

TECHNICAL DATA SHEET

MICRO ECONO

BEYOND BATTERIES

8.2KWH-52V Module

Manufactured by



EM-8.2k-52-1C-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	8.2kWh
Voltage Range	46.5Vdc to 59.5 Vdc
DC Voltage (Nominal)	52Vdc
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 Charge Current	158A (~1C)
Charging Method	CC/CP/VP

Discharge Specifications

Maximum Discharge Current	158A (~1C)
Discharging Method	CC/CP/VP

Module Environmental Specifications

Operating Temperature Range¹	-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
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 Software

Module Monitoring²

Total Voltage, Individual Cell Voltages, Current, Temperatures, SOC and Energy Consumed.



Isometric View

ENCONTROL²

Front View

Mechanical Specifications

Dimensions¹ (W x H x D) mm

483 x 143 x 610

Weight (kg)

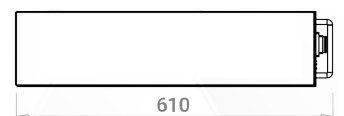
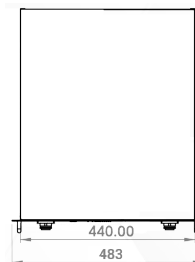
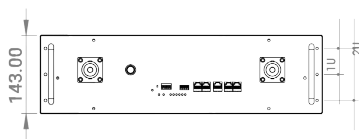
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Module Casing Material

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	All Modules must be at 100% SOC before connecting in series. Maximum of eight (8) Modules can be connected in series. Modules can only be connected in series through Encontactor and en controller refer to ENRack for better performance.
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 Modules can be connected in series-parallel combination through Encontactor and encontroller refer to ENRack for better performance.

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 Econo 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.