

### TECHNICAL DATA SHEET

Part Number: 7100-48-B-2C-M-SD-A-X-DC-G |Version Date: February 2022

**This is a tentative data sheet. Actual data sheet will be released after testing the Module.**



The Sirius Capacitor Module (“Sirius”) is supercapacitor-based storage that uses supercapacitors as storage cells instead of chemical cells. Kilowatt Labs’ proprietary balancing, control and charge retention algorithms control the operation of the supercapacitor-based modules, making Sirius a safe, efficient and effective alternative to chemical batteries wherever

#### PERFORMANCE SPECIFICATIONS

DC Energy	7100WH
DC Voltage (Nominal)	48V <sub>dc</sub>
Technology	Supercapacitors
Type	Pouch Cells

#### CHARGE SPECIFICATIONS

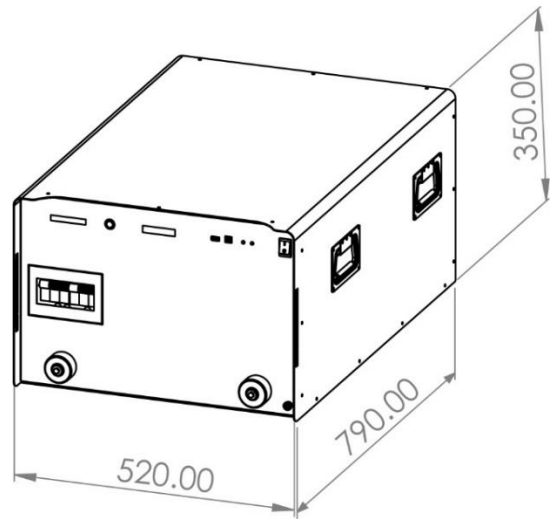
Charge Current @1C	150A
Maximum Charge Current	300A (2C)
Maximum Charge Voltage Range	40 V <sub>dc</sub> - 57V <sub>dc</sub>

#### DISCHARGE SPECIFICATIONS

Discharge Current @1C	150A (1C)
Maximum Discharge Current	300A (2C)
Maximum Discharging Voltage Range	57V <sub>dc</sub> - 40 V <sub>dc</sub>

#### ENVIRONMENTAL SPECIFICATIONS

Cell Operating Temperature	-30°C to 80°C
Operating Humidity	Non-Condensing



#### MECHANICAL SPECIFICATIONS

Dimensions (W x H x D) mm	520 x 350 x 790
Weight (Kg)	163
Module Casing Material	GI Powdered
Terminal Type	F08
Enclosure	IP20

#### SIRIUS VIEW APP

Module Monitoring	Total Voltage, Individual Cell Voltages, Current, Temperatures, Instantaneous Power, Circuit Breaker Status, SOC and Energy Consumed.
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### SMART FEATURES

Communication and Connectivity	USB Port + WIFI (Optional)
Alarm	Buzzer alarm in the event of Over/under-Voltage, Over-Current, Over Temperature
Dry Contact x4	Programmable
Anti-Theft (Optional)	Password In the event of starting and after tilting of the Module.

### SAFETY PERFORMANCE

Additional Safety	125A 2P Mechanical Actuated Circuit Breaker
Short Circuit Protection	10KA, Hardware Protection, Terminal Cut-off
Over/under voltage	Hardware protection, Terminal Cut-off
Over Current	Hardware protection, Terminal Cut-off
Over temperature	Hardware protection, Terminal Cut-off

### COMPLIANCE INFORMATION

EN55032:2015, EN55024:2010,  
EN61000-4-2:2009, EN61000  
EN61000:2008+A2:2010

### MODULE SERVICE LIFE

Projected Cycle Life	1 million cycles
Projected Calendar Life	45 years
Shelf Life	10 years
Warehousing	Can be stored at any SOC without affecting cycle life.

### 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.
Series Connection	<ul style="list-style-type: none"> <li>All Modules must be at 100% SOC before connecting in series.</li> <li>A maximum of 8 Modules with Module Combiner can be connected in series.</li> </ul> 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.