

Three Phase Hybrid Inverter

THH-12KW/15KW/17KW/20KW



THH series is specially designed for three-phase residential and small commercial projects. Its high efficiency (98.4%) allow for optimized power generation and meet the perfect choice of maximum energy yield for users.



100% Unbalanced Output, Each Phase



Dual MPPT Trackers, Max Efficiency Up to 99.99%



Type II Surge Protection with Voltage of 6000V



High Detection Accuracy, Voltage Accuracy Can Reach 0.1V, Current Accuracy Can Reach 0.05A



Switching Time of On/off-grid is Only 3ms



Power Factor ≈ 1 , Higher Efficiency, Lower Consumption



180V-950V Ultra-wide Input Operating Voltage Range



Hybrid



EURO
EN50549

AUS ESP ZA SA
GER AUT ITA UK
Grid Standards

10 Years
Design Life



ADVANTAGES-FEATURES

ONESUN

Technical Data

Model	THH-12KW	THH-15KW	THH-17KW	THH-20KW
PV String Input Data				
Max. Input Power	18000W	22500W	25500W	30000W
Max. Input Voltage	1000V			
MPPT Operating Voltage Range	180~950V			
Start-up Voltage	120V			
Max. Input Current	15A/15A	15A/28A	28A/28A	
Max. Short Circuit Current	18A/18A	18A/32A	32A/32A	
Number of MPPT Trackers	2	2	2	
Number of Strings Per MPPT	1/1	1/2	2/2	
AC Output (On-grid)				
Nominal Output Power	12000W	15000W	17000W	20000W
Max. Apparent Power	12000VA	15000VA	17000VA	20000VA
Nominal Output Voltage	380V/400V, 3L/N/PE			
Nominal Ouput Frequency	50Hz / 60Hz			
Max. Output Current	18A	22A	25A	31A
Power Factor	≈1 (0.8 leading to 0.8 lagging)			
Total Harmonic Distortion	<3%			
AC Output (Back-up)				
Nominal Output Power	12000W	15000W	17000W	20000W
Max. Apparent Power	12000VA	15000VA	17000VA	20000VA
Nominal Output Voltage	380V/400V, 3L/N/PE			
Max. Output Current	18A	22A	25A	31A
Nominal Output Frequency	50Hz / 60Hz			
Battery Input Data				
Battery Type	Lithium-ion/ Lead-acid			
Battery Voltage Range	180-700V			
Max. Charging Current	50A			
Max. Discharging Current	50A			
Charging Strategy for Li-Ion Battery	Self-adaption to BMS			
Efficiency				
Max. Efficiency	98.40%			
European Efficiency	97.50%			
MPPT Efficiency	99.99%			
Protection				
AC Overcurrent Protection	Integrated			
Ground Fault Protection	Integrated			
Power Network Monitoring	Integrated			
Residual Current Monitoring	Integrated			
General Data				
Operating Temperature Range	-25°C~60°C, >45°C Derating			
Altitude	<4000m			
Noise	<40dB			
Topology	Transformerless Isolation			
Cooling	Intelligent Fan			
Ingress Protection Rating	IP65			
Relative Humidity	0%~100% (Non-condensing)			
DC Connector Type	MC / Amphenol / Phoenix			
AC Connector Type	Plug-in Connector			
Display	LCD			
Cloud Communication	RS485 (WiFi / 4G / GPRS Optional)			
BMS Communication Mode	CAN			
Communication with Meter	RS485			
Installation	Wall-mounted			
Self-consumption at Night	< 10W			
Dimensions (W*D*H)	505*220*630mm			
Weight	Approx. 34kg		Approx. 36kg	
Certifications and Standards				
Safety Standards	IEC62109-1/-2; SONCAP			
EMC Standards	EN61000-6-1/-2/-3, IEC61000			
Grid Regulation	AS4777.2:2020, NRS097-2- 1:2017, PN-EN50549-1:2019, VDE-AR-N 4105:2018, EN50549-1:2019+ AC:2019-4			

Three Phase Hybrid Inverter

THH-30KW/35KW/40KW/45KW/50KW/55KW/60KW



THH series is compatible with different types of high power modules, which ensures more solar power absorption making it one of the most productive inverters on the market. Up to 4 MPP trackers guarantee optimal energy production even in shade.



Hybrid



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10 Years
Design Life



100% Unbalanced Output, Each Phase



4 MPP Trackers, Max Efficiency Up to 99.99%



Type II Surge Protection with Voltage of 6000V



High Detection Accuracy, Voltage Accuracy Can Reach 0.1V, Current Accuracy Can Reach 0.05A



Switching Time of On/off-grid is Only 3ms



Power Factor ≈ 1 , Higher Efficiency, Lower Consumption



180V-950V Ultra-wide Input Operating Voltage Range

ADVANTAGES-FEATURES

ONESUN

Technical Data

Model	THH-30KW	THH-35KW	THH-40KW	THH-45KW	THH-50KW	THH-55KW	THH-60KW
PV String Input Data							
Max. Input Power	45000W	52500W	60000W	67500W	75000W	82500W	90000W
Max. Input Voltage	1000V						
MPPT Operating Voltage Range	180~900V / 630V						
Start-up Voltage	180V						
Max. Input Current	36A / 36A / 36A			36A / 36A / 36A / 36A			
Max. Short Circuit Current	42A / 42A / 42A			42A / 42A / 42A / 42A			
Number of MPPT Trackers	3			4			
Number of Strings Per MPPT	2 / 2 / 2			2 / 2 / 2 / 2			
AC Output (On-grid)							
Nominal Output Power	3000W	35000W	40000W	45000W	50000W	55000W	60000W
Max Apparent Power	30000VA	35000VA	40000VA	45000VA	50000VA	55000VA	60000VA
Nominal Output Voltage	380V/400V, 3L/N/PE						
Nominal Ouput Frequency	50Hz / 60Hz						
Max Output Current	45A	52A	60A	66A	75A	80A	87A
Power Factor	≈1 (0.8 leading to 0.8 lagging)						
Total Harmonic Distortion	<3%						
AC Output (Back-up)							
Nominal Output Power	30000W	35000W	40000W	45000W	50000W	55000W	60000W
MAX Apparent Power	30000VA	35000VA	40000VA	45000VA	50000VA	55000VA	60000VA
Max. Single-phase Apparent Power	10000VA	11000VA	13000VA	15000VA	17000VA	18000VA	20000VA
Nominal Output Voltage	380V/400V, 3L/N/PE						
Max. Output Current	45A	52A	60A	66A	75A	80A	87A
Nominal Output Frequency	50Hz / 60Hz						
Switching Time	<10ms						
Battery Input Data							
Battery Type	Lithium-ion / Lead-acid						
Battery Voltage Range	220~800V						
Max. Charging Current	100A						
Max. Discharging Current	100A						
Charging Strategy for Li-Ion Battery	Self-adaption to BMS						
Efficiency							
Max. Efficiency	98.40%						98.60%
European Efficiency	97.50%						
MPPT Efficiency	99.99%						
Protection							
AC Overcurrent Protection	Integrated						
Ground Fault Protection	Integrated						
Power Network Monitoring	Integrated						
Residual Current Monitoring	Integrated						
General Data							
Operating Temperature Range	-25°C~60°C, >45°C Derating						
Altitude	<4000m						
Noise	<40dB						
Topology	Transformerless Isolation						
Cooling	Intelligent Fan						
Ingress Protection Rating	IP54						
Relative Humidity	5%~90%						
DC Connector Type	AC Connector						
AC Connector Type	Quick Plug Terminal						
Display	LCD						
Cloud Communication	RS485 (WiFi / 4G / GPRS Optional)						
BMS Communication Mode	CAN						
Communication with Meter	RS485						
Installation	Wall Mounted / Floor Mounted						
Self-consumption at Night	< 10W						
Dimensions (W*D*H)	800*350*875mm						
Weight	Approx. 102kg						
Certifications and Standards							
Safety Standards	IEC62109-1/-2; SONCAP						
EMC Standrards	EN61000-6-1/-2/-3, IEC61000						
Grid Regulation	AS4777.2:2020, NRS097-2- 1:2017, PN-EN50549-1:2019, VDE-AR-N 4105:2018, EN50549-1:2019+ AC:2019-4						