

## CNG310 Series Technical Specifications

| CNG310 10-100KVA                 |  |          |             |       |              |       |       |               |
|----------------------------------|--|----------|-------------|-------|--------------|-------|-------|---------------|
| Model                            | 10KVA  | 15KVA    | 20KVA       | 30KVA | 40KVA        | 60KVA | 80KVA | 100KVA        |
| Capacity                         | 8KW  | 12 KW    | 16 KW       | 24 KW | 32 KW        | 48 KW | 64 KW | 80 KW         |
| <b>Input</b>                     |  |          |             |       |              |       |       |               |
| Rated voltage                    | 380/400/415 Vac three-phase  |          |             |       |              |       |       |               |
| Voltage range                    | ±20%   |          |             |       |              |       |       |               |
| Frequency range                  | 45-65Hz  |          |             |       |              |       |       |               |
| Power factor                     | >0.92 with harmonic filter   |          |             |       |              |       |       |               |
| Current harmonic distortion      | <5% with harmonic filter   |          |             |       |              |       |       |               |
| Soft Start                       | 0 -100% in 10"   |          |             |       |              |       |       |               |
| <b>Bypass Input</b>              |  |          |             |       |              |       |       |               |
| Rated voltage                    | 230Vac single-phase  |          |             |       |              |       |       |               |
| Permitted voltage range          | ±15%(selectable from ±10% to ±25% from front panel)                          |          |             |       |              |       |       |               |
| Rated frequency                  | 50/60Hz  |          |             |       |              |       |       |               |
| Permitted frequency range        | ±2%(selectable from ±1% to ±5% from front panel)                             |          |             |       |              |       |       |               |
| Standard features                | BackFeed protection; split bypass line                                       |          |             |       |              |       |       |               |
| <b>Batteries</b>                 |  |          |             |       |              |       |       |               |
| Type                             | Maintenance-free lead-acid VRLA AGM / GEL;NiCd                               |          |             |       |              |       |       |               |
| Battery Voltage                  | 384VDC   |          |             |       |              |       |       |               |
| Maximum recharge current(A)      | 0.2 X C10  |          |             |       |              |       |       |               |
| AC ripple voltage                | <1%  |          |             |       |              |       |       |               |
| <b>Inverter output</b>           |  |          |             |       |              |       |       |               |
| Rated power(kVA)                 | 10KVA  | 15KVA    | 20KVA       | 30KVA | 40KVA        | 60KVA | 80KVA | 100KVA        |
| Active power(kW)                 | 8KW  | 12 KW    | 16 KW       | 24 KW | 32 KW        | 48 KW | 64 KW | 80 KW         |
| Number of phases                 | 1  |          |             |       |              |       |       |               |
| Rated voltage(V)                 | 230Vac single-phase  |          |             |       |              |       |       |               |
| Regulation of the output voltage | 220 ~ 244Vac phase/neutral(from control panel)                               |          |             |       |              |       |       |               |
| Crest factor(Ipeak/Irms)         | 3:1  |          |             |       |              |       |       |               |
| Static stability                 | ±1%  |          |             |       |              |       |       |               |
| Dynamic stability                | ±5%  |          |             |       |              |       |       |               |
| Frequency                        | 50/60Hz configurable   |          |             |       |              |       |       |               |
| Overload                         | 110% 125% 150% of the rated current for 5h/10'/1'                            |          |             |       |              |       |       |               |
| Frequency stability              | ±0.05% on mains failure  |          |             |       |              |       |       |               |
| System                           | 10KVA  | 15KVA    | 20KVA       | 30KVA | 40KVA        | 60KVA | 80KVA | 100KVA        |
| Remote signaling                 | Volt free contacts   |          |             |       |              |       |       |               |
| Remote controls                  | EPO and Bypass   |          |             |       |              |       |       |               |
| Communication                    | RS232 + remote contacts  |          |             |       |              |       |       |               |
| Operation temperature            | 0°C to +40°C   |          |             |       |              |       |       |               |
| Relative humidity                | <95% non condensing  |          |             |       |              |       |       |               |
| Colour                           | Light grey (RAL 7035)  |          |             |       |              |       |       |               |
| Noise                            | 54dBA at 1m  |          | 60dBA at 1m |       | 65dBA at 1m  |       |       |               |
| Protection degree                | IP20   |          |             |       |              |       |       |               |
| Efficiency Smart Mode            | up to 98%  |          |             |       |              |       |       |               |
| Compliance                       | Safety:EN 62040-1-1(Directive 2006/95/EC); EMC:6200-2(Directive 2004/108/EC) |          |             |       |              |       |       |               |
| Weight(KG)N.W                    | 176  | 220      | 205         | 213   | 295          | 440   | 520   | 770           |
| Dimensions:(WxDxH)mm             | 555*730*1210   |          |             |       | 800*730*1400 |       |       | 1115*730*1400 |
| Internal batteries               | optional   | optional | optional    | No    | No           | No    | No    | No            |

STANDARD: Conform to GB/IEC regulation: EMC:GB7260.2/IEC62040-2 -GB/17626.2~5/IEC61000-4-2~5 SAFETY:GB4943

Note: Product specifications are subject to change without further notice.



## CNG330 Series Technical Specifications

| CNG330 10-600KVA                                  |   |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
|---|---|-------|-------|---------------|--------------------------|-------|--------------|--------|--------------------|---------------|--------|--------|----------------|--------|--------|
| Model   | 10KVA   | 20KVA | 30KVA | 40KVA         | 60KVA                    | 80KVA | 100KVA       | 120KVA | 160KVA             | 200KVA        | 250KVA | 300KVA | 400KVA         | 500KVA | 600KVA |
| Capacity  | 8KW   | 16 KW | 24 KW | 32 KW         | 48 KW                    | 64 KW | 80 KW        | 96 KW  | 128 KW             | 160 KW        | 250KW  | 300KW  | 400KW          | 500KW  | 600KW  |
| <b>Input</b>                                      |   |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Rated voltage                                     | 400 Vac three-phase   |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Voltage range                                     | 380/400/415VAC(+25%,Can be set through the LCD panel)   |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Frequency range                                   | 40-70Hz(Automatically select synchronization range according to grid frequency)   |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Range(HZ)   | 50±5%(±10%)Bypass synchronization tracking  |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Rectifying pulse number                           | 6 pulse rectification   |       |       |               | 6/12 pulse rectification |       |              |        | 12 pulse rectifier |               |        |        |                |        |        |
| Phase system                                      | 3 φ 4W+PE(Three phase five wire system)   |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Battery voltage(VDC)                              | 384   |       |       |               |                          |       |              |        |                    |               | 480    |        |                |        |        |
| Battery quantity(section)                         | Standard with 32(30~34, can be set through the LCD panel) Standard 40 knots(38~42 knots,can be set by LCD panel)  |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| <b>Output</b>                                     |   |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Power factor                                      | 0.8/0.9   |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Voltage(V)  | L-N: 220±1% L-L: 380±1%   |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Three-phase 100% load unbalance voltage stability | ≤2%,Allow 100% imbalance  |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Frequency(HZ)                                     | Normal power, tracking the frequency of power, Grid abnormal. 50±0.2%   |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Transfer time(ms)                                 | 0   |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Parallel operation mode (parallel type)           | 6 parallel machine  |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Waveform distortion                               | Linear loadTHD<3%; Nonlinear loadTHD<5%   |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Overload capacity                                 | 125% full load for 10 minutes, maintain 150 % full load for 1 minute and then switch to bypass power supply, after reducing the load can automatically restore the inverter                             |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Crest factor                                      | >3:1  |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| <b>Others</b>                                     |   |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Index   | Standard with no transfer time maintenance bypass switch  |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Communication function                            | Provides dry contract communication and RS232/RS485, Optional SNMP option to achieve intelligent monitoring of UPS.   |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Panel display                                     | LED displays working status and fault indication; LCD displays three-phase input voltage, input frequency, three-phase output voltage, load ,battery voltage, battery charge and discharge current, etc |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Display   | LCD 7" touch screen display   |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| The audio noise(dB)                               | <65(within 1 meter)   |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Alarm function                                    | Battery low voltage, abnormal power supply, overload, UPS failure, over temperature protection  |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Protection  | Input over voltage, battery under voltage, overload, short circuit, over temperature protection   |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Cooling way                                       | Forced cooling  |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Operating temperature(°C)                         | 0~40  |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Humidity  | 0~95%, non-condensing   |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| electromagnetic compatibility                     | Conform GB7260.2  |       |       |               |                          |       |              |        |                    |               |        |        |                |        |        |
| Size(W*D*H)(mm)                                   | 540*660*1135  |       |       | 1100*800*1800 |                          |       | 800*800*1900 |        |                    | 1200*850*1900 |        |        | 2600*1100*2000 |        |        |
| Weight  | 0.48  | 0.56  | 0.89  | 1.08          | 0.28                     | 1.38  | 1.68         | 1.98   | 2.48               |               |        | 2.85   | 3.15           |        |        |

STANDA D: Conform to GB/IEC regulation: EMC:GB7260.2/IEC62040-2 -GB/17626.2~5/IEC61000-4-2~5 SAFETY:GB4943

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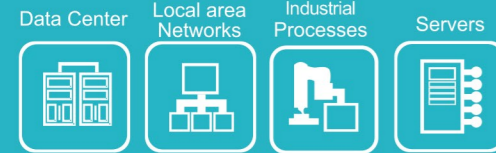
Low Frequency Online UPS 10-600KVA  
**CNG310 & CNG330**  
 Series

GREEN  
 ENERGY SAVING  
 ENVIRONMENTAL PROTECTION



# CNG310 & CNG330 Series

Low Frequency Online UPS 10-600KVA



## Product snapshot:

Model: CNG310 10-100KVA(3Ph/1Ph)  
 Model: CNG330 10-200KVA(3Ph/3Ph)  
 Nominal Input Voltage: 380/400/415VAC  
 Output Power Factor: 0.8  
 Parallel: Maximum 6PCS UPS  
 Battery can be shared in parallel mode



## High intelligence and reliable power supply:

Due to its outstanding mechanical and electrical design, CNG310/330 series UPS provides maximum protection for vital mission-critical networks, security applications (electro-medical) and industrial applications.

The load is powered continuously by the inverter with a filtered, stabilized and regulated sinewave supply. The input and output EMI filters considerably increase the immunity of the load to mains disturbances and surges.

The CNG310/CNG330 uses on-line double conversion technology (VFI) with isolation transformer on the inverter output.

The CNG310/CNG330 is supplied with Watch & Save 3000 software as standard and can be remotely monitored using the Power NetGuard system from anywhere in the world. Additional battery extension packs allow the standard battery runtime to be extended up to several hours.

## Application:

Servers  
 Local area Network(LAN)  
 Data centers  
 Telecommunications  
 Electro-medical equipment

## MAXIMUM BATTERY CARE:

- Battery deep discharge protection;
- Temperature compensating charger;
- Built-in automatic and manual battery test feature.

## MINIMUM IMPACT ON SUPPLIES EASY SOURCE:

Input current distortion <4% for the CNG310/CNG330 with filter with sinusoidal absorption to remove the risk of resonance with other input supply users or phase shift capacitor sets. The absorbed current distortion is independent of input supply parameters such as impedance. This enable CNG310/CNG330 to deliver maximum performance levels regardless of the installation environment. With these input features CNG310/CNG330 can achieve significant savings in terms of sizing and power supply coursesisolation transformers and generators over less sophisticated power systems.

## SIMPLE TO INSTALL:

- Capability to install the UPS into any distribution system (neutral not required on rectifier input);
- Capability to separate the rectifier/bypass power networks and to power them from two separate sources, without Galvanic isolation (Necessary on UPS without an output transformer).

## HIGH RELIABILITY:

- Extremely high short-circuit current to ensure compatibility with the most difficult transformer applications (lighting, drives and industrial processes) and an isolation transformer on the inverter output;
- Full microprocessor control with no-break static and manual bypasses;
- IGBT technology.

## OTHER CHARACTERISTICS:

- 0.8 power factor makes CNG310/CNG330 suitable for powering ICT and Industrial loads;
- High level diagnostics: event log with 128 messages, states, measurements and alarms – available from the built-in LCD with several languages;
- BACK FEED protection: to avoid energy feeding back into the mains supply cause a fault occur.

## MAXIMUM RELIABILITY AND AVAILABILITY:

Connect up to 6 units in parallel or N+1 redundancy, even of different power ratings. The UPS continue to work in parallel even if one of the interconnecting communication cables is disconnected (CLOSED LOOP).



## LOW CONSUMPTION LEVELS:

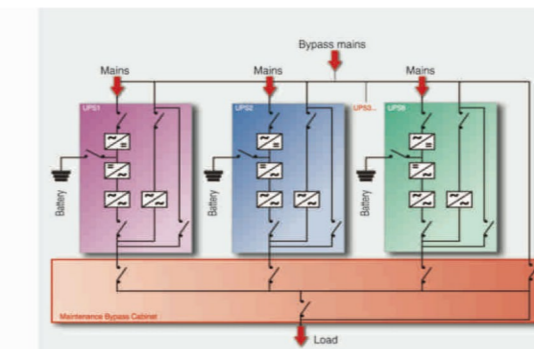
CNG310/CNG330 can achieve efficiencies >98% thanks to selectable Economy Mode which can be used in stable electrical environments to provide power supply continuity when the mains fail.

## ADVANCE COMMUNICATION:

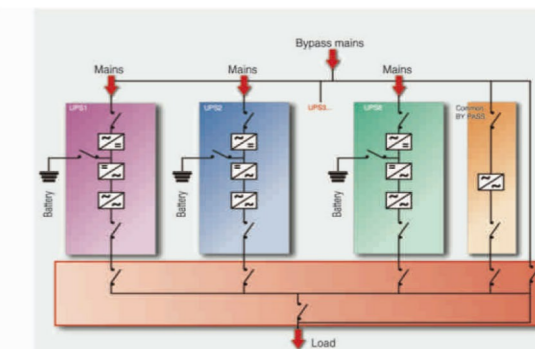
- Compatible with TeleNetGuard for remote maintenance;
- Advanced, multi-platform communication for all operation systems and network environments: Watch & Save 3000 monitoring and shut-down software included, with SNMP agent, for Windows 2008, Vista, 2003, XP; Mac OS X, Linux, Novell and most popular Unix operating systems;
- The UPS is supplied with a cable for direct connection to the PC (Plug and Play)
- RS232 double Serial port Installation slot for an Emergency Power Off (EPO) interface to allow the UPS to be switched off remotely in an emergency
- Generator interface: enables desynchronisation of the UPS output from a generator supply which may be subject to phase and frequency variations. The interface also enables more economic use of the battery charge..

## EXPANDABILITY :

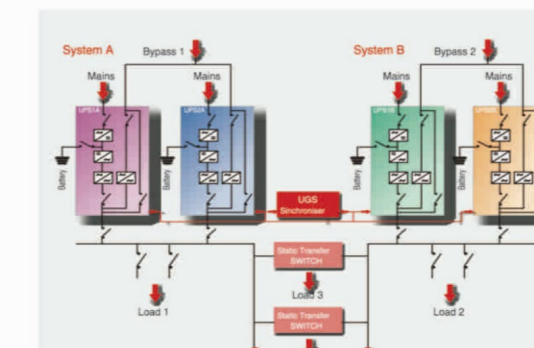
- The units can be connected in parallel up to 8 units to increase power availability or redundancy. The single module or the system can be expanded any time to suit power requirements without influencing the initial investment.
- Thanks to the peculiarity of the "Hot System Expansion" feature, the additional unit can be connected in parallel while the other units are on-line and supplying regular power to the load. The new UPS is on-line and will be set up automatically.



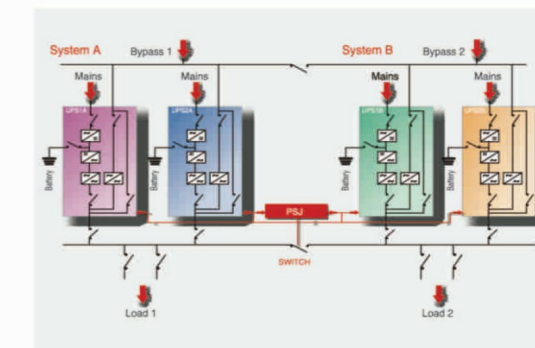
Parallel configuration of up to 8 units with distributed bypass  
 Parallel architecture which guarantees the redundancy of the power source. + Flexibility and modularity



Parallel configuration of up to 8 units with common bypass  
 Parallel architecture which guarantees the redundancy of the power source, with autonomous bypass management. + Selectivity downstream faults in bypass mode



Dynamic dual bus configuration  
 Solution which ensures redundancy until the distribution of the power supply to the loads + Downstream fault discrimination



Dual bus system configuration  
 Solution which guarantees the redundancy of the power supply even during maintenance + High levels of availability and redundancy