



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)
 - Individual cell balancing
 - Voltage diagnosis by logic output and temperature monitoring
- Vibration-resistant rugged design
- Typical applications
 - Transportation and automotive
 - Industrial, UPS, DVR and telecommunication



Product & Spec.

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, 25°C	at V _R	Gravimetric		
62	< 10.8	< 12.7	1450	< 4.2	64.2	3.1	21.0	EMHSR-0062C0-086R0S
93	< 8.4	< 10.0	2020	< 5.2	96.4	3.7	26.0	EMHSR-0093C0-086R0S

Rated Voltage, V _R		86.4 V DC		
Surge Voltage		91.2 V 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 rated voltage and 65°C		ΔCAP < 20% and ΔESR < 60% of specified value
	At Room Temperature	10 years at rated voltage ²		ΔCAP < 30% and ΔESR < 150% of specified value
Cycle Life (25°C)		1,000,000 cycles between rated voltage and half rated voltage using constant current charge and discharge		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
	Signal Output	4 pin connector		
Enclosure	Output Terminals	M8 screw holes		
	Insulation Coordination	Rated insulation voltage : 1 kV DC or 2.8kV AC (50Hz, 10sec) Rated impulse withstand voltage : 6 kV DC		IEC 61287-1 (Cat: OV II)
	Protection by Enclosure	IP 65 (Dust-tight and protected against water jets)		IEC 60529
	Vibration Resistance	SAE J2380		
	Mounting	12 locations		8x M8 mounting points on the top and bottom covers 4x M8 mounting bolts with fasteners

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

² Lifetime at room temperature is a provisional value.

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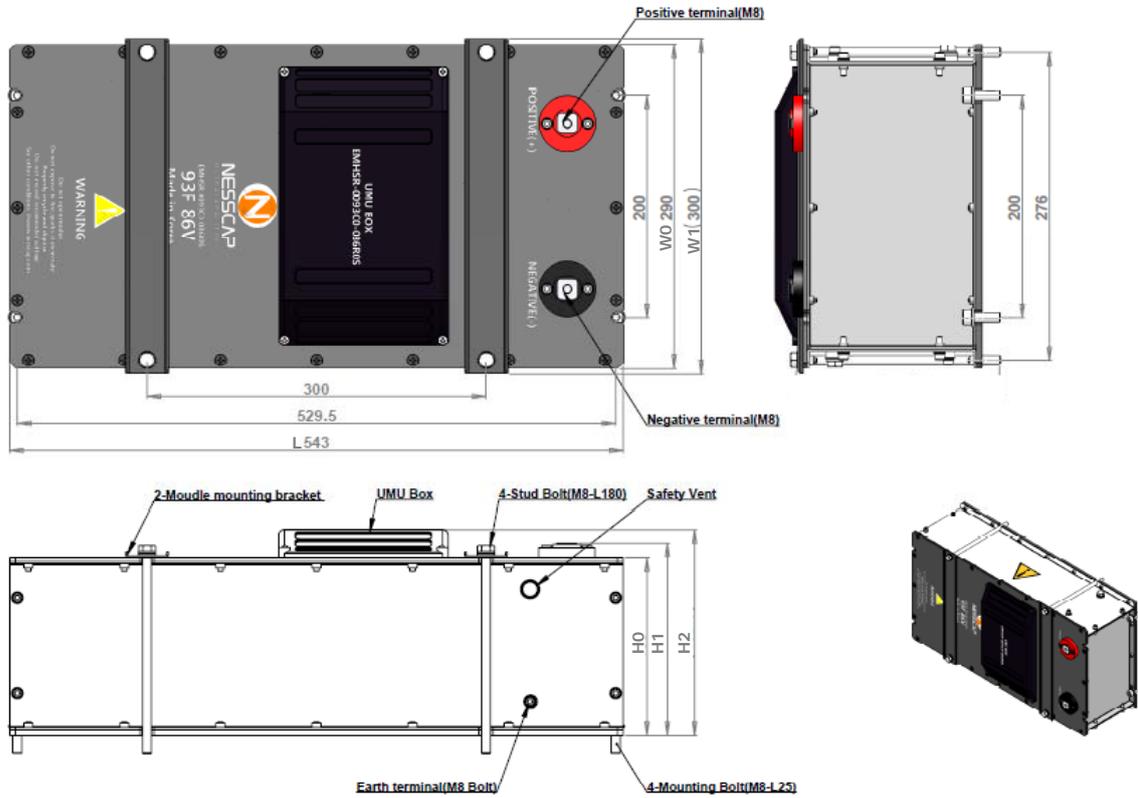
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ISO 9001, ISO 14001 and TS 16949 certified



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Dimension



Dimensions in mm (not to scale)

Part Number	Capacitance (F)	Dimensions (mm, ± 1.0)					
		L	W0	W1	H0	H1	H2
EMHSR-0062C0-086R0S	62	543	290	300	122	135	146.8
EMHSR-0093C0-086R0S	93	543	290	300	158	171	182.8

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