



AC/DC Switching Adapter - Single Output

ITE/Medical AC/DC Power Adapter
JD°\$(\$\$ GYfJYg(\$\$K Urtg
DOE level VI Efficiency Compliant

FEATURES

- ITE & Medical Approvals
- 3-prong IEC320-C14, Class I AC inlet
- Medical safety approved (2x MOPP between primary to secondary)
Suitable for BF application with appropriate system consideration
- ITE/Medical up to 5000 meter altitude during operation
- < 0.5W 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
- Input current (rms): 4.2A @115VAC; 2.1A @230VAC max.
- Efficiency: > 92% @80% Full load, 230VAC
- Efficiency: > 87.5% @Average efficiency, 115/230VAC
- Touch current < 100uA @264VAC
- Hold-up time: > 10ms typical @full load, 115VAC
- Short circuit protection: Auto-recovery
- Over load protection: Auto-recovery
- Over voltage protection: Auto-recovery
- Over temperature protection: Latch off type. AC Recycle.
- Maximum output power (Po): 380/400 Watts convection cooling
- Inrush current; cold start @25C: < 45A peak @115VAC
< 80A peak @230VAC

RoHS compliant

Dimension: L 222xW 112xH45 mm (8.74"x4.4"x1.77")
Weight: 2.85 kgs. (6.28 lbs.)

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: > 230,000 hours @full load and 25°C ambient temperature based on Bellcore TR-332

SAFETY STANDARDS

UL/cUL 60601-1 3.1rd Edition
TUV EN60601-1 3.1rd Edition
CB IEC60601-1 3.1rd Edition
UL/c-UL UL62368-1
TUV EN62368-1
CB IEC62368-1

EMC STANDARDS

EN60601-1-2
IEC60601-1-2 Ed4:2014
EN 55011 Class B
EN 55032 Class B
EN 55035 Class B
FCC Part 15 Class B
FCC Part 18 Class B
CE

DC OUTPUT & FEATURES

Model No.	Output Rating		Po	Output Regulation	Ripple & Noise (Vp-p)	Efficiency Level
VP10400-12	+12V	31.66A	380W	±5%	120mV	VI
VP10400-19	+19V	21.05A	400W	±5%	190mV	VI
VP10400-24	+24V	16.66A	400W	±5%	300mV	VI
VP10400-28	+28V	14.28A	400W	±5%	300mV	VI
VP10400-48	+48V	8.33A	400W	±5%	300mV	VI

- 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 54 to 75KHz 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+A1 (IEC 60601-1:2012 reprint) EN 60601-1:2006+A11+A1+A12 ANSI/AAMI ES60601-1 2012 + A1+ A2 CAN/CSAC22.2 No. 60601-1:14 - Edition 3	EC/EN 60601-1-2 Ed4:2014 & EN55011 and FCC Part 18
Audio/video, ITE equipment	IEC 62368-1:2014 (Second Edition) EN 62368-1:2014+A11 UL 62368-1, 2nd Edition, 2014-12-01 CAN/CSA C22.2 No. 62368-1-14, 2nd Edition	EN55032 & EN55035 & FCC part 15 (*) and ICES-003

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

(*) FCC PART15 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)

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

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

Note: Production testing use dc voltage test 4 Sec.

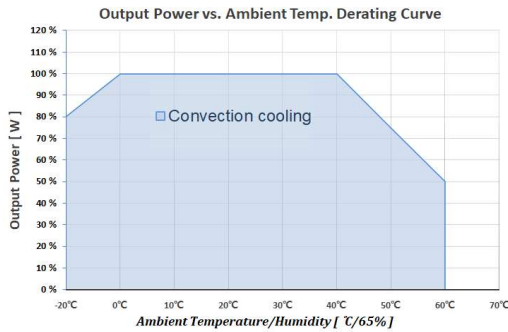


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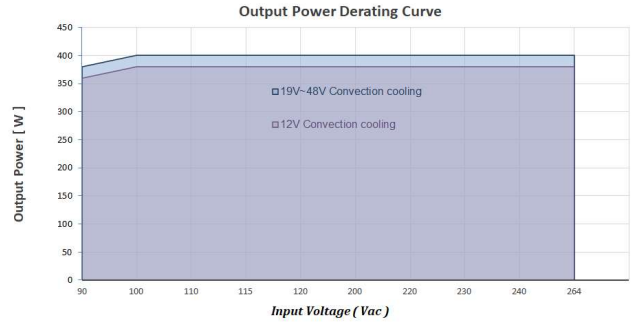
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ENVIRONMENTAL

DERATING CURVE:

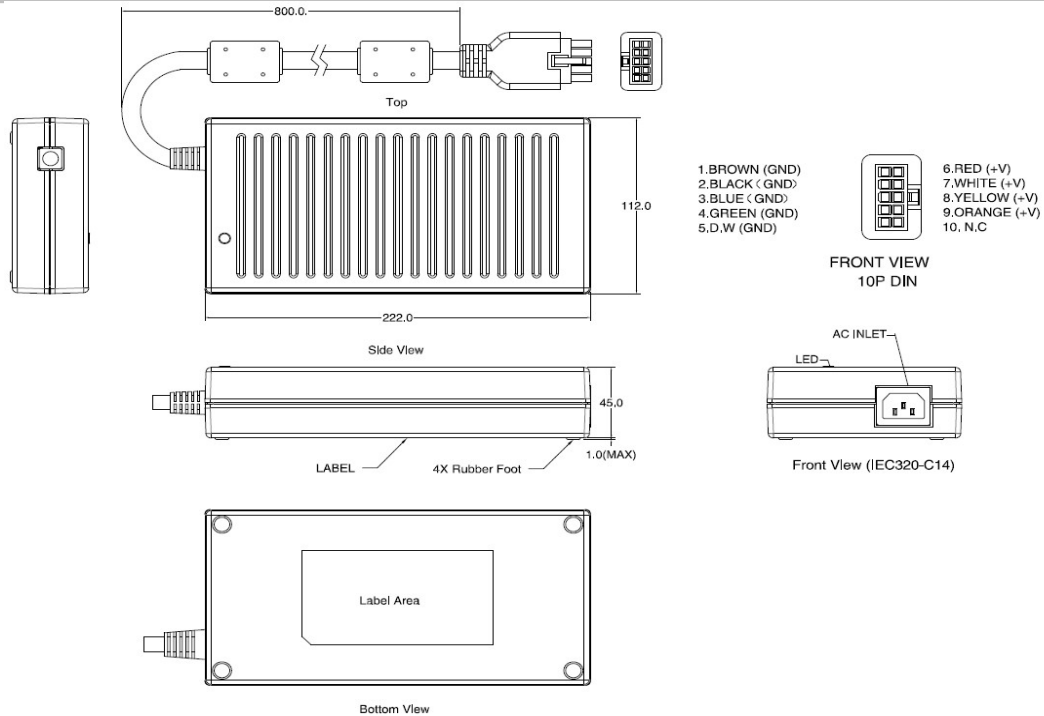


380W / 400W Convection cooling :
 Derate linearly 2.5% per°C from 41 to 60°C.
 Derate linearly 1% per°C from -1 to -20°C.



12V Convection cooling max output 380W
19V~48V Convection cooling max output 400W
 Derate linearly 0.5% per Vac from 100 to 90Vac

MECHANICAL SPECIFICATION



Dimension : L222(8.74") x W112(4.4") x H45(1.77")mm
 NOTE : TOLERANCE:±1.5 mm(0.06")(LxWxH)



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MECHANICAL SPECIFICATION

MATCHING CONNECTORS

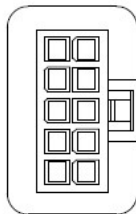
DC Output Connector

Standard male plug(power supply side): 10 PIN Mini Fit Pitch:4.2mm

Mating Connector : Molex P/N: 39-28-1123 or equivalent.

DC output cable: 8C+1, UL2464, 16AWG, VW-1, 80°C, 300V

- 1.BROWN (GND)
- 2.BLACK (GND)
- 3.BLUE (GND)
- 4.GREEN (GND)
- 5.D.W (GND)



- 6.RED (+V)
- 7.WHITE (+V)
- 8.YELLOW (+V)
- 9.ORANGE (+V)
- 10. N.C

FRONT VIEW
10P DIN

