



# LS31 10KVA - 40KVA

Low Frequency Online UPS Legend Star Series

LS31 10KVA - 40KVA (3ph in / 1ph out)



## Key Features:

- Online double-conversion
- DSP technology guarantees high reliability
- True galvanic isolation transformer design
- Control designed to withstand all kinds of loads
- Independent ventilation enhance durable operation under harsh environment
- Adjustable battery numbers
- Accept dual-mains input
- Parallel operation with up to 4 units (option)
- Variety of communication options available
- Reverse phase sequence operation and No neutral operation

**Shenzhen UPSen Electronic CO.,Ltd.**  
[www.upsen.net](http://www.upsen.net)

# Technical Specification:

Model		LS31 10K	LS31 15K	LS31 20K	LS31 30K	LS31 40K
Capacity		10KVA / 8KW	15KVA / 12KW	20KVA / 16KW	30KVA / 24KW	40KVA / 32KW
INPUT						
Rated Voltage		3 * 380 / 400V (3Ph + N or 3Ph + N + G)				
Voltage Range		165V ~ 280V (Ph-N) / 285V ~ 485V (Ph-Ph)				
Rated Frequency		50Hz / 60Hz				
Frequency Range		50Hz / 60Hz ±5Hz (±10%)				
INVERTER						
Nominal Voltage		220VAC/230VAC/240VAC(Adjustable)				
Waveform		Pure Sinewave				
Output Voltage	Steady State	±1%				
	Transient State	±5%				
Frequency		50 Hz / 60 Hz				
Frequency Stability		±1%				
Frequency Synchronisation Range		±5Hz (Equal to bypass working range)				
Frequency Synchronisation Speed		1~2 Hz/s				
Power Factor		0.8				
Crest Factor		3:1				
Total Harmonic Distortion (THDv)		< 2% (Linear Load); < 5% (Non-linear Load)				
Dynamic in-rush Voltage Range		0%→ 100%>0% (R Load) <+5% ; 20%→ 100%>20% (R Load) +3%				
Dynamic Recovery Time (III Grade)		0%-100% RCD load ; <60 ms recover to 90% of nominal voltage				
Transfer Time		0 ms				
Overload Capability		0% ~ 110% continuous running; 110% ~ 150% for 10 min~1 min; > 160% for 200ms				
Short-circuit Capability		60~ 100ms				
Transient Response Time		< 5ms				
BYPASS						
Connection Type		Hardwire 3-wire (1Ph+N+G)				
Input Voltage Range		220VAC ± 25%				
Overload Capability/Short-Circuit		1.5 In ~ 1.8 In 1h~30s 1.8 In~ >2.0 In 30s~200ms				
SYSTEM						
Efficiency (@ linear load )		≥88%			≥90%	
ECO Mode (Non-parallel models)		Yes				
EPO Function		Yes				
Standard		IEC 61000-4-5 Protection surge, IEC 62040-2 EMC/EMI, 1EC62040-1 Safety				
BATTERY & CHARGER						
Redifer	Type	6 pulse				
	Rated output voltage	384 VDC				
	Charger voltage	190VDC ~ 435VDC (Adjustable)				
	Charging current(max)	Default 10A, Maximum=C apacity/Battery Voltage			Default 10A, Maximum 40A, 5A@Full load	
Battery	Type	Support VRLA Battery				
	Numbers	32 pcs (29 ~ 32 Adjustable)				
	Cold Start	Yes				
PHYSICAL						
IP Protection		IP20 (Default), IP2 1/IP31 (Option)				
Machine Size, D * W * H (mm)		656 * 405 * 817			821 * 432 * 1159	
Net Weight (KGS)		118	120	131	149	224
package Size, D * W * H (mm)		785*535*985			950*560*1333	
Gross Weight(KGS)		131	137	144	162	224
ENVIRONMENT						
Operating Temperature		0~ 35°C continuous running, 40°C 8-hour running at nomina linput voltage, recharging battres and no overload, 45°C derating to 85% with linear load				
Operating Humidity		0~90% (non-condensing)				
Noise Level		Less than 70dB @ 1 Meter				
MANAGEMENT						
Modbus RS-232/RS485		Supports Windows®Famil, Linux and MAC				
Dry Contacts		6 outputs and 2 inputs				
Optional SNMP		Power management from SNMP manager and web browser				

\*Product Specifications are Subject to Change Without Notice.