



日揚國際事業股份有限公司
JD Auspice Co., Ltd.

SUNWAY TG 175 800V TE

Solar Inverter



note: subject to change without any notice, JDA pay no responsibility



SUNWAY TG 385 800V TE Inverters are full digital devices for controlling photovoltaic energy conversion. Designed and manufactured in Italy by the technicians of Elettronica Santerno S.p.A. using the most advanced electronics technology. All parameters inherent to the inverter's operation are easily programmable in a guided way through the keyboard and the alphanumeric display. Parameters are organized in a menu structure.

ADVANTAGES

- Maximum conversion efficiency.
- Integrated transformer
- Maximum modularity and flexibility of connection of several machines in parallel.
- Remote monitoring possibility with REMOTE SUNWAYM software sia locale che remoto both for a single machine and a multi inverter installation.
- Wide range of inverter sizes available.
- Integrated active monitoring of DC isolation.
- Integrated EMC filters for residential environments.
- Diagnostic messages on alphanumeric display that allow quick setting of parameters during start up and immediate monitoring during the operation.
- Easily accessible components for maximum reliability and maintainability.
- Possible use of photovoltaic modules that require an earthed pole.
- Thorough manufacturing with first class materials, all Made in Italy.



Dati tecnici / Technical data

Caratteristiche generali / Main features	
Modello / Model	SUNWAY TG 175 800V TE
Range di tensione campo fotovoltaico / PV field voltage range	415÷760 Vdc
Tensione a vuoto del campo / Open-circuit voltage	880 Vdc
Tensione di uscita / Output voltage	270 Vac ± 15%
Frequenza di uscita / Output frequency	50Hz ± 2%
Tensione di ripple residua sul campo fotovoltaico / PV voltage ripple	<1%
Distorsione totale della corrente di rete / Total AC current distortion	≤3%
Cosφ	1
Protezione contro sovratensioni CC (SPD) / Protection against DC overcurrent (SPD)	Si / yes
Grado di protezione IP44 / Degree of protection	IP44 /from NEMA3 to NEMA 12
Raffreddamento con ventilazione forzata / Forced cooling system	Termostata /Temperature controlled
Temperatura di funzionamento /Operating temperature range	- 10°C+40°C
Umidità relativa /Relative humidity	95% @20°C
Consumo in stop/Consumo notturno /Losses when stopped/ Night losses	40W /0W
Tensione di isolamento verso terra tra ingresso e uscita	2,5 kV to 50Hz for 60 sec.
Insulation voltage to ground and between input and output Protezione termica / Thermal protection	Integrata /Integrated
Valori di ingresso /Input Ratings	
Potenza di picco suggerita / Suggested peak power	161,6 kWp
Potenza nominale di ingresso in CC / Rated DC input power	140,5 kW
Corrente nominale di ingresso / Rated input current	304,5 A (dc)
Valori di uscita BT /LV Output Ratings	
Potenza massima di uscita / Max AC rated output power	150 kW
Potenza nominale di uscita / Rated AC output power	136,4 kW
Corrente nominale di uscita / Rated output current	291,6 A (ac)
Rendimento Inverters / Inverter efficiency	
Rendimento massimo inverter / Maximum Efficiency	98.4 %
Rendimento europeo inverter/ European Efficiency	97.6%
Dimensioni / Dimensions	
Dimensioni Inverter(LxHxLa) /Inverter dimensions(LxHxD)	1400x2270x600 mm
Peso Inverter (kg) / Inverter Weight (kg)	640 kg
Consumi / Losses	
Assorbimento Sistema di Ventilazione / Fan Losses	310 W

Elettronica Santerno si riserva il diritto di modificare i dati tecnici senza preavviso.

Elettronica Santerno reserves the right to make any technical changes to this document without prior notice.



Operating description

The inverter is connected to the PV field through subfield paralleling panels (String Box) that form the PV generator, and to the electric grid through an interface switch. Once the open circuit voltage of the field is enough, the inverter synchronizes with the electric power grid, closes the paralleling contactor and according to the available power on field ($P_{field} = V_{dc} \cdot I_{dc}$) it imposes to the grid a sinusoidal current in phase with the network voltage.

The current's phase is defined by the requested $\cos \phi$ that is typically 1.

Main normative references

SUNWAY TG series inverters have been developed, designed and constructed in accordance with the requirements of the low voltage directives and of electromagnetic compatibility directives

IMMUNITY :	Proof of immunity to electrostatic discharges according to EN61000-4-2 Levels : 6kV for contact discharge 8kV for air discharge
	Proof of immunity to fast transients according to EN61000-4-4 Levels : 2kV/5kHz PV field 2kV/5kHz serial RS232
	Proof of immunity to impulse according to EN61000-4-5 Levels: 1kV + pole/- pole PV field side 2kV + pole/earth PV field side 2kV - pole/earth PV field side 2kV + pole/earth AC side 2kV - pole/earth AC side
	Conducted emissions: EN55011 group 1 class B
ITALIAN GRID DIRECTIVES :	CEI 11-20, CEI 0-16


Included accessories

All inverters are supplied with user manuals, technical documentation conforming to existing regulations, keys and lifting hooks, dedicated pallets for easy and safe transport.




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