

AZZURRO - THREE-PHASE STRING INVERTERS

4.4KTL/5.5KTL/6.6KTL
8.8KTL/11KTL/12KTL



The compact **three-phase ZCS Azzurro** inverters are the ideal solution for small to medium size PV systems for residential, commercial and small industrial applications.

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

Their wide input range makes them easy to configure and 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 98.3%
- 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*
- Reactive output management feature
- Remote control over deliverable active/reactive output limit



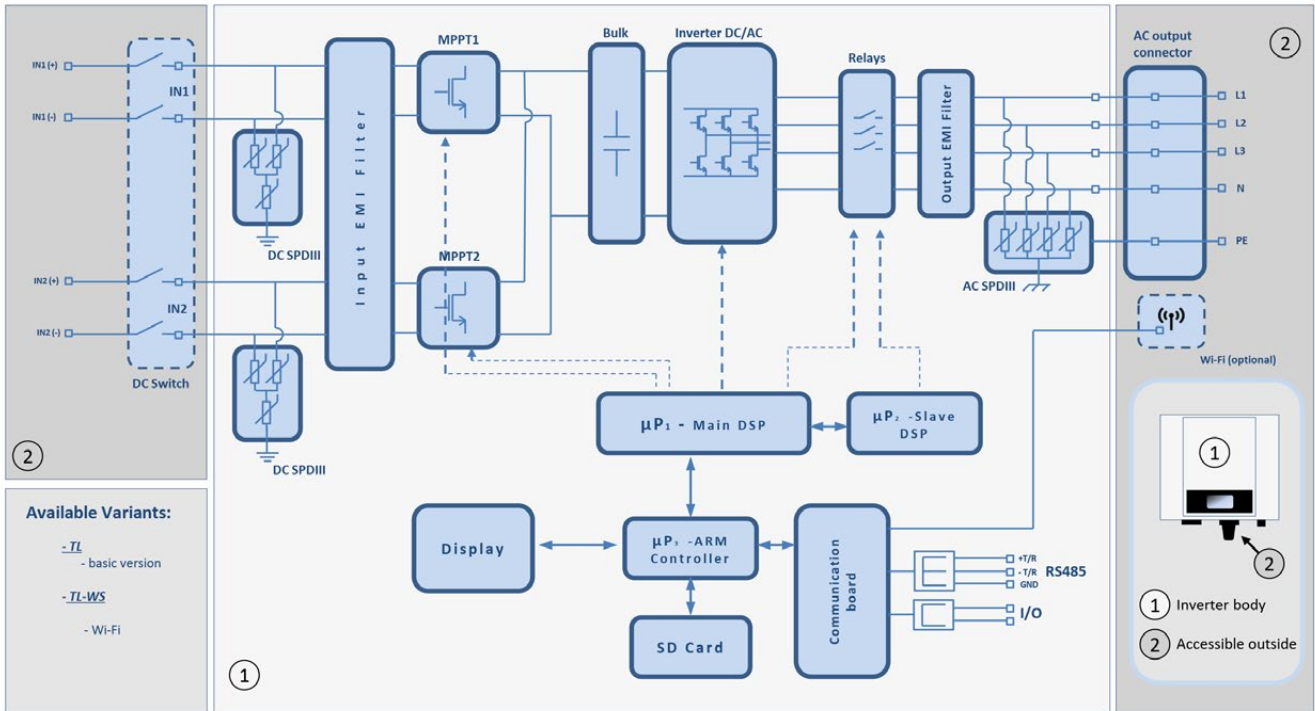
IDEAL FOR RETROFIT OPTIONS

- Wide operating input range from 160V to 960V also suitable for small size string systems
- Compact size
- Simple and user-friendly installation and configuration
- Dual MPPT channel

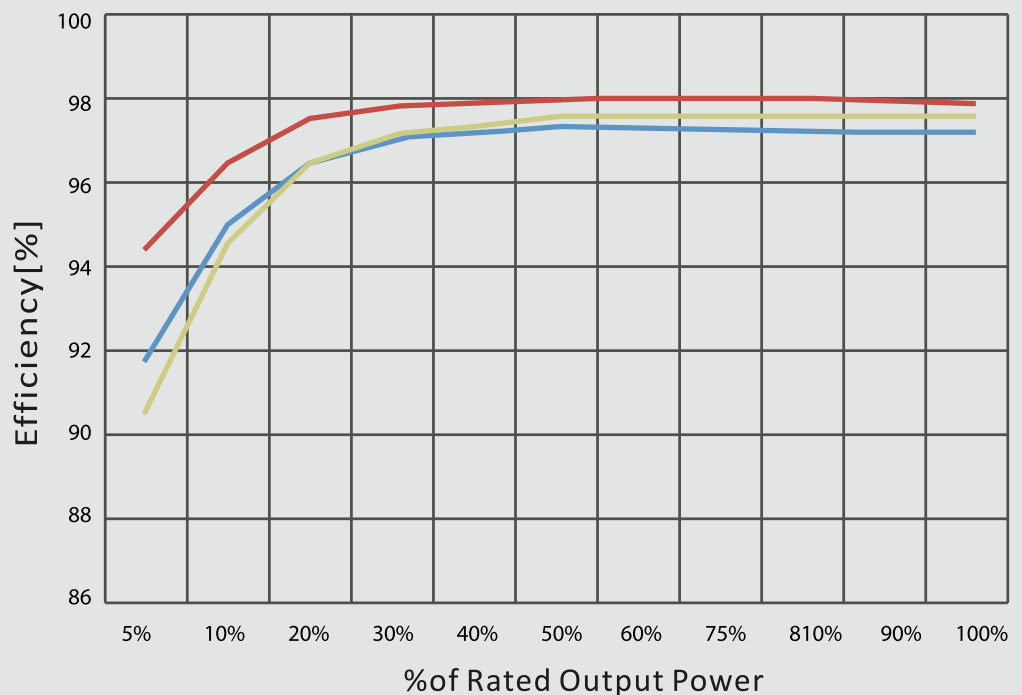


*Possible through current sensor (ZST-ACC-TA) and anti-reverse power controller (ZSM-OINJ)

FLOW CHART



EFFICIENCY CURVE



TECHNICAL SPECIFICATIONS	4.4KTL-X	5.5KTL-X	6.6KTL-X	8.8KTL-X	11KTL-X	12KTL-X
Input (DC)						
Maximum input power	4800W	6000W	7200W	9600W	12000W	14400W
Maximum DC power for each MPPT	4800W (440V-850V)	6000W (545V-850V)	7200W (660V-850V)	8800W (800V-850V)	8800W (800V-850V)	8800W (800V-850V)
Number of independent MPPTs	2					
Number of DC Inputs	1 for each MPPT					
Maximum absolute DC input voltage	1000V					
Input activation voltage	180V					
Rated input DC	600V					
MPPT DC Voltage range	160V-960V					
DC voltage range at full load	190V-850V	240V-850V	290V-850V	380V-850V	480V-850V	575V-850V
Max DC Input current per MPPT	11A/11A					
Input short circuit current for each MPPT	14A					
Output (AC)						
Rated AC Output Power	4000W	5000W	6000W	8000W	10000W	12000W
Maximum AC Power	4400VA	5500VA	6600VA	8800VA	11000VA	13200VA
Maximum AC Current	6.4A	8.0A	9.6A	12.8A	15.9A	19.1A
AC Rated Voltage	3/ N/ PE,220/380		3/N/PE,230/400		3/N/PE,240/415	
Rated AC Voltage Range	184V-276V (According to the standard of local networks)					
Rated Output Frequency	50/60Hz					
Mains frequency	50Hz,+/-5Hz (According to the standard of local networks)					
Active Power Adjustment Range	0-100%					
Total current harmonic distortion	<3%					
Power factor	1 (adjustable +/-0.8)					
Operating Performance						
Maximum Yield	98%			98.3%		
Weighted yield (EURO/CEC)	97.5%			98%		
Night Consumption	<1W					
Start Power Threshold	45W					
MPPT Efficiency	>99.5%					
Protection						
Reverse Polarity Protection	Yes					
DC Switch	Optional					
Protection class/Surge Category	1/111					
Safety Protection	Anti islanding, RCM U, Grounding Dispersion Monitoring					
Certifications	CE, CGC, AS47 77,AS3100,VDE4105 ,C10-C11 ,G83/G59, CEI 0-21					
Communication						
Power Management Unit	According to network requirements and certifications					
Standard Communication Mode	wifi, RS485, GPRS (optional) ,scheda SD					
Data storage	25 years					
General Information						
Ambient temperature	-25°C...+60°C					
Topology	Transformerless					
Protection rating	IP65					
Relative humidity	0...95% Without Condensation					
Maximum operating altitude	2000m					
Noise Emission	<29dB@1m					
Weight	21kg			22kg		
Cooling system	Natural					
Dimensions	483*452*200mm					
User interface	LCD display					
Warranty	10 years					



AS4777 G83/2 G59/3

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