

TECONNEX POWER - ESS CABINET TECHNICAL DETAILS



A COMPLETE RANGE OF LFP ENERGY STORAGE
SOLUTIONS DESIGNED FOR INDUSTRIAL
OR AGRICULTURAL APPLICATIONS

**TECONNEX
POWER**

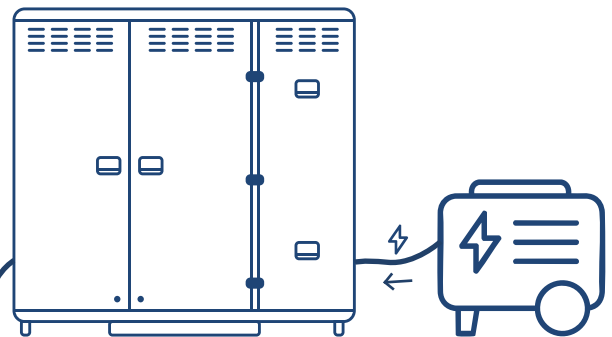
TECONNEX STANDALONE ESS CABINET SPECIFICATIONS

AC On-Grid Connection	TXP025LVESS	TXP050LVESS	TXP076LVESS	TXP200HVESS
Rated energy power output	12kW(15kVA)	25.6kW (32kVA)	38.4kW (48 kVA)	90kW(112kVA)
Rated energy storage capacity	25.6Wh	51.2kWh	76.8kWh	201 kWh
Rated Grid Voltage	1P+N+PE 230	400V AC	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 & Three Phase	Single & Three Phase	Single & Three Phase
Output frequency & voltage	50/60Hz;1L+N+PE 230VAC	50/60Hz;3L/N/PE 380/400VAC	50/60Hz;3L/N/PE 220/380, 230/400VAC	50/60Hz;3L/N/PE 220/380, 230/400VAC
Continuous power output	12kW(15kVA)	24kW (30kVA)	45kW (56.25 kVA)	90kW(112kVA)
Output Voltage waveform	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave
Built-in transformer	yes	yes	yes	yes
PV Input parameters				
Max PV input power	12kW	25.6kW	38.4kW	60kW
Full load MPP voltage tracker/inverter	200 -650VDC	200 -650VDC	200 -650VDC	350-1000VDC
Startup voltage/Tracker	160V DC	160V DC	160V DC	250V DC
NO of inverter	1 No	3 Nos	3 Nos	PCS (Power Converter System)
No of MPPT tracker /inverter	2	2	2	Customised
Battery Parameters				
Cell Specification	LiFeO4 100Ah	LiFeO4 100Ah	LiFeO4 100Ah	LiFeO4 280Ah
Rated Voltage	51.2VDC	51.2VDC	51.2VDC	48VDC
Battery Capacity	100Ah	100Ah	100Ah	280Ah
No of Strings/Cabinet	5Nos	10Nos	15Nos	15Nos
Cell Cycle life	80% retention with 5000 Cycles @ 0.5C 25Deg C			
Max Discharge Current/String	50 A	50A	50A	120A
Max Charge Current/String	50 A	50A	50A	120A
Maximum Efficiency	95%	95%	95%	95%
Total rated capacity	25.6kWh	51.2kWh	76.8kWh	201kWh
Performance				
Discharge autonomy 100% / 50% output rated power, hours	2/4	2/4 hrs	2/4 hrs	2/4 hrs
Recharging time at rated input power, hours	2 hrs	2 hrs	2 hrs	2.3 hrs
Communication Interface	RS485/CAN BUS	RS485/CAN BUS	RS485/CAN BUS	RS485/CAN BUS
Remote monitoring	Supporting Wi-Fi through Cloud Web Monitoring	Supporting Wi-Fi through Cloud Web Monitoring	Supporting Wi-Fi through Cloud Web Monitoring	Supporting Wi-Fi through Cloud Web Monitoring
General Data				
Operable ambient temp (Discharge)	-10Deg C / + 45Deg C	-10Deg C / + 45Deg C	-10Deg C / + 45Deg C	-10Deg C / + 45Deg C
Dimensions (L x W x H) *dimensions are subject to change	1000mm x800mm x 1000mm	2000mm x 800mmx 1900mm	2200mm x 1200mmx 2200mm	2500mm x 1200mm x2500mm
Degree of Protection	IP21/ IP54	IP21/ IP54	IP21/ IP54	IP54
Housing	Cabinet	Cabinet	Cabinet	Container
Fire suppression system	Fire suppression system is available as an optional extra			
Cooling method	Smart Air cooling	Smart Air cooling	Smart Air cooling	Smart Air cooling
Communication Interface	RS485/CAN	RS485/CAN	RS485/CAN	Customised options
Compliance	UN38.3. IEC62619, UL9450A,	UN38.3. IEC62619, UL9450A,	UN38.3. IEC62619, UL9450A,	UN38.3. IEC62619, UL9450A,
System compliance	G99	G99	G99	G99
Power Input & Output Socket details	Customised options	Customised options	Customised options	Customised options

THE TECONNEX POWER ESS CABINET CAN BE UTILISED IN A VARIETY OF COST EFFECTIVE INDUSTRIAL OR AGRICULTURAL APPLICATIONS



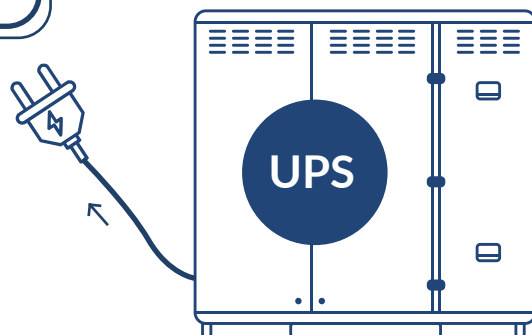
Allows a complete off grid power supply to be realised when connected to a sufficient renewable energy supply, for example by either solar or wind input.



Can be integrated into a existing power supply, with input by either grid connection or a genset; combined with input from renewables (wind or solar) to support a hybrid power supply, that can adapt due to either a variable demand or a variable supply.



Utilise - to benefit from low tariff / low cost power supply from a grid connection (eg - Octopus Energy's reduced rate off peak power supply rate - buy now > use later).



Integrate - into an existing power supply, to act as a UPS / back up power source, for applications where grid supply is either interrupted or unreliable, or where an emergency back-up is needed.



ENERGY STORAGE SYSTEM (ESS)



LFP ESS Cabinet Technical Details

SYSTEM FEATURES

Safe & Reliable Solutions

1. The Battery Management System (BMS) will ensure the safe and efficient operation of the batteries, preventing overcharging, over-discharging, and continually monitoring battery health.
2. Effortless transition between on-grid and off-grid modes ensures power supply for critical loads.
3. Enhanced protection at multiple levels with continuous fault diagnostics.
4. Remote monitoring with 24/7 cloud operation using a Wi-Fi module system and providing data analysis from anywhere, anytime.
5. Fire suppression systems are available: ESS units can be equipped with Gas monitoring sensors, Vents, and Aerosol to facilitate gas release to prevent accumulation of toxic gases.



Flexible Battery Design

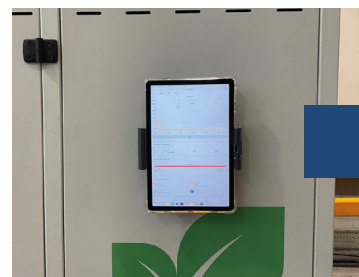
1. The Teconnex ESS unit is designed for easy installation and maintenance with minimal connection requirements.
2. The ESS unit has been configured for ease of expansion to increase capacity as required.

Cost-effective and High Availability

1. Our system enhances operational efficiency by supporting essential applications such as peak shaving, Demand Response (ADR), and Frequency Control Reserve.
2. We can provide remote software updates as they become available with customer permission for access, helping to reduce your operational and maintenance costs.



Web interface



Wireless tablet

TECONNEX POWER