



## Single-phase AC-coupled Inverter

The HAS-LV-EUG1 Series is designed to retrofit PV systems, accommodating power classes from 3 kW to 5 kW. It seamlessly integrates with existing PV inverters to create an efficient AC coupling system.

### Model

**HAS-3.0LV-EUG1   HAS-3.6LV-EUG1   HAS-4.6LV-EUG1  
HAS-5.0LV-EUG1**

The intelligent EMS function offers versatile support, enabling self-consumption mode, economic mode, and backup mode for various scenarios. Additionally, remote monitoring and management via S-Miles Cloud empowers users to comprehensively track system operation, optimizing both power and energy utilization over time.

## Features



Intelligent export limitation



Ultralight design for easy installation and space-saving



Compatibility with multiple batteries, offering users greater flexibility



Built-in dry contact for flexible monitoring of earth fault alarms, load control, or generator control



UPS-level switching time of less than 10 Milliseconds



Supports up to 10 parallel inverters

# Technical Specifications

Model	HAS-3.0LV-EUG1	HAS-3.6LV-EUG1	HAS-4.6LV-EUG1	HAS-5.0LV-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
Max. charge/discharge power (W)	3000/3000	3600/3600	4600/4600	5000/5000
Charging strategy for Li-ion battery	Self-adaption to BMS			
Charging curve	3 Stages/Equalization			
External temperature sensor	Optional			
Communication	CAN, RS485			
AC Input and Output (On-grid)				
Rated output power (W)	3000	3680	4600	5000 <sup>(1)</sup>
Max. output apparent power (VA)	3000	3680	4600 <sup>(2)</sup>	5000 <sup>(1) (2)</sup>
Max. input power (W)	6000	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
Max. input current (A)	26.1	32.0	32.0	32.0
Power factor	>0.99 (0.8 leading ... 0.8 lagging)			
THDi (@rated output)	<3%			
AC Output (On-grid)				
Rated output power (W)	3000	3680	4600	5000
Max. output apparent power (VA)	3300, 10s	4048, 10s	5060, 10s	5500, 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
THDv (@linear load)	<3%			
Efficiency				
Max. efficiency	95.2%	95.2%	95.2%	95.2%
Protection				
Anti-islanding protection	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)	21			
Mounting	Wall Mounting			
Operating temperature (°C)	-25 to +65 (>45, derating)			
Relative humidity	0-95%, no condensing			
Cooling	Natural Convection			
Topology (Battery)	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, Optional: Wi-Fi/4G/Ethernet			
Certifications and Standards				
Grid connection standard	EN 50549, VDE-AR-N 4105, AS/NZS 4777.2, VFR: 2019, TOR Erzeuger Type A			
Safety/EMC standard	IEC 62109-1/-2, IEC 62477-1,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