

GI SERIES Pure Sine Wave Inverter

PRODUCT OVERVIEW

With the double MCUs, the product provides different charge voltage and charge current to realize charge management for batteries of different types. Its mains supply preferred mode, energy-saving mode and battery preferred mode are all settable, thus making it easy to meet the different application needs of users. It has an LCD. It is widely applied to families, schools, streets, frontier defense, pasturing areas, industrial equipment, satellite communication equipment, military vehicle-borne equipment, ambulances, police cars, ships, etc



MAIN FEATURES

Excellent performance because of double MCU Intelligent design

- Pure sine wave output for compatibility with loads of different types
- Visualization of operation status of the equipment through a digital LCD
- A wide range of input voltage, accurate output and full automatic voltage stabilization
- Settable battery type and charge current for the charge management of batteries of different types of FT/FT-B
- Settable mains supply preferred mode, energy-saving mode and battery preferred mode for easy meeting of the needs of different users
- Overall protection functions (battery overvoltage protection, battery under voltage protection, overload protection, short circuit protection and over temperature protection)

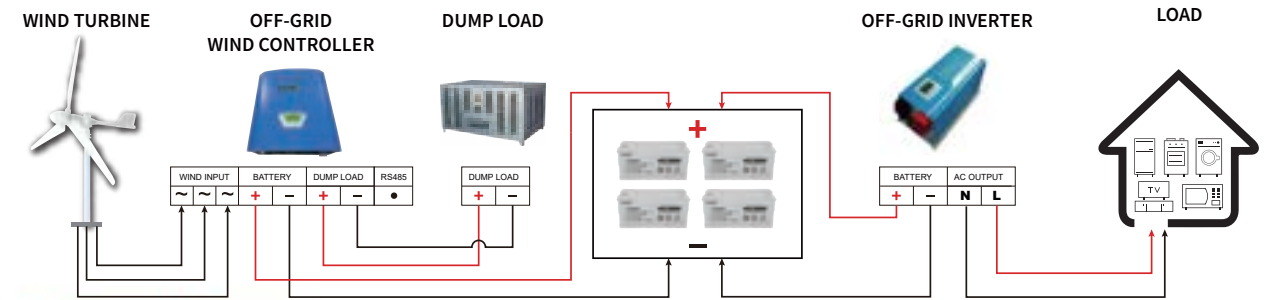


TECHNICAL INDEXES

Technical Indexes-1

| Model: GI | 0.3KW | 0.5KW | 0.7KW | 0.7KW | 1KW |
|-------------------------|----------------------|-------|-------|-------------|-------------|
| Rated power | 300W | 500W | 700W | 700W | 1000W |
| Battery | | | | | |
| Rated voltage | 12VDC/24VDC | 24VDC | 12VDC | 12VDC | 12VDC/24VDC |
| Input | | | | | |
| Voltage range | 73-138VAC/145-275VAC | | | | |
| Frequency | 45-65Hz | | | | |
| Product size: L*W*H(mm) | 302*122*188 | | | 316*149*215 | |
| Package size: L*W*H9mm) | 375*195*260 | | | 410*215*280 | |

OFF-Grid Wind Turbine SYSTEM



Technical Indexes-2

| Model: GI | 1KW | 1.5KW | 2KW | 3KW | 4KW | 5KW | 6KW | 8KW |
|-------------------------|----------------------|-------|-------|-------------|-------------|-------------|-------------|-------|
| Rated power | 1000W | 1500W | 2000W | 3000W | 4000W | 5000W | 6000W | 8000W |
| Battery | | | | | | | | |
| Rated voltage | 12VDC/24VDC/48VDC | | | 24VDC/48VDC | | 48VDC/96VDC | | |
| Charge current | 30A (default) -C0-C6 | | | | | | | |
| Battery type | U0-U7 | | | | | | | |
| Input | | | | | | | | |
| Voltage range | 85-138VAC/170-275VAC | | | | | | | |
| Frequency | 45-65Hz | | | | | | | |
| Product size: L*W*H(mm) | 486*247*179 | | | | 555*307*189 | | 653*332*260 | |
| Package size: L*W*H9mm) | 550*310*230 | | | | 640*370*240 | | 715*365*310 | |

Technical Indexes-3

| Common technical Index | |
|----------------------------------|---|
| Output | |
| Voltage range | 110VAC/220VAC; ± 5%(Inversion mode) |
| Frequency | 50/60Hz ± 1%(Inversion mode) |
| Output wave | Pure sine wave |
| Conversion time | < 10ms(Typical load) |
| Efficiency | > 85% (80% resistive load) |
| Overload | 110-120%/30S; > 160%/300ms; |
| Protection function | Battery overvoltage protection, battery undervoltage protection, overload, protection, short circuit protection, overtemperature protection, etc. |
| Operation of Ambient Temperature | 0-40℃ |
| Ambient temperature for storage | -15 - +50℃ |
| Operation/Storage ambient | 0-90% No condensation |

P.S.: We keep the right to change without any information.

G1 SINGLE-PHASE POWER-FREQUENCY INVERTER

MAIN FEATURES

- **High reliability**
Frequency tracking, noise filtering and low distortion in inverter output because of double-conversion design
- **High adaptability**
A wide range of input frequency, which realizes stable operation of fuel generators
- **High optimal performance of the battery**
An intelligent battery management technology, which guarantees a longer battery life and decreases the times of battery maintenance
An advanced constant-voltage charge technology, which activates the battery to the most extent, saves the charge time and guarantees a longer battery life
- **Overall and reliable protection**
A power-on test function, which can avoid the faults because of hazards of the inverter
- **Overall automatic protection and alarms such as output overload protection**
- **Efficient IGBT (Insulated Gate Bipolar Transistor) inversion technology**
Good high-speed switching feature, large-voltage and large-current operating characteristics, and voltage drive of IGBT (The fifth-generation IGBT has a lower saturation voltage drop and higher operation efficiency and reliability.)



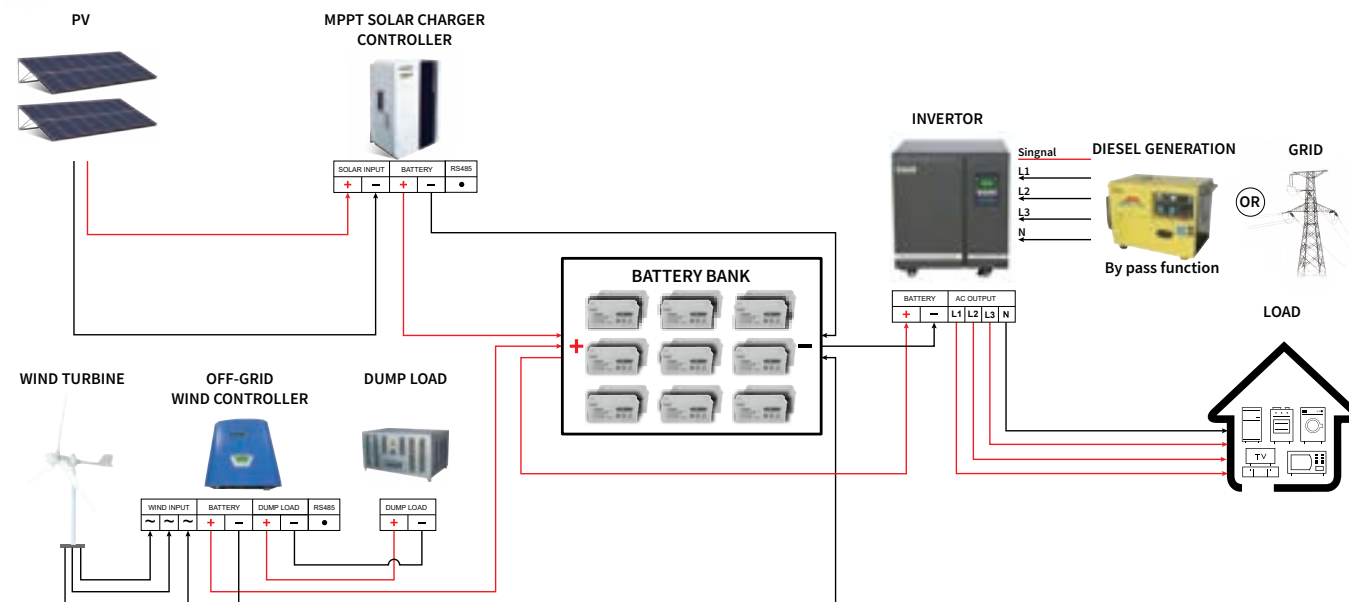
PRODUCT OVERVIEW

The product is a highly stable and reliable power supply designed by GREEF to meet the high reliability requirement for power grid and network systems. Its high quality enables it to provide safe, reliable and overall protection for loads such as data centers of users, industrial control equipment, precise medical system equipment and household appliances. It has perfect protection functions and high reliability because of a full digital vector control technology based on real time processing by DSP, MCU and DDC. In both the pure sine wave output mode and the inversion mode, it can output a pure sine wave power supply with low distortion, thus providing the best power supply guarantee for the loading equipment of users.

TECHNICAL INDEXES

| Model: G1 | 6KW | 8KW | 10KW | 12KW | 15KW | 20KW |
|----------------------------------|--|-----|------|----------------------------|------|-------------|
| Rated Power | 6KW | 8KW | 10KW | 12KW | 15KW | 20KW |
| Battery | | | | | | |
| Rated Voltage | 96VDC/192VDC | | | 192VDC | | |
| Charge Current | 10A-20A | | | | | |
| Low Voltage Protection | 84VDC/168VDC | | | 168VDC | | |
| Input | | | | | | |
| Voltage Range | 88-132VAC/176-264VAC | | | | | |
| Frequency | 45-65Hz | | | | | |
| Output | | | | | | |
| Frequency | 50/60Hz ± 1% (Inversion Mode) | | | | | |
| Voltage Range | 110VAC/220VAC; ± 5% (Inversion Mode) | | | | | |
| Output Waveform | Pure sine Wave | | | | | |
| Conversion Time | <10ms (Typical Load) | | | | | |
| Efficiency | >85% (100% Resistive Load) | | | >90% (100% Resistive Load) | | |
| Overload | 110-120%/30S; >160%/300ms; | | | | | |
| Protection Function | Battery overvoltage protection, battery undervoltage protection, overload protection, short circuit protection, overtemperature protection, etc. | | | | | |
| Operation of Ambient Temperature | 0-40°C | | | | | |
| Ambient Temperature for Storage | -15 - +50°C | | | | | |
| Operation/Storage combient | 0-90% No condensation | | | | | |
| Product Dimensions: DxHxh(mm) | 555*368*695 | | | | | 655*363*795 |
| Gross Weight (KG) | 80 | 90 | 110 | 130 | 150 | 170 |

SOLAR WIND DIESEL HYBRID GENERATOR SYSTEM



GIT THREE-PHASE POWER FREQUENCY INVERTER



PRODUCT OVERVIEW

The product applies to different types of loads because of its full digital design and real pure sine wave output. With power-frequency design and highly stable output voltage and frequency, it can operate continuously for a long time. Thus, it avoids the disadvantages of direct use of the mains supply, such as interruption of power supply, voltage instability, noise, and lightning attacks, and the disadvantage of short power supply time of small UPSs, guaranteeing continuous and reliable operation for electrical equipment. Sine wave inverter supplies are the best guarantee for the safe and reliable operation of systems. The product is now widely used in China Telecom, China Mobile, China Unicom, aerospace, railways, financial management, office automation, industrial automatic control, medical health, military scientific research, etc.

MAIN FEATURES

- Excellent performance because of an MCU intelligent control technology;
- A wide range of applicable loads because of power-frequency transformer design and pure sine wave AC output;
- A wide range, high accuracy, and full automatic voltage stabilization;
- Overall protection functions (overload protection, short circuit protection, overvoltage protection, undervoltage protection and overtemperature protection);
- Simple LEDs and a LCD for visualization of operation status of the equipment

TECHNICAL INDEXES

| Model: GIT | 1KW | 2KW | 3KW | 4KW | 5KW | 7KW | 8KW | 10KW |
|---|--|-------|-------|-------|-----------------|---------|---------|---------|
| Rated power | 1KW | 2KW | 3KW | 4KW | 5KW | 7KW | 8KW | 10KW |
| DC voltage | 48 VDC | | | | 48VDC/96VDC | | | |
| Input voltage | Three-phase four-wire system + ground wire 380V ± 20% | | | | | | | |
| Input frequency | 45—65 Hz | | | | | | | |
| Output voltage | 380VAC ± 5% (three-phase four-wire system) | | | | | | | |
| Output frequency | 50Hz ± 1% | | | | | | | |
| Switching time | Switching from the mains supply mode to the battery mode: 50ms; switching from the battery mode to the mains supply mode: 25ms | | | | | | | |
| Charge current | Max 8A | | | | | | | |
| Inverter output protection | 100-120%, 30s; > 120%, 100ms | | | | | | | |
| Noise | < 45dB | | | | | | | |
| Ambient temperature for operation | 0-40°C | | | | | | | |
| Ambient temperature for storage | -15 - +50°C | | | | | | | |
| Relative humidity for operation/storage | 0-90% (no condensation) | | | | | | | |
| Altitude for operation | 0-3,000m | | | | | | | |
| Altitude for storage | 0-15,000m | | | | | | | |
| Product dimensions D x W x H (mm) | 560 x 230 x 570 | | | | 590 x 470 x 730 | | | |
| Packing dimensions D x W x H (mm) | 640 x 300 x 730 | | | | 690 x 570 x 850 | | | |
| Net weight/gross weight (kg) | 29/40 | 38/48 | 31/51 | 50/61 | 104/112 | 106/120 | 107/125 | 117/137 |

GIT THREE-PHASE POWER-FREQUENCY INVERTER

PRODUCT OVERVIEW

The product can provide reliable power supply protection for large data centers, network computer rooms as well as the electric power links of fields such as manufacturing, traffic and energy to meet the high reliability requirement of users for large-power inverters. Based on the DSP accurate control technology and the double built-in MCUs, the product can output stable and pure sine waves and provide safe and reliable power supply protection for users.



MAIN FEATURES

- Advanced operation mode**
 Frequency tracking, phase-locking voltage stabilization, noise filtering and prevention of impact by fluctuation of the power grid realized in output of the inverter
 The best power supply guarantee for the loading equipment of users contributed by a full digital vector control technology based on real-time processing by DSP, MCU and DDC
- Efficient IGBT (Insulated Gate Bipolar Transistor) inversion technology**
 Good high-speed switching feature, large-voltage and large-current operating characteristics, and voltage drive of IGBT (The fifth-generation IGBT has a lower saturation voltage drop and higher operation efficiency and reliability.)
- High adaptability**
 A wide range of input frequency (45Hz ~ 65Hz), which realizes stable operation of fuel generators
- Great loading capacity**
 Suitability for industrial applications such as machine tools and wire cutters
- Reliable performance**
 A power-on test function for timely discovery elimination of potential hazards
 High stability and reliability guaranteed by integration of functions including AC input overvoltage protection, AC input undervoltage protection, output

- overload protection, short circuit protection, overcurrent protection, bus overvoltage protection, overheat protection, fan fault protection, auxiliary power supply fault protection, battery undervoltage warning protection, battery overcharge protection, etc.
- Management function**
 Big LCD, visualized display of operation statuses through flow charts, intelligent icon touch buttons, tabular data, event records, etc.
 Visualization of parameters of the inverter by means of communication with a computer via a RS232/RS 485 interface with help of intelligent monitoring software of the inverter
- Intelligent battery management**
 Intelligent battery charge: Adjustment of the battery charge parameter according to the battery configuration of the user, and switching between equalizing charge and floating charge, temperature compensating charge, and discharge management according to the power supply conditions, which may make the battery life longer and reduce burden of the administrator
 Intelligent battery fault detection: Measurement of single parameters, display of the measurement results on the LCD, and immediate alarming and notification for the administrator upon any battery fault
- Personalized settings:**
 Proper adjustment of the input parameters according to the input power supply conditions

TECHNICAL INDEXES

| Model: GIT | GIT-10KW | GIT-20KW | GIT-30KW | GIT-50KW | GIT-60KW | GIT-80KW | GIT-100KW | GIT-150KW | GIT-200KW |
|--|--|----------|----------|-----------------------|----------|----------|---------------|-----------|---------------|
| Rated capacity | 10KW | 20KW | 30KW | 50KW | 60KW | 80KW | 100KW | 150KW | 200KW |
| Operation mode and principle | PWM (pulse width modulation) based on DSP accurate control technology and double built-in MCUs Complete isolation of the output power supply | | | | | | | | |
| AC input | | | | | | | | | |
| Phase number | Three-phase +N+G | | | | | | | | |
| Voltage | AC220V/AC380V ± 20% | | | | | | | | |
| Frequency | 50Hz/60Hz ± 5% | | | | | | | | |
| DC input | | | | | | | | | |
| DC voltage | DC192V/DC220V/DC240V/DC384V | | | DC384V | | | | | |
| Floating battery | 13.6V of each battery × battery quantity [13.6V × 16 batteries = 217.6V] | | | | | | | | |
| Cut-off voltage | 10.8V of each battery × battery quantity [10.8V × 16 batteries = 172.8V] | | | | | | | | |
| AC output | | | | | | | | | |
| Phase number | Three-phase +N+G | | | | | | | | |
| Voltage | AC220V/AC380V ± 1% (steady load) | | | | | | | | |
| Frequency | 50Hz/60Hz ± 5% (mains supply) 50Hz ± 0.01% (battery) | | | | | | | | |
| Efficiency | ≥ 90% (load: 100%) | | | | | | | | |
| Output waveform | Sine wave | | | | | | | | |
| THD | Linear load: < 3%; non-linear load: < 5% | | | | | | | | |
| Dynamic load voltage transient | < ± 5% (jump from 0 to 100%) | | | | | | | | |
| Instant recovery time | < 100ms | | | | | | | | |
| Time of switching between the battery and the mains supply | 3S-5S | | | < 4ms | | | | | |
| Unbalanced voltage | < ± 3% < ± 1% (balanced load voltage) | | | | | | | | |
| Overload capacity | 120%, 20s; > 150%, 100ms | | | 125%, 20s; > 150%, 1s | | | | | |
| System indexes | | | | | | | | | |
| Operation efficiency | ≥ 90% (load: 100%) | | | | | | | | |
| Computer communication interface | RS 232/RS 485 (SNMP remote monitoring network adapter) | | | | | | | | |
| Operating temperature | -10~40°C | | | | | | | | |
| Relative humidity | 0 ~ 90% (no condensation) | | | | | | | | |
| Noise | 40-50dB | | | 50-60dB | | | 60-70dB | | |
| Structure | | | | | | | | | |
| External dimensions D × W × H (mm) | 580*750*920 | | | 808*728*1478 | | | 1138*795*1725 | | 1138*945*1725 |
| Weight (Kg) | 180 | 220 | 300 | 470 | 620 | 680 | 730 | 954 | 980 |