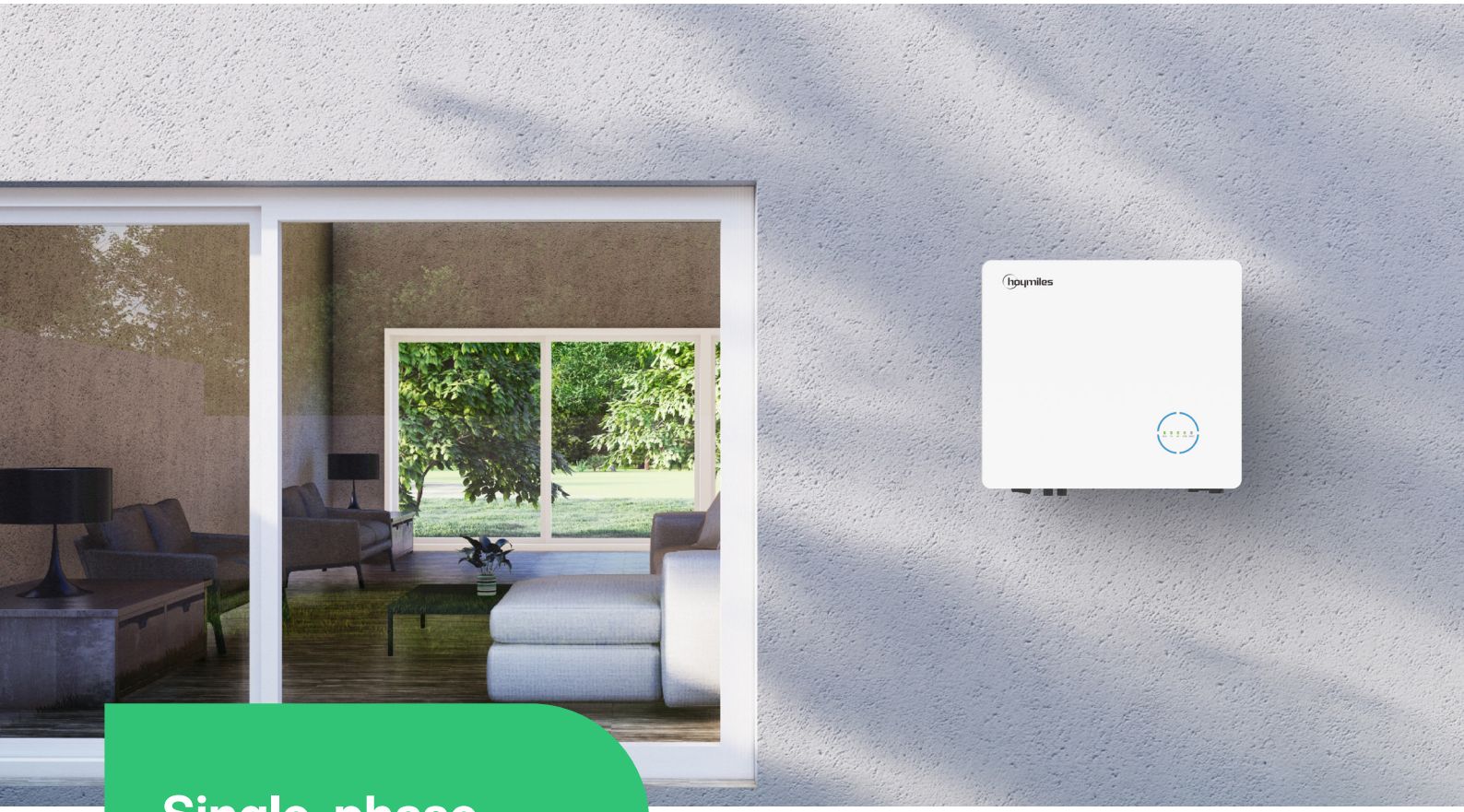

Single-phase Hybrid Inverter

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 3.0 kW to 6.0 kW.

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

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hoymiles.com
sales@hoymiles.com

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				
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[2]	5000[1] [2]	6000[1] [2]
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				
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)[3]	6000, 10s	7360, 10s	9200, 10s	10000, 10s	10000, 10s
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				
Noise (dB)	<40				
User interface	LED, App				
Digital input/output	DRM, 1 × DI, 2 × DO				
Communication	RS485, Wi-Fi/Ethernet/4G (optional)[4]				
Certifications and Standards					
Grid connection standard	EN 50549, VDE-AR-N 4105, VFR: 2019, TOR Erzeuger Type A, RD647, NTS (SENP), CEI 0-21 2019:04, C10-11 Type A				
Safety/EMC standard	IEC 62109-1/-2, EN 61000-6-1/-3				

(1) 4600 for VDE-AR-N 4105 & VDE0126-1-1
(2) Max. output apparent power 3680 VA for TOR Erzeuger Type A
(3) Can be achieved only if PV and battery power are sufficient.
(4) The DTS-4G solution will be coming soon.

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