

# All-in-one solar charge inverter

CBG-HF4830S60-H/CBG-HF4850S80-H CBG-HF4835U60-H/CBG-HF4850U80-H



#### **Performance characteristics**

-Full digital voltage and current double closed loop control, advanced SPWM technology, output of pure sine wave.

 $\cdot \text{Two}$  output modes: mains bypass and inverter output; uninterrupted power supply.

-Available in 4 charging modes: Only Solar, Mains Priority, Solar Priority and Mains & Solar hybrid charging.

Advanced MPPT technology with an efficiency of 99.9%.

With the charging requirement (voltage, current, mode) settings, and suitable for various types of energystorage batteries.

·ON/OFF rocker switch for AC output control.

1

·Power saving mode available to reduce no-load loss.

-Intelligent variable speed fan to efficiently dissipate heat and extend system life. -Lithium battery activation design, allowing access of lead-acid battery and lithium battery.

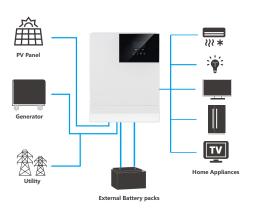
-360° all-round protection with a number of protection functions. Such as overload, short circuit and overcurrent.

-Supply of a variety of user-friendly communication modules, such as Rs485 (GPRS,WiFi), CAN, USB etc., and suitable for computer, mobile phones, Internetmonitoring as well as remote operations.

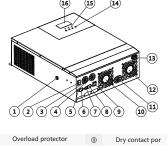
### **Application scenarios**



### **Product connection diagram**



### **Product characteristics**



2	ON/OFF rocker switch	10	Cooling fan
3	AC input port	1	Battery port
(4)	AC output port	12	Cooling fan
5	Grounding screw hold	13	PV port
6	RS485-2 communication port	60	Touch button
7	USB communication port	6	Indicator
8	RS485-1 communication port	16	LCD screen



## **Parameters**

Model	CBG-HF4830S60-H	CBG- <b>HF4850S</b>	CBG-HF4835U60-H	CBG- <b>HF4850U</b>	
AC mode					
Rated input voltage	220/230Vac 110,		20Vac		
Input voltage range	(170Vac~280Vac) ±2% ; (90Vac-280Vac)±2% (90Vac~1-			0Vac)±2%	
Frequency		50Hz/ 60Hz	(auto-sensing)		
Frequency Range		47±0.3Hz ~ 55±0.3Hz (50Hz)/	57±0.3Hz ~ 65±0.3Hz (60Hz);		
Overload/short circuit protection	Breaker				
Efficiency	>95%				
Conversion time (bypass and inverter)					
AC reverse protection	Available				
Maximum bypass overload current	40A			63A	
Inverting mode					
Output voltage waveform		Pure sin	e wave		
Rated output power(VA)	3000 (2600/2700/3000)	5000 (4350/4500/4800/5000)	3500(2900/3000/3200)	5000(4100/4300/450	
Rated output power(W)	3000 (2600/2700/3000)	5000 (4350/4500/4800/5000)	3500(2900/3000/3200)	5000(4100/4300/450	
Power factor		1			
Rated output voltage (Vac)	230Vac (200/208/2	20/240Vac settable)	120Vac (100/105/	110Vac settable)	
Output voltage error	00,200/2	±5'		,	
Output frequency range (Hz)	± 5% 50Hz ± 0.3Hz/60Hz ± 0.3Hz				
Efficiency	50HZ ± 0.3HZ/60HZ ± 0.3HZ				
Enciency				porting error and turn off t	
Overload protection	(102%-cload-125%) ±10%: reporting error and turn off the output after 5 minutes; (102%-cload-110%) ±10%: reporting error and turn off the output after 5 minutes;   (125%-cload-130%) ±10%: reporting error and turn off the output after 5 minutes; (110%-cload-125%) ±10%: reporting error and turn off the output after 10% seconds;   Laad-130% ±10%: reporting error and turn off the output after 5 seconds; Laad-125% ±10%: reporting error and turn off the output after 10% seconds;		orting error andturn off th		
Peak power	6000VA	10000VA	5000VA	7000VA	
Loaded motor capacity	2HP	4HP	2HP	3HP	
Output short-circuit protection		Brea	ker		
Specification of bypass breaker	40A 63A				
Rated battery input voltage	48V (minimum start voltage 44V)				
nated battery input foldage		48V (minimum st	art voltage 44V)		
Battery voltage range	40.0Vdc~60Vdc ± 0.6Vdc (unc	48V (minimum st dervoltage alarm/tumoff voltage/o	-	torationsettable LCD scree	
	40.0Vdc~60Vdc ± 0.6Vdc (unc		vervoltage alarm/overvoltage rest	torationsettable LCD scre	
Battery voltage range	40.0Vdc~60Vdc ± 0.6Vdc (unc	dervoltage alarm/turnoff voltage/o	vervoltage alarm/overvoltage rest	torationsettable LCD scree	
Battery voltage range Power saving mode	40.0Vdc~60Vdc ± 0.6Vdc (unc	dervoltage alarm/turnoff voltage/o	vervoltage alarm/overvoltage rest	torationsettable LCD scree	
Battery voltage range Power saving mode <b>AC charge</b>		lervoltage alarm/turnoff voltage/o Load ≤	vervoltage alarm/overvoltage rest		
Battery voltage range Power saving mode <b>AC charge</b> Battery type		dervoltage alarm/tumoff voltage/o Load ≤ Lead acid or lit	vervoltage alarm/overvoltage rest 550W hium battery 40.		
Battery voltage range Power saving mode AC charge Battery type Maximum charge current Charge current error		dervoltage alarm/tumoff voltage/o Load ≤ Lead acid or lit 0A	vervoltage alarm/overvoltage resi 50W hium battery 40.		
Battery voltage range Power saving mode AC charge Battery type Maximum charge current Charge current error Charge voltage range		dervoltage alarm/tumoff voltage/o Load s Lead acid or lit 0A ± SA	vervoltage alarm/overvoltage resi SOW hium battery 40. dc 60Vdc		
Battery voltage range Power saving mode AC charge Battery type Maximum charge current Charge current error Charge voltage range Short-circuit protection		dervoltage alarm/turnoff voltage/o Load ≤ Lead acid or lit 0A ±5A 40Vdc~	vervoltage alarm/overvoltage resi SOW hium battery 40. dc 60Vdc		
Battery voltage range Power saving mode AC charge Battery type Maximum charge current Charge current error Charge voltage range Short-circuit protection Breaker specification		Jervoltage alarny/tumoff voltage/o Load ≤ Lead acid or lit 0A ± 5A 40Vdc− Breaker and	vervoltage alarm/overvoltage resi SOW 40. dc 60Vdc blown fuse	A	
Battery voltage range Power saving mode AC charge Battery type Maximum charge current Charge outrage range Short-circuit protection Breaker specification Overcharge protection		iervoltage alarm/turnoff voltage/o Load ≤ Lead acid or lit 0A ± 5A 40/Vdc~ Breaker and 40A	vervoltage alarm/overvoltage resi SOW 40. dc 60Vdc blown fuse	A	
Battery voltage range Power saving mode AC charge Battery type Maximum charge current Charge current error Charge voltage range Short-circuit protection Breaker specification Overcharge protection Solar charge	6	iervoltage alarm/turnoff voltage/o Load ≤ Lead acid or lit 0A ± 5A 40/Vdc~ Breaker and 40A	vervoltage alarm/overvoltage resi SOW 40. dc 60Vdc blown fuse	A	
Battery voltage range Power saving mode AC charge Battery type Maximum charge current Charge current error Charge voltage range Short-circuit protection Breaker specification Overcharge protection Solar charge Maximum PV opencircuit voltage	60	dervoltage alarnr/turnoff voltage/o Load ≤ Lead acid or lit DA ± 5A 40Vdc~ Breaker and 40A Turn off charge a IVdc	vervoltage alamy/overvoltage res (50W hium battery 40. 40. 40. 40. 40. 40. 40. 40.	A 63A 500Vdc	
Battery voltage range Power saving mode AC charge Battery type Maximum charge current Charge current error Charge voltage range Short-circuit protection Breaker specification Overcharge protection Solar charge Maximum PV opencircuit voltage PV operation voltage range	60 500 120-5	iervoltage alarny/tumoff voltage/o Load s Lead acid or lit 0A ± 5A 40Vdc~ Breaker and 40A Tum off charge a IVdc i00Vdc	vervoltage alamy/overvoltage rest SOW 40. 40. 40. 40. 40. 40. 40. 40.	A 63A 500Vdc 120-500Vdc	
Battery voltage range Power saving mode AC charge Battery type Maximum charge current Charge current error Charge voltage range Short-circuit protection Breaker specification Overcharge protection Solar charge Maximum PV opencircuit voltage MPP voperation voltage range	60 500 120-5	dervoltage alarm/tumoff voltage/o Load s Lead acid or lit 0A ± 5A 40Vdc- Breaker and 40A Tum off charge a VVdc 150Vdc	vervoltage alamy/overvoltage rest 50W hium battery 40. dc 60Vdc blown fuse fter 1min alarm 450Vdc 120-450Vdc 120-430Vdc	A 63A 500Vdc	
Battery voltage range Power saving mode AC charge Battery type Maximum charge current Charge voltage range Short-circuit protection Short-circuit protection Overcharge protection Solar charge Maximum PV opencircuit voltage PV operation voltage range Battery voltage range	60 500 120-5 120-4	dervoltage alarm/turnoff voltage/o Load ≤ Lead acid or lit 0A ± 5A 40/Vdc- Breaker and 40A Turn off charge a 10/Vdc 10/Vdc 10/Vdc 40-60 40-60	vervoltage alamy/overvoltage rest 50W hium battery 40 40 60Vdc 60Vdc blown fuse fter 1min alarm 450Vdc 120-450Vdc 120-430Vdc 120-430Vdc	A 63A 500Vdc 120-500Vdc 120-450Vdc	
Battery voltage range Power saving mode AC charge Battery type Charge current error Charge voltage range Short-circuit protection Breaker specification Overcharge protection Solar charge Maximum PV opencircuit voltage PV operation voltage range MPPT voltage range Battery voltage range Maximum output power	60 500 120-5 120-4 4200W	tervoltage alarm/turnoff voltage/o Load set 0A ± 5A 400Vdc~ Breaker and 40A Turn off charge a Wdc 100Vdc 100Vdc 5000Vd 40-60	vervoltage alamy/overvoltage res SOW hium battery 40. 40. 40. 40. 40. 40. 40. 40.	A 63A 500Vdc 120-500Vdc 120-450Vdc 5000W	
Battery voltage range Power saving mode AC charge Battery type Maximum charge current Charge current error Charge voltage range Short-circuit protection Breaker specification Overcharge protection Solar charge PV operation voltage range MPPT voltage range MAXimum OVtage range Battery voltage range Maximum output power Charge current range of solar energy (setable)	60 500 120-5 120-4	dervoltage alarny/turnoff voltage/o Load ≤ Lead acid or lit DA ± 5A 40Vdc~ Breaker and 40A Turn off charge a VVdc 150Vdc 500Vdc 5000W 0-80A	vervoltage alamy/overvoltage rest SOW hium battery 40. 40. 40. 40. 40. 40. 40. 40.	A 63A 500Vdc 120-500Vdc 120-450Vdc	
Battery voltage range Power saving mode AC charge Battery type Maximum charge current Charge outrage range Charge voltage range Short-circuit protection Breaker specification Overcharge protection Solar charge Maximum PV opencircuit voltage PV operation voltage range MPPT voltage range Battery voltage range Maximum output power Charge current range of solar energy (settable) Charge short-circuit protection	60 500 120-5 120-4 4200W	tervoltage alarn/turnoff voltage/o Load ≤ Lead acid or lit 0A ± 5A 40Vdc~ Breaker and 40A 7 Turn off charge a VVdc 50Vdc 50Vdc 50Vdc 5000W 0-80A Blown	vervoltage alamy/overvoltage rest (50W) hium battery 40. 40. 40. 40. 40. 40. 40. 40.	A 63A 500Vdc 120-500Vdc 120-450Vdc 5000W	
Battery voltage range Power saving mode AC charge Battery type Maximum charge current Charge voltage range Charge voltage range Short-circuit protection Short-circuit protection Overcharge protection Overcharge protection Solar charge Maximum PV opencircuit voltage MPPT voltage range Battery voltage range Battery voltage range Charge current range of solar energy (settable) Charge schricticuit protection Wiring protection	60 500 120-5 120-4 4200W	dervoltage alarny/turnoff voltage/o Load ≤ Lead acid or lit DA ± 5A 40Vdc~ Breaker and 40A Turn off charge a VVdc 150Vdc 500Vdc 5000W 0-80A	vervoltage alamy/overvoltage rest (50W) hium battery 40. 40. 40. 40. 40. 40. 40. 40.	A 63A 500Vdc 120-500Vdc 120-450Vdc 5000W	
Battery voltage range Power saving mode AC charge Battery type Charge ourrent error Charge voltage range Short-circuit protection Short-circuit protection Solar charge Preaker specification Overcharge protection Solar charge Maximum PV opencircuit voltage Maximum PV opencircuit voltage Maximum output power Charge current range of solar energy (settable) Charge short-circuit protection Wiring protection	60 500 120-5 120-4 4200W	dervoltage alarm/turnoff voltage/o Load set DA ± 5A 40/Vdc- Breaker and 40A Turn off charge a 100/Vdc 150/Vdc 500/Vdc 40-60 5000W 0-80A Blown Inverse wiring	vervoltage alamy/overvoltage rest SOW hium battery 40. 40. 40. 40. 40. 40. 40. 40.	A 63A 500Vdc 120-500Vdc 120-450Vdc 5000W	
Battery voltage range Power saving mode AC charge Battery type Maximum charge current Charge ourrent error Charge voltage range Short-circuit protection Breaker specification Overcharge protection Solar charge Maximum PV opencircuit voltage PV operation voltage range MAPT voltage range MAPT voltage range MAXImum output power Charge current range of solar energy (settable) Charge short-circuit protection Wiring protection Specification authentication	60 500 120-5 120-4 4200W	tervoltage alarm/turnoff voltage/o Load set DA ± 5A 400Vdc- Breaker and 40A Turn off charge a Vdc 00Vdc 150Vdc 5000W 0-80A Blown Inverse wiring CE((EC6210	vervoltage alamy/overvoltage rest SOW hium battery 40. 40. 40. 40. 40. 40. 40. 40.	A 63A 500Vdc 120-500Vdc 120-450Vdc 5000W	
Battery voltage range Power saving mode AC charge Battery type Maximum charge current Charge current error Charge voltage range Short-circuit protection Breaker specification Overcharge protection Overcharge protection Solar charge Maximum PV opencircuit voltage Maximum PV opencircuit voltage MPPT voltage range MAPT voltage range MAPT voltage range MAXimum output power Charge short-circuit protection Wiring protection Sutery voltagic nage Sutery voltage range Maximum output power Charge short-circuit protection Wiring protection Specification authentication EMC authentication grade	60 500 120-5 120-4 4200W	tervoltage alarm/turnoff voltage/o Load ≤ Lead acid or lit DA ± 5A 40Vdc- Breaker and 40A Turn off charge a 1Vdc 150Vdc 500Vdc 5000W 0-80A Blown Inverse wiring CE(EC621C EN61	vervoltage alamy/overvoltage rest (50W) hium battery 40. 40. 40. 40. 40. 40. 40. 40.	A 63A 500Vdc 120-500Vdc 120-450Vdc 5000W	
Battery voltage range Power saving mode AC charge Battery type Maximum charge current Charge ourrent error Charge voltage range Charge voltage range Short-circuit protection Short-circuit protection Overcharge protection Solar charge Maximum PV opencircuit voltage Maximum PV opencircuit voltage MPPT voltage range Battery voltage range Maximum output power Charge current range of solar energy (settable) Charge short-circuit protection Wiring protection Specification authentication Specification authentication Specification authentication Chorge turent sange Solar Specification authentication Specification authentication Specification temperature range	60 500 120-5 120-4 4200W	devoltage alarn/tumoff voltage/o Load set DA ± 5A 400Vdc- Breaker and 40A Tum off charge a VVdc 00Vdc 500Vdc 40-60 5000W 0-80A Blown Inverse wiring CE(ECC6210 ENI61 CE(ECC6210	vervoltage alamy/overvoltage rest (50W) hium battery 40 60Vdc 60Vdc 60Vdc 60Vdc 60Vdc 120-450Vdc 120-500V 120-50Vdc 120-50Vd	A 63A 500Vdc 120-500Vdc 120-450Vdc 5000W	
Battery voltage range Power saving mode AC charge Battery type Charge current current Charge voltage range Charge voltage range Short-circuit protection Short-circuit protection Overcharge protection Solar charge Maximum PV opencircuit voltage Maximum PV opencircuit voltage Maximum output power Charge source for solar energy (settable) Charge sourcircuit protection Wiring protection Sufficient on uthentication Specification authentication EMC authentication grade Operation temperature range	60 500 120-5 120-4 4200W	dervoltage alarm/turnoff voltage/o Load set DA ± 5A 40/Vdc- Breaker and 40A Turn off charge a 100Vdc 500Vdc 500Vdc 5000W 0-80A Blown Inverse wiring CE(JEC621C EN61 -1.15°C t	vervoltage alamy/overvoltage rest (50W) hium battery 40 60Vdc 60Vdc 60Vdc 60Vdc 420Vdc 4200V 4200W 60C 120-430Vdc 120-50Vdc 120-50Vd	A 63A 500Vdc 120-500Vdc 120-450Vdc 5000W	
Battery voltage range Power saving mode AC charge Battery type Charge ourrent error Charge voltage range Short-circuit protection Short-circuit protection Preaker specification Overcharge protection Solar charge PV operation voltage range Maximum PV opencircuit voltage PV operation voltage range Maximum output power Charge current range of solar energy (settable) Charge short-circuit protection Charge schort-circuit protection Specification authentication Specification authentication Specification authentication Storage temperature range Storage temperature range Humidity range	60 500 120-5 120-4 4200W	dervoltage alarm/turnoff voltage/o Load set DA ± 5A 40.Vdc- Breaker and 40A Turn off charge a Vdc 500Vdc 500Vdc 5000W 0-80A Blown Inverse wiring CE(IEC621C EN61 -15°C tr -25°C to -25°C to	vervoltage alamy/overvoltage rest SOW hium battery 40. 40. 40. 40. 40. 40. 40. 40.	A 63A 500Vdc 120-500Vdc 120-450Vdc 5000W	
Battery voltage range Power saving mode AC charge Battery type Maximum charge current Charge ourrent error Charge voltage range Short-circuit protection Breaker specification Overcharge protection Solar charge Maximum PV opencircuit voltage PV operation voltage range MAPT voltage range MAPT voltage range MAXImum output power Charge current range of solar energy (settable) Charge short-circuit protection Wiring protection Suftery voltage range Maximum output power Charge current range of solar energy (settable) Charge short-circuit protection Wiring protection Specification authentication EMC authentication grade Operation temperature range Storage temperature range Noise	60 500 120-5 120-4 4200W	tervoltage alarn/turnoff voltage/o Load ≤ Lead acid or lit 0A ± 5A 400Vdc- Breaker and 40A Turn off charge a Vdc 00Vdc 5000W 0-80A Blown Inverse wiring CE(EC6210 EN61 -15°C tt -25°C c 5% to 95% (Con5°C ~ 5% to 95% (Con5°C ~	vervoltage alamy/overvoltage rest SOW hium battery 40. 40. 40. 40. 40. 40. 40. 40.	A 63A 500Vdc 120-500Vdc 120-450Vdc 5000W	
Battery voltage range Power saving mode AC charge Battery type Maximum charge current Charge current error Charge voltage range Charge voltage range Short-circuit protection Breaker specification Overcharge protection Solar charge Maximum PV opencircuit voltage MPPT voltage range Maximum output power Charge current range of solar energy (settable) Charge current range of solar energy (settable) Charge schrict-circuit protection Wiring protection Specification authentication Specification authentication Storage temperature range Storage temperature range Humidity range Noise Thermal dissipation	60 500 120-5 120-4 4200W	devoltage alarn/tumoff voltage/o Load set DA ± 5A 400Vdc- Breaker and 40A Tum off charge a VVdc 00Vdc 150Vdc 40-60 5000W 0-80A Blown Inverse wiring CE(EC6210 EN61 -15°C tr -25°C c 5% to 95% (Conforma set 60 Forced cooling with a	vervoltage alamy/overvoltage rest (50W) hium battery 40 60Vdc 60Vdc 60Vdc 60Vdc 120-450Vdc 120-450Vdc 120-450Vdc 120-430Vdc 120-430Vdc 120-430Vdc 120-430Vdc 120-450Vdc 12	A 63A 500Vdc 120-500Vdc 120-450Vdc 5000W	
Battery voltage range Power saving mode AC charge Battery type Maximum charge current Charge ourrent error Charge voltage range Short-circuit protection Breaker specification Overcharge protection Solar charge Maximum PV opencircuit voltage PV operation voltage range MAPT voltage range MAPT voltage range MAXImum output power Charge current range of solar energy (settable) Charge short-circuit protection Wiring protection Suftery voltage range Maximum output power Charge current range of solar energy (settable) Charge short-circuit protection Wiring protection Specification authentication EMC authentication grade Operation temperature range Storage temperature range Noise	60 500 120-5 120-4 4200W	tervoltage alarn/turnoff voltage/o Load ≤ Lead acid or lit 0A ± 5A 400Vdc- Breaker and 40A Turn off charge a Vdc 00Vdc 5000W 0-80A Blown Inverse wiring CE(EC6210 EN61 -15°C tt -25°C c 5% to 95% (Con5°C ~ 5% to 95% (Con5°C ~	vervoltage alamy/overvoltage rest (50W) hium battery 40 60Vdc 60Vdc 60Vdc 60Vdc 60Vdc 60Vdc 420Vdc 120-430Vdc 120-430Vdc 120-430Vdc 120-430Vdc 120-430Vdc 120-430Vdc 120-430Vdc 120-430Vdc 120-430Vdc 120-50Vdc 120-430Vdc 120-50Vdc 120-43	A 63A 500Vdc 120-500Vdc 120-450Vdc 5000W	