

## SIRIUS ENERGY STORAGE MODULE TECHNICAL DATA SHEET

Part Number: 1000-12-B-0.6C-A-G

Version Date: 05-10-18

Nominal Voltage	12VDC
Voltage Range	11VDC – 13.5VDC
Capacity	1000Wh
Maximum Charge Rate (0% -100% SOC)	50A
Maximum Discharge Rate (100% - 0% SOC)	50A
Maximum Charging Voltage	13.5VDC
Internal Resistance	≤1mΩ
Supercap cell DC to DC Roundtrip efficiency (@50A)	99.1%
Supercap cell Operating Temperature <sup>1</sup>	-30°C to 85°C
Galvanic Isolation	1500V
Projected Cycle Life <sup>2,3</sup>	1,000,000
Projected Calendar Life <sup>3,4</sup>	45 years
Shelf Life <sup>5</sup>	10 years
Warehousing	Can be stored at any SOC without affecting cycle life
Remote Control Input	Battery Self-Check
Terminal Type	F12
Module Casing Material	Aluminium
Dimensions (w x d x h)	1560mm x 78mm x 117 mm
Weight	Approx.23kg
Supercap Cell Self-discharge <sup>6</sup>	2% per month
Data Available	Energy (kWh) delivered to date on the LCD Display
Alarm	Audible alarm in the event of Over-Charge, Over-Discharge, Over-Temperature, Over-Current
CE Certification <sup>7</sup>	EN55032:2015, EN55024:2010, EN61000-4-2:2009, EN61000-43:2006+A1:2008+A2:2010
<b>Precautions</b>	
Alarm	In case of alarm, immediately rectify / attend to the cause of the alarm
Physical Damage	In case the module is physically damaged due to any event, do not install and energize the module under any circumstances and contact an authorized technician
Short Circuit	Ensure precautions to prevent short-circuit under all circumstances
Galvanic isolation	When connecting to external devices ensure that galvanic isolation does not exceed 1500V
Charge / Discharge Current	Under no circumstances must the charge / discharge current exceed 50A
Charging Voltage	Under no circumstances must the charging voltage exceed 13.5VDC for more than 60 seconds.
Charge Cycle	During charge cycle ensure never to exceed constant voltage of 13.5VDC and constant current of 50A
Series Connection	All modules must be at 100% SOC before connecting in series

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Maximum number of modules that can be connected in series <sup>8</sup>	8 with Module Combiner Please consult with Kilowatt Labs or its Reseller when connecting the modules in series. Under no circumstances should more than 3 modules be connected in series without the Module Combiner
Maximum number of modules that can be connected in parallel	No limit
Series – Parallel Connection	Modules cannot be connected in a series – parallel combination under any circumstances

<sup>1</sup>Cycle life may vary if the module is to be operated continuously outside a temperature range of -10°C to 55°C, and/or at C-rates higher than the maximum charge/discharge rate specified in this spec sheet. Please consult Kilowatt Labs or its Reseller prior to deploying the module in such applications.

<sup>2</sup>Projected Cycle life of supercap cells.

<sup>3</sup>Additional terms and conditions, including a limited warranty, will apply at the time of purchase.

<sup>4</sup>Projected Calendar life of supercap cells from the date of first operation

<sup>5</sup>Shelf life is the life of the module (in years) from the date it is manufactured to the time it is first operated

<sup>6</sup>Self-discharge for the module is 2% per month if idle (not charging or discharging) AND in Sleep Mode (switched off). If the module is not in sleep mode, then self-discharge may vary depending on ambient temperature.

<sup>7</sup>CE certification is completed for supercap cells

<sup>8</sup>Consult Kilowatt labs or its Reseller for information on connecting modules in series.

Product dimensions are for reference only unless otherwise identified and may change without notice.  
For critical applications, please contact Kilowatt Labs, Inc., or its Reseller.