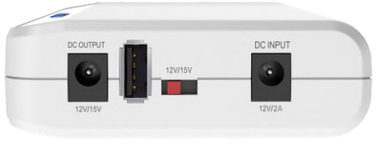
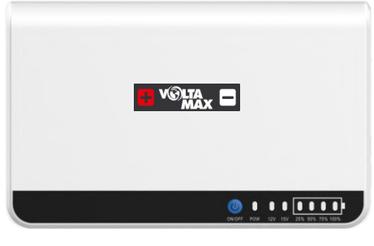
DC UPS-18W

Features

- Built - in lithium battery
- Auto start when connected to the adapter
- Auto shutdown when battery undervoltage
- Support charging when the machine shutdown
- Undervoltage & short - circuit protection
- Push the switch to switching rated output voltage
- Auto close output with LED flashing to remind short-circuit
- Support battery self replacement by opening the cover
- CE certification proves the high quality and reliability
- Compact and contemporary design, easy to install and use
- User friendly multi-LED status indicators
- 5V USB DC output for charging cell phones, PDA, PSP, IPOD, MP4, etc.
- Application: router, modem, wireless phone, CCTV



Side view



Top view

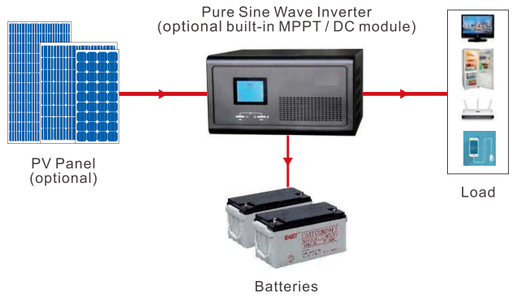
Specifications

MODEL	DC UPS-18W	
CE certification	Support	
Input (DC)	12V±1V	
Output (DC)	12V / 15V	
Battery capacity	2200mAH x 3	
INPUT		
Rated voltage	12V±1V	
Input current	MAX 2A±0.15A	
OUTPUT		
Rated voltage	5521_DC socket: DC 12V/15V	USB 5V
Output power (Max.)	18W	10W
Output current (Max.)	12V 1.5A/15V 1.2A	5V 2A
Short - circuit protection	Output closure with LED flashes	
BATTERY		
Battery type	Ternary lithium battery 18650	
Rated voltage	3.7V	
Battery capacity / quantity	2200mAH	3 cells
Battery combination method	Series connection	
Rated output voltage of battery pack	11.1V	
Battery protection board	In - built	
Battery undervoltage protection	9.1V±0.2V	
No-load charging current	2.1A Max.	
Full load charging current	0.3A Max.	
Charge time	1H (90%), 1.5H (100%)	
Discharge time	18W / 70mins	
Auto start when connected to the adapter	Support	
Battery disassembly	Support battery replacement by opening the cover	
Shutdown charging	Support	
DISPLAY		
Battery level display	Four green LED lights indicate battery level of 25%, 50%, 75%, 100%	
12V / 15V output display	Two green LED lights indicate 12V / 15V	
Charging / battery mode display	Green LED light indicates charging mode / red LED light indicates battery mode	
Charging display	Battery level light flashes while charging	
OPERATION ENVIRONMENT		
Operation environment	Temperature 0℃ - 40℃, humidity 20% - 90%	
Noise level	< 40dB	
DIMENSION		
Length x width x height (mm)	141 x 88 x 27	
Net weight (g)	275	
HOUSING MATERIAL AND COLOR		
Housing material	ABS - 15E1	
Housing color	White RAL - 9010	
Charging DC port color	Black	
OUT DC port color	Black	
Toggle switch color	Black toggle switch does not protrude from the housing	

Pure Sine Wave Inverter

300 W ~ 3500 W

The Pure Sine Wave Inverter is desirable long backup power solution for home and office appliances. It is not only an inverter but also contains a powerful intelligent charger. It provides pure sine wave power to all kinds of loads. And it can be used as UPS for computers as well.



Features

- DSP digital control technology
- Pure sine wave output
- Suitable for all kinds of loads, such as resistive, inductive and rectified loads and motors
- Use of pulse by pulse technology, improving load shock ability
- Charge current Max.60 A. Settable charge current and charge voltage on front panel
- Settable no-load shutdown and energy saving mode
- Short circuit, overload and low battery protection
- Intelligent long backup time up to 10 hrs (based on battery bank and loads)
- Compatible with generators, and matching of inverter and generator is settable
- Unique functions: optional built-in MPPT module enables the inverter to work as off-grid solar inverter, optional DC module enables the inverter to apply to communications, router, switch, mobile charging, DC fans and illumination

Rear Panel

1. Input
2. Output
3. Battery Breaker
4. Battery Input
5. Fuse
6. AC Breaker
7. Fan
8. DC Output (optional)
9. MPPT Module (optional)

Specifications

MODEL	300 W	600 W	1000 W	1600 W	2500 W	3500 W
DC INPUT						
Nominal input voltage	12 V			24 V		
DC input voltage range	10 ~ 15 V			20 ~ 30 V		
AC INPUT						
Bypass voltage	0 ~ 264 Vac for 220 / 230 / 240 Vac, 0 ~ 132 Vac for 100 / 110 / 115 / 120 Vac					
AC voltage	150 ~ 282 Vac for 220 Vac, 156 ~ 294 Vac for 230 Vac,163 ~ 307 Vac for 240 Vac, 68 ~ 128 Vac for 100 Vac, 75 ~ 141 Vac for 110 Vac, 79 ~ 148 Vac for 115 Vac, 82 ~ 154 Vac for 120 Vac					
Frequency	50 / 60 Hz (auto-sensing & settable: 5% ~ 15%, default 15%), 42.5 ~ 57.5 Hz for 50 Hz, 51 ~ 69 Hz for 60 Hz					
Input voltage of generator	99 ~ 282 Vac for 220 Vac, 104 ~ 294 Vac for 230 Vac, 108 ~ 307 Vac for 240 Vac, 45 ~ 128 Vac for 100 Vac, 50 ~ 141 Vac for 110 Vac, 52 ~ 148 Vac for 115 Vac, 54 ~ 154 Vac for 120 Vac					
Input frequency of generator	40 ~ 70 Hz					
Input power limitation	Rated power 10% ~ 150%, regulating step 10%, default 120%					
OUTPUT						
DC mode output voltage	220 / 230 / 240 Vac ± 5% or 100 / 110 / 115 / 120 Vac ± 5% (settable)					
AC mode output voltage	174 ~ 242 Vac for 220 Vac, 182 ~ 253 Vac for 230 Vac, 190 ~ 264 Vac for 240 Vac, 79 ~ 109 Vac for 100 Vac, 87 ~ 121 Vac for 110 Vac, 93 ~ 125 Vac for 115 Vac, 95 ~ 133 Vac for 120 Vac					
Nominal output frequency	50 / 60 Hz ± 0.3 Hz (auto-sensing & settable)					
Output waveform	Pure sine wave					
Output power	300 W	600 W	1000 W	1600 W	2500 W	3500 W
Efficiency	Max. 95% (mains mode); Max. 80% (inverter mode)					
ECO mode	Settable, load < 3%, enter in 80 s					
No-load shutdown	Settable, time can be set (1 ~ 99 min), load can be set (3% ~ 50%)					
Transfer time	≤ 10 ms				≤ 15 ms	
Power factor	1.0					
THDv	< 5% (linear load)					
Inductive load	Yes					
Motor load	Yes					
Rectifier load	Yes					
Overload	Mains mode: 110% for 120 s, 125% for 60 s, 150% for 10 s (switch to bypass) Inverter mode: 110% for 60 s , 125% for 10 s , 150% for 10 s (shut down)					
BATTERIES						
Charging current (selectable)	Default 10 A	Default 20 A, regulating step 1 A (< 10 A) / 5 A (> 10 A)				
	Max. 15 A	Max. 30 A	Max. 40 A	Max. 40 A	Max. 50 A	Max. 60 A
Equalizing charge voltage	Single battery 14.4 Vdc (default), 13.6 ~ 15 Vdc adjustable					
Floating charge voltage	Single battery 13.7 Vdc (default), 13.2 ~ 14.6 Vdc adjustable					
Charge mode	3 stage charge mode					
DOD	Single battery 10.8 Vdc (default), 9.6 ~ 13 Vdc settable					
EOD	Single battery 10.2 Vdc (default), 9.6 ~ 11.5 Vdc adjustable					
Reverse warning	Buzzer					
MPPT MODULES (OPTIONAL)						
Model	10 A / 20 A / 30 A / 40 A				/	
Max. PV input voltage (Voc)	40 V			60 V	/	
PV optimum operating voltage (Vmp)	18 V ~ 32 V			29 V ~ 48 V	/	
Max. PV power	120 W / 240 W / 360 W / 480 W			240 W / 480 W / 720 W / 960 W	/	
DC MODULES (OPTIONAL)						
Model	5 V (2 A), 9 V / 12 V (1 A), 15 V / 24 V (1 A), 12 V / 24 V (10 A)					
OTHERS						
Protections	Overload, short-circuit, overvoltage, undervoltage, overcharge, overtemperature, excessive low battery					
Human-machine interface	LCD & BUZZER					
Operating temperature	0℃ ~ 40℃					
Operating humidity	Relative humidity ≤ 93%					
Net weight (kg)	6.92 / 8.5 / 7.4	9.08 / 11.4 / 11	14.0 / 14.6	18.0 / 18.5	32.0	36.0
Gross weight (kg)	7.68 / 9.5 / 8.4	9.84 / 12.4 / 12	15.0 / 15.6	19.0 / 19.5	34.0	38.0
Dimensions (W × D × H) (mm)	265 × 258 × 114 (w /o option) 293 × 280 × 160 (w / option) 400 × 210 × 127 (Wall mounted)		293 × 280 × 160		302 × 479 × 209	
Packaged dimensions (W × D × H) (mm)	362 × 330 × 188 (w /o option) 370 × 355 × 235 (w / option) 490 × 290 × 195 (Wall mounted)		370 × 355 × 235		353 × 582 × 287	

- All specifications are subject to change without notice.
- Custom-made specifications are acceptable.

Modified Sine Wave Inverter

IS-1200 VA ~ 2400 VA

The Modified Sine Wave Inverter is a DC–to–AC inverter with auto line–to–battery transfer and integrated charging system, serving as an extended-run UPS, is a standalone power source or a home inverter as well. It supplies power from AC power and DC source. When AC cable is connected to a wall outlet, utility power goes to connected equipment and/or charges the batteries via the charging system. In battery mode, it automatically converts battery energy into AC power for backing up the connected devices.

Features

- Automatic Line to Battery transfer
- Rack / Tower design, installation versatility
- Adjustable wider input voltage range and charging current
- Intelligent charging control, efficient charging
- Auto restart when mains power is restored
- Superior protection: low battery, overcharge, overload, overtemperature and short circuit
- High load-bearing capacity, supporting various household loads and IT equipment (< 50% half-wave load, < 30% inductive load)

Specifications

MODEL	IS-1200 VA	IS-1500 VA	IS- 2400 VA
Capacity	720 W	900 W	1440 W
INPUT			
Rated voltage	220 / 230 / 240 Vac (selectable)		
Voltage range	220 / 230 / 240 Vac, –22% / –59% ~ +26%, ± 5 Vac (selectable)		
Rated frequency	50 / 60 Hz (auto-sensing)		
Frequency range	± 10% (default), ± 5% ~ 15% (selectable)		
OUTPUT			
Power factor	0.6		
Output voltage	Battery mode: 220 / 230 / 240 Vac ± 10% (selectable) Mains mode: synchronized with utility power		
Output frequency	Battery mode: 50 / 60 Hz ± 1% (selectable); Mains mode: synchronized with utility power		
Output waveform	Battery mode: square wave; Mains mode: synchronized with utility power		
Inversion efficiency	⩾ 83% (max.)		⩾ 85% (max.)
IT equipment	Yes		
Half–wave load	⩽ 50% (rated load)		
Inductive load	⩽ 30% (rated load)		
BATTERIES			
Rated voltage	12 Vdc		24 Vdc
Charging current (Max.)	20 / 10 A ± 3 A (selectable)		15 / 10 A ± 3 A (selectable)
Equalizing charge voltage	Single battery 14.2 ± 0.3 Vdc (default), 13.6 ~ 15.0 Vdc (selectable)		
Floating charge voltage	Single battery 13.6 ± 0.3 Vdc		
Low voltage alarm	Single battery 10.8 ± 0.3 Vdc (default), 9.6 ~ 13.0 Vdc (selectable)		
Low voltage shutdown	Single battery 10.2 ± 0.3 Vdc (default), 9.6 ~ 12.0 Vdc (selectable)		
Overvoltage protection	Single battery 15.0 ± 0.3 Vdc		
Overvoltage recovery	Single battery 13.6 ± 0.3 Vdc		
SYSTEM			
Transfer time	⩽ 8 ms (typical) , ⩽ 15 ms (max.)		
Protections	Overload, short circuit, over-temperature, output over/under-voltage, excessive low battery		
Overload times (Mains mode)	⩾ 110% for 120 s, ⩾ 125% for 60 s, ⩾ 150% for 10 s, ⩾ 200% for 1 s		
Overload times (Battery mode)	⩾ 110% for 60 s, ⩾ 125% for 5 s, ⩾ 150% for 1 s		
Communication interface	No		
Panel display	LCD + LED		
OTHERS			
Operating temperature	0 ~ 45℃		
Operating humidity	0 ~ 95% (no-condensing)		
Altitude	⩽ 1000 m (Above 1000 m, derating 1% for each additional 100 m)		
IP rating	IP20		
Cooling	Forced-air cooling		
Noise	< 45 dB		
Dimensions (W x D x H) (mm)	245 x 220 x 80		
Packaged dimensions (W x D x H) (mm)	315 x 290 x 156		
Net weight (kg)	2.66	2.68	2.82
Gross weight (kg)	3.02	3.04	3.18

Note: "Selectable" can be customized according to customer requirements.

Simulated Sine Wave

Line Interactive UPS

Specifications

MODEL	LI-400	LI-600	LI-800	LI-1200	LI-1500	LI-2000	LI-3000
Capacity	400 VA 240 W	600 VA 360 W	800 VA 480 W	1200 VA 720 W	1500 VA 900 W	2000 VA 1200 W	3000 VA 1800 W
INPUT							
Voltage	100 / 110 / 120 V: 80 ~ 150 Vac; 220 / 230 / 240 V: 162 ~ 295 Vac (145 ~ 295 Vac optional)						
Frequency	50 / 60 Hz ± 10% (auto-sensing)						
OUTPUT							
Voltage	100 / 110 / 120 Vac ± 10% or 220 / 230 / 240 Vac ± 10%						
Frequency	50 / 60 Hz ± 1% (auto-sensing)						
Waveform	Mains mode: pure sine wave; Battery mode: simulated sine wave						
Transfer time	Typical 8 ms, 10 ms max.						
BATTERIES							
DC voltage	12 V			24 V			48 V
Configuration	12 V / 4.5 Ah × 1	12 V / 7.0 Ah × 1	12 V / 8.0 Ah × 1	12 V / 7.0 Ah × 2	12 V / 8.0 Ah × 2	12 V / 9.0 Ah × 2	12 V / 9.0 Ah × 4
Recharge time	6 ~ 8 h						
OTHERS							
Protections	Short circuit, battery overcharge , overdischarge, overload, surge						
Communications	USB (optional)						
Humidity	20 ~ 90% RH @ 0 ~ 40℃ (non-condensing)						
Noise level	≤ 45 dB (1 m)						
Net / Gross weight (kg)	3.3 / 3.5	4.2 / 4.7	4.9 / 5.3	8.8 / 9.4	9.4 / 10.0	10.2/10.8	19.3/20.6
Dimensions (W × D × H) (mm)	100 × 200 × 142	100 × 280 × 142		136 × 328 × 186			157 × 452 × 211
Packaged dimensions (W × D × H) (mm)	139 × 242 × 210	139 × 325 × 210		185 × 374 × 269			238 × 536 × 295
Quantity / 20 ft	/						658 pcs

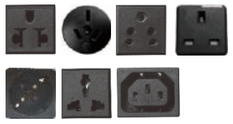
●All specifications are subject to change without notice.
●Custom-made specifications are acceptable.

Features

- LED display or LCD display selectable
- Microprocessor-based digital control
- Boost and buck AVR for voltage stabilization
- Auto sensing frequency
- Wide input voltage range
- Power-on self test
- Cold start
- Auto restart when mains power is restored
- Auto track mains phase to ensure that inverter output voltage has same phase with utility voltage, reducing transfer time and peak surge
- Intelligent battery management: battery temperature compensation to extend the battery life; three-stage charging to shorten recharge time
- Short circuit, battery overcharge / overdischarge, overload, surge protections
- Automatic charging in OFF mode
- Optional no-load shutdown
- Optional USB communication port and RJ45 protection
- Unattended safety shutdown: system alarm and auto Power-Off by USB interface communicating with PC

Rear Panel

1. Output Outlets (selectable)
2. TEL/Modem/Fax surge protection (optional)
3. USB communication (optional)
4. AC Input
5. AC Breaker
6. Fan



600VA/800VA

1200VA

1500VA/2000VA

Sine Wave

Line Interactive UPS

Features

- Pure sine wave output
- DSP digital control
- Boost and buck AVR for voltage stabilization
- Auto sensing frequency
- Adjustable charging current and battery shutdown point
- Settable ECO mode and no-load shutdown
- Humanized alarm system
- Power-on self test
- Cold start
- Auto restart when mains power is restored
- Intelligent battery management
- Short circuit and overload protection
- Automatic charging in OFF mode
- USB & RJ45, AS400 / SNMP (optional) communication port

Rear Panel

1. USB / RJ45
2. Output Outlets
3. EXT Battery (optional)
4. AC Breaker
5. Input
6. SNMP (optional)
7. Fan

LIS-1000 EXT

LIS-3000 EXT

Specifications

MODEL		LIS-500	LIS-1000	LIS-1500	LIS-2000	LIS-3000
Capacity		500 VA / 400 W	1000 VA / 800 W	1500 VA / 1200 W	2000 VA / 1600 W	3000 VA / 2400 W
DC INPUT						
Rated voltage		12 V	24 V		36 V (S) 48 V (H)	48 V
DC input range (default)		10 ~ 15 V	20 ~ 30 V		30 ~ 45 V (S) 40 ~ 60 V (H)	40 ~ 60 V
AC INPUT						
AC input range (bypass mode)		0 ~ 121 / 132 / 138 / 144 Vac for 100 / 110 / 115 / 120 Vac ± 10 Vac 0 ~ 242 / 264 / 276 / 288 Vac for 200 / 220 / 230 / 240 Vac ± 10 Vac				
AC input range (mains mode)		100 V: 70 ~ 130 Vac 110 V: 80 ~ 140 Vac 115 V: 85 ~ 145 Vac 120 V: 90 ~ 150 Vac 200 V: 145 ~ 260 Vac 220 V: 165 ~ 280 Vac 230 V: 175 ~ 290 Vac 240 V: 185 ~ 300 Vac				
Frequency input range		50 / 60 Hz (auto-sensing), 50 / 60 Hz ± 5% ~ 15%				
Generator connection		Available (generator input power is settable)				
OUTPUT						
Inverter output range		100 / 110 / 115 / 120 / 200 / 220 / 230 / 240 Vac ± 5% (settable)				
AC output range (bypass mode)		0 ~ 121 / 132 / 138 / 144 Vac for 100 / 110 / 115 / 120 Vac ± 10 Vac 0 ~ 242 / 264 / 276 / 288 Vac for 200 / 220 / 230 V / 240 Vac ± 10 Vac				
AC output range (mains mode)		100 V: 90 ~ 110 Vac 110 V: 99 ~ 121 Vac 115 V: 103 ~ 126 Vac 120 V: 108 ~ 132 Vac 200 V: 166 ~ 226 Vac 220 V: 188 ~ 245 Vac 230 V: 199 ~ 254 Vac 240 V: 210 ~ 264 Vac				
Output frequency		50 / 60 Hz ± 0.3 Hz (settable)				
Waveform		Pure sine wave				
Inverter efficiency		Max. 75%	Max. 80%		Max. 85%	
Energy saving mode		Settable (< 3% load), enter in 80 s				
No-load shutdown		Settable (< 3% load), shut down in 80 s				
Transfer time		≤ 10 ms				
THDV (resistive load)		≤ 5%				
Protections		Overload, short circuit (inverter), battery low voltage, battery overcharge, overtemperature				
Overload (mains mode)		110% for 120 s, 125% for 60 s, 150% for 10 s (transfer to bypass mode)				
Overload (inverter mode)		110% for 60 s, 125% for 10 s, 150% for 5 s (shut down directly)				
Mute		Automatic mute in 60 s or by manual				
BATTERIES						
Inbuilt battery (standard model)		/	12 V / 7 Ah x 2	12 V / 9 Ah x 2	12 V / 9 Ah x 3	12 V / 9 Ah x 4
Charging current		Standard model (S): 1 A (default) Long time model (H): 10 A (default); < 10 A, set step 1 A; ≥ 10 A, set step 5 A				
		Max. 10 A (H)	Max. 15 A (H)	/	Max. 20 A (H)	Max. 25 A (H)
Equalizing charge voltage		Single battery 14.1 Vdc (default), 13.6 ~ 15 Vdc adjustable				
Floating charge voltage		Single battery 13.5 Vdc (default), 13.2 ~ 14.6 Vdc adjustable				
Low voltage alarm point		Single battery 10.8 Vdc (default), 9.6 ~ 13 Vdc adjustable				
Low voltage shutdown point		Single battery 10.2 Vdc (default), 9.6 ~ 11.5 Vdc adjustable				
OTHERS						
Communications		USB & RJ45 (standard), dry contacts / SNMP (optional)				
Operating temperature		5℃ ~ 40℃				
Operating humidity		Relative humidity ≤ 93%				
Noise level		≤ 50 dB (1 m)				
Tower	Dimensions (W × D × H) (mm)	144 × 345 × 215 (S / H)			144 × 410 × 215 (S) 144 × 345 × 215 (H)	157.5 x 460x 221.5 (S) 190 x 467 x 335.5 (H)
	Packaged dimensions (W × D × H) (mm)	236 × 427 × 316 (S / H)			236 × 492 × 316 (S) 236 × 427 × 316 (H)	238 x 550 x 305 (S) 320 x 592 x 462(H)
	Net weight (kg)	7.0 (H)	12.2 (S) 11.6 (H)	14.2 (S)	18.5 (S) 17.8 (H)	23.6 (S) 28.0 (H)
	Gross weight (kg)	8.0 (H)	13.2 (S) 12.6 (H)	15.2 (S)	19.8 (S) 18.8 (H)	25 (S) 30.0 (H)
Rack-mount	Dimensions (W × D × H) (mm)	/	440 × 338 × 88 (S)	440 × 410 × 132 (S)		
	Packaged dimensions (W × D × H) (mm)	/	611 × 448 × 208 (S)	611 × 505 × 235 (S)		
	Net weight (kg)	/	14.6 (S)	17.2 (S)	21.3 (S)	26.7 (S)
	Gross weight (kg)	/	16.8 (S)	20.4 (S)	24.5 (S)	30.5 (S)

- S means standard model, H means long time model.
- All specifications are subject to change without notice.
- Custom-made specifications are acceptable.

Online Transformer base UPS

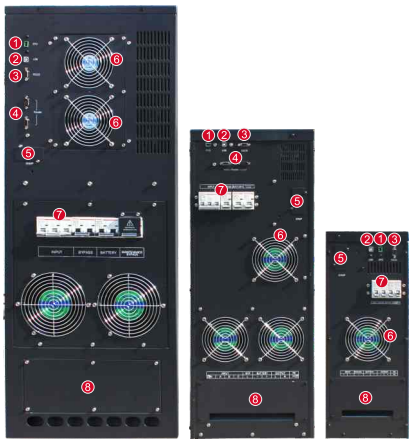
6KVA ~ 10KVA (1:1)
10KVA ~ 30KVA (3:1)

Features

- Single / single-phase, three / single-phase models with on-line double conversion technology
- DSP (Digital Signal Processors) technology
- Suitable for all kinds of loads (resistive, inductive and non-linear loads etc)
- High overload capability (up to 150%)
- Bypass dual DSP control design to enhance more reliability(10–30 kVA)
- Supports dual input, hot standby in series
- Redundant & parallelable with advanced parallel current-sharing control technology (10 - 30 kVA)
- Cold start and mains start function
- High charging capability: 2 A / 4 A / 6 A / 8 A / 10 A / 12 A selectable (standard), 14 A / 16 A / 18 A / 20 A / 22 A / 24 A selectable (options)(10–30 kVA)
- Standard configuration with output isolation transformer
- Superior protection (surge, short-circuit, overvoltage, undervoltage, overcharge, reverse battery protection etc.)
- Advanced communications: RS232 and USB ports (standard), SNMP, dry contacts and RS485 (options)
- Other options (parallel kits, input isolation transformer, bypass isolation transformer and harmonic suppressor)

Rear Panel

1. EPO
2. USB
3. RS232
4. Parallel port (optional)
5. SNMP (optional)
6. Fan
7. Breaker
8. Terminal



Specifications

MODEL	OL-6000 (1:1) T.B	OL-10000 (1:1) T.B	OL-10000 (3:1) T.B	OL-15000 (3:1) T.B	OL-20000 (3:1) T.B	OL-30000 (3:1) T.B
Capacity	6 kVA / 4800 W	10 kVA / 8 kW	10 kVA / 8 kW	15 kVA / 12 kW	20 kVA / 16 kW	30 kVA / 24 kW
INPUT						
Input wiring	Single-phase three-wire (1Φ + N + PE)		Three-phase five-wire (3Φ + N + PE)			
Rated voltage	220 / 230 / 240 Vac		380 / 400 / 415 Vac			
Voltage range	165 ~ 275 Vac		285 ~ 475 Vac			
Rated frequency	50 / 60 Hz					
Frequency range	40 ~ 70 Hz					
Bypass voltage range	± 25% (settable)					
OUTPUT						
Output wiring	Single-phase three-wire (1Φ + N + PE)					
Rated voltage	220 / 230 / 240 Vac					
Output voltage regulation	± 1%					
Rated frequency	50 / 60 Hz (settable)					
Output frequency regulation	50 / 60 Hz ± 0.1 Hz in battery mode					
Waveform	Sinusoidal					
Power factor	0.8					
Voltage distortion (THDv)	⩽ 2% (linear load); ⩽ 5% (non-linear load)					
Crest factor	3:1					
Overload	105% ~ 125% for 10 min, 125% ~ 150% for 1 min, 150% ~ 200% for 200 ms, > 200% for 100 ms					
BATTERIES						
DC voltage	192 Vdc					
Number of batteries	12 V × 16 pcs					
Charging voltage	216 Vdc					
EOD	168 Vdc					
Charging current	Default 8 A (2 A / 4 A / 6 A / 8 A / 10 A / 12 A selectable)					
SYSTEM						
Max. number of parallel connections	/	2				
Protections	Short-circuit, overload, overvoltage, undervoltage, low battery, overtemperature					
Communications	RS232 / USB (standard); RS485 / SNMP / dry contacts (optional)					
OTHERS						
Operating temperature	0 ~ 40℃					
Storage temperature	– 25℃ ~ 55℃ (without batteries)					
Relative humidity	0 ~ 95% (non-condensing)					
Altitude	⩽ 1000 m (derating 1% for each additional 100 m)					
IP rating	IP 20					
Noise level at 1 m	< 60 dB					
Dimensions (W × D × H) (mm)	210 × 585 × 590	310 × 600 × 880		400 × 815 × 1100		
Packaged dimensions (W × D × H) (mm)	328 × 716 × 805	430 × 710 × 1080		525 × 925 × 1305		
Net weight (kg)	54	104	140	210	240	280
Gross weight (kg)	64	113	153	225	255	295

- All specifications subject to change without notice.
- Custom-made specifications are acceptable.
- This product is applicable to industrial, commercial, financial, rail transit and other industries applications, but not available for life support systems.
- For critical systems related to public safety or significant economic benefits, dual power system is required to power the load.

Online UPS

6 kVA ~ 10 kVA
PF 1.0

Features

- High frequency on-line double conversion technology
- Advanced DSP and 3-level technology
- Output power factor 1.0
- Active power factor correction (APFC), input power factor up to 0.99
- High efficiency 95% (up to 98% in ECO mode)
- Advanced digital parallel technology
- Wide input voltage range (110 ~ 288 Vac) and frequency range (40 ~ 70 Hz)
- 50 / 60 Hz frequency auto sensing
- Two modes of frequency conversion: 50 Hz input / 60 Hz output or 60 Hz input / 50 Hz output
- Dual-input design, supporting independent bypass
- Flexible battery configuration (settable 16 - 20 pcs batteries)
- Digitally controlled charger
- High charging current available (Max. 12 A)
- Charging voltage and current configured by demands
- Linear derating in low voltage input reducing battery discharging times, extending the service life of battery
- Intelligent battery management, automatic floating / equalizing charge control, charger dormancy control, increasing battery life by 50%
- Ability to switch on the UPS with batteries
- Settable delayed start time when mains power is restored, reducing the impact on power grid or generator
- Fan speed varies intelligently with temperature, reducing noise and extending its service life
- Equipped with self-aging function
- Compact internal layout, miniaturized the complete unit for small footprint
- LCD+LED display, multi-functional keys operation, friendly human-machine interface
- Powerful background software for parameters configuration
- Advanced multi-platform communications: RS232, USB, RS485, SNMP and dry contacts communication interfaces
- Effective software and hardware protection function, robust self-diagnostic function, and abundant event logs for check

Available Options

- RS232 and smart card slot included
- Optional parallel function, battery temperature compensation, SNMP card, USB, RS485 card, dry contacts, EMD, and SMS alarms

Rear Panel

1. RS232
2. EPO
3. Parallel Port (optional)
4. USB (optional)
5. Temperature Detection (optional)
6. Intelligent Slot
7. Reserved: for manual bypass or battery breaker or outlets etc.
8. Fans
9. Bypass Breaker
10. Input Breaker
11. GND
12. Terminals and Cover

OL-6000 EXT

OL-10000 EXT

Specifications

MODEL	OL-6000 VA	OL-10000 VA
Capacity	6 kVA / 6 kW	10 kVA / 10 kW
INPUT		
Input wiring	Single-phase three-wire (1Φ + N + PE)	
Rated voltage	208 / 220 / 230 / 240 Vac	
Voltage range	110 ~ 176 Vac (linear derating between 50% and 100% load); 176 ~ 288 Vac (no derating)	
Rated frequency	50 / 60 Hz (auto-sensing)	
Frequency range	40 ~ 70 Hz	
Power factor	≥ 0.99	
Bypass voltage range	- 40% ~ +15% (settable)	
Total harmonic distortion (THDi)	≤ 5%	
OUTPUT		
Output wiring	Single-phase three-wire (1Φ + N + PE)	
Rated voltage	208 (PF=0.9) / 220 / 230 / 240 Vac	
Voltage regulation	± 1%	
Frequency	Synchronized to bypass in mains mode; 50 / 60 Hz±0.1% Hz in battery mode	
Waveform	Sinusoidal	
Power factor	1	
Total harmonic distortion (THDv)	≤ 1% (linear load); ≤ 4% (non-linear load)	
Crest factor	3:1	
Overload	105% ~ 110% for 10 min, 110% ~ 125% for 1 min, 126% ~ 150% for 30 s	
BATTERIES		
DC voltage	192 Vdc (192 ~ 240 Vdc settable)	
Number of battery	16 pcs (16 ~ 20 settable)	
Inbuilt battery (standard model)	12 V / 7 Ah × 16	12 V / 9 Ah×16
Charging current	Standard model: 1 A; Long time model: 5 A (default) ,1 ~ 5 A settable, 12 A (optional)	
Recharge time	Standard model: 90% capacity restored in 8 hours; Long time model: depend on the capacity of battery	
SYSTEM		
Efficiency	≥ 94% at 100% load, max. 95% at 60% load, ≥ 98% in ECO mode	
Transfer time	0 ms	
Protections	Short-circuit, overload, overtemperature, battery low voltage, overvoltage, undervoltage and fan failure	
Max. number of parallel connections	4	
Communications	RS232 (standard), USB / RS485 / dry contacts / SNMP / battery temperature compensation (optional)	
Display	LCD + LED	
OTHERS		
Operating temperature	0℃ ~ 40℃	
Storage temperature	-25℃ ~ 55℃ (without battery)	
Relative humidity	0 ~ 95% (non-condensing)	
Altitude	≤ 1000 m, derating 1% for each additional 100 m	
IP rating	IP 20	
Noise level at 1 m	≤ 55 dB	≤ 58 dB
Dimensions (W × D × H) (mm)	191 × 465 × 711 (S) , 191 × 465 × 350 (H)	191 × 495 × 711 (S), 191 × 495 × 350 (H)
Packaged dimensions (W × D × H) (mm)	310 × 654 × 941 (S), 318 × 595 × 475 (H)	310 × 685 × 941 (S), 318 × 617 × 475 (H)
Net weight (kg)	53 (S) , 14.5 (H)	62 (S), 16.5 (H)
Gross weight (kg)	61 (S), 16 (H)	70 (S), 18 (H)

- S means standard model; H means long time model.
- All specifications are subject to change without notice.

Rack Mount Online UPS

6 kVA ~ 10 kVA
PF 1.0

Features

- High frequency on-line double conversion technology
- Advanced DSP and 3-level technology
- Output power factor 1.0
- Active power factor correction (APFC), input power factor up to 0.99
- High efficiency 95% (up to 98% in ECO mode)
- Advanced digital parallel technology
- Wide input voltage range (110 ~ 288 Vac) and frequency range (40 ~ 70 Hz)
- 50 / 60 Hz frequency auto sensing
- Two modes of frequency conversion: 50 Hz input / 60 Hz output or 60 Hz input / 50 Hz output
- Hot-swappable battery
- Flexible battery configuration (settable 16 - 20 pcs batteries)
- Digitally controlled charger
- High charging current available (Max. 12 A)
- Charging voltage and current configured by demands
- Linear derating in low voltage input reducing battery discharging times, extending the service life of battery
- Intelligent battery management, automatic floating / equalizing charge control, charger dormancy control, increasing battery life by 50%
- Ability to switch on the UPS with batteries
- Settable delayed start time when mains power is restored, reducing the impact on power grid or generator
- Fan speed varies intelligently with temperature, reducing noise and extending its service life
- Equipped with self-aging function
- Compact internal layout, miniaturized the complete unit for small footprint
- LCD+LED display, multi-functional keys operation, friendly human-machine interface
- Powerful background software for parameters configuration
- Advanced multi-platform communications: RS232, USB, RS485, SNMP and dry contacts communication interfaces
- Effective software and hardware protection function, robust self-diagnostic function, and abundant event logs for check

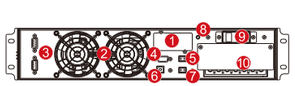
Available Options

- RS232 and smart card slot included
- Optional parallel function, battery temperature compensation, SNMP card, USB, RS485 card, dry contacts, EMD, and SMS alarms

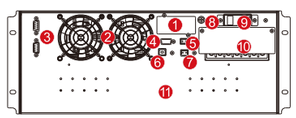
Rear Panel

1. SNMP (optional)
2. Fans
3. Parallel (optional)
4. RS232
5. EPO
6. USB (optional)
7. Temperature Compensation (optional)
8. GND
9. Bypass Breaker
10. Terminal and Cover
11. Battery Pack

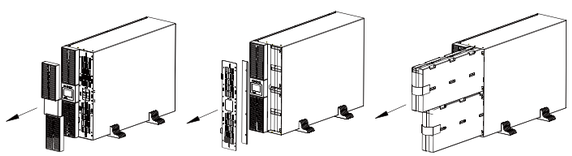
Display panel can be rotated



6/10KVA(H)



6/10KVA(S)



Easy for maintenance, hot-swappable battery

Specifications

MODEL	OL-6000 VA RM	OL-10000 VA RM
Capacity	6 kVA / 6 kW	10 kVA / 10 kW
INPUT		
Input wiring	Single-phase three-wire (1Φ + N + PE)	
Rated voltage	208 / 220 / 230 / 240 Vac	
Voltage range	110 ~ 176 Vac (linear derating between 50% and 100% load); 176 ~ 288 Vac (no derating)	
Rated frequency	50 / 60 Hz (auto-sensing)	
Frequency range	40 ~ 70 Hz	
Power factor	≥ 0.99	
Bypass voltage range	- 40% ~ +15% (settable)	
Total harmonic distortion (THDi)	≤ 5%	
OUTPUT		
Output wiring	Single-phase (L-N)	
Rated voltage	208 (PF=0.9) / 220 / 230 / 240 Vac	
Voltage regulation	± 1%	
Frequency	Synchronized to bypass in mains mode; 50 / 60 Hz ± 0.1% Hz in battery mode	
Waveform	Sinusoidal	
Power factor	1	
Total harmonic distortion (THDv)	≤ 1% (linear load); ≤ 4% (non-linear load)	
Crest factor	3:1	
Overload	105% ~ 110% for 10 min, 110% ~ 125% for 1 min,126% ~ 150% for 30 s	
BATTERIES		
DC voltage	192 Vdc (192~240 Vdc settable)	
Number of battery	16 pcs (16 ~ 20 settable)	
Inbuilt battery (standard model)	12 V / 7 Ah × 16	12 V / 9 Ah × 16
Charging current	Standard model: 1 A; Long time model: 5 A (default), 1 ~ 5 A settable, 12 A (optional)	
Recharge time	Standard model: 90% capacity restored in 8 hours; Long time model: depend on the capacity of battery	
SYSTEM		
Efficiency	≥ 94% at 100% load, max. 94.5% at 60% load, ≥ 98% in ECO mode	
Transfer time	0 ms	
Protections	Short-circuit, overload, overtemperature, battery low voltage, overvoltage, undervoltage and fan failure	
Max. number of parallel connections	4	
Communications	RS232 (standard), USB / RS485 / dry contacts / SNMP / battery temperature compensation (optional)	
Display	LCD + LED	
OTHERS		
Operating temperature	0℃ ~ 40℃	
Storage temperature	-25℃ ~ 55℃ (without battery)	
Relative humidity	0 ~ 95% (non-condensing)	
Altitude	≤ 1000 m, derating 1% for each additional 100 m	
IP rating	IP 20	
Noise level at 1 m	≤ 55 dB	≤ 58 dB
Dimensions (W × D × H) (mm)	440 × 660 × 176 (S) 440 × 580 × 88 (H)	
Packaged dimensions (W × D × H) (mm)	554 x 792 x 418 (S) 514 x 696 x 168 (H)	
Net weight (kg)	58 (S), 12 (H)	63 (S), 14 (H)
Gross weight (kg)	68 (S), 14 (H)	73 (S), 16 (H)

- S means standard model; H means long time model.
- All specifications are subject to change without notice.

Online UPS

10 kVA ~ 20 kVA (3:1)

Features

- High frequency on-line double conversion technology
- Advanced DSP and 3-level technology
- Output power factor 1.0
- Active power factor correction (APFC), input power factor up to 0.99
- High efficiency 95% (up to 98% in ECO mode)
- Advanced digital parallel technology
- 3:1 to 1:1 model settable
- Wide input voltage range (190 ~ 499 Vac) and frequency range (40 ~ 70 Hz)
- 50 / 60 Hz frequency auto sensing
- Two modes of frequency conversion: 50 Hz input / 60 Hz output or 60 Hz input / 50 Hz output
- Dual-input design, supporting independent bypass
- Flexible battery configuration (settable 16 - 20 pcs batteries)
- Digitally controlled charger
- High charging current available (Max. 10 A)
- Charging voltage and current configured by demands
- Linear derating in low voltage input reducing battery discharging times, extending the service life of battery
- Intelligent battery management, automatic floating / equalizing charge control, charger dormancy control, increasing battery life by 50%
- Ability to switch on the UPS with batteries
- Fan speed varies intelligently with temperature, reducing noise and extending its service life
- Equipped with self-aging function
- Compact internal layout, miniaturized the complete unit for small footprint
- LCD+LED display, multi-functional keys operation, friendly human-machine interface
- Powerful background software for parameters configuration
- Advanced multi-platform communications: RS232, USB, RS485, SNMP and dry contacts communication interfaces
- Effective software and hardware protection function, robust self-diagnostic function, and abundant event logs for check

Available Options

- RS232 and smart card slot included
- Optional parallel function, battery temperature compensation, SNMP card, USB, RS485 card, dry contacts, EMD and SMS alarms

Rear Panel

1. RS232
2. EPO
3. Parallel Port (optional)
4. USB (optional)
5. Temperature Detection (optional)
6. Intelligent Slot
7. Reserved: for manual bypass or battery breaker or outlets etc.
8. Fans
9. Bypass Breaker
10. Input Breaker
11. GND
12. Terminals and Cover

10 kVA (H) 15/20 kVA (H) 10 kVA (S)

Specifications

MODEL	OL-10000 (3:1)	OL-15000 (3:1)	OL-20000 (3:1)
Capacity	10 kVA / 10 kW	15 kVA / 15 kW	20 kVA / 20 kW
INPUT			
Input wiring	Three-phase five-wire (3Φ + N + PE)		
Rated voltage	380 / 400 / 415 Vac		
Voltage range	190 ~ 305 Vac (linear derating between 50% and 100% load); 305 ~ 499 Vac (no derating)		
Rated frequency	50 / 60 Hz (auto-sensing)		
Frequency range	40 ~ 70 Hz		
Power factor	≥ 0.99		
Bypass voltage range	- 40% ~ +15% (settable)		
Total harmonic distortion (THDi)	≤ 5%		
OUTPUT			
Output wiring	Single-phase three-wire (1Φ + N + PE)		
Rated voltage	208 (PF=0.9) / 220 / 230 / 240 Vac		
Voltage regulation	± 1%		
Frequency	Synchronized to bypass in mains mode; 50 / 60 Hz ± 0.1% Hz in battery mode		
Waveform	Sinusoidal		
Power factor	1		
Total harmonic distortion (THDv)	≤ 1% (linear load); ≤ 3% (non-linear load)		
Crest factor	3:1		
Overload	105% ~ 110% for 10 min, 110% ~ 125% for 1 min,126% ~ 150% for 30 s		
BATTERIES			
DC voltage	192 Vdc (192 ~ 240 Vdc settable)		
Number of battery	16 pcs (16 ~ 20 settable)		
Inbuilt battery (standard model)	12 V / 9 Ah×16	/	/
Charging current	Standard model: 1 A; Long time model: 5 A (default) ,1 ~ 5 A settable; 10 A (optional)		
Recharge time	Standard model: 90% capacity restored in 8 hours; Long time model: depend on the capacity of battery		
SYSTEM			
Efficiency	≥ 94% at 100% load, max. 95% at 60% load, ≥ 98% in ECO mode		
Transfer time	0 ms		
Protections	Short-circuit, overload, overtemperature, battery low voltage, overvoltage, undervoltage and fan failure		
Max. number of parallel connections	4		
Communications	RS232 (standard), USB / RS485 / dry contacts / SNMP / battery temperature compensation (optional)		
Display	LCD + LED		
OTHERS			
Operating temperature	0℃ ~ 40℃		
Storage temperature	-25℃ ~ 55℃ (without battery)		
Relative humidity	0 ~ 95% (non-condensing)		
Altitude	≤ 1000 m, derating 1% for each additional 100 m		
IP rating	IP 20		
Noise level at 1 m	≤ 58 dB		
Dimensions (W × D × H) (mm)	191×495×711 (S) 191×495×350 (H)	191 × 495 × 515 (H)	
Packaged dimensions (W × D × H) (mm)	310×685×941 (S) 318×617×475 (H)	285 × 593 × 618 (H)	
Net weight (kg)	64 (S), 18.5 (H)	26.5 (H)	
Gross weight (kg)	72 (S), 20 (H)	28 (H)	

- S means standard model; H means long time model.
- All specifications are subject to change without notice.

Online UPS

10 kVA ~ 60 kVA (3:3)

Features

- High frequency on-line double conversion technology
- Advanced dual-core DSP control technology and 3-level technology
- Active power factor correction (APFC), input power factor up to 0.99
- System efficiency is improved to 96%, energy saving rate is doubled
- Output power factor 1.0
- Dual input design, supporting independent bypass
- Advanced digital and parallel technology, providing higher reliability than single system
- Wide input voltage range
- 50 / 60 Hz auto-sensing frequency
- 50 / 60 Hz frequency conversion mode
- Work efficiency up to 98% in ECO mode
- Fan speed varies intelligently with load, reducing noise and extending its service life
- Conformal coating technology to make UPS operate in harsh environment for a long time
- Flexible battery configuration setting, selectable battery numbers: 32~ 40 pcs
- Digitally controlled charger
- Ability to switch on the UPS by battery in the absence of mains power (Cold start)
- Zero switching time for UPS power supply mode when the mains power is unstable, ensuring the output is uninterrupted
- Compact internal layout, small footprint
- 5 inches LCD colorful touch screen, friendly human & machine interface
- Powerful background software for parameters configuration and online upgrade
- Advanced multi-platform communication for UPS monitoring: RS232, USB, RS485, dry contacts, SNMP card, Wi-Fi card and GPRS card
- Linear derating in low voltage input, reducing battery discharging times, extending the service life of battery
- Intelligent battery management, automatic equalized and float charging control, charger dormancy control, improving the reliability of charger and extending the battery life
- Effective hardware and software protection, robust self-diagnosis function, abundant event logs for future check
- Standard RS232, USB, RS485, EPO, Dry contacts, Parallel port
- Optional SNMP card, WI-FI card, GPRS card, SMS alarms

Specifications

MODEL	OL-10000 (3:3)	OL-15000 (3:3)	OL-20000 (3:3)	OL-30000 (3:3)	OL-40000 (3:3)	OL-60000 (3:3)
Power rating						
INPUT						
Phase	3:3 / 3:1 / 1:1					
Rated voltage	220/230/240Vac (L-N) 380/400/415Vac (3Φ + N + PE)					
Voltage range	132~275Vac (L-N) 228~478Vac					
Rated frequency	50 / 60 Hz					
Frequency range	40 ~ 70 Hz					
Power factor	> 0.99					
Bypass voltage range	Selectable, default -20%~+15% Up limited: +10%, +15%, +20%, +25%; Down limited: -10%, -15%, -20%, -30%, -40%					
Bypass frequency range	Selectable, ±1Hz, ±3Hz, ±5Hz					
Input current THDi	<1% (linear load), <3% (nonlinear load)					
Bypass overload	125%: long term operation; 125%~130%: 10min; 130%~150%: 1min; 150%~400%: 1s; >400%, less than 200ms					
OUTPUT						
Rated voltage	220/230/240Vac (L-N) 380/400/415Vac (3Φ + N + PE)					
Voltage precision	±1% (linear load)					
Frequency	Synchronized with utility in mains mode, 50/60 Hz ± 0.1 Hz in battery mode					
Waveform	Sinusoidal					
Power factor	0.9/1					
Total harmonic distortion (THDv)	<1% (full linear load); <3% (full non-linear load according to IEC/EN62040-3)					
Crest factor	3:1					
Overload	<110%, 60min; 110%~125%, 10min; 125%~150%, 1min; >150%, 200ms					
BATTERIES						
DC voltage	Long time model: ±240VDC (selectable, 32 - 40pcs)					
Standard model battery voltage	(10+10) x 9AH	(20+20) x 7AH	(20+20) x 9AH	(15+15) x 9AH x 2 strings	(20+20) x 9AH x 2 strings	/
Charging current	10A Max.				15A Max.	20A Max.
Charger voltage precision	1%					
SYSTEM						
Display	5 inches touch screen					
Efficiency	95% Max.				96% Max.	
Transfer time	0 ms					
Interface	Standard: RS232, RS485, USB, battery cold start Option: programmable dry contact, SNMP, parallel kit					
ENVIRONMENT						
Operating temperature	0℃ ~ 40℃					
Storage temperature	-40℃ ~ 70℃					
Relative humidity	0 ~ 95% (non-condensing)					
Altitude	<1000m, load derated 1% per 100m from 1000 ~ 2000m					
Noise level at 1 m	58dB Max.			62dB Max.		
OTHERS						
Dimensions (W × D × H) (mm)	250 x 720 x 560 (S) 250 x 720 x 560 (H)	250 x 800 x 700 (S) 250 x 720 x 560 (H)		250 x 840 x 930 (S) 250 x 840 x 650 (H)	350 x 800 x 1280(S) 250 x 720 x 560 (H)	250 x 790 x 560 (H)
Packaged dimensions (W × D × H) (mm)	350 x 800 x 722 (S) 350 x 800 x 718 (H)	350 x 900 x 862 (S) 350 x 800 x 718 (H)		350 x 950 x 1102 (S) 350 x 980 x 810 (H)	450 x 900 x 1400 (S) 350 x 800 x 718 (H)	350 x 850 x 818 (H)
Net weight (kg)	82 (S) 31 (H)	131 (S) 33 (H)	145 (S) 33 (H)	215 (S) 42 (H)	300 (S) 42 (H)	48 (H)
Gross weight (kg)	93 (S) 40 (H)	142 (S) 42 (H)	156 (S) 42 (H)	227 (S) 52 (H)	310 (S) 52 (H)	58 (H)

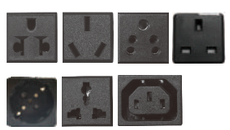
- S means standard model, H means long time model.
- Derate capacity to 90% when the number of batteries is set to 32 pcs for 40kVA/60kVA model.
- Custom-made specifications are acceptable.
- All specifications are subject to change without notice.
- Derate capacity to 60% when used at 3:1.

Online UPS

1 kVA ~ 3 kVA

Features

- High frequency on-line double conversion technology
- DSP (Digital signal processing) control technology
- Active power factor correction (APFC), input power factor up to 0.99
- Output power factor 0.9 / 1.0
- Wide input voltage range (110 V ~ 300 Vac) and frequency range (40 ~ 70 Hz)
- Auto sensing frequency
- 50 / 60 Hz frequency conversion
- Cold start
- Rear ventilation design and variable speed fan
- Effective software and hardware protection
- Quick and stable charging, 90% capacity restored in 3h (standard model UPS)
- Linear derating in low voltage input reducing battery discharging times
- Settable delayed start when power is restored
- Advanced battery management (ABM)
- Multiple functions settable via LCD: output voltage, EOD, auto-start, bypass mode
- Multi-platform communications: RS232 (standard), USB / RS485 / SNMP / dry contacts (optional)
- Optional USB, RS485 card, AS400 dry contacts, SNMP card, SMS alarms, EPO function



Optional outlets

Rear Panel

1. AC input socket
2. Battery connector (Optional)
3. Fan
4. USB (Optional)
5. EPO (Optional)
6. RS232
7. Intelligent slot (Optional)
8. Output sockets

OL-1000 VA

OL-3000 VA

Specifications

MODEL	OL-1000 VA	OL-2000 VA	OL-3000 VA
Capacity	1kVA	2kVA	3kVA
INPUT			
Rated voltage	208 / 220 / 230 / 240 Vac		
Voltage range	110 ~ 176 Vac (linear derating between 50% and 100% load); 176 ~ 280 Vac (no derating); 280 ~ 300 Vac (derating 50%)		
Frequency	40 ~ 70 Hz (auto-sensing)		
Power factor	≥ 0.99		
Bypass voltage range	- 25% ~ +15% (settable)		
Total harmonic distortion (THDi)	≤ 6%		
OUTPUT			
Voltage	208 / 220 / 230 / 240 Vac (settable via LCD)		
Voltage regulation	±1%		
Frequency	45 ~ 55 Hz or 55 ~ 65 Hz (synchronized range); 50 / 60 Hz ± 0.1 Hz (battery mode)		
Waveform	Sinusoidal		
Power factor	0.9		
Total harmonic distortion (THDv)	≤ 2% (linear load), ≤ 5% (non-linear load)		
Crest factor	3:1		
Overload	105% ~ 125% for 1 min, 125% ~ 150% for 30 s, > 150% for 300 ms		
BATTERIES			
DC voltage	24V (S) / 24V (H)	36V (S) / 36V (H)	48V (S) / 48V (H) / 72V (S) / 72V (H) / 72V (S) / 72V (H) / 96V (S) / 96V (H)
Inbuilt battery	2×9Ah /	3×7Ah /	4×9 Ah / 6×7 Ah / 6×9 Ah / 8×7 Ah /
Charging current (max.)	Standard model:1A, Long time model: 6A		
Recharge time	Standard model: 90% capacity restored in 3 hours; Long time model: depend on the capacity of battery		
SYSTEM			
Efficiency	≥ 90% (Mains mode) ≥ 85% (Battery mode) ≥ 95% (ECO mode)	≥ 91% (Mains mode) ≥ 86% (Battery mode) ≥ 96% (ECO mode)	≥ 92% (Mains mode) ≥ 87% (Battery mode) ≥ 97% (ECO mode)
Transfer time	Mains mode to battery mode: 0 ms Inverter mode to bypass mode: 4 ms (typical)		
Protections	Short-circuit, overload, overtemperature, battery discharge protection and fan testing protection		
Communications	RS232 (standard), USB / RS485 / dry contacts / SNMP (optional)		
Display	LCD + LED		
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		
OTHERS			
Operating temperature	0℃ ~ 40℃		
Storage temperature	-25℃ ~ 55℃ (without batteries)		
Relative humidity	0 ~ 95% (non-condensing)		
Altitude	≤ 1000 m, derating 1% for each additional 100 m		
IP rating	IP 20		
Noise level at 1m	≤ 50 dB		
Dimensions (W×D×H) (mm)	144 ×312 ×216	144 ×336 ×214	144 ×371 ×216 / 144 ×336 ×216 / 144 ×417 ×216 / 191 ×418 ×335 / 191 ×419 ×335 / 191 ×418 ×335 / 191 ×419 ×335 / 191 ×418 ×335 / 191 ×419 ×335 / 191 ×418 ×335
Packaged dimensions (W×D×H) (mm)	230 ×402 ×315	232 ×417 ×318	230 ×460 ×315 / 232 ×417 ×318 / 230 ×506 ×315 / 277×500×435 / 318 ×533 ×417 / 277×500×435
Net weight (kg)	11	6	12.8 / 6 / 16.4 / 10.5 / 23.1 / 10.5 / 24.3 / 11 / 29.4 / 11
Gross weight (kg)	11.3	6.9	14 / 7 / 17.8 / 11.6 / 24.7 / 12 / 25.9 / 12.5 / 31.1 / 12.5

- Derate capacity to 70% in CUCF mode and to 90% when the output voltage is adjusted to 208 Vac.
- S means standard model, H means long time model.
- All specifications are subject to change without notice.
- Custom-made specifications are acceptable.

Rack Mount Online UPS

1 kVA ~ 3 kVA

Features

- High frequency on-line double conversion technology
- DSP (Digital signal processing) control technology
- Active power factor correction (APFC), input power factor up to 0.99
- Output power factor 0.9 / 1.0
- Wide input voltage range (110 V ~ 300 Vac) and frequency range (40 ~ 70 Hz)
- Auto sensing frequency
- 50 / 60 Hz frequency conversion
- Cold start
- Rear ventilation design and variable speed fan
- Effective software and hardware protection
- Quick and stable charging, 90% capacity restored in 3h (standard model UPS)
- Linear derating in low voltage input reducing battery discharging times
- Settable delayed start when power is restored
- Hot-swappable battery
- Advanced battery management (ABM)
- Multiple functions settable via LCD: output voltage, EOD, auto-start, bypass mode
- Multi-platform communications: RS232 (standard), USB / RS485 / SNMP / dry contacts (optional)
- Optional USB, RS485 card, AS400 dry contacts, SNMP card, SMS alarms, EPO function, MBS (External maintenance bypass switch)

Rear Panel

1. AC input socket
2. Battery connector (Optional)
3. Fan
4. USB (Optional)
5. EPO (Optional)
6. RS232
7. Intelligent slot (Optional)
8. Output sockets

OL-1000 VA RM

OL-6000 VA RM

Specifications

MODEL	OL-1000 VA RM	OL-2000 VA RM	OL-3000 VA RM
Capacity	1kVA	2kVA	3kVA
INPUT			
Rated voltage	208 / 220 / 230 / 240 Vac		
Voltage range	110 ~ 176 Vac (linear derating between 50% and 100% load); 176 ~ 280 Vac (no derating); 280 ~ 300 Vac (derating 50%)		
Frequency	40 ~ 70 Hz (auto-sensing)		
Power factor	≥ 0.99		
Bypass voltage range	-25% ~ +15% (settable)		
Total harmonic distortion	≤ 6%		
OUTPUT			
Voltage	208 / 220 / 230 / 240 Vac (settable via LCD)		
Voltage regulation	± 1%		
Frequency	45 ~ 55 Hz or 55 ~ 65 Hz (synchronized range); 50 / 60 Hz ± 0.1 Hz (battery mode)		
Waveform	Sinusoidal		
Power factor	0.9		
Total harmonic distortion (THDv)	≤ 2% (linear load); ≤ 5% (non-linear load)		
Crest factor	3:1		
Overload	105% ~ 125% for 1 min, 125% ~ 150% for 30 s, > 150% for 300 ms		

BATTERIES													
DC voltage	24V (S)	24V (H)	36V (S)	36V (H)	48V (S)	48V (H)	72V (S)	72V (H)	72V (S)	72V (H)	96V (S)	96V (H)	
Inbuilt battery	2×9Ah	/	3×7Ah	/	4×9 Ah	/	6×7 Ah	/	6×9 Ah	/	8×7 Ah	/	
Charging current (max.)	Standard model:1A, Long time model: 6A												
Recharger time	Standard model: 90% capacity restored in 3 hours; Long time model: depend on the capacity of battery												

Efficiency	≥ 90% (Mains mode)		≥ 91% (Mains mode)		≥ 92% (Mains mode)								
	≥ 85% (Battery mode)		≥ 86% (Battery mode)		≥ 87% (Battery mode)								
	≥ 95% (ECO mode)		≥ 96% (ECO mode)		≥ 97% (ECO mode)								
Transfer time	Mains mode to battery mode: 0 ms Inverter mode to bypass mode: 4 ms (typical)												
Protections	Short-circuit, overload, overtemperature, battery discharge protection and fan testing protection												
Communications	RS232 (standard), USB / RS485 / dry contacts / SNMP (optional)												
Display	LCD + LED												
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												

Operating temperature	0℃ ~ 40℃												
Storage temperature	-25℃ ~ 55 ℃ (without batteries)												
Relative humidity	0~95% (non-condensing)												
Altitude	≤ 1000 m, derating 1% for each additional 100 m												
IP rating	IP 20												
Noise level at 1m	≤ 50 dB												
Dimensions (W × D × H) (mm)	440 ×338 ×88	440 ×468 ×88	440 ×430 ×88	440 ×468 ×88	440 ×430 ×88	440 ×468 ×88	440 ×560 ×88	440 ×468 ×88	440 ×560 ×88	440×468×88(UPS) 440x468x88(BAT)		440 ×468 ×88	
Packaged dimensions (W×D×H) (mm)	545 ×428 ×194	545 ×592 ×198	545 ×560 ×201	545 ×592 ×201	545 ×560 ×201	545 ×782 ×201	545 ×690 ×201	545 ×592 ×201	545 ×690 ×201	545 ×592 ×198	592x545 x198 (UPS) 597x545 x198 (BAT)	545 ×592 ×201	
Net weight(kg)	10.6	7.6	15.5	7.6	18.7	9.7	25.6	9.7	26.8	10	9.45(UPS) 27.2(BAT)	10.1	
Gross weight(kg)	11.3	11	18.6	11.1	21.8	14	25.8	13.2	29.7	13.5	2.97(UPS 30.2(BAT)	13.6	

- Derate capacity to 70% in CUCF mode and to 90% when the output voltage is adjusted to 208 Vac.
- S means standard model, H means long time model.
- All specifications are subject to change without notice.
- Custom-made specifications are acceptable.

Online Transformer base UPS

10 kVA ~ 120 kVA (3 : 3)

Features

- Online double-conversion with full DSP control
- IGBT inverter with output isolation transformer
- 100% unbalance load capability
- Output power factor 0.9
- Generator compatible
- Support battery cold start and auto-restart when mains power is restored
- ECO mode operation for energy saving
- Superior protection
- 7 inches LCD touch screen friendly human & machine interface
- Front access makes maintenance and replacement simplified (60 ~ 120 kVA)
- Intelligent self-diagnosing function, all kinds of failure protection, large capability of history records storage
- High MTBF (> 200,000 h)
- Low MTTR (< 0.5 h)
- Standard emergency power off (EPO)
- Standard RS232, RS485, dry contacts communication port
- Optional SNMP communication port
- Optional N+X redundancy parallel up to 6 units
- Optional input filter to improve input power factor

Specifications

MODEL	OL-10000 VA (3:3) T.B	OL-15000 VA (3:3) T.B	OL-20000 VA (3:3) T.B	OL-30000 VA (3:3) T.B	OL-40000 VA (3:3) T.B	OL-60000 VA (3:3) T.B	OL-80000 VA (3:3) T.B	OL-100000 VA (3:3) T.B	OL-120000 VA (3:3) T.B
Capacity	10 kVA / 9 kW	15 kVA / 13.5 kW	20 kVA / 18 kW	30 kVA / 27 kW	40 kVA / 36 kW	60 kVA / 54 kW	80 kVA / 72 kW	100 kVA / 90 kW	120 kVA / 108 kW
INPUT									
Input wiring	Three-phase five-wire (3Φ + N + PE)								
Rated voltage	380 / 400 / 415 Vac								
Voltage range	285~ 475V								
Rated frequency	50 / 60 Hz								
Frequency range	(50 / 60) ± 5 Hz								
Power factor	⩾ 0.95 (with filter)								
Delayed start of rectifier	10 s (1 ~ 300 settable)								
Bypass voltage range	±20% (settable)								
OUTPUT									
Output wiring	Three-phase five-wire (3Φ + N + PE)								
Rated voltage	380 / 400 / 415 Vac								
Output voltage regulation	± 1%								
Output frequency regulation	50 / 60 Hz ± 0.1% in battery mode								
Waveform	Sinusoidal								
Power factor	0.9								
Voltage distortion (THDv)	⩽ 1% (linear load), ⩽ 5% (non-linear load)								
Crest factor	3:1								
Overload	105% ~ 110% for 60 min, 110% ~ 125% for 10 min								
BATTERIES									
DC Voltage	Lead acid battery: 360Vdc Lithium iron phosphate battery: 384 Vdc								
Number of batteries	Lead acid battery: 12 V x 30 pcs (support 28~32 pcs) Lead acid battery: 2 V x 180 pcs (support 168~192 pcs) Lithium iron phosphate battery: 3.2 V x 120 pcs (support 112/120 pcs)								
Charging current	Charging rate (settable) × battery capacity (settable) × number of battery groups (settable)								
SYSTEM									
Efficiency	In line mode: Max. 93%; ECO mode: ⩾ 98%								
Max. number of parallel connections	6								
Protections	Short-circuit, overload, overvoltage, undervoltage. low battery, overtemperature, fan failure								
Communications	RS232 / RS485 / dry contacts (standard), SNMP (optional)								
EMI	EN62040-2								
EMS	IEC61000-4-2 (ESD) IEC61000-4-3 (RS) IEC61000-4-4 (EFT) IEC61000-4-5 (surge)								
OTHERS									
Operating temperature	0 ~ 40℃								
Storage temperature	-25℃ ~ 55℃ (without batteries)								
Relative humidity	0 ~ 95% (non-condensing)								
Altitude	⩽ 1000 m (derating 1% for each additional 100 m)								
IP rating	IP 20								
Noise level at 1 m	65dB								
Dimensions (W × D × H) (mm)	400 × 800 × 1100					600 × 700 × 1500	700 × 800 × 1700		
Packaged dimensions (W × D × H) (mm)	490 × 920 × 1300					700 × 800 × 1650	800 × 900 × 1850		
Net weight (kg)	158	165	175	210	260	460	590	630	690
Gross weight (kg)	200	207	217	252	302	480	620	660	720

- All specifications are subject to change without notice.
- Custom-made specifications are acceptable.
- This product is applicable to industrial, commercial, financial, rail transit and other industries applications, but not available for life support systems.
- For critical systems related to public safety or significant economic benefits, dual power system is required to power the load.

SNMP Card

Monitoring Software UPSmart

Product Introduction

UPSmart is monitoring software for single UPS developed on RS232/USB interface. When mains input is normal, UPSmart can display the input voltage, output voltage, frequency, load, battery capacity and many other parameters with real time data curves. When mains input is abnormal or other fault occurs, UPSmart can save the document automatically, make system turned off safely and automatically send alarm information by email or SMS messages. With UPSmart, users don't need to worry about any loss to the system cause by the abnormal mains power; users can make the necessary processing at the first time, and learn the historical operation information of equipment through query historical data and events saved in the system.

Application platform

Windows 98; Windows NT; Windows 2000; Windows ME; Windows XP; Windows 2003; Windows Vista; Windows 7

Features

- Working status: mains, battery, inverter, bypass, self test, etc.
- Real time monitoring: voltage, frequency, load, battery and other information
- Automatically securely saves data for common applications before shut down the system
- Multiple test methods for UPS diagnostic testing
- Automatic sequence turning on / off time of computer and UPS is configurable
- Historical parameters, operations and events can be inquired
- Local alarm and remote alarm functions are available
- Auto restart is settable

NANO-SNMP Card (iDA-Star series)

Internal card

External card

Specifications

MODEL	iDA-ST200P	iDA-ST200E
Type	Internal card	External card
Communication interface	RJ45, RS232, RS485	
Network interface	10/100Mbps high-speed Ethernet adaptive	
Serial interface	One 232 port for UPS communication, one 232 port for SMS and temperature-humidity module, one 485 port for protocol conversion	
SNMP MIB	RFC1628	
Network protocol	TCP/IP, UDP, SNMP, SNTP, HTTP, SMTP, DHCP, DNS, FTP, ARP, ICMP, etc.	
Input power (DC)	9~28V	
Power consumption	Max. 1.5W	
Operating environment	Temperature: 0°C~50°C, humidity: 10~90%	
Other configuration	Real-time system clock	
Program upgrade	FTP remote network upgrade through web page	
Multi-language	Support simplified Chinese, traditional Chinese, English	
System security	Offer IP-based filtering mechanism, and a user ID and password for system	
Applicable for	EAST full range conventional UPS products	
Dimensions	10 × 42 × 81mm	

Application schematic diagram