

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	PRELIMINARY
Rated DC voltage		765 V	
Operating range		576 V ¹⁾ – 910 V	
Min. start voltage		662 V ²⁾	
Max. DC voltage		915 V	
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)		342 – 440 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 – +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	
Grid connection rule		overview see homepage / download area	

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

¹⁾550 V @ 220 V; 576 V @ 230 V | ²⁾633 V @ 220 V; 662 V @ 230 V

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

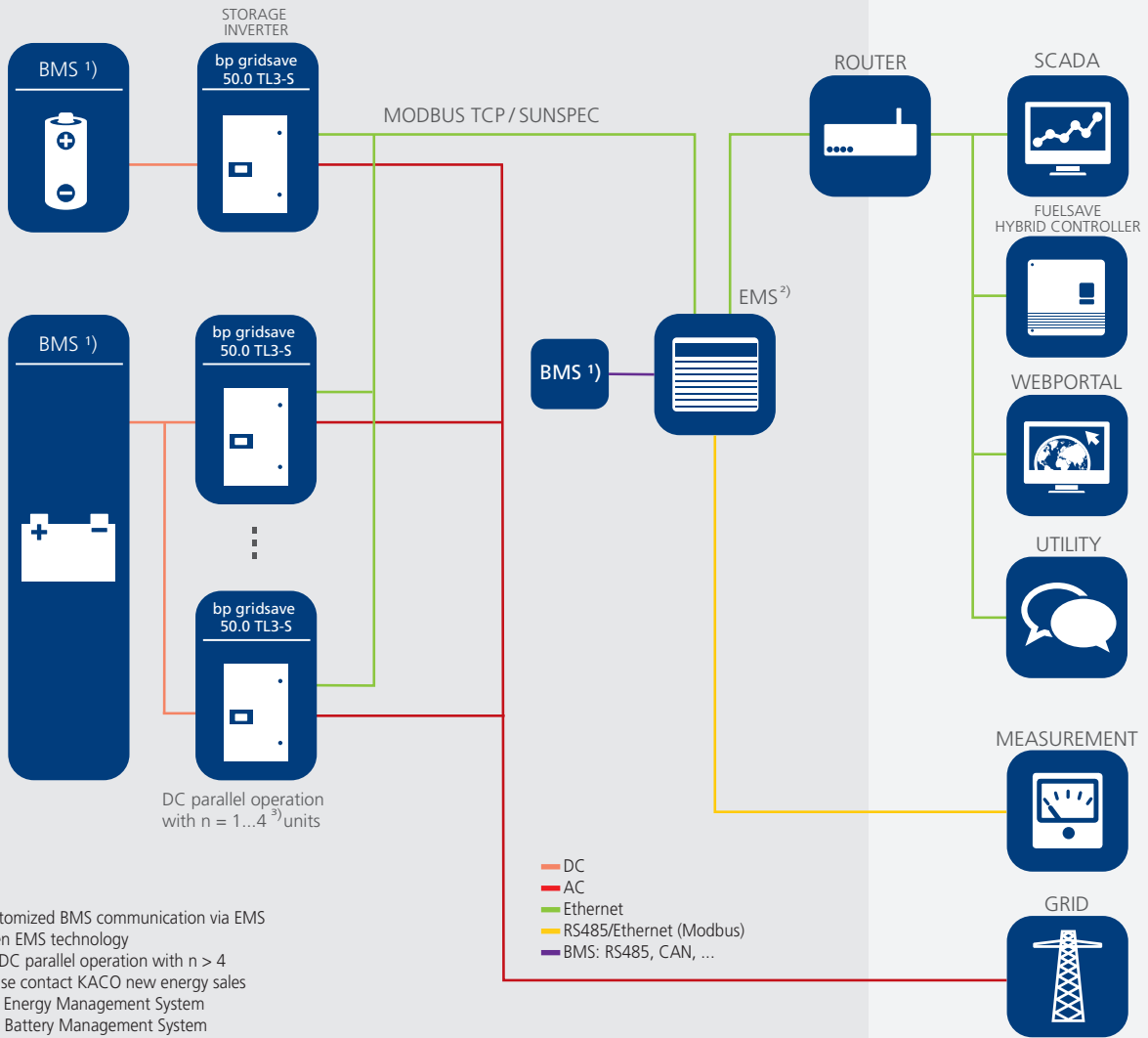
⁴⁾For DC parallel operation > 4 please contact KACO new energy sales

⁵⁾Power derating at high and low 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

