TRIO HYBRID K-SERIES THREE PHASE INVERTER







3- Phase Unbalanced Output



High Efficiency



Remote Monitoring



IP65 Rated



Hybrid Solution









Trio-Hybrid-K-5.0/ Trio-Hybrid-K-6.0/ Trio-Hybrid-K-8.0/ Trio-Hybrid-K-10.0/ Trio-Hybrid-K-12.0/ Trio-Hybrid-K-15.0

TommaTech®'s Trio-Hybrid K-Series three phase inverters are the preferred solution for both residential and commercial projects as they support unbalanced phase output, are equipped with dual protection for the BMS and can be controlled remotely through multiple communication options. The inverters, which are available in six power options between 5.0kW and 15.0kW can be equipped with up to 46kWh storage, each. Furthermore, they can be installed in parallel allowing for solutions of up to 150kWh and 460kWh storage.

TRIO HYBRID K-SERIES (THREE PHASE)



CE

Max. Pr Ampy Imput Power (Mst)	CE	Trio-Hy-K-5.0	Trio-Hy-K-6.0	Trio-Hy-K-8.0	Trio-Hy-K-10.0	Trio-Hy-K-12.0	Trio-Hy-K-15.0		
Max. Price Color	DC INPUT								
Sust Cut Notage May 200	Max. PV Array Input Power [Wp]	8000	10000	12000	15000	18000	18000		
Sect			.000		10	000			
Montrie of MRPT (Aurops par MRPT (Aur			200						
March Prof. MPT / Springs per MPT March Prof. MPT / Springs per MPT March Prof. MPT / MPT March Prof. MPT / MPT March Prof. MPT	Nominal Input Voltage [V]		640						
Number of MPPT / Strings per MPPT Miss from Current MPPT A / MPPT R Miss from Current MPPT R Miss from Current MPPT A / MPPT R Miss from Current MPPT A / MPPT R Miss from Current MPPT R M		18	0~950						
Max. Not Circuit Current (MPPT A / MPPT B) 20/20 50/20		2	2(1/1)	<u> </u>					
Nominal AC Output Power NM		1	6/16						
Nominal ACC Output Plower (M)	Max. Short Circuit Current (MPPT A / MPPT B) [A]	2	0/20						
Nominal AC Cutpus Power (M)	AC INPUT & OUTPUT			1					
Max. AC Output Appoarent Power (NA)	Nominal AC Output Power [W]	5000	6000	8000	10000	12000	15000		
Max AC Duput Current M 10000 12000 16000 200000 20000 20000 20000 20000 20000 20000 20000 200000 200000 20000 20000 20000 20000 20000 20000 20000 20000 20000 20000 200000 200000 200000 200000 200000 200000 200000 200000 200000 200000 200000 200000	<u> </u>	5500	6600	8800	11000	13200	15000		
Max. AC Ingut Apparent Power My 10000 120000 16000 200000 200000 200000 Max. AC Ingut Current M		8.1	9.7	12.9	16.1	19.3	24.1		
Max. AC input Current (AI 19.3 25.8 52.0 32.0 32.0 Nominal AC Voltage IV		10000	12000	16000	20000		20000		
Nominal AC Voltage M									
Nominal Grid Frequency Grid Frequency Range IHz Displacement Power Factor 1.8 Leading-0.8 Lagging 1.8 Leading-0.8 Leading-0. Leading-0.8 Leading-0. Leading-0.8 Leading-									
Displacement Power Pactor Continuous Charge Continuous Charg									
Thick Patter Pa									
### RETIREN DATA Battery Type		1 1 1							
Battery Type									
Battery Voltage Range M	<u></u>	Li-ion Battery							
Name									
SOUTPUT (OFF-CRID OR BACK-UP) (WITH BATTENY) SOUD SOUD SOUD 10000 12000 15000									
Nominal Output Power IVI									
Peak Apparent Power IVA 7500.60s 9000.60s 12000.60s 15000.60s		E000	6000	9000	10000	12000	15000		
Max Continous Current [A] 7.2 8.7 11.6 14.5 17.5 21.8 Nominal Voltage [M]. Frequency [Hz] 400/230; 50/60 STANDARD 400/230; 50/60 STANDARD STANDARD 10 STANDARD STA									
Nominal Voltage [M]. Frequency [Hz] 400/230; 50/60 Switch Time [ms] -10 Parallel Operation Yes YSTEM DATA Max. Efficiency [%] 98.0 Euro. Efficiency [%] 97.7 Battery Charge/Discharge Effciency [%] 98.5/97.5 Ingress Protection [P65 Operating Temperature Range [°C] -35×-60 (Derating at>45, Charge Derating at>35) Max. Operation Altitude [m] 3000 Humidity [%] 0~100 Typical Noise Emission [dB] <35 <45 Storage Temperature [°C] 40~+70 Dimensions [WxHxD] [mm] 503x503x199 Net Weight [kg] 30 Cooling Concept Natural Cooling Smart Cooling Communication Interfaces CT/ Trio Smart Meter/Dongle Wifi / Dongle LAN /Dongle 4G/ USB/ RS485 / DRM OWER CONSUMPTION Standby Consumption [W] <5W For Cold Standby TANDARD EMC EN/ECG2109-1/-2 EMC EN/ECG2109-1/-3 (4; EN61000-3-2/3/11/12)									
Switch Time [ms] <10 Parallel Operation Yes YSTEM DATA Max. Efficiency [%] 98.0 Euro. Efficiency [%] 98.0 Battery Charge/Discharge Effciency [%] 97.7 Battery Charge/Discharge Effciency [%] 98.5/97.5 Ingress Protection IP65 Operating Temperature Range [°C] -35~60 (Derating at>45, Charge Derating at>35) Max. Operation Altitude [m] 3000 Humidity [%] 0~100 Typical Noise Emission [dB] <35 <45 Storage Temperature [°C] 40~+70 Dimensions [WxHxD] [mn] 503x503x199 Net Weight [kg] 30 Cooling Concept Natural Cooling Smart Cooling Communication Interfaces CT/ Trio Smart Meter/Dongle Wifi / Dongle LAN /Dongle 4G/ USB/ RS485 / DRM OWER CONSUMPTION Standby Consumption [W] <5W For Cold Standby TANDARD EN/IEC62109-1/-2 EMC EN/IEC62109-1/-2		7.2	0.7			17.5	21.0		
Parallel Operation Yes									
Max. Efficiency % 98.0 Euro. Efficiency % 98.5/97.5 Battery Charge/Discharge Efficiency % 98.5/97.5 Ingress Protection IP65 Operating Temperature Range °C -35~60 (Derating at>45, Charge Derating at>35) Max. Operation Altitude m 3000 Humidity % 0~100 Typical Noise Emission dB <35 <45 Storage Temperature °C -40~+70 Dimensions WxHxD mm 503x503x199 Net Weight kg 30 Cooling Concept Natural Cooling Smart Cooling Communication Interfaces CT/ Trio Smart Meter/Dongle Wifi / Dongle LAN /Dongle 4G/ USB/ RS485 / DRM OWER CONSUMPTION Standby Consumption W <5W For Cold Standby TANDARD EMC ENGINO-6-1/2/3/ 4; ENG100-3-2/3/11/12									
Max. Efficiency [%] 98.0 Euro. Efficiency [%] 97.7 Battery Charge/Discharge Efficiency [%] 98.5/97.5 Ingress Protection IP65 Operating Temperature Range [°C] -35~60 (Derating at>45, Charge Derating at>35) Max. Operation Altitude [m] 3000 Humidity [%] 0~100 Typical Noise Emission [dB] <35				1	<u>es</u>				
Euro. Efficiency [%] 97.7 Battery Charge/Discharge Effciency [%] 98.5/97.5 Ingress Protection IP65 Operating Temperature Range [°C] -35~60 (Derating at>45, Charge Derating at>35) Max. Operation Altitude [m] 3000 Humidity [%] 0~100 Typical Noise Emission [dB] <35				0.	9 N				
Battery Charge/Discharge Effciency [%] Ingress Protection Operating Temperature Range [°C] Humidity [%] Typical Noise Emission [dB] Storage Temperature [°C] Dimensions [WxHxD] [mm] Net Weight [kg] Cooling Concept Communication Interfaces OWER CONSUMPTION Standby Consumption [W] Safety EMC ENGINOUS - 48 - 49 - 49 - 49 - 49 - 49 - 49 - 49									
Ingress Protection Operating Temperature Range [°C] Max. Operation Altitude [m] Max. Operation Altitude [m] Typical Noise Emission [dB] Storage Temperature [°C] Dimensions [WxHxD] [mm] Net Weight [kg] Cooling Concept Communication Interfaces OWER CONSUMPTION Standby Consumption [W] TANDARD Safety EMC ENGLOW A STANDARD IP65 Oderating at>45, Charge Derating at>35) A300 A45 A45 A45 A45 A45 A45 A45 A									
Operating Temperature Range (°C) Max. Operation Altitude [m] Max. Operation Altitude [m] Humidity (%) Typical Noise Emission [dB] Storage Temperature (°C) Dimensions (WxHxD] [mm] Net Weight (kg) Cooling Concept Communication Interfaces CT/ Trio Smart Meter/Dongle Wifi / Dongle LAN /Dongle 4G/ USB/ RS485 / DRM COWER CONSUMPTION Standby Consumption (W) Standby Consumption (W) Safety EMC ENGINE OF STANDARD ENGINE OF STANDARD STANDARD ENGINE OF STANDARD EN									
Max. Operation Altitude [m] Humidity [%] Typical Noise Emission [dB] Storage Temperature [°C] Dimensions [WxHxD] [mm] Net Weight [kg] Cooling Concept Communication Interfaces CT/ Trio Smart Meter/Dongle Wifi / Dongle LAN /Dongle 4G/ USB/ RS485 / DRM COWER CONSUMPTION Standby Consumption [W] Safety EMC EN61000-6-1/2/3/ 4; EN61000-3-2/3/11/12	<u></u>								
Humidity [%] 0~100 Typical Noise Emission [dB] <35 <45 Storage Temperature [°C] -40~+70 Dimensions [WxHxD] [mm] 503x503x199 Net Weight [kg] 30 Cooling Concept Natural Cooling Smart Cooling Communication Interfaces CT/ Trio Smart Meter/Dongle Wifi / Dongle LAN /Dongle 4G/ USB/ RS485 / DRM OWER CONSUMPTION Standby Consumption [W] <5W For Cold Standby TANDARD Safety EN/IEC62109-1/-2 EMC EN61000-6-1/2/3/ 4; EN61000-3-2/3/11/12									
Typical Noise Emission [dB] <35 <45 Storage Temperature [°C]									
Storage Temperature [°C] Dimensions [WxHxD] [mm] Net Weight [kg] Cooling Concept Communication Interfaces CT/ Trio Smart Meter/Dongle Wifi / Dongle LAN /Dongle 4G/ USB/ RS485 / DRM COWER CONSUMPTION Standby Consumption [W] Safety EMC EMC Storage Temperature [°C] -40~+70 -40~+70 S03x503x199 Smart Cooling							-15		
Dimensions [WxHxD] [mm] 503x503x199 Net Weight [kg] 30 Cooling Concept Natural Cooling Smart Cooling Communication Interfaces CT/ Trio Smart Meter/Dongle Wifi / Dongle LAN /Dongle 4G/ USB/ RS485 / DRM POWER CONSUMPTION Standby Consumption [W] <5W For Cold Standby STANDARD Safety EN/IEC62109-1/-2 EMC EN61000-6-1/2/3/ 4; EN61000-3-2/3/11/12									
Net Weight [kg] 30 Cooling Concept Natural Cooling Smart Cooling Communication Interfaces CT/ Trio Smart Meter/Dongle Wifi / Dongle LAN /Dongle 4G/ USB/ RS485 / DRM POWER CONSUMPTION Standby Consumption [W] <5W For Cold Standby TANDARD Safety EN/IEC62109-1/-2 EMC EN61000-6-1/2/3/ 4; EN61000-3-2/3/11/12									
Cooling Concept Communication Interfaces CT/ Trio Smart Meter/Dongle Wifi / Dongle LAN /Dongle 4G/ USB/ RS485 / DRM COWER CONSUMPTION Standby Consumption [W] STANDARD Safety EMC EMC STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD SAFETY EMC Natural Cooling Smart Cool									
Communication Interfaces CT/ Trio Smart Meter/Dongle Wifi / Dongle LAN /Dongle 4G/ USB/ RS485 / DRM COWER CONSUMPTION Standby Consumption [W] < 5W For Cold Standby STANDARD Safety EN/IEC62109-1/-2 EMC EN61000-6-1/2/3/ 4; EN61000-3-2/3/11/12									
POWER CONSUMPTION <5W For Cold Standby									
Standby Consumption [W] <5W For Cold Standby			CT/ THO STRAIL ME	eter/Dongte Will / D	origie LAN /Dorigie	2 4G/ U3B/ R3463 /	DRM		
Safety EN/IEC62109-1/-2 EMC EN61000-6-1/2/3/ 4; EN61000-3-2/3/11/12				<5W For (Cold Standby				
Safety EN/IEC62109-1/-2 EMC EN61000-6-1/2/3/4; EN61000-3-2/3/11/12				~5vv i Oi (
EMC EN61000-6-1/2/3/ 4; EN61000-3-2/3/11/12					C24.00.4.4.0				
CE VIDE MOS ENERGE AS JECONTAIN TOD									
Certification CE, VDE4105, EN50549, IEC61/2/, TOR			l						

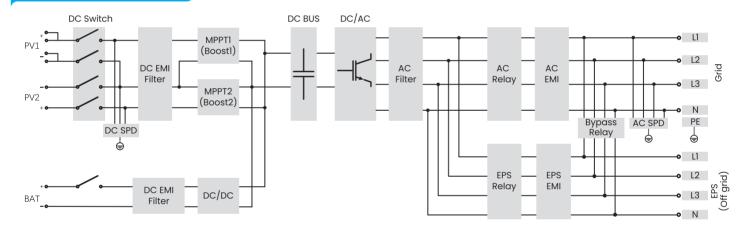


TRIO HYBRID K-SERIES (THREE PHASE)



	Trio-Hy-K-5.0	Trio-Hy-K-6.0	Trio-Hy-K-8.0	Trio-Hy-K-10.0	Trio-Hy-K-12.0	Trio-Hy-K-15.0			
PROTECTION									
Anti-Islanding Protection	Yes								
DC Reverse Polarity Protection	Yes								
Insulation Monitoring	Yes								
Residual Current Monitoring	Yes								
AC Overcurrent Protection	Yes								
AC Short-circuit Protection	Yes								
AC Overvoltage Protection	Yes								
AFCI	OPT								
Surge Protection	Type II, DC and AC								

CIRCUIT DIAGRAM





^{*}When PV1 is connected to 2 strings, the maximum input current is 26A; when PV1 is connected to 1 string, the maximum input current is 20A.

*Compatible with a minimum of 3 units of TommaTech 5.8kWh/3.0kWh batteries, but if the total voltage of the 3 batteries is less than 127V and there is no PV input, the system will not able to startup

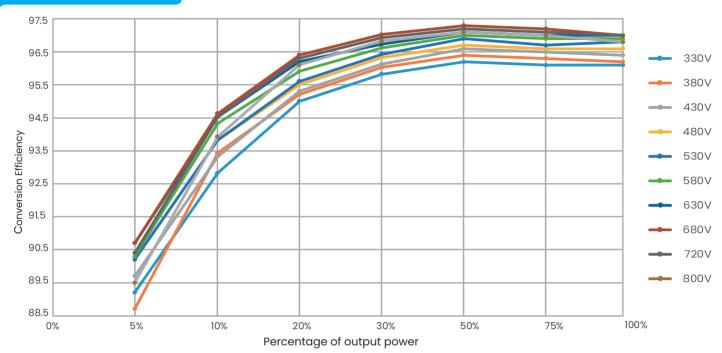
^{*}PV to BAT Max. efficiency 98.5%, BAT to AC Max. efficiency 97.5%.

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

TRIO HYBRID K-SERIES (THREE PHASE)



EFFICIENCY CURVE



DERATING CURVE

