

Hybrid Inverter

Three-Phase Hybrid Inverter
5-13kW

Small in Size,
Big on Power. 

Max. 1.67 times Photovoltaic Over-configuration	18 A Max. PV Input Current Per String	180-980 V MPPT Operating Voltage Range
Max. 16 kW EPS Peak Output Apparent Power	110 % Unbalanced Output	< 10 ms EPS Switching Time

Powered by

ECOS Smart Home
From WHES



Powerful

- Max. 18A DC input current per string, compatible with 182/210 PV modules.
- Ultra-wide MPPT voltage range captures every ray of light from dawn to dusk, maximizing energy collection.

Flexible

- Up to 110% three-phase unbalanced output, increasing self-use ratio and optimizing solar production.
- Max. 5 units in parallel, offering a cost-effective commercial solution.

Efficient

- High charge/discharge efficiency, up to 98.5%/97.7%.
- Reduced energy loss between battery and inverter interaction.

Friendly

- < 25dB, no noise pollution.
- IP65, indoor or outdoor application.

Contact Us

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Technical Specifications

Model	WH-THA502		WH-THA602	WH-THA802	WH-THA103	WH-THA123	WH-THA133
PV Input							
Absolute Max. Voltage				1000 V			
MPPT Voltage Range				180...980 V			
Max. DC Input Power	7500 W	9000 W	12000 W	15000 W	20000 W	20000 W	
Start-up Voltage				145 V			
Rated Operating Voltage				620V			
Max. Input Current				18/18 A			
Max. Inverter Backfeed Current to Array				0 A			
Isc PV				22/22 A			
No. of MPP Trackers				2			
No. of Strings per MPP Tracker				1			
Battery							
Battery Voltage Range				160...700 V			
Max. Charge/Discharge Current				25/25 A			
AC Input/Output							
Nominal Output Power	5000 W	6000 W	8000 W	10000 W	12000 W	13000 W	
Max. Apparent Power to Grid	5000 W	6000 W	8000 W	10000 W	12000 W	13000 W	
Max. Apparent Power from Grid	10000 W	12000 W	16000 W	17900 W	17900 W	17900 W	
Nominal Voltage	3/N/PE; 220 V /380 V 3/N/PE; 230V /400 V 3/N/PE; 240 V / 415 V						
Nominal Frequency	50/60 Hz						
Max. AC Current to Grid	8.1 A	9.6 A	12.8 A	16 A	19.2 A	20.8 A	
Max. AC Current from Grid	16.2 A	19.2 A	25.6 A	26 A	26 A	26 A	
Max. Output Fault Current	52 A (peak), 37 A (rms)						
AC Output Max. Output Overcurrent Protection	37 A						
AC Input Power Factor	-0.8...+0.8						
AC Output Power Factor	1 (-0.8...+0.8 adjustable)						
THDi	< 3%						
EPS Output							
Nominal Output Power ¹	5000 W	6000 W	8000 W	10000 W	12000 W	13000 W	
Peak Output Apparent Power @60 sec	10000 W	12000 W	16000 W	16000 W	16000 W	16000 W	
Nominal Voltage	3/N/PE; 220 V /380 V 3/N/PE; 230V /400 V 3/N/PE; 240 V / 415 V						
Nominal Frequency	50 Hz / 60 Hz (±0.2%)						
Max. Output Current	8.1 A	9.6 A	12.8 A	16 A	19.2 A	20.8 A	
Max. Output Fault Current	52 A (peak), 37 A (rms)						
EPS Output Max. Output Overcurrent Protection	37 A						
Switch Time	< 10 ms						
THDv @ Linear Load	< 2%						
Power Factor	-0.8...+0.8						
Efficiency							
PV Max. Efficiency				98%			
PV Europe Efficiency				97%			
PV Max. MPPT Efficiency				99.90%			
Battery Charge by PV Max. Efficiency				98.50%			
Battery Discharge Efficiency				97.70%			
Protection							
Over/Under Voltage Protection, DC Isolation Protection, DC Injection Monitoring, Residual Current Detection, Anti-islanding Protection, Over Load Protection, Battery Input Reverse Polarity Protection, PV Reverse Polarity Protection, Surge Protection, Over Heat Protection							
General Data							
Dimension (W*D*H)				510*205*480 mm			
Dimension of Packing (W*D*H)				705*355*615 mm			
Net Weight				30.8 kg			
Gross Weight				35 kg			
Operation Temp				-25°C...60°C			
Relative Humidity				0%...95%			
Altitude				≤ 3000m			
Ingress Protection				IP65			
Cooling				Natural			
Inverter Topology				Non-isolated			
Over Voltage Category				III (AC), II (DC)			
Protective Class				Class I			
Active Anti-Islanding Method				Frequency shift			
Human Interface				LED/APP			
BMS Communication Interface				RS485/CAN			
Meter Communication Interface				RS485			
Noise Emission				< 25 dB			
Standby Power Consumption				< 10 W			
Standard ²	IEC 62109, IEC 62040, AS/NZS 4777.2, EN 50549-1, C 10/11, VDE 4105, VDE 0124, XP C 15-712-3, VDE 0126, EN50549-1/rfG/PTPIREE, CEI 0-21, EIFS						

¹ Depends on the voltage and the discharge current of the batteries connected.

² For all standards refer to the certificates category on the WHES website.

* The product features a shiny silver color design with a mirror-like logo, which exhibits subtle color variations under different lighting conditions.

* All information reflects the current state of technology at the time of printing and is subject to change. Despite careful editing, no liability is assumed.