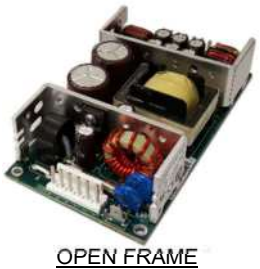
80 WATTS

SINGLE/MULTI OUTPUT DC-DC

DC1-80

FEATURES:

- **Compact 2.5" x 4.5" x 1.2" Size**
- **3 Year Warranty**
- **9-18 VDC Input**
- **One to Four Outputs**
- **4242VDC Reinforced Insulation**
- **Under/Overvoltage Lockout**
- **Pin Compatible with REL-70 Series**
- **IEC 60601-1 3rd ed. Medical Cert.**
- **IEC 62368-1 2nd ed. Certification**
- **0-70°C Operating Temperature**
- **RoHS Compliant**
- **Optional Chassis**
- **Power Good Signal**



OPEN FRAME

SAFETY SPECIFICATIONS

c UL us	Underwriters Laboratories File E137708/E140259	UL 62368-1:2014, 2nd Edition CAN/CSA-C22.2 No. 62368-1-14, 2nd Edition AAMI/ANSI ES60601-1:2005/(R) 2012(R)2021 CAN/CSA-C22.2 No. 60601-1:2014:2022
IECEE CB SCHEME	CB Reports/Certificates (including all National and Group Deviations)	IEC 62368-1:2014, 2nd Edition IEC 60601-1:2005/A1:2012/A2:2020
TUV SUD	TUV SUD America	EN 62368-1:2014, 2nd Edition EN 60601-1:2006/A1:2013/A2:2021
CE	RoHS Directive (Recast)	(2015/863/EU of March 2015)
UK CA	Restriction of the Use of Certain Hazardous Substances in EEE Regulations	2012 SI No. 3032 + 2019 SI No.492

MODEL LISTING

MODEL	OUTPUT 1	OUTPUT 2	OUTPUT 3	OUTPUT 4
DC1-80-4001	+3.3V/6A	+5V/5A	+12V/2A	-12V/2A
DC1-80-4002	+5V/6A	+3.3V/5A	+12V/2A	-12V/2A
DC1-80-4003	+5V/6A	-5V/5A	+12V/2A	-12V/2A
DC1-80-4004	+5V/6A	-5V/5A	+15V/2A	-15V/2A
DC1-80-4005	+5V/6A	+24V/2A	+12V/2A	-12V/2A
DC1-80-4006	+5V/6A	+24V/2A	+15V/2A	-15V/2A
DC1-80-3001	+5V/6A	+12V/2A		-12V/2A
DC1-80-3002	+5V/6A	+15V/2A		-15V/2A
DC1-80-2001	+5V/6A	+12V/4A		
DC1-80-2002	+5V/6A	+24V/2A		
DC1-80-2003	+12V/3.5A	-12V/3.5A		
DC1-80-2004	+15V/3A	-15V/3A		
DC1-80-1001	5V/16A			
DC1-80-1002	12V/6.7A			
DC1-80-1003	15V/5.3A			
DC1-80-1004	24V/3.3A			
DC1-80-1005	28V/2.9A			
DC1-80-1006	36V/2.2A			
DC1-80-1007	48V/1.7A			

ORDERING INFORMATION

Consult factory for alternate output configurations.
Consult factory for positive, negative or floating outputs.
Please specify the following optional features when ordering:

CH - Chassis

I/O - Isolated Outputs
TS - Terminal Strip

OUTPUT SPECIFICATIONS

Total Output Power at 50°C (1)	60W Singles	Convection Cooled
	50W Multi's	Convection Cooled
(See Derating Chart)	80W	300LFM Forced-Air Cooled (12)
Output Voltage Centering (5)	Output 1:	± 0.5%
(All outputs at 50% load)	Output 2:	± 5.0%
	Output 3:	± 5.0%
	Output 4:	± 5.0%
Output Voltage Adjust Range	Output 1:	95 - 105%
Load Regulation (5)	Output 1:	0.5%
(10-100% load change)	Output 2:	5.0%
	Output 3:	5.0%
	Output 4:	5.0%
Source Regulation	Outputs 1 – 4:	0.5%
Cross Regulation	Outputs 2 – 4:	5.0%
Output Noise (6)	Outputs 1 – 4:	1.0% or 100mV, whichever is greater
Turn on Overshoot	1%	
Transient Response	Output recovers to within 1% of initial set point due to a 50-100-50% step load change, 1ms maximum, 4% maximum deviation.	
Output Overvoltage Protection	Output 1:	110% to 150%, Latching
Output Overpower Protection	110-150% rated Pout, cycle on/off, auto recovery	
Start Up Time	1 Second	
Output Rise Time	25-50ms typical	
Minimum Load (5)	A minimum load of 10% is required on each output.	

INPUT SPECIFICATIONS

Input Voltage Range	9-18 VDC
Input Under-Voltage Lockout	
Turn-On Voltage	8.5-8.9 VDC
Turn-Off Voltage	7.0-8.5 VDC
Input Overvoltage Shutdown	19.0-21.0 VDC
Input Protection	Internal 15 A fuse
Reflected Ripple Current	1%
Efficiency	82% Typ., Full Power, (1002), varies by model

ENVIRONMENTAL SPECIFICATIONS

Ambient Operating Temperature Range	0°C to + 70°C Derating: See Power Rating Chart
Ambient Storage Temp. Range	- 40°C to + 85°C
Temperature Coefficient	Outputs 1 – 4: 0.02%/°C
Altitude	3,000m ASL – Operating – Medical 60601-1 5,000m ASL – Operating – ITE/AV – 62368-1 12,192m ASL – Non-Operating

GENERAL SPECIFICATIONS

Means of Protection	
Primary to Secondary	2MOPP (Means of Patient Protection)
Primary to Ground	1MOPP (Means of Patient Protection)
Secondary to Ground	Operational Insulation(Consult factory for 1MOPP)
Dielectric Strength(7, 8)	
Reinforced Insulation	4242 VDC, Primary to Secondary
Basic Insulation	2121 VDC, Primary to Ground
Operational Insulation	707 VDC, Secondary to Ground
Power Good Signal(11)	Logic high with input voltage above Vin min.
Remote Sense (singles only)(9)	250mV compensation of output cable losses
Mean-Time Between Failures	200,000 Hours min., MIL-HDBK-217F, 25° C, GB
Weight	0.60 Lbs. Open Frame

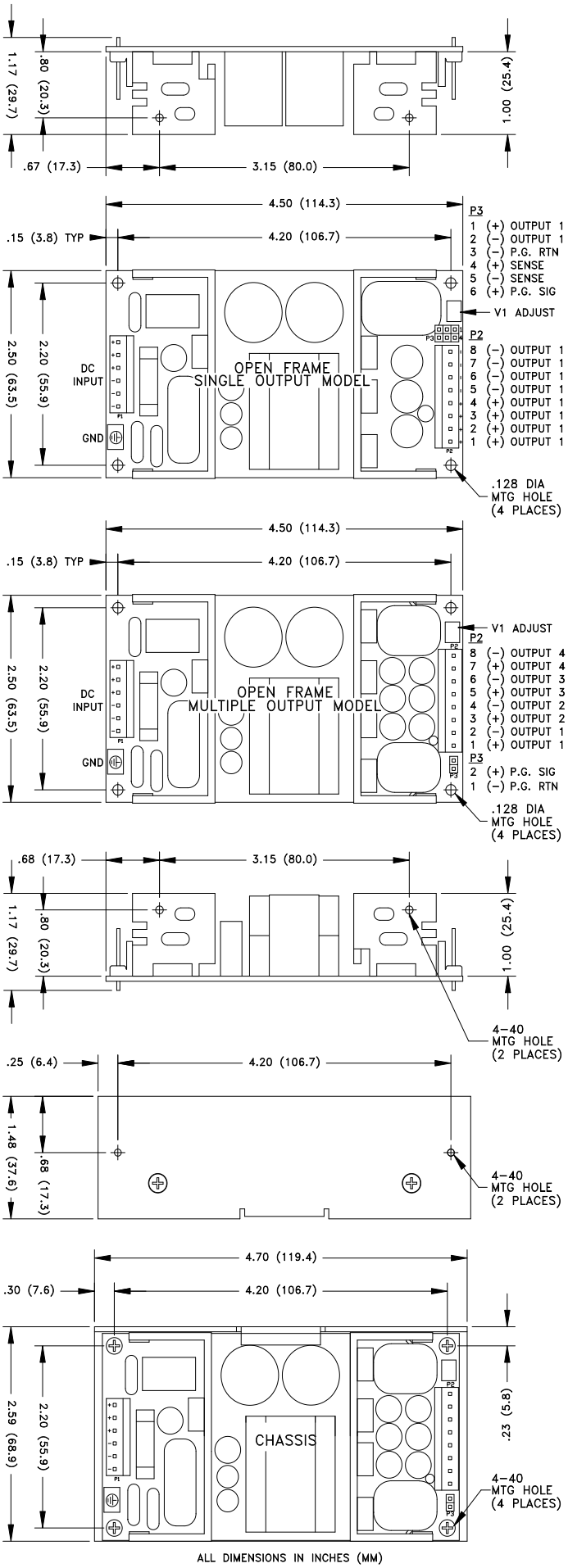
EMC SPECIFICATIONS

Electrostatic Discharge	EN61000-4-2	±8KV contact/ ±15KV air discharge	A
Electrical Fast Transients/Bursts	EN61000-4-4	±2KV, 5KHz/100KHz	A
Surge Immunity	EN61000-4-5	±2KV line to earth/ ±1KV line to line	A

All specifications are maximum at 25°C/80W unless otherwise stated, may vary by model and are subject to change without notice.

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*

DC1-80 SERIES MECHANICAL SPECIFICATIONS



ALL DIMENSIONS IN INCHES (MM)

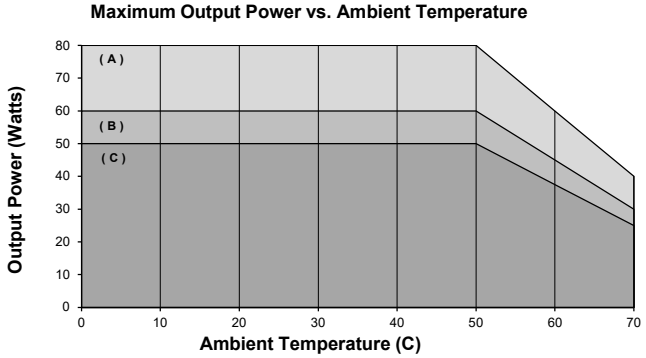
APPLICATIONS INFORMATION

1. Each output can deliver its rated current but total output power must not exceed 80W or as determined by the cooling requirements.
2. 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.
3. Sufficient area must be provided around power supply to allow natural movement of air to develop in convection-cooled applications.
4. 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.
5. A minimum load of 10% is required on each output to ensure specified centering and regulation of each output.
6. 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), 20 MHz bandwidth.
7. 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.
8. 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.
9. Remote-Sense terminals may be used to compensate for cable losses up to 250mV (single output models only). The use of a twisted pair, decoupling capacitors and an appropriately-rated low-impedance capacitor connected across the load will increase noise immunity.
10. Maximum screw penetration into bottom chassis mounting holes is 0.100 inches. Maximum screw penetration into side chassis mounting holes is 0.250 inches.
11. Power good feature provides a logic-high signal from an open collector transistor when DC input reaches minimum operating voltage.
12. 300LFM minimum of airflow must be maintained one inch above all points of top-side components when forced-air cooling is required.

CONNECTOR SPECIFICATIONS

P1	DC Input	0.156 friction lock header mates with TE Connectivity 770849-6 or equivalent crimp terminal housing with TE Connectivity 3-640707-1 or equivalent crimp terminal.
P2	DC Output	0.156 friction lock header mates with TE Connectivity 770849-8 or equivalent crimp terminal housing with TE Connectivity 3-640707-1 or equivalent crimp terminal.
G	Ground	0.187 quick disconnect terminal.
P3	Power Good /Sense (Single)	0.100 breakaway header mates with Molex 22-55-2061 or equivalent crimp terminal housing with Molex type 71851 or equivalent crimp terminal.
P3	Power Good (Multiple)	0.100 breakaway header mates with Molex 50-57-9002 or equivalent crimp terminal housing with Molex type 71851 or equivalent crimp terminal.

MAXIMUM OUTPUT POWER vs. AMBIENT TEMPERATURE



OUTPUT RATING:
(A) 80 Watts Max. Output Power with 300 LFM Forced Air. Open Frame or with Chassis
(B) 60 Watts Max. Output Power Convection Cooled. Open Frame or with Chassis. Singles.
(C) 50 Watts Max. Output Power Convection Cooled. Open Frame or with Chassis. Multi's.

REV. G 1/23/2025