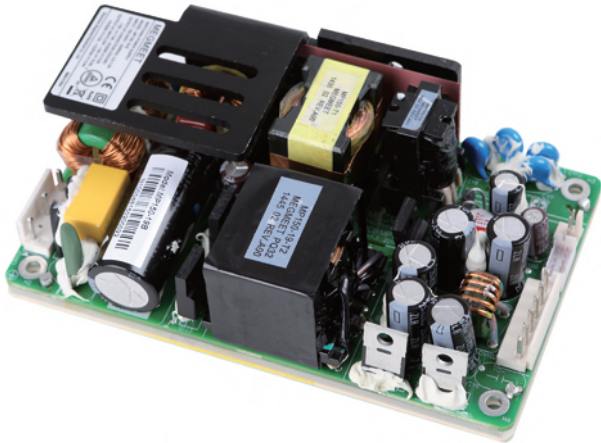


Medical Power Supply

MP150 Series



INPUT SPECIFICATIONS

Input Voltage	90~264 VAC (Universal)
Input Frequency	47~63Hz
Input Current	3.0A _{RMS} at 115VAC / 1.5A _{RMS} at 230VAC
Inrush Current	<80A @ 240 VAC, Cold Start
Power Factor	>0.95
Earth Leakage Current	<250µA @ 264VAC (Class I)
Patient Leakage Current	<100µA @ 264VAC
Input Protection	Internal T5A / 250V Fuse (Line & Neutral)

OUTPUT SPECIFICATIONS

Output Voltage	See Table
Line Regulation	±0.5%
Load Regulation	±2% For Main & 5VSDB ; ±10% For Fan
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	>20ms 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
Standby Output	5VSDB @ 500mA
Fan Output	12V 400mA
Remote Sense	Totally Compensates Up To 0.4V

FEATURES

- Medical 60601-1 Safety Approvals
- Small 5 x 3 x 1.38" Package
- Class I or Class II Construction
- High Efficiency - 90% Typical At Full Load
- Remote On/Off, Power Fail , Remote Sense
- 5VSDB @ 0.5A Output & 12V 0.4A Fan 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	4000 VAC – Input to Output 1500 VAC – Input to Ground 500 VAC– Output to Ground
MTBF	300K Hours, Mil-217F at 25 °C, full load
Weight	360g

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	0 ~ +40°C
Derating	2.5%/°C > 40°C, up to 50°C max
Storage Temperature	-40 ~ +80°C
Operating Humidity	5~95% (non-condensing)
Operating Altitude	3000M (max)
Shock	294m/s ² , 10mS on 3 axes
Vibration	10-500Hz, 19.6m/s ² (2G), 20mins on 3 axes

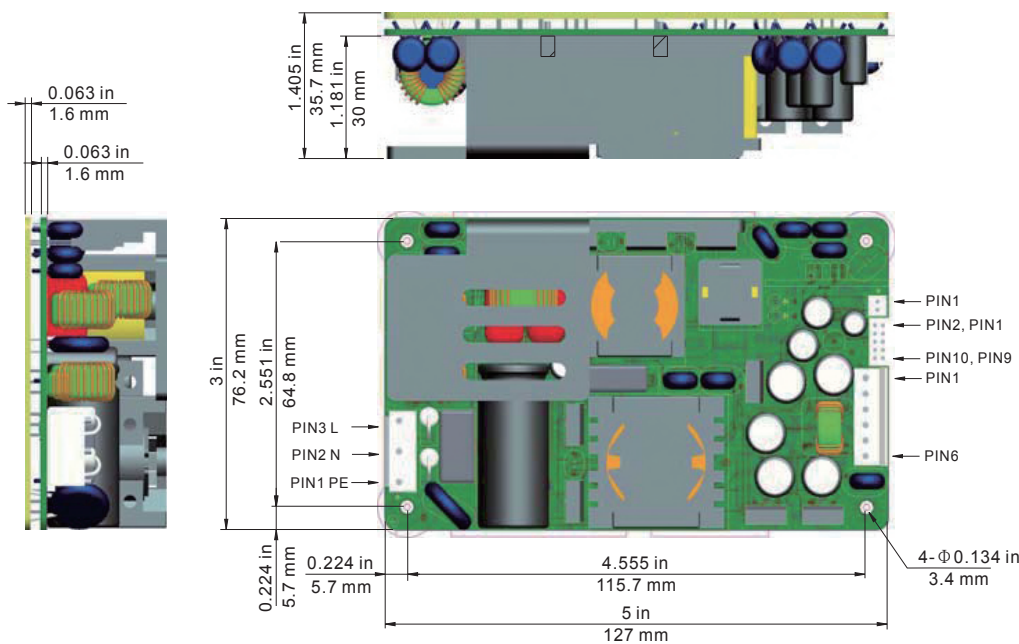
EMC & SAFETY

Emissions	EN55011, FCC Part J15, Class B, Conducted EN55011, FCC Part J15, Class B, Radiated
Harmonic Current	EN61000-3-2 Criterion A
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, Level 3, Criterion A
Conducted Immunity	EN61000-4-6, 3VRMS (6Vrms for ISM and Amateur Band) Criterion A
Radiated Immunity	EN61000-4-3, 10V/m, Criterion A
Magnetic Field	EN61000-4-8, 3A/m, Criterion A
Dips & Interruptions	EN61000-4-11, 0% 0.5cycles, 1 cycles; 70%25/30 cycles; 0% 250/300cycles; Criterion A/B/C
Safety Approvals	IEC 60601-1, 3rd Edition ; ANSI / AAMI ES60601-1 ; CSA C22.2 No 60601-1 ; EN60601-1, 3rd Edition ;CE Mark

MODELS	MAIN OUTPUT VOLTAGE	OUTPUT CURRENT (CONVECTION)	OUTPUT CURRENT ¹⁾ (FORCED-AIR)	STANDBY OUTPUT	FAN OUTPUT
MP150-12	12V	12.5A	16.67A	5V 400mA	12V 0.4A
MP150-19	19V	7.89A	10.53A	5V 400mA	12V 0.4A
MP150-24	24V	6.25A	8.33A	5V 400mA	12V 0.4A
MP150-28	28V	5.36A	7.14A	5V 400mA	12V 0.4A
MP150-48	48V	3.13A	4.17A	5V 400mA	12V 0.4A

Note: 1) Rated Current with 1.2 m/s (15CFM) Forced- Air Flow.

OUTLINE DRAWING



AC INPUT

JST P/N: B3P5-VH (LF)(SN)
Mates With: JST VHR-5N

Pin 1 Earth Ground

Pin 3 Line

Pin 5 Neutral

Pin 2, Pin 4 Removed

DC OUTPUT

JST P/N: B6P-VH (LF)(SN)
Mates With: JST VHR-6N

Pin 1, 2, 3 Output VDC

Pin 4, 5, 6 Return

SIGNAL CONNECTOR

JST P/N : B10B-PHDSS Mates With : JST PHDR-10VS

1 5VSDB Return

2 5VSDB

3 5VSDB Return

4 5VSDB

5 DC OK

6 PF

7 Remote on/off (Cathode)

8 Remote on/off (Anode)

9 Remote Sense -

10 Remote Sense +

FAN CONNECTOR

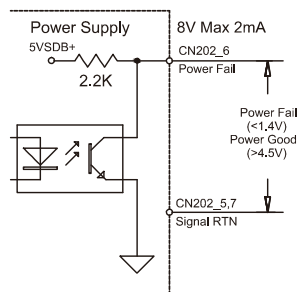
Landwin P/N: 2511P0200T
Mates With 2600S0200

Pin 1 Fan Output +

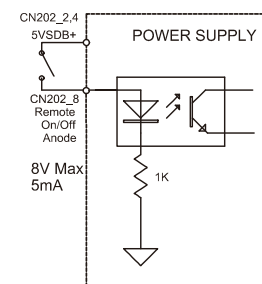
Pin 2 Fan Return

SIGNAL CONFIGURATION

Power Fail



Remote On/Off



SSIGNALS

Power Fail 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 Optocoupler diode, power the diode to shut down the main output .

NOTES