

# **MEAN WELL SP-200 Series 200W Single Output with PFC Function Instruction Manual**

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MEAN WELL SP-200 Series 200W Single Output with PFC Function Instruction Manual



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#### **Features**

- Universal AC input / full range
- Built-in active PFC function, PF>0.93

- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in cooling fan speed control
- Built-in constant current limiting circuit
- Built-in fan speed control
- 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-20 0-3.3	SP-20 0-5	SP-20 0-7.5	SP-20 0-12	SP-20 0-13.5	SP-20 0-15	SP-20 0-24	SP-20 0-27	SP-20 0-48
	DC VOLTAGE	3.3V	5V	7.5V	12V	13.5V	15V	24V	27V	48V
	RATED CURREN T	40A	40A	26.7A	16.7A	14.9A	13.4A	8.4A	7.5A	4.2A
	CURRENT RANG E	0 ~ 40 A	0 ~ 40 A	0 ~ 26. 7A	0 ~ 16. 7A	0 ~ 14. 9A	0 ~ 13. 4A	0 ~ 8.4 A	0 ~ 7.5 A	0 ~ 4.2 A
	RATED POWER	132W	200W	200.2 W	200.4 W	201.1 W	201W	201.6 W	202.5 W	201.6 W
	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
OUTP UT	VOLTAGE ADJ. R ANGE	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 TOLER ANCE Note.3	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATI ON	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%

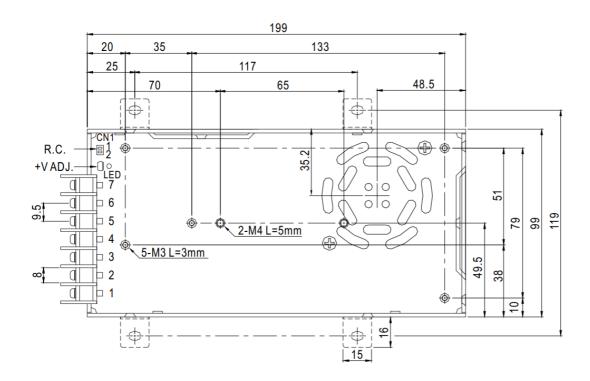
	LOAD REGULATI ON	±1.0%	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	SETUP, RISE TIM E	600ms,	600ms, 40ms at full load								
	HOLD UP TIME ( Typ.)	20ms at full load									
	<b>VOLTAGE RANG</b> 85 ~ 264VAC 120 ~ 370VDC										
FREQUENCY RA NGE 47 ~ 63Hz  POWER FACTOR (Typ.)  PF>0.93/230VAC PF>0.97/115VAC at full load											
INPU T	EFFICIENCY (Ty p.)	69%	76%	78.5%	84%	84%	84%	85%	85%	85%	
	AC CURRENT (Ty p.)	3.5A/115VAC 1.7A/230VAC									
INRUSH CURRE NT (Typ.)  COLD START 50A/230VAC											
	LEAKAGE CURR ent <2mA / 240VAC  105 ~ 150% rated output power										
	OVERLOAD	Protection type: Constant current limiting, recovers automatically after fault condition is removed							ult condit		

PROT ECTI ON	OVER VOLTAGE	3.63 ~ 4.46V	5.5 ~ 6 .75V	8.25 ~ 10.13V	13.2 ~ 16.2V	14.85 ~ 18.2 V	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 TEMPERA TURE	Shut down o/p voltage, recovers automatically after temperature goes dow							wn		
FUNC TION	REMOTE CONTR OL(OPTION)	CN1:4 ~	CN1:4 ~ 10VDC POWER ON, <0 ~ 0.8VDC POWER OFF								
	WORKING TEMP.	er to outp	o output load derating curve)								
	WORKING HUMI DITY	20 ~ 90% RH non-condensing									
ENVI RON MENT	STORAGE TEMP. , HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH									
	TEMP. COEFFICI ENT	±0.05%/°C (0 ~ 50°C)									
	VIBRATION 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes										
	SAFETY STAND ARDS  UL60950-1, CCC GB4943 approved										
	WITHSTAND VO LTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC									
SAFE TY & EMC (Note	ISOLATION RESI STANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C/70% RH									
4)											

	EMC EMISSION	Compliance to EN55032 (CISPR32) Class B,EN61000-3-2,-3						
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, light industry lev el, criteria A						
	MTBF	183.8K hrs min. MIL-HDBK-217F (25°C)						
OTHE RS	DIMENSION	199*99*50mm (L*W*H)						
	PACKING	0.85Kg; 20pcs/17.9Kg/1.21CUFT						
NOTE	<ol> <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 wih 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 or how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as avilable on <a href="https://www.meanwell.com">https://www.meanwell.com</a>)</li> <li>Product Liability Disclaimer For detailed information, please refer to <a href="https://www.meanwell.com/scruiceDisclaimer">https://www.meanwell.com/scruiceDisclaimer</a>.aspx</li> </ol>							

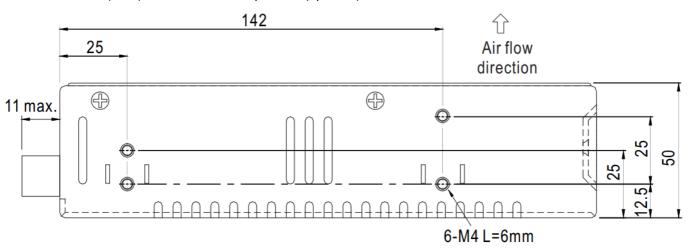
# **Mechanical Specification**

Terminal Pin No. Assignment



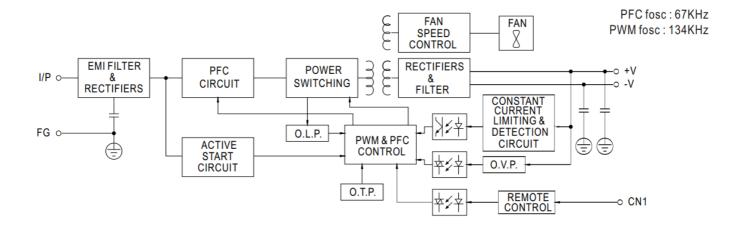
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5	DC OUTPUT -V
2	AC/N	6,7	DC OUTPUT +V
3	FG		

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

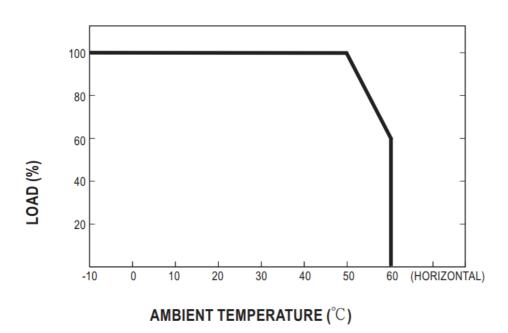


Pin No.	Assignment	Mating Housing	Terminal		
1	RC+	JST XHP or equivalent	JST SXH-001T-P0.6 or equivalent		
2	RC-	OOT ATTI OF Equivalent			

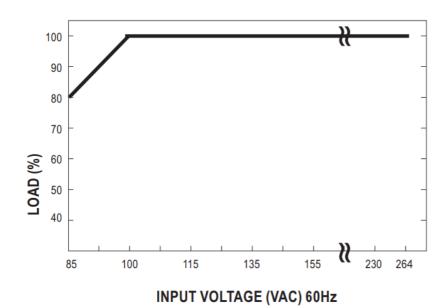
## **Block Diagram**



## **Derating Curve**



# **Output Derating VS Input Voltage**





### **Documents / Resources**



MEAN WELL SP-200 Series 200W Single Output with PFC Function [pdf] Instruction Manual

SP-200 Series 200W Single Output with PFC Function, SP-200 Series, 200W Single Output with PFC Function, PFC Function

#### References

• Product Liability Disclaimer-MEAN WELL Switching Power Supply Manufacturer

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