

350 WATTS

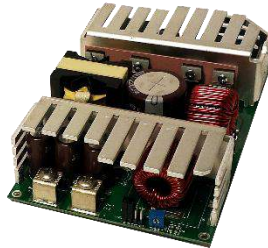
SINGLE OUTPUT AC-DC

FEATURES:

- Compact 3.9" x 6.0" x 1.5" Size
- 3 Year Warranty
- Universal 85-264V Input
- Single High Efficiency Output
- Power Fail Warning
- 0-70°C Operating Temperature
- RoHS Compliant
- IEC 60601-1 3rd ed. Medical Cert.
- IEC 62368-1 2nd ed. Certification
- IEC 60601-1-2 4th ed. EMC
- Class B Emissions per EN55011/32
- Optional Single Wire Load Sharing
- Optional Remote Inhibit/Enable
- Optional Chassis/Cover



CHASSIS/COVER



OPEN FRAME

SAFETY SPECIFICATIONS



Underwriters Laboratories
File E137708/E140259

UL 62368-1:2014, 2nd Edition
CAN/CSA-C22.2 No. 62368-1-14
AAMI/ANSI ES60601-1:2005/(R) 2012
CAN/CSA-C22.2 No. 60601-1:2014



CB Reports/Certificates (including all National and Group Deviations)

IEC 62368-1:2014, 2nd Edition
IEC 60601-1:2005/A1:2012



TUV SUD America

EN 62368-1:2014, 2nd Edition
EN 60601-1:2006/A1:2013



Low Voltage Directive
RoHS Directive (Recast)

(2014/35/EU of February 2014)
(2015/863/EU of March 2015)



Electrical Equipment (Safety) Regulations 2016 SI No. 1101
Restriction of the Use of Certain Hazardous Substances in EEE Regulations
2012 SI No. 3032 + 2019 SI No.492

MODEL LISTING

| MODEL | OPEN FRAME | | CHASSIS/COVER | |
|--------------|------------|-------------------|---------------|-------------------|
| | 300 LFM | CONVECTION COOLED | 300 LFM | CONVECTION COOLED |
| NXT-325-1001 | 2.5V/65.0A | 2.5V/40.0A | 2.5V/58.5A | 2.5V/36.0A |
| NXT-325-1002 | 3.3V/65.0A | 3.3V/40.0A | 3.3V/58.5A | 3.3V/36.0A |
| NXT-325-1003 | 5V/65.0A | 5V/40.0A | 5V/58.5A | 5V/36.0A |
| NXT-325-1004 | 12V/29.2A | 12V/16.7A | 12V/26.3A | 12V/15.0A |
| NXT-325-1005 | 15V/23.3A | 15V/13.3A | 15V/20.9A | 15V/12.0A |
| NXT-325-1006 | 24V/14.6A | 24V/8.3A | 24V/13.1A | 24V/7.5A |
| NXT-325-1007 | 28V/12.5A | 28V/7.1A | 28V/11.3A | 28V/6.4A |
| NXT-325-1008 | 48V/7.3A | 48V/4.2A | 48V/6.6A | 48V/3.8A |

Please refer to Output Power Derating chart.

ORDERING INFORMATION

Consult factory for alternate output configurations.

Please specify the following optional features when ordering:

CH - Chassis
CO - Cover
LS - Single Wire Load Sharing
LSEVB - Load Share Evaluation Board
RE - Remote Inhibit

All specifications are maximum at 25°C/maximum rated power unless otherwise stated, may vary by model and
Are subject to change without notice.

NXT-325

OUTPUT SPECIFICATIONS

| | | |
|---|---|---|
| Output Power at 50°C ⁽¹⁾ (See Derating Chart) | 100-202W 163-350W | Convection Cooled, Open Frame 300LFM Forced-Air Cooled ⁽¹⁵⁾ |
| Power Derating | 2.0 W _{OUT} / 1 V _{IN} below 100 V _{IN} | |
| Voltage Centering | ± 0.5% | (50% load) |
| Voltage Adjust Range | 95-105% | |
| Load Regulation | 0.5% | (0-100% load change) |
| Source Regulation | 0.5% | |
| Noise | 1.0% or 100mV Whichever is greater | |
| Turn on Overshoot | None | |
| Transient Response | Output recovers to within 1% of initial set point due to a 50% step load change, 500µS maximum, 4% maximum deviation. | |
| Overvoltage Protection | Latching, between 110% and 150% of rated output voltage. | |
| Overpower Protection | 110-130% rated P _{out} , cycle on/off, auto recovery | |
| Hold Up Time | 16ms min., Full Power, 85-264V Input | |
| Start Up Time | 3 Seconds, 120V Input | |

INPUT SPECIFICATIONS

| | |
|---------------------------------|--|
| Protection Class | I |
| Source Voltage | 85 – 264 Volts AC |
| Frequency Range | 47 – 63 Hz |
| Input Protection ⁽⁶⁾ | Internal 8A Time Delay fuse |
| Peak Inrush Current | 50A (cold) |
| Efficiency | 85% Typical, Full Power varies by model |
| Power Factor | 0.95 (Full Power, 230V), 0.98 (Full Power, 120V) |

ENVIRONMENTAL SPECIFICATIONS

| | |
|-----------------------------------|--|
| Ambient Operating | 0°C to + 70°C |
| Temperature Range | Derating: See Power Rating Chart |
| Thermal Shutdown | Output voltage is inhibited during excessive internal temperatures, automatic reset. |
| Ambient Storage Temp. Range | - 40°C to + 85°C |
| Operating Relative Humidity Range | 20-90% non-condensing |
| Altitude | 3,000m ASL - Operating 12,192m. ASL - Non-Operating |
| Temperature Coefficient | 0.02%/°C |
| Vibration | 2.5G swept sine, 10–2000Hz, 1 octave/min, 3 axis, 1 hour each |
| Shock | 20g, 11ms, 3 axis. |

GENERAL SPECIFICATIONS

| | |
|---|---|
| Means of Protection | |
| Primary to Secondary | 2MOPP (Means of Patient Protection) |
| Primary to Ground | 1MOOP (Means of Operator Protection) |
| Secondary to Ground | Operational Insulation(Consult factory for 1MOPP) |
| Dielectric Strength ^(8, 9) | |
| Reinforced Insulation | 5656 VDC, Primary to Secondary |
| Basic Insulation | 2121 VDC, Primary to Ground |
| Operational Insulation | 707 VDC, Secondary to Ground |
| Leakage Current | |
| Earth Leakage | <300µA NC, <1000µA SFC |
| Touch Current | <100µA NC, <500µA SFC |
| Power Fail Signal ⁽¹⁴⁾ | Logic low with input power failure 10 ms minimum prior to output 1 dropping 1%. |
| Remote Inhibit (optional) | Isolated. Contact closure inhibits output. |
| Load Share (optional) ^(16, 17, 18) | Single wire current sharing with return via negative sense return. Minimum current share load is 10% of each module's output current rating. Maximum output voltage deviation between modules is 5% for 2.5 through 5 V models and 400 mV for remaining models. |
| Standby Power (optional) ⁽¹⁹⁾ | Isolated 5 Vdc ± 10%, 10 mA available only with Remote Inhibit option. |
| Remote Sense ⁽¹⁰⁾ | 400mV compensation of output cable losses |
| Mean-Time Between Failures | 100,000 Hours min., MIL-HDBK-217F, 25° C, GB |
| Weight | 1.40 Lbs. Open Frame/ 2.15 Lbs. Chassis and Cover |

EMC SPECIFICATIONS (IEC 60601-1-2:2014, 4TH ed./IEC 61000-6-2:2005)

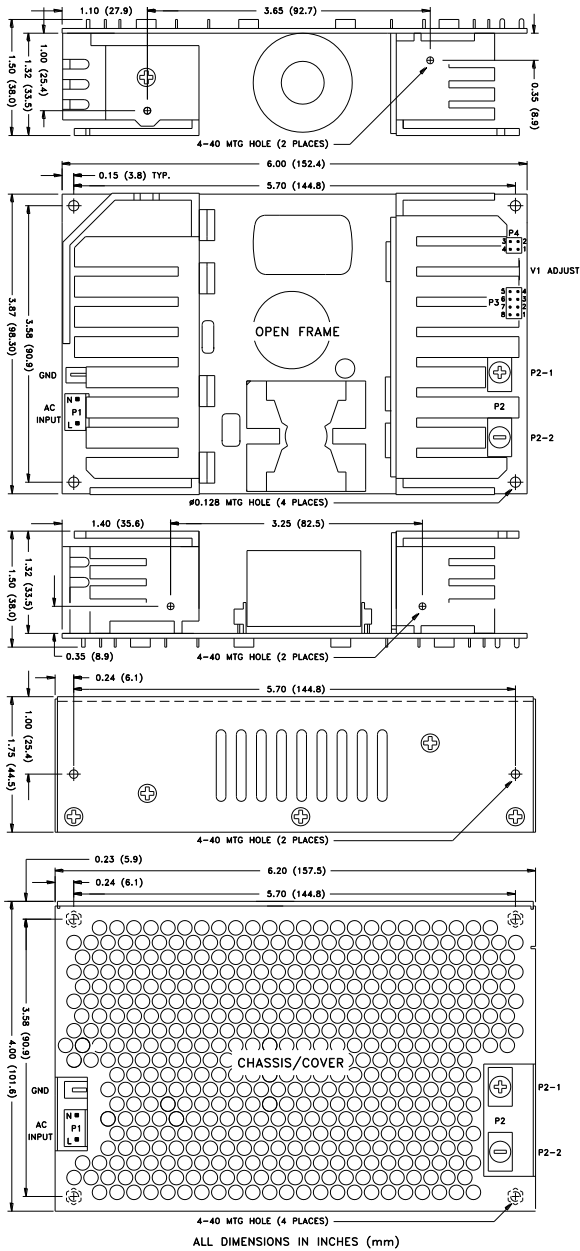
| | | | |
|-----------------------------------|---------------|--|--|
| Electrostatic Discharge | EN 61000-4-2 | ±8KV contact / ±15KV air discharge | A |
| Radiated Electromagnetic Field | EN 61000-4-3 | 80MHz-2.7GHz, 10V/m, 80% AM | A |
| Electrical Fast Transients/Bursts | EN 61000-4-4 | ±2 KV, 5KHz/100KHz | A |
| Surge Immunity | EN 61000-4-5 | ±2 KV line to earth / ±1 KV line to line | A |
| Conducted Immunity | EN 61000-4-6 | 0.15 to 80MHz, 10V, 80% AM | A |
| Magnetic Field Immunity | EN 61000-4-8 | 30A/m, 60 Hz. | A |
| Voltage Dips | EN 61000-4-11 | 0% U _T , 0.5 cycles, 0-315° 0% U _T , 1 cycles, 0° 40% U _T , 10/12 cycles, 0° 70% U _T , 25/30 cycles, 0° | 100/240V A/A 100/240V A/A 100/240V B/A 100/240V B/A |
| Voltage Interruptions | EN 61000-4-11 | 0% U _T , 300 cycles, 0° | 100/240V B/B |
| Radiated Emissions | EN 55011/32 | Class B | |
| Conducted Emissions | EN 55011/32 | Class B | |
| Harmonic Current Emissions | EN 61000-3-2 | Class A | |
| Voltage Fluctuations/Flicker | EN 61000-3-3 | Compliant | |



INTEGRATED

POWER DESIGNS

300 Stewart Road ■ Wilkes-Barre, PA 18706 ■ Phone: (570) 824-4666 ■ Fax: (570) 824-4843 ■ Email: sales@ipdpower.com ■ Web: www.ipdpower.com

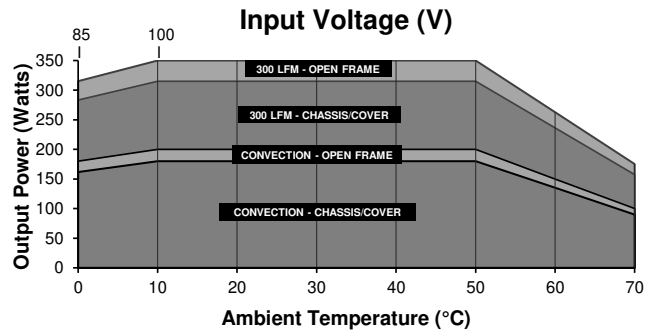


CONNECTOR SPECIFICATIONS

| | | |
|--------------|-------------------------------|--|
| P1 | AC Input | 0.156 friction lock header mates with Molex 09-50-3031 or equivalent crimp terminal housing with Molex 2478 or equivalent crimp terminal. |
| NEUTRAL | | |
| LINE | | |
| P2 | DC Output | 10-32 screw down terminal mates with #10 ring tongue terminal. (10 in-lb Max) |
| OUTPUT 1 (-) | | |
| OUTPUT 1 (+) | | |
| P3 | Power Fail, Load Share, Sense | 0.100 friction lock header mates with Molex 22-55-2081 or equivalent crimp terminal housing with Molex 71851 or crimp equivalent terminal. |
| SHARE BUS | | |
| P.F. SIG (+) | | |
| SENSE (-) | | |
| SENSE (+) | | |
| P4 | Inhibit, Standby Power | 0.100 friction lock header mates with Molex 22-55-2041 or equivalent crimp terminal housing with Molex 71851 or equivalent crimp terminal. |
| INHIBIT | | |
| STBY PWR (+) | | |
| | Ground | 0.187 quick disconnect terminal. |

- Continuous Output Power must not exceed 350W or maximum power per model listing.
- Generally, adequate cooling is provided when semiconductor case temperatures do not exceed 70°C rise and transformer temperature does not exceed 60°C rise at any specified ambient temperature.
- Sufficient area must be provided around power supply to allow natural movement of air to develop in convection-cooled applications.
- This product is intended for use as a professionally-installed component within information technology, industrial, and medical equipment and is not intended for stand-alone operation.
- A minimum load of 10% is required on Output 1 to ensure proper regulation of remaining outputs.
- This product includes only one fuse in the input circuit. In consideration of clause 8.11.5 of IEC 60601-1:2005, a second fuse may be required in neutral conductor of the end product.
- Peak-to-Peak Output Ripple and Noise is measured directly at the output terminals of the power supply, without the use of the probe ground lead or retractable tip (tip-and-barrel method), 20MHz bandwidth.
- This product was type-tested and safety-certified using the dielectric strength test voltages listed in Table 6 of IEC 60601-1:2005. In consideration of Clause 8.8.3, care must be taken to insure that the voltage applied to a reinforced insulation does not overstress different types and levels of insulation. Primary and secondary-to-ground capacitors may need to be disconnected prior to performing a dielectric strength test on the power supply or the end product. It is highly recommended that the DC test voltages listed in DVB.1, Annex DVB of UL 60601-1 1st Edition are not exceeded during a production-line dielectric strength test of the assembled end product. Please consult factory for further information.
- This power supply has been safety-approved and final-tested using a DC dielectric strength test. Please consult factory before performing an AC dielectric strength test.
- Remote-Sense terminals may be used to compensate for cable losses up to 400mV depending on model. The use of a twisted pair, decoupling capacitors and an appropriately-rated low-impedance capacitor connected across the load will increase noise immunity.
- Maximum screw penetration into bottom chassis mounting holes is 0.100 inches. Maximum screw penetration into side chassis mounting holes is 0.250 inches.
- To comply with emissions specifications, all four mounting hole pads must be electrically connected to a common metal chassis. Chassis/Cover option is recommended. Refer to Operating Instructions for additional information.
- Common RF shielding precautions may need to be taken to assure emissions compliance. Refer to Operating Instructions for additional information.
- Power Fail (AC-Good) feature provides a logic-low warning signal from an open collector transistor output 10ms prior to loss of output from AC failure.
- 300LFM of airflow must be maintained one inch above the top of the heatsinks in any direction in open-frame forced-air applications; and one inch above and toward any of the three perforated sides of the cover in forced-air Chassis/Cover applications.
- Low forward-voltage-drop oring diodes must be used in all load-sharing applications in 2.5 through 15V models. Oring diodes must be used on 24 through 48V models used in fault-tolerant applications but are optional in power-boosting applications. Oring diode power dissipation must be subtracted from the maximum output-power rating of each model.
- Current-carrying conductors in load-sharing applications must be short and symmetrical.
- Refer to Load-Share Evaluation Board data sheet (page 58) for additional load-share applications information.
- A load equal to 5% rated output power must be maintained when using Standby Power option. An external electrolytic capacitor across standby power output may be used to improve transient response.

MAX P_{OUT} vs. AMBIENT TEMPERATURE/INPUT VOLTAGE



Derating requirements – Chart above applies to models 1004 thru 1008 only. 350W 300LFM forced air, open frame. 200W convection cooled open frame. Derate 10% with chassis and cover. Derate 1.5W_{OUT}/1V_{IN} below 100V_{IN} and between 100V_{IN} and 85V_{IN}. Use larger of the two deratings when using chassis/cover below 100V_{IN}. Derate output power linearly to 50% between 50° and 70°C. Refer to model listing for all ratings.

TYPICAL LOAD SHARE/REMOTE SENSE APPLICATION

