

# 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 10% 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



10% continuous AC overloading on backup



Adjustable active, reactive power and power factor

Technical Data		GW50K-BTC
<b>Battery Input Data</b>		
Battery Type	Li-Ion	
Battery Voltage Range(V)	200~865	
Start-up Voltage (V)	250	
No. of Battery Input	1	
Max Discharge / Charge Current (A)	100	
Charging Mode for Battery	Self-adaption to BMS	
DC breaker	Integrated	
<b>AC Output Data (On-grid mode)</b>		
Nominal Output Power (VA)	50k	
Max. Output Power (VA)	52.5k	
Max. apparent power from Grid (VA)	100k	
Max. Current from Grid (A)	145	
Nominal Output Current (A)	72.5	
Max. Output Current (A)	76	
Nominal Output Voltage (V)	400, 3L / N / PE	
Nominal Output Frequency (Hz)	50 / 60	
Output Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)	
Output THDi (@Nominal Output)	<3%	
AC breaker	Integrated	
<b>AC Output Data (Backup mode)</b>		
Nominal Output Power (VA)	50k	
Overload Capability	1.1 times overload continuous; 1.2 times overload is not less than 1 minute	
Nominal Output Voltage (V)	400, 3L / N / PE	
Nominal Output Frequency (Hz)	50 / 60	
Nominal Output Current (A)	72.5	
Output THDv (@Liner Load)	<3%	
Load Unbalance	100% unbalanced load	
AC breaker	Integrated	
<b>Efficiency</b>		
Max. Discharge Efficiency	97.0%	
Max. Charge Efficiency	97.0%	
<b>Protection</b>		
Reverse Protection	Integrated	
Anti-islanding Protection	Integrated	
Insulation Resistor Detection	Integrated	
Residual Current Monitoring Unit	Integrated	
AC SPD Protection	Integrated	
Output Over Current Protection	Integrated	
Output Short Protection	Integrated	
Output Over Voltage Protection	Integrated	
<b>General Data</b>		
Operating Temperature Range (°C)	-30~60	
Relative Humidity	0~95%	
Operating Altitude (m)	4000	
Cooling	Fan Cooling	
Noise (dB)	<68	
User Interface	LCD&LED	
Communication	RS485, LAN	
BMS Communication	CAN, RS485	
Weight (Kg)	125	
Size (Width × Depth × Height mm)	585 × 750 × 1350	
Protection Degree	IP20	
Isolation Method	Transformerless	