



Single-phase Hybrid Inverter Datasheet

- HYS-3.0LV-AUG1**
- HYS-3.6LV-AUG1**
- HYS-4.6LV-AUG1**
- HYS-5.0LV-AUG1**
- HYS-6.0LV-AUG1**

Description

The HYS-LV Series is a high-performance single-phase hybrid inverter with excellent reliability, including power classes ranging from 3.0 kW to 6.0 kW.

The intelligent EMS function supports self-consumption mode, economical mode, and backup mode for multi-scenario applications.

Monitoring management through S-Miles Cloud allows users to remotely diagnose and track system's performance over time, maximizing the total solar power production and battery utilization.

Features

- | | | | |
|-----------|---|-----------|---|
| 01 | Intelligent export limitation | 05 | DC/AC ratio up to 150% |
| 02 | Double MPPT tracker, up to 14 A MPPT current | 06 | Ultralight for easy installation and space-saving |
| 03 | Compatible with multiple batteries, providing users with more choices | 07 | Built-in dry contact flexibly set to earth fault alarm, load control or generator control |
| 04 | UPS level switching time <10 ms | 08 | Max. 10 parallel inverters |

Technical Specifications

| Model | HYS-3.0LV-AUG1 | HYS-3.6LV-AUG1 | HYS-4.6LV-AUG1 | HYS-5.0LV-AUG1 | HYS-6.0LV-AUG1 |
|--|---|----------------|----------------|---------------------|---------------------|
| Battery | | | | | |
| Battery type | Li-ion/Lead-acid | | | | |
| Battery voltage range (V) | 40-60 | | | | |
| Max. charge/discharge current (A) | 75/75 | 90/90 | 100/100 | 100/100 | 100/100 |
| Max. charge/discharge power (W) | 3000/3000 | 3600/3600 | 4600/4600 | 5000/5000 | 5000/5000 |
| 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) | 4500 | 6000 | 7500 | 7500 | 7500 |
| Max. input voltage (V) | 550 | | | | |
| Rated voltage (V) | 360 | | | | |
| Start-up voltage (V) | 150 | | | | |
| MPPT voltage range (V) | 125-500 | | | | |
| Max. input current (A) | 14 | 14/14 | 14/14 | 14/14 | 14/14 |
| Max. short circuit current (A) | 17 | 17/17 | 17/17 | 17/17 | 17/17 |
| MPPT number/Max. input strings number | 1/1 | 2/2 | 2/2 | 2/2 | 2/2 |
| AC Input and Output (On-grid) | | | | | |
| Rated output power (W) | 3000 | 3680 | 4600 | 5000 ⁽¹⁾ | 6000 ⁽¹⁾ |
| Max. output apparent power (VA) | 3000 | 3680 | 4600 | 5000 ⁽¹⁾ | 6000 ⁽¹⁾ |
| EPS port output power (W) | 3000 | 3680 | 4600 | 5000 ⁽¹⁾ | 6000 ⁽¹⁾ |
| Max. input power (W) | 6000 | 7360 | 7360 | 7360 | 7360 |
| Grid form | L/N/PE | | | | |
| Rated AC output voltage/Range (V) | 230, 161-276 | | | | |
| Rated grid frequency (Hz) | 50/60 | | | | |
| Rated output current (A) | 13.0 | 16.0 | 20.0 | 21.7 | 26.0 |
| Max. output current (A) | 13.0 | 16.0 | 20.0 | 21.7 | 26.0 |
| Max. input current (A) | 26.1 | 32.0 | 32.0 | 32.0 | 32.0 |
| Power factor | >0.99 (0.8 leading ... 0.8 lagging) | | | | |
| THDi (@rated output) | <3% | | | | |
| AC Output (Off-grid) | | | | | |
| Rated output power (W) | 3000 | 3680 | 4600 | 5000 | 6000 |
| Max. output apparent power (VA) ⁽²⁾ | 6000, 10s | 7360, 10s | 9200, 10s | 10000, 10s | 10000, 10s |
| EPS port output power (W) | 3000 | 3680 | 4600 | 5000 | 6000 |
| Back-up switch time (ms) | <10 | | | | |
| Grid form | L/N/PE | | | | |
| Rated output voltage (V) | 230 | | | | |
| Rated output frequency (Hz) | 50/60 | | | | |
| Max. continuous output current (A) | 13.0 | 16.0 | 20.0 | 21.7 | 26.0 |
| THDv (@linear load) | <3% | | | | |
| Efficiency | | | | | |
| MPPT efficiency | 99.9% | 99.9% | 99.9% | 99.9% | 99.9% |
| Max. efficiency | 97.6% | 97.6% | 97.6% | 97.6% | 97.6% |
| EU efficiency | 97.0% | 97.0% | 97.0% | 97.0% | 97.0% |
| Max. battery discharge to AC efficiency | 95.0% | 95.0% | 95.0% | 95.0% | 95.0% |
| Protection | | | | | |
| Anti-islanding protection | Integrated | | | | |
| PV string input reverse polarity protection | Integrated | | | | |
| Insulation resistor detection | Integrated | | | | |
| Residual current monitoring unit | Integrated | | | | |
| AC over current protection | Integrated | | | | |
| AC short current protection | Integrated | | | | |
| AC overvoltage and undervoltage protection | Integrated | | | | |
| Surge protection | DC Type II/AC Type III | | | | |
| General | | | | | |
| Dimensions (W × H × D [mm]) | 502 × 461 × 202 | | | | |
| Weight (kg) | 24 | | | | |
| Mounting | Wall mounting | | | | |
| Operating temperature (°C) | -25 to +65 (>45, derating) | | | | |
| Relative humidity | 0-95%, no condensing | | | | |
| Cooling | Natural convection | | | | |
| Topology (Solar/Battery) | Transformerless/High-frequency isolation | | | | |
| Altitude (m) | ≤2000 | | | | |
| Protection degree | IP65 | | | | |
| Protection class | Class I | | | | |
| Noise (dB) | <40 | | | | |
| User interface | LED, App | | | | |
| Digital input/output | DRM, 1 × DI, 2 × DO | | | | |
| Communication | RS485, optional: Wi-Fi/Ethernet/4G ⁽³⁾ | | | | |
| Active anti-islanding method | AFDPF + AQDPF ⁽⁴⁾ | | | | |
| Country of Manufacture | China | | | | |
| Certifications and Standards | | | | | |
| Grid connection standard | EN 50549, VDE-AR-N 4105, AS/NZS 4777.2 | | | | |
| Safety/EMC standard | IEC 62109-1/-2, EN 61000-6-1/-3 | | | | |

(1) 4600 for VDE-AR-N 4105 & VDE0126-1-1

(2) Can be achieved only if PV and battery power are sufficient.

(3) The DTS-Ethernet and DTS-4G solutions will be coming soon.

(4) AFDPF: Active Frequency Drift with Positive Feedback; AQDPF: Active Q Drift with Positive Feedback.