



NESSCAP® Ultracapacitor Products 86V MODULES

Features

- 86V modules with rated capacitances of 62F and 93F
- 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 high vibration environments
- Typical applications:
 - Transportation and automotive
 - Industrial, UPS, DVR, and telecommunications



Specifications

Rated Capacitance (F)	Internal Resistance (mΩ)		Max Current ¹ (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 _R	72 hours at 25°C	at V _R	Gravimetric		
62	< 10.8	< 12.7	1,460	< 4.2	64.2	3.05	21.0	EMHSR-0062C0-086R0S
93	< 6.4	< 7.5	2,030	< 5.2	96.4	3.70	26.0	EMHSR-0093C0-086R0S

Rated Voltage, V _R		86.4V DC	
Surge Voltage		91.2V 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 _R and 65°C	ΔCAP < 20% and ΔESR < 60% of specified value
	At Room Temperature	10 years ² at V _R	ΔCAP < 30% and ΔESR < 150% of specified value
Cycle Life		1,000,000 cycles between V _R and 1/2V _R 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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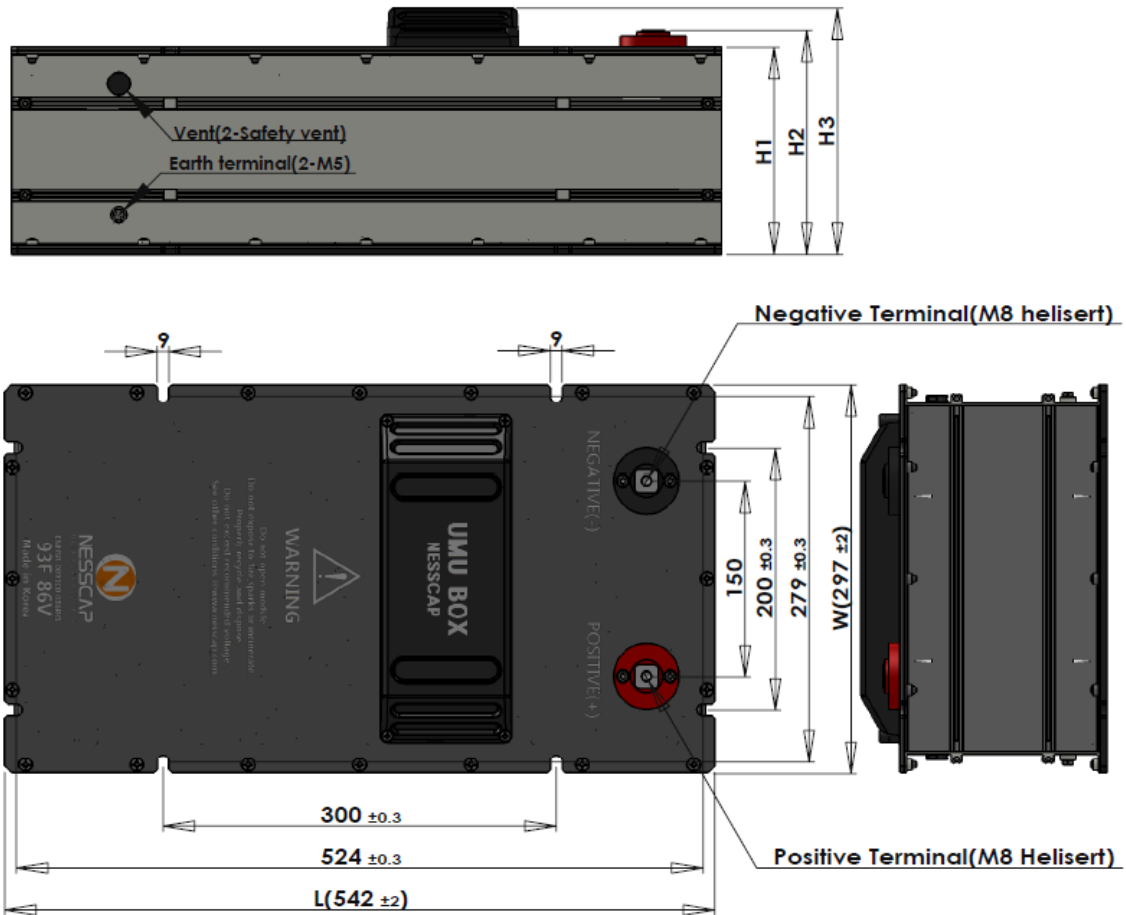
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ISO 9001, 14001, and TS 16949 certified



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Dimensions



Part Number	Capacitance (F)	Dimensions (mm)				
		L(±2.0)	W(±2.0)	H1(Max)	H2(Max)	H3(Max)
EMHSR-0062C0-086R0S	62	542	297	123	136	153
EMHSR-0093C0-086R0S	93	542	297	159	172	189

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