TOMMATECH GmbH
GERMAN-based company

Three Phase Hybrid Inverter

Trio Hybrid S Series

5 / 6 / 8 / 10 / 12 / 15 / 20

Simple. Reliable. Efficient.

- 3- Phase Unbalanced Output
- AC Coupling
- Up to 10 Parallel Connecting
- High Voltage Battery
- Plug Play
- Generator Compatibility
- All in One
- Diesel Generator Support

5kW 6kW

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

Trio Hybrid S HV AIO Series offers an all-in-one hybrid energy storage solution designed for residential applications, integrating the inverter and high-voltage battery system into a single enclosure. The high-voltage, series-connected battery architecture enhances overall system efficiency while reducing cabling requirements for a clean and secure installation. Its three-phase hybrid inverter design enables flexible operation in both on-grid and off-grid scenarios, while 100% unbalanced load support ensures high output performance on each phase. With advanced thermal management, parallel operation capability, and intelligent energy management features, the Trio Hybrid S HV AIO Series provides a reliable, compact, and long-lasting energy storage solution for modern homes.

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CE

	Trio Hybrid S 5K HV AIO	Trio Hybrid S 6K HV AIO	Trio Hybrid S 8K HV AIO	Trio Hybrid S 10K HV AIO	Trio Hybrid S 12K HV AIO	Trio Hybrid S 15K HV AIO	Trio Hybrid S 20K HV AIO
PV STRING INPUT DATA							
Max. PV Access Power (W)	6500	7800	10400	13000	15600	19500	26000
Max. DC Input Voltage (V)	1000						
Start-up Voltage (V)	150						
MPPT Voltage Range (V)	150-850						
Full Load DC Voltage Range (V)	195-850	195-850	260-850	325-850	340-850	420-850	500-850
Rated DC Input Voltage (V)	600						
PV Input Current (A)	20+20				26+20		26+26
Max. PV ISC (A)	30+30				39+30		39+39
No. of Strings MPP Tracker	2						
No.of Strings per MPP Tracker	1+1				2+1		2+2
AC OUTPUT DATA							
Rated AC Output and UPS Power (W)	5000	6000	8000	10000	12000	15000	20000
Max. AC Output Power (W)	5500	6600	8800	11000	13200	16500	22000
AC Output Rated 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
Max.AC Output (Off-gird) Current (A)	8.4 / 8	10 / 9.6	13.4 / 12.8	16.7 / 16	20 / 19.2	25 / 24	33.4 / 31.9
Max. Three-phase Unbalanced Output Current (A)	13	13	18	22	25	30	35
Max. Continuous AC Pass through (A)	40				80		
Peak Power (off grid)	1.5 time of rated power, 10 S						
Generator input/Smart load/AC couple current (A)	7.6/40/7.6	9.1/40/9.1	2.2/40/12.2	15.2/40/15.2	18.2/80/18.2	22.8/80/22.8	30.4/80/30.4
Power Factor	0.8 leading to 0.8 lagging						
Output Frequency and Voltage	50/60Hz; 3L / N / PE 220 / 380, 230 / 400Vac						
Grid Type	Three Phase						
DC injection current (mA)	<0.5%In						
BATTERY INPUT DATA							
Battery Type	LI-ION						
Battery Voltage Range (V)	160 ~ 700						
Max. Charging Current (A)	30		37				
Max. Discharging Current (A)	30		37				
Number of battery inp	1						
Charging Strategy for Li-Ion Batteryut	Self-adaption to BMS						
EFFICIENCY							
Max. Efficiency	97.6%						
Euro Efficiency	97%						
MPPT Efficiency	99.9%						
PROTECTION							
Integrated	PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection, Surge protection						
Output Over Voltage Protection	DC Type II / AC Type III						
Certifications and Standards	VDE-AR-N 4105, IEC 62116, IEC 61727						
Safety EMC / Standard	IEC / EN 61000-6-1 / 2 / 3 / 4, IEC / EN 62109-1, IEC / EN 62109-2						
GENERAL DATA							
Operating Temperature Range (C)	40~ 60C, > 45C derating						
Cooling							
Communication with BMS	RS485; CAN						
Warranty	5 years						

* TommaTech GmbH reserves the right to change the specifications of the products without prior notice.

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TRIO HYBRID S SERIES (THREE PHASE)

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MODEL		Hightech Power S 4kWh HV				
BATTERY SYSTEM DATA						
Cell Chemistry		LiFePO4				
Module Energy (kWh)		4				
Module Nominal Voltage (V)		102.4				
Module Capacity (Ah)		40				
Battery Module Qty in series. (Optional)		2	3	4	5	6
System Nominal Voltage (V)		204.8	307.2	409.6	512	614.4
System Operating Voltage (V)		166.4-700.8				
System Energy (kWh)		8	12	16	20	24
System Usable Energy (kWh) [1]		7.2	10.8	14.4	18	21.6
Charge / Discharge Current [2]	recommend	20				
	max	40				
	peak	50@2min				
Working Temperature (C)		Charge：-20 ~ 55 / Discharge : -20 ~ 55				
Communication Port		CAN2.0 / RS485				
Thermal Management		Natural Cooling				
Recommend Depth of Discharge		90%				
Cycle Life		25±2C, 0.5C / 0.5C,70%EOL≥6000				
Warranty [3]		10 years				
Certification		CE / IEC 62619				
OTHER DATA						
Humidity		5 ~ 85%RH				
Altitude (m)		≤2000				
IP Rating of Enclosure		IP65				
Noise (dB)		<55				
Storage Temperature (C)		0 ~ 35				
Dimension (W x D x H, mm)		540 x 385 x 1100	540 x 385 x 1320	540 x 385 x 1540	540 x 385 x 1760	540 x 385 x 1980
Weight Approximate (kg)		137	176	215	254	293
Installation Location		Floor Mount				

[1] DC Usable Energy, test conditions : 90% DOD, 0.3C charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.

[2] The current is affected by temperature and SOC.

[3] The warranty is due whichever reached first of warranty period or life cycle power.

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