



Three Phase Hybrid Inverter
Trio Hybrid L Series
15/20/25/30

Simple. Reliable. Efficient.



3- Phase
Unbalance Output



High
Efficiency



Dual HV
Battery Ports



Generator
Compatibility



Remote
Monitoring



IP66
Rated

15.0kW

15.0kW

Trio-Hybrid-L-15.0KP/ Trio-Hybrid-L-15.0K
Trio-Hybrid-L-20.0K/ Trio-Hybrid-L-20.0KP
Trio-Hybrid-L-25.0K/ Trio-Hybrid-L-30.0K



TommaTech®'s Trio Hybrid L Series three-phase hybrid inverters are designed to deliver advanced energy solutions with high flexibility and reliability. Thanks to its support for 3-phase unbalanced output, this series is ideal for both residential and commercial applications with irregular load demands. With dual high-voltage battery ports, generator compatibility, and remote monitoring, the system is built for both current needs and future expansions. The IP66-rated enclosure ensures durability against outdoor conditions, while high conversion efficiency allows maximum energy utilization. Supporting up to 200% PV oversizing and 110% AC output, Trio Hybrid L Series inverters help users maximize solar energy usage while maintaining system stability and smart energy management.



Trio-Hybrid L.15.0K Trio-Hybrid L.15.0KP Trio-Hybrid L.20.0K Trio-Hybrid L.20.0KP Trio-Hybrid L.25.0K Trio-Hybrid L.30.0K

PV INPUT

Max. recommended PV array power	30 kWp		40 kWp	50 kWp	60 kWp
Max. PV input voltage ^①	1000 V				
Rated PV input voltage	600 V				
Operation voltage range	120 ~ 950 V				
MPPT voltage range ^②	160 ~ 950 V				
Start-up voltage	200 V				
No. of MPP trackers / strings per MPP tracker	2 / (2 / 2)	3 / (2 / 2 / 2)	2 / (2 / 2)	3 / (2 / 2 / 2)	
Max. input current per MPPT ^③	36 A / 36 A	36 A / 36 A / 36 A	36 A / 36 A	36 A / 36 A / 36 A	
Max. input short circuit current per MPPT	45 A / 45 A	45 A / 45 A / 45 A	45 A / 45 A	45 A / 45 A / 45 A	

AC INPUT & OUTPUT (ON-GRID)

Rated output power	15000 W (AS4777 14999 W)	20000 W	20000 W	25000 W (VDE4105 24900 W)	30000 W (AS4777 29999 W, VDE4105 29900 W)
Rated output current	21.8 A	29.0 A	29.0 A	36.3 A	43.5 A
Max. output apparent power	16500 VA (AS4777 14999 VA)	22000 VA	22000 VA	27500 VA (VDE4105 24900 VA)	30000 VA (AS4777 29999 VA, VDE4105 29900 VA)
Max. output continuous current	24.0 A (AS4777 21.8 A)	31.9 A	31.9 A	39.9 A (VDE4105 36.3 A)	43.5 A
Rated AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V				
Max. AC input apparent power	15000 VA	20000 VA	20000 VA	25000 VA	30000 VA
Max. AC input current	21.8 A	29.0 A	29.0 A	36.3 A	43.5 A
Rated AC frequency	50 Hz / 60 Hz				
Adjustable power factor range	~ 1 (0.8 lagging to 0.8 leading)				
THDi (rated power)	< 3%				

BATTERY

Battery type	Lithium
Battery voltage range	120 ~ 800 V
Max. charge / discharge current	60 A (30 A x 2)

EPS (OFF-GRID) OUTPUT (WITH BATTERY)

Rated EPS output voltage, frequency	230 V / 400 V, 50 Hz / 60 Hz
Rated EPS output power	15000 VA 20000 VA 25000 VA 30000 VA
Peak EPS output power	2 times of rated power, 10 s
Switchover time	< 10 ms

EFFICIENCY

Max. efficiency	98.0%
European efficiency	97.7%

ENVIRONMENT LIMIT

Ingress protection	IP66
Operation temperature range	-35 ~ 60°C (> 45°C derating)
Max. operation altitude	3000 m
Relative humidity	0 ~ 100% RH (condensing)
Overvoltage category	Mains: III, Battery: II, PV: II

GENERAL

Dimensions (W x H x D)	696 x 526 x 240 mm
Net weight	47 kg
Cooling concept	Smart air cooling
Communication interfaces	Meter (RS-485), DI x 2, DO x 1, Modbus
Power consumption (night)	< 5 W
Topology	Non-isolated

① The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage inverter.

② Input voltage exceeding the operating voltage range may triggers inverter protection.

③ PV3 Only available for 15.0KP, 20.0KP, 25.0K and 30.0K. When both strings are connected to a single MPPT, the Max. input current for a single string is 18A; When a single string is connected to one MPPT, the Max input current for a single string is 20A.



Trio-Hybrid L15.0KP Trio-Hybrid L15.0K Trio-Hybrid L20.0K Trio-Hybrid L20.0KP Trio-Hybrid L25.0K Trio-Hybrid L30.0K

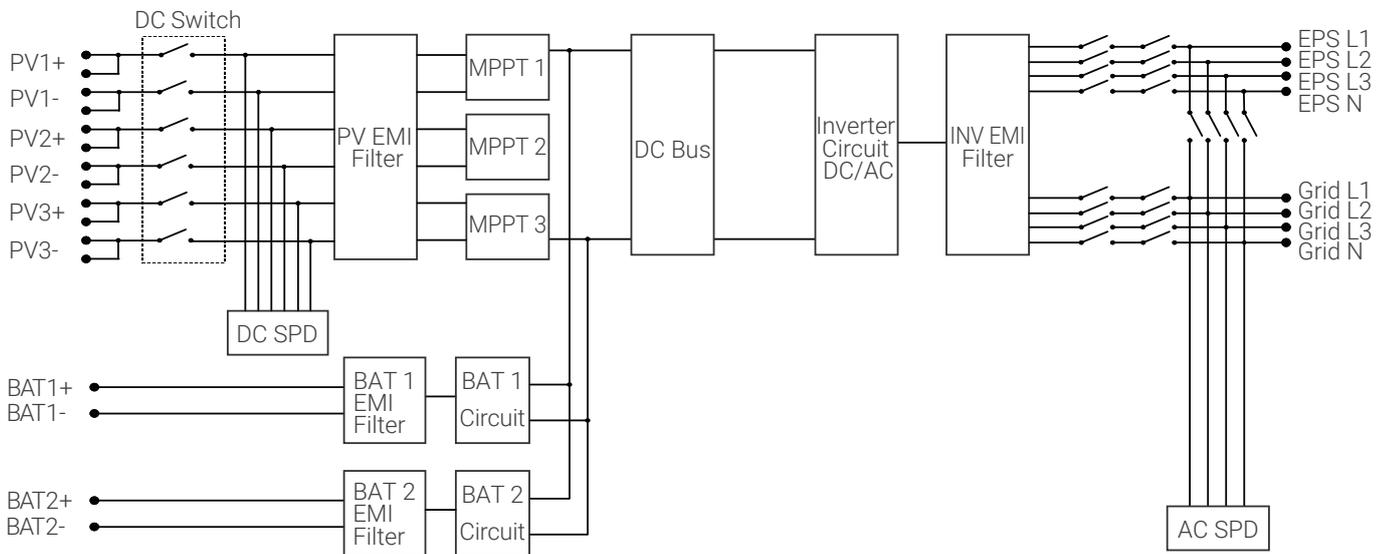
PROTECTION

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
Over-Heat Protection	Yes
AFCI	Optional
Battery Reverse Charging From Grid	Yes
Surge Protection	Type II, DC and AC

STANDARD

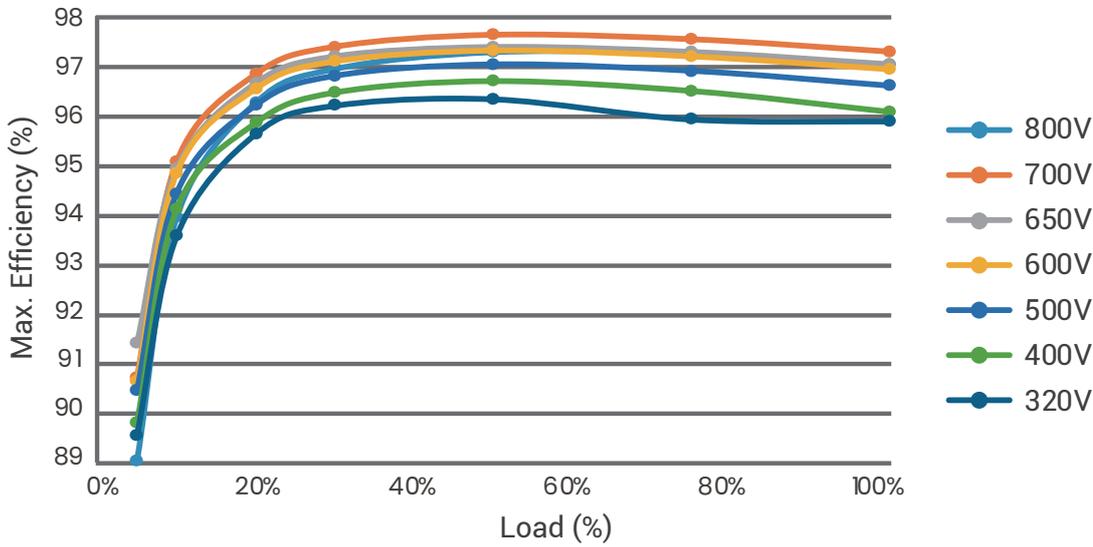
Safety	EN / IEC 62109 -1 / -2
EMC	EN61000-6-1/2/3/4; EN61000-3-11/12; EN 5011; IEC 62920
Certification	VDE4105 / EN50549 / IEC61727

CIRCUIT DIAGRAM



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

EFFICIENCY CURVE



DERATING CURVE

Derating Curve(30kW \ 320-950V)

