



# T-WAVE

## iPower 3P Series

### 10kVA - 20kVA

True On-Line Double Conversion



### Features

- Parallel redundancy
- Online double conversion with DSP control
- Input current harmonic: <5%
- Optimization battery group, the quantity of battery: 16/18/20 pieces (optional)
- High output power factor at 0.9PF
- Wide input voltage range: 208~520Vac
- Wide input frequency range(50Hz: 45~55Hz / 60Hz: 55~65Hz)
- Support generator input
- Support economic(ECO) operation mode
- Self-testing when UPS startup
- Options: SNMP card/Relay card/ Parallel card
- Cold start



Rear Panel



Relay card



SNMP



Parallel board



Battery Cabinets (Optional)



## Technical Specifications:

| MODEL                           | iPower(3P)-10T                                                                                                                                               | iPower(3P)-15T                                                                                        | iPower(3P)-20T |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------|
| Capacity (VA/Watts)             | 10k / 9k                                                                                                                                                     | 15k / 13.5k                                                                                           | 20k / 18k      |
| <b>INPUT</b>                    |                                                                                                                                                              |                                                                                                       |                |
| Nominal voltage                 | 380/400/415Vac;(3Ph+N+PE)                                                                                                                                    |                                                                                                       |                |
| Operating voltage range         | 208 ~ 520Vac                                                                                                                                                 |                                                                                                       |                |
| Operating frequency range       | 50Hz:45~55Hz;60Hz:55~65Hz(auto sensing)                                                                                                                      |                                                                                                       |                |
| Power factor                    | ≥0.99                                                                                                                                                        |                                                                                                       |                |
| Bypass voltage range            | Max.voltage: 220V: +25%(optional +10%,+15%,+20% )<br>230V: +20% (optional +10%,+15%)<br>240V: +15% (optional +10%)<br>Min.voltage: -45% (optional -20%,-30%) |                                                                                                       |                |
| Bypass frequency range          | Frequency protection range: ± 10%                                                                                                                            |                                                                                                       |                |
| ECO range                       | Same as the bypass                                                                                                                                           |                                                                                                       |                |
| Harmonic distortion (THDi)      | <5%(100% linear load)                                                                                                                                        |                                                                                                       |                |
| Generator input                 | Support                                                                                                                                                      |                                                                                                       |                |
| <b>OUTPUT</b>                   |                                                                                                                                                              |                                                                                                       |                |
| Rated voltage                   | 220/230/240Vac                                                                                                                                               |                                                                                                       |                |
| Power factor                    | 0.9                                                                                                                                                          |                                                                                                       |                |
| Voltage regulation              | ± 1%                                                                                                                                                         |                                                                                                       |                |
| Frequency                       | Line Mode                                                                                                                                                    | ± 1%/ ± 2%/ ± 4%/ ± 5%/ ± 10% of the rated frequency(optional)                                        |                |
|                                 | Bat. Mode                                                                                                                                                    | 50/60Hz( ± 0.1%)                                                                                      |                |
| Crest factor                    | 3:1                                                                                                                                                          |                                                                                                       |                |
| Harmonic distortion (THD)       | ≤2% with linear load<br>≤5% with non-linear load                                                                                                             |                                                                                                       |                |
| Efficiency                      | >93.5%                                                                                                                                                       | >94.5%                                                                                                |                |
| <b>BATTERY</b>                  |                                                                                                                                                              |                                                                                                       |                |
| Battery voltage                 | ± 96/108/120Vdc ( optional )                                                                                                                                 |                                                                                                       |                |
| Capacity (standard unit)        | 12V/9Ah                                                                                                                                                      |                                                                                                       |                |
| Typical recharge time           | 6~8 hours (to 90% of full capacity)                                                                                                                          |                                                                                                       |                |
| Charge current                  | 1A(10kVA Standard unit) ; Max.current 10A(Long run unit)                                                                                                     |                                                                                                       |                |
| <b>SYSTEM FEATURES</b>          |                                                                                                                                                              |                                                                                                       |                |
| Transfer time                   | Mains to Battery:0ms; Mains to Bypass:0ms                                                                                                                    |                                                                                                       |                |
| Overload                        | Line Mode                                                                                                                                                    | Load ≤ 110%: last 60min, ≤ 125%: last 10min, ≤ 150%: last 1min, >150% turn to bypass mode immediately |                |
|                                 | Bypass Mode                                                                                                                                                  | 63A(Breaker)                                                                                          | 100A(Breaker)  |
| Short circuit                   | Hold Whole System                                                                                                                                            |                                                                                                       |                |
| Overheat                        | Line Mode: Turn to Bypass; Bat. Mode: Shut down UPS immediately                                                                                              |                                                                                                       |                |
| Low battery voltage             | Alarm and Switch off                                                                                                                                         |                                                                                                       |                |
| Self-diagnostics                | Upon Power On and Software Control                                                                                                                           |                                                                                                       |                |
| Battery                         | Advanced Battery Management                                                                                                                                  |                                                                                                       |                |
| Audible & Visual alarms         | Line Failure, Battery Low, Overload, System Fault                                                                                                            |                                                                                                       |                |
| LED & LCD display               | Line Mode, Bat. Mode, Eco Mode, Bypass Mode, Battery Low, Battery Bad, Overload & UPS Fault                                                                  |                                                                                                       |                |
| LCD display                     | Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load Percentage, Battery Voltage, Inner Temperature & Remaining Battery Backup Time        |                                                                                                       |                |
| Communication interface         | Dry contact,USB,SNMP card(optional), Parallel board(optional), Relay card (optional)                                                                         |                                                                                                       |                |
| <b>ENVIRONMENTAL</b>            |                                                                                                                                                              |                                                                                                       |                |
| Operating temperature           | 0°C ~ 40°C                                                                                                                                                   |                                                                                                       |                |
| Storage temperature             | -25°C ~ 55°C                                                                                                                                                 |                                                                                                       |                |
| Humidity range                  | 0 ~ 95% (non-condensing)                                                                                                                                     |                                                                                                       |                |
| Altitude                        | < 1500m                                                                                                                                                      |                                                                                                       |                |
| Noise level                     | <55dB                                                                                                                                                        | <58dB                                                                                                 |                |
| <b>PHYSICAL</b>                 |                                                                                                                                                              |                                                                                                       |                |
| Dimension D × W × H (mm)        | 597 × 250 × 655(S)/502 × 250 × 616(H)                                                                                                                        | 502 × 250 × 616                                                                                       |                |
| Net weight (kg)                 | 76(S)/35 (H)                                                                                                                                                 | 45                                                                                                    | 46             |
| <b>STANDARDS</b>                |                                                                                                                                                              |                                                                                                       |                |
| Safety                          | IEC/EN62040-1,IEC/EN60950-1                                                                                                                                  |                                                                                                       |                |
| EMC                             | IEC/EN62040-2,IEC61000-4-2,IEC61000-4-3,IEC61000-4-4,<br>IEC61000-4-5,IEC61000-4-6,IEC61000-4-8                                                              |                                                                                                       |                |
| <b>BATTERY BANK</b>             |                                                                                                                                                              |                                                                                                       |                |
| Model                           | MP-BT Series                                                                                                                                                 |                                                                                                       |                |
| Battery type& Max.quantity      | 2 × 20pcs/9Ah                                                                                                                                                |                                                                                                       |                |
| <b>PHYSICAL OF BATTERY BANK</b> |                                                                                                                                                              |                                                                                                       |                |
| Dimensions D × W × H (mm)       | 597 × 250 × 616                                                                                                                                              |                                                                                                       |                |
| Net weight (kg)                 | 122/134                                                                                                                                                      |                                                                                                       |                |

