

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 WxHxD (mm)	585 × 750 × 1350	
Noise Emission (dB)	<68	
Topology	Transformerless	
Ingress Protection Rating	IP20	

*: Please visit GoodWe website for the latest certificates.