

# Good bye, rising energy costs.

**Electricity costs continue to rise – but now you can do something about it. /This is Why Sharp offers high quality photovoltaic modules and a modular battery solution to keep energy costs down, maximising independence.**

The ESS 3.0 is a new Lithium Ion Battery with a usable capacity of 5 kWh, designed to store electricity from photovoltaic solar systems, ensuring electricity produced during daytime can be used whenever needed.

The ESS 3.0 can be used for new and existing photovoltaic installations on residential homes. The high storage capacity and high power output helps to maximize self-consumption of electricity generated from the solar system, increasing your independence from energy suppliers and ever rising electricity prices.

### Safety Concept

- Normally-open electromechanical relay for a redundant dis-connection of the battery
- Temperature monitoring at cell level and “Current Interrupt Device (CID)” in each cell
- Monitoring of overvoltage and low voltage at cell level with redundant activation of battery-shut-down
- Active current balancing as a function of cell voltage and cell temperature
- Protected against system re-starting after deep-discharge or other significant damages to the battery
- Cell balancing
- State of charge determination (SOC)
- Battery monitoring (SOH)
- Integrated communication interface
- No memory effect
- Data logging
- Closed metal battery housing



### Main features

- 5 kWh usable battery capacity
- High power output of 6,500 W max
- Easy integration to the home grid with an additional battery inverter
- Compatible with many inverter manufacturers
- CAN interface using SMA protocol for direct connection to Sunny Island 6.0H-11 and others from SMA
- Integrated Battery Management System for highest operational safety
- Safe to overcharging and deep discharging
- Small and compact system
- Long life time, 5,000 full charge/discharge cycles

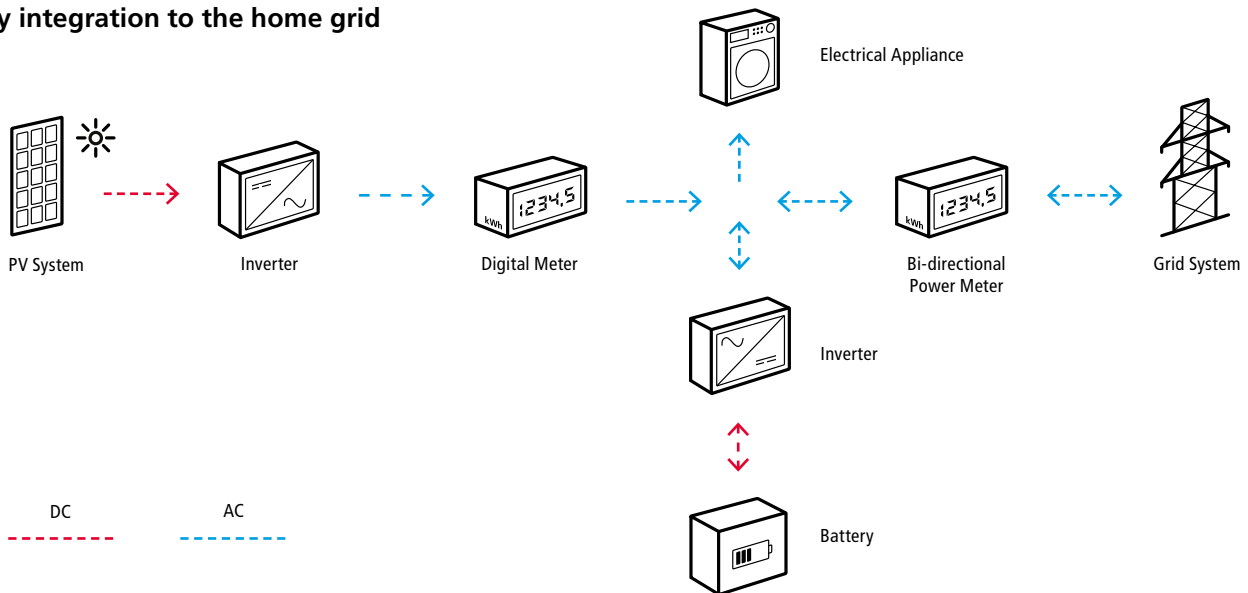


# Modular battery solution:

## Facts and figures.

Technical Data L20BMZ5000ESS	Description
Usable Capacity	5 kWh
Gross Capacity	6.49 kWh
Depth of Discharge	DoD 80%
Nominal Voltage	55.5 V
Charge End Voltage	61.5 V
Discharge End Voltage	41.0 V
Maximum Charge Current	80 A
Maximum Discharge Current	300 A
Withdrawal Capacity	6,500 W (DC)
No. of Cycles	5000 full charge / discharge cycles
Self Discharge of Cells	less than 4% per year
Battery Management System	Integrated
Battery Type	Lithium Ion (Nickel Manganese Cobald)
Cell Type	18650
Communication Interface	CAN (using SMA protocol)
Operating Temperature Range	0° to + 40 °C
Protection Level	IP21
Weight of Total System	120 kg
Dimensions (L x W x D)	592 x 646 x 440 mm
CE Conformity / UN Test 38.3	Yes / Yes
Warranty	7 years

### Easy integration to the home grid



## This is Why

[www.sharp.co.uk/solar](http://www.sharp.co.uk/solar)

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