SOLTANK

ENERGY UNIT STATION ESS-MPX-1000

All-in-one solution for power and energy delivery

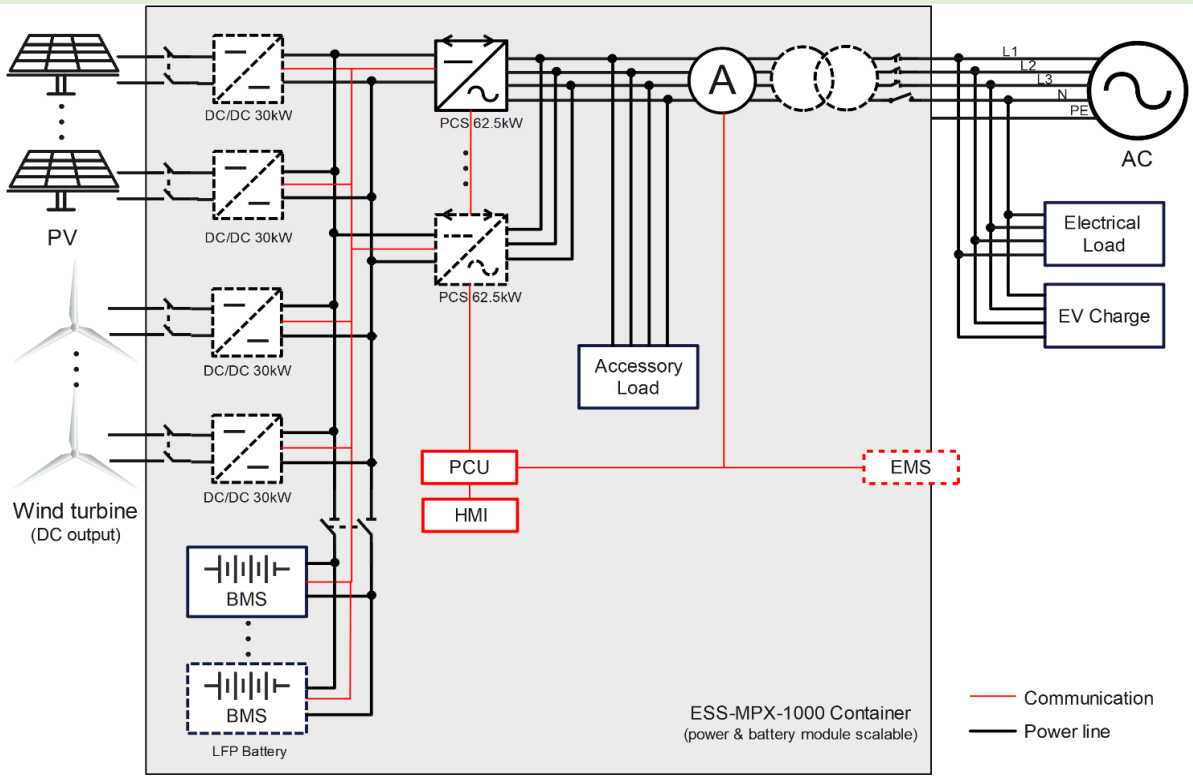

Figure: Electrical diagram of ESS-MPX-1000 (shaded) used in-grid applications. Dashed components are optional in delivery and/or practice.

All-in-one container solution integrating liquid-cooled Lithium ion LFP battery of 1st class with high performance power conversion system. Easy implementation in electrical grid.

Improved safety characteristics and specially optimized for the highest demands on flexibility, reliability and performance. Especially suitable for industrial, utility and in/off-grid applications.

■ Product certifications:
UN38.3, IEC62619, UL 1973, UL 9540A, IEC62477-1 LVD, IEC61000-6-2/4 EMC, VDE-AR-N 4105:2018, VDE-AR-N 4110:2018

Highlights

■ Compact design, all storage units and power units within container.
■ Incorporate new energy source. DC connection to PV pannel array up to 210kWp is reserved.
■ System parameters (power & energy capcity) are configurable within technical boundaries.
■ Plug-and-play installation, easy to relocate.
■ Apparant coloring open for customization.

ESS-MPX-1000 STATION

Up to 500 kW / 1000 kWh Energy Unit

All-in-one container solution integrating liquid-cooled Lithium-ion battery of 1st class with high performance power conversion system. Easy implementation in grid applications as well as off-grid applications.

CABINET GENERAL	
Protection Class	IP 55 (IP 65 on demand)
Operating Ambient Temp.	-40°C to +60°C
Operating Humidity	5-95% RH
Opearting Altitude	< 3,000 meter
Ventilation	Fan ventilation
Energy Management	Included, SCADA interface
Wiring	3P4W/3P5W, suitable for TN/TT system
Dimensions (W x L x H)	Standard 20ft HQ container
Cabinet Weight	< 20.0 ton
Communication	Modbus-RTU/-TCP for internal and external communication
Fire Safety System	Included
User Interface Display	10-inch LCD, EN/FR/DE/ES

PHOTOVOLTAIC CONNECTION [3]	
Rated Inlet Power PV	210 kW [1]
PV Panel Inlet Voltage	300 ~ 650 Vdc
No. MPPT Channel	Maximum 7 channels
Cooling Type	Forced air cooling
Certificates	IEC 62477, IEC 61000-6-2:2019, IEC 61000-6-4:2019
DC Voltage Ripple	≤ 2%
DC Current Ripple	≤ 2%

WIND TURBINE CONNECTION [5]	
Rated Inlet Power Turbine	210 kW [1]
No. MPPT Channel	Maximum 7 channels

POWER CONVERSION / AC STAGE	
Rated AC Power	500 kW [2]
Max Continous AC Power	800 kW (≥ 10min) [2]
Rated AC Voltage	315 ~ 450 (3-phase) Vac
Frequency	50/60 ± 5 Hz
Total Harmonic Distortion, Current (THDi)	< 3% @ rated power
Power Factor	± 0.1
Cooling Type	Forced air cooling
Certificates	IEC 62477, IEC 61000-6-2:2019, IEC 61000-6-4:2019
In-Grid Code	VDE-AR-N 4105:2018, VDE-AR-N 4110:2018

BATTERY STORAGE / DC STAGE	
Rated Useable Capacity	Up to 1,000 kWh [4]
Depth of Discharge	≥ 97%
Chemical System	Lithium-iron phosphate, LFP
Cooling Type	Liquid cooling
Certificates	UN38.3, IEC62619, UL 1973, UL 9540A, IEC62477-1 LVD, IEC61000-6-2/4 EMC

ISOLATION TRANSFORMER [6]	
Rated Power	1,000 kVA
Rated Voltage	400/800 Vac
Transformer Vector	Dy11
Cooling Type	Air natural ONAN

[1] 7 x DC/DC modules, PV & wind turbine mixed or interchangeable

[2] 8 x PCS modules, adjustable accordingly

[3,5,6] Sub-systems or modules not delivered by default

[4] 5 x battery racks, capacity is adjustable by rack configuration

Soltank New Energy GmbH
Website: www.sol-tank.com
E-Mail: Info@sol-tank.com
Address: Sebastian-Kneipp Str 41, 60439 Frankfurt