

Online UPS  
3Phase In / 3Phase Out

**GTC - MW** MEGAWATT SERIES  
300 ~ 400 ~ 500 ~ 600 ~ 700 ~ 800 ~ 1000kVA/kW



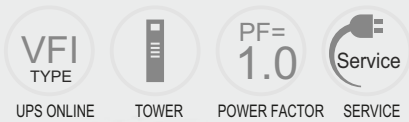
# GTC - MW MEGAWATT SERIES

300 ~ 400 ~ 500 ~ 600 ~ 700 ~ 800 ~ 1000kVA/kW

**3:3**

PHASE

## ONLINE UPS



**IGBT  
3Level  
Topology**



TECHNOLOGY  
**IGBT<sup>2</sup>**  
SAVE ENERGY

## HIGHLIGHTS

- 3-Level Rectifier and Inverter adopts IGBT Topology
- Ultra High Energy Efficiency >96.6%
- Full Rated Power Factor kVA=kW
- Parallel expansion to reach upto 8 MW
- N+N, N+1 redundancy mode configurable
- Automatic input phase reversal protection
- High input voltage range saves battery power
- Compatible for 100% regenerative loads with bidirectional power converters

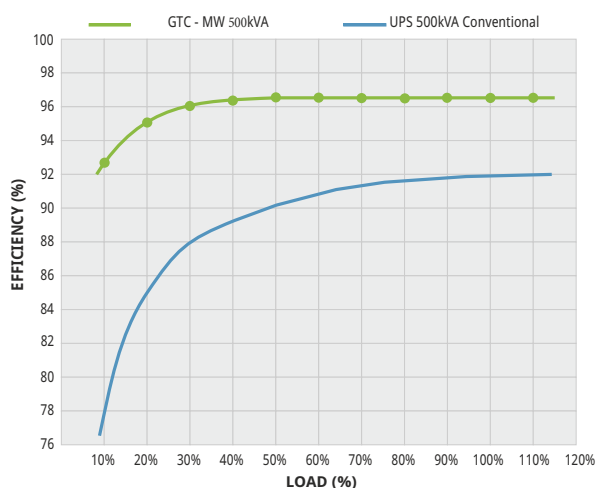
## Innovative 3-Level Topology

- GTC-MW Series with Innovative 3-Level Topology is a true on-line double conversion, three-phase UPS system that provides one of the highest level energy efficiencies in the industry.
- 3-level inverter & rectifier design GTC-MW Series brings the newest power conversion technology and delivers efficiency up to 96.6% at 40-70% load operation which is the most common operating range.



## High Efficiency & Low Total Cost of Ownership

- Less energy consumption to supply the loads, thanks to high efficiency up to 96.6%.
- Reduced energy losses.
- Reduced electricity usage and air conditioning requirements.
- Reduction in operating cost of UPS.
- IGBT based power factor correction technology provides input power factor close to 1 ( $\geq 0.99$ ). The high input power leads to reduced electricity pay-out, minimizes cable, switchboard, fuse and generator requirements, thus reducing investment cost.
- Low input current total harmonic distortion (THDi) less than 3% helps to avoid the disturbance and expensive harmonic filters.
- Small footprint and easy maintenance.



## High Output Power Factor 1

- Output power factor of 1 (kVA=kW) rate provides up to 25% more active power than a traditional UPS.
- Suitable for modern power supply application with unit or capacitive power factor (e.g. new servers generation).

## Reverse Energy Tolerance for Regenerative Load

GTC - MW can be used with regenerative loads such as synchronous motors. The regenerative loads pump the energy back to mains, traditional UPS system burn this feedback energy and this causes lower efficiency. GTC - MW UPS with IGBT rectifier are able to absorb intermittent load generated power. Additionally, this reverse power tolerance permits execution of important system operations like closed transfers of the UPS load directly to an engine generator source.

## Standard Electrical Features

- Parallel-Redundant (N+X) Systems
- Dual Input
- 3 Level IGBT Rectifier and Inverter
- Backfeed Protection
- Cold Start (Optional)
- Advanced Battery Management
- Short Circuit and Overload Protection
- Parallel Ready
- Redundant Power Supply
- Power Walk-in for Progressive Rectifier Start-up when the Mains is Restored
- Battery Temperature Sensor
- Static and Manual Bypass Operation
- 100% unbalanced load handling capability

## Advanced Communication Features

- RS232 Serial and RS485 Ports
- ModBUS RTU / ModBUS TCP (Optional)
- Remote Emergency Power Off (Optional)
- Dry Contact (Optional)
- SNMP (Optional)

## Flexibility

- Temperature sensor for external battery cabinets for extended runtimes.
- External battery cabinets for different sizes of batteries to provide extended runtimes.
- Frequency converter mode.
- Compatible version with EN 50171 for supplying power to emergency lighting systems

## Perfect Generator Compatibility

GTC - MW is Perfectly compatible with diverse sources, especially with generators. When generator power is used, thanks to its robust IGBT rectifier, it ensures clean, uninterrupted power to protected equipment. With high input power factor performance of GTC - MW it is enough to chose generator with power only 20% higher rated than the UPS. GTC - MW has the ability to adjust power walk in from 5 to 60 seconds, along with reduced input current distortion.

## Maximum Availability

- Parallel configuration up to 8 units per redundancy (N+1) and power increase, upto 8MW
- Loop connection helps the UPS system to continue the operation when the connection cable is interrupted.

## Technical Specifications

MODEL	GTC-MW33 X L40				X =kVA		
Capacity	300 kVA	400 kVA	500 kVA	600 kVA	700 kVA	800 kVA	1000 kVA
<b>INPUT</b>							
Nominal Voltage	380/400/415 VAC 3 P+N+PE (4W) / 3 P+N (3W)						
Voltage Tolerance	-20% +15%						
Frequency Tolerance	50Hz ±10%						
Power Factor	>0.99						
Total Harmonic Distortion (THDi)	<3%						
<b>OUTPUT</b>							
Power Factor	1, kVA=kW						
Nominal Voltage	380/400/415 VAC 3 P+N+PE (4W) / 3 P+N (3W)						
Voltage Tolerance	Static ±1, Dynamic ±3%						
Frequency Tolerance	50Hz						
Output THD	Linear Load <2 %, Non-Linear Load <3%						
Crest Factor	3:1						
Overload Capacity*	110% for 60min, 125% for 10min, 150% for 1min.						
Efficiency (Online Mode)	96.6%						
Efficiency (EHS Mode)	98.5%						
Efficiency (ECO Mode)	99.0%						
<b>BYPASS</b>							
Nominal Voltage	380/400/415 VAC 3 P+N						
Voltage Tolerance	±10%						
<b>BATTERY</b>							
Type	VRLA, Ni-Cd, Li-ion						
DC Voltage	480V DC Standard, Configurable upto 576V DC ( 40 to 48 no 12V DC )						
Recharge Time	6-8 hours						
Internal Battery	External Battery						
<b>ENVIRONMENTAL</b>							
Operating Temperature	For UPS 0°C to +40°C						
Storage Temperature	For UPS -15°C to +60°C						
Protection Class	IP20						
Humidity	0-95% (Without Condensation)						
Altitude	1000m above MSL without derating						
Noise Level	<70dBA			<75dBA			
<b>COMMUNICATION</b>							
Communication Port & Display	Modbus/TCP, Modbus/RS485, RS 232, SNMP; Graphical touch screen LCD Display						
<b>STANDARDS</b>							
Quality	ISO 9001, ISO 14001, ISO 27001, ISO 45001, ISO 50001						
Performance	EN62040-3						
EMC/LVD	EN62040-2, EN62040-1						
<b>DIMENSIONS &amp; WEIGHT</b>							
	300 kVA	400 kVA	500 kVA	600 kVA	700 kVA	800 kVA	1000 kVA
Cabinet Dimensions (mm)	Width	1400	1600		2800	3400	
	Depth	832	830		900	900	
	Height	2080	2100		2080	2080	
Net Weight (kg)	990	1100	1590	1650	2600	3400	


\* Conditions Apply  
Specifications are subject to change without prior notice.



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