

ST159KWH-50HV Preliminary

Storage System



HIGH INTEGRATION

- Highly integrated ESS with outdoors cabinet design provides high protection class
- Advanced integration technology ensures optimal system performance and lower cost

SAFE AND RELIABLE

- DC electric circuit safety management includes fast breaking and anti-arc protection
- Multi-state monitoring and linkage actions ensure battery system safety

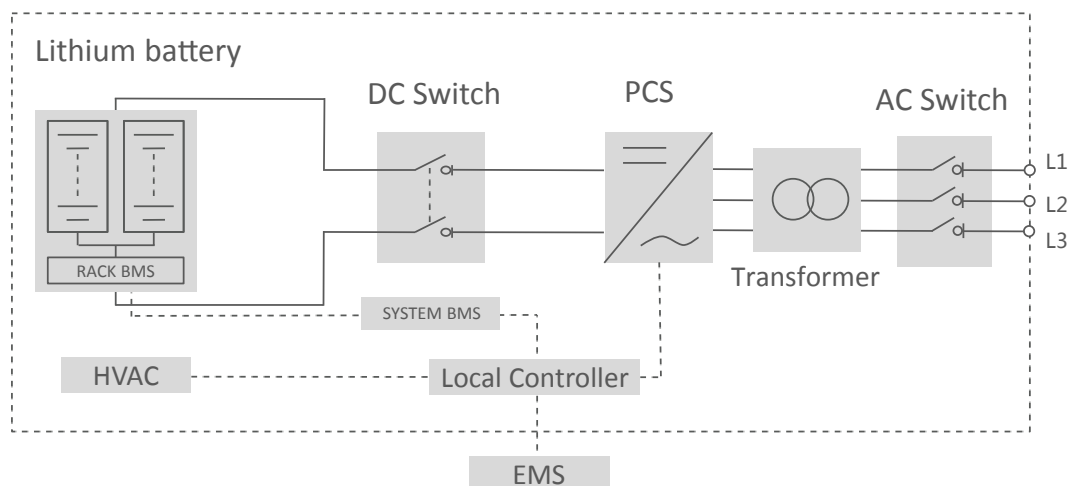
EFFICIENT AND FLEXIBLE

- Top-mounted HVAC and cell-level temperature control ensures longer battery life cycle
- Modular design supports parallel connection and easy system expansion

SMART AND FRIENDLY

- Integrated local controller enables single point of communication interface
- Fast state monitoring and faults record enables pre-alarm and faults location

CIRCUIT DIAGRAM



System Type	ST159KWH-50HV
Battery Data	
Cell type	Samsung SDI Mega E3, 3.68V / 100Ah
Configuration of system	216S2P
Battery capacity (BOL)	159 kWh
Battery voltage range	692 ~ 896 V
BMS communication interfaces	RS485, Ethernet
BMS communication protocols	Modbus RTU, Modbus TCP
AC Data	
Nominal AC power	50 kVA
Max. AC power	55 kVA
Max.THd of current	< 3 % (at nominal power)
DC component	< 0.5 % (at nominal power)
Nominal grid voltage	400 V
Grid voltage range	360 ~ 440 V
Power factor	> 0.99 (at nominal power)
Adjustable power factor	1 leading ~ 1 lagging
Nominal grid frequency	50 / 60 Hz
Grid frequency range	45 ~ 55 Hz / 55 ~ 65 Hz
Isolation method	Transformer (Optional)
General Data	
Dimensions (W * H * D)	1,800 * 2,350 * 1,000 mm / 70.87" * 92.52" * 39.37"
Weight (with / without battery)	3.4 T / 2.3 T 7,617.7 lbs / 5,153.2 lbs
Degree of protection	IP65
Operating temperature range	-25 to 45 °C / -13 to 113 °F
Relative humidity	0 ~ 95 % (non-condensing)
Max. working altitude	3,000 m / 9,842 ft
Cooling concept of battery chamber	Heating, Ventilation and Air Conditioning
Cooling concept of PCS chamber	Temperature controlled forced air cooling
Communication interfaces	RS485, Ethernet
Communication protocols	Modbus RTU, Modbus TCP, IEC 104
Compliance	TÜV

