

ZCS AZZURRO – SINGLE-PHASE HYBRID SYSTEM

1PH HYD 3000 ZP1/HYD 3680 ZP1/HYD 4000 ZP1/HYD 4600 ZP1/HYD 5000 ZP1/HYD 6000 ZP1



- » Integrated storage system, with modular installation for easy mounting
- » Automatic management of the energy flows from the photovoltaic system, battery and grid
- » Compact design and extremely small footprint
- » Parallel-ready
- » Possibility of operation in zero grid feed-in mode
- » Independently managed batteries via integrated PCU (Power Control Unit)
- » Stand-Alone support mode guarantees continuity of operation and “island” operation, both from the photovoltaic source and battery in the event of power failure.
- » Maximum flexibility for expanding storage capacity (from 5.1kWh to 20.4kWh)



TECHNICAL DATA	1PH HYD 3000 ZP1	1PH HYD 3680 ZP1	1PH HYD 4000 ZP1	1PH HYD 4600 ZP1	1PH HYD 5000 ZP1	1PH HYD 6000 ZP1
DC input data (photovoltaic)						
Typical DC power*	4500W	5400W	6000W	6900	7500W	9000W
Maximum DC power for each MPPT	3500W (270V-520V)				3750W (300V-520V)	
No. of independent MPPTs / No. of strings per MPPT	2/1					
Maximum input voltage	550V					
Start-up voltage	100V					
Rated Input voltage	360V					
MPPT DC voltage range	85V-520V					
Maximum input current for each MPPT	16A/16A					
Maximum absolute current for each MPPT	22.5A/22.5A					
Battery technical data						
Type of compatible battery	HV ZBT 5K					
Rated voltage	400V					
Allowable voltage range	300V-435V					
Maximum charge/discharge power	3000W	3680W	4000W	4600W	5000W	6000W
Allowable temperature range**	-10°C/+50°C					
Number/capacity of installable batteries	1-4 / 5.1-20.4kWh					
Charge curve	Managed by integrated BMS					
Depth of Discharge (DoD)	0%-90% (programmable)					
Dimensions (H x L x D)	420mm x 7087mm x 170mm					
Weight	50 kg					
AC output (grid side)						
Rated power	3000W	3680W	4000W	4600W	5000W	6000W
Maximum Power	3300VA	3680VA	4400VA	4600VA	5500VA	6600VA
Maximum current	15A	16A	20A	20.9A	25 A	30A
Connection type/Rated voltage	Single-phase L/N/PE 220, 230, 240V					
AC voltage range	180V-276V (according to the local standards)					
Rated frequency	50Hz/60Hz					
AC frequency range	44Hz -55Hz / 54Hz -66Hz (according to the local standards)					
Total harmonic distortion	< 3%					
Power factor	1 default (Programmable +/- 0.8)					
Grid feed-in limit	Programmable from display					
EPS Output (Emergency Power Supply)						
Maximum power supplied in EPS mode***	3000VA	3680VA	4000VA	4600VA	5000VA	6000VA
EPS output voltage and frequency	Single-phase 230V 50Hz/60Hz					
Current supplied in EPS mode	13A	16A	20A	20.9A	25A	30A
Total harmonic distortion	< 3%					
Switch time	< 10ms					
Efficiency						
Maximum efficiency	97.7%			97.8%		
Weighted efficiency (EURO)	97.7%			97.1%		
MPPT efficiency	>99.9%					
Consumption in stand-by	< 10W					
Protections						
Internal interface protection	Yes					
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 MOV: Type 3 Standard					
Battery soft start	Yes					
Standard						
EMC	EN 61000-3-2/3/11/12, EN 61000-6-2/3					
Safety standard	IEC 62116, IEC 61727, IEC 61683, IEC 60068-1/2/14/30, IEC 62109-1/2					
Grid connection standard	Connection certificates and standards available on www.zcsazzurro.com					
Communication						
Communication interfaces	Wi-Fi/4G/Ethernet (optional), RS485 (proprietary protocol), USB, CAN 2.0, Bluetooth					
Additional inputs or connections	Input for current sensor connection or meter					
Inverter general information						
Allowable ambient temperature range	-10°C...+60°C (power limit above 45°C)					
Topology	Transformerless / High-frequency isolation battery output					
Environmental protection class	IP65					
Allowable relative humidity range	5% - 95% without condensation					
Maximum operating altitude	4000m					
Noise level	< 25dB @ 1mt					
Weight	23.5 kg					
Cooling	Natural convection					
Dimensions (H x L x D)	470mm x 7087mm x 170mm					
Data monitoring	LCD Display + APP					
Warranty	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.

** Standard value for lithium batteries; maximum operating range between +10°C and +40°C;

*** Power output in EPS mode depends on the number and type of batteries, and the status of the system (e.g. residual capacity, temperature)