SBEON | Haier Energy

# Single-Phase Hybrid Inverter HH1P-3.6/4/4.6/5/6KL-A




- Support DC/AC ratio 200%
- Colorful LCD touch screen, more friendly
- Adapted to high-inductance / weak grid, stable operation
- Supports six charge/discharge time slots
- 4ms seamless switching between on-grid and off-grid
- Supports 16-unit parallel connection
- 45°C without derating
- IP66 for outdoor installation
- Adaptive battery compatibility
- Critical load management

| | HHIP-5.KL-A | HHIP-4KL-A | HHIP-4K6-A | HHIP-5KL-A | HHIP-6KL-A |
|---|---|---|---|---|---|
| **PV String Input Data** | | | | | |
| Max. Input Power (W) | 7200 | 6000 | 9200 | 10000 | 10000 |
| Max. Input Power (W) | | | 550 | | |
| MPPT Voltage Range (V) | | | 125-255 | | |
| Full Load MPPT Voltage Range (V) | 240-425 | 240-425 | 256-256 | 276-425 | 300-425 |
| Start-up Voltage (V) | | | 100 | | |
| Rated Input Voltage (V) | | | 370 | | |
| Max, Input Current per MPPT (V) | | | 16/18 | | |
| Max, Short Currot Current per MPPT (V) | | | 29/19 | | |
| Number of MPPT | | | 2 | | |
| Number of Strings per MPPT | | | 1/1 | | |
| **Battery Input Data** | | | | | |
| Battery type | Li-Inn / Lead-acid | | | | |
| Rated Battery Voltage (V) | 46 | | | | |
| Battery Voltage Range (V) | 40 – 60 | | | | |
| Max charge / clacharge Current (A) | 90 | 100 | 110 | 120 | 120 |
| Pack charaged Current (A) | 112.5 | 125 | 117.5 | 150 | 150 |
| Max charge / clacharge Power (W) | 3900 | 4000 | 5500 | 5500 | 5500 |
| Communization | | | RS485 / CAH | | |
| **AC Input/Output Data (On-grid)** | | | | | |
| Max. Input Power (W) | 5400 | 6000 | 6000 | 7500 | 9000 |
| Rated Output Power (W) | 3900 | 4000 | 4000 | 5500 | 5500 |
| Poek Approool Power (W) | 8840 @200ms) | 7000 (@200ms) | 8740 (@200ms) | 9500 (@200ms) | 9600 (@200ms) |
| Rated Output Current (V) | | | 230 | | |
| Rated Frequency (Hz) | | | 50 | | |
| Rated Output Current (A) | 15.7 | 17.4 | 20 | 21.7 | 26 |
| Max. Input / Output Current (A) | 23.5 / 17.5 | 26.0 / 10.1 | 30.0 / 22.0 | 32.0 / 26.9 | 39.1 / 20.0 |
| Power Factor | | | 1.0 ( -0.8 - +0.0) | | |
| **AC Output Data (Stand Alone)** | | | | | |
| Rated Output Power (W) | 3900 | 4000 | 5000 | 5000 | 6000 |
| Rated Output Voltage (V) | | | 230 | | |
| Rated Frequency (Hz) | | | 50 | | |
| Rated Output Current (A) | 15.7 | 17.4 | 20 | 21.7 | 26 |
| Power Factor | | | 10 (-0.0 -+0.0) | | |
| **AC Input Data (Generator)** | | | | | |
| Rated Input Power (W) | 3960 | 4400 | 5000 | 5500 | 6000 |
| Rated Input Voltage (V) | | | 230 | | |
| Rated Frequency (Hz) | | | 50 | | |
| Rated Input Current (A) | 15.7 | 17.4 | 20 | 21.7 | 26 |
| **Efficiency** | | | | | |
| Rated Efficiency | 99.90% | 99.90% | 99.90% | 99.90% | 99.00% |
| Max. Efficiency | 97.00% | 97.00% | 97.00% | 97.80% | 97.60% |
| European Efficiency | 97.00% | 97.00% | 97.00% | 97.00% | 97.00% |
| **General Data** | | | | | |
| Operating Temperature Range (°C) | -25 to -20 (Derating 10) | | | | |
| Humidity | 0-100% | | | | |
| Altitude (m) | ≤2000 (+2000 Derating) | | | | |
| Cooling Method | Natural cooling | | | | |
| Neise (RD) | <50 | | | | |
| Communication | WiFI | | | | |
| Display | LCD Color Touchscreen | | | | |
| Weight (kg) | 22.5 | | | | |
| Dimension (W × H × D mm) | 386 × 365 × 225 | | | | |
| Topology | Non-loslated (PV- AC) / High frequency isolated (Battery Side) | | | | |
| Ingress protection | IPSS | | | | |
| Opeening Method | Wall-mounted | | | | |
| Protective cizes | Class I | | | | |
| Overvoltage category | OVC IV (AC Axani. OVC IV (IV) | | | | |
| Warranty | 5 years | | | | |
| Parallel Units | 16 | | | | |
| **Protection and Certifications and Standards** | | | | | |
| Integrated | PV Input Lightning Protection / Anti-Levoding Protection / RC circuit Breaker / PV String Input Reverse Polarity Protection / Inculction Roultnor Retection / Curreent Current Monitoring Unit / Output Over Current Protection / Output Pronted Protection / Output Over Voltage Protectior | | | | |
| Safety EMC / Standard | EN61000-6-1, EN61000-6-3 | | | | |
| Grid Regulation | NRS2077, IECE1603, IECE1616, IECE1777 | | | | |