

COPIA-TH

Three-Phase Hybrid Inverter

ECACTUS



Product Introduction

Copia-TH, a three-phase hybrid inverter with a power output range of 5-13kW. It supports both single-phase and three-phase loads, making it versatile for different home and small C&I environments. Designed to work with high-voltage batteries, it maximizes self-generated and self-consumed energy, ensuring a reliable energy supply even during power outages.

Powerful

- Max. 1.67 times photovoltaic over-configuration.
- Max. 18A DC input current per string, compatible with 182/210 PV modules.

Reliable

- Uninterrupted power supply.
- Off-grid switching time is less than 10ms.

Flexible

- Up to 110% three-phase unbalanced output.
- Increase self-use ratio and optimizing solar production.

Friendly

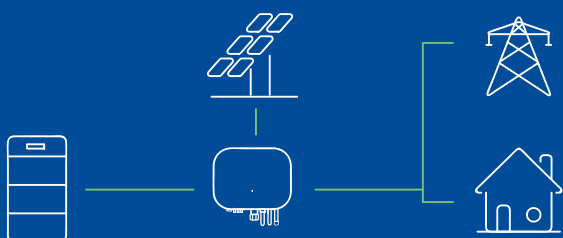
- <25dB low noise level.
- IP65, indoor or outdoor application.

Effective

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

Smart

- VPP and IOT ready.
- Remote updates & self-diagnosis.



- Equipped with a high-voltage battery, Cobia-TH helps you maximize self-use of energy, while effectively ensuring household energy supply during power outages.

Copia-TH Series



Technical Specifications

Model	WH-THA502	WH-THA602	WH-THA802	WH-THA103	WH-THA123	WH-THA133
PV Input						
Absolute Max. Voltage (V)	1000					
MPPT Voltage Range (V)	180..980					
Max. DC Input Power (W)	7500	9000	12000	15000	20000	20000
Start-up Voltage (V)	145					
Rated Operating Voltage (V)	620					
Max. Input Current (A)	18/18					
Max. Inverter Backfeed Current to Array (A)	0					
Isc PV (A)	22/22					
No. of MPP Trackers	2					
No. of Strings per MPP Tracker	1					
Battery						
Battery Voltage Range (V)	160..700					
Max. Charge/Discharge Current (A)	25/25					
AC Input/Output						
Nominal Output Power (W)	5000	6000	8000	10000	12000	13000
Max. Apparent Power to Grid (VA)	5000	6000	8000	10000	12000	13000
Max. Apparent Power from Grid (VA)	10000	12000	16000	17900	17900	17900
Nominal Voltage	3/N/PE:220/380 3/N/PE:230/400 3/N/PE:240/415					
Nominal Frequency (Hz)	50/60					
Max. AC Current to Grid (A)	8.1	9.6	12.8	16.0	19.2	20.8
Max. AC Current from Grid (A)	16.2	19.2	25.6	26.0	26.0	26.0
Max. Output Fault Current (A)	52 (peak), 37 (rms)					
AC Output Max. Output Overcurrent Protection (A)	37					
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 (W)	5000	6000	8000	10000	12000	13000
Peak Output Apparent Power (VA) @60 sec	10000	12000	16000	16000	16000	16000
Nominal Voltage (V)	3/N/PE:220/380 3/N/PE:230/400 3/N/PE:240/415					
Nominal Frequency (Hz)	50/60 (±0.2%)					
Max. Output Current (A)	8.1	9.6	12.8	16	19.2	20.8
Max. Output Fault Current (A)	52 (peak), 37 (rms)					
EPS Output Max. Output Overcurrent Protection (A)	37					
Switch Time (ms)	<10					
THDv @ Linear Load	<2%					
Power Factor	-0.8..+0.8					
Efficiency						
PV Max. Efficiency	98%					
PV Europe Efficiency	97%					
PV Max. MPPT Efficiency	99.9%					
Battery Charge by PV Max. Efficiency	98.5%					
Battery Discharge Efficiency	97.7%					
Protection						
Over/Under Voltage Protection	Yes					
DC Isolation Protection	Yes					
DC Injection Monitoring	Yes					
Residual Current Detection	Yes					
Anti-islanding Protection	Yes					
Over Load Protection	Yes					
Battery Input Reverse Polarity Protection	Yes					
PV Reverse Polarity Protection	Yes					
Surge Protection	Yes					
Over Heat Protection	Yes					
General Data						
Dimension (W*D*H) (mm)	510*205*480					
Dimension of Packing (W*D*H) (mm)	705*355*615					
Net Weight (kg)	30.8					
Gross Weight (kg)	35					
Operation Temp (°C)	-25..+60					
Relative Humidity	0..95%					
Altitude (m)	≤3000					
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 (dB)	<25					
Standby Power Consumption (W)	<10					
Safety and Approvals						
Safety	IEC 62109, IEC 62040					
Country	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					

Text and images correspond to the current state of technology at the time of printing. Subject to modifications. All information is without guarantee in spite of careful editing—liability excluded.