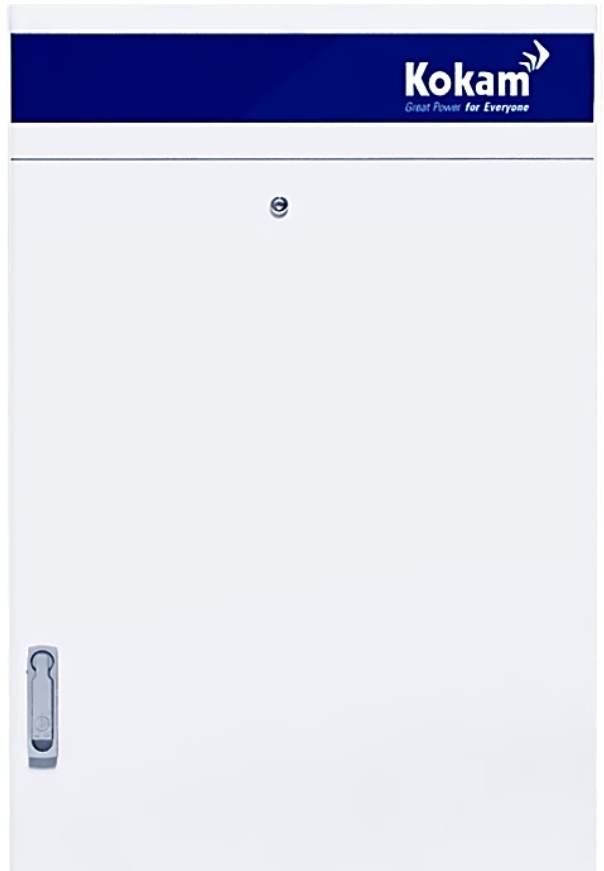




High Power Type

50.0kWh 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: KST050588A15ADC00 (Previous Model Name: KUPS-1C5R-160S-HP-50-P04-F06)

Item	Specification	Remarks		
Electrical				
Configuration	Rack	5 modules in series		
	Module	1P32S		
	Cell	High Power		
Installed Energy	50.0kWh	-		
Usable Energy ¹	46.0kWh	@ 1P discharge, BOL		
Nominal Voltage	588.8Vdc	-		
Operating Voltage Range	512.0 ~ 660.8Vdc	-		
Float Voltage	654.4Vdc	-		
Charging	Power	Rated	50.0kW	1P
		Max ²	100.0kW	2P
	Current	Rated	85.0A	1C
		Max ²	170.0A	2C
Discharging	Power	Rated	50.0kW	1P
		Max ²	294.4kW	5.8P, ≤7 min.
		Peak	350.3kW	7P, ≤5 min 30 sec.
			400.3kW	8P, ≤4 min 20 sec.
	Current	Rated	450.4kW	9P, ≤1 min.
			85.0A	1C
		Max ²	500.0A	5.8C, ≤7 min.
			595.0A	7C, ≤5 min 30 sec.
Peak	680.0A	8C, ≤4 min 20 sec.		
	765.0A	9C, ≤1 min.		
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. 658kg	± 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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