

Online UPS  
3Phase In / 3Phase Out

## GTC - MWX MEGAWATT SERIES

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



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

**3:3**

PHASE

## ONLINE UPS



kVA=kW

**96.6%**  
Efficiency

VFI  
TYPE

UPS ONLINE



TOWER

PF=  
**1.0**

POWER FACTOR



Service

SERVICE

**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
- Inbuilt Isolation Transformer

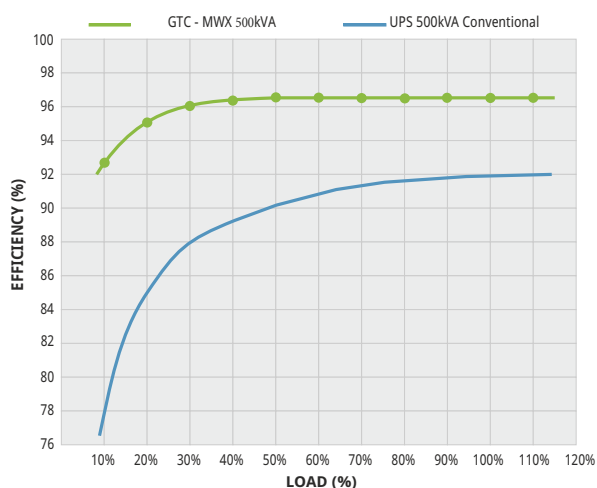
## Innovative 3-Level Topology

- GTC-MWX 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-MWX 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 - MWX 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 - MWX 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
- The GTC-MWX UPS features an output isolation transformer on the inverter as part of the inverter circuit inside the UPS cabinet, providing galvanic isolation between the load and the battery with improved versatility in system configuration

## Perfect Generator Compatibility

GTC - MWX 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 - MWX it is enough to chose generator with power only 20% higher rated then the UPS. GTC - MWX 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-MWX33 X L40      X =kVA						
Capacity		300 kVA	400 kVA	500 kVA	600 kVA	700 kVA	800 kVA	1000 kVA
INPUT								
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%						
OUTPUT								
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%						
BYPASS								
Nominal Voltage		380/400/415 VAC 3 P+N						
Voltage Tolerance		±10%						
BATTERY								
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						
ENVIRONMENTAL								
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			
COMMUNICATION								
Communication Port & Display		Modbus/TCP, Modbus/RS485, RS 232, SNMP; Graphical touch screen LCD Display						
STANDARDS								
Quality		ISO 9001, ISO 14001, ISO 27001, ISO 45001, ISO 50001						
Performance		EN62040-3						
EMC/LVD		EN62040-2, EN62040-1						
DIMENSIONS & WEIGHT		300 kVA	400 kVA	500 kVA	600 kVA	700 kVA	800 kVA	1000 kVA
Cabinet Dimensions (mm)	Width	2500		2850		4300		5900
	Depth	1250		1350		1500		2500
	Height	2080		2100		2080		2080
Net Weight (kg)		2600	2950	3590	3900	5600	6900	

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



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## Best Power Equipments India Pvt. Ltd.

Corporate Office: G-240, Sector-63, Distt. Gautam Buddh Nagar, Noida-201307 UP  
Registered Office: 812A, Shakuntala Building, 59, Nehru Place, New Delhi-110019  
PH: +91 120 4637000-0029 | Mobile: +91 9311995859 | Email: crm@bpe.co.in  
support@bpeindia.com | Toll Free: 1800 103 1247 | Website: www.bpee.com

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