



ENERGY STORAGE
SYSTEM (ESS)

4.4 kWh Sodium Ion
Rack Mount ESS

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**TECONNEX
POWER**

Safe & Reliable Solutions

1. The ESS features an intelligent Energy Management System (EMS) that optimizes real-time energy flow. Sophisticated algorithms balance supply and demand for seamless integration with various energy sources and consumption patterns.
2. Sodium-ion batteries have long cycle lives, ideal for grid storage. Their stable chemistry enables durability through numerous charge and discharge cycles without significant degradation.
3. Lower risk of thermal runaway: Sodium-ion batteries are less likely to overheat, catch fire, or explode than lithium-ion batteries due to sodium's lower reactivity and stable composition.
4. Cold temperature stability: Units can charge at low temperatures (0 °C to -20 °C).

Performance of Sodium-ion in ESS

1. Sodium-ion batteries are ideal for energy storage systems supporting grid balancing and renewable energy. They excel at long-duration storage, stabilizing power grids and storing energy from sources such as solar and wind.

Sustainable and High Availability

1. Sodium-ion batteries are an attractive choice for ESS due to their excellent scalability, operational safety, and low maintenance requirements.
2. Sodium-ion energy storage systems are less vulnerable to supply chain disruptions because of the global abundance of sodium.
3. Responsible disposal of "End-of-Life" cells is straightforward in comparison with lithium-ion products due to their less toxic chemical composition and reduced potential environmental impact.
4. We can provide remote software updates as they become available, with customer permission for access, helping to reduce your operational and maintenance costs.

Energy Independence and Grid Stability

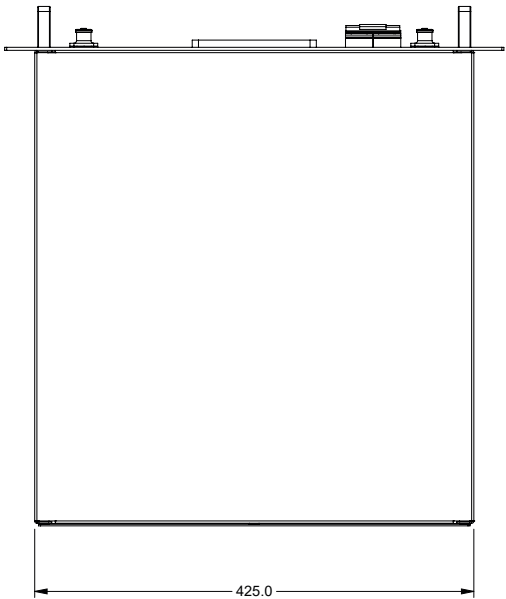
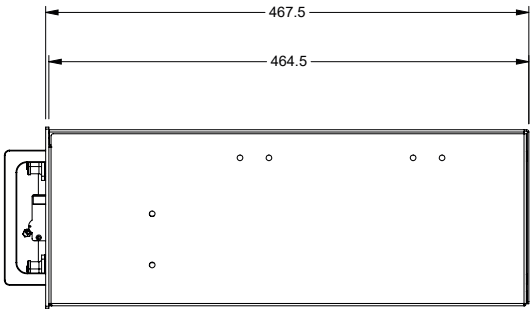
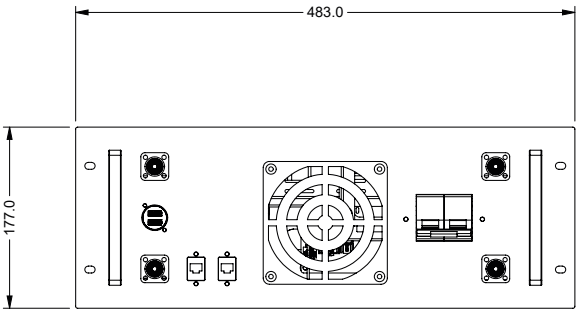
1. Sodium-ion energy storage systems deliver dependable backup power, enhance grid resilience by stabilizing voltage, and promote energy independence.
2. These systems also facilitate renewable energy storage from solar and wind sources, ensuring a stable and consistent energy supply for users.

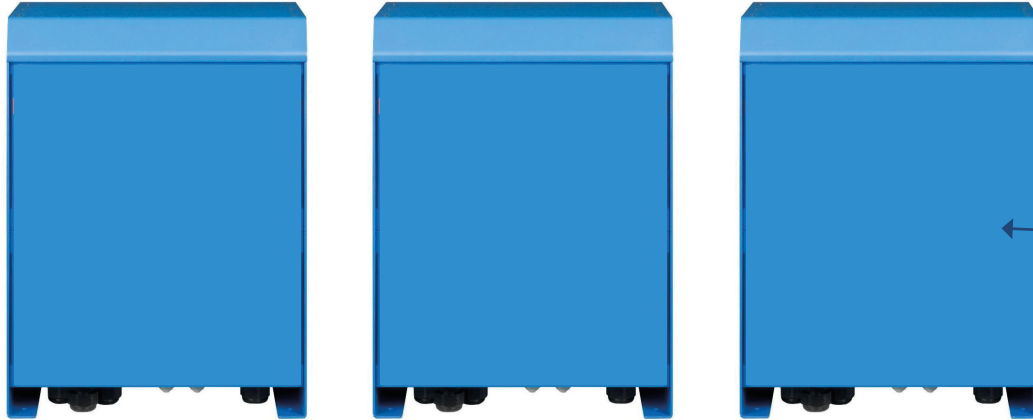


TECONNEX SODIUM ION RACK MOUNT ESS SPECIFICATIONS				
	TXP0013LVESS(Na-ion)	TXP030LVESS(Na-ion)	TXP065LVESS(Na-ion)	TXP0117HVESS(Na-ion)
Rated energy power output	5kW (6.25kVA)	15kW(18.75kVA)	30kW (37.5kVA)	60kW (75kVA)
Rated energy storage capacity	13.18kWh	30.74kWh	65.9kWh	117.1kWh
Rated Grid Voltage	230V AC	230VAC	400V AC	400V AC
Grid frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Peak shaving On/Off function	available	available	available	available
AC Load Output				
AC voltage range	Single phase	Single phase	Single &Three Phase	Single &Three Phase
Output frequency & voltage	50/60Hz; Single Phase 230VAC	50/60Hz; Single Phase 230VAC	50/60Hz;3L/N/PE 380/415VAC Single Phase 230VAC	50/60Hz;3L/N/PE 380/415VAC Single Phase 230VAC
Continuous power output	5kW(6.75kVA)	15kW(18.75kVA)	30kW (37.5kVA)	60kW (75kVA)
Output Voltage waveform	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave
Built-in transformer	yes	yes	yes	yes
PV Controller and Inverter details				
Max PV power capacity	5.8kW	11.5kW	33.5kW	60kW
No of Solar Controller /System	1 No	1 No	2Nos	In built-in HPS unit
Full load MPP voltage tracker / Controller	65-450VDC	65-450VDC	200 -650VDC	180 -850VDC
Startup voltage/Tracker	120VDC	120VDC	160V DC	180V DC
No of MPPT tracker /Controller	2	4	4	6
No of inverters	1 No	1 No	3 Nos	1No (Hybrid Power System HPS)
Battery Parameters				
Cell Specification	Na-ion 100Ah	Na-ion 100Ah	Na-ion 100Ah	Na-ion 160Ah module
Rated Voltage	48.8VDC	48.8VDC	48.8VDC	48.8VDC
Battery Capacity	100Ah	100Ah	100Ah	160Ah
No of Strings/Cabinet	3Nos	7Nos	15Nos	15Nos
Cell Cycle life	80% retention with 3000 Cycles @ 0.5C 25Deg C	80% retention with 3000 Cycles @ 0.5C 25Deg C	80% retention with 3000 Cycles @ 0.5C 25Deg C	80% retention with 3000 Cycles @ 0.5C 25Deg C
Max Discharge Current/String	50A	50A	50A	55A
Max Charge Current/String	50A	50A	50A	55A
Total rated capacity	13.14kWh	30.7kWh	65.9kWh	117.1kWh
Performance				
Discharge autonomy 100% / 50% output rated power, hours	2.6/5.2hrs	2/4 hrs	2.2/4.4 hrs	1.96/3.92 hrs
Recharging time at rated input power, hours	2.6hrs	2hrs	2.2hrs	1.96hrs
Communication Interface	RS485/CAN BUS	RS485/CAN BUS	RS485/CAN BUS	RS485/CAN BUS
Remote monitoring	GPRS/WIFI/Bluetooth /LAN	GPRS/WIFI/Bluetooth /LAN	GPRS/WIFI/Bluetooth /LAN	GPRS/WIFI/Bluetooth /4G/LAN
General Data				
Operable ambient temp	-20Deg C / + 55Deg C	-20Deg C / + 55Deg C	-20Deg C / + 55Deg C	-20Deg C / + 55Deg C
Dimensions (L x W x H) *dimensions are subject to change	1000mm x 600mm x 1000mm	1000mm x800mm x 1000mm	2000mm x 800mmx 1900mm	2000mm x 1200mmx 2500mm
Degree of Protection	IP21 (In-door)/ IP54 (Out-door)	IP21 (In-door)/ IP54 (Out-door)	IP21 (In-door)/ IP5 (Out-door)	IP21 (In-door)/ IP54 (Out-door)
Housing	Cabinet	Cabinet	Cabinet	Cabinet
Cooling method	Smart Air cooling	Smart Air cooling	Smart Air cooling	Smart Air cooling
Safety Compliance	UN38.3. IEC62619, UL9450A, EMC	UN38.3. IEC62619, UL9450A,EMC	UN38.3. IEC62619, UL9450A,EMC	UN38.3. IEC62619, UL9450A, EMC
Grid compliance	G99	G99	G99	G99
Power Input & Output Socket detail	Customised options	Customised options	Customised options	Customised options

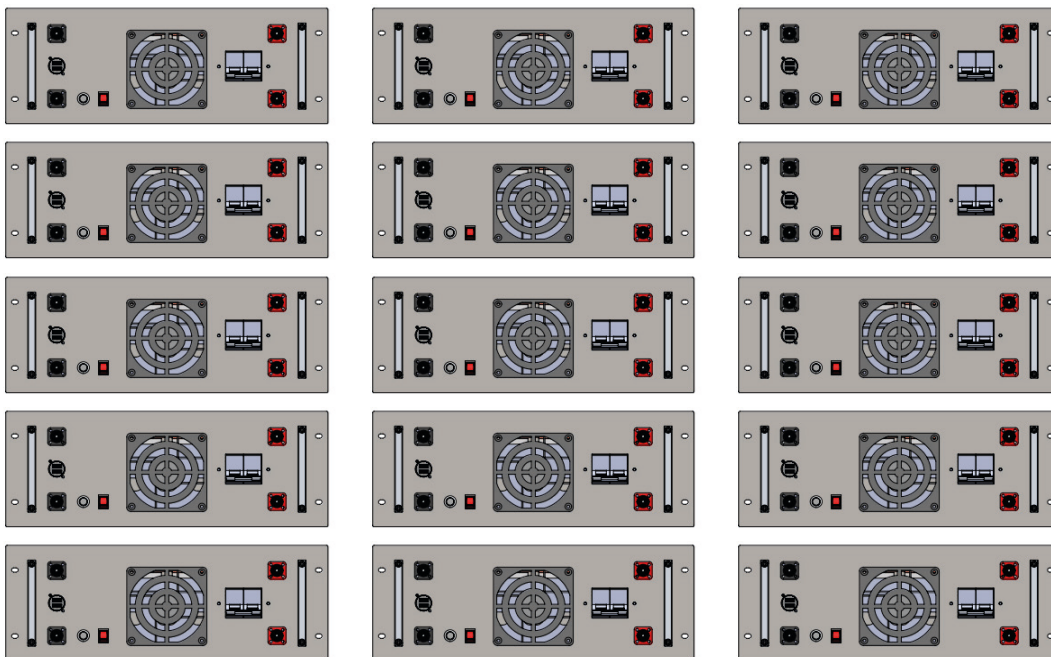
General Data		
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Dimensions (L x W x H) *dimensions are subject to change	1000mm x800mm x 1000mm	2000mm x 800mmx 1900mm
Degree of Protection	IP21/ IP54	IP21/ IP54
Housing	Cabinet	Cabinet
Cooling method	Smart Air cooling	Smart Air cooling
Communication Interface	RS485/CAN	RS485/CAN
Compliance	UN38.3. IEC62619, UL9450A,	UN38.3. IEC62619, UL9450A,
System compliance	G99	G99
Power Input & Output Socket details	Customised options	Customised options

Dimensional Specifications





10kWh
Hybrid
inverter (3X)



4.4kWh Na-ion
Battery Pack (15X)