Astrodyne TDI
Now you have power.

750W Single Output with PFC Function

SP750 series



- Universal AC input
- Protections:Short circuit/Over load/Over voltage/Over temperature
- Built-in active PFC function, PF>0.96
- Forced air cooling by built-in DC ball bearing fan
- High power density of 5.48W/cubic inch
- Built-in remote ON-OFF control
- Built-in constant current limiting circuit
- Built-in remote sense function
- With power good and fail signal output
- AC input active surge current limiting

c UL us TÜV CB CE

Model Number	Output Volts	Output Amps	OVP	Min Load	DC Volt Adjust	Line Reg	Efficiency
SINGLE OUTPUT							
SP750-5	5 Volts(DC)	120 Amps	5.75 ~ 6.75Volt(DC)	0~120Amps	4.75~5.5Volt(DC)	±0.5%	80%
SP750-12	12 Volts(DC)	62.5 Amps	13.8 ~ 16.2Volt(DC)	0~62.5Amps	10~13.5Volt(DC)	±0.3%	85%
SP750-15	15 Volts(DC)	50 Amps	18 ~ 21Volt(DC)	0~50Amps	13.5~16.5Volt(DC)	±0.3%	87%
SP750-24	24 Volts(DC)	31.3 Amps	27.6 ~ 32.4Volt(DC)	0~31.3Amps	22~26.4Volt(DC)	±0.2%	89%
SP750-27	27 Volts(DC)	27.8 Amps	31 ~ 36.5Volt(DC)	0~27.8Amps	24~30Volt(DC)	±0.2%	89%
SP750-48	48 Volts(DC)	15.7 Amps	57.6~ 67.2Volt(DC)	0~15.7Amps	43~56Volt(DC)	±0.2%	90%

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INPUT SPECIFICATIONS

Input Voltage Range	90 ~ 264VAC 127~370 Volts(DC)
Frequency Range	47-63 Hz
Inrush Current, typ: (cold start)	27Amps/115VAC; 45Amps 230VAC
Input Current	8.8Amps @ 115VAC
	4.2 Amps @ 230VAC
Leakage current	< 2.0 mAmps / 240VAC
Min Load	See Selection Chart
Power Factor (typ.) @ FL	PF> 0.96 / 230VAC
	> 0.99 / 115VAC

OUTPUT SPECIFICATIONS

Voltage and Current	See Selection Chart
Line Regulation	See Selection Chart
Load Regulation	±0.5%: 12~48Volts(DC)
	±2.0%: 5Volts(DC)
Voltage Tolerance (Note 2)	±1.0%: 12~48Volts(DC)
	±2.0%: 5 Volts(DC)
Ripple/Noise (Note 1)	120mVpk-pk max
Hold Up Time @ FL	16mS /230VAC
	16mS /115VAC
Setup, Rise Time @ FL	1500mS, 50mS /230VAC
	1500mS, 50mS /115VAC
Over Voltage Protection	See Selection Chart
	Shutdown o/p voltage, re-power
Over Current Protection	
105~135% rated output power	
Constant current limiting, unit will Hiccup after 3sec	
Over Temperature Protection	
85°C ±5°C (TSW1) detect on heatsink of power transitor	
85°C ±5°C (TSW2) detect on heasink of power diode	
Shutdown o/p volt, auto recover 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 EN55011(CISPR11)
	EN55022(CISPR22) Class B
Harmonic Current	Compliance to EN61000-3-2,-3
Remote Control (Note 3)	RC+/RC-: short= Power on
	Open= Power off
Power Good/Fail	50mS/1mS
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, ENV55024, EN61000-6-2
	EN61204-3
	heavy Industry Level, Criteria A

ENVIRONMENTAL SPECIFICATIONS

Oper. Temperature	-20°C to +60°C (See Derate Curve)
Storage Temperature	-40°C to +85°C, 10~95% RH
Relative Humidity	20~90% RH non cond
Temperature Coefficient	0.05% / °C (0-50°C)
MTBF	124KHrs min,MIL-HDBK-217F(25°C)
Vibration	10~500Hz, 2G10min./1cycle, period for
	60min. each along X, Y, Z axes

PHYSICAL SPECIFICATIONS

Size	278x127 x 63.5mm (10.94"x5 "x2.5")
Weight	102.29 oz (2900g)

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. The power supply unit will have no output if the shorting connector is not assembled between RC+ & RC-.

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

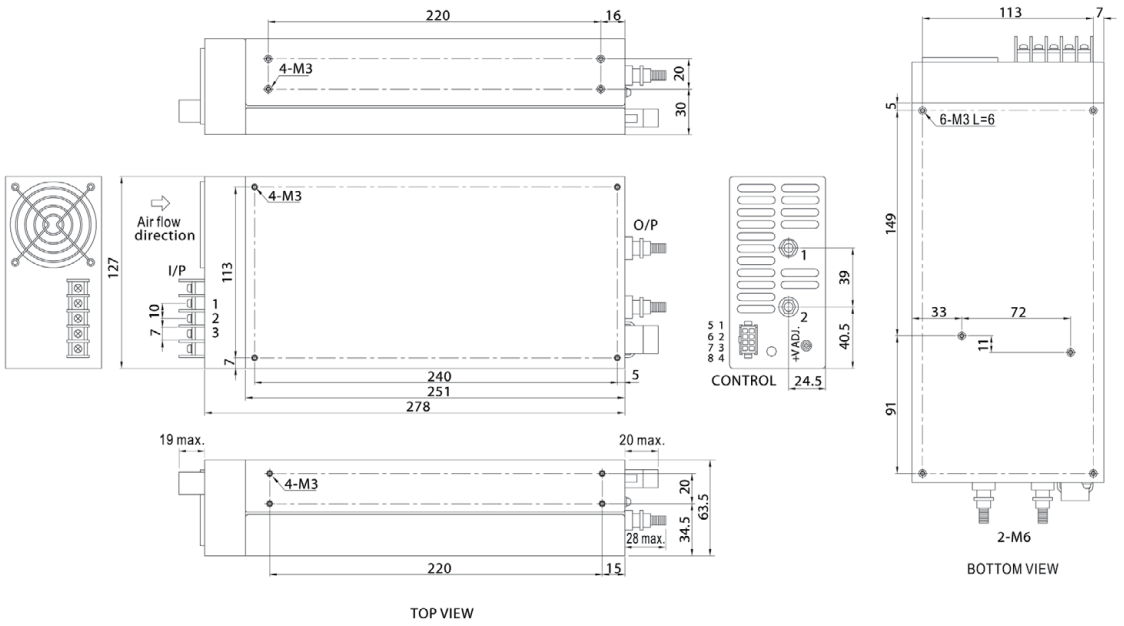
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■ Mechanical Specification

Case No.919A Unit:mm



AC Input Terminal
Pin No. Assignment

Pin No.	Assignment
1	AC/L
2	AC/N
3	FG ⏚

DC Output Terminal
Pin No. Assignment

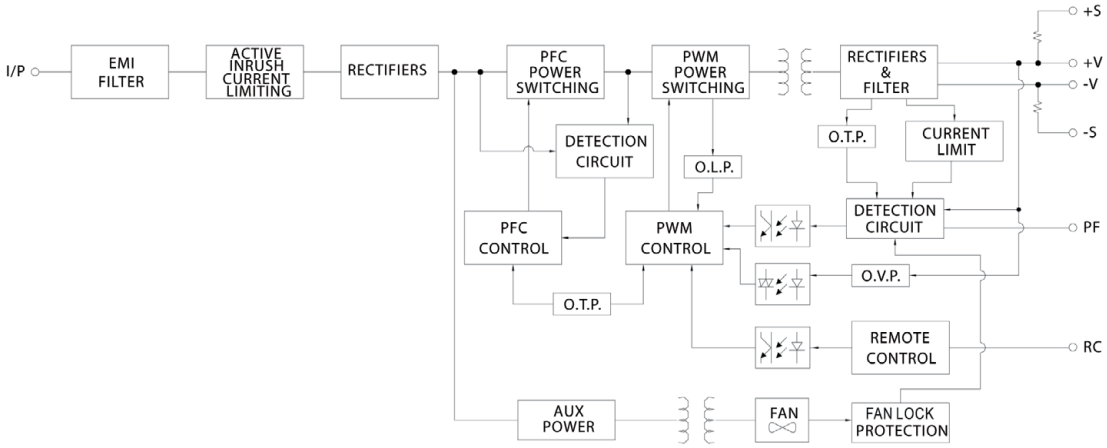
Pin No.	Assignment
1	DC OUTPUT +V
2	DC OUTPUT -V

Control Pin No. Assignment : MOLEX 5559-NP uses 5558male crimp terminal

Pin No.	Assignment	Pin No.	Assignment	Mating connector	Terminal
1	NC	5	NC	MOLEX 5557-NR	MOLEX 5556 Female crimp Terminal receptacle
2	-S	6	PF(Power fail signal)		
3	G	7	+S		
4	RC-	8	RC+		

■ Block Diagram

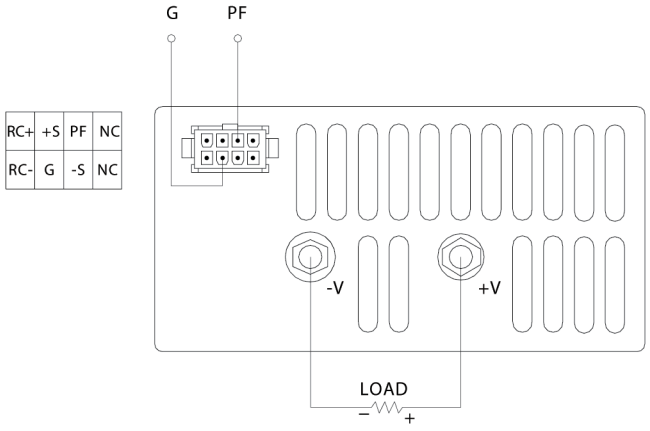
PFC fosc : 100KHz
PWM fosc : 140KHz



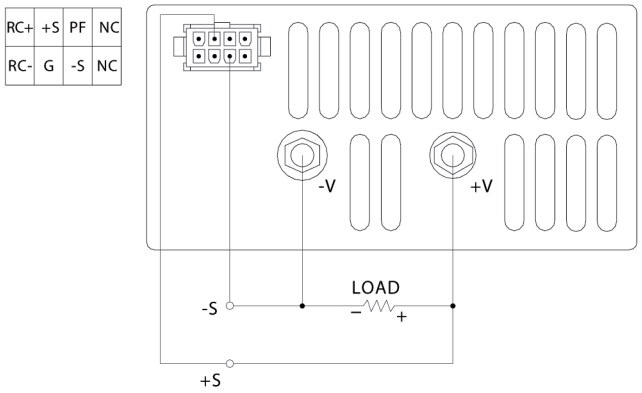
■ Control Terminal Instruction Manual

Power Fail Signal

PF Signal is the voltage difference between
"G" and "PF" pin output

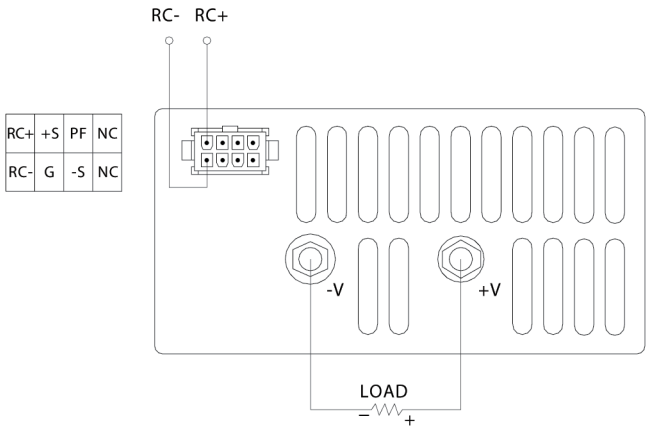


Remote Sensing

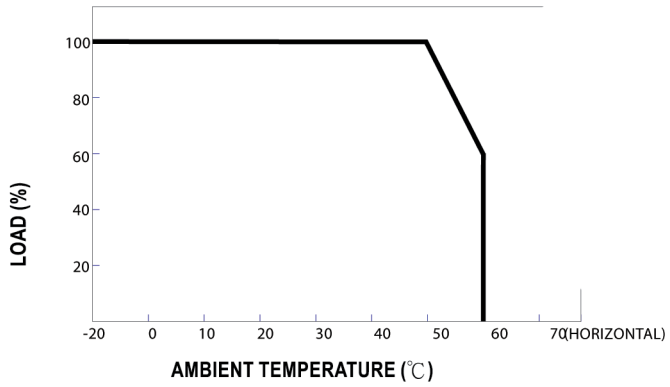


Remote Control

Power ON: RC+/RC- Short
Power OFF: RC+/RC- open



■ Derating Curve



■ Static Characteristics

