

AZZURRO - THREE-PHASE STRING INVERTERS

30000TL/33000TL/40000TL



The **Three-phase ZCS Azzurro** inverters are the ideal solution for medium and large size PV systems for roof or ground installations.

The advanced ZCS technology makes the Azzurro series efficient, versatile and high-performing.

Their wide input range from 30 to 40kW with dual MPPT channels makes them easy to configure and are suitable for all requirements on both new and retrofit installations on existing systems.



AZZURRO ZCS TECHNOLOGY

- Performance optimisation
- WiFi integration on the ZCS platform for stable, effective and intelligent connectivity



MAXIMUM ENERGY EFFICIENCY

- Maximum performance 98.7%
- Stable efficiency in all working conditions
- Rapid and accurate MPPT algorithm
- Dual input section with independent MPPT



A FLEXIBLE, ECONOMIC AND EASY INSTALLATION SOLUTION

- IP65 Protection rating
- Integrated string combiner with different configuration options
- Power Management Unit
- 4" LCD display
- Updates and diagnostics through SD Card



RELIABILITY, STURDINESS AND FLEXIBILITY

- External enclosure in rust-proof, corrosion-proof and UV-ray proof aluminium
- Flexible and user-friendly management of operating parameters
- Optional class II power surge protection devices (AC and DC)
- Topology without transformer
- 10 year ZCS warranty



INTELLIGENT GRID MANAGEMENT

- Dynamic management of delivery to the grid
- "Zero Delivery" grid function*
- Reactive output management feature
- Remote control over deliverable active/reactive output limit



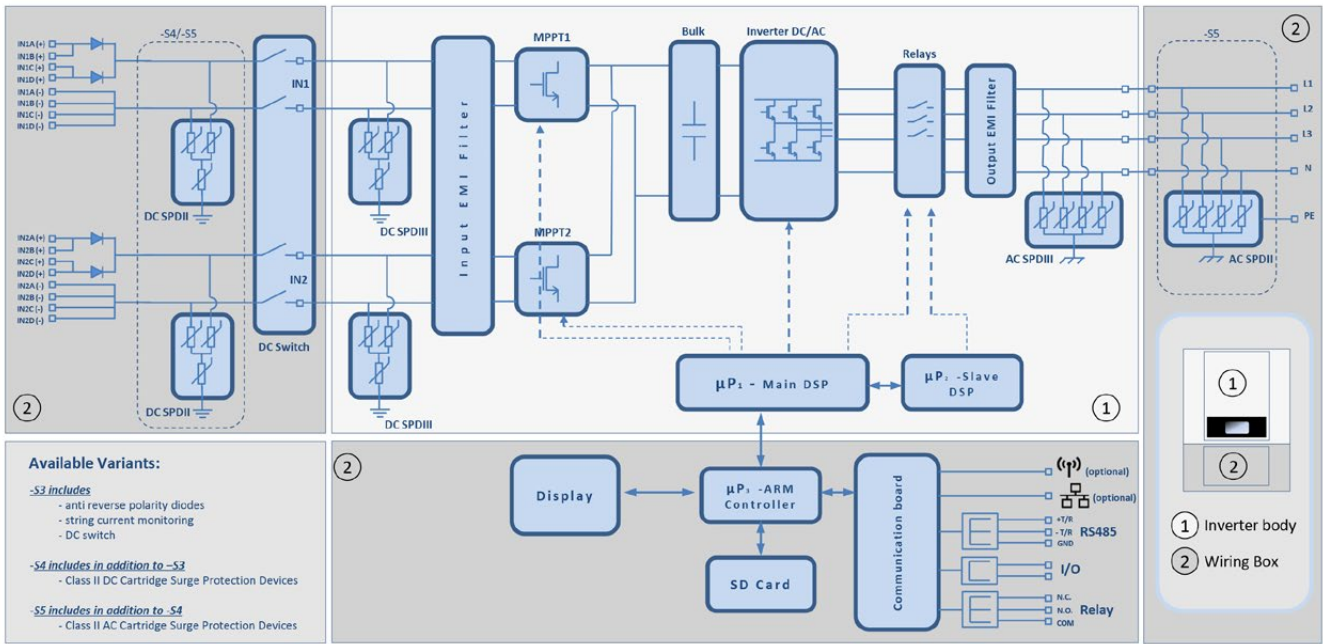
IDEAL FOR RETROFIT OPTIONS

- Wide operating input range from 250V to 960V also suitable for small size string systems
- Compact size
- Simple and user-friendly installation and configuration
- Dual MPPT channel

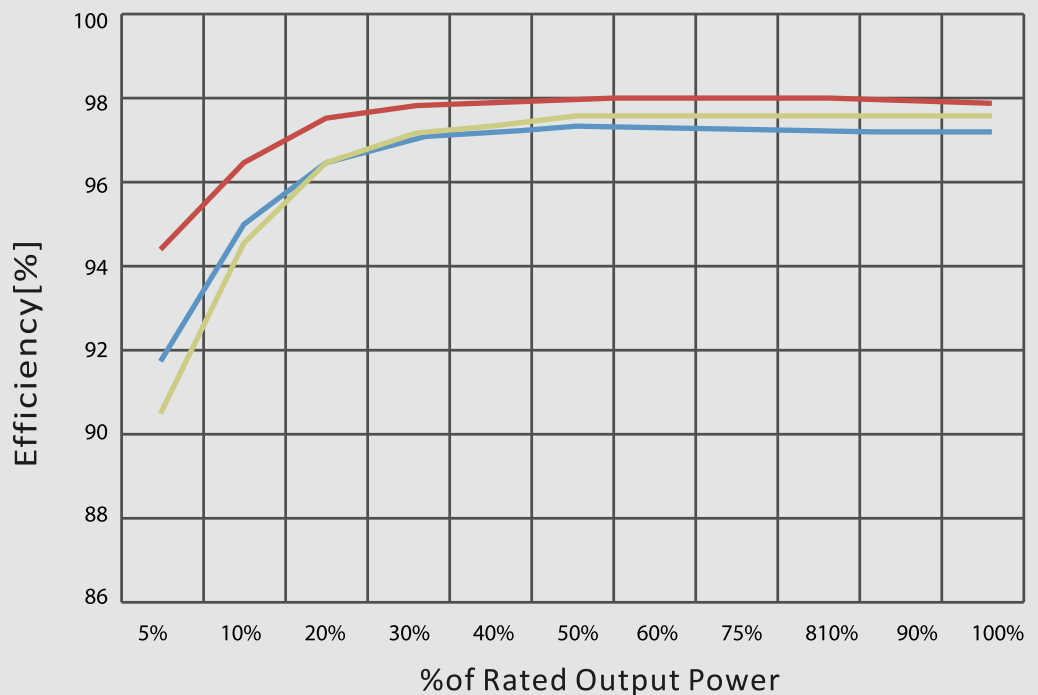


*Possible through current sensor (ZST-ACC-TA) and anti-reverse power controller (ZSM-OINJ)

FLOW CHART



EFFICIENCY CURVE



TECHNICAL SPECIFICATIONS	30000TL	33000TL	40000TL
Input (DC)			
Rated input DC power	33000W	36300W	44000W
Maximum DC power for each MPPT	15360W (480V-800V)	17000W (480V-800V)	20400W (570V-800V)
Number of independent MPPTs	2		
Number of DC Inputs	4 for each MPPT		
Maximum Input Voltage	1000V		
Activation voltage	350V		
Rated Input Voltage	600V	600V	700V
MPPT DC Voltage range	250V-960V		
DC voltage range at full load	480V-800V	480V-800V	570V-800V
Max Input current per MPPT	64A(32A/32A)	70A(35A/35A)	70A(35A/35A)
Max Input Current per String	12A		
Output (AC)			
AC rated power (@ 230V, 50Hz)	30000W	33000W	40000W
Maximum AC Power	30000VA	33000VA	40000VA
AC Rated Voltage	3/N/PE, 3/PE, 230/400V		3/N/PE, 277/480V o 3/PE, 277/480V
Rated AC Voltage Range	310V-480V (According to the local network standard)		422V-528V (According to the local network standard)
Mains frequency	47~53 / 57~63 Hz (According to the local network standard)		
Active Power Adjustment Range	0~100%		
Maximum AC Current	43A	48A	48A
Total current harmonic distortion	<3%		
Power factor	1 (adjustable +/- 0.8)		
Efficiency			
Maximum Efficiency	98.5%	98.5%	98.7%
Weighted efficiency (EURO)	98.2%	98.2%	98.4%
Night Consumption	<1W		
Start Power Threshold	45W		
MPPT efficiency	>99.5%		
Protection			
Reverse Polarity Protection	Yes		
DC Switch	Yes		
Protection class/Surge Category	I/III		
Input/Output MOV (III)	Optional		
Safety Protection	Anti islanding, RCMU, Ground fault monitoring		
Certificates	CE,CEI 0-21,CEI 0-16, SS4777,AS3100,VDE4105,C10-C11,G59 (altri certificati su richiesta)		
Communication			
Power Management Unit	According to network requirements and certifications		
Standard Communication Mode	RS485, Wifi (optional), SD card, Multi-function relay		
Data storage	25 years		
General Information			
Ambient temperatures	-25°C...+60°C		
Insulation level	Transformerless		
Protection rating	IP65		
Relative humidity	0...95% Without Condensation		
Maximum operating altitude	3000m		
Noise level	<30db@1m	<45db@1m	<45db@1m
Weight	50kg		
Cooling system	Natural convection	Forced convection	Forced convection
Dimensions (H x W x D)	767*564*290.5mm		
Warranty	10 years		



AS4777 G83/2 G59/3

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