

Crystal Serie

Uninterruptible Power Supply
1-10kVA



CL Crystal series HF online
UPS Singlephase for Centralized
server center, mainframe,
network control center,
computing center

True On-line
1 Phase in
1 Phase out

1-2-3 kVA

6-10 kVA
3 Level Technology
PF: 1

Technical Specifications

- High frequency and dual conversion on-line technology ·
- Wide input voltage range ·
- Advanced PFC technology ·
- True sine wave output with less than 3% THD ·
- 6 & 10 kVA 3 Level Technology and PF: 1 ·
- Self-diagnosis at UPS startup ·
- Advanced battery management (ABM) ·
- Cold start Feature (DC power on) ·
- Automatically charging batteries in UPS off mode ·
- Lightning and surge protections (surge energy rating 1050 J) ·
- Short circuit and overload protections ·
- Fan speed automatically changes as load varies ·
- Optional external battery pack ·
- EMI / RFI noise filter ·
- R5232 (SNMP Optional) ·
- Shutdown & Restart schedule ·

Specifications

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Model	CL1000	CL2000	CL3000	CL6000	CL10000
Capacity	1KVA	2KVA	3KVA	6KVA	10KVA
Input					
Rated input voltage	220VAC or 120VAC			220VAC	
Rated input frequency	50Hz/60Hz (self-adaption)				
Input voltage Range	110 ~ 295 ± 5VAC (50% load); 140 ~ 295 ± 5VAC (100% load) or 50/60/70/80 ~ 150 ± 5VAC (60%/70%/80%/100% load)			110 ~ 295 ± 5VAC (50% load); 140 ~ 295 ± 5VAC (100% load)	
Input frequency Range	45~55Hz +/-0.5% 50Hz; 55~65Hz +/-0.5% 60Hz				
Phase	single phase+N+GND				
Power factor	≥0.98			≥0.99	
Input current (liner full load)	4.0A or 10A	8.1A or 20A	12.1A or 30A	24.2A	40.4A
THD	< 6%			< 5%	
ByPass voltage range	186VAC~252VAC or 90VAC~140VAC			186VAC~252VAC	
Output					
Rated voltage	208VAC/220VAC/230VAC/240VAC or 100/110/115/120/127VAC can be set on LCD			208VAC/220VAC/230VAC/240VAC can be set on LCD	
Power factor	0.9			1	
Voltage distortion	± 1%				
DC component voltage	≤200mv				
Output current crest factor	3:1				
Rated frequency					
AC mode	same as input frequency				
Battery mode	50/60 ± 0.2Hz				
Phase lock speed	≤1Hz/s				
Wave distortion	100% linear load <3%; 100% nonlinear load <5%				
Transfer time					
From Mains mode to battery mode	0ms				
From battery mode to Mains mode	0ms				
From Mains mode to bypass mode	< 4ms			< 0ms	
From bypass mode to Mains mode	< 4ms			< 0ms	
From normal mode to ECO mode	< 10ms			< 10ms	
System Efficiency	Full load	≥90%			≥92%
	ECO mode	≥94%			
Inverter overload capacity	105% - 150% 30s transfer to bypass mode giving alarm; > 150% 300ms transfer to bypass mode giving alarm;			105% - 125% 10min transfer to bypass mode giving alarm 125% - 150% 30s transfer to bypass mode giving alarm > 150% 100ms transfer to bypass mode giving alarm;	
Battery					
Battery type	Lead Acid maintenance free battery				
DC voltage	24V DC	48V DC	72V DC	192V DC	192V DC
Inbuilt battery	9AH/12V	9AH/12V	9AH/12V	9AH/12V	9AH/12V
Battery quantity	2	4	6	16	16
Charge					
Output voltage	27.5 ± 0.4V	55 ± 0.6V	82.5 ± 0.9V	193.7 ± 0.9V	193.7 ± 0.9V
Charge method Three-stage charging					
Input voltage range	80VAC~300VAC or 40VAC~150VAC			150VAC~300VAC	
Charge current	Standard model: 1A; Long time model: 6A(Optional 12A)			Standard model: 1A; Long time model: 8	
Protection	Over-temp protection; Fan testing protection ; AC L and N connect wrong protection; Output short circuit protection				
Control	Silence; cold start; AC restart; Auto restart.				
Communication	RS232, SNMP card , USB				
Display	Software function; Statue analyze: Switch on/off UPS system, Monitor UPS working state ,store histor LCD/LED				
System Operating Environment					
Operating environment	Operation tem.	0 ~ 40°C			
	Store tem.	-25°C ~ 55°C			
	Humidity	20 ~ 90% (non-condensing)			
	Altitude	0m < altitude < 1500m, over 1500m, used with power derated			
Noise	< 50db			< 55db	
UPS Dimension (W*D*H) mm	144x357x215	191x452x341		262x514x455(Long time mode) 262x514x735(Standard model)	
Packing Dimension (W*D*H) mm	(Long time mode) (Standard model)	230x445x315	320x564x462		360x650x540 360x650x795