

Transformerless Type High Frequency OnLine UPS

3 Phase in & 3 Phase out



DNK033 series



Main Features



- Pluggable power module design with front access to decrease MTTR, parallel redundancy capability for power guarantee
- Power walk-in function. Support parallel operation with common battery
- Dual-mains inputs
- Built-in 4 switches including Mains input, bypass input, output and maintenance bypass switch
- Flexible battery configuration and adjustable charging current
- Output power factor 0.9(10K-20K) ; Output power factor 1.0 (30-200K)
- Active power factor correction in all phases
- Built-in 7" touch LCD screen for comprehensive information
- Emergency power off function(EPO)
- Generator compatible
- 50Hz/60Hz frequency converter mode

Share common battery packs, up to 4 units can be run in parallel

7" touch LCD screen

- Color screen shows dynamic power flow
- Adjustable charge current via LCD panel



30-60K Appearance

Technical Parameter 100kVA-200kVA

MODEL	AKH-33-100K	AKH-33-120K	AKH-33-180K	AKH-33-200K
PHASE	3-phase in / 3-phase out			
CABINET CAPACITY	100KVA/100KW	120KVA/120KW	180KVA/180KW	200KVA/200KW
BATTERY TYPE	External Battery			
PARALLEL CAPABILITY	4			
INPUT				
Nominal Voltage	3 x 380/400/415 VAC (3Ph+N)			
Voltage Range	110-300 VAC @ 50% load ; 176-276 VAC @ 100% load			
Nominal Frequency	50/60Hz (Auto sensing)			
Frequency Range	40Hz ~70Hz			
Power Factor	≥ 0.99 @ 100% load			
Harmonic Distortion(THDi)	<4% at full load			
OUTPUT				
Nominal Voltage	3 x 380/400/415 VAC (3Ph+N)			
Voltage Regulation (Steady state)	≤±1% Typical (balanced load) ≤±2% Typical (unbalanced load)			
Nominal Frequency	50/60Hz			
Frequency Range (Synchronized range)	46Hz ~ 54Hz or 56Hz ~ 64Hz			
Overload Capability	≤110% for 1 hour, 111% ~ 125% for 10 mins, 126%~150% for 1 min and >150% for 200ms			
Harmonic Distortion	≤2%THD(Linear Load),≤4%THD(Non-linear Load)			
EFFICIENCY				
AC Mode	95.5%			
ECO Mode	98.5%			
Battery Mode	94.5%			
BYPASS				
Nominal Voltage	3 x 380/400/415 VAC (3Ph+N)			
Voltage Range	-30% ~ +20%			
Frequency Range	46Hz ~ 54Hz or 56Hz ~ 64Hz			
Overload Capability	≤ 110% for 1 hour, 111% ~ 125% for 10 mins, 126%~150% for 1 min and >150% for 200ms			
BATTERY / CHARGER				
Nominal Voltage	+/- 192V ~ +/- 240V(Selectable)			
Maximum Voltage	+/- 240V (12V x 40 Pcs)			
Minimum Voltage	+/- 192V (12V x 32 Pcs)			
Floating Charge Voltage	2.28V / Cell (2.25 ~2.33 Selectable)			
Boost Charging Voltag	2.35V/Cell			
Temperature Compensation	Yes			
Maximum Charging Current	24A (Adjustable)	36A (Adjustable)	54A(Adjustable)	54A (Adjustable)
PHYSICAL				
IP Protection	IP20			
Dimension, D x W x H (mm)	1000 x 430 x 1200	1000 x 430 x 1200	1000 x 600 x 1200	1000 x 600 x 1200
Net Weight (Kg)	200	200	265	265
ENVIRONMENT				
Operating Temperature	0-40°C			
Operating Humidity	< 95 % and non-condensing			
Altitude**	<1000m for Nominal power			
MANAGEMENT				
Smart RS-232/ USB	Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux and MAC			
Optional SNMP	Power management from SNMP manager and web browser			
STANDARDS				
Safety	IEC/EN 62040-1			
EMC	IEC/EN 62040-2 Category C3			

**If the UPS is installed or used in a placewhere the altitude is above than 1000m, the output power must be derated one percent per 100m.
Product specifications are subject to change without further notice.

Technical Parameter 10kVA-60kVA

MODEL		AKH-33-10K	AKH-33-15K	AKH-33-20K	AKH-33-30K	AKH-33-40K	AKH-33-60K
PHASE		3-phase in / 3-phase out					
CAPACITY		10KVA / 9KW	15KVA / 13.5KW	20KVA / 18KW	30KVA / 30KW	40KVA / 40KW	60KVA / 60KW
PARALLEL CAPABILITY		No			4		
INPUT							
Nominal Voltage		3x380VAC (3Ph+ N + PE)			3 x 360/380/400/415 VAC(3Ph+N)		
Voltage Range		190-520 VAC (3Ph) @ 50% load ; 305-478 VAC (3Ph) @ 100% load			110-300 VAC. load 50%; 176-276 VAC 100% load		
Frequency Range		46~54 Hz or 56~64Hz			40 ~ 70Hz		
Power Factor		≥ 0.99 @100% load					
Harmonic Distortion(THDi)		<4% at full load					
OUTPUT							
Output Voltage		3 x 360*/380/400/415 VAC (3Ph+N)					
AC Voltage Regulation (Batt. Mode)		±1%					
Frequency Range (Synchronized Range)		46~54Hz or 56~64Hz					
Frequency Range (Batt. Mode)		50Hz ±0.1 Hz or 60 Hz±0.1Hz			50/60 Hz±1%		
Current Crest Ratio		3:1 (max.)					
Harmonic Distortio		≦ 2 % THD (Linear Load) ; ≦ 5 % THD (Non-linear Load)					
Transfer Time	AC mode to Battery mod	Zero					
	Inverter to Bypass	Zero					
Waveform (Batt. Mode)		Pure Sinewave					
Overload Capability		100-110% for 60 min, 111-125% for 10 min, 126%~150% for 1 min; >150% immediately shutdown					
BYPASS							
Nominal Voltage		3x380VAC (3Ph+ N + PE)			3 x 360/380/400/415 VAC (3Ph+N)		
Voltage Range		190-520 VAC (3Ph) @ 50%load; 305-478 VAC (3Ph) @ 100%load			305VAC~457VAC		
Frequency Range (Synchronized Range)		46~54 Hz or 56~64Hz			46~54Hz or 56~64Hz		
Overload Capability		> 130% 1 minute (default) ; Continously working until breaker protection (optional)					
EFFICIENCY							
AC Mode		90.5%	91.5%		95.5%		
ECO Mode			96.0%		98.5%		
Battery Mode		87.0%	88.0%		94.5 %		
BATTERY							
Long-run Model	Battery Type	Depending on the capacity of external batteries					
	Numbers	20(16-20 Adjustable)**			32~40 (Adjustable)		
	Charging Current (max.)	4A			1A~12A, Adjustable	1A~12A, Adjustable	1A~20A, Adjustable
	Charging Voltage	273 VDC ± 1%			±13.65V*N (N=16~ 20)		
INDICATORS							
7" Touch color LCD Panel		UPS status, Load level, Battery level, Input/Output voltage, Discharge timer, and Fault conditions					
PHYSICAL							
Long-run Model	Dimension, DxWxH (mm)	592 x 250 x 826			815 x 300 x 1000	815 x 300 x 1000	815 x 300 x 1000
Model	Net Weight (Kg)	38	40		55	56	74
ENVIRONMENT							
Temperature and Humidity		0-40°C; 0-95% non condensing					
Altitude**		0 ~ 1000m at full load					
Noise Level		Less than60dB@1 Meter	Less than 65dB@1 Meter			Less than 70dB@1 Meter	
MANAGEMENT							
Smart RS-232/USB		Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux and MAC					
Optional SNMP		Power management from SNMP manager and web browser					

*When output voltage is set as 3 x 360VAC or 3 x 380VAC, the output power of the unit will be de-rated to 90%.

**If the UPS is installed or used in a place where the altitude is higher than maximum height, the output power will be derated 1% per 100m.

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