

TMEiC

SOLAR WARE 500

Large Scale PV Inverter Solution



PVL-L0500E

TOSHIBA MITSUBISHI-ELECTRIC INDUSTRIAL SYSTEMS CORPORATION

SOLAR WARE 500

- Advanced multi-level Inverter system
- Maximum 98.5% efficiency
- Smallest footprint



The Advanced Multi-level Inverter - 56% switching loss reduction

SOLAR WARE 500 redefines the PV utility scale solar inverter solution in reliability, efficiency, and productivity. TMEiC sets the standard of utility scale installation with its own proprietary and the most advanced multi-level inverter system by reducing the switching loss by 56%. The Advanced Multi-level Inverter uses a new circuit topology to create 3 output voltage levels. With this new design, the inverter size has also been significantly reduced, achieving the world's smallest 500kW inverter.

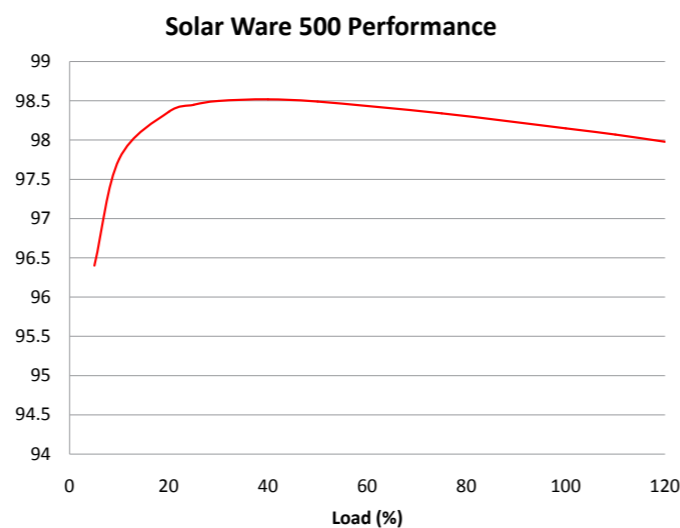
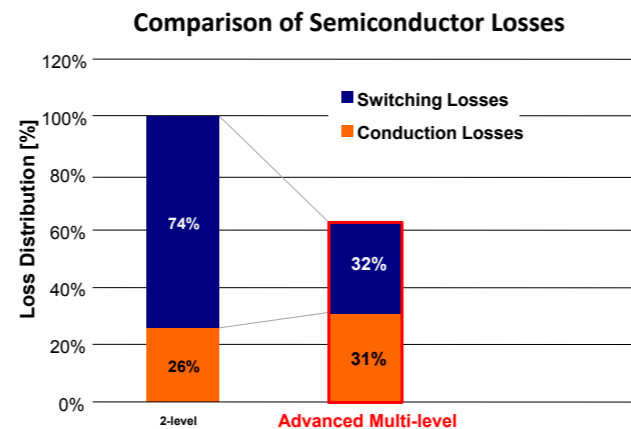
World leading efficiency, 98.5%

TMEiC's most advanced inverter design allows SOLAR WARE 500 to operate at amazing 98.5% maximum efficiency. With high efficiency and the robust design, TMEiC can significantly maximize array performance and uptime.

Integrated DC Input Cabinet with String Group Viewer*

SOLAR WARE 500 comes with fully integrated DC cabinet with up to 16 inputs. TMEiC String Group Viewer is the most efficient, intelligent, and cost effective solution to monitor the strings. This system allows the customers to easily detect poorly performing factors at a string group level. With intelligently pre-installed circuit breakers, maintenance and service structure can be significantly boosted with easy shutdown of string groups at 32kW level.

*String Group Viewer: Optional
DC Interface Cabinet size will increase from 500mm to 700mm

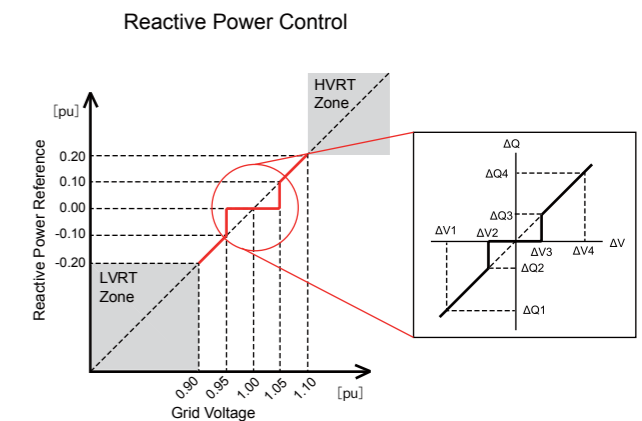


Grid Connection Features

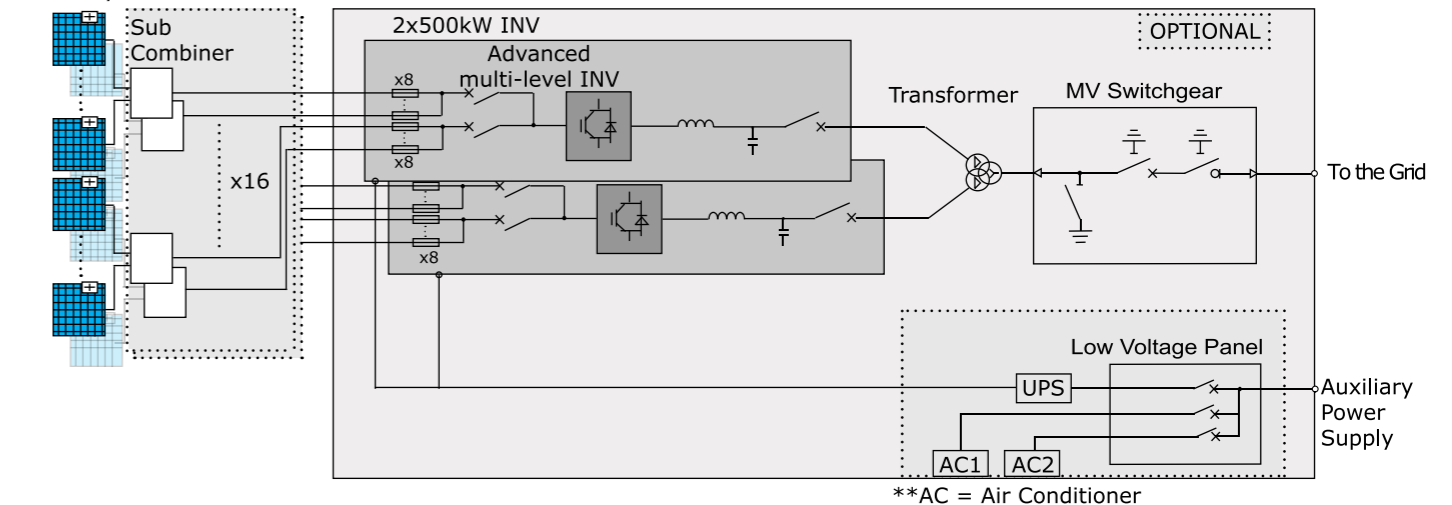
TMEiC has long history working with Japanese power companies and have developed the grid connection features together. All of TMEiC's utility scale inverters come with the latest interconnection technology enhanced by most skilled engineers and scientists.

The features include:

- Power Factor Control
- Reactive/Active power control
- Fault Ride Through
 - Voltage Ride Through (Low Voltage Ride Through)
 - Frequency Ride Through
- TMEiC's proprietary Anti-islanding technique: Slip-mode Frequency Shift Method.



1MW system configuration



SPECIFICATIONS

Type		PVL-L0500E
Input Side (DC)	Maximum DC Power	600kW
	Maximum DC Voltage	1000V
	MPPT Operating Range	450~950V
	Maximum DC Current	1155A
	Maximum Number of Input	16
Output Side (AC)	Nominal AC Output Power	500kW
	Nominal AC Voltage	300V 3-phase, 3-wire system
	Nominal AC Frequency	50/60Hz
	Nominal AC Current	962A
	Power Factor	>0.99 (Rated Power)
	Harmonic Distortion of AC Current	<3% (Rated Power)
	Maximum Efficiency	98.5%
	CEC Efficiency	98.3%
	European Efficiency	98.3%
Environmental Conditions	Enclosure Protection Ratings	IP2X (Indoors)
	Relative Humidity	15% to 95% (not condensating)
	Ambient Temperature Range	-20 °C to + 50 °C*1
	Max. Altitude Above Sea Level	2000m
Protective Functions	Input (DC) Side	Ground Fault, DC Reverse Current, Over Voltage, Over Current
	Grid (AC) Side	Anti-islanding, Over/Under Voltage, Over/Under Frequency, Over Current
	Grid Assistance	Reactive/Active Power Control, Fault Ride Through, Power Factor Control
User Interface	Local Control Panel	LCD (3.8inch, QVGA) with Touch-Screen
	Communications	Ethernet / RS485
	Fault Analysis	Fault Event Log, Waveform Acquisition
Compliance (CE Conformity)	Low Voltage Directive: 2006/95/EC (EN50178) EMC Directive: 2004/108/EC (EN61000-6-2, EN61000-6-4)	
Cooling Method	Forced air cooling	
Inverter Dimensions (H x W x D)	2075mm x 1900mm x 700mm	
Unit Weight	1300kg	

Note): *1: Need optional heater below -10°C, Power de-rating over +40°C

DIMENSIONS

