



Single-Phase Hybrid Inverter Datasheet

- HYS-3.8LV-USG1**
- HYS-4.8LV-USG1**
- HYS-6.0LV-USG1**
- HYS-7.6LV-USG1**
- HYS-9.6LV-USG1**

Description

The HYS-LV-US Series is a high-performance single-phase hybrid inverter with excellent reliability, including power classes ranging from 4 kW to 10 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 individual systems' performance over time, maximizing the total solar power production and battery utilization.

Features

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|-----------|---|-----------|---|
| 01 | Max. Efficiency 98.0%, CEC Efficiency 97.5% | 05 | Support both DC-coupled and AC-coupled system |
| 02 | Double MPPT tracker, up to 14A 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 Hoymiles Cloud |

Technical Specifications

Model	HYS-3.8LV-USG1	HYS-4.8LV-USG1	HYS-6.0LV-USG1	HYS-7.6LV-USG1	HYS-9.6LV-USG1
Battery					
Battery Type	Li-ion / Lead-acid				
Nominal Battery Voltage (V)	48				
Voltage Range (V)	40-60				
Max. Charge Current (A)	80	100	125	160	200
Max. Discharge Current (A)	80	100	125	160	200
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)	5400	6700	8400	10700	13400
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	2	2	2	2	2
Max. Number of PV String per MPPT	1/1	1/1	1/1	2/2	2/2
Max. PV Input Current (A)	14/14	14/14	14/14	28/28	28/28
Short-circuit Current of PV Input (A)	17/17	17/17	17/17	34/34	34/34
AC Input and Output (On-grid)					
Nominal Output Apparent Power (VA)	3840	4800	6000	7680	9600
Max. Output Apparent Power (VA)	3840	4800	6000	7680	9600
Max. Input Apparent Power (VA)	7680	9600	12000	15360	19200
Nominal AC Voltage (V)	240				
Nominal Grid Frequency (Hz)	60				
Max. Output Current (A)	16	20	25	32	40
Max. Input Current (A)	32	40	50	64	80
Power Factor	0.8 leading ... 0.8 lagging				
Total Harmonic Distortion (@nominal output)	< 3%				
AC Output (Off-grid)					
Max. Output Apparent Power (VA)	3840	4800	6000	7680	9600
Peak Output Apparent Power (VA)	7680, 10s	9600, 10s	12000, 10s	15360, 10s	19200, 10s
Nominal AC Voltage (V)	120 / 240 (split phase)				
Nominal AC Frequency (Hz)	60				
Max. Continuous Output Current (A)	16	20	25	32	40
Total Harmonic Distortion (@ linear load)	< 3%				

Technical Specifications

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Efficiency					
Max. Efficiency	98.0%	98.0%	98.0%	98.0%	98.0%
CEC Efficiency	97.5%	97.5%	97.5%	97.5%	97.5%
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 Arc Fault Detection	Integrated				
PV String Input Reverse Polarity Protection	Integrated				
Compliant MLRSD Products	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				
Overvoltage Category	DC Type II / AC Type III				
General					
Dimensions (W × H × D) [mm]	502 × 600 × 202			502 × 700 × 202	
Weight (kg)	30			35	
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	NEMA 4X				
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	1 × DI, 2 × DO				
Isolation Method (Solar / Battery)	Transformerless / High-frequency Isolation				
Certifications and Standards					
Grid Regulation	IEEE 1547-2018, IEEE 1547.1-2020, SRD2.0				
Safety Regulation	UL 1741, CSA C22.2 No.107.1, UL 1741 CRD, UL1741 SB				
AFCI	UL 1699B				
Software Approval	UL 1998				
EMC	FCC Part 15 Class B				