

# ENCAP

B E Y O N D B A T T E R I E S

TECHNICAL DATA SHEET

10KWH-48V

EN-10k-48-1C-X-X-X-X-2V1-GEN1

VERSION 2.1 | REVISION 2 | RELEASE DATE: 13 Sept 23



## 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

- Wide Operating Temperature Range
- Deployable in Various Environments including High Altitudes
- No Thermal Runaway Risk

## PERFORMANCE SPECIFICATIONS

DC Energy	10kWh
Voltage Range	43.2Vdc to 60.8Vdc
DC Voltage (Nominal)	48Vdc
Internal Resistance	< 4 mili Ohms

## CELL SPECIFICATIONS

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

## CHARGE CHARACTERISTICS

Maximum Continuous Charge Current	200A (~1C)
Charging Method	CC/CP/VP

## DISCHARGE SPECIFICATIONS

Maximum Continuous Discharge Current	300A (~1.5C)
Discharging Method	CC/CP/VP

## EN-CONNECT SOFTWARE

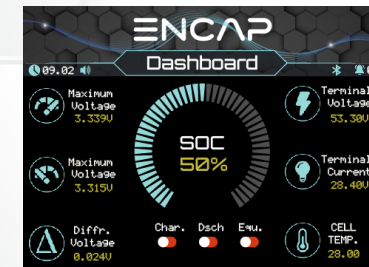
Module Monitoring	Total Voltage, Individual Cell Voltages, Current, Temperatures, SOC and Energy Consumed
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## MODULE ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range	-30°C~ +70°C (See Fig.1:Temperature Specifications)
Operating Humidity	Non-Condensing



Front View



LCD View



Isometric View

## MECHANICAL SPECIFICATIONS

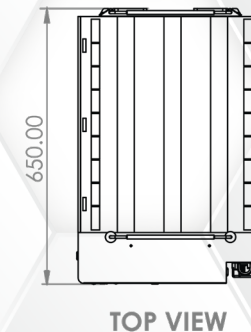
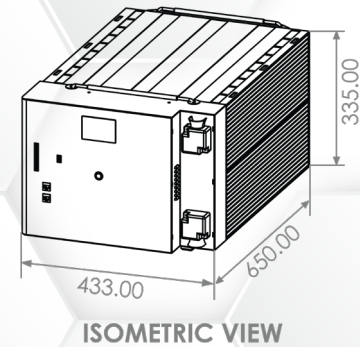
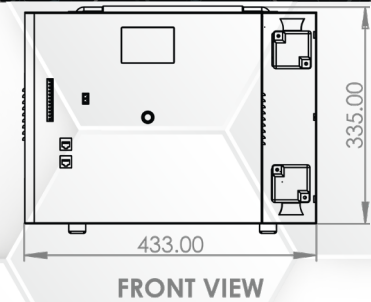
Dimensions <sup>1</sup> (W x H x D) mm	433 x 335 x 650
Weight (kg)	120
Module Casing Material	GI Powdered
Terminal Type	300A Terminal Post

## SMART FEATURES

OLED Display	Monitor Module
Communication	WIFI / CANBUS / Bluetooth
Alarm	Buzzer alarm in the event of Over/under-Voltage, Over-Current, Over Temperature
Dry Contacts Output	Four programmable Dry Contacts
Dry Contacts Input	24Vdc three digital input with isolated ground

## SAFETY PERFORMANCE

Short Circuit Protection	Electronic Switching, Terminal Cut-off
Over/under Voltage	Electronic Switching, Terminal Cut-off
Over Current	Electronic Switching, Terminal Cut-off
Over Temperature	Electronic Switching, Terminal Cut-off





## SERVICE LIFE

Cells Projected Cycle Life <sup>2</sup>	500,000 cycles
Cells Projected Calendar Life <sup>3</sup>	25 years
Module Projected Shelf Life <sup>4</sup>	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 or After Sales Support.
Short Circuit	Ensure precautions to prevent short-circuit under all circumstances.
Galvanic Isolation	When connecting to external devices ensure that galvanic isolation of the external device(s) does not exceed 1000V.
Parallel Connection	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.
Series-Parallel Connection	Modules cannot be connected in series-parallel combination under any circumstance.

## NOTES

<sup>1</sup>Product Dimensions are for reference only and may change without notice.

<sup>2</sup>Projected Life of encapsulated cells.

<sup>3</sup>Projected Calendar Life of encapsulated cells from the date of first operation.

<sup>4</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.

## TEMPERATURE SPECIFICATIONS

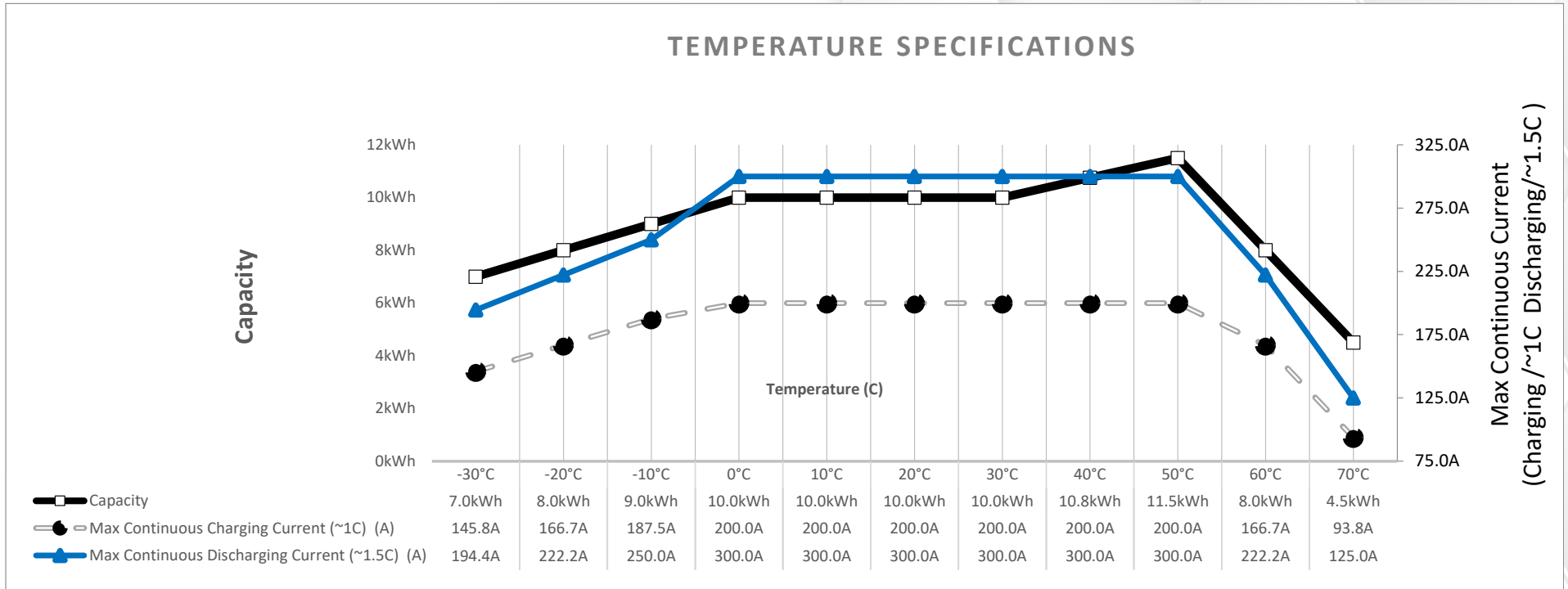


Fig.1: Temperature Specifications of 10kWh 48V ENCAP Module