

ZST Series, 10 ~ 80 kVA, 3:3 Phase, PF: 0.9

Standards - Safety: IEC/EN62040-1; IEC/EN60950-1

EMC: IEC/EN62040-2; IEC61000-4-2; IEC61000-4-3; IEC61000-4-4; IEC61000-4-5; IEC61000-4-6; IEC61000-4-8



Features

Online double conversion

- Online Double Conversion design with a pure output sinewave, that is immune from the UPS input, so that the load can run steadily.
- UPS switches between multiple working modes with out any interruption

Full DSP control

- More stable and reliable Full DSP Control based system for stable performance

High power factor

- 0.9 Output Power Factor
- Input power factor 0.98 with filter improves efficiency and reduces the harmonic pollution to the Grid and lowers the UPS running cost.

Additional Features

Wide input adaptability

- The range of AC input voltage is (380V_l 400V_{ac}/415V_{ac}) (-25%/+20%), minimizing transfer to battery mode, thereby greatly prolonging the battery life.
- Wide input frequency ranging from 45Hz to 65Hz, ensures stability of UPS while generator connected.

Optimized battery management

- Intelligent battery management system and advanced battery auto float/boost charge technology, reduces the frequency of battery maintenance, greatly improves the battery efficiency and extends battery life.
- Battery discharge time prediction: the system will display the backup time of battery calculated by discharge current and voltage.
- Battery self-test: battery is automatically tested at regular intervals.
- Flexible battery configuration ranging from 360-408V_{dc} / 480V_{dc}.

N+X parallel redundancy

- N+X parallel redundant design, up to 6 units available, makes the configuration more flexible.
- Any unit in parallel system fails, the faulty one will automatically cut off output, and the load will be powered by the remained units.
- Easily configurable parallel system just by connecting the parallel cables and configuration in the system settings.
- Non-fixed Master-Slave relationship: Among several UPS in parallel, the unit startup first is Master UPS, the others are Slave. The master and slave may be exchanged.

Strong overload capability

- 110% / 125% / 150% overload for 60min / 10min / 1min.

Transformer based UPS Design

- Isolation transformer offers full isolation and complete common mode noise rejection
- 6 Pulse Design with Output Isolation Transformer and 12 Pulse Design with Input and Output Isolation Transformer



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Additional Features

Power Walk In

- Specially designed power walk in function, in which rectifier of each unit in parallel system will be turned on in sequence at intervals to avoid the sudden load on the generator, thereby reducing the cost of the generator required.

Generator Mode

- Set the maximum output power of the generator when a smaller one than needed is employed to extend the battery duration time. In this case, the load is supplied by both the generator and battery.

LBS Synchronization

- Synchronize the output of the two independent UPS systems (single unit or parallel) even when the two systems are operating on different modes (bypass/inverter) or on battery.

Multi-Protection

- Self-diagnosis function will take place before start-up for safety.
- Multi-protection: AC input under/over voltage, overload, short-circuit, over-current, over bus voltage, over-temperature, fan failure, auxiliary power failure, battery under voltage, battery over-charge and so on.

EPO Function

- A concave red EPO button with transparent cover is embodied in the LCD control panel for emergency power off.

User-friendly network management

- LCD and LED mimic diagram: real time operation parameters and status
- RS232 & RS485 communication ports: for local monitor with corresponding software, and MODBUS protocol is optional.
- SNMP adapter (optional): for remote monitor through network.
- Dry contacts for additional monitoring:
 - a.** UPS on Inverter
 - b.** Mains input failure
 - c.** Remote EPO
 - d.** Battery low voltage alarm (Optional)
 - e.** UPS fault (Optional)
 - f.** UPS alarm (Optional)
 - g.** UPS on battery (Optional)
 - h.** UPS on bypass (Optional)

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Product Information

| Model | ZST10-06 | ZST20-06 | ZST30-06 | ZST40-06 | ZST60-06 | ZST80-06 |
|----------------------|-----------|------------|------------|------------|------------|------------|
| Capacity (VA/ Watts) | 10kVA/9kW | 20kVA/18kW | 30kVA/27kW | 40kVA/36kW | 60kVA/54kW | 80kVA/72kW |

Input

| | | | | | | |
|---------------------------|---|--|--|--|--|--|
| Operating Voltage Range | 380/400/415Vac(-25% / +20%), (3Ph+N+PE) | | | | | |
| Operating Frequency Range | 50/60Hz (± 5Hz) | | | | | |
| Power Factor | > 0.97 (with filter) | | | | | |

Output

| | | | | | | |
|---------------------------|-----------------------|------|--|------|--------|--|
| Output Voltage | 380/400/415 VAC (±1%) | | | | | |
| Output Frequency | 50/60Hz (± 0.05%) | | | | | |
| Harmonic Distortion(THDi) | <3% (Linear Load) | | | | | |
| Crest Factor | 3:1 (Max.) | | | | | |
| Efficiency | ≥88% | ≥89% | | ≥90% | ≥90.5% | |

Bypass

| | | | | | | |
|----------------------------|--|--|--|--|--|--|
| Rated Voltage | 380/400/415Vac | | | | | |
| Rated Frequency | 50/60Hz | | | | | |
| Voltage Protection Range | Upper Limit: +20%(+10%,+15%,+20% adjustable) Lower Limit: -40%(-10%,-20%,-30%, -40% adjustable) | | | | | |
| Frequency Protection Range | ± 10% (± 2.5%, ±5%, ±10%, ±20% adjustable) | | | | | |

Battery

| | | | | | | |
|-----------------|--------------------|--|--|--|--|--|
| Battery Voltage | 384Vdc(360-384Vdc) | | | | | |
|-----------------|--------------------|--|--|--|--|--|

System Features

| | | | | | | |
|-------------------------|---|--|--|--|--|--|
| Transfer Time | 0ms(Line mode < > Battery mode) | | | | | |
| Overload | 110%/60min, 125%/10min, 150%/1min | | | | | |
| LED Display | Input, Inverter, Bypass, Battery, Output, Status | | | | | |
| LCD Display | I/O Voltage, Frequency , Power, Power factor, Battery voltage, Current, Battery status, Load Percentage UPS status, History record | | | | | |
| Communication Interface | Dry contact, RS232, RS485, SNMP card (optional) | | | | | |
| Optional | Harmonic Filter, SNMP adapter, LBS cables, battery temperature sensor, Bypass current sharing inductor | | | | | |

Environment

| | | | | | | |
|-----------------------|------------------------|--|--|--------|--|--|
| Operating Temperature | 0 ~ 40°C | | | | | |
| Storage Temperature | -25°C ~ 55°C | | | | | |
| Humidity Range | 0 ~ 95% non-condensing | | | | | |
| Altitude | < 1500m | | | | | |
| Noise Level | < 60dB | | | < 65dB | | |

Physical

| | | | | | | |
|-------------------------|------------------|-----|------------------|-----|------------------|-----|
| Dimension(D x W x H) mm | 350 x 650 x 1050 | | 430 x 830 x 1100 | | 720 x 690 x 1400 | |
| Net Weight (Kg) | 148 | 163 | 230 | 255 | 386 | 426 |
| Shipping Weight (Kg) | 168 | 183 | 263 | 288 | 432 | 472 |

Specifications are subject to change without prior notice.

