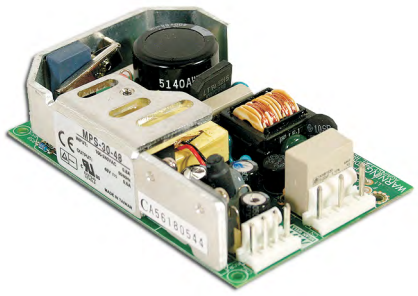
Astrodyne TDI
Now you have power.

30W Single Output for Medical Type

MPS30 series



- Universal AC input
- Low leakage current ≤ 0.3mA
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Fixed switching frequency at 100KHz
- Low cost
- High reliability

Model Number	Output Volts	Output Amps	Ripple & Noise	Efficiency	OVP	Min Load
SINGLE OUTPUT						
MPS30-5	5 Volts(DC)	5 Amps	80mV pk-pk	72%	5.5~6.75Volts(DC)	0~5Amps
MPS30-12	12 Volts(DC)	2.5 Amps	120mV pk-pk	75%	13.2~16.2Volts(DC)	0~2.5Amps
MPS30-15	15 Volts(DC)	2 Amps	150mV pk-pk	76%	16.5~20.25Volts(DC)	0~2Amps
MPS30-24	24 Volts(DC)	1.2 Amps	240mV pk-pk	77%	26.4~32.4Volts(DC)	0~1.2Amps
MPS30-27	27 Volts(DC)	1.1 Amps	240mV pk-pk	78%	29.7~36.45Volts(DC)	0~1.1Amps
MPS30-48	48 Volts(DC)	0.6 Amps	240mV pk-pk	78%	52.8~64.8Volts(DC)	0~0.6Amps

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INPUT SPECIFICATIONS

Input Voltage Range	90-264VAC / 120-370 Volts(DC)
Frequency Range	47-63 Hz
Inrush Current, typ: (cold start)	30Amps @ 230VAC Input
Input Current	0.8Amps max @ 115VAC
	0.5Amps max @ 230VAC
Leakage current	< 0.3mA / 230 VAC

OUTPUT SPECIFICATIONS

Voltage and Current	See Selection Chart
Line Regulation	±1.0%: 5~12Volts(DC)
	± 5%: 15~48Volts(DC)
Load Regulation	±2.0%: 5Volts(DC)
	1%: 12~48Volts(DC)
Voltage Tolerance (Note 2)	±3%
Ripple/Noise (Note 1)	See Selection Chart
Hold Up Time @ FL	70mS @ 230VAC
	12mS @ 115VAC
Setup, Rise Time @ FL	500mS, 30mS/230VAC
	500mS. 30mS/115VAC
Over Temperature Protection	Tj 135°C typ. (U1) detect on main
	conrol IC, auto recover
Over Voltage Protection	See Selection Chart
	Hiccup mode, auto recover
Over Current Protection	Above 105% rated output power
	Hiccup mode, auto recover

GENERAL SPECIFICATIONS

Safety	UL2601-1
	TUV EN60601-1
	IEC60601-1 approved
Insulation Resistance	≥ 100MΩ
EMI	Compliance to EN55011 (CISPR11)
	Class B
Harmonic Current	Compliance to EN61000-3-2,-3
Efficiency	See Selection Chart
Isolation	
	4000VAC Input - Output
	1500VAC Input - Ground
	Short Output - Ground
EMS	Compliance to
	EN61000-4-2,3,4,5,6,8,11;
	ENV50204, EN55024, EN60601-1-2,
	medical 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 to +90% RH non cond
Temperature Coefficient	0.03% / °C (0-50°C)
MTBF	547KHrs min, MIL-HDBK-217F(25°C)
Vibration	10~500Hz, 2G10min./1cycle, period for
	60min. each along X, Y, Z axes

PHYSICAL SPECIFICATIONS

Size		
	Millimeters	101.6 x 65.8 x 23.5
	Inches	4" x 2.59" x 0.93"
Weight		5.64 oz (160g)

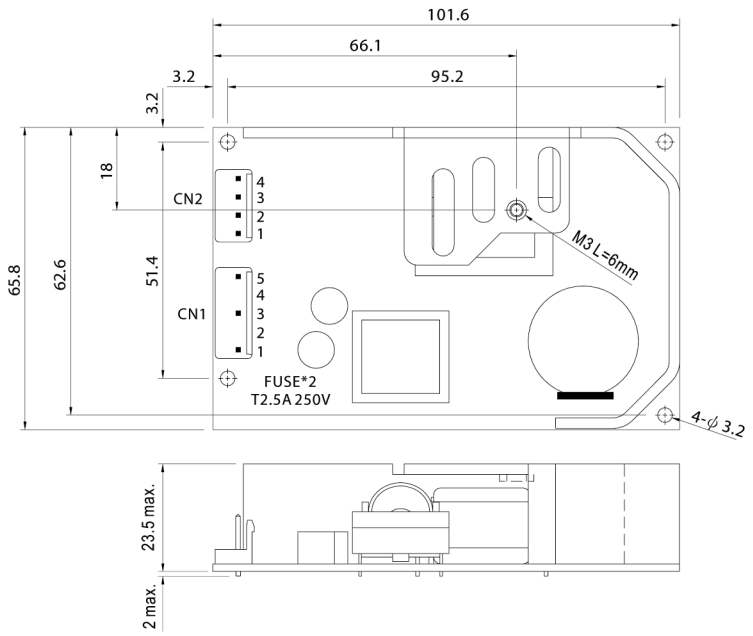
NOTE

1. Ripple and Noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47 uf parallel capacitor.
2. Tolerance: includes set up tolerance, line regulation and load regulation.

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

■ Mechanical Specification

Unit:mm



AC Input Connector (CN1) : Molex 41791-5 or equivalent

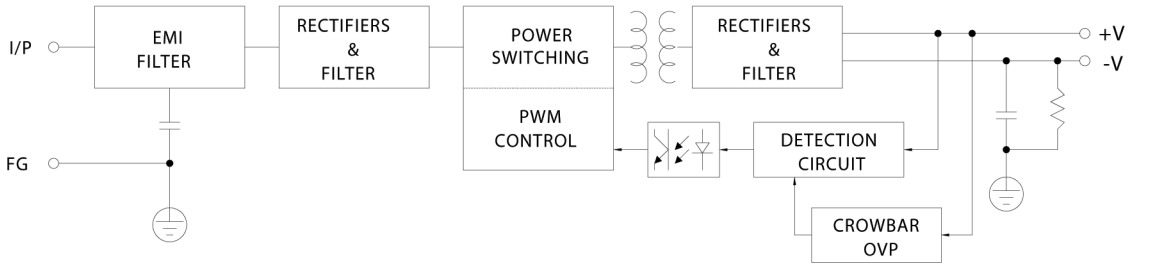
Pin No.	Assignment	Mating Housing	Terminal
1	FG ⏚	Molex 2139 or equivalent	Molex 2478 or equivalent
2,4	No Pin		
3	AC/N		
5	AC/L		

DC Output Connector (CN2) : Molex 41791-4 or equivalent

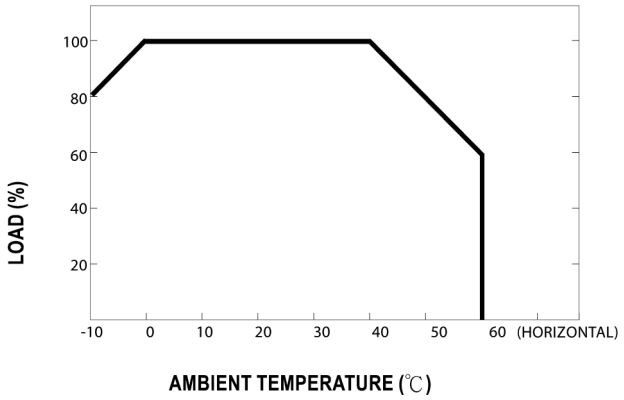
Pin No.	Assignment	Mating Housing	Terminal
1,2	-V	Molex 2139 or equivalent	Molex 2478 or equivalent
3,4	+V		

■ Block Diagram

fosc : 100KHz



■ Derating Curve



■ Static Characteristics