

NEW

Data sheet
blueplanet
gridsave 50.0 TL3-S



The clockwork of your energy storage system.

The bidirectional battery inverter blueplanet gridsave 50.0 TL3-S.

The blueplanet gridsave 50.0 TL3-S is a bidirectional battery inverter with an output of 50 kilowatts for commercial and large-scale storage applications that are based on different types of batteries, for example lithium-ion.

As part of an open storage system, its grid management capabilities support public utilities, distribution system operators, EPCs and large businesses in balancing generation and load of power networks.

The battery inverters can be operated in parallel on the DC side. This allows for multiple inverters to be connected to a single battery with a large capacity. The

advantages are highest system availability and efficiency of the energy storage system.

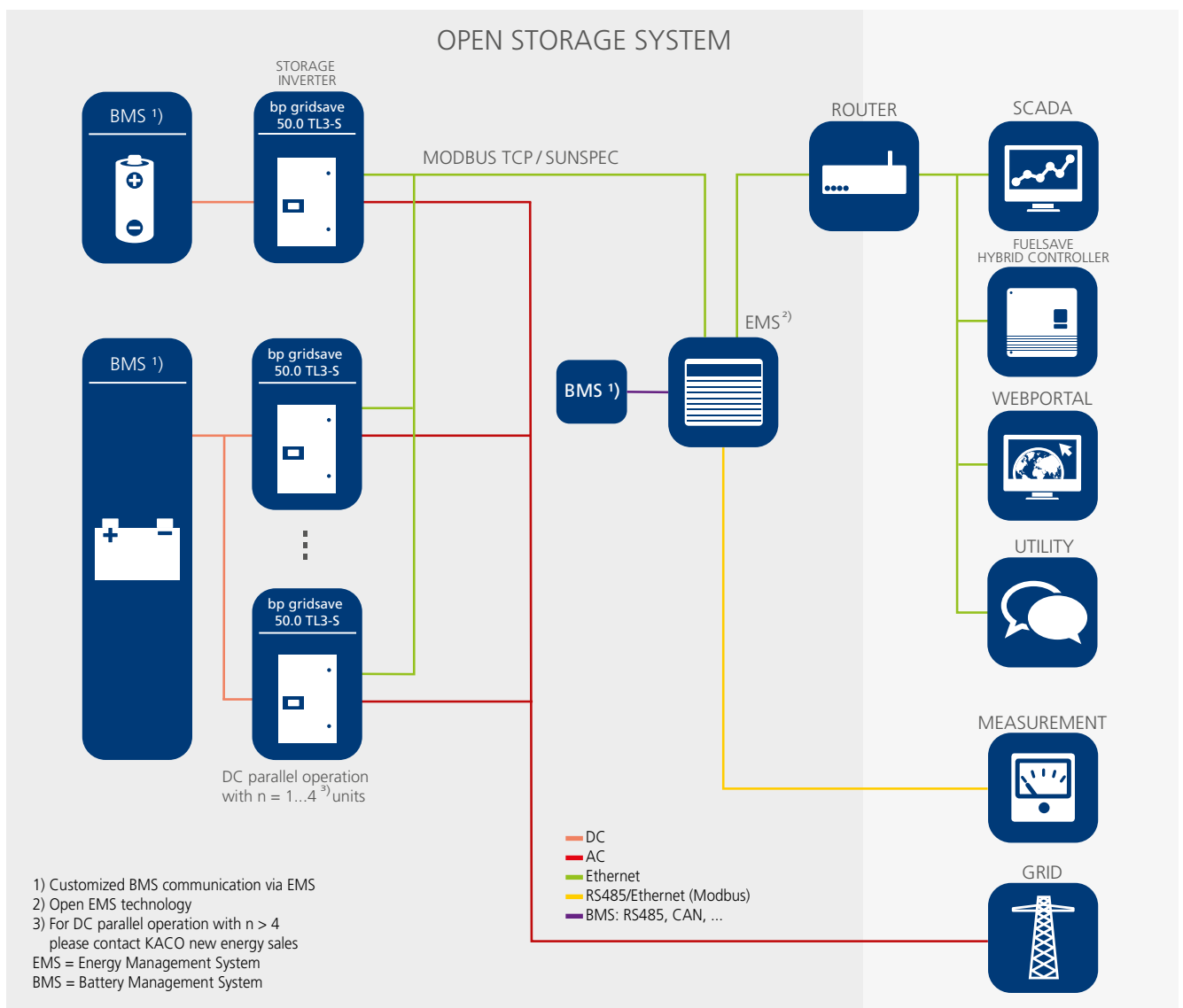
The blueplanet gridsave 50.0 TL3-S is deployed between battery storage and power grid and can be connected in parallel on the AC side without a limitation in number. The power grid can be the national grid, a power supply of a small town or industrial facility: The size of the storage system is scalable according to requirements for decentralized applications up into the megawatt range.

By supplying stored energy in times of high energy demand, the battery inverter regulates energy peaks. Charging and

discharging batteries, it also provides grid support by compensating reactive power or supplying additional active power.

The blueplanet gridsave 50.0 TL3-S is controlled by an external Energy Management System (EMS). For that purpose, the inverter communicates via open Sunspec Modbus TCP for use with different EMS's. This widespread interface allows for a large number of available controllers to manage the energy storage system. The blueplanet gridsave 50.0 TL3-S can therefore easily meet individual requirements in the design of the storage application.

The blueplanet gridsave 50.0 TL3-S is approved according to BDEW and ISO.



Technical data

blueplanet gridsave 50.0 TL3-S

| Electrical data | | gridsave 50.0 TL3-S | PRELIMINARY |
|--------------------------------|--|--|-------------|
| DC input | | | |
| Max. input current | | 90 A | |
| Max. short circuit current | | 150 A | |
| Min. starting voltage | | 665 V ¹⁾ | |
| Operating range | | 580 V ¹⁾ – 910 V | |
| Number of DC inputs | | 1 | |
| AC output | | | |
| Rated output | | 50 kVA ²⁾ | |
| Line voltage | | 400 V ¹⁾ / 230 V ± 10% (3/N/PE or 3/PEN) | |
| Rated current | | 3 x 72.4 A @ 230 V | |
| Max.current | | 3 x 76.5 A | |
| Frequency | | 50 / 60 Hz | |
| THD | | ≤1 % | |
| Number of grid phases | | 3 | |
| Cos phi | | 0 inductive ... 1 ... 0 capacitive ³⁾ | |
| General electrical data | | | |
| Max. efficiency | | 98,5 % | |
| Standby consumption | | ≤ 3 W | |
| Topology | | transformerless | |
| Interfaces | | 2 x Ethernet, USB | |
| AC connection | | screw terminals, max. 95 mm ² | |
| DC connection | | cable lugs, max. 70 mm ² | |
| Ambient temperature | | -20° C ... +60° C ⁴⁾ | |
| Cooling | | forced convection / speed controlled fan | |
| Noise emission | | < 61 db(A) | |
| Protection class | | IP65 | |
| H x W x D | | 760 x 500 x 452 mm | |
| Weight | | 75 kg | |
| Altitude | | < 2000 m | |
| Supported functions | | | |
| Communication | | TCP/IP, Modbus TCP Sunspec | |
| Operation mode | | on-grid (charge/discharge) | |
| Per-charge circuit | | optional | |
| DC parallel operation | | up to 4 ⁵⁾ | |
| Display and operation | | LCD + LEDs, 4-way navigation + 2 buttons | |
| Protective function | | overvoltage, overcurrent, overload, overheating, low voltage | |
| Standards | | IEC 62477, IEC 62109, EN61000-6-2, EN61000-6-3, EN61000-6-4 ⁶⁾ , EN61000-3-11/-12 | |

¹⁾ Grid voltage U_{AC} , min. battery voltage U_{DCmin} and min. starting voltage $U_{DCstartmin}$ are dependent of each other

²⁾ Power derating for voltages < 380 V

³⁾ for cos phi < 0,3 (inductive, capacitive) direct Q-setpoint required

⁴⁾ Power derating at low and high ambient temperatures

⁵⁾ For DC parallel operation with > 4 please contact KACO new energy sales

⁶⁾ For DC parallel operation



blueplanet gridsave 50.0 TL3-S

50 kVA rated power

Capable of reactive power

Supports DC parallel operation

Scalable system

AC-coupled

Ready for all types of batteries for
example Lithium Ion

Open Sunspec Modbus TCP
for use with different Energy
Management Systems

Compact and lightweight for wall
mounting

Your retailer
