

# COPIA-TH

Three-Phase Hybrid Inverter

eCACTUS



Support storing energy from diesel generator



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## Product Introduction

Copia-TH, a three-phase hybrid inverter with a power output range of 5-13kW. Compatible with both single-phase and three-phase loads, with ability to support 110% unbalanced load, and is well-suited for various home application environments.

### Compelling

1.5 DC/AC Ratio,  
Max 18A DC input current per string  
Up to 110% three-phase unbalanced output

### Stable

IP65 protection level,  
Uninterrupted power supply, and  
off-grid switching time is less than  
10ms

### Compatible

160-700V wide battery voltage range,  
Compatible with various brands  
of batteries

### Smart

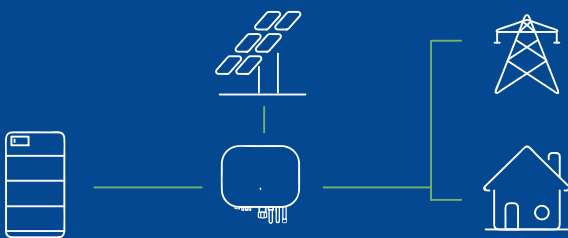
VPP and IOT ready,  
Supports remote update and  
control via ECOS

### Capable

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

### Secured

24-hour service response



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

# Copia-TH Series

## Technical parameters



Model	WH-THA502	WH-THA602	WH-THA802	WH-THA103	WH-THA123	WH-THA133
<b>PV Input</b>						
Absolute max Voltage (d.c.V)				1000		
MPPT Voltage Range (d.c.V)				180...980		
Max. DC Input Power (W)	7500	9000	12000	15000	20000	20000
Start-up Voltage (d.c.V)				145		
Rated Operating Voltage (d.c.V)				620		
Max. Input Current (d.c.A)				18/18		
Max. inverter backfeed current to array (d.c.A)				0		
iso PV (d.c.A)				22/22		
NO. of MPP Trackers				2		
NO. of Strings per MPP Tracker				1		
<b>Battery</b>						
Battery Voltage Range (d.c.V)				Li-ion		
Max. Charge/Discharge Current (d.c.A)				160...700		
				25/25		
<b>AC Input/Output</b>						
Rated output Power (W)	5000	6000	8000	10000	12000	13000
Rated Apparent Power to Grid (VA)	5000	6000	8000	10000	12000	13000
Max. Apparent Power to Grid (VA)	5000	6000	8000	10000	12000	13000
Rated Apparent Power from Grid (VA)	10000	12000	16000	17900	17900	17900
Max. Apparent Power from Grid (VA)	10000	12000	16000	17900	17900	17900
Rated Voltage (a.c.V)			3/N/PE:220/380	3/N/PE:230/400	3/N/PE:240/415	
Rated Frequency (Hz)			50/60			
Rated AC Current to Grid (a.c.A)	7.3	8.7	11.6	14.5	17.4	18.9
Max. AC Current to Grid (a.c.A)	8.1	9.6	12.8	16.0	19.2	20.8
Rated AC Current from Grid (a.c.A)	14.6	17.4	23.2	26.0	26.0	26.0
Max. AC Current from Grid (a.c.A)	16.2	19.2	25.6	26.0	26.0	26.0
Inrush current (a.c.A)			16 a.c.A (peak), 11.3 us (duration)			
Max. output fault current (a.c.A)			52 (peak), 37 (rms)			
AC output Maximum output overcurrent protection (a.c.A)			37			
AC input power factor			-0.8...+0.8			
AC output power factor			(-0.8...+0.8 adjustable)			
THDi			<3%			
<b>EPS Output</b>						
Rated Output Power (W)	5000	6000	8000	10000	12000	13000
Peak Output Apparent Power (VA) @60 sec	10000	12000	16000	16000	16000	16000
Rated Voltage (a.c.V)			3/N/PE:220/380	3/N/PE:230/400	3/N/PE:240/415	
Nominal Frequency (Hz)			50/60 (±0.2%)			
Rated Output Current (a.c.A)	7.3	8.7	11.6	14.5	17.4	18.9
Max. output fault current (a.c.A)			52 (peak), 37 (rms)			
EPS output Maximum output overcurrent protection (a.c.A)			37			
Switch time (ms)			<10			
THDv @Linear Load (%)			<2			
Power Factor			-0.8...+0.8			
<b>Efficiency</b>						
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		
<b>Protection</b>						
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		
<b>General Data</b>						
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		
<b>Safety and Approvals</b>						
Safety				IEC 62619, 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/RRG/PTPIREE, CEI 0-21, EIFS		

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