**Series CC1000**

**CAPACITOR CHARGING POWER SUPPLIES**

**FEATURES**

- 1kW output power
- High efficiency zero current and voltage switching techniques
- Excellent pulse to pulse repeatability characteristics
- Positive or negative polarity
- Compact size
- Low weight
- RoHS compliant to EU Directive 2002/95/EC
- CE marked

**DESCRIPTION**

The Series CC1000 is a range of high performance, high reliability, capacitor charging power supplies intended for use as a component power supply in various applications. These include industrial laser systems, non-contact medical environments, capacitor charging circuits, intense pulsed light systems, Nd:YAG and Er:YAG lasers. The Series CC1000 features high frequency switching techniques to combine a power factor corrector and resonant converter in a compact unit. This range has been designed to allow customisation to suit specific OEM applications.

**SPECIFICATION**

**Output Power:**
1kW output power.

**Output Voltage:**
0 to 2kV max depending on model.

**Output Current:**
4000mA max depending on model.

**Input Voltage:**
90-255V AC depending on model.

**Input Current:**
15A max.

**Polarity:**
Positive or negative to order.

**Power Factor Correction:**
Power factor corrected to meet the requirements of the EC EMC directive for line harmonics (BS EN61000-3-2).

**Charging Rate:**
1000 Joules per second average (equivalent to 1kW average). Peak power during the charging cycle may be up to double this. Peak charging rate up to 1100 J/s.

**Stored Energy:**
Less than 0.3 Joules.

**Stability:**
±0.2% per hour, after 1 hour warm-up.

**Pulse to Pulse Repeatability:**
±0.2% to 300Hz.
Please contact our sales team for ratings outside this range.

**Line Regulation:**
±0.2% of rated output.

**Temperature Coefficient:**
100ppm/oC over operating temperature range.

**Operating Temperature:**
0 to +45°C.

**Storage Temperature:**
-40°C to -85°C.

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Humidity:  
90% maximum relative humidity non-condensing.

Altitude:  
Sea level to 2000m (6500 ft).

Installation Category:  
1 (BS EN61010-1)

Pollution Degree:  
2 (BS EN61010-1)

Control:  
The power supply is operated via the 15-way D-type connector situated on the rear panel. Full control and monitoring functions are available by this method.

Cooling:  
Forced air cooling by an integrated fan. Air insulated HV section.

Protection:  
The units are fully protected against flashover and continuous short circuit (no trip).

EMC:  
The Series CC1000 is intended for installation as a component of a system. Basic EMC filtering is provided.

Safety:  
The Series CC1000 meets the requirements of the Low Voltage Directive (LVD), 2006/95/EC by complying with BS EN61010 when it is installed as a component part of compliant equipment. It is CE marked accordingly.

RoHS:  
The Series CC1000 meets the requirements of EU Directive 2002/95/EC on the Restriction of use of Certain Hazardous Substances in electrical and electronic equipment (RoHS).

Mechanical Specification:  
Dimensions: See outline drawing.  
Weight: 2.5kg (5.5 lb)

Outputs and Ordering Information:  
The standard range of units available is as follows:

<table>
<thead>
<tr>
<th>Model no</th>
<th>Output Voltage</th>
<th>Output Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC1000-501*</td>
<td>500V</td>
<td>4000mA</td>
</tr>
<tr>
<td>CC1000-102*</td>
<td>1kV</td>
<td>2000mA</td>
</tr>
<tr>
<td>CC1000-152*</td>
<td>1.5kV</td>
<td>1300mA</td>
</tr>
<tr>
<td>CC1000-202*</td>
<td>2kV</td>
<td>1000mA</td>
</tr>
</tbody>
</table>

* Please add suffix P (Positive) or N (negative) to the model number for the required polarity.

For voltages not listed above, please contact our sales team.

Interface Connection:
Mains: Screw terminals.  
Safety Earth: M5 stud.  
HV Output: Flying coaxial lead.  

Control interface via a 15-way female D-type connector:

1. ENABLE/RESET  
2. PFC STATUS INDICATION  
3. NOT USED  
4. NOT USED  
5. VOLTAGE PROGRAM  
6. SUMMARY TRIP INDICATION  
7. PEAK OUTPUT VOLS  
8. VOLTAGE MONITOR  
9. +15V  
10. USER INTERLOCK  
11. +15V  
12. NOT USED  
13. END OF CHARGE INDICATION  
14. GROUND  
15. NOT USED

These component power supplies meet the requirements of EC Directive 2006/95/EC (LVD).
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Drawing dimensions are in mm (inches)
Design developments may result in specification changes