			Title		
			System Interface Specification (447.55kWh KILO BESS)		
	RESPONSIBLE	DATE	SIZE	DOCUMENT NO.	REV
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MANUAL CHANGE PROHIBITED				SHEET 1 OF 4	


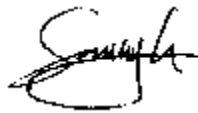
System Interface Specification

149.18kWh KILO BESS Battery System

Customer	Approved

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1. ESS RACK Parameters

Specific parameters for the Pack are detailed in the chart below

Parameter	Units	Specification	Note
Cell	Ah	60	ETI123100302 E60A
Series	N/A	224	One Rack
Parallel	N/A	3	One Rack
Cell Voltage			
Max	V	4.2	At 100% SOC
Nom	V	3.7	At 50% SOC
Min	V	2.7	At 0% SOC
Cell Capacity			
Rated	Ah	60	From cell specification
Minimum	Ah	58.8	From cell specification
Rack Configuration			
Cell Element	Module	56	element contains 12 cells (4s3p)
Rack Capacity (BOL)			
Rated	Ah	180	Calculated based on cell capacity
Minimum	Ah	176.4	Calculated based on cell minimum capacity
Rack Capacity (EOL)			
Rated	Ah	126	Estimated at 70%
Minimum	Ah	123.48	Calculated based on cell minimum capacity with estimated at 70%
Rack Voltage			
Max	V	940.8	Determined at maximum Pack voltage
Nom	V	828.8	Determined at nominal Pack voltage
Min	V	604.8	Determined at minimum Pack voltage
Rack Energy			
Rated	kWh	149.18	Calculated value based on rated system capacity
Minimum	kWh	146.20	Calculated value based on minimum capacity
Usable (typical)	kWh	89.50	Estimated energy between 20% and 80% SOC, de-rated specific to system application
Usable (max)	kWh	126.80	Estimated energy between 10% and 95% SOC, de-rated specific to system application
Rack Discharge Power			
Continuous	kW	39.29	At nominal system voltage (45A*828.8)
Max	kW	74.59	At nominal system voltage (90A*828.8)
Peak	kW	N/A	-
Rack Charge Power			
Continuous	kW	39.29	At nominal system voltage (45A*828.8)
Max	kW	74.59	At nominal system voltage (90A*828.8)
Peak	kW	N/A	-
Rack Discharge Current			
Continuous	A	45	Continuous between 20% and 100% SOC, specific to system application
Max	A	90	Continuous between 20% and 100% SOC (system maximum continuous)
Peak	A	N/A	-
Rack Charge Current			

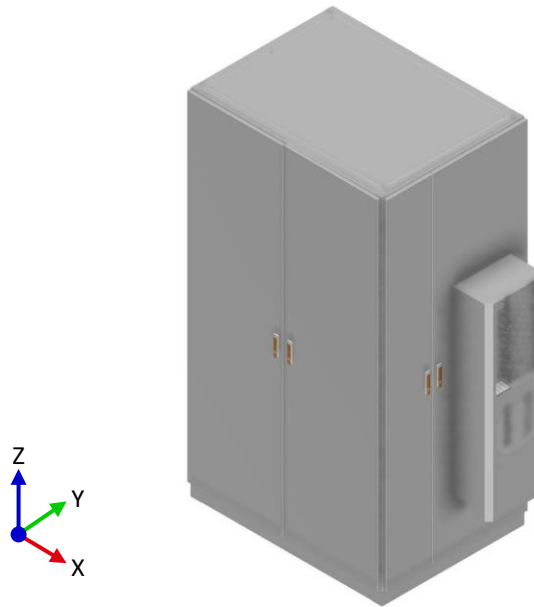
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Parameter	Units	Specification	Note
Continuous	A	45	Continuous between 0% and 80% SOC, specific to system application
Max	A	90	Continuous between 0% and 80% SOC (system maximum continuous)
Peak	A	N/A	-
Rack Specification			
Mass	Ton	Approx. 1.5	Approximate calculated value
Battery Shelf Life	years	5	Continuous between 20% and 80% SOC
Operating Temperature/Humidity			
Max	% RH	85	Range (cell min/max)
Min	% RH	45	Range (cell min/max)
Max	Degrees °C	55	Zero Current Limited Above Max Operating Temp
Min(Discharge)	Degrees °C	(-)20	Zero Current Limited Below Min Operating Temp
Min(Charge)	Degrees °C	0	Zero Current Limited Below Min Operating Temp
Storage Temperature	Degrees °C	0 to 25 ≤1year	Range (cell min/max)
		0 to 45 ≤3Month	Range (cell min/max)
		-30 to 60 ≤1Month	Range (cell min/max)

Table 1 - Product Technical Specifications

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2. Mechanical Drawings



Parameter	Unit	Value
X Dimension	mm	1,624
Y Dimension	mm	1,022
Z Dimension	mm	2,500
Mass	Ton	1.5

Figure 1 Rack Outline Drawing