Hoymiles

Open Energy for All

# THREE-PHASE HYBRID INVERTER

The HIT-(5-20)L-G3 series is a high-performance three-phase hybrid inverter with excellent reliability, including power classes ranging from 5 kW to 20 kW.

The intelligent EMS function supports self-consumption mode, economy mode, backup mode, peak shaving mode, and time of use mode for multi-scenario applications.

Monitoring management through S-Miles Cloud allows users to remotely diagnose and track the individual system performance over time, offering superior energy production.

HIT-(5-20)L-G3 Series




## Features

01 4 MPPTs with 20 A input; DC/AC oversizing up to 200%

02 100% unbalanced output; max. output of each phase up to 50% rated power

03 Support multiple intelligent operating modes, including Peak Shaving and up to eight configurable 24-hour TOU schedules

04 Integrated AI energy management with generator, heat pump and smart load

05 Max. 10 inverters in parallel for on-grid and off-grid system extension

06 Ultralight for easy installation and space-saving; unique built-in meter solution with up to 50 A bypass

# Technical Specifications

| Model | HIT-5L-G3 | HIT-6L-G3 | HIT-8L-G3 | HIT-10L-G3 | HIT-12L-G3 | HIT-15L-G3 | HIT-17L-G3 | HIT-20L-G3 |
|---|---|---|---|---|---|---|---|---|
| **Battery** | | | | | | | | |
| Battery type | Li-ion/Lead-acid | | | | | | | |
| Battery voltage range (V) | 40-60 | | | | | | | |
| Max. charge/discharge current (A) | 120/120 | 150/150 | 190/190 | 210/210 | 250/250 | 300/300 | 350/350 | 350/350 |
| Charging strategy for Li-ion battery | Self-adaption to BMS | | | | | | | |
| Charging curve | 3 Stages/Equalization | | | | | | | |
| External temperature sensor | Optional | | | | | | | |
| Communication | CAN | | | | | | | |
| **PV Input** | | | | | | | | |
| Recommended max. PV power (W) | 10000 | 12000 | 16000 | 20000 | 24000 | 30000 | 34000 | 40000 |
| Max. input voltage (V) | 1000 | | | | | | | |
| Rated voltage (V) | 720 | | | | | | | |
| Start-up voltage (V) | 150 | | | | | | | |
| MPPT voltage range (V) | 150-900 | | | | | | | |
| Max. input current (A) | 20/20 | 20/20 | 20/20/20 | 20/20/20 | 20/20/20/20 | 20/20/20/20 | 20/20/20/20 | 20/20/20/20 |
| Max. short circuit current (A) | 30/30 | 30/30 | 30/30/30 | 30/30/30 | 30/30/30/30 | 30/30/30/30 | 30/30/30/30 | 30/30/30/30 |
| MPPT number/Max. input strings number | 2/2 | 2/2 | 3/3 | 3/3 | 4/4 | 4/4 | 4/4 | 4/4 |
| **AC Input and Output (On-grid)** | | | | | | | | |
| Rated output power (W) | 5000 | 6000 | 8000 | 10000 | 12000 | 15000 | 17000 | 20000 |
| Max. output apparent power (VA)[1] | 5500 | 6600 | 8800 | 11000 | 13200 | 16500 | 18700 | 22000 |
| Max. continuous AC bypass current (A) | 50 | | | | | | | |
| Grid form | 3L/N/PE | | | | | | | |
| Rated AC output voltage/Range (V) | 380/400, 266-480 | | | | | | | |
| Rated grid frequency (Hz) | 50/60 | | | | | | | |
| Rated output current (A) | 7.6 | 9.1 | 12.2 | 15.2 | 18.2 | 22.8 | 25.8 | 30.4 |
| Max. output current (A) | 8.3 | 10 | 13.3 | 16.7 | 20 | 25 | 28.3 | 33.3 |
| Power factor | >0.99 (0.8 leading ... 0.8 lagging) | | | | | | | |
| THDi (@rated output) | <3% | | | | | | | |
| **AC Output (Back-up)** | | | | | | | | |
| Rated output power (W) | 5000 | 6000 | 8000 | 10000 | 12000 | 15000 | 17000 | 20000 |
| Max. output apparent power (VA)[2] | 10000, 10s | 12000, 10s | 16000, 10s | 20000, 10s | 24000, 10s | 30000, 10s | 34000, 10s | 40000, 10s |
| Back-up switch time (ms) | <0 | | | | | | | |
| Grid form | 3L/N/PE | | | | | | | |
| Rated output voltage (V) | 380/400 | | | | | | | |
| Rated output frequency (Hz) | 50/60 | | | | | | | |
| Max. continuous output current (A) | 7.6 | 9.1 | 12.2 | 15.2 | 18.2 | 22.8 | 25.8 | 30.4 |
| THDv (@linear load) | <3% | | | | | | | |
| **Efficiency** | | | | | | | | |
| MPPT efficiency | 99.9% | | | | | | | |
| Max. efficiency | 98.2% | 98.2% | 98.2% | 98.2% | 98.5% | 98.5% | 98.5% | 98.5% |
| EU efficiency | 97.6% | 97.6% | 97.6% | 97.6% | 98.0% | 98.0% | 98.0% | 98.0% |
| Max. battery discharge to AC efficiency | 95.7% | | | | | | | |
| **Protection** | | | | | | | | |
| Anti-islanding protection | Integrated | | | | | | | |
| PV string input reverse polarity protection | Integrated | | | | | | | |
| Insulation resistor detection | Integrated | | | | | | | |
| Residual current monitoring unit | Integrated | | | | | | | |
| AC overcurrent protection | Integrated | | | | | | | |
| AC short current protection | Integrated | | | | | | | |
| AC overvoltage and undervoltage protection | Integrated | | | | | | | |
| AFCI | Optional | | | | | | | |
| Surge protection | DC Type II/AC Type II | | | | | | | |
| **General** | | | | | | | | |
| Dimensions (W × H × D [mm])[3] | 539 × 696 × 232 | | | | | | | |
| Weight (kg) | 41 | | | | | | | |
| Mounting | Wall mounting | | | | | | | |
| Operating temperature (°C) | -25 to +65 (>45, derating) | | | | | | | |
| Relative humidity | 0-95%, no condensing | | | | | | | |
| Cooling | Natural convection | | Smart fan | | | | | |
| Topology (Solar/Battery) | Transformerless/High-frequency isolation | | | | | | | |
| Altitude (m) | ≤4000 (>2000, derating) | | | | | | | |
| Protection degree | IP66 | | | | | | | |
| User interface | LED & App | | | | | | | |
| Digital input/output | DRM, 2 × DI, 2 × DO | | | | | | | |
| Communication | RS485, Wi-Fi/Ethernet/4G (optional) | | | | | | | |
| **Certifications and Standards** | | | | | | | | |
| Grid connection standard | EN 50549, PN-EN 50549, TOR Erzeuger Type A, VDE 4105, NF EN 0549, RD 647, UNE 217001 217002, SR EN 50549, G98, G99, RETIE, BIS, IEC 61727, IEC 62116, IEC 61683, IEC 60068, AS/NZS 4777.2:2020 | | | | | | | |
| Safety/EMC standard | IEC 62109-1/-2, EN 61000-6-1/-2/-3/-4 | | | | | | | |

(1) For Belgium, the maximum output apparent power is equal to the nominal output apparent power.
(2) Can be achieved only if PV and battery power are sufficient.
(3) Excluding Connectors and Brackets.

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