



Features:

- Delivers up to 100 times the energy of conventional capacitors and delivers ten times the power of ordinary batteries
- Is optimized for individual applications through its capacity to repeatedly charge and discharge
- Designed for smaller and lighter-weight products
- Offers instantaneous ride-through power
- UL recognized



PC1000

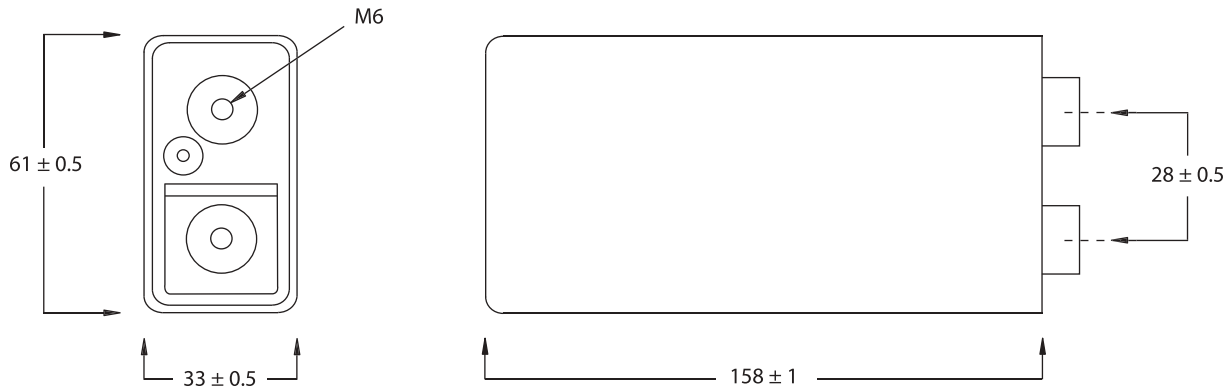
BOOSTCAP® Ultracapacitor

BOOSTCAP® Ultracapacitors provide extended power availability, allowing critical information and functions to remain available during dips, sags, and outages in the main power source. In addition, it can relieve batteries of burst power functions, thereby reducing costs and maximizing space and

energy efficiency. The ultracapacitor features a cylindrical design and an electrostatic storage capability that can cycle hundreds of thousands of charges and discharges without performance degradation.

BATTERY vs. ULTRACAPACITOR vs. CAPACITOR COMPARISON

| Available Performance | Lead Acid Battery | Ultracapacitor | Conventional Capacitor |
|-----------------------------|-------------------|-------------------|--|
| Charge Time | 1 to 5 hours | 0.3 to 30 seconds | 10 ⁻³ to 10 ⁻⁶ seconds |
| Discharge Time | 0.3 to 3 hours | 0.3 to 30 seconds | 10 ⁻³ to 10 ⁻⁶ seconds |
| Energy (Wh/kg) | 10 to 100 | 1 to 10 | <0.1 |
| Cycle Life | 1,000 | >500,000 | >500,000 |
| Specific Power (W/kg) | <1000 | <10,000 | <100,000 |
| Charge/discharge efficiency | 0.7 to 0.85 | 0.85 to 0.98 | >0.95 |



NOTES:
1) DIMENSIONS ARE IN (mm)

Specifications

| | | |
|--------------------------------------|---------------------------|--------------------------------------|
| Capacitance | • 1200 Farads (DCC, 25°C) | |
| Capacitance Tolerance | • -10%/+30% | |
| Voltage | Continuous | • 2.5 V |
| | Peak | • 2.7 V |
| Series Resistance | DC | • 1.3 mΩ (-25%/+25%) |
| | 1 kHz | • 0.9 mΩ (-25%/+25%) |
| Current (Rated)^{1,2} | • 300 A | |
| Stored Energy | • 3750 J | |
| Leakage Current | • 3 mA (72h, 25°C) | |
| Weight | • 420 g | |
| Volume | • .318 L | |
| Temperature³ | Operating | • -40° C to 70° C |
| | Storage | • -40° C to 85° C |
| Life Time (25°C) | • 10 y | ΔC >20%, ESR < 200% of initial value |
| Cyclability (25°C, I = 20 A) | • 500,000 | ΔC >20%, ESR < 200% of initial value |

The PC1000 is a 1200 farad ultracapacitor that caches 3750 Joules of energy at a nominal voltage of 2.5V. Measuring 158 x 61 x 33 mm, the device is ideal for industrial, UPS, hybrid electric vehicle, and fuel cell applications, or for any other application requiring pulse power, high cycle reliability, and/or low maintenance.

The PC1000 is charged from and used in conjunction with a primary power supply — whether that power supply is a battery, fuel cell, or generator. Through its small size and its ability to relieve power intensive systems of peak power functions, the ultracapacitor drastically extends a system's life while reducing its overall cost and size.

The PC1000 is also an ideal source of back-up power and pulse. It reduces the significant cost and safety risks that result from power interruptions to, for example, an industrial plant or hospital during dips, sags, and outages in the main power supply. The PC1000 is capable of accepting charge at the identical rate of discharge.

Physical Characteristics

| | |
|------------------------------------|-------------------------------|
| Dimensions (Reference only) | • 158 x 61 x 33 mm (+/- 1 mm) |
|------------------------------------|-------------------------------|

NOTES

- ¹ Rated current: 5 sec discharge rate to ½V
- ² Device can withstand short circuit current if kept within the operating temperature
- ³ Steady state case temperature

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