



- Universal AC input
- Protections: Short circuit/Over load/Over voltage/Over temperature
- Built-in active PFC function, PF >0.93
- LED indicator for power on
- Built-in constant current limiting circuit
- Low profile: 33mm thickness
- Fixed switching frequency at PFC: 67KHz PWM: 134KHz



Model Number	Output Volts	Output Amps	Ripple & Noise	Min Load	DC Volt Adjust	Load Reg	Efficiency
SINGLE OUTPUT							
SP150-3.3	3.3 Volts(DC)	30 Amps	100mV pk-pk	0~30Amps	3.14~3.63Volt(DC)	±1.0%	67%
SP150-5	5 Volts(DC)	30 Amps	100mV pk-pk	0~30Amps	4.75~5.5Volt(DC)	±1.0%	75%
SP150-7.5	7.5 Volts(DC)	20 Amps	100mV pk-pk	0~20Amps	7.13~8.25Volt(DC)	±1.0%	79%
SP150-12	12 Volts(DC)	12.5 Amps	100mV pk-pk	0~12.5Amps	11.4~13.2Volt(DC)	±0.5%	80%
SP150-13.5	13.5 Volts(DC)	11.2 Amps	100mV pk-pk	0~11.2Amps	12.8~14.9Volt(DC)	±0.5%	80%
SP150-15	15 Volts(DC)	10 Amps	100mV pk-pk	0~10Amps	14.3~16.5Volt(DC)	±0.5%	81%
SP150-24	24 Volts(DC)	6.3Amps	150mV pk-pk	0~6.3Amps	22.8~26.4Volt(DC)	±0.5%	83%
SP150-27	27 Volts(DC)	5.6 Amps	150mV pk-pk	0~5.6Amps	25.7~29.7Volt(DC)	±0.5%	84%
SP150-48	48 Volts(DC)	3.2 Amps	250mV pk-pk	0~3.2Amps	45.6~52.8Volt(DC)	±0.5%	84%

150W Single Output with PFC Function

SP150 series

INPUT SPECIFICATIONS

Input Voltage Range (Note3)	90 ~ 264VAC 120~370 Volts(DC)
Frequency Range	47-63 Hz
Inrush Current, typ: (cold start)	40Amps / 230VAC
Input Current	2.5 Amps. @ 115VAC 1.2 Amps. @ 230VAC
Leakage current	< 2mAmps / 240VAC
Min Load	See Selection Chart
Power Factor @ FL	PF> 0.93 / 230VAC > 0.98 / 115VAC

OUTPUT SPECIFICATIONS

Voltage and Current	See Selection Chart
Line Regulation	±0.5%
Load Regulation	See Selection Chart
Voltage Tolerance (Note 2)	±2.0%: 3.3~15Volts(DC) ±1.0%: 24~48Volts(DC)
Ripple/Noise (Note 1)	See Selection Chart
Hold Up Time	20mS @ FL
Setup, Rise Time	600ms, 30m @ FL
Over Voltage Protection	3.63 ~ 4.46Volt(DC): 3.3Volts(DC) 5.5 ~ 6.75Volt(DC): 5Volts(DC) 8.25 ~ 10.13Volt(DC): 7.5Volts(DC) 13.2 ~ 16.2Volt(DC): 12Volts(DC) 14.85 ~ 18.2Volt(DC): 13.5Volts(DC) 16.5 ~ 20.25Volt(DC): 15Volts(DC) 26.4 ~ 32.4Volt(DC): 24Volts(DC) 29.7 ~ 36.45Volt(DC): 27Volts(DC) 52.8 ~ 64.8Volt(DC): 48Volts(DC) Shut down o/p voltage, re-power
Over Current Protection	105 ~ 150% rated output power Constant current limiting, auto-recover
Over Temperature	95°C +/-5°C TSW1 : detect on heatsink of power transistor after cool down
DC Volt Adjust	See Selection Chart

GENERAL SPECIFICATIONS

Safety	UL60950-1, TUV EN60950-1 Approved
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All specifications are typical at nominal input, full load, and 25°C unless otherwise noted

Insulation Resistance	≥ 100MΩ / 500Volts(DC)
EMI	Compliance to EN55022 (CISPR22) Class B
Harmonic Current	Compliance to EN61000-3-2,-3
Efficiency	See Selection Chart
Isolation	3000VAC Input - Output 1500VAC Input - Ground 500VAC Output - Ground
EMS	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11; ENV50204, EN55024, light Industry Level, Criteria A

ENVIRONMENTAL SPECIFICATIONS

Oper. Temperature	-10°C to +60°C (See Derate Curve)
Storage Temperature	-20°C to +85°C, 10~95% RH
Relative Humidity	20~90% RH non cond
Temperature Coefficient	±0.05% / °C (0-50°C)
MTBF	191.2KHrs min, MIL-HDBK-217F(25°C)
Vibration	10~500Hz, 2G10min./1cycle, period for 60min. each along X, Y, Z axes

PHYSICAL SPECIFICATIONS

Size	
Millimeters	199 x 99 x 50
Inches	7.84" x 3.90" x 1.97"
Weight	26.81 oz (760g)

NOTE

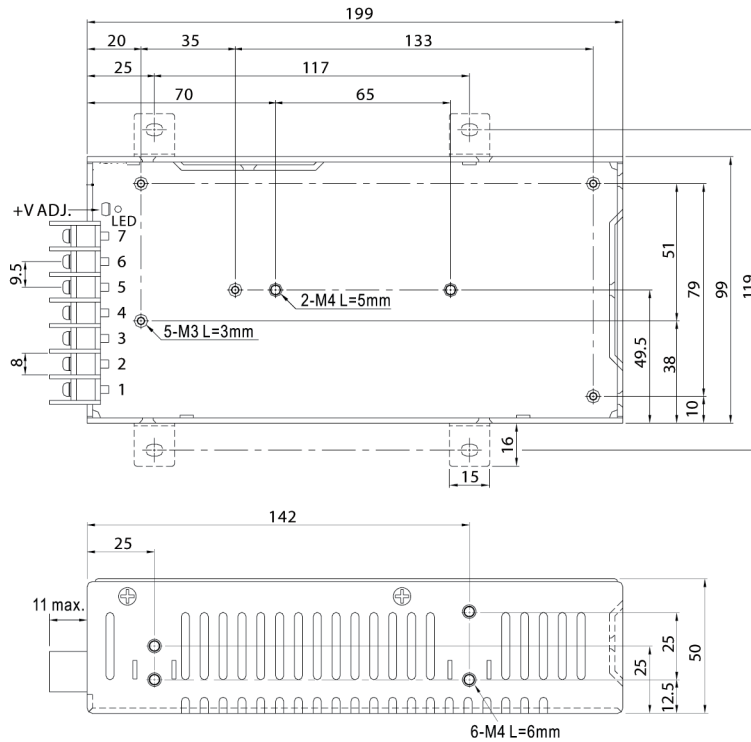
1. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
2. Tolerance : includes set up tolerance, line regulation and load regulation.
3. Derating may be needed under low input voltages. Please check the derating curve for more details.

150W Single Output with PFC Function

SP150 series

Mechanical Specification

Case No. 916A Unit:mm

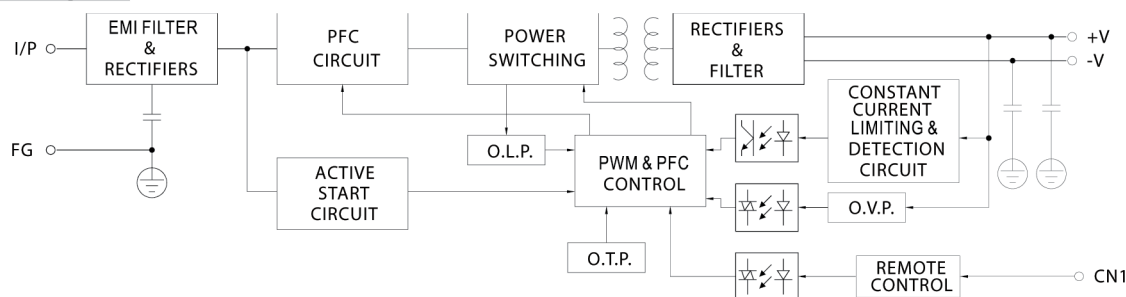


Terminal Pin No. Assignment

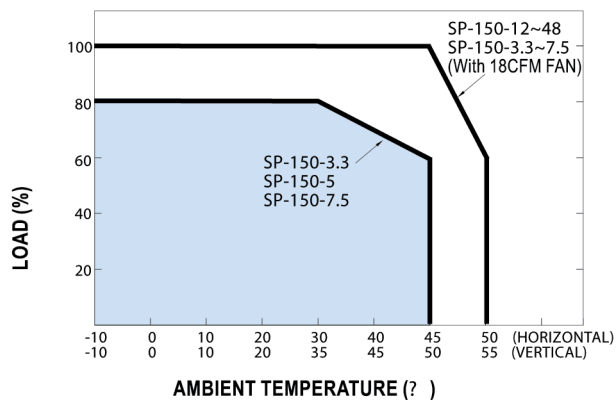
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5	DC OUTPUT -V
2	AC/N	6,7	DC OUTPUT +V
3	FG $\perp$		

PFC fosc : 67KHz
PWM fosc : 134KHz

Block Diagram



■ Derating Curve



■ Output Derating VS Input Voltage

