INVEREX® SOLAR ENERGY

3000-48-B-2C-M-SD-A-X-DC-I_GEN5

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 chemical batteries are deployed.

PERFORMANCE SPECIFICATIONS	
DC Energy	3000WH
DC Voltage (Nominal)	48V_{dc}
Technology	Supercapacitors
Type	Pouch Cells

CHARGE SPECIFICATIONS	
Maximum Charge Current	125A (2C)
Maximum Charge Voltage Range	44 V_{dc} - 57 V_{dc}

DISCHARGE SPECIFICATIONS	
Maximum Discharge Current	125A (2C)
Maximum Discharge Voltage Range	44 V_{dc} - 57 V_{dc}

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

SMART FEATURES	
Communication and Connectivity	WIFI + CANBUS + USB Serial + Bluetooth
Alarm	Buzzer alarm in the event of Over/ under-Voltage, Over-Current, Over Temperature
Dry Contacts x4	Programmable

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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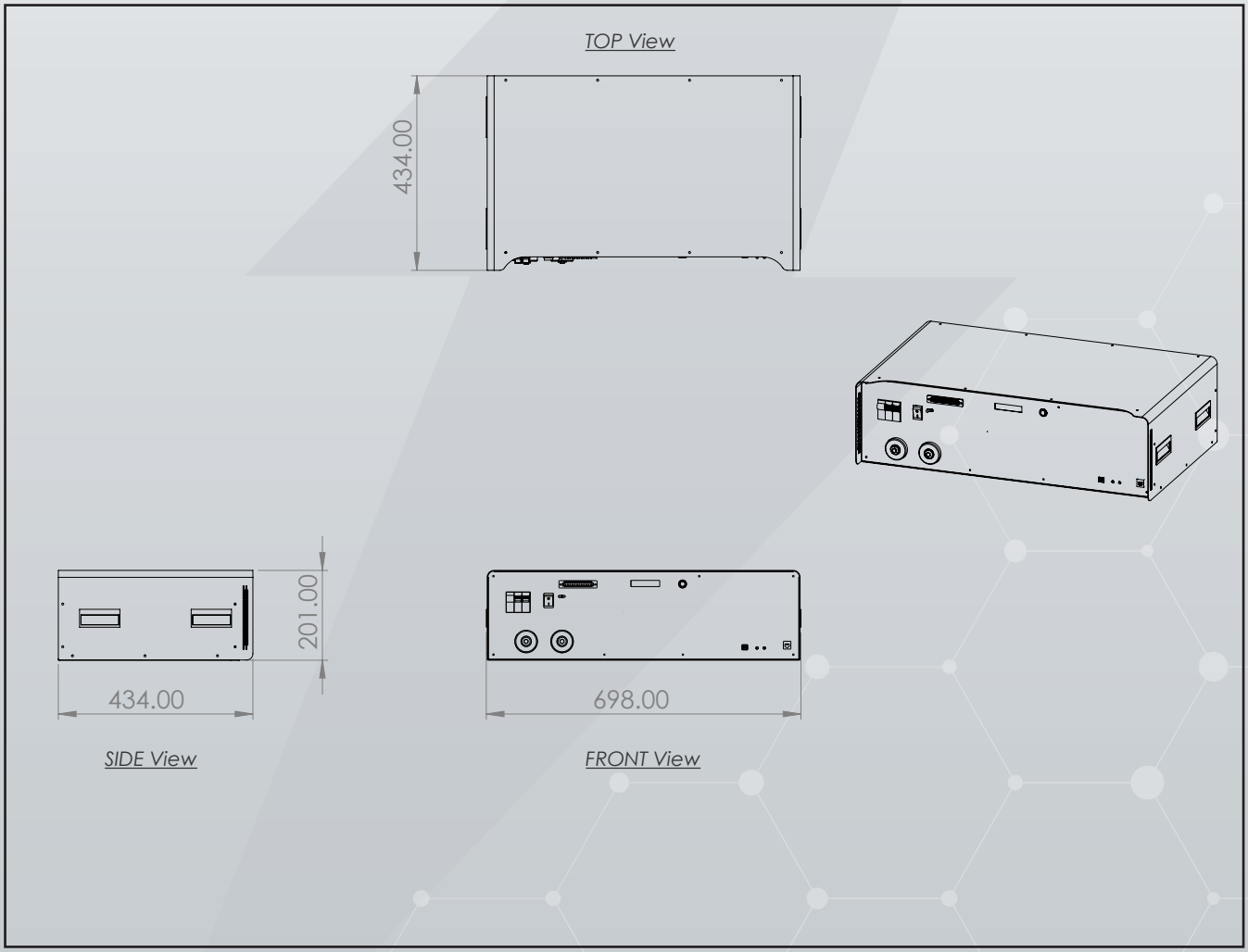
MECHANICAL SPECIFICATIONS	
Dimensions (W x H x D) mm	698 x 201 x 434
Weight (Kg)	58
Module Casing Material	GI Powdered
Terminal Type	F08
Enclosure	IP20



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

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

COMPLIANCE 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.
Series Connection	• All Modules must be at 100% SOC before connecting in series. • A maximum of 8 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.

MODULE CHARACTERISTICS:

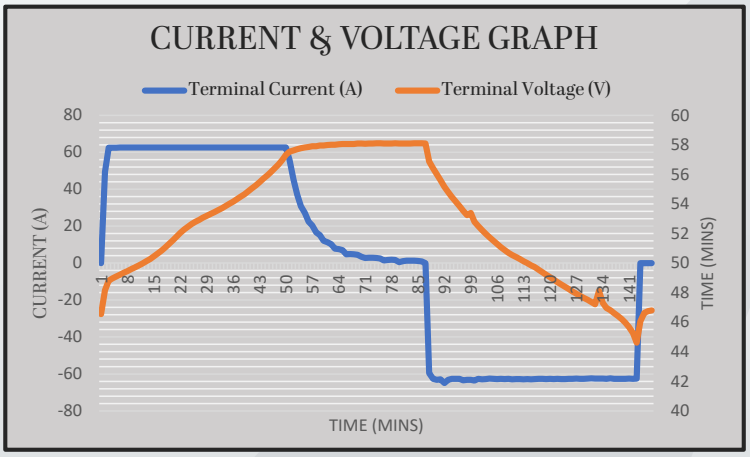

Figure 1: Current and voltage graph @1C and ambient temperature 30°C.

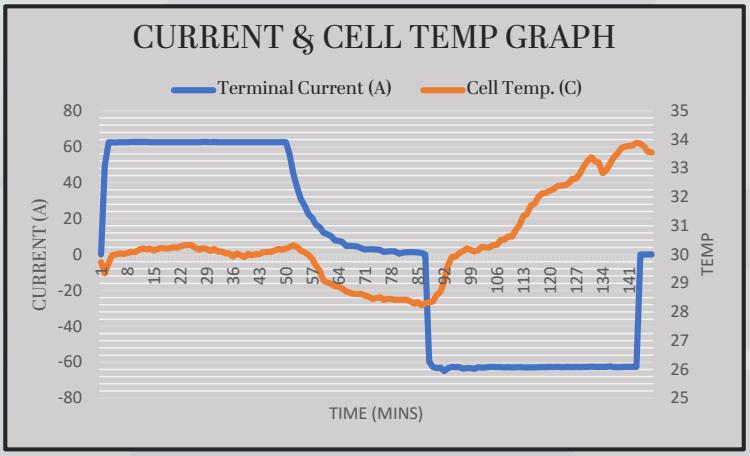

Figure 2: Current and cell temperature graph @1C and ambient temperature 30°C.

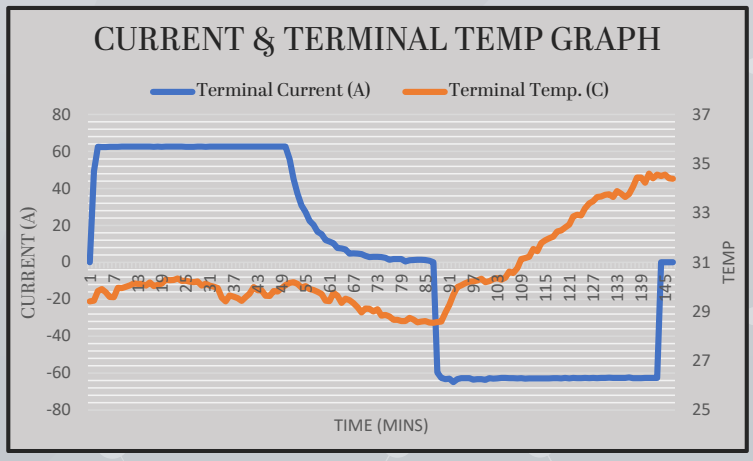

Figure 3: Current and terminal temperature graph @1C and ambient temperature 30°C.