

## ONYX



### LCD Display Panel



#### • True double-conversion

A true double conversion UPS will provide clean, high level quality power to fully protect mission-critical devices such as sensitive networks, small computer centers, servers, telecom applications, as well as for industrial applications.

#### • Output power factor 0.8

Compared to the online UPSs in the current market, ONYX series provides better output power factor up to 0.8. It offers higher performance and efficiency for critical applications.

#### • Wide input voltage range (110 V -300 V)

ONYX can still provide stable power to connected devices under unstable power environments.

#### • Programmable power management outlets

With programmable power management outlets, users can easily and independently control load segments. During power failure, this feature enables users to extend battery time to mission-critical devices by shutting down the non-critical devices.



Programmable Outlets (P1)  
- connect to non-critical devices

#### • 50/60 Hz Frequency Converter Mode

Lock output frequency at 50Hz or 60Hz to suit power sensitive equipments.

#### • ECO mode operation for energy saving

Offers efficiency as high as 97% to cut energy usage & cost. UPS power application via static bypass, timely returning to online double conversion when the need arises.

#### • Emergency Power Off (EPO) Function

This feature can secure the personnel and equipment in case of fires or other emergencies.

#### • SNMP+USB+RS-232 multiple communications

This feature allows either USB or RS-232 communication port to work with SNMP interface simultaneously.

#### • Smart battery charger design to optimize battery performance

- ONYX 1-3K series is equipped with **2-stage charger design** to guarantee battery discharge time. Besides, it will adjust charging voltage according to outside temperature. This features will extend the useful service life of batteries.
- ONYX 6K and up models are equipped with **3-stage extendable charger** for optimized battery performance. This feature extends the useful service life of batteries and optimizes battery performance. Besides, the extendable charger design can be stacked in numbers for large-capacity battery charging.

#### • Maintenance bypass available for 6K and up models

Internal bypass assures continuous power to critical devices during UPS maintenance.

#### • N+X parallel redundancy available for 6K and up models

ONYX (6K and up models) can be used in parallel operation with up to 3 units. It increases power capacity, safety, and availability.

#### • Adjustable battery numbers for 6K and up models

ONYX (6K and up models) can still normal operate well with only 18 or 19 internal batteries.

#### • Rackmount form factor available

ONYX series offers rackmount form factor for space consideration. It's ideal backup power protection solution for servers, storage systems, network equipment and other critical devices.

#### • Active Power Factor Correction in all phases for 3 phase in/1 phase out 10KVA to 20KVA

Active PFC improves power quality and increase the energy efficiency.

### External Maintenance Bypass Switch



### Remote Control & Monitoring Agent



- \* Ultra-compact, light and fast tool to remotely monitor and manage any UPS system
- \* Supports multiple languages and web-based auto language detection.

## ONYX 1K/1.5K/2K/3K/6K/10K ONLINE UPS SELECTION GUIDE

MODEL	ONYX 1K (L)	ONYX 1.5K (L)	ONYX 2K (L)	ONYX 3K (L)	ONYX 6K (L)	ONYX 10K (L)	ONYX 3/1-10K (L)	ONYX 3/1-20K (L)	
Phase	Single phase in/Single phase out						3 phase in / 1 phase out		
CAPACITY	1000 VA/600 W	1500 VA/1200 W	2000 VA/1600 W	3000 VA/2400 W	6000 VA/4800 W	10000 VA/8000 W	10000 VA/8000 W	20000 VA/16000 W	
<b>INPUT</b>									
Voltage Range	Low Line Transfer	160 VAC / 140 VAC / 120 VAC / 110 VAC ± 5 % 80 VAC / 70 VAC / 60 VAC / 50 VAC ± 5 % (based on load percentage 100% - 80% / 80% - 70% / 70% - 60% / 60% - 0)			176 VAC @ 100% load 110 VAC @ 50% load		176 VAC (phase voltage) @ 100% load 110 VAC (phase voltage) @ 50% load		
	Low Line Comeback	175 VAC ± 5 % or 85 VAC ± 5 %			186 VAC @ 100% load 120 VAC @ 50% load		186 VAC (phase voltage) @ 100% load 120 VAC (phase voltage) @ 50% load		
	High Line Transfer	300 VAC ± 5 % or 150 VAC ± 5 %			300 VAC		300 VAC (phase voltage)		
	High Line Comeback	290 VAC ± 5 % or 145 VAC ± 5 %			290 VAC		290 VAC (phase voltage)		
Frequency Range	47.5Hz ~ 52.5 Hz or 57Hz ~ 63 Hz			46-54Hz @ 50Hz / 56-64Hz @ 60Hz		46-54Hz @ 50Hz / 56-64Hz @ 60Hz			
Phase	Single phase with ground						3-phase with neutral and ground		
Power Factor	0.95			0.99 @ 100%load		0.99 @ 100%load			
<b>OUTPUT</b>									
AC Voltage Regulation (Batt. Mode)	± 3%			± 1%		± 1%			
Frequency Range (Synchronized Range)	48 ~ 52 Hz or 57 ~ 63 Hz			46-54Hz @ 50Hz / 56-64Hz @ 60Hz		46-54Hz @ 50Hz / 56-64Hz @ 60Hz			
Frequency Range (Batt. Mode)	50 Hz ± 0.25 Hz or 60Hz ± 0.3 Hz			50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz		50 / 60Hz ± 0.1 Hz			
Current Crest Ratio	3:1			3:1		3:1			
Harmonic Distortion	3% THD (Linear Load) 6% THD (Non-linear Load)		4% THD (Linear Load) 7% THD (Non-linear Load)		2% THD (Linear Load) 6% THD (Linear Load)		2% THD (Linear Load) 6% THD (Linear Load)		
Transfer Time	AC Mode to Batt. Mode	Zero						Zero	
	Inverter to Bypass	4 ms (Typical)			Zero		Zero		
Waveform (Batt. Mode)	Pure sine wave								
<b>EFFICIENCY</b>									
AC Mode	85%		88%		90%		90%		
Battery Mode	83%		88%		88%		88%		
<b>BATTERY</b>									
Standard Model	Battery Type	12 V / 7 AH	12 V / 9 AH	12 V / 7 AH	12 V / 9 AH	12 V / 7 AH	12 V / 9 AH	12 V / 9 AH	
	Numbers	3	3	6	6	20	20	40	
	Typical Recharge Time	4 hours recover to 90% capacity				7 hours recover to 90% capacity	8 hours recover to 90% capacity	8 hours recover to 90% capacity	
	Charging Current (max.)	1.0 A			1.0 A		1A	2A	
	Charging Voltage	41.0 VDC ± 1%		82.1 VDC ± 1%		273.0 VDC		273.0 VDC	
Long-run Model	Battery Type	Depending on the capacity of external batteries							
	Numbers								
	Charging Current (max.)	8.0 A			4.0 A		4A	8A	
	Charging Voltage	41.0 VDC ± 1%		82.1 VDC ± 1%		273.0 VDC		273.0 VDC	
<b>INDICATORS</b>									
LCD Display	UPS status, Load level, Battery level, Input/Output voltage, Discharge timer, and Fault conditions								
<b>ALARM</b>									
Battery Mode	Sounding every 4 seconds								
Low Battery	Sounding every second								
Overload	Sounding twice every second								
Fault	Continuously sounding								
<b>PHYSICAL</b>									
Standard Model	Dimension, DXWXH (mm)	397 x 145 x 220		421 x 190 x 318		592 x 250 x 576		592 x 250 x 576	
	Net Weight (kgs)	13.18		28.1		81	83	83	
Long-run Model	Dimension, DXWXH (mm)	397 x 145 x 220		421 x 190 x 318		592 x 250 x 576		592 x 250 x 576	
	Net Weight (kgs)	6.86		12.93		22	24	24	
<b>ENVIRONMENT</b>									
Operation Humidity	20-90 % RH @ 0- 40°C (non-condensing)								
Noise Level	Less than 45dBA @ 1 Meter				Less than 55dB @ 1 Meter				
<b>MANAGEMENT</b>									
Smart RS-232	Supports Windows® family, Novell, Linux and FreeBSD								
USB									
Optional SNMP	Power management from SNMP manager and web browser								

\* L means long-run model