CAPALEX

ENSEGA MODULE

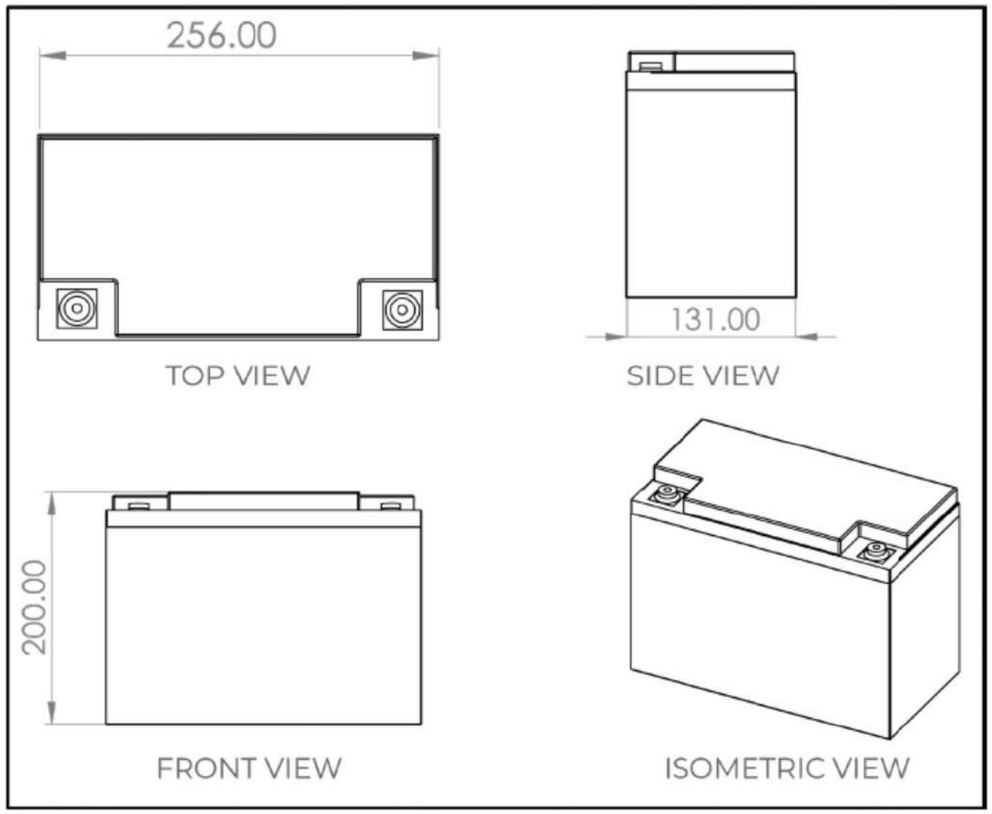
ENS-500-12-0.5C-X-X-X-X-1V0-GEN1

VERSION 1.0, Revision

RELEASE DATE: 31st JANUARY 2023

PERFORMANCE SPECIFICATIONS	
DC Energy	500Wh
Voltage Range	10.8Vdc to 15.2Vdc
DC Voltage (Nominal)	12Vdc
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 Charge Current	0.5C (20A) maximum (maximum continous charging current) @25°C
Charging Method	CC/CP/VP

DISCHARGE SPECIFICATIONS	
Maximum Discharge Current	0.5C (20A) maximum (maximum continous discharging current) @25°C
Disharging Method	CC/CP/VP
ENSEGA MONITORING SOFTWARE	
Communication and Connectivity	Bluetooth / EN-Control tool[1]
Module Monitoring	Total Voltage, Individual Cell Voltages, Current, Temperatures, Instantaneous Power, SOC and Energy Consumed
SAFETY PERFORMANCE	
Short Circuit Protection	500A, Electronic Switching, Terminal Cut-off
Over/under voltage	Electronic Switching, Terminal Cut-off
Over Current (Charge & Discharge Current)	Electronic Switching, Terminal Cut-off
Over temperature	Electronic Switching, Terminal Cut-off
Cell's Imbalance ($\Delta V \geq 1V$)	Electronic Switching, Terminal Cut-off



MECHANICAL SPECIFICATIONS

Dimensions (W x H x D) mm	256 mm x 200 mm x 131 mm
Weight (Kg)	6 Kg
Module Casing Material	Plastic Casing

MODULE SERVICE LIFE	
Projected Cycle Life[4,5]	500,000 cycles
Projected Calendar Life	25 years
Shelf Life[5,6]	10 years (Extendable)
Warehousing	Can be stored at any SOC without affecting cycle life

ENVIRONMENTAL SPECIFICATIONS	
Cell Operating Temperature[2,3]	Charging: 0~50°C (0°C to 10°C current limit 20A charge)
	Discharging: -20~ +55°C
Operating Humidity	Non-Condensing
Storage Temperature	-10~ +45°C (<3 months, SOC: 20% ~ 60%) -10~ +35°C (<1 year, SOC: 30% ~ 60%)

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.
Short Circuit	Ensure precautions to prevent short-circuit under all circumstances.
Galvanic isolation	When connecting to external devices ensure that galvanic isolation does not exceed 1000V.
Series Connection	All Modules must be at 100% SOC before connecting in series. Please consult your Reseller when connecting the Modules in series.
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	Modules cannot be connected in series-parallel combination under any circumstance.

[1] The temperature range indicates the range in which the encapsulated cells can operate. The performance of the cells may vary if they are continuously operated outside a temperature range of -10°C to 55°C, and/or at C-rates higher than the maximum charge/discharge rate specified in this spec sheet. The operating temperature range of the module varies based on the application. If the module is to be operated continuously outside a temperature range of -10°C to 55°C, and/or at C-rates higher than the maximum charge/discharge rate specified in the spec sheet, please consult Enercap or its Reseller prior to deploying.

[2] Warranty conditions will apply. Please consult your Reseller or www.encape.energy/warranty for warranty conditions applicable to your region.

[3] Projected life of encapsulated cells. Cycle life will vary if cycled more than 4 times a day.

[4] Additional terms and conditions, including a limited warranty, will apply at the time of purchase.

[5] Projected Calendar life of encapsulated cells from the date of first operation.

[6] Shelf life is the life of the module (in years) from the date it is manufactured to the time it is first operated

Product dimensions are for reference only unless otherwise identified and may change without notice.

For critical applications, please contact your Reseller.