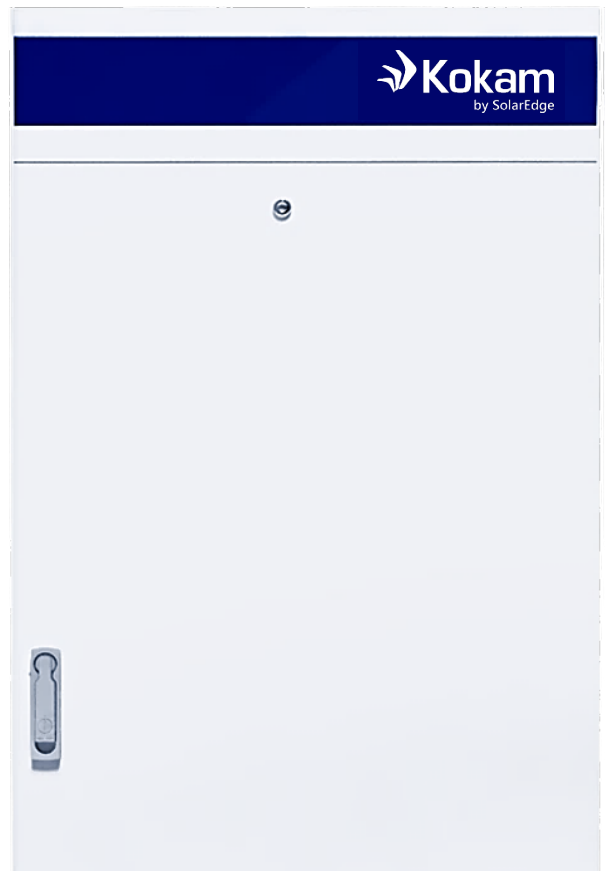


Ultra High Power Type

36kWh Battery Rack



- › Highly advanced lithium-ion battery solution for mission-critical applications
- › Industry-leading high power performance (Up to 10 C-rate)
- › Pre-assembled solution for ease of installation and maintenance
- › Exceedingly small footprint due to high energy density
- › 2-pole and 3-pole topology available
- › High reliability and unparalleled safety
- › Long cycle and calendar life (Over 8,000 cycles and up to 15 years*)
- › 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: KUPSI-2C3RT3-36-UP

Item	Specification	Remarks	
Electrical			
Rack Configuration	6 modules in series	Cell: 130255255P (75Ah)	
Module Configuration	1P22S	-	
Installed Energy	36kWh	-	
Usable Energy	33kWh	@ 1P discharge, BOL	
Nominal Voltage	244Vdc	-	
Operating Voltage Range	±211 ~ 272Vdc	-	
Float Voltage	272Vdc	-	
Max. Charge Power	73kW	@ 2P, 1 Cycle	
Max. Charge Current	150A	@ 2C, 1 Cycle	
Rated Charge Power	36kW	@ 1P	
Rated Charge Current	75A	@ 1C	
Max. Discharge Power	366kW	@ 10P, ≤6 min., 1 Cycle	
Max. Discharge Current	750A	@ 10C, ≤6 min., 1 Cycle	
Rated Discharge Power	36kW	@ 1P	
Rated Discharge Current	75A	@ 1C	
Round Trip DC Efficiency	>95%	@ 1P, BOL	
Control Power	AC 100~240V, 50/60Hz	1ph, 2 wire	
Mechanical			
Dimension	780 (W) x 676 (D) x 1,900 (H) mm	-	
Weight	Approx. 580kg	-	
IP Grade	20	-	
Communication			
Communication Interface	Ethernet/RS-485	ModBus TCP/ModBus RTU	
Monitoring	RS-232C	-	
Environment			
Operating Temperature	Charging	0 ~ 10°C	@ <0.2P
		10 ~ 35°C	@ <2P
		35 ~ 45°C	@ <1P
	Discharging	0 ~ 55°C	-
Operating Temperature		18 ~ 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	
Expected Cycle & Calendar Life**			
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	-	
Certifications			
Certifications	UL1642, UL1973, CE, UN38.3	@ Cell level	

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

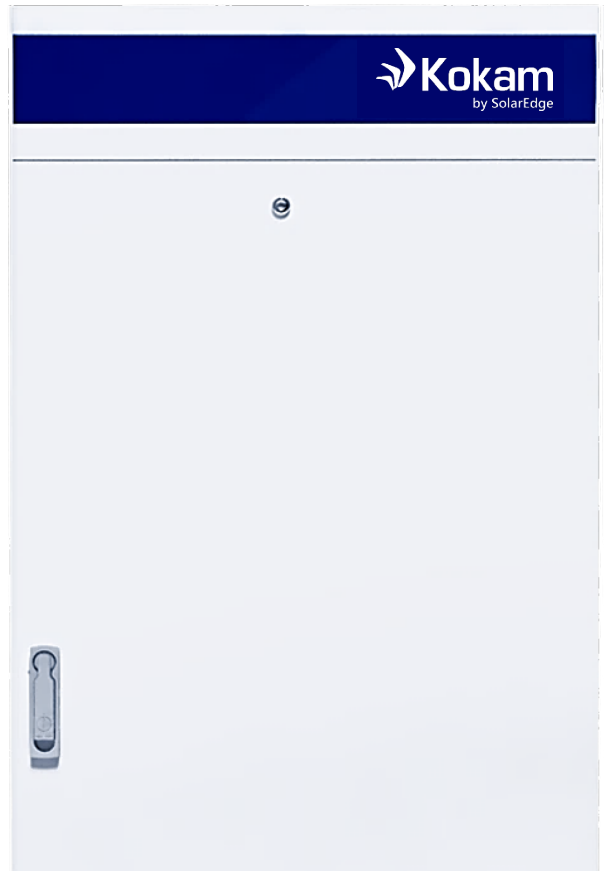
**Depending on the load profile, the warranty condition may differ

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High Power Type

37kWh Battery Rack



- › Highly advanced lithium-ion battery solution for mission-critical applications
- › Exceptionally high power performance (Up to 6 C-rate)
- › Pre-assembled solution for ease of installation and maintenance
- › Exceedingly small footprint due to high energy density
- › 2-pole and 3-pole topology available
- › High reliability and unparalleled safety
- › Long cycle and calendar life (Over 8,000 cycles and up to 15 years*)
- › 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: KUPSI-1C4RT3-37-UP

Item	Specification	Remarks	
Electrical			
Rack Configuration	4 modules in series	Cell: 120255255G1H (85Ah)	
Module Configuration	1P30S	-	
Installed Energy	37kWh	-	
Usable Energy	34kWh	@ 1P discharge, BOL	
Nominal Voltage	220Vdc	-	
Operating Voltage Range	± 192 ~ 247Vdc	-	
Float Voltage	247Vdc	-	
Max. Charge Power	75kW	@ 2P, 1 Cycle	
Max. Charge Current	170A	@ 2C, 1 Cycle	
Rated Charge Power	37kW	@ 1P	
Rated Charge Current	85A	@ 1C	
Max. Discharge Power**	225kW	@ 6P, ≤10 min., 1 Cycle	
Max. Discharge Current**	510A	@ 6C, ≤10 min., 1 Cycle	
Rated Discharge Power	37kW	@ 1P	
Rated Discharge Current	85A	@ 1C	
Round Trip DC Efficiency	>95%	@ 1P, BOL	
Control Power	AC 100~240V, 50/60Hz	1ph, 2 wire	
Mechanical			
Dimension	580 (W) x 740 (D) x 1,960 (H) mm	-	
Weight	Approx. 545kg	-	
IP Grade	20	-	
Communication			
Communication Interface	Ethernet/RS-485	ModBus TCP/ModBus RTU	
Monitoring	RS-232C	-	
Environment			
Operating Temperature	Charging	0 ~ 10°C	@ <0.2P
		10 ~ 35°C	@ <2P
		35 ~ 45°C	@ <1P
	Discharging	0 ~ 55°C	-
Operating Temperature		18 ~ 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	
Expected Cycle & Calendar Life**			
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	-	
Certifications			
Certifications	UL1642, CB, UN38.3	@ Cell level	
	UL1973	@ Cell level, available by 3Q 2020	
	UL9540A	@ Cell level, available by 4Q 2020	

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

**Depending on project specific back-up time requirement, these values may change (5-30 min.)

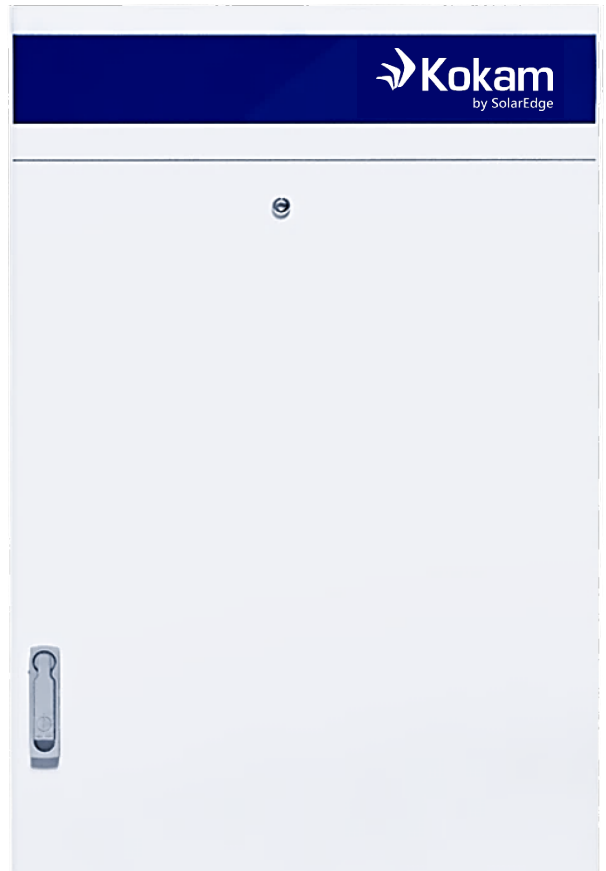
***Depending on the load profile, the warranty condition may differ

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High Power Type

41kWh Battery Rack



- › Highly advanced lithium-ion battery solution for mission-critical applications
- › Exceptionally high power performance (Up to 6 C-rate)
- › Pre-assembled solution for ease of installation and maintenance
- › Exceedingly small footprint due to high energy density
- › 2-pole and 3-pole topology available
- › High reliability and unparalleled safety
- › Long cycle and calendar life (Over 8,000 cycles and up to 15 years*)
- › 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: KUPSI-1C4RT3-41-UP

Item	Specification	Remarks	
Electrical			
Rack Configuration	4 modules in series	Cell: 120255255G1H (85Ah)	
Module Configuration	1P33S	-	
Installed Energy	41kWh	-	
Usable Energy	37kWh	@ 1P discharge, BOL	
Nominal Voltage	242Vdc	-	
Operating Voltage Range	±211 ~ 272Vdc	-	
Float Voltage	272Vdc	-	
Max. Charge Power	82kW	@ 2P, 1 Cycle	
Max. Charge Current	170A	@ 2C, 1 Cycle	
Rated Charge Power	41kW	@ 1P	
Rated Charge Current	85A	@ 1C	
Max. Discharge Power**	247kW	@ 6P, ≤10 min., 1 Cycle	
Max. Discharge Current**	510A	@ 6C, ≤10 min., 1 Cycle	
Rated Discharge Power	41kW	@ 1P	
Rated Discharge Current	85A	@ 1C	
Round Trip DC Efficiency	>95%	@ 1P, BOL	
Control Power	AC 100~240V, 50/60Hz	1ph, 2 wire	
Mechanical			
Dimension	580 (W) x 740 (D) x 1,960 (H) mm	-	
Weight	Approx. 565kg	-	
IP Grade	20	-	
Communication			
Communication Interface	Ethernet/RS-485	ModBus TCP/ModBus RTU	
Monitoring	RS-232C	-	
Environment			
Operating Temperature	Charging	0 ~ 10°C	@ <0.2P
		10 ~ 35°C	@ <2P
		35 ~ 45°C	@ <1P
	Discharging	0 ~ 55°C	-
Operating Temperature		18 ~ 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	
Expected Cycle & Calendar Life**			
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	-	
Certifications			
Certifications	UL1642, CB, UN38.3	@ Cell level	
	UL1973	@ Cell level, available by 3Q 2020	
	UL9540A	@ Cell level, available by 4Q 2020	

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

**Depending on project specific back-up time requirement, these values may change (5-30 min.)

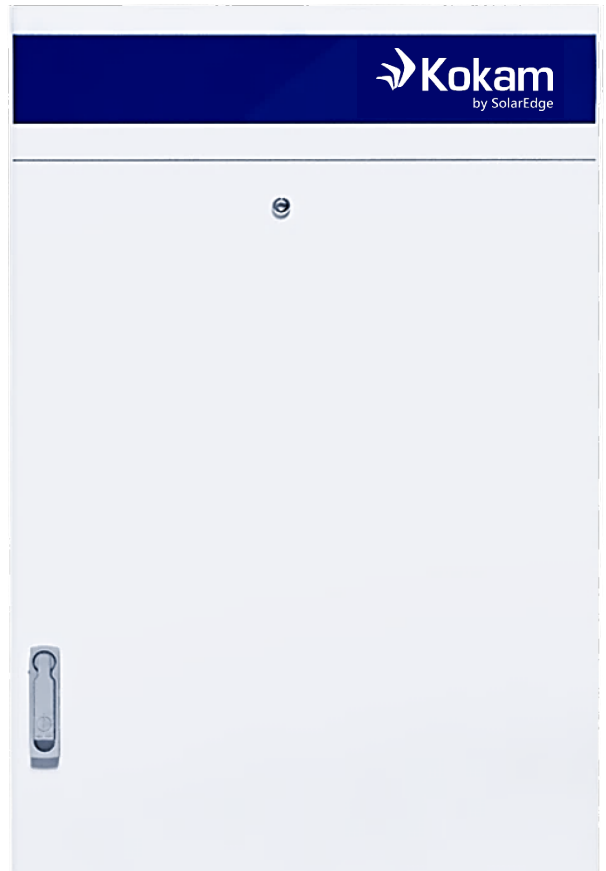
***Depending on the load profile, the warranty condition may differ

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High Power Type

62kWh Battery Rack



- › Highly advanced lithium-ion battery solution for mission-critical applications
- › Exceptionally high power performance (Up to 6 C-rate)
- › Pre-assembled solution for ease of installation and maintenance
- › Exceedingly small footprint due to high energy density
- › 2-pole and 3-pole topology available
- › High reliability and unparalleled safety
- › Long cycle and calendar life (Over 8,000 cycles and up to 15 years*)
- › 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: KUPSI-2C5RT3-62-UP

Item	Specification	Remarks	
Electrical			
Rack Configuration	10 modules in series	Cell: 120255255G1H (85Ah)	
Module Configuration	1P20S	-	
Installed Energy	62kWh	-	
Usable Energy	57kWh	@ 1P discharge, BOL	
Nominal Voltage	368Vdc	-	
Operating Voltage Range	± 320 ~ 413Vdc	-	
Float Voltage	413Vdc	-	
Max. Charge Power	125kW	@ 2P, 1 Cycle	
Max. Charge Current	170A	@ 2C, 1 Cycle	
Rated Charge Power	62kW	@ 1P	
Rated Charge Current	85A	@ 1C	
Max. Discharge Power**	375kW	@ 6P, ≤10 min., 1 Cycle	
Max. Discharge Current**	510A	@ 6C, ≤10 min., 1 Cycle	
Rated Discharge Power	62kW	@ 1P	
Rated Discharge Current	85A	@ 1C	
Round Trip DC Efficiency	>95%	@ 1P, BOL	
Control Power	AC 100~240V, 50/60Hz	1ph, 2 wire	
Mechanical			
Dimension	780 (W) x 676 (D) x 2,237 (H) mm	-	
Weight	Approx. 810kg	-	
IP Grade	20	-	
Communication			
Communication Interface	Ethernet/RS-485	ModBus TCP/ModBus RTU	
Monitoring	RS-232C	-	
Environment			
Operating Temperature	Charging	0 ~ 10°C	@ <0.2P
		10 ~ 35°C	@ <2P
		35 ~ 45°C	@ <1P
	Discharging	0 ~ 55°C	-
Operating Temperature		18 ~ 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	
Expected Cycle & Calendar Life**			
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	-	
Certifications			
Certifications	UL1642, CB, UN38.3	@ Cell level	
	UL1973	@ Cell level, available by 3Q 2020	
	UL9540A	@ Cell level, available by 4Q 2020	

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

**Depending on project specific back-up time requirement, these values may change (5-30 min.)

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

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