

SIRIUS ENERGY STORAGE MODULE TECHNICAL DATA SHEET

Part Number: 6700-48-B-1.4C-M-SD-L-A-G Version Date: August 2019

PERFORMANCE SPECIFICATIONS	Voltage (Nominal)	48 V _{dc}
	Maximum Charge Voltage	54 V _{dc}
	Discharge Cut-Off Voltage	44 V _{dc}
	Total Energy	6700 Wh
	Maximum Charge Rate	200 A
	Maximum Discharge Rate	200 A
	Module Self Discharge ¹	2% per month Module switched OFF
ENVIRONMENTAL SPECIFICATIONS	Cell Operating Temperature ³	-30 °C to 80 °C
	Operating Humidity	Non-Condensing
MECHANICAL SPECIFICATIONS	Dimensions (w × d × h)	535mm x 550mm x 330mm
	Weight	Approx.105kg
	Module Casing Material	Aluminum
	Terminal Type	F12
SMART FEATURES	Monitoring Data	Total Cell Voltage, Individual Cell Voltages, Current, Temperature, and Energy
	Remote control (optional)	Via Sirius Remote Control
	Communication and Connectivity	USB
	Alarm	Audible alarm in the event of Over/under-Voltage, Over-Current, Over Temperature
	Password Protection with Tilt Sensor	In the event of starting and after tilting of the Module.
SIRIUSVIEW SOFTWARE	Module Monitoring	Current, Total Voltage, minimum and maximum Voltages, Temperatures, Total Energy delivered, Graphs
	System Monitoring	Modules Monitoring (connected in parallel or series)
MODULE SERVICE LIFE	Projected Cycle Life ^{4,5}	1 million cycles
	Projected Calendar Life ^{5,6}	45 years
	Shelf Life ⁷	10 years
	Warehousing	Can be stored at any SOC without affecting cycle life
SAFETY PERFORMANCE	Over/under voltage	Hardware protection, Module shut down
	Over Current	Hardware protection, Module shut down
	Over temperature	Hardware protection, Module shut down
	Additional Safety	2× DC Circuit Breaker + SSR Protection
COMPLIANCE⁸ INFORMATION	EN55032:2015, EN55024:2010, EN61000-4-2:2009, EN61000 EN61000:2008+A2:2010	
PRECAUTIONS	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 your Reseller.

This technical data sheet may change without notice and at the sole discretion of Kilowatt Labs, Inc.

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	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 1000V.
	Charge Current	Under no circumstances must the charge current exceed 200 A.
	Discharge Current	Under no circumstances must the discharge current exceed 200 A.
	Charging Voltage	Under no circumstances must the charging voltage exceed 54 V _{dc} for more than 60 seconds.
	Charge Cycle	During charge cycle ensure never to exceed constant voltage of 54 V _{dc} and constant current of 200 A.
	Series Connection	No Series Connection allowed.
	Parallel Connection	There is no limit on the number of Modules that can be connected in parallel.
	Series-Parallel Connection	Modules cannot be connected in Series-Parallel combination under any circumstance.

¹Self-discharge is the natural decay of the Module total voltage over time. Module self-discharge is 2% in Sleep Mode (switched off) and 9.6% in Switched-On Mode.

²The Module C-Rate refers to the rate at which a battery is charged or discharged. A 1C rate means that the current will charge or discharge the entire battery in 1 hour.

³The temperature range indicates the range in which the supercapacitor cells can operate. The performance of the cells may vary if they are continuously operated 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. The operating temperature range of the module varies based on the application. 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 the spec sheet, please consult Kilowatt Labs or its Reseller prior to deploying.

⁴Projected life of supercapacitor cells. Cycle life will vary if cycled more than 4 times a day.

⁵Additional terms and conditions, including a limited warranty, will apply at the time of purchase.

⁶Projected Calendar life of supercapacitor cells from the date of first operation.

⁷Shelf life is the life of the module (in years) from the date it is manufactured to the time it is first operated

⁸CE certification is completed for supercapacitor cells.

Product dimensions are for reference only unless otherwise identified and may change without notice.

For critical applications, please contact your Reseller.