

# ENCAP

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

## TECHNICAL DATA SHEET

Micro Pro Module 8KWH-48V

EMP-8k-48-1C-X-X-X-X\_2V0\_GEN1

VERSION 2 | REVISION 0 | RELEASE DATE: 13th Jan 25



### 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	8kWh
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	170A (~1C)
Charging Method	CC/CP/VP

## DISCHARGE SPECIFICATIONS

Maximum Continuous Discharge Current	170A (~1C)
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
Operating Humidity	Non-Condensing



Front View



Isometric View

### MECHANICAL SPECIFICATIONS

Dimensions <sup>1</sup> (W x H x D) mm	483 x 143 x 598
Weight (kg)	44
Module Casing Material	GI Powdered
Terminal Type	300A Terminal Post

### SMART FEATURES

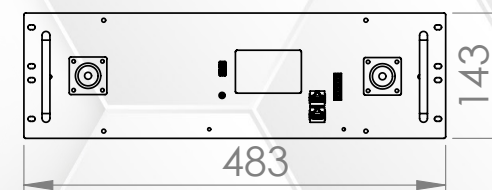
OLED Display	Monitor Module
Communication	CANBUS & WIFI
Alarm	Buzzer alarm in the event of Over/under-Voltage, Over-Current, Over Temperature
Dry Contacts Output	Programmable Dry Contacts

### SAFETY PERFORMANCE

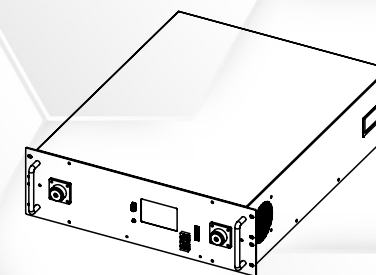
Short Circuit Protection, Over/under Voltage, Over Current, Over Temperature	Through Encontactor
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### SERVICE LIFE

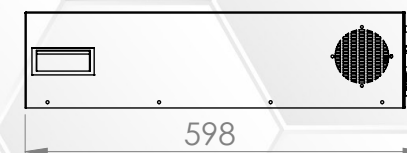
Cells Projected Cycle Life <sup>2</sup>	500,000 cycles
Cells Projected Calendar Life <sup>3</sup>	25 years
Module Projected Shelf Life <sup>4</sup>	10 years
Warehousing	Can be stored at any SOC without affecting cycle life



Front View



Isometric View



Side View



Top View



## 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.
Series Connection	Series Connection is not allowed.
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	Series-Parallel Connection of the Modules is not allowed.

## 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.
- Encap Micro Pro must be operated with Encontactor and Encontroller, otherwise there is risk of severe damage. Please refer to the Enrack user manual or contact the technical support team for further guidance.**