

TECHNICAL DATASHEET

Three-phase Hybrid Inverter

BE6-20KW-3PH (LV) // RESIDENTIAL USE // COMMERCIAL USE

Low-voltage three-phase hybrid inverter with power ratings from 6 to 20 kW. Designed for efficient solar energy management and battery storage. High performance, intelligent control, and maximum reliability for residential and industrial installations.

- ✓ Up to 3 MPPTs with Max. PV Input power of 30KW.
- ✓ Up to 380A max. charging/discharging current.
- ✓ Max. 9 units parallel for on-grid and off-grid operation.
- ✓ IP65: Indoor or outdoor installation.
- ✓ Intelligent Management, local & remote monitoring.



FEATURES



HIGH POWER



HYBRID READY



ON/OFF GRID



SMART MONITORING



BATTERY COMPATIBLE



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Three-phase Hybrid Inverter

BE6-20KW-3PH (LV)

| MODEL | BE 6KW-3PH-LV | BE 8KW-3PH-LV | BE 10KW-3PH-LV |
|---|--|-----------------------------------|-----------------------------------|
| EFFICIENCY | | | |
| Max. Efficiency | | 97.60% | |
| Eur. Efficiency | | 97.00% | |
| INPUT (PV) | | | |
| Max. PV Access Power | | 40,000W | |
| Max. PV Usable Power | 20,000W | 20,000W | 30,000W |
| Max. PV Input Voltage | | 1,000V | |
| Start-up Voltage | | 120V | |
| MPPT Operating Voltage Range | | 160V-980V | |
| Max. Input Current per MPPT | 20A / 20A | 20A / 20A | 20A / 20A / 20A |
| Max. Short Circuit Current per MPPT | 30A / 30A | 30A / 30A | 30A / 30A / 30A |
| Nos. of MPPT | 2 | 2 | 3 |
| String per MPPT | 1/1 | 1/1 | 1/1/1 |
| INPUT/OUTPUT (BAT) | | | |
| Battery Type | Lithium-ion / Lead-acid | | |
| No. Of Battery Input | 2* | | |
| Battery Rated Voltage | 48V | | |
| Battery Voltage Range | 40V-60V | | |
| Max. Charge/Discharge Current | 380A / 150A | 380A / 200A | 380A / 250A |
| Max. Charge/Discharge Power | 20,000W / 7,200W | 20,000W / 9,600W | 20,000W / 12,000W |
| OUTPUT (GRID) | | | |
| Nominal AC Output Power | 6,000W | 8,000W | 10,000W |
| Max. AC Output Apparent Power | 6,600VA | 8,800VA | 11,000VA |
| Nominal AC Output Current | 3 x 9.1A / 3 x 8.7A / 3 x 8.3A | 3 x 12.1A / 3 x 11.6A / 3 x 11.1A | 3 x 15.2A / 3 x 14.5A / 3 x 13.9A |
| Max. AC Output Current | 3 x 10A | 3 x 13.3A | 3 x 16.7A |
| Max. Single Phase Power | 3,200W | 4,267W | 5,333W |
| Max. Continuous AC Passthrough (grid to load) | 45A | | |
| Nominal Grid Voltage | 220V / 380V; 230V / 400V, 240V / 415V 3W+N+PE | | |
| Nominal Grid Frequency | > 0.99 @rated power (Adjustable 0.8 LD - 0.8 LG) | | |
| Power Factor | > 0.99 @rated power (Adjustable 0.8 LD - 0.8 LG) | | |
| THDi | <3% @rated power | | |
| OUTPUT (BACK UP) | | | |
| Nominal AC Output Power | 6,000W | 8,000W | 10,000W |
| Max. AC Output Apparent Power | 6,600VA | 8,800VA | 11,000VA |
| Nominal AC Output Current | 3 x 9.1A / 3 x 8.7A / 3 x 8.3A | 3 x 12.1A / 3 x 11.6A / 3 x 11.1A | 3 x 15.2A / 3 x 14.5A / 3 x 13.9A |
| Max. AC Output Current | 3 x 10A | 3 x 13.3A | 3 x 16.7A |
| Peak Output Apparent Power | 200%, 10s | 200%, 10s | 200%, 10s |
| Nominal Grid Voltage | 220V / 380V; 230V / 400V, 240V / 415V 3W+N+PE | | |

| MODEL | BE 6KW-3PH-LV | BE 8KW-3PH-LV | BE 10KW-3PH-LV |
|---------------------------------|---------------|---|----------------|
| Nominal Grid Frequency | | 50Hz / 60Hz | |
| Transfer Time | | <10ms (Typical) | |
| THDV | | <3% @100% R Load | |
| INPUT (GENERATOR) | | | |
| Max. Input Power | | 30,000W | |
| PROTECTION | | | |
| Protection Category | | Class I | |
| DC Switch | | Yes | |
| Anti-islanding Protection | | Yes | |
| AC Overcurrent Protection | | Yes | |
| DC Reverse Protection | | Yes | |
| Overvoltage Protection | | Yes | |
| Surge Arrester | | DC Type II, AC Type II | |
| Insulation Resistance Detection | | Yes | |
| Leakage Current Protection | | Yes | |
| Built-in Battery Breaker | | 400A, Optionals | |
| 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 | | Smart Cooling | |
| Mounting | | Wall bracket | |
| Dimensions (WxHxD) | | 460mm x 742mm x 266mm | |
| Weight | | 50Kg | |
| HMI & COM | | | |
| Display | | LED+LCD | |
| Communication Interface | | RS485/CAN (for BMS), RS485 (for Meter), DRMs, CAN (for parallel), 2*DO, 2*DI, USB (for Wi-Fi/LAN) | |
| CERTIFICATION | | | |
| Safety | | IEC/EN 62109-1/-2 | |
| EMC | | IEC/EN 61000-6-1/-2/-3/-4, IEC/EN 62920 | |
| Grid | | IEC 61727/62116, IEC 60068, IEC 61683, NRS 097-2-1, EN 50549-1/10 | |

Three-phase Hybrid Inverter

BE6-20KW-3PH (LV)

| MODEL | BE 12KW-3PH-LV | BE 15KW-3PH-LV | BE 20KW-3PH-LV |
|---|--|-----------------------------------|---------------------------------|
| EFFICIENCY | | | |
| Max. Efficiency | | 97.60% | |
| Eur. Efficiency | | 97.00% | |
| INPUT (PV) | | | |
| Max. PV Access Power | | 40,000W | |
| Max. PV Usable Power | 30,000W | 30,000W | 30,000W |
| Max. PV Input Voltage | | 1,000V | |
| Start-up Voltage | | 120V | |
| MPPT Operating Voltage Range | | 160V-980V | |
| Max. Input Current per MPPT | 20A / 20A / 20A | 20A / 20A / 20A | 20A / 20A / 20A |
| Max. Short Circuit Current per MPPT | 30A / 30A / 30A | 30A / 30A / 30A | 30A / 30A / 30A |
| Nos. of MPPT | 3 | 3 | 3 |
| String per MPPT | 1/1/1 | 1/1/1 | 1/1/1 |
| INPUT/OUTPUT (BAT) | | | |
| Battery Type | Lithium-ion / Lead-acid | | |
| No. Of Battery Input | 2* | | |
| Battery Rated Voltage | 48V | | |
| Battery Voltage Range | 40V-60V | | |
| Max. Charge/Discharge Current | 380A / 300A | 380A / 350A | 380A / 380A |
| Max. Charge/Discharge Power | 20,000W / 14,500W | 20,000W / 18,000W | 20,000W / 20,000W |
| OUTPUT (GRID) | | | |
| Nominal AC Output Power | 12,000W | 15,000W | 20,000W |
| Max. AC Output Apparent Power | 13,200VA | 13,200VA | 22,000VA |
| Nominal AC Output Current | 3 x 18.2A / 3 x 17.4A / 3 x 16.7A | 3 x 22.7A / 3 x 21.7A / 3 x 20.8A | 3 x 30.3A / 3 x 29A / 3 x 27.8A |
| Max. AC Output Current | 3 x 20A | 3 x 25A | 3 x 33.3A |
| Max. Single Phase Power | 6,400W | 8,000W | 8,500W |
| Max. Continuous AC Passthrough (grid to load) | 45A | | |
| Nominal Grid Voltage | 220V / 380V; 230V / 400V, 240V / 415V 3W+N+PE | | |
| Nominal Grid Frequency | > 0.99 @rated power (Adjustable 0.8 LD - 0.8 LG) | | |
| Power Factor | > 0.99 @rated power (Adjustable 0.8 LD - 0.8 LG) | | |
| THDi | <3% @rated power | | |
| OUTPUT (BACK UP) | | | |
| Nominal AC Output Power | 12,000W | 15,000W | 20,000W |
| Max. AC Output Apparent Power | 13,200VA | 16,500VA | 22,000VA |
| Nominal AC Output Current | 3 x 18.2A / 3 x 17.4A / 3 x 16.7A | 3 x 22.7A / 3 x 21.7A / 3 x 20.8A | 3 x 30.3A / 3 x 29A / 3 x 27.8A |
| Max. AC Output Current | 3 x 20A | 3 x 25A | 3 x 33.3A |
| Peak Output Apparent Power | 200%, 10s | 200%, 10s | 150%, 10s |
| Nominal Grid Voltage | 220V / 380V; 230V / 400V, 240V / 415V 3W+N+PE | | |

| MODEL | BE 12KW-3PH-LV | BE 15KW-3PH-LV | BE 20KW-3PH-LV |
|---------------------------------|----------------|---|----------------|
| Nominal Grid Frequency | | 50Hz / 60Hz | |
| Transfer Time | | <10ms (Typical) | |
| THDV | | <3% @100% R Load | |
| INPUT (GENERATOR) | | | |
| Max. Input Power | | 30,000W | |
| PROTECTION | | | |
| Protection Category | | Class I | |
| DC Switch | | Yes | |
| Anti-islanding Protection | | Yes | |
| AC Overcurrent Protection | | Yes | |
| DC Reverse Protection | | Yes | |
| Overvoltage Protection | | Yes | |
| Surge Arrester | | DC Type II, AC Type II | |
| Insulation Resistance Detection | | Yes | |
| Leakage Current Protection | | Yes | |
| Built-in Battery Breaker | | 400A, Optionals | |
| 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 | | Smart Cooling | |
| Mounting | | Wall bracket | |
| Dimensions (WxHxD) | | 460mm x 742mm x 266mm | |
| Weight | | 50Kg | |
| HMI & COM | | | |
| Display | | LED+LCD | |
| Communication Interface | | RS485/CAN (for BMS), RS485 (for Meter), DRMs, CAN (for parallel), 2*DO, 2*DI, USB (for Wi-Fi/LAN) | |
| CERTIFICATION | | | |
| Safety | | IEC/EN 62109-1/-2 | |
| EMC | | IEC/EN 61000-6-1/-2/-3/-4, IEC/EN 62920 | |
| Grid | | IEC 61727/62116, IEC 60068, IEC 61683, NRS 097-2-1, EN 50549-1/10 | |

NOTES

The range of output voltage and frequency may vary depending on different grid codes. Specifications are subject to change without advanced notice. *If only one set of terminals is used, the max battery charge/discharge will be limited to 200A.