ELMARK®

The Brand of Electricity

SOLAR POWER SYSTEMS

CATALOGUE | 2024

USE OF SOLAR ENERGY

Choice with perspective

The sun is the largest renewable energy resource that has the potential to nourish life on earth and provide clean and sustainable energy. The fact is that more energy from the sun reaches our planet in an hour than is used by the entire population of the world in a year. This energy is the most reliable and alternative source of exhaustible land resources, with the difference that it is completely free.

The constant improvement of technology and the reduction in the prices of products using solar energy worldwide make the idea of self-producing energy and its use for home more and more attractive and, in recent years, more profitable. The reasons for a person to think and take such a step are becoming more numerous and convincing.

Add value to your home

Building a solar energy system will inevitably add value to your home. In case one day you decide to sell, this would be a solid argument for any buyer to choose your property over one without a solar system.

REDUCE DRASTICALLY YOUR ELECTRICITY BILLS

Whether you own a small home or a business, the electricity bill is a significant monthly expense. The use of sunlight to produce energy can partially reduce this cost or even turn it off completely. Considering the long life of modern solar equipment, which is an average of 25 years, the prospect of building a solar system to power our milliseconds has taken us into account in the electricity bills and in its long-term purity. Given volatile and constantly rising electricity prices, this gives you the certainty and predictability of spending for years to come.

USE 100% CLEAN ENERGY

Solar energy is a 100% clean and renewable energy source. It reduces the need for and dependence on exhaustible sources such as oil, natural gas and solid fuels for the production of electricity. The use of fossil fuels emits harmful emissions that affect air, water and soil quality and are responsible for global warming. On the other hand, the sun is an unlimited source of energy, the use of which in no way affects the environment. Residential solar energy systems represent an investment in the future of the planet, preserving non-renewable energy sources and protecting the environment.

TYPES OF SOLAR SYSTEMS

WHICH SYSTEM MEETS MY NEEDS

Solar systems can be divided into three main groups:

AUTONOMOUS PHOTOVOLTAGE SYSTEM (OFF-GRID)

for locations without a built-in power supply

GRID CONNECTED SOLAR SYSTEM (ON-GRID)

for locations with a built-in power supply

HYBRID SOLAR SYSTEM

for places with and without power supply with the possibility of storing electricity

AUTONOMOUS SOLAR SYSTEM

(OFF-GRID) from 300 to 2 000W

These systems are an ideal solution for independent power supply with power from 300W to 2000W for places where it is inaccessible or unreliable. They can be used to power various consumers in the home, cottage, camper or caravan, without the need for an existing electrical grid.

Typically, these systems are made up of four main elements:

» Solar panels

» Deep discharge battery

» Inverter

The principle of operation of the autonomous solar system is as follows: During daylight hours, solar panels produce electricity stored in the battery(s) connected to the system. In order for this energy to be used in bits, the inverter converts the constant voltage from the battery into variable before submitting it to consumers. This results in a completely self-contained appliance power system without the need for power grid.

There are some differences between the **autonomous solar systems offered by ELMARK**. For example, sets up to 2kW are extremely mobile and convenient to transport and connect even for people without technical knowledge. The inverter and battery are built into the unit housing, and separately only the solar panel we offer in a convenient transport bag. The appliance can be charged in 3 different ways: from the electricity grid, from the lighter of the car and from the solar energy, making it a multi-functional energy station.

All capacities above 2000W are available as sets of inverter, the required number of solar panels and battery.

GRID-TIED SOLAR SYSTEM
(ON-GRID) from 3000W to 110 000W

This is the most common type of solar power generation system offered by ELMARK with capacity from 3kW to 110kW.

For the operation of the system it is necessary to have a power supply on site.

Typically, these systems are made up of three main elements:

» Solar panels

» ON-GRID inverter

» Mounting structure

The principle of the work of the network photovoltage system is as follows: When grid voltage is available, during daylight hours, the solar panels produce electricity that is converted by the grid inverter and fed into the grid. This system does not use a battery to store the electricity produced.

These systems are preferred for the construction of solar p**lants for the purpose of selling electricity or building a network system to directly power consumers** during the day, in places where there is electricity and the main consumption is daily. Their principle of operation makes them extremely suitable for partial reduction or complete disconnection of power substations. Given the size of the solar system built and the total electricity consumption during daylight hours, the following two scenarios are possible:

1

The system to produce less energy than used

When a photovoltage system is installed with a certain capacity and consumption exceeding the capacity of the system, the difference is taken from the grid. This leads to a reduction in the monthly bill, depending on the difference between energy produced and consumed. *For example, if we have a photovoltage system built with a power of 5 kW and an average consumption of 8 kW, then the bill will be reduced by about 50%. And so: the consumption of 8 kW is distributed from around 5 kW of instantaneous production from the grid system and 3 kW from the power grid.*

2

The system to produce more energy than consumed

In a photovoltage system with a certain power and average consumption lower than the produced one. In this case, if the consumer has a power purchase agreement with the local electricity distribution company, they can feed the energy back into the grid at a set tariff. If there is no contract in place, the excess energy remains unused and must be prevented from being fed back into the grid because it will be billed as used. This is achieved through a Smart Meter offered by ELMARK, connected upstream of the meter installed by the distribution company.

The conclusion of a contract with the local electricity distribution company to buy excess electricity produced during the day is key to systems built in private homes, where family members are absent during daylight hours and the consumption of electricity during the day is significantly lower than the one produced. The energy produced and sold compensates financially for consumption in the dark part of the day, when energy is used entirely from the transmission network. In addition to home, signing a contract for the purchase of energy is also important for business, which will inevitably improve monthly electricity bills.

HYBRID SOLAR SYSTEM
from 3000W to 120 000W

This is a combined variant of the first two systems, gaining increasing popularity and harnessing the energy produced in the most rational way offered by ELMARK with capacity from 3kW to 120kW.

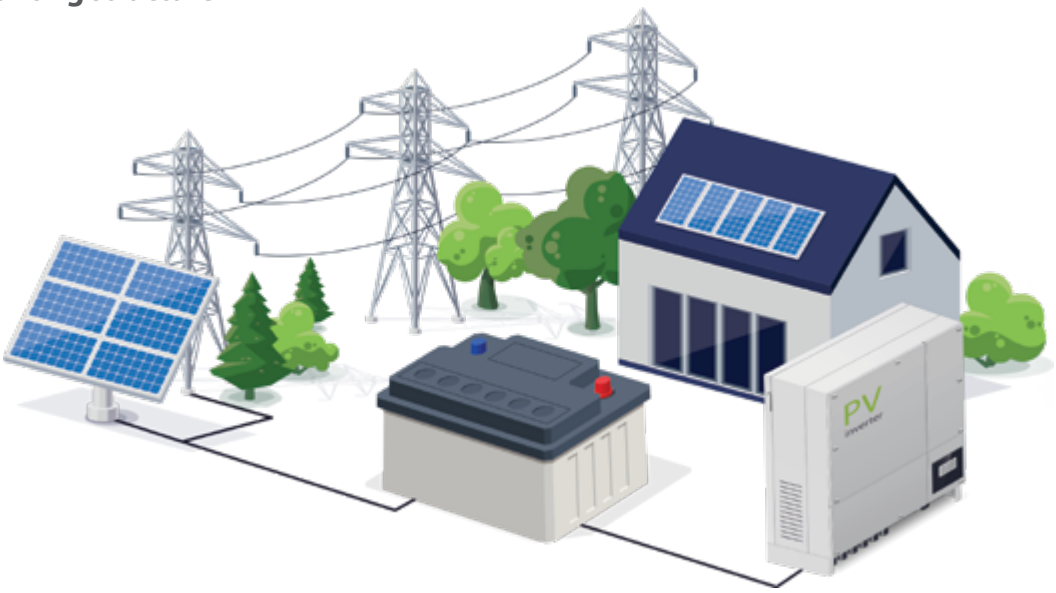
Typically, these systems are made up of four main elements:

» Solar panels

» Hybrid inverter

» Deep discharge battery

» Mounting structure



The principle of operation of the system is determined entirely by the inverter, which can work in one of your chosen three modes:

1

As an autonomous solar inverter

This automatically converts the system into an autonomous system. Depending on the inverter used, the energy produced can be stored in a rechargeable battery or used directly to power various consumers. The priority in this mode is the energy produced by the solar panels. The inverters are provided with an input and a power supply from the power transmission network and in the event of a deficiency of power from the photovoltaic panels and the battery, take the necessary amount of electricity from the grid

2

As a grid connected solar inverter

They pass the electricity produced directly to consumers and do not use a battery. They only work when electricity grid voltage is available.

3

Combined mode

They use the energy produced by the solar panels, the battery and the electricity grid. Here, the priority remains to use the energy produced by the modules, then by the accumulators and only then by the grid in case of the insufficiency of the first two.

This is themostrational option for using the energy produced, because first the consumers are energized, if there is an excess of energy the batteries are energized and once they are charged, the excess can be returned for sale to the energy company

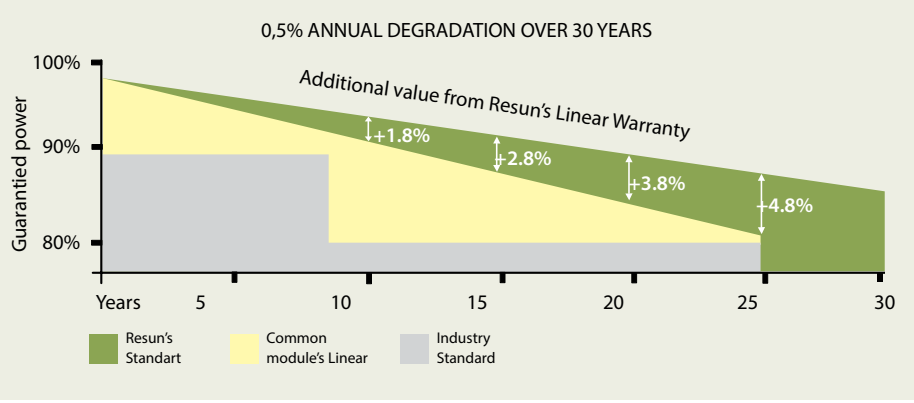
WHAT IS THE NORMAL SERVICE LIFE

up to 30 years operational

15 years warranty

up to 5 years return on investment

The life and normal operation of modern solar panels has been proven to be between 25-30 years. So you can be sure that they will continue to produce energy for a period of several decades. The decline in their production in 20 years will be less 20%, given that the decrease in the productivity of one panel in one year does not exceed 1%.



The other main component in the system is the inverter, **which converts the constant current voltage into variable voltage**. The SOLIS inverters offered by ELMARK are proven on the market for their reliability and we offer them with a warranty of 7 years with the possibility of its extension up to 15 years. This ensures the certainty and reliability of the initial investment made in the long term. Given that the system is paid **for a period of about 5 years** from its installation, for the remaining period the saved resource is at times more than the possible costs that would arise.

ELMARK
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N-TYPE TOPCON MONO-CRYSTALINE HALF CUT CELLS BIFACIAL SOLAR PANEL 430W, BLACK

FULL WARRANTY | 15 YEARS

PANEL LIFETIME | 30 YEARS

EFFICIENCY 22% ÷ 28%

N-Type TOPCon

Catalogue number:
98SOL430M

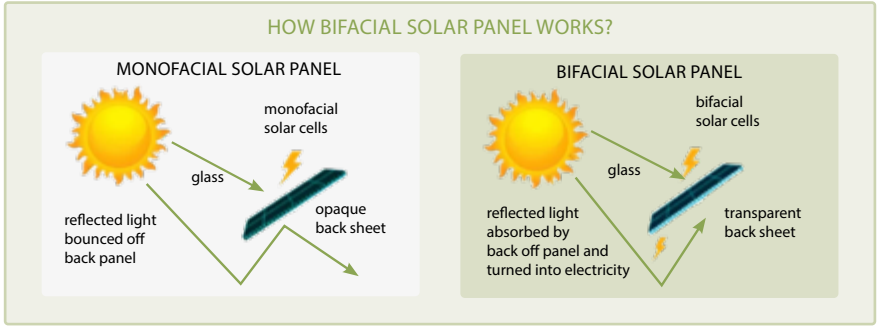
Half-cell high-efficiency solar panel is cutting cells one divides into two, it could reduce thermal resistance, improve output power 5-10W. It could meet 1500V whole system voltage design demand and reduce whole system cost 10%. In comparison to full solar cell modules, this one cells sub-fissure, power attenuation and sunshine occlusion is more lower and excellent high temperature character. It is the best choice for large ground power station projects.

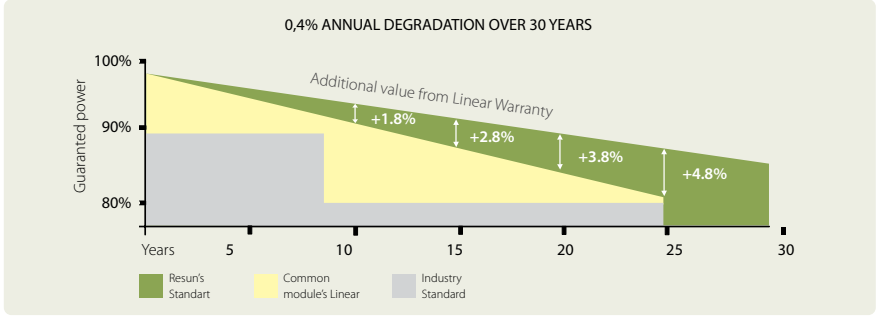
TOPCon (Tunnel Oxide Passivated Contact) solar cell technology has emerged as a promising innovation in the field of photovoltaics such as paving the way for a more efficient and sustainable energy future.
TOPCon cells employ a micro-nano tunnelling oxide layer, a carrier-selective microcrystalline silicon film, and cutting-edge passivation contact technology. This advanced structure provides a significant boost to cell conversion efficiency and power output. The unique tunnel oxide layer minimizes subsurface recombination, resulting in improved overall efficiency

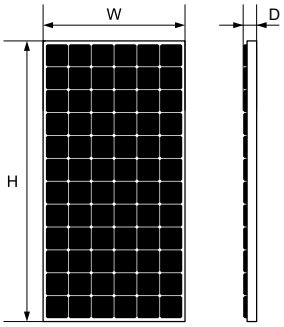
Bifacial solar panels perform best when installed near highly reflective surfaces. Such as swimming pools glass, sandy, stoney or snowy areas. Although the front of the panel still absorbs the majority of the sunlight, some bifacial models are capable of increasing energy production by up to 30%. The exact amount of extra energy will depend on the environment surrounding the solar panels themselves.

FEATURES

- Higher efficiency: TOPCon cells convert more sunlight that P-type cells, which results in a higher cell and module efficiency.
- Lower degradation: TOPCon modules have a lower power degradation power during the 1st year and during the 30 years of PV panels use, compared to PERC panels.
- High temperatures resistance: TOPCon cells have a better resistance to high temperatures, which means the efficiency of TOPCon modules will be higher in hot climates compared to PERC modules.
- Low light performance: TOPcon modules have a higher efficiency in low light condition, which extends the electricity generation period during the day and improve the performance of the installation over time.







TECHNICAL DATA

- Peak power (Pmax): 430W
- Maximum supply voltage (Vmp): 32.27V
- Maximum power current (Imp): 13.33A
- Open circuit voltage (Voc): 38.4V
- Short-circuit current (Isc): 14.09A
- Module efficiency: from 22% up to 28%
- Annual degradation: ≤ 0.5%
- First year degradation: ≤ 0.5%
- Maximum system voltage (V): 1500 VDC
- Rated operating temperature of the module: 45±2°C
- BB (busbars): 10
- Cell type: Mono-crystalline
- Distribution box on the panel: IP68
- Connector: Compatible with MC4
- Frame material: aluminum hollow-chamber frame on each side anodized aluminum alloy- black
- Number of cells: 108 cells (6x9+6x9)
- Application class: A
- Maximum load: 5400 Pascal
- Maximum snow load: 5400 Pascal
- Maximum wind load: 2400 Pascal
- Dimensions HxWxD: 1722x1134x35mm
- Weight (kg): 21.6

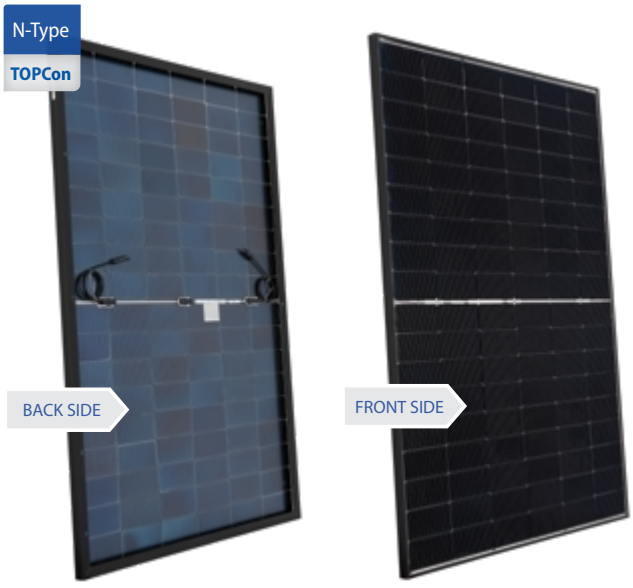
TEMPERATURE CHARACTERISTICS

- Nominal Module Operating Temperature (NMOT): 45°C±2°C
- Temp. Voc coefficient (TK Voc): -0,24% /°C
- Temp. Isc coefficient (TK Isc): 0,043% /°C
- Temp. Coefficient of Pmax (TK Pmax): -0,30%/°C
- Ambient temperature: -40°C+85°C

Note: the specifications are obtained under the standard test conditions (STCs): 1000 W/ m² solar radiation, 1,5 air mass and 25 ° C cell temperature.

CERTIFICATES

- CE
- DEKRA
- PID-FREE
- IEC61215/ 61730



This product meets all the technical requirements set by the European Union for the construction of solar systems.

ELMARK
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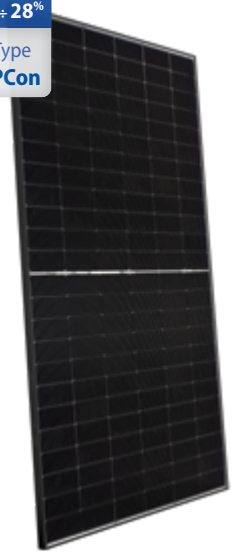
N-TYPE TOPCON MONO-CRYSTALINE HALF CUT CELLS BIFACIAL SOLAR PANEL 580W, BLACK

FULL WARRANTY | 15 YEARS

PANEL LIFETIME | 30 YEARS

EFFICIENCY 22% ÷ 28%

N-Type TOPCon



Catalogue number:
98SOL580M

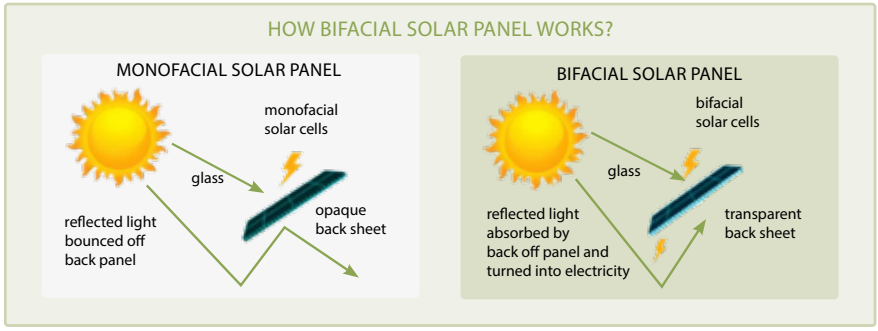
Half-cell high-efficiency solar panel is cutting cells one divides into two, it could reduce thermal resistance, improve output power 5-10W. It could meet 1500V whole system voltage design demand and reduce whole system cost 10%. In comparison to full solar cell modules, this one cells sub-fissure, power attenuation and sunshine occlusion is more lower and excellent high temperature character. It is the best choice for large ground power station projects.

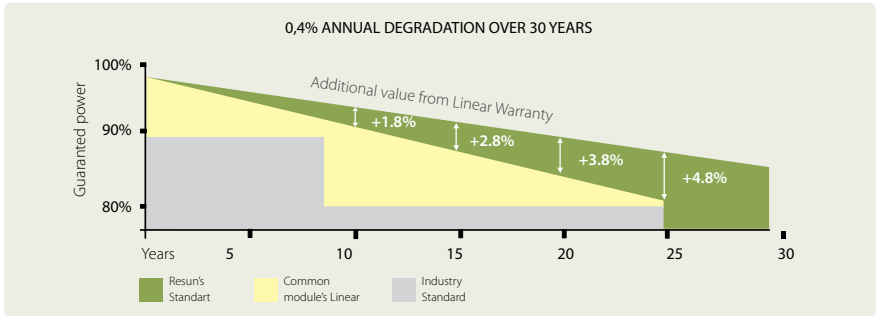
TOPCon (Tunnel Oxide Passivated Contact) solar cell technology has emerged as a promising innovation in the field of photovoltaics such as paving the way for a more efficient and sustainable energy future.
TOPCon cells employ a micro-nano tunnelling oxide layer, a carrier-selective microcrystalline silicon film, and cutting-edge passivation contact technology. This advanced structure provides a significant boost to cell conversion efficiency and power output. The unique tunnel oxide layer minimizes subsurface recombination, resulting in improved overall efficiency.

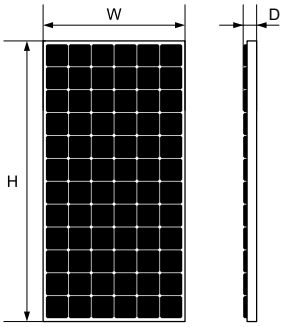
Bifacial solar panels perform best when installed near highly reflective surfaces. Such as swimming pools glass, sandy, stoney or snowy areas. Although the front of the panel still absorbs the majority of the sunlight, some bifacial models are capable of increasing energy production by up to 30%. The exact amount of extra energy will depend on the environment surrounding the solar panels themselves.

FEATURES

- Higher efficiency: TOPCon cells convert more sunlight that P-type cells, which results in a higher cell and module efficiency.
- Lower degradation: TOPCon modules have a lower power degradation power during the 1st year and during the 30 years of PV panels use, compared to PERC panels.
- High temperatures resistance: TOPCon cells have a better resistance to high temperatures, which means the efficiency of TOPCon modules will be higher in hot climates compared to PERC modules.
- Low light performance: TOPcon modules have a higher efficiency in low light condition, which extends the electricity generation period during the day and improve the performance of the installation over time.







TECHNICAL DATA

- Peak power (Pmax): 580W
- Maximum supply voltage (Vmp): 42.52V
- Maximum power current (Imp): 13.64A
- Open circuit voltage (Voc): 50.9V
- Short-circuit current (Isc): 14.25A
- Module efficiency: from 22% up to 28%
- Annual degradation: ≤ 0.5%
- First year degradation: ≤ 0.5%
- Maximum system voltage (V): 1500 VDC
- Rated operating temperature of the module: 45±2°C
- BB (busbars): 16
- Cell type: Mono-crystalline
- Distribution box on the panel: IP68
- Connector: Compatible with MC4
- Frame material: aluminum hollow-chamber frame on each side anodized aluminum alloy- black
- Number of cells: 144 cells (6x12+6x12)
- Application class: A
- Maximum load: 5400 Pascal
- Maximum snow load: 5400 Pascal
- Maximum wind load: 2400 Pascal
- Dimensions HxWxD: 2278x1134x35mm
- Weight (kg): 27

TEMPERATURE CHARACTERISTICS

- NomNominal Module Operating Temperature (NMOT): 45°C±2°C
- Temp. Voc coefficient (TK Voc): -0,24% /°C
- Temp. Isc coefficient (TK Isc): 0,043% /°C
- Temp. Coefficient of Pmax (TK Pmax): -0,30%/°C
- Ambient temperature: -40°C+85°C

Note: the specifications are obtained under the standard test conditions (STCs): 1000 W/ m² solar radiation, 1,5 air mass and 25 ° C cell temperature.

CERTIFICATES

- CE
- DEKRA
- PID-FREE
- IEC61215/ 61730

This product meets all the technical requirements set by the European Union for the construction of solar systems.

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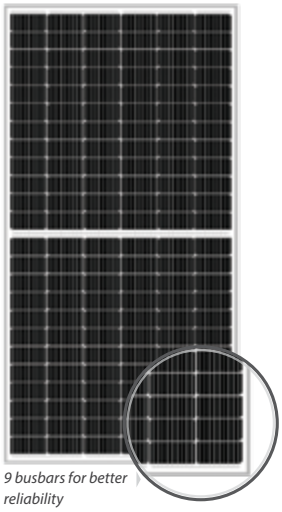
SOLAR PANEL 465W, RESUN

FULL WARRANTY | 15 YEARS

PANEL LIFETIME | 30 YEARS

EFFICIENCY 21.39%



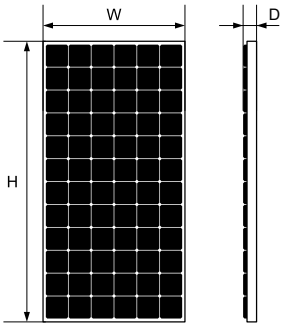
9 busbars for better reliability

Catalogue number:
98SOL465M

Half-cell high-efficiency solar panel is cutting cells one divides into two, it could reduce thermal resistance, improve output power 5-10W. It could meet 1500V whole system voltage design demand and reduce whole system cost 10%. In comparison to full solar cell modules, this one cells sub-fissure, power attenuation and sunshine occlusion is more lower and excellent high temperature character. It is the best choice for large ground power station projects.

TECHNICAL DATA

- Peak power (Pmax): 465W
- Maximum supply voltage (Vmp): 42,09V
- Maximum power current (Imp): 11,05A
- Open circuit voltage (Voc): 49,9V
- Short-circuit current (Isc): 11,82A
- Module efficiency (%): 21.39
- Annual degradation per year: ≤ 0,5%
- First year degradation: ≤ 0,5%
- Maximum system voltage (V): 1500 VDC
- Rated operating temperature of the module: 45±2°C
- Cell type: Mono-crystalline
- Distribution box on the panel: IP68
- Connector: Compatible with MC4
- Frame material: anodised aluminum alloy type
- Number of cells: 144 cells (6x12+6x12)
- Maximum load: 5400 Pascal
- Maximum snow load: 5400 Pascal
- Maximum wind load: 2400 Pascal
- Dimensions HxWxD: 2094x1038x35mm
- Weight (kg): 25



TEMPERATURE CHARACTERISTICS

- Nominal Module Operating Temperature (NMOT): 45°C±2°C
- Temp. Voc coefficient (TK Voc): -0,32% /°C
- Temp. Isc coefficient (TK Isc): 0,05% /°C
- Temp. Coefficient of Pmax (TK Pmax): -0,37% /°C
- Ambient temperature: -40°C+85°C

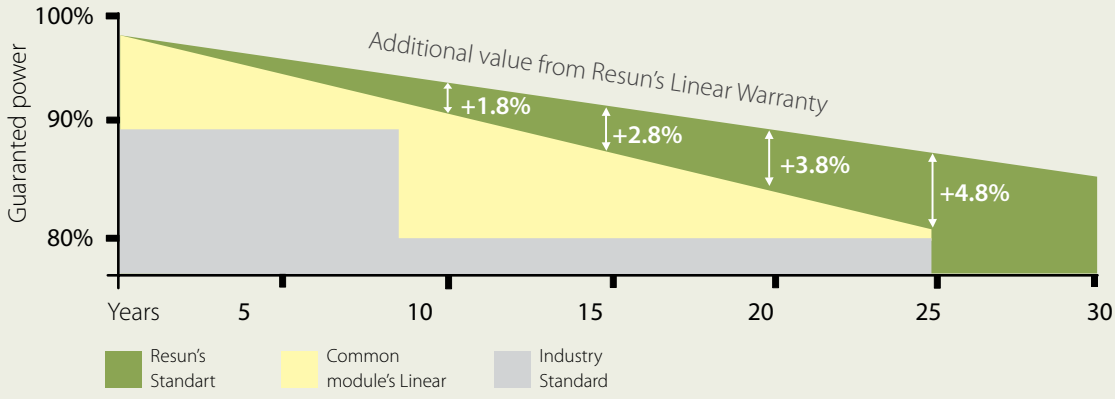
CERTIFICATES

- CE
- TUV
- PID-FREE
- IEC61215/ 61730/ 61701/ 62716

Note: the specifications are obtained under the standard test conditions (STCs): 1000 W/ m² solar radiation, 1,5 air mass and 25 ° C cell temperature.

This product meets all the technical requirements set by the European Union for the construction of solar systems.

0,5% ANNUAL DEGRADATION OVER 30 YEARS

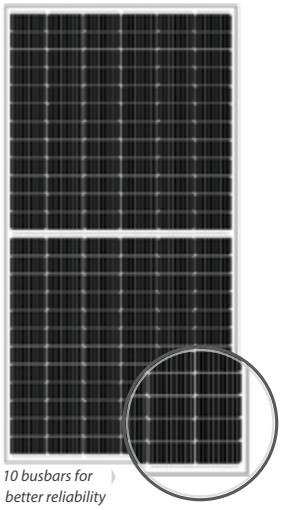


SOLAR PANEL 560W, RESUN

FULL WARRANTY | 15 YEARS

PANEL LIFETIME | 30 YEARS

EFFICIENCY 21.66%



10 busbars for better reliability

Catalogue number:
98SOL560M

Solar panel Resun 560W is a robust solar module with 144 solar cells. These modules can be used for on-grid solar application. Resuns meticulous design and production techniques ensure a high-yield, long-term performance for every solar plant. Resuns rigorous quality control and in-house testing facilities guarantee solar modules meet the highest quality standard possible.

TECHNICAL DATA

- Peak power (Pmax): 560W
- Maximum supply voltage (Vmp): 42,40V
- Maximum power current (Imp): 13,21A
- Open circuit voltage (Voc): 50.60V
- Short-circuit current (Isc): 13,99A
- Module efficiency (%): 21.66
- Annual degradation per year: ≤ 0,5%
- First year degradation: ≤ 0,5%
- Maximum system voltage (V): 1500 VDC
- Rated operating temperature of the module: 45±2°C
- Cell type: Mono-crystalline
- Distribution box on the panel: IP68
- Connector: Compatible with MC4
- Frame material: Aodised aluminum alloy type
- Number of cells: 144 cells (6x12+6x12)
- Frame material: Aodised aluminum alloy type
- Maximum load: 5400 Pascal
- Maximum snow load: 5400 Pascal
- Maximum wind load: 2400 Pascal
- Dimensions HxWxD: 2279x1134x35mm
- Weight (kg): 29

TEMPERATURE CHARACTERISTICS

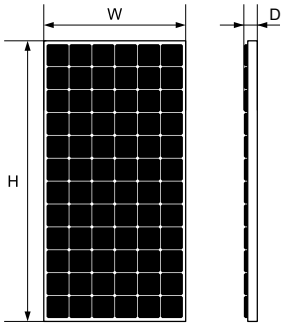
- Nominal Module Operating Temperature (NMOT): 45°C±2°C
- Temp. Voc coefficient (TK Voc): -0,32% /°C
- Temp. Isc coefficient (TK Isc): 0,05% /°C
- Temp. Coefficient of Pmax (TK Pmax): -0,37% /°C
- Ambient temperature: -40°C+85°C

CERTIFICATES

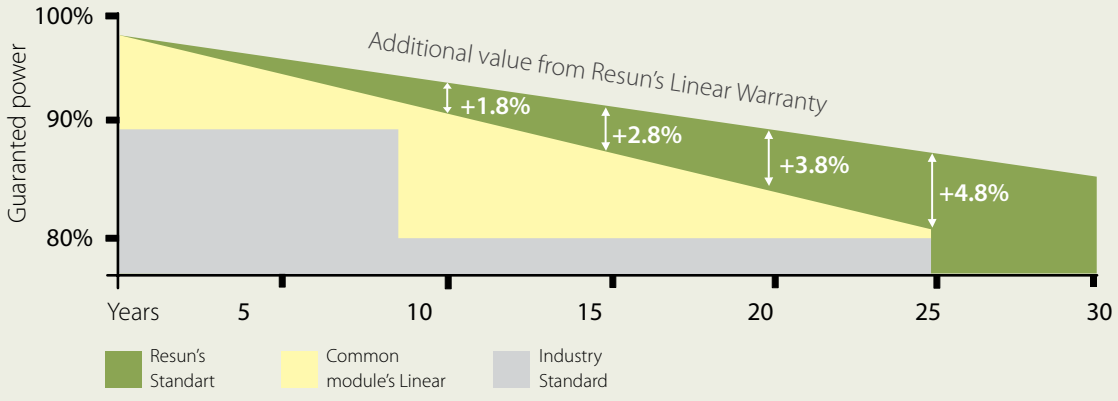
- CE
- TUV
- PID-FREE
- IEC61215/ 61730/ 61701/ 62716

Note: the specifications are obtained under the standard test conditions (STCs): 1000 W/ m² solar radiation, 1,5 air mass and 25 ° C cell temperature.

This product meets all the technical requirements set by the European Union for the construction of solar systems.



0,5% ANNUAL DEGRADATION OVER 30 YEARS



ELMARK
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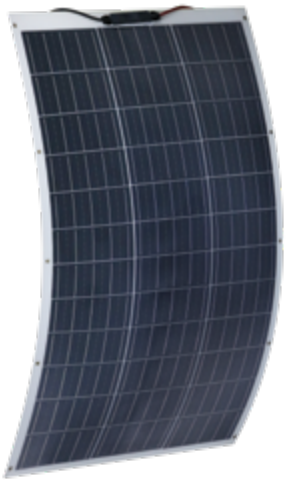
MONO-CRYSTALINE FLEXIBLE SOLAR PANEL 240W, BLACK

FULL WARRANTY | 10 YEARS

PANEL LIFETIME | 25 YEARS

EFFICIENCY | 19.87 %



Catalogue number:
98SOL240FM

The panel is ideal for flat or curved roofs, such as on boats, caravans, motorhomes, etc as it can easily fit to the shape of the roof. It is normally fitted to a roof using an adhesive, but it can also be secured with self-tapping screws or other fasteners.

TECHNICAL DATA

- Peak power (Pmax): 240W
- Maximum supply voltage (Vmp): 40.40V
- Maximum power current (Imp): 5.95A
- Open circuit voltage (Voc): 48.6V
- Short-circuit current (Isc): 6.3A
- Module efficiency (%): 19.87%
- Maximum system voltage (V): 600 VDC
- Rated operating temperature of the module: 45±3°C
- Cell type: Mono-crystalline
- Distribution box on the panel: IP68
- Connector: Compatible with MC4
- Number of cells: 72 cells (6x18)
- Dimensions HxWxD: 1568x770x2.6mm
- Weight (kg): 2.1

TEMPERATURE CHARACTERISTICS

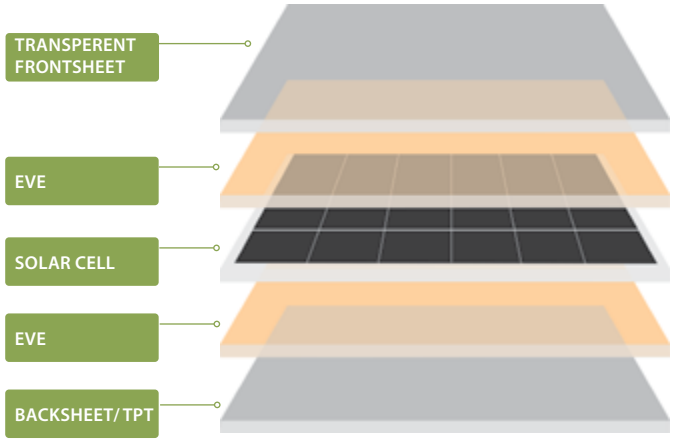
- Nominal Module Operating Temperature (NMOT): 45°C±3°C
- Temp. Voc coefficient (TK Voc): -0,29506% /°C
- Temp. Isc coefficient (TK Isc): 0,08558% /°C
- Temp. Coefficient of Pmax (TK Pmax): -0,38001% /°C
- Ambient temperature: -40°C+85°C

FEATURES

- Lightweight & Ultra-thin Design"
- Easy to Transport,Carry And Install
- Efficient and Reliable

Note: the specifications are obtained under the standard test conditions (STCs): 1000 W/ m² solar radiation, 1,5 air mass and 25 ° C cell temperature.

SOLAR PANEL STRUCTURE



MOUNTING STRUCTURES

An important point in the construction of a photovoltage system is the way of installation of the solar panels. Usually it is carried out on the roof of the building, but it is also possible to be executed on the ground.

We offer ready-made solutions for flat and pitched roofs made of tiles, sheet iron, sandwich panels, bitumen and concrete.

For each of the options we offer ready-made sets, with the elements necessary for the installation of the amount of solar panels in the set of each system. They are all offered separately in the case of an individual approach or up to the construction of an existing assembly structure.

Mounting structures for pitched tiled roof

Mounting structures for pitched bituminous roof

Mounting structure for pitched sheet iron roof

Triangular ballast mounting structures for flat roof or ground

10 YEARS WARRANTY

SOLAR POWER MOUNTING RAIL

Catalogue number:
423199

APPLICATION

Attached to the roof or the location designated for the installation of the PV modules, the role of the rails is to hold the rows of solar panels by means of brackets. The way of fixing the rails to the roof is determined depending on its type- tile, bitumen, sheet metal (tin), concrete, etc.

TECHNICAL DATA

Length: 2400 mm
Material: Aluminum 6005-T5

Universal element suitable for any type of roof or for a ground mounting structure.

CONNECTOR FOR RAIL

Catalogue number:
423201

APPLICATION

Provides a reliable connection when connecting two rails. The connection is carried out in the middle of bolts, two rails need one connector.

TECHNICAL DATA

Length: 140 mm
Material: Aluminum 6005-T5

Universal element suitable for any type of roof or for a ground mounting structure.

MID CLAMP FOR FRAMED PANEL

Catalogue number:
423202

Catalogue number:
423202/BL

APPLICATION

They serve to connect two panels mounted side by side. The clamp is placed between them and by using a screw tightens the frames of the PV modules to the mounting rail. It takes two clamps to connect two panels.

TECHNICAL DATA

For solar panels of a height: 30mm and 35mm
Suitable for frame panels
Material: Aluminum 6005-T5

Universal element suitable for any type of roof or for a ground mounting structure.

CLAMP FOR FRAMED PANEL

30mm
Catalogue number:
423203

35mm
Catalogue number:
423203-2

35mm
Catalogue number:
423203-2/BL

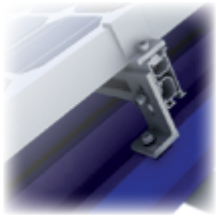
APPLICATION

They are used to connect the photovoltaic module to the mounting rail at the beginning and end of the solar line. One end of the clamp is placed in the rail and the other end on the panel frame and, by means of a bolt, the two elements are fastened to each other. Two clamps for framed panel are required for the installation of one panel.

TECHNICAL DATA

For solar panels of a height: 30mm and 35mm
Suitable for frame panels
Material: Aluminum 6005-T5

Universal element suitable for any type of roof or for a ground mounting structure.



These products meet all the technical requirements set by the European Union for the construction of solar systems.

TIN ROOF HOOK TYPES 1, 2, 13, 14

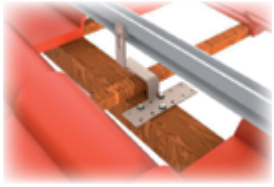
APPLICATION

They are used to attach the mounting rail to a tiled roof. Using screws, one end of the hook is fastened to the wooden structure located under the tile itself, and in the hole of the upper part with bolts is fastened the solar power mounting rail. Considering the individual features in the construction of each wooden structure and the orientation of the solar line, we offer 4 types of hooks, depending on the specific needs during installation.

TECHNICAL DATA

Material: Stainless Steel

The elements are only suitable for the construction of solar structures on tile roofs.

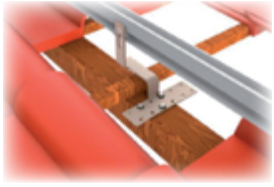


HOOK TYPE 1

Catalogue number:
423204

HOOK TYPE 2

Catalogue number:
423205



HOOK TYPE 13

Catalogue number:
423206

HOOK TYPE 14

Catalogue number:
423207

These products meet all the technical requirements set by the European Union for the construction of solar systems.

10 YEARS WARRANTY

TIN ROOF HOOKS

APPLICATION

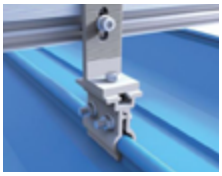
They are used to attach the mounting rail to a sheet metal roof. Using screws, one end of the hook is fastened on the roof rib and the mounting rail of the solar panel is fastened in the hole at the top with bolts. We offer two types of hooks depending on the orientation of the solar line, in relation to the ribbing on the roof.

TECHNICAL DATA

Material: Stainless Steel

The elements are only suitable for the construction of solar structures on sheet metal roofs.

Catalogue number:
423217



Catalogue number:
423219

Catalogue number:
423218

Catalogue number:
423220

L-FEET FOR TIN ROOF WITH FASTENERS

APPLICATION

They are used to attach the mounting rail to a sheet metal roof. Using screws, the single end of the hook is fastened on the roof and the solar power mounting rail is fastened in the hole of the upper part with bolts.

TECHNICAL DATA

Material: Stainless Steel

The element is only suitable for the construction of solar structures on sheet metal roofs.

Catalogue number:
423216

These products meet all the technical requirements set by the European Union for the construction of solar systems.

L-FEET WITH FASTENERS

Catalogue number:
423214

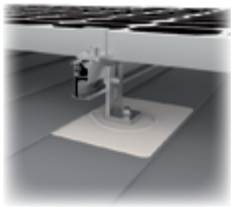
APPLICATION

It is used to attach the mounting rail to a bituminous roof. It is recommended that the installation of the hook is carried out in a set with a steel flashing plate to prevent water penetration. Attach the hook to the roof by screwing it through the hole of the flashing plate.

TECHNICAL DATA

Material: Stainless Steel

The element is only suitable for the construction of solar structures on a bituminous roof.



FLASHING PLATE 280X280

Catalogue number:
423215

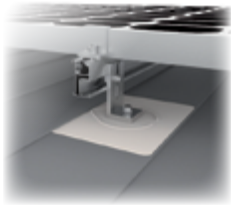
APPLICATION

It is used to attach the mounting rail to a bituminous roof. It is recommended that the installation of the hook is carried out in a set with a steel flashing plate to prevent water penetration. Attach the hook to the roof by screwing it through the hole of the flashing plate.

TECHNICAL DATA

Material: Stainless Steel

The element is only suitable for the construction of solar structures on a bituminous roof.



15° TRIANGULAR MOUNT

APPLICATION

They are used to provide the necessary inclination of the solar panels when mounting them on a flat roof or to adjust the angle of inclined roofs. They are mounted on the rails supporting the solar panels by a steel hook. They are usually installed on concrete foundations and can be further reinforced with ballast weights.

TECHNICAL DATA

Material: Aluminum 6005-T5

Catalogue number	Dimensions (mm)
423223	1300x1400
423223-2	1600x1700

These products meet all the technical requirements set by the European Union for the construction of solar systems.

10 YEARS WARRANTY

30° TRIANGULAR MOUNT

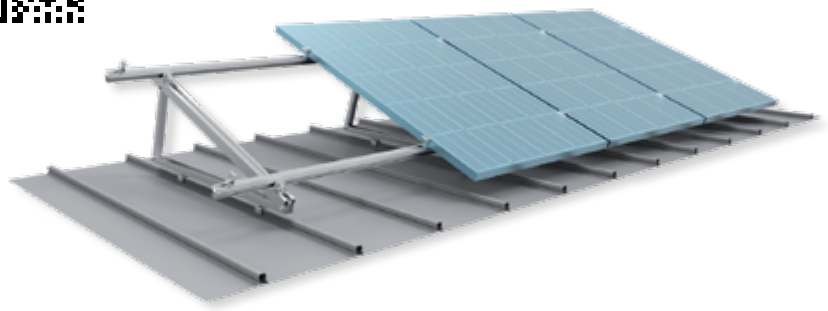
APPLICATION

They are used to provide the necessary inclination of the solar panels when mounting them on a flat roof or to adjust the angle of inclined roofs. They are mounted on the rails supporting the solar panels by means of a steel hook. They are usually installed on concrete foundations and can be reinforced additionally with ballast weights.

TECHNICAL DATA

Dimensions:1300x1400mm/ 1600x1700mm
Material: Aluminum 6005-T5

Catalogue number	Dimensions (mm)
423227	1300x1400
423227-2	1600x1700



L-CONNECTOR FOR RAIL

Catalogue number:
423224

APPLICATION

The element is suitable for the construction of solar structures on straight and pitched roofs or for solar structures built on land.

TECHNICAL DATA

Material: Stainless Steel

ANGLE PLATE

Catalogue number:
423225

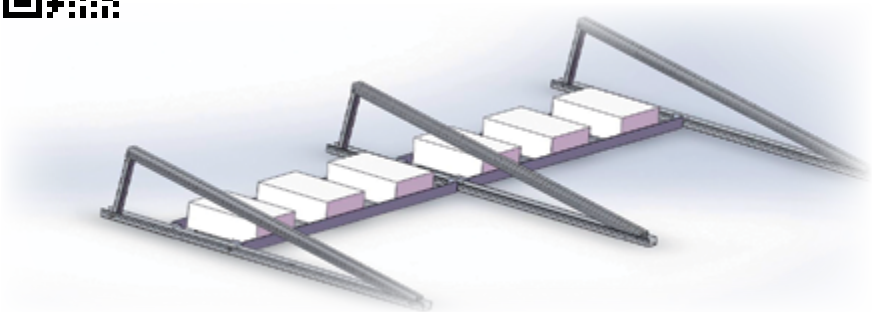
APPLICATION

They serve to further strengthen the triangular mounts with each other by placing concrete blocks (ballasts) between two hooks.

TECHNICAL DATA

Material: Stainless Steel

The element is only suitable for the construction of solar structures on a flat roof or ground.



These products meet all the technical requirements set by the European Union for the construction of solar systems.

GROUNDING OF THE MOUNTING STRUCTURE

The grounding of the solar mounting structure is just as important and necessary as the grounding in your home. Grounded panels and mounting rails should provide the easiest path for lightning to reach the ground when needed, as well as to discharge naturally occurring static electricity. This is achieved by building a system of elements: Grounding clip, earth lug, conductor, earthing rail and pole and other accessories, depending on the individual approach for installation or features of the roof.

GROUNDING CLIP

Catalogue number:
423208

APPLICATION

It makes contact between the solar panels and the mounting rails. It is usually fixed between the PV modules and the rail by means of the mid clamp for framed panels. The bolt of the mid clamp passes through the hole of the grounding clip and during tightening it performs the role of an earthing wire, thus preventing possible damage to the solar panels during a storm.

TECHNICAL DATA

Material: Stainless Steel

Universal element suitable for any type of roof or for a ground mounting structure.

EARTH LUG

Catalogue number:
423209

APPLICATION

A basic element making a connection from the solar array to the ground, by means of a conductor. It is mounted at one end of the rail for mounting solar panels, thus protecting the entire row. A grounding conductor of aluminum or other material is connected to it to lead lightning or static electricity to the earthing rail.

TECHNICAL DATA

Material: Aluminum

Universal element suitable for any type of roof or for a ground mounting structure.

These products meet all the technical requirements set by the European Union for the construction of solar systems.

10 YEARS WARRANTY

CABLE CLIPS (CLAMPS) TYPE 1, 2, 8 AND 9

APPLICATION
They are important in the installation and maintenance of the wiring system. They are an integral part of its „management" by being used to group cables into bundles, determine the direction and place of their fixing, so that the system built can look not only visually well, but also reliably protected.
Our cable clips for solar systems are designed for different number and cross-section of wires with up to 90 degree deviation.

TECHNICAL DATA
Material: Stainless Steel

Universal elements suitable for any type of roof or for a ground mounting structure.

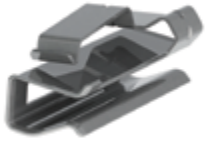
CABLE CLIP TYPE 1 - 2x4/6mm²

Catalogue number:
423210

CABLE CLIP TYPE 2 - 4x90°4/6mm²/ 3x90°10mm²

Catalogue number:
423211

CABLE CLIP TYPE 8 -2x90°4/6mm²



Catalogue number:
423212

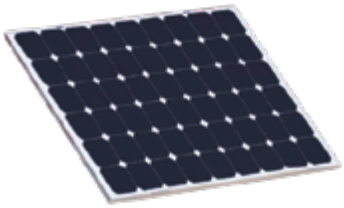
CABLE CLIP TYPE 9 - 2x90°4/6mm²

Catalogue number:
423213

These products meet all the technical requirements set by the European Union for the construction of solar systems.

10 YEARS WARRANTY

BALCONY/ HANDRAIL MOUNTING STRUCTURE, SET



The balcony solar mounting system is a product that is installed on balcony railings and allows for the easy construction of small home PV plants on balconies. Installation and removal are very simple and quick; the installation can be completed by 1-2 people. The system is bolted and fixed, so there is no need for welding or drilling during installation.
With a maximum tilt angle of 30°, the panels' tilt angle can be flexibly adjusted according to the installation site to achieve the best power generation efficiency. Optimized structural design and material selection ensure the system's strength and stability in a variety of climatic environments.

TECHNICAL DATA

- Material: Aluminum and stainless steel
- Panel type: Framed with width till 35mm
- Wind load resistance: Up to 50m/s (180km/h)
- Snow load resistance: Up to 1.4KN/m^2
- Panel mounting direction: Landscape

Catalogue number:
423245

**Note: Mounting structure included all elements, required for the installation of one solar panel.*

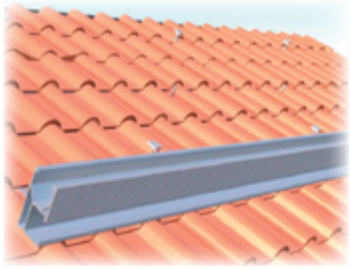
MOUNTING STRUCTURES FOR PITCHED TILE ROOF, SETS

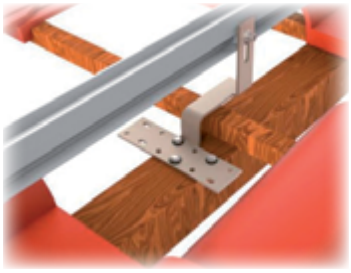
In the following lines you will find the configuration of different sets of mounting structures for different types of roof structures with capacities from 3 to 30kW. The sets are equipped with all the basic elements, with exemplary quantities sufficient for the complete construction of the photovoltage system.

The quantities of elements are intended for construction of systems with solar panels with catalogue number:

- 98SOL430M, with a power of 430W and dimensions 1722x1134x35mm;
- 98SOL580M, with a power of 580W and dimensions 2278x1134x35mm.

**Please note that the quantities of the elements may differ from those indicated, depending on the individuality of each project.*





MOUNTING STRUCTURES FOR PITCHED TILE ROOF FROM 3 TO 30KW FOR PANELS 430W

Description of the items included in the set	Catalogue number	at 3kW	at 3.6 kW	at 5 kW	at 6 kW	at 8 kW	at 10 kW	at 15 kW	at 20 kW	at 30 kW
Rail - 2400mm	423199	7	9	12	14	19	24	35	47	70
Connector - 140mm	423201	4	6	8	10	13	16	22	26	34
Mid clamp for framed panel	423202/BL	10	14	18	20	30	36	56	74	120
End clamp for framed panel 35mm	423203-2/BL	8	8	12	16	20	24	28	32	40
Tile roof hook	423204	14	18	24	28	38	48	70	94	140
Grounding clip	423208	10	14	18	20	30	36	56	74	120
Earth lug	423209	8	8	12	16	20	24	28	32	40

MOUNTING STRUCTURES FOR PITCHED TILE ROOF FROM 3 TO 30KW FOR PANELS 580W

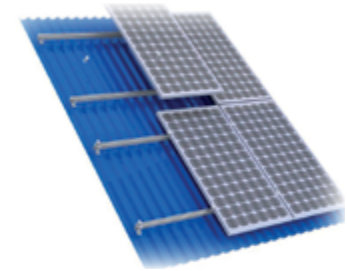
Description of the items included in the set	Catalogue number	at 3kW	at 3.6 kW	at 5 kW	at 6 kW	at 8 kW	at 10 kW	at 15 kW	at 20 kW	at 30 kW
Rail - 2400mm	423199	6	7	9	11	14	18	26	35	52
Connector - 140mm	423201	4	4	6	6	10	12	18	22	30
Mid clamp for framed panel	423202/BL	8	10	14	16	20	30	42	56	82
End clamp for framed panel 35mm	423203-2/BL	8	8	8	12	16	20	26	28	42
Tile roof hook	423204	12	14	18	22	28	36	52	70	104
Grounding clip	423208	8	10	14	16	20	30	42	56	82
Earth lug	423209	8	8	8	12	16	20	26	28	42

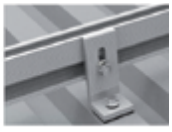
CATALOGUE NUMBERS OF THE SETS

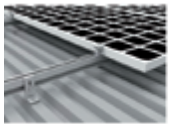
Solar system (kW)	Catalogue number for panel 430W	Catalogue number for panel 580W
3	4234303P/TR	4235803P/TR
3.6	42343036P/TR	42358036P/TR
5	4234305P/TR	4235805P/TR
6	4234306P/TR	4235806P/TR
8	4234308P/TR	4235808P/TR
10	42343010P/TR	42358010P/TR
15	42343015P/TR	42358015P/TR
20	42343020P/TR	42358020P/TR
30	42343030P/TR	42358030P/TR

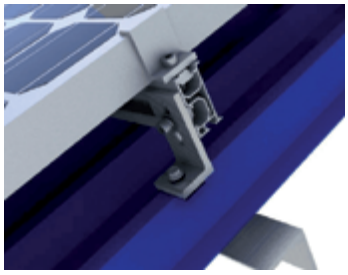
These products meet all the technical requirements set by the European Union for the construction of solar systems.

MOUNTING STRUCTURES FOR PITCHED SHEET METAL ROOF, SETS









MOUNTING STRUCTURES FOR PITCHED SHEET METAL ROOF FROM 3 TO 30KW FOR PANELS 430W

Description of the items included in the set	Catalogue number	at 3kW	at 3.6 kW	at 5 kW	at 6 kW	at 8 kW	at 10 kW	at 15 kW	at 20 kW	at 30 kW
Rail - 2400mm	423199	7	9	12	14	19	24	35	47	70
Connector - 140mm	423201	4	6	8	10	13	16	22	26	34
Mid clamp for framed panel	423202/BL	10	14	18	20	30	36	56	74	120
End clamp for framed panel 35mm	423203-2/BL	8	8	12	16	20	24	28	32	40
L-feet with fasteners for sheet metal roof	423216	14	18	24	28	38	48	70	94	140
Grounding clip	423208	10	14	18	20	30	36	56	74	120
Earth lug	423209	8	8	12	16	20	24	28	32	40

MOUNTING STRUCTURES FOR PITCHED SHEET METAL ROOF FROM 3 TO 30KW FOR PANELS 580W

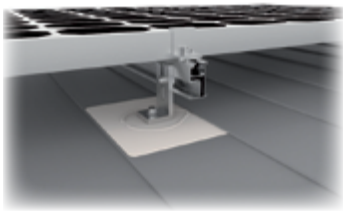
Description of the items included in the set	Catalogue number	at 3kW	at 3.6 kW	at 5 kW	at 6 kW	at 8 kW	at 10 kW	at 15 kW	at 20 kW	at 30 kW
Rail - 2400mm	423199	6	7	9	11	14	18	26	35	52
Connector - 140mm	423201	4	4	6	6	10	12	18	22	30
Mid clamp for framed panel	423202/BL	8	10	14	16	20	30	42	56	82
End clamp for framed panel 35mm	423203-2/BL	8	8	8	12	16	20	26	28	42
L-feet with fasteners for sheet metal roof	423216	12	14	18	22	28	36	52	70	104
Grounding clip	423208	8	10	14	16	20	30	42	56	82
Earth lug	423209	8	8	8	12	16	20	26	28	42

CATALOGUE NUMBERS OF THE SETS

Solar system (kW)	Catalogue number for panel 430W	Catalogue number for panel 580W
3	4234303P/DR	4235803P/DR
3.6	42343036P/DR	42358036P/DR
5	4234305P/DR	4235805P/DR
6	4234306P/DR	4235806P/DR
8	4234308P/DR	4235808P/DR
10	42343010P/DR	42358010P/DR
15	42343015P/DR	42358015P/DR
20	42343020P/DR	42358020P/DR
30	42343030P/DR	42358030P/DR

These products meet all the technical requirements set by the European Union for the construction of solar systems.

MOUNTING STRUCTURES FOR PITCHED BITUMINOUS ROOF, SETS



MOUNTING STRUCTURES FOR PITCHED BITUMINOUS ROOF FROM 3 TO 30KW FOR PANELS 430W

Description of the items included in the set	Catalogue number	at 3kW	at 3.6 kW	at 5 kW	at 6 kW	at 8 kW	at 10 kW	at 15 kW	at 20 kW	at 30 kW
Rail - 2400mm	423199	7	9	12	14	19	24	35	47	70
Connector - 140mm	423201	4	6	8	10	13	16	22	26	34
Mid clamp for framed panel	423202/BL	10	14	18	20	30	36	56	74	120
End clamp for framed panel 35mm	423203-2/BL	8	8	12	16	20	24	28	32	40
Bituminous roofing hook	423214	14	18	24	28	38	48	70	94	140
Flashing plate 280x280	423215	14	18	24	28	38	48	70	94	140
Grounding clip	423208	10	14	18	20	30	36	56	74	120
Earth lug	423209	8	8	12	16	20	24	28	32	40

MOUNTING STRUCTURES FOR PITCHED BITUMINOUS ROOF FROM 3 TO 30KW FOR PANELS 580W

Description of the items included in the set	Catalogue number	at 3kW	at 3.6 kW	at 5 kW	at 6 kW	at 8 kW	at 10 kW	at 15 kW	at 20 kW	at 30 kW
Rail - 2400mm	423199	6	7	9	11	14	18	26	35	52
Connector - 140mm	423201	4	4	6	6	10	12	18	22	30
Mid clamp for framed panel	423202/BL	8	10	14	16	20	30	42	56	82
End clamp for framed panel 35mm	423203-2/BL	8	8	8	12	16	20	26	28	42
Bituminous roofing hook	423214	12	14	18	22	28	36	52	70	104
Flashing plate 280x280	423215	12	14	18	22	28	36	52	70	104
Grounding clip	423208	8	10	14	16	20	30	42	56	82
Earth lug	423209	8	8	8	12	16	20	26	28	42

CATALOGUE NUMBERS OF THE SETS

Solar system (kW)	Catalogue number for panel 430W	Catalogue number for panel 580W
3	4234303P/SR	4235803P/SR
3.6	42343036P/SR	42358036P/SR
5	4234305P/SR	4235805P/SR
6	4234306P/SR	4235806P/SR
8	4234308P/SR	4235808P/SR
10	42343010P/SR	42358010P/SR
15	42343015P/SR	42358015P/SR
20	42343020P/SR	42358020P/SR
30	42343030P/SR	42358030P/SR

These products meet all the technical requirements set by the European Union for the construction of solar systems.

10 YEARS WARRANTY

MOUNTING STRUCTURES FOR FLAT ROOF OR GROUND, SETS

30-40° TRIANGULAR MOUNTING STRUCTURES FOR ROOF, WALL OR GROUND FROM 3 TO 30KW FOR PANELS 430W

Description of the items included in the set	Catalogue number	at 3kW	at 3.6 kW	at 5 kW	at 6 kW	at 8 kW	at 10 kW	at 15 kW	at 20 kW	at 30 kW
Mounting triangle 30-40°	423241	14	18	24	28	38	48	70	94	140
Anchor 6x70 mm	423244	28	36	48	56	76	96	140	188	280
Grounding clip SS304	423242	28	36	48	56	76	96	140	188	280
Earth lug EL-EL02	423243	7	9	12	14	19	24	35	47	70

*This construction is suitable for solar panels with width from 1134mm and for places where the speed of the wind does not exceed 30m/s (108km/h).
Panel mounting direction: Landscape

30-40° TRIANGULAR MOUNTING STRUCTURES FOR ROOF, WALL OR GROUND FROM 3 TO 30KW FOR PANELS 580W

Description of the items included in the set	Catalogue number	at 3kW	at 3.6 kW	at 5 kW	at 6 kW	at 8 kW	at 10 kW	at 15 kW	at 20 kW	at 30 kW
Mounting triangle 30-40°	423241	12	14	18	22	28	36	52	70	104
Anchor 6x70mm	423244	24	28	36	44	56	72	104	140	208
Grounding clip SS304	423242	24	28	36	44	56	72	104	140	208
Earth lug EL-EL02	423243	6	7	9	11	14	18	26	35	52

*This construction is suitable for solar panels with width from 1134mm and for places where the speed of the wind does not exceed 30m/s (108km/h)/.
Panel mounting direction: Landscape

CATALOGUE NUMBERS OF THE SETS

Solar system (kW)	Catalogue number for panel 430W	Catalogue number for panel 580W
3	4234303BX/TR	4235803BX/TR
3.6	42343036BX/TR	42358036BX/TR
5	4234305BX/TR	4235805BX/TR
6	4234306BX/TR	4235806BX/TR
8	4234308BX/TR	4235808BX/TR
10	42343010BX/TR	42358010BX/TR
15	42343015BX/TR	42358015BX/TR
20	42343020BX/TR	42358020BX/TR
30	42343030BX/TR	42358030BX/TR

These products meet all the technical requirements set by the European Union for the construction of solar systems.

10 YEARS WARRANTY

MOUNTING STRUCTURES FOR FLAT ROOF OR GROUND, SETS

30° TRIANGULAR BALLAST MOUNTING STRUCTURES FOR FLAT ROOF OR GROUND FROM 3KW TO 30KW FOR PANELS 430W

Description of the items included in the set	Catalogue number	at 3kW	at 3.6 kW	at 5 kW	at 6 kW	at 8 kW	at 10 kW	at 15 kW	at 20 kW	at 30 kW
Rail - 2400mm	423199	7	9	12	14	19	24	35	47	70
Connector - 140mm	423201	4	6	8	10	13	16	22	26	34
Mid clamp for framed panel	423202/BL	10	14	18	20	30	36	56	74	120
End clamp for framed panel 35mm	423203-2/BL	8	8	12	16	20	24	28	32	40
30° Triangular mount	423227	9	11	14	17	23	29	42	56	85
L-Connector	423224	18	22	28	34	46	58	84	112	170
Angle Plate	423225	14	18	20	23	30	38	56	74	112
Grounding clip	423208	10	14	18	20	30	36	56	74	120
Earth lug	423209	8	8	12	16	20	24	28	32	40

30° TRIANGULAR BALLAST MOUNTING STRUCTURES FOR FLAT ROOF OR GROUND FROM 3KW TO 30KW FOR PANELS 580W

Description of the items included in the set	Catalogue number	at 3kW	at 3.6 kW	at 5 kW	at 6 kW	at 8 kW	at 10 kW	at 15 kW	at 20 kW	at 30 kW
Rail - 2400mm	423199	6	7	9	11	14	18	26	35	52
Connector - 140mm	423201	4	4	6	6	10	12	18	22	30
Mid clamp for framed panel	423202/BL	8	10	14	16	20	30	42	56	82
End clamp for framed panel 35mm	423203-2/BL	8	8	8	12	16	20	26	28	42
30° Triangular mount	423227	9	10	14	14	23	38	41	56	82
L-Connector	423224	18	20	28	28	46	76	82	112	164
Angle Plate	423225	14	16	20	20	30	62	66	74	130
Grounding clip	423208	8	10	14	16	20	30	42	56	82
Earth lug	423209	8	8	8	12	16	20	26	28	42

CATALOGUE NUMBERS OF THE SETS

Solar system (kW)	Catalogue number for panel 430W	Catalogue number for panel 580W
3	4234303F/BTR	4235803F/BTR
3.6	42343036F/BTR	42358036F/BTR
5	4234305F/BTR	4235805F/BTR
6	4234306F/BTR	4235806F/BTR
8	4234308F/BTR	4235808F/BTR
10	42343010F/BTR	42358010F/BTR
15	42343015F/BTR	42358015F/BTR
20	42343020F/BTR	42358020F/BTR
30	42343030F/BTR	42358030F/BTR

These products meet all the technical requirements set by the European Union for the construction of solar systems.

FLAT ROOF SIMPLE BALLAST MOUNTING SYSTEM 10°, SET

This is suitable for a variety of solar panel sizes, and the panel is installed horizontally, with angle of 10 degrees. The system has simple structure, good stability, and easy installation.
It is a modular structure, witch can be expanded from one module to any scale while maximizing the roof usage.

10° MOUNTING STRUCTURE FOR FLAT ROOF FROM 3 TO 30KW FOR PANEL 430W

Description of the items included in the set	Catalogue number	at 3kW	at 3.6 kW	at 5 kW	at 6 kW	at 8 kW	at 10 kW	at 15 kW	at 20 kW	at 30 kW
Rail - 1360mm	423263	14	18	24	28	38	48	70	94	140
Rail - 900mm	423264	14	18	24	28	38	48	70	94	140
Rail connector - 200mm	423265	28	36	48	56	76	96	140	188	280
Front support leg	423261	14	18	24	28	38	48	70	94	140
Rear support leg	423262	14	18	24	28	38	48	70	94	140
End clamp for framed panel 35mm	423203-4/BL	28	36	48	56	76	96	140	188	280
Grounding clip	423242-2	28	36	48	56	76	96	140	188	280
Earth lug	423243	7	9	12	14	19	24	35	47	70

**Ballast is not included.*

10° MOUNTING STRUCTURE FOR FLAT ROOF FROM 3 TO 30KW FOR PANEL 580W

Description of the items included in the set	Catalogue number	at 3kW	at 3.6 kW	at 5 kW	at 6 kW	at 8 kW	at 10 kW	at 15 kW	at 20 kW	at 30 kW
Rail - 1360mm	423263	12	14	18	22	28	36	52	70	104
Rail - 900mm	423264	12	14	18	22	28	36	52	70	104
Rail connector - 200mm	423265	24	28	36	44	56	72	104	140	208
Front support leg	423261	12	14	18	22	28	36	52	70	104
Rear support leg	423262	12	14	18	22	28	36	52	70	104
End clamp for framed panel 35mm	423203-4/BL	24	28	36	44	56	72	104	140	208
Grounding clip	423242-2	24	28	36	44	56	72	104	140	208
Earth lug	423243	6	7	9	11	14	18	26	35	52

**Ballast is not included.*

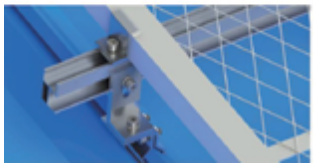
CATALOGUE NUMBERS OF THE SETS

Solar system (kW)	Catalogue number for panel 430W	Catalogue number for panel 580W
3	4234303FR/TR	4235803FR/TR
3.6	42343036FR/TR	42358036FR/TR
5	4234305FR/TR	4235805FR/TR
6	4234306FR/TR	4235806FR/TR
8	4234308FR/TR	4235808FR/TR
10	42343010FR/TR	42358010FR/TR
15	42343015FR/TR	42358015FR/TR
20	42343020FR/TR	42358020FR/TR
30	42343030FR/TR	42358030FR/TR

These products meet all the technical requirements set by the European Union for the construction of solar systems.

10 YEARS WARRANTY

WALKWAY WITH MOUNTING ACCESSORIES, SET



Catalogue number:

423250

WALKWAY WITH MOUNTING ACCESSORIES, SET

Walkway system is a good solution in case of ice, snow, grease, oil and detergent in wet or other risks in the areas for walking. Walk plate are usually used to homework, industrial workshop floor, narrow channel, terrace, warehouses, sidewalk, stairs, between the solar massive in solar systems and etc.

TECHNICAL DATA OF WALKWAY PLATE

- Material: Galvanized carbon steel
- Dimensions: 2000x400x38 mm

SET INCLUDED

- Rails 500mm: 4 pcs
- Walkway: 1 pc
- End clamps: 8 pcs

FEATURES

- Light structure with high bearing capacity and easy installation
- Beautiful appearance, galvanized processing ensures the strong corrosion resistance
- Good function of anti-skid, ventilation, avoid accumulation of dirt.

* Fasteners for fixing walkway rails to mounting ground are not included

10 YEARS WARRANTY

CARPORT FOR SOLAR PANELS, SET

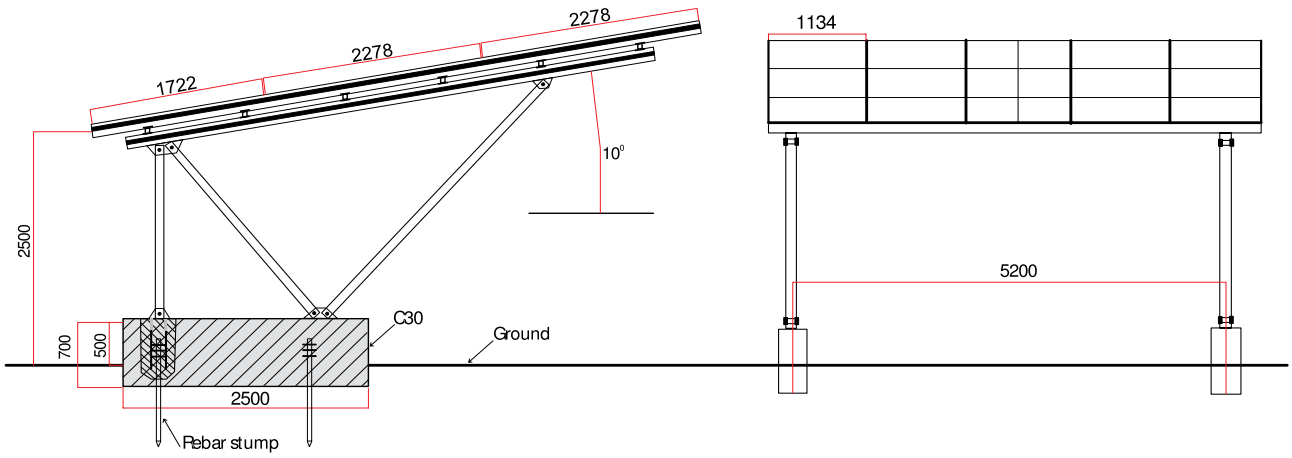
CARPORT FOR SOLAR PANELS, SET

The carport is suitable for installation of solar panels with power up to 8kW (15 pcs.) ELMARK panels with power 430W and 580W). The size of the structure is suitable for parking two cars, with a high of 2.5 m at its lowest point. The length of the structure is 6m and the width is 5.2m. It is a suitable option for home construction or for combining multiple cells, when creating larger parking lots or systems with higher capacities.

This system is also extremely suitable for combining with a 7kW single-phase charging station for electric vehicles. For the construction of a three-phase charging station with a power of 22kW, ELMARK recommends the use of 4 mounting structures and a 30kW solar system.

Catalogue number:
423278/CP

These products meet all the technical requirements set by the European Union for the construction of solar systems.



10 YEARS WARRANTY

ON-GRID SOLAR INVERTERS

ELMARK
The Brand of Electricity

GRID CONNECTED (ON-GRID) SOLAR INVERTERS WITH POWERS FROM 3kW TO 110KW

These are the most common type of inverters, also known as strings, ON-GRIDs or grid connected. Their work requires power from the power grid. These inverters cannot operate with a battery serving as energy storage or as a UPS.

CERTIFICATION

- INTERTEK/ VDE/ EN/ CE

intertek

Certificate of Conformity

Certificate Number: CN-PV-230560

On the basis of the tests undertaken, the sample<s> of the below product have been found to comply with the requirements of the referenced specification<s>/standard<s> at the time the tests were carried out. It does not imply that Intertek has performed any surveillance or control of the manufacture(s). The manufacturer(s) shall ensure that the manufacturing process assures compliance of the production units with the examined products mentioned in this certificate.

Applicant:	Elmark Industries SC 2 Dobrudzha blvd. , 9300, Dobrich, Bulgaria
Product:	PV Grid interactive inverter
Ratings & Principle Characteristics:	See appendix of Certificate of Conformity
Model:	ELM3PON030K, ELM3PON036K, ELM3PON040K, ELM3PON050K, ELM3PON060K
Brand Name<s>:	ELMARK
Product Complies with:	EN 50549-1:2019 Requirements for the connection of generation equipment in parallel with public distribution networks.
Certificate Issuing Office Name & Address:	Intertek Testing Services Ltd. Shanghai West Area, 2nd Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China Accredited by ACCREDIA in accordance with ISO/IEC 17065:2012
Test Report No.<s>:	2308A0285SHA-001

Additional information in Appendix.

Signature

Certification Manager: Qiao Qiao
Date: 28 September 2023

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Intertek Page 1 of 2

intertek

Certificate of Conformity

Certificate Number: CN-PV-230561

On the basis of the tests undertaken, the sample<s> of the below product have been found to comply with the requirements of the referenced specification<s>/standard<s> at the time the tests were carried out. It does not imply that Intertek has performed any surveillance or control of the manufacture(s). The manufacturer(s) shall ensure that the manufacturing process assures compliance of the production units with the examined products mentioned in this certificate.

Applicant:	Elmark Industries SC 2 Dobrudzha blvd. , 9300, Dobrich, Bulgaria
Product:	Grid-connected PV inverter
Ratings & Principle Characteristics:	See appendix of Certificate of Conformity
Model:	ELM1PON3000, ELM1PON3600-1, ELM1PON3600, ELM1PON4000, ELM1PON5000, ELM1PON6000, ELM1PON7000, ELM1PON8000
Brand Name<s>:	ELMARK
Product Complies with:	EN 50549-1:2019 Requirements for the connection of generation equipment in parallel with public distribution networks.
Certificate Issuing Office Name & Address:	Intertek Testing Services Ltd. Shanghai West Area, 2nd Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China Accredited by ACCREDIA in accordance with ISO/IEC 17065:2012
Test Report No.<s>:	2308A0286SHA-001

Additional information in Appendix.

Signature

Certification Manager: Qiao Qiao
Date: 28 September 2023

ACCREDIA

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Intertek Page 1 of 3 SFT-PV-OP-23a (28-December-2021)

intertek

Certificate of Conformity

Certificate Number: CN-PV-230559

On the basis of the tests undertaken, the sample<s> of the below product have been found to comply with the requirements of the referenced specification<s>/standard<s> at the time the tests were carried out. It does not imply that Intertek has performed any surveillance or control of the manufacture(s). The manufacturer(s) shall ensure that the manufacturing process assures compliance of the production units with the examined products mentioned in this certificate.

Applicant:	Elmark Industries SC 2 Dobrudzha blvd. , 9300, Dobrich, Bulgaria
Product:	Grid-connected PV inverter
Ratings & Principle Characteristics:	See appendix of Certificate of Conformity
Model:	ELM3PON003K, ELM3PON004K, ELM3PON005K, ELM3PON006K, ELM3PON008K, ELM3PON010K, ELM3PON012K, ELM3PON013K, ELM3PON015K, ELM3PON017K, ELM3PON020K, ELM3PON025K
Brand Name<s>:	ELMARK
Product Complies with:	EN 50549-1:2019 Requirements for the connection of generation equipment in parallel with public distribution networks.
Certificate Issuing Office Name & Address:	Intertek Testing Services Ltd. Shanghai West Area, 2nd Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China Accredited by ACCREDIA in accordance with ISO/IEC 17065:2012
Test Report No.<s>:	2308A0284SHA-001

Additional information in Appendix.

Signature

Certification Manager: Qiao Qiao
Date: 28 September 2023

ACCREDIA

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Intertek Page 1 of 4 SFT-PV-OP-23a (28-December-2021)

The full range of available certificates can be found on www.elmarkholding.eu

ON-GRID

10 YEARS WARRANTY

SINGLE-PHASE (ON-GRID) SOLAR INVERTERS SOLIS 3.6KW, 5KW AND 8KW

Standard grid inverters are the most commonly used type of inverters for trading electricity or producing electricity for own use. Because they them selves cannot work with batteries, this means that they can only be used during the bright part of the day. That is, the electricity produced from the solar panels is consumed instantly or returned to the electricity grid for sale.

The inverters come with the additional option of purchasing a Wi-Fi plug-and-play device with catalog No 423050 for remote monitoring, which connects to a dedicated input on them. It can monitor the status of the photovoltage system from a mobile phone or computer at any time and from anywhere in the world with the SolisCloud app. The app is compatible with Android and iOS in 10 different languages. To download the app, scan the code from page 47.

SOLIS-S6-GR1P3.6-M/ 1P
SOLIS-S6-GR1P5K/ 1P
SOLIS-1P8K-5G/ / 1P

ADVANTAGES

- Integrated algorithm for Maximum Power Point Tracking (MPPT)
- Integrated EPM (Export Power Manager) function
- Short circuit protection
- DC reverse voltage protection
- Over voltage protection
- Thermal protection
- Network monitoring
- Protection stopping the voltage supply in case of failure of power supply from the mains. This prevents the occasional pop-up of voltage from the system to the network during operation and while in combined mode
- Remote Wi-Fi monitoring

CERTIFICATION

- VDE/ EN/ IEC/ CE/ TUV

See the full range of certificates on www.elmarkholding.eu

TECHNICAL DATA 3.6KW/ 5KW/ 8KW

- Number of poles: 1/N/PE
- Rated power: **3.6KW/ 5KW/ 8KW**
- Maximum power of solar panels: 5400W/ 7500W/ 12000W
- MPPT operating voltage range: 80-500VDC/ 90-520VDC/ 80-500VDC/ 90-520VDC
- Maximum input voltage: 600VDC
- Number of independent outputs (MPP Trackers)/Strings on each output: 1/2; 2/2; 3/2
- THDv (linear load): <2%
- THDi: <2%
- Power reduction at 45°C: ≤ 3%
- EU performance: >96,8%/ 97,1%/ 97,3%
- Display: LCD
- IP code: IP66
- Altitude: up to 4000m
- Ambient temperature: from -25 to 60°C
- Relative humidity: from 0 to 100%
- Weight: 7.7kg/ 12kg/ 13.3kg
- Dimension (WxHxD): 310x373x160mm/ 310x543x160mm/ 310x543x160mm

Catalogue number	Type	Number of poles	Rated power (W)	Maximum power of solar panels (W)	Dimensions WxHxD (mm)
423001	SOLIS-S6-GR1P3.6-M	1/N/PE	3600	5400	310x373x160
423002	SOLIS-S6-GR1P5K	1/N/PE	5000	7500	310x543x160
423003	SOLIS-1P8K-5G	1/N/PE	8000	12000	310x543x160

Scan and watch detailed video with all product functions.

These products meet all the technical requirements set by the European Union for the construction of solar systems.

10 YEARS WARRANTY

ELMARK
The Brand of Electricity

ON-GRID

SINGLE-PHASE (ON-GRID) SOLAR INVERTERS ELMARK 3KW, 5KW, 8KW AND 10KW

The ELMARK ELM1PON Series Single-phase inverters are designed for residential PV system applications. All models have uni body housings with aluminum structure which is anodized, increasing durability and effectively prevents corrosion. Equipped with external inductors, the uni body housings can ensure efficient heat dissipation, which significantly improves the reliability and extends the life of the inverters.

The inverter menu is activated by sensor touch buttons. Communication implements are via the Wi-Fi module.

Check the system status anytime and anywhere via online portal or smart HOME APP.

ELM1PON3000
ELM1PON5000
ELM1PON8000
ELM1PON10000

ADVANTAGES

- Anti-flow: Ant-feed function
- PV oversize: Max. 1.5 time PV oversize capacity
- Multiple intelligent protection
- Smart IV curve scanning
- Wi-Fi Standard Ethernet
- Configuration: Quick and easy configuration via Wi-FI
- PV Reverse polarity protection
- PV Insulation resistance detection
- AC short circuit protection
- AC over current protection
- AC over voltage protection
- Anti-islanding protection
- Residual current detection
- Over temperature protection
- Integrated DC switch
- Surge protection type III
- Smart IV curve scanning
- Active and reactive power compensation, adjust power factor
- High-quality power output and low THDI

TECHNICAL DATA

- Number of poles: 1/N/PE
- Rated power: 3KW / 5KW / 8KW / 10KW
- Maximum power of solar panels: 4500W / 7000W / 11200W / 14000W
- MPPT operating voltage range: 70-550V DC
- Maximum input voltage: 600VDC
- Number of independent outputs (MPP Trackers)/Strings on each output: 2/2; 2/2; 2/3; 2/4
- EU performance: > 98,2% / 98,2% / 98,2% / 98,4%
- Display: LCD
- Modbus: RS485
- IP code: IP65
- Altitude: up to 4000m
- Ambient temperature: from -25 to 60°C
- Relative humidity: from 0 to 100%
- Weight: 11kg / 11kg / 17kg / 19kg

CERTIFICATION

- INTERTEK/ VDE/ EN/ CE

See the full range of certificates on www.elmarkholding.eu

Catalogue number	Type	Number of poles	Rated power (W)	Maximum power of solar panels (W)	Dimensions WxHxD (mm)
423006	ELM1PON3000	1/N/PE	3000	4500	370x350x142
423004	ELM1PON5000	1/N/PE	5000	7000	370x350x142
423007	ELM1PON8000	1/N/PE	8000	11200	510x370x167
423005	ELM1PON10000	1/N/PE	10000	14000	510x370x167

Scan and watch detailed video with all product functions.

This product meets all the technical requirements set by the European Union for the construction of solar systems.

7 YEARS TOTAL WARRANTY
+ 5 standard 2 extended

ON-GRID

10 YEARS WARRANTY

THREE-PHASE (ON-GRID) SOLAR INVERTER SOLIS 6KW, 10KW, 15KW, 20KW AND 30KW

Standard grid inverters are the most commonly used type of inverters for trading electricity or producing electricity for own use. As they cannot run on batteries alone, this means they can only be used during daylight hours. That is, the electricity produced from the solar panels is consumed instantly or returned to the electricity grid for sale.

The inverters come with the additional option of purchasing a Wi-Fi plug-and-play device with catalog No 423050 for remote monitoring, which connects to a dedicated input on them. It can monitor the status of the photovoltage system from a mobile phone or computer at any time and from anywhere in the world with the SolisCloud app. The app is compatible with Android and iOS in 10 different languages. To download the app, scan the code from page 47.

SOLIS-S5-GR3P6K/ 3P
SOLIS- S5-GR3P10K/ 3P
SOLIS- S5-GR3P15K/ 3P
SOLIS-S5-GR3P20K/ 3P
SOLIS-S5-GC30K/ 3P

ADVANTAGES

- Integrated algorithm for Maximum Power Point Tracking (MPPT)
- Integrated EPM (Export Power Manager) function
- Short circuit protection
- DC reverse voltage protection
- Over voltage protection
- Thermal protection
- Network monitoring
- Protection stopping the voltage supply in case of failure of power supply from the mains. This prevents the occasional pop-up of voltage from the system to the network during operation and while in combined mode
- Remote Wi-Fi monitoring

CERTIFICATION

- VDE/ EN/ IEC/ CE/ TUV

See the full range of certificates on www.elmarkholding.eu

TECHNICAL DATA 6KW/ 10KW/ 15KW/ 20KW/ 30KW

- Number of poles: 3/N/PE
- Rated power: 6000W/ 10 000W/ 15 000W/ 20 000W/ 30 000W
- Maximum power of solar panels: 9000W/ 15 000W/22 500W/ 30 000W/ 45 000W
- MPPT operating voltage range: 160-1000VDC
- Maximum input voltage: 1100VDC
- Number of independent outputs (MPP Trackers)/Strings on each output:2/2; 2/2; 2/4; 2/4; 3/6
- EU performance: >98,3%/ 97,9%/ 98%/ 98,1%/ 98.1%
- Display: LCD
- IP code: IP66
- Altitude: up to 4000m
- Ambient temperature: from -25 to 60°C
- Relative humidity: from 0 to 100%
- Weight: 17.8 kg/ 17.8kg/ 18.8kg/ 20kg/ 37kg

Catalogue number	Type	Number of poles	Rated power (W)	Maximum power of solar panels (W)	Dimensions WxHxD (mm)
423019	SOLIS-S5-GR3P6K	3/N/PE	6000	9000	310x563x219
423020	SOLIS- S5-GR3P10K	3/N/PE	10000	15000	310x563x219
423021	SOLIS- S5-GR3P15K	3/N/PE	15000	22500	310x563x219
423022	SOLIS-S5-GR3P20K	3/N/PE	20000	30000	310x563x219
423023	SOLIS-S5-GC30K	3/N/PE	30000	45000	647x629x252

Scan and watch detailed video with all product functions.

These products meet all the technical requirements set by the European Union for the construction of solar systems.

10 YEARS WARRANTY

ELMARK
The Brand of Electricity

ON-GRID

ELM3PON006K
ELM3PON010K
ELM3PON015K
ELM3PON020K

THREE-PHASE (ON-GRID) SOLAR INVERTERS ELMARK 6KW, 10KW, 15KW AND 20KW

The ELMARK ELM3PON series three-phase string inverters are designed for commercial and power plant PV system applications,. All models have uni body housings with aluminum structure which is anodized, increasing durability and effectively prevents corrosion. Equipped with external inductors, the uni body housings can ensure efficient heat dissipation, which significantly improves the reliability and extends the life of the inverters.

The inverter menu is activated by sensor touch buttons. Communication implements are via the Wi-Fi module. Check the system status anytime and anywhere via online portal or smart HOME APP.

ADVANTAGES

- Anti-flow: Ant-feed function
- PV oversize: Max. 1.5 time PV oversize capacity
- Multiple intelligent protection
- Smart IV curve scanning
- Wi-Fi Standard Ethernet
- Configuration: Quick and easy configuration via Wi-FI
- PV Reverse polarity protection
- PV Insulation resistance detection
- AC short circuit protection
- AC over current protection
- AC over voltage protection
- Anti-islanding protection
- Residual current detection
- Over temperature protection
- Integrated DC switch
- Surge protection type III
- Smart IV curve scanning
- Active and reactive power compensation, adjust power factor
- High-quality power output and low THDI

TECHNICAL DATA

- Number of poles: 3P/N/PE
- Rated power: 6KW / 10KW / 15KW / 20KW
- Maximum power of solar panels: 9000W / 15000W / 22500W / 30000W
- MPPT operating voltage range: 150-1000V DC
- Maximum input voltage: 1100VDC and 1000V DC for 30kW
- Number of independent outputs (MPP Trackers)/Strings on each output: 2/2; 2/2; 2/3; 2/4
- EU performance: > 98,3% / 98,7% / 98,7% / 98,75%
- Display: LCD
- Modbus: RS485
- IP code: IP65
- Altitude: up to 4000m
- Ambient temperature: from -25 to 60°C
- Relative humidity: from 0 to 100%
- Weight: 16kg / 15kg / 17kg / 19kg

CERTIFICATION

- INTERTEK/ VDE/ EN/ CE

See the full range of certificates on www.elmarkholding.eu

Catalogue number	Type	Number of poles	Rated power (W)	Maximum power of solar panels (W)	Dimensions WxHxD (mm)
423008	ELM3PON006K	3P/N/PE	6000	9000	510x370x192
423030	ELM3PON010K	3P/N/PE	10000	15000	510x370x192
423031	ELM3PON015K	3P/N/PE	15000	22500	510x370x192
423032	ELM3PON020K	3P/N/PE	20000	30000	535x370x192

Scan and watch detailed video with all product functions.

This product meets all the technical requirements set by the European Union for the construction of solar systems.

7 YEARS TOTAL WARRANTY
+ 5 standard 2 extended

ON-GRID

THREE-PHASE (ON-GRID) SOLAR INVERTERS ELMARK 30KW, 40KW, 50KW AND 60KW

The ELMARK ELM3PON series three-phase string inverters are designed for commercial and power plant PV system applications,. All models have uni body housings with aluminum structure which is anodized, increasing durability and effectively prevents corrosion. Equipped with external inductors, the uni body housings can ensure efficient heat dissipation, which significantly improves the reliability and extends the life of the inverters. The inverter menu is activated by sensor touch buttons. Communication implements are via the Wi-Fi module.

Check the system status anytime and anywhere via online portal or smart HOME APP.

ELM3PON030K
ELM3PON040K
ELM3PON050K
ELM3PON060K

ADVANTAGES

- Anti-flow: Ant-feed function
- PV oversize: Max. 1.5 time PV oversize capacity
- Multiple intelligent protection
- Smart IV curve scanning
- Wi-Fi Standard Ethernet
- Configuration: Quick and easy configuration via Wi-FI
- PV Reverse polarity protection
- PV Insulation resistance detection
- AC short circuit protection
- AC over current protection
- AC over voltage protection
- Anti-islanding protection
- Residual current detection
- Over temperature protection
- Integrated DC switch
- Surge protection type III
- Smart IV curve scanning
- Active and reactive power compensation, adjust power factor
- High-quality power output and low THDI

TECHNICAL DATA

- Number of poles: 3P/N/PE
- Rated power: 30KW/ 40KW/ 50KW/ 60KW
- Maximum power of solar panels: 45000W / 60000 / 75000 / 90000
- MPPT operating voltage range: 200-1000V DC
- Maximum input voltage: 1100VDC
- Number of independent outputs (MPP Trackers)/Strings on each output: 3/6; 3/6; 3/7; 4/8
- EU performance: > 98,5%/ 98,65%/ 98,80%/ 99,00%
- Display: LCD
- Modbus: RS485
- IP code: IP65
- Altitude: up to 4000m
- Ambient temperature: from -25 to 60°C
- Relative humidity: from 0 to 100%
- Weight: 42kg / 43kg / 45kg / 51kg

CERTIFICATION

- INTERTEK/ VDE/ EN/ CE

See the full range of certificates on www.elmarkholding.eu

Catalogue number	Type	Number of poles	Rated power (W)	Maximum power of solar panels (W)	Dimensions WxHxD (mm)
423033	ELM3PON030K	3P/N/PE	30000	45000	712x427x232
423009	ELM3PON040K	3P/N/PE	40000	60000	712x427x232
423010	ELM3PON050K	3P/N/PE	50000	75000	712x427x232
423011	ELM3PON060K	3P/N/PE	60000	90000	712x427x232

Scan and watch detailed video with all product functions.

This product meets all the technical requirements set by the European Union for the construction of solar systems.

7 YEARS TOTAL WARRANTY
+ 5 standard 2 extended

ELMARK
The Brand of Electricity

ON-GRID

THREE-PHASE (ON-GRID) SOLAR INVERTER SOLIS 40KW, 50KW AND 60KW

Standard grid inverters are the most commonly used type of inverters for trading electricity or producing electricity for own use. As they cannot run on batteries alone, this means they can only be used during daylight hours. That is, the electricity produced from the solar panels is consumed instantly or returned to the electricity grid for sale.

The inverter comes with the additional option of purchasing a Wi-Fi plug-and-play device with catalog No 423050 for remote monitoring, which connects to a dedicated input on it. It can monitor the status of the photo-voltaic system from a mobile phone or computer at any time and from anywhere in the world with the SolisCloud app. The app is compatible with Android and iOS in 10 different languages. To download the app, scan the code from page 47

SOLIS-S5-GC40K/ 3P

SOLIS-S5-GC50K/ 3P
SOLIS-S5-GC60K/ 3P

ADVANTAGES

- Integrated algorithm for Maximum Power Point Tracking (MPPT)
- Integrated EPM (Export Power Manager) function
- SVG Function
- Maintains work with aluminum wires to reduce costs for the system
- Short circuit protection
- DC reverse voltage protection
- Surge protection - cathodic arrester type II
- Thermal protection
- Scanning I/V Curves
- Integrated AFCI arc flash protection reducing the risk of fire
- Network monitoring
- Protection stopping the voltage supply in case of failure of power supply from the mains. This prevents the occasional pop-up of voltage from the system to the network during operation and while in combined mode
- Remote Wi-Fi monitoring

TECHNICAL DATA 40KW/ 50KW/ 60KW

- Number of poles: 3/N/PE
- Rated power: 40 000W/ 50 000W/ 60 000W
- MPPT operating voltage range: 200-1000VDC/ 180-1000VDC/ 180-1000VDC
- Maximum input voltage: 1100VDC
- Number of independent outputs (MPP Trackers)/Strings on each output: 4/8; 5/10; 6/12
- EU performance: >98,3%
- Display: LCD
- IP66
- Altitude: up to 4000m
- Ambient temperature: from -25 to 60°C
- Relative humidity: from 0 to 100%
- Weight: 37kg/ 54.5kg/ 54.5kg
- Dimensions (WxHxD): 647x629x252mm/ 691x578x338mm/ 691x578x338

CERTIFICATION

- VDE/ EN/ IEC/ CE/ TUV

See the full range of certificates on www.elmarkholding.eu

Catalogue number	Type	Number of poles	Rated power (W)	MPPT operating voltage range (VDC)	Dimensions WxHxD (mm)
423024	Solis-S5-GC40K	3/N/PE	40000	200-1000	647x629x252mm

** Products are delivered on request, after coordination of a project and preparation of an individual offer.*

Scan and watch detailed video with all product functions.

Catalogue number	Type	Number of poles	Rated power (W)	MPPT operating voltage range (VDC)	Dimensions WxHxD (mm)
423025	Solis-S5-GC50K	3/N/PE	50000	180-1000	691x578x338
423026	Solis-S5-GC60K	3/N/PE	60000	180-1000	691x578x338

** Products are delivered on request, after coordination of a project and preparation of an individual offer.*

Scan and watch detailed video with all product functions.

This product meets all the technical requirements set by the European Union for the construction of solar systems.

7 YEARS TOTAL WARRANTY
7 standard + 0 extended

ON-GRID

THREE-PHASE (ON-GRID) SOLAR INVERTER SOLIS 80KW, 100KW AND 110KW

Standard grid inverters are the most commonly used type of inverters for trading electricity or producing electricity for own use. As they cannot run on batteries alone, this means they can only be used during daylight hours. That is, the electricity produced from the solar panels is consumed instantly or returned to the electricity grid for sale.

The inverters come with the additional option of purchasing a Wi-Fi plug-and-play device with catalog No 423050 for remote monitoring, which connects to a dedicated input on them. It can monitor the status of the photovoltage system from a mobile phone or computer at any time and from anywhere in the world with the SolisCloud app. The app is compatible with Android and iOS in 10 different languages. To download the app, scan the code from page 47.

SOLIS-80K-5G/ 3P
SOLIS-100K-5G/ 3P
SOLIS-110K-5G/ 3P

ADVANTAGES

- Integrated algorithm for Maximum Power Point Tracking (MPPT)
- Integrated EPM (Export Power Manager) function
- SVG Function
- Supports working with aluminum wires to reduce system costs
- Short circuit protection
- DC reverse voltage protection
- Surge protection - cathodic arrester type II
- Thermal protection
- Scanning I/V Curves
- Integrated AFCI arc flash protection reducing the risk of fire
- Network monitoring
- Protection stopping the voltage supply in case of failure of power supply from the mains. This prevents the occasional pop-up of voltage from the system to the network during operation and while in combined mode
- Remote Wi-Fi monitoring

TECHNICAL DATA 80KW, 100KW AND 110KW

- Number of poles: 3/N/PE
- Rated power: 80 000W/ 100 000W/ 110 000W
- MPPT operating voltage range: 180-1000VDC
- Maximum input voltage: 1100VDC
- Number of independent outputs (MPP Trackers)/Strings on each output: 9/18; 10/20; 10/20
- EU performance: >98,3%
- Display: LCD
- IP66
- Altitude: up to 4000m
- Ambient temperature: from -25 to 60°C
- Relative humidity: from 0 to 100%
- Weight: 82kg/ 91kg/ 91kg
- Dimensions (WxHxD):1050x567x315mm/ 1065x567x345mm/ 1065x567x345 mm

CERTIFICATION

- VDE/ EN/ IEC/ CE/ TUV

See the full range of certificates on www.elmarkholding.eu

Catalogue number	Type	Number of poles	Rated power (W)	MPPT operating voltage range (VDC)	Dimensions WxHxD (mm)
423027	Solis-80K-5G	3/N/PE	80000	180-1000	1050x567x315
423028	Solis-100K-5G	3/N/PE	100000	180-1000	1065x567x345
423029	Solis-110K-5G	3/N/PE	110000	180-1000	1065x567x345

** Products are delivered on request, after coordination of a project and preparation of an individual offer.*

Scan and watch detailed video with all product functions.

7 YEARS TOTAL WARRANTY
+ 7 standard
0 extended

These products meet all the technical requirements set by the European Union for the construction of solar systems.

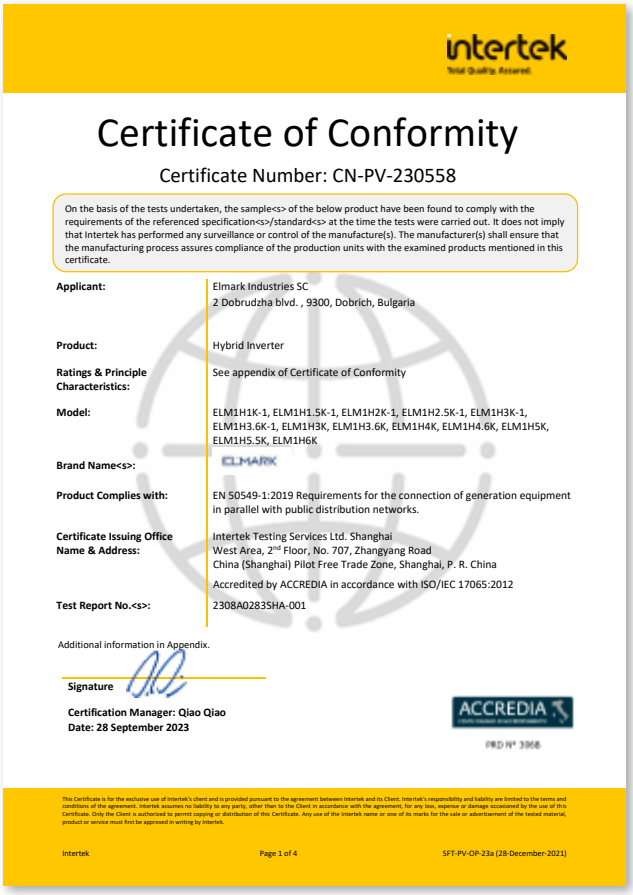
HYBRID SOLAR INVERTERS

HYBRID SOLAR INVERTERS WITH CAPACITIES FROM 3kW TO 20kW

ELMARK's hybrid inverter options range from 3kW to 20kW. They have a mode of operation that completely excludes the need for existing power supply from the grid, as well as in combined mode connected to the grid and to a battery.

CERTIFICATION

- INTERTEK/ VDE/ EN/ CE



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Certificate of Conformity

Certificate Number: CN-PV-230558

On the basis of the tests undertaken, the sample<s> of the below product have been found to comply with the requirements of the referenced specification<s>/standard<s> at the time the tests were carried out. It does not imply that Intertek has performed any surveillance or control of the manufacture(s). The manufacturer(s) shall ensure that the manufacturing process assures compliance of the production units with the examined products mentioned in this certificate.

Applicant:	Elmark Industries SC 2 Dobrudzha blvd. , 9300, Dobrich, Bulgaria
Product:	Hybrid Inverter
Ratings & Principle Characteristics:	See appendix of Certificate of Conformity
Model:	ELM1H1K-1, ELM1H1.5K-1, ELM1H2K-1, ELM1H2.5K-1, ELM1H3K-1, ELM1H3.6K-1, ELM1H3K, ELM1H3.6K, ELM1H4K, ELM1H4.6K, ELM1H5K, ELM1H5.5K, ELM1H6K
Brand Name<s>:	ELMARK
Product Complies with:	EN 50549-1:2019 Requirements for the connection of generation equipment in parallel with public distribution networks.
Certificate Issuing Office Name & Address:	Intertek Testing Services Ltd. Shanghai West Area, 2nd Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China Accredited by ACCREDIA in accordance with ISO/IEC 17065:2012
Test Report No.<s>:	2308A0283SHA-001

Additional information in Appendix.

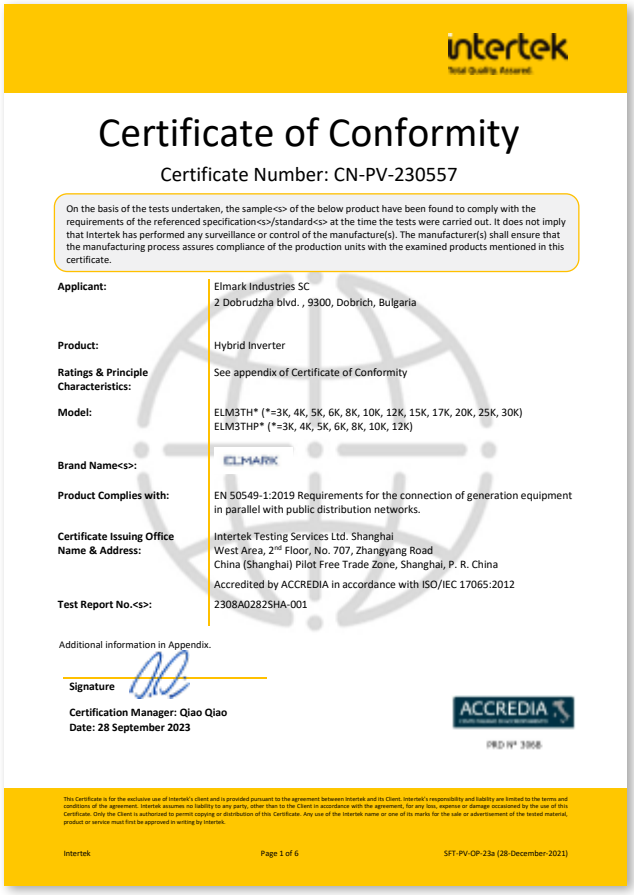
Signature

Certification Manager: Qiao Qiao
Date: 28 September 2023

ACCREDIA
PRD N° 3868

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Intertek Page 1 of 4 SFT-PV-OP-23a (28-December-2021)



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Certificate of Conformity

Certificate Number: CN-PV-230557

On the basis of the tests undertaken, the sample<s> of the below product have been found to comply with the requirements of the referenced specification<s>/standard<s> at the time the tests were carried out. It does not imply that Intertek has performed any surveillance or control of the manufacture(s). The manufacturer(s) shall ensure that the manufacturing process assures compliance of the production units with the examined products mentioned in this certificate.

Applicant:	Elmark Industries SC 2 Dobrudzha blvd. , 9300, Dobrich, Bulgaria
Product:	Hybrid Inverter
Ratings & Principle Characteristics:	See appendix of Certificate of Conformity
Model:	ELM3TH* (*=3K, 4K, 5K, 6K, 8K, 10K, 12K, 15K, 17K, 20K, 25K, 30K) ELM3THP* (*=3K, 4K, 5K, 6K, 8K, 10K, 12K)
Brand Name<s>:	ELMARK
Product Complies with:	EN 50549-1:2019 Requirements for the connection of generation equipment in parallel with public distribution networks.
Certificate Issuing Office Name & Address:	Intertek Testing Services Ltd. Shanghai West Area, 2nd Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China Accredited by ACCREDIA in accordance with ISO/IEC 17065:2012
Test Report No.<s>:	2308A0282SHA-001

Additional information in Appendix.

Signature

Certification Manager: Qiao Qiao
Date: 28 September 2023

ACCREDIA
PRD N° 3868

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Intertek Page 1 of 6 SFT-PV-OP-23a (28-December-2021)

The full range of available certificates can be found on www.elmarkholding.eu

ELMARK
The Brand of Electricity

HYBRID

SINGLE-PHASE HYBRID SOLAR INVERTER 3KW ELMARK ELM1H3K WITH POSSIBILITY TO PARALLEL COUPLING

ELMARK low voltage Series storage Inverters are designed to increase energy independence for homeowners. ELM1H3K is compatible with low voltage (40-60V) batteries. Energy management is based on time-of-use and demand charge rate structures, significantly reduce the amount of energy purchased from the public grid.
UPS function (switch time < 10ms), enables the crucial loads power on during outages. Additionally, under the backup operation mode, the inverter provides you up to 150% peak output overloading. The ELM1H3K low voltage series storage inverters integrated with Arc Fault Circuit Interrupter (AFCI) and Rapid Shutdown.

Check the system status anytime and anywhere via online portal or smart HOME APP.

Google Play

App Store

Scan and watch detailed video with all product functions.

Catalogue number:

423071

ADVANTAGES

- UPS function
- Support generator and wind turbine
- Ability to operate up to 6 inverters in parallel
- and increase system power up to 18kW.
- Anti-flow: Ant-feed function
- PV oversize: Max. 1.5 time PV oversize
- capacity
- Multiple intelligent protection
- Smart monitoring & remote firmware
- upgrade
- PV Reverse polarity protection
- Over current/ voltage protection
- Anti-islanding protection
- AC short circuit protection
- Residual current detection
- Ground fault monitoring
- Insulation resister detection
- PV arc detection

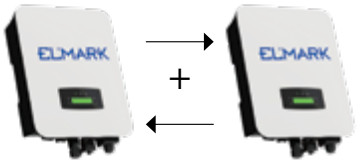
CERTIFICATION

- INTERTEK/ VDE/ EN/ CE

See the full range of certificates on www.elmarkholding.eu

TECHNICAL DATA

- Number of poles: 1P/N/PE
- Rated power: 3KW
- Maximum power of solar panels: 4500W
- MPPT operating voltage range: 80-500V DC
- Maximum input voltage: 550VDC
- Number of independent outputs
- (MPP Trackers)/Strings on each output: 2/2
- Battery voltage: 40-60VDC
- Battery Type: Lithium/Lead Acid
- Charging current: 80A
- EU performance: > 97,6%
- Display: LCD
- Modbus: RS485
- IP code: IP65
- Altitude: up to 4000m
- Ambient temperature: from -25 to 60°C
- Relative humidity: from 0 to 100%
- Weight: 17kg
- Dimension (WxHxD): 513x370x192mm



Increase the power to 6kW with parallel coupling.

This product meets all the technical requirements set by the European Union for the construction of solar systems.

7 YEARS TOTAL WARRANTY
7 standard
0 extended

HYBRID

10 YEARS WARRANTY

SINGLE-PHASE (HYBRID) SOLAR INVERTER SOLIS 3.6KW SOLIS- S5-EH1P3.6K-L

It is an OFF-GRID solar inverter with an integrated charge controller, making it an ideal power generation solution for locations where there is no electrical grid or as a backup power supply.
It requires solar panels, a battery or an electrical grid to operate. The inverter comes with the additional option of purchasing a Wi-Fi plug-and-play device with catalog No 423050 for remote monitoring, which connects to a dedicated input on it. It can monitor the status of the photo voltaic system from a mobile phone or computer at any time and from anywhere in the world with the SolisCloud app. The app is compatible with Android and iOS in 10 different languages. The inverter does not offer the possibility to connect multiple devices in parallel.

S5-EH1P3.6K-L/ 1P

Google Play

App Store

Catalogue number:

423043

Scan and watch detailed video with all product functions.

ADVANTAGES

- Integrated MPPT controller
- Uninterrupted power supply, 20ms reaction
- AFCI protection, proactively reduces fire risk
- With shifting and peak shaving capabilities friendly to grid
- Higher charge-discharge efficiency, improving the economic benefits
- Multiple working modes to make maximize self-consumption, increase benefit
- 24-hour fully intelligent energy management, Real-time grasp of PV plant status
- Remotely control & upgrade function, making digital power plant maintenance at your fingertips
- Intelligent EMS function, improving battery's reliability
- Max. string input current 15A
- With high-frequency isolation technology, making system safer and long lifespan
- Compatible with lithium & lead-acid batteries, increased more choice in different markets
- Short circuit protection
- DC reverse voltage protection
- Over voltage protection
- Integrated AFCI arc flash protection reducing the risk of fire
- Remote Wi-Fi monitoring

CERTIFICATION

- VDE/ EN/ IEC/ CE/ TUV

See the full range of certificates on www.elmarkholding.eu

TECHNICAL DATA

- Number of poles: 1/N/PE
- Rated power: 3600W
- Maximum power of solar panels: 5700W
- Rated output backup power: 3kW
- MPPT operating voltage range: from 90 to 520VDC
- Maximum input voltage: 600VDC
- Number of independent outputs (MPP Trackers)/Strings on each output: 2/2
- THDv (linear load): <2%
- THDi: <2%
- Power reduction at 45°C: ≤ 3%
- Battery voltage: 42-58VDC
- Battery Type: Lithium/Lead Acid
- Charging current: 62.5A
- EU performance: >96,5%
- Display: 7.0"LCD color screen display
- IP65
- Altitude: up to 3000m
- Ambient temperature: from -25 to 60°C
- Weight: 18.3kg
- Dimensions (WxHxD): 333x505x249mm

This product meets all the technical requirements set by the European Union for the construction of solar systems.

10 YEARS WARRANTY

ELMARK
The Brand of Electricity

HYBRID

10 YEARS WARRANTY

SOLIS-S5-EH1P5K-L

SINGLE-PHASE HYBRID SOLAR INVERTER SOLIS 5KW- SOLIS-RHI-5K-48ES

It is an hybrid solar inverter with an integrated charge controller, making it an ideal power generation solution for locations where there is no electrical grid or as a backup power supply.

It requires solar panels, a battery or an electrical grid to operate. The inverter comes with the additional option of purchasing a Wi-Fi plug-and-play device with catalog No 423050 for remote monitoring, which connects to a dedicated input on it. It can monitor the status of the photo-voltaic system from a mobile phone or computer at any time and from anywhere in the world with the SolisCloud app. The app is compatible with Android and iOS in 10 different languages. To download the app, scan the code from page 47. The inverter does not offer the possibility to connect multiple devices in parallel.

Catalogue number:

423041

ADVANTAGES

- Integrated MPPT controller
- Intelligent Energy Management System (EMS) function, improving the reliability of the battery
- Built-in controller monitoring battery charge and discharge rates
- Short circuit protection
- DC reverse voltage protection
- Surge protection
- Integrated AFCI arc flash protection reducing the risk of fire
- Remote Wi-Fi monitoring
- Multiple operating modes to optimize system benefits

CERTIFICATION

- VDE/ EN/ IEC/ CE/ TUV

See the full range of certificates on www.elmarkholding.eu

TECHNICAL DATA

- Number of poles: 1/N/PE
- Rated power: 5000W
- Maximum power of solar panels: 8000W
- MPPT operating voltage range: from 90 to 520VDC
- Maximum input voltage: 600VDC
- Number of independent outputs (MPP Trackers)/Strings on each output: 2/2
- THDv (linear load): <2%
- THDi: <2%
- Power reduction at 45°C: ≤ 3%
- Battery voltage: 42-58VDC
- Battery type: Lithium/Lead Acid
- Charging current: 100A
- EU performance: >96,8%
- Display: LCD
- IP65
- Altitude: up to 2000m
- Ambient temperature: from -25 to 60°C
- Weight: 18.3kg
- Dimensions (WxHxD): 340x510x250mm

Scan and watch detailed video with all product functions.

This product meets all the technical requirements set by the European Union for the construction of solar systems.

10 YEARS WARRANTY

HYBRID

SINGLE-PHASE HYBRID SOLAR INVERTER 5KW ELMARK ELM1H5K WITH POSSIBILITY TO PARALLEL COUPLING

The ELMARK ELM1H5K low voltage Series storage Inverters are designed to increase energy independence for homeowners. ELM1H5K is compatible with low voltage (40-60V) batteries.
Energy management is based on time-of-use and demand charge rate structures, significantly reduce the amount of energy purchased from the public grid.

Thanks for the UPS function (switch time < 10ms), enables the crucial loads power on during outages. Additionally, under the backup operation mode, the inverter provides you up to 150% peak output overloading.
ELM1H5K is inverter integrated with Arc Fault Circuit Interrupter (AFCI) and Rapid Shutdown.

Check the system status anytime and anywhere via online portal or smart HOME APP.

ELM1H5K

Catalogue number:

423036

ADVANTAGES

- UPS function
- Support generator and wind turbine
- Ability to operate up to 6 inverters in parallel and increase system power up to 30kW.
- Anti-flow: Ant-feed function
- PV oversize: Max. 1.5 time PV oversize capacity
- Multiple intelligent protection
- Smart monitoring & remote firmware upgrade
- PV Reverse polarity protection
- Over current/ voltage protection
- Anti-islanding protection
- AC short circuit protection
- Residual current detection
- Ground fault monitoring
- Insulation resistance detection
- PV arc detection

CERTIFICATION

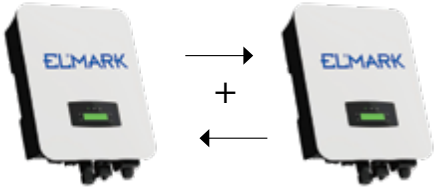
- INTERTEK/ VDE/ EN/ CE

See the full range of certificates on www.elmarkholding.eu

TECHNICAL DATA

- Number of poles: 1P/N/PE
- Rated power: 5KW
- Maximum power of solar panels: 7500W
- MPPT operating voltage range: 80-500V DC
- Maximum input voltage: 550VDC
- Number of independent outputs (MPP Trackers)/Strings on each output: 2/2
- Battery voltage: 40-60VDC
- Battery Type: Lithium/Lead Acid
- Charging current: 80A
- EU performance: > 97,6%
- Display: LCD
- Modbus: RS485
- IP code: IP65
- Altitude: up to 4000m
- Ambient temperature: from -25 to 60°C
- Relative humidity: from 0 to 100%
- Weight: 17kg
- Dimension (WxHxD): 513x370x192mm

Scan and watch detailed video with all product functions.



Increase the power to 10kW with parallel coupling

This product meets all the technical requirements set by the European Union for the construction of solar systems.

7 YEARS TOTAL WARRANTY
+ 5 standard 2 extended

HYBRID

10 YEARS WARRANTY

RHI-3P6K-HVES-5G/ 3P
RHI-3P10K-HVES-5G/ 3P

THREE-PHASE HYBRID SOLAR INVERTER SOLIS 6KW AND 10KW- RHI-3P6K-HVES-5G AND RHI-3P10K-HVES-5G

These are hybrid solar inverters with integrated charge controllers, making them an ideal power generation solution for locations where there is no power grid or as backup power supply.

They require solar panels, a battery or an electrical grid to operate. The inverters come with the additional option of purchasing a Wi-Fi plug-and-play device with catalog No 423050 for remote monitoring, which connects to a dedicated input on them. It can monitor the status of the photovoltaic system from a mobile phone or computer at any time and from anywhere in the world with the SolisCloud app. The app is compatible with Android and iOS in 10 different languages. To download the app, scan the code from page 47. The inverter does not offer the possibility to connect multiple devices in parallel.

ADVANTAGES

- Maximum efficiency 98.4%
- Three modes of operation (on own consumption, during use and off-grid back-up
- Built-in controller monitoring battery charge and discharge rates
- Integrated MPPT controller
- Intelligent Energy Management System (EMS) function, improving the reliability of the battery
- Short circuit protection
- DC reverse voltage protection
- Surge protection
- Integrated AFCI arc flash protection reducing the risk of fire
- Protection stopping the voltage supply in case of failure of power supply from the mains. This prevents the occasional pop-up of voltage from the system to the network during operation and while in combined mode
- Remote Wi-Fi monitoring

TECHNICAL DATA:

- Number of poles: 3/N/PE
- Rated power: 6000W /10 000W
- Maximum power of solar panels: 9600W/16 000W
- MPPT operating voltage range: from 200 to 850VDC
- Maximum input voltage: 1000VDC
- Number of independent outputs (MPP Trackers)/Strings on each output: 2/2; 2/4
- Battery voltage: 160-600VDC
- Battery type: Li-ion
- Charging current: 25A
- EU performance: >97,7%
- Display: LCD
- IP65
- Altitude: up to 4000m
- Ambient temperature: from -25 to 60°C
- Humidity range: from 0 to 100%
- Weight: 25.1kg
- Dimensions (WxHxD): 535x455x185mm

CERTIFICATION

- VDE/ EN/ IEC/ CE/ TUV

See the full range of certificates on www.elmarkholding.eu

Catalogue number	Type	Number of poles	Rated power (W)	Maximum power of solar panels	Dimensions WxHxD (mm)
423044	RHI-3P6K-HVES-5G	3/N/PE	6000	9600	535x455x185
423045	RHI-3P10K-HVES-5G	3/N/PE	10000	16 000	535x455x185

Scan and watch detailed video with all product functions.

These products meet all the technical requirements set by the European Union for the construction of solar systems.

THREE-PHASE HYBRID SOLAR INVERTERS 10KW, 15KW AND 20KW ELMARK WITH POSSIBILITY TO PARALLEL COUPLING

The ELMARK ELM3TH low voltage Series storage Inverters are designed to increase energy independence for homeowners and commercial users. They are compatible with high voltage (150-800V) batteries. Energy management is based on time-of-use and demand charge rate structures, significantly reduce the amount of energy purchased from the public grid.

Thanks for the UPS function (switch time < 10ms), enables the crucial loads power on during outages. Additionally, under the backup operation mode, the inverter provides you up to 150% peak output overloading.
ELM3TH is inverter integrated with Arc Fault Circuit Interrupter (AFCI) and rapid shutdown.

Check the system status anytime and anywhere via online portal or smart HOME APP.

ELM3TH10K
ELM3TH15K
ELM3TH20K

ADVANTAGES

- UPS function
- Support generator and wind turbine
- Ability to operate up to 6 inverters in parallel and increase system power up to 120kW.
- Support unbalance load
- Anti-flow: Ant-feed function
- PV oversize: Max. 1.5 time PV oversize capacity
- Multiple intelligent protection
- Smart: Smart monitoring & remote firmware upgrade
- PV Reverse polarity protection
- Over current/ voltage protection
- Anti-islanding protection
- AC short circuit protection
- Residual current detection
- Ground fault monitoring
- Insulation resister detection
- PV arc detection

TECHNICAL DATA

- Number of poles: 3P/N/PE
- Rated power: 10KW/ 15KW/ 20KW
- Maximum power of solar panels: 15KW/ 22.5kW/ 30kW
- MPPT operating voltage range: 150-850V DC
- Maximum input voltage: 1000VDC
- Number of independent outputs (MPP Trackers)/Strings on each output: 2/2; 2/4; 2/4
- Battery voltage: 150-800VDC
- Battery Type: Lithium/Lead Acid
- Charging current: 30A; 50A; 50A
- EU performance: > 98,3%; 98,3%; 97,8%
- Display: LCD
- Modbus: RS485
- IP code: IP65
- Altitude: up to 4000m
- Ambient temperature: from -25 to 60°C
- Relative humidity: from 0 to 100%
- Weight: 22kg; 28kg; 28kg
- Dimension (WxHxD): 588x426x250mm

CERTIFICATION

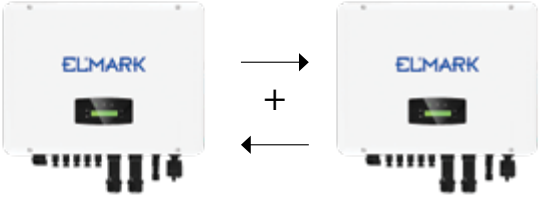
- INTERTEK/ VDE/ EN/ CE

See the full range of certificates on www.elmarkholding.eu

7 YEARS TOTAL WARRANTY
+ 5 standard 2 extended

Scan and watch detailed video with all product functions.

Catalogue number	Type	Number of poles	Rated power (W)	Maximum power of solar panels (W)	Dimensions WxHxD (mm)
423037	ELM3TH10K	3P/N/PE	10000	15000	588x426x250
423072	ELM3TH15K	3P/N/PE	15000	22500	588x426x250
423038	ELM3TH20K	3P/N/PE	20000	30000	588x426x250



By connecting up to 6 inverters in parallel, you can get power from 60 to 120kW

This product meets all the technical requirements set by the European Union for the construction of solar systems.

10 YEARS WARRANTY

RAI-3K-48ES-5G/ 1P

SINGLE-PHASE INVERTER SOLIS FOR UPGRADE ON-GRID SYSTEM WITH OFF-GRID FUNCTIONALITY 3KW- RAI-3K-48ES-5G

The AC-Coupled inverter is used for upgrade the existing on-grid single pole Solis power generation system to a hybrid system which can work with batteries to optimize self-consumption. The energy storage inverter is a good choice for ON-GRID and OFF-GRID integrated storage solutions.

The inverters come with the additional option of purchasing a Wi-Fi plug-and-play device with catalog No 423050 for remote monitoring, which connects to a dedicated input on them.
It can monitor the status of the photo-voltaic system from a mobile phone or computer at any time and from anywhere in the world with the SolisCloud app. The app is compatible with Android and iOS in 10 different languages. To download the app, scan the code from page 423.

Catalogue number:

423040

ADVANTAGES

- Compatible with any ON-GRID SOLIS SYSTEM
- Compatible with both li-ion battery and lead-acid battery
- Built-in controller monitoring battery charge and discharge rates
- OFF-GRID, back-up function
- Minimum/maximum voltage protection of the battery
- Battery protection at wrong poles connection
- Thermal protection
- Intelligent Energy Management System (EMS) function, improving the reliability of battery
- Remote Wi-Fi monitoring

CERTIFICATION

VDE/ EN/ IEC/ CE/ TUV
See the full range of certificates on www.elmarkholding.eu

TECHNICAL DATA

- Number of poles: 1/N/PE
- Rated power: 3000W
- Maximum input voltage: 1000VDC
- THDv (linear load): <3%
- THDi: <3%
- Power reduction at 45°C: ≤ 3%
- Battery voltage: 40-60VDC
- Battery type: Li-ion/lead acid
- Charging current: 60A
- Maximum charging efficiency: >94,0%
- Maximum discharge efficiency: >94,5%
- Display: LCD
- IP65
- Altitude: up to 2000m
- Ambient temperature: from -25 to 60°C
- Weight: 15kg
- Dimensions (WxHxD): 403x525x170mm

Scan and watch detailed video with all product functions.

This product meets all the technical requirements set by the European Union for the construction of solar systems.

10 YEARS WARRANTY

EPM1-5G

Catalogue number:
423053

SOLIS EXPORT MANAGER EPM1-5G

The Solis export power manager is the ideal solution for smart energy management for both residential and commercial systems. The unit allows you to adjust export values to satisfy local network regulatory requirements. Energy management with the Solis export power manager allows for higher self-consumption and efficient use of the locally generated PV power. Solis Export Power Manager EPM1-5G can control up to 10 inverters connected to it.

ADVANTAGES

- Simultaneous control and monitoring of 10 inverter
- Supports "Δ" and "Y" grid systems and single-phase grids to reduce system changes
- Realizing reactive compensation of the system
- The control accuracy is up to 3%, which improves the system's spontaneous use rate
- Supports simultaneous access to Solis inverters with different capacities

TECHNICAL DATA

- Supported devices: all Solis-branded inverters
- Rated voltage: 230 V, 1/N/PE
- Input voltage range: L to N: 100~ 300 V (L-N)
- Input frequency range: 45~65 Hz
- Communication with the inverter: Modbus 485
- Monitoring: Wi-Fi stick
- Maximum communication distance: up 1000 m
- Maximum number of managing inverters: 10
- Display: LCD
- IP code: IP65
- Relative humidity: 5- 95%
- Ambient temperature: from -25 up 60°C
- Weight: 2.1kg

EPM3-5G

Catalogue number:
423051

SOLIS EXPORT MANAGER EPM3-5G

Thanks to Solis Export Power Manager EPM3-5G, you can adjust the export values of energy produced. This is an ideal solution for intelligent management of the energy produced for own needs and to meet the regulatory requirements of the local energy distribution company.
Solis Export Power Manager EPM3-5G can control up to 10 inverters connected to it.

ADVANTAGES

- Simultaneous control and monitoring of 10 inverter
- Supports "Δ" and "Y" networks, as well as single-phase
- Compensates for harmful harmonics and provides a power factor within normal limits
- High steering accuracy with deviation up 3%
- Supports simultaneous access to Solis inverters with different capacities

TECHNICAL DATA

- Supported devices: all Solis-branded inverters
- Rated voltage: 400 V, 3/N/PE or 3/PE
- Input voltage range: L to N: 100~277 V; L to L: 176~480 V
- Communication with the inverter: Modbus RS485 with two-pin RS485 cable
- Monitoring: Wi-Fi stick
- Maximum length of the connecting cable: up 1000 m
- Maximum number of managing inverters: 10
- Display: LCD
- IP code: IP65
- Relative humidity: 5- 95%
- Ambient temperature: from -25 up 60°C
- Weight: 2.1kg

Catalogue number:
423050

WI-FI DEVICE FOR CONTROL AND ANALYSIS

The Solis monitoring system is focused on remote service and maintenance of the built system. This is achieved thanks to a Wi-Fi plug-and-play device that can be placed on any SOLIS-branded inverter. The monitoring possibility provides users with accurate and comprehensive data analysis, as well as timely notification of damage.

ADVANTAGES

- Easy installation - plug-and-play
- Real-time damage alarm
- Status indication
- Reset debugging button

TECHNICAL DATA

- Supported devices: all Solis-branded inverters
- Operating voltage: 5 VDC (+/-5%)
- Indicator light: LED x 3
- Power Consumption 5W
- Configuration method: APP/WEB
- Data storage: 4MB
- IP code: IP65
- Relative humidity: 5- 95%
- Ambient temperature: from -40 to 70°C
- Weight: 80g

ELMARK
The Brand of Electricity

ACCESSORIES FOR SOLAR INVERTERS

The „Smart Meter" is an important element in the construction of a photo-voltaic system, especially in cases where we do not have a contract for the sale of produced energy to the local energy distribution company. When daytime production exceeds consumption, excess energy is returned to the grid and charged as consumed. To avoid this, a Smart Meter must be added to the system. Its function is to continuously (24/7) monitor the consumption at the customer premises and feed this information to the inverter. By receiving the information from the meter, the inverter knows at all times whether the produced energy is more than consumption. When the production values exceed the consumed power, the inverter instantly reduces its production so that it is equal to or less than the on-site consumption, thus avoiding energy being fed back into the grid.

SOLIS SINGLE-PHASE SMART METER DDSD1352

A three-phase DDSD1352 electricity meter can be used in all types of control systems, including SCADA. It is distinguished by high accuracy, small dimensions, and easy installation. It is used for measuring and managing multiple electrical parameters, providing data for the previous 12 months, on the condition of harmonics, realizes remote switching and control with switching of input and relay output with the possibility of alarm notification.

Catalogue number:

423060

ADVANTAGES

- Measurement of a wide range of parameters
- Easy parameter adjustment using 3 buttons
- Multi-tariff - four tariffs
- 4 time zones, 2 time interval channels with 14 intervals per day
- Voltage drop or over voltage warning

TECHNICAL DATA

- Input voltage: 220V AC
- Rated current: 10A
- Maximum current: 60A
- Accuracy class: 1
- Measuring range: 000000.00~99999999kWh
- Measurement parameters: voltage, current, active, reactive and power factor, power factor, frequency
- Constant: 1600imp/kWh
- Protocol: MODBUS-RTU
- Communication: Infrared
- Display: 8 Bit LCD
- Dimensions (LxHxW): 36x88x70mm

** Smart meter DDSD1352 is compatible with all 1P solar inverters SOLIS.*

Scan and watch detailed video with all product functions.

SOLIS THREE-PHASE SMART METER DTSD1352

A three-phase DTSD1352 electricity meter can be used in all types of control systems, including SCADA. Designed for power supply systems, industrial mining enterprises and utilities. It is distinguished by high accuracy, small dimensions and easy installation. It is used for measuring and managing multiple electrical parameters, providing data for the previous 48 months, on the condition of harmonics, including the 31st harmonic, realizes remote switching and control with switching of input and relay output with the possibility of alarm notification.

Catalogue number:

423061

ADVANTAGES

- Measurement of a wide range of parameters
- Easy parameter adjustment using 4 buttons
- Multi-tariff - four tariffs
- 4 time zones, 2 time interval channels with 14 intervals per day
- Voltage drop or over voltage warning

TECHNICAL DATA

- Voltage: 3×100V, 3×380V, 3×57.7/100V, 3×220/380V
- Resistance: >2MΩ
- Rated current: 3×1(6)A
- Maximum current: 3×10(80)A
- Deviation: ±0.2%
- Accuracy class: active energy 1; reactive energy 2
- Measuring range: 000000.00~99999999kWh
- Measurement parameters: voltage, current, active, reactive and apparent power factor, power factor, frequency
- Constant: 6400imp/kWh
- Communication protocol: MODBUS-RTU
- Communication interface: RS485, Infrared
- Display: 8 Bit LCD
- Dimensions (LxHxW): 126.5x88.2x69.5mm

** Smart meter DTSD1352 is compatible with all 3P solar inverters SOLIS.*

Scan and watch detailed video with all product functions.

ELMARK SINGLE-PHASE SMART METER ELM- KW10S

ELMARK smart meter is an intelligent control device, which is designed for grid-connected inverters. Its main function is to measure the generation and consumption, transmit the data to the inverter through RS485 communication, to ensure that the generated power of the inverter is less or equal to the user's load.

Catalogue number:

423062

TECHNICAL DATA

- Rated power: 10kW
- Max. power: 18kW
- Accuracy: 1%
- Rated voltage: 230V
- Voltage range: 184-253V
- Rated current: 50A
- Max. current: 80A
- Connection for measurement: Direct connection
- Frequency range: 45-65Hz
- Grid type: L+N
- Communication: RS485
- IP code: IP20
- Mounting: on DIN-Rail
- Dimensions (LxWxH): 100x30x65mm

** Smart meter ELM- KW10S is compatible with all 1P solar inverters ELMARK.*

Scan and watch detailed video with all product functions.

SINGLE-PHASE SMART METER DDSU666-CT

Type DDSU666-CT single phase electronic energy meter is designed based on power monitoring and energy metering demands for electric power system, communication industry, construction industry, etc. as a new generation of intelligent instrument combining measurement and communication function, mainly applied into the measurement and display for the electric parameters in the electric circuit including voltage, current, power, frequency, power factor, active energy, etc. The network can be realized through RS485 communication interface and external device. DIN rail mounting and modular design, it is characterized with small volume, easy installation and easy networking, widely applied into the internal energy monitoring and assessment for industrial and mining enterprises, hotels, schools, large public buildings.

Catalogue number:

423066

TECHNICAL DATA

- Current measurement range: 0-100A
- Measurement class: 1
- Voltage measurement accuracy: ± 0.5%
- Current / Power / Energy measurement accuracy: ±1%
- Frequency measurement accuracy: ± 0,01Hz
- Input voltage: 176 - 288VAC
- Power consumption: ≤ 0.8W
- Accessories: 1 CT150A/5A
- Grid type: 1P+N
- Communication: RS485 Modbus-RTU
- Baud rate: 9600bps
- Communication: RS485
- IP code: IP20
- Mounting: on DIN-Rail
- Dimensions (LxWxH): 100x36x65.5mm
- Operating temperature range: from -25 to 60°C
- Operating humidity: 5- 95% (non-condensing)

**Smart meter DDSU666-CT is compatible with all 1P solar inverters ELMARK*

Scan and watch detailed video with all product functions.

ELMARK TRIPLE-PHASE SMART METER ELM- KW50T

ELMARK smart meter is an intelligent control device, which is designed for grid-connected inverters. Its main function is to measure the generation and consumption, transmit the data to the inverter through RS485 communication, to ensure that the generated power of the inverter is less or equal to the user's load.

Catalogue number:

423063

TECHNICAL DATA

- Rated power: 50kW
- Max. power: 55kW
- Accuracy: 1%
- Rated voltage: 230/400V
- Voltage range: 320-440V
- Rated current: 72.5A
- Max. current: 80A
- Connection for measurement:

Direct connection

- Frequency range: 45-65Hz
- Grid type: 3P+N
- Communication: RS485
- IP code: IP20
- Mounting: on DIN-Rail
- Dimensions (LxWxH): 100x70x65mm

** Smart meter ELM- KW50T is compatible with all 3P solar inverters ELMARK.*

Scan and watch detailed video with all product functions.

ELMARK TRIPLE-PHASE SMART METER ELM- KW130T

ELMARK smart meter is an intelligent control device, which is designed for grid-connected inverters. Its main function is to measure the generation and consumption, transmit the data to the inverter through RS485 communication, to ensure that the generated power of the inverter is less or equal to the user's load.

Catalogue number:

423064

TECHNICAL DATA

- Rated power: 130kW
- Max. power: 150kW
- Accuracy: 1%
- Rated voltage: 230/400V
- Voltage range: 320-440V
- Rated current: 3x200A (CT max. 3x5000A)
- Max. current: 3x220A (CT max. 3x5000A)
- Grid type: 3P+N
- Communication: RS485
- IP code: IP20
- Mounting: on DIN-Rail
- Dimensions (LxWxH): 100x70x65mm

** Smart meter ELM- KW130T is compatible with all 3P solar inverters ELMARK.*

Scan and watch detailed video with all product functions.

ELMARK
The Brand of Electricity

BATTERIES FOR SOLAR POWER SYSTEMS

10 YEARS WARRANTY

Catalogue number:
98BAT2400LFP

UHOME LFP BATTERY (LIFEPO4) 2400W FOR SINGLE PHASE HYBRID INVERTERS

ADVANTAGES

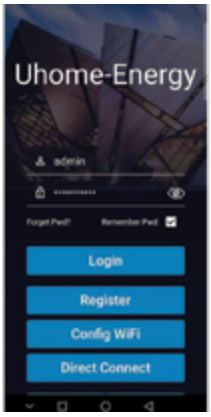
This type of battery offers many advantages, such as longer life, no maintenance, outstanding safety and improved discharge and charge efficiency compared to lead-acid batteries. They are suitable for high power storage, for frequent loads and for installation in places where space is limited (battery size is 442x500x133mm). The manufacturer of the Uhome LFP battery guarantees more than 6000 cycles of deep discharge at 95% of the battery capacity. This is achieved through an integrated BMS control system that monitors voltage, current, temperature and cell status, balancing charging and discharging to increase cell life. The ability to connect up to 8 batteries in parallel increases the capacity of the system by increasing the time of use or to power more powerful consumers.

FEATURES

- Environmentally friendly product, non-toxic and non-polluting environment
- The material used to make the product is made of LiFePO4 for safe use and numerous life cycles
- The Battery Management System (BMS) has a protective safety against overcharge, peak current, low voltage, short circuit and high temperature.
- The system can automatically control overcharge processes and balance current and voltage levels at the level at the unit level module in a group of several connected batteries.
- It has its own cooling system at low noise levels.
- Low self-discharge rates. The battery can last up to 6 months without charging.
- It does not remember situations where a shallow charge or discharge is required
- The operating temperature range is from -10° to 55°C (When charging 0~50°C; When discharging -10~55°C)
- Compact and modern design, that fits into any room.
- Compatible with a wide range of hybrid inverters available on the market.

TECHNICAL DATA

- Rated voltage: 48-56V DC
- Rated capacity: 2400Wh (2.4kW)
- Usable capacity: 2200Wh (2.2kW)
- Rated charging/dilution capacity:1500Wh (1.5kW)
- Charging voltage: 57.6V
- Communication inputs: RS485, CAN
- Configuration: up to 8 batteries in series or parallel
- Patients with related adverse
- IP code: IP20
- Cooling: Naturally
- Operating temperature: When charging: from 0 to 50 °C, On discharge: from -10 up to 55°C
- Weight: 27.5Kg
- Installation: on a wall/ on land
- Protection: software and hardware
- Dimensions: 442x500x133mm



CERTIFICATION

- The product is designed and tested in accordance with international safety requirements IEC 60364.
- Manufacturer declares that this Uhome-LFP 2400 is compliance with the essential requirements and other relevant of RE Directive 2014/53/EU.

MONITORING

The battery has a built-in Wi-Fi module providing access to information by computer or mobile phone, via the Uhome app.

Scan the code to download the Google Play or App Store »

This product meets all the technical requirements set by the European Union for the construction of solar systems.

10 YEARS WARRANTY

Catalogue number:
98BAT5000LFP

UHOME LFP BATTERY (LIFEPO4), 4800W FOR SINGLE PHASE HYBRID INVERTERS

ADVANTAGES

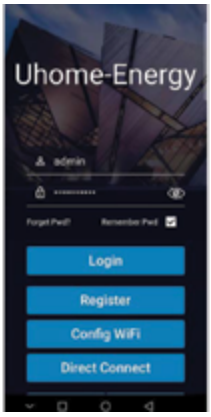
This type of battery offers many advantages, such as longer life, no maintenance, outstanding safety and improved discharge and charge efficiency compared to lead-acid batteries. They are suitable for high power storage, for frequent loads and for installation in places where space is limited (battery size is 442x500x133mm). The manufacturer of the Uhome LFP battery guarantees more than 6000 cycles of deep discharge at 95% of the battery capacity. This is achieved through an integrated BMS control system that monitors voltage, current, temperature and cell status, balancing charging and discharging to increase cell life. The ability to connect up to 8 batteries in parallel increases the capacity of the system by increasing the time of use or to power more powerful consumers.

FEATURES

- Environmentally friendly product, non-toxic and non-polluting environment
- The material used to make the product is made of LiFePO4 for safe use and numerous life cycles
- The Battery Management System (BMS) has a protective safety against overcharge, peak current, low voltage, short circuit and high temperature.
- The system can automatically control overcharge processes and balance current and voltage levels at the level at the unit level module in a group of several connected batteries.
- It has its own cooling system at low noise levels.
- Low self-discharge rates. The battery can last up to 6 months without charging.
- It does not remember situations where a shallow charge or discharge is required
- The operating temperature range is from -10° to 55°C (When charging 0~50°C; When discharging -10~55°C)
- Compact and modern design, that fits into any room.
- Compatible with a wide range of hybrid inverters available on the market.

TECHNICAL DATA

- Rated voltage: 48-56V DC
- Rated capacity: 5100Wh (5.1kW)
- Usable capacity: 4800Wh (4.8kW)
- Rated charging/dilution capacity: 3000Wh (3.0kW)
- Charging voltage: 57.6V
- Communication inputs: RS485, CAN
- Configuration: up to 8 batteries installed in series or parallel
- IP code: IP20
- Cooling: Naturally
- Operating temperature: When charging: from 0 to 50 °C, On discharge: from -10 up to 55°C
- Weight: 45Kg
- Installation: on a wall/ on land
- Protection: software and hardware
- Dimensions: 442x500x135mm



CERTIFICATION

- The product is designed and tested in accordance with international safety requirements IEC 60364.
- Manufacturer declares that this Uhome-LFP 5000 is compliance with the essential requirements and other relevant of RE Directive 2014/53/EU.

MONITORING

The battery has a built-in Wi-Fi module providing access to information by computer or mobile phone, via the Uhome app.

Scan the code to download the Google Play or App Store »

This product meets all the technical requirements set by the European Union for the construction of solar systems.

Catalogue number:
98BAT10000LFP

UHOME LFP BATTERY (LIFEPO4), 10 000W FOR SINGLE PHASE HYBRID INVERTERS

ADVANTAGES

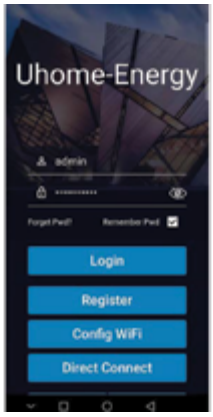
This type of battery offers many advantages, such as longer life, no maintenance, outstanding safety and improved discharge and charge efficiency compared to lead-acid batteries. They are suitable for high power storage, for frequent loads and for installation in places where space is limited (battery size is 525x820x238mm). The manufacturer of the Uhome LFP battery guarantees more than 6000 cycles of deep discharge at 95% of the battery capacity. This is achieved through an integrated BMS control system that monitors voltage, current, temperature and cell status, balancing charging and discharging to increase cell life. The ability to connect up to 4 batteries in parallel increases the capacity of the system by increasing the time of use or to power more powerful consumers.

FEATURES

- Environmentally friendly product, non-toxic and non-polluting environment
- The material used to make the product is made of LiFePO4 for safe use and numerous life cycles
- The Battery Management System (BMS) has a protective safety against overcharge, peak current, low voltage, short circuit and high temperature.
- The system can automatically control overcharge processes and balance current and voltage levels at the level at the unit level module in a group of several connected batteries.
- It has its own cooling system at low noise levels.
- Low self-discharge rates. The battery can last up to 6 months without charging.
- It does not remember situations where a shallow charge or discharge is required
- The operating temperature range is from -10° to 50°C (When charging 0~45°C; When discharging -10~50°C
- Compact and modern design, that fits into any room.
- Compatible with a wide range of hybrid inverters available on the market.

TECHNICAL DATA

- Rated voltage: 48-56V DC
- Rated capacity: 10 000Wh (10kW)
- Usable capacity: 9200Wh (9.2kW)
- Nominal dis-/charge Power: 4.6kW
- MAX. charging voltage: 57.6V
- Communication inputs: RS485, CAN
- Configuration: up to 4 batteries installed in series or parallel
- IP code: IP65
- Cooling: Naturally
- Operating temperature: When charging: from 0 to 45 °C, On discharge: from -10 up to 50°C
- Weight: 96Kg
- Installation: free standing
- Protection: triple hardware protection
- Dimensions: 525x820x238mm



CERTIFICATION

- The product is designed and tested in accordance with international safety requirements IEC 60364.
- Manufacturer declares that this Uhome-LFP 10000 is compliance with the essential requirements and other relevant of RE Directive 2014/53/EU.

MONITORING

The battery has a built-in Wi-Fi module providing access to information by computer or mobile phone, via the Uhome app.

Scan the code to download the Google Play or App Store »

This product meets all the technical requirements set by the European Union for the construction of solar systems.

10 YEARS WARRANTY

ELMARK LIFEPO4 HIGH VOLTAGE ENERGY STORAGE BATTERY 10KW, 15KW AND 20KW FOR THREE PHASE HYBRID INVERTERS ELMARK

ADVANTAGES

This type of battery offers many advantages, such as longer life, no maintenance, outstanding safety and improved discharge and charge efficiency compared to lead-acid batteries.
They are suitable for high power storage, for frequent loads and for installation on the ground. ELMARK guarantees that high voltage LFP batteries haves more than 6000 cycles of deep discharge at 90% of the battery capacity.

FEATURES

- Environmentally friendly product, non-toxic and non-polluting environment
- The material used to make the product is made of LiFePO4 for safe use and numerous life cycles
- Smart O&M: Check the APP to find data on your phone. Remote diagnosis and OTA.
- It has its own cooling system at low noise levels.
- Low self-discharge rates.
- It does not remember situations where a shallow charge or discharge is required.
- The operating temperature range is from -20° to 55°C (When charging 0~55°C;
When discharging -20~55°C)
- Compact and modern design.
- Compatible with all three-phase hybrid inverters ELMARK.

TECHNICAL DATA

- Battery type: LiFePO4
- Installation: Ground-mounting
- Max. Discharge/Charge Current: 35A
- Protection Level: IP65
- Cycle Life: >6000, 90%DOD
- Transportation SOC: 30%
- Working Temperature: When charging 0~55°C; When discharging -20~55°C

Catalogue number	Voltage Working range	Nominal Voltage	Nominal Capacity	Weight (kg)	Dimension (WxHxD,)mm
98BAT10000HV	153V-213V DC	192V DC	10kWh	105	606x900x220
98BAT15000HV	230V-319V DC	288V DC	15kWh	152,3	606x1240x220
98BAT20000HV	306V-426V DC	384V DC	20kWh	199,5	606x1580x220

98BAT10000HV 98BAT15000HV 98BAT20000HV

This product meets all the technical requirements set by the European Union for the construction of solar systems.

CERTIFICATION DEKRA
The product is designed and tested in accordance with CEI 0-21:2022-03

Annex

DEKRA

Document no. : 6167418.01COC

Type of generating unit:
Tipologia di apparato:

Static Conversion Device *Dipositivo di conversione statica*	Interface Protection *Protezione di interfaccia*	Interface Protection Device *Dispositivo di interfaccia*	Rotating Generator Device *Dispositivo di generazione rotante*
Yes/*Si*	Yes/*Si*	Yes/*Si*	No

REMARK: the device is capable to limit the Idc to 0,5% of the nominal current
NOTA: Il dispositivo èin grado di limitare la Idc allo 0,5% della corrente nominale

Hardware version: 1.01
Versione hardware: 1.01
Software version: V01
Versione software: V01
The battery used for testing with the Hybrid Inverter ELMARK covered by this certificate:
La batteria utilizzata per i test con l'invertitore ibrido coperto dal presente certificato

Battery Models	AF20000W-H8	AF17500W-H7	AF15000W-H6
Nominal Voltage	384V	336V	288V
Nominal capacity	52Ah	52Ah	52Ah
CUS (Storage system useful capacity)	20.0kWh	17.5kWh	15.0kWh
Battery Models	AF12500W-H5	AF10000W-H4	AF7500W-H3
Nominal Voltage	240V	192V	144V
Nominal capacity	52Ah	52Ah	52Ah
CUS (Storage system useful capacity)	12.5kWh	10.0kWh	7.5kWh
Remark: The CB test certificate No. of the battery: DE 7-0773 When the batteries are connected in parallel, the charge/ discharge current is superimposed and is limited by the maximum current of the battery port of the Hybrid Inverter. The batteries are not integrated into the Hybrid Inverter and must be installed according to the local regulations.			

Testing Laboratory:
Laboratorio prove:

Testing Laboratory for CEI 0-21:2022-03
DEKRA Testing and Certification (Suzhou) Co., Ltd.
No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Accreditation Number: L5313 (CNAS-ILAC)

Testing Laboratory for EMC:
1. Intertek Testing Services Shanghai
   Building No.86, 1198 Qinzhou Road (North), Caohejing Development Zone, Shanghai 200233, China
   Accreditation Number: 3309.02 (A2LA-ILAC)
2. Shanghai Inspection and Testing Institute of Instruments and Automation Systems Co., Ltd.
   No.103, Caobao Road, Xuhui District, Shanghai, China
   Accreditation Number: L0130 (CNAS-ILAC)

ELMARK
The Brand of Electricity

ACCESSORIES FOR SOLAR BATTERIES

UHOME ENERGY PORT

Catalogue number:
98BAT/EP

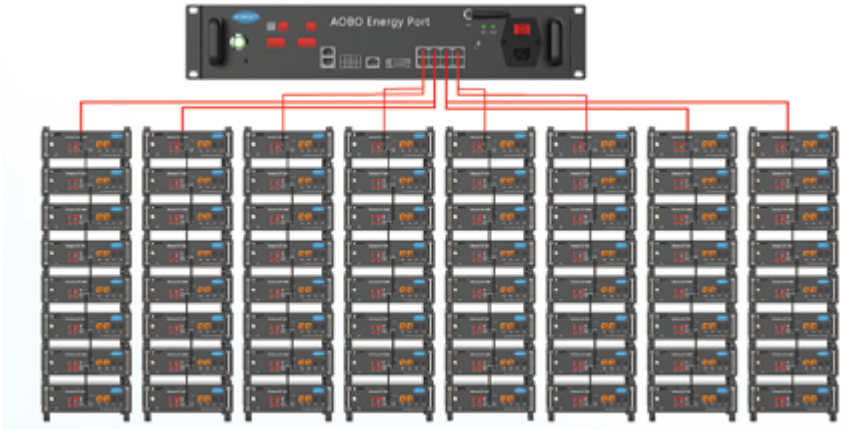
The energy port is a device that allows the connection and management of more than 8 batteries in parallel or in series. It's suitable with UHOME batteries with capacity of 2400 and 4800W.

ADVANTAGES

- CAN Communication Cable Connection mode (suit for 2-8 batteries piles)
- Suitable for residential and little commercial system.
- Plug-in and ready, no need any other accessories.

TECHNICAL DATA

- Power supply: 220-240V
- Live span: over 15 years
- Communication interface: CAN/RS 482/232/Internet
- IP code: IP20
- Working temperature: from -20 till + 60°C
- Size (LxWxH): 300x442x89mm
- Weight: 3kg



ENERGY STORAGE CONNECTOR PLUGS 1000V, IP67

Cable connectors for battery power cables, suitable with input of all types UHOME LFP BATTERY. With they can be make power extension cables with needed length.

Catalogue number	Rated voltage (V)	Rated current (A)	Conductor cross section (mm^2)	IP code	Packing (pcs)
59089	1000V	120A	16-25mm^2	IP67	1/100
59090	1000V	200A	35-50mm^2	IP67	1/100

** 2 pcs in SET*

59089

59090

SOLAR BATTERY MOUNTING ACCESSORIES UHOME LPF 2400 AND LPF 5000

Catalogue number:
98BAT2400BRW

WALL MOUNTING

By spacers mounted at the four ends of the battery (Fig. 1)
This method of installation is recommended for up to 4 batteries. One set is suitable for installation of 2 batteries.
For installation of more than 4 batteries in a series it is recommended to use a board.

Fig. 1

Catalogue number:
98BAT2400BRG

GROUND MOUNTING

By spacers mounted at the four ends of the battery (Fig.2)

This method of installation is recommended for up to 4 batteries. One set is suitable for installation of 1 batterie.
For installation of more than 4 batteries in a series it is recommended to use a board.

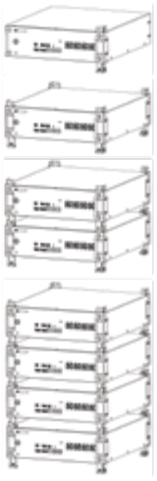


Fig. 2

METAL STORAGE CABINET FOR SOLAR BATTERIES UHOME LPF 2400 AND LPF 5000

Catalogue number:
98BAT15U

Using a metal cabinet to store the batteries of an already built hybrid or off-grid solar system is the most reliable and recommended option for this. The cabinet is suitable for the installation of up to 4 batteries with a capacity of 2400 and 4800Wh, while protecting at the same time the batteries and adds compactness and completeness to the system. The ability to lock the limits the compromise of equipment in places with random access to people, eliminating the possibility of accidents. Ventilation holes are provided on the housing and the door is made of mesh steel for proper cooling of the batteries, in rooms with temperatures from 0-50°C. In rooms with high temperatures, it is recommended to install an additional fan, and in winter or in rooms with temperatures below -10°C a heater to ensure optimum temperature. In the free installation method, without using a storage cabinet, optimum temperature levels are much more difficult to maintain and cost considerably more than the investment in it. Ensuring the optimum working temperature of the batteries, in turn, increases their lifetime and their mode of operation.

ADVANTAGES

Provides mechanical protection of batteries
Locking the dashboard in order to prevent accidental access or incidents.
Easier to ensure optimal microclimate of the battery storage area.
System compactness and completeness

TECHNICAL DATA

Material: cold-rolled SPCC steel
Wall thickness: 2 mm
Weight: 40kg
Dimensions (LxWxH): 600x600x769mm
Capacity: 4 batteries Uhome-LPF 2400/5000

SOLAR CABLES H1Z2Z2-K

APPLICATION

They are specifically designed for the construction of photovoltage systems. H1Z2Z2-K solar cables have good wear resistance, extreme flexibility, UV protection and do not support combustion. They are also halogen-free, water and oil resistant. Cable weight: 4 mm²- 57kg; 6 mm²- 77kg

TECHNICAL DATA

- Reaction to fire: Dca S1a, d2, a1
- Cable cross-section: 4 mm²; 6 mm²
- Rated voltage (Uo/U): AC 1,0/1,0 kV; DC 1,5/1,5
- Conductor material: Tinned copper Class 5
- Number of conductors X diameter (N°x mm): 4 mm² - 50x0,30; 6 m² - 75x0,30
- Insulation and sheath material: Halogen-free compound
- Insulation thickness: 0,70 mm
- Insulation diameter: 4 mm²- 3,90 mm; 6mm²- 4,50mm
- Outer cable diameter: 4 mm²- 5,50 mm; 6 mm²- 6,05 mm
- Cable colour: black; red
- Maximum conductor resistance at 20°C: 4 mm²- 5,09 ohm/km; 6 mm²- 3,39 ohm/km
- Maximum insulation resistance at 20°C: 4 mm²- 580 MΩ.km; 6 mm²- 500 MΩ.km
- Minimum bending radius during laying: 5xØ of cable
- Flame spread test on single cable: EN 60332-1-2
- Operating temperature: -40+90°C
- Maximum short-circuit temperature: 250°C/5sec. (max.)
- Cable weight: 4 mm²- 57kg; 6 mm²- 77kg

CERTIFICATION

- Declaration of performance (DoP)
- TUV Certificate
- CE and EN Certificates

Catalogue number	Cross section (n x mm²)	Colour	Outer diameter (mm)	Total weight (kg/km)	Packing (m)
M411079/BL	4	Black	5,6	58	100
M411079/R	4	Red	5,6	58	100
M411080/BL	6	Black	6,2	78	100
M411080/R	6	Red	6,2	78	100

We have included black and red solar cable H1Z2Z2-K with a cross section of 4mm2 to all our solar kits. You can see the quantities in the table below:

Catalogue number	3.6 kW	5 kW	10 kW	15 kW	20 kW	30 kW
M411079/BL	x50m	x50m	x50m	x75m	x100m	x100m
M411079/R	x50m	x50m	x50m	x75m	x100m	x100m

These products meet all the technical requirements set by the European Union for the construction of solar systems.

MALE/FEMALE CABLE CONNECTORS IP67, COMPATIBLE WITH MC4 STANDARD

APPLICATION

They are an important and indispensable element of any modern solar installation, serving for easier and faster wiring of the solar array. They are available in both male and female versions, and are compatible with the well-established MC4 connection standard.

EC Declaration of conformity

TECHNICAL DATA

- Rated voltage: 1500V
- Rated current: 30A
- Test voltage: 6KV(50Hz)
- IP code: IP67
- Conductive parts material: Copper alloy, tin plated
- Operating temperature: form -40 up +90°C
- Suitable for solar cables with cross sections: 2.5 mm2; 4 mm2 and 6mm2
- Suitable for cable glands: 3-6 mm

SINGLE CONNECTOR MC4 TYPE IP67, SET

Catalogue number	Type	Conductor cross section (mm^2)	Dimensions (mm)	Packing (pcs)
411079/MF	Single male/female couplers, SET	4/6	107.5 x 41	1/5

** 2 pcs. in set.*

TRIPLE CONNECTOR MC4 TYPE, IP67

Catalogue number	Type	Conductor cross section (mm^2)	Dimensions (mm)	Packing (pcs)
411080/M	2 male/ 1 female coupler	4/6	107.5 x 41	1/2
411080/F	1 male/ 2 female coupler	4/6	107.5 x 41	1/2

FOURFOLD CONNECTOR MC4 TYPE, IP67

Catalogue number	Type	Conductor cross section (mm^2)	Dimensions (mm)	Packing (pcs)
411081/M	3 male/ 1 female coupler	4/6	107.5 x 63	1/100
411081/F	1 male/ 3 female coupler	4/6	107.5 x 63	1/100

FIVEFOLD CONNECTOR MC4 TYPE , IP67

Catalogue number	Type	Conductor cross section (mm^2)	Dimensions (mm)	Packing (pcs)
411082/M	4 male/ 1 female coupler	4/6	108.5 x 85	1/50
411082/F	1 male/ 4 female coupler	4/6	108.5 x 85	1/50

These products meet all the technical requirements set by the European Union for the construction of solar systems.

TRIPLE CONNECTOR MC4 Y-TYPE , IP67

Catalogue number	Type	Conductor cross section (mm^2)	Length (mm)	Packing (pcs)
411080/MY	2 male/ 1 female coupler	4/6	300	1/50
411080/FY	1 male/ 2 female coupler	4/6	300	1/50

FOURFOLD CONNECTOR MC4 Y-TYPE, IP67

Catalogue number	Type	Conductor cross section (mm^2)	Length (mm)	Packing (pcs)
411081/MY	3 male/ 1 female coupler	4/6	300	1/40
411081/FY	1 male/ 3 female coupler	4/6	300	1/40

FIVEFOLD CONNECTOR MC4 Y-TYPE , IP67

Catalogue number	Type	Conductor cross section (mm^2)	Length (mm)	Packing (pcs)
411082/MY	4 male/ 1 female coupler	4/6	515	1/30
411082/FY	1 male/ 4 female coupler	4/6	515	1/30

These products meet all the technical requirements set by the European Union for the construction of solar systems.

TWO/FOUR-POLE DC ISOLATOR WATERPROOF BOX, IP66

APPLICATION

The DC switch is mounted between the solar panels and the inverter and is intended to isolate the PV array during installation or subsequent maintenance.

FEATURES

• Screw fixing doesn't interfere with the sealing performance.
• Multiple mechanical seals around the shaft guarantee the reliability of a waterproof and moisture-proof design.
• Stainless steel rotary screw does not rust nor damp.
• Standard cable interface available with seal rings.
• Internal sealing in top and bottom covers, combined with 2 screws, guarantee an IP66 protection degree.
• SAFE-LOCK with three rotational positions, reducing the risk of tampering.
• The isolator is compatible with various cables and with optional waterproof cable joints and MC4 joints
• Incorporating a user independent switching action, spring mechanism, to ensure a very fast break/make action, ensuring that the disconnection of the load circuits and suppression of the arc normally occurs within 5ms.
• Self-cleaning contact mechanism, reducing power loss and abrasion, improving the conduction performance, reducing the resistance and energy loss of the switch, extending the on-off life cycle.
• Double arc extinguishing mechanism, magnetic and arc chutes, restrain the arc efficiency, especially DC arcs.

TECHNICAL DATA

- Rated insulation voltage Ui: 1500V
- Rated current: 32A
- Rated impulse withstand voltage Uimp: 8000V
- Poles: 2P/4P
- Knob position: OFF at 9 hr, ON at 12 hr, C type
- Mechanical life: 10 000 cycles
- Pollution degree: 2
- Over voltage category: III
- Operating temperature: -40 to +70°C
- IP code: IP66
- Handle colour: Black
- Mounting: Wall-mounted or screw installation
- Dimensions LxHxD: 98x225x110

Catalogue number	Type	Rated current	Number of poles	Packing (pcs)
98SOL2P32S/DC	DC isolator 2 series-1 string	32A	2P	1
98SOL4P32S/DC	DC isolator 4 series-2 string	32A	4P	1

TWO/FOUR-POLE DC ISOLATOR SWITCHES, SUITABLE FOR PANEL MOUNTING

APPLICATION

The DC switch is mounted between the solar panels and the inverter and is intended to isolate the PV array during installation or subsequent maintenance.

TECHNICAL DATA

- Rated insulation voltage Ui: 1500V
- Rated current: 32A
- Rated impulse withstand voltage Uimp: 8000V
- Poles: 2P/4P
- Knob position: OFF at 12 hr, ON at 3 hr, C type
- Mechanical life: 10 000 cycles
- Pollution degree: 2
- Over voltage category: III
- Operating temperature: -40 to +70°C
- IP rating of shaft and mounting nut: IP66
- Handle colour: Black
- Mounting: Single hole
- Dimensions LxHxD: 60.2x94.9x64.8

Catalogue number	Type	Rated current	Number of poles	Packing (pcs)
98SOL2P32F/DC	DC isolator 2 series-1 string	32A	2P	1
98SOL4P32F/DC	DC isolator 4 series-2 string	32A	4P	1

These products meet all the technical requirements set by the European Union for the construction of solar systems.

OFF-GRID SOLAR SYSTEMS

OFF-GRID SINGLE-PHASE SOLAR SYSTEM 300W, SET

The 300W power kit on offer is extremely compact and easy to carry. The quality of the electricity it produces is stable and comparable to that from the grid. Its compact dimensions and mobility make it extremely suitable for powering small consumers off the grid. The battery is built into the body of the inverter and the solar panel is placed in a convenient carrying bag. In addition to sunlight, the inverter's lithium-ion battery can be charged from the mains (220V) or from a car battery (12V). The inverter has many different types and voltages of output ports, making it a versatile device suitable for powering appliances with different purposes.

Catalogue number:

98SOL501

Solar panel 18V 100W

Portable charging station 300W

ADVANTAGES OF THE SYSTEM

- Three ways to charge the battery - from the mains, battery, solar power
- It can be used as a backup power supply in case of failure of
- the main power supply for stand-by lighting or other important low-power consumers.
- High quality, rechargeable lithium-ion battery with cover capacity 495Wh
- The inverter has 2 universal outlets 100-240V AC (300W), compatible with all known world standard plugs
- USB ports for smartphones, iPad, MP3, camera, hobby (helicopters, drones, etc.)
- Lighter for car
- Ports for simultaneous battery charging and discharging
- 12V petrol car start function
- Overload protection and warning, short circuit,overheating, over voltage, overheating, over voltage

THE SOLAR SET INCLUDES

Catalogue number	Description of the product
98SOL501PAN	Solar panel 18V 100W
98SOL501PS	Portable charging station 300W with built-in lithium-ion battery

TECHNICAL DATA

- Rated power AC: 300W
- Peak power AC: 600W
- Output Voltage: 220V/50HZ; AC110V/60HZ; 12V
- Waveform: Pure sine wave (sinusoid)
- Battery: Li-ion 14.8V 33.5Ah
- Battery capacity: 495Wh
- Charge current characteristics: 18- 30V 3.5A (MAX)
- Solar panel current characteristics: 18V/ 100W
- Charging time required: 6-8h
- USB outputs: USB 2.05V 2A/USB QC 3.0/ Type-C
- Outputs 12V DC: 2x10A
- Outputs 220V DC: 2
- Operating temperature: from -10 to 60°C
- Dimensions LxWxH: 205x105x170mm
- Net weight of the inverter: 3.6kg

OFF-GRID SINGLE-PHASE SOLAR SYSTEM 1000W, SET

The available 1000W kit is extremely compact and easy to carry. The quality of the electricity it produces is stable and comparable to that of mains electricity. Its compact size and mobility make it extremely suitable for powering small off-grid consumers. The battery is built into the inverter housing and the solar panel is placed in a convenient carrying bag. In addition to sunlight, the inverter's lithium-ion battery can be charged from the mains (220V) or from a car battery (12V). The inverter has many different types and voltages of output ports, making it a versatile device suitable for powering appliances with different purposes.

Catalogue number:

98SOL1001

Solar panel 36V 100W

Portable charging station 1000W

ADVANTAGES OF THE SYSTEM

- Three ways to charge the battery - from the mains, battery, solar power
- It can be used as a backup power supply in case of failure of the main power supply for stand-by lighting or other important low-power consumers.
- High quality, rechargeable lithium-ion battery with cover capacity 1048Wh
- The inverter has 2 universal outlets 100-240V AC (1000W), compatible with all known world standard plugs
- USB ports for smartphones, iPad, MP3, camera, hobby (helicopters,drones, etc.)
- Lighter for car
- Ports for simultaneous battery charging and discharging
- 12V petrol car start function
- Overload protection and warning, short circuit, overheating, over voltage

TECHNICAL DATA

- Rated power AC: 1000W
- Peak power AC: 2000W
- Output Voltage: 220V/50HZ; AC110V/60HZ; 12V
- Waveform: Pure sine wave (sinusoid)
- Battery: Li-ion 25.2V 41.6Ah
- Battery capacity: 1048Wh
- Current charge characteristics: 29.4- 40V 15A (MAX)
- Solar panel current charge characteristics: 36V/ 100W
- Charging time required: 6-8h
- USB outputs: USB 2.05V 2A/USB QC 3.0/ Type-C
- Outputs 12V DC: 2x10A
- Outputs 220V DC: 2
- Operating temperature: from -10 to 60°C
- Dimensions LxWxH: 360x215x300mm
- Net weight of the inverter: 10.5kg

THE SOLAR SET INCLUDES

Catalogue number	Description of the product
98SOL1001PAN	Solar panel 36V 100W
98SOL1001PS	Portable charging station 1000W with built-in lithium-ion battery

OFF-GRID SINGLE-PHASE SOLAR SYSTEM 2000W,SET

The available 2000W kit is extremely compact and easy to carry. The quality of the electricity it produces is stable and comparable to that of mains electricity. Its compact size and mobility makes it extremely suitable for powering small off-grid consumers. The battery and inverter are housed in a wheeled case with a handle, and the solar panel is in a convenient carry bag. In addition to sunlight, the inverter's lithium-ion battery can be charged from the mains (220V) or from a car battery (12V). The inverter has many different types and voltages of output ports, making it a versatile device suitable for powering appliances with different purposes.

Catalogue number:

98SOL2001

Solar panel 36V 200W

Portable charging station 2000W

ADVANTAGES OF THE SYSTEM

- Three ways to charge the battery - from the mains, battery, solar power
- It can be used as a backup power supply in case of failure of
- the main power supply for stand-by lighting or other important low-power consumers.
- High quality, rechargeable lithium-ion battery with cover capacity
- 2016Wh
- The inverter has 2 universal outlets 100-240V AC (2000W), compatible with all known world standard plugs
- USB port
- Lighter for car
- Ports for simultaneous battery charging and discharging
- 12V petrol car start function
- Overload protection and warning, short circuit,overheating, over voltage

THE SOLAR SET INCLUDES

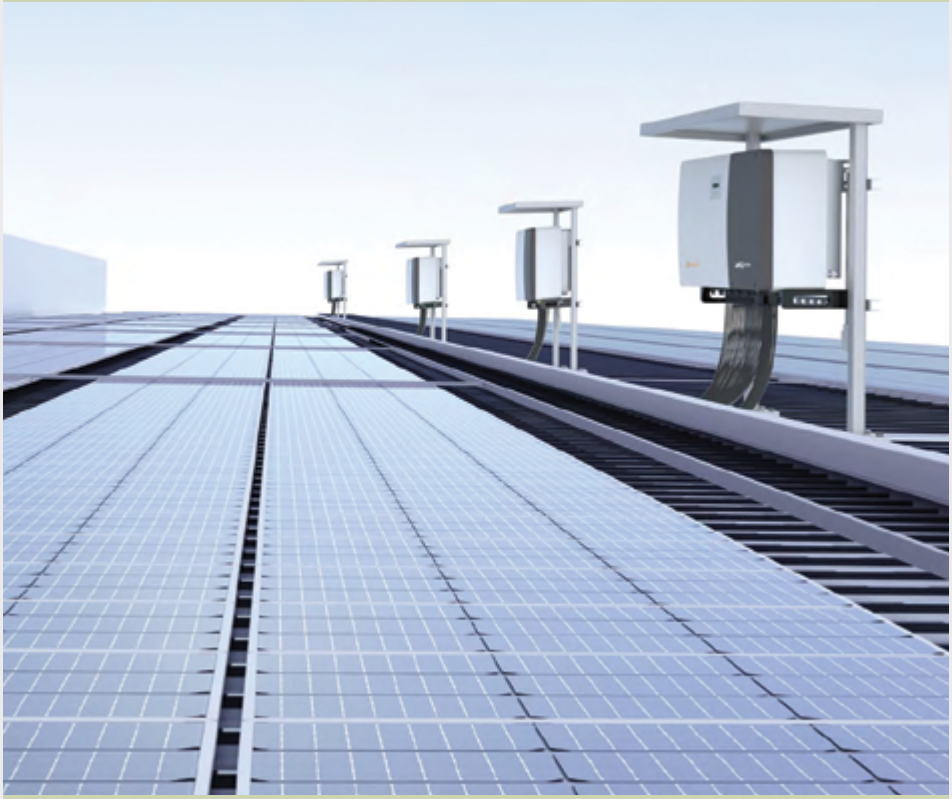
Catalogue number	Description of the product
98SOL2001PAN	Solar panel 36V 200W
98SOL2001PS	Portable charging station 2000W with built-in lithium-ion battery

TECHNICAL DATA

- Rated power AC: 2000W
- Peak power AC: 4000W
- Output Voltage: 220V/50HZ; AC110V/60HZ; 12V
- Waveform: Pure sine wave (sinusoid)
- Battery: Li-ion 25.2V 80Ah
- Battery capacity: 2016Wh
- Current charge characteristics: 29.4- 40V 15A (MAX)
- Solar panel current charge characteristics: 36V/ 200W
- Charging time required: 10-12h
- USB outputs: USB 2.05V 2A/USB QC 3.0/ Type-C
- Outputs 12V DC: 1
- Outputs 220V DC: 2
- Operating temperature: from -10 to 60°C
- Dimensions LxWxH: 516x435x229mm
- Net weight of the inverter: 18kg

ON-GRID SOLAR SYSTEMS **SETS**

WITH CAPACITIES FROM 3000W TO 110KW



ON-GRID SINGLE-PHASE SOLAR SYSTEM, SETS

These systems are preferred for the construction of solar power plants for the purpose of selling electricity or the construction of a grid system for the direct supply of consumers during the day in places where there is an established power grid. Their operating principle makes them extremely suitable for the partial reduction or complete exclusion of electricity bills.

ELMARK offers the preparation of an individual project, including all the necessary elements for the construction of a solar system, completely free of charge. On www.elmarkholding.eu, you can fill in a form for the preparation of an individual project. We will prepare you a project and an offer.

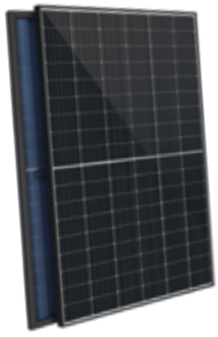
ON-GRID SINGLE-PHASE SOLAR SYSTEM WITH POWER OF 3000W - SET

ADVANTAGES OF THE SYSTEM

- Anti-flow: Ant-feed function
- PV oversize: Max. 1.5 time PV oversize capacity
- Multiple intelligent protection
- Smart IV curve scanning
- Wi-Fi Standard Ethernet
- Configuration: Quick and easy configuration via Wi-FI
- PV Reverse polarity protection
- PV Insulation resistance detection
- AC short circuit protection
- AC over current protection
- AC over voltage protection
- Anti-islanding protection
- Residual current detection
- Over temperature protection
- Integrated DC switch
- Surge protection type III
- Smart IV curve scanning
- Active and reactive power compensation, adjust power factor
- High-quality power output and low THDI
- High quality monocrystalline half cut cells solar panels with high efficiency up to 22% + 3.5%
- Low performance drop of the system and long service life of the solar panels, up to 30 years

Items included in the sets:

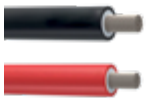
N-Type
TOPCon



98SOL430M
98SOL580M

423006
INVERTER ELMARK

98SOL4P32S/DC



M411079/BL
M411079/R

HYBRID

SOLAR SET WITH PANEL 430W WITH INVERTER ELMARK

Catalogue number:

98SOL3000M/6E

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 3000W	423006	1 pc
Solar panel 430W	98SOL430M	7 pcs
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	1 pc

SOLAR SET WITH PANEL 580W WITH INVERTER ELMARK

Catalogue number:

98SOL3000M/7E

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 3000W	423006	1 pc
Solar panel 580W	98SOL580M	6 pcs
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	1 pc

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

WARRANTY
» Solar panel
15 YEARS WARRANTY
» Inverter ELMARK
7 YEARS TOTAL WARRANTY
5 standard + 2 extended

ELMARK
The Brand of Electricity

ON-GRID SINGLE-PHASE SOLAR SYSTEM WITH POWER OF 3600W, SET

ADVANTAGES OF THE SYSTEM

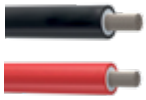
- Inverter with accurate MRT algorithm
- Intelligent EMS function
- Short circuit protection
- DC reverse voltage protection
- Surge protection
- Thermal protection
- Network monitoring
- Protection stopping the voltage supply in case of failure of power supply from the mains. This prevents the occasional pop-up of voltage from the system to the network during operation and while in combined mode
- Remote Wi-Fi monitoring

Items included in the sets:

98SOL430M
98SOL580M

423001
INVERTER SOLIS

98SOL4P32S/DC



M411079/BL
M411079/R

SOLAR SET WITH PANEL 430W WITH INVERTER SOLIS

Catalogue number:
98SOL3600M/6S

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter Solis 3600W	423001	1 pc
Solar panel 430W	98SOL430M	9 pcs
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	1 pc

SOLAR SET WITH PANEL 580W WITH INVERTER SOLIS

Catalogue number:
98SOL3600M/7S

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter Solis 3600W	423001	1 pc
Solar panel 580W	98SOL580M	7 pcs
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	1 pc

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

WARRANTY
» Solar panel
15 YEARS WARRANTY
» Inverter SOLIS
10 YEARS WARRANTY

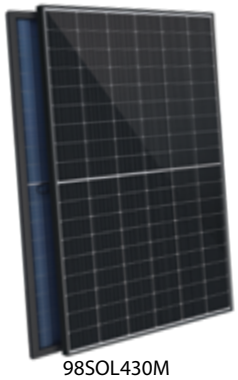
ON-GRID SINGLE-PHASE SOLAR SYSTEM WITH POWER OF 5000W SET

ADVANTAGES OF THE SYSTEM

- Inverter with accurate MRT algorithm
- Intelligent EMS function
- Short circuit protection
- DC reverse voltage protection
- Surge protection
- Thermal protection
- Network monitoring
- Protection stopping the voltage supply in case of failure of power supply from the mains. This prevents the occasional pop-up of voltage from the system to the network during operation and while in combined mode
- Remote Wi-Fi monitoring

Items included in the sets:

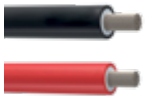
N-Type
TOPCon



98SOL430M
98SOL580M

423004
INVERTER ELMARK

98SOL4P32S/DC



M411079/BL
M411079/R

ON-GRID

SOLAR SET WITH PANEL 430W WITH INVERTER ELMARK

Catalogue number:

98SOL5000M/6E

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 5000W	423004	1 pc
Solar panel 430W	98SOL430M	12 pcs
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

SOLAR SET WITH PANEL 580W WITH INVERTER ELMARK

Catalogue number:

98SOL5000M/7E

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 5000W	423004	1 pc
Solar panel 580W	98SOL580M	9 pcs
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

WARRANTY
» Solar panel
15 YEARS WARRANTY
» Inverter ELMARK
7 YEARS TOTAL WARRANTY
+ 5 standard 2 extended

ELMARK
The Brand of Electricity

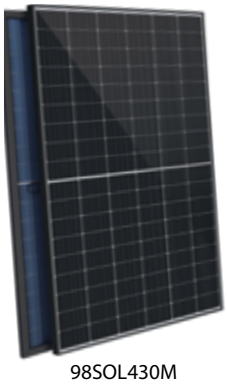
ON-GRID SINGLE-PHASE SOLAR SYSTEM WITH POWER OF 8000W - SET

ADVANTAGES OF THE SYSTEM

- Inverter with accurate MRT algorithm
- Intelligent EMS function
- Short circuit protection
- DC reverse voltage protection
- Surge protection
- Thermal protection
- Network monitoring
- Protection stopping the voltage supply in case of failure of power supply from the mains. This prevents the occasional pop-up of voltage from the system to the network during operation and while in combined mode
- Remote Wi-Fi monitoring

Items included in the sets:

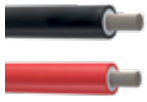
N-Type
TOPCon



98SOL430M
98SOL580M

423007
INVERTER ELMARK

98SOL4P32S/DC



M411079/BL
M411079/R

ON-GRID

SOLAR SET WITH PANEL 430W WITH INVERTER ELMARK

Catalogue number:
98SOL8000M/6E

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 8000W	423007	1 pc
Solar panel 430W	98SOL430M	19 pcs
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

SOLAR SET WITH PANEL 580W WITH INVERTER ELMARK

Catalogue number:
98SOL8000M/7E

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 8000W	423007	1 pc
Solar panel 580W	98SOL580M	14 pcs
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

WARRANTY
» Solar panel
15 YEARS WARRANTY
» Inverter ELMARK
7 YEARS TOTAL WARRANTY
+ 5 standard 2 extended

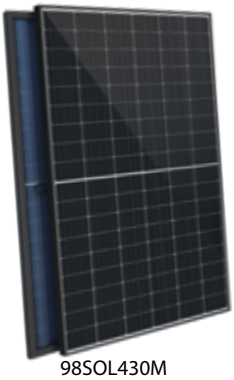
ON-GRID SINGLE-PHASE SOLAR SYSTEM WITH POWER OF 10000W - SET

ADVANTAGES OF THE SYSTEM

- Anti-flow: Ant-feed function
- PV oversize: Max. 1.5 time PV oversize capacity
- Multiple intelligent protection
- Smart IV curve scanning
- Wi-Fi Standard Ethernet
- Configuration: Quick and easy configuration via Wi-FI
- PV Reverse polarity protection
- PV Insulation resistance detection
- AC short circuit protection
- AC over current protection
- AC over voltage protection
- Anti-islanding protection
- Residual current detection
- Over temperature protection
- Integrated DC switch
- Surge protection type III
- Smart IV curve scanning
- Active and reactive power compensation, adjust power factor
- High-quality power output and low THDI
- High quality monocrystalline half cut cells solar panels with high efficiency up to 21.5%
- Low performance drop of the system and long service life of the solar panels, up to 30 years

Items included in the sets:

N-Type
TOPCon

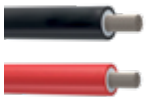


98SOL430M
98SOL580M

ON-GRID

423005
INVERTER ELMARK

98SOL4P32S/DC



M411079/BL
M411079/R

SOLAR SET WITH PANEL 430W WITH INVERTER ELMARK

Catalogue number:

98SOL10000M/6E

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 10000W	423005	1 pc
Solar panel 430W	98SOL430M	24 pcs
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

SOLAR SET WITH PANEL 580W WITH INVERTER ELMARK

Catalogue number:

98SOL10000M/7E

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 10000W	423005	1 pc
Solar panel 580W	98SOL580M	18 pcs
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

WARRANTY
» Solar panel
15 YEARS WARRANTY
» Inverter ELMARK
7 YEARS TOTAL WARRANTY
5 standard + 2 extended

ELMARK
The Brand of Electricity

ON-GRID THREE-PHASE SOLAR SYSTEM, SETS

These systems are preferred for the construction of solar power plants for the purpose of selling electricity or the construction of a grid system for the direct supply of consumers during the day in places where there is an established power grid. Their operating principle makes them extremely suitable for the partial reduction or complete exclusion of electricity bills.

ELMARK offers the preparation of an individual project, including all the necessary elements for the construction of a solar system, completely free of charge. On www.elmarkholding.eu, you can fill in a form for the preparation of an individual project. We will prepare you a project and an offer.

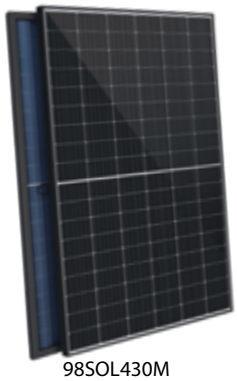
ON-GRID THREE-PHASE SOLAR SYSTEM WITH POWER OF 6000W, SET

ADVANTAGES OF THE SYSTEM

- Anti-flow: Ant-feed function
- PV oversize: Max. 1.5 time PV oversize capacity
- Multiple intelligent protection
- Smart IV curve scanning
- Wi-Fi Standard Ethernet
- Configuration: Quick and easy configuration via Wi-FI
- PV Reverse polarity protection
- PV Insulation resistance detection
- AC short circuit protection
- AC over current protection
- AC over voltage protection
- Anti-islanding protection
- Residual current detection
- Over temperature protection
- Integrated DC switch
- Surge protection type III
- Smart IV curve scanning
- Active and reactive power compensation, adjust power factor
- High-quality power output and low THDI
- High quality monocrystalline half cut cells solar panels with high efficiency up to 22% + 3.5%
- Low performance drop of the system and long service life of the solar panels, up to 30 years

Items included in the sets:

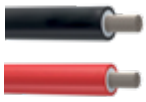
N-Type
TOPCon



98SOL430M
98SOL580M

423008
INVERTER ELMARK

98SOL4P32S/DC



M411079/BL
M411079/R

ON-GRID

SOLAR SET WITH PANEL 430W WITH INVERTER ELMARK

Catalogue number:
98SOL6003M/6E

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 6000W	423008	1 pc
Solar panel 430W	98SOL430M	14 pcs
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

SOLAR SET WITH PANEL 580W WITH INVERTER ELMARK

Catalogue number:
98SOL6003M/7E

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 6000W	423008	1 pc
Solar panel 580W	98SOL580M	11 pcs
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

WARRANTY
» Solar panel
15 YEARS WARRANTY
» Inverter ELMARK
7 YEARS TOTAL WARRANTY
+ 5 standard 2 extended

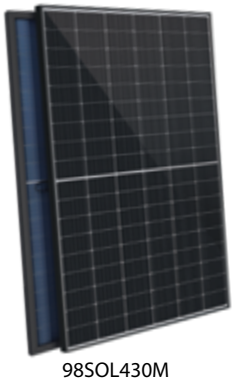
ON-GRID THREE-PHASE SOLAR SYSTEM WITH POWER OF 10000W, SET

ADVANTAGES OF THE SYSTEM

- IAnti-flow: Ant-feed function
- PV oversize: Max. 1.5 time PV oversize capacity
- Multiple intelligent protection
- Smart IV curve scanning
- Wi-Fi Standard Ethernet
- Configuration: Quick and easy configuration via Wi-FI
- PV Reverse polarity protection
- PV Insulation resistance detection
- AC short circuit protection; AC over current protection
- AC over voltage protection
- Anti-islanding protection
- Residual current detection
- Over temperature protection
- Integrated DC switch
- Surge protection type III
- Smart IV curve scanning
- Active and reactive power compensation, adjust power factor
- High-quality power output and low THDI
- High quality monocrystalline half cut cells solar panels with high efficiency up to 22% + 3.5%
- Low performance drop of the system and long service life of the solar panels, up to 30 years

Items included in the sets:

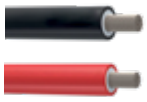
N-Type
TOPCon



98SOL430M
98SOL580M

423030
INVERTER ELMARK

98SOL4P32S/DC



M411079/BL
M411079/R

ON-GRID

SOLAR SET WITH PANEL 430W WITH INVERTER ELMARK

Catalogue number:
98SOL10003M/6E

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 10000W	423030	1 pc
Solar panel 430W	98SOL430M	24 pcs
Solar cable - red, Ø 4mm²	M411079/R	50 m
Solar cable - black, Ø 4mm²	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

SOLAR SET WITH PANEL 580W WITH INVERTER ELMARK

Catalogue number:
98SOL10003M/7E

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 10000W	423030	1 pc
Solar panel 580W	98SOL580M	18 pcs
Solar cable - red, Ø 4mm²	M411079/R	50 m
Solar cable - black, Ø 4mm²	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

WARRANTY
» Solar panel
15 YEARS WARRANTY
» Inverter ELMARK
7 YEARS TOTAL WARRANTY
5 standard + 2 extended

ELMARK
The Brand of Electricity

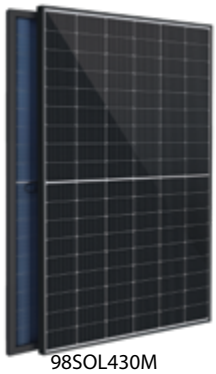
ON-GRID THREE-PHASE SOLAR SYSTEM WITH POWER OF 15000W, SET

ADVANTAGES OF THE SYSTEM

- Anti-flow: Ant-feed function
- PV oversize: Max. 1.5 time PV oversize capacity
- Multiple intelligent protection
- Smart IV curve scanning
- Wi-Fi Standard Ethernet
- Configuration: Quick and easy configuration via Wi-FI
- PV Reverse polarity protection
- PV Insulation resistance detection
- AC short circuit protection
- AC over current protection
- AC over voltage protection
- Anti-islanding protection
- Residual current detection
- Over temperature protection
- Integrated DC switch
- Surge protection type III
- Smart IV curve scanning
- Active and reactive power compensation, adjust power factor
- High-quality power output and low THDI
- High quality monocrystalline half cut cells solar panels with high efficiency up to 22% + 3.5%
- Low performance drop of the system and long service life of the solar panels, up to 30 years

Items included in the sets:

N-Type
TOPCon



98SOL430M
98SOL580M

423031
INVERTER ELMARK

98SOL4P32S/DC

M411079/BL
M411079/R

ON-GRID

WARRANTY
» Solar panel
15 YEARS WARRANTY
» Inverter ELMARK
7 YEARS TOTAL WARRANTY
+ 5 standard 2 extended

SOLAR SET WITH PANEL 430W WITH INVERTER ELMARK

Catalogue number:
98SOL15003M/6E

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 15000W	423031	1 pc
Solar panel 430W	98SOL430M	35 pcs
Solar cable - red, Ø 4mm^2	M411079/R	75 m
Solar cable - black, Ø 4mm^2	M411079/BL	75 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

SOLAR SET WITH PANEL 580W WITH INVERTER ELMARK

Catalogue number:
98SOL15003M/7E

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 15000W	423031	1 pc
Solar panel 580W	98SOL580M	26 pcs
Solar cable - red, Ø 4mm^2	M411079/R	75 m
Solar cable - black, Ø 4mm^2	M411079/BL	75 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

ON-GRID THREE-PHASE SOLAR SYSTEM WITH POWER OF 20000W, SET

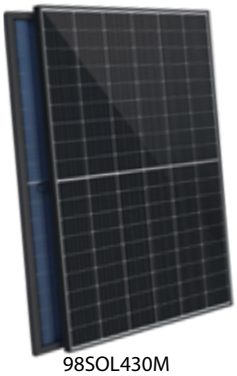
ADVANTAGES OF THE SYSTEM

- Anti-flow: Ant-feed function
- PV oversize: Max. 1.5 time PV oversize capacity
- Multiple intelligent protection
- Smart IV curve scanning
- Wi-Fi Standard Ethernet
- Configuration: Quick and easy configuration via Wi-FI
- PV Reverse polarity protection
- PV Insulation resistance detection
- AC short circuit protection; AC over current protection
- AC over voltage protection
- Anti-islanding protection
- Residual current detection
- Over temperature protection
- Integrated DC switch
- Surge protection type III
- Smart IV curve scanning
- Active and reactive power compensation, adjust power factor
- High-quality power output and low THDI
- High quality monocrystalline half cut cells solar panels with high efficiency up to 22% + 3.5%
- Low performance drop of the system and long service life of the
- solar panels, up to 30 years

Items included in the sets:

N-Type
TOPCon

ON-GRID



98SOL430M
98SOL580M

423032
INVERTER ELMARK

98SOL4P32S/DC

M411079/BL
M411079/R

SOLAR SET WITH PANEL 430W WITH INVERTER ELMARK

Catalogue number:
98SOL20003M/6E

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 20000W	423032	1 pc
Solar panel 430W	98SOL430M	47 pcs
Solar cable - red, Ø 4mm^2	M411079/R	100 m
Solar cable - black, Ø 4mm^2	M411079/BL	100 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

SOLAR SET WITH PANEL 580W WITH INVERTER ELMARK

Catalogue number:
98SOL20003M/7E

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 20000W	423032	1 pc
Solar panel 580W	98SOL580M	35 pcs
Solar cable - red, Ø 4mm^2	M411079/R	100 m
Solar cable - black, Ø 4mm^2	M411079/BL	100 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

WARRANTY
» Solar panel
15 YEARS WARRANTY
» Inverter ELMARK
7 YEARS TOTAL WARRANTY
+ 5 standard 2 extended

ELMARK
The Brand of Electricity

ON-GRID THREE-PHASE SOLAR SYSTEM WITH POWER OF 30000W, SET

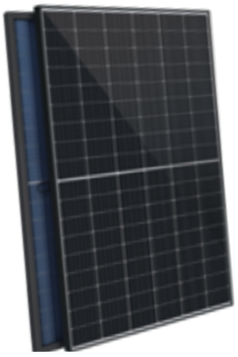
ADVANTAGES OF THE SYSTEM

- Anti-flow: Ant-feed function
- PV oversize: Max. 1.5 time PV oversize capacity
- Multiple intelligent protection
- Smart IV curve scanning
- Wi-Fi Standard Ethernet
- Configuration: Quick and easy configuration via Wi-FI
- PV Reverse polarity protection
- PV Insulation resistance detection
- AC short circuit protection
- AC over current protection
- AC over voltage protection
- Anti-islanding protection
- Residual current detection
- Over temperature protection
- Integrated DC switch
- Surge protection type III
- Smart IV curve scanning
- Active and reactive power compensation, adjust power factor
- High-quality power output and low THDI
- High quality monocrystalline half cut cells solar panels with high efficiency up to 22% + 3.5%
- Low performance drop of the system and long service life of the solar panels, up to 30 years

Items included in the sets:

N-Type
TOPCon

ON-GRID



98SOL430M
98SOL580M

423033
INVERTER ELMARK

98SOL4P32S/DC

M411079/BL
M411079/R

SOLAR SET WITH PANEL 430W WITH INVERTER ELMARK

Catalogue number:
98SOL30003M/6E

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 30000W	423033	1 pc
Solar panel 430W	98SOL430M	70 pcs
Solar cable - red, Ø 4mm^2	M411079/R	100 m
Solar cable - black, Ø 4mm^2	M411079/BL	100 m
4P 32A DC switch	98SOL4P32S/DC	3 pc

SOLAR SET WITH PANEL 580W WITH INVERTER ELMARK

Catalogue number:
98SOL30003M/7E

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 30000W	423033	1 pc
Solar panel 580W	98SOL580M	52 pcs
Solar cable - red, Ø 4mm^2	M411079/R	100 m
Solar cable - black, Ø 4mm^2	M411079/BL	100 m
4P 32A DC switch	98SOL4P32S/DC	3 pc

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

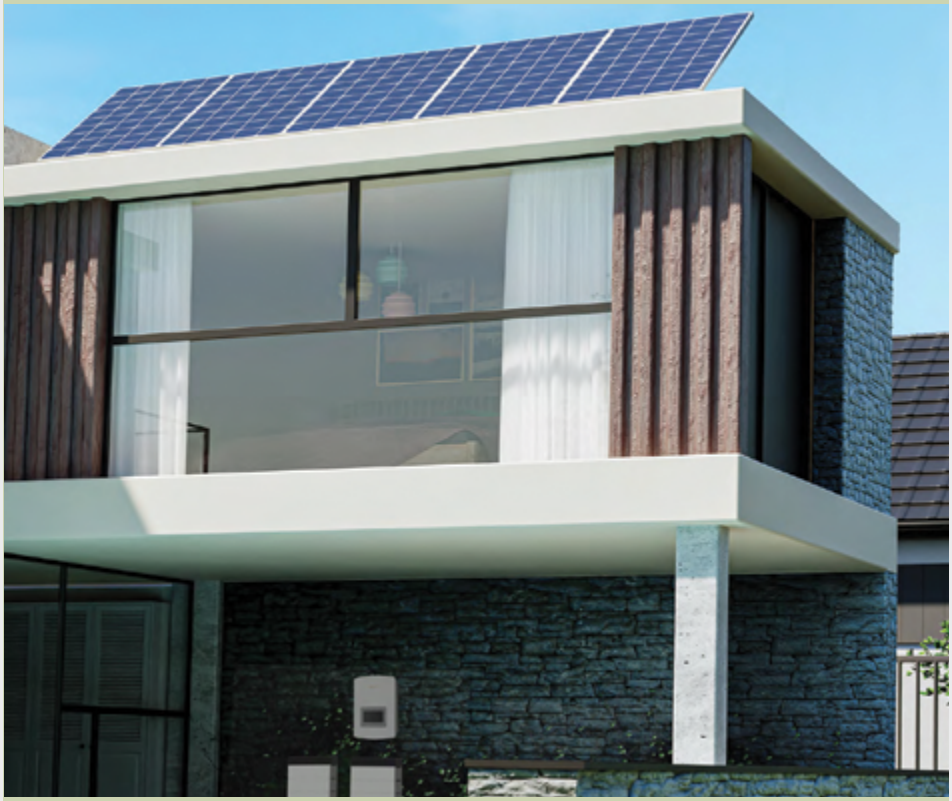
ON-GRID THREE-PHASE SOLAR SYSTEM WITH POWER OF 40KW -110KW

ELMARK offers options for drafting solar systems with capacities from 40 to 110 kW after coordination and drafting of a project and a quote on an individual request. The powers of solar systems that we can offer in this range are the following:

- 40 000W
- 50 000W
- 60 000W
- 80 000W
- 100 000W
- 110 000W

WARRANTY
» Solar panel
15 YEARS WARRANTY
» Inverter ELMARK
7 YEARS TOTAL WARRANTY
+ 5 standard 2 extended

HYBRID SOLAR SYSTEMS **SETS**



ELMARK
The Brand of Electricity

HYBRID SINGLE-PHASE SOLAR SYSTEM, SETS

The proposed kit is suitable for the construction of a stationary off-grid (OFF-GRID) solar system in places where there is no power grid or as a hybrid to provide backup power in case of power failure.

ELMARK offers the preparation of an individual project, including all the necessary elements for the construction of a solar system, completely free of charge. On www.elmarkholding.eu, you can fill in a form for the preparation of an individual project. We will prepare you a project and an offer.

HYBRID SINGLE-PHASE SOLAR SYSTEM WITH POWER OF 3000W, SET

ADVANTAGES OF THE SYSTEM

- UPS function
- Support generator and wind turbine
- Ability to operate up to 6 inverters in parallel
- Support unbalance load
- Anti-flow: Ant-feed function
- PV oversize: Max. 1.5 time PV oversize capacity
- Multiple intelligent protection
- Smart monitoring & remote firmware upgrade
- PV Reverse polarity protection
- Over current/ voltage protection
- Anti-islanding protection
- AC short circuit protection
- Residual current detection
- Ground fault monitoring
- Insulation resister detection
- PV arc detection
- High quality monocrystalline half cut cells bi-facial solar panels N-type TOPCon with high efficiency up to 22% + 3.5%
- Low performance drop of the system and long service life of the solar panels, up to 30 years

Items included in the sets:

98SOL430M
98SOL580M

423071
INVERTER ELMARK


98BAT2400LFP


98SOL4P32S/DC


M411079/BL
M411079/R

SOLAR SET WITH PANEL 430W WITH INVERTER ELMARK

Catalogue number:
98SOL3000HM/6E

Description of the items included in the set	Catalogue number	Quantity
Hybrid inverter ELMARK 3000W	423071	1 pc
Solar panel 430W	98SOL430M	7 pcs
LiFePO4 battery 2400Wh	98BAT2400LFP	1 pc
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	1 pc

SOLAR SET WITH PANEL 580W WITH INVERTER ELMARK

Catalogue number:
98SOL3000HM/7E

Description of the items included in the set	Catalogue number	Quantity
Hybrid inverter ELMARK 3000W	423071	1 pc
Solar panel 580W	98SOL580M	6 pcs
LiFePO4 battery 2400Wh	98BAT2400LFP	1 pc
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	1 pc

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

WARRANTY
» Solar panel
15 YEARS WARRANTY
» Inverter ELMARK
7 YEARS TOTAL WARRANTY
+ 5 standard 2 extended
» Battery
10 YEARS WARRANTY

HYBRID SINGLE-PHASE SOLAR SYSTEM WITH POWER OF 3600W, SET

ADVANTAGES OF THE SYSTEM

- Ability to upgrade backup power capacity with adding additional batteries
- Maximum efficiency 98.4%
- Inverter mit integrated MPPT controller
- Intelligent Energy Management System (EMS) function, improving the reliability of battery
- Built-in controller monitoring battery charge and discharge rates
- Short circuit protection
- DC reverse voltage protection
- Surge protection
- Integrated AFCI arc flash protection reducing the risk of fire
- Remote Wi-Fi monitoring
- Multiple operating modes to optimize
- Remote Wi-Fi system monitoring
- High quality monocrystalline half cut cells bi-facial solar panels N-type TOPCon with high efficiency up to 22% + 3.5%
- Low performance drop of the system and long service life of the solar panels, up to 30 years

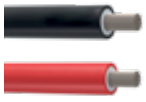
Items included in the sets:

98SOL430M
98SOL580M


423043
INVERTER SOLIS


98BAT2400LFP


98SOL4P32S/DC


M411079/BL
M411079/R

SOLAR SET WITH PANEL 430W WITH INVERTER SOLIS

Catalogue number:

98SOL3600HM/6S

Description of the items included in the set	Catalogue number	Quantity
Hybrid inverter Solis 3600W	423043	1 pc
Solar panel 430W	98SOL430M	9 pcs
LiFePO4 battery 2400Wh	98BAT2400LFP	1 pc
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	1 pc

SOLAR SET WITH PANEL 580W WITH INVERTER SOLIS

Catalogue number:

98SOL3600HM/7S

Description of the items included in the set	Catalogue number	Quantity
Hybrid inverter Solis 3600W	423043	1 pc
Solar panel 580W	98SOL580M	7 pcs
LiFePO4 battery 2400Wh	98BAT2400LFP	1 pc
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	1 pc

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

WARRANTY
» Solar panel
15 YEARS WARRANTY
» Inverter SOLIS
10 YEARS WARRANTY
» Battery
10 YEARS WARRANTY

ELMARK
The Brand of Electricity

HYBRID SINGLE-PHASE SOLAR SYSTEM WITH POWER OF 5000W, SET

ADVANTAGES OF THE SYSTEM

- Ability to upgrade backup power capacity with adding additional batteries
- Inverter with built-in MPPT controller
- Intelligent Energy Management System (EMS) function, improving the reliability of battery
- Built-in controller monitoring battery charge and discharge rates
- Short circuit protection
- DC reverse voltage protection
- Surge protection
- Integrated AFCI arc flash protection reducing the risk of fire
- Remote Wi-Fi monitoring
- Multiple operating modes to optimize system benefits
- Remote Wi-Fi system monitoring
- High quality monocrystalline half cut cells solar panels with high efficiency up to 21.5%
- Low performance drop of the system and long service life of the solar panels, up to 30 years

Items included in the sets:

98SOL430M
98SOL580M

423036
INVERTER ELMARK

98BAT2400LFP

98SOL4P32S/DC

M411079/BL
M411079/R

HYBRID

SOLAR SET WITH PANEL 430W WITH INVERTER ELMARK

Catalogue number:

98SOL5000HM/6E

Description of the items included in the set	Catalogue number	Quantity
Hybrid inverter ELMARK 5000W	423036	1 pc
Solar panel 430W	98SOL430M	12 pcs
LiFePO4 battery 2400Wh	98BAT2400LFP	1 pc
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

SOLAR SET WITH PANEL 580W WITH INVERTER ELMARK

Catalogue number:

98SOL5000HM/7E

Description of the items included in the set	Catalogue number	Quantity
Hybrid inverter ELMARK 5000W	423036	1 pc
Solar panel 580W	98SOL580M	9 pcs
LiFePO4 battery 2400Wh	98BAT2400LFP	1 pc
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

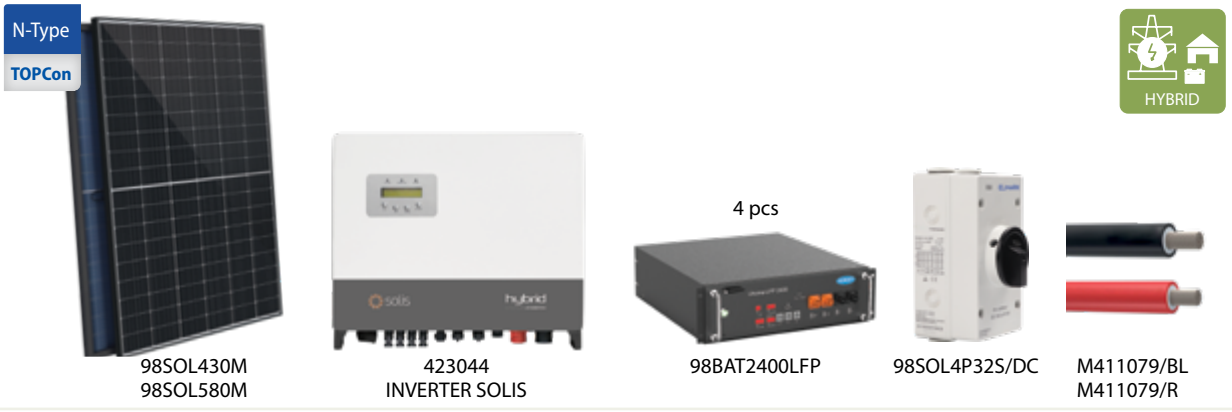
WARRANTY
» Solar panel
15 YEARS WARRANTY
» Inverter ELMARK
7 YEARS TOTAL WARRANTY
+ 5 standard 2 extended
» Battery
10 YEARS WARRANTY

HYBRID THREE-PHASE SOLAR SYSTEM WITH POWER OF 6000W, SET

ADVANTAGES OF THE SYSTEM

- Ability to upgrade backup power capacity with adding additional batteries
- Maximum efficiency 98.4%
- Inverter with integrated MPPT controller
- Intelligent Energy Management System (EMS) function, improving the reliability of battery
- Built-in controller monitoring battery charge and discharge rates
- Short circuit protection
- DC reverse voltage protection
- Surge protection
- Integrated AFCI arc flash protection reducing the risk of fire
- Remote Wi-Fi monitoring
- Multiple operating modes to optimize
- Remote Wi-Fi system monitoring
- High quality monocrystalline half cut cells bi-facial solar panels N-type TOPCon with high efficiency up to 22% + 3.5%
- Low performance drop of the system and long service life of the solar panels, up to 30 years

Items included in the sets:



98SOL430M
98SOL580M

423044
INVERTER SOLIS

98BAT2400LFP

98SOL4P32S/DC

M411079/BL
M411079/R

SOLAR SET WITH PANEL 430W WITH INVERTER SOLIS

Catalogue number:
98SOL6003HM/6S

Description of the items included in the set	Catalogue number	Quantity
Hybrid inverter Solis 6000W	423044	1 pc
Solar panel 430W	98SOL430M	14 pcs
LiFePO4 battery 2400Wh	98BAT2400LFP	4 pc
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

SOLAR SET WITH PANEL 580W WITH INVERTER SOLIS

Catalogue number:
98SOL6003HM/7S

Description of the items included in the set	Catalogue number	Quantity
Hybrid inverter Solis 6000W	423044	1 pc
Solar panel 580W	98SOL580M	11 pcs
LiFePO4 battery 2400Wh	98BAT2400LFP	4 pc
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

WARRANTY
» Solar panel
15 YEARS WARRANTY
» Inverter SOLIS
10 YEARS WARRANTY
» Battery
10 YEARS WARRANTY

ELMARK
The Brand of Electricity

HYBRID THREE-PHASE SOLAR SYSTEM WITH POWER OF 10000W, SET

ADVANTAGES OF THE SYSTEM

- Maximum efficiency 98.4% of the inverter
- Inverter with integrated MPPT controller
- Built-in controller monitoring battery charge and discharge rates
- Intelligent EMS function, increasing battery life
- Short circuit protection
- DC reverse voltage protection
- Surge protection
- Integrated AFCI arc flash protection reducing the risk of fire
- Remote Wi-Fi monitoring
- Multiple operating modes to optimize system benefits
- Remote Wi-Fi system monitoring
- High quality monocrystalline half cut cells solar panels with high efficiency up to 21.5%
- Low performance drop of the system and long service life of the solar panels, up to 30 years

Items included in the sets:

98SOL430M
98SOL580M

423037
INVERTER ELMARK

98BAT10000HV

98SOL4P32S/DC

M411079/BL
M411079/R

SOLAR SET WITH PANEL 430W WITH INVERTER ELMARK

Catalogue number:

98SOL10003HM/6E

Description of the items included in the set	Catalogue number	Quantity
Hybrid inverter ELMARK 10000W	423037	1 pc
Solar panel 430W	98SOL430M	24 pcs
LiFePO4 battery 10000Wh	98BAT10000HV	1 pc
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

SOLAR SET WITH PANEL 580W WITH INVERTER ELMARK

Catalogue number:

98SOL10003HM/7E

Description of the items included in the set	Catalogue number	Quantity
Hybrid inverter ELMARK 10000W	423037	1 pc
Solar panel 580W	98SOL580M	18 pcs
LiFePO4 battery 10000Wh	98BAT10000HV	1 pc
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

WARRANTY
» Solar panel
15 YEARS WARRANTY
» Inverter ELMARK
7 YEARS TOTAL WARRANTY
+ 5 standard 2 extended
» Battery
10 YEARS WARRANTY

HYBRID THREE-PHASE SOLAR SYSTEM WITH POWER OF 15000W, SET

ADVANTAGES OF THE SYSTEM

- UPS function
- Support generator and wind turbine
- Ability to operate up to 6 inverters in parallel
- Support unbalance load
- Anti-flow: Ant-feed function
- PV oversize: Max. 1.5 time PV oversize capacity
- Multiple intelligent protection
- Smart monitoring & remote firmware upgrade
- PV Reverse polarity protection
- Over current/ voltage protection
- Anti-islanding protection
- AC short circuit protection
- Residual current detection
- Ground fault monitoring
- Insulation resister detection
- PV arc detection
- High quality monocrystalline half cut cells bi-facial solar panels N-type TOPCon with high efficiency up to 22% + 3.5%
- Low performance drop of the system and long service life of the solar panels, up to 30 years

Items included in the set:

98SOL430M
98SOL580M

423072
INVERTER ELMARK

98BAT10000HV

98SOL4P32S/DC

M411079/BL
M411079/R

SOLAR SET WITH PANEL 430W WITH INVERTER ELMARK

Catalogue number:

98SOL15003HM/6E

Description of the items included in the set	Catalogue number	Quantity
Hybrid inverter ELMARK 15000W	423072	1 pc
Solar panel 430W	98SOL430M	35 pcs
LiFePO4 battery 10000Wh	98BAT10000HV	1 pc
Solar cable - red, Ø 4mm^2	M411079/R	100 m
Solar cable - black, Ø 4mm^2	M411079/BL	100 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

SOLAR SET WITH PANEL 580W WITH INVERTER ELMARK

Catalogue number:

98SOL15003HM/7E

Description of the items included in the set	Catalogue number	Quantity
Hybrid inverter ELMARK 15000W	423072	1 pc
Solar panel 580W	98SOL580M	26 pcs
LiFePO4 battery 10000Wh	98BAT10000HV	1 pc
Solar cable - red, Ø 4mm^2	M411079/R	100 m
Solar cable - black, Ø 4mm^2	M411079/BL	100 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

WARRANTY

» **Solar panel**
15 YEARS WARRANTY

» **Inverter ELMARK**
7 YEARS TOTAL WARRANTY
+ 5 standard 2 extended

» **Battery**
10 YEARS WARRANTY

ELMARK
The Brand of Electricity

HYBRID THREE-PHASE SOLAR SYSTEM WITH POWER OF 20000W, SET

ADVANTAGES OF THE SYSTEM

- UPS function
- Support generator and wind turbine
- Ability to operate up to 6 inverters in parallel
- Support unbalance load
- Anti-flow: Ant-feed function
- PV oversize: Max. 1.5 time PV oversize capacity
- Multiple intelligent protection
- Smart monitoring & remote firmware upgrade
- PV Reverse polarity protection
- Over current/ voltage protection
- Anti-islanding protection
- AC short circuit protection
- Residual current detection
- Ground fault monitoring
- Insulation resister detection
- PV arc detection
- High quality monocrystalline half cut cells bi-facial solar panels N-type TOPCon with high efficiency up to 22% + 3.5%
- Low performance drop of the system and long service life of the solar panels, up to 30 years

Items included in the sets:

98SOL430M
98SOL580M

423038
INVERTER ELMARK

98BAT10000HV

98SOL4P32S/DC

M411079/BL
M411079/R

HYBRID

SOLAR SET WITH PANEL 430W WITH INVERTER ELMARK

Catalogue number:

98SOL20003HM/6E

Description of the items included in the set	Catalogue number	Quantity
Hybrid inverter ELMARK 20000W	423038	1 pc
Solar panel 430W	98SOL430M	47 pcs
LiFePO4 battery 10000Wh	98BAT10000HV	1 pc
Solar cable - red, Ø 4mm^2	M411079/R	100 m
Solar cable - black, Ø 4mm^2	M411079/BL	100 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

SOLAR SET WITH PANEL 580W WITH INVERTER ELMARK

Catalogue number:

98SOL20003HM/7E

Description of the items included in the set	Catalogue number	Quantity
Hybrid inverter ELMARK 20000W	423038	1 pc
Solar panel 580W	98SOL580M	35 pcs
LiFePO4 battery 10000Wh	98BAT10000HV	1 pc
Solar cable - red, Ø 4mm^2	M411079/R	100 m
Solar cable - black, Ø 4mm^2	M411079/BL	100 m
4P 32A DC switch	98SOL4P32S/DC	2 pc

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

WARRANTY
» Solar panel
15 YEARS WARRANTY
» Inverter ELMARK
7 YEARS TOTAL WARRANTY
+ 5 standard 2 extended
» Battery
10 YEARS WARRANTY

POWER STORAGE INVERTER 3000W WITH BATTERY, SET

The inverter is used to upgrade the existing SOLIS single-phase grid (ON-GRID) power generation system to a battery-capable hybrid system to optimize self-consumption. The energy storage inverter is a good choice for already built ON-GRID systems, providing backup power when the main is dropped.

ELMARK offers the possibility of extending the warranty period to 15 years on all inverters Solis after purchasing the „Extended Warranty" package within 30 days after the purchase of the solar inverter. For more information, contact our local office.

ADVANTAGES OF THE SYSTEM

- Ability to upgrade the capacity of the backup power supply with the addition of additional batteries
- Compatible with any ON-GRID SOLIS SYSTEM
- Compatible with both Li-ion battery and lead-acid battery
- OFF-GRID, back-up function
- Inverter mit integrated MPPT controller
- Intelligent EMS function, increasing battery life
- Built-in controller monitoring battery charge and discharge rates
- Minimum/maximum voltage protection of the battery
- Battery protection at wrong poles connection
- Thermal protection
- Intelligent Energy Management System (EMS) function, improving the reliability of battery
- Remote Wi-Fi monitoring

Items included in the set:

423040
INVERTER SOLIS

98BAT2400LFP

Catalogue number:
98SOL3000EM

THE SET INCLUDES:

Description of the items included in the set	Catalogue number	Quantity
Solis energy storage inverter 3000W	423040	1 pc.
LiFePO4 battery with capacity 2400Wh	98BAT2400LFP	1 pc.

WARRANTY

» **Inverter SOLIS**
10 YEARS WARRANTY

» **Battery**
10 YEARS WARRANTY

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

CARPORT SOLAR SYSTEMS SETS

ON-GRID SINGLE-PHASE SOLAR SYSTEM WITH POWER OF 8000W - SET WITH CARPORT

These systems are preferred for the construction of solar power plants for the purpose of selling electricity or the construction of a grid system for the direct supply of consumers during the day in places where there is an established power grid. Their operating principle makes them extremely suitable for the partial reduction or complete exclusion of electricity bills.

ADVANTAGES OF THE SYSTEM

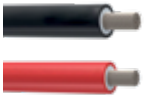
- Anti-flow: Ant-feed function
- PV oversize: Max. 1.5 time PV oversize capacity
- Multiple intelligent protection
- Smart IV curve scanning
- Wi-Fi Standard Ethernet
- Configuration: Quick and easy configuration via Wi-FI
- PV Reverse polarity protection
- PV Insulation resistance detection
- AC short circuit protection
- AC over current protection
- AC over voltage protection
- Anti-islanding protection
- Residual current detection
- Over temperature protection
- Integrated DC switch
- Surge protection type III
- Smart IV curve scanning
- Active and reactive power compensation, adjust power factor
- High-quality power output and low THDI
- High quality monocrystalline half cut cells solar panels with high efficiency up to 22,45% + 3.5%
- Low performance drop of the system and long service life of the solar panels, up to 30 years

Items included in the sets:

98SOL430M
98SOL580M

423007
INVERTER ELMARK

98SOL4P32S/DC



M411079/BL
M411079/R

423278/CP

SOLAR SET WITH INVERTER ELMARK

Catalogue number:
98SOL8000M/6ECP

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 8000W	423007	1 pc
Solar panel 430W	98SOL430M	5pcs
Solar panel 580W	98SOL580M	10 pcs
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	2 pc
Garage construction	423278/CP	1 pc

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

WARRANTY
» Solar panel
15 YEARS WARRANTY
» Inverter ELMARK
7 YEARS TOTAL WARRANTY
+ 5 standard 2 extended
» Garage construction
10 YEARS WARRANTY

ELMARK
The Brand of Electricity

ON-GRID THREE-PHASE SOLAR SYSTEM WITH POWER OF 8000W - SET WITH CARPORT

These systems are preferred for the construction of solar power plants for the purpose of selling electricity or the construction of a grid system for the direct supply of consumers during the day in places where there is an established power grid. Their operating principle makes them extremely suitable for the partial reduction or complete exclusion of electricity bills.

ADVANTAGES OF THE SYSTEM

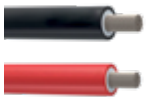
- Anti-flow: Ant-feed function
- PV oversize: Max. 1.5 time PV oversize capacity
- Multiple intelligent protection
- Smart IV curve scanning
- Wi-Fi Standard Ethernet
- Configuration: Quick and easy configuration via Wi-FI
- PV Reverse polarity protection
- PV Insulation resistance detection
- AC short circuit protection
- AC over current protection
- AC over voltage protection
- Anti-islanding protection
- Residual current detection
- Over temperature protection
- Integrated DC switch
- Surge protection type III
- Smart IV curve scanning
- Active and reactive power compensation, adjust power factor
- High-quality power output and low THDI
- High quality monocrystalline half cut cells solar panels with high efficiency up to 22,45% + 3.5%
- Low performance drop of the system and long service life of the solar panels, up to 30 years

Items included in the sets:

98SOL430M
98SOL580M

423030
INVERTER ELMARK

98SOL4P32S/DC



M411079/BL
M411079/R

423278/CP

SOLAR SET WITH INVERTER ELMARK

Catalogue number:
98SOL8003M/6ECP

Description of the items included in the set	Catalogue number	Quantity
ON-GRID inverter ELMARK 10000W	423030	1 pc
Solar panel 430W	98SOL430M	5pcs
Solar panel 580W	98SOL580M	10 pcs
Solar cable - red, Ø 4mm^2	M411079/R	50 m
Solar cable - black, Ø 4mm^2	M411079/BL	50 m
4P 32A DC switch	98SOL4P32S/DC	2 pc
Garage construction	423278/CP	1 pc

This solar power system meets all the technical requirements set by the European Union for the construction of solar systems.

WARRANTY
» Solar panel
15 YEARS WARRANTY
» Inverter ELMARK
7 YEARS TOTAL WARRANTY
+ 5 standard 2 extended
» Garage construction
10 YEARS WARRANTY

CHARGING STATIONS FOR ELECTRIC AND PLUG-IN CARS

Advantages of charging stations

Let's first look at what is the advantage of an electric car charger over a standard charge from a single-phase (two-pin) socket at home to answer the question, do I need a special charging station at home?

One of the answers to this question lies in the SPEED of charging the electric car battery from zero to full charge and whether it is acceptable to you. The charging speed depends on the capacity of the battery and the power it consumes per hour.

The standard Schuko socket allows charging the battery with a maximum current of 16A, which is equivalent to approximately 3680W. The charging cables in turn deliberately reduce the magnitude of the current from 16 to 12A, in order to protect the installation from overloading. So the power drawn from the battery per hour drops to 2760W. For a mass battery of about 40kWh, the time required to fully charge it under these conditions would be about 15 hours.

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REDUCES CHARGING TIME BY UP TO 3 TIMES

ELMARK's 7kW single-phase charger will speed up the charging process between 2 and 3 times. Thus, the same battery with a capacity of 40kWh will be charged for about 6 hours, enough time to fully charge at night rate and the car to be charged 100% for the next day.

40kWh	7kW	6 hours
2018 Nissan LEAF	Home charging station	Charging time
		

SAFETY - ANOTHER BENEFIT TO CHOOSE THE HOME CHARGING STATION

Standard household outlets are not designed to withstand continuous loads with maximum power for 10-15 hours. These loads, combined with the long duration, can cause the installation to heat up, increasing the risk of damage and fire. The purpose-built charging point, including the charging station and its accompanying installation, are safe from any electrical risks.

ENSURE YOUR **COMFORT**

Another advantage that ensures the use of a home charger station is convenience. The commitment to looking for a convenient place near home for charging the car battery and the loss of time during its charging period is dropped.

ELMARK PORTABLE ELECTRIC VEHICLE CHARGERS

ELMARK provides single-phase AC portable EV chargers with rated power of 3.7kW and 7.3kW AC with has multiple safety protection mechanisms such as over current, over voltage and over temperature protection to ensure safe use.
Portable EV chargers are light in weight and stable in performance, resistant to falling and pressure. The waterproof performance is up to IP65, and it can work normally when immersed in water for a short time
It is usually carried with the car to facilitate the owner to charge in any charging condition.

TECHNICAL DATA

- Rated voltage: 207-253V AC
- Poles: 1P+N+ PE
- Rated current: adjustable
- Charging cable length: 4m
- IP code: IP65
- Connector material: Flame retardant, RoHS, wear resistance, rolling pressure resistance, high and low temperature resistance, stamping resistance, high oil resistance, ultraviolet rays resistance.
- Protections: Over temperature, over/under voltage protection, over current protection, residual current protection(AC30mA,DC6mA)
- Terminals: silver plated
- Gun head material: ABS, safe and durable, not easy to ignite
- Display: LCD
- Charger size (LxWxH): 180x82x50mm
- Working temperature: from -25 to +50°C
- Working humidity: 3-95%
- Working altitude: <2000m

Catalogue number	Number of poles	Rated power (kW)	Output current (A)	Cable length (m)	Packing/ Box
98EVP37	1P+N+ PE	3.7	6-16 adjustable	4	1
98EVP73	1P+N+ PE	7.3	6-32 adjustable	4	1

Scan and watch detailed video with all product functions.

5 YEARS TOTAL WARRANTY
+ 5 standard
0 extended

ELMARK RFID ELECTRIC VEHICLE CHARGING WALL BOXES

RFID EV Charging wall box, it is easy to install, stable in performance, and has a complete protection mechanism. The LCD display can show the detailed charging status. To operate RIFD function, it has a card writer and management program. The charger can be used with a stand.
This device is a charger that, for reasons of convenience and safety, must meet a number of technical requirements, while at the same time being designed to supply our vehicle in the comfort of our homes. This is the ideal solution for supplying electricity to the battery, as it allows us to make the most of idle hours, such as at night, to charge our vehicles.

ADVANTAGES

- Applicable with 99% of electric vehicles
- Two installation modes: on the wall or on a stand
- Easy charging activation via magnetic card
- Precise monitoring of PWM signal variations
- Oxygen-free pure copper cables, flame retardant and high temperature resistance

ADDITIONAL FUNCTIONS:

- **RFID Function**: The charging station can be configured with contactless IC card swiping function, and charging can only be carried out through authorized IC card. If the IC card is lost, the internal dip switch can be used to set the IC card losing module. There are 2 IC cards which are authorized
- **DLB Function:** This function is the automatic distribution of charging current, through an external current transformer. During the charging process, the charging station will monitor the online charging current in real time and make corresponding adjustments. When it is detected that the current of the main circuit is greater than the set current, the charging station will reduce the charging current until the charging is stopped. When it is detected that the current of the main circuit is less than the set current, the charging station will continue to increase the charging current until 32A or 63A. In this state, the maximum charging current of the charging station is 32A and 63A. While the charging current is uncertain, the current setting switch of the charging station becomes the transformation ratio setting switch of the current transformer. The transformation ratio of the external current transformer is set by software or factory setting. The factory default current transformer transformation ratio is 100A/5A.
- **RCMU function:** When the charging station is working , if there is a DC leakage current signal, the RCMU will immediately output a fault signal and cut off the output power within 300ms, ensuring the safety and reliability of personal and property. If the fault is eliminated, the charging station will automatically restart charging according to the program within 3S. Before charging, the RCMU module of the device will automatically carry out the accuracy and detection of the DC leakage current to ensure the safe and reliable operation of the device.
- **CT access function:** The charging station can provide an analog input function, the input analog is AC0-5A, which is used to display the current working current. When the detected working current is greater than the set current value, the charging station will reduce the charging current to the set current value. Thereby ensuring the safe and reliable operation of the charging station.
- **LCD display function**

TECHNICAL DATA

- Charger output: socket type 2
- Rated voltage: 207-253V AC; 360-440V AC
- Poles: 1P+N+ PE; 3P+N+ PE
- Rated current: adjustable
- IP code: IP54
- Connector material: Flame retardant, RoHS, wear resistance, rolling pressure resistance, high and low temperature resistance, stamping resistance, high oil resistance, ultraviolet rays resistance.
- Protections: Over temperature, over/under voltage protection, over current protection, residual current protection(AC30mA,DC6mA), surge protection
- Terminals: silver plated
- Gun head material: ABS, safe and durable, not easy to ignite
- RFID module for IC card with 2 cards
- DLB: CT 100/5A
- Lock: Electro-magnetic lock DC 12V 4 wire type
- Communication mode: OCPP1.6 Wi-Fi, 4G
- Display: LCD
- Mounting: wall or post
- Charger size (LxWxH): 245x123x357mm
- Working temperature: from -25 to +50°C
- Working humidity: 3-95%
- Working altitude: <2000m

Catalogue number	Rated voltage (V)	Number of poles	Rated power (kW)	Packing/ Box
98EV73	207-253	1P+N+ PE	7.3	1
98EV11	360-440	3P+N+ PE	11	1
98EV22	360-440	3P+N+ PE	22	1

Scan and watch detailed video with all product functions.

EV CHARGING CABLES

EV charging cable is the carrier connecting electric vehicle and charging pile. And its basic function is to transmit electric energy.
EV Charging cables are generally used in charging stations, parking lots, hotels, communities, garages, and other areas.
At present, the safety of electric vehicles has become the focus of the industry.
During electric vehicles' charging and discharging process, it is important to pay attention to safety issues because of the long usage time, high current intensity, and high frequency of cables.
Based on ensuring good insulation performance, electric vehicle charging cable shall have high heat resistance and aging resistance.
At the same time, it shall have good low smoke and flame-retardant characteristics during combustion to minimize loss and injury.

Type 2 AC charging cables double-plug version (Type 2 to Type 2 or Female to Male Extension Cable), which is used for the connection from the charging station end to the electric vehicle end. Product meets the IEC 62196-2 charging connector standards. They are mainly two current options of 16A and 32A, which are divided into single-phase and three-phase version and defaults to a 5m black straight cable.

TECHNICAL DATA

- Type: female to male type 2 charging cable
- Cable length: 5m
- Case material: thermoplastic, flame retardant grade UL94 V-0
- Pin: copper alloy, silver + thermoplastic on the top
- Insulation resistance: >500MΩ(DC500V)
- Conductive terminal temperature rise: ≤50K
- Withstand voltage: 2500V/min
- Contact resistance: ≤0.3Ω
- Mechanical life: no-load plug in/ pull out >50000 times
- Coupled insertion force: 45N~80N
- Withstanding impact: Tolerable to 2-ton car rolling or 1m height drop without damage.

Catalogue number	Operating voltage (V)	Rated current (A)	Suitable for charging station with power (kW)	Cable type	Cable length (m)	Packing/ Box
98EVP32/1P	207-253	32	7.3	3x6+2x0.5mm2	5	1
98EVP16/3P	360-440	16	11	5x2.5mm+2x0.5mm2	5	1
98EVP32/3P	360-440	32	22	5x6mm+2x0.5mm2	5	1

EV CHARGING PILLAR

In cases where the charging station cannot be installed on a wall and the parking space is remote from the building, it is recommended to install the charging station on a pillar to which the charging cable is freely accessible.

Catalogue number:
98EVPOLE

Scan and watch detailed video with all product functions.

ELMARK ELECTRIC VEHICLE URBAN CHARGING STATIONS

The 40kW-320kW DC EV charger are suitable for special urban charging station, urban public charging stations, intercity highway charging stations and other occasions requiring DC quick charging, especially suitable for rapid deployment under site limitation.

FEATURES

- Support Ethernet/4G/WI-FI communication
- OCCP communication protocol with CMS
- APP and cashless payment
- Simultaneously charging with 2 outputs (40kW with one)
- Suitable for fast charging
- SiC technology for high efficiency
- PTB certified energy meter with accurate measurement
- Compatible with IEC standard
- Multiple protections for running safety
- APP operation or RFID authentication or plug and play
- Option POS terminal for contactless credit card payment

PROTECTIONS

- Over/under voltage protection
- Overload protection
- Short circuit protection
- Over/under temperature protection
- Grounding protection
- Surge protection

5 YEARS TOTAL WARRANTY
+ 5 standard
0 extended

TECHNICAL DATA

- Voltage range: 200-750V
- Frequency: 50/60Hz
- Max. current: 200A
- Power: from 40kW to 320kW
- Power factor: ≥ 0.99 (50%-100% load)
- THD value: ≤ 5% (50%-100% load)
- Stable current accuracy: ≤ ±1%
- Max. efficiency: 95%
- Installation: Flor standing
- Charging outlet: 2 charging guns (CCS 2), 40kW 1 charging gun (CCS 2)
- Cable length: 5m
- LCD screen: included
- Emergency stop button: included
- RFID function: available
- Communication protocol: OCPP 1.6 (JSON)
- Cooling method: fan cooling
- Material: Galvanized steel
- MTBF: 100 000 hours
- IP code: IP54
- Noise: ≤ 60dB
- Working temperature: from -30°C to 50°C
- Humidity: 5-95% non condensing
- Working altitude: <2000m

Catalogue number	Model	Phases	Rated power (kW)	Charging outlets	Cable length	Dimensions (mm)
98EVP40	EL-EVP40	3P+N+PE	40kW	1	5m	1600x750x430
98EVP60	EL-EVP60	3P+N+PE	60kW	2	5m	1600x750x430
98EVP90	EL-EVP90	3P+N+PE	90kW	2	5m	1600x750x580
98EVP120	EL-EVP120	3P+N+PE	120kW	2	5m	1600x750x580
98EVP180	EL-EVP180	3P+N+PE	180kW	2	5m	1600x750x750
98EVP240	EL-EVP240	3P+N+PE	240kW	2	5m	1600x750x750
98EVP320	EL-EVP320	3P+N+PE	320kW	2	5m	1600x750x750

ELMARK
The Brand of Electricity

WARRANTY TERMS

The terms apply to all products in the „Solar systems" section and are valid within the officially announced warranty periods:

- Upon sale, ELMARK guarantees that the products are free from defects and function under normal use and service. The announced warranty period of each product starts from the date of sale.
- The warranty is only valid for products purchased directly from ELMARK after a purchase document has been provided. For products purchased from our partners, all documents certifying the movement of the product from ELMARK to the end customer shall be provided.
- ELMARK's sole obligation in relation to the warranty periods announced shall be to enclose in replacement or repair of any product found to be defective after a claim by ELMARK within the warranty period specified for the product concerned.
- The warranty does not cover labor and transportation costs to the location where the product subject to the claim was installed.
- The warranty does not apply in the event that a product is installed in non-compliance with the installation instructions, except if the installation is performed by ELMARK.
- The warranty does not apply in the event that auxiliary or essential elements not purchased or recommended by ELMARK are used in the mounting of the system.
- The warranty does not apply in the event of damage caused by misuse, improper operation or unauthorized modification.
- The warranty does not apply in the event of damage occurring during transport by an external carrier.
- The warranty does not apply in case of damage or defects resulting from natural disasters caused by lightning, flood, fire, damage caused by pests and acts by third parties or events.

ELMARK recommends taking out solar array (system) insurance against natural disasters and damage.

- The warranty does not apply in the event of damage or defects resulting from hurricane-force winds and snowfall in excess of the values stated in the mounting structures section.
- The warranty does not apply in case of installation by unqualified persons or by qualified technicians in case of non-compliance with the installation instructions.
- The warranty does not apply in the event of attempted repair or correction by an unqualified technician.
- The warranty does not apply in case of relocation of elements of the system by a non-qualified technical person, compared to the initial installation.
- The warranty does not apply in case of modification of the system, in relation to the initial and final construction, in case of damage or deletion of serial numbers of the solar inverters.
- The warranty does not apply when using batteries that are not certified, not specified and recommended, when building off-grid and hybrid energy storage systems.

FILING A CLAIM

- A warranty claim will be honored subject to all terms described in the warranty terms and conditions section.
- Claims can be made from the official ELMARK website www.elmarkholding.eu
- The additional costs for travel, labor, delivery, etc., will be charged additionally upon removal of the claim if it is found that the products are free from defect or the warranty conditions are not met.
- A claim for compensation cannot be made for any loss of profit (including energy not fed into the grid or energy not used for own consumption, etc.). In any event, the maximum compensation for the customer's losses, regardless of fault, may not exceed the amount paid by the customer to purchase the equipment.

GENERATORS

ELECTRICAL GASOLINE GENERATORS

ELECTRICAL GASOLINE GENERATORS EL-GF SERIES

Generators are machines that provide electricity when power from the local grid is unavailable. Electrical generators are used as a primary power source in areas where a local electrical grid is unavailable or difficult to access such as mining and farming operations or even new developments and construction and to supply backup power to facilities, businesses, or homes during power outages. Electrical generators don't create electricity. They convert mechanical energy into electrical power. Capturing the power of motion and turning it into electrical energy by forcing electrons from the external source through an electrical circuit. A generator is an electrical motor working in reverse. Once an electrical current has been established, it is directed through copper wires to power machines, devices, or electrical systems.

FEATURES

- **Automatic voltage regulator (AVR):** An automatic voltage regulator (AVR) is a electronic device for automatically maintaining generator output terminal voltage at a set value under varying load and operating temperature. It controls output by sensing the voltage Vout at a power-generating coil and comparing it to a stable reference. The error signal is then used to adjust an average value of the field current.
- **Switch for electric start:** no included by EL-3GF-6.
- **Two power supply voltage:** 220 and 380V AC (all models without EL-3GF-6).
- **Four stroke engine:** more fuel efficient as compared to 2-stroke generators. They consume the fuel on every 4th cycle. Moreover 4 stroke engine is and more durability A 2-stroke engine works more as compared to a 4 stroke engine for a specific time. It is evident from the fact that a 2-stroke engine produces more heat and more exhaust in one hour as compared to a 4-stroke engine.
- **Less sound:** A 4-stroke engine produces less sound and makes less pollution. It is safe for the environment. This is due to the fact that you do not have to add oil in the gas and hence no oil is burned during the combustion process.
- **No Extra Oil in Fuel:** There is no need to add extra oil along with the fuel in the fuel tank. Separate engine oil is used which needs to be replaced after every 500 hours of activity.
- **Compact design.**
- **User-friendly in operations.**

Catalogue number	Model	Rated power (kW)	Max. power (kW)	Fuel tank capacity (L)	Fuel consumption (g/(kW·h))	Running time (h)
45GF36	EL-2.8GF-6	2.8	3	15	≤530	10
45GF524	EL-5GF-2-4	5	5.5	25	≤480	9.5
45GF724	EL-7GF-2-4	7	7.5	25	≤515	5.8

ELECTRICAL DIESEL GENERATORS

EL-DG10/9.5E- without canopy

Silent type
EL-DG10/9.5SE- with canopy

ELECTRICAL DIESEL GENERATORS EL-DG SERIES, 9.5KW

TECHNICAL DATA

- Models: EL-DG10/9.5E- without canopy and EL-DG10/9.5SE- SILENT with canopy
- Max. output: 10kW
- Rated output: 9.5kW
- Frequency: 50Hz
- Output voltage: 220/380V
- DC output: 12V/8.3A
- Power factor: 1
- Starting method: Electric
- Automatic voltage regulator (AVR): Included
- Alternator Type: Self-excited, 2-pole, single phase alternator
- Starting system: Electric key start with 24Ah battery
- Noise Level (7m)EL-DG10/9.5E: 80-85DB
- Noise Level (7m)EL-DG10/9.5SE: 70-73DB
- Fuel tank capacity: 30L
- Continuous running time: 12h
- Engine type: Double-cylinder, vertical, 4-stroke air-cooled diesel engine
- Combustion system: direct injection
- Fuel consumption rate: ≤270 g/kW/h
- Oil volume: 2.5L
- Panel: 2 sockets, voltmeter, AC circuit breaker, oil alert
- Dimension (LxWxH) EL-DG10/9.5E: 770x540x710mm
- Dimension (LxWxH) EL-DG10/9.5SE: 1120x760x840mm
- Net weight EL-DG10/9.5E: 155kg
- Net weight EL-DG10/9.5SE: 205kg

Catalogue number	Model	Rated power (kW)	Max. Power (kW)	Fuel tank capacity (L)	Fuel consumption (g/(kW·h))	Running time (h)
45DG9500E	EL-DG10/9.5E	9.5	10	30	≤270	12
45DG9500SE	EL-DG10/9.5SE	9.5	10	30	≤270	12

3 YEARS TOTAL WARRANTY
3 standard + 0 extended

ELECTRICAL DIESEL GENERATOR EL-DG SILENT SERIES, 15KW

Silent type
EL-DG15.5/15SE- with canopy

TECHNICAL DATA

- Models: EL-DG15.5/15SE- SILENT with canopy
- Max. output: 15.5kW
- Rated output: 15kW
- Frequency: 50Hz
- Output voltage: 220/380V
- DC output: 12V/8.3A
- Power factor: 1
- Starting method: Electric
- Automatic voltage regulator (AVR): Included
- Alternator Type: Self-excited, 2-pole, single phase alternator
- Starting system: Electric key start with 24Ah battery
- Noise Level (7m): 85DB
- Fuel tank capacity: 30L
- Continuous running time: 8h
- Engine type: Double-cylinder, vertical, 4-stroke air-cooled diesel engine
- Combustion system: direct injection
- Fuel consumption rate: ≤250 g/kW/h
- Oil volume: 3.8L
- Panel: 2 sockets, voltmeter, AC circuit breaker, oil alert
- Dimension (LxWxH): 940x680x980mm
- Net weight: 235kg

Catalogue number	Model	Rated power (kW)	Max. Power (kW)	Fuel tank capacity (L)	Fuel consumption (g/(kW·h))	Running time (h)
45DG15000SE	EL-DG15.5/15SE	15.5	15	30	≤250	8

ELECTRICAL DIESEL GENERATOR EL-DG SILENT SERIES, 30KW

Silent type
EL-DG38/30SE- with canopy

TECHNICAL DATA

- Models: EL-DG38/30SE- SILENT with canopy
- Max. output: 38kW
- Rated output: 30kW
- Frequency: 50Hz
- Output voltage: 220/380V
- Phase / wire: 3 phase / 4 wire
- Power factor: 0.8
- Starting method: Electric
- Automatic voltage regulator (AVR): ≤1
- Engine Type: Water-cooled, inline, 4-stroke, direct injection
- Intake type: Naturally-aspirated
- Noise Level (7m): 85DB
- Fuel tank capacity: 65L
- Continuous running time: 9h
- Combustion system: direct injection
- Min. specific fuel consumption at full load (g/kW.h): ≤235
- Dimension (LxWxH): 2100x900x1350mm
- Net weight: 950kg

Catalogue number	Model	Rated power (kW)	Max. Power (kW)	Fuel tank capacity (L)	Fuel consumption (g/(kW·h))	Running time (h)
45DG30000SE	EL-DG38/30SE	30	38	65	≤235	9

ELECTRICAL DIESEL GENERATORS EL-DF SERIES

A diesel generator is machinery that converts the chemical energy in diesel to electrical energy and is used to power electrical equipment. They can be used to supply a range of applications such as homes, schools, factories, hospitals and other.
Diesel generators are available with and without canopy. Canopies are made of galvanized 3 mm metal sheets. The painting is done by nano technology electronic powder coating technique. Galvanized metal sheets are durable against rust. On the doors of canopies are used stainless steel hinges and locks. In canopies, high levels of sound muting type of silence are located in an isolated area to insulate heat which included exhaust pipes and exhaust itself.

ELECTRICAL DIESEL GENERATORS EL-DF SERIES WITH CANOPY

Catalogue number	Model	Power stand by (kVA/kW)	Power prime (kVA/kW)	Output voltage (V)	Length (mm)	Width (mm)	Height (mm)
45DG55/44C	EL-DF55C	55/44	50/40	400/230	2400	1000	1800
45DG75/60C	EL-DF75C	75/60	68/55	400/230	2400	1000	1800
45DG94/75C	EL-DF94C	94/75	85/68	400/230	2700	1100	1800
45DG110/88C	EL-DF110C	110/88	100/80	400/230	3100	1100	1880
45DG150/120C	EL-DF150C	150/120	136/109	400/230	3100	1100	1880
45DG175/140C	EL-DF175C	175/140	159/127	400/230	3100	1100	1880

ELECTRICAL DIESEL GENERATORS EL-DF SERIES WITHOUT CANOPY

Catalogue number	Model	Power stand by (kVA/kW)	Power prime (kVA/kW)	Output voltage (V)	Length (mm)	Width (mm)	Height (mm)
45DG55/44	EL-DF55	55/44	50/40	400/230	2000	1000	1700
45DG75/60	EL-DF75	75/60	68/55	400/230	2000	1000	1800
45DG94/75	EL-DF94	94/75	85/68	400/230	2150	1100	1800
45DG110/88	EL-DF110	110/88	100/80	400/230	2500	1100	1780
45DG150/120	EL-DF150	150/120	136/109	400/230	2500	1100	1780
45DG175/140	EL-DF175	175/140	159/127	400/230	2500	1100	1780