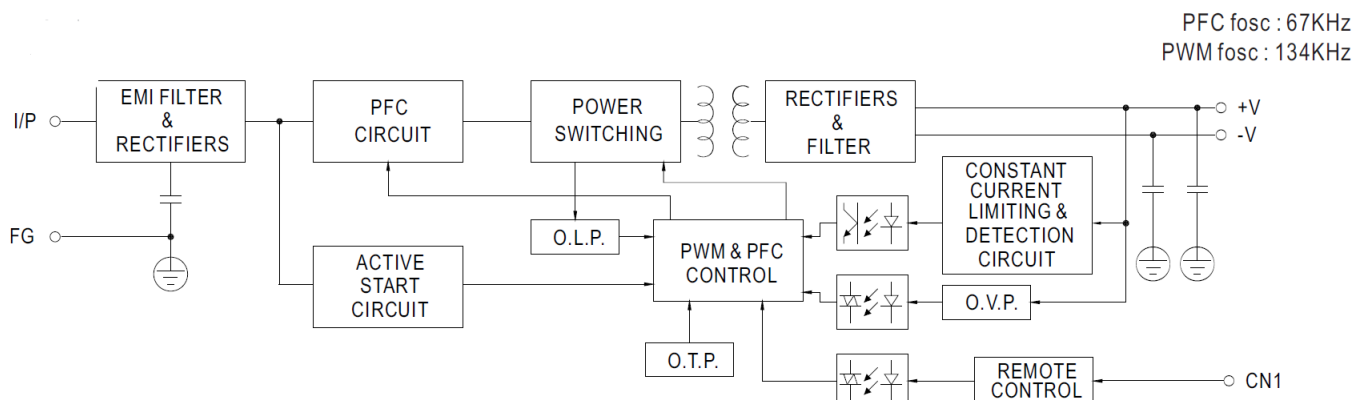
### Terminal Pin No. Assignment

Pin No.	Assignment			Pin No.	Assignment
1	AC/L			4,5	DC OUTPUT -V
2	AC/N			6,7	DC OUTPUT +V
3	FG				

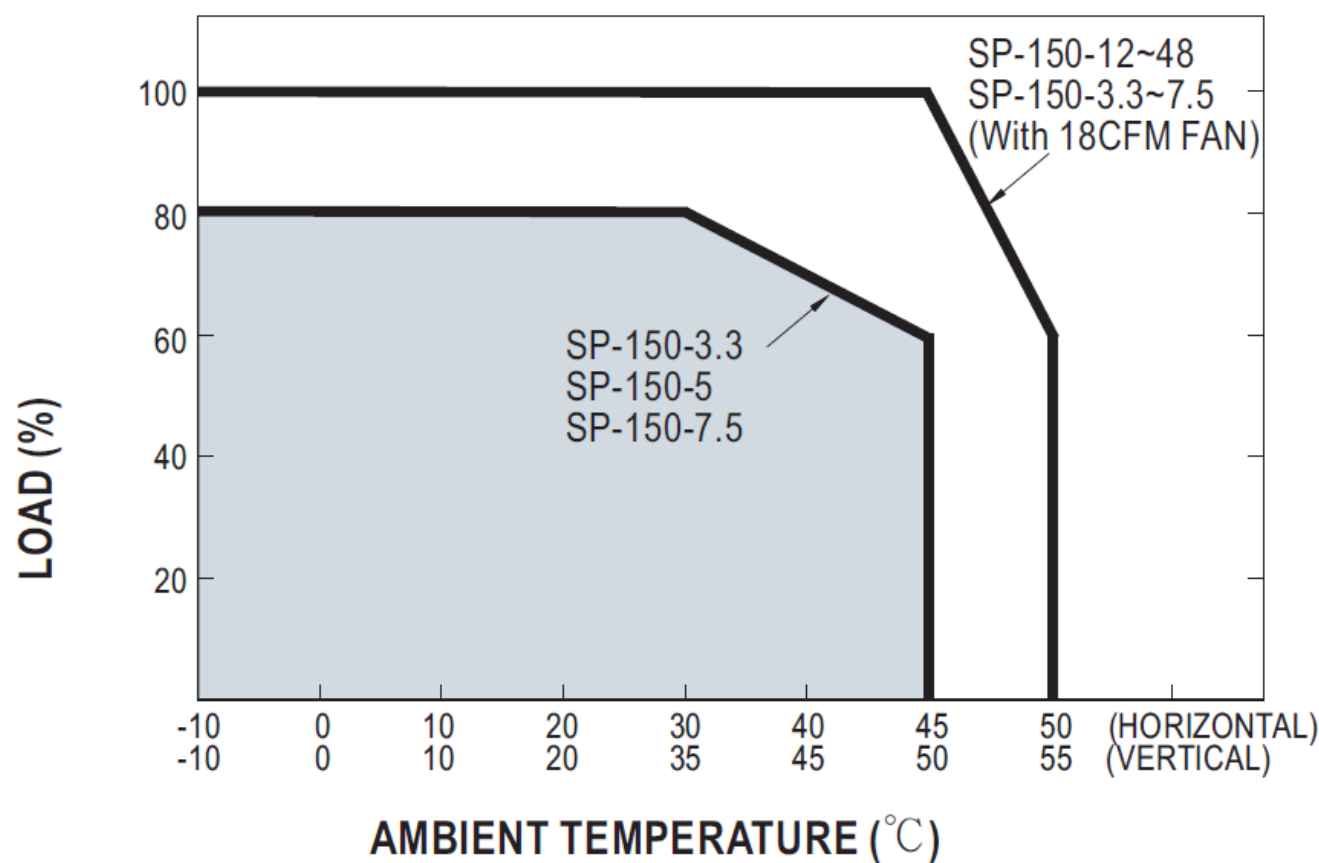
### Remote ON/OFF(CN1):JST S2B-XH or equivalent(optional)

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

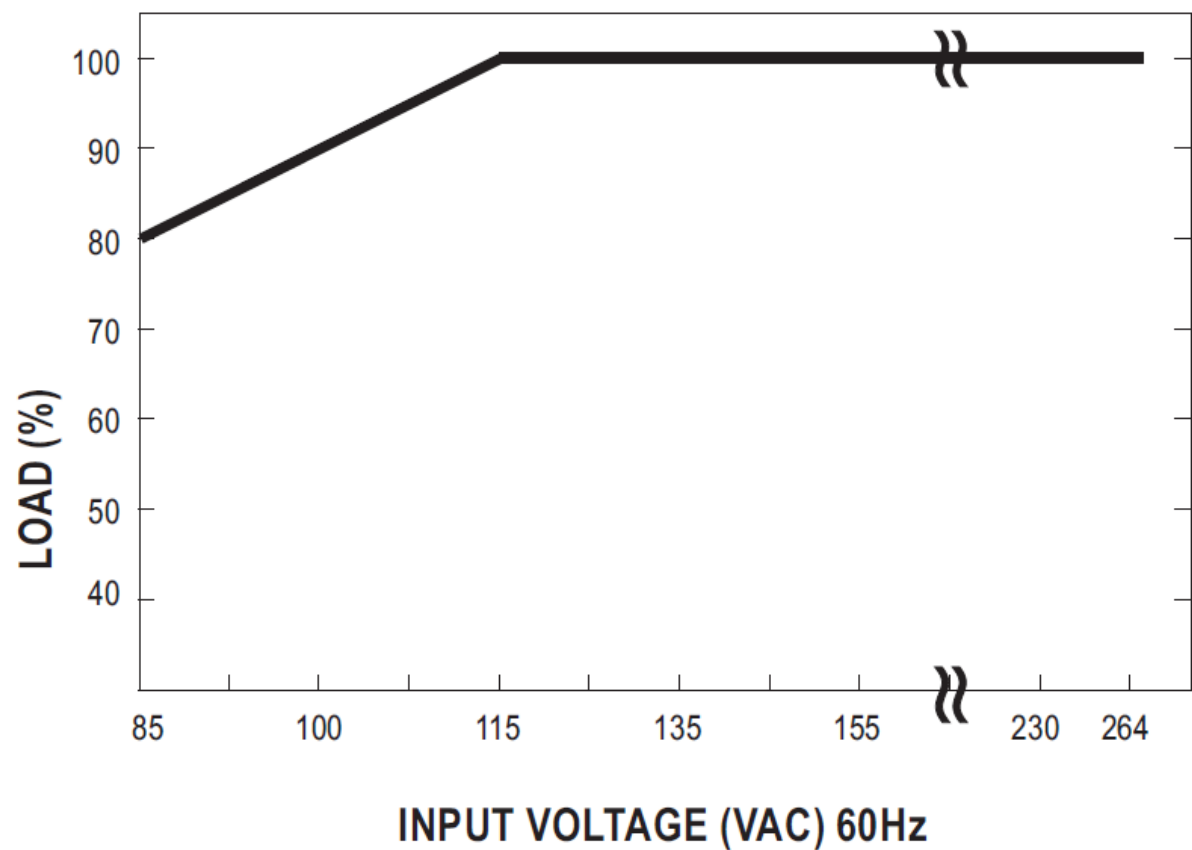
### Block Diagram



Derating Curve



Output Derating VS Input Voltage





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SP-150 Series 150W Single Output with PFC Function, SP-150 Series, 150W Single Output with PFC Function

## References

- [MEAN WELL Product Liability Disclaimer-MEAN WELL Switching Power Supply Manufacturer](#)