

UNITY POWER FACTOR

Uninterruptible power supply

6 kVA: 20 kVA (1:1)



Features

- Advanced DSP (Digital signal processors) technology.
 - Variable speed fan.
 - Effective software and hardware protection function, robust self-diagnostic function, and abundant event log for check.
 - Advanced digital parallel technology.
 - Wide input voltage range, 50 / 60 Hz frequency auto sensing.
 - Linear derating in low voltage input reducing battery discharging times, extending the service life of battery.
 - Dual-input design, supporting independent bypass.
 - Output power factor improved from 0.9 to 1, load capacity increased by 13%.
 - Flexible battery configuration (settable 16 - 20 pcs batteries).
 - Charging voltage and current configured by demands.
 - Ability to switch on the UPS with batteries.
 - Settable delayed start time when mains power is restored, reducing the impact on power grid or generator.
 - Two modes of frequency conversion: 50 Hz input/ 60 Hz output or 60 Hz input/ 50 Hz output.
- LCD+LED display, multi-functional keys operation, friendly human-machine interface
 - Powerful background software for parameters configuration
 - Compact internal layout, miniaturized the complete unit for small footprint
 - Advanced multi-platform communications: RS232, USB, RS485, SNMP and dry contacts communication interfaces
 - Intelligent battery management, automatic floating/ equalizing charge control charger dormancy control, increasing battery life by 50%
 - Active power factor correction (APFC), input power factor up to 0.99
 - High efficiency 95% (up to 98% in ECO mode)
 - Equipped with self-aging function

Available Options

- RS232 and smart card slot included
- Optional parallel function, battery temperature compensation, SNMP card, USB, RS485 card, dry contacts, EMD, and SMS alarms

Rear Panel

1	RS232
2	EPO
3	Parallel port (optional)
4	USB (optional)
5	Temperature detection (optional)
6	SNMP (optional)
7	Reserved: for customer function such as manual bypass, battery breaker, socket,..etc.
8	Fans
9	Bypass breaker
10	Input breaker
11	GND
12	Terminals and terminal cover



Specifications

Model	U4GK1106 (1:1)	U4GK1110 (1:1)	U4GK1115 (1:1)	U4GK1120 (1:1)
Capacity	6kVA/6000W	10kVA/10000W	15 kVA/15000 W	20 kVA/ 20000 W
INPUT				
Input wiring	Single-phase three-wire (1<P + N + PE)			
Rated voltage	208 V / 220 V / 230 V / 240 Vac			
Voltage range	110 ~ 176 Vac (linear derating between 50% and 100% load) 176 ~ 288 Vac (no derating)			
Rated frequency	50 / 60 Hz (auto- sensing)			
Frequency range	40 ~ 70 Hz			
Power factor	≥ 0.99			
Bypass voltage range	- 40% ~ +15% (adjustable)			
Total harmonic distortion (THDI)	≤ 5%			
OUTPUT				
Output wiring	Single-phase three-wire (1<P + N + PE)			
Rated voltage	208 V (PF=0.9) / 220 V / 230 V / 240 Vac			
Voltage regulation	±1%			
Frequency	Synchronized to bypass in mains mode; 50 / 60 Hz ± 0.1% Hz in battery mode			
Waveform	Sinusoidal			
Power factor	1			
Total harmonic distortion (THDV)	≤ 1% (linear load); ≤ 4% (non-linear load)		≤ 1% (linear load); ≤ 3% (non-linear load)	
Overload capability	102% ~ 110% for 10 min, 110% ~ 125% for 1 min, 125% ~ 150% for 30 s			
BATTERIES				
DC voltage	192 Vdc (192 / 240 Vdc adjustable)			
Number of batteries	16 pcs (16 ~ 20 adjustable)			
Inbuilt battery (Standard model)	12/7 Ah X 16	12/9 Ah X 16	-	-
Charging current	Standard model: 1 A Long time model: 5 A (default), 1 ~ 5 A adjustable 12 A (6~10kVA optional); 10 A (15~20kVA optional)			
Recharge time	Standard model: 90% capacity restored in 8 hours Long time model: depend on the capacity of battery			
SYSTEM				
Efficiency	≥ 94% at 100% load, max. 95% at 60% load, ≥ 98% in ECO mode			
Switching time	0 ms			
Protections	Short-circuit, overload, overtemperature, battery low voltage, overvoltage, undervoltage and fan failure			
Max. number of parallel connections	4			
Communications	RS232 (standard), USB / RS485 / dry contacts/ SNMP / battery temperature compensation (optional)			
Display	LCD+ LED			
OTHERS				
Operating temperature	0°C ~ 40°C			
Storage temperature	-25°C ~ 55°C (without battery)			
Humidity	0 ~ 95% (non-condensing)			
Altitude	≤ 1000 m, derating 1% for each additional 100 m			
IP rating	IP 20			
Noise level at 1 m	≤ 55 dB	≤ 58 dB	≤ 58 dB	≤ 58 dB
Dimensions (W x D x H) (mm)	191 x 465 x 711 (S) 191 x 465 X 350 (H)	191 x 495 x 711 (S) 191 x 495 X 350 (H)	191 x 495 x 515(H)	
Packaged dimensions (W x D x H) (mm)	654 x 310 x 941 (S) 595 x 318 x 475 (H)	685 x 310 x 941 (S) 617 x 318 x 475 (H)	593 x 285 x 618(H)	
Net weight (kg)	53 (S) 14.5 (H)	62 (S) 16.5 (H)	26.5 (H)	
Gross weight (kg)	61 (S) 16 (H)	72 (S) 18 (H)	28 (H)	

- (S) means standard model.
- (H) means long time model.
- All specifications are subject to change without notice