

ESS Z

The customized solution
for your needs



E-MOBILITY



DRIVE
SYSTEMS



ENERGY STORAGE
SYSTEMS



POWER- AND
GARDENTOOLS



INDUSTRIAL



MEDICAL

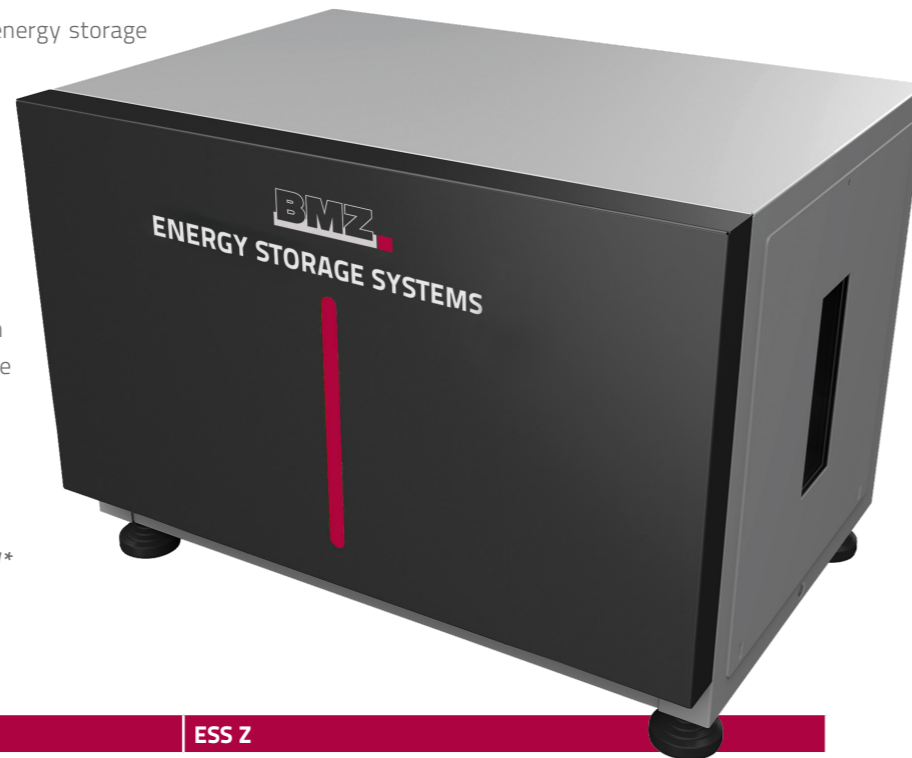
Energy Storage Systems

ESS Z

>> We deliver customized solutions for your needs - Flexibly adaptable due to the modular and compact design. <<

ESS Z is a new modular lithium-ion based energy storage system, which stores the surplus of the collected solar energy for later use. Energy can either be directed into the storage system or be fed into the public grid via an inverter. Energy is available as required: in the evening, at night, or on a cloudy day. With the ESS Z System, consumers of solar power become more independent from electricity prices and use their home-made eco-electricity when they need it.

- Scalable up to 12 modules
- Maximum energy density
- Maximum discharge power up to 18 kW*



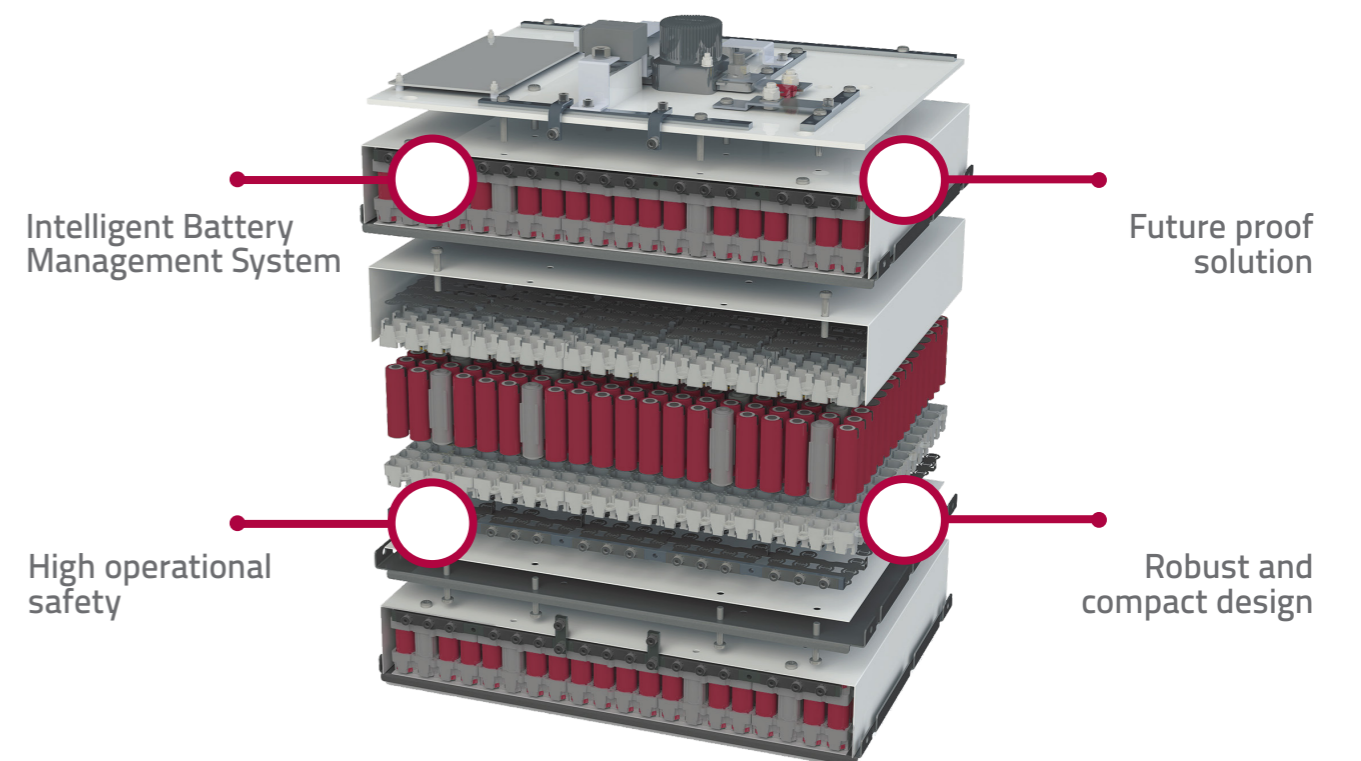
| PROPERTIES | ESS Z |
|---------------------------|---|
| Energy (nom. / usable) | 8.87 kWh / 7.1 kWh |
| Nominal Voltage | 54.75 V |
| Charge End Voltage | 61.5 V |
| Discharge End Voltage | 45.0 V |
| Capacity (nom. / usable) | 162 Ah / 129.6 Ah |
| Max. Charge | 81 A |
| Max. Discharge Current | 300 A (3 Sec.) |
| Max. Discharge Power | 18 kW* |
| Weight | 98 kg |
| Dimensions (W * H * D) | 638 x 421 x 487 mm |
| Communication | CAN - SMA Ready |
| Battery Chemistry | Li-Ion NCA |
| Discharge Depth | 80 % DOD |
| Full Cycles | 5,000 |
| Battery Management System | Monitoring of cell voltage, cell temperature, current, derating and passive balancing |
| Energy Density (Weight) | 90.5 Wh / kg |

*depends on the respective inverter

MULTI-LEVEL SAFETY CONCEPT



- Direct current relay and 2nd protection (chemical fuse) for a redundant battery cut-off
- Over- and undervoltage monitoring for each cell string with redundant battery cut-off
- Closed metal, double housing
- Current Interrupt-Device (CID) in each cell
- Protection against a reboot after deep discharge or any other serious error
- Active current control as a function of cell voltage and temperature (derating)
- Temperature monitoring for each cell string



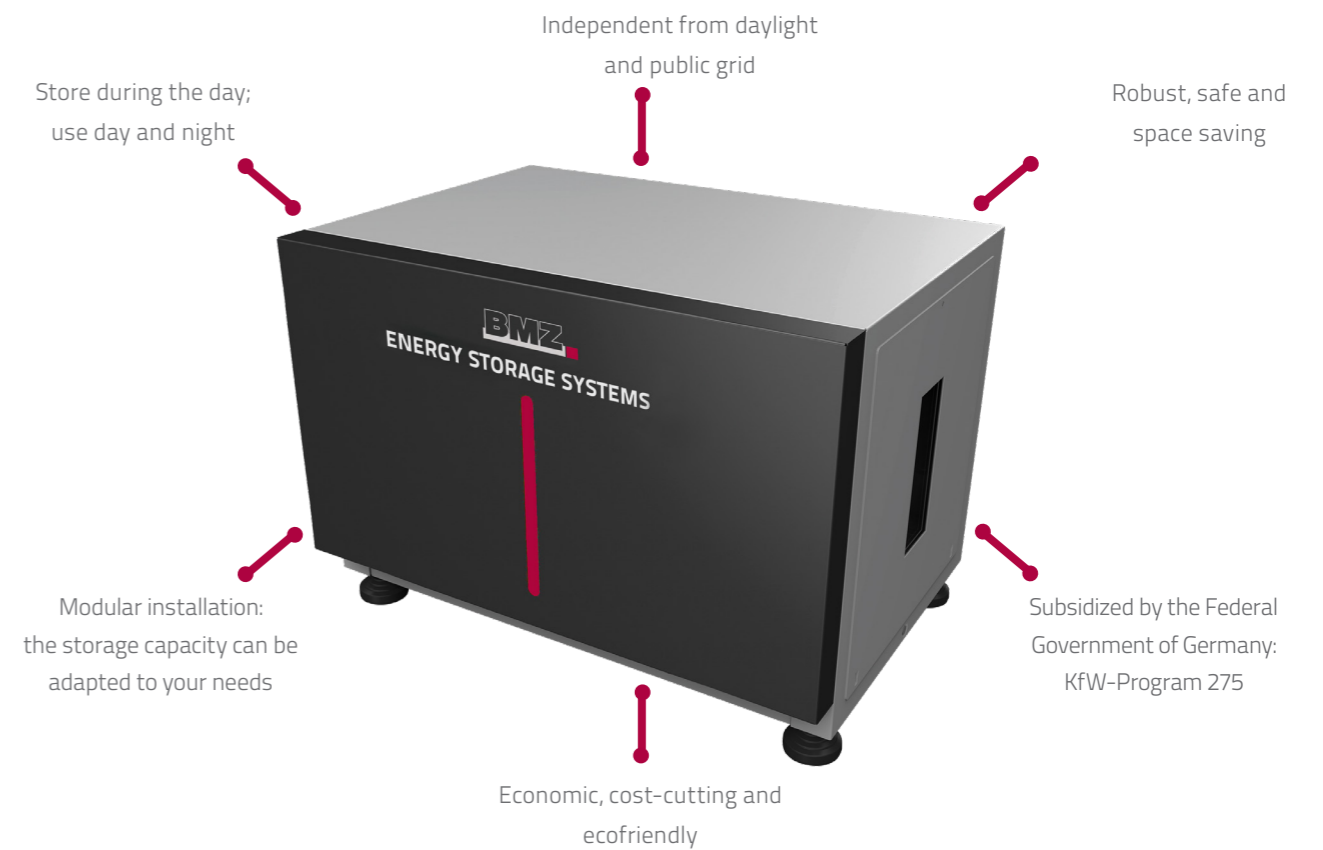
ENERGY STORAGE SOLUTIONS FOR GENERATIONS.



USER INFORMATION

- Powerful energy storage system
- High efficiency: 95 %
- Durable: 5,000 full cycles
- High operational safety
- Discharge temperature (cells): 2° to 45° C
- Charge temperature (cells): 2° to 45° C
- Recommended storage temperature: 10° to 25° C
- Stand-by consumption: Active mode 5 W / Sleep mode 0.126 W
- Protection class: IP 21
- European Conformity (CE): yes
- UN-test 38.3: yes
- Self discharge (cells): Ca. 2 % per year
- High discharge depth: 80 % DoD (Depth of Discharge)
- Max. parallel connection (of batteries): 12 (additional hardware required)
- Warranty: 10 year warranty covering the system's current value (in Germany)

ADVANTAGES OF BMZ-ENERGY STORAGE



A safe investment in your future



Reduction of your energy costs



Environmental friendly Technology



Lifetime up to 20 years



Made in Germany

DEVELOPED ACCORDING TO THE STANDARDS AND USER GUIDELINES FOR STATIONARY ENERGY STORAGE SYSTEMS

- VDE-AR-E 2510-50
- DIN EN 62619 (Draft)
- VDE-AR-E 2510-2
- FNN note (04/2016 version)

Any questions?

Contact us, we will be pleased to advise you.



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