

# DIAMOND SERIES UPS

(10-40kVA)



*True On-line Double Conversion Diamond Plus UPS Series has been designed to backup various applications. Small datacenters, Medical Lab equipment, light industrial facilities all require rugged UPS equipment.*

## Engineered to support demanding applications

- **Available sizes**

10, 15, 20, 30 and 40kVA models available

- **Small Footprint**

The 10/15/20kVA Diamond Series UPS units have one of the smallest footprints in the industry. Just 9.8" wide (10kVA), and 12" wide (15/20kVA) allows for the Diamond Series UPS units to fit into small locations where space is a premium. Additionally the 30/40kVA is only 23.4" wide which also allows for these units to fit into small locations.

- **Power Factor 1:1**

For critical applications, this 3-phase online UPS has an output power factor of 1.0. This ensures higher kW output with its advanced IGBT performance.

- **Conformal Coated Boards**

Conformal coated boards protects the Diamond Series units to be used in "Light Industrial" applications. Boards that are conformal coated include the Main PCB, Bypass, Charger, Parallel and Joint boards.

- **Warranty**

Three (3) year warranty on the electronics, and batteries. For additional warranty options please call factory.

- **Redundant Type UPS**

The system can be operated as a Redundant type UPS system. Output of UPS #1 is connected to Bypass of UPS #2 to ensure high reliability.

- **Powerful Charger Capabilities**

Diamond series is built-in powerful charger to support long runtime applications when connecting to big capacity of external battery cabinet.

- **Internal Maintenance Bypass (MBS)**

The Internal Maintenance Bypass (make before break) is a source for continued power to the load while servicing or changing out batteries.

- **Power walk-in function**

The Diamond Series is designed to have flexible power walk-in by way of adjusting the power walk-in time. This setting will optimize generator sizing and reduce the impact to the AC source by having different walk-in time

- **Back-Feed Relays**

The Diamond Series is designed with back-feed relays internal to UPS to avoid electrical feedback.

- **TAA Compliant**

All units comply with the Trade Agreement Act (TAA), 19 U.S.C ~ 2501.2581

## Specifications:

MODEL		10K(L)	15K(L)	20K(L)	30KL	40KL
<b>CAPACITY*</b>		10kVA / 10kW	15kVA / 15kW	20kVA / 20kW	30kVA/30kW	40kVA/40kW
<b>INPUT</b>						
Input Voltage - (Range)		208VAC - (+30%, -17%)				
Input (THD) <sub>i</sub>		1% - 100% Load, 2% - 50% Load				
Frequency Range		46Hz ~ 64 Hz				
Phase		3 Phase with Neutral				
Power Factor		≥ 0.99 at 100% Load				
<b>Battery Backup (Internal to UPS)</b>						
Battery Backup Times (100% Load)		3 minutes	5 minutes	6 minutes	5 minutes	5 minutes
<b>OUTPUT</b>						
Phase		3 Phase with Neutral				
Output Voltage		3 x 208/220 VAC (Ph-Ph), 3 x 120/127 VAC (Ph-N)				
AC Voltage Regulation		± 1%				
Frequency Range (Sync Range)		50/60Hz				
Overload	AC Mode	100%~110%: 1 hour; 110%~130%: 1min; >130% : 1sec				
	Battery Mode	100%~110%: 30sec; 110%~130%: 10sec; >130% : 1sec				
Current Crest Ratio		3:1 max				
Harmonic Distortion		≅ 2 % @ 100% Linear Load; ≅ 4 % @ 100% Non-linear Load (PF≥0.8)				
Transfer Time	Line↔ Battery	0 ms				
	Inverter↔ Bypass	0 ms (When phase lock fails, <4ms interruption occurs from inverter to bypass)				
<b>EFFICIENCY</b>						
AC Mode		94%				
Battery Mode		93.5%				
ECO Mode		97%				
<b>BATTERY</b>						
<b>PHYSICAL</b>						
Standard Model	Dimension, W x D x H (In.)	9.8" x 27" x 33"	12" x 34" x 40"		23.4"x 35.8" x 64.9"	
	Net Weight (lbs)	209	398	508	1,036 lbs	1,180 lbs
Shipping Information	Dimensions, W x D x H (In.)	15" x 31.9" x 49.6"	17.1" x 37.8" x 49.6"	17.1" x 37.8" x 49.6"	28" x 40.8" x 74.9"	28" x 40.8" x 74.9"
	Net Weight (lbs)	242 lbs	448 lbs	558 lbs	1,086 lbs	1,210 lbs
External Batt. Cabinets	TBA	Optional	Optional		Optional	
<b>ENVIRONMENT</b>						
Operation Temperature		0 ~ 40°C (the battery life will decrease when > 25°C)				
Operation Humidity		<95 % and non-condensing				
Operation Altitude ft/(m)		3,300 ft., (1000)				
Acoustic Noise Level		Less than 54dB @ 1 Meter	Less than 54dB @ 1 Meter	Less than 54dB @ 1 Meter	Less than 70dB @ 1 Meter	Less than 75dB @ 1 Meter
<b>MANAGEMENT</b>						
Smart RS-232 or USB		Supports Windows® 2000/2003/XP/Vista/2008/7/8/10, Linux, Unix, and MAC				
MODBUS		Supports MODBUS for Industrial Applications				
Optional SNMP		Power management from SNMP manager and web browser				
<b>APPROVAL AGENCIES</b>						
All Agency Approvals		UL1778 (5 <sup>th</sup> Edition), cUL, CSAc 22.2				
		IEC 62040-1 UPS Standards				
		EMI Compatibility: FCC Title 47, Part 15, Subpart B				
		Seismic/OSHPD (2022)				

For any additional information please contact the factory at [sales@360powerquality.com](mailto:sales@360powerquality.com) or 1-630-318-0839