



PV/ESS All In One Cabinet

CB-DS5T0103-PV050A

PV ESS All-in-one Cabinet

CBTEK CB Smart100 PV ESS All-in-one Cabinet consists of power battery cluster, hybrid inverter, variable frequency temperature control system, BMS, EMS, combined precision suppression and burst suppression fire protection system, electrical auxiliary equipment and weather resistant sheet metal cabinet, and the capacity of the ESS is 50kW/103.68kWh.

Features

- **Simple** : All-in-one design and modular installation, single cabinet covering an area of just 1.21m²;
 - Applicable to multiple industrial scenarios and easy to connect to the grid;
 - Anti-installation short-circuit error, convenient and safe for maintenance;
 - Simple capacity expansion covering power range from 50kW to 300kW;
 - Factory prefabrication and integrated transportation to reduce the transportation, installation and commissioning fees by 15%.
- **Safe** : Electrical multi-dimensional fusion perception, multi-level fuse protection;
 - Internal integration of PV/ESS/PCS equipment, more unified bus control, improving system stability;
 - Early thermal runaway prewarning design, integrating detection, fire suppression, combustible gas detection, smoke and explosion relief functions, which interacts with BMS and EMS to realize PACK-level targeted fire extinguishing;
 - Smart temperature control system, system temperature difference $\leq 5^{\circ}\text{C}$, battery cycle life increased by 12%.
- **Smart** : Remote cloud operation and maintenance, supporting remote and local monitoring;
 - Smart balancing strategy and system AI prewarning to ensure the consistency of battery life cycle;
 - Support black start function with reliable power supply in off-grid/micro-grid mode;
 - Support multiple operation modes (VPP, grid-connected, off-grid) to improve revenue.

MODEL	CB-DS5T0103-PV050A
PV PARAMETERS	
Max. Input power	50kW
Start-up voltage	200V
PV Max.voltage	1000Vdc
PV rated voltage	630Vdc
MPPT operating voltage range	200~850Vdc
MPPT Qty.	4
Qty. of single MPPT input channels	2
Max.input current	30A
Max.short circuit current	40A
ESS PARAMETERS	
Rated power	103.68kWh
Rated capacity	150Ah
Rated voltage	691.2Vdc
Battery voltage range	604.8~777.6 Vdc
Rated charge/discharge current	75A
Max.charge/discharge current	90A
AC PARAMETERS	
Rated output power	50kW
Max. input apparent power	50kVA
Grid-connected Max. output apparent power	50kVA
Off-grid Max.output apparent power	50kVA
Max.output current	75A
Rated voltage(input&output)	3L/N/PE; 400V
Grid frequency	50Hz/60Hz
THDu	<3%@ rated power& linear load
INVERTER EFFICIENCY PARAMETERS	
Max. efficiency	98.4%
EU efficiency	97.5%
AMBIENT PARAMETERS	
Operating temperature	-20 °C ~50 °C (45 °C derating)
Storage temperature	-20 °C ~45 °C
Humidity	5~95%, no condensing
Altitude	2000m (2000m derating)
Cooling mode	Smart air conditioner, smart fan
OTHER PARAMETERS	
Dimension(W*D*H)	1100*1100*2200mm
Weight	1300kg
Ingress protection	IP54
Communication mode	RS485, Ethernet, 4G