

- Universal AC input
- Low leakage current $\leq 0.3\text{mA}$
- Protections: Short circuit / Overload / Over voltage
- Fixed switching frequency at 45KHz
- Cooling by free air convection



| Model Number | Output Volts | Output Amps | OVP | Volt Tolerance | DC Volt Adjust | Efficiency |
|----------------------|----------------|-------------|----------------------|----------------|---------------------|------------|
| SINGLE OUTPUT | | | | | | |
| MPS65-3.3 | 3.3 Volts(DC) | 12 Amps | 3.8~4.46Volts(DC) | $\pm 3.0\%$ | 2.97~3.63Volts(DC) | 66% |
| MPS65-5 | 5.0 Volts(DC) | 12 Amps | 5.75~6.75Volts(DC) | $\pm 3.0\%$ | 4.5~5.5Volts(DC) | 74% |
| MPS65-7.5 | 7.5 Volts(DC) | 8.0 Amps | 8.63~10.1Volts(DC) | $\pm 3.0\%$ | 6.75~8.25Volts(DC) | 76% |
| MPS65-12 | 12 Volts(DC) | 5.2 Amps | 13.8~16.2Volts(DC) | $\pm 2.0\%$ | 10.8~13.2Volts(DC) | 77% |
| MPS65-13.5 | 13.5 Volts(DC) | 4.7 Amps | 15.5~18.2Volts(DC) | $\pm 2.0\%$ | 12.2~14.85Volts(DC) | 78% |
| MPS65-15 | 15 Volts(DC) | 4.2 Amps | 17.25~20.25Volts(DC) | $\pm 2.0\%$ | 13.5~16.5Volts(DC) | 79% |
| MPS65-24 | 24 Volts(DC) | 2.7 Amps | 27.6~32.4Volts(DC) | $\pm 2.0\%$ | 21.6~26.4Volts(DC) | 80% |
| MPS65-27 | 27 Volts(DC) | 2.4 Amps | 31~36.45Volts(DC) | $\pm 2.0\%$ | 24.3~29.7Volts(DC) | 80% |
| MPS65-48 | 48 Volts(DC) | 1.35 Amps | 55.2~64.8Volts(DC) | $\pm 2.0\%$ | 43.2~52.8Volts(DC) | 80% |

INPUT SPECIFICATIONS

| | |
|-----------------------------------|--|
| Input Voltage Range | 90-264VAC / 127-370 Volts(DC) |
| Frequency Range | 47-440 Hz |
| Inrush Current, typ: (cold start) | 15Amps @ 115VAC Input 30 Amps @ 230VAC |
| Input Current | 1.6 Amps max @ 115VAC 0.9 Amps max @ 230VAC |
| Leakage current | < 0.3mA / 264 VAC |

OUTPUT SPECIFICATIONS

| | |
|----------------------------|---|
| Voltage and Current | See Selection Chart |
| Line Regulation | ±1.0% |
| Load Regulation | ±3.0%: 3.3~7.5Volts(DC) ±2.0%: 12~48Volts(DC) |
| Voltage Tolerance (Note 2) | See Selection Chart |
| Ripple/Noise (Note 1) | 80mVpk-pk: 3.3Volts(DC): 100mVpk-pk: 5~48Volts(DC) |
| Hold Up Time @ FL | 50mS @ 230VAC 16mS @ 115VAC |
| Setup, Rise Time @ FL | 800mS, 30mS/230VAC 800mS, 30mS/115VAC |
| Over Voltage Protection | See Selection Chart Hiccup mode, auto recover |
| Over Current Protection | 73~105W rated output power Hiccup mode, auto recover |
| DC Volt Adjust | See Selection Chart |

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 |

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

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) on +5V output |
| MTBF | 359.7KHrs min, MIL-UDBK-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 42 |
| | Inches | 5" x 2.99" x 1.65" |
| Weight | | 8.11 oz (230g) |

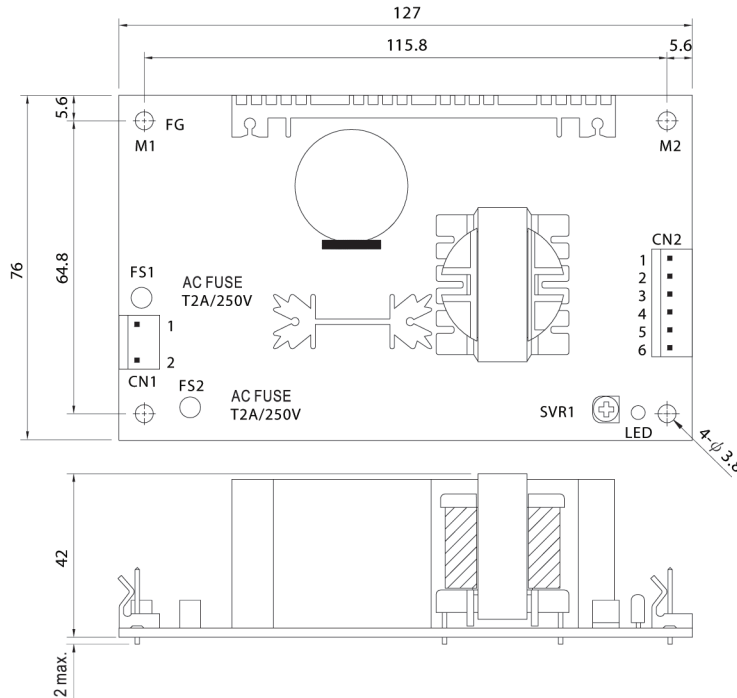
NOTE

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.

Astrodyne products are not authorized or warranted for use as critical components in life support systems, equipment used in hazardous environments, nuclear controls systems, or other mission-critical applications.

Mechanical Specification

Unit:mm



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

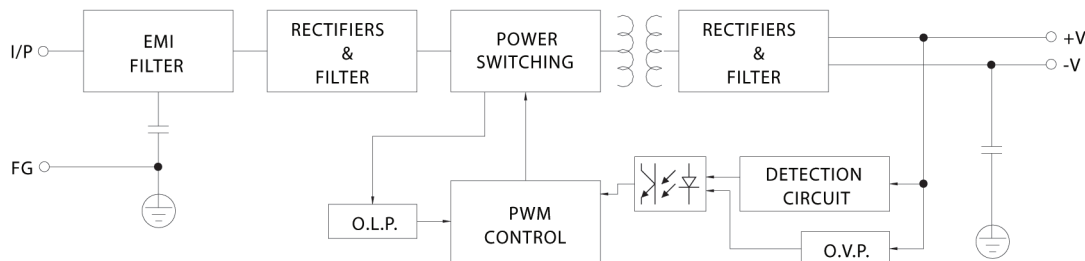
| Pin No. | Assignment | Mating Housing | Terminal |
|---------|------------|--------------------------|--------------------------|
| 1 | AC/L | Molex 5195 or equivalent | Molex 5194 or equivalent |
| 2 | AC/N | | |

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

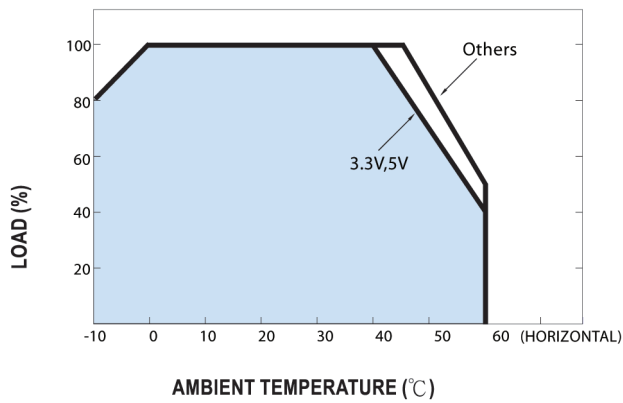
| Pin No. | Assignment | Mating Housing | Terminal |
|---------|------------|--------------------------|--------------------------|
| 1,2,3 | +V | Molex 5195 or equivalent | Molex 5194 or equivalent |
| 4,5,6 | -V | | |

Block Diagram

fosc : 45KHz



Derating Curve



Static Characteristics

