BEXIE ENERGY

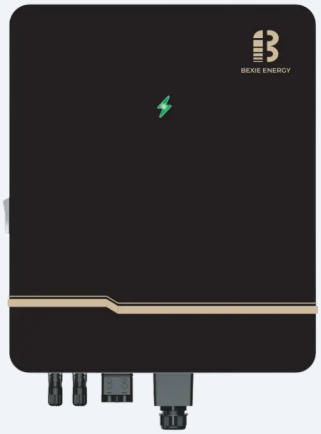
Europe based aftersale
Company HQ in Spain

TECHNICAL DATASHEET

Single-phase Hybrid Inverter

BE3-6KW-1PH-G2 (LV) // RESIDENTIAL USE // COMMERCIAL USE

Low-voltage single-phase hybrid inverter with power ratings from 3 to 6 kW. Designed for residential solar and energy storage applications, it combines dual MPPT technology, natural cooling and advanced battery management for reliable and efficient operation. Certified for grid connection in major European markets.



- Fast charging and discharging up to 135 A.
- Seamless transition to backup mode, <10 ms UPS-level switching.
- Dual MPPT design with up to 18 A input current per tracker.
- AC coupling support.
- PV system oversizing up to 10 kW.
- IP65 protection for indoor and outdoor installation.

FEATURES

SMART MONITORING | HYBRID READY | AC COUPLING | ON/OFF GRID | BATTERY COMPATIBLE

+34 985 194 232

www.bexieenergy.com

Calle Peña Santa 68, Polígono Industrial Silvota, 33192, Llanera, Asturias

BEXIE GROUP designs, manufactures and delivers high-performance solar electric technology worldwide. Our high-efficiency solar cells enable us to produce different types of solar panels with highest efficiency.

TECHNICAL DATASHEET

Single-phase Hybrid Inverter

BE3-6KW-1PH-G2 (LV)

BEXIE ENERGY

MODEL	BE3KW-1PH-G2	BE3.6KW-1PH-G2	BE3.68KW-1PH-G2
EFFICIENCY			
Max. Efficiency		97.3%	
European Efficiency		96.8%	
INPUT (PV)			
Max. PV Usable Power		10,000W	
Max. PV Input Voltage		550V	
Start-up Voltage		90V	
MPPT Operating Voltage Range		70V - 540V	
Max. Input Current per MPPT		18A / 18A	
Max. Short Circuit Current per MPPT		25A / 25A	
No. of MPPT		2	
No. of Strings per MPPT		1 / 1	
INPUT/OUTPUT (BAT)			
Battery Type		Lithium-ion / Lead-acid	
Nominal Battery Voltage		48V	
Battery Voltage Range		40V - 65V	
Max. Charge/Discharge Current	75A / 75A	75A / 75A	75A / 75A
Max. Charge/Discharge Power	4,000W / 4,000W	4,000W / 4,000W	4,000W / 4,000W
INPUT/OUTPUT (GRID)			
Nominal AC Output Power	3,000W	3,600W	3,680W
Max. AC Output Apparent Power	3,300VA	3,960VA	3,680VA
Max. AC Output Power (PF=1)	3,300W	3,960W	3,680W
Max. AC Output Current	15A	18A	16.7A
Max. Grid Input Power	7,500W	7,500W	7,500W
Max. Input Current	34A	34A	34A
Nominal Voltage		220V / 230V / 240V, L+N+PE	
Grid Voltage Range		150V - 300V (Adjustable)	
Nominal Frequency		50Hz / 60Hz	
AC Frequency Range		45Hz - 55Hz / 55Hz - 65Hz (Adjustable)	
Power Factor		>0.99 @rated power (Adjustable 0.8 LD - 0.8 LG)	
THDI		<3% @R Load	
OUTPUT (BACK UP)			
Nominal AC Output Power	3,000W	3,600W	3,680W
Nominal AC Output Current	13.6A / 13.0A / 12.5A	16.4A / 15.7A / 15.0A	16.7A / 16.0A / 15.3A
Peak Output Apparent Power		120% @ 1min	
Peak Output Apparent Power	200% @ 10s	200% @ 10s	200% @ 10s
Nominal Voltage		220V / 230V / 240V, L+N+PE	
Nominal Frequency		50Hz / 60Hz	
Transfer Time		<10ms (Typical)	
THDV		<3% @R Load	

TECHNICAL DATASHEET

Single-phase Hybrid Inverter

BE3-6KW-1PH-G2 (LV)

BEXIE ENERGY

MODEL	BE3KW-1PH-G2	BE3.6KW-1PH-G2	BE3.68KW-1PH-G2
PROTECTION			
Protection Category		Class I	
PV Switch		Yes	
Anti-islanding Protection		Yes	
Overcurrent Protection		Yes	
Overvoltage Protection		DC Type II, AC Type III	
AC Short Circuit Protection		Yes	
PV Reverse Polarity Protection		Yes	
Surge Protection		DC Type III, AC Type III (Type II Optional)	
Insulation Resistance Detection		Yes	
Residual Current Protection		Yes	
GENERAL			
Max. Operation Altitude		4,000m (>2,000m derating)	
Ingress Protection Degree		IP65	
Operating Temperature Range		-25°C ~ 60°C (>45°C derating)	
Relative Humidity		0 ~ 100%	
Cooling Method	Natural Cooling	Natural Cooling	Natural Cooling
Mounting		Wall Bracket	
Dimensions (WxHxD)		377mm x 452mm x 206mm	
Weight		20kg	
HMI & COM			
Display		LED, LCD (Optional)	
Communication Interfaces		RS485/CAN (for BMS), RS485 (for Meter), DRMs, 2*DO, 2*DI ,USB (for Wi-Fi/LAN,optional)	
CERTIFICATION			
Grid		IEC 61727/62116/61683/60068, G98/G99/G100, VDE4105, EN50549-1/-10, CEI 0-21, C10/11	
Safety		IEC/EN 62109-1&2	
EMC		IEC/EN 61000/62920	

TECHNICAL DATASHEET

Single-phase Hybrid Inverter

BE3-6KW-1PH-G2 (LV)

BEXIE ENERGY

MODEL	BE4.6KW-1PH-G2	BE5KW-1PH-G2	BE6KW-1PH-G2
EFFICIENCY			
Max. Efficiency		97.3%	
European Efficiency		96.8%	
INPUT (PV)			
Max. PV Usable Power		10,000W	
Max. PV Input Voltage		550V	
Start-up Voltage		90V	
MPPT Operating Voltage Range		70V - 540V	
Max. Input Current per MPPT		18A / 18A	
Max. Short Circuit Current per MPPT		25A / 25A	
No. of MPPT		2	
No. of Strings per MPPT		1 / 1	
INPUT/OUTPUT (BAT)			
Battery Type		Lithium-ion / Lead-acid	
Nominal Battery Voltage		48V	
Battery Voltage Range		40V - 65V	
Max. Charge/Discharge Current	110A / 110A	110A / 110A	135A / 135A
Max. Charge/Discharge Power	5,500W / 5,500W	5,500W / 5,500W	6,600W / 6,600W
INPUT/OUTPUT (GRID)			
Nominal AC Output Power	4,600W	5,000W	6,000W
Max. AC Output Apparent Power	4,600VA	5,500VA	6,600VA
Max. AC Output Power (PF=1)	4,600W	5,500W	6,600W
Max. AC Output Current	21A	25A	28.7A
Max. Grid Input Power	9,000W	9,000W	9,000W
Max. Input Current	41A	41A	41A
Nominal Voltage		220V / 230V / 240V, L+N+PE	
Grid Voltage Range		150V - 300V (Adjustable)	
Nominal Frequency		50Hz / 60Hz	
AC Frequency Range		45Hz - 55Hz / 55Hz - 65Hz (Adjustable)	
Power Factor		>0.99 @rated power (Adjustable 0.8 LD - 0.8 LG)	
THDI		<3% @R Load	
OUTPUT (BACK UP)			
Nominal AC Output Power	4,600W	5,000W	6,000W
Nominal AC Output Current	20.9A / 20.0A / 19.2A	22.7A / 21.7A / 20.8A	27.3A / 26.1A / 25.0A
Peak Output Apparent Power		120% @ 1min	
Peak Output Apparent Power	200% @ 10s	200% @ 10s	166% @ 10s
Nominal Voltage		220V / 230V / 240V, L+N+PE	
Nominal Frequency		50Hz / 60Hz	
Transfer Time		<10ms (Typical)	
THDV		<3% @R Load	

TECHNICAL DATASHEET

Single-phase Hybrid Inverter

BE3-6KW-1PH-G2 (LV)

BEXIE ENERGY

MODEL	BE4.6KW-1PH-G2	BE5KW-1PH-G2	BE6KW-1PH-G2
PROTECTION			
Protection Category		Class I	
PV Switch		Yes	
Anti-islanding Protection		Yes	
Overcurrent Protection		Yes	
Overvoltage Protection		DC Type II, AC Type III	
AC Short Circuit Protection		Yes	
PV Reverse Polarity Protection		Yes	
Surge Protection		DC Type III, AC Type III (Type II Optional)	
Insulation Resistance Detection		Yes	
Residual Current Protection		Yes	
GENERAL			
Max. Operation Altitude		4,000m (>2,000m derating)	
Ingress Protection Degree		IP65	
Operating Temperature Range		-25°C ~ 60°C (>45°C derating)	
Relative Humidity		0 ~ 100%	
Cooling Method	Natural Cooling	Natural Cooling	Smart Cooling
Mounting		Wall Bracket	
Dimensions (WxHxD)		377mm x 452mm x 206mm	
Weight		20kg	
HMI & COM			
Display		LED, LCD (Optional)	
Communication Interfaces		RS485/CAN (for BMS), RS485 (for Meter), DRMs, 2*DO, 2*DI ,USB (for Wi-Fi/LAN,optional)	
CERTIFICATION			
Grid		IEC 61727/62116/61683/60068, G98/G99/G100, VDE4105, EN50549-1/-10, CEI 0-21, C10/11	
Safety		IEC/EN 62109-1&2	
EMC		IEC/EN 61000/62920	

NOTES

Remarks: · The range of output voltage and frequency may vary depending on different grid codes. · Specifications are subject to change without advanced notice.