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

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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%				

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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.

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Three-phase Hybrid Inverter Datasheet

HYT-5.0HV-EUG1
HYT-6.0HV-EUG1
HYT-8.0HV-EUG1
HYT-10.0HV-EUG1
HYT-12.0HV-EUG1

Description

The HYT-HV Series is a high-performance three-phase hybrid inverter with excellent reliability, including power classes ranging from 5 kW to 12 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 the individual system's performance over time, offering superior energy production.

Features

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

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Technical Specifications

Model	HYT-5.0HV-EUG1	HYT-6.0HV-EUG1	HYT-8.0HV-EUG1	HYT-10.0HV-EUG1	HYT-12.0HV-EUG1
Battery					
Battery Type	Li-ion				
Nominal Battery Voltage (V)	500				
Voltage Range (V)	170-600				
Max. Charge Current (A)	20	20	30	30	30
Max. Discharge Current (A)	20	20	30	30	30
Rated Power (W)	5000	6000	8000	10000	10000
Charging Strategy	Self-adaption to BMS				
PV Input					
Max. PV Input Power (W)	7500	9000	12000	15000	15000
Max. PV Input Voltage (V)	1000				
Nominal Input Voltage (V)	720				
MPPT Voltage Range (V)	200-950				
Start-up Voltage (V)	250				
Number of MPPTs	2	2	2	2	2
Max. Number of PV String per MPPT	1/1	1/1	1/1	1/2	1/2
Max. PV Input Current (A)	14/14	14/14	14/14	14/28	14/28
Short-circuit Current of PV Input (A)	17/17	17/17	17/17	17/34	17/34
AC Input and Output (On-grid)					
Nominal Output Apparent Power (VA)	5000	6000	8000	10000	12000
Max. Output Apparent Power (VA)	5500	6600	8800	11000	12000
Max. Input Apparent Power (VA)	10000	12000	16000	16000	16000
Nominal AC Voltage (V)	400/380, 3L/N/PE				
Nominal Grid Frequency (Hz)	50/60				
Max. Output Current (A)	8.3	10.0	13.3	16.7	17.4
Max. Input Current (A)	15.2	18.2	24.2	24.2	24.2
Power Factor	0.8 leading ... 0.8 lagging				
Total Harmonic Distortion (@nominal output)	<3%				
AC Output (Off-grid)					
Max. Output Apparent Power (VA)	5000	6000	8000	10000	12000
Peak Output Apparent Power (VA)	10000, 10s	12000, 10s	16000, 10s	16000, 10s	16000, 10s
Nominal AC Voltage (V)	400/380, 3L/N/PE				
Nominal AC Frequency (Hz)	50/60				
Max. Output Current (A)	8.3	10.0	13.3	16.7	17.4
Total Harmonic Distortion (@linear load)	<3%				

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Technical Specifications

Model	HYT-5.0HV-EUG1	HYT-6.0HV-EUG1	HYT-8.0HV-EUG1	HYT-10.0HV-EUG1	HYT-12.0HV-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	97.5%	97.5%	97.5%	97.5%	97.5%
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 × 486 × 202				
Weight (kg)	26.5				
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 / Transformerless				
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				

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