Single-phase AC-coupled Inverter Datasheet

HAS-3.8LV-USG1
HAS-4.8LV-USG1
HAS-6.0LV-USG1
HAS-7.6LV-USG1
HAS-9.6LV-USG1
HAS-11.5LV-USG1

Description

The HAS-LV-USG1 Series is for retrofit application, including power classes ranging from 3.8 kW to 11.5 kW. It can be installed with existing PV inverters, forming an AC-coupled system.

The intelligent EMS function supports self-consumption mode, economical mode, and backup mode for multi-scenario applications. Monitoring management through S-Miles Cloud allows users to remotely diagnose and track individual system's performance over time, maximizing the total battery utilization.

Features

01	Max. battery discharge to AC efficiency 95.0%
02	Compatible with various 48 V low voltage batteries
03	Ultralight for easy installation and space-saving
04	Split-phase backup output w/o bulky autotransformer
05	Seamless backup power for whole home or critical loads
06	Smart energy storage system operating modes
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	HAS-3.8LV-USG1	HAS-4.8LV-USG1	HAS-6.0LV-USG1	HAS-7.6LV-USG1	HAS-9.6LV-USG1	HAS-11.5LV-USG1
Battery						
Battery type	Li-ion/Lead-acid(1)					
Battery voltage range (V)	40-60					
Max. charge/discharge current (A)	80/80	100/100	100/100	160/160	200/200	200/200
Max. charge/discharge power (W)	3840/3840	4800/4800	4800/4800	7600/7600	9600/9600	9600/9600
Charging strategy for Li-ion battery	Self-adaption to BMS					
Charging curve	3 Stages/Equalization					
External temperature sensor	Optional					
Communication	CAN					
AC Input and Output (On-grid)						
Rated output power (W)	3840	4800	6000	7680	9600	11520
Max. output apparent power (VA)	3840	4800	6000	7680	9600	11520
Max. input power (W)	7680	9600	9600	15360	19200	19200
Rated AC output voltage/Range (V)	240, 211-264					
Rated grid frequency (Hz)	60					
Max. output current (A)	16	20	25	32	40	48
Max. input current (A)	32	40	40	64	80	80
Power factor	>0.99 (0.8 leading ... 0.8 lagging)					
THDi (@rated output)	<3%					
AC Output (Off-grid)						
Rated output power (W)	3840	4800	4800	7680	9600	9600
Max. output apparent power (VA)	7680, 10s	9600, 10s	9600, 10s	15360, 10s	19200, 10s	19200, 10s
Back-up switch time (ms)	<40					
Rated output voltage (V)	120/240 (split phase)					
Rated output frequency (Hz)	60					
Max. continuous output current (A)	16	20	20	32	40	40
THDv (@linear load)	<3%					
Efficiency						
Max. battery discharge to AC efficiency	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%
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)	19.8 × 24.2 × 7.95 inch (502 × 615 × 202 mm)			19.8 × 29.1 × 7.95 inch (502 × 740 × 202 mm)		
Weight	61.7 lbs (28 kg)			81.6 lbs (37 kg)		
Mounting	Wall mounting					
Operating temperature	-13℉ to +149℉ (>113℉, derating)/-25℃ to +65℃ (>45℃, derating)					
Relative humidity	0-95%, no condensing					
Cooling	Natural convection					
Topology (Battery)	High-frequency isolation					
Altitude	≤6562 ft (2000 m)					
Protection degree	Type 4X					
Noise (dB)	<40					
User interface	LED & App					
Digital input/output	1 × DI, 2 × DO					
Max. parallel	10(2)			10(3)		
Communication	RS485, optional: Wi-Fi/WLAN/4G(4)					
Warranty	10 Years					
Certifications and Standards						
Grid connection standard	IEEE 1547-2018, IEEE 1547.1-2020, SRD2.0					
Safety/EMC standard	UL 1741, CSA C22.2 No.107.1, UL 1741 CRD, UL 1741 SB, FCC Part 15 Class B					
Software approval	UL 1998					

(1) Lead-acid batteries will be supported soon.
(2) On-grid and off-grid parallel solutions will be coming soon.
(3) Off-grid parallel solution will be coming soon.
(4) The DTS-4G solution will be coming soon.

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