Technology from Japan
Made in India

TMEiC
We drive industry

TMUPS

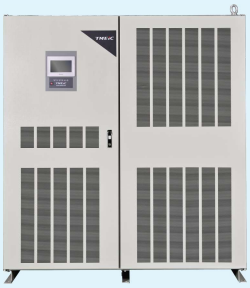
Next Generation UPS for Business Critical Loads

From 100kW scalable up to 4.8MW

Global Presence

NEXT-GENERATION UPS SOLUTIONS
FOR BUSINESS-CRITICAL LOADS!

TMUPS Series Uninterruptible Power Supply (UPS) design with its advanced state-of-the-art power conversion technology delivers Industry leading efficiency to go along with the quality and reliability that users are accustomed to when specifying TMUPS.



W250 UPS System

100kVA~600kVA

World's first multi-level conversion Uninterruptible Power Supply, TMUPS is the wise response from TMEIC for the growing demand of high reliability and efficient power solution for mission-critical applications.

Its innovative three-level circuit concept and exclusive power module delivers superior performance and reliability with reduced cost of ownership.

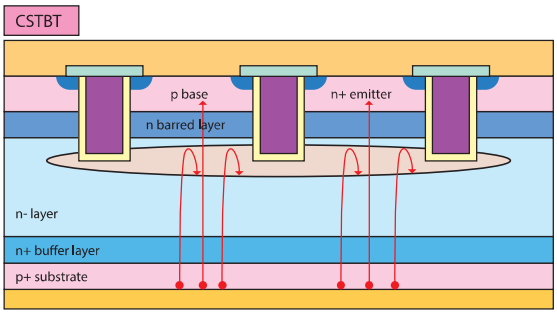
Features

- High thermal withstanding and short circuit characteristics of CSTBT Module– provides high reliability to UPS and business critical loads – no production loss and increased productivity
- Next generation UPS delivers high efficiency upto 97%
- Compatible for 100% regenerative loads with bi-directional power converters
- Multi-level power conversion (rectifier, Inverter & DC-DC path) enhances design life of capacitors >15 years
- Scalable up to 8 units in parallel to meet the redundancy requirements
- 3-phase independent control (100% unbalanced loads) with Feed forward control design delivers excellent dynamic response to step load changes in parallel operation
- Unity power factor at output & ≥0.99 at the input
- High speed controller supports highly reliable parallel system
- Instantaneous Wave form Control for both input current and output voltage
- Industrial leading reliable high efficient transformer less technology
- Battery flexibility & compatibility including VRLA, Advance VRLA, Lithium-ion batteries & Ni-Cad

Robust & Proprietary Power Module

CSTBT is fabricated using a special vertical structure to improve carrier concentration and lowering saturation losses.

- Robust in design
- High endurance in dynamic load conditions
- High thermal stability delivering continuous power in most demanding environments
- Reduced losses



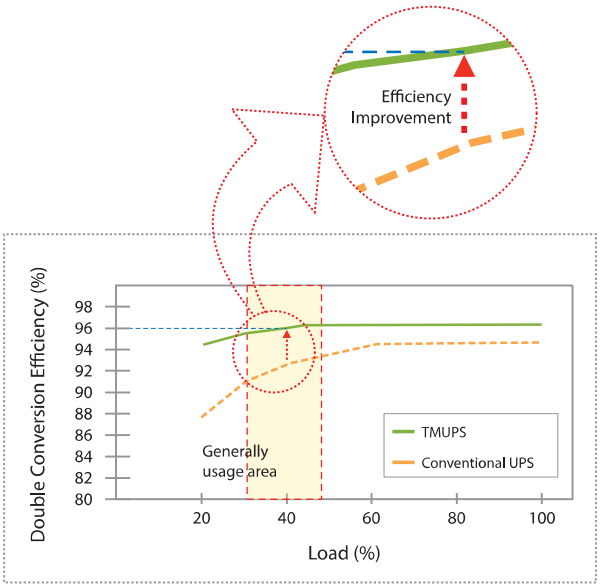
Highest Efficiency

TMEIC UPS is the most efficient true online double-conversion UPS at all load levels. Unique combination of multilevel conversion technology with CSTBT structure differentiates TMUPS in terms of higher efficiency translates into energy savings.

This benefits the user with reduced cost of ownership and improved Power Usage Effectiveness (PUE).

Benefits

- Capex & Opex savings in cooling cost
- Energy savings and reduced TCO
- Space savings

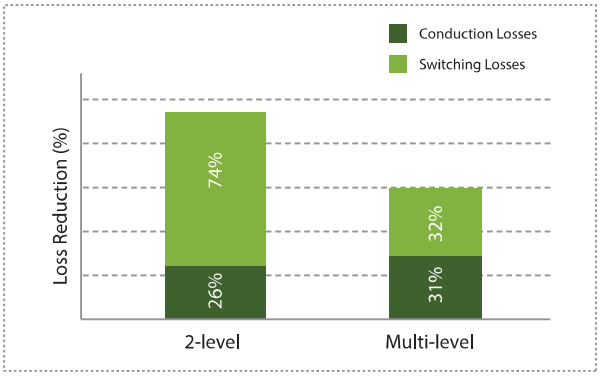


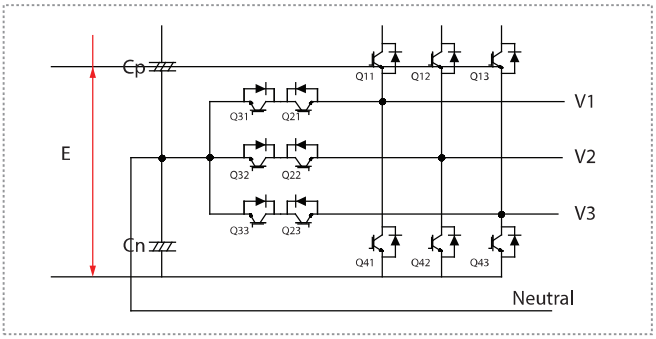
Innovative Multilevel Power Conversion Technology

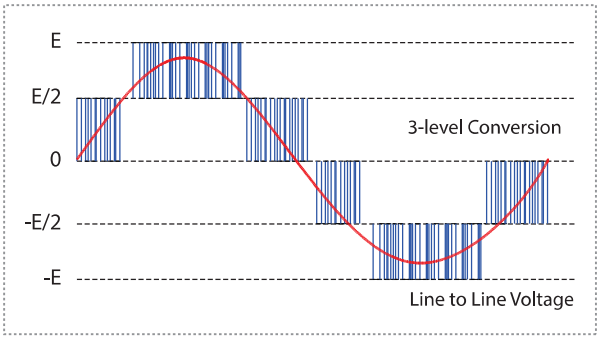
State-of-the-art multilevel technology in both rectifier and inverter creates multiple voltage levels to reduce voltage and thermal stress on components. With this design components life, reliability and availability is increased significantly with proven track record of more than a decade.

Benefits

- Lower voltage stress on power semi-conductors devices
- Significant reduction of noise and electromagnetic interference
- Higher efficiency (lower losses)
- Higher system reliability and compactness







Voltage variation ΔV at the terminals
E @Two-level, E/2 @Three-level
Reduction of conversion loss, reduced EMI interference, reduction of harmonics and reactor size.

TECHNICAL SPECIFICATIONS

DESCRIPTION	TMUPS W250 Series							
Rating (kVA)	100	120	160	200	300	400	500	600
Rating (kW)	100	120	160	200	300	400	500	600
Design Topology	Online double conversion (VFI-SS-III), Transformerless design							
Regulatory	Safety : IEC 62040 -1, EMC : IEC 62040 -2, Performance : IEC 62040 -3							
Power Expansion	Upto 8 units with advanced current mirror loop control for reliable parallel operation							
Surge Protection	Built-in modular type II surge protection							
Emergency Power off (EPO)	Available in front panel							
Cable Entry[1]	Bottom							
Protection Class	IEC-IP-20							
Colour	Grey RAL 7032							
Input Characteristics								
Converter Technology	Robust CSTBT based multi-level Technology, High Efficiency & Long life							
Nominal Voltage	3Phase 380/400/415 V + PE							
Voltage Tolerance	+15%, -20%							
Frequency	50 Hz ± 10%							
Power Factor	0.99							
Current Distortion (THDi) @ Rated Load[2]	3%							
System Power Walk in	30 secs programmable and up to 3600 secs programmable converter start delay							
Output Characteristics								
Inverter Technology	Robust CSTBT based multi-level Technology, High Efficiency & Long Life							
Nominal Voltage	3Phase-4 Wire 400/415 V (selectable)							
Frequency	50 Hz							
Frequency Sync Range	±1% to ± 5% (Selectable in 1% increment)							
Frequency Slew Rate	1 Hz/sec to 5 Hz/sec (Selectable in 1 Hz/sec increment)							
Phase Displacement	±1 Deg @ 100% balanced load, ±3 Deg @ 100% unbalanced load							
Power Factor	Unity							
Voltage Regulation Static Load	< 1%							
Dynamic Response (100% Step Load)	< 2%, recovery within 20ms							
Voltage Distortion (THDv) @ Rated Load	< 2% Linear load, < 3% Non-linear load							
Over Load	110% for 60 Minutes, 125% for 10 Minutes, 150% for 1 Minute							
Bypass Characteristics								
Nominal Voltage	3 Phase - 4wire 400/415V +/-10%							
Nominal Frequency	50Hz							
Short Circuit withstand Capacity	500% for 20ms							
Ecomode with PF & Harmonics Correction	Available as a value-added optional feature (Smart Drive)							
Battery								
Nominal Voltage	480 VDC (Flexible)							
Max DC Voltage Protection	Upto 700 VDC							
Battery Type	VRLA, Flooded, Ni-Cd, LIB							
Efficiency								
Double Conversion Mode	Upto 97%							
Communication								
Intelligent Monitoring (Option)	Modbus/TCP, Modbus/RS485, RS 232, SNMP							
UPS Display	Graphical Touchscreen with LCD Display							
Alarm and Status Information	Through LCD Display, user programmable input and output dry contacts							
Environmental Conditions								
Operating Temperature[4]	0 to 40° C							
Relative Humidity	5 to 95% non-condensing							
Operating Altitude	1000m above MSL without derating							
Physical								
Dimension (W x D x H)[3]	700 x 832 x 2080		700 x 832 x 2080		1400 x 832 x 2080		1600 x 832 x 2080	
Weight (kg)	550	550	610	610	990	1100	1590	1650

Specifications are subject to change without prior notice as part of continuous development.
1 - Top entry optional on request 2 - With source THDv < 1% 3 - Dimension tolerance ±10 mm 4 - As per maintenance guidelines detailed in user manual

TMEiC
We drive industry

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