

Attestation of Conformity

Attestation No: SHA-AoC-230017

Applicant Name & Address: Bluesun Solar Co., Ltd.

1499 Zhenxing Road, Shushan District Hefei City, Anhui Province,

230031, P.R. China

Factory Name & Address: CF7C04F0

Product Description: Hybrid inverter Brand Name: BLUESUN ESS

Model: BSE*H3 (*=3K, 4K, 5K, 6K, 8K, 10K, 12K, 15K, 17K, 20K, 25K, 30K)

BSE*H3P (*=3K, 4K, 5K, 6K, 8K, 10K, 12K)

BSE*H3A (*=3K, 4K, 5K, 6K, 8K, 10K, 12K, 15K, 17K)

BSE*H3C (*=3K, 4K, 5K, 6K)

Characteristics: See appendix for details

Standards: EN 62109-1:2010; EN 62109-2:2011

EU Directive: the Low Voltage Directive (LVD) (2014/35/EU)

Test Report No: 230801345SHA-001, 230801345SHA-002

Issued by: Intertek Testing Services Ltd. Shanghai

West Area, 2nd Floor, No. 707, Zhangyang Road, China (Shanghai)

Pilot Free Trade Zone, Shanghai, P. R. China

Issue date: 2023-10-23

This is to attest that the Technical Construction File for the product listed above has been evaluated against the Essential Safety Requirements of Annex I of the Low Voltage Directive (2014/35/EU). This Attestation can be used in support of the Manufacturers Declaration of Conformity on affixing the CE mark. Product conformity to CE marking is not assured until all other applicable EU Regulations are met in full.

Name: Qiao Qiao

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Ratings & Principle Characteristics:

Specifications table					
Model	BSE3KH3 BSE4KH3 BSE5KH3 BSE6KH				
PV input					
P pv Max(kW)	5	6	7.5	9	
Vmax PV (Vdc) (absolute Max.)	1000	1000	1000	1000	
Isc PV (absolute Max.) (A)	30*2	30*2	30*2	30*2	
Number MPP trackers	2	2	2	2	
Number input strings	1/1	1/1	1/1	1/1	
Max. PV input current (A)	20*2	20*2	20*2	20*2	
MPPT voltage range (Vdc)	150-850	150-850	150-850	150-850	
Vdc range @ full power (Vdc)	200-850	200-850	200-850	250-850	
Battery (charge/discharge)					
Battery type		Li-ion/Le	ead-acid		
Battery Normal Voltage (Range) (Vdc)	150	0-800(Field adapt b	attery voltage ran	ge)	
Max charge/discharge Current(A)	30	30	30	30	
Max charge/discharge Power(kW)	3	4	5	6	
AC Grid (input and output)					
Normal AC Voltage (VAC)		3P+N+PE/3P	+PE 230/400		
Frequency (Hz)		5	0		
Normal AC Current (A)	4.4	5.8	7.3	8.7	
Max. cont. input/output current (A)	8 / 5.3	10.5 / 7	13 / 8.5	16 / 10.5	
Rated Power (kW)	3	4	5	6	
Rated Apparent Power (kVA)	3	4	5	6	
Max. cont. input/output Power (kW)	4.5 / 3.3	6 / 4.4	7.5 / 5.5	9 / 6.6	
Max. cont. Apparent input/output Power (KVA)	4.5 / 3.3	6 / 4.4	7.5 / 5.5	9 / 6.6	
Power factor(adjustable)		1.0(-0.8	3~ +0.8)		
AC Load output (stand alone)					
Normal Voltage (VAC)		3P+N+PE/3P	+PE 230/400		
Frequency (Hz)		5	0		
Nominal Current (A)	4.4	5.8	7.3	8.7	
Max. cont. current (A)	5.3	7	8.5	10.5	
Max. cont. Power (kW)	3	4	5	6	
Rated Apparent Power (kVA)	3	4	5	6	
Max. cont. Apparent Power (kVA)	3	4	5	6	
Power factor	1.0				
Others					
Ingress protection (IP)	IP65				
Protective class	Class I				
Temperature (°C)	-25°C to +60°C (Derating 45°C)				
Inverter Isolation	Non-isolated (PV-AC-BAT)				
Overvoltage category	OVC III (AC Main), OVC II (PV)				
Firmware Version	V1.01				
Software Version	V01				



Ratings & Principle Characteristics:

	Specifications table					
Model	BSE8KH3 BSE10KH3 BSE12KH3 BSE15KH3					
PV input						
P pv Max(kW)	12	15	18	22.5		
Vmax PV (Vdc) (absolute Max.)	1000	1000	1000	1000		
Isc PV (absolute Max.) (A)	30*2	30*2	30*2	30+48		
Number MPP trackers	2	2	2	2		
Number input strings	1/1	1/1	1/1	1/2		
Max. PV input current (A)	20*2	20*2	20*2	20+32		
MPPT voltage range (Vdc)	150-850	150-850	150-850	150-850		
Vdc range @ full power (Vdc)	300-850	500-850	500-850	500-850		
Battery (charge/discharge)						
Battery type		Li-ion/Le	ead-acid			
Battery Normal Voltage (Range) (Vdc)	150	0-800(Field adapt b	attery voltage ran	ge)		
Max charge/discharge Current(A)	30	30	30	50		
Max charge/discharge Power(kW)	8	10	12	15		
AC Grid (input and output)						
Normal AC Voltage (VAC)		3P+N+PE/3P	+PE 230/400			
Frequency (Hz)		5	0			
Normal AC Current (A)	11.6	14.5	17.4	21.8		
Max. cont. input/output current (A)	20 / 13.5	26 / 17	32 / 21.5	40.5 / 27		
Rated Power (kW)	8	10	12	15		
Rated Apparent Power (kVA)	8	10	12	15		
Max. cont. input/output Power (kW)	12 / 8.8	15 / 11	18 / 13.2	22.5 / 16.5		
Max. cont. Apparent input/output Power						
(kVA)	12 / 0.0	10/11	10 / 13.2	22.5 / 16.5		
Power factor(adjustable)		1.0(-0.8	3~ +0.8)			
AC Load output (stand alone)						
Normal Voltage (VAC)		3P+N+PE/3P	+PE 230/400			
Frequency (Hz)		5	0			
Nominal Current (A)	11.6	14.5	17.4	21.8		
Max. cont. current (A)	13.5	17	21.5	27		
Max. cont. Power (kW)	8	10	12	15		
Rated Apparent Power (kVA)	8	10	12	15		
Max. cont. Apparent Power (kVA)	8	10	12	15		
Power factor	1.0					
Others						
Ingress protection (IP)	IP65					
Protective class	Class I					
Temperature (°C)	-25°C to +60°C (Derating 45°C)					
Inverter Isolation	Non-isolated (PV-AC-BAT)					
Overvoltage category	OVC III (AC Main), OVC II (PV)					
Firmware Version	V1.01					
Software Version	V01					



Ratings & Principle Characteristics:

Specifications table					
Model	BSE3KH3P BSE4KH3P BSE5KH3P BSE6KH3				
PV input					
P pv Max(kW)	5	6	7.5	9	
Vmax PV (Vdc) (absolute Max.)	1000	1000	1000	1000	
Isc PV (absolute Max.) (A)	30*2	30*2	30*2	30*2	
Number MPP trackers	2	2	2	2	
Number input strings	1/1	1/1	1/1	1/1	
Max. PV input current (A)	20*2	20*2	20*2	20*2	
MPPT voltage range (Vdc)	150-850	150-850	150-850	150-850	
Vdc range @ full power (Vdc)	200-850	200-850	200-850	250-850	
Battery (charge/discharge)					
Battery type		Li-ion/Le	ead-acid		
Battery Normal Voltage (Range) (Vdc)	80	-600(Field adapt b	attery voltage rang	ae)	
Max charge/discharge Current(A)	50	50	50	50	
Max charge/discharge Power(kW)	3	4	5	6	
AC Grid (input and output)					
Normal AC Voltage (VAC)		3P+N+PE/3P	+PE 230/400		
Frequency (Hz)		5	0		
Normal AC Current (A)	4.4	5.8	7.3	8.7	
Max. cont. input/output current (A)	8 / 5.3	10.5 / 7	13 / 8.5	16 / 10.5	
Rated Power (kW)	3	4	5	6	
Rated Apparent Power (kVA)	3	4	5	6	
Max. cont. input/output Power (kW)	4.5 / 3.3	6 / 4.4	7.5 / 5.5	9 / 6.6	
Max. cont. Apparent input/output Power (KVA)	4.5 / 3.3	6 / 4.4	7.5 / 5.5	9 / 6.6	
Power factor(adjustable)		1.0(-0.8	3~ +0.8)		
AC Load output (stand alone)					
Normal Voltage (VAC)		3P+N+PE/3P	+PE 230/400		
Frequency (Hz)		5	0		
Nominal Current (A)	4.4	5.8	7.3	8.7	
Max. cont. current (A)	5.3	7	8.5	10.5	
Max. cont. Power (kW)	3	4	5	6	
Rated Apparent Power (kVA)	3	4	5	6	
Max. cont. Apparent Power (kVA)	3	4	5	6	
Power factor	1.0				
Others					
Ingress protection (IP)	IP65				
Protective class	Class I				
Temperature (°C)	-25°C to +60°C (Derating 45°C)				
Inverter Isolation	Non-isolated (PV-AC-BAT)				
Overvoltage category	OVC III (AC Main), OVC II (PV)				
Firmware Version	V1.01				
Software Version	V01				



Ratings & Principle Characteristics:

Specifications table					
Model	BSE8KH3P BSE10KH3P BSE12KH				
PV input					
P pv Max(kW)	12	15	18		
Vmax PV (Vdc) (absolute Max.)	1000	1000	1000		
Isc PV (absolute Max.) (A)	30*2	30*2	30*2		
Number MPP trackers	2	2	2		
Number input strings	1/1	1/1	1/1		
Max. PV input current (A)	20*2	20*2	20*2		
MPPT voltage range (Vdc)	150-850	150-850	150-850		
Vdc range @ full power (Vdc)	300-850	500-850	500-850		
Battery (charge/discharge)					
Battery type		Li-ion/Lead-acid			
Battery Normal Voltage (Range) (Vdc)	80-600(Field adapt battery voltage range)	120-650(Field adapt ba	attery voltage range)		
Max charge/discharge Current(A)	50	50	50		
Max charge/discharge Power(kW)	8	10	12		
AC Grid (input and output)					
Normal AC Voltage (VAC)	3P	+N+PE/3P+PE 230/400			
Frequency (Hz)		50			
Normal AC Current (A)	11.6	14.5	17.4		
Max. cont. input/output current (A)	20 / 13.5	26 / 17	32 / 21.5		
Rated Power (W)	8	10	12		
Rated Apparent Power (kVA)	8 10		12		
Max. cont. input/output Power (kW)	12 / 8.8 15 / 11		18 / 13.2		
Max. cont. Apparent input/output Power (kVA)	12 / 8.8 15 / 11		18 / 13.2		
Power factor(adjustable)		1.0(-0.8~ +0.8)			
AC Load output (stand alone)					
Normal Voltage (VAC)	3P	+N+PE/3P+PE 230/400			
Frequency (Hz)		50			
Nominal Current (A)	11.6	14.5	17.4		
Max. cont. current (A)	13.5	17	21.5		
Max. cont. Power (kW)	8	10	12		
Rated Apparent Power (kVA)	8	10	12		
Max. cont. Apparent Power (kVA)	8	10	12		
Power factor	1.0				
Others					
Ingress protection (IP)	IP65				
Protective class	Class I				
Temperature (°C)	-25°C to +60°C (Derating 45°C)				
Inverter Isolation	Non-isolated (PV-AC-BAT)				
Overvoltage category	OVC III (AC Main), OVC II (PV)				
Firmware Version	V1.01				
Software Version	V01				



Ratings & Principle Characteristics:

Specifications table					
Model	BSE17KH3 BSE20KH3 BSE25KH3 BSE30KH				
PV input					
P pv Max(kW)	25.5	30 37.5		45	
Vmax PV (Vdc) (absolute Max.)	1000	1000	1000	1000	
Isc PV (absolute Max.) (A)	48*2	48*2	60*2	60*2	
Number MPP trackers	2	2	2	2	
Number input strings	2/2	2/2	2/2	2/2	
Max. PV input current (A)	32*2	32*2	40*2	40*2	
MPPT voltage range (Vdc)	150-850	150-850	150-850	150-850	
Vdc range @ full power (Vdc)	500-850	500-850	500-850	500-850	
Battery (charge/discharge)					
Battery type		Li-ion/Le	ead-acid		
Battery Normal Voltage (Range) (Vdc)	150)-800(Field adapt b	oattery voltage ran	ige)	
Max charge/discharge Current(A)	50	50	60	60	
Max charge/discharge Power(kW)	17	20	25	30	
AC Grid (input and output)					
Normal AC Voltage (VAC)		3P+N+PE/3P	+PE 230/400		
Frequency (Hz)		5	0		
Normal AC Current (A)	24.7	29	36.3	43.5	
Max. cont. input/output current (A)	45 / 30	48 / 32	60 / 40	72 / 48	
Rated Power (kW)	17	20	25	30	
Rated Apparent Power (kVA)	17	20	25	30	
Max. cont. input/output Power (kW)	25.5 / 18.7	30 / 22	37.5 / 27.5	45 / 33	
Max. cont. Apparent input/output Power (kVA)	25.5 / 18.7	30 / 22	37.5 / 27.5	45 / 33	
Power factor(adjustable)		1.0(-0.8	3~ +0.8)		
AC Load output (stand alone)		,	•		
Normal Voltage (VAC)		3P+N+PE/3P	+PE 230/400		
Frequency (Hz)		5	0		
Nominal Current(A)	24.7	29	36.3	43.5	
Max. cont. current (A)	30	32	40	48	
Max. cont. Power (kW)	17	20	25	30	
Rated Apparent Power (kVA)	17	20	25	30	
Max. cont. Apparent Power (kVA)	17	20	25	30	
Power factor	1.0				
Others					
Ingress protection (IP)	IP65				
Protective class	Class I				
Temperature (°C)	-25°C to +60°C (Derating 45°C)				
Inverter Isolation	Non-isolated (PV-AC-BAT)				
Overvoltage category	OVC III (AC Main), OVC II (PV)				
Firmware		V1			
Software Version	V01				



Ratings & Principle Characteristics:

Specifications table					
Model	BSE3KH3A BSE4KH3A BSE5KH3A BSE6KH3A				
PV input					
P pv Max(kW)	5	6	7.5	9	
Vmax PV (Vdc) (absolute Max.)	1000	1000	1000	1000	
Isc PV (absolute Max.) (A)	30*2	30*2	30*2	30*2	
Number MPP trackers	2	2	2	2	
Number input strings	1/1	1/1	1/1	1/1	
Max. PV input current (A)	20*2	20*2	20*2	20*2	
MPPT voltage range (Vdc)	150-850	150-850	150-850	150-850	
Vdc range @ full power (Vdc)	200-850	200-850	200-850	200-850	
Battery (charge/discharge)					
Battery type		Li-ion/Le	ead-acid		
Battery Normal Voltage Range (Vdc)	150)-600(Field adapt b	pattery voltage ran	ge)	
Max charge/discharge Current(A)	30	30	30	30	
Max charge/discharge Power(kW)	3	4	5	6	
AC Grid (input and output)					
Normal AC Voltage (VAC)		3P+PE/3F	P 133/230		
Frequency (Hz)		5	0		
Normal AC Current (A)	7.6	10.1	12.6	15.1	
Max. cont. input/output current (A)	16 / 10.5	20 / 13.5	26 / 17	32 / 21.5	
Rated Power (kW)	3	4	5	6	
Rated Apparent Power (kVA)	3	4	5	6	
Max. cont. input/output Power (kW)	4.5 / 3.3	6 / 4.4	7.5 / 5.5	9 / 6.6	
Max. cont. Apparent input/output Power (kVA)	4.5 / 3.3 6 / 4.4 7.5 / 5.5 9 /				
Power factor(adjustable)		1.0(-0.8	3~ +0.8)		
AC Load output (stand alone)		,	,		
Normal Voltage (VAC)		3P+PE/3F	P 133/230		
Frequency (Hz)		5	0		
Nominal Current (A)	7.6	10.1	12.6	15.1	
Max. cont. current (A)	10.5	13.5	17	21.5	
Max. cont. Power (kW)	3	4	5	6	
Rated Apparent Power (kVA)	3	4	5	6	
Max. cont. Apparent Power (kVA)	3	4	5	6	
Others					
Ingress protection (IP)	IP65				
Protective class	Class I				
Temperature (°C)	-25°C to +60°C (Derating 45°C)				
Inverter Isolation	Non-isolated (PV - AC - BAT)				
Overvoltage category		OVC III (AC Ma	in), OVC II (PV)		
Firmware		V1	.01		
Software Version	V01				



Ratings & Principle Characteristics:

Specifications table					
Model	BSE3KH3C BSE4KH3C BSE5KH3C BSE6KH3				
PV input					
P pv Max(kW)	5	6 7.5		9	
Vmax PV (Vdc) (absolute Max.)	1000	1000	1000	1000	
Isc PV (absolute Max.) (A)	30*2	30*2	30*2	30*2	
Number MPP trackers	2	2	2	2	
Number input strings	1/1	1/1	1/1	1/1	
Max. PV input current (A)	20*2	20*2	20*2	20*2	
MPPT voltage range (Vdc)	150-850	150-850	150-850	150-850	
Vdc range @ full power (Vdc)	200-850	200-850	200-850	200-850	
Battery (charge/discharge)					
Battery type		Li-ion/Le			
Battery Normal Voltage Range (Vdc)	80	-600(Field adapt b	attery voltage rang	ge)	
Max charge/discharge Current(A)	50	50	50	50	
Max charge/discharge Power(kW)	3	4	5	6	
AC Grid (input and output)					
Normal AC Voltage (VAC)		3P+PE/3F	P 133/230		
Frequency (Hz)		5	0		
Normal AC Current (A)	7.6	10.1	12.6	15.1	
Max. cont. input/output current (A)	16 / 10.5	20 / 13.5	26 / 17	32 / 21.5	
Rated Power (kW)	3	4	5	6	
Rated Apparent Power (kVA)	3	4	5	6	
Max. cont. input/output Power (kW)	4.5 / 3.3	6 / 4.4	7.5 / 5.5	9 / 6.6	
Max. cont. Apparent input/output Power (kVA)	4.5 / 3.3 6 / 4.4 7.5 / 5.5 9 / 6				
Power factor(adjustable)		1.0(-0.8	3~ +0.8)	<u> </u>	
AC Load output (stand alone)			,		
Normal Voltage (VAC)		3P+PE/3F	P 133/230		
Frequency (Hz)		5	0		
Nominal Current (A)	7.6	10.1	12.6	15.1	
Max. cont. current (A)	10.5	13.5	17	21.5	
Max. cont. Power (kW)	3	4	5	6	
Rated Apparent Power (kVA)	3	4	5	6	
Max. cont. Apparent Power (kVA)	3	4	5	6	
Others					
Ingress protection (IP)	IP65				
Protective class	Class I				
Temperature ($^{\circ}$ C)	-25°C to +60°C (Derating 45°C)				
Inverter Isolation	Non-isolated (PV - AC - BAT)				
Overvoltage category	OVC III (AC Main), OVC II (PV)				
Firmware		V1	.01		
	V01				



Ratings & Principle Characteristics:

	Specifications table					
Model	BSE8KH3A	BSE10KH3A	BSE12KH3A	BSE15KH3A	BSE17KH3A	
PV input						
P pv Max(kW)	12	15	18	22.5	25.5	
Vmax PV (Vdc) (absolute Max.)	1000	1000	1000	1000	1000	
Isc PV (absolute Max.) (A)	30+48	48*2	48*2	60*2	60*2	
Number MPP trackers	2	2	2	2	2	
Number input strings	1/2	2/2	2/2	2/2	2/2	
Max. PV input current (A)	20+32	32*2	32*2	40*2	40*2	
MPPT voltage range (Vdc)	150-850	150-850	150-850	150-850	150-850	
Vdc range @ full power (Vdc)	200-850	200-850	250-850	300-850	300-850	
Battery (charge/discharge)						
Battery type			_i-ion/Lead-aci			
Battery Normal Voltage Range (Vdc)		150-600(Field	adapt battery	voltage range)		
Max charge/discharge Current(A)	50	50	50	60	60	
Max charge/discharge Power(kW)	8	10	12	15	17	
AC Grid (input and output)						
Normal AC Voltage (VAC)		3F	P+PE/3P 133/2	30		
Frequency (Hz)			50			
Normal AC Current (A)	20.1	25.1	30.1	37.6	42.7	
Max. cont. input/output current (A)	40.5 / 27	45 / 30	48 / 32	60 / 40	72 / 48	
Rated Power (kW)	8	10	12	15	17	
Rated Apparent Power (kVA)	8	10	12	15	17	
Max. cont. input/output Power (kW)	12 / 8.8	15 / 11	18 / 13.2	22.5 / 16.5	25.5 / 18.7	
Max. cont. Apparent input/output Power (kVA)	12 / 8.8	15 / 11	18 / 13.2	22.5 / 16.5	25.5 / 18.7	
Power factor(adjustable)			1.0(-0.8~ +0.8)		
AC Load output (stand alone)						
Normal Voltage (VAC)		3F	P+PE/3P 133/2	30		
Frequency (Hz)			50			
Nominal Current (A)	20.1	25.1	30.1	37.6	42.7	
Max. cont. current (A)	27	30	32	40	48	
Max. cont. Power (kW)	8	10	12	15	17	
Rated Apparent Power (kVA)	8	10	12	15	17	
Max. cont. Apparent Power (kVA)	8	10	12	15	17	
Others						
Ingress protection (IP)	IP65					
Protective class	Class I					
Temperature (°C)	-25°C to +60°C (Derating 45°C)					
Inverter Isolation	Non-isolated (PV - AC - BAT)					
Overvoltage category	OVC III (AC Main), OVC II (PV)					
Firmware	V1.01					
Software Version			V01			
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