

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/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 |
| UHD365-1002 | 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

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) (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 |

Notes:

1. Total continuous output power shall not exceed 365 W with forced air, or 200 W without a fan.
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.
3. For additional options of output current and output voltage, contact your sales representative or send an email to: 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 |
|--------------------------------------|-------|---------|---------|---------|---|
| 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 | | <ul style="list-style-type: none"> • ±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 | | |

4 - 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 | <ul style="list-style-type: none"> • 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 |

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

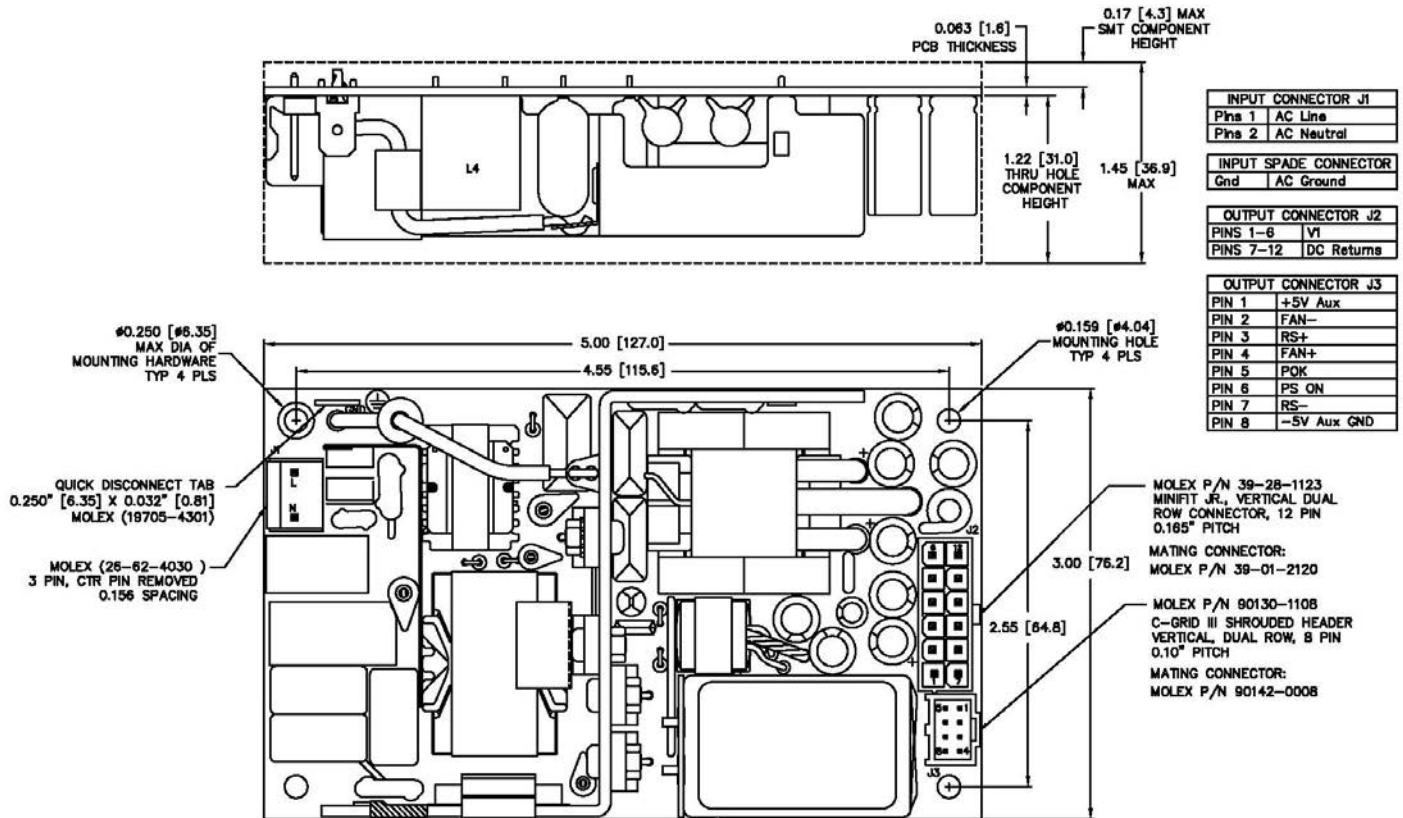


Figure 1

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.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

ERP Power:

[UHD365-1002](#) [UHD365-1006](#) [UHD365-1003](#) [UHD365-1008](#) [UHD365-1009](#) [UHD365-1005](#) [UHD365-1007](#)
[UHD365-1001](#)