# POWER-WIN TECHNOLOGY CORP.

www.power-win.com

## AC/DC Switching Adapter - Single Output

**ITE/Medical AC/DC Power Adapter**
A08210 Series 210Watts
US DOE & EU ErP Efficiency Compliant

### FEATURES

- Meet DOE Level VII and EU ErP Efficiency Compliant
- 3-prong IEC320-C14, Class I AC inlet
- Medical safety approved ( 2x MOPP between primary to secondary )
  Suitable for BF appl Suitable for BF application with appropriate system consideration
- Altitude during operation : ITE up to 5000m , Medical Below 3000m
- < 0.15W No Load Input Power
- Touch current less than 100uA
- 3 year warranty

### ELECTRICAL SPECIFICATIONS

- Input range : 90 - 264VAC
- Frequency : 47 - 63Hz
- Power Factor : >0.95 @115VAC; > 0.90 @230VAC @full load
- Inrush current : < 25A peak @115VAC;< 50A peak @230VAC cold start '@25°C
- Input current (rms) : 2.5A @115VAC; 1.3A @230VAC max.
- Efficiency : >92% @80% Full load, 230VAC
  >89% @Average efficiency, 115/230VAC
- Maximum output power (Po) : 210 Watts convection cooling
- Hold-up time : >10ms typical @full load, 115VAC
- Short circuit protection : Auto-recovery
- Over load protection : Auto-recovery
- Over voltage protection : Latch off
- Over temperature protection : Latch off

**RoHS compliant**

Dimension : L 170×W 85×H 44 mm ( 6.69"x3.35"x1.73" )
Weight : 0.78 kgs. ( 1.72 lbs. )

### SAFETY STANDARDS

UL/cUL 60601-1
TUV EN 60601-1
CB IEC 60601-1
UL/cUL UL 62368-1
TUV EN 62368-1
CB IEC 62368-1

### EMC STANDARDS

EN 60601-1-2
EN 55011 Class B
EN 55032 Class B
EN 55035 Class B
FCC Part 15 Class B
FCC Part 18 Class B
CE

### ENVIRONMENTAL

- Operating temperature : -20 to +60°C (Refer to derating curve)
- Operating Humidity : 10% to 95%, Non-condensing.
- Storage temperature : -20°C to +85°C, Non-condensing.
- Storage Humidity : 0% to 95%, Non-condensing.
- MTBF : > 350,000 hours @full load and 25°C ambient temperature based on Telcordia SR-332(Bellcore)

### DC OUTPUT & FEATURES

| Model No. | Output Rating | | Po | Output Regulation | Ripple & Noise (Vp-p) | Efficiency Level |
|---|---|---|---|---|---|---|
| **A08210-12** | +12V | 17.50A | 210W | ±5% | 100mV | VII |
| **A08210-15** | +15V | 14.00A | 210W | ±5% | 100mV | VII |
| **A08210-19** | +19V | 11.05A | 210W | ±5% | 100mV | VII |
| **A08210-24** | +24V | 8.75A | 210W | ±5% | 150mV | VII |
| **A08210-28** | +28V | 7.50A | 210W | ±5% | 150mV | VII |
| **A08210-36** | +36V | 5.83A | 210W | ±5% | 150mV | VII |
| **A08210-48** | +48V | 4.37A | 210W | ±5% | 150mV | VII |

Note: 1. 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.
2. (-1 to -20°C ambient temperature and EMS Immunity worse case O/P Regulation ≦ ±10%)
3. The switching frequency of this series is set within 56 to 85KHz at full load.
4. The ripple and noise of this series is tested under full load condition.

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## SAFETY AGENCY CERTIFICATIONS

### Safety and EMC Performance

| Description | Safety | EMC |
|---|---|---|
| Medical equipment | IEC 60601-1:2005+AMD1:2012+AMD2:2020<br>EN 60601-1:2006/A1:2013/A12:2014/A2:2021<br>ANSI/AAMI ES60601-1:2005/A2:2021<br>CAN/CSA C22.2 NO. 60601-1:14/A2:22 | EN 60601-1-2:2015+A1:2021<br>EN 55011:2016+A1:2019+A2:2021<br>FCC 47 CFR Part 18 |
| Audio / Video, ITE equipment | IEC 62368-1:2018<br>EN IEC 62368-1:2020+A11:2020<br>UL 62368-1, 3rd Ed<br>CAN/CSA C22.2 No. 62368-1:19, 3rd Ed | EN 55032:2015+A11:2020<br>EN 55035:2017+A11:2020<br>FCC 47 CFR Part 15B(*)<br>ICES-003 Issue 7 |

Tests for conformance to this equirement will be performed with final system

(*) FCC PART 15 compliance information and warnings :

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions :

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

### Insulation level and dielectric withstand (HI-POT)

| Audio / Video, ITE equipment | Isolation voltage | Grade insulation |
|---|---|---|
| Primary circuits to secondary circuits | 4242Vdc (3000Vac) | Reinforced |
| Primary circuits to earth ground | 2121Vdc (1500Vac) | Basic |
| Secondary circuits to earth ground | 2121Vdc (1500Vac) | Basic |

| Medical equipment | Isolation voltage | Means of patient protection |
|---|---|---|
| Primary circuits to secondary circuits | 5656Vdc (4000Vac) | 2 MOPP |
| Primary circuits to earth ground | 2121Vdc (1500Vac) | 1 MOPP |
| Secondary circuits to earth ground | 2121Vdc (1500Vac) | 1 MOPP |

Note : testing in Production use a dc voltage test 4 Sec.

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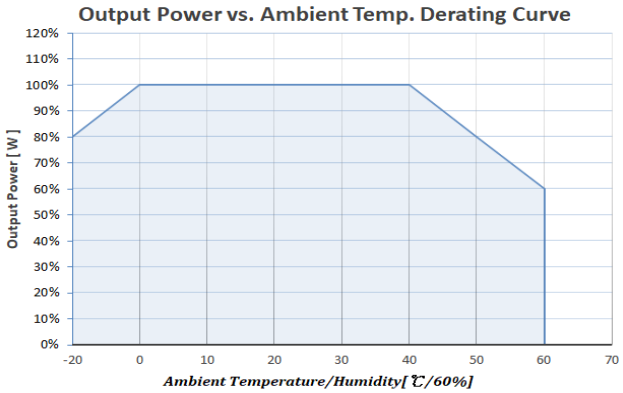
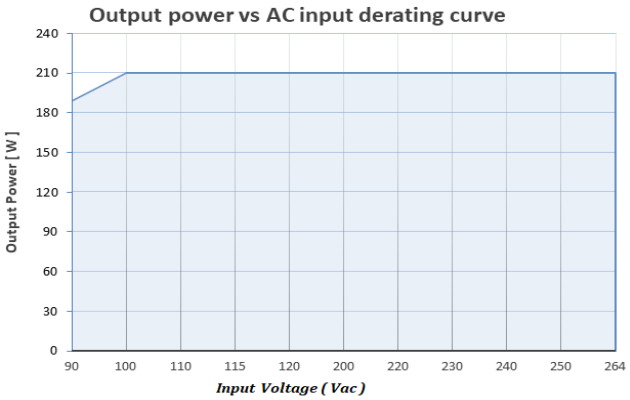
## ENVIRONMENTAL

### DERATING CURVE:

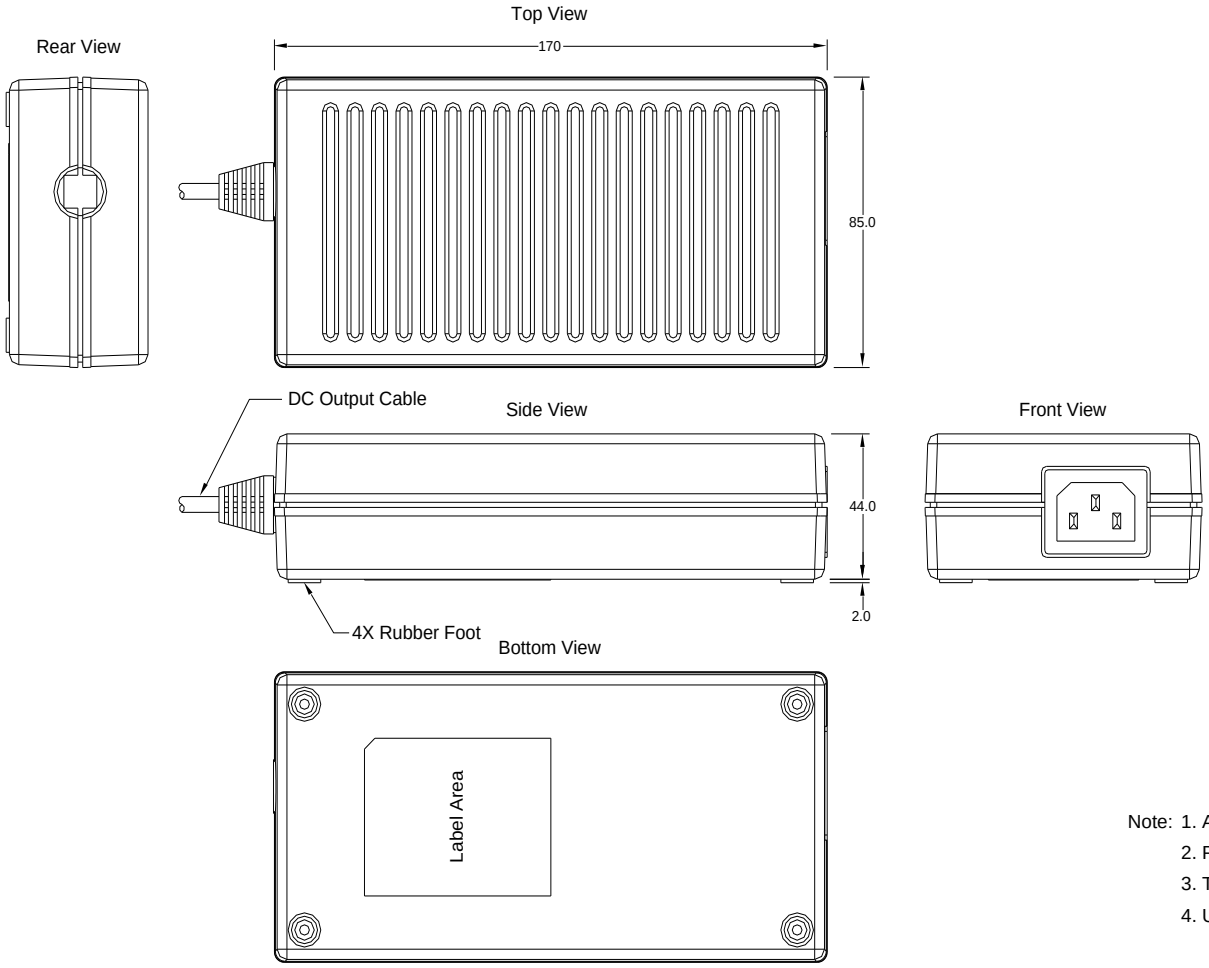



**Derate linearly 2% per°C from 41 to 60°C.**
**Derate linearly 1% per°C from 0 to -20°C.**

**Derate linearly 1% perVac from 90V to 100V**

## MECHANICAL SPECIFICATION




Note: 1. AC Inlet : IEC320-C14
2. Plastic Case Color : Black
3. Tolerance : ± 0.5mm
4. Unit : mm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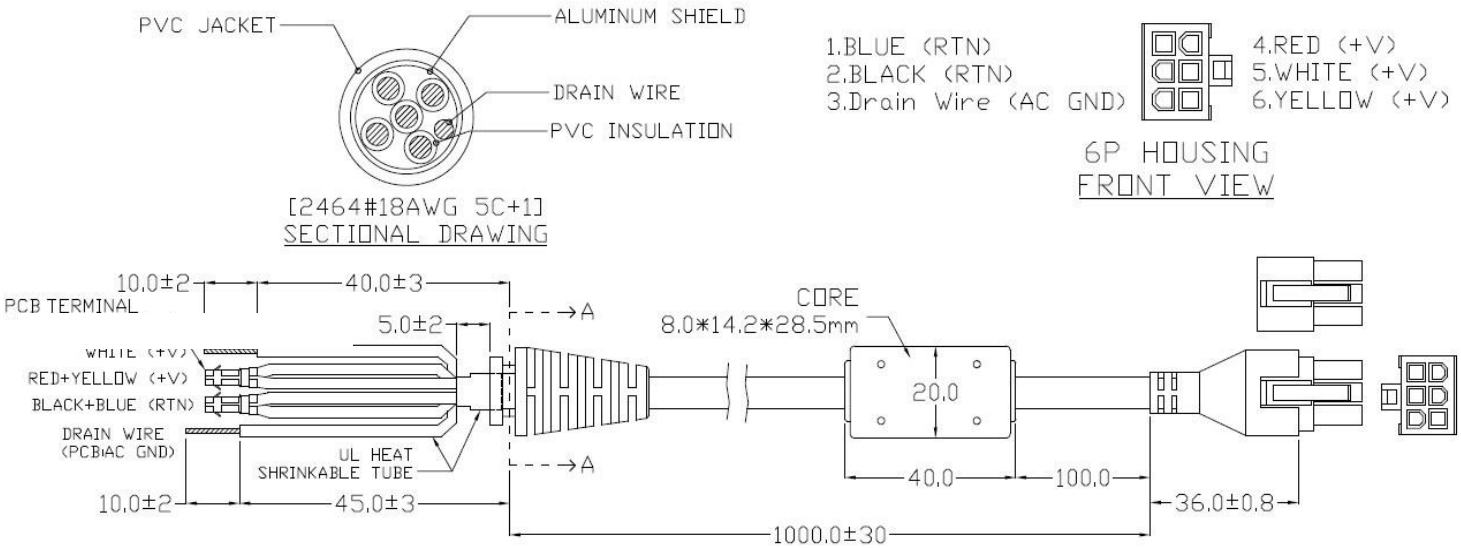
## STANDARD OUTPUT CABLE

### 12V



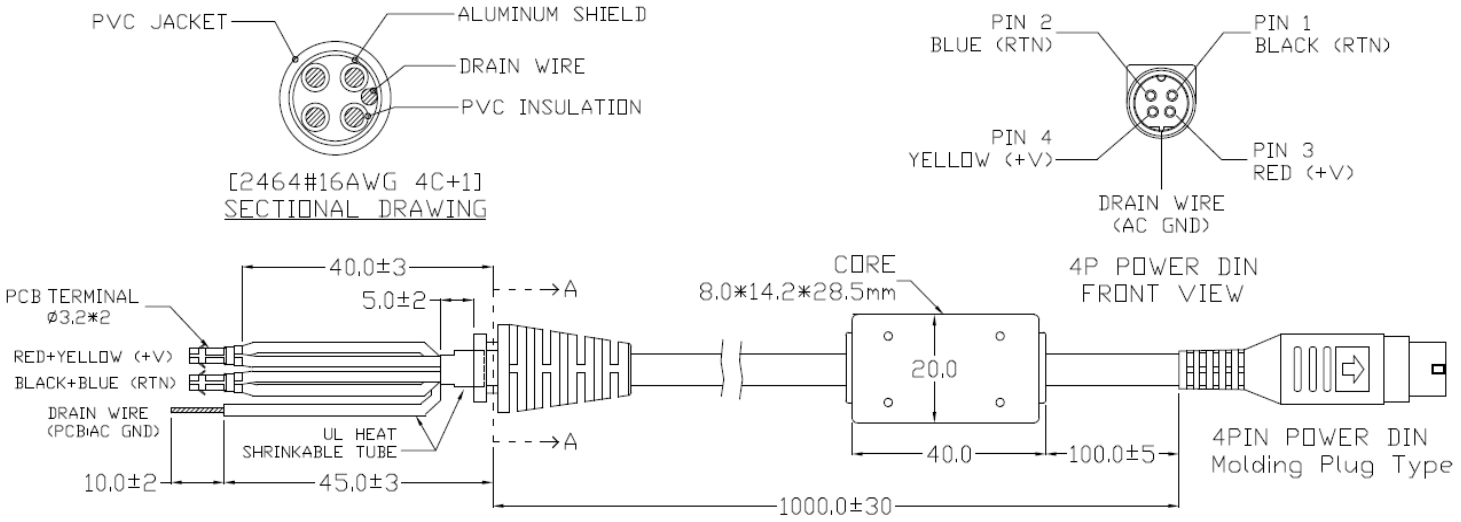

DC Output Connector

Standard male plug(power supply side): 6P=P4.2 UL/CSA/TUV 94V-2 [7A/250V/85℃]

Mating Connector : WST P4.20 6PIN WAFTER M-I42002

DC output cable: 5C+1, UL2464, 18AWG, VW-1, 80℃, 300V

### 15,19V,24V,28V,36V,48V




Standard male plug(power supply side): 4PIN POWER DIN

Mating Connector : 4PIN POWER DIN(FEMALE)MDP-002-4PIN

DC output cable: 4C+1, UL2464, 16AWG, VW-1, 80℃, 300V

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