

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: PPDS 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

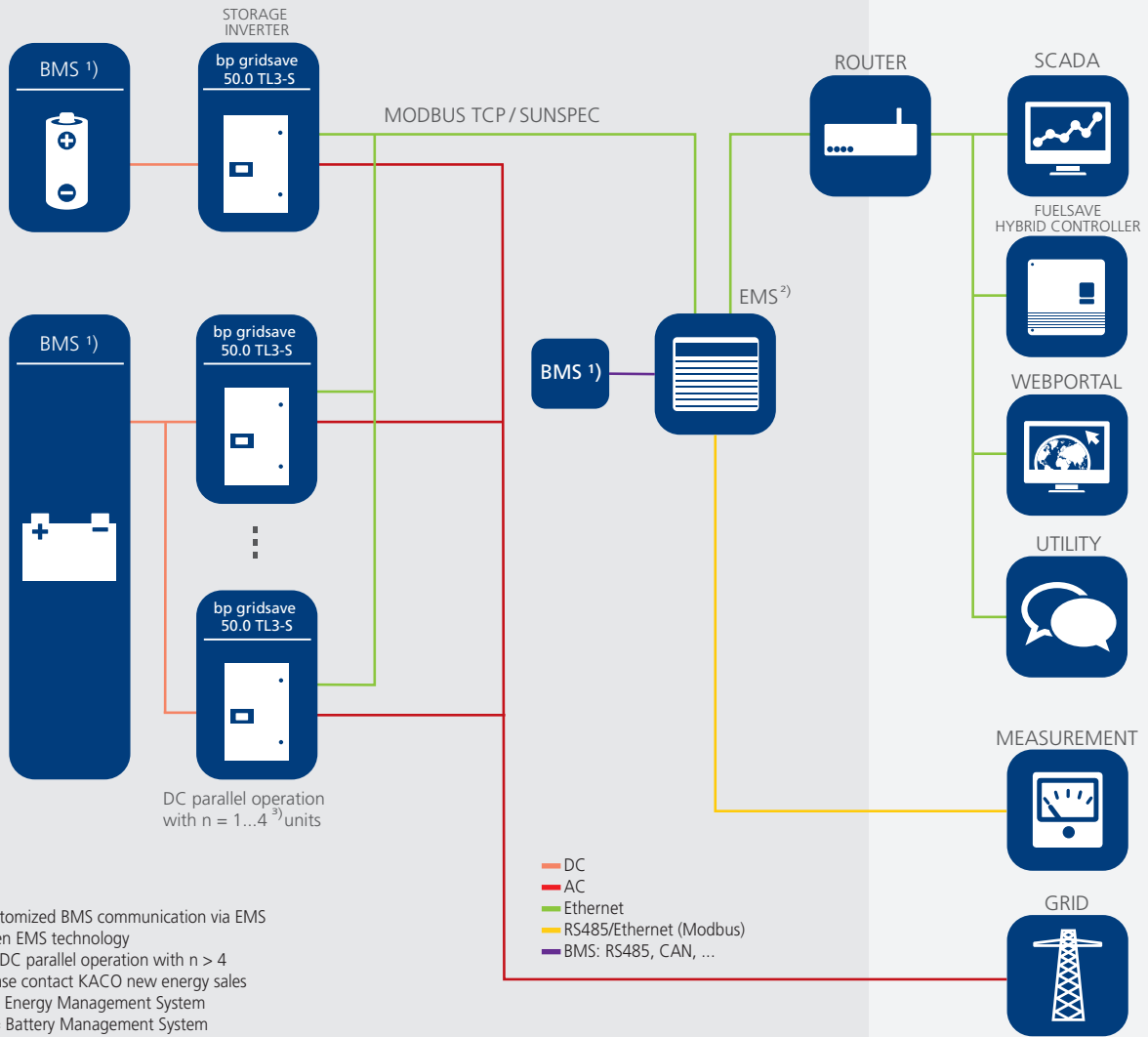
⁴⁾for DC parallel operation > 4 please contact KACO new energy sales

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

