

# ENCAP

BEYOND BATTERIES

## TECHNICAL DATA SHEET

9KWH-110V Module



EN-9k-110-1C-X-X-X-X-1V0-GEN1

### SMART MANAGEMENT

- Feature-rich online monitoring via App or OLED display
- Automatic Firmware Updates
- Warning Alarms

### EFFICIENT

- Highly Efficient: > 95% RTE (Round Trip Efficiency)
- 100% DOD (Depth of Discharge)
- 500,000 Cell Life Cycles

### SAFE & RELIABLE

- Wider operating ambient temperature range
- Suitable for various installation environments including high altitudes
- No thermal runaway risk

## Performance Specifications

<b>Useable Energy Capacity</b>	9kWh
<b>Voltage Range</b>	87Vdc to 118Vdc
<b>DC Voltage (Nominal)</b>	110Vdc
<b>Internal Resistance</b>	<4 mΩ

## Cell Specifications

<b>Technology</b>	Encapsulated Cell
<b>Nominal Cell Voltage</b>	6.4 ~ 6.6Vdc / Cell (Encapsulated) 1/2 + 0.12V Envelope

## Charge Characteristics

<b>Maximum Continuous Charging Current<sup>1</sup></b>	82A (~1C)
<b>Charging Method</b>	CC/CP/VP

## Discharge Specifications

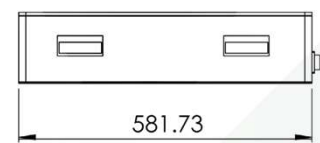
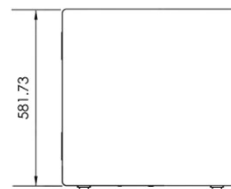
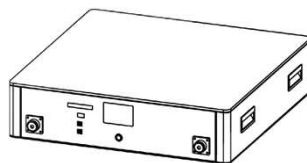
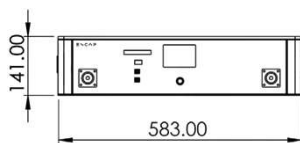
<b>Maximum Continuous Discharging Current</b>	82A (~1C)
<b>Discharging Method</b>	CC/CP/VP

## ENConnect Software

<b>Module Monitoring</b>	Total Voltage, Individual Cell Voltages, Current, Temperature, SOC and Energy Consumed
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## Mechanical Specifications

<b>Dimensions<sup>2</sup> (W x H x D) mm</b>	583 x 141 x 581.73
<b>Weight (kg)</b>	65
<b>Module Casing Material</b>	GI Powdered
<b>Terminal Type</b>	300A Terminal Post



Front View

Isometric View

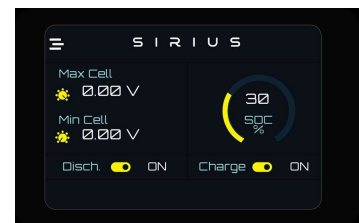
Top View

Side View



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Smart Features	
<b>OLED Display</b>	Monitor Module
<b>Communication</b>	WIFI / CANBUS / Bluetooth
<b>Alarm</b>	Buzzer Alarm in the event of Over/Under-Voltage, Over-Current, Over-Temperature
<b>Dry Contacts Output</b>	Four programmable Dry Contacts
<b>Dry Contacts Input</b>	24Vdc three digital input with Isolated ground
Module Service Life	
<b>Projected Cycle Life<sup>3</sup></b>	500,000 cycles
<b>Projected Calendar Life<sup>4</sup></b>	25 years
<b>Shelf Life<sup>5</sup></b>	10 years
<b>Warehousing</b>	Can be stored at any SOC without affecting cycle life
Safety Performance	
<b>Short Circuit Protection</b>	Electronic Switching, Terminal Cut-off
<b>Over/Under Voltage</b>	Electronic Switching, Terminal Cut-off
<b>Over Current</b>	Electronic Switching, Terminal Cut-off
<b>Over Temperature</b>	Electronic Switching, Terminal Cut-off
Module Specifications	
<b>Operating Temperature Range<sup>1</sup></b>	-10°C~ +55°C (For continuous operation outside this range, please consult Resellers or Enercap)
<b>Operating Humidity</b>	Non-Condensing



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Precautions	
<b>Alarm</b>	In case of alarm, immediately rectify/attend to the cause of the alarm.
<b>Physical Damage</b>	In case the Module is physically damaged for any event, do not install and energize the Module under any circumstances and contact your Reseller or After Sales Support.
<b>Short Circuit</b>	Ensure precautions to prevent short-circuit under all circumstances.
<b>Galvanic isolation</b>	When connecting to external devices ensure that galvanic isolation does not exceed 1000V.
<b>Parallel Connection</b>	All Modules must be at 100% SOC before connecting in parallel. There is no limit on the number of Modules that can be connected in parallel.
<b>Series-Parallel Connection</b>	Modules cannot be connected in series-parallel combination under any circumstance.

## Notes:

<sup>1</sup>The temperature range indicates the range within which the Module can operate. The performance of the Module may vary if operated continuously outside the temperature range and/or at C-rates higher than the maximum charge/discharge rates specified in this data sheet. If the Module is to be operated continuously outside the temperature range and/or at C-rates higher than the maximum charge/discharge rates specified in this data sheet, please consult your Reseller or After Sales Support prior to deploying.

<sup>2</sup>Product Dimensions are for reference only and may change without notice.

<sup>3</sup> Projected life of encapsulated cells. Cycle life will vary if cycled more than 4 times a day.

<sup>4</sup> Projected Calendar life of encapsulated 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

- Additional terms and conditions, including a limited warranty, will apply at the time of purchase.
- For critical applications, please contact your Reseller or After Sales Support.



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