ENCAP

BEYOND BATTERIES

TECHNICAL DATA SHEET

Micro Opti Module 7.1KWH-48V

EN-7.1k-48-1C-2PA-X-X-PIB_1V0_GEN1

VERSION 1 | REVISION 0 | RELEASE DATE: 7th June 24

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	7.1kWh
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	150A (~1C)
Charging Method	CC/CP/VP

DISCHARGE SPECIFICATIONS

Maximum Continuous Discharge Current	150A (~1C)
Discharging Method	CC/CP/VP

EN-CONNECT SOFTWARE[2]

Module Monitoring[2]	Total Voltage, Individual Cell Voltages, Current, Temperatures, SOC and Energy Consumed

MODULE ENVIRONMENTAL SPECIFICATIONS

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

Front View

Isometric View

ENCONTROL[2]

MECHANICAL SPECIFICATIONS

Dimensions[1] (W x H x D) mm	482 x 134 x 568
Weight (kg)	43
Module Casing Material	GI Powdered
Terminal Type	300A Terminal Post

## SMART FEATURES

Circuit Breaker Protection	2P 125A Breaker
OLED Display (With Encontrol)[2]	Monitor Module
Communication	CANBUS , RS232, RS485
Alarm[2]	Buzzer alarm in the event of Over/under-Voltage, Over-Current, Over Temperature
Dry Contacts Output	Programmable Dry Contacts

SAFETY PERFORMANCE

Short Circuit Protection	Through MCB and Encontactor
Over/under Voltage	Through Encontactor
Over Current	Through MCB and Encontactor
Over Temperature	Through Encontactor

SERVICE LIFE

Cells Projected Cycle Life[3]	500,000 cycles
Cells Projected Calendar Life[4]	25 years

Front View

134

Isometric View

Side View

568

Top View

440.00
482.60
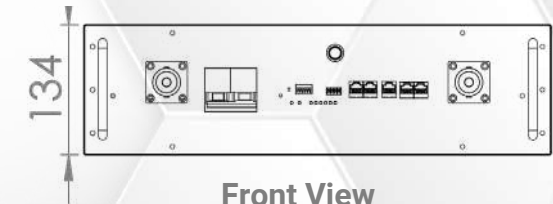
Module Projected Shelf Life[5]	10 years
Warehousing	Can be stored at any SOC without affecting cycle life

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.

NOTES

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

[2]The 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.

[3] Projected Life of encapsulated cells.

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

[5] 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.