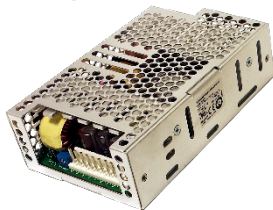


110 WATTS

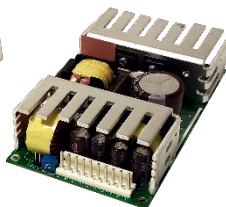
SINGLE/MULTI OUTPUT DC-DC

FEATURES:

- Compact 3" x 5" x 1.3" Size
- 2 Year Warranty
- 36-72VDC Input
- One to Four Outputs
- 4242VDC Reinforced Insulation
- Under/Overvoltage Lockout
- Size/Pin Compatible with REL-110 Series
- IEC 60601-1 3rd ed. Medical Cert.
- IEC 62368-1 2nd ed. Certification
- 0-70°C Operating Temperature
- RoHS Compliant
- Optional Chassis/Cover
- Power Good Signal








CHASSIS/COVER



OPEN FRAME

SAFETY SPECIFICATIONS

	Underwriters Laboratories File E137708/E140259	UL 60950-1:2007, 2 nd Edition AAMI/ANSI ES60601-1:2005/(R) 2012
		CB Reports/Certificates (including all National and Group Deviations) IEC 62368-1:2014, 2 nd Edition IEC 60601-1:2005/A1:2012
	UL Recognition Mark for Canada File E137708/E140259	CAN/CSA-C22.2 No. 60950-1-07, 2 nd Edition CAN/CSA-C22.2 No. 60601-1:2014
	TUV	EN 62368-1:2014, 2 nd Edition EN 60601-1:2006/A1:2013
	RoHS Directive (Recast)	(2011/65/EU of June 2011)

MODEL LISTING

MODEL	OUTPUT 1 ⁽²⁰⁾	OUTPUT 2 ⁽²⁰⁾	OUTPUT 3 ⁽¹⁹⁾	OUTPUT 4 ⁽¹⁹⁾
DC4-110-4001	+3.3V/10A ⁽¹⁷⁾	+5V/6A	+12V/2A	-12V/2A
DC4-110-4002	+5V/10A ⁽¹⁷⁾	+3.3V/6A	+12V/2A	-12V/2A
DC4-110-4003	+5V/10A ⁽¹⁷⁾	+3.3V/6A	+15V/2A	-15V/2A
DC4-110-4004	+5V/10A ⁽¹⁷⁾	-5V/6A	+12V/2A	-12V/2A
DC4-110-4005	+5V/10A ⁽¹⁷⁾	-5V/6A	+15V/2A	-15V/2A
DC4-110-4006	+5V/10A ⁽¹⁷⁾	+24V/2A	+12V/2A	-12V/2A
DC4-110-4007	+5V/10A ⁽¹⁷⁾	+24V/2A	+15V/2A	-15V/2A
DC4-110-3001	+5V/10A ⁽¹⁷⁾	+12V/3A		-12V/3A
DC4-110-3002	+5V/10A ⁽¹⁷⁾	+15V/2A		-15V/2A
DC4-110-2001	+3.3V/10A ⁽¹⁷⁾	+5V/6A		
DC4-110-2002	+5V/10A ⁽¹⁷⁾	+12V/5A		
DC4-110-2003	+5V/10A ⁽¹⁷⁾	+24V/3A		
DC4-110-2004	+12V/5A	-12V/4A		
DC4-110-2005	+15V/4A	-15V/3A		
DC4-110-1001	2.5V/22A ⁽¹⁸⁾			
DC4-110-1002	3.3V/22A ⁽¹⁸⁾			
DC4-110-1003	5V/22A ⁽¹⁸⁾			
DC4-110-1004	12V/9.2A			
DC4-110-1005	15V/7.3A			
DC4-110-1006	24V/4.6A			
DC4-110-1007	28V/3.9A			
DC4-110-1008	48V/2.3A			

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
CO - Cover
BD - Reverse Input Protection

I/O - Isolated Outputs
TS - Terminal Strip

DC4-110

OUTPUT SPECIFICATIONS

Total Output Power at 50°C ₍₁₎ (See Derating Chart)	80W 110W	Convection Cooled ^(13, 15) 300LFM Forced-Air Cooled ^(12, 14, 16)
Output Voltage Centering	Output 1: Output 2: Output 3: Output 4:	± 0.5% ± 5.0% ± 5.0% ± 5.0% (All outputs at 50% load)
Output Voltage Adjust Range	Output 1:	95 - 105%
Load Regulation	Output 1: Output 2: (4001-5 Models) Output 3: Output 4:	0.5% 5.0% 8.0% 6.0% 5.0% (10-100% load change)
Source Regulation	Outputs 1 - 4:	0.5%
Cross Regulation	Outputs 2 - 4:	5.0%
Output Noise	Outputs 1 - 4:	1.0%
Turn on Overshoot		None
Transient Response	Outputs 1 - 4	
Voltage Deviation		5.0%
Recovery Time		500µs
Load Change		50% to 100%
Output Overvoltage Protection	Output 1:	110% to 150%
Output Overpower Protection		110-160% rated Pout, cycle on/off, auto recovery
Start Up Time		5 Seconds

INPUT SPECIFICATIONS

Input Voltage Range	36-72 VDC
Input Under-Voltage Lockout	
Turn-On Voltage	29.0-35.0 VDC
Turn-Off Voltage	28.0-34.0 VDC
Input Overvoltage Shutdown	77.0-85.0 VDC
Maximum Input Current	4.2 A
Reflected Ripple Current	5 %
Efficiency	82% Typ., Full Power, 48VDC, varies by model

ENVIRONMENTAL SPECIFICATIONS

Ambient Operating	0°C to + 70°C
Temperature Range	Derating: See Power Rating Chart
Ambient Storage Temp. Range	- 40°C to + 85°C
Temperature Coefficient	Outputs 1 - 4: 0.02%/°C

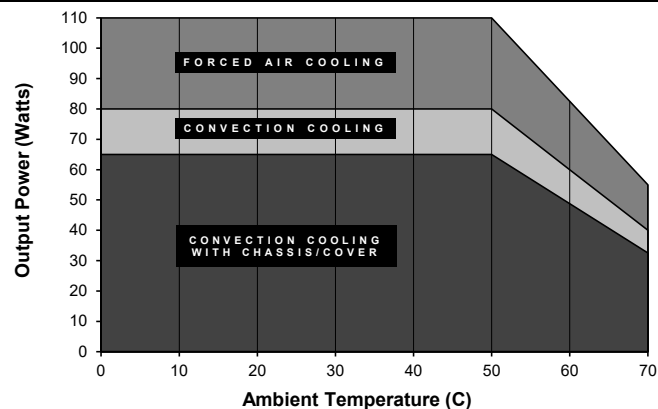
GENERAL SPECIFICATIONS

Means of Protection	
Primary to Secondary	2MOOP (Means of Operator Protection)
Primary to Ground	1MOOP (Means of Operator 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	100,000 Hours min., MIL-HDBK-217F, 25° C, GB
Weight	0.65 Lbs. Open Frame 1.15 Lbs. Chassis and Cover

EMC SPECIFICATIONS

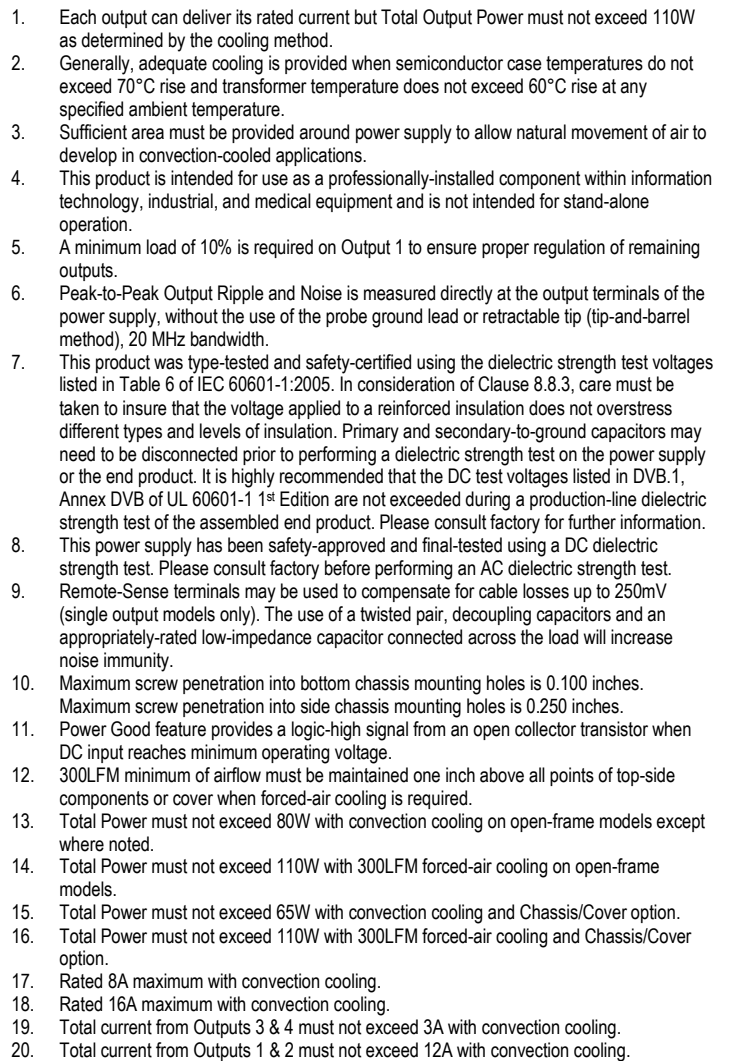
Electrostatic Discharge	EN61000-4-2	±8KV contact/ ±15KV air discharge	A
Electrical Fast Transients/Bursts	EN61000-4-4	±2KV, 5KHz/100KHz	A
Surge Immunity	EN61000-4-5	±2KV line to earth/ ±1KV line to line	A

MAXIMUM OUTPUT POWER vs. AMBIENT TEMPERATURE



All specifications are maximum at 25°C/110W unless otherwise stated, may vary by model and are subject to change without notice.

APPLICATIONS INFORMATION



CONNECTOR SPECIFICATIONS

P1	DC Input	0.156 friction lock header mates with Tyco 640250-4 or equivalent crimp terminal housing with Tyco 3-640706-1 or equivalent crimp terminal.
P2	DC Output (Single)	0.156 friction lock header mates with Tyco 770849-8 or equivalent crimp terminal housing with Tyco 3-640707-1 or equivalent crimp terminal.
P2	DC Output (Multiple)	0.156 friction lock header mates with Tyco 1-770849-0 or equivalent crimp terminal housing with Tyco 3-640707-1 or equivalent crimp terminal.
G	Ground	0.187 quick disconnect terminal.
P3	P.G./Sense (Single)	0.100 breakaway header mates with Molex 50-57-9006 or equivalent crimp terminal housing with Molex type 71851 or equivalent crimp terminal.
P3	P.G. (Multiple)	0.100 breakaway header mates with Molex 50-57-9002 or equivalent crimp terminal housing with Molex type 71851 or equivalent crimp terminal.

ALL DIMENSIONS IN INCHES (mm)