# POWER-WIN TECHNOLOGY CORP.

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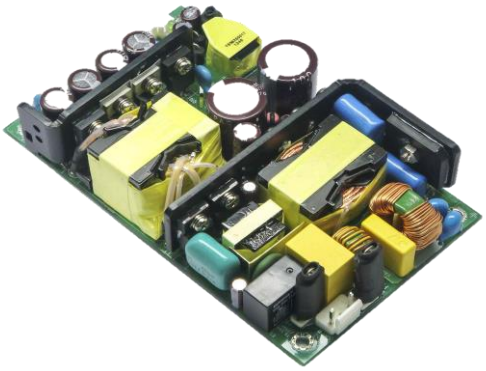
## Open Frame Type Switching Power Supply

**280Watts Medical and ITE Single Output**



### FEATURES

- Both ITE & Medical Approvals.
- High Power density, 280W in 5" x 3" footprint.
- Medical applications Protection: Means of Patient Protection (MOPP).
- Altitude during operation: ITE up to 5000m ,Medical Below 3000m.
- Main output and Standby output Power ON LED indicators.
- 3 years warranty.

### ELECTRICAL SPECIFICATIONS

- Input range : 90 - 264VAC (Refer to derating curve).
- Frequency : 47 - 63Hz.
- Power Factor : > 0.95 @115VAC; > 0.90 @230VAC @full load.
- Inrush current :<30A peak @115VAC; <60A peak @230VAC cold start @25°C.
- Input current (rms) : 3.5A @115VAC; 2A @230VAC max.
- Efficiency : > 91% typical @full load, 230VAC.
- leakage current < 100uA @264VAC.
- Maximum output power : 280Watts forced air, 210Watts convection cooling.
- Hold-up time : > 10ms typical @full load, 115VAC.
- Short circuit protection : Auto-recovery.
- Over load protection : 105% to 150% maximum rating, Auto-recovery.
- Over voltage protection : Latching type. AC Recycle.
- 5Vsb meet ErP 0.5W @ No load.
- Remote control ( Inhibit ) function.

**RoHS compliant**

Dimension : L127 ×W76.2 ×H30mm ( 5" x 3" x 1.18")

Weight : 0.350 kgs. ( 0.775 lbs. )

### SAFETY STANDARDS

UL60601-1 3rd Edition

UL/c-UL UL60950-1

EN60601-1 3rd Edition

TUV EN60950-1

IEC EN60601-1 3rd Edition

CB IEC 60950-1

### EMC STANDARDS

EN60601-1-2

EN55024

EN 55011 Class B

EN55032 Class B

FCC Part 15 Class B

FCC Part 18 Class B

CE

### ENVIRONMENTAL

- Operating temperature : -20°C to +70°C (Refer to derating curve).
- Storage temperature: -20°C to +85°C.
- Humidity: Non-condensing 0% to 90%.
- MTBF : > 250,000 hours @full load and 25°C ambient temperature per Telcordia(Bellcore).

### DC OUTPUT & FEATURES

| Model No. ( Note 1.) | Output Voltage (V1) | Maximum Load (V1) | | Output Regulation (V1) | Ripple Noise (V1) | Standby supply (V2) | FAN output (V3) | Convection total power | 18CFM Forced air total power |
|---|---|---|---|---|---|---|---|---|---|
| | | Convection | 18 CFM Forced Air | | | | | | |
| PW-IM280B-1Y120Z | +12V | 17.5A | 23.33A | ±3% | 150mV | 5V/0.5A | 12V/0.3A | 210W | 280W |
| PW-IM280B-1Y240Z | +24V | 8.75A | 11.66A | ±3% | 240mV | 5V/0.5A | 12V/0.3A | 210W | 280W |
| PW-IM280B-1Y280Z | +28V | 7.5A | 10A | ±2% | 280mV | 5V/0.5A | 12V/0.3A | 210W | 280W |
| PW-IM280B-1Y480Z | +48V | 4.375A | 5.83A | ±2% | 300mV | 5V/0.5A | 12V/0.3A | 210W | 280W |
| PW-IM280B-1Y540Z | +54V | 3.88A | 5.18A | ±2% | 400mV | 5V/0.5A | 12V/0.3A | 210W | 280W |

**Note:**

1. Output connector options: Z=**T** ( Terminal block type, pitch 8.25mm): Suitable for all voltages
   Z=**M** ( Mini-fit type, pitch 4.2mm) or Z=**C** ( Connector type, pitch=3.96mm ): Suitable for 24V up
2. All models are equiped with 5Vsb & 12V fan outputs.
3. All models have total power 210W Max. convection or 280W Max. forced air cooling.
4. Ripple and noise are measured at oscilloscope 20MHz bandwidth by a 47uF electrolytic capacitor and a 0.1uF ceramic capacitor in parallel at output connector.

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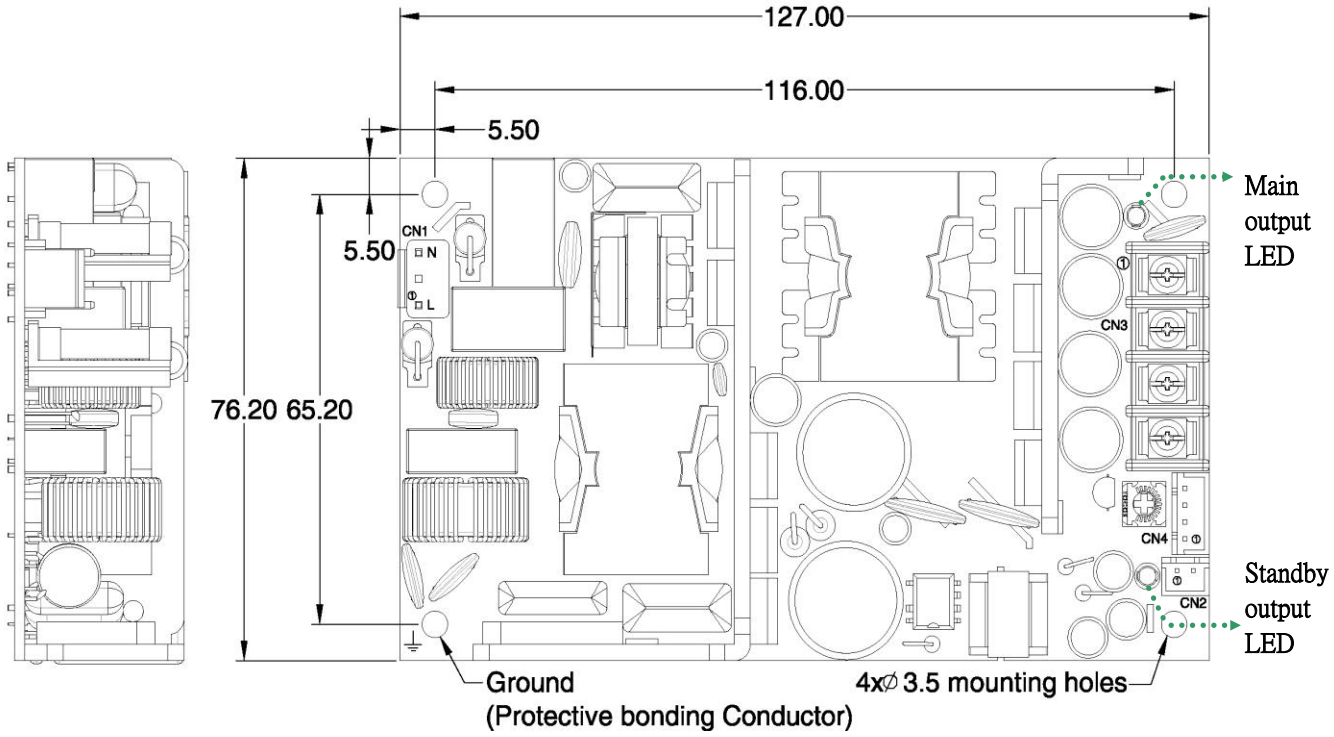
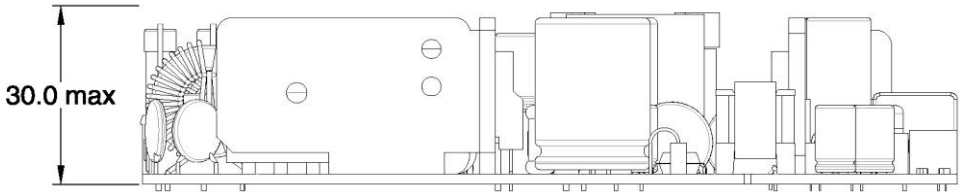
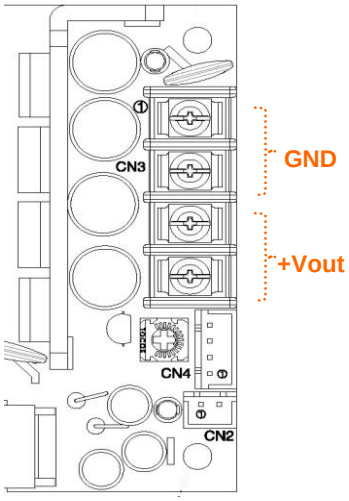
## MECHANICAL SPECIFICATION



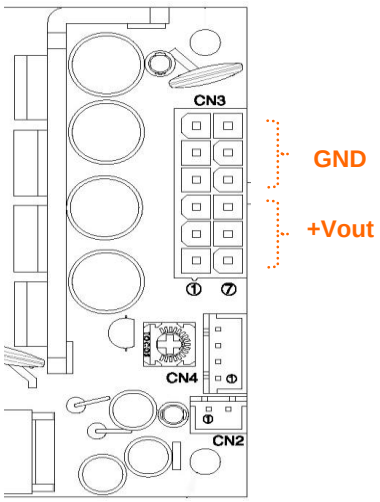




## MAIN OUTPUT OPTIONAL TYPE ( CN3 )

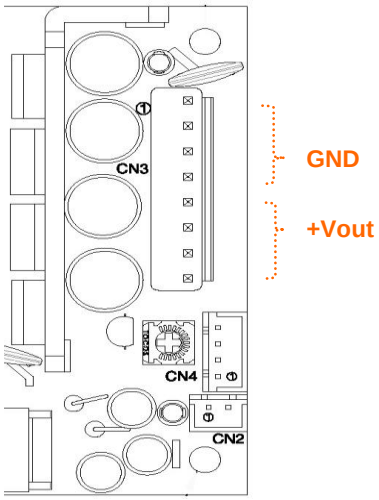
**Terminal Block Type**




**Mini Fit Type**




**Connector Type**



## MECHANICAL SPECIFICATION

### MATCHING CONNECTORS

**CN1: Input Connector**

JST B2P3-VH pitch: 3.96mm or equivalent,
mates with JST VAR-2 or equivalent

| Pin # | Signal |
|---|---|
| 1 | AC Line |
| 2 | AC Neutral |

**CN2: FAN Output Connector**

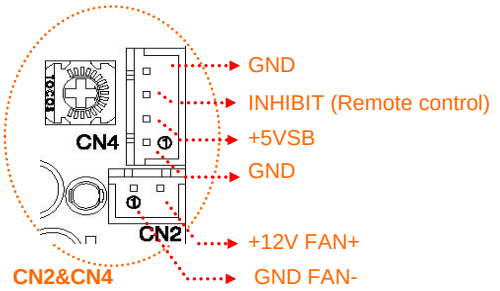
JST B2B-XH-A pitch: 2.5mm or equivalent,
mates with JST XHP-2 or equivalent

| Pin # | Signal |
|---|---|
| 1 | GND FAN- |
| 2 | +12V FAN+ |

**CN4: Remote control & Standby supply**

JST B4B-XH-A pitch: 2.5mm or equivalent,
mates with JST XHP-4 or equivalent

| Pin # | Signal |
|---|---|
| 1 | GND |
| 2 | +5VSB |
| 3 | INHIBIT (Remote control) |
| 4 | GND |




INHIBIT→ Logic level HIGH (5V) or Floating : Enable, Logic level LOW : Disable

**CN3: Main Output Connector**

**Terminal Block Type**

4-Pole Terminal block pitch: 8.25mm ,
rate 20A/300V or equivalent

| Pin # | Signal |
|---|---|
| 1 | GND |
| 2 | GND |
| 3 | +Vout |
| 4 | +Vout |

**Connector Type**

JST B8P-VH-B pitch: 3.96mm or equivalent,
mates with JST VHR-8N or equivalent

| Pin # | Signal | Pin # | Signal |
|---|---|---|---|
| 1 | GND | 5 | +Vout |
| 2 | GND | 6 | +Vout |
| 3 | GND | 7 | +Vout |
| 4 | GND | 8 | +Vout |

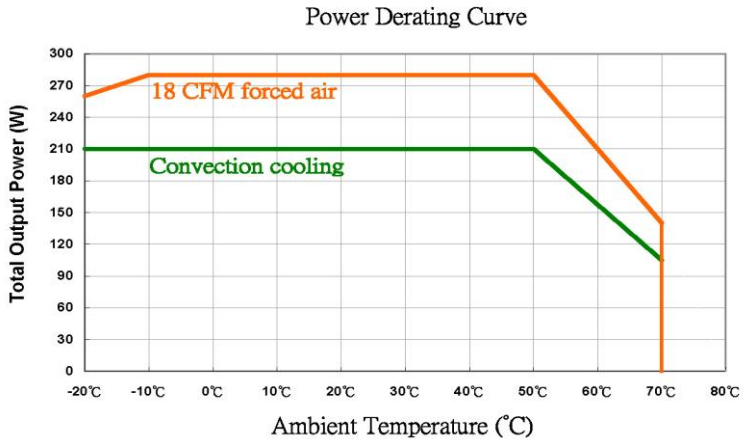
**Mini Fit type**

12 PIN Min Fit Pitch:4.2mm .
Molex P/N 39-28-1123 or equivalent.

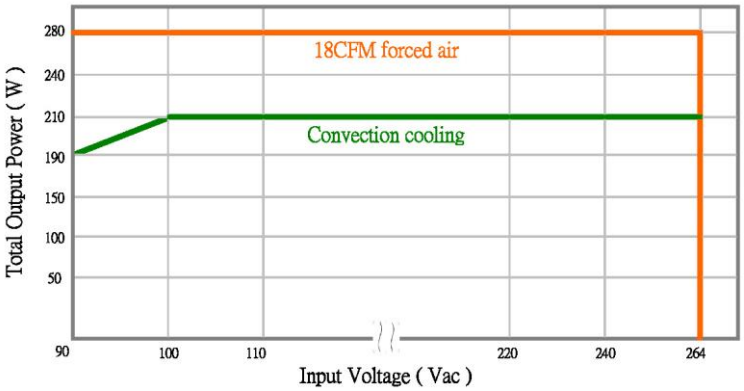
| Pin # | Signal | Pin # | Signal |
|---|---|---|---|
| 1 | +Vout | 7 | +Vout |
| 2 | +Vout | 8 | +Vout |
| 3 | +Vout | 9 | +Vout |
| 4 | GND | 10 | GND |
| 5 | GND | 11 | GND |
| 6 | GND | 12 | GND |

## ENVIRONMENTAL

### DERATING CURVE




**convection cooling and**
**18CFM forced air cooling**
**Derate linearly 2.5% per °C from 51 to 70°C**




**Convection cooling total output 210W**
**Derate linearly 1% per Vac from 100 to 90Vac**

### DC FAN Recommended Direction