



**SOLAR POWER
 WHERE I NEED IT**



SOLARA – always the right choice



SOLARA®

THE GREAT FREEDOM

The most beautiful spots on earth have no socket. With SOLARA you can still enjoy your vacation wherever you like it. Solar power gives you the freedom you dreamed of once you bought your camper or yacht.

FOR TECHNICAL EQUIPMENT WITHOUT POWER SUPPLY

Whether radio mast, navigation marks or a hospital at the end of the world. Electricity is needed everywhere. Professional solar systems from SOLARA can provide reliable energy.

PROVEN QUALITY SINCE 1996

Anyone who has successfully produced solar technology for so long has probably done everything right. Our customers are satisfied because we supply long-lasting and reliable solar systems. Only the latest technologies and materials being used to make our products more productive.

PREMIUM QUALITY - MADE IN GERMANY

All SOLARA solar panels are produced in Germany. Only then short and CO₂ reduced deliveries are possible. Product innovations can be implemented easily and quickly. German engineering guarantees consistently high quality.

WE LOVE PHOTOVOLTAICS

SOLARA are Engineers with long experience and great passion for solar technology. Hamburg business people, whom have the pleasure to deliver solar systems reliably and safely anywhere in the world.



SOLAR TECHNOLOGY IN TESTED QUALITY

More and more customers are demanding a priced alternative in classic quality. SOLARA has the DCsolar solar modules produced in Asia well and cheaply.

“EVEN IN THE ECONOMY CLASS YOU CAN HAVE A GOOD AND SAFE FLIGHT”

DCsolar solar modules are developed by SOLARA in Germany. Tested and certified manufacturing facilities in Asia produce DCsolar modules according to these specifications.

ATTRACTIVE ALL-IN-ONE KITS

DCsolar modules can be combined with all high-quality SOLARA mounting systems and charge controllers. The DCsolar all-in-one kits in SOLARA quality are very price attractive.

You have the choice: Premium quality Made in Germany or the classic stuff from Asia

PROVED

SOLARA®

QUALITY

PROVED

SOLARA®

SAFETY

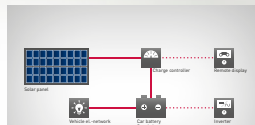
PROVED

DCsolar

QUALITY

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How to find the right system size

SOLARA solar panels & sets



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Power M-Series



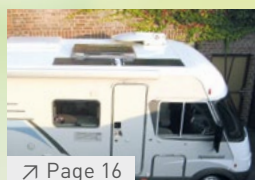
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M-Series



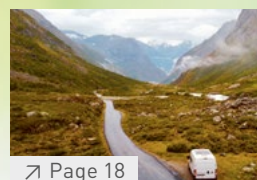
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Power Mobile



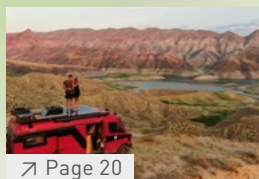
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Power S-Series



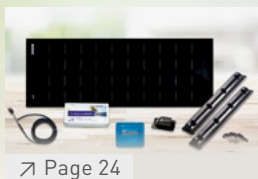
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S-Series



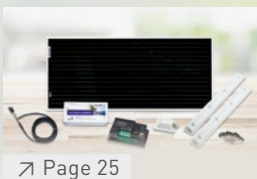
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S-Series Vision



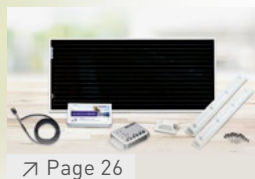
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SOLARA All-in-one kit Power Pack



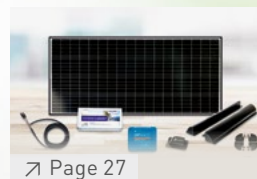
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SOLARA All-in-one kit Power Pack



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SOLARA All-in-one kit Premium Pack



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Accessories

DCsolar solar panels & sets




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Strong energy on the go



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EcoLux-Series



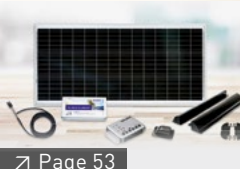
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DCsolar All-in-one kit Power MPPT HV



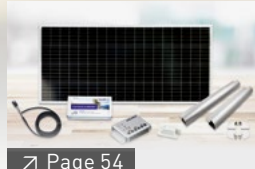
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DCsolar All-in-one kit Power MPPT




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DCsolar All-in-one kit Power EBL



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DCsolar All-in-one kit Power Profi



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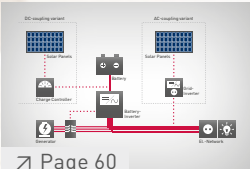
Accessories

Commercial applications



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Solutions for every application




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The Off-Grid principle



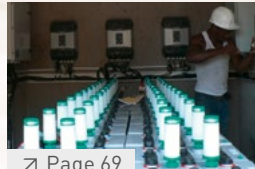
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Solar panels



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Charge controller & inverters



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Batteries

Independent power supply

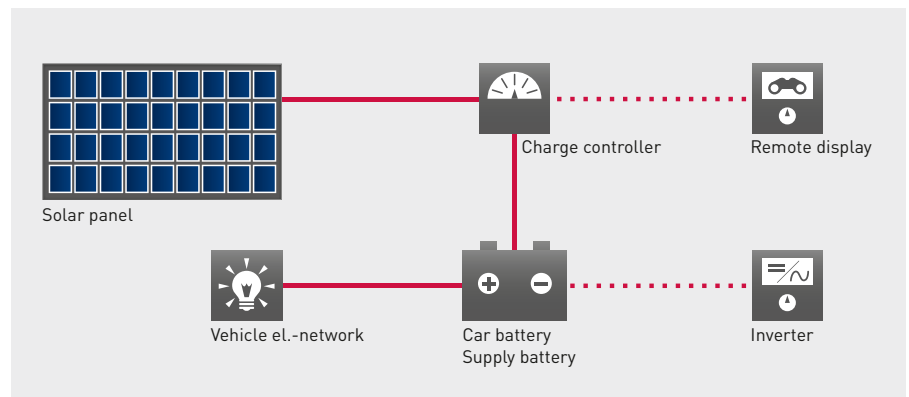
SOLAR PANELS FOR EVERY NEED

Reliability is also a decisive criterion in the small performance range. Whether camper or boat, mountain hut or measuring station, often even a small solar system is enough to ensure a power supply, even without complicated inverters.

On the following pages you will find a variety of complete solutions for almost every requirement. The advantage of solar systems by SOLARA are their quick setup, because all parts of the system are optimally adapted and plug & play.

MAXIMUM FLEXIBILITY

In addition, all components form a solid basis for extensions. The modular design ensures maximum flexibility, additional components can be integrated at any time, retroactively and step-by-step, in line with any growing energy demand.



CALCULATE YOUR ENERGY REQUIREMENTS

To find out how big your solar system should be, you need to take a closer look at your consumers and their energy requirements. Depending on the number of devices, the power consumption of each device and the daily run-time. Furthermore, the number of people and the period of use during the year affect energy demand.

Now just simply sum up your consumption according to the table below - the result is your daily energy need. Depending on your consumption behaviour and the time of use over the year, then this consumption will be, more or less, covered by the solar system.



| Device | Power Rating | Operation Time | Consumption |
|--------------------|--------------|----------------|-------------|
| Radio | 15 W | 4 hours | 60 Wh/day |
| Colour-TV | 30 W | 4 hours | 120 Wh/day |
| Sat-Receiver | 20 W | 4 hours | 80 Wh/day |
| Lamp | 10 W | 5 hours | 50 Wh/day |
| Compressor fridge | 50 W | 6 hours | 300 Wh/day |
| Mobile phone | 15 W | 1 hours | 15 Wh/day |
| Tablet/Laptop | 15 W | 2 hours | 30 Wh/day |
| Map plotter | 15 W | 6 hours | 90 Wh/day |
| Autopilot | 40 W | 6 hours | 240 Wh/day |
| Water maker | 100 W | 4 hours | 400 Wh/day |
| Instrument display | 10 W | 6 hours | 60 Wh/day |
| E-Bike | 150 W | 4 hours | 600 Wh/day |

How to find the right system size

MODULE IS NOT EQUAL A MODULE

In order to find out which panel size is the right one, it is advisable to take a closer look at the general conditions such as travel time, travel behaviour and vehicle size.

- To extend the service life, it is not always necessary to cover the entire consumption. Often, it is sufficient enough to compensate a part by the solar system.
- In the case of a main use during the summer season, a solar system delivers very good yields and can be chosen smaller.
- With only a few people on board, the energy consumption is usually lower and the solar power plant can be chosen smaller.



Solar system up to 110 W

- Ideal for camper vans and small RV's
 - Mostly weekend tours during summer time
 - Consumers: light, pump, radio, small compressor fridge
- Product recommendation:** Modules from the S-Series or M-Series

Solar system with 110 Wp (440 Wh/day)

- Ideal for small to medium size RV's
 - Period of use: April to September
 - Consumer: light, pump, radio, TV/SAT
- Product recommendation:** SOLARA or DCsolar complete sets, S-Series modules, Power Mobile, Power Mobile Plus

Solar system with 110 - 220 Wp (440-880 Wh/day)

- Ideal for medium to large RV's
 - Period of use: all year round
 - Consumers: light, pump, radio, TV/SAT, small compressor fridge
- Product recommendation:** SOLARA or DCsolar complete sets, S-Series modules

Solar system with more than 220 Wp (> 880 Wh/day)

- Ideal for medium to large RV's
 - Period of use: all year round
 - Consumers: light, pump, radio, TV/SAT, compressor fridge, E-Bike charger
- Product recommendation:** SOLARA or DCsolar complete sets, S-Series modules



Solar system smaller than 25 W

- All boat sizes and types
 - Trickle charge for the battery system
 - Period of use: all year round
- Product recommendation:** Solara M-Series

Solar system with 30-80 W

- Sailboat, charter boat
 - High consumption coverage
 - Compressor fridge, radio, navigation, light, communication, tablet/PC
 - Summer time, long-distance voyage, short-haul cruises
- Product recommendation:** Solara M-Series, Power M-Series, Power Mobile

Solar system with 80-150 W

- Sailboat, charter boat
 - High consumption coverage
 - Compressor fridge, radio, navigation, light, communication, tablet/PC
 - Summer time, long-distance voyage, short-haul cruises
- Product recommendation:** Solara M-Series, Power M-Series, Power Mobile

Solar systems with 150 W and more

- Large sailboat, catamaran, large charter boat
 - Almost complete consumption compensation
 - Compressor fridge, radio, navigation, light, communication, tablet/PC
 - April-September period, long-distance voyage, cruises with little to no harbour time
- Product recommendation:** Solara M-Series, Power M-Series, S-Series





Pothole Rodeo – With solar from Austria to the Black Sea and back to the Adriatic Sea

LUKAS, STEFANIE, CHRISTIAN AND DANIEL, TEAM #106 BULLIVERS REISEN

“We have always had solar power. Our mobile solar system has always kept the batteries charged during this extreme journey. Charging with Solara solar panels is great!

Our conclusion: A genius adventure holiday with incredible experiences, places and people! And who knows, maybe we'll go the start again next year, when the search for the last potholes of Europe continues... :)”

DCsolar Power Move

| | |
|--------------|--|
| System size | 120 W |
| Suitable for | sail boats, caravans, RV's and camper vans |
| Products | 1 x DCsolar Power move with 120 Watt |
| | 1 x Charge controller Fox 062, 6A |

➤ [More details on our portable Modules can be found on the pages 14 and 42](#)



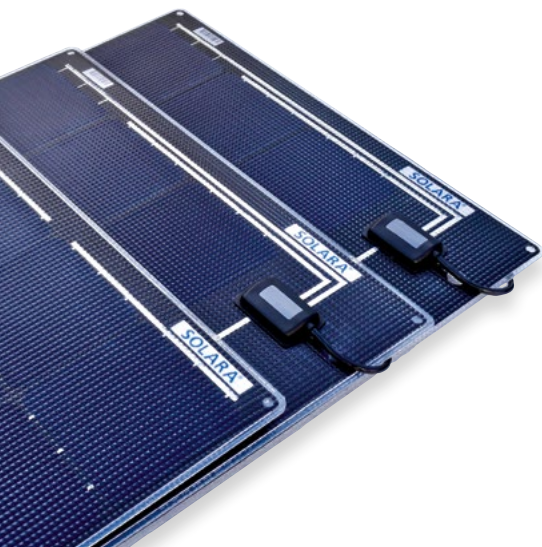
**Flexibel einsetzbar –
überall.**



SOLARA Power M-Series

HIGHEST DAILY YIELDS BY SUNPOWER CELLS

- Solar cells with over 23% efficiency
- Additional solar cells for efficient charging
- Highest yields in every season due to excellent low-light performance - even in diffused light
- Designed and manufactured for permanent use on water and on land
- All materials withstand extreme heat, high humidity, sea and salt water
- External cell protector with protection diodes included
- Extremely flat module construction with aluminium sandwich support plate
- Flat, glued and screwed cable outlet with strain relief
- Fully walkable on firm ground
- Cable lead-through already prepared in the carrier plate
- Manufactured exclusively in Germany

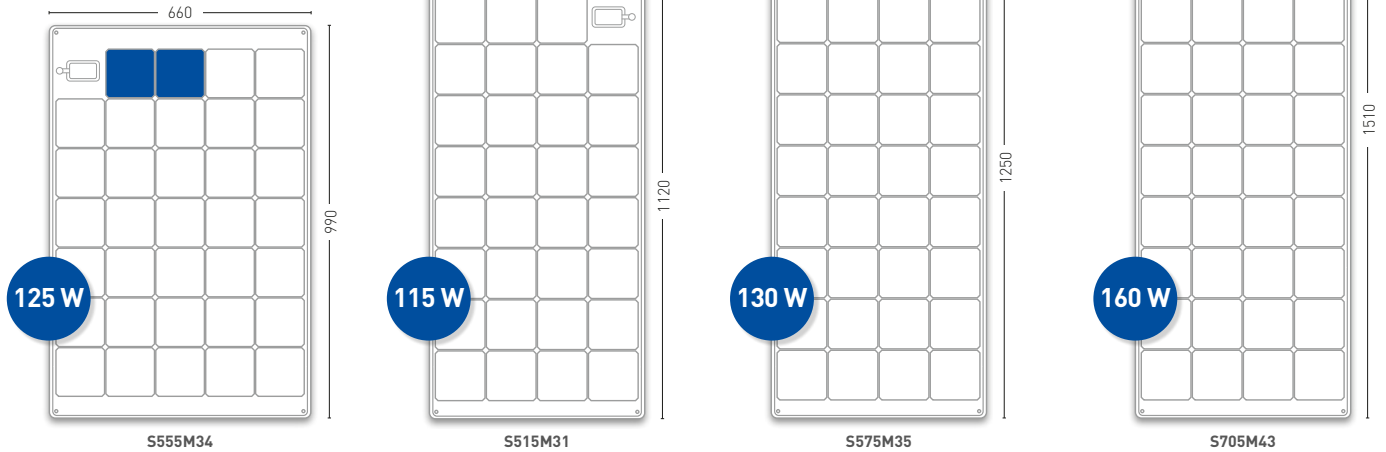


SOLARA Power M-Series



Now even more power

Extra cells for efficient charging!



PERFORMANCE

| Type | S555M34 | S515M31 | S575M35 | S705M43 |
|--|---------|---------|---------|---------|
| Daily output in summer in Germany (Ø) Wh/d | 555 | 515 | 575 | 705 |
| Rated output ¹ (Pmpp) Wp | 125 | 115 | 130 | 160 |
| Short-circuit current (Isc) A | 6.40 | 6.40 | 6.40 | 6.40 |
| Open-circuit voltage (Uoc) V | 24.82 | 22.63 | 25.55 | 31.39 |
| Voltage(Umpp) V | 21.08 | 19.22 | 21.70 | 26.66 |
| Current (Impp) A | 6.04 | 6.04 | 6.04 | 6.04 |
| No. of cells | 34 | 31 | 35 | 43 |

¹ Performance at STC, Standard Testing Conditions: 1000 W/m², AM 1.5, cell temperature 25° C

Dimensions and weight

| | | | | |
|---------------------------|---------------|----------------|----------------|----------------|
| Dimensions (L x W x H) mm | 990 x 660 x 4 | 1120 x 545 x 4 | 1250 x 545 x 4 | 1510 x 545 x 4 |
| Weight kg | 4.2 | 3.6 | 4.4 | 5.2 |
| Cell dimensions mm | 125 x 125 | 125 x 125 | 125 x 125 | 125 x 125 |

Thermal properties (per cell)

| | |
|--------------|--------|
| TK Pmpp %/°C | -0.29 |
| TK Uoc mV/°C | -1.74 |
| TK Isc mA/°C | 2.90 |
| NOCT °C | 46 ± 2 |

Used materials

| | |
|------------------|---|
| Cell technology | Sunpower, monocrystalline with back contact |
| Front/back | ETFE front and back side foil, welded at the edge |
| Cable outlet | Solid, flat, seawater tight, glued and screwed |
| Connecting cable | 3 m, 2 x 2.5 mm ² |

More technical data

| | |
|--------------------------------|----------------|
| Measuring accuracy Pmpp at STC | ± 5 % |
| Operating temperature range | -40°C to +85°C |





SOLARA M-Series

EXTREMELY FLAT, WALKABLE AND SEMI-FLEXIBLE

- Stability and maximum heat dissipation due to innovative aluminium-sandwich support plate
- Additional solar cells for efficient charging
- Maximum daily yield due to additional single cells
- All materials withstand extreme heat, high humidity, sea and salt water
- Teflon-type extremely resistant protective film on front and back
- Flat, glued and screwed cable outlet with strain relief
- Cell protector with external protection diodes included
- Cable lead-through already prepared in the carrier plate
- Manufactured exclusively in Germany

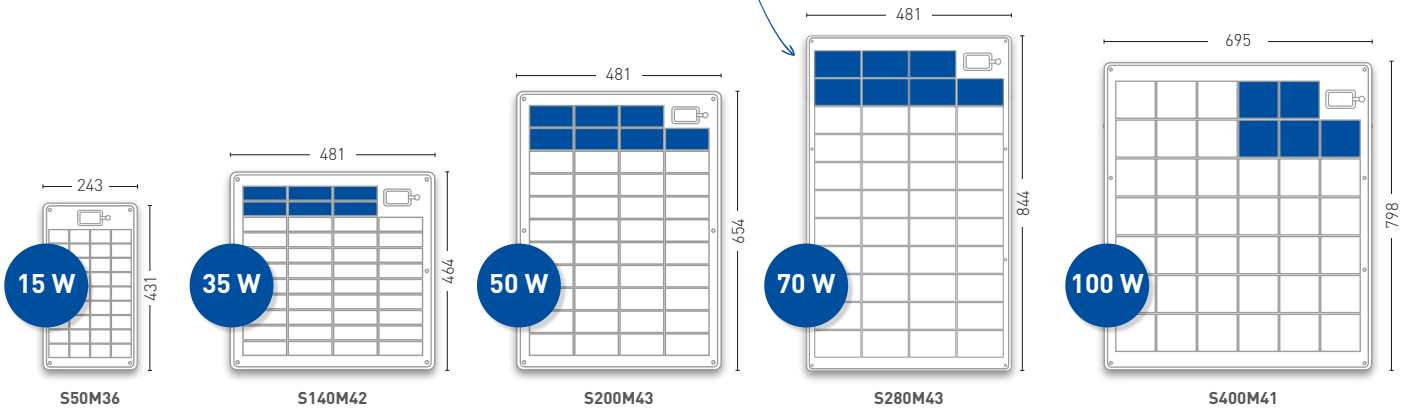




SOLARA M-Series



Extra cells for efficient charging!



PERFORMANCE

| Type | S50M36 | S140M42 | S200M43 | S280M43 | S400M41 |
|--|--------|---------|---------|---------|---------|
| Daily output in summer in Germany (Ø) Wh/d | 50 | 140 | 200 | 280 | 400 |
| Rated output ¹ (Pmpp) Wp | 15 | 35 | 50 | 70 | 100 |
| Short-circuit current (Isc) A | 0.72 | 1.44 | 2.15 | 2.85 | 4.29 |
| Open-circuit voltage (Uoc) V | 24.48 | 28.56 | 29.24 | 29.24 | 27.88 |
| Voltage(Umpp) V | 20.88 | 24.36 | 24.94 | 24.94 | 23.87 |
| Current (Impp) A | 0.69 | 1.38 | 2.05 | 2.72 | 4.10 |
| No. of cells | 36 | 42 | 43 | 43 | 41 |

¹ Performance at STC, Standard Testing Conditions: 1000 W/m², AM 1.5, cell temperature 25 °C

Dimensions and weight

| | | | | | |
|---------------------------|---------------|---------------|---------------|---------------|---------------|
| Dimensions (L x W x H) mm | 431 x 243 x 4 | 464 x 481 x 4 | 654 x 481 x 4 | 844 x 481 x 4 | 798 x 695 x 4 |
| Weight kg | 0.9 | 1.7 | 2.2 | 2.8 | 3.7 |
| Cell dimensions mm | 52 x 35 | 104 x 35 | 104 x 52 | 104 x 69 | 104 x 104 |

Thermal properties

| | |
|-------------|--------|
| TK Pmpp %/C | -0.40 |
| TK Uoc %/C | -0.32 |
| TK Isc %/C | 0.06 |
| NOCT °C | 46 ± 2 |

Used materials

| | |
|------------------------------|---|
| Cell technology | Monocrystalline PERC |
| Front/back | ETFE front and back side foil, welded at the edge |
| Cable outlet | Solid, small, flat, seawater-tight, glued and screwed |
| Hotspot protector (external) | Enclosed with S200M43, S280M43 and S400M41 |
| Connecting cable | 3 m, 2 x 1.5mm ² oder 3 x 1.5mm ² |

More technical data

| | |
|--------------------------------|----------------|
| Measuring accuracy Pmpp at STC | ± 5 % |
| Operating temperature range | -40°C to +85°C |





Mobile and flexible in every situation!

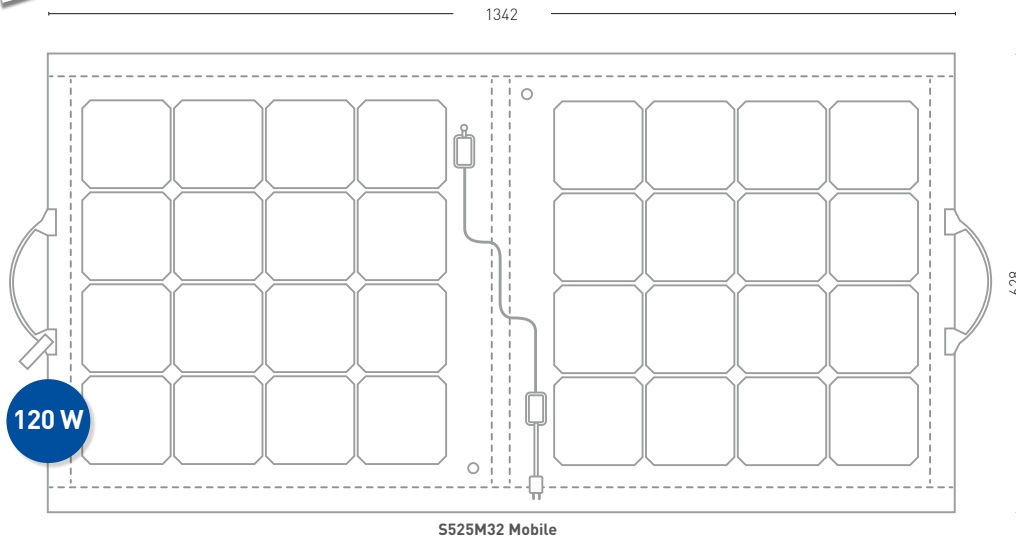
SOLARA Power Mobile

PLUG & PLAY WITH CABLE CHARGE CONTROLLER

- Flexible use thanks to innovative, fully encircling fabric bordure
- Eyelets, Loxx buttons, velcro or zipper can be retrofitted
- Space-saving stowage due to foldable module surface
- Effective battery charging even when the vehicle is in the shade
- Extremely high output by the use of Sunpower cells with 23 % efficiency
- All materials withstand extreme heat, high humidity, sea and salt water
- Manufactured exclusively in Germany



SOLARA Power Mobile



PERFORMANCE

| Type | S525M32 Mobile |
|--|----------------|
| Daily output in summer in Germany (Ø) Wh/d | 525 |
| Rated output ¹ (Pmpp) Wp | 120 |
| Short-circuit current (Isc) A | 6.40 |
| Open-circuit voltage (Uoc) V | 22.63 |
| Voltage(Umpp) V | 19.22 |
| Current (Impp) A | 6.04 |
| No. of cells | 32 |

¹ Performance at STC, Standard Testing Conditions: 1000 W/m², AM 1.5, cell temperature 25° C

Dimensions and weight

| | |
|----------------------------------|----------------|
| Dimensions opened (L x W x H) mm | 1342 x 628 x 6 |
| Dimensions folded (L x W x H) mm | 685 x 628 x 25 |
| Weight kg | 4.9 |
| Cell dimensions mm | 125 x 125 |

Thermal properties (per cell)

| | |
|--------------|--------|
| TK Pmpp %/°C | -0.29 |
| TK Uoc mV/°C | -1.74 |
| TK Isc mA/°C | 2.90 |
| NOCT °C | 46 ± 2 |

Used materials

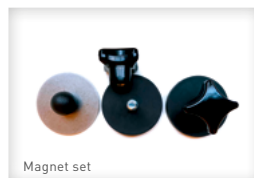
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|-----------------|---|
| Cell technology | Sunpower, monocrystalline with back contact |
| Front/back | ETFE front and back side foil, welded at the edge |
| Cable outlet | Solid, small, flat, seawater-tight, glued and screwed |

More technical data

| | |
|--------------------------------|----------------|
| Measuring accuracy Pmpp at STC | ± 5 % |
| Operating temperature range | -40°C to +85°C |

Scope of delivery: Cable charge controller Fox-062 (for Gel, AGM and Li-batteries), Cable 5 m with SureSeal plugs pre-mounted

Options: Extension cable with SureSeal plugs 5 m, Eyelet set, Loxx buttons, magnet sets

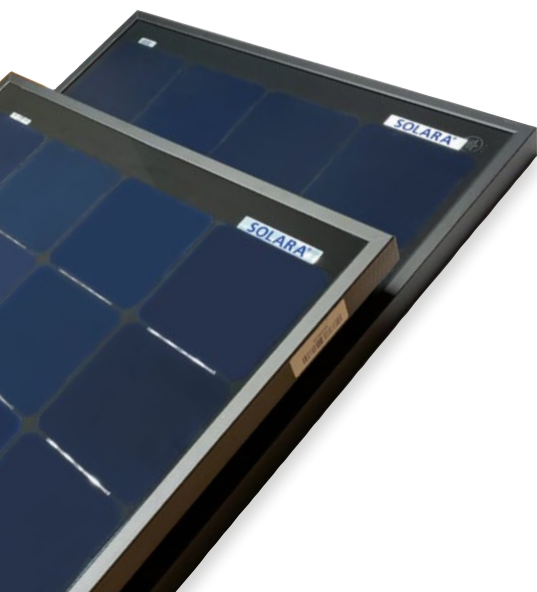




SOLARA Power S-Series

HIGHEST DAILY SUPPLY BY SUNPOWER CELL

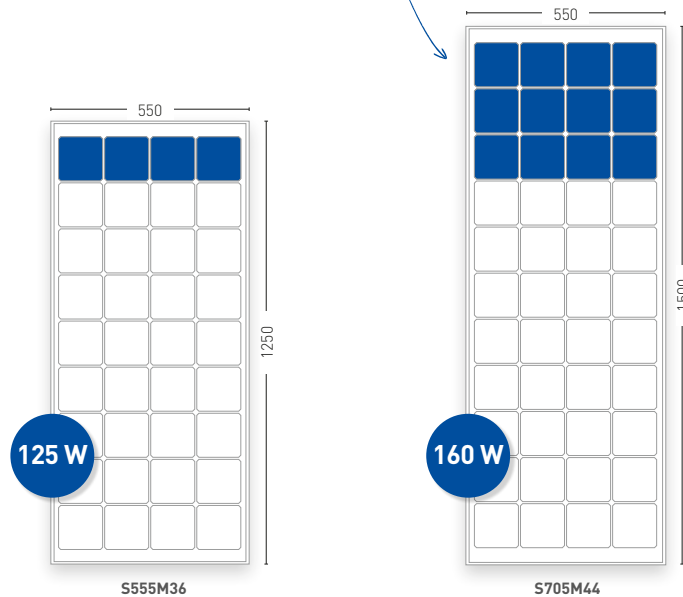
- Increased number of cells for maximum daily yield
- Solar cells with over 23% efficiency
- Additional solar cells for efficient charging
- Use of 2.0 mm thick, scratch-resistant, thermally tempered solar glass
- Excellent mechanical strength thanks to the torsion-resistant module frame
- Large, waterproof junction box with connection cable, MC4 compatible
- Specially designed for long-term use in extreme heat and high humidity
- Manufactured exclusively in Germany



SOLARA Power S-Series



Extra cells for efficient charging!



PERFORMANCE

| Type | S555M36 | S705M44 |
|--|---------|---------|
| Daily output in summer in Germany (Ø) Wh/d | 555 | 705 |
| Rated output ¹ (Pmpp) Wp | 125 | 160 |
| Short-circuit current (Isc) A | 6.87 | 6.42 |
| Open-circuit voltage (Uoc) V | 24.68 | 31.05 |
| Voltage(Umpp) V | 19.08 | 26.65 |
| Current (Impp) A | 6.56 | 6.01 |
| No. of cells | 36 | 44 |

¹ Performance at STC, Standard Testing Conditions: 1000 W/m², AM 1.5, cell temperature 25° C

Dimensions and weight

| | | |
|---------------------------|-----------------|-----------------|
| Dimensions (L x W x H) mm | 1250 x 550 x 35 | 1500 x 550 x 35 |
| Weight kg | 6.6 | 9.5 |
| Cell dimensions mm | 125 x 125 | 125 x 125 |

Thermal properties (per cell)

| | |
|--------------|--------|
| TK Pmpp %/°C | -0.29 |
| TK Uoc mV/°C | -1.74 |
| TK Isc mA/°C | 2.90 |
| NOCT °C | 46 ± 2 |

Used materials

| | |
|-----------------|---|
| Cell technology | Sunpower, monocrystalline with back contact |
| Frontside | Tempered solar glass |
| Frame | Anodized aluminium hollow profile, silver |
| Junctionbox | IP67 with MC4 compatible connectors |

More technical data

| | |
|--------------------------------|----------------|
| Measuring accuracy Pmpp at STC | ± 5 % |
| Operating temperature range | -40°C to +85°C |
| Glass thickness | 2.0 mm |



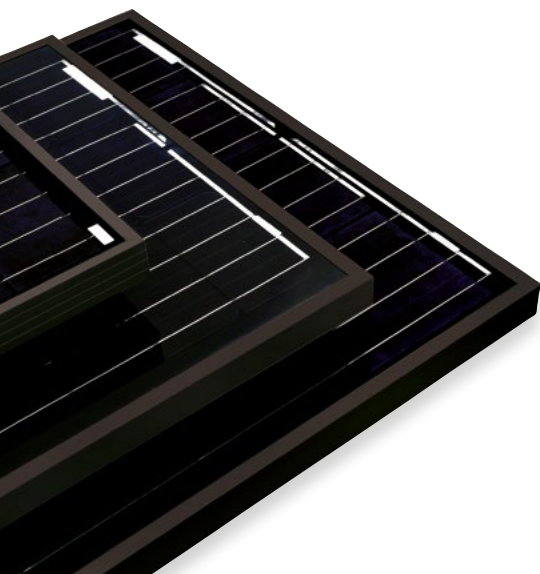


Specially developed for mobile use.

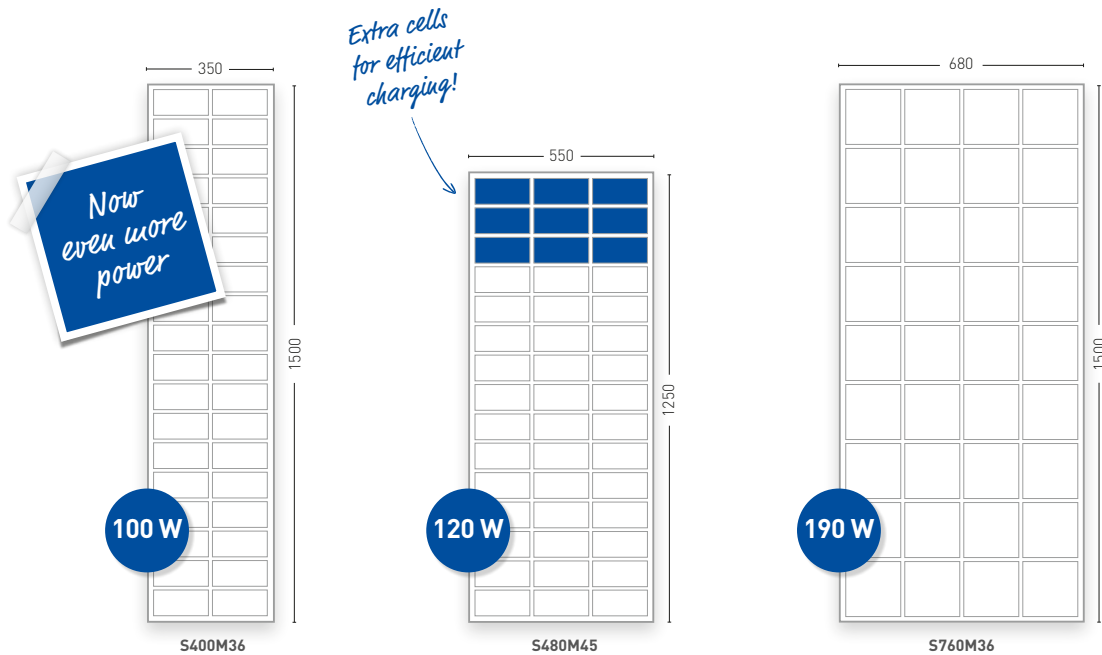
SOLARA S-Series

ROBUST AND RELIABLE DEVELOPED FOR MOBILE APPLICATIONS

- Solar modules with 36/45 high-performance solar cells
- Additional solar cells for efficient charging (S480M45 only)
- Designed and manufactured for permanent use on water and on land
- Robust, seawater-resistant, torsion-resistant aluminium profile frame
- Drainage holes to prevent frost damage
- Large, waterproof junction box with connection cable, MC4 compatible
- Manufactured exclusively in Germany



SOLARA S-Series



PERFORMANCE

| Type | S400M36 | S480M45 | S760M36 |
|--|---------|---------|---------|
| Daily output in summer in Germany (Ø) Wh/d | 400 | 480 | 760 |
| Rated output ¹ (Pmpp) Wp | 100 | 120 | 190 |
| Short-circuit current (Isc) A | 5.04 | 4.89 | 10.09 |
| Open-circuit voltage (Uoc) V | 24.16 | 29.94 | 24.14 |
| Voltage (Umpp) V | 20.70 | 25.65 | 20.13 |
| Current (Impp) A | 4.83 | 4.68 | 9.44 |
| No. of cells | 36 | 45 | 36 |

¹ Performance at STC, Standard Testing Conditions: 1000 W/m², AM 1.5, cell temperature 25° C

Dimensions and weight

| | | | |
|---------------------------|-----------------|-----------------|-----------------|
| Dimensions (L x W x H) mm | 1500 x 350 x 35 | 1250 x 550 x 35 | 1500 x 680 x 35 |
| Weight kg | 7.9 | 6.6 | 9.3 |
| Cell dimensions mm | 156 x 78 | 156 x 78 | 156 x 156 |

Thermal properties

| | |
|--------------|--------|
| TK Pmpp %/°C | -0.42 |
| TK Uoc %/°C | -0.32 |
| TK Isc %/°C | 0.04 |
| NOCT °C | 46 ± 2 |

Used materials

| | |
|-----------------|--|
| Cell technology | Monocrystalline PERC |
| Frontside | Tempered solar glass |
| Frame | Anodized aluminium hollow profile, black |
| Junctionbox | IP67 with MC4 compatible connectors |

More technical data

| | |
|--------------------------------|----------------|
| Measuring accuracy Pmpp at STC | ± 5 % |
| Operating temperature range | -40°C to +85°C |
| Glass thickness | 3.2/2.0 mm |





SOLARA S-Series Vision

INDESTRUCTIBLE DUE TO UNIQUE GLASS/GLASS TECHNOLOGY

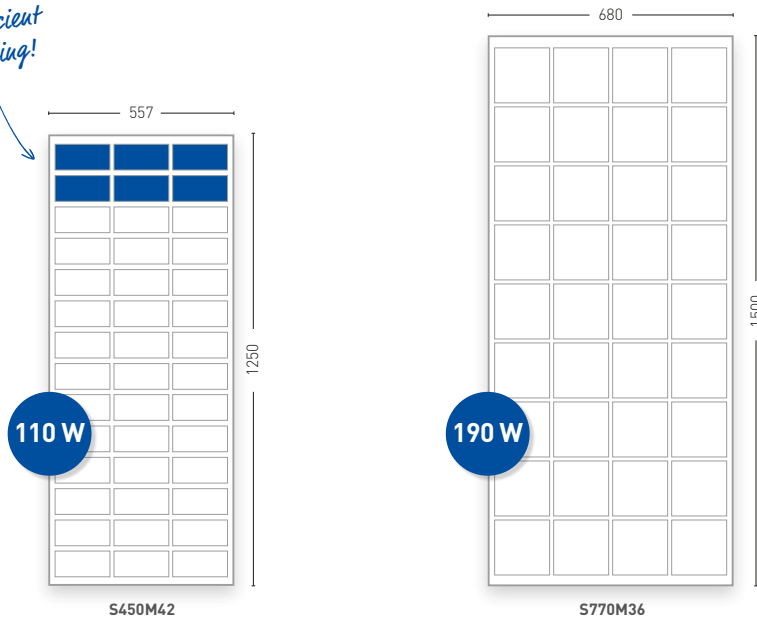
- Fully walkable
- Additional solar cells for efficient charging (S450M42 only)
- Robust, seawater-resistant aluminium profile frame
- Tropical roof capable and OFF-ROAD use suitable
- Large, waterproof junction box with connection cable, MC4 compatible
- Suitable for use even under extreme climatic conditions
- Designed and manufactured for permanent use on water and on land
- Manufactured exclusively in Germany



SOLARA S-Series Vision



Extra cells for efficient charging!



PERFORMANCE

| Type | S450M42 | S770M36 |
|--|---------|---------|
| Daily output in summer in Germany (Ø) Wh/d | 440 | 760 |
| Rated output ¹ (Pmpp) Wp | 110 | 190 |
| Short-circuit current (Isc) A | 4.95 | 10.09 |
| Open-circuit voltage (Uoc) V | 27.62 | 24.14 |
| Voltage (Umpp) V | 23.50 | 20.13 |
| Current (Impp) A | 4.68 | 9.44 |
| No. of cells | 42 | 36 |

¹ Performance at STC, Standard Testing Conditions: 1000 W/m², AM 1.5, cell temperature 25° C

Dimensions and weight

| | | |
|---------------------------|-----------------|-----------------|
| Dimensions (L x W x H) mm | 1250 x 557 x 35 | 1500 x 680 x 35 |
| Weight kg | 9.4 | 13.5 |
| Cell dimensions mm | 156 x 78 | 156 x 156 |

Thermal properties

| | |
|--------------|--------|
| TK Pmpp %/°C | -0.42 |
| TK Uoc %/°C | -0.32 |
| TK Isc %/°C | 0.04 |
| NOCT °C | 46 ± 2 |

Used materials

| | |
|-----------------|--|
| Cell technology | Monocrystalline PERC |
| Front/back | Tempered solar glass |
| Frame | Anodized aluminium hollow profile, black |
| Junctionbox | IP67 with MC4 compatible connectors |

More technical data

| | |
|--------------------------------|----------------|
| Measuring accuracy Pmpp at STC | ± 5 % |
| Operating temperature range | -40°C to +85°C |
| Glass thickness | 2 x 2 mm |







A different excursion

PHILIPP K., STUDENT AND LONG-DISTANCE SAILOR

„During our 10-month trip we almost never spend the nights in harbors. The most beautiful bays have always been our hostel. Through the combination of Solara Vision modules across the cockpit and Power M-Series modules on deck, we always had enough energy.

This not only spared our travel budget, but impressed other sailors that solar can be so powerful.“

SOLARA S-Serie Vision SOLARA Power M-Serie

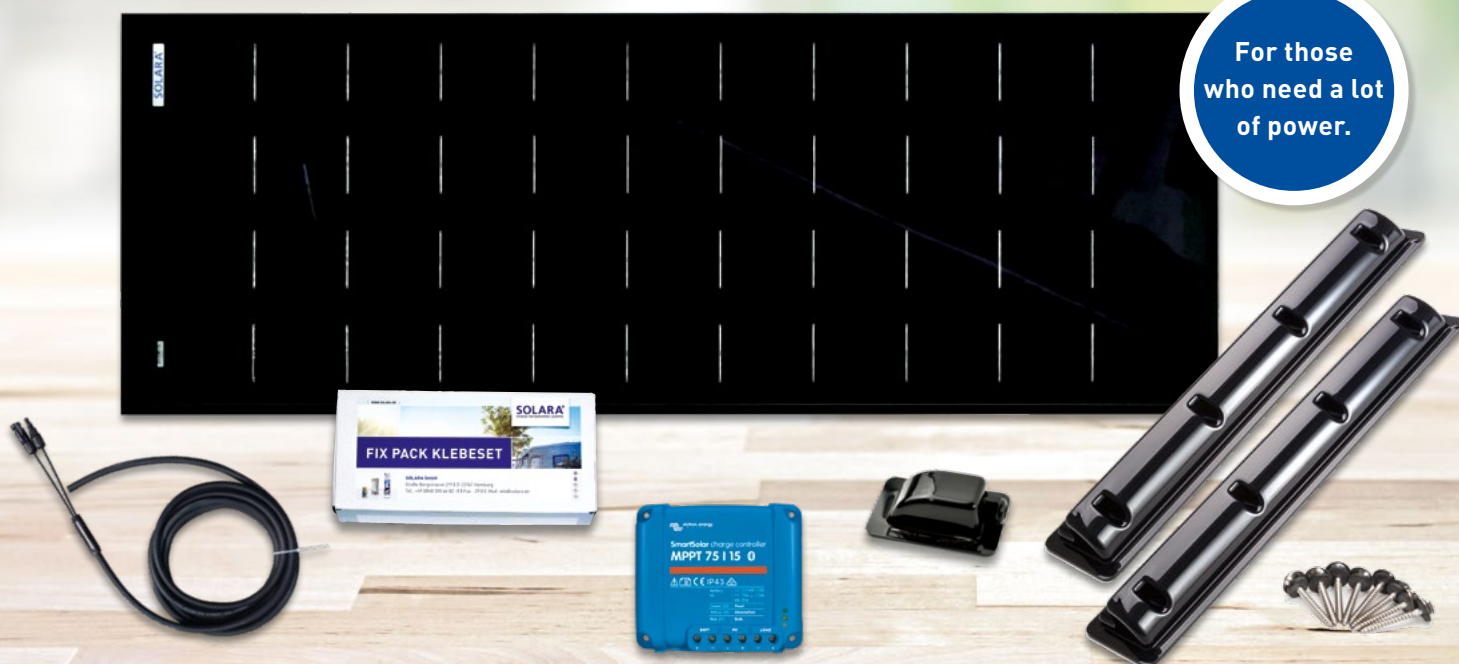
| | |
|--------------|--|
| System size | 640 W+ 450 W |
| Suitable for | 4 persons plus guests, watermaker, cool box, projector, computer, on board electrics |
| Products | 4x Vision S-Series Type S770M36 2x Power M-Series Type S525M35 2x Power M-Series Type S465M31 Victron charge controller and monitoring system |

With a measurement system plenty of data being collected to analyze how solar module behave on a long distance trip.





For those
who need a lot
of power.



SOLARA Power Pack

MAXIMUM PERFORMANCE ON SMALLEST AREA

- SOLARA Power S series modules with black frame profile
- MPPT charge controller, Victron 15 A/20 A/30 A, incl. Bluetooth for remote access via Smartphone
- ABS spoiler, in black, specially coated, UV-resistant, incl. screws
- ABS roof grommet, in black, for watertight cable feedthrough
- Special adhesive set SOLARA FIX PACK for bonding the spoiler and roof grommet
- Module connection cable with UV-resistant sheath and MC4 plug-in system
- Substantial installation instruction

Quality
Made in
Germany

PROVED

SOLARA®

QUALITY

SOLARA POWER PACKS

| Type | POP01 | POP02 | POP03 | POP04 |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|
| Power (W) | 125 | 160 | 250 | 320 |
| Daily yield (Wh) | 555 | 705 | 1110 | 1410 |
| Solar panel (Type) | S555M36 | S705M44 | S555M36 | S705M44 |
| No. of solar panels (pc) | 1 | 1 | 2 | 2 |
| Solar panel size L x W x H (mm) | 1250 x 550 x 35 | 1500 x 550 x 35 | 1250 x 550 x 35 | 1500 x 550 x 35 |
| Total length incl. spoiler (mm) | 1400 | 1650 | 2 x 1400 | 2 x 1650 |
| Charger | Victron 15 A | Victron 15 A | Victron 20 A | Victron 30 A |



Everything delivered in one box!

5 years
product
guarantee*



Charge of starter and consumption battery at the same time.



SOLARA Premium Pack MPPT EBL



OPTIMALLY SUPPLIED, AS REQUIRED

- SOLARA S series modules with black frame profile
- Votronic MPPT dual-circuit charge controller incl. all necessary adapter cables
- ABS spoiler, in black, special coated, UV-resistant, incl. screws
- ABS roof grommet, in black, for absolutely watertight cable feedthrough
- Special adhesive set SOLARA FIX PACK for bonding the spoiler and roof grommet
- Module connection cable with UV-resistant sheath and MC4 plug-in system
- Substantial installation instruction



SOLARA PREMIUM PACKS MPPT EBL

| Type | PRP01 | PRP02 | PRP03 | PRP04 |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|
| Power (W) | 120 | 190 | 240 | 380 |
| Daily yield (Wh) | 480 | 760 | 960 | 1520 |
| Solar panel (Type) | S480M45 | S760M36 | S480M45 | S760M36 |
| No. of solar panels (pc) | 1 | 1 | 2 | 2 |
| Solar panel size L x W x H (mm) | 1250 x 550 x 35 | 1500 x 680 x 35 | 1250 x 550 x 35 | 1500 x 680 x 35 |
| Total length incl. spoiler (mm) | 1400 | 1650 | 2 x 1400 | 2 x 1650 |
| Charger | MPP 260CI | MPP 260CI | MPP 260CI | MPP 440CI |



Everything delivered in one box!





Charge of starter and consumption battery at the same time.



SOLARA Premium Pack MPPT

Quality
Made in
Germany

OPTIMALLY SUPPLIED, AS REQUIRED

- SOLARA S series modules with black frame profile
- MPPT charge controller Victron 15 A/20 A/30A, incl. Bluetooth for remote access via Smartphone
- ABS spoiler, in black, special coated, UV-resistant, incl. screws
- ABS roof grommet, in black, for absolutely watertight cable feedthrough
- Special adhesive set SOLARA FIX PACK for bonding the spoiler and roof grommet
- Module connection cable with UV-resistant sheath and MC4 plug-in system
- Substantial installation instruction

PROVED

SOLARA®

QUALITY

SOLARA PREMIUM PACKS MPPT

| Type | PRP05 | PRP06 | PRP07 | PRP08 |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|
| Power (W) | 120 | 190 | 240 | 380 |
| Daily yield (Wh) | 480 | 760 | 960 | 1520 |
| Solar panel (Type) | S480M45 | S760M36 | S480M45 | S760M36 |
| No. of solar panels (pc) | 1 | 1 | 2 | 2 |
| Solar panel size L x W x H (mm) | 1250 x 550 x 35 | 1500 x 680 x 35 | 1250 x 550 x 35 | 1500 x 680 x 35 |
| Total length incl. spoiler (mm) | 1400 | 1650 | 2 x 1400 | 2 x 1650 |
| Charger | Victron 15 A | Victron 15 A | Victron 20 A | Victron 30 A |



Everything delivered in one box!

5 years
product
guarantee*



Price/
performance
winner!



SOLARA Profi Pack

POWERFUL SET WITH 20 A CHARGE CONTROLLER

- SOLARA S series module(s) with black frame profile
- SOLARA charge controller, 20 A, with LED indicator to indicate battery charge level
- ABS spoiler, in black, special coated, UV-stable, incl. screws
- ABS roof grommet, in black, for absolutely watertight cable feedthrough
- Special adhesive set SOLARA FIX PACK for bonding the spoiler and roof grommet
- Module connection cable with UV-resistant sheath and MC4 plug-in system
- Substantial installation instruction

Quality
Made in
Germany

PROVED

SOLARA®

QUALITY

SOLARA PROFI PACKS

| Type | PP01 | PP02 | PP03 |
|---------------------------------|-----------------|-----------------|-----------------|
| Power (W) | 120 | 190 | 240 |
| Daily yield (Wh) | 480 | 760 | 960 |
| Solar panel (Type) | S480M45 | S760M36 | S480M45 |
| No. of solar panels (pc) | 1 | 1 | 2 |
| Solar panel size L x W x H (mm) | 1250 x 550 x 35 | 1500 x 680 x 35 | 1250 x 550 x 35 |
| Total length incl. spoiler (mm) | 1400 | 1650 | 2 x 1400 |
| Charger | Solara SR 340 E | Solara SR 340 E | Solara SR 340 E |



Everything delivered in one box!

5 years
product
guarantee*

With SOLARA soak up the sun!





SR340E



SR180 - 350LCD



SR85TL - SR175TL

Suitable
for all battery
types.

SOLARA charge controllers

Your control center

We guarantee high reliability, the latest technology and easy installation at low costs. The regulated PWM characteristic guarantees optimized charging. All Solara controllers are so-called series regulators (no shunt) and thus very efficient. The load output protects your battery from deep discharge. A large and informative LCD display shows the current system status. The SR 350 DUO also offers the possibility to charge two independent battery circuits.

The features

- Automatic detection of battery voltage
- Solar power < 90 - 350 watts
- Electronically protected against overcharging, reverse polarity, overvoltage
- Battery deep discharge protection in each regulator 5 to 20 A
- Battery type selector (except SR 340 E)
- LED indicator for battery status
- Metal housing IP65 (SR 340 E)
- Charges two parallel battery circuits (SR 350 DUO)
- USB port for charging (SR 180/350 LCD)
- Lithium-ready (SR XXX LCD/DUO)
- Low self-consumption < 4 mA

| Type | Solar panel power (W) | Current (A) | Voltage (V) | max. Open-circuit voltage (V) | Meter |
|------------|-----------------------|-------------|-------------|-------------------------------|-------|
| SR 60 UL | 60 | 4 | 12 | 30 | LED |
| SR 85 TL | 90/180 | 5 | 12/24 | 30/50 | LED |
| SR 175 TL | 180/360 | 10 | 12/24 | 30/50 | LED |
| SR 340 E | 340/680 | 20 | 12/24 | 30/50 | LED |
| SR 180 LCD | 180/360 | 10 | 12/24 | 30/50 | LCD |
| SR 350 LCD | 360/700 | 20 | 12/24 | 30/50 | LCD |
| SR 350 DUO | 360/700 | 20 | 12/24 | 30/50 | LCD |





SR und MPP DuoDigital



Votronic Solar Computer S



Smartphone App



Votronic charge controllers

Simultaneous charging

The VOTRONIC charge controllers are characterized by a high compatibility with many electrical systems in campers. Leading manufacturers install Votronic components and there the solar charge controllers can be perfectly integrated. Two microprocessor-controlled device series are available, the SR and the highly efficient MPP series. Both series are additionally equipped with a charging output for the vehicle starter battery. The spectrum of devices is completed with an energy and power meter for the solar array.

The features

- Recharge and charge retention of vehicle starter battery
- 2 different control methods available, SR and MPP
- High operational safety through microcontroller
- Charging programs for lead-acid, gel, AGM batteries
- LiFePO4 batteries adjustable at all MPP-charger only
- Continuous control, immediate recharging
- Temperature compensation
- 5 LED status indicators on the device
- For all standard solar module
- Optional: Plug and Play power meters LCD Solar Computer S or VPC

| Type | Solar panel power (W) | Current (A) | Voltage (V) | max. Open-circuit voltage (V) | Meter |
|-----------------------------|-----------------------|-------------|-------------|-------------------------------|-------|
| Votronic SR 150 DuoDigital | 150 | 9 | 12 | 28 | LED |
| Votronic SR 220 DuoDigital | 220 | 14 | 12 | 28 | LED |
| Votronic SR 350 DuoDigital | 350 | 21 | 12 | 28 | LED |
| Votronic SR 550 DuoDigital | 550 | 33 | 12 | 28 | LED |
| Votronic MPP 170 DuoDigital | 170 | 10 | 12 | 60 | LED |
| Votronic MPP 260 DuoDigital | 260 | 15 | 12 | 60 | LED |
| Votronic MPP 360 DuoDigital | 360 | 21 | 12 | 60 | LED |
| Votronic MPP 440 DuoDigital | 440 | 26 | 12 | 60 | LED |

Solar-Computer S for solar power and current, battery voltage, charged Ah and Wh, compatible with SR- and MPP series

EBL connection cable

Temp. Sensor 825

BT Connector S-BC Bluetooth Connector, inkl. Energy Monitor App





MPPT 75/15



Smart Shunt



Smartphone App



Victron MPPT charge controllers

Ultra-fast maximum power point tracking (MPPT)

In particular, when the sky is overcast, when the light intensity changes constantly, an extremely fast MPPT controller improves the energy yield by up to 30% compared to PWM charge controllers.

You can remotely control and monitor the extensive features of your SmartSolar MPPT charger by connecting it via Bluetooth with your smartphone or other device via the VictronConnect app.

The features

- Ultrafast Maximum Power Point Tracking (MPPT)
- Advanced maximum power point detection for partial shading
- BatteryLife: intelligent battery management through load shedding
- Load output on the small models
- Automatic battery voltage detection
- Flexible charging algorithms
- Overheating protection and load reduction at high temperatures

| Type | Solar panel power (W) | Current (A) | Voltage (V) | max. Open-circuit voltage (V) | Meter |
|-----------------------|---|-------------|-------------|-------------------------------|-------|
| MPPT 75/10 * | 145/290 | 10 | 12/24 | 75 | LED |
| MPPT 75/15 * | 220/440 | 15 | 12/24 | 75 | LED |
| MPPT 100/15 * | 220/440 | 15 | 12/24 | 100 | LED |
| MPPT 100/20 * | 290/580/870 | 20 | 12/24/48 | 100 | LED |
| MPPT 100/30 * | 440/880 | 30 | 12/24 | 100 | LED |
| MPPT 100/50 * | 700/1400 | 50 | 12/24 | 100 | LED |
| MPPT 150/35 * | 500/1000/2000 | 35 | 12/24/48 | 150 | LED |
| MPPT 150/45 * | 650/1300/2600 | 45 | 12/24/48 | 150 | LED |
| MPPT 150/60 * | 860/1720/3440 | 60 | 12/24/48 | 150 | LED |
| Remote meter BMV700 | for all Victron MPPT controller, incl. 500A Shunt | | | | |
| Remote meter BMV702 | for all Victron MPPT controller, incl. 500A Shunt, shows additional battery voltage | | | | |
| Remote meter BMV712 | for all Victron MPPT controller, incl. 500A Shunt and Bluetooth | | | | |
| Smart Shunt 500A/50mV | Measuring shunt with Bluetooth connection. Can be read out on a smartphone and the app. | | | | |

more Victron items on request

* Bluetooth integrated





SunSaver 6-20



SunSaver Duo



EcoPulse mit Display


 Top-quality.

Morningstar charge controllers

Professional battery charging

A broad performance spectrum, innovative functions, robust design and high efficiency characterize the MorningStar solar charge controllers. ISO9001 manufacturing, quality control with 100% functional testing ensure quality, reliability and longevity in the application. Over 2 million devices are installed in over 112 countries until today.

The features

- Epoxy resin-moulded board
- For gel-type and AGM batteries
- With temperature sensor and deep discharge protection
- Built-in or remote display available
- PWM charging characteristic, Series design
- Automatic 12/24 V detection
- All fuses electronically
- Low self-consumption < 8 mA
- Top quality with 5 years guarantee, EcoPulse 2 years

| Type | Solar panel power (W) | Current (A) | Voltage (V) | max. Open-circuit voltage (V) | Meter |
|--------------------|-----------------------|-------------|-------------|-------------------------------|-------|
| SunSaver 6L | 110 | 6 | 12 | 25 | LED |
| SunSaver 10L | 170 | 10 | 12 | 25 | LED |
| SunSaver 20L | 340 | 20 | 12 | 25 | LED |
| SunSaver Duo Basic | 425 | 25 | 12 | 30 | LED |
| SunSaver Duo | 425 | 25 | 12 | 30 | LCD |
| EcoPulse 10 | 170/340 | 10 | 12/24 | 60 | LED |
| EcoPulse 10M | 170/340 | 10 | 12/24 | 60 | LCD |
| EcoPulse 20 | 340/680 | 20 | 12/24 | 60 | LED |
| EcoPulse 20M | 340/680 | 20 | 12/24 | 60 | LCD |
| EcoPulse 30 | 510/1020 | 30 | 12/24 | 60 | LED |
| EcoPulse 30M | 510/1020 | 30 | 12/24 | 60 | LCD |
| TriStar 45 | 750/1500/3200 | 45 | 12/24/48 | 60 | LED |
| TriStar 60 | 1000/2000/4000 | 60 | 12/24/48 | 60 | LED |

PROVED

SOLARA®

QUALITY


 5 years
product
guarantee*



SunSaver MPPT



ProStar MPPT mit Display



TriStar MPPT 30/45/60



EcoBoost mit Display

For the highest demands.

For professionals who wants more

Highest efficiency and high yields with MorningStar MPPT TrackStar technology. Solar voltages of 150 V or 600 V allow the use of large high-performance solar modules. In off-grid, telecommunication, oil, gas, lighting, monitoring and traffic systems, MPPT controllers are mainly used. The various network and communication options make them versatile.

The features

- Max. solar open circuit voltage 150 V and 600 V
- Very good yields thanks to TrakStar MPPT technology
- For all battery types, lithium-ready
- Automatic 12/24/48 V detection
- For large systems with up to 60 A solar current
- With temperature sensor and depth discharge protection
- Many network and communication options
- MODBUS protocol
- 200-day data logger
- Programmable via MS-View software
- All fuses electronically
- Robust design without fan
- Top quality with 5 years guarantee

| Type | Solat panel power (W) | Current (A) | System Voltage (V) | max. Open-circuit voltage (V) | Meter |
|-------------------|-----------------------|-------------|--------------------|-------------------------------|-------|
| SunSaver MPPT 15L | 200/400 | 15 | 12/24 | 75 | LED |
| ProStar MPPT 25 | 350/700 | 25 | 12/24 | 120 | LED |
| ProStar MPPT 25M | 350/700 | 25 | 12/24 | 120 | LCD |
| ProStar MPPT 40 | 550/1100 | 40 | 12/24 | 120 | LED |
| ProStar MPPT 40M | 550/1100 | 40 | 12/24 | 120 | LCD |
| TriStar MPPT 30 | 400/800/1600 | 30 | 12/24/48 | 150 | LED |
| TriStar MPPT 45 | 600/1200/2400 | 45 | 12/24/48 | 150 | LED |
| TriStar MPPT 60 | 800/1600/3200 | 60 | 12/24/48 | 150 | LED |

| Type | Solat panel power (W) | Current (A) | System Voltage (V) | max. Open-circuit voltage (V) | Meter |
|-------------------|-----------------------|-------------|--------------------|-------------------------------|-------|
| EcoBoost MPPT 20 | 300/600 | 20 | 12/24 | 120 | LED |
| EcoBoost MPPT 20M | 300/600 | 20 | 12/24 | 120 | LCD |
| EcoBoost MPPT 30 | 400/800 | 30 | 12/24 | 120 | LED |
| EcoBoost MPPT 30M | 400/800 | 30 | 12/24 | 120 | LCD |
| EcoBoost MPPT 40 | 560/1120 | 40 | 12/24 | 120 | LED |
| EcoBoost MPPT 40M | 560/1120 | 40 | 12/24 | 120 | LCD |





SOLARA – always a good connection



SOLARA ABS- and Aluminium mounting spoiler

The optimal fastening

Holding spoilers are the optimal fastening for solar modules. They are available in different colours and are perfect for RV's, camper or caravans. Simply glue instead of screw.

Due to their aerodynamic shape, they are at the same time a mounting system and wind deflector, so that no disturbing noise can occur.

We only use high-quality, specially coated, UV-resistant ABS plastic or anodized aluminum so that our mounting spoilers remain permanently dimensionally stable and colour-stable.

The features

- The optimum combination of functionality and appearance
- About 50 % lighter than other conventional spoilers
- UV-stable
- The aerodynamic shape does not produce any disturbing wind noise
- 100 % recyclable
- All necessary screws included

| SOLARA ABS-mounting spoiler | Art.-No. | Max. solar panel width | Pc/set |
|---------------------------------|----------|--------------------------|--------|
| Mounting spoilers set | HS35/W | 350 mm | 2 |
| Mounting spoilers set | HS45/W | 450 mm | 2 |
| Mounting spoilers set | HS55/X* | 550 mm | 2 |
| Mounting spoilers set | HS68/X* | 680 mm | 2 |
| Edge spoilers set | HSE/X* | all type of solar panels | 4 |
| Universal mounting spoilers set | HSV/X* | all type of solar panels | 2 |

* X = white or black

| SOLARA Aluminium mounting spoiler | Art.-No. | Max. solar panel width | Pc/set |
|-----------------------------------|----------|------------------------|--------|
| Mounting spoilers set | AS527/Y* | 527 mm | 2 |
| Mounting spoilers set | AS550/Y* | 550 mm | 2 |
| Mounting spoilers set | AS680/Y* | 680 mm | 2 |

* Y = silver or black

Caution: Installation with the SOLARA FIX PACK only!



Tested,
permanently
waterproof.



DD1/W



DD2/W



DD1/S



DD2/S

SOLARA ABS-roof grommet & adhesive set

Professional aerodynamic roof grommet

The optimum combination of functionality and appearance for the cable entry into the vehicle. A wide adhesive seam and a waterproof PG screw connection facilitate secure installation. Suitable for cable diameters from 4 mm to 13.5 mm. Simply fixed with the ABS special adhesive from our SOLARA FIX PACK and a secure and permanently watertight cable entry to the interior is guaranteed.

The features

- Lightweight
- Aerodynamic shape, there are no disturbing wind noises
- Special coated ABS plastic
- UV-stable
- 100 % recyclable

| Type | Art.-No. | No. of inlets |
|--------------|----------|-------------------------|
| Roof grommet | DD1/W | 1 x PG13.5 for 1 cable |
| Roof grommet | DD1/S | 1 x PG13.5 for 1 cable |
| Roof grommet | DD2/W | 2 x PG13.5 for 2 cables |
| Roof grommet | DD2/S | 2 x PG13.5 for 2 cables |

SOLARA adhesive kit Fix Pack

The ABS special adhesive set is specially developed for the SOLARA ABS-mounting spoilers and roof grommets, aluminium brackets, as well as for bonding the SOLARA M and Power M-series. The single-component MS polymer adhesive is completely non-toxic.



Tested,
secured
bonding.

| Type | Description |
|------------------------------|---|
| SOLARA adhesive set Fix Pack | Cartridge 290 ml, primer (Dekavator) cleaning cloth, sanding pad, colour: white |
| SOLARA adhesive set Fix Pack | Cartridge 290 ml, primer (Dekavator) cleaning cloth, sanding pad, colour: black |

PROVED
SOLARA®
SAFETY

Quality
Made in
Germany

5 years
product
guarantee*



SOLARA accessories

Easy to handle

With the SOLARA accessories, the installation becomes a breeze. High-quality connectors, rugged cables, pre-assembled connection cables, EBL charge controllers - all professional components for quick and easy installation. Our cables are suitable for outdoor use.

| Type | Description |
|--------------------------------------|--|
| Connection cable / connectors | |
| Dc-Connect-C, 4 mm ² | Connection cable module - controller with MC4 connectors, length 5 m, size 2x 4mm ² , fits to all Solara and DcSolar modules |
| Dc-Connect-C, 2.5 mm ² | Connection cable module - controller with MC4 connectors, length 5 m, size 2x 2.5 mm ² , fits to all Solara and DcSolar modules |
| Dc-Connect-M | Connection cable for modules with MC4 connectors, length 2 m, size 2x 4 mm ² |
| Dc-Connect-B | Connection cable charge controller - battery, assembled with fuse and cable lugs, length 1 m, size 2x 6 mm ² |
| MC4 Y-Set | Y-adapter set for parallel connection of two modules, set with plus and minus |
| MC4 PV Stick | MC4 connectors, DIY, tool-free, set with plus and minus |
| Charge controller | |
| Fox-062 | Cable charge controller, max. solar current 8A, system voltage 12V, adjustable to different battery types |
| Cellprotector | Hotspot protector for SOLARA M-Series Modules |
| EBL connection cable | Connection wire for any solar controller with Schaudt EBL |
| Aluminium brackets | |
| HSP | Silver aluminium bracket for module mounting, max. module size 1300 x 560 mm, set with 4 brackets, incl. screws |
| HSP400 | Silver aluminium bracket for module mounting, max. module size 1500 x 700 mm, set with 6 brackets, incl. screws |
| HSP/sw | Black aluminium bracket for module mounting, max. module size 1300 x 560 mm, set with 4 brackets, incl. screws |
| HSP400/sw | Black aluminium bracket for module mounting, max. module size 1500 x 700 mm, set with 6 brackets, incl. screws |
| Deck seals | |
| Deck seal | Scanstrut DS H-6, for 1 cable, cable diameter 2-6 mm, incl. several sealings |
| Deck seal | Scanstrut DS H-10, for 1 cable, cable diameter 6-10 mm, incl. several sealings |
| Deck seal | Scanstrut DS Multi, several cables, cable diameter up to 15 mm |
| Deck seal | Scanstrut DS-HD6, for 2 cables, cable diameter up to 6 mm max., incl. several sealings |
| Deck seal | Scanstrut DS-HD10, for 2 cables, cable diameter 6-10 mm, incl. several sealings |

Flexible
in use.

PROVED

SOLARA®

QUALITY

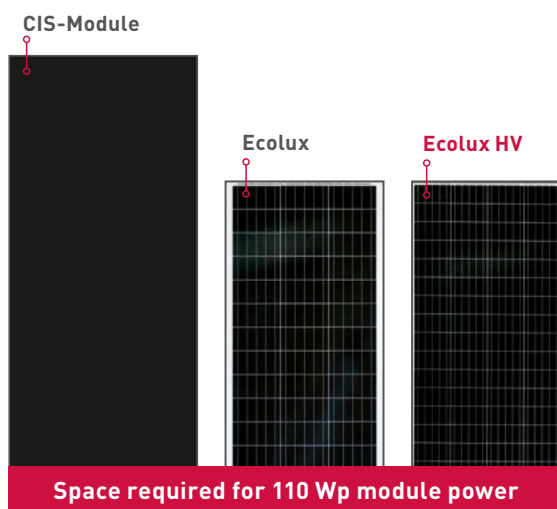
DCsolar – strong power on the go!



DCSOLAR MODULES FOR ALL CASES

The Ecolux HV-series with its especially for mobile use developed solar cells, has in addition to a natural, higher cell voltage, an excellent low-light and temperature behavior, so that even at low irradiation sufficient voltage is built up to charge the on-board batteries.

If only limited space is available, the Ecolux HV series is the perfect solution. as it requires up to 21 % less space than a standard crystalline standard module and even more than 45 % less compared to a thin-film module (e.g. CIS), and that with a weight of just under 8.0 kg compared to the 16.0 kg of a comparable 110 watt CIS module.



DCsolar ALL-IN-ONE SOLUTIONS

Are you looking for a high-quality solar complete set for a fair price? Then DCsolar products are exactly the right choice!

SOLARA offers with the brand DCsolar optimally assembled complete sets. All necessary components are delivered in a box together with detailed installation instructions, everything plug and play!

CERTIFICATIONS AND TESTS

- Mechanical stress tests
- Climate test of the entire module
- Degradation test
- Check for micro cracks on the cells





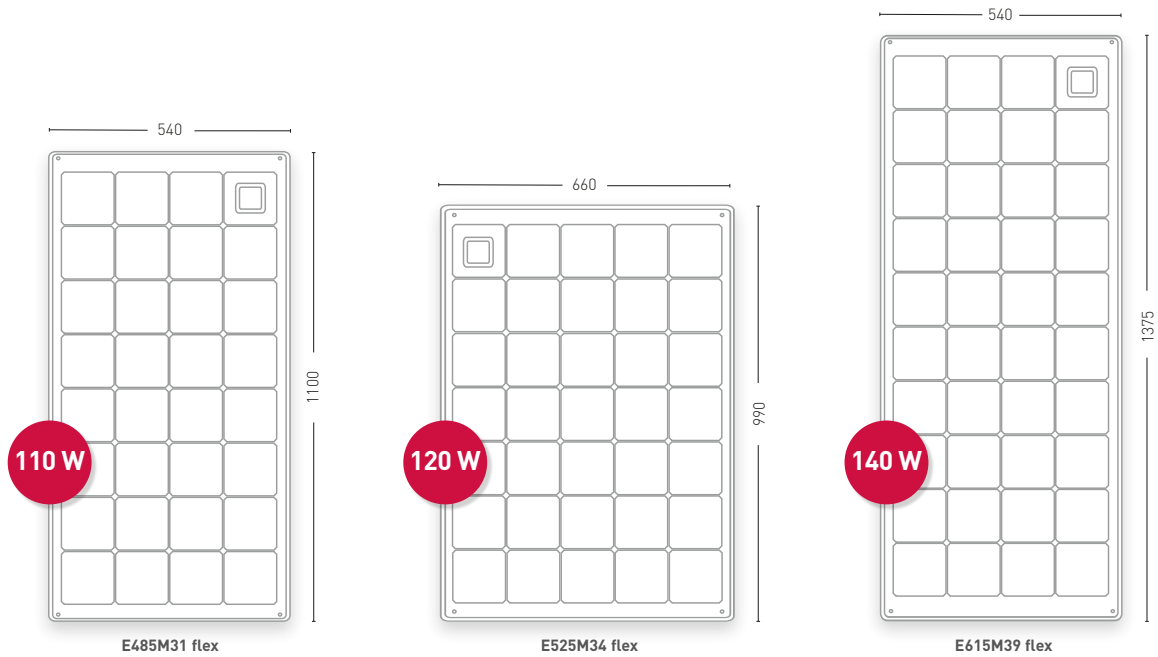
DCsolar Power Flex

TOP PERFORMANCE - FOR HIGHEST DEMANDS

- Semi-flexible solar module, stable due to a 1.2 mm aluminium support plate
- Lightweight and fully walkable
- Solar cells with over 23% efficiency
- Fully encapsulated cells by bonding front and back side foils
- Adapts to curved roof surface
- Monocrystalline solar cells with high efficiency
- Highest daily yields on the smallest surface even in low light conditions



DCsolar Power Flex-Series



PERFORMANCE

| Type | E485M31 flex | E525M34 flex | E615M39 flex |
|--|--------------|--------------|--------------|
| Daily output in summer in Germany (Ø) Wh/d | 485 | 525 | 615 |
| Rated output * (Pmpp) Wp | 110 | 120 | 140 |
| Short-circuit current (Isc) A | 6.10 | 6.10 | 6.19 |
| Open-circuit voltage (Uoc) V | 22.3 | 24.5 | 28.1 |
| Voltage (Umpp) V | 19.2 | 21.1 | 24.2 |
| Current (Impp) A | 5.70 | 5.70 | 5.79 |
| No. of cells | 31 | 34 | 39 |

* Performance at STC, Standard Testing Conditions: 1000 W/m², AM 1.5, cell temperature 25° C

Dimensions and weight

| | | | |
|---------------------------|----------------|---------------|----------------|
| Dimensions (L x W x H) mm | 1100 x 540 x 4 | 990 x 660 x 4 | 1375 x 540 x 4 |
| Weight kg | 4.3 | 4.5 | 4.9 |
| Cell dimensions mm | 125 x 125 | 125 x 125 | 125 x 125 |

Thermal properties (per cell)

| | |
|--------------|--------|
| TK Pmpp %/°C | -0.29 |
| TK Uoc mV/°C | -1.74 |
| TK Isc mA/°C | 2.90 |
| NOCT °C | 46 ± 2 |

Used materials

| | |
|------------------|--|
| Cell technology | Sunpower, monocrystalline with back contact |
| Front-/backside | ETFE foil at front and backside, foils welded all along the edge |
| Bypass diodes | Integrated in cable outlet |
| Connection cable | 3 m, 2 x 2.5 mm ² |

More technical data

| | |
|--------------------------------|----------------|
| Measuring accuracy Pmpp at STC | -5 / +10 % |
| Operating temperature range | -40°C to +85°C |





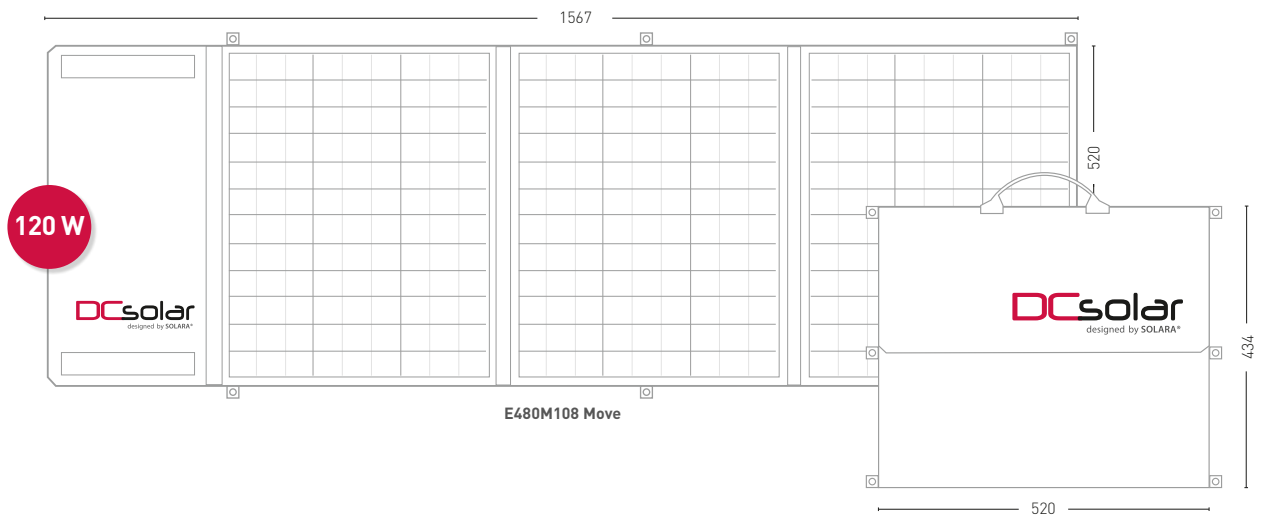
DCsolar Power Move

MAXIMUM PERFORMANCE AT THE HIGHEST QUALITY

- Highest daily yields by using Sunpower cells with up to 22% efficiency
- High yield in every season due to the best low-light behaviour, even in diffused light
- Three modules in one - each with 36 cells per module field - connected in parallel - thus shadow resistant
- 5 m cable with mobile cable solar charging controller (for Gel, AGM, liquid and Li-batteries) with 12 V car standard plug
- Elegant distinctive design
- Sewn in sturdy textile fabric
- Foldable and portable, small convenient size



DCsolar Power Move



PERFORMANCE

| Type | E480M108 Move |
|--|---------------|
| Daily output in summer in Germany (Ø) Wh/d | 480 |
| Rated output ¹ (Pmpp) Wp | 120 |
| Short-circuit current (Isc) A | 6.36 |
| Open-circuit voltage (Uoc) V | 23.76 |
| Voltage (Umpp) V | 19.80 |
| Current (Impp) A | 6.06 |
| No. of cells | 108 (3 x 36) |

¹ Performance at STC, Standard Testing Conditions: 1000 W/m², AM 1.5, cell temperature 25° C

Dimensions and weight

| | |
|---------------------------|-----------------|
| Dimensions (L x W x H) mm | 1567 x 520 x 35 |
| Weight kg | 4.3 |
| Cell dimensions mm | 158 x 31 |

Thermal properties

| | |
|--------------|--------|
| TK Pmpp %/°C | -0.42 |
| TK Uoc %/°C | -0.32 |
| TK Isc %/°C | 0.04 |
| NOCT °C | 46 ± 2 |

Used materials

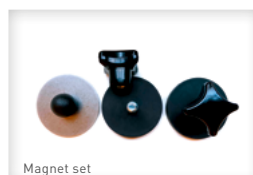
| | |
|------------------|------------------------------|
| Cell technology | Monocrystalline PERC |
| Connection cable | 5 m, 2 x 1.5 mm ² |

Scope of delivery: Cable charge controller Fox-062 and 5 m connecting cable

Options: Extension cable with SureSeal plugs 5 m | Loxx buttons | eyelet set with hole punch | magnet set for metal surfaces or canvas

More technical data

| | |
|--------------------------------|----------------|
| Measuring accuracy Pmpp at STC | -5 / +10 % |
| Operating temperature range | -40°C to +85°C |





DCsolar OBD-2 battery charger

ONE FOR ALL VEHICLES SOLAR CHARGER WITH 13 WATT

- Effective compensation of self discharging
- Specifically developed for RVs, Camper vans etc.
- Solar module can be fixed easily with suction cups to the windshield or dashboard
- Comfortable and easy connection with OBD-2 connector to the vehicle
- Integrated control board to prevent over-charging and discharging
- High efficient and low-light active mono-crystalline solar cells guarantee all year usability
- Extremely robust due to ETFE foils on both sides
- Compact shape, environmental friendly



DCSOLAR OBD-2 battery charger



PERFORMANCE

| Type | E52M8 |
|--|-------|
| Daily output in summer in Germany (Ø) Wh/d | 52 |
| Rated output ¹ (Pmpp) Wp | 13 |
| Voltage (Umpp) V | 14.40 |
| Current (Impp) A | 0.90 |
| No. of cells | 8 |

¹ Performance at STC, Standard Testing Conditions: 1000 W/m², AM 1.5, cell temperature 25° C

Dimensions and weight

| | |
|---------------------------|---------------|
| Dimensions (L x W x H) mm | 350 x 252 x 4 |
| Weight kg | 0.59 |
| Cell dimensions mm | 158 x 51 |

Thermal propert

| | |
|--------------|--------|
| TK Pmpp %/°C | -0.42 |
| TK Uoc %/°C | -0.32 |
| TK Isc %/°C | 0.04 |
| NOCT °C | 46 ± 2 |

Used materials

| | |
|------------------|--|
| Cell technology | Monocrystalline PERC |
| Front/back | ETFE foil at front and backside, foils welded all along the edge |
| Connection cable | 2.2 m, OBD2-connector |

More technical data

| | |
|--------------------------------|----------------|
| Measuring accuracy Pmpp at STC | -5 / +10 % |
| Operating temperature range | -40°C to +85°C |

Scope of delivery: integrated charge controller, 4x suction cups, safety cord, detailed manual



Everything delivered in one box!



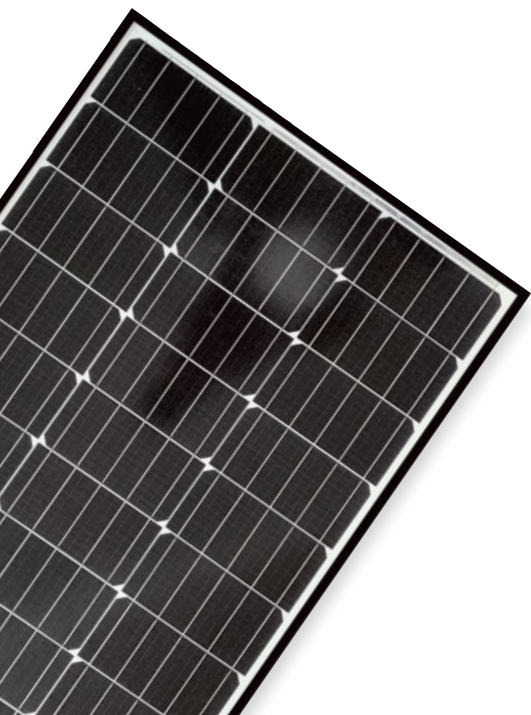


More yield
through
High Voltage!

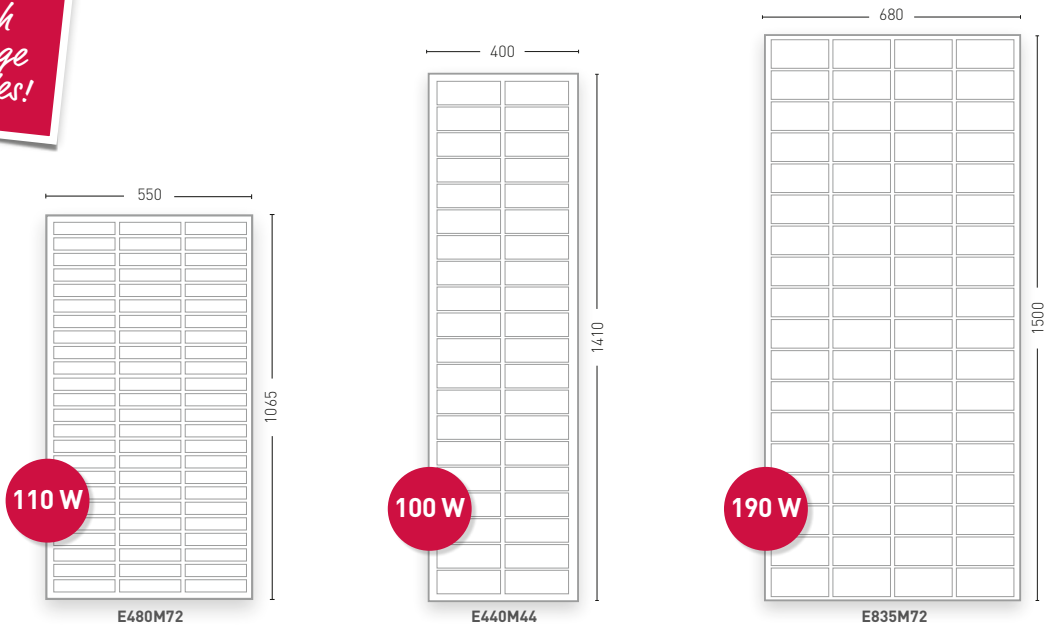
DCsolar Ecolux HV-Series

TOP PERFORMANCE - DEVELOPED FOR THE HIGHEST DEMANDS

- High-yield MonoPerc solar cells with > 22% efficiency
- 44/72 cells for maximum yields in combination with MPPT controllers
- Best low light performance
- Temperature stable voltage
- Stable black hollow chamber profile frame
- Original MC4 connector
- High transmissive solar glass



DCsolar Ecolux HV-Series



PERFORMANCE

| Type | E480M72 | E440M44 | E835M72 |
|--|---------|---------|---------|
| Daily output in summer in Germany (Ø) Wh/d | 480 | 440 | 835 |
| Rated output ¹ (Pmpp) Wp | 110 | 100 | 190 |
| Short-circuit current (Isc) A | 2.83 | 4.45 | 6.87 |
| Open-circuit voltage (Uoc) V | 48.47 | 29.85 | 49.75 |
| Voltage (Umpp) V | 39.95 | 23.70 | 41.63 |
| Current (Impp) A | 2.75 | 4.05 | 4.59 |
| No. of cells | 72 | 44 | 72 |

¹ Performance at STC, Standard Testing Conditions: 1000 W/m², AM 1.5, cell temperature 25° C

Dimensions and weight

| | | | |
|---------------------------|-----------------|-----------------|-----------------|
| Dimensions (L x W x H) mm | 1065 x 550 x 35 | 1410 x 400 x 35 | 1500 x 680 x 35 |
| Weight kg | 6.8 | 7.2 | 10.3 |
| Frame color | black | black | black |

Thermal properties

| | |
|--------------|--------|
| TK Pmpp %/°C | -0.42 |
| TK Uoc %/°C | -0.32 |
| TK Isc %/°C | 0.04 |
| NOCT °C | 46 ± 2 |

Used materials

| | |
|-----------------|--|
| Cell technology | Monocrystalline PERC > 22 % efficiency |
| Frontside | Tempered solar glass, hail resistant |
| Frame | Anodized aluminium hollow profile, black |
| Junctionbox | IP65 with MC4 compatible connectors |

More technical data

Measuring accuracy Pmpp at STC -5 / +10 %A
 Operating temperature range -40°C to +85°C





Price/
performance
winner!

DCsolar Ecolux-Series

SUPERIOR MODULAR TECHNOLOGY - VERSATILE APPLICABLE

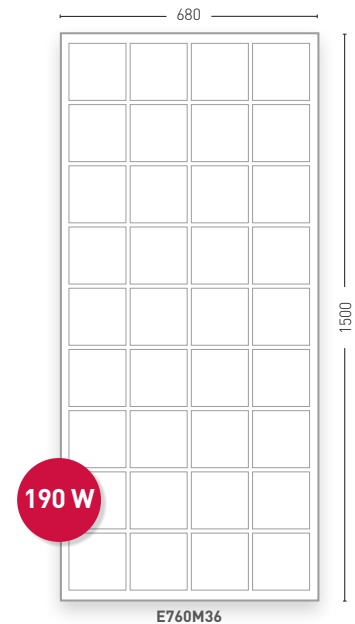
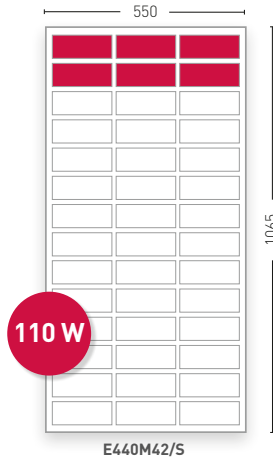
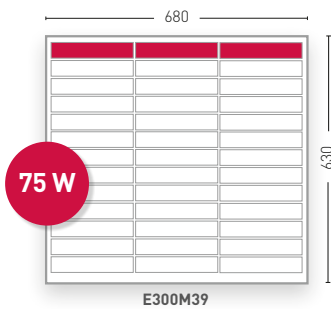
- High-yield MonoPerc solar cells with > 22% efficiency
- Extra solar cells for efficient charging
- Stable hollow chamber profile frame
- MC4 compatible connector
- High transmissive solar glass
- Hail resistant



DCsolar Ecolux-Series



*Now smaller
and with
even more
power!*



PERFORMANCE

| Type | E300M39 | E440M42/S | E760M36 |
|--|---------|-----------|---------|
| Daily output in summer in Germany (Ø) Wh/d | 300 | 440 | 760 |
| Rated output ¹ (Pmpp) Wp | 75 | 110 | 190 |
| Short-circuit current (Isc) A | 3.63 | 4.90 | 9.74 |
| Open-circuit voltage (Uoc) V | 26.26 | 28.28 | 24.88 |
| Voltage (Umpp) V | 21.71 | 23.30 | 20.82 |
| Current (Impp) A | 3.45 | 4.72 | 9.17 |
| No. of cells | 39 | 42 | 36 |

¹ Performance at STC, Standard Testing Conditions: 1000 W/m², AM 1.5, cell temperature 25° C

Dimensions and weight

| | | | |
|---------------------------|----------------|-----------------|-----------------|
| Dimensions (L x W x H) mm | 630 x 660 x 35 | 1065 x 550 x 35 | 1500 x 680 x 35 |
| Weight kg | 5.0 | 6.8 | 10.3 |
| Frame color | silver | silver | silver |

Thermal properties

| | |
|--------------|--------|
| TK Pmpp %/°C | -0.42 |
| TK Uoc %/°C | -0.32 |
| TK Isc %/°C | 0.04 |
| NOCT °C | 46 ± 2 |

Used materials

| | |
|-----------------|--|
| Cell technology | Monocrystalline PERC > 22 % efficiency |
| Frontside | Tempered solar glass, hail resistant |
| Frame | Anodized aluminium hollow profile, black |
| Junctionbox | IP65 with MC4 compatible connectors |

More technical data

| | |
|--------------------------------|----------------|
| Measuring accuracy Pmpp at STC | -5 / +10 % |
| Operating temperature range | -40°C to +85°C |



DCsolar - there, where I need the energy





DCsolar Power Set MPPT High Voltage

HIGH DAILY YIELDS WITH MPPT TECHNOLOGY

- Ecolux HV-Series modules
- Victron MPPT charge controller
- High-quality aluminium bracket set(s)
- Roof grommet, UV-stable with one cable entry
- Fix Pack adhesive kit
- Connection cable for module to charge controller incl. 2 x MC4 connectors
- MultiContact Y-connector
- Detailed mounting instructions

DCsolar POWER SETS MPPT HV

| Type | PSMHV 01 | PSMHV 02 | PSMHV 03 | PSMHV 04 |
|---------------------------------|--------------------|--------------------|--------------------|---------------------|
| Power (W) | 110 | 190 | 220 | 380 |
| Daily yield (Wh) | 480 | 835 | 960 | 1670 |
| Solar panel (Type) | E480M72 | E835M72 | E480M72 | E835M72 |
| No. of solar panels (pc) | 1 | 1 | 2 | 2 |
| Solar panel size L x W x H (mm) | 1065 x 550 x 35 | 1500 x 680 x 35 | 1065 x 550 x 35 | 1500 x 680 x 35 |
| Charger | Victron MPPT 75/15 | Victron MPPT 75/15 | Victron MPPT 75/15 | Victron MPPT 100/30 |
| No. of cells | 72 | 72 | 72 | 72 |



Everything delivered in one box!

PROVED

DCsolar

QUALITY



Price/
performance
winner!

DCsolar Power Set MPPT EBL High Voltage

HIGH DAILY YIELDS WITH MPPT TECHNOLOGY

- Ecolux HV-Series modules
- Victron Duo MPPT charge controller
incl. all necessary adapter cables
- High-quality aluminium bracket set(s)
- Roof grommet, UV-stable with one cable entry
- Fix Pack adhesive kit
- Connection cable for module to charge controller
incl. 2 x MC4 connectors
- MultiContact Y-connector
- Detailed mounting instructions

DCsolar POWER SETS MPPT EBL HV

| Type | PSEHV 01 | PSEHV 02 | PSEHV 03 |
|---------------------------------|--------------------|--------------------|--------------------|
| Power (W) | 110 | 190 | 220 |
| Daily yield (Wh) | 480 | 835 | 960 |
| Solar panel (Type) | E480M72 | E835M72 | E480M72 |
| No. of solar panels (pc) | 1 | 1 | 2 |
| Solar panel size L x W x H (mm) | 1065 x 550 x 35 | 1500 x 680 x 35 | 1065 x 550 x 35 |
| Charger | Votronic MPPT260CI | Votronic MPPT260CI | Votronic MPPT260CI |
| No. of cells | 72 | 72 | 72 |



Everything delivered in one box!

PROVED

DCsolar

QUALITY



Charge of engine and service battery at the same time.



DCsolar Power Set EBL

SPECIALLY FOR VEHICLES WITH EBL-BLOCK

- Ecolux Series modules
- Votronic charge controller DuoDigital 230 incl. all necessary adapter cables
- High-quality aluminium bracket set(s)
- Roof grommet, UV-stable with one cable entry
- Fix Pack adhesive kit
- Connection cable for module to charge controller incl. 2 x MC4 connectors
- MultiContact Y-connector
- Detailed mounting instructions

DCsolar POWER SETS EBL

| Type | PSE 01 | PSE 02 | PSE 03 |
|---------------------------------|-------------------------|-------------------------|-------------------------|
| Power (W) | 110 | 190 | 220 |
| Daily yield (Wh) | 440 | 760 | 880 |
| Solar panel (Typ) | E440M42/S | E760M36 | E440M42/S |
| No. of solar panels (Stk) | 1 | 1 | 2 |
| Solar panel size L x W x H (mm) | 1065 x 550 x 35 | 1500 x 680 x 35 | 1065 x 550 x 35 |
| Charger | Votronic DuoDigital 230 | Votronic DuoDigital 230 | Votronic DuoDigital 230 |
| No. of cells | 42 | 36 | 42 |



Everything delivered in one box!

PROVED

DCsolar

QUALITY



Price/
performance
winner!

DCsolar Power Set Profi

BESTSELLER IN PROOFED QUALITY

- Ecolux Series modules
- Solara Charge Controller SR 340 E
- High-quality aluminium bracket set(s)
- Roof grommet, UV-stable with one cable entry
- Fix Pack adhesive kit
- Connection cable for module to charge controller incl. 2 x MC4 connectors
- MultiContact Y-connector
- Detailed mounting instructions

DCsolar POWER SETS PROFI

| Type | PSP 01 | PSP 02 | PSP 03 |
|---------------------------------|-----------------|-----------------|-----------------|
| Power (W) | 110 | 190 | 220 |
| Daily yield (Wh) | 440 | 760 | 880 |
| Solar panel (Typ) | E440M42/S | E760M36 | E440M42/S |
| No. of solar panels (Stk) | 1 | 1 | 2 |
| Solar panel size L x W x H (mm) | 1065 x 550 x 35 | 1500 x 680 x 35 | 1065 x 550 x 35 |
| Charger | Solara SR 340 E | Solara SR 340 E | Solara SR 340 E |
| No. of cells | 42 | 36 | 42 |



Everything delivered in one box!

PROVED

DCsolar

QUALITY



DCsolar accessories

Easy to handle

With the DCsolar accessories, the installation becomes a breeze. High-quality connectors, rugged cables, pre-assembled connection cables, EBL charge controllers - all professional components for quick and easy installation. Our cables are suitable for outdoor use.

| Type | Description |
|--------------------------------------|--|
| Connection cable / connectors | |
| Dc-Connect-C, 4 mm ² | Connection cable module - controller with MC4 connectors, length 5 m, size 2x 4mm ² , fits to all Solara and DcSolar modules |
| Dc-Connect-C, 2.5 mm ² | Connection cable module - controller with MC4 connectors, length 5 m, size 2x 2.5 mm ² , fits to all Solara and DcSolar modules |
| Dc-Connect-M | Connection cable for modules with MC4 connectors, length 2 m, size 2x 4 mm ² |
| Dc-Connect-B | Connection cable charge controller - battery, assembled with fuse and cable lugs, length 1 m, size 2x 6 mm ² |
| MC4 Y-Set | Y-adapter set for parallel connection of two modules, set with plus and minus |
| MC4 PV Stick | MC4 connectors, DIY, tool-free, set with plus and minus |
| Charge controller | |
| Fox-062 | Cable charge controller, max. solar current 8A, system voltage 12V, adjustable to different battery types |
| Cellprotector | Hotspot protector for SOLARA M-Series Modules |
| EBL connection cable | Connection wire for any solar controller with Schaudt EBL |
| Aluminium brackets | |
| HSP | Silver aluminium bracket for module mounting, max. module size 1300 x 560 mm, set with 4 brackets, incl. screws |
| HSP400 | Silver aluminium bracket for module mounting, max. module size 1500 x 700 mm, set with 6 brackets, incl. screws |
| HSP/sw | Black aluminium bracket for module mounting, max. module size 1300 x 560 mm, set with 4 brackets, incl. screws |
| HSP400/sw | Black aluminium bracket for module mounting, max. module size 1500 x 700 mm, set with 6 brackets, incl. screws |
| Deck seals | |
| Deck seal | Scanstrut DS H-6, for 1 cable, cable diameter 2-6 mm, incl. several sealings |
| Deck seal | Scanstrut DS H-10, for 1 cable, cable diameter 6-10 mm, incl. several sealings |
| Deck seal | Scanstrut DS Multi, several cables, cable diameter up to 15 mm |
| Deck seal | Scanstrut DS-HD6, for 2 cables, cable diameter up to 6 mm max., incl. several sealings |
| Deck seal | Scanstrut DS-HD10, for 2 cables, cable diameter 6-10 mm, incl. several sealings |



Solutions for any application



SOLARA®

module. komponenten. systeme

EVERYTHING FROM ONE SOURCE

Whether road sign, radio mast, navigation mark or a hospital at the end of the world. No matter what application, electricity is becoming increasingly important and SOLARA solar systems provide just that energy. Through many years of experience, our engineers can plan exactly the system size your application needs. With us you get everything from one source. Solar modules, electronics, batteries – everything individually planned and adapted to the needs.

PROVEN QUALITY FOR OVER 25 YEARS

Our customers are satisfied because we deliver long-lasting and reliable solar systems. Our systems always use the latest technologies and materials to make our systems better and more powerful.

STRONG BRANDS

In order to meet professional demands professional products are required. Our suppliers are not only leaders in their respective field, also our partners since many years.

Behind our strong brands is always plenty of experience, short communication channels, quick help and fast availability - usually directly from stock.



MORNINGSTAR
corporation



SONNENSTROM
FABRIK



HOPPECKE
POWER FROM INNOVATION



victron energy
BLUE POWER



phocos



STUDER



HIS
we connect solar energy



Renusol
Europe GmbH



Rolls





Small off-grid system made with 6 SOLARA solar modules

RALF Z., ECOLOGIST

„Our 6 serial connected Excellent solar modules with 325 W each are producing DC-current, which we charge via a Phocos Hybrid-inverter into a 24 V battery system.

The integrated inverter converts the batteries energy into 230 V AC.

So there is always enough energy available to support our well pump to irrigate our plants.“

SOLARA Excellent-Series

| | |
|--------------|---|
| System size | 1,950 W |
| Suitable for | commercial applications |
| Products | 6 x Solara Excellent 325M60 with 325 W each 1 x Hybrid-Inverter-Charger Phocos PSW-H-5kW 4 x Victron Gel-type batteries, 130 Ah c10, incl. connectors |

➔ [More details on powerfull off-grid equipment can be found from page 60](#)



Top quality for off-grid use.

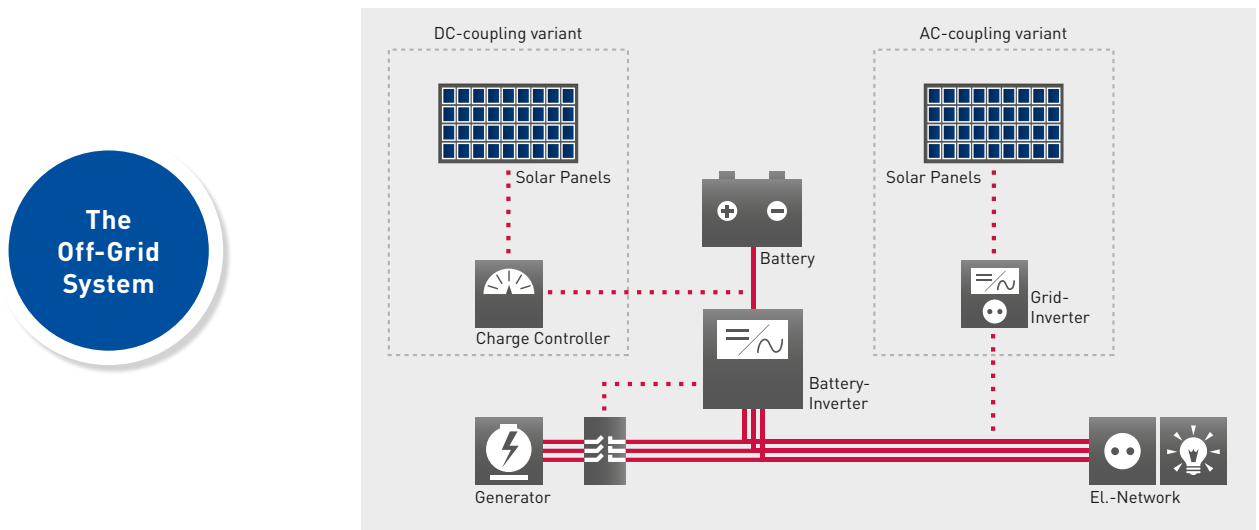
Independent energy supply

INDEPENDENCY

A functioning power grid is not always available, even if it seems quite natural. Bad or inadequate infrastructure is the most common cause. It looks even more difficult if there is no power grid at all, but you still need a reliable power supply: Here, solar technology is often the only solution. **SOLARA offers such solutions:** individually planned, adapted to the needs, a properly functioning system with solar power where it is needed.

DEVELOPMENT

Around two billion people on earth have no access to reliable energy supply. However, especially in remote regions, the availability of electricity is one of the most important keys to sustainable development. Solara photovoltaic power plants and components are specifically designed for use in these areas: **reliable and very powerful.**



PLANNING A SYSTEM – THE SOLARA PLANNING SHEET

To be able to serve a purpose reliably, they have to be planned precisely and adapted to the specific needs, the site and the consumer's behaviour.

Such systems include on the one hand energy sources, such as a generator, a solar array, a wind turbine or a combination of different sources to generate the required energy locally and on the other hand, the devices (battery charger and inverter) to store the energy locally in batteries and to supply the consumers with AC voltage.

Use our detailed planning sheet for your system enquiry. It is made to retrieve all relevant information and maps the future system, its components and properties clearly. So we can create you an optimal offer.

Also available as a download at www.solara.eu



Projects with SOLARA



Power supply of a measuring station for speed control

| | |
|----------------|--|
| PV-system size | 3 kW |
| Products | Sonnenstromfabrik glass/glass modules, Studer, BAE batteries |
| Location | Drammetal, Germany |



Power supply of a mobile chicken shed

| | |
|----------------|---|
| PV-system size | 990 W |
| Products | Excellent modules, Phocos, Hoppecke Batteries |
| Location | Melle, Germany |



Back-up power supply

| | |
|----------------|---|
| PV-system size | 5,7 kW |
| Products | Centrosolar Excellent modules, SMA Sunny Backup, Hoppecke batteries |
| Location | German Embassy, Vientiane, Laos |



Power supply to a hospital

| | |
|----------------|---|
| PV-system size | 9,1 kW |
| Products | Centrosolar Professional modules, SMA Sunny Island, Rolls batteries |
| Location | Irrawaddy Delta, Myanmar |



LED road sign

| | |
|----------------|--|
| PV-system size | 380 W |
| Productse | Solara S-Series modules, Morningstar, Network connectivity |
| Location | Autobahn, Germany |



Tsunami early warning system

| | |
|----------------|-----------------------------------|
| PV-system size | 500 W + 600 W |
| Products | Solara M-Series, S-Series modules |
| Location | Indian Ocean, Indonesia |



Made
in
Germany.

Sonnenstromfabrik Excellent

SOLARA S-Series

Powerful solar modules

Quality from the Sonnenstromfabrik

The Sonnenstromfabrik is the most modern and qualitatively leading manufacturer of solar modules in Europe. The module factory has established itself as a quality leader over the past 25 years. The particular strength of the Sonnenstromfabrik are their, compared to conventional solar modules, much more durable glass/glass modules of the series „Excellent Glass/Glass“.

The Features

- Anti-reflection glass ensures high yields
- Positive power classification
- 100 % PID-safe
- Ballast up to 18,000 Pa (for glass/glass modules)
- Large, waterproof junction box
- Salt-spray-resistant
- Ammonia-resistant
- Hail-resistant

Glass/glass modules

| Type | Module power (W) | No. of cells | Dimensions (L x W x H in mm) | Weight (Kg) |
|------------------------|------------------|--------------|------------------------------|-------------|
| Diamond | 350 - 400 | 108/96 | 1745/1560 x 1145 x 35 | 23.0/22.0 |
| Excellent | 325 - 330 | 60 | 1700 x 1000 x 35 | 22.0 |
| Solara S-Series Vision | 110 | 36 | 1250 x 550 x 35 | 9.4 |
| Solara S-Series Vision | 190 | 42 | 1500 x 680 x 35 | 15.0 |

Glass/foil modules

| Type | Module power (W) | No. of cells | Dimensions (L x W x H in mm) | Weight (Kg) |
|-----------------|------------------|--------------|------------------------------|-------------|
| Sapphire | 490 | 132 | 2110 x 1145 x 35 | 23.0 |
| Sapphire | 350 - 410 | 108/96 | 1745/1560 x 1145 x 35 | 19.0/20.0 |
| Excellent | 325 - 330 | 60 | 1700 x 1000 x 35 | 19.0 |
| Solara S-Series | 100 | 36 | 1500 x 350 x 35 | 7.9 |
| Solara S-Series | 120 | 45 | 1250 x 550 x 35 | 6.6 |
| Solara S-Series | 190 | 36 | 1500 x 680 x 35 | 10.5 |





Individual solutions

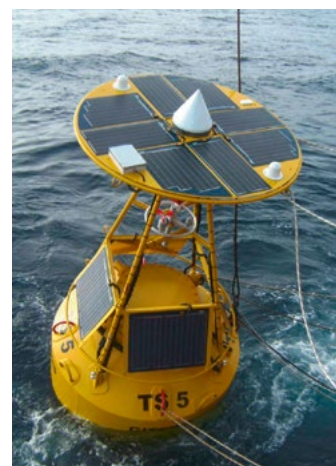
A variety of applications such as e.g. parking ticket machines, measuring stations, emergency telephones, street lighting, telecommunications and much more, often need to be supplied with autonomous power. Either there is no electricity available or the connection to the power grid is too expensive or complicated. Depending on the product a perfectly suitable solar module for this application is required so that it can be easily integrated into the existing application without further modification.

This is the strength of Solara, because we can manufacture any solar module exactly to your specifications. Whether square, triangular or round, small or large, all module outputs from 1 Watt for cigarette vending machines to 395 Watts for telecommunication systems are possible here and that even in smaller quantities.

You give us the desired dimensions and power, we design the optimal module and make you an appropriate offer based on the requested quantities. After your approval, the solar module can be produced and delivered promptly.

What is possible?

- Any shape
- Power ranges from 1 Watt to 490 Watts
- Use of polycrystalline, monocrystalline and as well as back contact cells
- Module construction glass/foils, glass/glass, foil/metal or foil/plastic
- Semiflexible modules
- Covered cell connectors
- Transparent, white or black backsheet
- Frame colour silver or black
- Frameless as a laminate
- Junction box or direct cable outlet





SunGuard



ProStar with Display



TriStar 45/60

A blue circular badge with a white border containing the text 'Lithium-ready.'

Morningstar charge controllers

Charge controller for professional use

In case of high solar power and currents, battery voltages up to 48V, needed communication and data transfer, the professional ProStar and TriStar controllers are being used. Basically, all MorningStar controllers are designed without fans or moving parts.

The features

- For all battery types, lithium-ready
- For large systems with up to 60 A solar current
- With temperature sensor and deep discharge protection
- PWM charging characteristic, Series design
- Automatic voltage detection
- Several network and communication options
- All fuses electronically
- Low self-consumption < 20 mA
- Top quality with 5 years guarantee

| Type | Solat panel power (W) | Current (A) | Voltage (V) | max. Open-circuit voltage (V) | Meter |
|-------------|-----------------------|-------------|-------------|-------------------------------|-------|
| SunGuard | 80 | 4,5 | 12 | 30 | LED |
| ProStar 15 | 250/500 | 15 | 12/24 | 60 | LED |
| ProStar 15M | 250/500 | 15 | 12/24 | 60 | LCD |
| ProStar 30 | 500/1000 | 30 | 12/24 | 60 | LED |
| ProStar 30M | 500/000 | 30 | 12/24 | 60 | LCD |
| TriStar 45 | 750/1500/3200 | 45 | 12/24/48 | 60 | LED |
| TriStar 60 | 1000/2000/4000 | 60 | 12/24/48 | 60 | LED |





GS-MPPT-100M



GS-MPPT-100M



ReadyBlocks

When it comes to performance.

Morningstar GenStar MPPT charge controllers

GenStar MPPT is the industry's first fully integrated DC solar charging system. A completely new design that provides all the features, most frequently requested by installers, including key communication and control functions.

The features

- Complete network integration without adapters or additional devices
- WiFi and Bluetooth connectivity with a mobile device and an app for easy connection
- LiveView 2.0 web app interface on board
- Fanless design for improved efficiency and exceptional long-term reliability
- Oversized PV array input power
- Comprehensive electronic protection functions, such as a „fold-back“ circuit for lithium, which protects against charging damage in cold weather
- Powerful load control - integrated 30 A load capability, unique for controllers in this power class

| Type | Power (VA) | Charging current (A) | System voltage (V) | Max. solar voltage (Vdc) |
|-------------------|----------------|----------------------|--------------------|--------------------------|
| GS-MPPT-60M-200V | 1200/2400/4800 | 60A | 12/24/48 | 200 |
| GS-MPPT-80M-200V | 1600/3200/6400 | 80A | 12/24/48 | 200 |
| GS-MPPT-100M-200V | 2000/4000/8000 | 100A | 12/24/48 | 200 |

For further information do not hesitate contacting us.

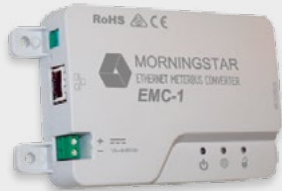
Morningstar ReadyBlock System extension for GenStar

The ReadyBlock expansion system offers true integration of the controller technology thanks to the exclusive ReadyRail design. All information is immediately available as it is actually part of the hardware and software of the charge controller itself and not outside the system as with a typical stand-alone add-on device.

The Features

- ReadyShunt - battery measurement/monitoring, important key figures such as state of charge (SOC), energy inputs and outputs (ampere hours), current measurement for energy sources and loads and more
- ReadyBMS - complete closed-loop communication and control with lithium batteries
- ReadyRelay - signalling (dry contact), advanced load control

5 years
product
guarantee*


 Versatile
expandable.


EMC-1



MeterHub



TS-M-2



RD-1

Morningstar accessories

The various accessories from Morningstar provides professional extension of the solar system. Communication adapters enable data transfer, even over the Internet. Displays and hubs, visualize many devices in one place, a relay driver to control external devices and other accessories just a good and clean installation.

Accessories

| Type | Function | Compatible to |
|---------|--|--------------------------------------|
| RM-1 | Remote LCD display for several system parameters, incl. 10 m connection wire | SunSaver MPPT, ProStar MPPT |
| TS-M-2 | Build-in meter for system parameter | TriStar MPPT |
| TS-RM-2 | Remote LCD display for system parameters, incl. 30 m connection wire | TriStar MPPT |
| RTS | Temperature sensor with 10 m connection wire | ProStar MPPT, TriStar MPPT, EcoBoost |
| EMC-1 | Ethernet Meterbus converter | ProStar MPPT, TriStar MPPT, |
| HUB-1 | Enables multiple controllers to share one display or relay driver | ProStar MPPT, TriStar MPPT, |
| MSC-1 | Converter for RJ-11 to RS232 communication | SunSaver MPPT, ProStar MPPT |
| RD-1 | Logic module for system controll functions | ProStar MPPT, TriStar MPPT |
| UMC-1 | Converter for RJ-11 to USB 2.0 communication | SunSaver MPPT, ProStar MPPT |
| DIN-1 | DIN-rail holder | SunSaver MPPT |
| WireBox | Enclosure accessory for ProStar MPPT | ProStar MPPT |





SureSine 1250



SureSine 2500



SureSine 1250



SureSine 700

Morningstar SureSine inverter

Inverters for professional applications

The new SureSine series of off-grid inverters comprises six power classes from 150-2,500 W with 120 or 230 V output and 12, 24 or 48 V DC input to cover a wide range of off-grid applications that require a powerful, industrial-grade, pure sine wave inverter.

The features

- Setup and monitoring via APP Bluetooth communication on board
- Multiple hardwired AC remote control options for selected models
- Industry leading NRTL certifications for safety, low noise and high performance for reliability and system compliance
- Industrial quality, with high-quality toroidal transformers for improved sine wave stability
- Outstanding thermal performance with fanless design
- Communication options: RS485, USB, Ethernet, MS-CAN, Bluetooth

| Typ | Dauerleistung (Watt) | Max. Leistung 1min. (Watt) | Systemspannung (V) | AC Spannung (V) |
|---------------|----------------------|----------------------------|--------------------|--------------------------|
| SureSine 150 | 150 | 225 | 12/24/48 | 120/220, 60Hz / 230 50Hz |
| SureSine 300 | 300 | 450 | 12/24/48 | 120/220, 60Hz / 230 50Hz |
| SureSine 700 | 700 | 1050 | 12/24/48 | 120/220, 60Hz / 230 50Hz |
| SureSine 1000 | 1000 | 1500 | 12/24/48 | 120/220, 60Hz / 230 50Hz |
| SureSine 1250 | 1250 | 1875 | 12/24/48 | 120/220, 60Hz / 230 50Hz |
| SureSine 2500 | 2500 | 3750 | 12/24/48 | 120/220, 60Hz / 230 50Hz |

For further information do not hesitate contacting us.

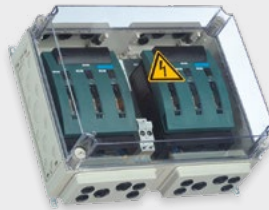




Quattro



MultiPlus



BatFuse x.2



BatFuse x.1

Kabel 16/35/70 mm²

Victron

Best price and power performance

With over 43 years of experience, Victron Energy enjoys an unrivalled reputation for technical innovation, reliability and quality. Victron is one of the world leaders in the field of independent power supply. The wide product range includes i.a. sine inverter and inverter/charger combinations, battery chargers, DC/DC converters, transfer switches, batteries, solar charge controllers and many more innovative solutions.

| Type | Power (VA) | Charging current (A) | System voltage (V) | Specialty |
|----------------------------|--------------|----------------------|--------------------|---------------|
| Quattro | 3000 - 15000 | 70 - 200 | 12/24/48 | - |
| MultiPlus Inverter/Charger | 800 - 5000 | 16 - 120 | 12/24/48 | - |
| MultiPlus Inverter/Charger | 500 - 1200 | 6 - 50 | 12/24/48 | - |
| Phoenix Inverter | 250 - 800 | - | 12/24/48 | Inverter only |

Several accessories available such as control panels, battery monitors, remote monitoring and much more.

For more information and details, please contact us.

Accessories

These accessories are needed in almost every system. High quality fuses, rugged cables - all professional components for a clean and safe installation.

| Type | Function |
|--------------------------|--|
| MC4 PV Stick | MC4 connectors, DIY, tool-free, set with plus and minus |
| Cable 1x4 | Installation cable for outside use, Typ H1Z2Z2-K, size 1x 4 mm ² , by meter |
| Cable 1x6 | Installation cable for outside use, Typ H1Z2Z2-K, size 1x 6 mm ² , by meter |
| Cable 16 mm ² | Connection cable with cable lug, length 4 m |
| Cable 35mm ² | Connection cable with cable lug, length 2 m or 4 m |
| Cable 70 mm ² | Connection cable with cable lug, length 3 m or 6 m |
| Batfuse 1.1 | NH00-Fuse up to 2x 80 - 160 A, for 1 Inverter, 3 DC Inputs, IP65 |
| Batfuse 1.2 | NH00-Fuse up to 6x 80 - 160 A, for 3 Inverter, 6 DC Inputs, IP65 |
| Batfuse 2.1 | NH01-Fuse up to 2x 125 - 250 A, for 1 Inverter, 3 DC Inputs, IP65 |
| Batfuse 2.2 | NH01-Fuse up to 6x 125 - 250 A, for 3 Inverter, 6 DC Inputs, IP65 |

PROVED

SOLARA®

QUALITY



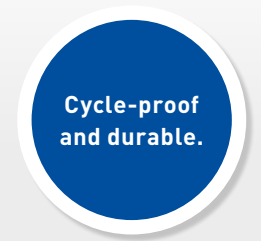
OPzV



OPzS



Battery rack



Cycle-proof and durable.



Aqua Gen

Hoppecke gel and liquid batteries

OPzS/OPzV batteries

Since 1927 the company develops and produces “Made in Germany”. Longevity due to high number of cycles (up to 3,000 cycles at DoD 50%) are one of the characteristics of these stationary batteries.

The features

- Maximum cycle life and longevity
- Standards IEC 61427, DIN 40742
- Up to 3,000 cycles at DoD 50%
- M8 thread for cable connections
- Highest resistance to mechanical stresses by reinforced, impact-resistant polypropylene housing

sun|power VR L (OPzV)

| Description | Dimensions | Capacity c100 |
|-------------------------------|---|--------------------------------------|
| 12 V bloc, W x H 205 x 383 mm | Lenght: 272, 380 mm | 70, 130, 200 Ah |
| 6 V bloc, W x H 205 x 383mm | Lenght: 272, 380 mm | 270, 330, 400 Ah |
| 2 V cell, width 208 mm | L x H: 105 x 420, 126 x 420, 147 x 420, 126 x 535, 147 x 535, 168 x 535, 147 x 710 mm | 287, 359, 430, 478, 574, 670, 847 Ah |
| 2 V cell, width 193 mm | L x H: 215 x 710 mm | 990, 1130 Ah |
| 2 V cell, width 235 mm | L x H: 215 x 710 mm | 1271, 1412 Ah |
| 2 V cell, width 277 mm | L x H: 215 x 710, 215 x 710, 215 x 855 mm | 1553, 1695, 1955 Ah |
| 2 V cell, width 400 mm | L x H: 215 x 815 mm | 2281, 2607 Ah |
| 2 V cell, width 490 mm | L x H: 215 x 815 mm | 2933, 3258 Ah |
| 2 V cell, width 580 mm | L x H: 215 x 815 mm | 3584, 3910 Ah |

1-step or 2-step racks available on request

sun|power V L (OPzS)

| Description | Dimensions | Capacity c100 |
|-------------------------------|---|--------------------------------------|
| 12 V bloc, W x H 205 x 383 mm | Lenght: 272, 380 mm | 70, 130, 200 Ah |
| 6 V bloc, W x H 205 x 383mm | Lenght: 272, 380 mm | 270, 330, 400 Ah |
| 2 V cell, width 208 mm | L x H: 105 x 420, 126 x 420, 147 x 420, 126 x 535, 147 x 535, 168 x 535, 147 x 710 mm | 280, 350, 420, 520, 620, 730, 910 Ah |
| 2 V cell, width 193 mm | L x H: 215 x 710 mm | 1070, 1220 Ah |
| 2 V cell, width 235 mm | L x H: 215 x 710 mm | 1370, 1520 Ah |
| 2 V cell, width 277 mm | L x H: 215 x 710, 215 x 710, 215 x 855 mm | 1670, 1820, 2170 Ah |
| 2 V cell, width 400 mm | L x H: 215 x 815 mm | 2540, 2900 Ah |
| 2 V cell, width 490 mm | L x H: 215 x 815 mm | 3250, 3610 Ah |
| 2 V cell, width 580 mm | L x H: 215 x 815 mm | 3980, 4340, 4700 Ah |

1-step or 2-step racks, re-combination tool, acid trays available on request



VR M



VR X-FT



VR X

Efficiency and durability.

Hoppecke AGM batteries

Compact and powerful

Sealed lead-acid battery, almost maintenance-free due to Absorbent-Glass-Mat technology. The ideal battery for small and medium-sized cyclic applications.

The features

- Maintenance-free due to AGM technology
- 2,500 cycles at 50% DoD
- Ideal for street lighting or small technical installations

sun|power VR M

| Description | Dimensions | Capacity c100 |
|-------------------------------|--------------------------|-------------------|
| 12 V bloc, W x H 177 x 190 mm | Lenght: 232, 267, 303 mm | 56, 69, 76, 88 Ah |
| 12 V bloc, W x H 177 x 230 mm | Lenght: 344, 498 mm | 101, 146 Ah |
| 12 V bloc, W x H 170 x 275 mm | Lenght: 344, 242, 308 mm | 125 Ah |
| 6 V bloc, W x H 170 x 275 mm | Lenght: 242, 308 mm | 186, 247 Ah |
| 2 V bloc, L x H 183 x 310 mm | Width: 155, 226 mm | 430, 620 Ah |
| 2 V bloc, L x H 182 x 310 mm | Width: 304, 391 mm | 890, 1120 Ah |

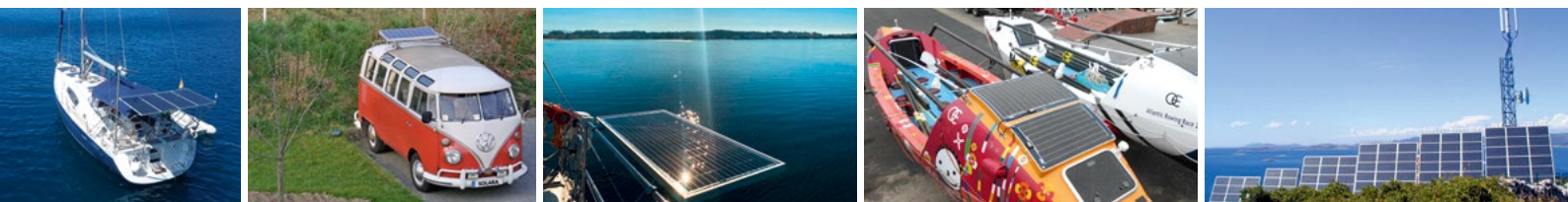
grid|power VR X

| Type | Weight (Kg) | Capacity c100 |
|--|-------------|---------------|
| VR X 12-57, L x B x H 207 x 177 x 230 | 19.0 | 57 Ah |
| VR X 12-63, L x B x H 229 x 177 x 230 | 23.3 | 63 Ah |
| VR X 12-68, L x B x H 229 x 177 x 230 | 25.7 | 68 Ah |
| VR X 12-88, L x B x H 344 x 177 x 230 | 30.8 | 88 Ah |
| VR X 12-102, L x B x H 344 x 177 x 230 | 33.6 | 102 Ah |
| VR X 12-114, L x B x H 344 x 177 x 230 | 38.7 | 114 Ah |
| VR X 12-142, L x B x H 498 x 177 x 230 | 46.2 | 142 Ah |
| VR X 12-153, L x B x H 498 x 177 x 230 | 48.2 | 153 Ah |
| VR X 12-166, L x B x H 498 x 177 x 230 | 53.3 | 166 Ah |

grid|power VR X-FT

| Type | Weight (Kg) | Capacity c100 |
|---|-------------|---------------|
| VR X-FT 12-90, L x B x H 383 x 105 x 265 | 32.5 | 90 Ah |
| VR X-FT 12-115, L x B x H 541 x 125 x 217 | 36.4 | 115 Ah |
| VR X-FT 12-170, L x B x H 541 x 125 x 302 | 52.3 | 170 Ah |
| VR X-FT 12-180, L x B x H 541 x 125 x 302 | 59.0 | 180 Ah |

Your specialized dealer



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