INTEGRATED POWER DESIGNS

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DC4-185 SERIES OPERATING INSTRUCTIONS

INPUT RATINGS: 36-72VDC, 10A

OUTPUT RATINGS: 185 Watts Maximum Total Continuous Output Power with 300 LFM Forced Air. Open Frame or with Chassis and Cover.
135 Watts Maximum Total Continuous Output Power Convection Cooled. Open Frame or with Chassis and Cover.
110 Watts Maximum Total Continuous Output Power Convection Cooled with Chassis and Cover.

MODEL LISTING:

MODEL	OUTPUT 1	OUTPUT 2	OUTPUT 3	OUTPUT 4
DC4-185-4001	3.3VDC/20A(1)	5VDC/10A	12VDC/2A	12VDC/2A
DC4-185-4002	5VDC/20A(1)	3.3VDC/10A	12VDC/2A	12VDC/2A
DC4-185-4003	5VDC/20A(1)	3.3VDC/10A	15VDC/2A	15VDC/2A
DC4-185-4004	5VDC/20A(1)	5VDC/10A	12VDC/2A	12VDC/2A
DC4-185-4005	5VDC/20A(1)	5VDC/10A	15VDC/2A	15VDC/2A
DC4-185-4006	5VDC/20A(1)	24VDC/3A	12VDC/2A	12VDC/2A
DC4-185-4007	5VDC/20A(1)	24VDC/3A	15VDC/2A	15VDC/2A
DC4-185-3001	5VDC/20A(1)	12VDC/5A		12VDC/2A
DC4-185-3002	5VDC/20A(1)	15VDC/4A		15VDC/2A
DC4-185-2001	3.3VDC/20A(1)	5VDC/10A		
DC4-185-2002	5VDC/20A(1)	12VDC/8A		
DC4-185-2003	5VDC/20A(1)	24VDC/4A		
DC4-185-2004	12VDC/10A	12VDC/6A		
DC4-185-2005	15VDC/8A	15VDC/5A		
DC4-185-1001	2.5VDC/37A(2)			
DC4-185-1002	3.3VDC/37A(2)			
DC4-185-1003	5VDC/37A(2)			
DC4-185-1004	12VDC/15.4A			
DC4-185-1005	15VDC/12.3A			
DC4-185-1006	24VDC/7.7A			
DC4-185-1007	28VDC/6.6A			
DC4-185-1008	48VDC/3.8A			

NOTES:
1. Rated 15A maximum with convection cooling.
2. Rated 27A maximum with convection cooling.
3. Total current from Outputs 3 & 4 must not exceed 3A with convection cooling.
4. Total current from Outputs 1 & 2 must not exceed 20A with convection cooling.
5. A suffix may be added to the model number to indicate the following optional configurations: (CH-chassis, CO-cover, IO-isolated outputs, TS-terminal strip, BD- Blocking Diode).

DECLARATION OF CONFORMITY

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

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

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:

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: January 21, 2025

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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.

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ENVIRONMENTAL: For Indoor Use Only.
No protective packaging required during transport.
Operating Temperature- 0-50°C
Storage Temperature- -40-85°C
Operating / Storage Humidity- 0-95%RH non-condensing
Operating Altitude- 3000m max.

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

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! Modification of this equipment is prohibited without the authorization of the manufacturer.

SEPARATION: Primary to secondary creepage distance is 6mm minimum, clearance 3.2mm minimum (2MOOP). Primary to ground creepage distance is 3mm minimum, clearance 1.6mm minimum (1MOOP). Secondary to ground creepage is 2.3mm minimum, clearance is 1.4mm minimum (Operational Insulation). The required separation must be maintained in the end use equipment to preserve the established means of protection.

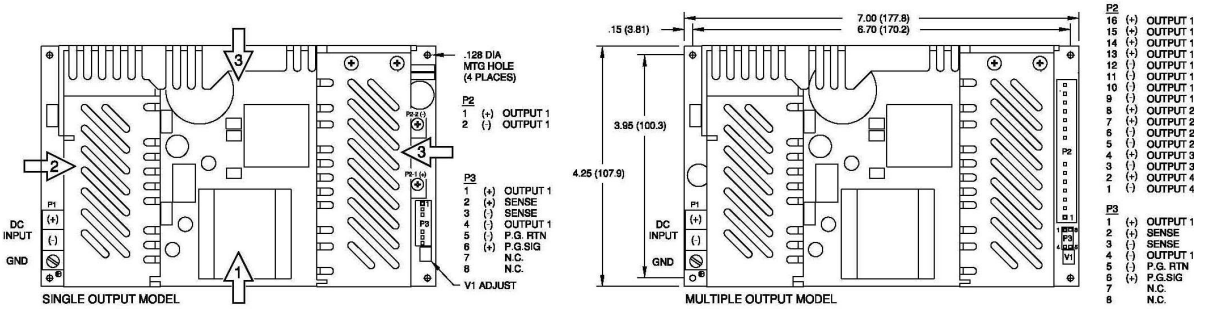
OUTPUTS: The outputs are not acceptable for patient connection without additional isolation. All outputs are ES1 under normal and single fault conditions unless otherwise indicated.

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 60601:2005 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 1500 VAC is applied between primary and secondary circuits. Each isolating component is factory tested at 3000 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.

CONNECTIONS / DIMENSIONS:



AIR FLOW DIRECTION: 1-Optimum, 2- Good, 3- Fair

CONNECTORS: P1: DC Input - #6 standard 3 position terminal block

P2: DC Output (Single) – 6-32 screw down terminal mates with #6 ring tongue terminal (10in-lb max.)

P2: DC Output (Multiple) - .156 friction lock header mates with Molex 09-50-3161 or equivalent crimp terminal housing with Molex 2478 or equivalent crimp terminal.

G: Ground- .187 quick disconnect terminal.

P3: P.G./Sense (Single) - .100 breakaway header mates with Molex 50-57-9008 or equivalent crimp terminal housing with Molex type 71851 or equivalent crimp terminal.

P3: Power Good (Multiple) - .100 breakaway header mates with Molex 22-55-2081 or equivalent crimp terminal housing with Molex type 71851 or equivalent crimp terminal.