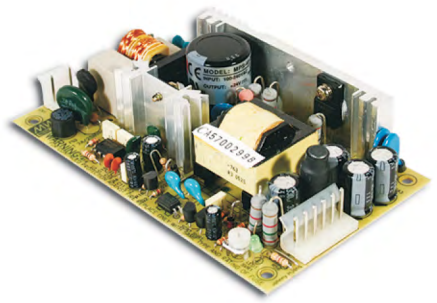
Astrodyne TDI
Now you have power.

45W Single Output for Medical Type

MPS45 series



- Universal AC input
- Low leakage current ≤ 0.3mA
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Fixed switching frequency at 45KHz
- Cooling by free air convection

Model Number	Output Volts	Output Amps	Ripple & Noise	Line Reg	Load Reg	Tolerance	Min Load	Efficiency
SINGLE OUTPUT								
MPS45-3.3	3.3 Volts(DC)	8.0 Amps	80mV pk-pk	±1.0%	±3.0%	±3.0%	0~10.7 Amps	65%
MPS45-5	5 Volts(DC)	8.0 Amps	100mV pk-pk	±1.0%	±3.0%	±3.0%	0~10.5 Amps	72%
MPS45-7.5	7.5 Volts(DC)	5.4 Amps	100mV pk-pk	±1.0%	±3.0%	±3.0%	0~7 Amps	75%
MPS45-12	12 Volts(DC)	3.7 Amps	100mV pk-pk	±1.0%	±2.0%	±2.0%	0~4.4 Amps	76%
MPS45-13.5	13.5 Volts(DC)	3.3 Amps	100mV pk-pk	±1.0%	±2.0%	±2.0%	0~3.9 Amps	76%
MPS45-15	15 Volts(DC)	3.0 Amps	100mV pk-pk	±1.0%	±2.0%	±2.0%	0~3.5 Amps	77%
MPS45-24	24 Volts(DC)	1.9 Amps	100mV pk-pk	±1.0%	±2.0%	±2.0%	0~2.2 Amps	78%
MPS45-27	27 Volts(DC)	1.7 Amps	100mV pk-pk	±1.0%	±2.0%	±2.0%	0~1.95 Amps	78%
MPS45-48	48 Volts(DC)	1.0 Amps	100mV pk-pk	±1.0%	±2.0%	±2.0%	0~1.1 Amps	78%

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INPUT SPECIFICATIONS

Input Voltage Range	90-264VAC / 127-370 Volts(DC)
Frequency Range	47-440 Hz
Inrush Current, typ: (cold start)	15 Amps @ 115VAC Input
	30 Amps @ 230VAC
Input Current	1.2 Amps max @ 115VAC
	0.7 Amps max @ 230VAC
Leakage current	< 0.3mA / 230VAC

OUTPUT SPECIFICATIONS

Voltage and Current	See Selection Chart
Line Regulation	See Selection Chart
Load Regulation	See Selection Chart
Voltage Tolerance (Note 2)	See Selection Chart
Ripple/Noise (Note 1)	See Selection Chart
Hold Up Time @ FL	50mS @ 230VAC
	16mS @ 115VAC
Setup, Rise Time @ FL	800mS, 30mS/230VAC
	1200mS. 30mS/115VAC
Over Temperature Protection	Tj 135°C typ. (U1) detect on main
	conrol IC, auto recover
Over Voltage Protection	115~135%
	Hiccup mode, auto recover
Over Current Protection	53~75W rated output power
	36~55W (3.3Volts DC)
	Hiccup mode, auto recover
DC Voltage Adjust	±10%

GENERAL SPECIFICATIONS

Safety	UL2601-1
	TUV EN60601-1
	IEC60601-1 approved
Insulation Resistance	≥ 100MΩ / 500 Volts(DC)
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
	500VAC 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	0.04% / °C (0-50°C)
MTBF	366.7KHrs min, MIL-HDBK-217F(25°C)
Vibration	10~500Hz, 2G10min./1cycle, period for
	60min. each along X, Y, Z axes

PHYSICAL SPECIFICATIONS

Size		
	Millimeters	127 x 76 x 28
	Inches	5" x 2.99" x 1.10"
Weight		6.35 oz (180g)

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.
3. Mounting holes M1 and M2 should be grounded for EMI purposes.

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

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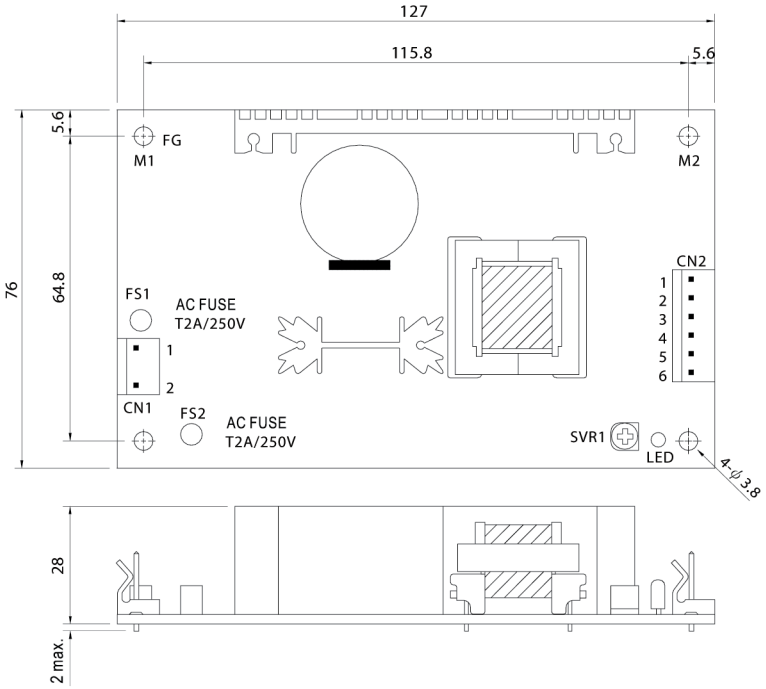
■ Mechanical Specification

Unit:mm



AC Input Connector (CN1) : Molex 5277-02 or equivalent

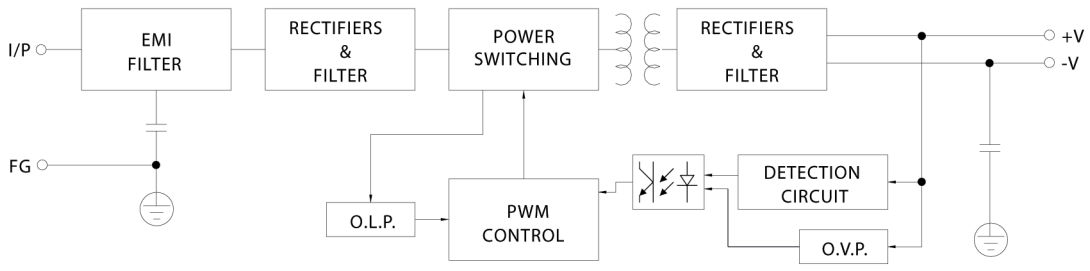
Pin No.	Assignment	Mating Housing	Terminal
1	AC/N	Molex 5195 or equivalent	Molex 5194 or equivalent
2	AC/L		

DC Output Connector (CN2) : Molex 5273-06 or equivalent

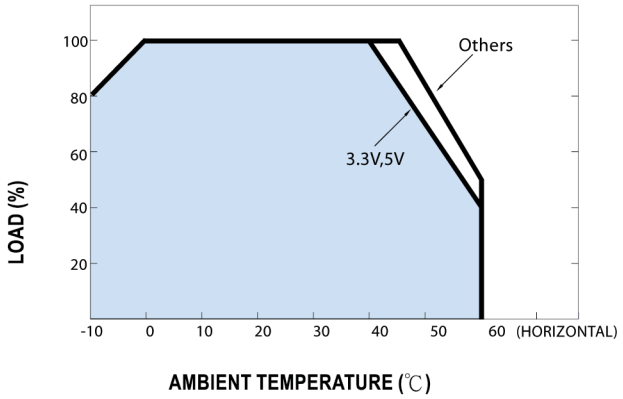
Pin No.	Assignment	Mating Housing	Terminal
1,2,3	+V	Molex 5195 or equivalent	Molex 5194 or equivalent
4,5,6	-V		

■ Block Diagram

fosc : 45KHz



■ Derating Curve



■ Static Characteristics