GOODWE

BT Series

5-10kW I Three phase AC-coupled retrofit inverter (HV)

The GoodWe BT Series is an AC-coupled retrofit inverter, which is able to upgrade existing three-phase on-grid PV systems to storage systems. The AC-coupled solution can transform any three-phase on-grid PV system into an energy storage system with batteries, enhancing grid independence and self-consumption. It is compatible with high voltage Li-Ion batteries ranging from 180 to 600V and is also equipped with UPS-level switching for a stable and reliable power supply.

Smart Control & Monitoring

· <10ms UPS-level switching
· Smart home integration with multi-protocol communications

Friendly & Thoughtful Design

· Fanless cooling for quiet operation
· Elegant and compact design

Superb Safety & Reliability

· IP66 ingress protection
· Quality and robust components

Flexible & Adaptable Applications

· 110% AC output overloading
· Wide battery voltage range 180 ~ 600V

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Technical Data	GW5K-BT	GW6K-BT	GW8K-BT	GW10K-BT
Battery Input Data				
Battery Type	Li-Ion	Li-Ion	Li-Ion	Li-Ion
Nominal Battery Voltage (V)	500	500	500	500
Battery Voltage Range (V)	180 ~ 600	180 ~ 600	180 ~ 600	180 ~ 600
Start-up Voltage (V)	180	180	180	180
Number of Battery Input	1	1	1	1
Max. Continuous Charging Current (A)	25	25	25	25
Max. Continuous Discharging Current (A)	25	25	25	25
Max. Charging Power (W)	5000	6000	8000	10000
Max. Discharging Power (W)	5000	6000	8000	10000
AC Output Data (On-grid)				
Nominal Output Power (W)	5000	6000	8000	10000
Nominal Apparent Power Output to Utility Grid (VA)	5000	6000	8000	10000
Max. Apparent Power Output to Utility Grid (VA)*1*5	5500	6600	8800	11000
Max. Apparent Power from Utility Grid (VA)	10000	12000	15000	15000
Output Voltage Range (V)	0 ~ 300	0 ~ 300	0 ~ 300	0 ~ 300
Nominal Output Voltage (V)	400 / 380, 3L / N / PE	400 / 380, 3L / N / PE	400 / 380, 3L / N / PE	400 / 380, 3L / N / PE
Nominal AC Grid Frequency (Hz)	50 / 60	50 / 60	50 / 60	50 / 60
AC Grid Frequency Range (Hz)	45 ~ 55	45 ~ 55	45 ~ 55	45 ~ 55
Max. AC Current Output to Utility Grid (A)	8.5	10.5	13.5	16.5
Max. AC Current From Utility Grid (A)	15.2	18.2	22.7	22.7
Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)			
Max. Total Harmonic Distortion	<3%	<3%	<3%	<3%
AC Output Data (Back-up)				
Back-up Nominal Apparent Power (VA)	5000	6000	8000	10000
Max. Output Apparent Power without Grid (VA)*2	5000 (10000@60sec)	6000 (12000@60sec)	8000 (15000@60sec)	10000 (15000@60sec)
Max. Output Apparent Power with Grid (VA)	5000	6000	8000	10000
Max. Output Current (A)	8.5	10.5	13.5	16.5
Nominal Output Voltage (V)	400 / 380, 3L / N / PE	400 / 380, 3L / N / PE	400 / 380, 3L / N / PE	400 / 380, 3L / N / PE
Nominal Output Frequency (Hz)	50 / 60	50 / 60	50 / 60	50 / 60
Output THDv (@Linear Load)	<3%	<3%	<3%	<3%
Efficiency				
Max. Efficiency	97.6%	97.6%	97.6%	97.6%
European Efficiency	97.2%	97.2%	97.5%	97.5%
Max. Battery to AC Efficiency	97.6%	97.6%	97.6%	97.6%
Protection				
PV Insulation Resistance Detection	Integrated	Integrated	Integrated	Integrated
Residual Current Monitoring	Integrated	Integrated	Integrated	Integrated
Battery Reverse Polarity Protection	Integrated	Integrated	Integrated	Integrated
Anti-islanding Protection	Integrated	Integrated	Integrated	Integrated
AC Overcurrent Protection	Integrated	Integrated	Integrated	Integrated
AC Short Circuit Protection	Integrated	Integrated	Integrated	Integrated
AC Overvoltage Protection	Integrated	Integrated	Integrated	Integrated
General Data				
Operating Temperature Range (°C)	-35 ~ +60	-35 ~ +60	-35 ~ +60	-35 ~ +60
Relative Humidity	0 ~ 95%	0 ~ 95%	0 ~ 95%	0 ~ 95%
Max. Operating Altitude (m)	4000	4000	4000	4000
Cooling Method	Natural Convection	Natural Convection	Natural Convection	Natural Convection
User Interface	LED, APP	LED, APP	LED, APP	LED, APP
Communication with BMS*3	RS485, CAN	RS485, CAN	RS485, CAN	RS485, CAN
Communication with Meter	RS485	RS485	RS485	RS485
Communication with Portal	WiFi, LAN	WiFi, LAN	WiFi, LAN	WiFi, LAN
Weight (kg)	21	21	21	21
Dimension (W × H × D mm)	415 × 516 × 180	415 × 516 × 180	415 × 516 × 180	415 × 516 × 180
Topology	Non-isolated	Non-isolated	Non-isolated	Non-isolated
Self-consumption at Night (W)*4	<15	<15	<15	<15
Ingress Protection Rating	IP66	IP66	IP66	IP66
Mounting Method	Wall Mounted	Wall Mounted	Wall Mounted	Wall Mounted

*1: According to the local grid regulation.
*2: Can be reached only if battery capacity is enough, otherwise will shut down.
*3: CAN communication is configured by default. If 485 communication is used, please replace the corresponding communication line.
*4: No Back-up Output.
*5: For Chile Max. Apparent Power Output to Utility Grid (VA) and Max. Output Power (W): GW5K-BT is 5000; GW6K-BT is 6000; GW8K-BT is 8000; GW10K-BT is 10000.
*: Peak output apparent power can be reached only if PV and battery power is enough.
*: Please visit GoodWe website for the latest certificates