

# 300 WATTS

## CE-300 SERIES AC-DC

### FEATURES:

- RoHS Compliant
- Universal 85-264 VAC Input
- Compact 4.9" x 8.5" x 1.95 Size
- 2 Year Warranty
- One to Five Tightly Regulated Outputs
- EN 60950-1 ITE Certification
- Class B Emissions per EN 55022
- Harmonic Current per EN 61000-3-2
- EMC to EN 61000-6-2 and EN 60601-1-2



FAN/COVER

### SAFETY SPECIFICATIONS

|         |                                                     |                                                                                                        |
|---------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| General | Protection Class: I                                 |                                                                                                        |
|         | Overvoltage Category: II                            |                                                                                                        |
|         | Pollution Degree: 2                                 |                                                                                                        |
|         | Underwriters Laboratories File E137708/E140259      | UL 60950-1 2 <sup>nd</sup> Edition, 2007                                                               |
|         |                                                     | CB Certificate per IEC 60950-1:2005 2 <sup>nd</sup> Edition +A1:2009 including all National Deviations |
|         | UL Recognition Mark for Canada File E137708/E140259 | CAN/CSA-C22.2 No. 60950-1-07, 2 <sup>nd</sup> Edition                                                  |
|         | TUV                                                 | EN 60950-1/A12:2011                                                                                    |
|         | Low Voltage Directive RoHS Directive (Recast)       | (2006/95/EC of December 2006) (2011/65/EU of June 2011)                                                |

### MODEL LISTING

| MODEL NO.   | OUTPUT 1 | OUTPUT 2  | OUTPUT 3 | OUTPUT 4  | OUTPUT 5 |
|-------------|----------|-----------|----------|-----------|----------|
| CE-300-5001 | +5V/40A  | +24V/4A   | +12V/6A  | -5V/1A    | -12V/2A  |
| CE-300-5002 | +5V/40A  | +12V/8A   | -12V/6A  | -5V/1A    | +24V/2A  |
| CE-300-5003 | +5V/40A  | +12V/8A   | +24V/3A  | -15V/1A   | +15V/2A  |
| CE-300-5004 | +5V/40A  | +24V/4A   | 24V/3A   | -12V/1A   | +12V/2A  |
| CE-300-5005 | +24V/8A  | +12V/8A   | +5V/6A   | -15V/1A   | +15V/2A  |
| CE-300-5006 | +24V/8A  | 24V/4A    | +5V/6A   | -15V/1A   | +15V/2A  |
| CE-300-5012 | +5V/40A  | +28V/3A   | +12V/6A  | -5V/2A    | -12V/2A  |
| CE-300-5013 | +5V/40A  | +3.3V/6A  | +24V/4A  | -5V/1A    | 12V/2A   |
| CE-300-4001 | +5V/40A  | +12V/8A   | -5V/5A   |           | -12V/2A  |
| CE-300-4002 | +5V/40A  | +24V/4A   | +12V/6A  |           | -12V/2A  |
| CE-300-4003 | +5V/40A  | +24V/4A   | +15V/4A  |           | -15V/2A  |
| CE-300-4004 | +24V/8A  | +12V/8A   | +5V/6A   |           | -12V/2A  |
| CE-300-4005 | +5V/40A  | -5.2V/12A | +12V/6A  |           | -12V/2A  |
| CE-300-4006 | +24V/8A  | +12V/8A   |          | -12V/1.5A | 5V/2A    |
| CE-300-4007 | +24V/8A  | +15V/6A   | +5V/6A   |           | -15V/2A  |
| CE-300-4009 | +24V/8A  | +12V/8A   | +5V/10A  |           | -12V/2A  |
| CE-300-4011 | +5V/40A  | +3.3/12A  |          | +12V/2A   | -12V/2A  |
| CE-300-3001 | +5V/40A  | +12V/8A   | -12V/6A  |           |          |
| CE-300-3002 | +5V/40A  | +12V/8A   | +24V/3A  |           |          |
| CE-300-3003 | +5V/40A  | +15V/6A   | -15V/4A  |           |          |
| CE-300-3004 | +12V/16A | +12V/8A   | +5V/6A   |           |          |
| CE-300-3006 | +5V/40A  | +3.3/12A  |          | +12V/2A   |          |
| CE-300-2001 | +5V/40A  | +24V/4A   |          |           |          |
| CE-300-2002 | +12V/16A | -12V/8A   |          |           |          |
| CE-300-2003 | +15V/13A | -15V/6A   |          |           |          |
| CE-300-2004 | +24V/8A  | -24V/4A   |          |           |          |
| CE-300-1001 | 5V/60A   |           |          |           |          |
| CE-300-1002 | 12V/25A  |           |          |           |          |
| CE-300-1003 | 15V/20A  |           |          |           |          |
| CE-300-1004 | 24V/12A  |           |          |           |          |

### OUTPUT SPECIFICATIONS

|                                          |                                                 |                                                              |
|------------------------------------------|-------------------------------------------------|--------------------------------------------------------------|
| Total Output Power                       | 300W                                            |                                                              |
| Output Voltage Centering                 | Outputs 1 – 5:                                  | ± 0.5% (All outputs at 50% load)                             |
| Output Voltage Adjust Range              | Outputs 1 – 3:                                  | 95 - 105%                                                    |
| Load Regulation                          | Outputs 1 – 5:                                  | 1.0% (10-100% load change)                                   |
| Source Regulation                        | Outputs 1 – 5:                                  | 0.5%                                                         |
| Cross Regulation                         | Outputs 2 – 5:                                  | 0.5% (Output 1 load varied 50-100%)                          |
| Output Noise                             | Outputs 1 - 5:                                  | 1.0%                                                         |
| Turn on Overshoot                        | None                                            |                                                              |
| Transient Response                       | Outputs 1 – 5                                   |                                                              |
| Voltage Deviation                        | 5.0%                                            |                                                              |
| Recovery Time                            | 2mS                                             |                                                              |
| Load Change                              | 50% to 100%                                     |                                                              |
| Output Overvoltage Protection (Optional) | Output 1:                                       | 120% to 150% Shuts down all outputs. Cycle input to restart. |
| Output Overpower Protection              | 340 W Min., Outputs cycle on/off, auto recovery |                                                              |
| Output Overcurrent Protection            | Outputs 2,3,4 & 5, 110% Min                     |                                                              |
| Hold Up Time                             | 20 mS min., 300W Output, 120V Input             |                                                              |
| Start Up Time                            | 3 Seconds                                       |                                                              |

### INPUT SPECIFICATIONS

|                     |                          |  |
|---------------------|--------------------------|--|
| Source Voltage      | 85 – 264 Volts AC        |  |
| Frequency Range     | 47 – 63 Hz               |  |
| Source Current      |                          |  |
| True RMS            | 5.8A at 85V Input        |  |
| Peak Inrush         | 20A                      |  |
| Peak Repetitive     | 8.2A at 85V Input        |  |
| Harmonic Distortion | 0.05                     |  |
| Efficiency          | .68-.80(Varies by model) |  |
| Power Factor        | 0.90 (300 W, 230V)       |  |

### ENVIRONMENTAL SPECIFICATIONS

|                             |                                  |          |
|-----------------------------|----------------------------------|----------|
| Ambient Operating           | 0° C to + 50° C                  |          |
| Temperature Range           | Derating: See Power Rating Chart |          |
| Ambient Storage Temp. Range | - 40° C to + 85° C               |          |
| Temperature Coefficient     | Outputs 1 – 5:                   | 0.02%/°C |

### GENERAL SPECIFICATIONS

|                                    |                                                                               |  |
|------------------------------------|-------------------------------------------------------------------------------|--|
| Dielectric Strength <sup>(8)</sup> |                                                                               |  |
| Reinforced Insulation              | 4242 VDC, Primary to Secondary, 1 Sec.                                        |  |
| Basic Insulation                   | 2121 VDC, Primary to Ground, 1 Sec.                                           |  |
| Operational Insulation             | 500 VDC, Secondary to Ground, 1 Sec.                                          |  |
| Power Fail Signal                  | Logic low with input power failure 2 mS minimum prior to Output 1 dropping 1% |  |
| Remote On/Off (optional)           | Contact closure shuts off all outputs                                         |  |
| Remote Sense(outputs 1 & 2)        | 250mV compensation of output cable losses                                     |  |
| Weight                             | 3.30 Lbs.                                                                     |  |

### ELECTROMAGNETIC COMPATIBILITY SPECIFICATIONS

|                                |               |                                                                                                         |
|--------------------------------|---------------|---------------------------------------------------------------------------------------------------------|
| Electrostatic Discharge        | EN 61000-4-2  | +/- 8kV Contact Discharge<br>+/- 8kV Air Discharge                                                      |
| Radiated Electromagnetic Field | EN 61000-4-3  | 80MHz-2.5GHz, 10/m, 80% AM                                                                              |
| EFT/Bursts                     | EN 61000-4-4  | +/- 2 kV                                                                                                |
| Surges                         | EN 61000-4-5  | +/- 1 kV Differential Mode<br>+/- 2 kV Common Mode                                                      |
| Conducted Immunity             | EN 61000-4-6  | .15 to 80MHz, 3V, 80% AM                                                                                |
| Voltage Dips and Interruptions | EN 61000-4-11 | 30% Reduction, 500ms<br>95% Reduction, 10ms<br>60% Reduction, 1s (Criteria B)<br>95% Reductions, 5000ms |
| Radiated Emissions             | EN 55022      | Class B                                                                                                 |
| Conducted Emissions            | EN 55022      | Class B                                                                                                 |
| Harmonic Current Emissions     | EN 61000-3-2  |                                                                                                         |

### ORDERING INFORMATION

Please specify the following optional features when ordering:

RE – Remote Inhibit

OVP - Overvoltage protection

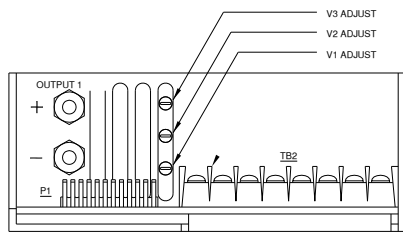
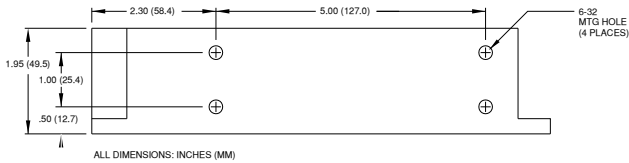
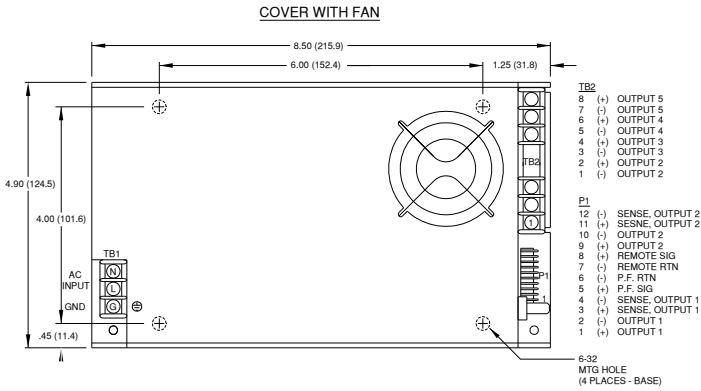
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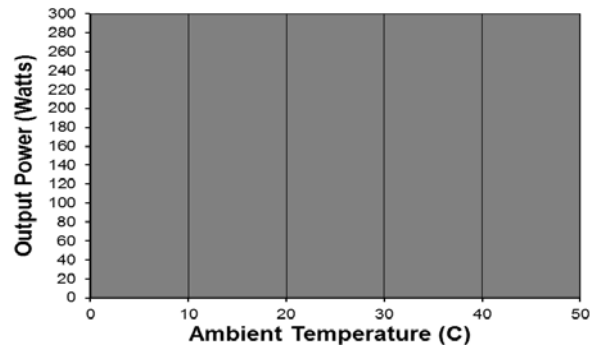
## CE-300 SERIES MECHANICAL SPECIFICATIONS



## APPLICATIONS INFORMATION

- Semiconductor case temperatures must not exceed 110°C.
- Each output can deliver its rated current but total output power must not exceed 300 watts.
- Internal fan provides airflow to cool internal components. Area around fan and vent openings must be kept clear to allow unrestricted airflow in and out of these openings. This product is intended for use as a professionally installed component within information technology.
- A minimum load of 10% is required on output one to ensure proper regulation of remaining outputs.
- Remote sense terminals may be used to compensate for cable losses up to 250mV. The use of a twisted pair is recommended as well as a decoupling capacitor (0.1 - 10µF) and a capacitor of 100µF/amp connected across the load side.
- 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, 20 MHz bandwidth.
- This product was type tested and safety certified using the dielectric strength test voltages listed in Table 5B of UL 60950-1. In consideration of Clause 5.2.2, care must be taken to insure that the voltage applied to a reinforced insulation does not overstress basic insulation. Secondary to ground capacitors may need to be removed prior to performing a dielectric strength type test on the end product. It is highly recommended that the DC equivalent test voltages be used when performing a production-line dielectric strength test of the assembled end product. Please consult factory before performing an AC dielectric strength test.
- 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.
- Maximum screw penetration into chassis mounting holes is .188 inches.

## MAXIMUM OUTPUT POWER VS. AMBIENT TEMPERATURE



## CONNECTOR SPECIFICATIONS

|       |              |                                                                                                                                      |
|-------|--------------|--------------------------------------------------------------------------------------------------------------------------------------|
| TB1   | AC Input     | Terminal block with 6-32 screws on 0.325 centers mates with #6, 0.26 inch wide spade terminals. (10 in-lb max)                       |
| TB2   | DC Output    | Terminal block with 6-32 screws on 0.325 centers mates with #6, 0.26 inch wide spade terminals. (10 in-lb max)                       |
| + / - | DC Output    | 10-32 threaded studs mate with #10 ring tongue terminals.                                                                            |
| P1    | Option/Sense | .100 breakaway header mates with Molex 22-01-2127 or equivalent crimp terminal housing with Molex 6459 or equivalent crimp terminal. |

## NOTES

Consult factory for alternate output configurations.  
 Consult factory for positive, negative or floating outputs.  
 Refer to Applications Information for complete output power ratings.  
 All specifications are maximum at 25° C, 300W unless otherwise stated, may vary by model and are subject to change without notice.

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