



More Safety, More Power



TSUNESS

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TSUN Product

Microinverter / Easy Solar Kit / Energy Storage / Rapid Shutdown

ABOUT US

With its German management background and quality assurance system, TSUN is the top micro inverter brand providing the most efficient, highest ROI and safest solar solution to residential and commercial solar installations.

TSUN has a mature and elite R&D, sales and management team who has more than 10 years' experience in the global PV industry.

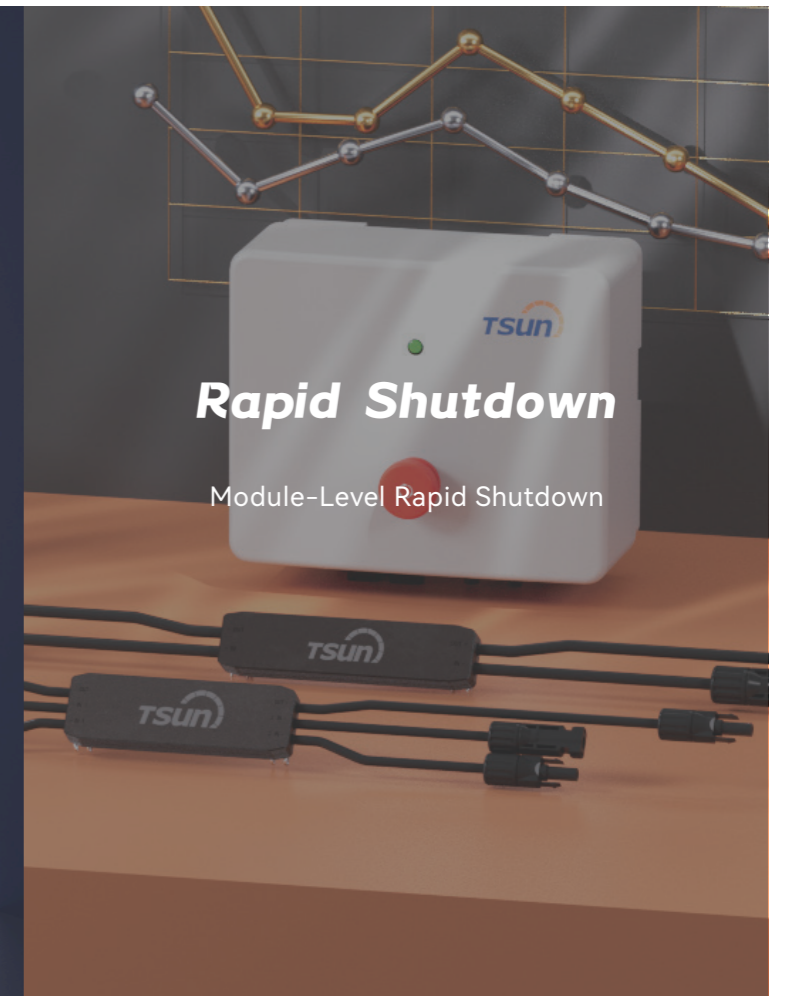
The team has good knowledge of the global market, with elite R&D team composed with engineers and experts, TSUN is more than confident to provide global customers with the most user-friendly and cost-effective solutions.



COMPANY DISTRIBUTION



PRODUCTS OF SERIES





TSUNESS

01 SOLUTION

On-grid PV System with Microinverter

Low DC Voltage, Module-level MPPT, Safe and Efficient!

Storage System with Microinverter

Safe and High Efficiency, Flexible and Multiple Use, Store your Home Energy!

Storage System with Rapid Shutdown

High Power Efficiency, Flexible and Multiple Use, Safe to Store Energy!

Portable PV System with Easy Solar Kit

PV Home Appliances, Flexible and Easy to Install!

On-grid PV System with Microinverter

Low DC Voltage, Module-level MPPT, Safe and Efficient!



Safe and Efficient PV System Solution with TSUN Microinverter.
Module-level MPPT to Track the Maximum Efficiency.
Low DC Voltage to Guarantee Safety.

Components



Microinverter



Talent / Web & App



Project case

01

More efficient

PV solar systems have always been affected by 'Shadow Effect' since they were put into use.

The output current of PV modules will be greatly affected when the modules were sheltered by shadow. In a PV array, the current change of a single PV module will affect the current of entire PV array, thus affecting the generating efficiency of the whole PV system.

As a representative technical route in MLPE, TSUN Microinverter has multi-channel MPPT, which can track and converts power for single PV module.

The single shadowed PV module will not affect the power generation of other PV modules, so as to maximum the energy generation efficiency and energy production.

What's more, multi-channel MPPT design makes microinverters more suitable for complex roof environments and meet more customized installation requirements.

02

More Safe

As a solar energy conversion device, PV modules output energy under sun radiation and cannot be turned off, which leads to high DC voltage continuously existing in the area of PV array when there is radiation.

Just in case the DC terminal contact is poor, it's easy to cause DC arc, resulting in PV system fire accident. Meanwhile, if the PV array wire is damaged, the electric shock risk might exist, threatening the safety of firefighters. However, TSUN Microinverter adopts multi-channel MPPT design, each input with low DC voltage as well as the entire system.

Therefore, the PV system with TSUN microinverter has no risk of DC high voltage and DC arc.

And in emergency situations such as fire, the firefighters safety can be guaranteed with no risks of electric shock.

03

Much Easier to Install

PV system requires professional installers to install. But TSUN Microinverters adopt plug-and-play design, most connecting work can be finished on the roof.

Therefore, compared with other traditional inverters, the installation of TSUN Microinverter is much easier and only needs simple training.

04

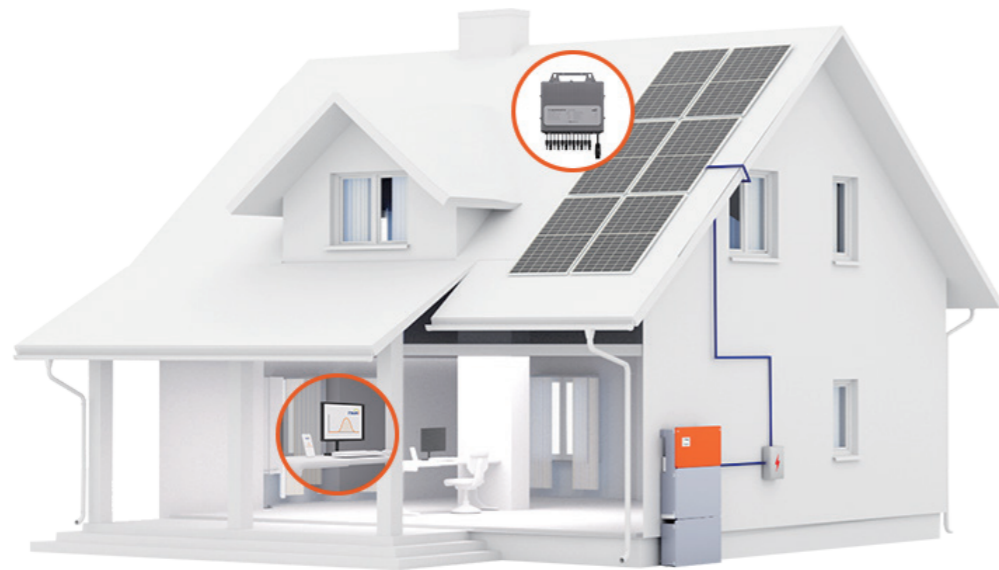
Much Easier to Monitor

Meanwhile, the monitoring system of TSUN Microinverter can collect the information of single PV module to indicate the real time situation of each PV module.

If the abnormal situation exists in PV system, the users can quickly locate the exception, analyze and rectify the problems, and then restore the system by using the monitoring system.

Storage System with Microinverter

Safe and High Efficiency, Flexible and Multiple Use, Store your Home Energy!



Perfectly Matches TSUN Microinverter to Ensure Safe.
Flexible and Multiple Use to Meet All Users' Need.
Improving Energy Efficiency in your Home.

Components



Microinverter



All-in-one AC
Coupled Unit



Talent / Web & App

Project case

01

Safe Rooftop Solution

As a solar energy conversion device, PV modules output energy under sun radiation and cannot be turned off, which leads to high DC voltage continuously existing in the area of PV array when there is radiation.

Just in case the DC terminal contact is poor, it's easy to cause DC arc, resulting in PV system fire accident. Meanwhile, if the PV array wire is damaged, the electric shock risk might exist, threatening the safety of firefighters. However, TSUN Microinverter adopts multi-channel MPPT design, each input with low DC voltage as well as the entire system.

Therefore, the PV system with TSUN microinverter has no risk of DC high voltage and DC arc.

And in emergency situations such as fire, the firefighters safety can be guaranteed with no risks of electric shock.

02

High Spontaneous Self-Consumption Rate

The electricity generated by on-grid PV system has instantaneity. When electricity cannot be consumed by the household load, it must be fed into the public grid.

Meanwhile, power generation by PV system relied on sunlight which means it only works during the day. When the few household loads can't consume the electricity generated, and the feed-in tariff is low in the local area, the electricity fed into the grid will be wasted, reducing the overall system revenue.

However, AC Coupled Unit can store the AC electricity in battery and release it when users need, thereby improves the spontaneous self-consumption rate of home power generation system and ensures the maximum benefit.

03

Flexible and Multiple Use

Easy monitoring fulfill customers' demand

Auto Scheduling Mode: AC Coupled Unit can store the unused electricity during the day and release it at night.

Time-sharing Tariff Mode: AC Coupled Unit can store the electricity when the electricity price is low and release it during high electricity price period.

Back up Mode: When the users' local power grid is unstable and exists power outage, this mode can store enough electricity for customers to use.

04

Retrofit Existing PV Systems (Without Microinverter)

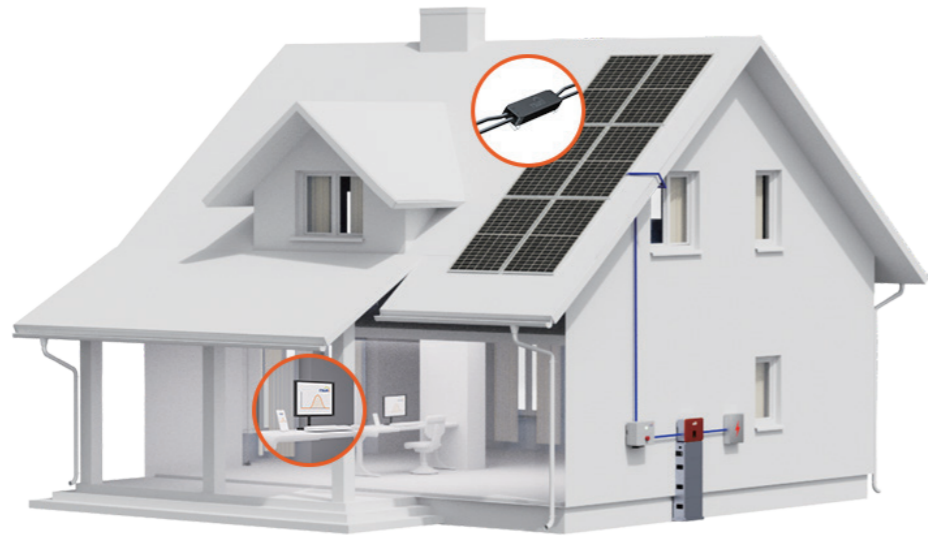
If users didn't adopt TSUN Microinverter, AC Coupled Unit can also be used with PV systems from others.

The existing on-grid PV system can be retrofitted into energy storage system by using AC Coupled Unit which can store the unused electricity during the day and release it at night, improving the spontaneous self-consumption rate of home PV system.

Meanwhile, this solution can choose to install TSUN PV Array-level Rapid Shutdown which designed according to NEC2014 regulation. This product is easy to install and safe to use for cutting DC high voltage outside the PV array. In emergency situation such as fire, protect the safety of firefighters.

Storage System with Rapid Shutdown

High Power Efficiency, Flexible and Multiple Use, Safe to Store Energy!



Hybrid Storage Unit Design to Get Maximize Energy Utilization.
Flexible and Multiple Use to Meet All Users' Need.
Adopt Rapid Shutdown, Safe to Store Energy.

Components



Module-level Rapid Shutdown



Talent / Web & App

Project case

01

High Power Efficiency

The core of energy storage system is the storage and release of electricity energy. The conversion efficiency of charge and discharge will affect the energy utilization rate of energy storage system.

The higher the conversion efficiency, the higher the energy utilization, the smaller the electricity loss. And the conversion efficiency of charge and discharge is related to current. At the same power, the lower the current, the lower the loss. The efficiency of a conventional low-voltage battery is about 95% on a single charge and discharge, and the electricity utilization rate of a single charge-discharge cycle use is only about 90%. TSUN Hybrid Storage Unit adopts high-voltage battery models, so the voltage of charge-discharge is high and the current is low.

What's more, the single charge-discharge efficiency reaches 98%, and the electricity utilization rate of a single charge-discharge cycle use is more than 95%.

02

Flexible and Multiple Use

TSUN Hybrid Storage Unit provides multiple working modes to demand customers' use.

Auto Scheduling Mode: When electricity energy generated PV system is enough to use during the day (especially the next morning when the PV system is not working), TSUN Hybrid Storage Unit can store the unused electricity during the day and release it at night.

Time-sharing Tariff Mode: When electricity energy generated PV system is not enough to use during the day (especially the next morning when the PV system is not working), TSUN Hybrid Storage Unit can be charged for specific time that users set (Usually at night when the electricity price is low), then releasing the electricity during the peak demand in the morning. In this mode, users can obtain the benefits between different electricity price.

Back up Mode: When the users' local power grid is unstable and exists power outage, this mode can store enough electricity for customers to use.

03

Much safer

As a solar energy conversion device, PV modules can output energy under sunlight and cannot be turned off, which makes the DC high voltage must exist in PV array under the condition of sunlight. When a building with PV system is on fire, firefighters cannot use water to put out the fire if the PV string wire is damaged.

Because it exists the risk of electric shock, threatening the safe of firefighters. TSUN Module-level Rapid Shutdown meets the requirement of NEC2017/2020, which is installed in PV string.

In case of fire, the PV string can be cut off to eliminate the DC high voltage, so the firefighters can safely use water to put out fire and avoid the risk of electric shock.

04

Multiple Ways to Rapid Shutdown

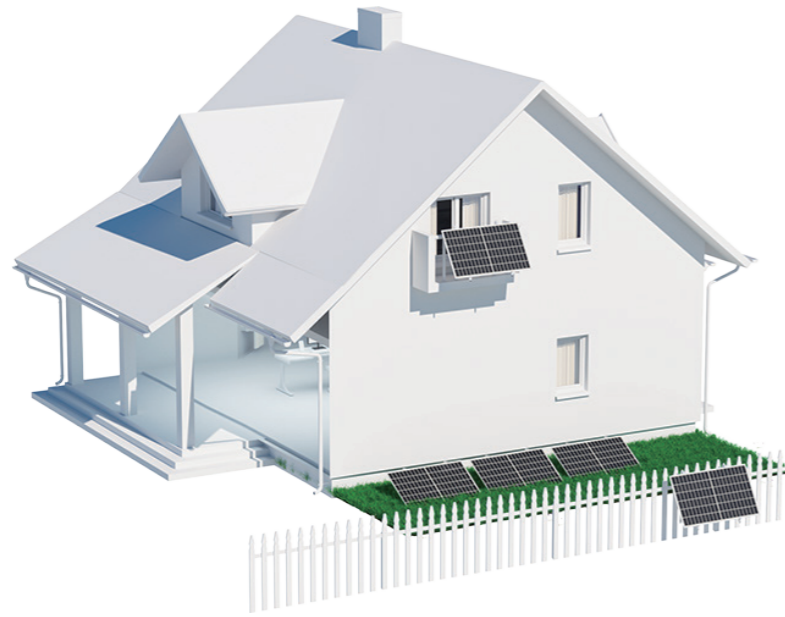
TSUN Module-level Rapid Shutdown possesses multiple ways to rapid shutdown, which can be flexibly chosen based on the practical situation of the field.

In emergency situations such as fire, the users can turn off the switch on the control box with one key. When the users presses the switch, Rapid Shutdown will cut off DC electricity in the PV strings within 10 seconds to ensure no DC high voltage in PV system, so as to guarantee the safety of firefighters.

TSUN Rapid Shutdown possesses over-temperature detection function. When the temperature near the shutdown is detected to be above 85°, it can automatically shutdown to ensure no DC high voltage in PV system and restore the connection when the temperature drops.

Portable PV System with Easy Solar Kit

PV Home Appliances, Flexible and Easy to Install!

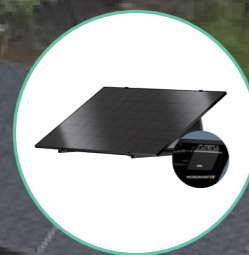


Easy Solar Kit, your Home DIY PV Appliances.
Flexible to Fit Various Area and Get More Electricity.
Plug and Play, Easy to Install.

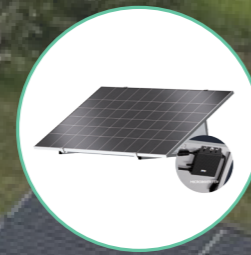
Components



ESK Pop-Up
Silver Swan / Black Swan



ESK Transformer
Silver Swan / Black Swan



Project case

01

PV Home Appliances

Traditional PV system requires wide roofs or floors to install PV modules, and uses inverter to transfer DC current into AC current.

All of the design and construction needs professional staff. Therefore, the process of installing a PV system for end users is quite complex.

Thus, why not turn PV system into household appliances like refrigerators and washing machines? Based on the concept of "home appliances", TSUN has launched the mini PV power generation system--Easy Solar Kit.

It only needs users to simply plug it into a socket to get electricity when user has ESK at home.

02

Flexible Installation

Based on the design concept of "household appliances", the capacity of Easy Solar Kit is small but flexible, based on single PV module, so as to the installation area of Easy Solar Kit is fully flexible.

TSUN Easy Solar Kit possesses a variety of patented structural design, which can be placed in the garden or on flat roof, in the balcony or be hung on the garden railing, or even be fixed on the house wall.

There is no limitation for the installation location as long as no major shadow problems, and the capacity of the system is fully flexible, offers all options to home owners to use their home space freely.

03

Adjustable Angle

TSUN Easy Solar Kit is much flexible, which supports to manually adjust the PV module angle to get more energy.

According to different regions and countries, users can set a recommended angle or manually adjust the angle according to time changes in winter and summer.

04

Support Flexible Monitor

What's more, TSUN Easy Solar Kit supports to use local socket meter to read the current generation power, cumulative generation, grid and voltage frequency parameters, making it easy to monitor the generation status of Easy Solar Kit.

TSUNESS

02 PRODUCT

MICROINVERTER

M350/M400 M1600
M800/M800(DE) TITAN

EASY SOLAR KIT

Easy Solar Kit Pop-Up
Easy Solar Kit Transformer

ENERGY STORAGE

All-in-one AC Coupled Unit
All-in-one Hybrid Storage Unit

RAPID SHUTDOWN

Module-level Rapid Shutdown
Module-level Rapid Shutdown Controller

TITAN Microinverter

Technical Data



TSOL-MP2250



TSOL-MP3000



TSOL-MS3000

Input (DC)

Quantity of Input	4 inputs, 4 Panels	6 inputs, 6 Panels	4 inputs, 8 Panels
Recommended Module Power [W]	480~700+	480~700+	380~600+
Start up Voltage per Input@Rated condition [V]	22	22	36
MPPT Voltage Range per Input [V]	18~60	18~60	32~120
Max. Input Voltage per Input [V]	60	60	120
Max. Short-circuit Current per Input [A]	20	20	16
Max. Input Current per Input [A]	18.5	18.5	15
Quantity of MPPT	4	6	4

Output (AC)

Max. Output Power [VA]	2250	3000	3000
Nominal Continuous Output Power [W]	2500	3000	3000
Nominal Output Current [A]	10.1	13.6	13.6
Max. Output Current [A]	11	14	14
Nominal Output Voltage/Range [V]	220/230/240, L/N/PE		
Nominal Frequency [Hz]	50/60		
Power Factor	>0.99 default, 0.8 leading ... 0.8 lagging		
Output Current Harmonic Distortion	<3%		

Efficiency

Peak Inverter Efficiency	97.0%	97.1%	97.2%
CEC Weighted Efficiency	96.5%	96.6%	96.7%
Nominal MPPT Efficiency	99.9%	99.9%	99.9%

Mechanical Data

Dimensions [WxHxD mm]	354 * 294 * 60		
Weight [kg]	6.4	7.2	6.8

Ordering NO.	Model	Description
06.02.01.001	TSOL-MP3000	Microinverter, output 3000W Max input current 18.5A
06.02.01.002	TSOL-MP2250	Microinverter, output 2250W Max input current 18.5A
06.02.01.003	TSOL-MS3000	Microinverter, output 3000W Max input current 15A



TITAN Microinverter Size & Packing Information

	Qty. (pcs)	Size	Weight	Qty. (pcs)	Qty. (plt)
Per Carton	1	650*520*305 (mm)	8.2 KG(MP3000)		
Per Pallet	44	1.1*0.9*1.1 (m)	373 KG(MP3000)		
Per 20 GP				1056	24
Per 40 GP				2288	52
Per 40 HQ				2704	52

GEN 2 Microinverter TSOL-M350/TSOL-M400

Technical Data



TSOL-M350



TSOL-M400

Input (DC)

	TSOL-M350	TSOL-M400
Recommended Input Power [W]	240-380	240-440
Start up Voltage [V]	22	22
MPPT Voltage Range [V]	16~60	16~60
Max. Input Voltage [V]	60	60
Max. Input Current [A]	11.5	11.5
Max. Input Short Circuit Current[A]	15	15

Output (AC)

	TSOL-M350	TSOL-M400
Max. Output Power [W]	300	350
Nominal Output Current [A]	1.3	1.52
Max. Output Current [A]	1.45	1.59
Nominal Output Voltage / Range [V]	230, L/N/PE , 207-253V	
Nominal Frequency / Range [Hz]	50, 45-55Hz	
Power Factor	0.8 leading ... 0.8 lagging	
Output Current Harmonic Distortion	<3%	
Max. Units Per Branch	18	16

Efficiency

Peak Inverter Efficiency	96.7%
CEC Weighted Efficiency	96.5%
Nominal MPPT Efficiency	99.9%
EU Efficiency	96.3%
Night Time Power Consumption [mW]	< 50

Mechanical Data

Dimensions [WxHxD mm]	178 * 153 * 28
Weight [kg]	1.98

Ordering NO.	Model	Description
04.02.01.001	TSOL-M350	Microinverter, output 300W
04.02.01.002	TSOL-M400	Microinverter, output 350W
04.02.02.001	TSOL-MT-F	AC connector, female
04.02.01.002	TSOL-MP-F	Protect cap, female
04.02.01.003	TSOL-MT-T	AC connector, male
04.02.02.004	TSOL-MP-T	Protect cap, male
04.02.02.005	TSOL-MC200-G2	Interconnection cable, 2m

GEN 2 Microinverter TSOL-M800/TSOL-M800(DE)

Technical Data



TSOL-M800



TSOL-M800(DE)

Input (DC)

	TSOL-M800	TSOL-M800(DE)
Recommended Input Power [W]	2*280-440	
Start up Voltage [V]	22	
MPPT Voltage Range [V]	16~60	
Max. Input Voltage [V]	60	
Max. Input Current [A]	11.5	
Max. Input Short Circuit Current[A]	15	

Output (AC)

	TSOL-M800	TSOL-M800(DE)
Max. Output Power [W]	700	600
Nominal Output Current [A]	3.04	2.61
Max. Output Current [A]	3.19	3
Nominal Output Voltage / Range [V]	230, L/N/PE , 207-253V	
Nominal Frequency / Range [Hz]	50, 45-55Hz	
Power Factor	0.8 leading ... 0.8 lagging	
Output Current Harmonic Distortion	<3%	
Max. Units Per Branch	7	

Efficiency

Peak Inverter Efficiency	96.7%
CEC Weighted Efficiency	96.5%
Nominal MPPT Efficiency	99.9%
EU Efficiency	96.3%
Night Time Power Consumption [mW]	< 50

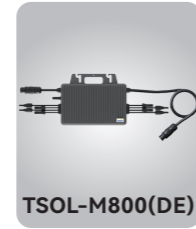
Mechanical Data

Dimensions [WxHxD mm]	250 * 170 * 28
Weight [kg]	3

Ordering NO.	Model	Description
04.02.01.003	TSOL-M800	Microinverter, output 700W
04.02.01.006	TSOL-M800(DE)	Microinverter, output 600W
04.02.02.001	TSOL-MT-F	AC connector, female
04.02.01.002	TSOL-MP-F	Protect cap, female
04.02.01.003	TSOL-MT-T	AC connector, male
04.02.02.004	TSOL-MP-T	Protect cap, male
04.02.02.005	TSOL-MC200-G2	Interconnection cable, 2m

GEN 2 Microinverter TSOL-M1600

Technical Data



Input (DC)

Recommended Input Power [W]	4*300-470
Start up Voltage [V]	22
MPPT Voltage Range [V]	16~60
Max. Input Voltage [V]	60
Max. Input Current [A]	11.5
Max. Input Short Circuit Current[A]	15

Output (AC)

Max. Output Power [W]	1500
Nominal Output Current [A]	6.52
Max. Output Current [A]	6.82
Nominal Output Voltage / Range [V]	230, L/N/PE , 207-253V
Nominal Frequency / Range [Hz]	50, 45-55Hz
Power Factor	0.8 leading ... 0.8 lagging
Output Current Harmonic Distortion	<3%
Max. Units Per Branch	3

Efficiency

Peak Inverter Efficiency	96.7%
CEC Weighted Efficiency	96.5%
Nominal MPPT Efficiency	99.9%
EU Efficiency	96.3%
Night Time Power Consumption [mW]	< 50

Mechanical Data

Dimensions [WxHxD mm]	280 * 176 * 33
Weight [kg]	3.75

Ordering NO.	Model	Description
04.02.01.005	TSOL-M800	Microinverter, output 1500W
04.02.02.001	TSOL-MT-F	AC connector, female
04.02.01.002	TSOL-MP-F	Protect cap, female
04.02.01.003	TSOL-MT-T	AC connector, male
04.02.02.004	TSOL-MP-T	Protect cap, male
04.02.02.005	TSOL-MC200-G2	Interconnection cable, 2m



GEN 2 Microinverter Size & Packing Information

	Qty. (pcs)	Size	Weight	Qty. (pcs)	Qty. (plt)
Per Carton					
	M350/M400	5	435*240*305 (mm)	12 KG	
	M800/M800(DE)	5	495*315*265 (mm)	17 KG	
	M1600	5	545*350*250 (mm)	21 KG	
Per Pallet					
	M350/M400	300	120*100*198 (cm)	738 KG	
	M800/M800(DE)	210	120*100*174 (cm)	753 KG	
	M1600	180	110*110*165 (cm)	792 KG	
Per 20 GP					
	M350/M400			3000	10
	M800/M800(DE)			2100	10
	M1600			1800	10

Easy Solar Kit Pop-Up

Technical Data



DC Power Data

Module Power (P _{nom})	400-460
Module Efficiency	20.5%
Power Tolerance	0/+5W
Temp. Coef. (Power)	-0.35%/°C
Quantity of modules	1

AC Electrical Data

Max. Continuous Output Power [W]	350
Max. Output Current [A]	1.59
Nominal Output Voltage [V]*	220/230/240
Nominal Frequency [Hz]*	50/60
Power Factor	>0.99
Output Current Harmonic Distortion	<3%

Certification

Solar Module	CE,TUV,INMETRO,SEC
Microinverter	CE-LVD,CE-EMC,VDE 4105,VDE 0126,EN 50549

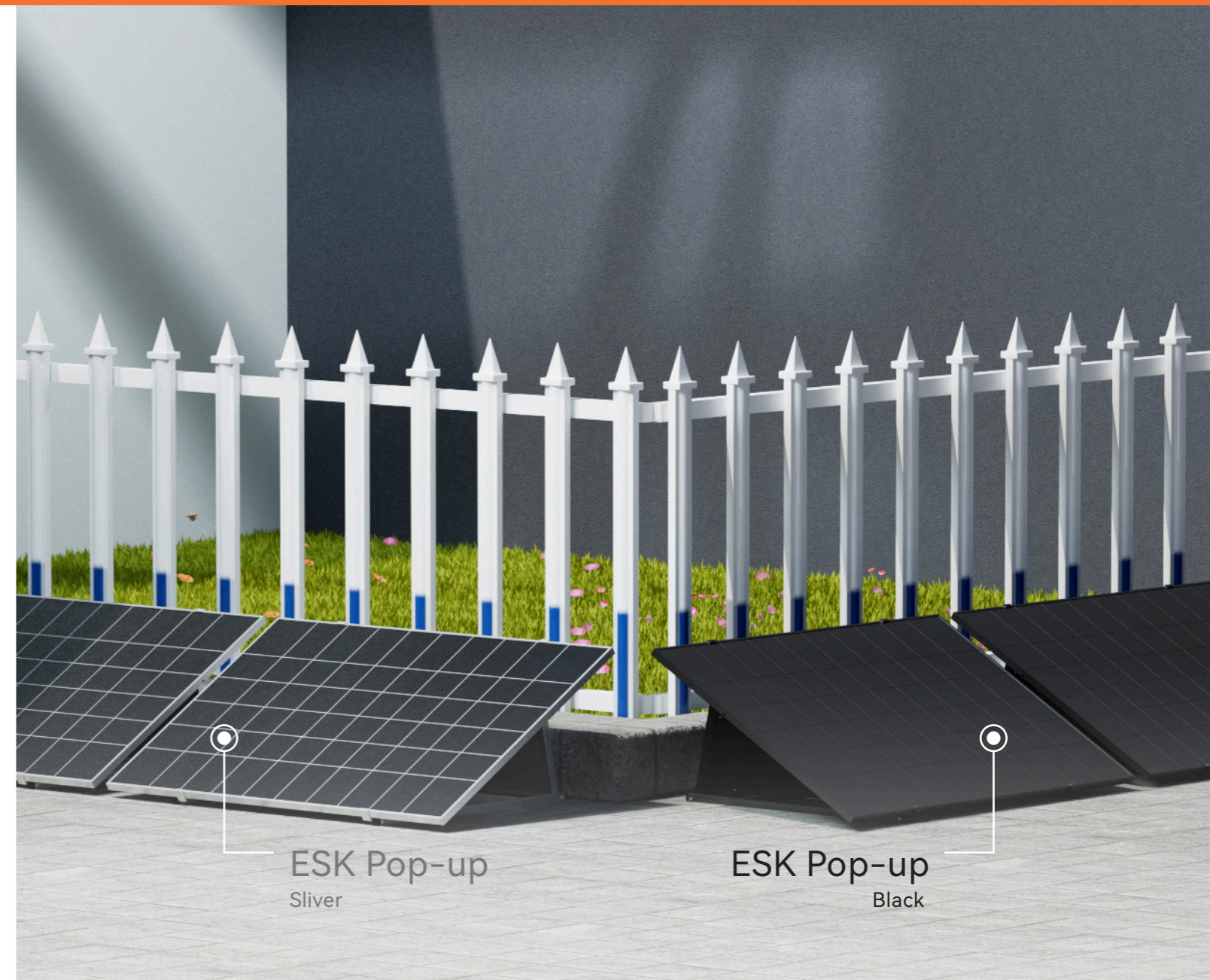
Environmental Data

Environmental Protection Rating	IP67
Operating Ambient Temperature Range	-40 °C to 60 °C
Relative Humidity	0-100%
Max. Operating Altitude Without Derating [m]	2000

Mechanical Data

Weight [kg]	29.5
Dimensions [W×H×D mm]	1724*1164*90
Packing Configuration	12 pcs kit / pallet, 26 pallet/40HQ
Warranty	12 years

* The AC voltage and frequency range may vary depending on specific country grid.



Applicable scenarios



Garden



Flat Rooftop



Platform

Ordering NO.

Model

Description

04.01.01.007	TSOL-ESK400-PS	PV module, Microinverter, 2m End cable
04.01.01.008	TSOL-ESK400-PB	Black PV module, Microinverter, 2m End cable
04.01.02.002	Socket Meter-W	Socket Power Meter with WiFi (Optional)
04.02.02.005	TSOL-MC200-G2	Interconnection AC cable, 2m (Optional)
04.01.02.010	TSOL-MEC1000-G2	End cable, 10m, optional (Optional)

Easy Solar Kit Transformer

Technical Data



Microinverter Parameter

Recommended Module Power (STC Pmax)	280-440
Max. DC Voltage per Input [V]	60
Max. DC Current per Input [A]	11.5
Max. DC Short Circuit Current per Input [A]	15
Input Connector Type	MC4
Max. Continuous Output Power [W]	350
Max. Output Current [A]	1.59
Nominal Output Voltage [V]*	220/230/240
Nominal Frequency [Hz]*	50/60
Power Factor	>0.99
Output Current Harmonic Distortion	<3%

Bracket Parameter

Length of Solar Module [mm]	>900
Width of Solar Module [mm]	> 500 ; < 1114
Thickness of Solar Module [mm]	35 (30 / 25 optional)
Optional Accessories	Clevises * 2 ; Wire Ropes * 4

AC End Cable Parameter

Length of Cable [m]	2.1
Wire Gauge	3 * 1.5 mm ²
Plug Type	Depending on specific country

General Parameter

Dimensions [W×H×D mm]	885×360×108
Weight [kg]	12
Environmental Protection Rating	IP67
Operating Ambient Temperature Range	-40 °C to 60 °C
Relative Humidity	0-100%
Max. Operating Altitude Without Derating [m]	2000

* The AC voltage and frequency range may vary depending on specific country grid.



Applicable scenarios



Balcony



Wall



Railing

Ordering NO.	Model	Description
04.01.01.009	TSOL-ESK400-TS	Metal bracket, M400 microinverter, 2m end cable , PV module
04.01.01.010	TSOL-ESK400-TB	Black Metal bracket, M400 microinverter, 2m end cable , PV module
04.01.02.002	Socket Meter-W	Socket Power Meter with WiFi (Optional)

All-in-one AC Coupled Unit

Technical Data



Battery Data

Battery Type	LiFePO4					
Battery Capacity per Kit [kWh]	5.12					
Battery Voltage per Kit [V]	51.2					
Max. Battery Quantities per System	4 (Up to 20.48 kWh)					
Max. Charging Power [W]	3000	3600	4000	4600	5000	6000
Max. Charging/ Discharging Current [A]	60/60	72/72	80/80	92/92	100/100	120/120

AC Input & Output [On-grid]

Rated Output Power[W]	3000	3600	4000	4600	5000	6000
Max. Output Power [VA]	3300	3680	4400	4600	5500	6000
Rated Output Current [A]	13	16	17.4	20	21.7	26.1
Max. Output Current [A]	15	16.7	20	23	25	27.3
Rated Output Voltage [V]	220/230/240, L/N/PE					
Rated Grid Frequency [Hz]	50/60					
Power Factor [cos φ]	0.8 leading~0.8 lagging					
Total Harmonic Distortion [THDI]	<3%					

AC Output [Back-up Mode]

Rated Output Power [W]	3000	3600	4000	4600	5000	6000
Max. Output Current [A]	15	16.7	20	23	25	27.3
Rated Output Voltage [V]	220 / 230 / 240, L/ N/ PE					
Rated Output Frequency [Hz]	50/60					
Total Harmonic Distortion of Voltage	<3%					
Switch Time [ms]	<20					
Peak Output Apparent Power [VA]	3600VA, 60sec	4200VA, 60sec	4800VA, 60sec	5500VA, 60sec	6000VA, 60sec	7200VA, 60sec

Efficiency

Max. Battery Charging/ Discharging Efficiency	95% / 95%
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Protection

Battery Input Reverse Polarity Protection	Integrated
AC Short Circuit Protection	Integrated
Overload Protection	Integrated
Surge Protection	Integrated
Residual Current Protection	Integrated
AC Overvoltage/Undervoltage Protection	Integrated
AC Overfrequency/Underfrequency Protection	Integrated
Over Temperature Protection	Integrated
Anti-islanding protection	Integrated

General Data

Topology	Transformerless
Ingress Protection	IP65
Operating Temperature Range	-30~+60°C
Ambient Humidity	0~100%
Altitude	4000m(>3000m power derating)
Noise[dBA]	<25
Cooling method	Natural Convection
Dimensions [W×H×D mm]	408x652x195 (Inverter)/388x652x195 (Battery)
Weight [kg]	20 (Inverter)/50 (Battery)
Communication	Wi-Fi / 4G (Optional)

Ordering NO.	Model	Description
04.03.01.001	TSOL-ACU-3.0K	Output 3.0kW (without battery)
04.03.01.002	TSOL-ACU-3.6K	Output 3.6kW (without battery)
04.03.01.003	TSOL-ACU-4.0K	Output 4.0kW (without battery)
04.03.01.004	TSOL-ACU-4.6K	Output 4.6kW (without battery)
04.03.01.005	TSOL-ACU-5.0K	Output 5.0kW (without battery)
04.03.01.006	TSOL-ACU-6.0K	Output 6.0kW (without battery)
04.03.02.001	Talent-ACU	Monitoring for ACU
04.10.01.001	TSOL-B100E-S	Storage battery,5.12kWh

All-in-one Hybrid Storage Unit

Technical Data

PV Input

	HSU3.0K	HSU3.6K	HSU4.0K	HSU4.6K	HSU5.0K	HSU6.0K
Max.PV Array Power[Wp]@STC	4500	5400	6000	6900	7500	9000
Max. DC Input Voltage [V]	550					
MPPT Voltage Range [V]	90 ~ 500					
Rated DC Voltage [V]	360					
Start Voltage [V]	100					
Max. DC Input Current [A]	14/14					
Max. DC Short Circuit Current [A]	16/16					
Quantity of MPPT	2					

Battery Data

Battery Type	LiFePO4					
Battery Capacity per Kit [kWh]	5.12					
Battery Voltage per Kit [V]	51.2					
Max. Battery Quantities per System	4 (Up to 20.48 kWh)					
Max. Charging Power [W]	3000	3600	4000	4600	5000	6000
Max. Charging/ Discharging Current [A]	60/60	72/72	80/80	92/92	100/100	120/120

AC Input & Output [On-grid]

Rated Output Power[W]	3000	3600	4000	4600	5000	6000
Max. Output Power [VA]	3300	3680	4400	4600	5500	6000
Rated Output Current [A]	13	16	17.4	20	21.7	26.1
Max. Output Current [A]	15	16.7	20	23	25	27.3
Rated Output Voltage [V]	220/230/240, L/N/PE					
Rated Grid Frequency [Hz]	50/60					
Power Factor [cos φ]	0.8 leading~0.8 lagging					
Total Harmonic Distortion [THDI]	<3%					

AC Output [Back-up Mode]

Rated Output Power [W]	3000	3600	4000	4600	5000	6000
Max. Output Current [A]	15	16.7	20	23	25	27.3
Rated Output Voltage [V]	220 / 230 / 240, L/ N/ PE					
Rated Output Frequency [Hz]	50/60					
Total Harmonic Distortion of Voltage	<3%					
Switch Time [ms]	<20					
Peak Output Apparent Power [VA]	3600VA, 60sec	4200VA, 60sec	4800VA, 60sec	5500VA, 60sec	6000VA, 60sec	7200VA, 60sec

Efficiency

Max. Battery Charging/ Discharging Efficiency	95% / 95%
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Protection

Battery Input Reverse Polarity Protection	Integrated
AC Short Circuit Protection	Integrated
Overload Protection	Integrated
Surge Protection	Integrated
Residual Current Protection	Integrated
AC Overvoltage/Undervoltage Protection	Integrated
AC Overfrequency/Underfrequency Protection	Integrated
Over Temperature Protection	Integrated
Anti-islanding protection	Integrated

General Data

Topology	Transformerless
Ingress Protection	IP65
Operating Temperature Range	-30~+60°C
Ambient Humidity	0~100%
Altitude	4000m(>3000m power derating)
Noise[dBA]	<25
Cooling method	Natural Convection
Dimensions [W×H×D mm]	408x652x195 (Inverter)/388x652x195 (Battery)
Weight [kg]	20 (Inverter)/50 (Battery)
Communication	Wi-Fi / 4G (Optional)

Ordering NO.	Model	Description
04.09.01.001	TSOL-HSU-3.0K	Output 3.0kW,5.12kWh
04.09.01.002	TSOL-HSU-3.6K	Output 3.6kW,5.12kWh
04.09.01.003	TSOL-HSU-4.0K	Output 4.0kW,5.12kWh
04.09.01.004	TSOL-HSU-4.6K	Output 4.6kW,5.12kWh
04.09.01.005	TSOL-HSU-5.0K	Output 5.0kW,5.12kWh
04.09.01.006	TSOL-HSU-6.0K	Output 6.0kW,5.12kWh
04.09.02.001	Talent-HSU	Monitoring for HSU
04.10.01.001	TSOL-B100E-S	Storage battery,5.12kWh

Module-Level Rapid Shutdown

Technical Data



Rapid Shutdown Device

	80(UL) / 120(EU)	80*2(UL) / 120*2(EU)
Max. DC Voltage [V]	80(UL) / 120(EU)	80*2(UL) / 120*2(EU)
Max. DC Current [A]	20	20*2
Max. System Voltage [V]	1500	1500
Operating Temperature Range [°C]	-40 to +80	-40 to +80
Cable Size [mm²] / Length [mm]	4 / 300 (Panel), 1200 (String)	4 / 300 (Panel), 1200 (String)
Ingress Protection	IP68	IP68
Communication	PLC	PLC
Mounting	Clip	Clip
Connector	MC4 Compatible	MC4 Compatible
Dimensions [W×H×D mm]	130*30*16	137*42*16
Weight [kg]	0.25	0.45



Rapid Shutdown Controller

Operating AC Voltage Range [V]	100 -240
Norminal Frequency [Hz]	50/60
Consumption [W]	<1
Quantity of DC Input	4 Strings
Max. DC Current per Input [A]	20
Max. DC Voltage per Input [V]	1500
Operating Temperature Range [°C]	-30 to +55
Ingress Protection	IP65
Communication	PLC
Mounting	Wall Mounted
Connector	MC4 Compatible (DC) , Plug in Connector (AC)
Dimensions [W×H×D mm]	216*165*57
Weight [kg]	1.8

Module-Level Rapid Shutdown Size & Packing



	Qty. (pcs)	Size	Weight	Qty. (pcs)	Qty. (plt)
Per Carton					
TSOL-RSDM-DS	80	545*545*420 (mm)	12 KG		
TSOL-RSDM-DD	80	545*545*420 (mm)	16.8 KG		
TSOL-RSDM-CQ	8	620*445*222 (mm)	16.8 KG		
Per Pallet					
TSOL-RSDM-DS	640	110*110*98 (cm)	111 KG		
TSOL-RSDM-DD	640	110*110*98 (cm)	149.4 KG		
TSOL-RSDM-CQ	128	110*110*102 (cm)	485.4 KG		
Per 20 GP					
TSOL-RSDM-DS				12800	20
TSOL-RSDM-DD				12800	20
TSOL-RSDM-CQ				2560	20

Ordering NO.	Model	Description
04.05.01.001	TSOL-RSDM-DS-A(EU/UL)	1 input, 1500V, 20A
04.05.01.005	TSOL-RSDM-DD-A(EU/UL)	2 inputs, 1500V, 20A
04.05.02.001	TSOL-RSDM-CQ-A(EU/UL)	4 strings, 20A