



UPS



STABILIZER



LINE INTERACTIVE

400VA ~ 2000VA

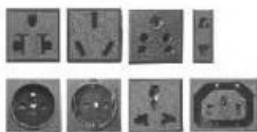


Features

- 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 RS232 / USB communication port and RJ11 / RJ45 protection
- Unattended safety shutdown: system alarm and auto Power-On / Off by RS232 or USB interface communicating with PC

Rear Panel

1. Output Socket (selectable)
2. TEL/Modem/Fax surge protection (optional)
3. USB (optional)
4. AC Input
5. Fuse



Optional sockets



400VA ~ 800VA



1200VA ~ 1500VA



1500VA ~ 2000VA

Line Interactive UPS

Specifications

MODEL	Li-400	Li-600	Li-800	Li-1200	Li-1500	Li-2000	
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	
INPUT							
Voltage	100 V / 110 V / 120 V: 82 ~ 147 Vac 220 V / 230 V / 240 V: 162 ~ 295 Vac (145 ~ 295 Vac for 220 V optional)						
Frequency	50 / 60 Hz ± 10% (auto-sense)						
OUTPUT							
Voltage	100 V / 110 V / 120 Vac ± 10% or 220 V / 230 V / 240 Vac ± 10%						
Frequency	50 / 60 Hz ± 1% (auto-sense)						
Waveform	Mains mode: pure sine wave; battery mode: simulated sine wave						
Crest factor	3:1						
Transfer time	Typical 2 ~ 7 ms; Max. 10 ms						
BATTERIES							
DC voltage	12 V			24 V			
Configuration	1 x 12 V / 4.5 Ah	1 x 12 V / 7.0 Ah	1 x 12 V / 8.0 Ah	2 x 12 V / 7.0 Ah	2 x 12 V / 8.0 Ah	2 x 12 V / 9.0 Ah	
Recharge time	4 ~ 6 h						
COMMUNICATIONS							
USB / RS232 / SNMP (optional)	Supports Windows® 98 / 2000 / 2003 / XP / Vista / 2008 / Windows® 7 / 8 / 10						
OTHERS							
Protections	Short circuit - battery overcharge - overdischarge - overload - surge						
Humidity	20 ~ 90% RH @ 0 ~ 40°C (non-condensing)						
Noise level	≤ 45 dB (1m)						
Plastic case	Net / Gross weight (kg)	3.8 / 4.3	4.3 / 4.8	5.3 / 5.8	9.5 / 10.0	10.7 / 11.2	—
	Dimensions (W x D x H) (mm)	100 x 280 x 140			140 x 345 x 170		—
	Packaged dimensions (W x D x H) (mm)	139 x 325 x 210			198 x 406 x 245		—
	Quantity / 20ft	2300 pcs			1000 pcs		—
Metal case	Net / Gross weight (kg)	—	5.5 / 6.0	6.7 / 7.2	10.5 / 11.2	12.6 / 13.4	14.0 / 14.8
	Dimensions (W x D x H) (mm)	—	95 x 320 x 160		125 x 320 x 225		125 x 380 x 225
	Packaged dimensions (W x D x H) (mm)	—	145 x 375 x 230		180 x 390 x 295		180 x 450 x 295
	Quantity / 20ft	2400 pcs	2000 pcs		1000 pcs		
Rack mount	Net / Gross weight (kg)	6.7 / 7.2	7.8 / 8.3	9.0 / 9.5	12.6 / 13.2	15.7 / 16.3	17.0 / 17.6
	Dimensions (W x D x H) (mm)	—	308 x 438 x 88		308 x 438 x 132		
	Packaged dimensions (W x D x H) (mm)	—	395 x 525 x 185		395 x 525 x 225		

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

LINE INTERACTIVE(SINEWAVE)

1000VA ~ 3000VA

PF 0.8



Features

- Pure sine wave output
- Output power factor 0.8
- 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 Sockets
3. EXT Battery (optional)
4. AC Breaker
5. Input
6. SNMP (optional)
7. Fan



Line Interactive UPS

Specifications

MODEL	Lis-500	Lis-1000	Lis-1500	Lis-2000	Lis-3000	
Capacity	500 VA / 300 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 ~ 15V	20 ~ 30 V		30 ~ 45V(S) 40 ~ 60V(H)	40 ~ 60 V	
AC INPUT						
AC input range (bypass mode)	0 ~ 121 V / 132 V / 138 V / 144 Vac for 100 V / 110 V / 115 V / 120 Vac \pm 10 Vac 0 ~ 242 V / 264 V / 276 V / 288 Vac for 200 V / 220 V / 230 V / 240 Vac \pm 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 Hz / 60 Hz (auto-sense), 50 Hz / 60 Hz \pm 5% ~ 15%					
Generator connection	Available (generator input power is settable)					
OUTPUT						
Inverter output range	100 V / 110 V / 115 V / 120 / 200 V / 220 V / 230 V / 240 Vac \pm 5% (settable)					
AC output range (bypass mode)	0 ~ 121 V / 132 V / 138 V / 144 Vac for 100 V / 110 V / 115 V / 120 Vac \pm 10 Vac 0 ~ 242 V / 264 V / 276 V / 288 Vac for 200 V / 220 V / 230 V / 240 Vac \pm 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 \pm 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	\leq 10 ms					
THDV (resistive load)	\leq 5%					
Protections	Overload, short circuit (inverter), battery low voltage, battery overcharge, overtemperature					
Overload time (mains mode)	120 s for 110%, 60 s for 125%, 10 s for 150% (transfer to bypass mode)					
Overload time (inverter mode)	60 s for 110%, 10 s for 125%, 5 s for 150% (Shut down directly)					
Mute	Automatic mute in 60 s or by manual					
BATTERIES						
Battery capacity (H: external expansion)	12 V x 1	12 V / 7 Ah x 2	12 V / 9 Ah x 2	12V/9Ahx3 (H: 12Vx4)	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; \geq 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					
COMMUNICATIONS						
USB+RJ45	Supports Windows® 98 / 2000 / 2003 / XP / Vista / 2008 / 7 / 8 / 10					
SNMP (optional)	Power management from SNMP manager and web browser (standard with slot)					
OTHERS						
Operating temperature	5°C ~ 40°C					
Operating humidity	Relative humidity \leq 93%					
Noise level	\leq 50 dB (1m)					
Tower	Dimensions (W x D x H) (mm)	345 x 215 x 144 (S/H)			410 x 215 x 144 (S) 345 x 215 x 144 (H)	467 x 335.5 x 190 (S/H)
	Packaged dimensions (W x D x H) (mm)	427 x 316 x 236 (S/H)			492 x 316 x 236 (S) 427 x 316 x 236 (H)	592 x 462 x 320 (S/H)
	Net weight (kg)	7.0 (H)	12.2 (S) 11.6 (H)	14.2 (S)	18.5 (S) 17.8 (H)	28.1 (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)	30.2 (S) 30.0 (H)
Rack mount	Dimensions (W x D x H) (mm)	/	440 x 338 x 88 (S)		440 x 410 x 132 (S)	
	Packaged dimensions (W x D x H) (mm)	/	611 x 448 x 208 (S)		611 x 505 x 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 subject to change without notice.
- Custom-made specifications are acceptable.

ONLINE

1KVA ~ 3KVA
PF 0.9

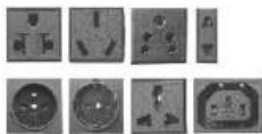


Features

- High frequency and true double-conversion
- DSP (Digital Signal Processors) technology
- Input power factor correction (PFC)
- Wide input voltage range (110V-300V)
- Output power factor 0.9
- Cold start
- Auto sensing frequency
- ECO mode operation for energy saving
- Selectable output voltage via LCD
- Output bypass settable via LCD
- Power-on self test
- Advanced battery management (ABM)
- Short circuit and overload protection
- Automatic charging in OFF mode
- Auto control fan speed when loads varies
- Standard RS232 communication port and RJ45 protection
- Optional USB / SNMP communication port
- Optional emergency power off (EPO)
- Optional extension battery bank
- Optional built-in isolation transformer

Rear Panel

1. Overcurrent Protection
2. AC Input
3. Modem/Tel/Fax
4. DC Input
5. Outlet
6. Fan
7. RS232
8. USB (optional)
9. EPO (optional)
10. SNMP/AS400 (optional)



Optional sockets



Online Transformerless UPS

Specifications

MODEL	OL-1000		OL-1000 EXT	OL-2000		OL-2000 EXT	OL-3000		OL-3000 EXT
Capacity	1 KVA / 900 W			2 KVA / 1800 W			3 KVA / 2700 W		
INPUT									
Rated voltage	208 V / 220 V / 230 V / 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-sense)								
Power factor	≥ 0.99								
Bypass voltage range	-25% ~ +15% (settable)								
OUTPUT									
Voltage	208 V / 220 V / 230 V / 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								
Crest factor	3:1								
Harmonic distortion	≤ 2% (linear load); ≤ 5% (non-linear load)								
Transfer time	Mains mode to battery mode: 0 ms Inverter mode to bypass mode: 4 ms (typical)								
Overload capability	105% ~ 125%: transfer to bypass in 1 min; 125% ~ 150%: transfer to bypass in 30 s; > 150%: transfer to bypass in 300 ms								
EFFICIENCY									
Mains mode	≥ 90%			≥ 91%			≥ 92%		
Battery mode	≥ 85%			≥ 86%			≥ 87%		
ECO mode	≥ 95%			≥ 96%			≥ 97%		
BATTERIES									
DC voltage	24 V	36 V	36 V	48 V	72 V	72 V	72 V	96 V	96 V
Inbuilt battery of standard model	2 × 9 Ah	3 × 7 Ah	/	4 × 9 Ah	6 × 7 Ah	/	6 × 9 Ah	8 × 7 Ah	/
Charging current (max.)	1 A		6 A	1 A		6 A	1 A		6 A
Recharge time	8 h								
ALARMS									
Utility failure	4 s per beep								
Low battery	1 s per beep								
Overload	1 s twice beep								
UPS fault	Long beep								
COMMUNICATIONS									
RS232 (standard) / USB (optional)	Supports Windows® 98 / 2000 / 2003 / XP / Vista / 2008 / Windows® 7 / 8 / 10								
SNMP (optional)	Power management from SNMP manager and web browser								
OTHERS									
Operating temperature	0 ~ 40°C								
Relative Humidity	0 ~ 90% (non-condensing)								
Noise level	≤ 50 dB (1m)								
Dimensions (W x D x H) (mm)	144 x 336 x 214	144 x 414 x 214	144 x 336 x 214	191 x 418 x 335				191 x 464 x 335	191 x 418 x 335
Packaged dimensions (W x D x H) (mm)	232 x 417 x 318	23 x 492 x 316	232 x 417 x 318	318 x 533 x 471				320 x 573 x 471	318 x 533 x 471
Net weight (kg)	9.5	13	6	18	25.7	10.5	27.2	32	11
Gross weight (kg)	10.5	14.2	7	19.5	27.4	12	29	34	12.5

● Derate capacity to 70% in CUCDF mode and to 90% when the output voltage is adjusted to 208Vac.
● S means standard model, H means long time model.

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

ONLINE

6KVA ~ 10KVA
PF 0.9



Features

- High frequency and true double-conversion
- DSP digital control technology
- Input power factor correction (PFC)
- Wide input voltage range (110V ~ 300V)
- Output power factor 0.9
- Cold start
- Auto sensing frequency
- ECO mode operation for energy saving
- Selectable output voltage via LCD
- 50 Hz / 60 Hz frequency conversion mode available
- Selectable battery low voltage via LCD
- Power-on self test
- Advanced battery management (ABM)
- Short circuit and overload protection
- Automatic charging in OFF mode
- Fan speed auto control when loads varies
- Standard RS232 communication port
- Optional USB / SNMP communication port
- Optional emergency power off (EPO)
- Optional extension battery bank
- Optional built-in isolation transformer
- Optional manual bypass
- Optional N+X redundancy parallel

Rear Panel

1. AC Input
2. Modem/Tel/Fax
3. DC Input
4. Outlet
5. Fan
6. RS232
7. USB (optional)
8. EPO (optional)
9. Manual Bypass (optional)
10. SNMP/AS400 (optional)
11. Breaker
12. Parallel Card (optional)
13. BAT_NTC (optional)



Online Transformerless UPS

Specifications

MODEL	OL-6000 VA & EXT	OL-10000 VA & EXT
Capacity	6 KVA / 5400 W	10 KVA / 9000 W
INPUT		
Rated voltage	208 V / 220 V / 230 V / 240 Vac	
Voltage range	Half load (110 ~ 300) ± 5 Vac Full load (160 ~ 300) ± 5 Vac	
Frequency	40 ~ 70 Hz (auto-sense)	
Power factor	≥ 0.99	
Bypass voltage range	160V ~ rated output voltage +32V	
OUTPUT		
Voltage	208 V / 220 V / 230 V / 240 Vac (settable via LCD)	
Voltage regulation	± 1%	
Frequency	45 ~ 55 Hz or 55 ~ 65 Hz (synchronized range); 50 / 60 Hz ± 0.2 Hz (battery mode)	
Waveform	Sinusoidal	
Crest factor	3:1	
Harmonic distortion	≤ 2% (linear load); ≤ 5% (non-linear load)	
Transfer time	0 ms	
Overload capability	105% ~ 125%: transfer to bypass in 3 mins; 125% ~ 150%: transfer to bypass in 30 s; > 150%: transfer to bypass in 100 ms	
EFFICIENCY		
Mains mode	≥ 92%	
Battery mode	≥ 91%	
ECD mode	≥ 98%	
BATTERIES		
DC voltage	192 V	
Inbuilt battery of standard model	16 × 7 Ah	16 × 9 Ah
Charging current	Standard model	1 A
	Long time model	1 A / 3 A / 5 A / 8 A
Recharge time	8 h	
ALARMS		
Utility failure	4 s per beep	
Low battery	1 s per beep	
Overload	1 s twice beep	
UPS fault	Long beep	
COMMUNICATIONS		
RS232 (standard), USB (optional)	Supports Windows® 98 / 2000 / 2003 / XP / Vista / 2008 / Windows® 7 / 8 / 10	
SNMP (optional)	Power management from SNMP manager and web browser	
OTHERS		
Humidity	20 ~ 90% RH @ 0 ~ 40°C (non-condensing)	
Noise level	≤ 55 dB (1m)	
Dimensions (W × D × H) (mm)	262 × 514 × 455 (H), 262 × 514 × 735 (S)	
Packaged dimensions (W × D × H) (mm)	365 × 605 × 610 (H), 390 × 625 × 937 (S)	
Net weight (kg)	22.1 (H), 64.1 (S)	22.8 (H), 70.8 (S)
Gross weight (kg)	25.2 (H), 72.2 (S)	25.9 (H), 78.9 (S)

● Derate capacity to 70% in CUCF mode and to 90% when the output voltage is adjusted to 208Vac.
● S means standard model, H means long time model.

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

ONLINE RACK MOUNT

1KVA ~ 10KVA
PF 0.9



1 ~ 3KVA



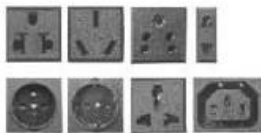
6 ~ 10KVA

Features

- Rack / Tower design
- High frequency and true double-conversion
- DSP digital control technology
- Input power factor correction (PFC)
- Wide input voltage range (110 V – 300 V)
- Output power factor 0.9
- Cold start
- Auto sensing frequency
- ECO mode operation for energy saving
- Selectable output voltage via LCD
- Output bypass settable for 1,2,3 KVA via LCD
- 50 Hz / 60 Hz frequency conversion mode available on 6 – 10 KVA
- Selectable battery low voltage via LCD
- Power-on self test
- Advanced battery management (ABM)
- Short circuit and overload protection
- Automatic charging in OFF mode
- Fan speed auto control when loads varies
- Standard RS232 communication port and RJ45 protection
- Optional USB / SNMP communication port
- Optional emergency power off (EPO)
- Optional extension battery bank
- Optional N+X redundancy parallel on 6 – 10 KVA

Rear Panel

1. Overcurrent Protection
2. AC Input
3. Modem/Tel/Fax
4. DC Input
5. Outlet
6. Fan
7. RS232
8. USB (optional)
9. EPO (optional)
10. SNMP/AS400 (optional)
11. Parallel Card (optional)



Optional sockets



Online Transformerless UPS

Specifications

MODEL	OL-1000 RM & EXT	OL-2000 RM & EXT	OL-3000 RM & EXT	OL-6000 RM & EXT	OL-10000 RM & EXT
Capacity	1 KVA / 900 W	2 KVA / 1800 W	3 KVA / 2700 W	6 KVA / 5400 W	10 KVA / 9000 W
INPUT					
Rated voltage	208 V / 220 V / 230 V / 240 Vac				
Voltage range	Half load (115 ~ 295) ± 5 Vac, full load (145 ~ 295) ± 5 Vac		Half load (115 ~ 295) ± 5 Vac, full load (165 ~ 295) ± 5 Vac		
Frequency	45 ~ 55 Hz ± 0.5% Hz or 55 ~ 65 Hz ± 0.5% Hz (auto-sense)			40 ~ 70 Hz ± 0.5% (auto-sense)	
Power factor	≥ 0.98			≥ 0.99	
Bypass voltage range	Rated output voltage -34 V ~ rated output voltage +32 V			160 V ~ rated output voltage +32 V	
OUTPUT					
Voltage	208 V / 220 V / 230 V / 240 Vac (settable via LCD)				
Voltage regulation	± 1%				
Frequency	Synchronized with utility in mains mode; 50 / 60 Hz ± 0.2 Hz in battery mode				
Waveform	Sinusoidal				
Crest factor	3:1				
Harmonic distortion	≤ 3% (linear load); ≤ 5% (non-linear load)			≤ 2% (linear load); ≤ 5% (non-linear load)	
Transfer time	Mains mode to battery mode: 0 ms Inverter mode to bypass mode: 4 ms (typical)			Mains mode to battery mode: 0 ms Inverter mode to bypass mode: 0 ms	
Overload	105% ~ 150%: transfer to bypass in 30 s; > 150%: transfer to bypass in 300 ms			105% ~ 125%: transfer to bypass in 3 mins; 125% ~ 150%: transfer to bypass in 30 s; > 150%: transfer to bypass in 100 ms	
EFFICIENCY					
Mains mode	≥ 90%			≥ 92%	
Battery mode	≥ 87%			≥ 91%	
ECO mode	≥ 98%			≥ 98%	
BATTERIES					
DC voltage	24 V	48 V	72 V	192 V	
Inbuilt battery of standard model	2 × 9 Ah	4 × 9 Ah	6 × 9 Ah	16 × 7 Ah	16 × 9 Ah
Charging current	Standard model	1 A			
	Long time model	6 A			1 A / 3 A / 5 A / 8 A
Recharge time	8 h				
ALARMS					
Utility failure	4 s per beep				
Low battery	1 s per beep				
Overload	1 s twice beep				
UPS fault	Long beep				
COMMUNICATIONS					
RS232 (standard), USB (optional)	Supports Windows® 98 / 2000 / 2003 / XP / Vista / 2008 / Windows® 7 / 8 / 10				
SNMP (optional)	Power management from SNMP manager and web browser				
OTHERS					
Humidity	20~90% RH @ 0~40°C (non-condensing)				
Noise level	≤ 50 dB (1m)			≤ 55 dB (1m)	
Long time model	Dimensions (W × D × H) (mm)	440 × 468 × 88		440 × 555 × 132	
	Packaged dimensions (W × D × H) (mm)	530 × 590 × 170		535 × 660 × 215	
Standard model	Net / Gross weight (kg)	8.6 / 12.0	10.7 / 14.1	12.3 / 15.7	16.4 / 20.7
	Dimensions (W × D × H) (mm)	440 × 468 × 88	440 × 718 × 88		440 × 555 × 132 (UPS)
Standard model	Packaged dimensions (W × D × H) (mm)	530 × 590 × 170	530 × 825 × 170		440 × 555 × 132 (BAT)
					535 × 660 × 215 (UPS)
					540 × 685 × 235 (BAT)
	Net / Gross weight (kg)	14.3 / 17.7	23.4 / 26.8	29.7 / 33.1	16.4 / 20.7 (UPS) 43.6 / 47.1 (BAT)
					17.1 / 21.4 (UPS) 49.6 / 53.1 (BAT)

● Derate capacity to 70% in CUCF mode and to 90% when the output voltage is adjusted to 208Vac.
● S means standard model, H means long time model.

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

ONLINE (3:1)

6KVA ~ 20KVA (3:1)
PF 0.9



Features

- High frequency and true double-conversion
- DSP digital control technology
- Wide input voltage range (110V – 300V)
- Output power factor 0.9
- Optimized battery configuration: 192V / 240V
- Cold start
- Auto sensing frequency
- ECO mode operation for energy saving
- 50/60Hz frequency conversion mode
- Selectable output voltage via LCD
- Selectable battery shutdown voltage (EOD) via LCD
- Selectable input mode via LCD (3:1 or 1:1)
- Power-on self test
- Advanced battery management (ABM)
- Short circuit and overload protection
- Automatic charging in OFF mode
- Fan speed auto control when loads varies
- Standard RS232 / USB communication port
- Standard emergency power off (EPO)
- Optional RS485 / SNMP / AS400 communication port
- Optional extension battery bank
- Optional battery temperature compensation
- Optional built-in isolation transformer
- Optional manual bypass
- Optional N+X redundancy parallel

Rear Panel

- | | |
|-------------|------------------------------|
| 1. AC Input | 7. EPO |
| 2. DC Input | 8. Manual Bypass (optional) |
| 3. Outlet | 9. SNMP/AS400 (optional) |
| 4. Fan | 10. Breaker |
| 5. RS232 | 11. Parallel Card (optional) |
| 6. USB | 12. BAT_NTC (optional) |



6/10KS

15/20KH

6/10KH

Online Transformerless UPS

Specifications

MODEL	OL-6000 (3:1) & EXT	OL-10000 (3:1) & EXT	OL-15000 (3:1) & EXT	OL-20000 (3:1) & EXT
Capacity	6 KVA / 5.4 KW	10 KVA / 9 KW	15 KVA / 13.5 KW	20 KVA / 18 KW
INPUT				
Rated voltage	3:1: 360 V / 365 V / 380 V / 400 V / 415 Vac; 1:1: 208 V / 210 V / 220 V / 230 V / 240 Vac (settable via LCD)			
Voltage range	3:1: half load (190 ~ 520) ± 5Vac, full load (277 ~ 520) ± 5 Vac; 1:1: half load (110 ~ 300) ± 5Vac, full load (160 ~ 300) ± 5 Vac.			
Frequency	40 ~ 70 Hz (auto-sense)			
Power factor	3:1 ≥ 0.95; 1:1 ≥ 0.99			
BYPASS				
Voltage range	160 V ~ rated output voltage +32 V			
Frequency	50 / 60 Hz ± 5 Hz			
OUTPUT				
Voltage	208 V / 210 V / 220 V / 230 V / 240 Vac (settable via LCD)			
Voltage regulation	± 1%			
Frequency	Synchronized with utility in mains mode; 50 / 60 ± 0.1 Hz in battery mode			
Waveform	Sinusoidal			
Crest factor	3:1			
Harmonic distortion	≤ 2% (linear load); ≤ 5% (non-linear load)			
Transfer time	0 ms			
Overload capability	105% ~ 125%: transfer to bypass in 3 mins; 125% ~ 150%: transfer to bypass in 30 s; > 150%: transfer to bypass in 100 ms			
EFFICIENCY				
Mains mode	≥ 93%			
Battery mode	≥ 92%			
ECO mode	≥ 98%			
BATTERIES				
DC voltage	192 V / 240 Vdc			
Inbuilt battery of standard model	16 / 20 × 7 Ah	16 / 20 × 9 Ah	No	
Charging current	Standard model	1 A		No
	Long time model	7 A		
Recharge time	8 h			
ALARMS				
Utility failure	4 s per beep			
Low battery	1 s per beep			
Overload	1 s twice beep			
UPS fault	Long beep			
COMMUNICATIONS				
RS232 / USB (standard)	Supports Windows® 98 / 2000 / 2003 / XP / Vista / 2008 / Windows® 7 / 8 / 10			
SNMP (optional)	Power management from SNMP manager and web browser			
OTHERS				
Humidity	20 ~ 90% RH @ 0 ~ 40°C (non-condensing)			
Noise level	≤ 58 dB (1m)			≤ 60 dB (1m)
Dimensions (W × D × H) (mm)	262 × 580 × 455 (H), 262 × 580 × 732 (S)		262 × 580 × 628 (H)	
Packaged dimensions (W × D × H) (mm)	355 × 682 × 615 (H), 359 × 687 × 937 (S)		359 × 687 × 832 (H)	
Net weight (kg)	25.0 (H), 73.0 (S)	25.5 (H), 74.0 (S)	38.5 (H)	39.0 (H)
Gross weight (kg)	28.5 (H), 82.5 (S)	29.0 (H), 83.5 (S)	47.0 (H)	47.5 (H)

- Derate capacity to 70% in CUCF mode and to 90% when the output voltage is adjusted to 208Vac.
- 3:1 means three-phase input and single-phase output mode; 1:1 means single-phase input and single-phase output mode.
- S means standard model, H means long time model.

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

ONLINE (3:3)

10KVA ~ 30KVA (3:3)
PF 0.9



Features

- High frequency and true online double-conversion
- DSP digital control technology
- Input power factor correction (PFC)
- Wide input voltage range (190V ~ 485V)
- Output power factor 0.9
- Excellent load-carrying capability, linear derating between 50% and 100% load at 190 ~ 277 Vac
- Optimized battery configuration: 192V / 216V / 240V
- Cold start
- Auto sensing frequency
- ECO mode operation for energy saving
- 50 / 60Hz frequency conversion mode
- Selectable output voltage via LCD
- Selectable battery shutdown voltage (EOD) via LCD
- Power-on self test
- Advanced battery management (ABM)
- Short circuit and overload protection
- Automatic charging in OFF mode
- Auto control fan speed when loads varies
- Dual input
- Advanced quick charge technology, charging speed is increased double
- Configurable transfer time from battery to mains power, reducing the impact on grid or generator
- Automatic startup / shutdown function (optional), automatic transfer to bypass at light load, automatic restart at acting load; energy-saving and environment-friendly
- Standard RS232 / USB communication port
- Standard emergency power off (EPO)
- Standard maintenance bypass
- Optional extension battery bank
- Optional RS485 / SNMP / AS400 communication port
- Optional N+X redundancy parallel up to 6 units
- Optional battery temperature compensation

Rear Panel

1. Mains Input
2. DC Input
3. Bypass Input
4. Output
5. Mains Input Breaker
6. Bypass Input Breaker
7. Maintenance Bypass
8. Fan
9. RS232
10. USB
11. EPO
12. Battery Temperature Compensation (Optional)
13. Intelligent Slot 1 (SNMP / AS400 / RS485 Optional)
14. Intelligent Slot 2 (SNMP / AS400 / RS485 Optional)
15. Parallel Card (optional)
16. Battery Breaker



Online Transformerless UPS

Specifications

MODEL	OL-10000 (3/3) & EXT	OL-15000 (3/3) & EXT	OL-20000 (3/3) & EXT	OL-30000 (3/3) & EXT
Capacity	10 kVA / 9 kW	15 kVA / 13.5 kW	20 kVA / 18 kW	30 kVA / 27 kW
INPUT				
Rated voltage	360 V / 380 V / 400 V / 415 Vac			
Voltage range	277 ~ 485 Vac (no derating) 190 ~ 277 Vac (linear derating between 50% and 100% load)			
Rated frequency	50 / 60 Hz (auto-sense)			
Frequency range	40 ~ 70 Hz			
Power factor	≥ 0.99			
Total harmonic distortion (THDI)	≤ 5%			
Bypass voltage range	-40% ~ + 15% (settable)			
OUTPUT				
Voltage	360 V / 380 V / 400 V / 415 Vac (settable)			
Voltage regulation	± 1%			
Frequency	Synchronized with utility in mains mode; 50 / 60 ± 0.1 Hz in battery mode			
Waveform	Sinusoidal			
Crest factor	3:1			
Total harmonic distortion (THDV)	≤ 2% (linear load); ≤ 5% (non-linear load)			
Transfer time	Mains mode to battery mode: 0 ms; Inverter mode to bypass mode: 0 ms			
Inverter overload capability	102% ~ 125%: transfer to bypass in 10 mins; 125% ~ 150%: transfer to bypass in 1 min; > 150%: transfer to bypass in 0.5 s			
Bypass overload capability	102% ~ 125%: shut down in 20 mins; 125% ~ 150%: shut down in 2 mins; > 150%: shut down in 1 s			
BATTERIES				
DC voltage	Standard model: 240 VDC; Long time model: 192 VDC (192V / 216V / 240V optional)			
Inbuilt battery of standard model	20 × 7 Ah	40 × 7 Ah	40 × 9 Ah	60 × 9 Ah
Typical recharge time	Standard model: 4 hours; Long time model: depend on the capacity of battery			
SYSTEM				
Efficiency	≥ 93%, ECO mode 98%			
Display	LCD + LED			
Alarm	Battery mode, low battery, fans fault etc.			
Max. parallel numbers	6			
EMI	IEC / EN62040-2			
EMS	IEC61000-4-2 (ESD)			
	IEC61000-4-3 (RS)			
	IEC61000-4-4 (EFT)			
	IEC61000-4-5 (surge)			
COMMUNICATIONS				
RS232 / RS485 / USB / dry contacts	Supports Windows® 98 / 2000 / 2003 / XP / Vista / 2008 / 7 / 8 / 10			
SNMP (optional)	Power management from SNMP manager and web browser			
OTHERS				
Humidity	20 ~ 90% RH @ 0 ~ 40°C (non-condensing)			
Noise level	≤ 60 dB (1m)	≤ 65 dB (1m)		
Dimensions (W × D × H) (mm)	350 × 655 × 732 (H)			
	350 × 785 × 858 (S)	350 × 785 × 1078 (S)		
Packaged dimensions (W × D × H) (mm)	472 × 780 × 920 (H)			
	472 × 910 × 1050 (S)	472 × 910 × 1260 (S)		
Net weight (kg)	55 (H), 115 (S)	60 (H), 155 (S)	61 (H), 175 (S)	65 (H), 235 (S)
Gross weight (kg)	65 (H), 125 (S)	70 (H), 170 (S)	71 (H), 190 (S)	75 (H), 250 (S)

● Derate capacity to 90% when the output voltage is adjusted to 360Vac.
● S means standard model, H means long time model.

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

ONLINE T.B

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



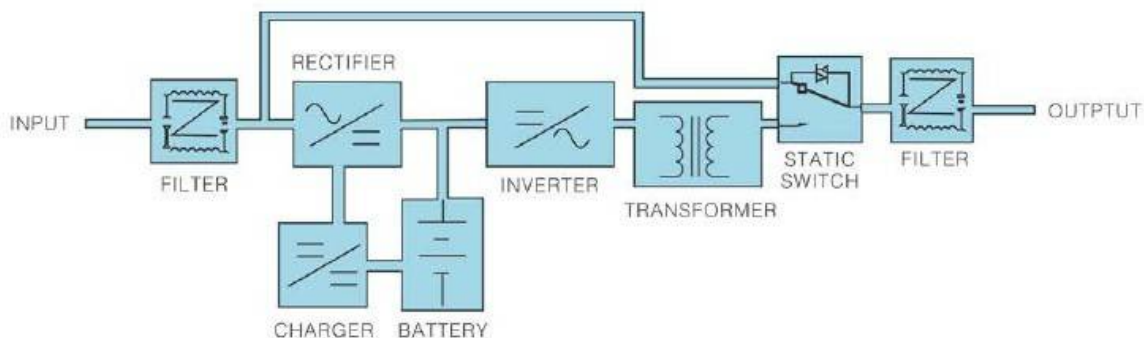
Features

- 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
- Supports dual input, hot standby in series
- Redundant & paralleleable with advanced parallel current-sharing control technology
- 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)
- Standard configuration with output isolation transformer
- Superior protection (surgers, short-circuit, overvoltages, undervoltages, overcharge, reverse connection 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
5. SNMP (optional)
6. Fan
7. Breaker
8. Terminal



Online Transformer Base UPS

Specifications

MODEL	OL-6000 TB (1/1) & EXT	OL-10000 TB (1/1) & EXT	OL-10000 TB (3/1) & EXT	OL-15000 TB (3/1) & EXT	OL-20000 TB (3/1) & EXT	OL-30000 TB (3/1) & EXT
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						
Nominal voltage	220 / 230 / 240 Vac single-phase		380 / 400 / 415 Vac three-phase +N			
Voltage range	165 ~ 275 Vac		285 ~ 475 Vac			
Rated frequency	50 Hz / 60 Hz					
Frequency range	40 ~ 70 Hz					
Frequency tracking range	± 5% Hz					
BYPASS						
Nominal voltage	220 / 230 / 240 Vac single-phase					
Overload capability	Load current < 150% rated current; long time running 150% ≤ load current < 200%: 1 min 200% rated current ≤ load current: 200 ms					
BATTERIES						
Battery voltage	192 Vdc					
Battery type	VRLA AGM maintenance-free lead based					
Number of battery	12 V × 16 pcs					
Charging voltage	220 Vdc					
EOD	168 Vdc					
Charging current	Default 8 A (2 A / 4 A / 6 A / 8 A / 10 A / 12 A selectable)					
OUTPUT						
Nominal voltage	220 / 230 / 240 Vac single-phase					
Power factor	0.8					
Waveform	Sinusoidal					
Rated frequency	50 Hz / 60 Hz (settable)					
Frequency precision	Mains mode: track bypass input in the state of synchronization Battery mode: 50 / 60 ± 0.1 Hz					
Voltage precision	± 1%					
Recovery time of transient voltage	< 20 ms					
Crest factor	3:1					
THDV	≤ 3% (linear load); ≤ 6% (non-linear load)					
Overload capability	Load ≤ 105%: long time running ; 105% < load ≤ 125%: transfer to bypass in 10 mins ; 125% < load ≤ 150%: transfer to bypass in 1 min 150% < load ≤ 200%: transfer to bypass in 200 ms 200% < load: transfer to bypass in 100 ms					
OTHERS						
Transfer time	0 ms					
Protections	Short-circuit – overload – overvoltage – undervoltage – low battery – overtemperature					
Communications	RS232 / USB (standard); RS485 / SNMP / dry contacts (optional)					
Operating temperature	0 ~ 40°C					
Storage temperature	-25°C ~ 55°C (without batteries);					
Relative humidity	0 ~ 95% (non-condensing)					
Operating altitude	≤ 1000 m (derating 1% for each additional 100 m)					
Noise level	< 60 dB (at 1 m)					
MTBF	MTBF > 200000 h					
MTTR	MTTR < 0.5 h					
IP rating	IP20					
Dimensions (W × D × H) (mm)	210 × 585 × 590	310 × 600 × 880		400 × 815 × 1100		
Net weight (kg)	54	96	130	201	230	277
Gross weight (kg)	64	108	142	216	245	292

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

ONLINE T.B

10KVA ~ 120KVA (3:3)
PF 0.9



EA890 series UPS is a intelligent 3 phase in 3 phase out uninterruptible power supply, it adopts double transform high frequency PWM and high performance digital control technique (DSP), with perfect protection, super network management function, reasonable man-machine interface and a series of precision design, meets all high reliability requirements of uninterruptible power supply and integrates reliable, safety, maintainability characteristics of a new generation low frequency UPS.

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
- 5.7 inches LCD touch screen, friendly human & machine interface
- Front access makes maintenance and replacement easy (40 ~ 120KVA)
- Intelligent self-diagnosing function, all kinds of failure protection, large capability of history records storage
- High MTBF (>200,000h)
- Low MTTR (<0.5h)
- 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

Online Transformer Base UPS

Specifications

MODEL	OL-1000 TB (3/3) & EXT	OL-1500 TB (3/3) & EXT	OL-2000 TB (3/3) & EXT	OL-3000 TB (3/3) & EXT	OL-4000 TB (3/3) & EXT	OL-6000 TB (3/3) & EXT	OL-8000 TB (3/3) & EXT	OL-10000 TB (3/3) & EXT	OL-12000 TB (3/3) & EXT
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									
Rated voltage	380 V / 400 V / 415 Vac								
Voltage range	± 25%								
Rated frequency	50 / 60 Hz								
Frequency range	50 / 60 Hz ± 5 Hz								
Power factor	≥ 0.95 (with filter)								
Bypass voltage range	± 20%								
Delayed start of rectifier	1 ~ 300 s (settable via display panel)								
ECO voltage range	± 10% (settable)								
OUTPUT									
Voltage	380 V / 400 V / 415 Vac								
Voltage regulation	± 1%								
Frequency	Synchronized with utility in mains mode; 50 / 60 Hz ± 0.1% in battery mode								
Waveform	Sinusoidal								
Power factor	0.9								
Crest factor	3:1								
Total harmonic distortion (THDV)	≤ 2% (linear load); ≤ 5% (non-linear load)								
Transfer time	AC mode to battery mode: 0 ms Inverter mode to bypass mode: 0 ms Inverter mode to ECO mode: 5 ~ 10 ms								
Inverter overload capability	105%: long time running; 105% ~ 110%: transfer to bypass in 1 h 110% ~ 125%: transfer to bypass in 10 mins 125% ~ 150%: transfer to bypass in 1 min 150% ~ 200%: transfer to bypass in 200 ms > 200%: transfer to bypass in 100 ms								
Slight adjustment of inverter output voltage	± 5 V								
BATTERIES									
DC Voltage	12 V x configured battery number (settable via display panel)								
Number of battery	28 ~ 32 pcs (settable)								
Charging	Three-stage charging, auto switch floating / equalizing charge								
Battery state display	Display battery backup time, battery remaining capacity								
Battery self-test	Settable periodic self-test; manually configurable test time and voltage								
SYSTEM									
Efficiency	In line mode: Max. 93%; ECO mode: ≥ 98%								
Max. Parallel numbers	6								
Protections	Short-circuit – overload – overvoltage – undervoltage – low battery – overtemperature – fan fault								
IP rating	IP20								
EMI	EN62040-2								
EMS	IEC61000-4-2 (ESD) IEC61000-4-3 (RS) IEC61000-4-4 (EFT) IEC61000-4-5 (surge)								
COMMUNICATIONS									
RS232 / RS485 / dry contacts (standard)	Supports Windows® 98 / 2000 / 2003 / XP / Vista / 2008 / Windows® 7 / 8 / 10								
SNMP (optional)	Power management from SNMP manager and web browser								
OTHERS									
Humidity	0~95% RH @ 0~40°C (non-condensing)								
Noise level	55 dB			60 dB			65 dB		
Dimensions (W x D x H) (mm)	400 x 800 x 1100			600 x 700 x 1500			700 x 800 x 1700		
Packaged dimensions (W x D x H) (mm)	490 x 890 x 1170			690 x 790 x 1570			790 x 890 x 1770		
Net / Gross weight (kg)	158 / 200	165 / 207	175 / 217	210 / 252	260 / 302	460 / 480	590 / 620	630 / 660	690 / 720

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

STABILIZER (AVR)

500VA ~ 5000VA



500VA ~ 1000VA

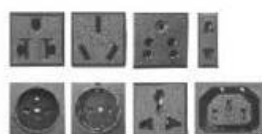


500VA ~ 5000VA

AVR series AC automatic regulators apply the advanced control technology with well qualified components. It has the features of wide input voltage compatibility, high reliability, output voltage stabilizing, energy saving etc.; it has over voltage and low voltage protection and delayed output protection etc., it could supply stabilized power to lights, TVs, air-conditioners, refrigerator, computers and duplicating machines and other household equipment in schools, offices, hotels, meeting rooms where the stabilized voltage is needed.

Features

- Classic series, EI transformer, relay type
- Input and output voltage LED / Meter / LCD display
- High temperature protection
- Circuit breaker protection
- Efficiency: 98%



Optional sockets



Rear Panel

1. AC Input
2. Output
3. Fuse
4. ON/OFF