

**ELS-11
SERIES
(1 - 3kVA)**

- ✓ High Frequency True Double Conversion
- ✓ DSP (Digital Signal Processors) Technology
- ✓ Input Power Factor Correction (PFC)
- ✓ Wide Input Voltage Range (110~300V)
- ✓ Output Power Factor = 0.9
- ✓ Cold Start (Start from Battery without Mains)
- ✓ Selectable Input / Output Voltage via LCD
- ✓ ECO Mode for Efficient Operation
- ✓ Load-Based Smart Fan Control



Buildings



Server Systems



Medical Facilities



Industrial Factories



Transportation Systems



Emergency Systems

TECHNICAL SPECIFICATIONS

MODEL	ELS-111	ELS-112	ELS-113
Capacity (kVA/kW)	1kVA/900W	2kVA/1800W	3kVA/2700W
INPUT			
Voltage	208 / 220 / 230 / 240 VAC		
Voltage Range	176 VAC (linearly derates at 50% and 100% load); 176 ~ 280 VAC (no derating); 280 ~ 300		
Frequency	40 ~ 70 Hz (Auto-Sensing)		
Power Factor	≥ 0.99		
Bypass Voltage Range	- 25% ~ +15% (adjustable via LCD)		
(THDi)	≤ 6%		
OUTPUT			
Voltage	208 / 220 / 230 / 240 VAC (adjustable via LCD screen)		
Voltage Regulation	± 1%		
Frequency	45–55 Hz or 55–65 Hz (sync range); 50 / 60 Hz ± 0.1 Hz (battery mode)		
Waveform	Pure Sine Wave		
Power Factor	0.9		
Voltage THD	≤ 2% (linear load), ≤ 5% (non-linear load)		
Crest Factor	3:1		
Overload	105–125% load: 1 min, 125% - 150% load 30 sec, > 150% load 300 ms		
BATTERY			
DC Voltage	24V	36V	48V / 72V / 96V
Internal Battery Group	2 x 7Ah / 2 x 9Ah	2 x 7Ah / 2 x 9Ah	4 x 9Ah / 6 x 9Ah
Charging Current (Max.)	1 A / 6 A		
Recharge Time	Standard model: 90% capacity in 3 hours. Long-run model: depends on battery capacity.		
SYSTEM FEATURES			
Efficiency	≥ 90% (Line mode) ≥ 85% (Battery mode) ≥ 95% (ECO mode)	≥ 91% (Line mode) ≥ 86% (Battery mode) ≥ 96% (ECO mode)	≥ 92% (Line mode) ≥ 87% (Battery mode) ≥ 97% (ECO mode)
Transfer Time	Line to Battery: 0 ms; Inverter to Bypass: 4 ms		
Protections	Short circuit, overload, over temperature, battery discharge protection and fan self-test		
Communication	RS232, USB (standard); RS485 / dry contacts / SNMP (optional)		
Display	LCD + LED Display		
Standards	EN 62040-1, EN 62040-2, EN 61000-3-2, EN 61000-3-3, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11, IEC 61000-2-2, IEC 62040-2, IEC 62040-1, IEC 62040-3		
OTHER FEATURES			
Operating Temperature	0°C ~ 40°C		
Storage Temperature	- 25°C ~ 55°C (without battery)		
Relative Humidity	0 ~ 95% (non-condensing)		
Operating Altitude	1% power derating per 100 m above 1000 m		
Protection Class	IP20		
Noise Level	≤ 50 dB		