

PHOTOVOLTAIC WATER HEATING

The SOLAR KERBEROS system is used for photovoltaic water heating through the economical utilization of electric power.

The SOLAR KERBEROS system provides for the maximum use of electric power generated by photovoltaic modules. It is principally used for the high efficiency heating of water by utilising a MPP (maximum power point) tracking inverter. The device can be used with any type of water heater. Potential energy surpluses are suitable for charging batteries e.g. for LED lighting or in combination with a DC/AC inverter, to back up the power supply of essential appliances (eg circulation pumps of solid fuel heaters, gas heaters, emergency lighting, etc.). The SOLAR KERBEROS control unit could be connected to a larger control system using a communication interface (intelligent houses, smart grids). It can work autonomously and without a power supply (stand alone system).

HIGHLIGHTS

- High efficiency
- Easy and cost-efficient installation
- Low roof load
- Efficient operation also during winter
- Suitable for any type of water heater
- Fully autonomous system (even during a power cut)
- Connectivity to a larger control system
- Easy to upgrade
- User-friendly
- Power supply backup

AREAS OF APPLICATION

- Residential properties
- Apartment buildings
- Holiday homes
- Commercial buildings
- Stadiums, sports venues
- Water parks, wellness centres
- Recreation and camping facilities
- Industry – water heating for technological purposes
- Companies with high consumption of warm water



APPLICATIONS

- **Water heating**
- Pump back-up
- Charging of electro-mobile vehicles (cars, scooters, bikes)
- Charging of electric tools
- Electric heating
- Security systems
- Emergency lighting
- LED lighting

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Technical data

Electric data - photovoltaic

Input voltage (limits)	100 -280 VDC
MPP tracking range	120 - 260 VDC
Maximum output current	8 A
Maximum efficiency	99 %

Recommended wiring: 6 PV modules in series with power 250 W/each. Different number of modules and different module power can be used but maximum voltage output of the system must be 280 VDC for any illumination and temperature.

Electric data - mains electricity

Input voltage	230 V AC 50 Hz
Maximal output current	13 A

Output to heating element

Power	According to input voltages, limited by max. mains current 13 A and 8 A from PV panels. Power for given combination 2 - 3 kW
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External output

Input voltage	Adjustable (5 - 15 % of input voltage), only maximum voltage limited, without stabilization
Maximal output current	8 A

Thermal regulators

Setting range	10 - 80°C
Thermal fuse	Yes - electronic

Working conditions

Operating temperature	+5 až +40°C
Store temperature	-20 až +60°C
Operating relative humidity	Max 75 % non condensing
Store relative humidity	Max 90 % non condensing
Environment dustiness	Dust particles volume max 0,75 mg/m ³
Chemical effects	Non aggressive

Constructions parameters

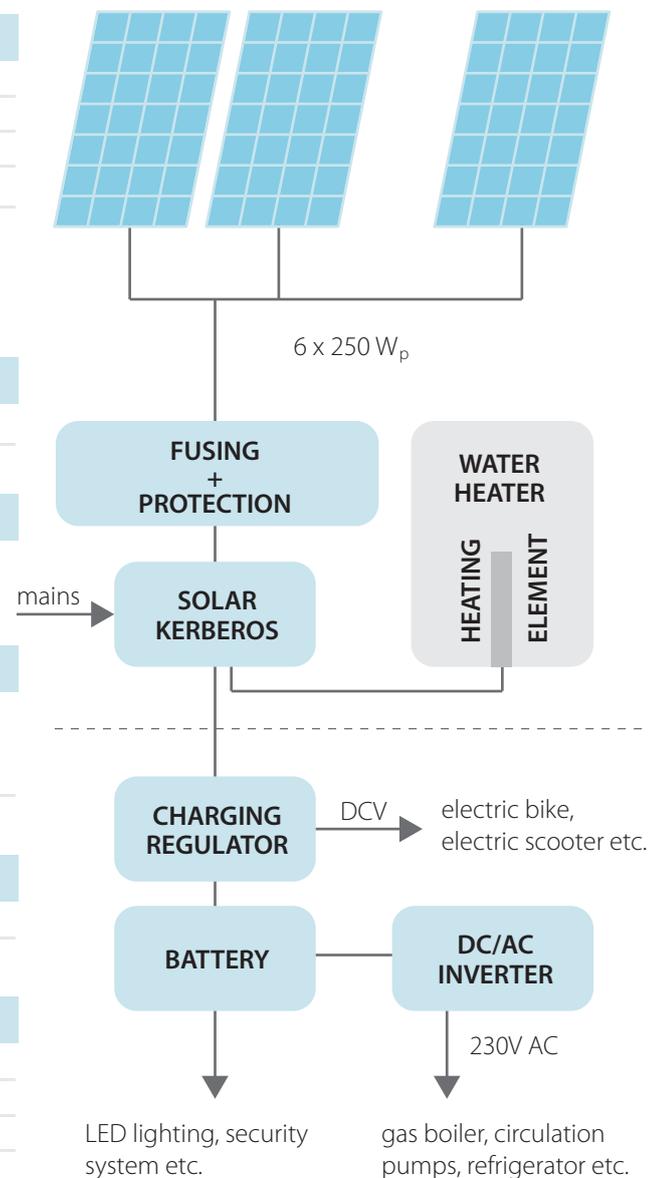
Size	385 x 323 x 100 mm
Weight	5 800 g
Ingress protection	IP 20

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