

# HT-TZ Series

10-400 kVA

THREE-PHASE IN / THREE-PHASE OUT  
DOUBLE CONVERSION ON-LINE



## Product

HT-TZ series industrial UPS is specially designed for the relatively harsh power consumption environment and field application environment of the industrial manufacturing industry. It adopts double conversion online high-performance sine wave UPS, advanced industrial-grade power devices and superior performance. International advanced technologies such as SPWM inverter and intelligent multi-mode battery management technology, as well as rich power management software and other technologies, provide power protection for important equipment such as manufacturing intelligent precision equipment and industrial automation systems, and have been widely used in metallurgy, Chemical, building materials, glass, automobile, electric power, communication, computer room and other industries.

## Features:

### High-performance design

- Strengthened combined structure cabinet design, user-friendly front-end maintenance design, can be against the wall on three sides, saving space. It can be equipped with various components to improve the IP level, which is suitable for various harsh industrial environments.
- The mains input range can reach  $380\text{Vac}\pm 25\%$ , and the allowable mains frequency can reach  $40\sim 65\text{Hz}$ , which is more suitable for industrial power grid environment.
- The circuit board is placed in a completely enclosed space and coated with "three-proof", which is more suitable for the harsh environment of the tunnel.

- Fan intelligent speed regulation, prolong fan life, reduce UPS noise. Multi-level protection Safe operation
- With alarm and protection functions such as input overvoltage, input undervoltage, overload, short circuit, phase loss, phase sequence error, etc., it has strong adaptability and strong anti-load capability.
- Cold start and self-start functions, the UPS can be started directly with the battery pack when there is no utility power, and the UPS can be started directly with the utility pack when there is no battery to meet the emergency needs; when the utility power is restored, the UPS can be started automatically, and it has the advantage of being unmanned. Watch function.
- DC input polarity protection to ensure that the machine is not damaged. High reliability design
- Adopt self-patented master-slave self-adaptive parallel technology, which can be upgraded or expanded online according to business development, to meet the requirements of "growing and building":
- Each parallel device has no master-slave distinction, avoiding single point fault
- UPS of different power and different models can be connected in parallel;
- N+1 parallel connection can be realized without any accessories;
- Parallel machines can share battery packs, saving costs;
- In theory, there is no limit on the number of parallel machines
- Key circuits are designed with redundancy, such as  $3\times 2$  logic power supply redundancy, cooling system redundancy, power capacity surplus, etc.,

which effectively improves system operation reliability.

- Adopt double DSP digital control technology, the whole machine has high control precision and fast operation speed.
- The three-phase output is completely independently modulated, allowing the three-phase load to be 100% unbalanced, with strong load adaptability and high system reliability.
- Manual maintenance bypass design, can still supply uninterrupted power supply to the load during maintenance, improve reliability and maintainability; reliable fool-proof control switch, UPS input and output and maintenance bypass switch adopt linkage signal Detection, the user opens and closes various control switches at will, the UPS will automatically change the working state, and the power supply will not be abnormal due to the disorderly closing of the control switch by the user.

## Green environmental protection

- Comply with the national standard EMC electromagnetic compatibility (GB7260.2), reduce and avoid all kinds of interference, and ensure the purity of the power grid. Humanized management is easy to operate
- Friendly Chinese and English optional color 7-inch touch screen LCD+LED interface design, intuitive and clear running status flow chart, touch buttons with intelligent icons, make human-machine communication zero distance
- Rich UPS operation data, historical event records and multi-level fault code display, highlighting the humanization of information processing;
- Through the RS232 or RS485 interface, with the intelligent monitoring software, it can communicate with the PC in real time. Various parameters and working status of the UPS system can be clearly displayed on the communication interface of the PC. direct control of functions;
- Set the input voltage range by entering the password on the panel, thereby reducing the frequency of battery use and greatly extending the service life of the battery.
- Input the password on the panel to set the output voltage to adapt to the voltage requirements of different devices.
- Set the battery voltage by entering the password on the panel, so as to avoid the failure of the UPS to work normally due to damage to a certain battery.
- With optional functions of RS485 interface and DB9 dry node interface;

## Perfect network monitoring solution

- Real-time monitoring function
- Self-diagnosis function
- Intelligent query function

- Automatic alarm function
- Automatic real-time saving
- Humanized control design, there is no sequence requirement for power on and off, so as to avoid UPS failure due to wrong operation sequence. Value-added options
- Real-time monitoring of voltage, current, battery temperature, etc.
- Intelligent analysis of battery working status
- Sound and light alarm for system abnormality
- Real-time status record storage function
- RS232, RS485 interface remote monitoring function
- Convenient management and installation
- Power supply system customization: UPS products of different grid systems can be customized according to the requirements of equipment voltage/frequency
- 12-pulse rectification: suitable for large-capacity UPS, which can effectively reduce input current harmonics
- Bypass isolation transformer: improve the reliability of bypass power supply
- Air-conditioning battery cabinet : Suitable for harsh installation environment,
- Harmonic suppressor: used to reduce the total harmonic distortion rate of input current
- Protection grade option: With dustproof and waterproof processing components, it can effectively improve the protection level of the equipment (optional)
- ECO efficiency Optimizer: Improve system efficiency
- SNMP option

Model	TZ3310	TZ3315	TZ3320	TZ3330	TZ3340	TZ3360	TZ3380
Capacity	10KVA	15KVA	20KVA	30KVA	40KVA	60KVA	80KVA
<b>System</b>							
Output power factor cosφ:	100~ 80%						
Maximum leakage current (mA)	100						
Mean Time Between Failure (MTBF)	300,000 hours						
Remote signal	Three contact signals ( battery low, battery discharge, bypass /						
Dry contact signal	Standard configuration 14 contact signals;						
Remote control	EPO Emergency Shutdown and Bypass ECO						
Computer monitor port	RS232/ RS485 / MODBUS						
Operating temperature	-10 -50 °C						
Maximum relative humidity	95 % ( non-condensing )						
Cool down	Forced ventilation (fan speed varies with load)						
Maximum altitude	1000 meters rated power ( 100 meters increase -1% reduction )						
Noise dB	60 ~ 65						
Protection class ( EN 60529 )	IP22						
In and out way	down / back						
Safety standards	Safety regulations: EN 50091-1 / GB4943 ; Electromagnetic						
Standard configuration	Built-in output isolation transformer						
Optional	Input isolation transformer, 5th harmonic filter, 12 pulses						
<b>Rectifier input ( standard UPS)</b>							
Rated voltage	380V 3 -phase						
Voltage range	± 25 %						
Rated frequency	50 / 60 Hz automatic recognition						
Frequency Range	45 ~ 65						
Input power factor cosφ :	Up to 0.99 (with harmonic filter)						
Input current harmonic components (THDi)	Can be <5% (with harmonic filter)						
Maximum input current [A]	18	28	37	55	72	103	130
Power factor cosφ:	80% ( optional 90% )						
Soft start	0 - 100% for 10 seconds						
<b>Battery</b>							
Number of units (rated voltage)	192 ( 384VDC )						
<b>Inverter output</b>							
Rated voltage [V]	380 ( 3 -phase +N )						
Rated current [A]	14	22	29	43	58	87	115
Phase voltage setting	200 ~ 244 V ( control panel )						
Crest factor ( I <sub>peak</sub> /I <sub>rms</sub> )	3:1(Max.)						
Waveform	Sine wave						
Linear load voltage waveform distortion	<2%						
Nonlinear load voltage waveform distortion	3%						
Steady State Voltage Stability	± 1 %						
Transient Voltage Response	± 5 % within 10ms						
Rated frequency	same as input						
Overload	600'/10'/1' ( 110/125/150% rated current )						
Inverter efficiency (100% load)	94%						
<b>Bypass</b>							
Rated voltage [V]	380 ( 3 -phase +N )						
Input voltage range	±15 % (adjustable from control panel to ± 10 % , ± 25 % )						
Rated frequency [Hz]	50 / 60						
Frequency Range	±2 % (adjustable from control panel to ±5 % )						
Inverter / Bypass Transfer Time	0ms						
Overload capacity	18' / 10' / 1" ( 150/175/200% rated current)						
<b>Physical</b>							
DimensionsW *D*H (mm)	600 * 600 *1280					800* 800 *1480	
Weight (without battery) Kg	200	220	260	300	360	480	550

Model	TZ33100	TZ33120	TZ33160	TZ33200	TZ33300	TZ33400
Capacity	100KVA	120KVA	160KVA	200KVA	300KVA	400KVA
<b>System</b>						
Output power factor cosφ:	100~ 80%					
Maximum leakage current (mA)	100					
Mean Time Between Failure (MTBF)	300,000 hours					
Remote signal	Three contact signals ( battery low, battery discharge, bypass /					
Dry contact signal	Standard configuration 14 contact signals;					
Remote control	EPO Emergency Shutdown and Bypass ECO					
Computer monitor port	RS232/ RS485 / MODBUS					
Operating temperature	-10 -50 °C					
Maximum relative humidity	95 % ( non-condensing )					
Cool down	Forced ventilation (fan speed varies with load)					
Maximum altitude	1000 meters rated power ( 100 meters increase -1% reduction )					
Noise dB	60 ~ 65					
Protection class ( EN 60529 )	IP22					
In and out way	down / back					
Safety standards	Safety regulations: EN 50091-1 / GB4943 ; Electromagnetic					
Standard configuration	Built-in output isolation transformer					
Optional	Input isolation transformer, 5th harmonic filter, 12 pulses					
<b>Rectifier input ( standard UPS)</b>						
Rated voltage	380V 3 -phase					
Voltage range	± 25 %					
Rated frequency	50 / 60 Hz automatic recognition					
Frequency Range	45 ~ 65					
Input power factor cosφ :	Up to 0.99 (with harmonic filter)					
Input current harmonic components (THDi)	Can be <5% (with harmonic filter)					
Maximum input current [A]	175	220	280	350	530	700
Power factor cosφ:	80% ( optional 90% )					
Soft start	0 - 100% for 10 seconds					
<b>Battery</b>						
Number of units (rated voltage)	192 ( 384VDC )					
<b>Inverter output</b>						
Rated voltage [V]	380 ( 3 -phase +N )					
Rated current [A]	148	186	235	296	440	600
Phase voltage setting	200 ~ 244 V ( control panel )					
Crest factor ( I <sub>peak</sub> /I <sub>rms</sub> )	3:1(Max.)					
Waveform	Sine wave					
Linear load voltage waveform distortion	<2%					
Nonlinear load voltage waveform distortion	3%					
Steady State Voltage Stability	± 1 %					
Transient Voltage Response	± 5 % within 10ms					
Rated frequency	same as input					
Overload	600'/10'/1' ( 110/125/150% rated current )					
Inverter efficiency (100% load)	94%					
<b>Bypass</b>						
Rated voltage [V]	380 ( 3 -phase +N )					
Input voltage range	±15 % (adjustable from control panel to ± 10 % , ± 25 % )					
Rated frequency [Hz]	50 / 60					
Frequency Range	±2 % (adjustable from control panel to ±5 % )					
Inverter / Bypass Transfer Time	0ms					
Overload capacity	18 ' / 10 ' / 1 " ( 150/175/200% rated current)					
<b>Physical</b>						
DimensionsW *D*H (mm)	800 * 800 * 1800		1100 *800*1800		1400*1100*2000	
Weight (without battery) Kg	900	1020	1220	1550	2500	2850