

## UNITY POWER FACTOR

## Uninterruptible power supply

6 kVA: 20 kVA (3:1)



### 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	U4GK3106 (3:1)	U4GK3110 (3:1)	U4GK3115 (3:1)	U4GK3120 (3:1)
<b>Capacity</b>	6kVA/6000W	10kVA/10000W	15 kVA/15000 W	20 kVA/ 20000 W
<b>INPUT</b>				
Input wiring	Three-phase five-wire (3<P + N + PE)			
Rated voltage	380 V / 400 V / 415 Vac			
Voltage range	190 - 305 Vac (linear derating between 50% and 100% load) 305 - 499 Vac (no derating)			
Rated frequency	50 / 60 Hz (auto- sensing)			
Frequency range	40 - 70 Hz			
Power factor	≥ 0.99			
Bypass voltage range	- 40% ~ +15% (settable)			
Total harmonic distortion (THDI)	≤ 5%			
<b>OUTPUT</b>				
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); ≤ 3% (non-linear load)			
Crest factor	3:1			
Overload capability	102% ~ 110% for 10 min, 110% ~ 125% for 1 min, 125% ~ 150% for 30 s			
<b>BATTERIES</b>				
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; 10 A (optional)			
Recharge time	Standard model: 90% capacity restored in 8 hours Long time model: depend on the capacity of battery			
<b>SYSTEM</b>				
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			
<b>OTHERS</b>				
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	≤ 58 dB			
Dimensions (W x D x H) (mm)	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)	685 x 310 x 941 (S) 617 x 318 x 475 (H)		593 x 285 x 618(H)	
Net weight (kg)	58.5 (S) 18.5 (H)	64 (S) 18.5 (H)	26.5 (H)	
Gross weight (kg)	66.5 (S) 20 (H)	72 (S) 20 (H)	28 (H)	

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