

## Ultra High Density 365 W AC-DC Power Supply



FOOTPRINT:  
W 76 x L 127 mm (W 3 x L 5 in)

### FEATURES

- 12 V to 48 V outputs available
- Universal 90 to 264 Vac input
- Typical efficiency of 90%
- Industry standard 3" x 5" footprint
- OVP, OTP and short-circuit protection
- Fanless, convection-cooled operation up to 200 W
- Power density up to 18W/in<sup>3</sup>
- Active power factor correction (PFC)
- Auxiliary fan +12V output and 5V standby
- Full ITE and medical approvals
- Compliant to worldwide safety and EMC standards

### MODEL SELECTION GUIDE

ERP Part Number	Main Output V1		12 V Auxiliary Output V2 (A)	+5 Vsb Output (A)	Maximum Power (W)	
	V1 (V)	Max. Current (A)			With Fan	No Fan
UHD365-1001	12	30.4	1	2	365	200
UHD365-1002	24	15.2	1	2	365	200
UHD365-1003	48	7.6	1	2	365	200

*For additional options of output current and output voltage, contact your sales representative or send an email to: [SaveEnergy@erp-power.com](mailto:SaveEnergy@erp-power.com)*



### APPLICATIONS

- Medical & dental electronics
- Diagnostic & imaging equipment
- LED displays
- Networking, telecom and automation equipment
- Point of sale products

## Ultra High Density 365 W AC-DC Power Supply

### 1 - ORDERING INFORMATION - MODEL DESCRIPTION

ERP Part Number	Main Output V1				Auxiliary Output V2			5 V Standby		Maximum Power (W)	
	V1 (V)	Current without Air Flow (A) <i>(note 1)</i>	Current with Air Flow (A) <i>(note 2)</i>	V1 Ripple Pk-Pk (mV)	V2 (V)	Current without Air Flow (A) <i>(note 1)</i>	Current with Air Flow (A) <i>(note 2)</i>	Current without Air Flow (A) <i>(note 1)</i>	Current with Air Flow (A) <i>(note 2)</i>	With Fan	No Fan
UHD365-1001	12	16.6	30.4	120	12	0.5	1.0	1	2.0	365	200
UHD365-1002	24	8.3	15.2	240	12	0.5	1.0	1	2.0	365	200
UHD365-1003	48	4.16	7.6	480	12	0.5	1.0	1	2.0	365	200

#### Notes:

- Total continuous output power shall not exceed 365 W with forced air, or 200 W without a fan.
- Air flow must be sufficient to keep heatsink temperatures below 110°C at 50°C ambient operation. Total power must not exceed 365 W.
- For additional options of output current and output voltage, contact your sales representative or send an email to: [SaveEnergy@erp-power.com](mailto:SaveEnergy@erp-power.com)

### 2 - INPUT SPECIFICATION

	Units	Minimum	Typical	Maximum	Notes
AC Input Voltage Range (Vin)	Vac	90	115/230	264	
Input Frequency Range	Hz	47	50/60	63	
Power Factor (PF)			0.98		At 90 Vac
Input Current	A	-	-	5	At 90 Vac
Leakage Current	µA			110 µA @ 115 Vac 275 µA @ 230 Vac	
Efficiency		-	90%	-	At 50% load

## Ultra High Density 365 W AC-DC Power Supply

### 3 - OUTPUT SPECIFICATION

	Units	Minimum	Typical	Maximum	Notes
<b>Output Voltage V1 Set-Point Accuracy</b>	%		±3		
<b>Line Regulation</b>	%		±1		From 90 to 264 Vac
<b>Load Regulation</b>	%				
V1 (Main output)			±1		
V2 (12 V auxiliary)			±5		
5V standby			±15		
<b>Cross Regulation</b>	%				
V1 (Main output)			±1		
V2 (12 V auxiliary)			±5		
5V standby			±15		
<b>Transient Response</b>	%			10	25% load change
<b>Output Ripple Voltage</b>	%		±1		<ul style="list-style-type: none"> <li>•±1.0% of nominal output voltage</li> <li>•Peak-to-peak value, measured at 20 MHz Bandwidth</li> </ul>
<b>Rise Time</b>	ms	0.2		20	
<b>Startup Time</b>	s		1		
<b>Holdup Time</b>	ms				At full load
at 115 Vac			16.6		
at 230 Vac			20		
<b>Minimum Load</b>	A	0			
<b>Temperature Drift</b>	mV/°C		±1.2		

### 4 - PROTECTION FEATURES

	Units	Minimum	Typical	Maximum	Notes
<b>Undervoltage Lockout</b>	Vac	80			No damage, auto-recovery
<b>Over-Voltage Protection</b>	%	115		130	Latched shutdown. 5 Vsb does not exceed 6.8V.
<b>Over-Current Protection</b>	%	110		150	<ul style="list-style-type: none"> <li>•No single output exceeds 150% of its rated output for more than 1 minute under any loading condition and nominal input voltage ranges.</li> <li>•The power supply auto recovers when the over load condition is removed.</li> </ul>
<b>Short-Circuit Protection</b>					Auto-recovery
<b>Over-Temperature</b>					Auto-recovery
<b>Input Fuse</b>	A		6.3		Line and Neutral
<b>Isolation Input/Output</b>	Vdc	5656			For 1 second minimum
<b>Isolation Input/Ground</b>	Vdc	5656			For 1 second minimum

## Ultra High Density 365 W AC-DC Power Supply

### 5 - EMC COMPLIANCE AND SAFETY APPROVALS

EMC Compliance				
		Standard	Condition	Criteria
Conducted EMI		EN55022 (CISPR 22)	Class A	4dB margin
Harmonic Current Emissions		IEC61000-3-2	For Class D equipment	
Voltage Fluctuations		IEC61000-3-3		
Immunity Compliance	ESD (Electrostatic Discharge)	IEC61000-4-2	15 kV air discharge, 8 kV contact discharge	A
	RF Electromagnetic Field Susceptibility	IEC61000-4-3	3 V/m, 80-1000 MHz; 80% modulated at a distance of 3 meters	A
	Electrical Fast Transient	IEC61000-4-4	± 2kV on AC power port for 1 minute; ± 1kV on signal/control lines	A
	Surge	IEC61000-4-5	± 1kV line to line, ±2kV line to earth on AC power port; ±0.5kV for outdoor cables	A
	Conducted RF Disturbances	IEC61000-4-6	3 Vrms, 0.15-80 MHz, 80% AM modulation	A
	Magnetic Field Disturbances	IEC61000-4-8	50 and 60 Hz, 3 A/m	A
	Voltage Dips & Interruptions	IEC61000-4-11	Dip to 40% for 5 cycles (100 msec) Dip to 70% for 25 cycles (500 msec) Dropout to 5% for 10 msec Interruptions > 95% for 5 s	B B B C

Safety Agency Approvals	
Agencies	VDE, UL, cUL
Standards	EN60950, IEC60950, UL 60950, EN60601-1, IEC60601, UL 60601-1

### 6 - ENVIRONMENTAL CONDITIONS

	Units	Minimum	Typical	Maximum	Notes
Operating Temperature	°C	-20		+70	50% of max power at 70°C, linearly derated from 50°C to 70°C
Storage Temperature	°C	-40		+80	
Relative Humidity	%	8		90	Operating, non-condensing
Operating Altitude	m			3000	
Shock	G			10	Half-sine 6 axis, operating
Vibration	G			2	10-300 Hz, 3 axis, operating
MTBF	Hours	200,000			At 75% load

## Ultra High Density 365 W AC-DC Power Supply

### 7 - MECHANICAL SPECIFICATION

Connector	Manufacturer and Part Number
Input Connector J1	Molex 26-60-4030 or equivalent
J1 Mating Connector	Molex 09-91-0300 or equivalent
Ground Connector	Molex 19705-4301 or equivalent
Ground Mating Connector	Molex 0190030001 or equivalent
Power Output Connector J2	Molex 39-28-1123 or equivalent
J2 Mating Connector	Molex 39-01-2120 or equivalent
Signal Output Connector J3	Molex 90130-1108 or equivalent
J3 Mating Connector	Molex 90142-0008 or equivalent

## Ultra High Density 365 W AC-DC Power Supply

### 8 - MECHANICAL DRAWING

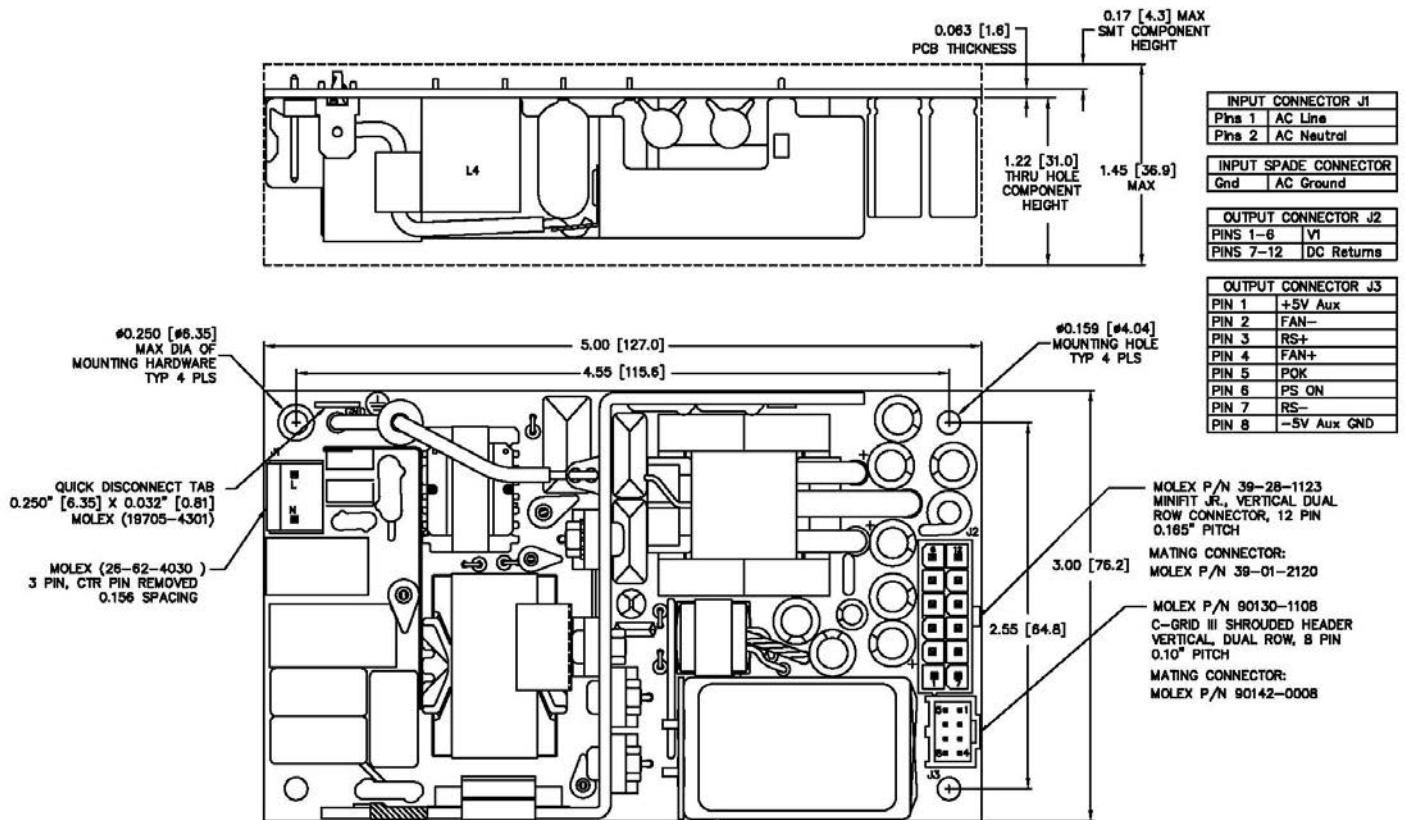


Figure 1

**USA Headquarters**  
 Tel: +1-805-517-1300  
 Fax: +1-805-517-1411  
 893 Patriot Drive, Suite E,  
 Moorpark, CA 93021, USA

**CHINA Operations**  
 Tel: +86-756-6266298  
 Fax: +86-756-6266299  
 No. 8 Pingdong Road 2  
 Zhuhai, Guangdong, China 519060

ERP Power, LLC (ERP) reserves the right to make changes without further notice to any products herein. ERP makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does ERP assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. "Typical" parameters which may be provided in ERP data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. ERP does not convey any license under its patent rights nor the rights of others. ERP products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the ERP product could create a situation where personal injury or death may occur. Should Buyer purchase or use ERP products for any such unintended or unauthorized application, Buyer shall indemnify and hold ERP and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that ERP was negligent regarding the design or manufacture of the part. ERP is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.