SUNWAY TG STANDARD series

SUNWAY TG 730 800V TE

Indoor Application

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

Designed for utility scale applications, **SUNWAY TG** inverters feature best-in-class technology without compromises providing the highest power density and reliability.
Thanks to the intrinsic flexibility, **SUNWAY TG** product range allows the optimal configuration of medium and large PV plants providing the lowest system cost and the maximum yield.

SUNWAY TG inverters are designed and manufactured in Italy by technicians and engineers of Elettronica Santerno S.p.A.

BENEFITS

- Very high conversion efficiency with a single power conversion stage, optimized for minimum losses
- Modular construction and cabinet industrialization for maximum reliability and easy access to all components for maintainability and ease of service on site
- Grid Code integrated features (LVRT, Reactive Power Control, Frequency and Voltage control) in compliance with the most advanced European and WW standards
- Remote monitoring possibility with SunwayPortal and REMOTE SUNWAYM software both for a single device and a multi-inverter installation
- Integrated DC-side protection provided by disconnect switch with release coil
- Integrated miswiring protection on DC side
- Integrated AC-side protection with automatic-disconnection on load breaker
- Integrated active monitoring of DC isolation
- Integrated Modbus on RS485 and TCP-IP on Ethernet data connection
- Integrated inputs for environmental sensors
- Possibility to install photovoltaic modules requiring one earthed pole, both positive and negative pole
- Thorough manufacture with first class materials, fully Made in Italy

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Main features	
Model	SUNWAY TG 730 800V TE
MPPT voltage range(1)	415 - 760 V
Number of independent MPPT	1
Max DC voltage	880
Rated AC voltage (range)	270V ± 15%
AC power frequency (range)	50/60 Hz (up to-3 / +2 Hz)
Default Cosϕ- Min Cosϕ	1 - 0.9 lead / lag
Operating temperature range	
Application / Degree of protection	Indoor / IP44
Maximum operating altitude(2)	4000 m

Input Ratings (DC)	
Suggested PV Peak power	650 kWp
Rated input power	578 kW
Maximum short circuit PV input current	1250 A
PV voltage ripple	<1%
Output Ratings (AC)	
Rated output power @40°C	561.2 KVA
Max output power @25°C	594 kVA
Rated output current	1200 A
Power Threshold	1% of Rated AC output power
Total AC current distortion	≤3%
Inverter efficiency	
Maximum, European /CEC efficiency	98.5% /98%/98%
Dimensions	
Inverter dimensions (WxHxD)	2600x2475x800 mm
Inverter Weight (kg)	1800 kg
Auxiliary Consumptions	
Losses when stopped/Night losses	45 W / 45 W
Maximum auxiliary consumptions	2230 W
Optional anticondensation heater power consumption(3)	1kW

Elettronica Santerno reserves the right to make any technical changes to this document without prior notice.
NOTE
(1) At Vac rated and Cos ϕ =1
(2) Up to 1000 m without derating
(3) Optional recommended for Outdoor application in cold climate environments

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Additional information	
Protection against overvoltage (SPD)	DC Side: Yes - AC Side: Optional
Relative humidity	95% non condensing
Cooling system / Airflow	Forced air / 6680 m3/h
Thermal protection	Integrated, 5 sensors, both on cabinet and power stack
Environmental sensors	4 embedded inputs
Digital communications channels	2XRS485 with Modbus + Ethernet with TCP/IP
Noise emission	72 dB
Connection phases	3
Max DC inputs per pole/ fuse protected(4)	4/0
Integrated DC-Parallel	no
DC inputs current monitoring	Optional
DC side disconnection device	DC disconnect switch
AC side disconnection device	AC circuit breaker
DC Ground fault monitoring	Yes
AC Ground fault monitoring	Optional
Grid fault monitoring	Yes
Display	Alphanumerical display/keypad
Power modulation	Via Remote Control (RS485, Ethernet) and analog
RAL	RAL 7035
PV plant monitoring	Optional (Via Sunway Portal)

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NOTE
(4) Fuses to be ordered separately

Description of Operation

SUNWAY TG are grid connected solar inverters, suitable for connection to LV or MV distribution lines, as well as HV transport grids.
Advanced grid interface, certified in compliance with the most advanced requirements, ensures reliability and maximum uptime, providing grid support features such as FRT, active power modulation, voltage control. Utility Interactive Features are embedded, software-controlled, completely configurable based on the applicable grid code.
Moreover, Sunway TG inverters can be integrated in smart grid plants, installed together with off-grid inverters.

Best reliability is ensured by design. All electronics PCBs are coated for best protection against harsh environment. Redundant protection systems and auto-diagnostic functions are also implemented.
Auxiliary power and LVRT are self-supplied. Neither external power nor UPS is needed; however, an external source may be connected, if desired.

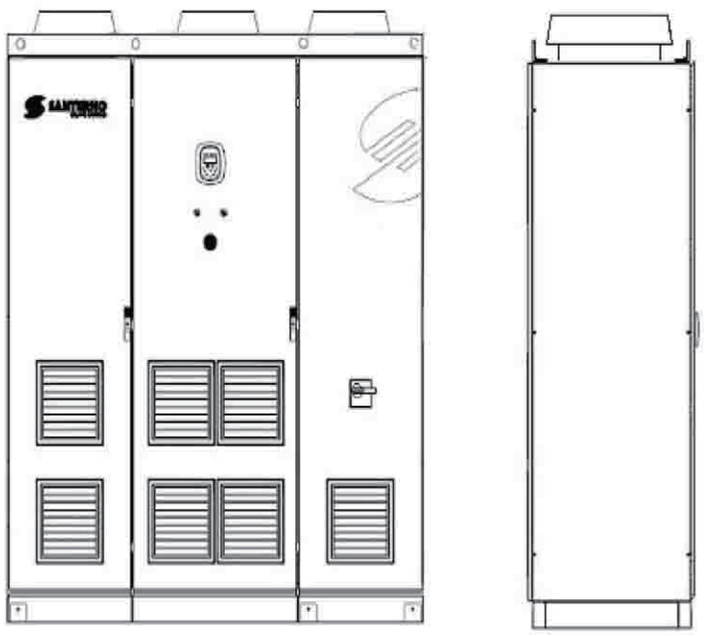
PV earthing

Optionally, the **SUNWAY TG** inverters can be provided with positive- or negative- ground connection of the PV field. That configuration shall be defined when ordering the equipment and it is recommended in case of modules sensitive to the PID (potentially induced degradation) are adopted.

Standard Supply

All inverters are supplied with user manuals, technical documents complying with the regulations in force, keys and lifting hooks, special pallets for easy and safe transport.

Layout



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Main Normative References

The **SUNWAY TG** inverters have been developed, designed and manufactured in accordance with the up-to-date requirements of the Low Voltage directives, Electromagnetic Compatibility directives and Grid Connection standards

Standards	
Certification	CE, CQC(5) ,CSA(5)
EMC/Model	61000-6-2
Harmonics	61000-3-4, 61000-3-12, RD 1663
Immunity	EN61000-4-2, EN61000-4-4, EN61000-4-5 EN55011 group 1 class B
Safety	IEC 62109-1, IEC 62109-2, UL 1741(5)
Insulation voltage to ground and between input and output	2.5kV
Grid connection	CEI 0-16, A70 (Italy) RD 1565/2010, RD 661/2007 (Spain) BDEW (Germany) CQC (China) IEEE 1547 (USA)

NOTE
(5) Only on specific models

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