

SM0062-018-P



APPLICATIONS

- Wind Turbine Pitch Control
- Engineering Machinery
- Industrial Equipment
- UPS and Telecom Systems
- AGV



FEATURES & ADVANTAGES

- One Million Cycle Life
- High Power Density
- Wide Temperature Range: -40°C to +65°C
- Compact Size, Lightweight



Specifications

Capacitance	Rated ¹	62F
	Tolerance	-0/+20%
Voltage	Rated	18V DC
	Surge ²	18.6V DC
ESR	ESR (DC) - maximum initial	22mΩ
Current	Maximum leakage ³	25mA
	Maximum peak	200A
	Maximum continuous	19A RMS
Energy Storage	Maximum energy ⁴	2.8Wh
	Usable energy ⁵	2.1Wh
	Volumetric energy density ⁶	2.5Wh/L
	Gravimetric energy density ⁷	4.3Wh/kg
Power	Power density ⁸	2719W/kg

Temperature

Temperature Characteristics	Operating temperature range	-40°C to +65°C
	Storage temperature range	-40°C to +70°C

Monitor and Control

Alarm Monitor	Over voltage	N/A
	Temperature sensor	N/A

Safety

Safety	Short circuit current	640A
	500V DC Insulation resistance	≥100MΩ
	5600V DC Leakage current	≤10mA
	Environmental ingress protection	IP54

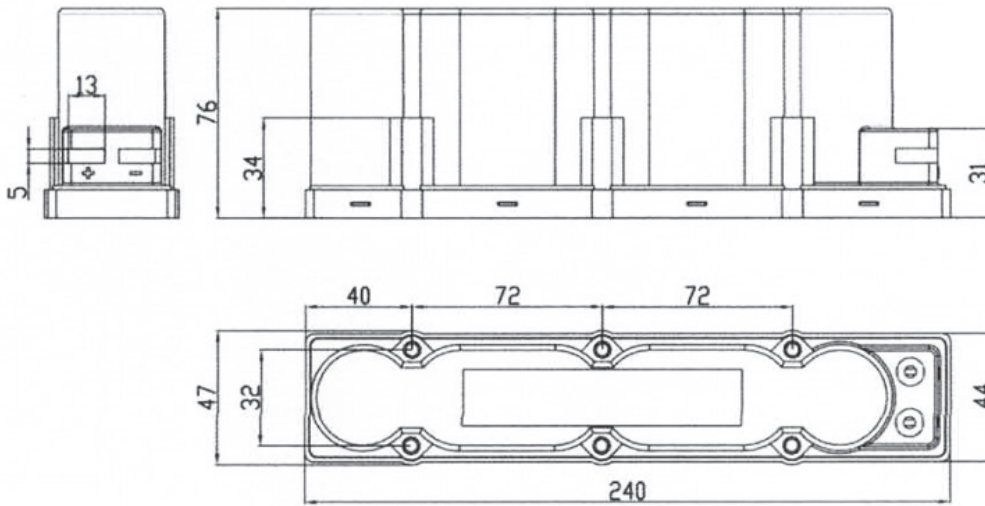
Service Lifetime

Endurance	Product held at rated voltage in 65°C environment for 1500 hours	
	Change in capacitance (% drop from rated)	≤20%
	Change in ESR (% increase from maximum initial)	≤100%
DC Life	Product held at rated voltage in 25°C environment	
	Life (projected)	10+ years
	Change in capacitance (% drop from rated)	≤20%
	Change in ESR (% increase from maximum initial)	≤100%
Cycle Life	Cycling from rated voltage to 50% voltage under constant current in 25°C environment	
	Life (projected)	1,000,000 cycles
	Change in capacitance (% drop from rated)	≤20%
	Change in ESR (% increase from maximum initial)	≤100%
Storage	Stored uncharged in original packaging in 25°C environment	
	Life	4 years

Physical Characteristics

Mechanical	Vibration	GB/T 11287-2000
	Transportation vibration	GB/T 4798.2-2008
	Shock	GB/T 14537-1993

Outline Drawings:



Weight and Size:

Weight: ≤.65 kg | **Size: (Typical value):** 240*47*78 (L*W*H) mm

Naming Rules:

Type	Capacitance	Dash	Rated Voltage	Dash	CMS - Capacitor Management/Monitoring
SM Supercapacitor Module	0062 = 62F	-	018 = 18V	-	P = Passive balancing

Notes:

1. Measure capacitance and DC internal resistance at 25°C under specified test current per Figure 1
2. Maximum voltage is non-repeatable and duration cannot exceed 1s
3. Corresponding current value after 72 hours of rated voltage at 25°C

$$4. 0.5C(V_{nom}^2)/3600$$

$$5. 0.5C(V_{nom}^2 - 0.5V_{nom}^2)/3600$$

$$6. \text{Max energy (Wh)} / \left(\frac{L \times W \times H \text{ (mm)}}{1 \times 10^6} \right)$$

$$7. \text{Max energy (Wh)} / \text{Weight (kg)}$$

$$8. \text{Per IEC62391-2, } P_d = \frac{0.12V^2}{ESR_{DC} \times \text{Weight(kg)}}$$

CAP/ESR Measurement Waveform

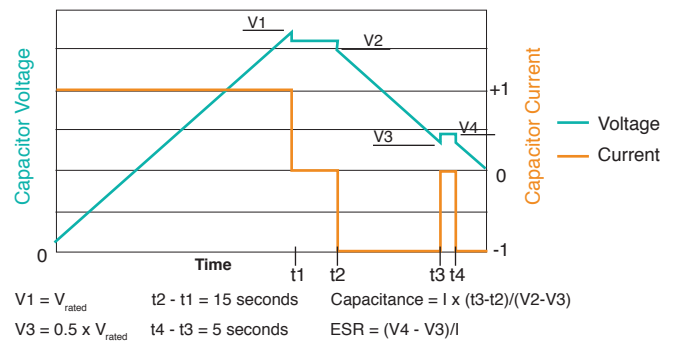


Figure 1

Precautions:

- This product may vent or rupture if overcharged, reverse charged, incinerated or heated above 100°C
- Do not crush, mutilate, or disassemble
- Do not dispose of unit in trash

To ensure optimal life, LICAP recommends operating the module below rated voltage. Please contact LICAP applications engineering for advice.



Specifications are subject to change without notice.