



# NESSCAP® Ultracapacitor Products 64V MODULES

## Features

- 64V module with rated capacitance of 83F and 125F
- Highest power performance with ultra-low internal resistance
- Integrated UMU (Ultracapacitor Management Unit) for:
  - Individual cell balancing
  - Voltage and temperature diagnosis by logic output
  - Optional CAN or RS communication interface
- Rugged design for harsh environments
- Typical applications:
  - Transportation and automotive
  - Industrial, UPS, DVR, and telecommunications



## Specifications

Rated Capacitance (F)	Internal Resistance (mΩ)		Max Current <sup>1</sup> (A)	Leakage Current (mA)	Stored Energy (Wh)	Specific Energy (Wh/kg)	Nominal Weight (kg)	Part Number
	AC (100Hz)	DC						
Discharge with constant current at 25°C			1 sec discharge rate to 1/2V <sub>R</sub>	72 hours at 25°C	at V <sub>R</sub>	Gravimetric		
83	< 8.1	< 9.5	1,460	< 4.2	48.4	3.22	15.0	EMHSR-0083C0-064R0S
125	< 6.4	< 7.5	2,030	< 5.2	72.9	3.83	19.0	EMHSR-0125C0-064R0S

Rated Voltage, V <sub>R</sub>		64.8V DC		
Surge Voltage		68.4V DC		
Capacitance Tolerance		0% / +20%		
Operating Temperature Range		-40 ~ 65°C		ΔCAP  < 5% and ΔESR < 150% of initial value measured at 25°C
Storage Temperature Range		-40 ~ 70°C		
Lifetime	Endurance	1,500 hours at V <sub>R</sub> and 65°C		ΔCAP  < 20% and ΔESR < 60% of specified value
	At Room Temperature	10 years <sup>2</sup> at V <sub>R</sub>		ΔCAP  < 30% and ΔESR < 150% of specified value
Cycle Life		1,000,000 cycles between V <sub>R</sub> and 1/2V <sub>R</sub> using constant current charge and discharge at 25°C		ΔCAP  < 30% and ΔESR < 150% of specified value
Electronics (Ultracapacitor Management Unit)	Balancing	Active Balancing		
	Monitoring	Over Voltage : High and Low signal Temperature : NTC		Requires external 5V DC input, configurable to user specific requirements
	Communications	High/Low Logic signal Optional CAN 2.0B, J1939 or RS485 interface		
	Signal Output	4 pin connector		
Enclosure	Output Terminals	M8 screw holes		
	Insulation Coordination	Rated insulation voltage : 1kV DC Or 2.8kV AC (50Hz, 10sec) Rated impulse withstand voltage : 6kV DC		IEC 61287-1 (Cat. : OV II)
	Protection Degree	IP 65 (Dust-tight and protected against water jets)		IEC 60529
	Vibration & Shock Resistance	SAE J2380 : Vibration SAE J2464 : Shock		
	Mounting	16 locations, M8 slots on top and bottom covers		

1 – Warning: this value should not be used as continuous current

2 – Lifetime at room temperature is a provisional value

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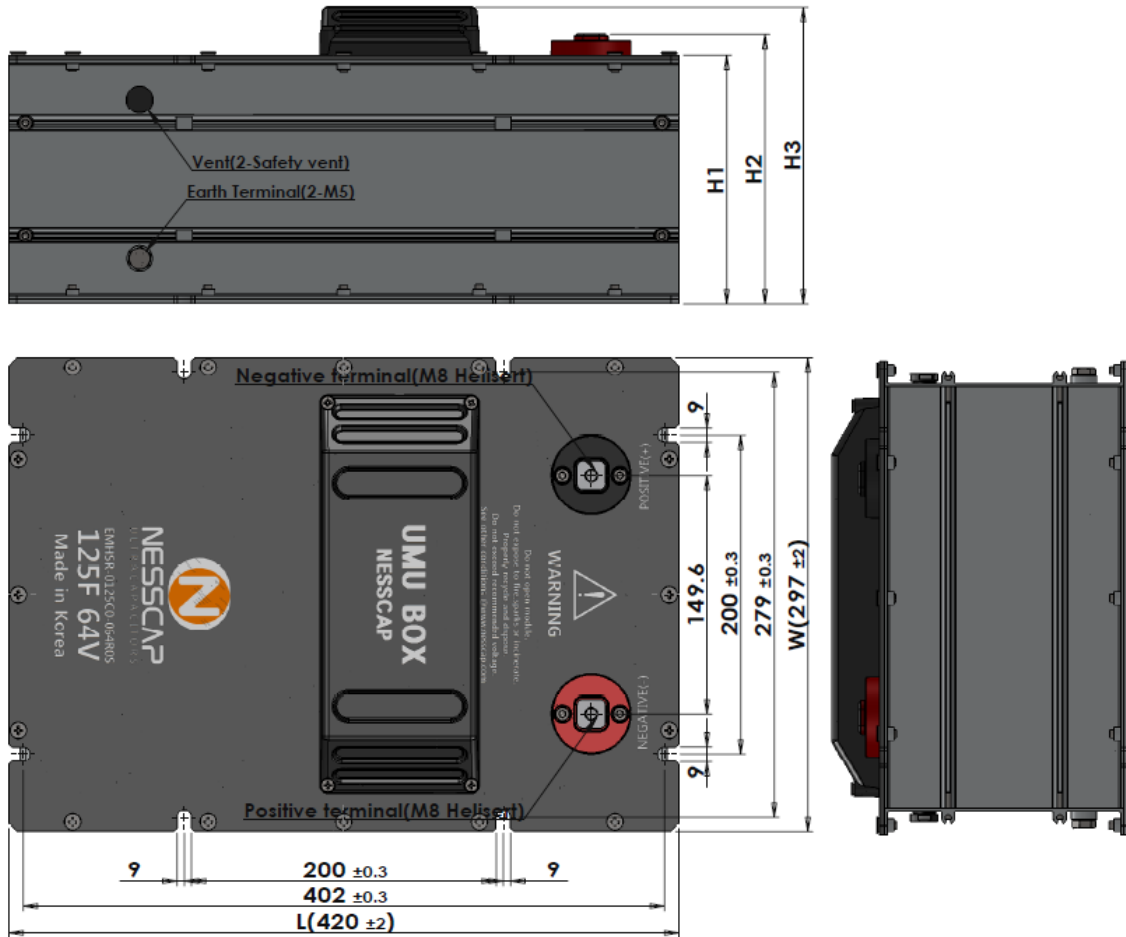
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ISO 9001, 14001, and TS 16949 certified



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## Dimensions



Part Number	Capacitance (F)	Dimensions (mm)				
		L(±2.0)	W(±2.0)	H1(Max)	H2(Max)	H3(Max)
EMHSR-0083C0-064R0S	83	420	297	121	134	151
EMHSR-0125C0-064R0S	125	420	297	157	170	187

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