

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

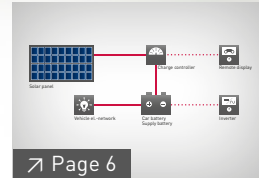
PROVED

DCsolar

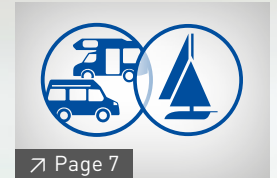
QUALITY

CONTENT

Solar systems tips



Tips for system design



How to find the right system size

SOLARA solar panels & sets



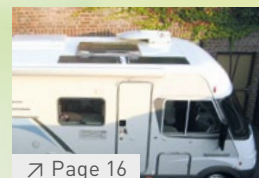
Power M-Series



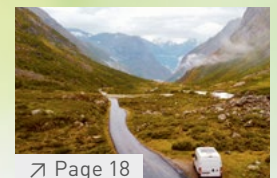
M-Series



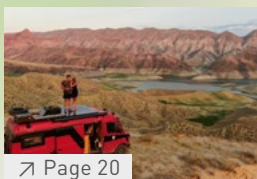
Power Mobile



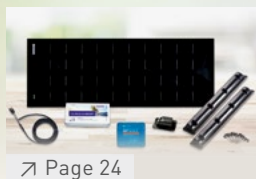
Power S-Series



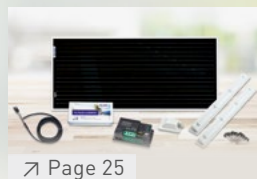
S-Series



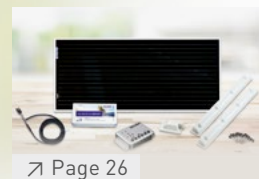
S-Series Vision



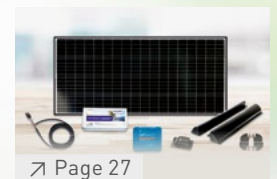
SOLARA All-in-one kit Power Pack



SOLARA All-in-one kit Power Pack



SOLARA All-in-one kit Premium Pack



SOLARA All-in-one kit Profi Pack

Charge controllers & displays



SOLARA



Votronic



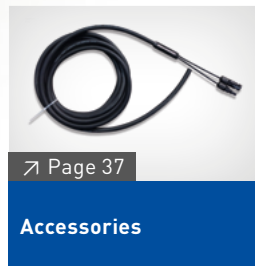
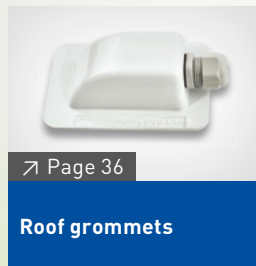
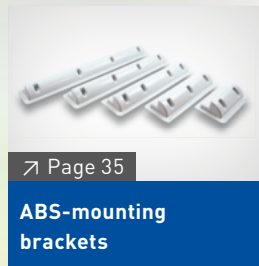
Victron



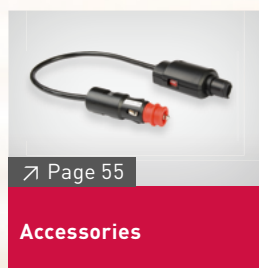
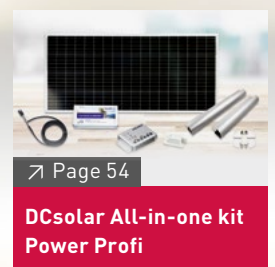
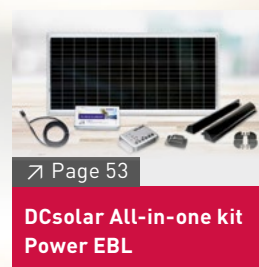
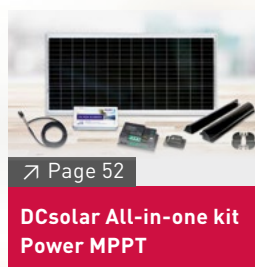
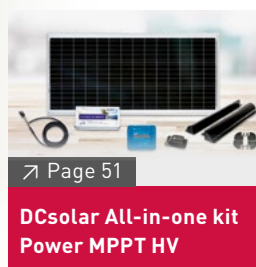
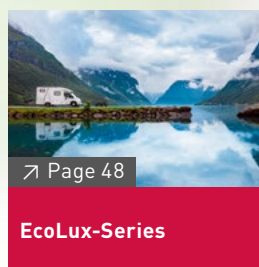
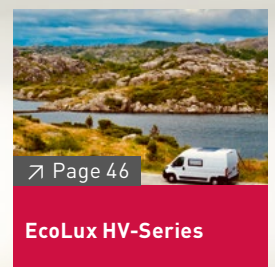
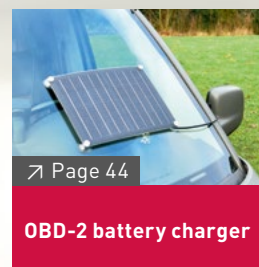
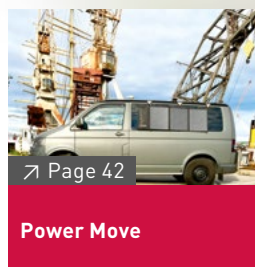
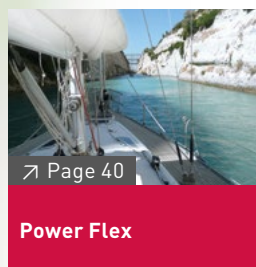
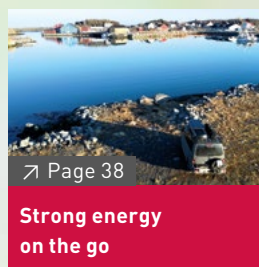
MorningStar

SOLARA.EU

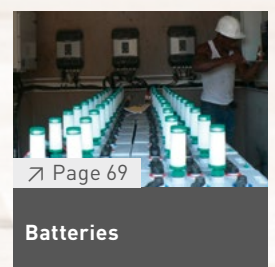
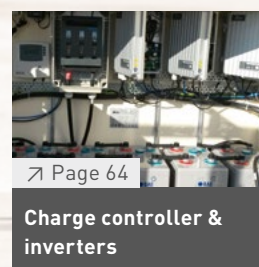
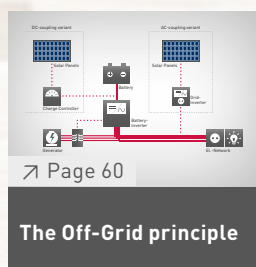
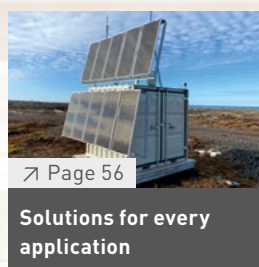
Mounting systems & accessories



DCsolar solar panels & sets



Commercial applications



Independent power supply

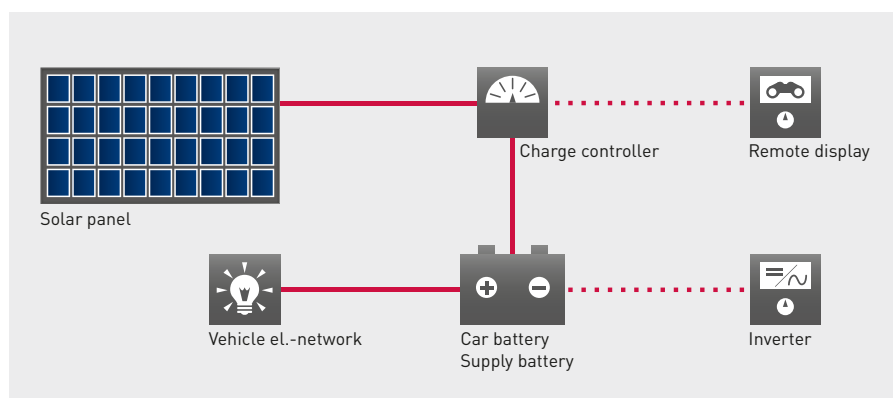
SOLAR PANELS FOR EVERY NEED

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

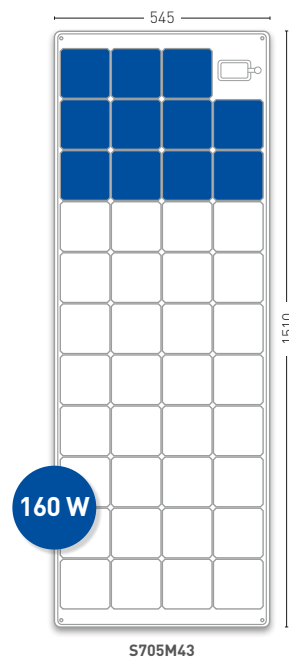
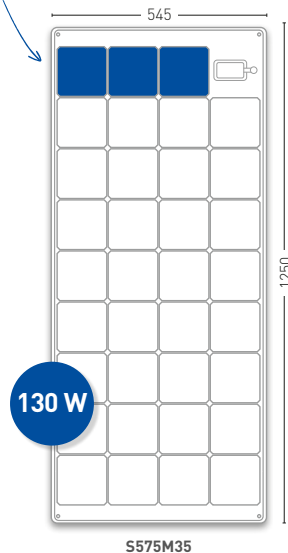
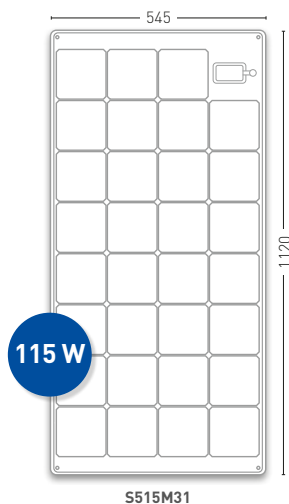
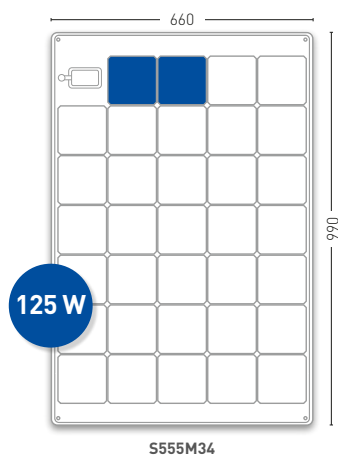


SOLARA Power M-Series



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 (P _{mpp}) Wp	125	115	130	160
Short-circuit current (I _{sc}) A	6.40	6.40	6.40	6.40
Open-circuit voltage (U _{oc}) V	24.82	22.63	25.55	31.39
Voltage (U _{mp}) V	21.08	19.22	21.70	26.66
Current (I _{mp}) 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 P _{mpp} %/°C	-0.29
TK U _{oc} mV/°C	-1.74
TK I _{sc} 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 P _{mpp} at STC	± 5 %
Operating temperature range	-40°C to +85°C





SOLARA M-Series

EXTREMELY FLAT, WALKABLE AND SEMI-FLEXIBLE

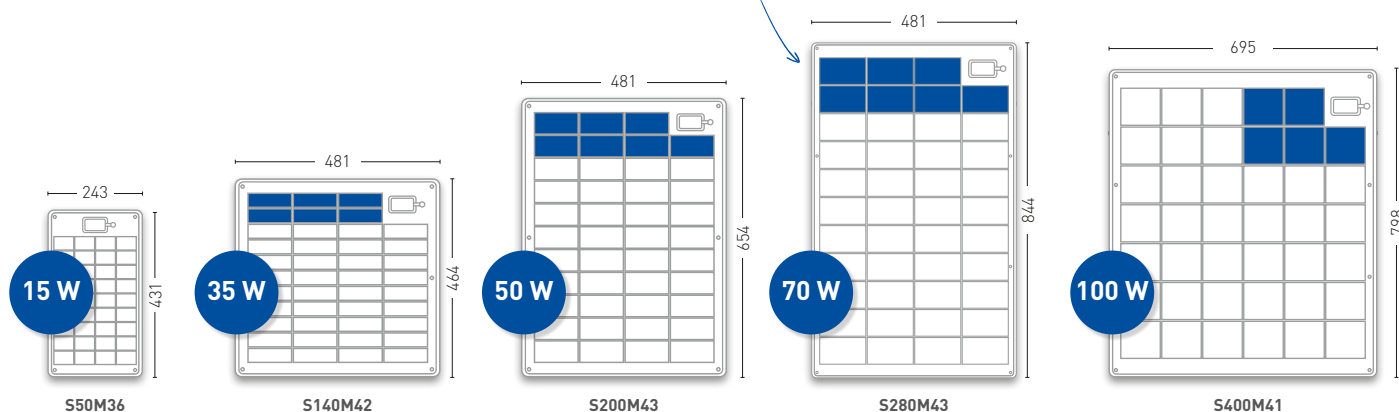
- Stability and maximum heat dissipation due to innovative aluminium-sandwich support plate
- Additional solar cells for efficient charging
- Maximum daily yield due to additional single cells
- All materials withstand extreme heat, high humidity, sea and salt water
- Teflon-type extremely resistant 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 (P _{mpp}) Wp	15	35	50	70	100
Short-circuit current (I _{sc}) A	0.72	1.44	2.15	2.85	4.29
Open-circuit voltage (U _{oc}) V	24.48	28.56	29.24	29.24	27.88
Voltage (U _{mpp}) V	20.88	24.36	24.94	24.94	23.87
Current (I _{mpp}) 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 P _{mpp} %/C	-0.40
TK U _{oc} %/C	-0.32
TK I _{sc} %/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 P _{mpp} at STC	± 5 %
Operating temperature range	-40°C to +85°C





**Mobile and
flexible in every
situation!**

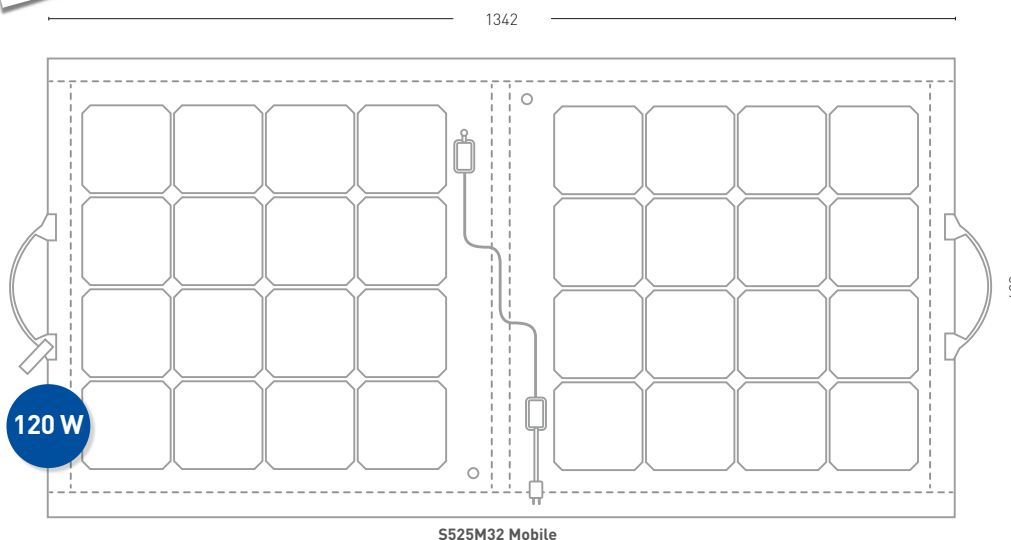
SOLARA Power Mobile

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 (Ump) 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

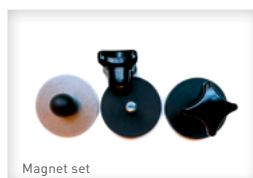
Cell technology	Sunpower, monocrystalline with back contact
Front/back	ETFE front and back side foil, welded at the edge
Cable outlet	Solid, small, flat, seawater-tight, glued and screwed

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

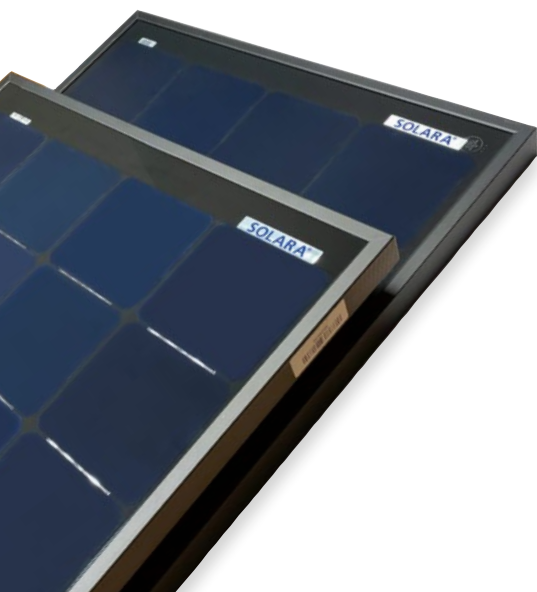




SOLARA Power S-Series

HIGHEST DAILY SUPPLY BY SUNPOWER CELL

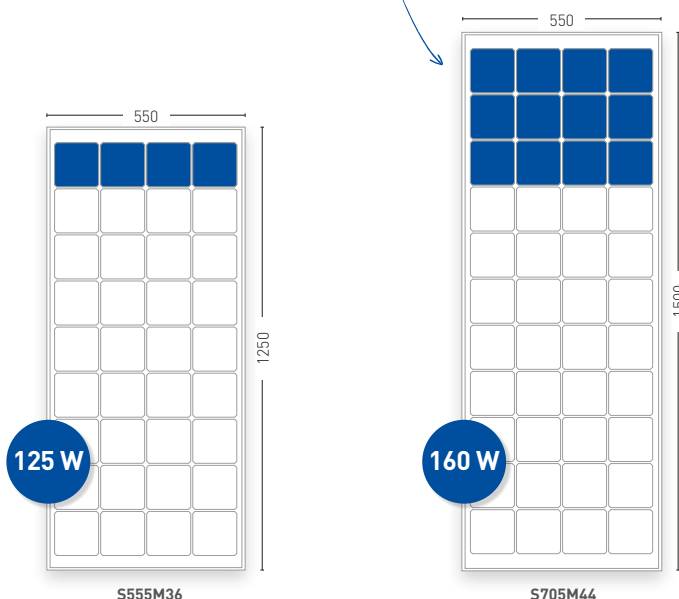
- Increased number of cells for maximum daily yield
- Solar cells with over 23% efficiency
- Additional solar cells for efficient charging
- Use of 2.0 mm thick, scratch-resistant, thermally tempered solar glass
- Excellent mechanical strength thanks to the torsion-resistant module frame
- Large, waterproof 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



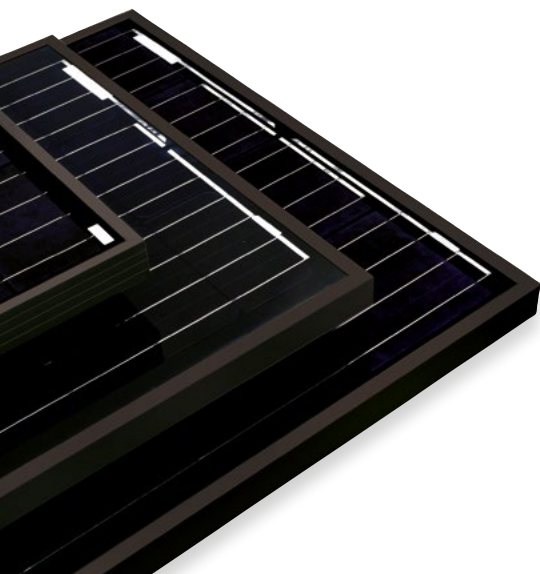


Specially
developed for
mobile use.

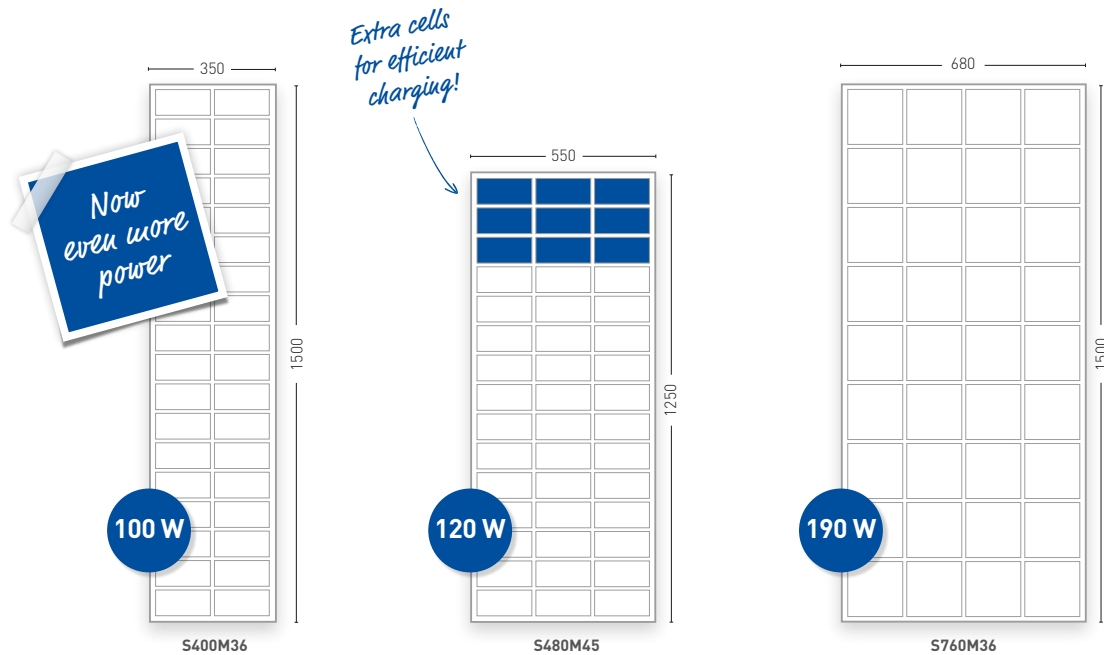
SOLARA S-Series

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 (P _{mp}) Wp	100	120	190
Short-circuit current (I _{sc}) A	5.04	4.89	10.09
Open-circuit voltage (U _{oc}) V	24.16	29.94	24.14
Voltage (U _{mp}) V	20.70	25.65	20.13
Current (I _{mp}) 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 P _{mp} %/°C	-0.42
TK U _{oc} %/°C	-0.32
TK I _{sc} %/°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 P _{mp} at STC	± 5 %
Operating temperature range	-40°C to +85°C
Glass thickness	3.2/2.0 mm

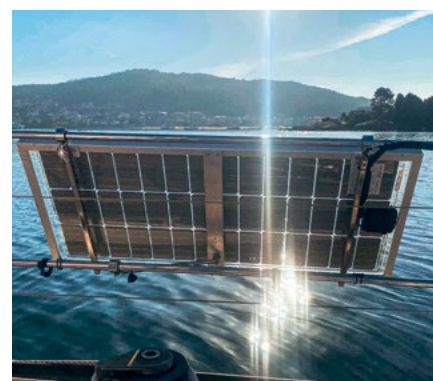




SOLARA S-Series Vision

INDESTRUCTIBLE DUE TO UNIQUE GLASS/GLASS TECHNOLOGY

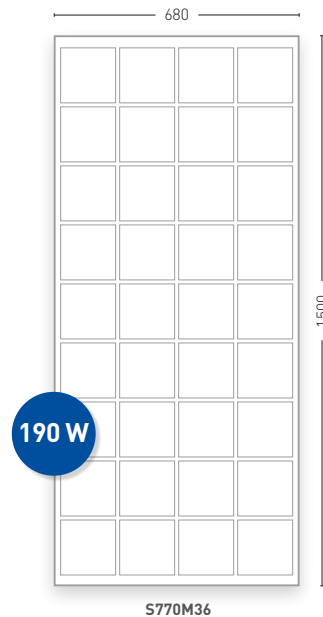
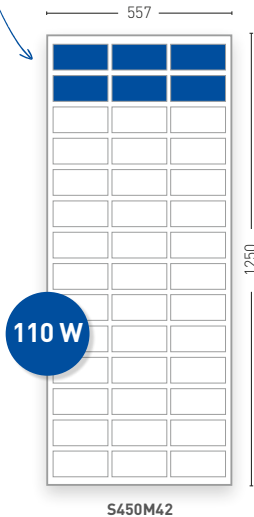
- Fully walkable
- Additional solar cells for efficient charging (S450M42 only)
- Robust, seawater-resistant aluminium profile frame
- Tropical roof capable and OFF-ROAD use suitable
- Large, waterproof junction box with connection cable, MC4 compatible
- Suitable for use even under extreme climatic 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-Series Vision SOLARA Power M-Series

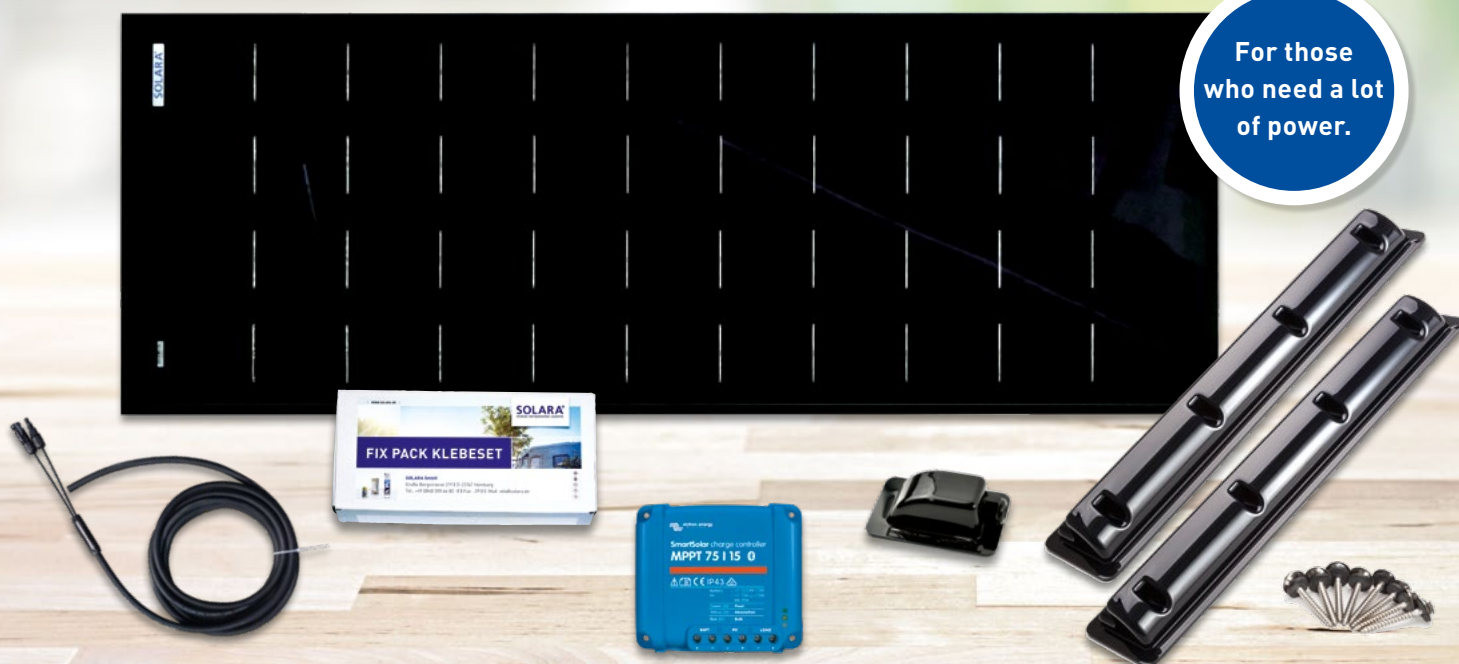
System size	640 W+ 450 W
Suitable for	4 persons plus guests, watermaker, cool box, projector, computer, on board electrics
Products	4x Vision S-Series Type S770M36 2x Power M-Series Type S525M35 2x Power M-Series Type S465M31 Victron charge controller and monitoring system

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

Quality
Made in
Germany

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

PROVED

SOLARA®

QUALITY

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!

5 years
product
guarantee*



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

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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

EBL
compatible.

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

Bluetooth
smart
integrated.

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

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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

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QUALITY

5 year
product
guarantee*



**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.

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





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

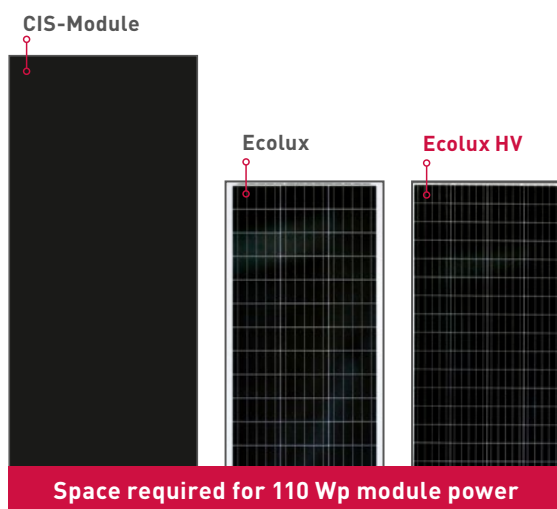
DCsolar – strong power on the go!



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





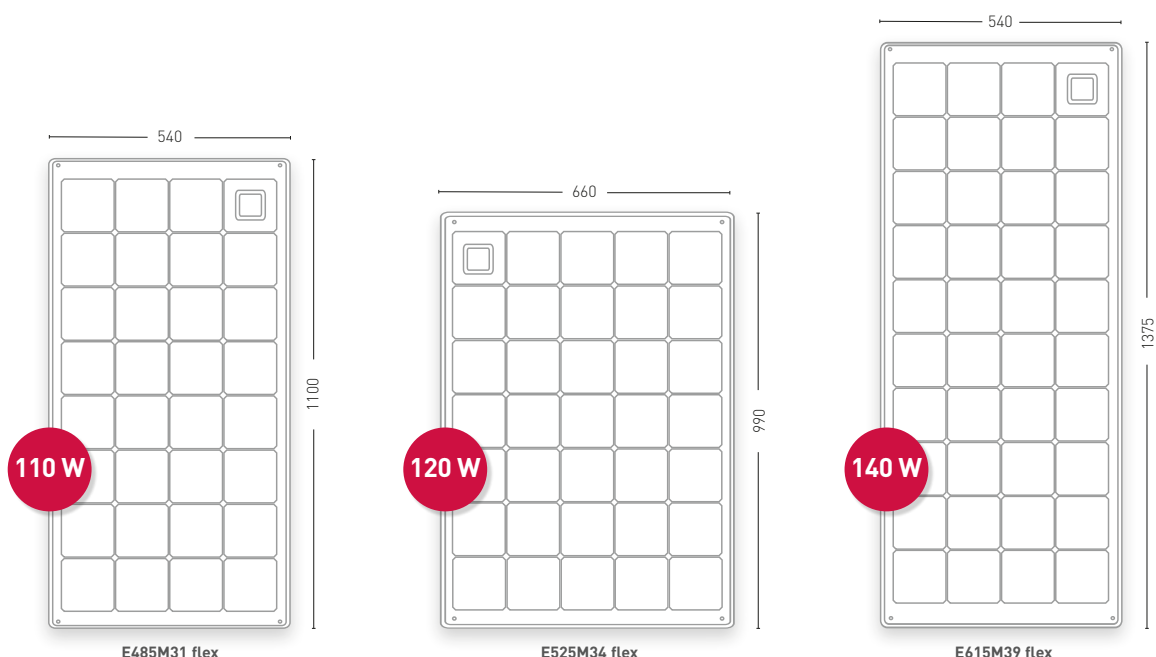
DCsolar Power Flex

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 * (P _{mp}) Wp	110	120	140
Short-circuit current (I _{sc}) A	6.10	6.10	6.19
Open-circuit voltage (U _{oc}) V	22.3	24.5	28.1
Voltage (U _{mp}) V	19.2	21.1	24.2
Current (I _{mp}) 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 P _{mp} %/°C	-0.29
TK U _{oc} mV/°C	-1.74
TK I _{sc} 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 P _{mp} at STC	-5 / +10 %
Operating temperature range	-40°C to +85°C





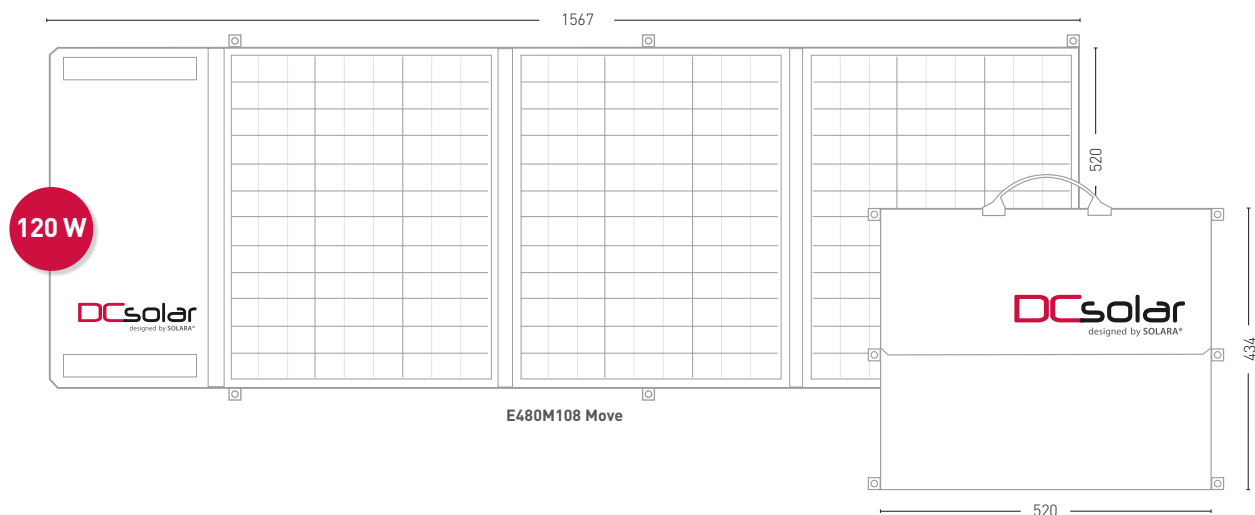
DCsolar Power Move

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 (P _{mp}) Wp	120
Short-circuit current (I _{sc}) A	6.36
Open-circuit voltage (U _{oc}) V	23.76
Voltage (U _{mp}) V	19.80
Current (I _{mp}) 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 P _{mp} %/°C	-0.42
TK U _{oc} %/°C	-0.32
TK I _{sc} %/°C	0.04
NOCT °C	46 ± 2

Used materials

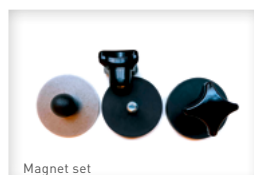
Cell technology	Monocrystalline PERC
Connection cable	5 m, 2 x 1.5 mm ²

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 P _{mp} at STC	-5 / +10 %
Operating temperature range	-40°C to +85°C

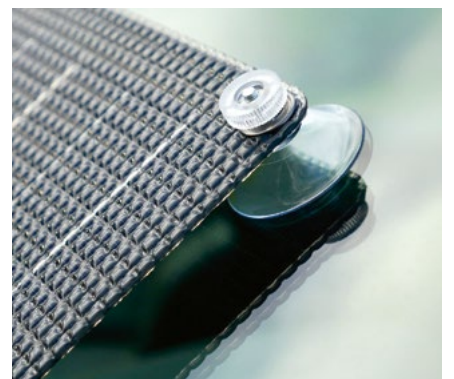
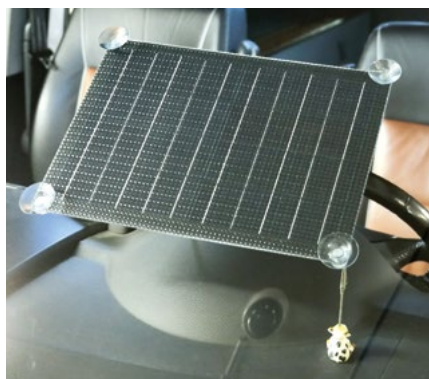




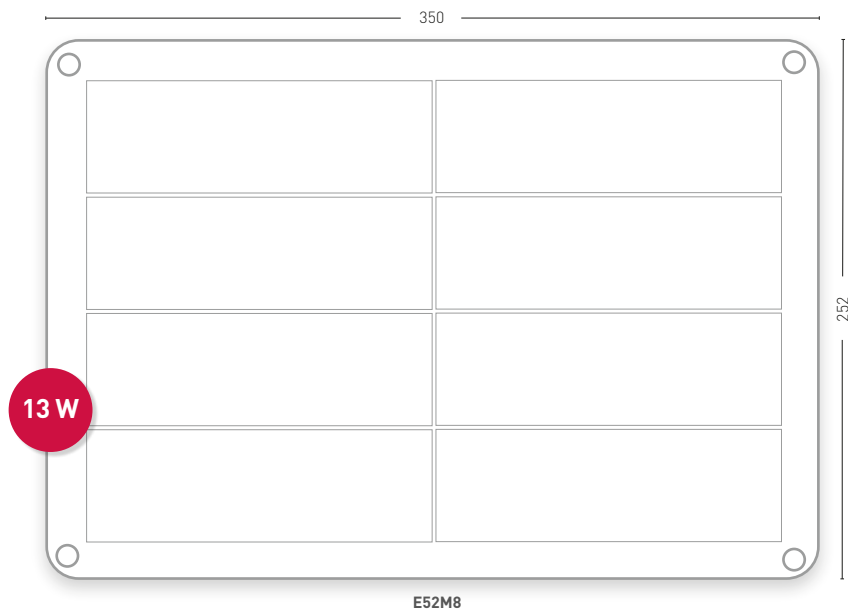
DCsolar OBD-2 battery charger

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 property

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!



3 years
product
guarantee*



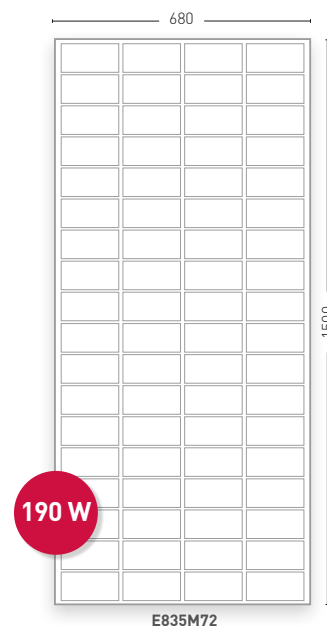
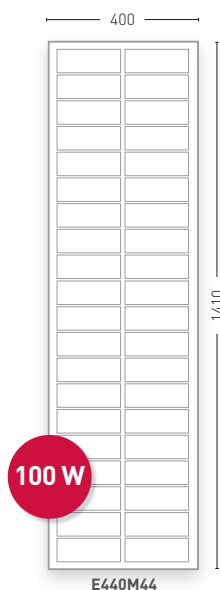
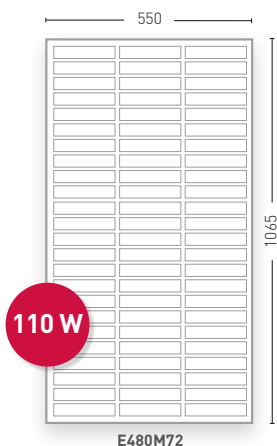
DCsolar Ecolux HV-Series

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 (P _{mp}) Wp	110	100	190
Short-circuit current (I _{sc}) A	2.83	4.45	6.87
Open-circuit voltage (U _{oc}) V	48.47	29.85	49.75
Voltage (U _{mp}) V	39.95	23.70	41.63
Current (I _{mp}) 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 P _{mp} %/°C	-0.42
TK U _{oc} %/°C	-0.32
TK I _{sc} %/°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 P_{mp} at STC -5 / +10 %A
 Operating temperature range -40°C to +85°C





Price/
performance
winner!

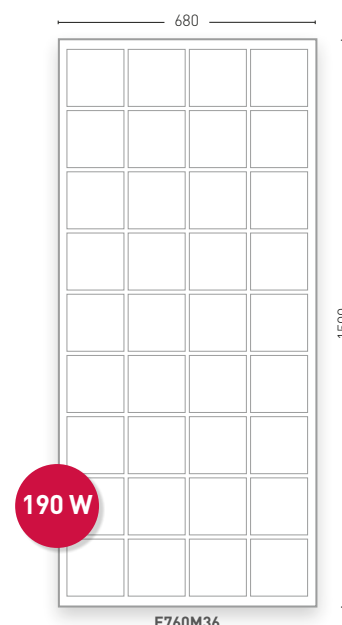
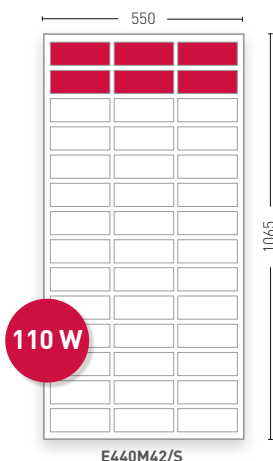
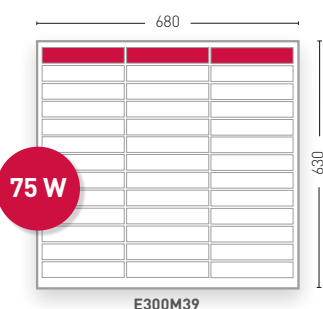
DCsolar Ecolux-Series

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



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

PROVED

DCsolar

QUALITY

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.







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.

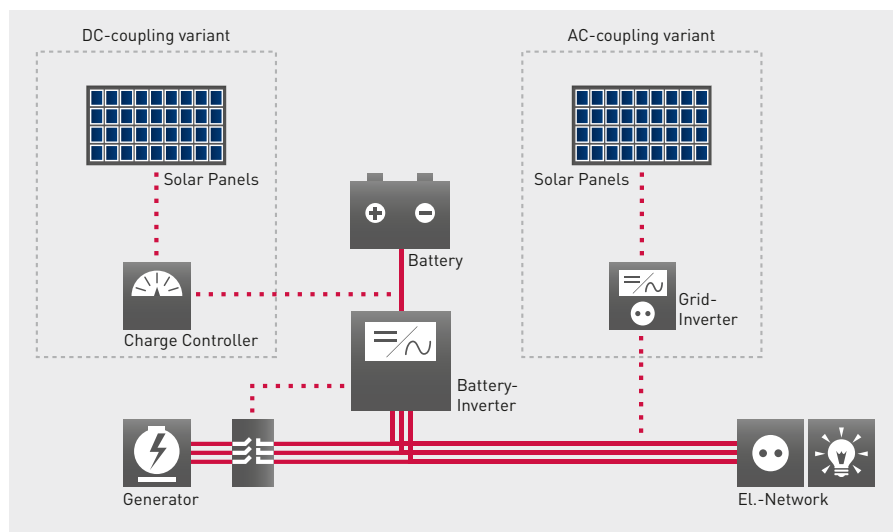
Independent energy supply

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

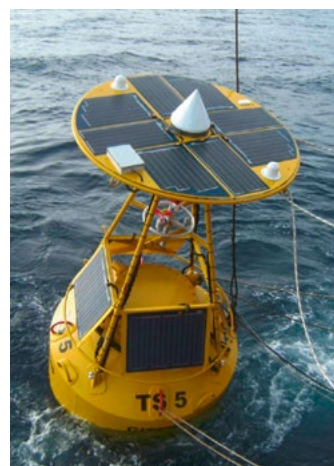
A variety of applications such as e.g. parking ticket machines, measuring stations, emergency telephones, street lighting, telecommunications and much more, often need to be supplied with autonomous power. Either there is no electricity available or the connection to the power grid is too expensive or 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

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

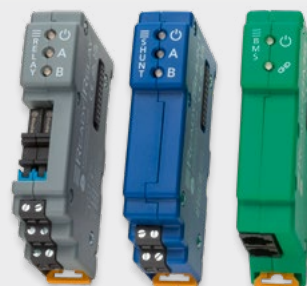




GS-MPPT-100M



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

 PROVED
SOLARA®
QUALITY

 5 year
product
guarantee*



SureSine 1250



SureSine 2500



SureSine 1250



SureSine 700

Price/
performance
winner!

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

Type	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.

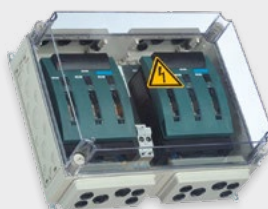




Quattro



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 mm², by meter
Cable 1x6	Installation cable for outside use, Typ H1Z2Z2-K, size 1x 6 mm², by meter
Cable 16 mm²	Connection cable with cable lug, length 4 m
Cable 35mm²	Connection cable with cable lug, length 2 m or 4 m
Cable 70 mm²	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

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QUALITY



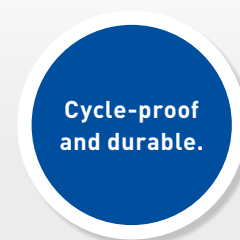
OPzV



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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