

SkelMod

162V92F

- + 162V DC nominal voltage
- + Ultra-low ESR
- + Long lifetime - 1 million duty cycles
- + High power output



General Specifications	Value	Unit
Electrical		
Rated voltage	162	V
Rated capacitance	92	F
Rated DC 10ms ESR	9.0	mΩ
Rated DC 1s ESR	12.2	mΩ
Rated maximum peak current (for 1 s duration) ^{1,9}	3.15	kA
Typical short circuit current (For informational purposes - do not use as operating current.)	18.1	kA
Maximum stored energy ²	335.3	Wh
Cells in total	54	pcs
Cell configuration	54s1p	
Cell type	SCX5000	

Physical parameters	Value	Unit
Mass. Typical	35.0	kg
Dimensions (WxHxL)	483 x 178 x 540	mm
Width indicates the dimensions for the front panel, the rest of the module is narrower and usable in a 19" rack.		

Temperature and Life	Value	Unit
Operating temperature range*		
Minimum	-40	°C
Maximum	+60	°C
Storage temperature range (uncharged)		
Minimum	-40	°C
Maximum	+50	°C
Life		
Lifetime @ 162V and maximum operating temperature	1500	Hours
Storage life @ RT, uncharged	10	Years
Projected cycle life @ RT, between V_R and $V_R / 2$	1,000,000	Cycles

Power

Rated nominal power, calculated from 10 ms ESR		
Power ⁶	732.6	kW

Rated practical power, calculated from 1 s ESR		
Power ⁶	538.0	kW

$$(1) \text{ Maximum peak current (1 sec)} = \frac{\frac{1}{2} CV}{C \times \text{ESR} + 1s} \quad (2) E_{\text{stored}} = \frac{\frac{1}{2} CV^2}{3600} \quad (3) E_{\text{specific}} = \frac{E_{\text{stored}}}{\text{mass}}$$

$$(4) P_{\text{density}} = \frac{P_{\text{max}}}{\text{volume}} \quad (5) E_{\text{density}} = \frac{E_{\text{stored}}}{\text{volume}} \quad (6) P_{\text{max}} = \frac{V^2}{4 \times \text{ESR}}$$

$$(7) P_{\text{specific}} = \frac{P_{\text{max}}}{\text{mass}} \quad (8) R_{\text{th}} = \frac{\Delta T}{\text{DC 1s ESR} \times I^2}$$

* For maximum series voltage IE32 (EN 60721-3-3) requirements must be followed. For lower temperature contact Skeleton Technologies

** Inrush current for the auxiliary supply: 0.18A

*** Thermal parameters given for cooling airflow rate of 85CFM

(9) The stated maximum peak current should not be exceeded during use. If the limit is to be exceeded by the customer, Skeleton must be consulted beforehand and give approval for the exceeded power load.

(10) These values of current refer to begin of life conditions of the product, for system design 200% ESR should be considered.

Standard markings

- + Name of manufacturer, part number, serial number, rated voltage
- + Rated capacitance, negative and positive terminals, warning marking
- + Total energy in watt-hours

Notes

- + All information provided on this data sheet and all subsequent supercapacitors sales and testing are subject to Standard Terms of Service (ToS) available on www.skeletontech.com, document General Terms of Sale for Skeleton Technologies GmbH