

# ENCAP

BEYOND BATTERIES

## TECHNICAL DATA SHEET



EN-10k-48-1C-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>	10kWh
<b>DC Voltage Range</b>	43.2Vdc to 60.8Vdc
<b>Nominal DC Voltage</b>	48Vdc
<b>Internal Resistance</b>	<4 mΩ

## Cell Specifications

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

## Charge Characteristics

<b>Maximum Continuous Charging Current</b>	1C (200A)
<b>Charging Method</b>	CC/CP/VP

## Discharge Specifications

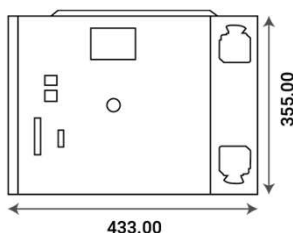
<b>Maximum Continuous Charging Current</b>	1.5C (300A)
<b>Discharging Method</b>	CC/CP/VP

## ENConnect Software

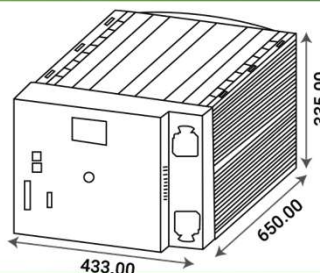
<b>Module Monitoring</b>	Total Voltage, Individual Cell Voltages, Current, Temperature, Instantaneous Power, Circuit Breaker Status, SOC, Energy Consumed
--------------------------	--

## Mechanical Specifications

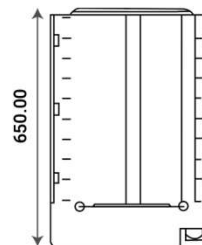
<b>Dimensions (W x H x D) mm</b>	433 x 335 x 650 or 17.04" x 13.97" x 25.59"
<b>Weight (kg)</b>	120 kg or 264.55 lb
<b>Module Casing Material</b>	GI Powdered
<b>Terminal Type</b>	300A Terminal Post



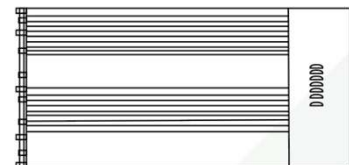
Front View<sup>4</sup>



Isometric View<sup>4</sup>



Top View<sup>4</sup>



Side View<sup>4</sup>



Authorized Channel Partner  
of EMTEL Energy USA

## Smart Features

<b>OLED Display</b>	Monitor & Configure 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>1</sup></b>	500,000 cycles
<b>Projected Calendar Life<sup>2</sup></b>	25 years
<b>Shelf Life<sup>3</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 Environmental Specifications

<b>Cell Operating Temperature<sup>5</sup></b>	-22°F to +122°F or -30°C to 50°C
<b>Operating Humidity</b>	Non-Condensing
<b>Storage Temperature</b>	14°F ~ 113°F (<3 months, SOC:20% ~ 60%) 14°F ~ 95°F (<1 year, SOC:30% ~ 60%)



Authorized Channel Partner  
of EMTEL Energy USA

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 reason, 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 or series-parallel combination under any circumstances. If a series configuration is required, a different model is available.

## Notes:

<sup>1</sup>Projected Life of Encapsulated Cells. Cycle Life will vary if cycled more than 4 times a day.

<sup>2</sup>Projected Calendar Life of Encapsulated Cells from the date of first operation.

<sup>3</sup>Shelf Life is the life of the Module (in years) from the date it is manufactured to the time it is first operated.

<sup>4</sup>Product Dimensions are for reference only and may change without notice.

<sup>5</sup>The temperature range indicates the range within which the Encapsulated Cells can operate. The performance of the cells may vary if they are continuously operated outside the temperature range of and/or at C-rates higher than the maximum charge/discharge rates specified in this data 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 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.

- 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.



Authorized Channel Partner  
of EMTEL Energy USA