

Single Phase Grid-tied Solar Inverter 3KW

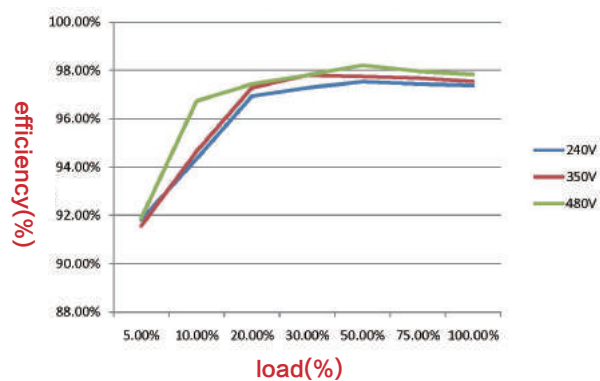
Description

Tough TL series single phase inverter is a new generation of PV string inverter which has been developed for residential users. Tough TL series inverters have the advantages of compact size, light weight, easy installation and maintenance, and are above all cost efficient.

Features

- The core technologies are from Germany.
- Software optimization for the power grid with much wider adaptability.
- Global integrated monitoring and management, supporting all kinds of portable mobile devices, HMI is optional.
- Minimum working voltage is 50V.
- Wider voltage range, lower starting voltage, higher conversion efficiency.
- Designed with latest thermal simulation technology for longer service life.

Efficiency curve



Specification

	3KW
Input (DC)	
Max. DC input power (W)	3300
Max. DC voltage (V)	500
Starting voltage /Min. operation voltage (V)	120/100
Starting power (W)	30
MPPT Operating Voltage Range (V)	120-450
Number of MPPT/ String Per MPPT	1/2
Max. DC current (A) per MPPT x Number of MPPT	15x1
DC switch	Optional
Output (AC)	
Rated power (W)	3000
Max. AC output current (A)	13
AC voltage range	230/180~277Vac
	According to VDE-AR-N4105, G83/2, C10/11, TF3.2.1, AS4777/3100, CQC
Grid frequency	50Hz (44~55Hz) / 60Hz (54~65Hz)
	According to VDE-AR-N4105, G83/2, C10/11, TF3.2.1, AS4777/3100, CQC
Power factor	≥0.99 (Adjustable)
THD	< 3% (At Rated Power)
AC connection	Single-phase (L, N, PE)
System	
Cooling method	Natural Cooling method
Max. efficiency	97.30%
Euro-efficiency	96.50%
MPPT efficiency	99.9%
Degree of protection	IP65
Self-consumption (at night)	<1W
Topology	Transformerless
Operating temperature range	-25℃~+60℃, (derate after 45℃)
Relative humidity	0~95%, no condensation
Protection	Over voltage protect ; DC insulation monitoring; DC Over current Protection; Grounding fault monitoring; Grid protection; island protection; Overheating protection; Overvoltage and short circuit protection etc.
Display and communication	
Display	LED Display (standard) /LCD (Optional)
System language	English, Chinese, German, Dutch
Communication interfaces:	RS485 (Standard), WiFi, Ethernet (Optional)
Mechanical parameters	
Dimension (H x W x D mm)	280x300x138
Weight (kg)	9.5
Installation	Wall mounting
Others	
DC terminal	BC03A, BC03B (PV-CF-S2, 5-6 (+); PV-CM-S2, 5-6 (-)...., Helios H4 2.5mm²)
Certifications	VDE-AR-N4105, G83/2, C10/11, TF3.2.1, AS4777/3100, CQC, EN61000-6-1:4, EN61000-3-2:3, EN61000-11:12, IEC 62109-1:2010, LVRT
Factory warranty (years)	5 (standard) / 10, 15, 20 (optional)