Technical Data

DC input

Max. Input Voltage	400Vdc
Max. Input Current	3×10A
Recommended DC Input Power	6kW
MPPT Range	80Vdc~320Vdc
Number of PV Inputs	3
MPPT Tracker	1

AC output

	Phonocube 7.2
Rated Output Power	7.2kW
Max Output Capacity	7.2kVA
Rated Capacity Each Phase	2.4kVA
Rated Voltage	400Vac
Rated Frequency	50Hz
Frequency Range	47.5~51.5Hz
Harmonic Wave	≤3%
Power Factor	-0.9~+0.9
Output	3 phases
Feed-in	3 phases

Packing Configuration*

Container Type	20'GP
Cabinet	21 pcs
Battery System	168 sets

*Phonocube's cabinet and battery system will be shipped separately.

Note: This datasheet is not legally binding. Phono Solar reserves the right to make specifications changes without notice. Further information can be found on our website: www.phonosolar.com

System

Max. Efficiency of Inverter	94.5% (with transformer)
Isolated Type	High Frequency Isolation
Working Temperature	0°C~40°C
Storage temperature	-10°C ~ +35°C
Cooling	Natural Cooling
Relative Humidity	0~85%
Protection Type	IP20
Display	LCD
Communication Interfaces	RS485, Ethernet
Dimensions (H x W x D)	1800 x 630 x 550 (mm)
Housing	Steel
Weight	260kg

Battery

	Phonocube 7.2
Type	Lithium Iron Phosphate
Rated Voltage	192Vdc
Storage Capacity	9.6kWh
Life Cycles	>6000 (80% DOD)

Certification

EN 50178
IEC 62133
IEC/EN 61000-6-1/-2/-3/-4
IEC/EN 62109-1, IEC/EN 62109-2
VDE-AR-N 4105, VDE0126-1-1+A1

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PARTNER INFORMATION

EN-7.2-1501

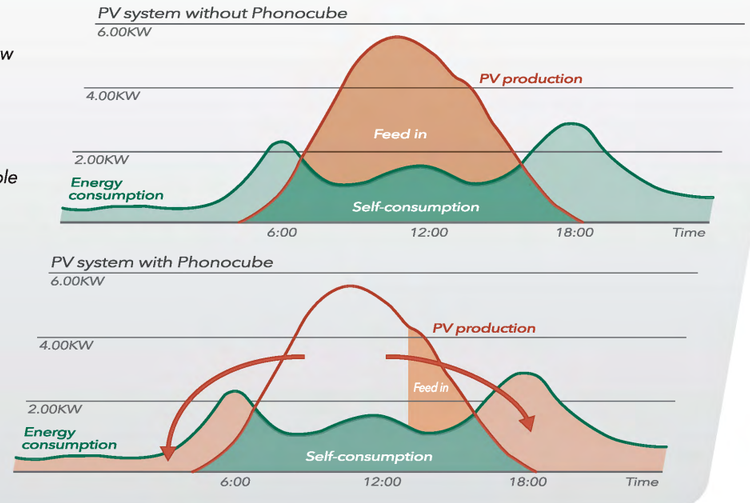
Phono® Solar

PhonoCube

Phonocube is an energy management unit that is suitable for integration into both new and existing photovoltaic systems. It combines the inverter, batteries and the photovoltaic system into one compact system.

Controlled by a SMART ENERGY MANAGEMENT SYSTEM (SEMS), Phonocube makes it possible for photovoltaic system owners to use PV electricity for their own requirements not only during sunlight hours but also at times of less light; such as in the morning or evening. Electricity produced by the photovoltaic system can be consumed directly, stored in the batteries or fed into the public grid. Phonocube ensures self-consumption is prioritised; grid power will only be used when neither the photovoltaic system nor the batteries are able to supply sufficient electricity.

Phonocube presents you not only with an essential product, but with an energy management solution. You will notice nothing different, except the reduction in your electricity bills!



Features

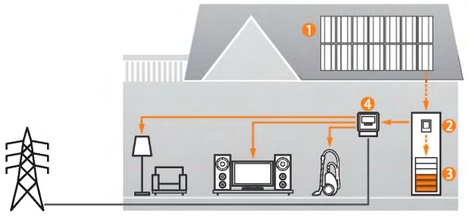
Up to 100% daily self-consumption*
Suitable for off-grid use
Back up system
Operating modes switch automatically
Ultra quiet design
High performance lithium batteries designed to last up to 20 years
Certified by TÜV Rheinland

*Depending on PV power/battery ratio

Functionality

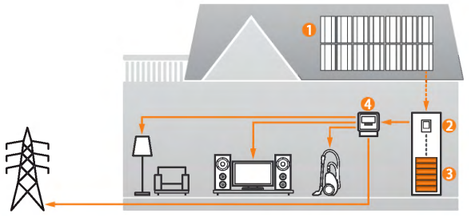
❶ PV System ❷ Inverter ❸ Built-in Batteries ❹ Energy Meter — DC, current — DC, no current — AC, current — AC, no current

Morning

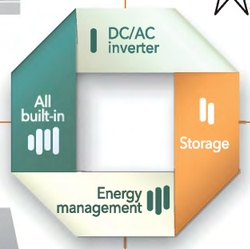


Energy produced by the PV system (1) is used to optimize self-consumption; excess energy is used to recharge the batteries (3).

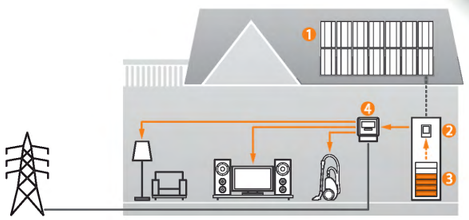
Afternoon



When the batteries (3) are fully charged and Phonocube is already meeting your self-consumption requirements; excess energy is fed into the public grid.

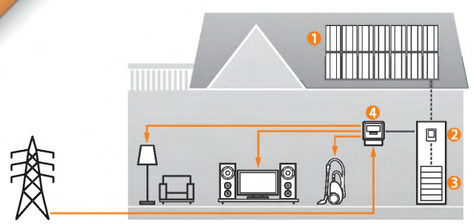


Evening

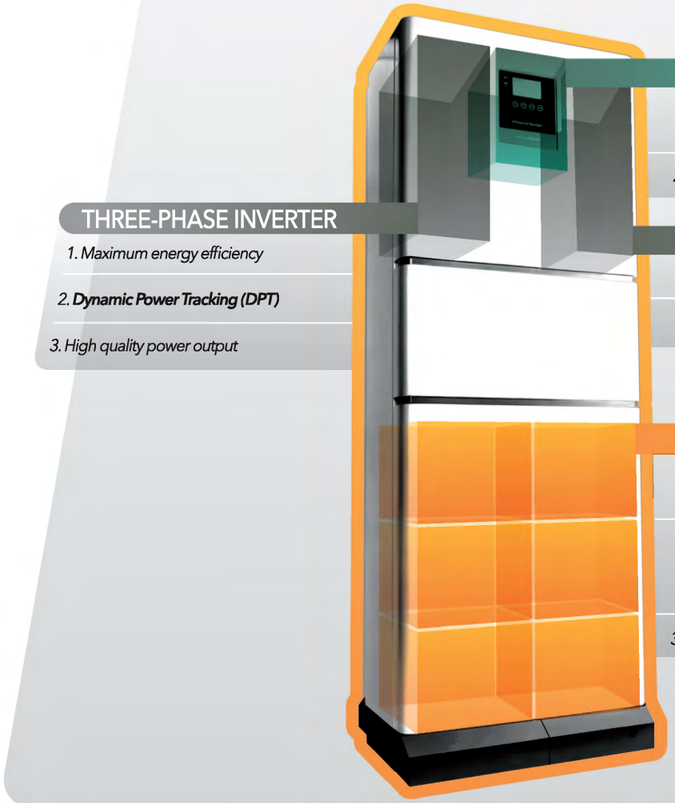


Once the sun has set, the system automatically switches to energy from the batteries (3).

Night



If the battery (3) capacity is insufficient to meet your consumption requirements; electricity is then obtained from the public grid.



THREE-PHASE INVERTER

1. Maximum energy efficiency
2. **Dynamic Power Tracking (DPT)**
3. High quality power output

MAN-MACHINE INTERACTION

1. LCD displays real-time status for each component, including the inverter, batteries and PV array
2. Various language options available

SMART ENERGY MANAGEMENT SYSTEM (SEMS)

1. Self-consumption ratio of over 60%
2. Operating modes switch automatically

BUILT-IN BATTERY SYSTEM

1. High performance lithium batteries designed to last up to 20 years
2. Intelligent BMS real-time monitors each battery and communicates with SEMS to maximize its efficiency and lifetime
3. Modular design, easy fixing and removal