TOMMATECH GmbH

GERMAN-based company

# OFF-GRID INVERTER

Catalogue


Garching - Munich Manufacturing Facility / Germany


Antalya Manufacturing Facility / Türkiye

# Contents



TOMMATECH GmbH

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In an increasingly complex world, we continuously adapt to changes and actively encourage all our partners to embrace our long-term goals and values through goal-oriented communication and a deep mutual understanding of our mission. In this way, we aim to provide a valuable contribution for future generations.

## Technology

### Vision:

Our vision is to be a leader in the development of advanced solar energy technologies that maximize energy efficiency, protect the ecological balance, restore harmony between humans and nature, and accelerate the global transition to renewable energy in order to achieve the set climate goals.

### Mission:

We focus on continuous innovation and research to develop modern solar technology and integrate it efficiently into smart home systems, enabling our customers to benefit from connected and sustainable energy use.

### Today:

Many customers are already benefiting from our modern installations, which we have seamlessly integrated into their homes. This optimizes energy consumption, allowing customers to save money immediately and reduce their carbon footprint.

## Optimization

"Through intelligent optimization solutions, we achieve the most efficient use of solar energy worldwide, actively supporting the achievement of climate neutralty."

"We are committed to developing and implementing advanced automation and control technologies to optimize energy consumption in households and businesses while significantly reducing operating costs."

Our customers' current energy optimization systems have already achieved significant improvements in emissions.

## Manufacturing

We aim to be a leading manufacturer of solar technologies, setting industry standards for quality and sustainability.

We are committed to producing high-quality and innovative solar products that meet the needs of the present while addressing future challenges. Through continuous improvements and investments in our production processes, we strive to maximize efficiency and minimize environmental impact.

Our customers are already benefiting from the advanced solar products manufactured in our state-of-the-art facilities. These products are not only efficient and reliable but also leading in terms of sustainability and environmental protection. The continuous optimization of our production processes guarantees products that are both economically and ecologically advantageous.

## Milestones

We are pioneering solar techno- logy that plays a crucial role in contributing to energy indepenence and climate resilience.

We drive transformative change in the global use of solar energy. By developing technologies that enable significant improvements in performance and ease of use, we are setting new standards.

Customers worldwide are using our technology, and together we are accelerating the transition to renewable energy while achieving both economic and ecological benefits.

## Automation

To drive the integration of intelligent automation solutions that make the interaction between solar technologies and end users seamless and intuitive.

To develop automation systems that not only operate smoothly but also adapt to consumer needs. These systems aim to optimize energy consumption, enhance operational efficiency, and accelerate the adoption of renewable technologies.

Our customers are enjoying the convenience and efficiency that our intelligent automation solutions bring to their daily lives. These technologies simplify the control of their energy supply, reduce costs, and support the transition to a more environmentally friendly future.

CE ISO SOMPO

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2014

60+

2

# Transparency

## Vision:

We aim to create an atmosphere of openness where everyone from our customers to our employees feels secure and well-informed.

## Mission:

Clear information, no secrets that's our motto. Whether it's about the production of our products or how they function, we keep you constantly updated. We believe that well informed people make better decisions.

## Today:

Our customers and partners benefit from our transparent business management. We ensure complete openness at every stage of our processes, from development to product delivery. This practice of open communication allows our stakeholders to make informed decisions and strengthens trust in long-term collaboration with our company.

# Experience

We want every interaction with our company to be a positive experience for customers and partners. Our products and services should not only be reliable and innovative but also inspire enthusiasm.

Our goal is to provide each customer and partner with a personalized and valuable experience. With our extensive experience in solar technology, we know what works and we use that knowledge to exceed your expectations and make the transition to sustainable energy easier for you.

Our customers benefit directly from our many years of experience in solar technology. We deliver tailored solutions that are reliable and efficient, supporting every step of the journey toward sustainable energy. Our team ensures a seamless experience through professional advice and assistance.

# Commitment

Our vision is to be a leader in the solar industry through our unwavering commitment to quality and sustainability. We strive to improve in every aspect every day from product development to our services.

Our primary goal is to consistently exceed our customers' expectations. We are committed to the highest quality and continuous improvement of our products and services. Our dedication to sustainability and ethical business practices is unwavering and guides all our actions.

Our customers and partners can rely on our strong commitment. We employ innovative and sustainable technologies to ensure that our solutions are not only efficient but also environmentally friendly. Every project is executed with the highest standards of quality and a focus on long-term customer satisfaction.

# Home Solution

We aim to transform every home into an eco-friendly energy source. Our vision is to offer advanced solar solutions that are easy to integrate and optimize household energy consumption while contributing to global sustainability.

Our goal is to develop customized solar solutions tailored to the specific needs and conditions of each household. We are committed to providing our custmers with the best combination of efficiency, ease of use, and economic benefit, making the transition to renewable energy simple and appealing.

Our Home Solution products enable customers to meet their energy needs sustainably while saving costs. Homes equipped with our technology benefit from intelligent energy management and a reduced carbon footprint. Our solutions are not only environmentally friendly but also user-friendly, allowing every household to fully harness the advantages of modern solar technology.

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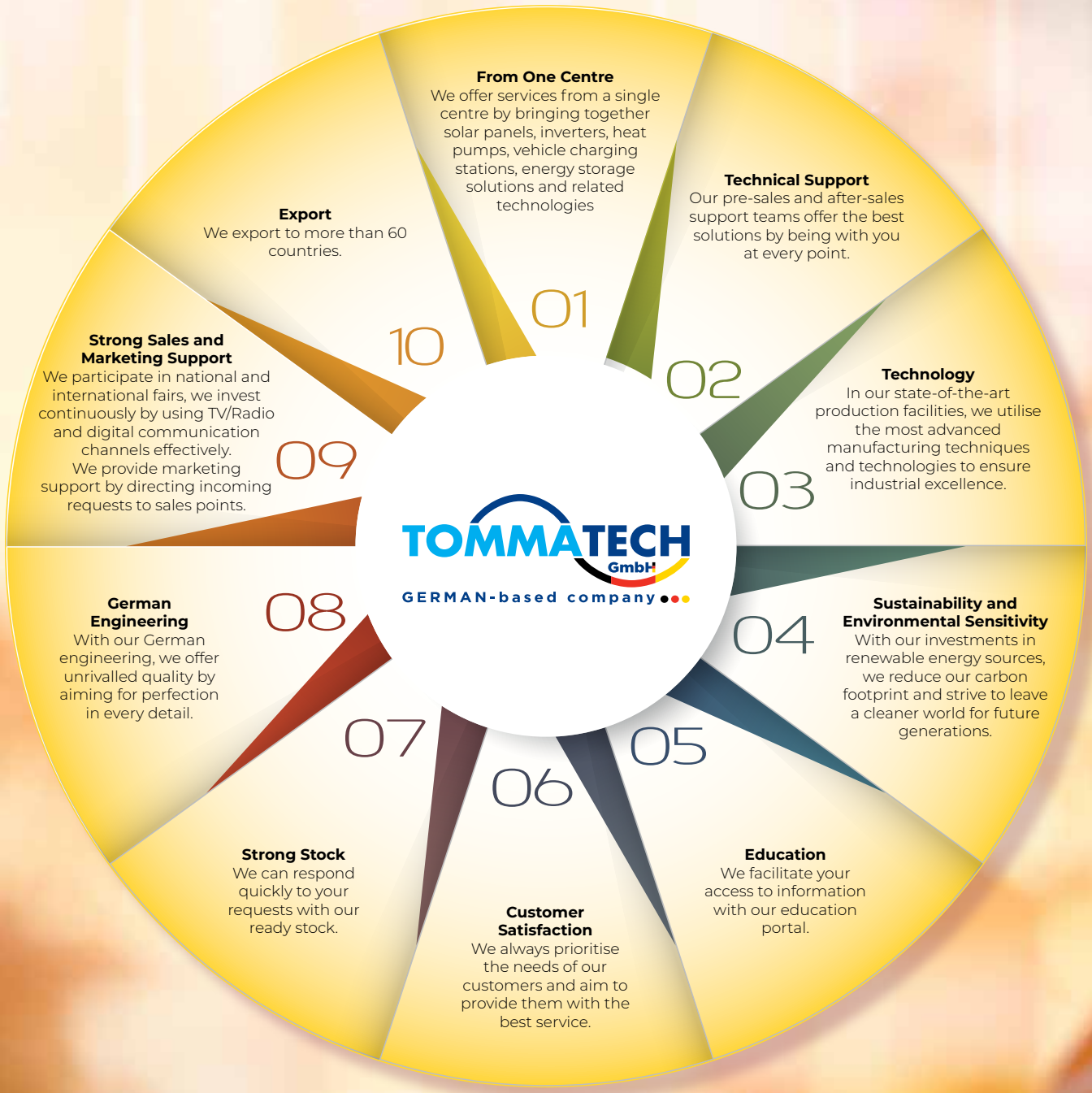


# with TommaTech

*You are in control!*

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# OFF-GRID

## New Series

OFG-TT-01-NEW1K-12MF
OFG-TT-02-NMPPT1K-12MF
OFG-TT-03-NEW3K-24MF
OFG-TT-04-NMPPT3K-24MF
OFG-TT-05-NEW5K-48MF
OFG-TT-06-NMPPT5K-48MF


## New Pro Series

OFG-TT-PRO1.2K-WIFI-12MF
OFG-TT-PRO3K-WIFI-24MF
OFG-TT-PRO5K-WIFI-48MF


## Plus Series

OFG-TT-05-MPLUS4K-24MF
OFG-TT-08-MPLUS7K-48MF-P
OFG-TT-08-11K-MPPT-48MF

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## HYBRID

LV F Series

INV-HYB-48V-15K-F-TF
INV-HYB-48V-20K-F-TF


## CHARGE CONTROLLERS

AU Series

SSC-05-PWM60-12-24-2USB
SSC-21-PWM45-24LCD2USB

SCC Series

SSC-19-MPPT60-12-24-48


## ENERGY MANAGEMENT SYSTEM

Portal

WatchPower

SolarMan

## WHAT IS OFF-GRID INVERTER?

It is a device designed to feed the electrical energy generated from solar panels to the loads of the house where there is no grid connection.

## HOW DOES AN OFF-GRID INVERTER WORK?

The Off-Grid inverter basically works on the principle of the inverter circuit inside. DC electrical energy generated from solar panels is converted into AC electrical energy used in homes or workplaces thanks to this inverter circuit.

## WHY OFF-GRID INVERTER?

Thanks to the battery connection, it can store energy; it provides uninterrupted energy by using the power in the battery in overcast weather or in the evening. In this way, regardless of the state of the grid, it can continue to obtain electricity from the sun.

## WHERE TO USE OFF-GRID INVERTER?

It is a preferred alternative in systems with grid electricity and self-consumption, in areas where grid electricity is not available or where grid line installation is costly and power outages are frequent.

## WHO USES OFF-GRID INVERTER?

Off-grid solar inverters are widely used by individuals and organisations who want to meet their energy needs without being connected to the electricity grid. These inverters convert direct current (DC) generated by solar panels into alternating current (AC), enabling electrical devices to operate.

## OFF-GRID INVERTER WORKING PRINCIPLE

In the Off-Grid system, the DC power generated from the solar panel or battery is transmitted to the inverter. The inverter reacts to sudden changes in its direction with the capacitor and inductor circuit, and in this process, the current rises and falls, creating a sinusoidal waveform. The generated waveform can be a pure or modified waveform.

# ADVANTAGES OF OFF-GRID INVERTER

- Off-Grid systems allow you to be completely independent in terms of energy, and this independence can also be considered as a security factor.
- The biggest advantage is that it offers a 100% independent energy source. You do not need to pay for electricity costs and you are completely protected from increasing energy prices.
- Since you do not need a grid connection, you are not affected by power outages.
- The installation time of the systems is very short; thus, it becomes ready for use quickly.
- It is very easy to install, long and complex assembly processes are not required.
- Off-Grid systems offer the opportunity to expand according to your needs in the future.
- You do not need an extra generator, so you save additional costs.

  As with all renewable energy systems, Off-Grid systems are environmentally friendly; they do not emit gases.
- In areas where there is no grid  electricity, it can be integrated with batteries, providing a solution independent of power outages.
- Off-Grid systems are long-lasting and require only one installation cost; there is no obligation to pay any invoice afterwards.
- Maintenance is very easy and only periodic general maintenance is sufficient; it does not require frequent maintenance.

# OFF- GRID NEW SERIES INVERTERS

1kW - 3kW - 5kW

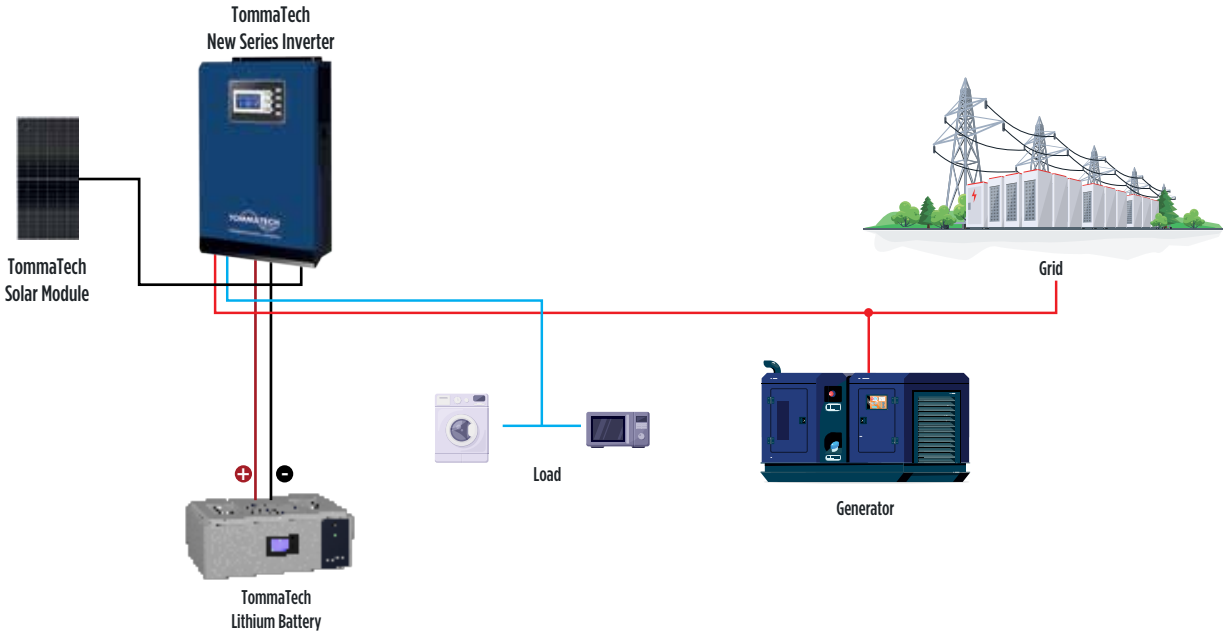

## New

PWM and MPPT winding controlled options provide the opportunity to choose the most suitable device for your needs.

## Product Features

- High Efficiency
- Energy Storage Solutions
- Dust Prevention Kit
- 1 Phase AC Output
- Generator Supported
- Full Sine Wave Output
- Easy Installation

## Connection Diagram



| MODEL | TT-NEW1K | TT-NEW1K/MPPT | TT-NEW3K | TT-NEW3K/MPPT | TT-NEW5K | TT-NEW5K/MPPT |
|---|---|---|---|---|---|---|
| Maximum Power | 1000 / 1000 | | 3000 / 3000 | | 5000 / 5000 | |
| Parallel Array Capacity | No | | | | | |
| **AC INPUT** | | | | | | |
| Voltage [V AC] | 230 | | | | | |
| Selectable Voltage Range [V AC] | 170-280 (For Personal Computers) ; 90-280 (For household appliances) | | | | | |
| Nominal Frequency [Hz] | 50 / 60 (Auto Detection) | | | | | |
| **DC INPUT** | | | | | | |
| Maximum Input Current [A] | 50 | 18 | 50 | 18 | 50 | 50 |
| Maximum Short Circuit Current [A] | 50 | 22 | 50 | 22 | 50 | 60 |
| MPPT Voltage Range [V] | N/A | 17 ~ 80 | N/A | 30 ~ 80 | N/A | 60 ~ 115 |
| Number Of MPPT | N/A | 1 | N/A | 1 | N/A | 1 |
| MPPT Array Input Number | N/A | 1 | N/A | 1 | N/A | 1 |
| **OUTPUT** | | | | | | |
| AC Voltage Regulation (Battery Mode [V AC] | 230 ± 5% | | | | | |
| Instantaneous Voltage Power [VA] | 2000 | | 6000 | | 10000 | |
| Efficiency (Peak) [%] | 90 ~ 93 | | | | | |
| Automatic Switchover Time [ms] | 10 (For Personal Computers) ; 20 (For household appliances) | | | | | |
| Wave Shape | Pure Sine Wave | | | | | |
| **BATTERY** | | | | | | |
| Battery Voltage [V] | 12 | | 24 | | 48 | |
| Variable Charge Voltage [V] | 13.5 | | 27 | | 54 | |
| Over Charge Protection [V] | 16 | | 33 | | 63 | |
| **CHARGING CONTROLS & AC CHARGING** | | | | | | |
| Solar Charger Type | PWM | MPPT | PWM | MPPT | PWM | MPPT |
| Max. PV Array Open Circuit Voltage [V] | 55 | 102 | 80 | 102 | 105 | 145 |
| Max. PV Array Power [W] | 600 | 500 | 1200 | 1000 | 2400 | 3000 |
| MPPT Operating Voltage Range [V] | N/A | 17 ~ 80 | N/A | 30 ~ 80 | N/A | 60 ~ 115 |
| Max. Solar Charging Current [A] | 50 | 40 | 50 | 40 | 50 | 60 |
| Max. AC Charging Current [A] | 20 | | 25 | | 60 | |
| Max. Charging Current [A] | 50 | 60 | 70 | 60 | 110 | 120 |
| **PHYSICAL FEATURES** | | | | | | |
| Depth x Width x Height [mm] | 88 x 225 x 320 | | 100 x 285 x 334 | | 100 x 300 x 440 | |
| Net Weight [kg] | 4.4 | 4.4 | 6.3 | 6.5 | 8.5 | 9.7 |
| Communication Interface | USB/RS232 | | | | | |
| **ENVIRONMENTAL FEATURES** | | | | | | |
| Relative Humidity [%] | 5 to 95 Relative Humidity (Non-condensing) | | | | | |
| Operating Temperature [°C] | -10 ~ 50 | | | | | |
| Storage Temperature [°C] | -15 ~ 60 | | | | | |

# OFF-GRID NEW PRO SERIES INVERTERS

1.2kW - 3kW - 5kW

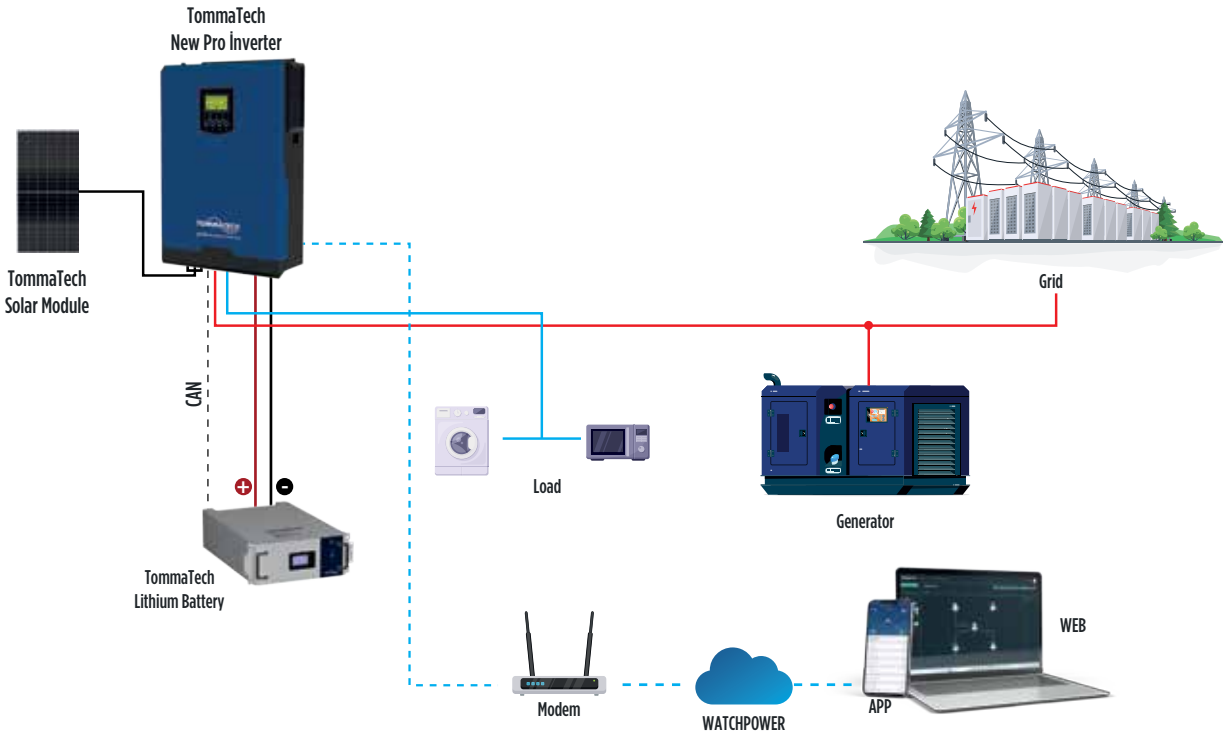

## New Pro

High PV input power, battery-independent design and dust-proof, easy-to-maintain options allow you to choose the device that suits your needs

## Product Features

- High Efficiency
- Energy Storage Solutions
- Dust Prevention Kit
- 1 Phase AC Output
- Battery Independent
- PV High Voltage
- Generator Supported
- Full Sine Wave Output
- Easy Installation
- Remote Monitoring
- BMS Communication

## Connection Diagram



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| MODEL | OFG-TT-PRO1.2K-WIFI-12MF | OFG-TT-PRO3K-WIFI-24MF | OFG-TT-PRO5K-WIFI-48MF |
|---|---|---|---|
| Maximum Power [VA/W] | 1200 / 1200 | 3000 / 3000 | 5000 / 5000 |
| **AC INPUT** | | | |
| Voltage [V AC] | 230 | | |
| Selectable Voltage Range [V AC] | 170-280 (For Personal Computers) ; 90-280 (For household appliances) | | |
| Nominal Frequency [Hz] | 50 / 60 (Auto Detection) | | |
| **OUTPUT** | | | |
| AC Voltage Regulation (Battery Mode [V AC] | 230 ± 5% | | |
| Instantaneous Voltage Power [VA] | 2400 | 6000 | 10000 |
| Efficiency (Peak) [%] | 90 ~ 93 | | |
| Automatic Switchover Time [ms] | 10 (For Personal Computers) ; 20 (For household appliances) | | |
| Wave Shape | Pure Sine Wave | | |
| **BATTERY** | | | |
| Battery Voltage [V] | 12 | 24 | 48 |
| Variable Charge Voltage [V] | 13.5 | 27 | 54 |
| Over Charge Protection [V] | 16 | 32 | 63 |
| **CHARGING CONTROLS & AC CHARGING** | | | |
| Solar Charger Type | MPPT | | |
| Max. PV Array Open Circuit Voltage [V] | 350 | 450 | 500 |
| Max. PV Array Power [W] | 2000 | 3000 | 5000 |
| MPPT Operating Voltage Range [V] | 60~300 | 60~400 | 120~450 |
| Max. Solar Charging Current [A] | 80A | | 100A |
| Max. AC Charging Current [A] | 100A | | |
| Max. Charging Current [A] | 13 | | 18 |
| **PHYSICAL FEATURES** | | | |
| Depth x Width x Height [mm] | 90 x 288 x 357 | 110 x 288 x 390 | 120 x 300 x 440 |
| Net Weight [kg] | 6.5 | 7.2 | 10 |
| Communication Interface | RS232/RS485, Optional WiFi | | |
| **ENVIRONMENTAL FEATURES** | | | |
| Relative Humidity [%] | 5 ~ 95 Relative Humidity (Non-condensing) | | |
| Operating Temperature [°C] | -10 ~ 50 | | |
| Storage Temperature [°C] | -15 ~ 60 | | |

# OFF-GRID PLUS SERIES INVERTERS

3.6kW - 7.2kW - 11kW

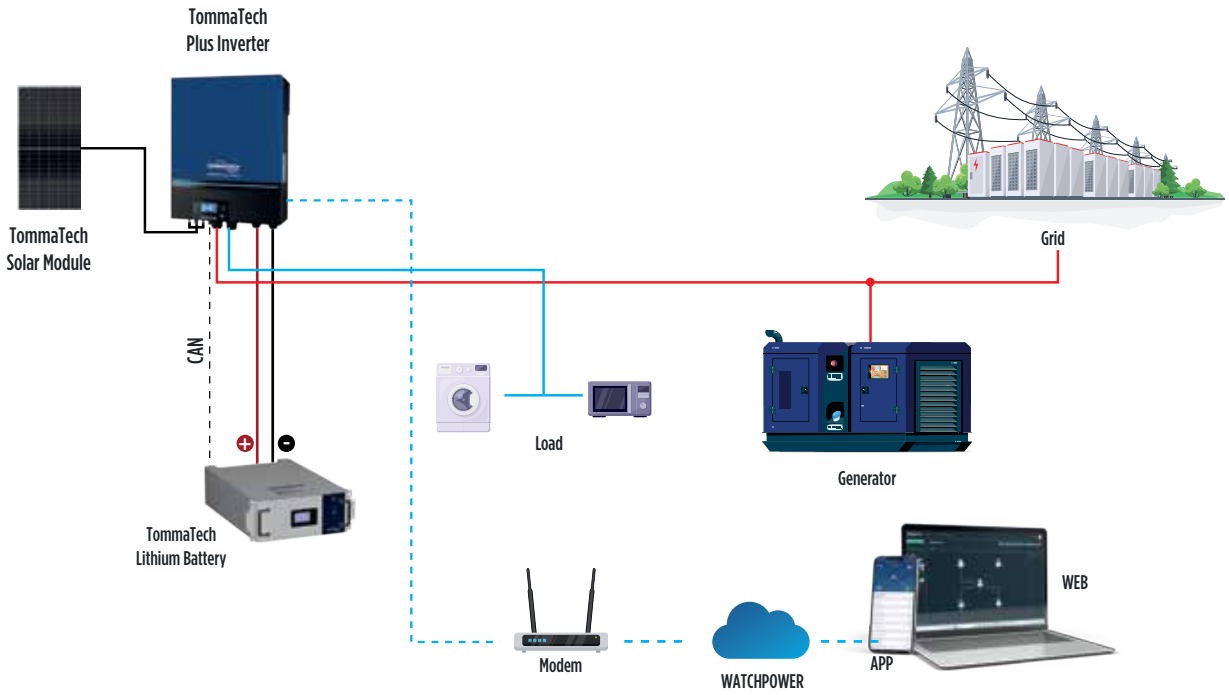

## Plus

High PV input power, protected against dust, easy to maintain, suitable for parallel connection options and built-in Wi-Fi allows you to choose the device that suits your needs.

## Product Features

- PV High Voltage
- High Efficiency
- Energy Storage Solutions
- Remote Monitoring
- 1 Phase AC Output
- Battery Independent
- Optional 100 W DC Çıkış (DC)
- Generator Supported
- Expandable System
- Full Sine Wave Output
- Easy Installation
- BMS Communication (BMS)

## Connection Diagram



| MODEL | TT-3.6K-HV-24V-MPPT | TT-7.2K-PLUS-HV-48V-MPPT | TT-11K-PLUS-HV-48V-MPPT |
|---|---|---|---|
| Maximum Power [VA/W] | 3600 / 3600 | 7200 / 7200 | 11000 / 11000 |
| Parallel Capability | No | Yes, 6 Pieces | |
| **AC INPUT** | | | |
| Voltage [V AC] | 230 | | |
| Selectable Voltage Range [V AC] | 170-280 (For Personal Computers) 90-280 (For household appliances) | | |
| Nominal Frequency [Hz] | 50 /60 (Auto Detection) | | |
| **DC INPUT** | | | |
| Maximum Input Current [A] | 18 | 18 | 18 |
| Maximum Short Circuit Current [A] | 22 | 22 | 22 |
| MPPT Range @ Operating Voltage [V DC] | 120 ~ 450 | 90 ~ 450 | |
| Number Of MPPT | 1 | 2 | 2 |
| MPPT Array Input Number | 1 | 1 | 1 |
| **OUTPUT** | | | |
| AC Voltage [V AC] | 230 ± 5% | | |
| Surge Power [VA] | 7500 | 15000 | 22000 |
| Maximum Eciency [%] | 90 - 93 | | |
| Transfer Time [ms] | 15 (For Personal Computers) 20 (For household appliances) | 10 (For Personal Computers) 20 (For household appliances) | |
| Waveform | Pure Sine Wave | | |
| No Load Power Consumption [W] | < 45 | < 70 | |
| **BATTERY** | | | |
| Battery Voltage [V DC] | 24 | 48 | |
| Floating Charge Voltage [V DC] | 27 | 54 | |
| Overcharge Protection [V DC] | 33 | 66 | 63 |
| **CHARGING CONTROLS & AC CHARGING** | | | |
| Solar Charger Type | MPPT | | |
| Max. PV Array Open Circuit Voltage [V] | 4000 | 8000 (4000 x 2) | 11000 (5500 x 2) |
| Max. PV Array Power [W] | 120 ~ 450 | 90 ~ 450 | |
| MPPT Operating Voltage Range [V] | 500 | | |
| Max. Solar Charging Current [A] | 80 | | 150 |
| Max. AC Charging Current [A] | 80 | | 150 |
| Max. Charging Current [A] | 80 | | 150 |
| **PHYSICAL FEATURES** | | | |
| Depth x Width x Height [mm] | 432.5 x 147.4 x 553.6 | | |
| Net Weight [kg] | 14.1 | | 18.4 |
| Communication Interface | USB/RS232/RS485/Wi-Fi/Dry Contact | | |
| **ENVIRONMENTAL FEATURES** | | | |
| Relative Humidity [%] | 5 ~ 95 Relative Humidity (Non-condensing) | | |
| Operating Temperature [°C] | -10 ~ 50 | | |
| Storage Temperature [°C] | -15 ~ 60 | | |
| **STANDART** | | | |
| Compatibility | CE | | |

# Sustainable Living
# Renewable Energy

# TRIO HYBRID LV F SERIES INVERTERS

15kW - 20kW

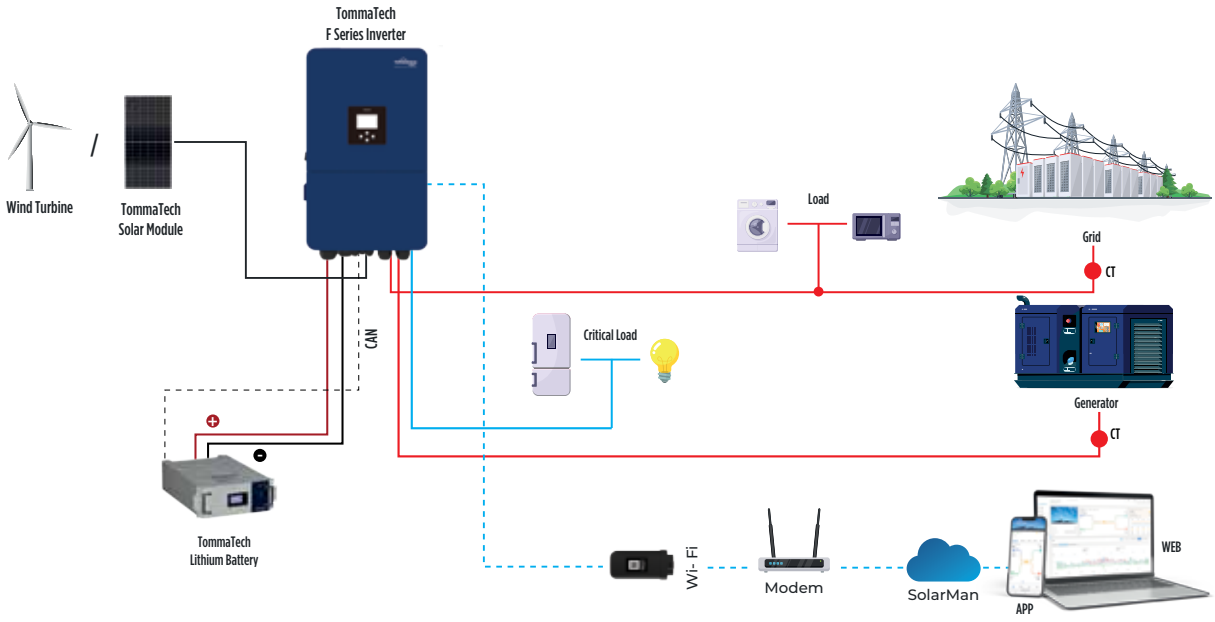
## LV F Series

TommaTech Trio-Hybrid F Series Three Phase LV Hybrid Inverter is the ideal solution for low voltage battery applications with 48V battery system voltage as well as unbalanced phase output support. The inverter series, which is fully compatible with TommaTech LV Lithium Batteries, can be easily preferred for both residential and commercial projects with its remote control feature. The F series hybrid three-phase inverter can be used in parallel with up to 10 units and this power can be supported by lithium batteries in a sustainable way.

## Product Features

- Expandable System
- 48V Battery Output Voltage
- 280A — 15kW Maximum Charge/Discharge Current
- 350A — 20kW Max Charge/ Decharge Current
- 3 Phase AC Output
- Phase Unbalance Adjustment
- Generator Supported
- MPPT High Efficiency
- AC Input/Output Wide Voltage Range
- Remote Monitoring
- PV High Voltage
- BMS — BMS Communication

## Connection Diagram



| MODEL | TRIO HİBRİT LV 15.0F | TRIO HİBRİT LV 20.0F |
|---|---|---|
| **BATTERY INPUT DATA** | | |
| Battery Type | Lead-Acid or Lithium-Ion | |
| Battery Voltage Range (V) | 40-60 | |
| Max. Charging Current (A) | 280 | 350 |
| Max. Discharging Current (A) | 280 | 350 |
| Charging Strategy for Li-ion Battery | Self-adaptation to BMS | |
| Number of Battery Input | 1 | |
| **PV STRING INPUT DATA** | | |
| Max. PV Input Power (W) | 22500 | 30000 |
| Max. PV Input Voltage (V) | 800 | |
| Start-up Voltage (V) | 160 | |
| MPPT Voltage Range (V) | 160-650 | |
| Rated PV Input Voltage (V) | 550 | |
| Max. Operating PV Input Current (A) | 36+20 | |
| Max. Input Short-Circuit Current (A) | 54+30 | |
| No. of MPP Trackers/No. of Strings MPP Tracker | 2 / 2+1 | |
| **AC INPUT/OUTPUT DATA** | | |
| Rated AC Input/Output Active Power (W) | 15000 | 20000 |
| Max. AC Input/Output Apparent Power (VA) | 16500 | 20000 |
| Rated AC Input/Output Current (A) | 22.8/21.8 | 30.4/29 |
| Max. AC Input/Output Current (A) | 22.8/21.8 | 30.4/29 |
| Max. Continuous AC Transition (mains to load) (A) | 70 | |
| Peak Power (off-grid) (W) | 2 times the nominal power, 10 h | |
| Displacement Power Factor Adjustment Range | 0,8 front 0,8 back 220/380V, | |
| Nominal Input/Output Voltage/Range (V) | 230/400V 0 ,85Un-1,1Un | |
| Nominal Input/Output Grid | 50/45-55, 60/55-65 | |
| Frequency/Interval(Hz) Network Connection Form | 3L+N+PE | |
| Total Current Harmonic Distortion | <%3 of (nominal power) | |
| THDi DC Injection Current | <%0,5 within | |
| Parallel Connection (Pieces) | 10 | |
| **EFFICIENCY** | | |
| Max. Efficiency | 97.6% | |
| Euro Efficiency | 97.0% | |
| MPPT Efficiency | >99% | |
| **EQUIPMENT PROTECTION** | | |
| Integrated | DC Polarity Reverse Connection Protection, AC Output Overcurrent Protection AC Output Overvoltage Protection, AC Output Short Circuit Protection, Thermal Protection DC Terminal Insulation Impedance Monitoring, DC Component Monitoring, Earth Fault Current Monitoring Power Network Monitoring, Island Protection Monitoring, Earth Fault Detection, DC Input Switch Over Voltage Load Drop Protection, Residual Current (RCD) Detection, Surge protection level | |
| Surge Protection Level | TIP II (DC), TIP II (AC) | |
| **INTERFACE** | | |
| Communication Interface | RS485/RS232/CAN | |
| Monitor Mode | GPRS/WIFI/Bluetooth/4G/LAN (optional) | |
| **GENERAL DATA** | | |
| Operating Temperature Range (°C) | -40 ila +60 (>45 Yield Loss) | |
| Permissible Ambient Humidity | 0-100% | |
| Permissible Altitude | <3000 | |
| Noise (dB) | <60 | |
| Ingress Protection (IP) Rating | IP65 | |
| Inverter Topology | Non-isolated | |
| Over Voltage Category | OVC II (DC), OVC III (AC) | |
| Cabinet Size (WxHxD mm) | 456×750×268,5 (Excluding Connectors and Brackets) | |
| Weight (kg) | 50.6 | |
| Type of Cooling | Smart Cooling | |
| Warranty | 10(5+5*) | |

* Kurulum yeri Avrupa'da ise garanti süresi 10 yıldır.

# AU SERIES PWM CHARGE CONTROLLERS

45A / 60A

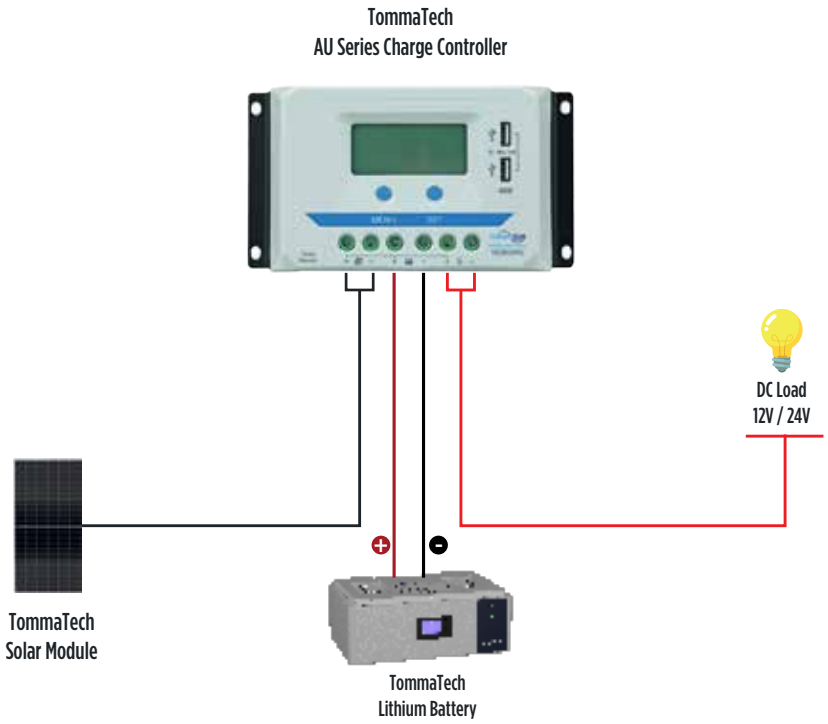
## AU Series

The Tommatech AU series controller is a PWM charge controller with a built-in LCD display adopting the most advanced digital technologies. The model, which includes multiple load control modes, can be easily preferred in systems such as solar home systems, traffic signalling systems, solar street lights, solar garden lights.

## Product Features

- **Compatible with 12V/24V/48V Battery Voltage**
- **LCD Screen**
- **High Efficiency**
- **Max Charging Current up to 60A**

## Connection Diagram



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| MODEL | TT1024AU | TT2024AU | TT3024AU | TT3048AU | TT4524AU | TT4548AU | TT6024AU | TT6048AU |
|---|---|---|---|---|---|---|---|---|
| Nominal System Voltage [V] | 12/24 Auto | | | 12/24/36/48 Oto | 12/24 Oto | 12/24/36/48 Oto | 12/24 Oto | 12/24/36/48 Oto |
| Battery Input Voltage Range [V] | 9~32 | | | 9~64 | 9~32 | 9~64 | 9~32 | 9~64 |
| Rated Charge / Discharge Current [A] | 10 @55 °C | 20 @55 °C | 30 @55 °C | | 45 @55 °C | | 60 @55 °C | |
| Maximum PV Open Circuit Voltage [V] | 50 | | | 96 | 50 | 96 | 50 | 96 |
| Battery Type | Dry / Gel / Wet | | | | | | | |
| Balancing Charge Voltage [V] | Dry: 14.6 / Gel: No / Wet | | | | | | | |
| Upgrade Charge Voltage [V] | Dry: 14.4 / Gel: 14.2 / Wet: 14.6 | | | | | | | |
| Float Charge Voltage [V] | Dry / Gel / Wet: 13.8 | | | | | | | |
| Reconnection Voltage (Low Voltage) [V] | Dry / Gel / Wet: 12.6 | | | | | | | |
| Disconnection Voltage (Low Voltage) [V] | Dry / Gel / Wet: 11.1 | | | | | | | |
| Self Consumption | 9.2mA /12V;11.7mA / 24V; 14.5mA / 36V;17mA / 48V | | | | | | | |
| Temperature Coefficient | -3mV / °C / 2V (25 °C) | | | | | | | |
| Charge Circuit Voltage Drop [V] | 0.29 | | | | | | | |
| Discharge Circuit Voltage Drop [V] | 0.16 | | | | | | | |
| LCD Display Operating Temperature Range [OC] | -20 ~+70 | | | | | | | |
| Operating Environment Temperature Range [OC] | -25 ~+55 (Product can operate continuously at full load) | | | | | | | |
| Relative Humidity | 95%, Non-condensing | | | | | | | |
| Protection Class | IP30 | | | | | | | |
| Earthing | Joint Positive | | | | | | | |
| USB Output | 5V / 2.4A (Total) | | | | | | | |
| General Dimensions [mm] | 142x85x41.5 | 160x94.9x49.3 | 181x100.9x59.8 | | 194x118.4x63.8 | | 214x128.7x72.2 | |
| Assembly Dimension [mm] | 130x160 | 148x70 | 172x80 | | 185x90 | | 205x100 | |
| Mounting Hole Size [mm] | 4.5 | | 5 | | 5 | | 5 | |
| Connection Terminal [mm2] | 4/12AWG | 10/8AWG | 16/6AWG | | 16/6AWG | | 25/4AWG | |
| Weight [kg] | 0.22 | 0.35 | 0.55 | 0.58 | 0.76 | 0.88 | 1.02 | 1.04 |

# SCC SERIES MPPT CHARGE CONTROLLERS

60A


## SCC Series

Equipped with combined MPPT Technology and DSP controller, the TommaTech 3kW Charge Controller Series is designed to charge the battery at the optimum voltage for off-grid systems at various temperatures. In this way, compared to conventional solar charge controllers, it is aimed to operate at the optimum power output voltage of the energy generated from solar panels.

## Product Features

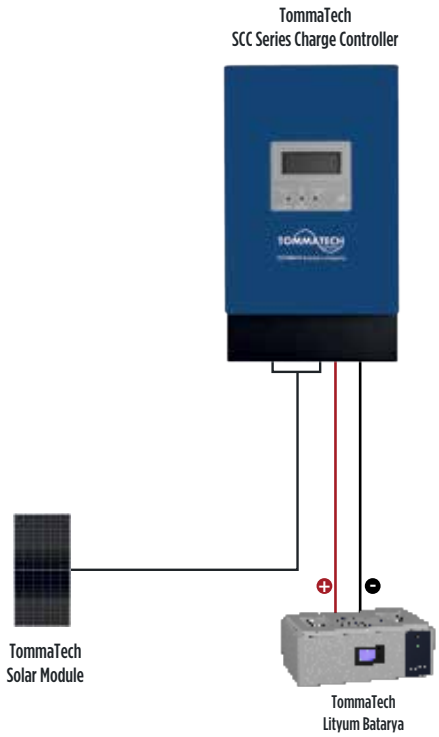
**Compatible with 12V/24V/48V Battery Voltage**

**LCD Screen**

**High Efficiency**

**Max Charging Current up to 60A**

## Connection Diagram



| MODEL | SCC-MPPT 3kW |
|---|---|
| **INPUT** | |
| MPPT Operating Voltage [V] | 60 ~ 115 |
| Maximum PV Array Open Circuit Voltage [V] | 145 |
| Maximum PV Array Power [W] | 800 I 1600 I 3200 |
| Maximum Current [A] | 50 |
| **OUTPUT** | |
| Nominal Battery Voltage [V] | 12 I 24 I 48 |
| Connected Battery Type | Sealed Lead Acid, Dry, Gel |
| Maximum Charging Current [A] | 60 |
| Maximum Eciency [%] | 98 |
| Charging Method | Three Phases : Charged, Absorption, Variable |
| **PROTECTION** | |
| Over Load Protection | > %110 : Sound Alarm |
| Over Charge Protection | Yes |
| Reverse Pole Protection | Yes |
| **INDICATORS** | |
| LED Indicator | LCD Display Indicating Solar Energy, Load Level, Battery Voltage / Capacity, Charging Current and Failure Conditions |
| LED Display | Three Indicators for Solar, Charging and Load Status |
| **PHYSICAL FEATURES** | |
| Dimensions [DxWxH] [mm] | 315 x 165 x 128 |
| Net Weight [kg] | 4.5 |
| IP Protection | IP31 |
| **ENVIRONMENT** | |
| Nem [%] | 5 ~ 95 Relative Humidity (Non-condensing) |
| Operating Temperature [°C] | 0 ~ 55 |
| Storage Temperature [°C] | -15 ~ 60 |
| Maximum Operating Altitude (Altitude) [m] | 0 ~ 3000 |

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ANDROID APP ON Google play

Download on the App Store

## WatchPower

## Easy Use

With the WatchPower application, remote monitoring can be done on NEW PRO series and M PLUS series devices. You can see instantaneous production, consumption and battery charge-discharge data in the system as simulation and table. Parameter settings and voltage range value can be changed remotely.

## Easy Access

In this series, the wifi card is embedded in the graphics card without the need for an external Wifi dongle for monitoring. You can easily and free of charge access the application from Google Play Store and App Store.
After the installation, it records the power generated on a daily, monthly and annual basis in the cloud. Daily, monthly and annual data can be reported in the form of excel documents.

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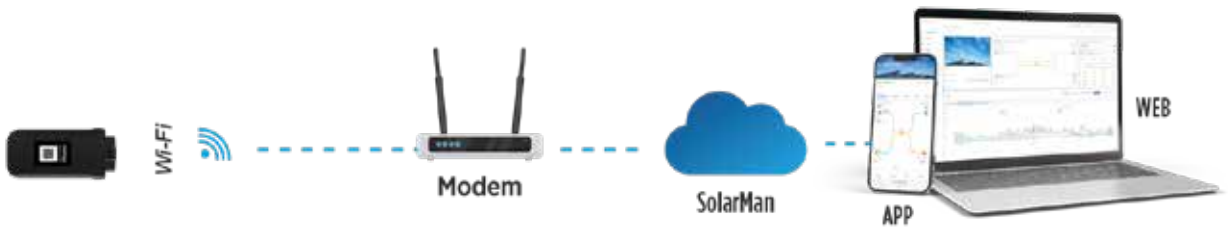
## SolarMan

### Easy Use

You can easily provide remote monitoring and control of your TommaTech F series devices via SolarMan application. From the voltage and current values you receive from the panels to the occupancy rate of your high voltage battery, you can make many setting changes and remote monitoring such as the instantaneous power requirement of your home and the input voltage range selection.

### Easy Access

In the F series devices, you can install the Wifi dongle apparatus included in the product box internally by connecting it to your inverter. You can easily log in from anywhere at any time via WEB or APP. By logging in via WEB, you can access the detailed data of your system and create reports on a daily, monthly or annual scale.

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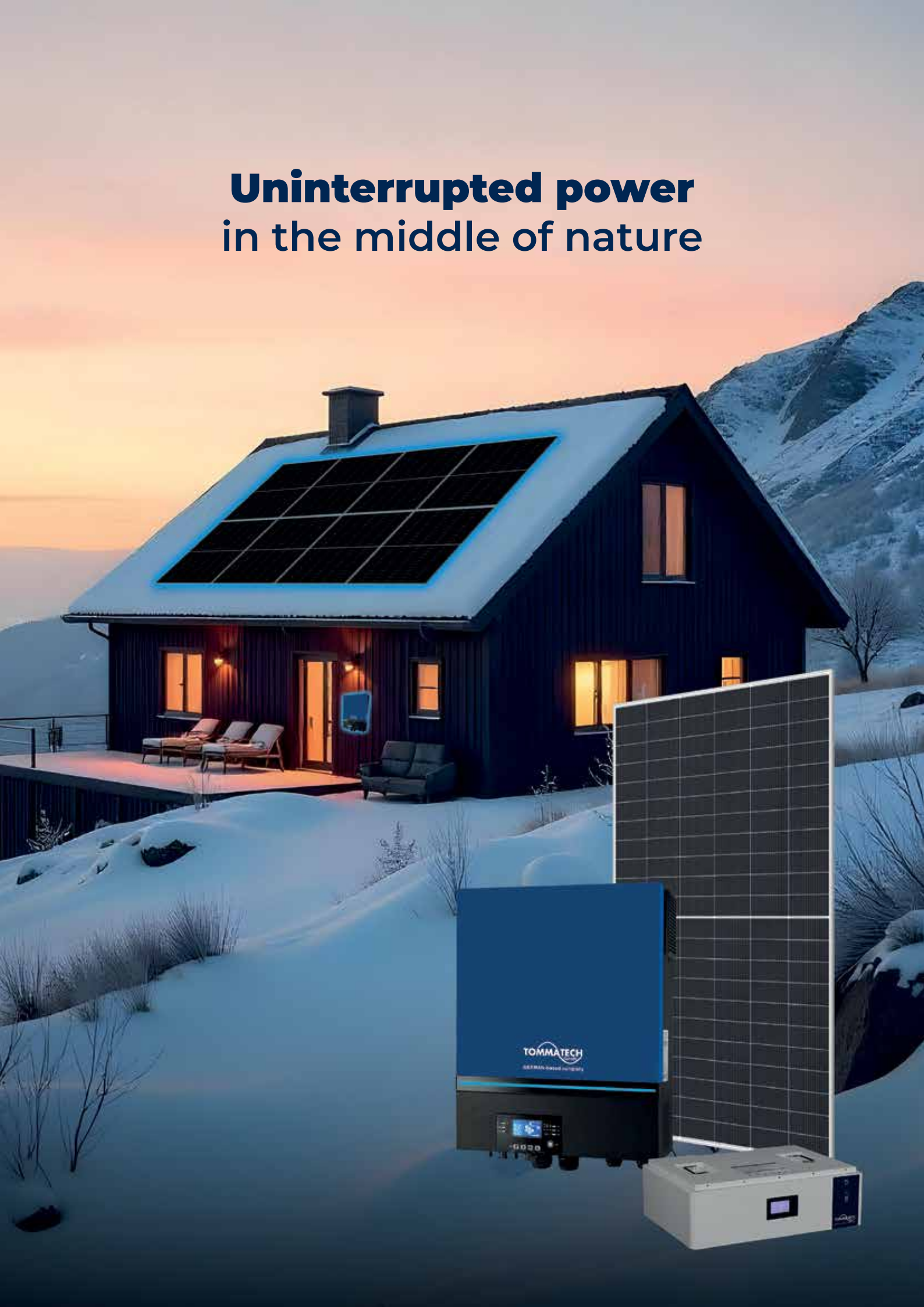
# **Uninterrupted power**
in the middle of nature



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