

TECHNICAL DATA SHEET

ENCAP

BEYOND BATTERIES

Micro Tel

8KWH-48V Module



EM-8k-48-1C-X-X-X-PIB_1V0_GEN1

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 mΩ

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

Module Environmental Specifications

Operating Temperature Range	-30°C ~ +70°C
Operating Humidity	Non-Condensing

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

Smart Features

Alarm²	Buzzer alarm in the event of Over/under-Voltage, Over-Current, Over Temperature
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OLED Display (With Encontrol)²	Monitor Module
Communication	CANBUS , RS232, RS485
Dry Contacts Output	Programmable Dry Contacts
Service Life	
Cells Projected Cycle Life³	500,000 Cycles
Cells Projected Calendar Life⁴	25 Years
Module Projected Shelf Life⁵	10 Years
Warehousing	Can be stored at any SOC without affecting cycle life
EN-Connect Software²	
Module Monitoring²	Total Voltage, Individual Cell Voltages, Current, Temperatures, SOC and Energy Consumed

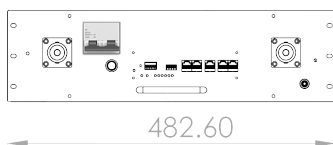


Isometric View

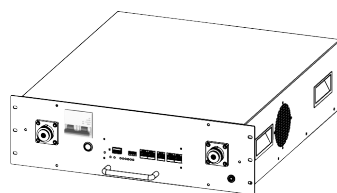


Front View

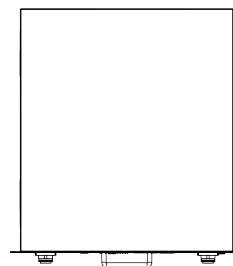
Mechanical Specifications	
Dimensions¹ (W x H x D) mm	482.60 x 133 x 505
Weight (kg)	43
Module Casing Material	GI Powdered
Terminal Type	300A Terminal Post



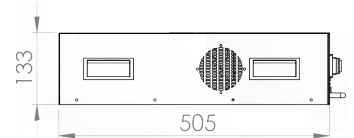
Front View



Isometric View



Top View



Side 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.

¹Product Dimensions are for reference only and may change without notice.

²The ENCONTROL tool is an OLED display designed for Module monitoring. Please note SMART FEATURES are not part of the standard Module and require separate purchase of ENCONTROL tool.

³Projected Life of encapsulated cells.

⁴Projected Calendar Life of encapsulated cells from the date of first operation.

⁵Shelf 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 Tel 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.**