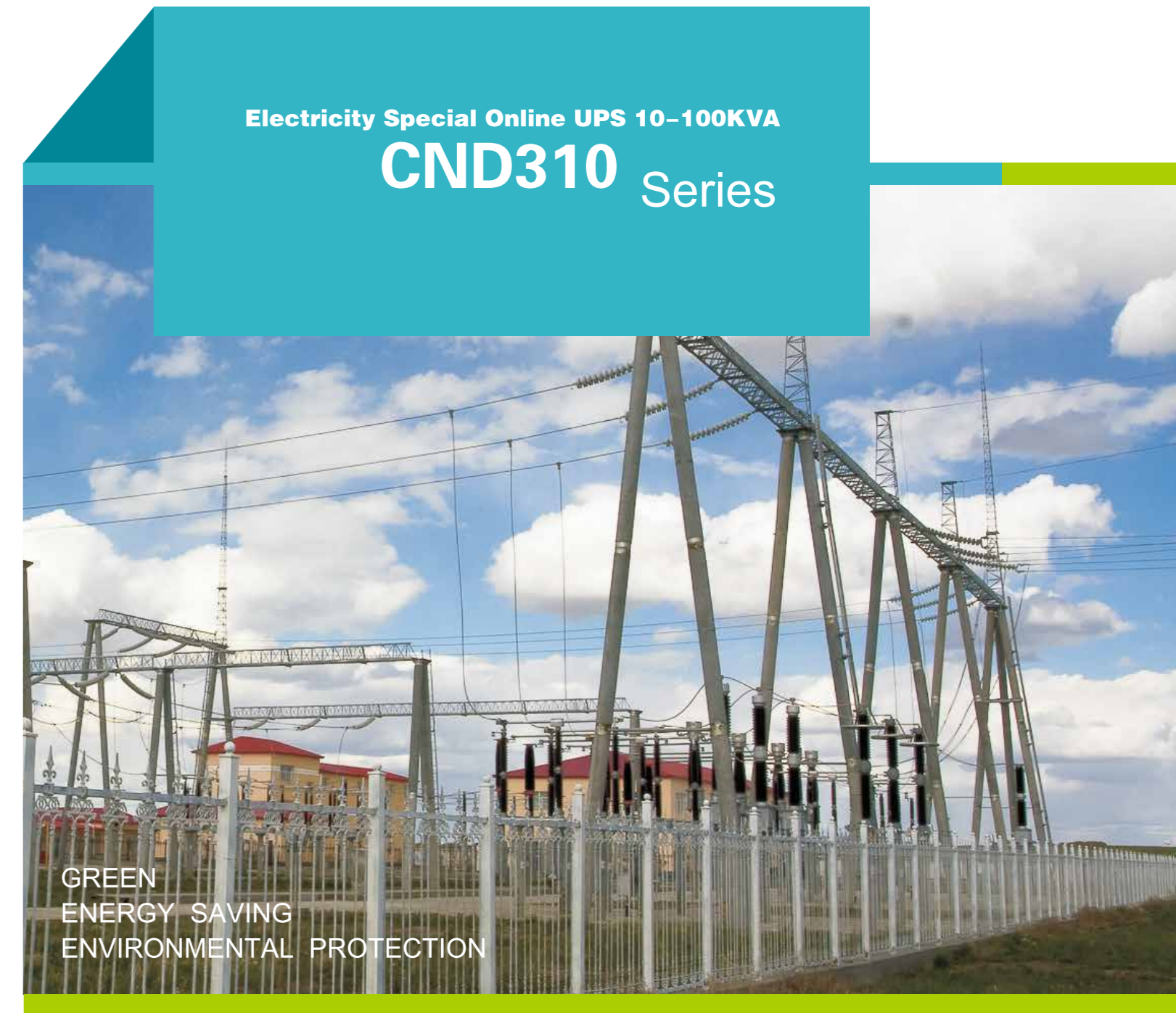


**CND310 Series Technical Specifications**

Model Number	CND310 10KVA-100KVA									
	10KVA	15KVA	20KVA	30KVA	40KVA	50KVA	60KVA	80KVA	100 KVA	
Rating capacity	8 KW	12 KW	16 KW	24 KW	32 KW	40 KW	48 KW	64 KW	80KW	
Rating voltage	220VAC Single Phase (6-20KVA) / 380VAC Three Phases									
AC input										
Voltage range	±25%									
Frequency range	50/60Hz±10%									
Soft start	0 - 100% 5 seconds									
Power Factor	0.95(with input filter)									
Bypass input										
Permitted voltage range	±15%									
Frequency range	50/60Hz±5%									
Output										
Voltage accuracy	220V±1%(steady load) 220V±3%( fluctuating load)									
Permitted Frequency range	50/60Hz±0.05Hz(powered by battery)									
Power factor	0.8									
Waveform Distortion	Linearload<2%, non linear load<4%									
Dynamic load voltage transients	<5%									
Crest factor(peak/ lrms)	3:1									
Overload capacity	Normal in 110% load, 125% for 10min									
Efficiency	Double conversion mode: 94%; ECO mode: 98%									
DC										
Battery voltage	220V; (10-40KVA 110V is optional)									
Cutoff voltage	185V									
Maximum discharge current	36A	55A	73A	109A	145A	181A	218A	291A	364A	
Panel display										
LCD	Chinese/English UPS status, operation instruction input voltage, output voltage, current, frequency, battery voltage, value of charge and discharge current, fault display , warning									
Environment										
Temperature	0°C-40 °C									
Humidity	0-95%(no condensing)									
Storage temperature	-25 °C—55 °C									
Altitude	<1500m									
Physical features										
Weight(KG)	Net	230	258	350	400	480	580	650	900	950
	Gross	250	285	380	425	500	600	675	925	988
Dimesion W X D X H mm	800×600×2260				800×800×2260			800×1200×2260		
Optional	RS485/SNMP/ Harmonic compensation cabinet/Input and output isolation cabinet/Lightning protection device/Bypass stablized cabinet/ Customized appearance and size									

Note: Product specifications are subject to change without further notice



# CND310

## Electricity Special Online UPS

### Snapshot

Model: 10-100 KVA  
 Nominal voltage: 380/400/415VAC  
 Nominal frequency: 50Hz/60Hz  
 Output power factor: 0.8

### Application:

Petroleum, chemical industry, gas and power station...



The CND310 series Electricity Special UPS system consisting of system cabinet, DBW bypass stabilized cabinet, and PDU feeder cabinet; CONSNANT designs exclusively for power plant, transformer substation, and distribution substation according to the development requirement of China Power. It possesses on-line double conversion and zero transfer function. It can be mainly applied for power system telemechanics, PTU, power line carrier, power system monitoring and so on. After being isolated and filtered by regulator, Single-phase 220V or three-phase 380V can provide stable power for load through inverter when the AC is normal. If the failure of AC power grid supply or a power cut occurs, the backup of DC power system can invert to supply electricity through the reverse diode. If the DC Power System is under voltage or cut off, the static switch will turn to bypass automatically. When the AC power is recover, the static switch will turn to AC power automatically. If the inverter is overloaded or fault, the system will turn to bypass and indicates a warning signal at the same time.

### Key Features:

- Adopt full digital control technology
- Intelligent detection and monitoring function
- Digitally control the static switching with zero switch
- Full isolation between input and output
- Super low output zero earth voltage
- DC UPS isolated with utility power Compatible with the DC power system and isolated with utility power completely
- Cubicle design with the power standard both indication and cabinet (Can be customized according to customer demands)
- Multifunctional protection for over voltage, under voltage, over current, short circuit and over temperature and so on.
- Large-screen LCD monitor with Chinese and English operation interface
- Ultralong 256 event record, user-friendly analysis and management to the situation of the power supply (touch screen optional)
- Static bypass has a strong anti-overload capability

### Control System

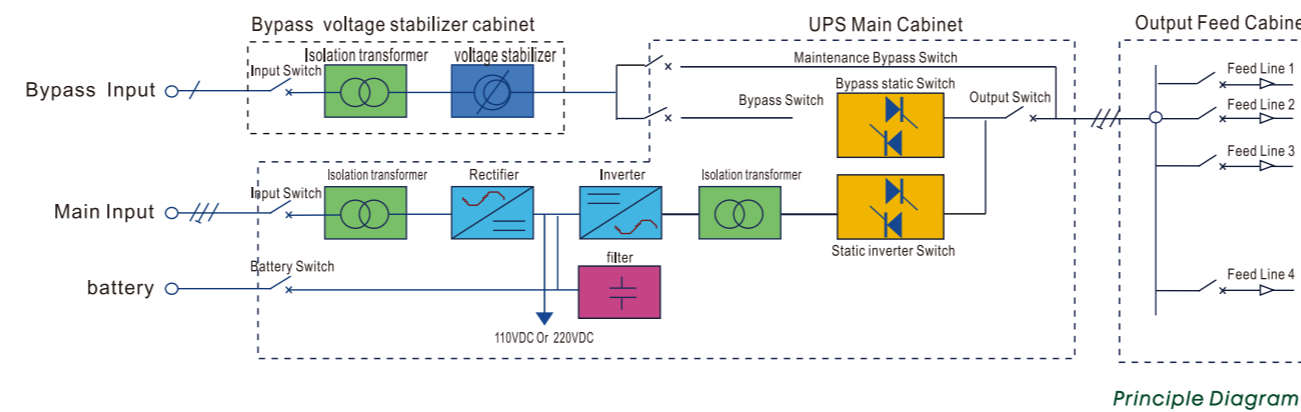
It adopts microprocessor bus control technology, three core processor controlling rectification, inverter and parallel connection respectively, to ensure the real-time control of the rectifier, inverter and static switch and the coordination of every power part, characterized by increased control of aging, higher reliability, enhance of the efficiency of the whole UPS system and the output technical parameters are better than that of the device with same capacity.

### Inverter

SPWM(sinusoidal pulse width modulation), formed by 6 IGBT high power tubes, is composed of full-bridge-control. Its function is to transform DC voltage into sinusoidal AC voltage, boosting by the special ( $\Delta/Y$ ) zero phase shift zigzag type isolation transformer and become AC220V as load required. In addition, the transformer can eliminate like triple harmonics current that are reflected by non linear load from computer. Control features is the adoption of the "slow-down gate voltage" protection technology, greatly reducing disturbance of shutoff of the inverter (inverter and static switch shift mutually), enhancing the overload capacity of the whole UPS system, which make the capability of anti-short circuit and anti overload of UPS far superior to the ordinary UPS, especially the anti shot circuit is unmatched by similar devices.

### Rectifier

6 pulse or 12 pulse fully controlled bridge (6 or 12 SCR) compose rectifier. Its function is to input AC 3880V to DC220V or so by rectification. "slope" start (soft start) is the control feature, which means output voltage of the rectifier increase from 0V to 220V within 10 second and has no impact on the power grid.

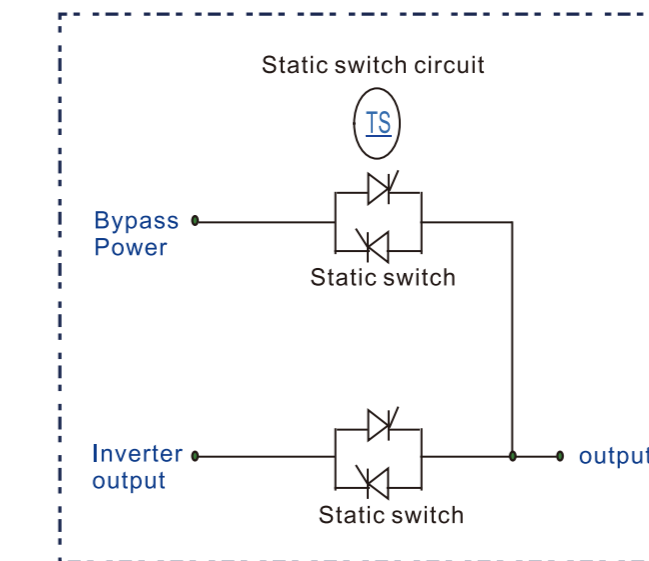


### Static Switch :

Not sync automatically switch:

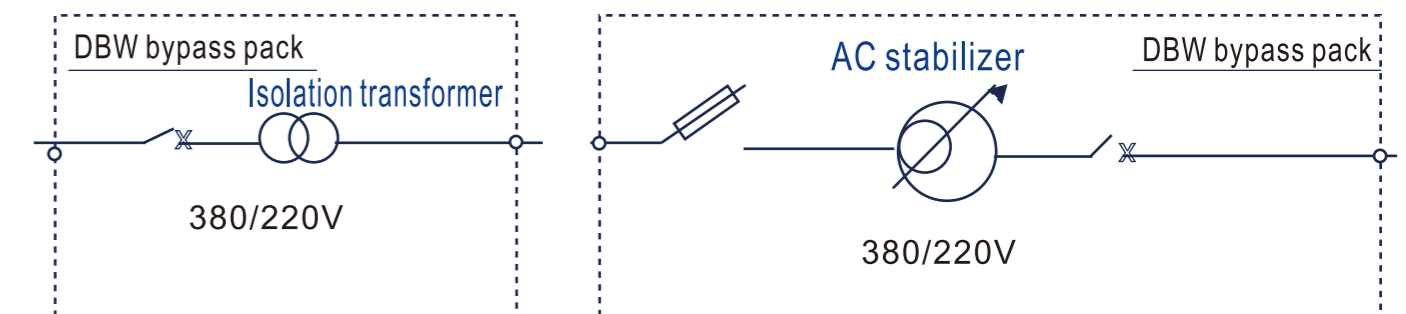
When the bypass of the UPS lose sync with the inverter, system can automatically implement not sync switch, for example, when the utility power surge pulse width <5ms, the system can ensure no power cutoff.

When the bypass exceed the limitation, UPS will detect the bypass every 20ms, when the phase angle difference of bypass and the inverter turn to normal range, not synchronized bypass shifting can be realized.



### Optional Bypass Cabinet :

#### Isolation transformer and Bypass voltage regulator



### Inverter of UPS have a strong overload:

- 110% load --60 minutes
- 125% load --10 minutes
- 150% load --1 minute
- 200% single phase load --30 seconds
- Good Capacity of Resistance to Output Short Circuit Current Limiting and Period Load Impact

### Advantages:

290% rated current -- 5 " : Even though a output short circuit or an overload occurs because of user' s improper operation, the output current of UPS can still be limited to a controllable extent instead of exceedingly increasing, consequently laying a good foundation for a long-term and reliable operation of UPS..

### Intelligent Monitoring :

Working status and data of UPS are transmitted to DCS system in real-time via RS232/RS485, passive contact and power transmitter, which finally realize Intelligent monitoring.

### Unique Option :

- SNMP card
- Dry contact card
- Signal transmitter
- Bypass isolation and voltage regulation
- Increase feeder circuit (standard for 8 loops)
- 12 pulse rectifier
- The appearance of special models (standard dimension:800×600×2260mm)