TOMMATECH GmbH
GERMAN-based company

Three Phase Hybrid Inverter

Trio Hybrid F-Series

INV-HYB-48V-12K-F-TF

Simple. Reliable. Efficient.

- 3- Phase Unbalanced Output
- Phase Imbalance Adjustment
- Expandable System
- 240A Maximum Charge/Discharge Current
- 48V Battery Output Voltage
- Generator Supported

12.0kW

INV-HYB-48V-12K-F-TF

TommaTech Trio Hybrid F-Series 12kW Three Phase LV Hybrid Inverter, in addition to its phase imbalance output support feature, is an ideal solution for low voltage battery applications with a 48V battery system voltage. The inverter series, which works perfectly with TommaTech LV Lithium Batteries and has remote control capability, can be easily preferred for both residential and commercial projects. With its 12kW power, the hybrid three-phase inverter can reach high capacities with up to 10 units in parallel, and at the same time, this power can be sustainably supported by lithium batteries.

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TOMMATECH TRIO-HYBRID 12.0K 48V F-SERIES
THREE PHASE HYBRID INVERTER

CE

	INV-HYB-48V-12K-F-TF
DC INPUT	
Maximum PV Array Input Power [Wp]	15600
Nominal Input Voltage [V]	550
Start Output Voltage [V]	160
MPPT Voltage Range [V]	200-650
Maximum PV Input Voltage [V]	800
Maximum Input Current (MPPT A / MPPT B) [A]	26/13
Maximum Short Circuit Current (MPPT A / MPPT B) [A]	34/17
Number of MPPTs	2
Strings per MPPT	2/1
AC INPUT & OUTPUT	
Nominal AC Output Power [W]	12000
Maximum AC Output Apparent Power [VA]	13200
Maximum AC Output Current [A]	18.2 / 17.4
Maximum AC Input Current [A]	20 / 19.1
Maximum Three Phase Unbalanced Output Current (A)	27.3 / 26.1
Maximum Output Short Circuit Current [A]	75
Maximum Continuous AC Pass Current [A]	45
Maximum Power (Off Grid)	2 times the rated power (for 10 seconds)
Displacement Power Factor	0.8 Leading 0.8 Lagging
Nominal Grid Frequency [Hz], AC Voltage [V]	50/60Hz; 3L/N/PE 220/380, 230/400Vac
Grid Type	Three Phase
THDi (Rated Power) [%]	<3
DC Injection Current [mA]	<0.5
BATTERY DATA	
Battery Type	Lead-Acid or Lithium-ion
Battery Voltage Range [VI	40 ~ 60
Max. Continuous Charge/Discharge Current [A]	240
External Temperature Sensor	Built-in
Charge Curve	3 Stages / Balancing
Charging Strategy for Li-ion Battery	Automatic Adaptation to BMS
SYSTEM DATA	
Maximum Efficiency [%]	97.6
Euro. Efficiency [%]	97.0
MPPT Efficiency [%]	>99
Integrated	Anti-islanding Protection, PV Array Input Reverse Polarity Protection, Insulation Resistance Detection, Leakage Current Monitoring Unit, Output Overcurrent Protection, Output Short Circuit Protection
Surge Protection	DC Type III / DC Type III
Over Voltage Category	DC Type III / DC Type III
Operating Temperature Range [°C]	-40 ~ 60°C (Derating at >45°C)
Cooling Concept	Smart Cooling
Typical Noise Emission [dB]	55
BMS Communication Interface	RS485; CAN
Net Weight [kg]	33.6
Dimensions (WxHxD) [mm]	422×702×281 (Excluding Connectors and Brackets)
Ingress Protection	IP65
Installation Type	Wall Mounted
Warranty	5 Years
CERTIFICATES AND STANDARDS	
Grid Connection Standard	IEC 61727, IEC 62116, CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002, OVE-Richtlinie R25, G99, VDE-AR-N 4105
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2

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