PRELIMINARY DATA SHEET

SkelMod 162V62F

+ 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
Absolute maximum voltage	170	V
Rated capacitance	62	F
Rated DC 10ms ESR	10.9	mΩ
Rated DC 1s ESR	13.0	mΩ
Rated maximum peak current (for 1 s duration) [1, 9]	2.78	kA
Typical short circuit current (For informational purposes - do not use as operating current.)	14.9	kA
Maximum stored energy [2]	225	Wh
Cells in total	54	pcs
Cell configuration	54s1p	

Physical parameters

	Value	Unit
Mass. Typical	35.0	kg
Dimensions (LxWxH)	540 x 483 x	
Width indicates the dimensions for the front panel, the rest of the module is narrower and usable in a 19" rack.	172	mm

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

	Value	Unit
Rated nominal power, calculated from 10 ms ESR		
Power [6]	601	kW
Rated practical power, calculated from 1 s ESR		
Power [6]	504	kW

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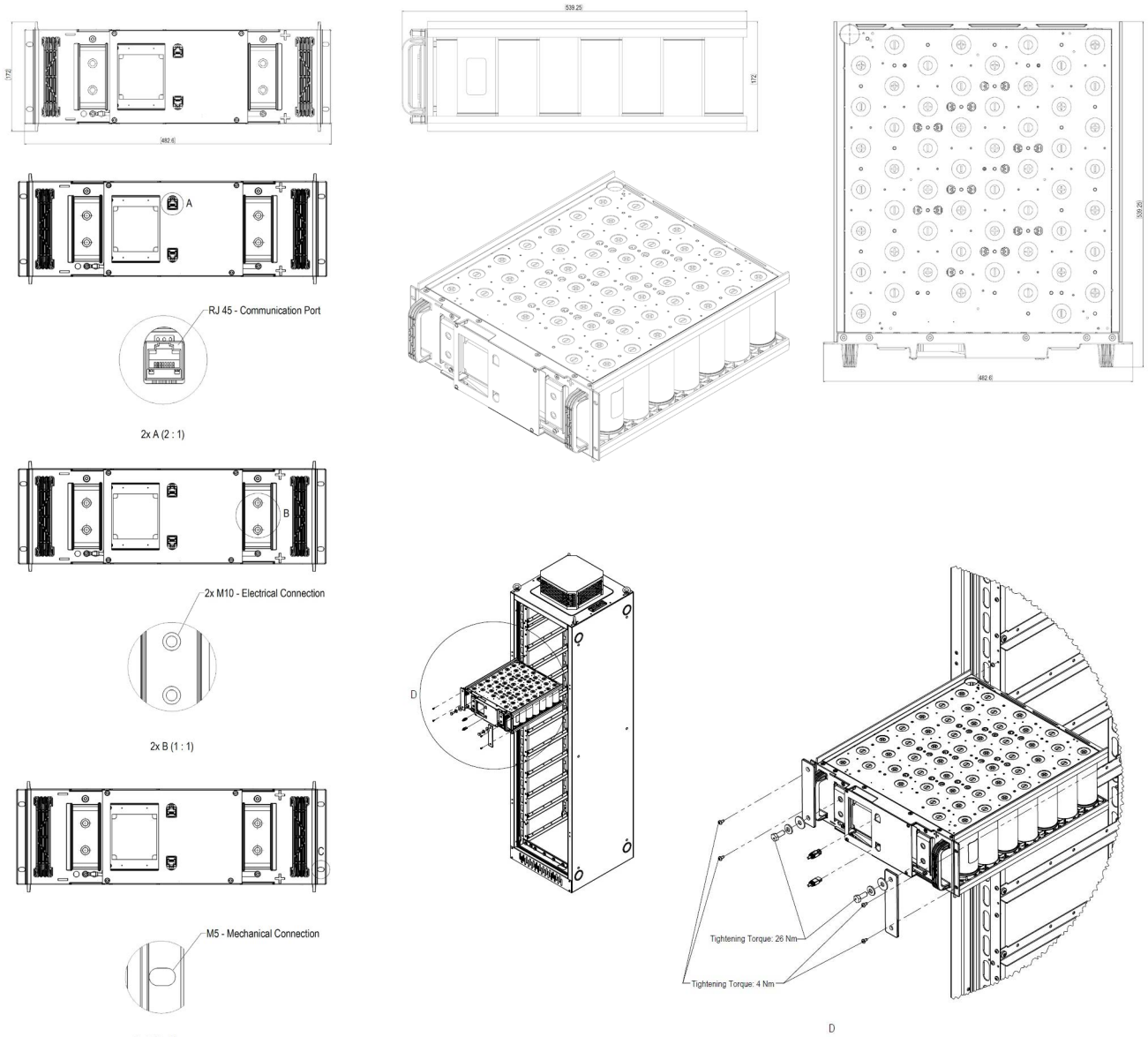

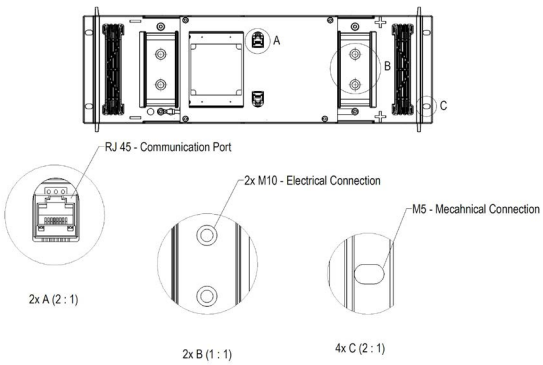

(1) Maximum peak current (1 sec) = $\frac{½\ CV}{C \times ESR + 1s}$ (2) $E_{stored} = \frac{½\ CV^2}{3600}$ (3) $E_{specific} = \frac{E_{stored}}{mass}$

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

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

* 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

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