Astrodyne TDI
Now you have power.

150W Single Output with PFC Function

SP150/DRL series



- Universal AC input
- Protections:Short circuit/Over load/Over voltage/Over temperarure
- 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/DRL	3.3 Volts(DC)	30 Amps	100mV pk-pk	0~30Amps	3.14~3.63Volt(DC)	±1.0%	67%
SP150-5/DRL	5 Volts(DC)	30 Amps	100mV pk-pk	0~30Amps	4.75~5.5Volt(DC)	±1.0%	75%
SP150-7.5/DRL	7.5 Volts(DC)	20 Amps	100mV pk-pk	0~20Amps	7.13~8.25Volt(DC)	±1.0%	79%
SP150-12/DRL	12 Volts(DC)	12.5 Amps	100mV pk-pk	0~12.5Amps	11.4~13.2Volt(DC	±0.5%	80%
SP150-13.5/DRL	13.5 Volts(DC)	11.2 Amps	100mV pk-pk	0~11.2Amps	12.8~14.9Volt(DC)	±0.5%	80%
SP150-15/DRL	15 Volts(DC)	10 Amps	100mV pk-pk	0~10Amps	14.3~16.5Volt(DC)	±0.5%	81%
SP150-24/DRL	24 Volts(DC)	6.3Amps	150mV pk-pk	0~6.3Amps	22.8~26.4Volt(DC)	±0.5%	83%
SP150-27/DRL	27 Volts(DC)	5.6 Amps	150mV pk-pk	0~5.6Amps	25.7~29.7Volt(DC)	±0.5%	84%
SP150-48/DRL	48 Volts(DC)	3.2 Amps	250mV pk-pk	0~3.2Amps	45.6~52.8Volt(DC)	±0.5%	84%

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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
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

All specifications are typical at nominal input, full load, and 25°C unless otherwise noted

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.

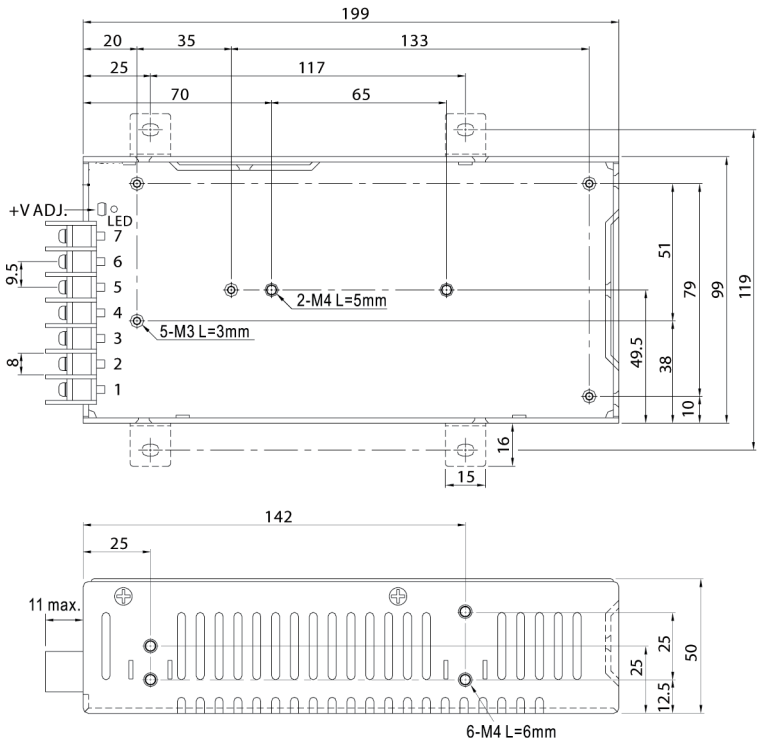
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■ Mechanical Specification

Case No. 916A Unit:mm

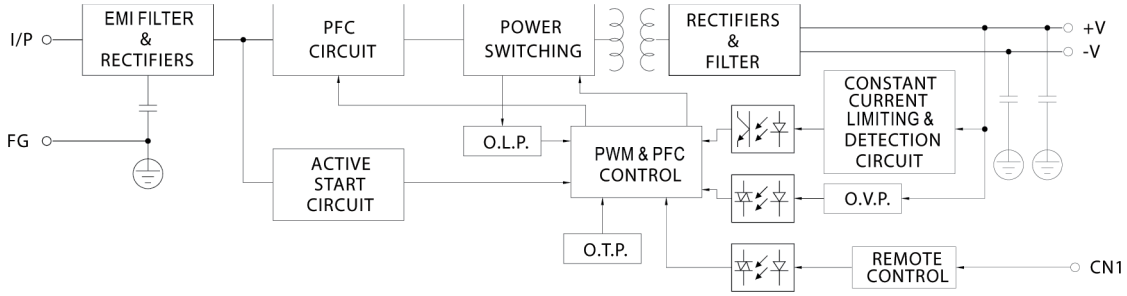


Terminal Pin No. Assignment

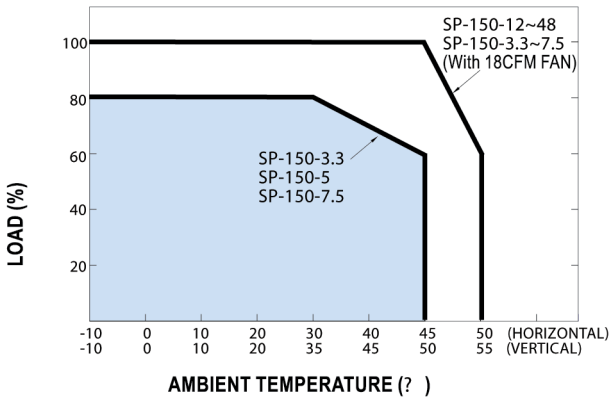
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5	DC OUTPUT -V
2	AC/N	6,7	DC OUTPUT +V
3	FG ⏚		

PFC fosc : 67KHz
PWM fosc : 134KHz

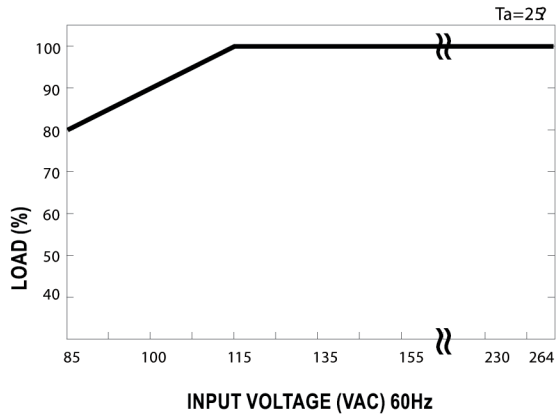
■ Block Diagram

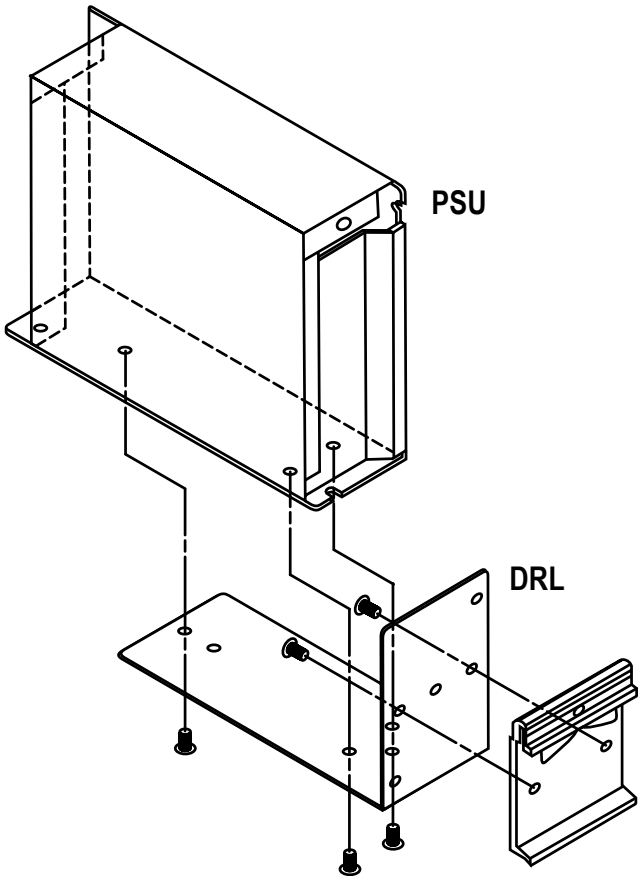


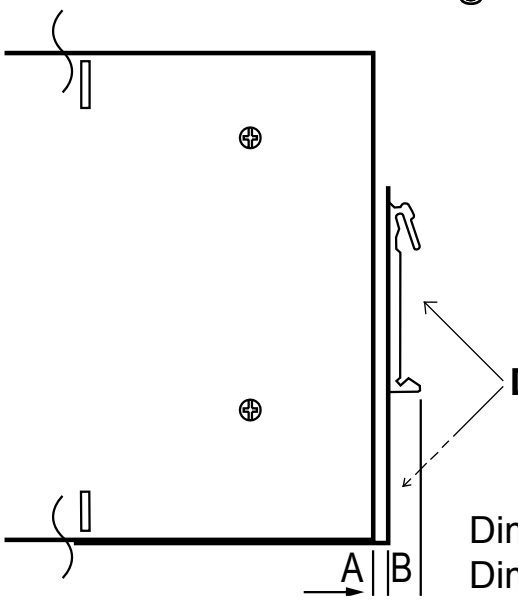
■ Derating Curve



■ Output Derating VS Input Voltage







DRL Clip & Bracket

Dimension **A**: 1.29”
Dimension **B**: 0.36”