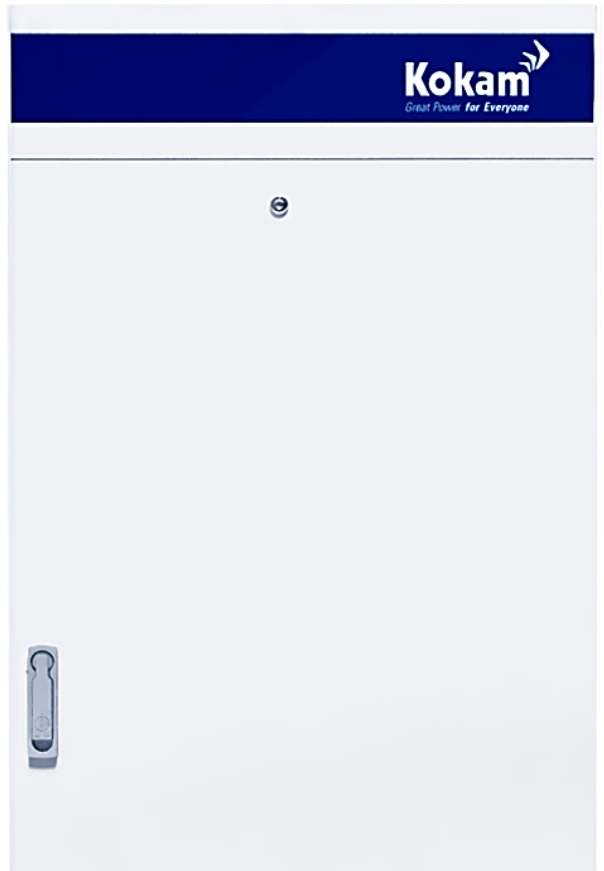




High Power Type

54.7kWh Battery Rack



- › Highly advanced lithium-ion battery solution for mission-critical applications
- › Exceptionally high power performance (Up to 9 C-rate)
- › Exceedingly small footprint due to high energy density
- › 2-pole and 3-pole topology available
- › Long cycle and calendar life (Over 8,000 cycles and up to 15 years¹)
- › Highly intelligent BMS² for sophisticated system control and monitoring

1. Depending on the load profile, the warranty condition may differ / 2. BMS: Battery Management System
*The image above is a reference, and the actual product may differ from the above image

Battery Rack Specification

Model: KST054644A15ADC00 (Previous Model Name: KUPS-1C5R-175S-HP-54-P04-F06)

Item	Specification	Remarks			
Electrical					
Configuration	Rack	5 modules in series			
	Module	1P35S			
	Cell	High Power			
Installed Energy	54.7kWh	-			
Usable Energy ¹	50.3kWh	@ 1P discharge, BOL			
Nominal Voltage	644.0Vdc	-			
Operating Voltage Range	560.0 ~ 722.7Vdc	-			
Float Voltage	715.7Vdc	-			
Charging	Power	Rated	54.7kW	1P	
		Max ²	109.4kW	2P	
	Current	Rated	85.0A	1C	
		Max ²	170.0A	2C	
Discharging	Power	Rated	54.7kW	1P	
		Max ²	322.0kW	5.8P, ≤7 min.	
		Peak	383.1kW	7P, ≤5 min 30 sec.	
	Current	Peak	437.9kW	8P, ≤4 min 20 sec.	
			492.6kW	9P, ≤1 min.	
			85.0A	1C	
		Rated	Max ²	500.0A	5.8C, ≤7 min.
			Peak	595.0A	7C, ≤5 min 30 sec.
			Peak	680.0A	8C, ≤4 min 20 sec.
Round Trip DC Efficiency	>95%	@ 1P, BOL			
Control Power	DC 24V	-			
Mechanical					
Dimension	580 (W) x 740 (D) x 2,300 (H) mm	± 5mm			
Weight	Approx. 683kg	± 5%			
IP Grade	20	-			
Communication					
Communication Interface	Ethernet/RS-485	Modbus TCP/ Modbus RTU			
Monitoring	RS-232C	-			
Operating Conditions					
Operating Temperature ³	Charging	0 ~ 10°C	<0.2P		
		10 ~ 35°C	<2P		
		35 ~ 45°C	<1P		
	Discharging	0 ~ 55°C	-		
Environment					
Ambient Temperature	23±5°C	-			
Storage Humidity	<60±25% RH	Non-condensing			
Storage Temperature ⁴	1 Year	-20 ~ 25°C	30≤ SOC ≤50%		
	6 Months	-20 ~ 35°C			
	3 Months	-20 ~ 45°C			
	<1 Week	-20 ~ 60°C			
Expected Cycle & Calendar Life⁵					
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	@ 25±3°C, SOC ≤80%, SOH 70%			
Certification & Compliance					
Certifications ⁶	UL 1642, UL 1973, IEC 62619, UL 9540A, UN 38.3	Cell level			
	CE, IEC 62619, UN 38.3	Module level			
	CE, IEC 62619, IEC 60730-1 Annex H	Rack level			
Compliance	RoHS II, REACH	-			

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

1. The usable energy may change depending on the calendar life of the battery cells.

2. After max. charging or discharging, it is recommended to rest the battery rack until the cell temperature returns to 23±5°C.

3. Operating temperature is based on the cell temperature.

4. When resting the battery system after an operation for longer than 1 month, the user shall ensure that the SOC is above 30%. The ambient temperature shall be controlled at 23±5°C when resting the battery system. During storage, the temperature and SOC conditions shall always be adhered to.

5. Cycle and calendar life shall be depending on the load profile, and the warranty condition may differ according to Kokam Limited Product Warranty.

6. Certification update (incl. model name). Expected to be completed in 1Q 2022.

DISCLAIMERS OF WARRANTIES:

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