

BTC Series

50 kW | Three Phase AC-Coupled HV Retrofit Inverter

GoodWe BTC Series is a three-phase AC retrofit inverter suitable for distributed PV systems and can be connected with high-voltage batteries ranging from 200 to 865V. Its simple and Plug & Play modular design consisting of four sections (DC/DC, DC/AC, STS & EMS modules). It can switch to backup mode in less than 10ms and ensures continuous power supply for critical loads. It does not require perfect balance when operating in backup mode, allowing for each phase to supply power to the loads individually. The active, reactive power and power factor of this inverter is fully adjustable, which makes it suitable for application on micro-grids and ensures grid stability for the whole PV system. It offers 110% continuous AC overloading on the backup side for maximum power output and remote shutdown function for system safety.



Modular design, quick plug & play



100% unbalanced load



Built-in remote shutdown function



8 ms UPS-level switching



110% continuous AC overloading on backup



Adjustable active, reactive power and power factor

Technical Data		GW50K-BTC
Battery Input Data		
Battery Type		Li-Ion
Battery Voltage Range (V)		200 ~ 865
Max. Continuous Charging Current (A)		100
Max. Continuous Discharging Current (A)		100
No. of Battery Input		1
DC breaker		Integrated
AC Output Data (On-grid)		
Nominal Apparent Power Output to Utility Grid (VA)		50k
Max. Apparent Power Output to Utility Grid (VA)		52.5k
Max. Apparent Power from Utility Grid (VA)		100k
Nominal Output Voltage (V)		400, 3L / N / PE
Nominal AC Grid Frequency (Hz)		50 / 60
Max. AC Current From Utility Grid (A)		145
Power Factor		~1 (Adjustable from 0.8 leading to 0.8 lagging)
Max. Total Harmonic Distortion		<3%
AC breaker		Integrated
AC Output Data (Back-up)		
Back-up Nominal Apparent Power (VA)		50k
Nominal Output Voltage (V)		400, 3L / N / PE
Nominal Output Frequency (Hz)		50 / 60
Output THDv (@Linear Load)		<3%
Overload Capability		1.1 times overload continuous; 1.2 times overload is not less than 1 minute
Load Unbalance		100% unbalanced load
AC breaker		Integrated
Efficiency		
Max. Battery to AC Efficiency		97.0%
Protection		
Insulation Resistor Detection		Integrated
Residual Current Monitoring		Integrated
Battery Reverse Polarity Protection		Integrated
Anti-islanding Protection		Integrated
AC Overcurrent Protection		Integrated
AC Short Circuit Protection		Integrated
AC Overvoltage Protection		Integrated
AC Surge Protection		Integrated
General Data		
Operating Temperature Range (°C)		-30 ~ 60
Relative Humidity		0 ~ 95%
Max. Operating Altitude (m)		4000
Cooling Method		Fan Cooling
Display		LCD & LED
Communication with BMS		RS485, CAN
Communication with Portal		RS485, LAN
Weight (Kg)		125
Dimension (W × H × D mm)		585 × 1350 × 750
Noise Emission (dB)		<68
Topology		Transformerless
Ingress Protection Rating		IP20

*: Please visit GoodWe website for the latest certificates.