

AZZURRO - SINGLE-PHASE STRING INVERTER

1100TL/1600TL/2200TL
2700TL/3000TL



The TL series **ZCS Azzurro Single-Phase** inverters are the ideal solution for small photovoltaic systems in residential buildings. Available in sizes from 1 to 3kw, they are small, easy to manage and easy to install.

The wide range of input makes them easy to configure and suitable for any type of need, for both new installations or retrofit on existing ones.

The multifunction graphic display provides instant viewing of all the data and the Wi-Fi connectivity allows remote monitoring at no cost.



ZCS AZZURRO TECHNOLOGY

- Performance optimisation
- Wi-Fi integration on ZCS platform for stable, effective and intelligent connectivity



MAXIMUM ENERGY EFFICIENCY

- Maximum performance 97.2%
- Stable efficiency in all working conditions
- Rapid and accurate MPPT algorithm



FLEXIBLE, ECONOMICAL AND EASY-TO-INSTALL SOLUTION

- Protection rating of IP65
- Fast and safe installation with all required parts included
- "Plug & Play" AC and DC connections
 - Wireless communication with integrated Web Server
 - 4-inch LCD graphic display
 - ENEL Autotest in standard or fast versions
- Updates and diagnostics via SD card



RELIABILITY, DURABILITY AND FLEXIBILITY

- Rust-proof, corrosion-proof and UV-proof aluminium exterior casing
 - Natural ventilation cooling
- Fast and flexible management of function parameters
- Simple and user-friendly monitoring
 - 10 year ZCS warranty



INTELLIGENT GRID MANAGEMENT

- Dynamic management of grid feed-in
 - "Zero Grid Feed-in" functionality *
 - Remote control of the deliverable active/reactive power limit



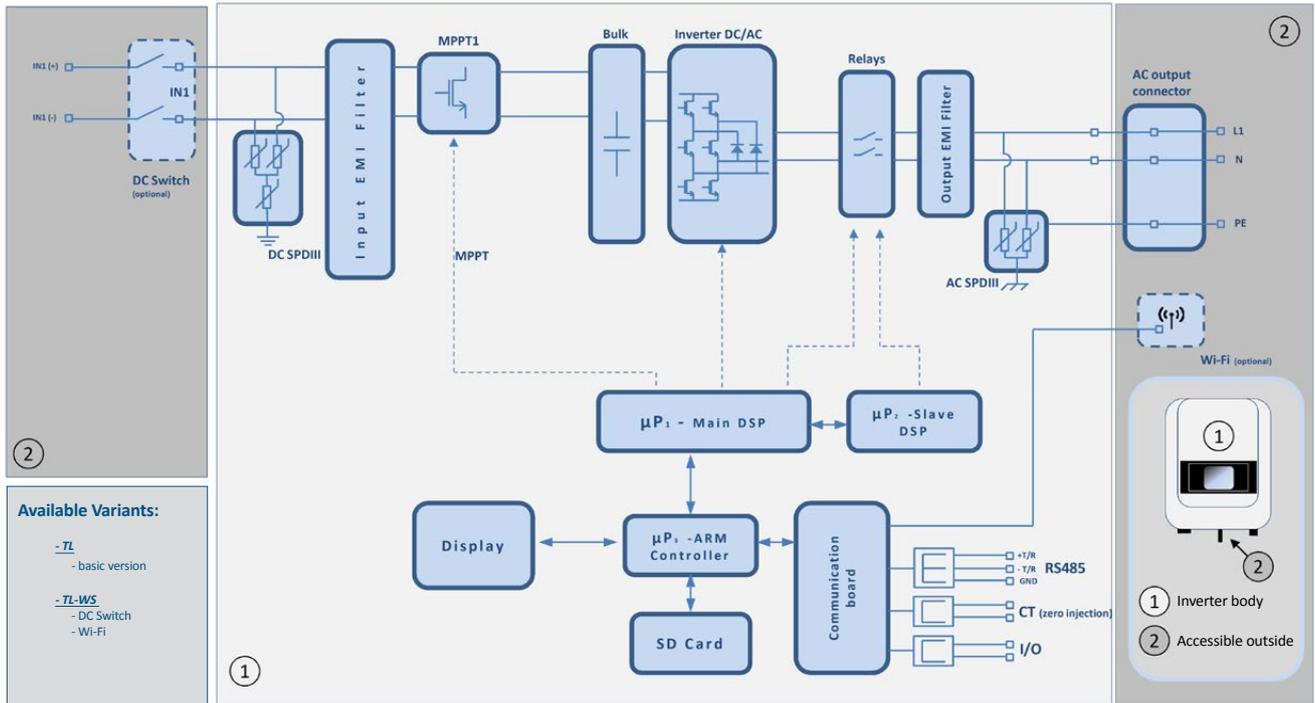
IDEAL FOR RETROFITTING

- Wide input operating range from 90V to 550V
 - Compact size
- Simple and user-friendly installation and configuration

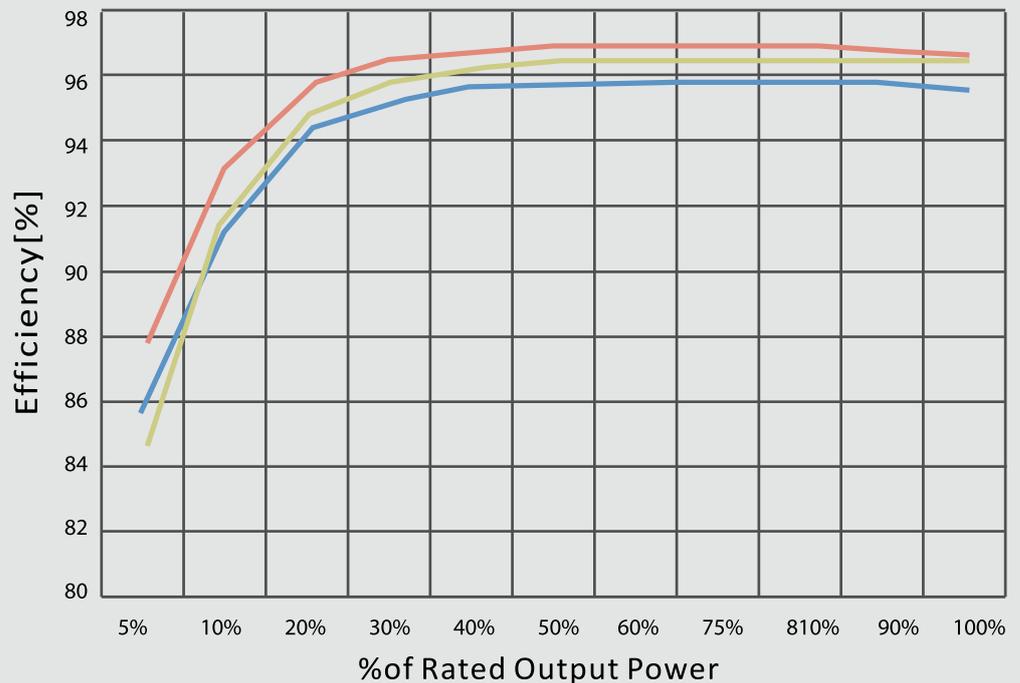


*Possible through a current sensor (ZST-ACC-TA)

FLOW CHART



EFFICIENCY CURVE



TECHNICAL DATA	1100TL	1600TL	2200TL	2700TL	3000TL
DC Input data					
Typical DC power	1200W	1800W	2400W	2900W	3300W
No. of independent MPPTs/No. of strings per MPPT	1/1				
Maximum DC input voltage	450V		500V		
Activation voltage	100V		120V		
Nominal DC input voltage	360V				
MPPT range of DC voltage	80-450V		100-500V		
DC voltage range at full load	110-450V	165-450V	170-500V	200-500V	
Maximum input current for each MPPT	10A		13A	13.5A	15A
AC output data					
Nominal AC power	1000W	1550W	2100W	2600W	3100W
Maximum AC power	1000VA	1550VA	2100VA	2600VA	3100VA
Maximum AC Current	4.5A	7A	9.5A	11.5A	13A
Type of connection/nominal grid voltage	Single-phase L/N/PE / 220V,230V,240V				
Grid Voltage range	180~270V (according to the local grid standards)				
Grid nominal frequency	50/60Hz				
Grid frequency range	45~53 / 57~63 Hz (according to the local grid standards)				
Total current harmonic distortion	<3%				
Power factor	1 (programmable +/-0.8)				
Active Power adjustable range	0~100%				
Grid feed-in limitation	Feed in adjustable from zero to the nominal power value*				
Efficiency					
Maximum efficiency	97%		97.1%		97.2%
Weighted efficiency (EURO)	95.2%	95.9%	96.1%	96.4%	96.5%
MPPT efficiency	>99.9%				
Night-time consumption	<1W				
Protections					
Safety protections	Anti islanding, RCMU, Ground Fault Monitoring				
DC reverse polarity protection	Yes				
DC switch	Optional (only WS models)				
Surge protection	Yes				
Protection class/Surge category	I/III				
Integrated dischargers	AC/DC MOV: Type III standard				
Standard					
EMC	EN 61000-6-1/2/3/4,				
Safety standard	IEC 62116, IEC 61727, IEC 61683, IEC 60068-1/2/14/30, IEC 62109-1/2				
Grid connection standard	AS 4777, VDE V 0124-100, VDE V 0126-1-1, VDE-AR-N 4105, EN50438, G83/2, C10/11, RD1699, CEI 0-21				
Communication					
Communication interfaces	Wi-Fi (only WS models), RS485 (proprietary protocol), SD card				
Additional inputs or connections	Input for current sensor connection				
Data storage on SD	25 years				
General information					
Permissible ambient temperature range	-25°C...+60°C (power limitation above 45°C)				
Topology	Transformerless				
Environmental protection rating	IP65				
Permissible relative humidity range	0%.....95% senza condensazione				
Maximum operating altitude	2000m				
Noise	< 25dB @ 1mt				
Weight	11kg		12kg		
Cooling	Natural ventilation				
Dimensions (H*L*D)	405mm*314mm*135mm				
Display	LCD				
Warranty	10 years				

*Possible by connecting a current sensor (ZST-ACC-TA)



AS4777 G83/2 G59/3

CE, CEI 0-21, CQC, IEC, VDE-AR-N4105/VDE-0126, EMC, C10/11, EN50438, RD1669