



INPUT SPECIFICATIONS

| | |
|--------------------------------|---|
| Input Voltage | 90-264 VAC (Universal) |
| Input Frequency | 47-63Hz |
| Input Current | 8.0A _{RMS} at 115VAC / 4.0A _{RMS} at 230VAC |
| Inrush Current | <10A @ 240 VAC, Cold Start |
| Power Factor | >0.98 |
| Earth Leakage Current | <250µA @ 264VAC (Class I) |
| Patient Leakage Current | <100µA @ 264VAC |
| Input Protection | Internal 10A / 250V Fuse (Line & Neutral) |

OUTPUT SPECIFICATIONS

| | |
|---------------------------|---------------------------------------|
| Output Voltage | See Table |
| Line Regulation | ±0.5% |
| Load Regulation | ±2% |
| Minimum Load | None |
| Transient Response | ±5%, 50% step-load, slew rate 1A/µS |
| Ripple / Noise | 1% pk-pk typical |
| Turn-On Delay | 3 seconds max @ 115VAC |
| Hold-Up Time | >15ms at 115VAC Input (Full Load) |
| Over-Voltage | 110-140% Latching |
| Over-Load | 120-150% (Hiccup Mode, Auto-Recovery) |
| Short Circuit | Hiccup Mode |
| Over-Temperature | Auto-Recovery |

STATUS & CONTROL

| | |
|-----------------------|--|
| Remote On/Off | Powered LED = Shut Down (Isolated Optocoupler) |
| Power Fail | TTL High = Failure (Open Collector) 12ms Warning Time |
| DC OK | TTL High = OK (Open Collector) |
| Standby Output | 5VSDB @ 100mA |

FEATURES

- Medical 60601-1(BF) Safety Approvals
- Small 9.3 x 4 x 1.58" U-Frame Package
- Class I Construction
- Internal Variable Speed Fan Forced-Air Cooling
- High Efficiency - 93% Typical At Full Load
- Remote On/Off, Power OK & DC OK
- 5VSDB @ 100mA Output
- Universal AC Input With Active PFC
- EN55011 / FCC Part 15J Class B Emissions
- 3 Year Warranty

GENERAL SPECIFICATIONS

| | |
|-------------------|---|
| Efficiency | 90 typical at 115/230 VAC, full load |
| Isolation | Input to Output 4000 VAC ,2xMOPP Input to Ground 1500 VAC ,1xMOPP Output to Ground 1500 VAC ,1xMOPP |
| MTBF | 300K Hours, Mil-217F at 25 °C, full load |
| Weight | 1150g |

ENVIRONMENTAL SPECIFICATIONS

| | |
|------------------------------|---|
| Operating Temperature | 0°C ~ +40°C (Internal Fan Forced Air Flow) |
| Derating | 2.5%/°C > 40°C, up to 50°C max |
| Storage Temperature | -40°C ~ +80°C |
| Operating Humidity | 5~95% (non-condensing) |
| Operating Altitude | 3000M (max) |
| Shock | 294m/s ² (30G) , 11ms on 3 axesn ,total 18 times |
| Vibration | 10-500Hz, 19.6m/s ² (2G), 20mins on 3 axes |

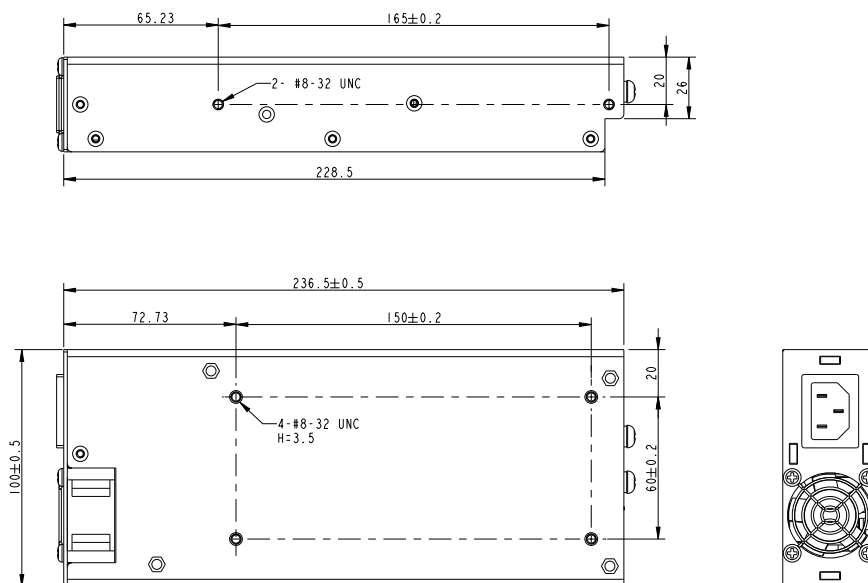
EMC & SAFETY

| | |
|----------------------------------|--|
| Emissions | EN55011, FCC Part J15, Class B, Conducted EN55011, FCC Part J15, Class B, Radiated |
| Harmonic Current | EN61000-3-2 Class B |
| Voltage Flicker | EN61000-3-3 |
| ESD | EN61000-4-2, 8kV contact, 15kV Air Discharge |
| EFT/Burst | EN61000-4-4, Level 3, Criterion A |
| Surge | EN61000-4-5, Installation Class3, Criterion A |
| Conducted Immunity | EN61000-4-6 ,3V _{RMS} (6V _{RMS} ,ISM band), Criterion A |
| Radiated Immunity | EN61000-4-3, 3V/m(6V/m,ISM band), Criterion A |
| Proximity Fields Immunity | EN61000-4-3 (Table 9 in IEC60601-1-2 4 th ED) |
| Magnetic Field | EN61000-4-8, 30A/m, Criterion A |
| Dips & Interruptions | EN61000-4-11, 0% 0.5 cycles,1 cycles; 70% 25/30 cycles; 0% 300cycles; Criterion A/B/C |
| Safety Approvals | IEC/EN 60601-1, 3rd Edition ANSI / AAMI ES60601-1 CSA C22.2 No 60601-1 CE Mark |

| MODELS | MAIN OUTPUT VOLTAGE | OUTPUT CURRENT* | RIPPLE&NOISE | STANDBY OUTPUT | MAX TOTAL REGULATION |
|----------|---------------------|-----------------|--------------|----------------|----------------------|
| MP600-12 | 12V | 50.0A | 120mV | 5VSDB @ 100mA | ±2% |
| MP600-15 | 15V | 40.0A | 150mV | 5VSDB @ 100mA | ±2% |
| MP600-18 | 18V | 33.3A | 180mV | 5VSDB @ 100mA | ±2% |
| MP600-24 | 24V | 25.0A | 240mV | 5VSDB @ 100mA | ±2% |
| MP600-28 | 28V | 21.5A | 280mV | 5VSDB @ 100mA | ±2% |
| MP600-36 | 36V | 16.7A | 360mV | 5VSDB @ 100mA | ±2% |
| MP600-48 | 48V | 12.5A | 480mV | 5VSDB @ 100mA | ±2% |

Notes * Cooling: **Internal Fan Forced-Air Cooling**

OUTLINE DRAWING



AC INPUT

IEC320-C14 Inlet

| | |
|---|--------------|
| L | Line |
| G | Earth Ground |
| N | Neutral |

DC OUTPUT

Terminal Blocks

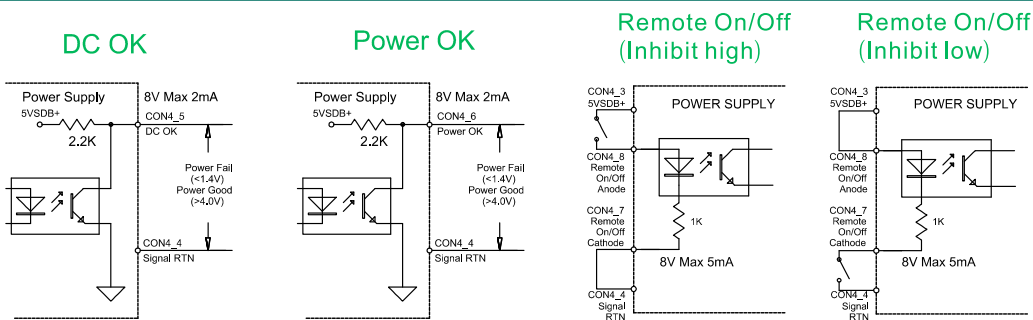
| | |
|----|------------|
| +V | Output VDC |
| -V | Return |

SIGNAL CONNECTOR

AMP P/N : 640456-8

| | |
|---|-------------------------|
| 1 | +Sense |
| 2 | -Sense |
| 3 | 5VSDB |
| 4 | 5VSDB Return |
| 5 | DC OK |
| 6 | PWR OK |
| 7 | Remote on/off (Cathode) |
| 8 | Remote on/off (Anode) |

OUTLINE DRAWING



SIGNALS

DC OK Optocoupler transistor, main output ok 4V-5.5V, main output fail 0V-1.4V.

PWR OK Optocoupler transistor, goes high 100-500ms after main output when AC applied, goes low 4ms min. (typical 12ms) before loss of main output after AC failure.

Remote On/Off Isolated optocoupler diode, power it to shut down main output.

NOTES