

TECHNICAL DATASHEET

Single-phase Hybrid Inverter

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

// RESIDENTIAL USE // COMMERCIAL USE

Low-voltage single-phase hybrid inverter with power ratings from 3.6 to 6 kW. Dual phase-shift control technology with an optimized charging and discharging process and ultra-fast switching between grid-connected and island modes. Certified for grid connection in Europe and the United Kingdom.

- ✓ Fast charging or discharging up to 120A.
- ✓ Fanless cooling design, long lifespan and quiet performance.
- ✓ Seamless transition to backup mode, <10 ms UPS level switching.
- ✓ Parallel connection up to 9.
- ✓ IP65 outdoor and indoor application.
- ✓ Feed-in limitation function (zero export).
- ✓ PV system oversizing up to 9KW.
- ✓ Support for both local and remote communication.



FEATURES



HYBRID READY



AC COUPLING



ON/OFF GRID



SMART MONITORING



BATTERY COMPATIBLE



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MODEL	BE3.6KW-1PH	BE4.6KW-1PH	BE5KW-1PH	BE6KW-1PH
EFFICIENCY				
Max. Efficiency (PV to AC)			97.3%	
Max. Efficiency (BAT to AC)			94.3%	
Euro. Efficiency (PV to AC)			96.8%	
INPUT (PV)				
Max. PV Input Power	6,300W	9,000W	9,000W	9,000W
Max. PV Voltage			550V	
Start-up Voltage			90V	
MPPT Voltage Range			70V-540V	
Max. Input Current			15A / 15A	
Max. Short Circuit Current			20A / 20A	
Nos. of MPPT			2	
String 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	60A / 60A	120A / 120A	120A / 120A	120A / 120A
Max. Charge/Discharge Power	3,000W / 3,000W	6,000W / 6,000W	6,000W / 6,000W	6,000W / 6,000W
OUTPUT (GRID)				
Nominal AC Output Power	3,600W	4,600W	5,000W	6,000W
Max. AC Apparent Power	3,960VA	4,600VA	5,500VA	6,000VA
Max. AC Output Power (PF=1)	3,960W	4,600W	5,500W	6,000W
Max. AC Output Current	18A	22A	25A	27.2A
Nominal Grid Voltage			220V / 230V / 240V, L+N+PE	
Grid Voltage Range			150V-300V (Adjustable)	
Nominal Grid Frequency			50Hz / 60Hz	
Grid Frequency Range			45Hz-55Hz / 55Hz-65Hz (Adjustable)	
Power Factor			>0.99 @rated power (Adjustable 0.8 LD-0.8 LG)	
THDI			<3% (Rated Power)	
OUTPUT (BACK UP)				
Nominal Output Power	3,000W	4,600W	5,000W	6,000W
Nominal Output Current	13A	20A	21.7A	26A
Peak Power (>1s)	4,500VA	6,900VA	7,500VA	9,000VA
Nominal Output Voltage			220V / 230V / 240V, L+N+PE	
Nominal Output Frequency			50Hz / 60Hz	
Transfer Time			<10ms	
THDV			<3%@100%R Load	
PROTECTION				
Protection Category			Class I	

MODEL	BE3.6KW-1PH	BE4.6KW-1PH	BE5KW-1PH	BE6KW-1PH
DC Switch			Yes	
Anti-islanding Protection			Yes	
AC Over Current Protection			Yes	
AC Over Voltage Protection			Yes	
AC Short Circuit Protection			Yes	
DC Reverse Protection			Yes	
Surge Arrester		DC Type III, AC Type III		
PV Insulation Detection			Yes	
Leakage Current Protection			Yes	
GENERAL				
Max.Operation Altitude		4,000m (>2,000m derating)		
Protection Degree		IP65		
Operating Temperature Range		-25~60°C (>45°C derating)		
Relative Humidity		0~100%		
Cooling		Natural Cooling		
Mounting		Wall bracket		
Dimensions (WxHxD)		570mm x 495mm x 175mm		
Weight	20kg	25kg	25kg	25kg
PV Connection		MC4/H4		
Battery Connection		Dedicated DC connector		
AC Connection		Dedicated AC connector		
HMI & COM				
Display		LED+APP		
Communication		RS485/CAN (for BMS), RS485, USB, DRM/RS485 (for Meter), Optional: Wi-Fi/GPRS/LAN		
CERTIFICATION				
Grid		IEC 61727, EN 50549-1, G99, CEI 0-21, RD1699/661/647/413, NTS, UNE 217001		
Safety & EMC		IEC 62109-1/2, EN 62109-1/2, IEC 61000		