batterX®

ENERGY STORAGE SYSTEM REDEFINED

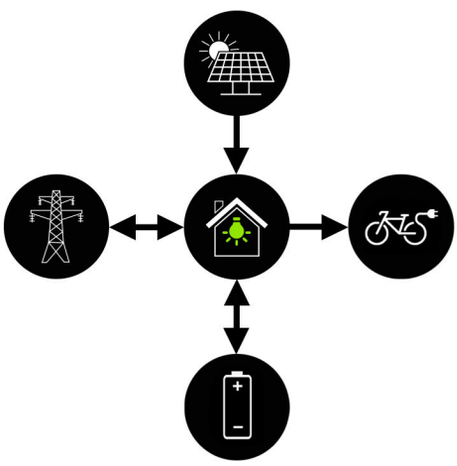
Leading in autonomous hybrid power supply

batterX®

DAY PROTECTION

1. The day, with solar energy

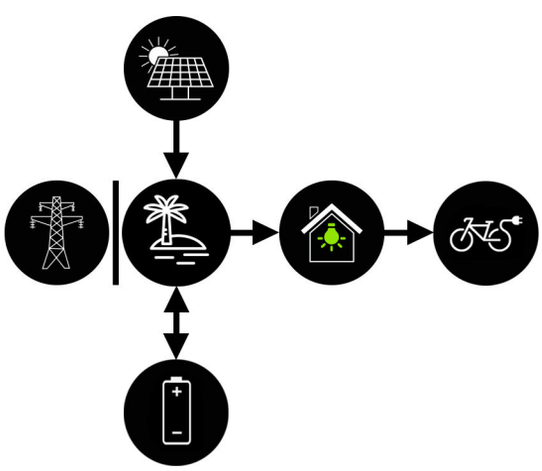
The consumers are supplied or respectively protected by the photovoltaic system and the battery system. If this energy is not sufficient, the missing power can be drawn from the grid. Priority is always given to the direct own consumption of the self generated solar power and afterwards the storage in the battery. Not self-consumed or stored energy can be fed into the public grid.



Real-time monitoring with liveX

2. The day, without grid

In the event of a power failure during the day, the solar power is used without restriction. The battery system automatically switches the photovoltaic system to island operation and supplies all 3 phases of the house with three-phase current. In island operation, both the house can be supplied with solar power and the battery can be charged. All consumers on the emergency power path are supplied from a combination of solar and battery power completely self-sufficiently and without interruption.



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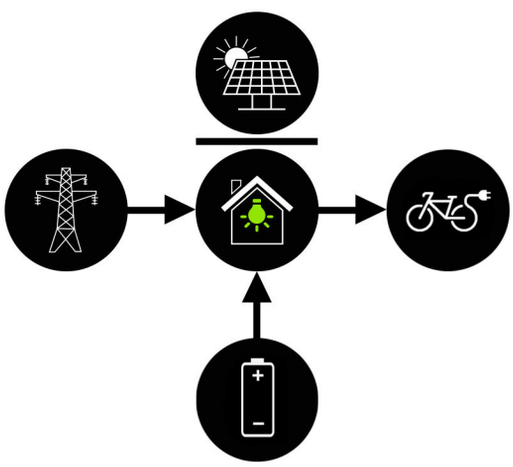
NIGHT PROTECTION

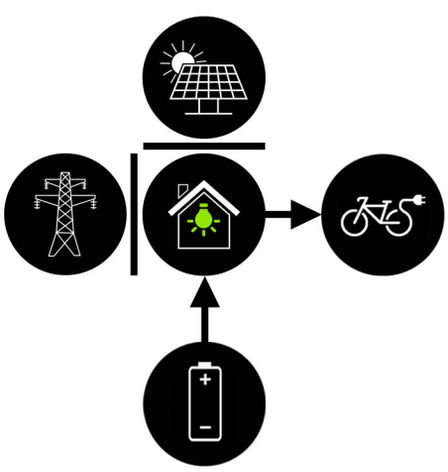
1. In the evening with batteries

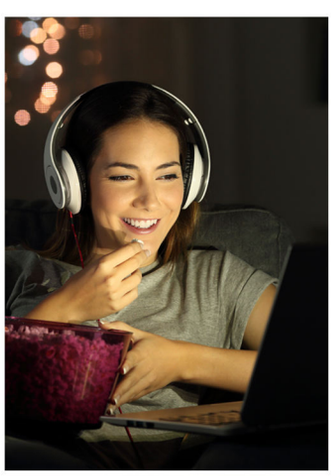
In the evening, the stored battery power is used to supply the house. If this energy is not sufficient, the public grid can be used at any time for additional supply.

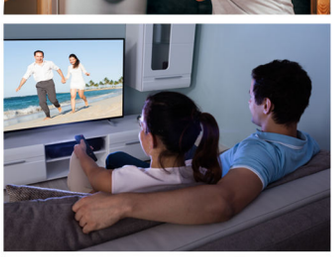


2. In the evening without grid

In the event of a power failure in the evening, just like during the day, batterX ensures the unique all-round protection:
Uninterrupted switchover to battery operation (emergency power operation) and supply of all 3 phases of the house with three-phase current until the battery is empty.







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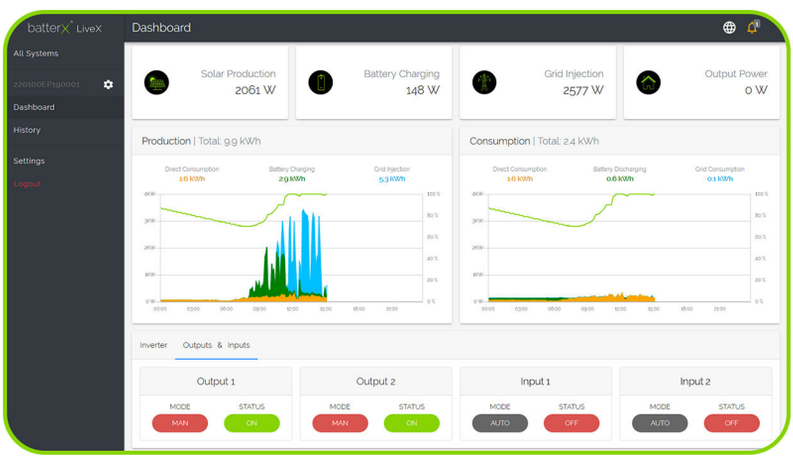
liveX Home

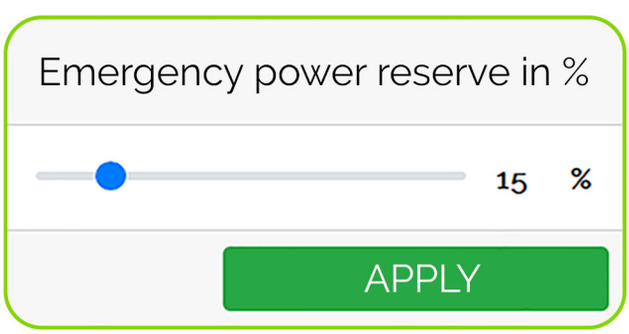
developed by batterX® Open source API

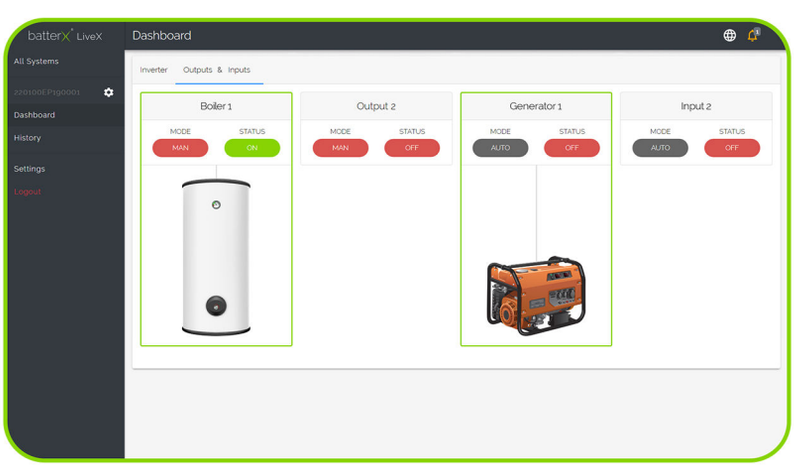
MONITORING- AND CONTROLLING TOOL
liveX is compatible with all web browsers, computers and mobile devices.



Live dashboard with energy flow diagram and display of all relevant parameters for the areas: Photovoltaics, battery system, grid and consumers.

Configurable energy management. Select the Emergency power reserve and daily use of the battery by yourself, by simple adjustment of the slide controller in the Dashboard. You can use this function to define by yourself an area in the battery, wich guarantees you an emergency power reserve 365 days a year. Thus you guarantee your security of supply, even during longer periods of bad weather.





By means of an intelligent energy management system, programmable relay contacts can be used to control consumers such as a heat pump or a heating rod. This allows excess energy, which would otherwise be fed into the public grid, to be used intelligently in the house.

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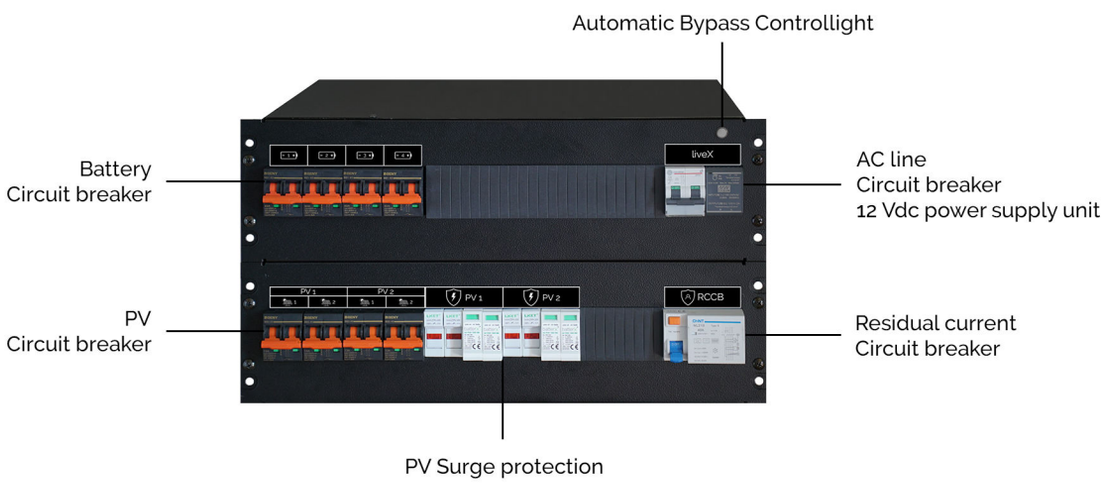
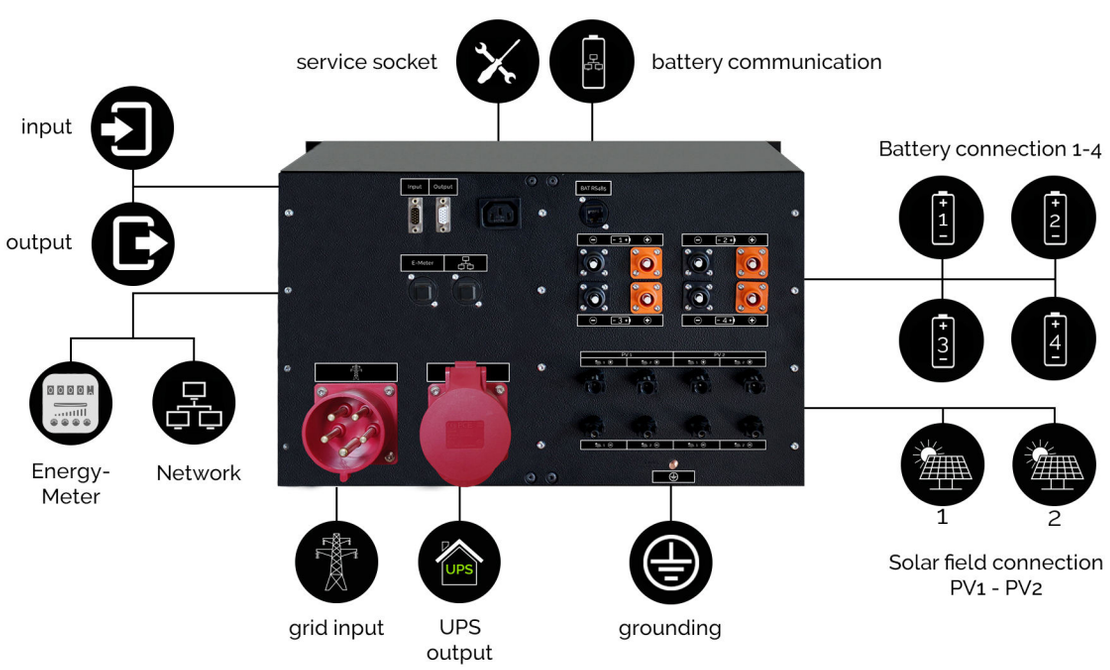
cliX Module

developed by batterX®

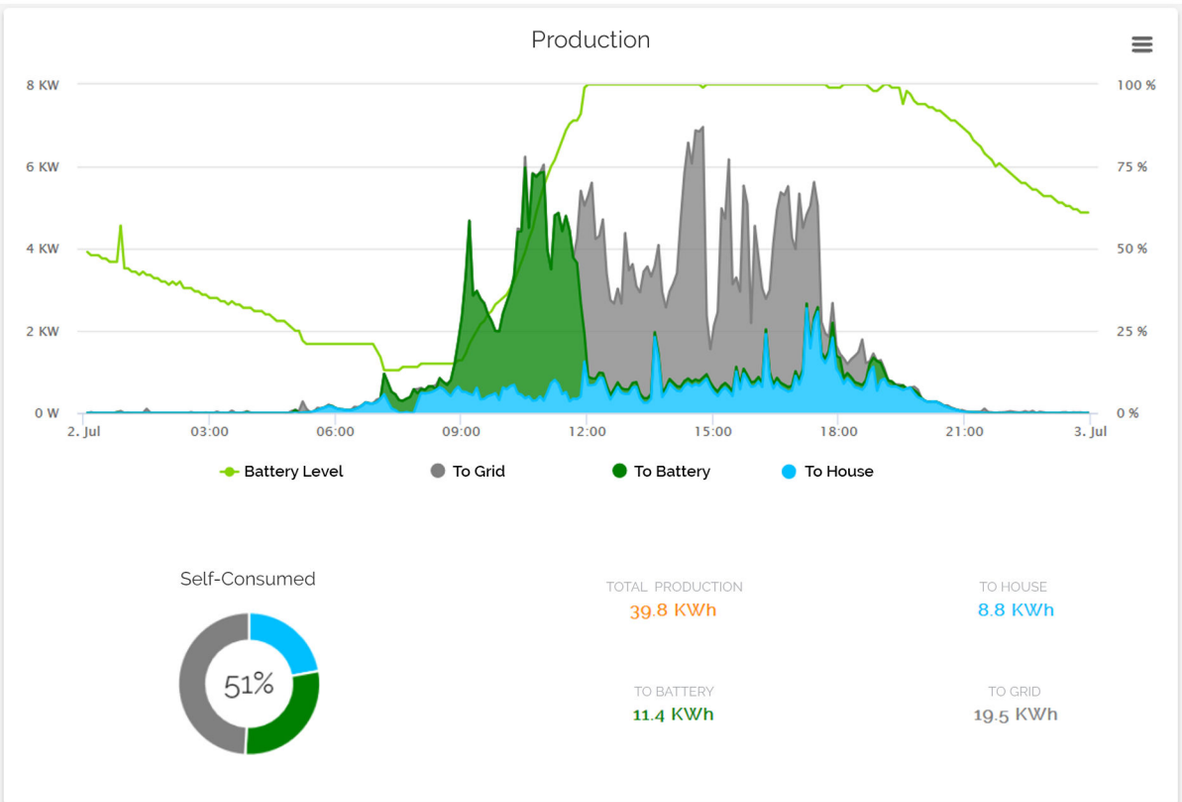
Protection

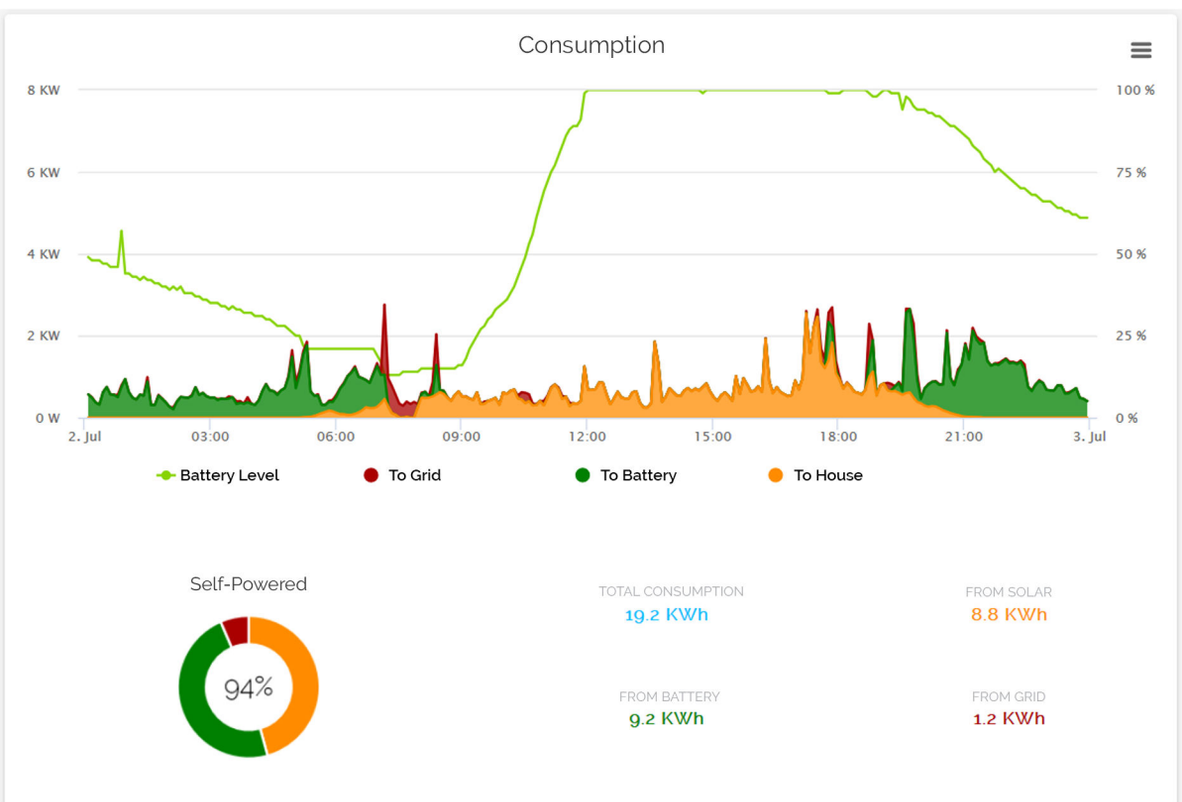


Connections



OPTIMISATION OF OWN POWER CONSUMPTION





THREE PHASE ENERGY STORAGE

System shortcuts	nominal capacity	Inverter	Maximum PV power	Numbers of battery modules	Maximum charging power	On-grid output power	Maximum UPS mode
All-in-one rack							
h10R-7,2	7,2	h10	10 kWp	2	3,5 kW	3 x 3,33 kW *	3 x 2 kW *
h10R-10,8	10,8	h10	10 kWp	3	5,4 kW	3 x 3,33 kW *	3 x 3,33 kW *
h10R-14,4	14,4	h10	10 kWp	4	7 kW	3 x 3,33 kW *	3 x 3,33 kW *
Wall-mount installation of the inverter with separate small battery rack							
h10W-7,2	7,2	h10	10 kWp	2	3,5 kW	3 x 3,33 kW *	3 x 2 kW *
h10W-10,8	10,8	h10	10 kWp	3	5,4 kW	3 x 3,33 kW *	3 x 3,33 kW *
h10W-14,4	14,4	h10	10 kWp	4	7 kW	3 x 3,33 kW *	3 x 3,33 kW *

Hybrid-Inverter	h10
On-grid & UPS Output power	max. 10 kW
Max. PV Power	10 kWp
Dimensions (HxWxD) mm / Weight kg	622 x 500 x 167,5 mm / 45 kg
PV-Input (DC)	
Voltage range - MPPT	400 - 800 Vdc
Voc max.	900 Vdc
Numbers of MPPT / max. current	2 x 18,6 A
Output (AC)	
Phases	three-phase
Nominal current	14,5 A per phase
UPS-switching time	< 10 milliseconds
Features	
Scope of delivery	8 relay contacts (4 in/4 out), FI Typ B 30 mA, DC surge protection type 2, automatic Bypass, energy meter, generator contact, PV-on/off-switch, optional: AC surge protection type 2
Battery module	
Depth of discharge (DOD)	usable cyclical: 90%, usable UPS: 98%
Cyclability	8.000 cycles *(Up to 8.000 cycles depending on C Rate and DoD)*
Charge / discharging current	37 A in on-grid mode, 74 A im UPS mode
Dimensions (HxWxD) mm / Weight kg	132 x 442 x 420 mm / 32 kg
Working temperature	5 - 30 °C
19" Rack Dimensions (HxWxD) mm / Weight kg	
All-in-one-rack	1.958 x 600 x 600 mm (39U) / 65 kg
Small battery rack	1.163 x 600 x 600 mm (22U) / 45 kg
Certifications & Standards	
CE marking & EC conformity	EMC directive 2014/30/EU (DIN EN 61000-6-2:2005 DIN EN 61000-6-3:2007 Low-voltage directive 2014/35/EU (DIN EN 62040-1:2008)
Battery safety	IEC 62619:2014; UN38.3; TÜV Süd
UPS mode	DIN EN 62109-2:2011
Grid codes	VDE-AR-N-4105:2018; CEI 0-21:2016 (IT)

* three-phase current

Technical data subject to change without notice (05/2019)

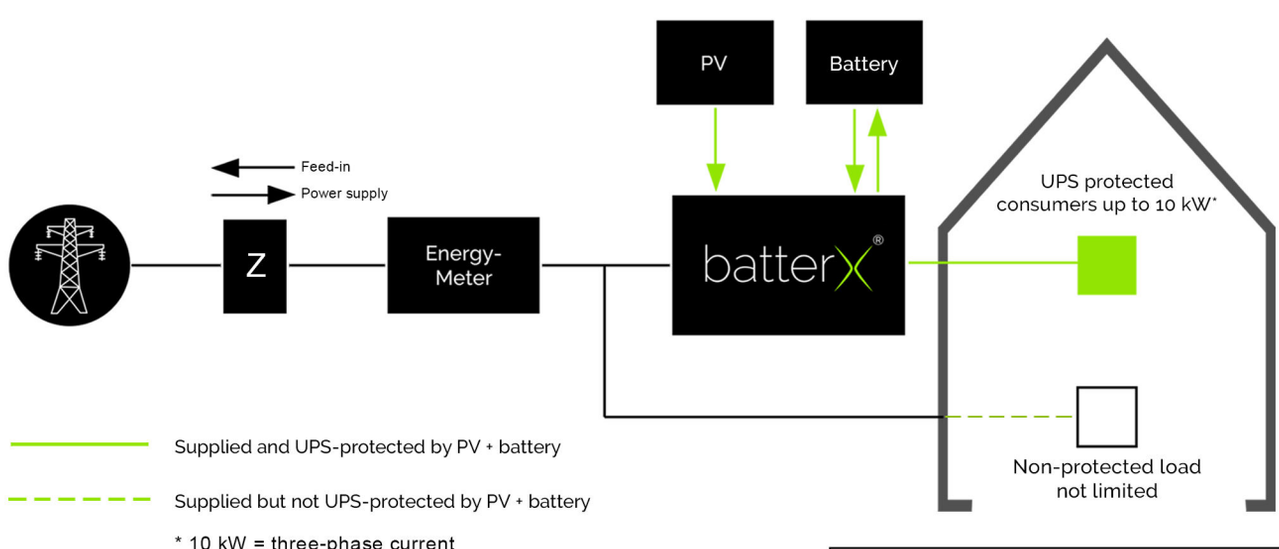
batterX® home series

SPECIFICATIONS

Advantages

- Emergency power
- Three-phase current
- Intelligent Energymanagementsystem (EMS)
- Modular LiFePO4 storage
- World's safest battery technology
- Optimization of self-consumption
- Emergency Power Off (EPO) „optional“
- Integrated DC surge protection type 2
- Reduction of energy costs
- With or without feed it to the grid (adjustable)
- Island operation (Off-grid-mode)
- Eco-friendly due to LiFePO4 technology
- Plug & Play installation - clix module
- Automatic Bypass
- 10 years warranty on batteries

FUNCTIONAL DIAGRAM



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