

Power Independence!

Think of Bosch



High Quality – High-Performance – High Reliability
Solar Photovoltaic Solutions from **Bosch**



BOSCH
Invented for life

Self Consumption pays off !

The fluctuation in availability of non-renewable energy source combined with constantly climbing electricity prices make self-consumption an important factor for the profitability of PV systems. The key is to increasingly use as much of the solar power you generate, as possible, to cover your own needs.

Self-consumption of solar power has positive effects in a variety of ways:



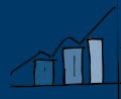
► **Independence**



► **Future Security**



► **Potential Savings**



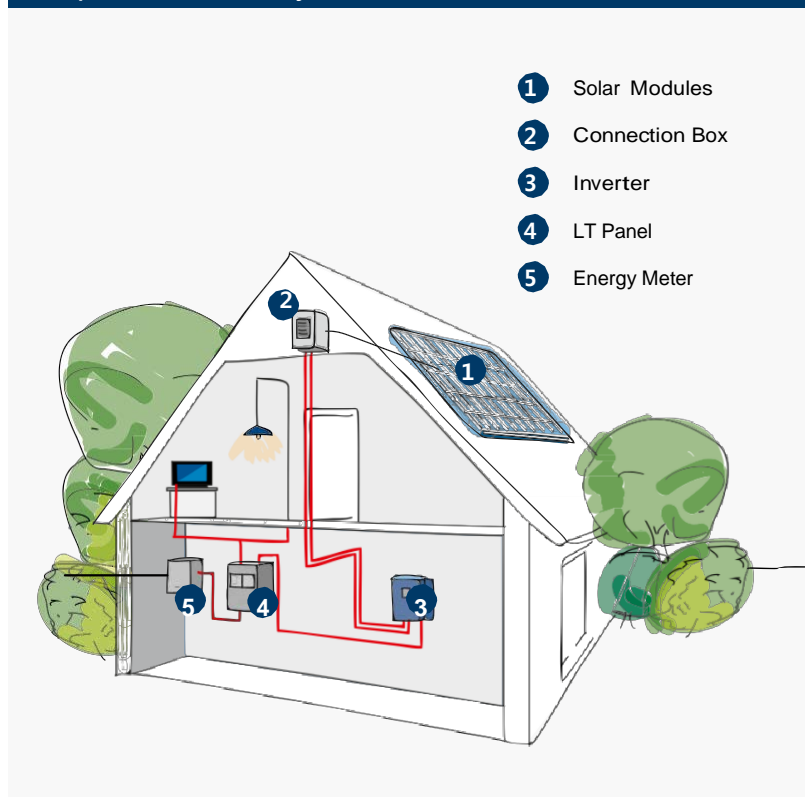
► **Increase of Savings Effects**

For a PV system, the solar electricity is generated using the solar cells that capture the sunlight and convert it to electrical energy. A PV system typically includes multiple solar modules, each containing solar cells that are installed and wired together. An inverter is wired to the PV system to convert the direct current into the alternating current used on the power grid.

The volume of electricity produced depends on the length and intensity of sunlight falling on the system and quality of solar cells and components used within the solar modules. Now this electricity is used by running load or exported to the grid.

Modern photovoltaic systems can be used on the buildings or stand alone systems and can endure extreme weather conditions such as rain, storms and hail. They are long lasting and represent a good investment for private homes to serve as a green power source.

Principle function of a PV System



Note: In the current system configuration provided by Bosch, the MMPT charge controller comes as an integrated component inside the PCU.

Residential Solutions by Bosch

Unique features include:

- ❖ Excellent Quality Assured
- ❖ MPPT based Inverter
- ❖ Plug & Play System: Simple and Secure Installation

System Characteristics	2kW	3kW	5kW	10kW
Solar Module				
PV modules	Poly-Crystalline Modules	Poly-Crystalline Modules	Poly-Crystalline Modules	Poly-Crystalline Modules
Module rating	250 Wp	250 Wp	250 Wp	250 Wp
Number of modules	8	12	20	40
PCU Specification¹				
Inverter Model	Grid-Tied Solar Inverter	Grid-Tied Solar Inverter	Grid-Tied Solar Inverter	Grid-Tied Solar Inverter
Inverter rating	2 kW (Single Phase)	3 kW (Single Phase)	5 kW (Single Phase)	10 kW (Three Phase)
AC power capacity	2 kW	3 kW	5 kW	10kW
Voltage / Frequency	220V/50Hz	220V/50Hz	220V/50Hz	415V/50Hz
Regulation	<3% at Rated Power	<3% at Rated Power	<3% at Rated Power	<3% at Rated Power
Peak efficiency	97.5 %	97.5 %	97.5 %	98.30%
Operating temperature	-20°C to +60 °C	-20°C to +60 °C	-20°C to +60 °C	-20°C to +60 °C
General Site Requirements²				
Roof type	Flat RCC Roof	Flat RCC Roof	Flat RCC Roof	Flat RCC Roof
Roof safe load bearing capacity	> 200 kg/sqm	> 200 kg/sqm	> 200 kg/sqm	> 200 kg/sqm
Shadow free space	50 Sqm (10 m x 2 m)	50 Sqm (15 m x 2 m)	50 Sqm (50 m x 2 m)	100 Sqm (10 m x 10 m)
Enclosed space for Inverter	4 sqm (2 m x 2 m) [well ventilated]	4 sqm (2 m x 2 m) [well ventilated]	4 sqm (2 m x 2 m) [well ventilated]	4 sqm (2 m x 2 m) [well ventilated]
Grounding	Clear ground space of 1 sqm for system grounding	Clear ground space of 1 sqm for system grounding	Clear ground space of 1 sqm for system grounding	Clear ground space of 1 sqm for system grounding

1 Technical parameters may change with make and improvement in product

2 Site Specific – may vary from site to site

For higher capacities, the mentioned inverter capacities can be used in multiples.