

# Durable Series

**DS10KD33 / DS15KD33 /  
DS20KD33 / DS30KD33 /  
DS40KD33 / DS50KD33 /  
DS60KD33 / DS80KD33 /  
DS100KD33 / DS120KD33 /  
DS160KD33 / DS200KD33 /  
DS240KD33 / DS300KD33 /  
DS320KD33 / DS400KD33 /  
DS500KD33**



\* DSD33

## Features

- True galvanic isolation design ensures that such serious AC mains problems as noise, lightning effects or leakage current do not reach your systems.
- Protection from the accidental disconnection of the neutral wire ensures the safety of the UPS and the stability of the power supply.
- Protection from incorrect operation ensures that violating the operation procedures will not lead to UPS or connected equipment damage.
- The use of up-to-date DSP, IGBT and switching components ensures the high reliability and efficiency of the UPS.
- Multi-CPU design increases the system reliability.
- Plug-and-play design and easy access to boards ensures the fastest and easiest UPS maintenance.
- Individual inverter for each phase ensures stable work under completely unbalanced load.
- Intelligent charger with temperature compensation feature ensures the longest possible battery life. The adjustable level of charging current allows the UPS to work with large battery banks for long backup time.
- Intelligent battery test logics eliminate the possibility of power supply interruption during battery test in case of batteries being bad. Provides the detection of battery electrolyte leakage and improper battery grounding.
- Intelligent fan speed control increases the fan life expectancy and reduces the audible noise.
- Advanced heat abstraction design by physical separation of the power and control circuitry ensures the smooth operation of the UPS under most harsh conditions.
- Cold start function makes it possible to start the UPS even when AC mains are not providing the power.
- 12-pulse rectifier ensures reduced harmonics for UPS with capacities of 80KVA and higher.
- Input harmonic filter reduces the Total Harmonic Distortion (T.H.D.) of the UPS.
- Parallel operation makes it possible to upgrade the UPS to a larger capacity.

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 DS50KD33 / DS60KD33 / DS80KD33 / DS100KD33

## Specifications

Model Name	DS10KD33	DS15KD33	DS20KD33	DS30KD33	DS40KD33	DS50KD33	DS60KD33	DS80KD33	DS100KD33	
Topology	True On-Line, Double Conversion									
On-battery output Waveform	Pure Sine Wave									
Maximum Capacity	10KVA / 8KW	15KVA / 12KW	20KVA / 16KW	30KVA / 24KW	40KVA / 32KW	50KVA / 40KW	60KVA / 48KW	80KVA / 64KW	100KVA / 80KW	
<b>INPUT</b>										
Nominal Input Voltage	380 / 400 / 415Vac									
Input Phase and Wire	3 Phase 4 Wire and ground									
Nominal Input Frequency	50 / 60 Hz $\pm$ 7%									
Input Voltage Range	Rated Voltage $\pm$ 20%									
Rectification Pulse	6 pulses or 12 pulses (optional)									
<b>OUTPUT</b>										
Output Voltage	380 / 400 / 415Vac									
Output Phase and Wire	3 Phase 4 Wire and ground									
Nominal Output Frequency	50Hz / 60Hz									
Frequency Lock Range	$\pm$ 5 Hz									
THD (Linear Load)	< 5 %									
Output Voltage Regulation	Rated Voltage $\pm$ 1%									
Transfer Time (Typical)	0 ms									
Start on battery	Yes									
Auto Restart	Yes									
<b>STATIC SWITCH</b>										
Operation	UPS bypasses as the inverter and the utility are synchronized									
Efficiency	99.50%									
<b>CHARGER</b>										
Voltage	397V									
Current	1A	1.5A	2A	3A	4A	5A	6A	8A	10A	
Charge Time to 90% (Typical)	<4 Hours									
<b>BATTERY</b>										
Configuration	Battery Pack with 12V $\times$ 29 pcs									
Backup time	Depends on overall battery capacity									
<b>PROTECTIONS</b>										
Overload Protection	UPS shuts down at 110% load after 15 mins, at 135% load after 10 mins or 150% load after 30 secs									
Over Current Protection	Circuit breaker									
<b>ENVIRONMENTAL</b>										
Operation Temperature	0~40°C / 32~104°F									
Storage Temperature	-25~55°C / -13~130°F									
Ambient operation	0 - 95% Non condensing									
Audible Noise	< 60 dBA							< 67 dBA		
<b>PHYSICAL</b>										
Dimensions	Physical / Packing (in)	31.5 $\times$ 21.7 $\times$ 63 / 37.4 $\times$ 27.6 $\times$ 73.6							31.5 $\times$ 43.3 $\times$ 63 / 37.4 $\times$ 49.2 $\times$ 73.6	
	L $\times$ W $\times$ H (mm)	800 $\times$ 550 $\times$ 1600 / 950 $\times$ 700 $\times$ 1870							800 $\times$ 1100 $\times$ 1600 / 950 $\times$ 1250 $\times$ 1870	
Weight (Net / Gross)	(lbs)	661 / 738	793 / 870	881 / 958	1035 / 1112	1145 / 1222	1233 / 1311	1388 / 1465	2159 / 2280	2841 / 2963
	(kg)	300 / 335	360 / 395	400 / 435	470 / 505	520 / 555	560 / 595	630 / 665	980 / 1035	1290 / 1345

Specifications are subject to change without notice.

# Durable Series

**DS120KD33 / DS160KD33 / DS200KD33 / DS240KD33 /  
DS300KD33 / DS320KD33 / DS400KD33 / DS500KD33**

## Specifications

Model Name	DS120KD33	DS160KD33	DS200KD33	DS240KD33	DS300KD33	DS320KD33	DS400KD33	DS500KD33
<b>Topology</b>	True On-Line, Double Conversion							
<b>On-battery output Waveform</b>	Pure Sine Wave							
<b>Maximum Capacity</b>	120KVA / 96KW	160KVA / 128KW	200KVA / 160KW	240KVA / 192KW	300KVA / 240KW	320KVA / 256KW	400KVA / 320KW	500KVA / 400KW
<b>INPUT</b>								
<b>Nominal Input Voltage</b>	380 / 400 / 415Vac							
<b>Input Phase and Wire</b>	3 Phase 4 Wire and ground							
<b>Nominal Input Frequency</b>	50 / 60 Hz ± 7%							
<b>Input Voltage Range</b>	Rated Voltage ± 20%							
<b>Rectification Pulse</b>	6 pulses or 12 pulses (optional)							
<b>OUTPUT</b>								
<b>Output Voltage</b>	380 / 400 / 415Vac							
<b>Output Phase and Wire</b>	3 Phase 4 Wire and ground							
<b>Nominal Output Frequency</b>	50Hz / 60Hz							
<b>Frequency Lock Range</b>	±5 Hz							
<b>THD (Linear Load)</b>	< 5 %							
<b>Output Voltage Regulation</b>	Rated Voltage ± 1%							
<b>Transfer Time (Typical)</b>	0 ms							
<b>Start on battery</b>	Yes							
<b>Auto Restart</b>	Yes							
<b>STATIC SWITCH</b>								
<b>Operation</b>	UPS bypasses as the inverter and the utility are synchronized							
<b>Efficiency</b>	99.50%							
<b>CHARGER</b>								
<b>Voltage</b>	397V							
<b>Current</b>	12A	16A	20A	24A	30A	32A	40A	50A
<b>Charge Time to 90% (Typical)</b>	<4 Hours							
<b>BATTERY</b>								
<b>Configuration</b>	Battery Pack with 12V×29 pcs							
<b>Backup time</b>	Depends on overall battery capacity							
<b>PROTECTIONS</b>								
<b>Overload Protection</b>	UPS shuts down at 110% load after 15 mins, at 135% load after 10 mins or 150% load after 30 secs							
<b>Over Current Protection</b>	Circuit breaker							
<b>ENVIRONMENTAL</b>								
<b>Operation Temperature</b>	0~40°C / 32~104°F							
<b>Storage Temperature</b>	-25~55°C / -13~130°F							
<b>Ambient operation</b>	0 - 95% Non condensing							
<b>Audible Noise</b>	< 67 dBA		< 70 dBA				< 80 dBA	
<b>PHYSICAL</b>								
<b>Dimensions</b>	<b>Physical / Packing (in)</b>	31.5×43.3×63 / 37.4×49.2×73.6		31.5×86.6×63 / 37.4×98.4×73.6			31.5×130×63 / 37.4×147.6×73.6	31.5×173.2×63 / 37.4×196.9×73.6
	<b>L×W×H (mm)</b>	800×1100×1600 / 950×1250×1870		800×2200×1600 / 950×2500×1870			800×3300×1600 / 950×3750×1870	800×4400×1600 / 950×5000×1870
<b>Weight (Net / Gross)</b>	<b>(lbs)</b>	3040 / 3161	3568 / 3689	5396 / 5639	5771 / 6013	6520 / 6762	9394 / 9637	10771 / 11013
	<b>(kg)</b>	1380 / 1435	1620 / 1675	2450 / 2560	2620 / 2730	2960 / 3070	4265 / 4375	4890 / 5000

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## Battery Cabinet Design

The battery cabinet is designed with the same size and outlook as the UPS for convenience of installation when several cabinets of UPS and battery are aligned together. It can accommodate Lead Acid maintenance free batteries 12V×29 pcs (1 set) or 58 pcs (2 sets).

## Battery Cabinet Specifications

Cabinet Type	BP026A291S	BP026A292S	BP075A291S	BP088A291S	BP100A291S
Battery	12V 26AH×29 pcs×1set, total 29 pcs	12V 26AH×29 pcs×2 sets, total 58 pcs	12V 75AH×29 pcs×1 set, total 29 pcs	12V 88AH×29 pcs×1 set, total 29 pcs	12V 100AH×29 pcs×1 set, total 29 pcs
DC Voltage	348 VDC		348 VDC		
Cabinet Dimension (W×D×H)	550×800×1600mm		1100×800×1600mm		
Packing Dimension (W×D×H)	700×950×1870mm		1250×950×1870mm		
Empty Cabinet (Net / Gross Weight)	158 / 193 kg		250 / 305 kg		
With Battery (Net / Gross Weight)	410 / 445 kg	690 / 725 kg	1020 / 1075 kg	1130 / 1185 kg	1270 / 1325 kg

