

- Universal AC input
- Protections: Short circuit/Over load/Over voltage/Over temperature
- Free air convection for 150W and forced air convection for 225W
- Built in active PFC circuit compliance to EN61000-3-2
- High power density 4.7w/cubic inch
- Active AC surge current limiting
- U-bracket low profil: 38mm



| Model Number | Output Volts | Output Amps | Ripple & Noise | Min Load | DC Volt Adjust | Efficiency |
|----------------------|---------------|-------------|----------------|------------|-------------------|------------|
| SINGLE OUTPUT | | | | | | |
| USP225-3.3 | 3.3 Volts(DC) | 40 Amps | 100mV pk-pk | 0~40Amps | 2.97~3.6Volt(DC) | 72% |
| USP225-5 | 5 Volts(DC) | 40 Amps | 100mV pk-pk | 0~40Amps | 4.5~5.5Volt(DC) | 77% |
| USP225-12 | 12 Volts(DC) | 18.7 Amps | 100mV pk-pk | 0~18.7Amps | 10.8~13.2Volt(DC) | 83% |
| USP225-15 | 15 Volts(DC) | 15 Amps | 100mV pk-pk | 0~15Amps | 13.5~16.5Volt(DC) | 84% |
| USP225-24 | 24 Volts(DC) | 9.4 Amps | 150mV pk-pk | 0~9.4Amps | 21.6~26.4Volt(DC) | 85% |
| USP225-48 | 48 Volts(DC) | 4.7 Amps | 250mV pk-pk | 0~4.7Amps | 43.2~52.8Volt(DC) | 86% |

225W Single Output with PFC Function

USP225 series

INPUT SPECIFICATIONS

| | |
|-----------------------------------|----------------------------------|
| Input Voltage Range | 90 ~ 264 VAC; 127~370 Volts(DC) |
| Frequency Range | 47-63 Hz |
| Inrush Current, typ: (cold start) | 15Amps@115VAC / 30Amps@230VAC |
| Input Current, typ. | |
| 3.3Volts(DC) | 2.2Amps@115VAC / 1.1Amps@230VAC |
| 5~48Volts(DC) | 3.3Amps@115VAC / 1.6Amps@230VAC |
| Leakage current | < 3.5mAmps /240VAC |
| Power Factor @ FL | PF > 0.93/230VAC >0.97/115VAC |

OUTPUT SPECIFICATIONS

| | |
|-----------------------------|--|
| Voltage and Current | See Selection Chart |
| Line Regulation | ±0.5% |
| Load Regulation | ±1.0% |
| Voltage Tolerance (Note2) | ±2.0% |
| Ripple/Noise max(Note 1) | See Selection Chart |
| Hold Up Time @ FL | 22mS/230VAC 22mS/115VAC |
| Setup, Rise Time @ FL | 500ms, 30m/230VAC 1200mS, 30mS/115VAC |
| Over Voltage Protection | 3.6 ~ 4.4Volt(DC): 3.3Volts(DC) 5.5 ~ 7.4Volt(DC): 5Volts(DC) 13.2 ~ 16.3Volt(DC): 12Volts(DC) 16.5 ~ 20.2Volt(DC): 15Volts(DC) 26.4~ 32.4Volt(DC): 24Volts(DC) 52.8~ 64.8Volt(DC): 48Volts(DC) Shutdown o/p, re-power |
| Over Current Protection | 105~ 150% rated output power Constant current limiting, auto-recover |
| Over Temperature Protection | 95°C ±5°C(RTH2: detect on heatsink of power transistor) Shutdown o/p voltage, re-power 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 EN55022B (CISPR22B) |
| Harmonic Current | Compliance to EN61000-3-2,-3 |
| Isolation | 3000VAC Input - Output 1500VAC Input - Ground 500VAC Output - Ground |
| EMS | Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, light Industry Level, Criteria A |

ENVIRONMENTAL SPECIFICATIONS

| | |
|-------------------------|---|
| Oper. Temperature | -20°C to +65°C (See Derate Curve) |
| Storage Temperature | -40°C to +85°C, 10~95% RH |
| Relative Humidity | 20~90% RH non cond |
| Temperature Coefficient | ±0.03% / °C (0-50°C) |
| MTBF | 220KHrs min, MIL-HDBK-217F(25°C) |
| Vibration | 10~500Hz, 2G10min./1cycle, period for 60min. each along X, Y, Z axes |

PHYSICAL SPECIFICATIONS

| | |
|-------------|-----------------------|
| Size | |
| Millimeters | 202 x 101.5 x 38 |
| Inches | 7.68" x 2.17" x 0.91" |
| Weight | 12.35 oz (850g) |

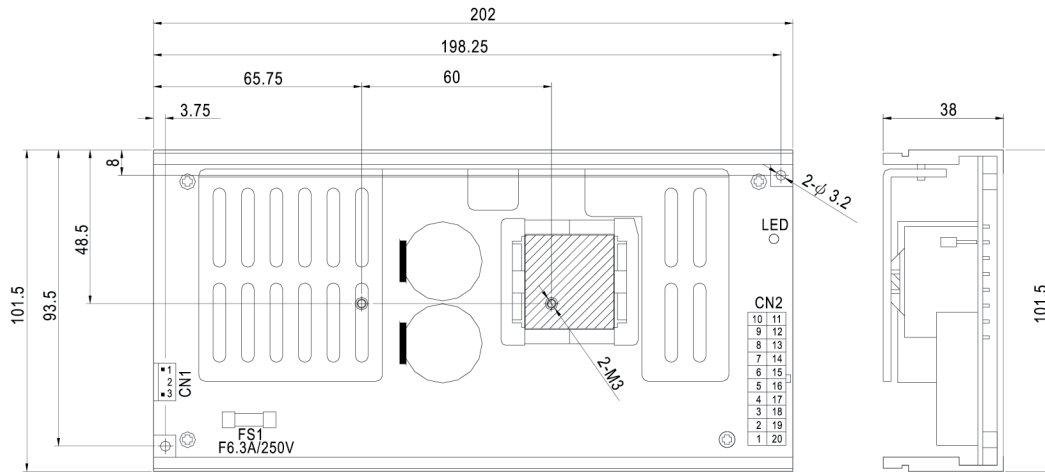
NOTE

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.

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

Mechanical Specification

Case No. 928 Unit:mm



AC Input Connector (CN1) : JST B3P-VH or equivalent

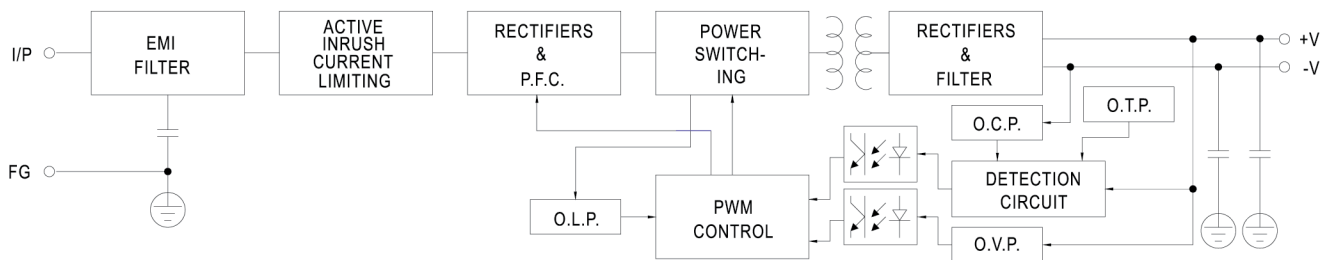
| Pin No. | Assignment | Mating Housing | Terminal |
|---------|------------|-----------------------|--------------------------------|
| 1 | AC/N | JST VHR or equivalent | JST SVH-21T-P1.1 or equivalent |
| 2 | No Pin | | |
| 3 | AC/L | | |

DC Output Connector (CN2) : MOLEX 39-29-9206 or equivalent

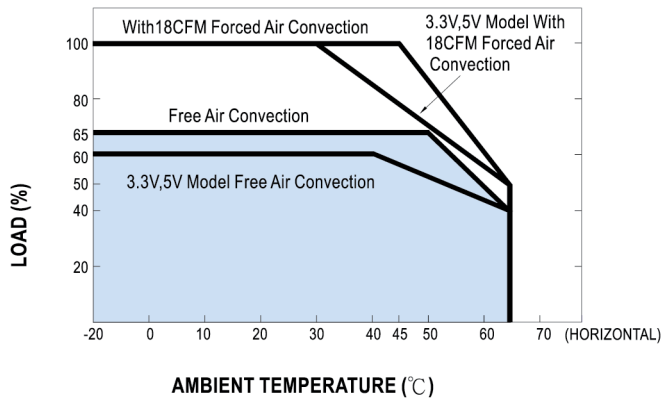
| Pin No. | Assignment | Mating Housing | Terminal |
|---------|------------|--------------------------|--------------------------|
| 1~5 | +V | MOLEX 5557 or equivalent | MOLEX 5556 or equivalent |
| 6~15 | -V | | |
| 16~20 | +V | | |

Block Diagram

fosc : 100KHz



■ **Derating Curve**



■ **Static Characteristics (5V)**

