

AZZURRO - THREE-PHASE STRING INVERTERS

10000TL/15000TL/17000TL/20000TL



The **Three-phase ZCS Azzurro** inverters are the ideal solution for medium size PV systems for commercial or industrial applications.

The Italian technology developed by ZCS makes the Azzurro series efficient, versatile and high-performing.

Their wide input range from 10 to 20kW 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 98.2%
- 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
- Natural ventilation cooling
- 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*
- Remote control over deliverable active/reactive output limit



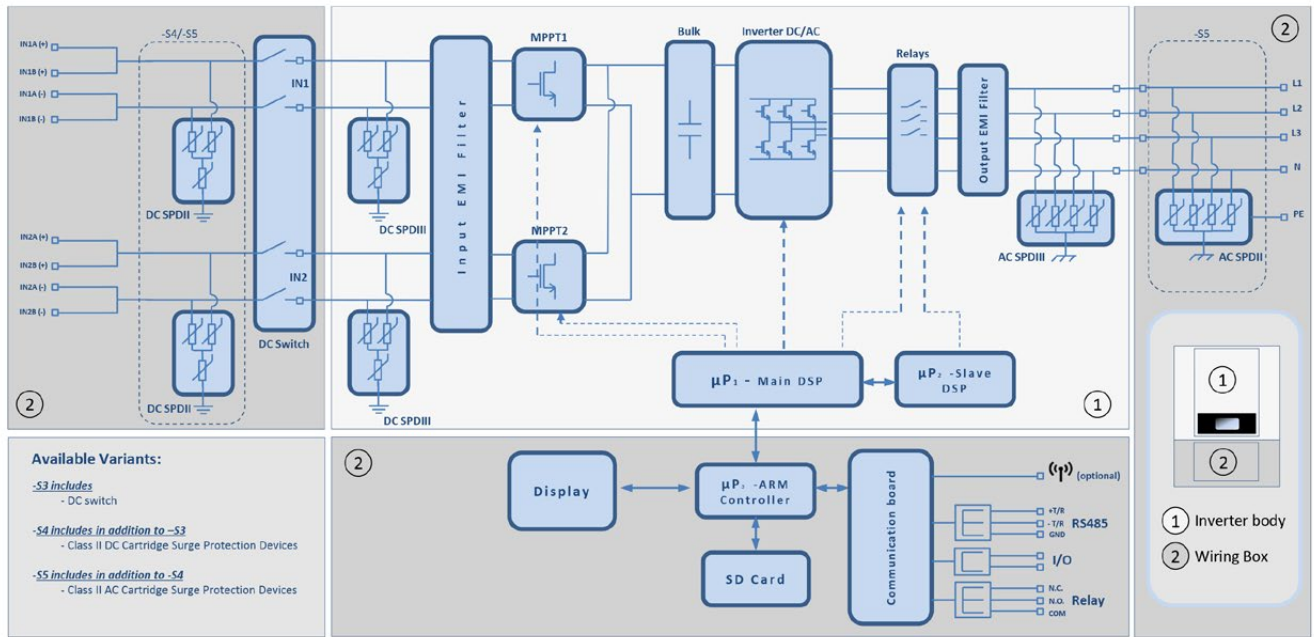
IDEAL FOR RETROFIT OPTIONS

- 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

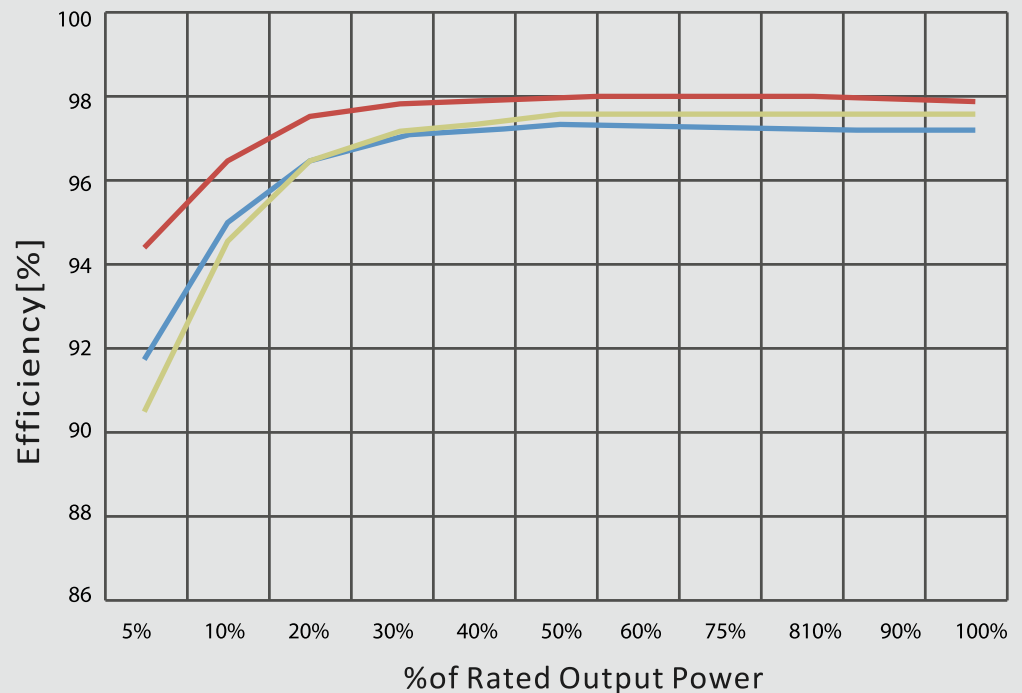


*Possible through current sensor (ZST-ACC-TA) and anti-reverse power controller (ZSM-OINJ)

FLOW CHART



EFFICIENCY CURVE



TECHNICAL SPECIFICATIONS	10000TL	15000TL	17000TL	20000TL
Input (DC)				
Rated input DC power	11000W	16500W	18700W	22000W
Maximum DC power for each MPPT	6750W (450V-850V)	10500W (500V-850V)	10500W (500V-850V)	12000W (500V-850V)
Number of independent MPPTs	2			
Number of DC Inputs	2 for each MPPT			
Maximum Input Voltage	1000V			
Activation voltage	350V			
Rated Input Voltage	600V			
MPPT DC Voltage range	250V-960V			
DC voltage range at full load	350V-850V	370V-850V	420V-850V	430V-850V
Max Input current per MPPT	15A/15A	21A/21A	21A/21A	24A/24A
Short Circuit Current for each MPPT	20A	27A	27A	30A
Output (AC)				
Nominal AC power (@ 230V, 50Hz)	10000W	15000W	17000W	20000W
Maximum AC Power	10000VA	15000VA	17000VA	20000VA
AC Rated Voltage	3/N/PE,220/380V			
	3/N/PE,230/400V			
	3/N/PE,240/415V			
Rated AC Voltage Range	180V-270V (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	15A	22A	25A	29A
Total current harmonic distortion	<3%			
Power factor	1 (adjustable +/- 0.8)			
Efficiency				
Maximum Efficiency	98.2%			
Weighted efficiency (EURO)	97.6%/97.8%	97.9%/98%	97.9%/98%	98%/98.1%
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,CQC,AS4777,AS3100,VDE4105,C10-C11,G59 (other certificates on request)			
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	2000m			
Noise level	<45db@1m			
Weight	45kg	45kg	48kg	48kg
Cooling system	Natural			
Dimensions (H x W x D)	707*492*240mm			
Warranty	10 years			



AS4777 G83/2 G59/3

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