

# EXTRA POWER

## 60KVA - 200KVA 3:3 phase

### Online Transformer-Less UPS



TIS.1291 Part 1-2553  
TIS.1291 Part 2-2553  
TIS.1291 Part 3-2555



**MODEL**  
MY 160 - 200 kVA

**MODEL**  
MY 60 - 120 kVA



## Highlights

- 3 level IGBT rectifier and inverter
- High Efficiency up to 96.5%
- Output PF 1.0
- Operation temperature up to 50°C
- Fault Trace Management
- Colorful LED bar
- Customized power distribution cabinet
- Flexible Network Management: SNMP
- Expanded dry contact
- Intelligent Battery Monitoring System
- Bypass voltage regulator
- Dual system control card
- N+X in parallel
- Input and output isolation transformer
- SPD: C Grade
- Output Synchronization Common Bus
- Battery Charge Temperature Compensation

## HIGH RELIABILITY

- Wide input voltage range -60%~+25% with high grid adaptability
- High overload capacity
- Dual DSP control prevents single failure point
- Intelligent fan control and redundant design for energy saving: 25% load can be driven when 2 fans fail and 50% load when 1 fan fails
- Integrated with input,output,bypass breaker and manual bypass switch for better protection of system.
- Anti-corrosion resistant coating in all PCB boards.
- Short circuit time up to 200ms which provide high protection for system.
- Bus synchronization control function provides reliable high power for the dual bus application
- High ambient temperature up to 50 °C with auto-derating above 40 °C

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LOCAL AREA NETWORKS (LAN)



SERVERS



DATA CENTRES



TELECOMMUNICATIONS DEVICES



E-BUSINESS (Servers Farms, ISP/ASP/POP)



INDUSTRIAL PROCESSES



INDUSTRIAL PLCs



ELECTRO-MEDICAL DEVICES



EMERGENCY DEVICES (Lights/Alarms)



Automatic fans control

## FLEXIBLE

### Frequency Converter



Easy to support different mains frequency load

### Common battery bank



Save the space and lower TCO  
Battery range: 28~46 pcs

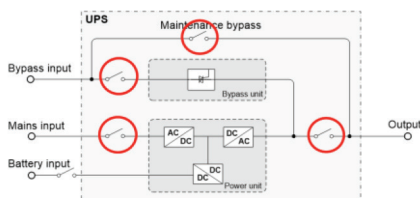
### Compatible with transformer



Transformer rating Ratio : <1:1.5  
UPS : 100kW  
Transformer : <150kW

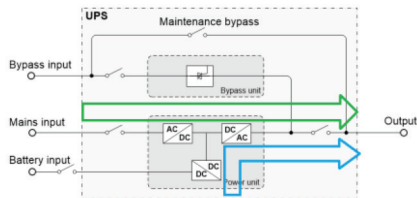
## SAFE

### 4 breaker design



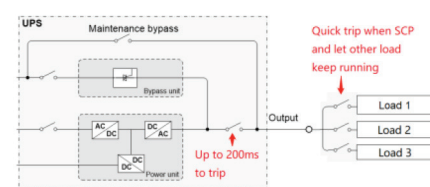
4 breaker integrated design No need to consider upstream and downstream distribution set

### Battery rectifier soft start



Smooth transfer the power from Battery mode to double conversion Prevent any impact for input grid

### Safe short circuit protection



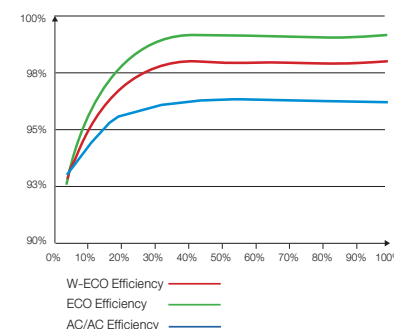
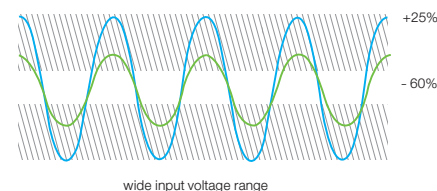
Output SCP time set from 20ms to 200ms. Guarantee the effective disconnection of the failure load

## GREEN POWER

- AC/AC efficiency up to 96.5% and 20% load up to 95% efficiency reduces heat dissipation and limits power consumption costs
- ECO mode efficiency up to 99.2% gives significant cost reduction
- W-ECO mode could reach 98.5% efficiency, THDi below 5% and transfer time below 5ms to reduce TCO.
- High input power factor up to 0.99 and low Input THDi: < 3.0% at full load, much less grid pollution and costs
- Self-load test function, easy debugging and easy onsite test during commissioning, before it is connected the real load, without using costly temporary loads, cabling and breakers for energy saving.

## ADVANCED TECHNOLOGY

- Three level technology, Low harmonic, high efficiency, effectively energy-saving.
- Power walk in function decrease the inrush to mains or generator.
- 8 units of intelligent paralleling helps to achieve maximum capacity up to 1.6MW.
- Self-dedusting function which save the preventive service time.
- Parallel ECO mode maximum whole system efficiency.
- Common battery bank on parallel mode.
- Frequency converter function(60Hz to 50Hz or 50Hz to 60Hz)
- Lithium Battery compatible.



AC/AC double conversion efficiency up to 96.5% ECO mode efficiency up to 99%

## USER-FRIENDLY INTERFACE

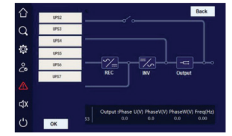
- User-friendly ON/OFF - Double physical button design to avoid false operation.
- Multicolor LED bar allowing quick and easy detection of the system status and simplified troubleshooting.
- Colorful touch screen with LED Indicators, ensure comprehensive and visualized information display.
- Large data storage capacity, 10000pcs events logs.
- Friendly human-machine interface with data and graphical forms.
- Support software update at site, one time update for all power module and control module.
- Smart programmable dry contact communication function.
- Main unit display allow to check the information of each parallel unit

## INTELLIGENT MANAGEMENT

- Fault Trace Management (FTM) for convenient failure analysis (waveform record before & after of the fault point for 200ms) which easily figure out faulty point.
- 3 stage battery charging system, prolong the service life of batteries
- Intelligent battery management, 28-46 pcs batteries per string allow customers to get the faulty battery out instead of replacing it
- Key components pre-alarm function which precaution the system fault.
- Full asset management record the spare parts replacement, timeline and service people.
- Easy monitoring of lithium battery, battery tripping, generator, etc.

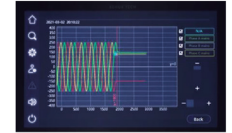


### Integrate Status Monitoring



Monitor the status of other parallel UPS. Easy check on the master UPS to know whole system status

### Fault Trace Management



Easy and quick locate the problem  
Reduce time for maintenance

## ACCESSORIES (Option)

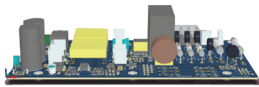
SNMP Card



Dry contact expansion card



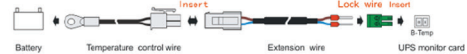
BMS expansion card



Battery  
Release Control Accessory



Class - C SPD



Battery  
Temperature Sensor

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Status Light

Touch Screen (option)

### POWER MODULE



1. LED indicator
2. Lock indicator

### BYPASS MODULE



1. Dry contact
2. Cold start
3. Expansion card slot
4. SNMP
5. RS485
6. RS232
7. Parallel port

### MODEL MY 60 - 120 kVA

#### FRONT VIEW (opened doors)



1 Power module  
1 Bypass module

1. Power Module
2. Bypass Module
3. Input Breaker
4. Output Breaker
5. Bypass Breaker
6. Maintenance breaker

### MODEL MY 160 - 200 kVA

#### FRONT VIEW (opened doors)



2 Power module  
1 Bypass module

1. Power Module
2. Bypass Module
3. Input Breaker
4. Output Breaker
5. Bypass Breaker
6. Maintenance breaker

Your choice of power protection

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EMERGENCY DEVICES (Lights/Alarms)

MODEL	MY60	MY80	MY100	MY120	MY160	MY200
INPUT						
Voltage (Vac)	380/400/415 (138~485 L-L); 3 phase 4 wires					
Frequency (Hz)	40~70					
Power Factor	≥0.99					
Phase	3φ4W+PE					
THDi at full linear load	<3%					
BYPASS						
Bypass Voltage (Vac)	380/400/415: -20%~+15%; 3 phase 4 wires					
Frequency Range (Hz)	50/60(±5%/±10%)					
Overload	≤130%: long run; 130%< load ≤150%: 5min; 150%< load ≤200%: 1s; 200%< load≤300%: 100ms; >300%: immediately.					
OUTPUT						
Capacity (kVA)	60	80	100	120	160	200
Power Factor	1 or 0.9 (option)					
Voltage (Vac)	380/400/415±1%; 3 phase 4 wires					
Frequency (Hz)	50/60±0.1% (Battery mode)					
Phase	3φ4W+PE					
Three Phase Difference	≤2%					
Waveform	Pure sine wave, THDv<1% at linear load, THDv<4% at non-linear load					
Transfer Time (ms)	0					
AC-AC Efficiency Max	96.5%					
Overload*	101-105% Long run, 106-110% load for 60 minutes, 111%-125% load for 10 minutes, 126%-150% load for 1 minute, over 150% load transfer to bypass					
BATTERY						
Battery Voltage (Vdc)	±192(±168 ~±288 adjustable)		±240(±168 ~±288 adjustable)			
BATT Type	External					
Charging Current (A) MAX	30				60	
OTHER						
Communication Interface	RS485, MODBUS, dry contact (RS232, SNMP, expend dry contact card are optional in slot)					
Display	4.3-inch Touch screen+LED or 7-inch touch screen+LED; Option					
Alarm	AC input abnormal, low battery, overload, failure					
Protection	Output short-circuit, overload, over-temperature, battery low voltage, output over/low voltage					
Noise (dB)	<65					
IP	20					
Working Temperature (°C)	0 ~ 40 no derate,40~50 auto derate.					
Relative Humidity	0 ~ 95%, no condensation					
Dimension (WxD×H)(mm)	400×960×1200				600×1000×1600	
Weight (kg)	145	161	161	161	260	260

• Specification is subject to change without prior notice.

\* 120kva overload capacity based on PF0.9.



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TIS.1291 Part 3-2553

- All specifications subject to change without notice.
- Custom-made specifications are acceptable.
- Manufactured by factory with ISO 9001, ISO 14001, OHSAS 18001, CE, STANDARD