

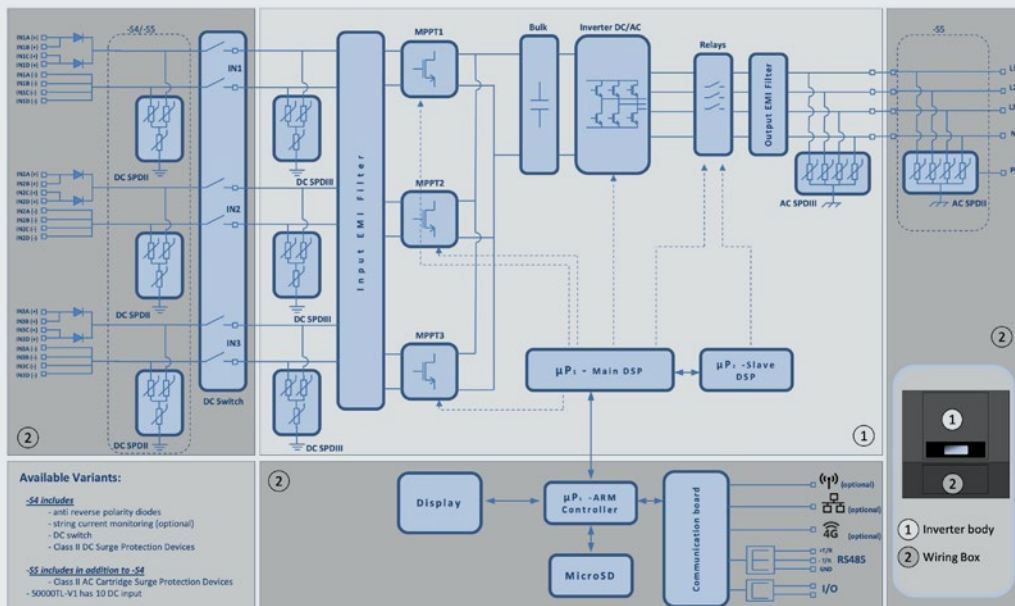
ZCS AZZURRO - THREE-PHASE STRING INVERTER

50000TL-V1/60000TL-V1



- » Maximum yield 98.6%
- » Triple input section with independent MPPTs
- » Integrated string combiner with different configuration options
- » SD card for updates and diagnostics
- » Optional Class II surge protection devices
- » 5 or 10 year ZCS warranty
- » “Zero Grid Feed-in” functionality
- » Possibility to manage reactive power
- » Wide operating input range from 250V to 960V also suitable for small-sized string systems

FLOW CHART



TECHNICAL DATA		3PH 50000TL-V1	3PH 60000TL-V1
DC Input data			
Typical DC power	55000 W		66000 W
Maximum DC power for each MPPT	22000W (500V-800V)		22000W (530V-800V)
No. of independent MPPTs / No. of strings per MPPT	3/(4/3/3)		3/(4/4/4)
Maximum DC input voltage	1000V		
Start-up voltage	350V		
Nominal DC input voltage	600V		
MPPT DC voltage range	250V-960V		
DC voltage range at full load	500V-800V		530V-800V
Maximum input current for each MPPT	40A/30A/30A		40A/40A/40A
Maximum absolute current for each MPPT	48A/36A/36A		48A/48A/48A
Maximum current per string**	15A		
AC Output data			
Rated AC power	50000 W		60000 W
Maximum AC power	50000VA		60000VA
Maximum AC current per phase	80A		90A
Connection type/Rated grid voltage	Three-phase 3PH/N/PE 220V/230V/240V (PH-N); 380V/400V/415V (PH-PH) or Three-phase 3PH/PE 380V/400V/415V (PH-PH)		
Grid voltage range	184V~276V (PH-N); 320V~480V (PH-PH) (according to the local grid standards)		
Rated grid frequency	50Hz/60Hz		
Grid frequency range	45Hz~53Hz / 57Hz~63Hz (according to the local grid standards)		
Total harmonic distortion	<3%		
Power factor	1 (Programmable +/-0.8)		
Active power adjustment range (settable)	0~100%		
Grid feed-in limit	Feed adjustable from zero to nominal power value*		
Efficiency			
Maximum efficiency	98.5%		98.6%
Weighted efficiency (EURO)	98.3%		98.4%
MPPT efficiency	>99.9%		
Consumption at night	<1W		
Protections			
Internal interface protection	No		
Safety protections	Anti-islanding, RCMU, Ground Fault Monitoring		
Reverse polarity protection DC	Yes		
DC circuit breaker	Integrated		
Overheating protection	Yes		
Overvoltage category/Protection class	Overvoltage Category III / Protection class I		
Integrated dischargers	Type 3 AC/DC MOV Standard. Type 2 DC Dischargers Standard. Type AC Dischargers optional (only S5 models)		
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	CE, CGC, ZVRT, AS 4777, AS 3100, VDE-AR-N 4105, EN50438, G83/2, G59/3, C10/11, CEI 0-21, CEI 0-16		
Communication			
Communication interfaces	Wi-Fi (Optional), RS485 (proprietary protocol), SD card		
Additional inputs or connections	I/O inputs for connection to anti-reverse power controller		
Data storage on SD	25 years		
General information			
Allowable ambient temperature range	-25°C...+60°C (power limit above 45°C)		
Topology	Transformerless		
Environmental protection class	IP65		
Allowable relative humidity range	0%.....95% non-condensing		
Maximum operating altitude	2000m		
Noise level	< 60dB @ 1mt		
Weight	68Kg		70Kg
Cooling	Forced fan convection		
Dimensions (H x W x D)	737mm x 713mm x 297mm		
Display	LCD		
Warranty	5 or 10 years		

* Possible by connecting anti-reverse power controller (ZSM-ZEROINJ)

** models with more than two strings per MPPT have internal protection diodes, higher string currents than those reported may cause diode interruption

ZCS AZZURRO - LV SERIES THREE-PHASE STRING INVERTER

80KTL-LV/100KTL-LV/110KTL-LV



- » Maximum yield 98.7%
- » Protection class of IP66
- » Updates and diagnostics via USB
- » Forced convection with speed-controlled cooling
- » Class II surge protection devices (AC and DC)
- » 5 or 10 year ZCS warranty
- » Wide operating range from 180V to 1000v for enhanced configuration flexibility
- » Up to 10 independent MPPT channels



TECHNICAL DATA	3PH 80KTL-LV	3PH 100KTL-LV	3PH 110KTL-LV
DC Input data			
Typical DC power*	96000 W	120000 W	132000 W
Maximum DC power for each MPPT	13000 W		
No. of independent MPPTs / No. of strings per MPPT	8/2	10/2	
Maximum DC input voltage	1100V		
Start-up voltage	200V		
Nominal DC input voltage	600V		
MPPT DC voltage range	180V-1000V		
DC voltage range at full load	500V-850V		
Maximum input current for each MPPT	26A		
Maximum absolute current for each MPPT	40A		
AC Output data			
Rated AC power	80 kW	100 kW	110 kW
Maximum AC power	88kVA	110kVA	121kVA
Maximum AC current per phase	128A	160A	175A
Connection type/Rated grid voltage	Three-phase 3PH/N/PE 220V/230V/240V (PH-N); 380V/400V/415V (PH-PH) or Three-phase 3PH/PE 380V/400V/415V (PH-PH)		
Grid voltage range	184V~276V (PH-N); 320V~480V (PH-PH) (according to the local grid standards)		
Rated grid frequency	50Hz/60Hz		
Grid frequency range	45Hz~55Hz / 54Hz~66Hz (according to the local grid standards)		
Total harmonic distortion	<3%		
Power factor	1 (Programmable +/-0.8)		
Active power adjustment range (settable)	0~100%		
Grid feed-in limit	Feed-in adjustable from zero to nominal power value**		
Efficiency			
Maximum efficiency	98.6%	98.7%	98.75%
Weighted efficiency (EURO)	98.2%	98.3%	98.4%
MPPT efficiency	>99.9%		
Consumption at night	<1W		
Protections			
Internal interface protection	No		
Safety protections	Anti-islanding, RCMU, Ground Fault Monitoring		
Reverse polarity protection DC	Yes		
DC circuit breaker	Integrated		
Overheating protection	Yes		
Overvoltage category/Protection class	Overvoltage category III / Protection class I		
Integrated dischargers	AC/DC: Type 2 Standard		
Standard			
EMC	EN 61000-6-2/4, EN 61000-3-11/12		
Safety standard	IEC 62109-1/2, IEC62116, IEC61727, IEC61683, IEC60068(1,2,14,30)		
Grid connection standard	Connection certificates and standards available on www.zcsazzurro.com		
Communication			
Communication interface (optional)	Wi-Fi/4G/Ethernet (optional), RS485 (proprietary protocol), USB		
General information			
Allowable ambient temperature range	-30°C...+60°C (power limit above 45°C)		
Topology	Transformerless		
Environmental protection class	IP66		
Allowable relative humidity range	0%.....100%		
Maximum operating altitude	4000m		
Noise level	< 60dB @ 1mt		
Weight	72 kg	84 kg	85 kg
Cooling	Forced fan convection		
Dimensions (H x W x D)	1051mm x 660mm x 340mm		
Display	LED indicators, Bluetooth + App		
Warranty	5 or 10 years		

* The typical DC power does not represent a maximum applicable power limit. The online configurator available at www.zcsazzurro.com will provide any applicable configurations.

** Possible by using a specific meter