



Three Phase Hybrid Inverter  
**Trio Hybrid S Series**  
5 / 6 / 8 / 10 / 12 / 15 / 20 / 25

*Reliable. Scalable. Efficient.*



3- Phase  
Unbalanced  
Output



AC  
Coupling



Up to 10  
Units Parallel



50A Max  
Current



High Voltage  
Battery



Diesel  
Generator  
Support

5.0kW

6.0kW

**Trio Hybrid S 5K HV / Trio Hybrid S 6K HV /  
Trio Hybrid S 8K HV / Trio Hybrid S 10K HV /  
Trio Hybrid S 12K HV / Trio Hybrid S 15K HV /  
Trio Hybrid S 20K HV / Trio Hybrid S 25K HV**

Trio Hybrid S Series offers high-efficiency three-phase hybrid inverter solutions designed for residential and commercial applications. With high-voltage battery support, it enhances energy storage efficiency while providing flexible operation through on-grid and off-grid capabilities. The AC coupling feature allows seamless integration with existing solar systems, making it ideal for retrofit and capacity expansion projects. Combining intelligent energy management, strong output performance, and comprehensive protection functions, the Trio Hybrid S Series delivers a reliable solution for sustainable energy use.



# TRIO HYBRID S SERIES (THREE PHASE)



	Trio Hybrid S 5K HV	Trio Hybrid S 6K HV	Trio Hybrid S 8K HV	Trio Hybrid S 10K HV	Trio Hybrid S 12K HV	Trio Hybrid S 15K HV	Trio Hybrid S 20K HV	Trio Hybrid S 25K HV
<b>PV STRING INPUT DATA</b>								
Max. PV Access Power (W)	10000	12000	16000	20000	24000	30000	40000	50000
Max. PV Input Power (W)	8000	9600	12800	16000	19200	24000	32000	40000
Max. PV Input Voltage (V)	1000							
Start-up Voltage (V)	180							
MPPT Voltage Range (V)	150-850							
Rated PV Input Voltage (V)	600							700
Max. Operating PV Input Current (A)	20+20				26+20		26+26	
Max. Input Short-Circuit Current (A)	30+30				39+30		39+39	
No. of MPPT Trackers/ No. of Strings MPP Tracker	2/1+1				2/2+1		2/2+2	
<b>AC INPUT/OUTPUT DATA</b>								
Rated AC Input/Output Active Power (W)	5000	6000	8000	10000	12000	15000	20000	25000
Max. AC Input/Output Apparent Power (VA)	5500	6600	8800	11000	13200	16500	22000	27500
Rated AC Input/Output Current (A)	7.6/7.3	9.1/8.7	12.2/11.6	15.2/14.5	18.2/17.4	22.8/21.8	30.4/29	37.9/36.3
Max. AC Input/Output Current (A)	8/4.8	10/9.6	13.4/12.8	16.7/16	20/19.2	25/24	33.4/31.9	41.7/39.9
Max. Continuous AC Passthrough (grid to load) (A)	40				80			
Peak Power (off-grid) (W)	1.5 times of rated power, 10s							
Power Factor Adjustment Range	0.8 leading to 0.8 lagging							
Rated Input/Output Voltage/Range (V)	220/380V, 230/400V 0.85Un-1.1Un							
Rated Input/Output Grid Frequency/Range (Hz)	50/45-55, 60/55-65							
Grid Connection Form	3L+N+PE							
Total Current Harmonic Distortion THDi	<3% (of nominal power)							
DC Injection Current	<0.5% In							
<b>BATTERY INPUT DATA</b>								
Battery Type	Lithium-ion							
Battery Voltage Range (V)	160/700							
Max. Charging Current (A)	30	30		37				50
Max. Discharging Current (A)	30	30		37				50
Charging Strategy for Li-ion Battery	Self-adaption to BMS							
Number of Battery Input	1							
<b>EFFICIENCY</b>								
Max. Efficiency	97.6%							
Euro Efficiency	97.0%							
MPPT Efficiency	>99%							
<b>EQUIPMENT PROTECTION</b>								
Integrated	DC Reverse Polarity Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring, Arc Fault Circuit Interrupter (optional), Anti-islanding Protection, DC Switch, Insulation Impedance Detection, Residual Current Detection							
Surge Protection Level	TYPE II(DC), TYPE II(AC)							
<b>INTERFACE</b>								
Communication Interface	RS485/RS232/CAN							
Monitor Mode	GPRS/WIFI/Bluetooth/4G							
LCD/LED Display	LCD							
<b>GENERAL DATA</b>								
Operating Temperature Range (°C)	-40 to +60°C, >45°C Derating							
Permissible Ambient Humidity	0-100%							
Permissible Altitude (m)	2000m							
Noise (dB)	≤55							
Ingress Protection (IP) Rating	IP 65							
Inverter Topology	Non-Isolated							
Over Voltage Category	OVC II(DC), OVC III(AC)							
Cabinet Size (WxHxD mm)	408x638x237 (Excluding Connectors and Brackets)							
Weight (kg)	30.5							
Type of Cooling	Natural Cooling				Intelligent Air Cooling			
Warranty	5 Years							
Grid Regulation	IEC 61727, IEC 62116, EN 50549, VDE-AR-N 4105							
Safety / EMC Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2							