ONLINE UPS

# Giant iND

## Applications:

Giant iND is suitable for industrial and facilities applications.

- Industrial process ( and control system, industrial machinery, instrument and measurement, process monitoring and control, security and transport systems….)
- Infrastructures (Hospital, airport, semiconductor, water treatment, metallurgy)
- Energy industry (gas and oil, nuclear power)
- Military application

## • True online double conversion with DSP control

Double conversion between input/output, battery and bypass are totally isolated power line noise, spikes and transients.
A Digital Signal Processor (DSP) control provides an improved solution with high performance.

## • Robust electrical performance to prevent damage from top and bottom connections

This UPS is designed to accept wide input voltage and frequency range to cope with the worst utility conditions. It can eliminates harmful distortion from utility power and withstand all kinds of severe impacts from various loads. It's capable to support heavy duty equipment, production equipment and DCS (Distributed Control System) system.

## • Screwless cabinet design and fully coating PCBAs to withstand harsh environment

The outside cabinet is designed only with locks without any screws and all PCBAs are coated for anti-moisture, anti-electric leakage, anti-dust and anti-corrosion.
Its robust design is suitable for harsh environment with high temperature, high humidity, dense dust, salt, or fierce vibration.


## • Unique ventilation design for effective heat dissipation

Unique ventilation design allows heat to rise by the process of convection. Therefore, the UPS cabinets can be added in parallel side by side for space-saving.

## • Flexible battery configuration adapts different applications

The number of batteries can be adjusted flexibly according to different power demands.

## • Accepts dual-mains inputs

Giant iND series is allowed to connect two separate power inputs to increase operation reliability.

## • Front access makes maintenance and replacement easy

It's considerate to allow easy access to all of the electronic cards and power components in the unit through the front panel for further maintenance and replacement.

## • High short-circuit and overload

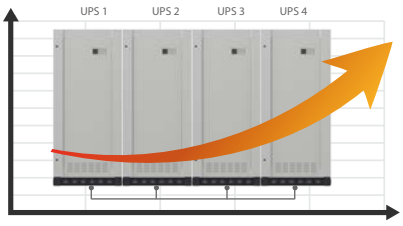
This UPS is built-in high short-circuit protection. Once short circuit occurs, this mechanism will be activated. The load will stay protected and the UPS will remain intact. High overload protection supports 110% for 60 minutes and 125% for 10 minutes.

## • Easy integration into existing electrical networks or generator

During wiring connection, Giant iND can be accessible either from top or from bottom under different environmental conditions. Besides, this UPS is fully compatible with generator.

## • Parallel capability up to 4 units

Up to 4 units in parallel can be operated without adding additional hardware, increasing system capacity as well as operation reliability for power redundancy.



# Giant iND 3P/1P 220VDC Online UPS Selection Guide

| MODEL | | Giant iND 31-10K | Giant iND 31-15K | Giant iND 31-20K | Giant iND 31-30K | Giant iND 31-40K | Giant iND 31-60K | Giant iND 31-80K | Giant iND 31-100K | Giant iND 31-120K |
|---|---|---|---|---|---|---|---|---|---|---|
| CAPACITY | | 10KVA/8KW | 15KVA/12KW | 20KVA/16KW | 30KVA/24KW | 40KVA/32KW | 60KVA/48KW | 80KVA/64KW | 100KVA/80KW | 120KVA/96KW |
| **INPUT** | | | | | | | | | | |
| Nominal Voltage | | 3 x 380VAC (3Ph + G or 3Ph + N + G) | | | | | | | | |
| Acceptable Voltage Range | | 304VAC ~ 456VAC | | | | | | | | |
| Frequency | | 50Hz ±5 Hz (±10%) | | | | | | | | |
| **OUTPUT** | | | | | | | | | | |
| Nominal Voltage | | 220VAC/230VAC/240VAC (Selectable) | | | | | | | | |
| Connection Type | | Hardwire 3-wire (1Ph+N+G) | | | | | | | | |
| Waveform | | Pure Sinewave | | | | | | | | |
| Output Voltage Stability | Steady state | ±1% | | | | | | | | |
| | Transient state | ±5% | | | | | | | | |
| Frequency | | 50 Hz | | | | | | | | |
| Frequency Stability | | ± 1% | | | | | | | | |
| Frequency Synchronisation Range | | ± 5Hz (Equal to bypass working range) | | | | | | | | |
| Frequency Synchronisation Speed | | 1~2 Hz/s | | | | | | | | |
| Power Factor | | 0.8 | | | | | | | | |
| Crest Factor | | 3:1 | | | | | | | | |
| Total Harmonic Distortion (THDv) | | <2% (Linear Load)<br><4% (Non-linear Load) | | | | | | | | |
| Dynamic in-rush Voltage Range | | 0%->100%->0% (R Load) <±5% : 20%->100%->20% (R Load) ±3% | | | | | | | | |
| Dynamic Recovery Time (III Grade) | | 0%~100% RCD load : <60 ms recover to 90% of nominal voltage | | | | | | | | |
| Phase Displacement | | 120° ±1% (balanced load)<br>120° ±2% (imbalances 50% of the load) | | | | | | | | |
| Transfer Time | | 0 ms | | | | | | | | |
| Overload Capability | | 0% ~ 110% continuous running; 110% ~ 150% for 10 min~1 min; >160% for 200ms | | | | | | | | |
| Short-circuit Capability | | 60~100ms | | | | | | | | |
| Transient Response Time | | < 5ms | | | | | | | | |
| **BYPASS** | | | | | | | | | | |
| Connection Type | | Hardwire 3-wire (1Ph+N+G) | | | | | | | | |
| Input Voltage Range | | 220VAC ± 25% | | | | | | | | |
| Overload / Short-circuit capability | | 1.5 In~1.8 In 1h~30s | | | | | | | | |
| | | 1.8 In ~ >2.0 In 30s~200ms | | | | | | | | |
| **SYSTEM** | | | | | | | | | | |
| Efficiency (@ linear load) | | ≥90% | | | | | | | | |
| ECO Mode (Non-parallel models) | | Yes | | | | | | | | |
| EPO Function | | Yes | | | | | | | | |
| Standard | | IEC 61000-4-5 Surge Protection, IEC 62040-2 EMC/EMI, IEC62040-1 Safety | | | | | | | | |
| **BATTERY & RECTIFIER** | | | | | | | | | | |
| Rectifier | Type | 6 pulse | | | | 12 pulse | | | | |
| | Rated output voltage | 220 VDC | | | | | | | | |
| | Charger voltage | 216VDC ~ 243VDC (Adjustable) | | | | | | | | |
| | Charging current(max) | Default 10A, Maximum=Capacity / Battery Voltage | | | Default 10A, Maximum 40A | | | | | |
| Battery | Type | Support VRLA Battery | | | | | | | | |
| | Numbers | 16 - 18 pcs (adjustable) | | | | | | | | |
| | Reverse Diode | Yes | | | | | | | | |
| | Cold Start | Yes | | | | | | | | |
| **PHYSICAL** | | | | | | | | | | |
| IP Protection | | IP20 (Default), IP21/IP31 (Option) | | | | | | | | |
| Dimensions, DxWxH (mm) | | 800 x 800 x 1800 | | | | | 800 x 1200 x 1800 | | 800 x 1600 x 1800 | |
| Net Weight (Kgs) | | 354 | 386 | 400 | 480 | 680 | 910 | 1010 | 1360 | 1620 |
| **ENVIRONMENT** | | | | | | | | | | |
| Operating Temperature | | 0~ 35°C continuous running, 40°C 8-hour running at nominal input voltage, recharging batteries and no overload, 45°C derating to 85% with linear load | | | | | | | | |
| Operating Humidity | | 0~90% (non-condensing) | | | | | | | | |
| Noise Level | | Less than 70dB @ 1 Meter | | | | | | | | |
| **MANAGEMENT** | | | | | | | | | | |
| Modbus RS-232/RS485 | | Supports Windows® 2000/2003/XP/Vista/2008/7/8/10, Linux and MAC | | | | | | | | |
| Dry Contacts | | 6 outputs and 2 inputs | | | | | | | | |
| Optional SNMP | | Power management from SNMP manager and web browser | | | | | | | | |

Product specifications are subject to change without further notice.

# Giant iND 3P/1P 384VDC Online UPS Selection Guide

| MODEL | | Giant iND 31-10K | Giant iND 31-15K | Giant iND 31-20K | Giant iND 31-30K | Giant iND 31-40K | Giant iND 31-60K | Giant iND 31-80K | Giant iND 31-100K | Giant iND 31-120K |
|---|---|---|---|---|---|---|---|---|---|---|
| CAPACITY | | 10KVA / 8KW | 15KVA / 12KW | 20KVA / 16KW | 30KVA / 24KW | 40KVA / 32KW | 60KVA / 48KW | 80KVA / 64KW | 100KVA / 80KW | 120KVA / 96KW |
| **INPUT** | | | | | | | | | | |
| Nominal Voltage | | 3 x 380VAC (3Ph + G or 3Ph + N + G) | | | | | | | | |
| Acceptable Voltage Range | | 304VAC ~ 456VAC | | | | | | | | |
| Frequency | | 50Hz ±5 Hz (±10%) | | | | | | | | |
| **OUTPUT** | | | | | | | | | | |
| Nominal Voltage | | 220VAC/230VAC/240VAC (Selectable) | | | | | | | | |
| Connection Type | | Hardwire 3-wire (1Ph+N+G) | | | | | | | | |
| Waveform | | Pure Sinewave | | | | | | | | |
| Output Voltage Stability | Steady state | ± 1% | | | | | | | | |
| | Transient state | ± 5% | | | | | | | | |
| Frequency | | 50 Hz | | | | | | | | |
| Frequency Stability | | ± 1% | | | | | | | | |
| Frequency Synchronisation Range | | ± 5Hz (Equal to bypass working range) | | | | | | | | |
| Frequency Synchronisation Speed | | 1~2 Hz/s | | | | | | | | |
| Power Factor | | 0.8 | | | | | | | | |
| Crest Factor | | 3:1 | | | | | | | | |
| Total Harmonic Distortion (THDv) | | <2% (Linear Load)<br><4% (Non-linear Load) | | | | | | | | |
| Dynamic in-rush Voltage Range | | 0%->100%->0% (R Load) <±5% : 20%->100%->20% (R Load) ±3% | | | | | | | | |
| Dynamic Recovery Time (III Grade) | | 0%~100% RCD load : <60 ms recover to 90% of nominal voltage | | | | | | | | |
| Phase Displacement | | 120° ±1% (balanced load)<br>120° ±2% (imbalances 50% of the load) | | | | | | | | |
| Transfer Time | | 0 ms | | | | | | | | |
| Overload Capability | | 0% ~ 110% continuous running; 110% ~ 150% for 10 min~1 min; >160% for 200ms | | | | | | | | |
| Short-circuit Capability | | 60~100ms | | | | | | | | |
| Transient Response Time | | < 5ms | | | | | | | | |
| **BYPASS** | | | | | | | | | | |
| Connection Type | | Hardwire 3-wire (1Ph+N+G) | | | | | | | | |
| Input Voltage Range | | 220VAC ± 25% | | | | | | | | |
| Overload / Short-circuit capability | | 1.5 In~1.8 In 1h~30s | | | | | | | | |
| | | 1.8 In ~ >2.0 In 30s~200ms | | | | | | | | |
| **SYSTEM** | | | | | | | | | | |
| Efficiency (@ linear load) | | ≧90% | | | | | | | | |
| ECO Mode (Non-parallel models) | | Yes | | | | | | | | |
| EPO Function | | Yes | | | | | | | | |
| Standard | | IEC 61000-4-5 Surge Protection, IEC 62040-2 EMC/EMI, IEC62040-1 Safety | | | | | | | | |
| **BATTERY & RECTIFIER** | | | | | | | | | | |
| Rectifier | Type | 6 pulse | | | | | | | | |
| | Rated output voltage | 384 VDC | | | | | | | | |
| | Charger voltage | 395VDC ~ 435VDC (Adjustable) | | | | | | | | |
| | Charging current(max) | Default 10A, Maximum=Capacity / Battery Voltage | | | Default 10A, Maximum 40A | | | | | |
| Battery | Type | Support VRLA Battery | | | | | | | | |
| | Numbers | 32 Pcs (29 ~ 32 pcs adjustable) | | | | | | | | |
| | Reverse Diode | No | | | | | | | | |
| | Cold Start | Yes | | | | | | | | |
| **PHYSICAL** | | | | | | | | | | |
| IP Protection | | IP20 (Default), IP21/IP31 (Option) | | | | | | | | |
| Dimensions, D x W x H (mm) | | 800 x 800 x 1800 | | | | | | | 800 x 1200 x 1800 | |
| Net Weight (Kgs) | | 360 | 386 | 400 | 430 | 490 | 610 | 680 | 900 | 920 |
| **ENVIRONMENT** | | | | | | | | | | |
| Operating Temperature | | 0~ 35°C continuous running, 40°C 8-hour running at nominal input voltage, recharging batteries and no overload, 45°C derating to 85% with linear load | | | | | | | | |
| Operating Humidity | | 0~90% (non-condensing) | | | | | | | | |
| Noise Level | | Less than 70dB @ 1 Meter | | | | | | | | |
| **MANAGEMENT** | | | | | | | | | | |
| Modbus RS-232/RS485 | | Supports Windows® 2000/2003/XP/Vista/2008/7/8/10, Linux and MAC | | | | | | | | |
| Dry Contacts | | 6 outputs and 2 inputs | | | | | | | | |
| Optional SNMP | | Power management from SNMP manager and web browser | | | | | | | | |

Product specifications are subject to change without further notice.

# Giant iND 3P/3P 384VDC Online UPS Selection Guide

**480VDC version is available. Please check sales for the details.**

| MODEL | | Giant iND 33-10K | Giant iND 33-15K | Giant iND 33-20K | Giant iND 33-30K | Giant iND 33-40K | Giant iND 33-60K | Giant iND 33-80K | Giant iND 33-100K | Giant iND 33-120K | Giant iND 33-160K | Giant iND 33-200K | Giant iND 33-250K | Giant iND 33-300K | Giant iND 33-400K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CAPACITY | | 10KVA / 8KW | 15KVA / 12KW | 20KVA / 16KW | 30KVA / 24KW | 40KVA / 32KW | 60KVA / 48KW | 80KVA / 64KW | 100KVA / 80KW | 120KVA / 96KW | 160KVA / 128KW | 200KVA / 160KW | 250KVA / 200KW | 300KVA / 240KW | 400KVA / 320KW |
| **INPUT** | | | | | | | | | | | | | | | |
| Nominal Voltage | | 3 x 380VAC/400VAC/415VAC (3Ph + N or 3Ph + N + G) | | | | | | | | | | | | | |
| Acceptable Voltage Range | | 304VAC ~ 456VAC | | | | | | | | | | | | | |
| Frequency | | 50Hz ±5 Hz (±10%) | | | | | | | | | | | | | |
| **OUTPUT** | | | | | | | | | | | | | | | |
| Nominal Voltage | | 3 x 380VAC/400VAC /415VAC(3Ph + N) | | | | | | | | | | | | | |
| Connection Type | | Hardwire 5-wire (3Ph+N+G) | | | | | | | | | | | | | |
| Waveform | | Pure Sinewave | | | | | | | | | | | | | |
| Output Voltage Stability | Steady state | ±1% | | | | | | | | | | | | | |
| | Transient state | ±5% | | | | | | | | | | | | | |
| Frequency | | 50 Hz | | | | | | | | | | | | | |
| Frequency Stability | | ± 1% | | | | | | | | | | | | | |
| Frequency Synchronisation Range | | ± 5Hz (Equal to bypass working range) | | | | | | | | | | | | | |
| Frequency Synchronisation Speed | | 1~2 Hz/s | | | | | | | | | | | | | |
| Power Factor | | 0.8 | | | | | | | | | | | | | |
| Crest Factor | | 3:1 | | | | | | | | | | | | | |
| Total Harmonic Distortion (THDv) | | < 2% (Linear Load)<br>< 4% (Non-linear Load) | | | | | | | | | | | | | |
| Dynamic in-rush Voltage Range | | 0%->100%->0% (R Load) < ±5% ; 20%->100%->20% (R Load) ±3% | | | | | | | | | | | | | |
| Dynamic Recovery Time (III Grade) | | 0%~100% RCD load : < 60 ms recover to 90% of nominal voltage | | | | | | | | | | | | | |
| Phase Displacement | | 120º ±1% (balanced load)<br>120º ±2% (imbalances 50% of the load) | | | | | | | | | | | | | |
| Transfer Time | | 0 ms | | | | | | | | | | | | | |
| Overload Capability | | 0% ~ 110% continuous running; 110% ~ 150% for 10 min~1 min; >160% for 200ms | | | | | | | | | | | | | |
| Short-circuit Capability | | 60~100ms | | | | | | | | | | | | | |
| Transient Response Time | | < 5ms | | | | | | | | | | | | | |
| **BYPASS** | | | | | | | | | | | | | | | |
| Connection Type | | Hardwire 5-wire (3Ph+N+G) | | | | | | | | | | | | | |
| Input Voltage Range | | 3 x 380VAC/400VAC/415VAC(3Ph+N) | | | | | | | | | | | | | |
| Overload / Short-circuit capability | | 1.5 In~1.8 In 1h~30s | | | | | | | | | | | | | |
| | | 1.8 In ~ >2.0 In 30s~200ms | | | | | | | | | | | | | |
| **SYSTEM** | | | | | | | | | | | | | | | |
| Efficiency (At Linear Load) | | 90% | | 91% | | | | 92% | | | | | | 93% | |
| ECO Mode (Non-parallel models) | | Yes | | | | | | | | | | | | | |
| EPO Function | | Yes | | | | | | | | | | | | | |
| Standard | | IEC 61000-4-5 Surge Protection, IEC 62040-2 EMC/EMI, IEC62040-1 Safety | | | | | | | | | | | | | |
| **BATTERY & RECTIFIER** | | | | | | | | | | | | | | | |
| Rectifier | Type | 6 pulse | | | | | | | 6 pulse or 12 pulse | | | | 12 pulse | | |
| | Rated output voltage | 384 VDC | | | | | | | | | | | | | |
| | Charger voltage | 395VDC ~ 435VDC (Adjustable) | | | | | | | | | | | | | |
| | Charging current(max) | Default 10A, Maximum=Capacity/Battery Voltage | | | Default 10A, Maximum 40A | | | | | | | | | | |
| Battery | Type | Support VRLA Battery | | | | | | | | | | | | | |
| | Numbers | 32 Pcs (29 ~ 32 pcs adjustable) | | | | | | | | | | | | | |
| | Reverse Diode | No | | | | | | | | | | | | | |
| | Cold Start | Yes | | | | | | | | | | | | | |
| **PHYSICAL** | | | | | | | | | | | | | | | |
| IP Protection | | IP20 (Default), IP21/IP31 (Option) | | | | | | | | | | | | | |
| Dimensions, D x W x H (mm) | | 800 x 800 x 1800 | | | | | | | 800 x 1200 x 1800 | | 800 x 1600 x 1800 | | | 850x1630 x1900 | 900x1800 x1900 |
| Net Weight (Kgs) | | 290 | 312 | 349 | 385 | 427 | 508 | 563 | 760 | 850 | 1120 | 1390 | 1750 | 2100 | 2500 |
| **ENVIRONMENT** | | | | | | | | | | | | | | | |
| Operating Temperature | | 0~ 35°C continuous running, 40°C 8-hour running at nominal input voltage, recharging batteries and no overload, 45°C derating to 85% with linear load | | | | | | | | | | | | | |
| Humidity | | 0~90% (non-condensing) | | | | | | | | | | | | | |
| Noise Level | | Less than 70dB @ 1 Meter | | | | | | | | | | | | Less than 72dB @ 1 Meter | |
| **MANAGEMENT** | | | | | | | | | | | | | | | |
| Modbus RS-232/RS485 | | Supports Windows® 2000/2003/XP/Vista/2008/7/8/10, Linux and MAC | | | | | | | | | | | | | |
| Dry Contacts | | 6 outputs and 2 inputs | | | | | | | | | | | | | |
| Optional SNMP | | Power management from SNMP manager and web browser | | | | | | | | | | | | | |

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