

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

Useable Energy Capacity	10kWh
DC Voltage Range	43.2Vdc to 60.8Vdc
Nominal DC Voltage	48Vdc
Internal Resistance	<4 mΩ

Cell Specifications

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

Charge Characteristics

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

Discharge Specifications

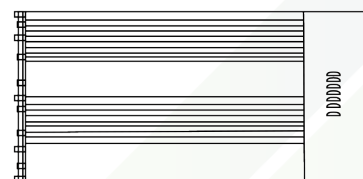
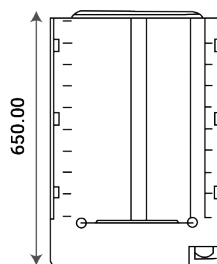
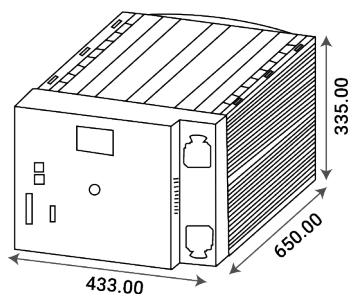
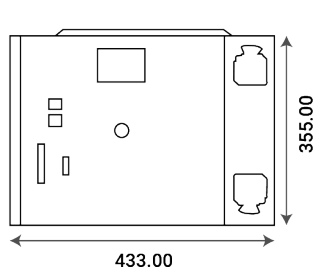
Maximum Continuous Charging Current	1.5C (300A)
Discharging Method	CC/CP/VP

ENConnect Software

Module Monitoring	Total Voltage, Individual Cell Voltages, Current, Temperature, Instantaneous Power, Circuit Breaker Status, SOC, Energy Consumed
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Mechanical Specifications

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


Front View⁴

Isometric View⁴

Top View⁴

Side View⁴

Smart Features

OLED Display	Monitor & Configure 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

Module Service Life

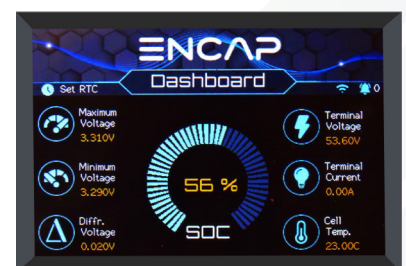
Projected Cycle Life¹	500,000 cycles
Projected Calendar Life²	25 years
Shelf Life³	10 years
Warehousing	Can be stored at any SOC without affecting cycle life

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

Module Environmental Specifications

Cell Operating Temperature⁵	-22°F to +122°F or -30°C to 50°C
Operating Humidity	Non-Condensing
Storage Temperature	14°F ~ 113°F (<3 months, SOC:20% ~ 60%) 14°F ~ 95°F (<1 year, SOC:30% ~ 60%)



Precautions

Alarm	In case of alarm, immediately rectify/attend to the cause of the alarm.
Physical Damage	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.
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.
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 or series-parallel combination under any circumstances. If a series configuration is required, a different model is available.

Notes:

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

²Projected Calendar Life of Encapsulated Cells from the date of first operation.

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

⁴Product Dimensions are for reference only and may change without notice.

⁵The 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.