

TECHNICAL DATA SHEET

ENCAP

BEYOND BATTERIES

Micro Tel

8KWH-48V Module

Manufactured by



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

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|---|------------|
| 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

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|---------------------------------|--|
| 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 Software² | |
| Module Monitoring² | Total Voltage, Individual Cell Voltages, Current, Temperatures, SOC and Energy Consumed |

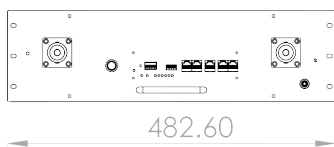


Isometric View

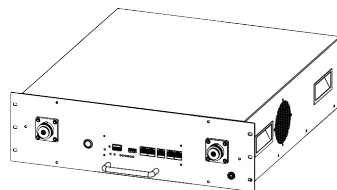


Front View

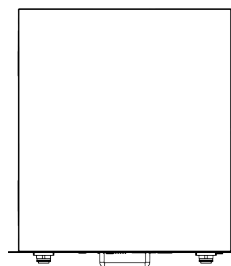
| | |
|--|--------------------|
| Mechanical Specifications | |
| Dimensions¹ (W x H x D) mm | 482.60 x 133 x 505 |
| Weight (kg) | 43 |
| Module Casing Material | GI Powdered |
| Terminal Type | 300A Terminal Post |



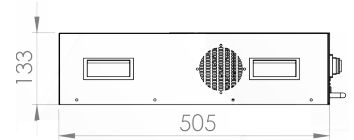
Front View



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.**