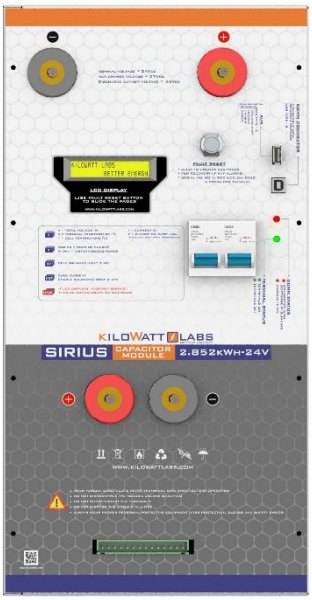
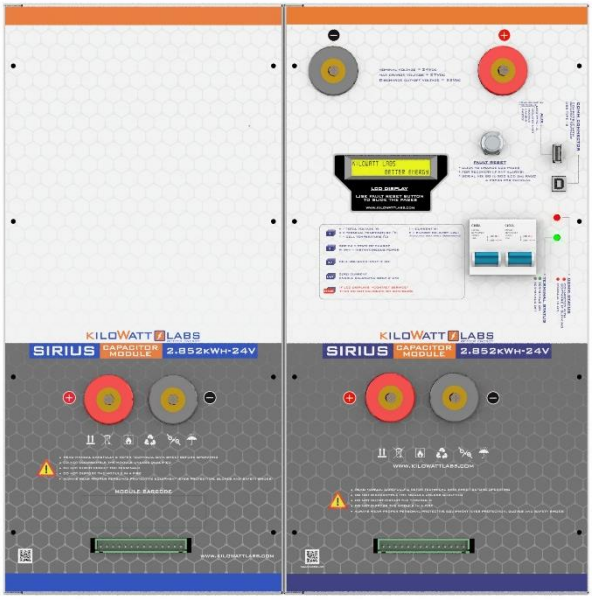
SIRIUS ENERGY STORAGE MODULE
TECHNICAL DATA SHEET
Part Number: 2852-24-B-1.7C-TM-SD-A-X-X-G | Version Date: January 2020



1. Standalone Module



2. Capacity Extension Module:

	Model	Standalone Module	Capacity Extension Module
PERFORMANCE SPECIFICATIONS	Voltage (Nominal)	24 V_{dc}	
	Maximum Charge Voltage	27 V_{dc}	
	Discharge Cut-Off Voltage	22 V_{dc}	
	Total Energy	2852 WH	5704 WH
	Maximum Charge Rate	200 A	
	Maximum Discharge Rate	200 A	
	Recommended Charge Rate	120 A	
	Recommended Discharge Rate	120 A	
ENVIRONMENTAL SPECIFICATIONS	Cell Operating Temperature[1]	-30 ^{O}C to 80 ^{O}C	
	Operating Humidity	Non-Condensing	
MECHANICAL SPECIFICATIONS	Dimensions (w × d × h) mm	238 x 480 x 370	476 x 480 x 370
	Weight (Kg)	54	108
	Module Casing Material	GI Powdered	

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	Terminal Type	F08
SMART FEATURES	Monitoring Data	Total Cell Voltage, Current, Temperatures, SOC and Energy
	Remote control	Mechanical Contactor
	Communication and Connectivity	USB Port
	Alarm	Audible alarm in the event of Over/under-Voltage, Over-Current, Over Temperature
SIRIUSVEIW SOFTWARE	Module Monitoring	Current, Voltage, Temperatures, Total Energy delivered, SOC, Graphs
	System Monitoring	Modules Monitoring (connected in parallel or series)
MODULE SERVICE LIFE	Projected Cycle Life[2,3]	1 million cycles
	Projected Calendar Life[3,4]	45 years
	Shelf Life[5]	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	125A 2P DC circuit breaker + DC contactor
COMPLIANCE[6] 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.
	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/Discharge Current	Under no circumstances must the charge/discharge current exceed 200A.
	Charging Voltage	Under no circumstances must the charging voltage exceed $27V_{dc}$ for more than 60 seconds.

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	Charge Cycle	During charge cycle ensure never to exceed constant voltage of 27V_{dc} and constant current of 200A.
	Series Connection	• All Modules must be at 100% SOC before connecting in series. • A maximum of 15 Modules with Module Combiner can be connected in series. Please consult your Reseller when connecting the Modules in series.
	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.

[1]The 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.
[2]Projected life of supercapacitor cells. Cycle life will vary if cycled more than 4 times a day.
[3]Additional terms and conditions, including a limited warranty, will apply at the time of purchase.
[4]Projected Calendar life of supercapacitor cells from the date of first operation.
[5]Shelf life is the life of the Module (in years) from the date it is manufactured to the time it is first operated.
[6]CE 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.

Note: Please make sure the voltage level of both Modules is equal while connecting in parallel to avoid damage.