

### 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 operation, 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

- **Optimized Operation**
  - Natural Cooling
  - Maintenance-free
  - Ultra-quiet
- **Superior Efficiency**
  - Max. MPPT Tracking Efficiency: 99.9%
  - Max. PV Conversion Efficiency: 97.6%
  - Battery Charge/Discharge Efficiency: 94.6%
- **Protection and Durability**
  - IP65
  - Overload Capability: Tested 1.5x rated power, overload for 60 seconds
  - Continuous Max. Charge/Discharge Current: 120A
- **Flexibility and Connectivity**
  - PV Power Oversize: Max. input up to 1.5x rated power
  - Dedicated Port: For generator connection, smart load management, or AC coupling
  - Single-Phase Parallel Connections: Supports up to 6 pcs
- **User Experience**
  - Smart APP: User-friendly operation and monitoring
  - UPS-level Switching <10ms
  - Optional Modules: RSD, AFCI



# Technical Specifications

Models	ELS3K	ELS3K6	ELS4K	ELS4K6	ELS5K	ELS6K
<b>Battery Input Parameters</b>						
Battery Type	Lithium battery / Lead-acid battery					
Battery Voltage Range (V)	42-63					
Rated Battery Voltage (V)	48					
Battery Charging Mode	3-stage charging or BMS command					
Maximum Charging and Discharge Current (A)	75	80	85	100	110	120
<b>PV Input Parameters</b>						
Maximum Input Power (W)	4500	5400	6000	6900	7500	9000
Maximum Input Voltage (V)	580					
MPPT Voltage Range (V)	100-550					
Start-up Voltage (V)	100					
Rated Input Voltage (V)	360					
Max.Input Current per MPPT(A)	16					
Max. Short Circuit Current per MPPT(A)	19.2					
Number of MPPTs/ Number of Strings per MPPT	1/1			2/1		
<b>AC Output Parameters (On-grid)</b>						
Maximum Output Power (VA)	3300	4050	4400	5060	5500	6600
Rated Output Voltage (V)	230					
Rated Output Frequency (Hz)	50					
Maximum Output Current (A)	14.3	17.6	19.1	22	23.9	28.6
Maximum Input Current (A)	28.6	35.2	38.2	43	47.8	55
Load Power Factor	0.99 (Adjustable from 0.8 leading to 0.8 lagging)					
THDi (Total Harmonic Current Distortion) @ Rated Output Power	<3%					
<b>AC Output Parameters (Off-grid)</b>						
Rated Output Power (VA)	3000	3680	4000	4600	5000	6000
Peak Power (VA),Time (s)	1.5* Rated Power, 60s					
Overload Power (VA),Time (s)	1.25* Rated Power, 300s					
Switch Time	<10ms					
Rated Output Current (A)	13.1	16	17.4	20	21.7	26.1
Rated Output Voltage (V)	230					
Rated Output Frequency (Hz)	50/60 (±0.5%)					
THDv (Total Harmonic Voltage Distortion) @Linear loads	<3%					
<b>Efficiency</b>						
Maximum Efficiency	97.6%		97.8%		98%	
European Efficiency	97.2%		97.3%		97.5%	
Max. Battery to AC Efficiency	94.6%					
MPPT Efficiency	99.9%					
<b>General Parameters</b>						
Protections	·PV reverse polarity protection ·PV insulation detection		·Grid monitoring protection ·AC Overcurrent Protection		·Over temperature protection. ·Anti-islanding Protection ·Residual Current Monitoring	
DC Switch	Included					
AFCI	Optional					
SPD Protections	DC Type II / AC Type III					
RSD Rapid Shutdown	Optional					
Generator Auto Start-up	2 Wire Start					
Working Temperature Range	-30°C ~ +60°C (> 45°C derating)					
Relative Humidity	0%-95% (N.C)					
Maximum Working Altitude	4,000m (> 2,000m derating)					
Cooling Method	Natural					
User Interface	LED & APP					
Communication with BMS	RS485/CAN					
Communication with Meter	RS485					
Monitoring Method	WiFi / Bluetooth					
Net Weight (kg)	28.1					
Dimension W × H × D (mm)	558.1 × 455.1 × 222.5					
Noise Emission (dB)	< 25					
Topology	High-Frequency Isolation (Battery)					
Standby Losses (W)	<10					
Ingress Protection Rating	IP65					
Mounting Method	Wall Mounted					