



Single-Phase Hybrid Inverter Datasheet

- HYS-3.0LV-EUG1**
- HYS-3.6LV-EUG1**
- HYS-4.6LV-EUG1**
- HYS-5.0LV-EUG1**
- HYS-6.0LV-EUG1**

Description

The HYS-LV Series is a high-performance single-phase hybrid inverter with excellent reliability, including power classes ranging from 3 kW to 6 kW.

The intelligent EMS function supports self-consumption mode, economic 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 | Max. Efficiency 97.6%, European Efficiency 97.0% | 05 | Support both DC-coupled and AC-coupled system |
| 02 | Double MPPT tracker, up to 14 A MPPT current | 06 | EMS has integrated with self-consumption, economic mode, backup mode for multi-scenario application |
| 03 | DC/AC ratio up to 150% | 07 | Built-in dry contact flexibly set to earth fault alarm, load control or generator control |
| 04 | Ultralight for easy installation and space-saving | 08 | Remote monitoring through S-Miles Cloud |

Technical Specifications

| Model | HYS-3.0LV-EUG1 | HYS-3.6LV-EUG1 | HYS-4.6LV-EUG1 | HYS-5.0LV-EUG1 | HYS-6.0LV-EUG1 |
|--|-----------------------------|----------------|---------------------|------------------------|------------------------|
| Battery | | | | | |
| Battery Type | Li-ion / Lead-acid | | | | |
| Nominal Battery Voltage (V) | 48 | | | | |
| Voltage Range (V) | 40-60 | | | | |
| Max. Charge Current (A) | 75 | 90 | 100 | 100 | 100 |
| Max. Discharge Current (A) | 75 | 90 | 100 | 100 | 100 |
| Charging Strategy for Li-ion Battery | Self-adaption to BMS | | | | |
| Charging Curve | 3 Stages / Equalization | | | | |
| External Temperature Sensor | Optional | | | | |
| PV Input | | | | | |
| Max. PV Input Power (W) | 4500 | 6000 | 7500 | 7500 | 7500 |
| Max. PV Input Voltage (V) | 550 | | | | |
| Nominal Input Voltage (V) | 360 | | | | |
| MPPT Voltage Range (V) | 125-500 | | | | |
| Start-up Voltage (V) | 150 | | | | |
| Number of MPPTs | 1 | 2 | 2 | 2 | 2 |
| Max. Number of PV String per MPPT | 1 | 1/1 | 1/1 | 1/1 | 1/1 |
| Max. PV Input Current (A) | 14 | 14/14 | 14/14 | 14/14 | 14/14 |
| Short-circuit Current of PV Input (A) | 17 | 17/17 | 17/17 | 17/17 | 17/17 |
| AC Input and Output (On-grid) | | | | | |
| Nominal Output Apparent Power (VA) | 3000 | 3680 | 4600 | 5000 ⁽¹⁾ | 6000 ⁽¹⁾ |
| Max. Output Apparent Power (VA) | 3000 | 3680 | 4600 ⁽²⁾ | 5000 ⁽¹⁾⁽²⁾ | 6000 ⁽¹⁾⁽²⁾ |
| Max. Input Apparent Power (VA) | 6000 | 7360 | 7360 | 7360 | 7360 |
| Nominal AC Voltage (V) | 230 | | | | |
| Nominal Grid Frequency (Hz) | 50/60 | | | | |
| Max. Output Current (A) | 13.0 | 16.0 | 20.0 | 21.7 | 26.0 ⁽³⁾ |
| Max. Input Current (A) | 26.1 | 32.0 | 32.0 | 32.0 | 32.0 |
| Power Factor | 0.8 leading ... 0.8 lagging | | | | |
| Total Harmonic Distortion (@nominal output) | <3% | | | | |
| AC Output (Off-grid) | | | | | |
| Max. Output Apparent Power (VA) | 3000 | 3680 | 4600 | 5000 | 6000 |
| Peak Output Apparent Power (VA) ⁽⁴⁾ | 6000, 10s | 7360, 10s | 9200, 10s | 10000, 10s | 10000, 10s |
| Nominal AC Voltage (V) | 230 | | | | |
| Nominal AC Frequency (Hz) | 50/60 | | | | |
| Max. Output Current (A) | 13.0 | 16.0 | 20.0 | 21.7 | 26.0 |
| Total Harmonic Distortion (@ linear load) | <3% | | | | |

Technical Specifications

| Model | HYS-3.0LV-EUG1 | HYS-3.6LV-EUG1 | HYS-4.6LV-EUG1 | HYS-5.0LV-EUG1 | HYS-6.0LV-EUG1 |
|---|--|----------------|----------------|----------------|----------------|
| Efficiency | | | | | |
| Max. Efficiency | 97.6% | 97.6% | 97.6% | 97.6% | 97.6% |
| Euro Efficiency | 97.0% | 97.0% | 97.0% | 97.0% | 97.0% |
| Max. Battery to Load Efficiency | 95.0% | 95.0% | 95.0% | 95.0% | 95.0% |
| MPPT Efficiency | 99.9% | 99.9% | 99.9% | 99.9% | 99.9% |
| 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 | | | | | |
| Dimension (W × H × D [mm]) | 502 × 461 × 202 | | | | |
| Weight (kg) | 24 | | | | |
| Mounting | Wall Mounting | | | | |
| Operation Temperature (°C) | -25 to + 65 (>45, derating) | | | | |
| Relative Humidity | 0-95%, no condensing | | | | |
| Altitude (m) | ≤2000 | | | | |
| Cooling | Natural Convection | | | | |
| Protection Degree | IP65 | | | | |
| Noise (dB [A]) | <40 | | | | |
| User Interface | LED & App | | | | |
| Communication with BMS | RS485, CAN | | | | |
| Communication with Meter | RS485 | | | | |
| Communication Interface | RS485, Wi-Fi/Ethernet/4G (optional) | | | | |
| Digital Input/Output | DRM, 1 × DI, 2 × DO | | | | |
| Isolation Method (Solar / Battery) | Transformerless / High-frequency Isolation | | | | |
| Certifications and Standards | | | | | |
| Grid Regulation | EN 50549, VDE-AR-N 4105, AS/NZS 4777.2 | | | | |
| Safety Regulation | IEC 62109-1, IEC 62109-2 | | | | |
| EMC | EN 61000-6-1, EN 61000-6-3 | | | | |

(1) 4600 for VDE-AR-N 4105 & VDE0126-1-1; 4999 for AS/NZS 4777.2

(2) Max. output apparent power 3680 VA for TOR Erzeuger Type A

(3) 21.7 A for AS/NZS 4777.2

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