INTEGRATED POWER DESIGNS

300 Stewart Road
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Phone: (570) 824-4666

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NXT-400 SERIES OPERATING INSTRUCTIONS

INPUT RATING: 100-240VAC, 10.0 A, 50-60 Hz.

OUTPUT RATING: 400 Watts Maximum Total Continuous Output Power with 300 LFM Forced Air.
225 Watts Maximum Total Continuous Output Power Convection Cooled.

MODEL LISTING:

	OPEN FRAME		CHASSIS/COVER	
Model	300LFM	Convection Cooled	300LFM	Convection Cooled
NXT-400-1001	2.5V/80.0A	2.5V/45.0A	2.5V/72.0A	2.5V/40.5A
NXT-400-1002	3.3V/80.0A	3.3V/45.0A	3.3V/72.0A	3.3V/40.5A
NXT-400-1003	5V/80.0A	5V/45.0A	5V/72.0A	5V/40.5A
NXT-400-1004	12V/33.3A	12V/18.8A	12V/29.9A	12V/16.9A
NXT-400-1005	15V/26.7A	15V/15.0A	15V/24.0A	15V/13.5A
NXT-400-1006	24V/16.7A	24V/9.4A	24V/15.0A	24V/8.5A
NXT-400-1007	28V/14.3A	28V/8.0A	28V/12.8A	28V/7.2A
NXT-400-1008	48V/8.3A	48V/4.7A	48V/7.5A	48V/4.5A

NOTES: 1. A suffix may be added to the model number to indicate the following optional configurations:
(C-chassis, CO-cover, LS – load share, RE-remote inhibit, WT-Low Temperature Turn On).

DECLARATION OF CONFORMITY

Manufacturer: Integrated Power Designs, Inc.
Manufacturer's Address: 300 Stewart Road, Wilkes-Barre, PA 18706 USA
Product Type: Switchmode AC-DC Power Supply

Declares all models listed above including all options are in compliance with the following European Community Directives:

Low Voltage Directive 2014/35/EU of 26 February 2014
RoHS Directive 2015/863/EU of 31 March 2015

As well as with the requirements set out in the Laws of the United Kingdom relating to and applying the following standards:

Electrical Equipment (Safety) Regulations 2016 SI No. 1101
BS EN 62368-1:2014
Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 SI No. 3032 + 2019 SI No.492

In addition, all models are Certified to be in compliance with applicable requirements of UL 62368-1:2014, ANSI/AAMI ES60601-1:2005/AMD2 :2021, IEC 62368-1:2014 and IEC 60601-1:2005/A2:2020 including all EU national deviations, CAN/CSA-C22.2 No. 62368-1-14, CAN/CSA-C22.2 No. 60601-1:14 , AM1:2014, AM2:2022, EN 62368-1:2014 and EN 60601-1:2006/A2:2021.

BY: John Thompson - President
John Thompson
PLACE: Integrated Power Designs
300 Stewart Road, Wilkes-Barre, PA 18706 USA
DATE: March 24, 2025

EUROPEAN CONTACT:
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UK CONTACT:
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Laser Quay, Culpeper Close
Rochester Kent ME2 4HU
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CLASSIFICATION:
1. Protection against electric shock – Class I.
2. Protection against harmful ingress of water – IPXO (Non-protected), ordinary.
3. Methods of sterilization – None.
4. Suitability for use in an oxygen rich environment – End user responsibility, not evaluated.
5. Mode of operation – Continuous.

WARNING! RISK OF FIRE! An open internal fuse indicates a catastrophic failure of circuit component(s). Repair must be by authorized IPD personnel only. Refer to fuse rating on power supply circuit board for rating.

WARNING! SHOCK HAZARD! Dangerous voltages are present on some components, printed circuit board traces and heatsinks.

INPUT FUSE: This product includes a single fuse in the phase lead only. In consideration of IEC 60601-1:2005 Clause 8.11.5, a second fuse may be required in the neutral lead of the end use equipment

SEPERATION: Primary to secondary creepage distance is 8mm minimum, 5mm minimum clearance (2MOPP). Primary to ground creepage distance is 4mm minimum, 2.5mm clearance (1MOOP). Secondary to ground creepage is 2.3mm minimum, clearance is 1.4mm minimum (Operational Insulation). Required separation must be maintained in the end use equipment to preserve the established means of protection.

OUTPUTS: The outputs are not acceptable for patient connection without additional isolation. All outputs are ES1 under normal and single fault conditions except the 1006 which is ES2 under single fault condition.

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TEMPERATURES: The maximum operating temperatures of safety components as defined in the applicable safety standards must not be exceeded after installation in the end use equipment. Output power, ambient air temperature and convection or forced air cooling availability should be considered in the end use equipment.

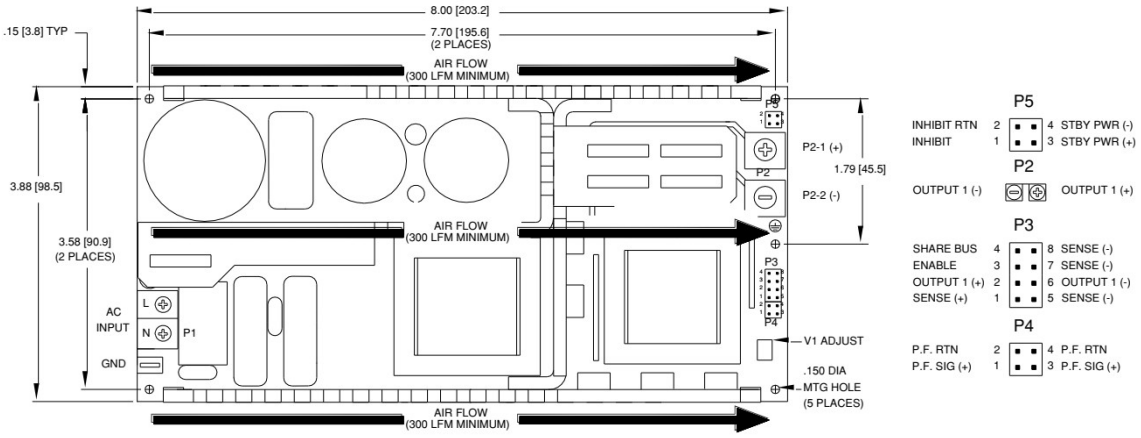
HIPOT: In consideration of IEC 60601-1:2005 Clause 8.8.3, care must be taken to insure the voltage applied to a reinforced insulation does not overstress different types and levels of insulation. Breakdown of basic insulation and catastrophic failure of the power supply may result if a test voltage of greater than 1800 VAC is applied between primary and secondary circuits. Each isolating component is factory tested at 4000 VAC minimum prior to installation. 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.

INSTALLATION: The power supplies included in model listing on reverse side are considered components intended for professional installation into end use equipment. The protective earth (ground) terminal must be bonded to protective earth in the end use equipment.

EMISSIONS: This product was tested for compliance with EN 55022 and EN 55011 conducted and radiated emissions using the techniques listed below and non-inductive load resistors to simulate operation in a typical installation. All or a combination of the following requirements may be necessary to insure compliance in the end use equipment.

1. All five PCB mounting holes must be connected to a common metal surface.
2. Input cable line neutral and ground wires are twisted together.
3. Input cable 2 x through Fair-rite 2643626402 near power supply.
4. Output cable twisted together.
5. Output cable 2 x through Fair-rite 2643626402 near power supply.
6. Chassis/cover used.

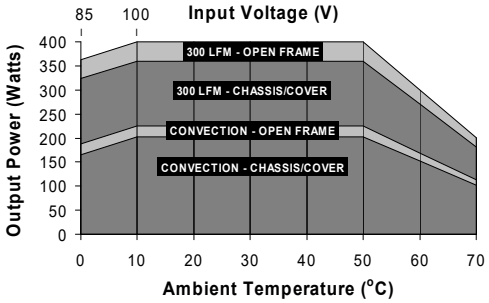
CONNECTIONS / DIMENSIONS:



CONNECTORS:

P1: AC Input – Terminal Block with 6-32 screws on .400 centers mates with #6 spade terminals.
P2: DC Output (Single Output) – 10-32 screw down terminal mates with #10 ring tongue terminal.
G: Protective Earth (Ground) – 0.187 quick disconnect terminal.
P3: Load Share Sense – 0.100 friction lock header mates with Molex 22-55-2081 or equivalent crimp terminal housing with Molex type 71851 or equivalent crimp terminal.
P4: Power Fail- 0.100 breakaway header mates with Molex 22-55-2041 or equivalent crimp terminal housing with Molex type 71851 or equivalent crimp terminal.
P5: Inhibit / Standby Power- 0.100 breakaway header mates with Molex 22-55-2041 or equivalent crimp terminal housing with Molex type 71851 or equivalent crimp terminal.

DERATING:



DERATING REQUIREMENTS:
Chart to left applies to models 1003 thru 1008 only. 325 Watts 300 LFM forced air, open frame. Derate 10% with chassis and cover. Derate 2.5W OUT / 1 VIN below 100 VIN and between 100 VIN and 85 VIN. Use larger of the two deratings when using chassis/cover below 100 VIN. Derate output power linearly to 50% between 50° and 70° C.