

TRI-CELL

The efficient storage system
for solar power.



Maximum independence with own solar power.

With TRI-CELL, the electrical energy of a solar power system can be stored for later use. Depending on the available solar energy, TRI-CELL regulates own consumption, energy storage, as well as power grid feed-in. Thus, solar power can be conveniently used any time of day or night – e.g. for electrical equipment and heat pumps.

That's how efficiency is easily increased.

Complete system for own power

TRI-CELL is a complete system, comprising safe batteries, modern inverter technology in rotary current design, as well as an energy management system.

Energy supply will thus be more independent and more flexible: In sunshine, power will come directly from the PV system. If there is little sun, stored energy from TRI-CELL will be used. Only if there is insufficient capacity will power be taken from the public grid. In case of public power failure, TRI-CELL takes over the emergency power supply.

Modern and safe battery technology

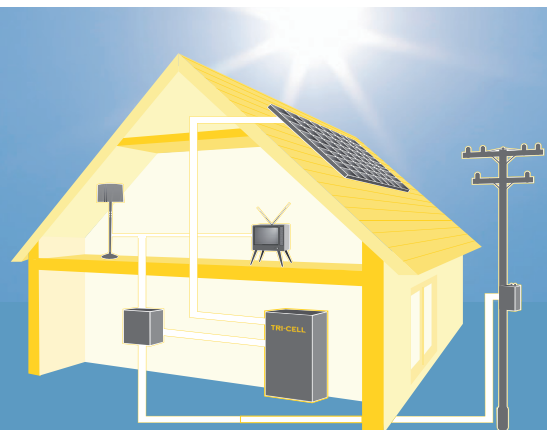
TRI-CELL uses lithium iron nano-phosphate batteries (LiFePo₄) which do not release lithium or oxygen and which are thus extraordinarily safe.

The efficient new battery excels by a long service life of 5,000 charging cycles – that's equivalent to about 15 years. Electronic monitoring prevents overcharging and total discharge of the individual cell, reducing the risk of premature failure of each battery. However, if a cell is ever defective, it will be detected by the system and automatically bypassed until the battery is replaced.

Simple installation for any household size

Suitable for any system size: TRI-CELL is available in different capacities and can be subsequently expanded without any problems.

Once connected to the house distribution system, TRI-CELL will work without any separate device for rotary current. Also, no manual programming of the energy management system is required. Its maintenance-free batteries are not considered hazardous materials and are permitted for operation in private households without any restrictions.



How own solar power pays off

Predominantly own power supply is possible – thanks to TRI-CELL and a PV system. Whether private or commercial use: Own power consumption provides long-term savings potentials.

Sample calculation Single-family home with TRI-CELL S

Location

Munich, Germany

Costs for complete system, including modules

21.992 Euros

COSTS OF ELECTRICITY SUPPLY

Assumed mean value for the next 20 years*:

40 ct/kWh

Generated energy for own consumption per year:

4.018 kWh/year AC

Savings per year for own consumption of energy:

1.607 Euros/year

ENERGY FEEDBACK with feed-in remuneration as of Sept. '12

Generated energy per year for feedback into the public grid:

1.004 kWh/year AC

Annual revenue for feedback into the public grid:

166 Euros/year

Sum total of savings, remuneration and depreciation in 20 years:

2.158 Euros/year

The system will be paid after 10,2 years.

Without feed-in remuneration, the system will be paid after 11 years.

Sample calculation Multi-family home with TRI-CELL M

Location

Freiburg, Germany

Costs for complete system, including modules

27.450 Euros

COSTS OF ELECTRICITY SUPPLY

Assumed mean value for the next 20 years*:

40 ct/kWh

Generated energy for own consumption per year:

6.822 kWh/year AC

Savings per year for own consumption of energy:

2.388 Euro/year

ENERGY FEEDBACK with feed-in remuneration as of Sept. '12

Generated energy per year for feedback into the public grid:

1.706 kWh/year AC

Annual revenue for feedback into the public grid:

283 Euros/year

Sum total of savings, remuneration and depreciation in 20 years:

3.492 Euros/year

The system will be paid after 7,9 years.

Without feed-in remuneration, the system will be paid after 8,6 years.

Calculations based on German Feed-In Tariff as of September 2012

* according to Fraunhofer ISE forecast

Electricity price of 25 ct/kWh in 2012 with annual increase of 4,3 %.

The most important facts at a glance

Proven technology and top quality of the components installed make TRI-CELL an efficient storage system. For optimum use, TRITEC has its own calculation tool for any support in designing TRI-CELL.

Model	TRI-CELL S-Li	TRI-CELL M-Li	TRI-CELL L-Li	TRI-CELL XL-Li
Art.-Nr.	1100123	1100124	1100125	1100126
Scope of applications	grid-connected	grid-connected	grid-connected	grid-connected
Nominal AC output	7,5 kW	7,5 kW	15 kW	15 kW
Overload (1 min)	9,75 kW	9,75 kW	19,5 kW	19,5 kW
Number of phases	3	3	3	3
Grid conformity	TN / TN-C-S / TN-S	TN / TN-C-S / TN-S	TN / TN-C-S / TN-S	TN / TN-C-S / TN-S
Output voltage	Sine wave	Sine wave	Sine wave	Sine wave
Voltage regulation	230 V \pm 3%, 400 V \pm 3%	230 V \pm 3%, 400 V \pm 3%	230 V \pm 3%, 400 V \pm 3%	230 V \pm 3%, 400 V \pm 3%
Frequency	50 Hz \pm 0,1%	50 Hz \pm 0,1%	50 Hz \pm 0,1%	50 Hz \pm 0,1%
Grid recovery	yes	yes	yes	yes
Stand-alone operation	yes	yes	yes	yes
Battery technology	Lithium iron nano-phosphate	Lithium iron nano-phosphate	Lithium iron nano-phosphate	Lithium iron nano-phosphate
Battery voltage	96 V	96 V	96 V	96 V
Battery capacity	60 Ah	100 Ah	100 Ah	200 Ah
Max. capacity without radiation	3,8 kWh	6,4 kWh	6,4 kWh	12,8 kWh
Exhaustive discharge protection	yes	yes	yes	yes
DC-converter	2	4	6	8
DC-converter open-circuit voltage	520 V	520 V	520 V	520 V
DC-converter input-voltage (MPP range)	90 – 480 V	90 – 480 V	90 – 480 V	90 – 480 V
DC-converter max. input current	14 A	14 A	14 A	14 A
DC-converter max. input power	2800 W	2800 W	2800 W	2800 W
Recommended PV generator	3,7 kWp	11 kWp	14,7 kWp	20,2 kWp
Integrated display	yes	yes	yes	yes
Data communication	Internet	Internet	Internet	Internet
Dimensions (L / B / H) in mm	500 / 800 / 1400	500 / 800 / 1400	500 / 800 / 1400	500 / 800 / 1400
Weight	170 – 250 kg*	170 – 250 kg*	170 – 250 kg*	170 – 250 kg*
Ambient temperature	-10 to +45°	-10 to +45°	-10 to +45°	-10 to +45°
Product warranty	5 years	5 years	5 years	5 years
Norms	DIN EN 60650-1, DIN EN 50178 VDE 0160, DIN VDE 0126-1-1, IEC 62103	DIN EN 60650-1, DIN EN 50178 VDE 0160, DIN VDE 0126-1-1, IEC 62103	DIN EN 60650-1, DIN EN 50178 VDE 0160, DIN VDE 0126-1-1, IEC 62103	DIN EN 60650-1, DIN EN 50178 VDE 0160, DIN VDE 0126-1-1, IEC 62103

* depending on the model