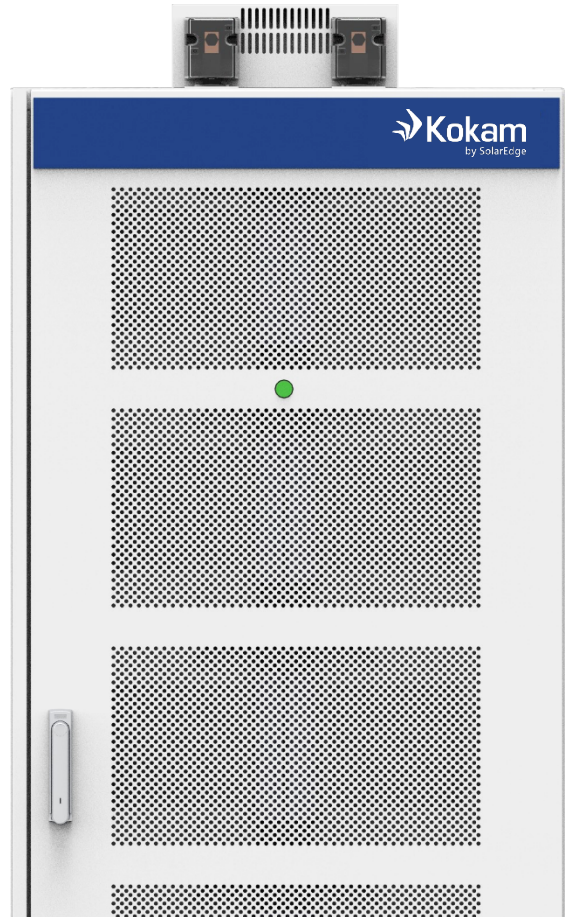


High Energy Type

# 151kWh Battery Rack



- › Excellent power-to-energy balance
- › Pre-assembled solution for ease of installation and maintenance
- › Optimized thermal management via air cooling
- › High reliability and unparalleled safety
- › Long cycle and calendar life (Over 8,000 cycles and up to 15 years\*)
- › Scalable up to multiple MWh with virtually no limit
- › Highly intelligent BMS\*\* for sophisticated system control and monitoring

\*Depending on the load profile, the warranty condition may differ

\*\*BMS: Battery Management System

# Battery Rack Specification

**Model: KRI-2C5R-C-200S-HE-151**

Item	Specification	Remarks	
<b>Electrical</b>			
Rack Configuration	10 modules in series	Cell: 130255255G1 (103Ah)	
Installed Energy	151kWh	-	
Usable Energy	139kWh	@ 0.5P discharge, BOL	
Nominal Voltage	736Vdc	-	
Operating Voltage Range	670 ~ 826Vdc	-	
Max. Charge Power	151kW	@ 1P, 1 Cycle	
Max. Charge Current	206A	@ 1C, 1 Cycle	
Rated Charge Power	75kW	@ 0.5P	
Rated Charge Current	103A	@ 0.5C	
Peak Discharge Power	454kW	@ 3P, ≤10 sec, ≥SOC 50%	
Peak Discharge Current	618A	@ 3C, ≤10 sec, ≥SOC 50%	
Max. Discharge Power	303kW	@ 2P, 1 Cycle	
Max. Discharge Current	412A	@ 2C, 1 Cycle	
Rated Discharge Power	75kW	@ 0.5P	
Rated Discharge Current	103A	@ 0.5C	
Round Trip DC Efficiency	>95%	@ 0.5P, BOL	
Control Power	AC 100~240V	-	
<b>Mechanical</b>			
Dimension	785 (W) x 730 (D) x 2,300 (H) mm	±5%, incl. Fuse Box	
Weight	1,300kg	±5%	
IP Grade	20	-	
<b>Communication</b>			
Communication Interface	Ethernet/RS-485/CAN2.0B	ModBus TCP/ ModBus RTU	
Monitoring	RS-232C	-	
<b>Environment</b>			
Operating Temperature	Charge	0 ~ 10°C	@ <0.2P
		10 ~ 35°C	@ <1P
		35 ~ 45°C	@ <0.5P
	Discharge	0 ~ 55°C	-
Operating Temperature		22 ~ 28°C	Recommended
Storage Humidity		< 60±25% RH	Non-condensing
Storage Temperature	1 Year	-20 ~ 25°C	SOC 50%±5%
	6 Months	25 ~ 35°C	
	3 Months	35 ~ 45°C	
	<1 Week	45 ~ 60°C	
<b>Expected Cycle &amp; Calendar Life**</b>			
Cycle Life @ DoD 90%	≥6,000 cycles	@ 25 ± 3°C, 1C/1C, SOH 70%	
Cycle Life @ DoD 80%	≥8,000 cycles	@ 25 ± 3°C, 1C/1C, SOH 70%	
Calendar Life	Up to 15 years	-	
<b>Certifications</b>			
Certifications	UL1642, CB, UL1973, UN38.3	@ Cell level	
	UL9540A	@ Cell level, available by 4Q 2020	

\*P : Power-rate / C : Current-rate

\*\*Depending on the load profile, the warranty condition may differ

## Offered Solution

System Config.*	Installed Energy	Nominal Voltage	Operating Voltage	Rated Charge Power	Rated Discharge Power	Max Charge Power	Max Discharge Power	Max Discharge Current	BCP** Required	No. of Banks***
2 Racks	303kWh	736Vdc	670 ~ 826Vdc	151kW	151kW	303kW	606kW	824A	Y	1
3 Racks	454kWh	736Vdc	670 ~ 826Vdc	227kW	227kW	454kW	908kW	1236A	Y	1
4 Racks	606kWh	736Vdc	670 ~ 826Vdc	303kW	303kW	606kW	1212kW	1648A	Y	1
5 Racks	758kWh	736Vdc	670 ~ 826Vdc	379kW	379kW	758kW	1516kW	2060A	Y	1
6 Racks	909kWh	736Vdc	670 ~ 826Vdc	454kW	454kW	909kW	1818kW	2472A	Y	1
7 Racks	1061kWh	736Vdc	670 ~ 826Vdc	530kW	530kW	1061kW	2122kW	2884A	Y	1
8 Racks	1212kWh	736Vdc	670 ~ 826Vdc	606kW	606kW	1212kW	2424kW	3296A	Y	1
9 Racks	1364kWh	736Vdc	670 ~ 826Vdc	682kW	682kW	1364kW	2728kW	3708A	Y	1
10 Racks	1516kWh	736Vdc	670 ~ 826Vdc	758kW	758kW	1516kW	3032kW	4120A	Y	2
11 Racks	1667kWh	736Vdc	670 ~ 826Vdc	833kW	833kW	1667kW	3334kW	4532A	Y	2
12 Racks	1819kWh	736Vdc	670 ~ 826Vdc	909kW	909kW	1819kW	3638kW	4944A	Y	2
13 Racks	1971kWh	736Vdc	670 ~ 826Vdc	985kW	985kW	1971kW	3942kW	5356A	Y	2
14 Racks	2122kWh	736Vdc	670 ~ 826Vdc	1061kW	1061kW	2122kW	4244kW	5768A	Y	2
15 Racks	2274kWh	736Vdc	670 ~ 826Vdc	1137kW	1137kW	2274kW	4548kW	6180A	Y	2
16 Racks	2425kWh	736Vdc	670 ~ 826Vdc	1212kW	1212kW	2425kW	4850kW	6592A	Y	2
17 Racks	2577kWh	736Vdc	670 ~ 826Vdc	1288kW	1288kW	2577kW	5154kW	7004A	Y	2
18 Racks	2729kWh	736Vdc	670 ~ 826Vdc	1364kW	1364kW	2729kW	5458kW	7416A	Y	2
19 Racks	2880kWh	736Vdc	670 ~ 826Vdc	1440kW	1440kW	2880kW	5760kW	7828A	Y	2
20 Racks	3032kWh	736Vdc	670 ~ 826Vdc	1516kW	1516kW	3032kW	6064kW	8240A	Y	3
21 Racks	3183kWh	736Vdc	670 ~ 826Vdc	1591kW	1591kW	3183kW	6366kW	8652A	Y	3
22 Racks	3335kWh	736Vdc	670 ~ 826Vdc	1667kW	1667kW	3335kW	6670kW	9064A	Y	3
23 Racks	3487kWh	736Vdc	670 ~ 826Vdc	1743kW	1743kW	3487kW	6974kW	9476A	Y	3
24 Racks	3638kWh	736Vdc	670 ~ 826Vdc	1819kW	1819kW	3638kW	7276kW	9888A	Y	3
25 Racks	3790kWh	736Vdc	670 ~ 826Vdc	1895kW	1895kW	3790kW	7580kW	10300A	Y	3
26 Racks	3942kWh	736Vdc	670 ~ 826Vdc	1971kW	1971kW	3942kW	7884kW	10712A	Y	3
27 Racks	4093kWh	736Vdc	670 ~ 826Vdc	2046kW	2046kW	4093kW	8186kW	11124A	Y	3
28 Racks	4245kWh	736Vdc	670 ~ 826Vdc	2122kW	2122kW	4245kW	8490kW	11536A	Y	3
29 Racks	4396kWh	736Vdc	670 ~ 826Vdc	2198kW	2198kW	4396kW	8792kW	11948A	Y	3
30 Racks	4548kWh	736Vdc	670 ~ 826Vdc	2274kW	2274kW	4548kW	9096kW	12360A	Y	4

\*Depending on customer requirements, more than 30 racks can be connected in parallel.

\*\*BCP: Battery Connection Panel (Incl. switch disconnecter, system BMS)

\*\*\*Depending on operational requirements, the number of Banks may vary. One BCP is required per Bank.

### DISCLAIMERS OF WARRANTIES:

All materials and services on this document are provided "as is" without warranty of any kind, either express or implied, including, but not limited to, the implied warranties of merchantability or fitness for a particular purpose, or the warranty of non-infringement. This document could include technical or other mistakes, inaccuracies or typographical errors. Kokam assumes no responsibility for errors or omissions in the information, documents, software, materials and/or services which are referenced by or linked to this document. Kokam does not grant any express or implied right to any person or business entity under any patents, copyrights, trademarks, or trade secret information with respect to the materials and services. No portion of the information or documents may be reproduced in any form or by any means without the prior written consent of kokam. In no event shall kokam be liable to any person or business entity for any special, punitive, incidental, indirect or consequential damages based on any use of this document.