

ORNATE

HP-KL (1-3kVA, Single Phase)



HP-KL
(1-3 kVA)

The **HP-KL** is a true online double-conversion topology ONLINE UPS Designed with IGBT based inverter & rectifier that can provide your critical equipment with reliable, stable purest power. It features significant advantages, including an output power factor of 0.9 and Unity 1 pf across its entire range with High efficiency up to 94% AC-AC and Selectable ECO mode efficiency Up to 96 % for greater energy savings with Multiple Intelligent ready networking and friendly LCD + LED Visual human-machine interface.

FEATURES AND PERFORMANCES

- High frequency on-line double conversion technology
- DSP (Digital signal processors) control technology
- Active power factor correction (APFC), input power factor up to 0.99
- Output power factor 0.9 | 1 Unity
- Wide input voltage range (110 V ~ 300 Vac) and frequency range (40 ~ 70 Hz)
- Generator Compatible with Wide Input voltage window
- Auto sensing frequency
- 50 / 60 Hz frequency conversion
- Cold start
- Rear ventilation design and variable speed fan
- Effective software and hardware protection
- Quick and stable charging, 90% capacity restored in 4 h (standard model UPS)
- Linear derating in low voltage input reducing battery discharging times
- Settable delayed start when power is restored
- Advanced battery management (ABM)
- Multiple functions settable via LCD: output voltage, EOD, auto-start, bypass mode, ECO mode and frequency conversion mode
- Multi-platform communications: RS232 (standard), USB / RS485 / SNMP / dry contacts (optional)
- As400 dry contacts, SNMP card, SMS alarms, EPO function, and 12 A charger (1 to 3 kVA)

IDEAL APPLICATIONS

- Mission Critical applications & System
- POS -RETAIL
- Bank branches - ATM's
- IT equipment (Work Stations)
- Security and Surveillance System
- Servers/Networking/Storage
- Industrial Automation Control.
- Health Care equipment's
- Telecom/Railway Signaling
- Education (Smart schools)and Many more

MODEL SERIES		HP1KL	HP2KL	HP3KL
		ORNATE HP-KL		
General Specifications				
Apparent power (kVA)		1000 VA	2000 VA	3000 VA
Active power (kW)		900 W 1000 W	1800 W 2000 W	2700 W 3000 W
Technology		Advanced Dual-Core DSP Control IGBT -PWM Technology		
Waveform		Sinusoidal		
UPS architecture		Tower Type		
INPUT				
Input wiring		Single-phase 3-wire (1Φ + N + PE)		
Input voltage		208/220/230/240Vac		
Input frequency		40 ~ 70 Hz		
Input Rated frequency		50 / 60 Hz (auto-sensing)		
Input voltage range		120 ~ 300Vac (120 ~ 300 @ 60% Load, 160 ~ 300Vac @ 100% Load)		
THD Input Current		≤ 5% (with rated load)		
Input power factor		≥ 0.99 (with rated load)		
OUTPUT				
Output wiring		Single-phase 3-wire (1Φ + N + PE)		
Output voltage		Standard 230 V (208/220/230/240Vac - Configurable Via LCD panel)		
Output voltage Regulation		±1% (with balance load) 1.5 % (unbalanced load)		
Output frequency		Line Mode: 45~55Hz or 56~65Hz Battery Mode : (50/60±0.1%)Hz - Configurable Via LCD panel		
Efficiency		Upto 94%		
		Upto 99% (ECO Mode)		
Power Factor		0.8 0.9 1		
Waveform		Line Mode : Sinusoidal Battery Mode : Pure Sine Wave		
Crest factor		3:1 (max.)		
Total Harmonic Distortion (THDv)		≤ 2% (linear load); ≤ 5% (non-linear load)		
Overload capacity		105% ~ 125% for 10 min, 126% ~ 150% for 1 min, <150% for 30s		
Transfer Time				
AC mode to Bat.mode		0 ms		
Inverter to Bypass		4ms (Typical)		
Inbuilt Isolation Transformer		Yes (Optional)		
Receptacle	Standard Run Model	India socket x 3	India socket x 6	India socket x 6
	Long Run Model	India socket x 3	India socket x 4 + Terminal block x 1 (optional)	India socket x 4 + Terminal block x 1 (optional)
BATTERIES				
Standard Run Model (Internal Battery)	Battery Type	7AH 9AH	7AH 9AH	7AH 9AH
	Number of Battery	2 3	4 6	8
	DC Voltage	24 36	48 72	72 96
	Typical Recharge Time	Depend on the capacity of battery or 3.5 hours (to 90% of full capacity)		
	Charging current (max.)	1.0 A		
	Charging voltage	27.4Vdc±1% 41.1Vdc±1%	54.8Vdc±1% 82.2Vdc±1%	109.6Vdc±1%
Long Run Model (External Battery)	Battery Type	Depending on the capacity of external batteries		
	Number of Battery	3	6	6 9
	DC Voltage	36	72	72 96
	Typical Recharge Time	Depend on the capacity of battery or 3 hours (to 90% of full capacity)		
	Charging current (max.)	Standard Autonomy expansion : 6 A 12 A		
	Charging voltage	41.1Vdc±1%	82.2Vdc±1%	82.2Vdc±1% 109.6Vdc±1%
Autonomy expansion		Yes		
Battery series type/voltage		VRLA - AGM Lead-acid, Sealed Maintenance-free, Tubular ,Lithium ion		
Battery Test		Automatic or Manual		
Battery Cold Start		Yes Inbuilt		
System Protection		Short-circuit, overload, over temperature, excessive low battery, over voltage, under voltage, fans failure and testing alarm and OVDC (optional)		
SYSTEM COMMUNICATION AND MANAGEMENT				
Display		LED Display : Line mode,Bat.mode,ECO mode,Bypass mode,Battery low voltage,Overload & UPS fault		
		LCD Display : Input voltage,Input frequency,Output voltage,Output frequency,Load percentage, Battery voltage,Inner		
Communication ports		RS232,USB Serial ports, EPO (Standard) RS485 / SNMP / AS 400 dry contacts , SMS alarms, EPO (optional)		
Alarms and signals		Line Mode, Battery Mode,Battery Low,Over Load,Fault		
Remote management		Yes (Optional)		
CONFORMITY				
EMI	EN62040-2			
	IEC/EN 62040-1 -1 IEC/EN 62040-2 (EMC Emission)			
EMS	IEC/EN 50091-1 IEC/EN 62040-3 (Performance & Design) IEC/EN 60950 (Safety) IEC/EN 61000-4 -4 IEC/EN 61000-4 -			
	IEC/EN 50091-2 IEC/EN 60146 (Design & Manufacture)			
BIS	Yes			

MECHANICAL FEATURES				
Standard Run Model (Internal Battery)	Dimensions (W x D x H) (mm) +/- 2 mm	144x336x214 144x414x214	144x417x216 144x419x335	191 x 419 x 435
	Packaged dimensions (W x D x H) (mm) +/- 2%	230x402x315 230x460x315	230x506x315 277x500x435	277 x 500 x 435
	Net weight (kg) +/- 2%	11 12.8	16.4 23.1	24.3 29.4
	Gross weight (kg) +/- 2%	11.3 14	17.8 24.7	25.9 31.1
Long Run Model (External Battery)	Dimensions (W x D x H) (mm) +/- 2 mm	144x 336 x 216	191x 419 x 335	191x 418 x 335
	Packaged dimensions (W x D x H) (mm) +/- 2%	230 x 417 x 318	318 x 533 x 471	277 x 500 x 435
	Net weight (kg) +/- 2%	6	10.5	11
	Gross weight (kg) +/- 2%	7	12	12.5

AMBIENT CONDITIONS	
Operating Temperature (° C)	0°C ~ 55°C * (0 ~ 40 °C @ 100 % , > 40 °C upto 55 °C at rated Load)
Storage Temperature (°C)	(-)25°C ~ 55°C (without battery)
Relative Humidity (%)	0% ~ 95% (non-condensing)
Altitude	≤1000 m; above 1000 m, downgrading 1% for each additional 100m ~ 1500m
Protection rating	IP20
Noise at 1 mt from the unit (dBA)	Less than 50dBA @ 1 Meter

** Product Specifications are subject to change without prior notice

* When output voltage is adjusted to 100/200/ 208VAV will Derate to 80% of the unit capacity.