

blueplanet gridsave 50.0 TL3-S

Bidirectional battery inverter.



The heart of your battery storage

High system availability due to several inverters connected to one battery

Reactive power capable

Scalable, AC-coupled, for different battery types

High efficiency, also in the partial load range

Easy to control through open communication standard



Technical Data

| DC input data | | gridsave 50.0 TL3-S |
|---|--|--|
| Rated DC voltage | | 765 V |
| Operating range | | 662 V ¹⁾ – 1050 V ²⁾ |
| Max. input current | | 90 A |
| Max. short circuit current $I_{sc,max}$ | | 150 A |
| Number of DC inputs | | 1 |
| AC output data | | |
| Rated output | | 50 000 VA |
| Max. power | | 52 000 VA |
| Line voltage | | 230 V / 400 V (3 / N / PE; 3 / PEN) 220 V / 380 V (3 / N / PE; 3 / PEN) |
| Voltage range (Ph-Ph) | | 286 – 500 V |
| Rated frequency (range) | | 50 Hz / 60 Hz (42 – 68 Hz) |
| Rated current | | 3 x 72.2 A @ 400 V 3 x 76.0 A @ 380 V |
| Max. current | | 3 x 76.5 A |
| Reactive power / cos phi | | 0 – 100 % S _{max} / 0.30 ind. – 0.30 cap. ³⁾ |
| Max. total harmonic distortion (THD) | | 1.6 % |
| Number of grid phases | | 3 |
| General data | | |
| Max. efficiency | | 98.5 % |
| Operation mode | | on-grid (charge / discharge) |
| DC parallel operation | | up to 4 gridsave 50.0 TL3-S ⁴⁾ |
| Communication | | TCP / IP, Modbus TCP based on Sunspec |
| Standby consumption | | 3 W |
| Protective functions | | overvoltage, overcurrent, overload, overheating, undervoltage |
| Circuitry topology | | transformerless |
| Mechanical data | | |
| Display | | graphical display + LEDs |
| Control units | | 4-way navigation + 2 buttons |
| Interfaces | | Ethernet, USB |
| Fault signalling relay | | potential-free NOC max. 30 V / 1 A |
| DC connection | | cable lug, max. 70 mm ² Cu or Al |
| AC connection | | screw terminal, max. 95 mm ² Co or Al |
| Ambient temperature | | -20 °C ²⁾ – +60 °C ⁵⁾ |
| Humidity | | 0 – 100 % |
| Max. installation elevation (above MSL) | | 3 000 m |
| Min. distance from coast | | 2 000 m / 500 m (OD+ version) |
| Cooling | | temperature controlled fan |
| Protection class | | IP65 |
| Noise emission | | < 61 db (A) |
| H x W x D | | 760 x 500 x 425 mm |
| Weight | | 75 kg |
| Certifications | | |
| Safety | | EN 62109-1/-2, EN 62477-1, EN 61000-6-1/-2, CISPR 11, EN 55011 available: AT : TOR D4 Version 2.3:2016-7 DE: VDE-AR-N 4105:2018, VDE-AR-N 4110:2018 FR: VDE 0126 / IT: CEI-21 planned: BE: C10/11:2012-6 / ES PO.12.2 / GB: ENA-EREC G99 / CZ: PPD5 PŘÍLOHA 4 / IT: CEI-16 certificates see homepage / download area |
| Grid connection rule | | |

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

¹⁾633 V @ 220 V; 662 V @ 230 V

²⁾power derating@low heat sink temperatures and high DC voltages

³⁾for cos phi < 0.30 (inductive, capacitive) direct Q-setpoint is required

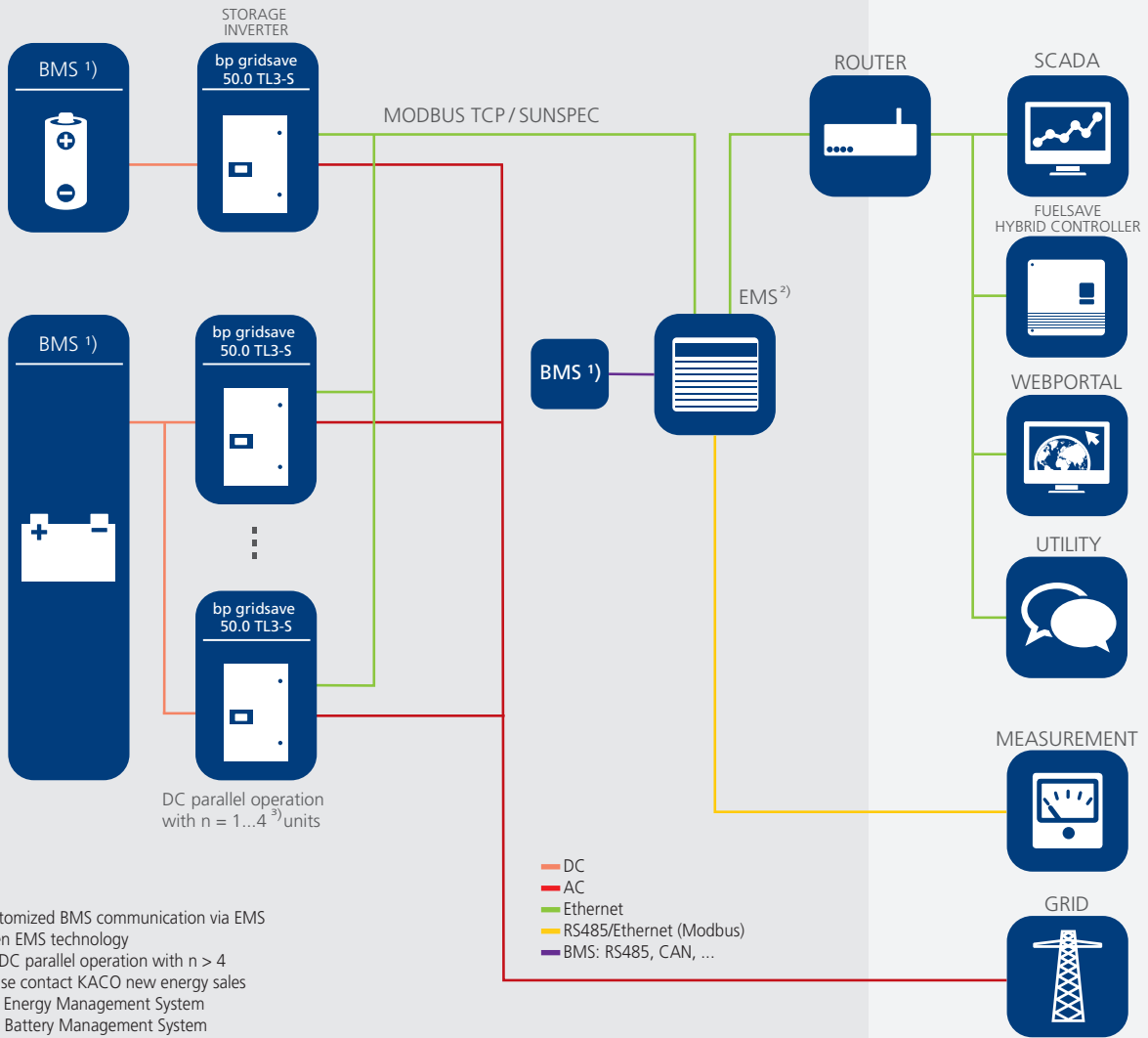
⁴⁾for DC parallel operation > 4 please contact KACO new energy sales

⁵⁾power derating at high ambient temperatures

| Versions | B | M | L | XL |
|-----------------|---|---|---|----|
| Pre-charge | - | - | ✓ | ✓ |
| DC fuse | - | ✓ | ✓ | ✓ |
| DC load relay + | - | - | ✓ | ✓ |
| DC load relay - | - | - | - | ✓ |
| OD+ | ★ | ★ | ★ | ★ |

standard = ✓ upgradeable = ○ optional = ★

OPEN STORAGE SYSTEM



- 1) Customized BMS communication via EMS
 - 2) Open EMS technology
 - 3) For DC parallel operation with $n > 4$ please contact KACO new energy sales
- EMS = Energy Management System
BMS = Battery Management System

