ELS Series
Residential Hybrid Inverter

Overview

The ELS series single-phase residential hybrid inverter supports flexible charging options, including utility, generators, and solar energy. It also provides versatile power supply mode, such as grid bypass, off-grid power supply, and on-grid feeding power.

The series features comprehensive and efficient energy management functions. It supplies power for daily use, stores excess power, and exports the remaining power to the grid. These benefits help to reduce electricity costs, decrease dependence on the grid, and improve power reliability.

Features

High Efficiency
- Overload capability: 1.5x rated power, overload for 60 seconds
- Continuous max. charge/discharge current: 120A
- 150% PV oversizing capability

Superior Efficiency
- Max. MPPT tracking efficiency: 99.9%
- Max. PV conversion efficiency: 97.6%
- Battery charge/discharge efficiency: 94.6%

Smart Power Management
- Dedicated interface: For generator connection, smart load management, or AC coupling
- UPS-level switching <10ms
- Single-phase parallel connections: Supports up to 6 pcs

Reliable & Safe
- Natural cooling; Maintenance-free; Ultra-quiet
- IP65 protection
- Optional modules: RSD; AFCI

User Experience
- LED/LCD display
- Smart APP: User-friendly operation and monitoring

Technical Specifications

Model	ELS3K	ELS3K6	ELS4K	ELS4K6	ELS5K	ELS6K
Battery input （DC）						
Battery type	Lithium battery/Lead-acid battery					
Voltage range	42-63V					
Rated voltage	48V					
Charging rule	3-stage charging or BMS command					
Max. charging and discharging current	75A	80A	85A	100A	110A	120A
PV input （DC）						
Max. input power	4,500W	5,400W	6,000W	6,900W	7,500W	9,000W
Max.input voltage	580V					
Start-up voltage	100V					
Rated input voltage	360V					
Max. input current per MPPT	16A					
MPPT voltage range	100–550V					
Number of MPPTs	1		2			
Number of strings per MPPT	1					
AC output(On-grid)						
Max. output apparent power	3,300VA	4,050VA	4,400VA	5,060VA	5,500VA	6,600VA
Rated output current	14.3A	17.6A	19.1A	22A	23.9A	28.6A
Max. input current from grid	28.6A	35.2A	38.2A	43A	47.8A	55A
Rated output voltage	230V					
Rated grid frequency	50Hz					
THDi	< 3%					
Power factor	≈1 (Adjustable from 0.8 leading to 0.8 lagging)					
AC output (Off-grid)						
Rated output power	3,000W	3,680W	4,000W	4,600W	5,000W	6,000W
Peak power (VA), time (s)	1.5* Rated power, 60s					
Overload power (VA), time (s)	1.25* Rated power, 300s					
Rated output current	13.1A	16A	17.4A	20A	21.7A	26.1A
Rated output voltage	230V					
Rated output frequency	50/60Hz					
THDu （@Linear loads）	< 3%					
Switch time	10ms					
Efficiency						
Max. Efficiency	97.60%		97.80%		98%	
European Efficiency	97.20%		97.30%		97.50%	
Max. discharging efficiency	94.60%					
Protection						
Basic protection	• PV reverse polarity • PV insulation resistance • PV string current monitoring		• AC output overvoltage • AC output overcurrent • AC output short circuit		• Anti-islanding • Grid monitoring • Residual current (RCD) detection	
AFCI	Optional					
DC switch	Integrated					
SPD	DC Type II/AC Type III					
Rapid shutdown （RSD）	Optional					
Environmental parameters						
Opereating temperature	-30°C to 60°C					
Relative humidity	0% to 95%					
Altitude	4,000m (> 2,000m Derating)					
Ingress protection	IP65					
Noise emission	< 25dB					
Mechanical parameters						
Dimensions （L×W×H） (mm)	222.5 × 558.1 × 455.1					
Weight (kg)	28.1					
Others						
Generator auto start-up	2 Wire start - integrated					
Standby losses (W)	< 10					
Topology	High-frequency isolation (Battery)					
Cooling method	Natural					
Mounting method	Wall mounted					
Communication with BMS	RS485/CAN					
Communication with meter	RS485					
Communication with protal	WiFi/Bluetooth (External)					
Display	LED & APP					
Certifications	EN/IEC62109; EN/IEC61000; IEC61683; EN50549; IEC61727; IEC62116; CEI 0-21					

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