



Ultra High Density 365 W AC-DC Power Supply

PRODUCT DESCRIPTION

This single-output, ultra high density AC-DC power supply series is designed for mission-critical operations in medical, IT and industrial applications. It features a power density of 18W/in³ and a typical efficiency of 90%. At an output power of 365 W, in an industry standard 3"x5" footprint, the UHD365 series offers equipment designers a way to reduce system form factor and increase performance.



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/in³
- 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
UHD365-1005	15	24.3	1	2	365	200
UHD365-1006	19	19.2	1	2	365	200
UHD365-1002	24	15.2	1	2	365	200
UHD365-1007	29	12.5	1	2	365	200
UHD365-1008	32	11.4	1	2	365	200
UHD365-1009	36	10	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@ERPPowerLLC.com

APPLICATIONS

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





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I - 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

2 - OUTPUT SPECIFICATION

	Units	Minimum	Typical	Maximum	Notes
Output Voltage V1 Set-Point Accuracy	%		±3		
Line Regulation	%		±1		From 90 to 264 Vac
Load Regulation	%				
V1 (Main output)			±1		
V2 (12 V auxiliary)			±5		
5V standby			±15		
Cross Regulation	%				
V1 (Main output)			±1		
V2 (12 V auxiliary)			±5		
5V standby			±15		
Transient Response	%			10	25% load change
Output Ripple Voltage	%		±1		• ±1.0% of nominal output voltage • Peak-to-peak value, measured at 20 MHz Bandwidth
Rise Time	ms	0.2		20	
Startup Time	s		1		
Holdup Time	ms				
at 115 Vac			16.6		At full load
at 230 Vac			20		
Minimum Load	A	0			
Temperature Drift	mV/°C		±1.2		



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3 - PROTECTION FEATURES

	Units	Minimum	Typical	Maximum	Notes
Undervoltage Lockout	Vac	80			No damage, auto-recovery
Over-Voltage Protection	%	115		130	Latched shutdown. 5 Vsb does not exceed 6.8V.
Over-Current Protection	%	110		150	- No single output exceeds 150% of its rated output for more than 1 minute under any loading condition and nominal input voltage ranges. - The power supply auto recovers when the over load condition is removed.
Short-Circuit Protection					Auto-recovery
Over-Temperature					Auto-recovery
Input Fuse	A		6.3		Line and Neutral
Isolation Input/Output	Vdc	5656			For 1 second minimum
Isolation Input/Ground	Vdc	5656			For 1 second minimum

4 - 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 Interrupts > 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



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5 - 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

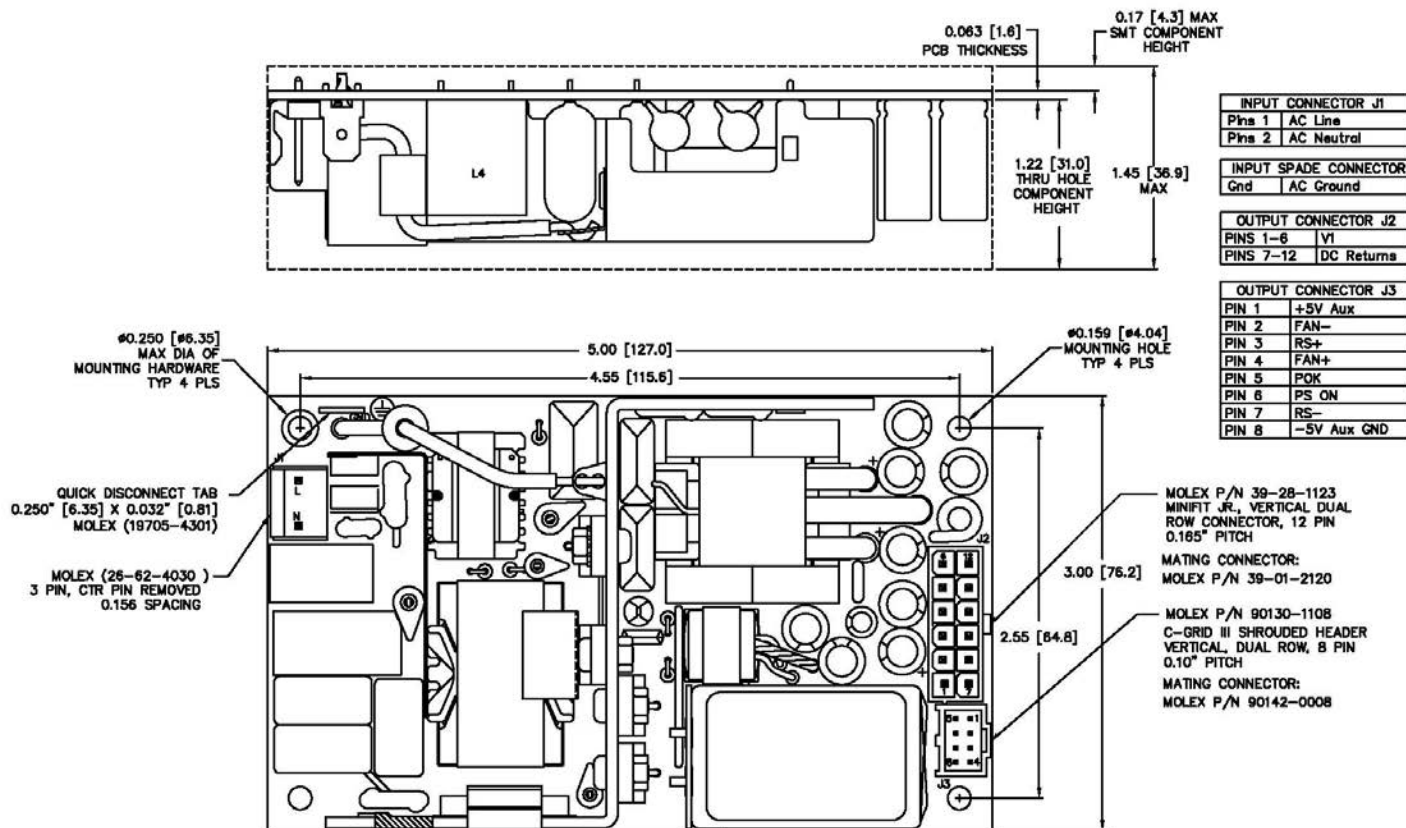


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6 - MECHANICAL SPECIFICATION

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

7 - MECHANICAL DRAWING





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8 - 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) (note 1)	Current with Air Flow (A) (note 2)	V1 Ripple Pk-Pk (mV)	V2 (V)	Current without Air Flow (A) (note 1)	Current with Air Flow (A) (note 2)	Current without Air Flow (A) (note 1)	Current with Air Flow (A) (note 2)	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
UHD365-1005	15	13.3	24.3	150	12	0.5	1.0	1	2.0	365	200
UHD365-1006	19	10.5	19.2	190	12	0.5	1.0	1	2.0	365	200
UHD365-1007	29	6.9	12.5	290	12	0.5	1.0	1	2.0	365	200
UHD365-1008	32	6.2	11.4	320	12	0.5	1.0	1	2.0	365	200
UHD365-1009	36	5.5	10	360	12	0.5	1.0	1	2.0	365	200

Notes:

1. Total continuous output power must not exceed 200 W.
2. Air flow must be sufficient to keep heatsink temperatures below 110°C at 50°C ambient operation. Total power must not exceed 365 W.

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