

Test Verification of Conformity

Verification Number: 2408B2790SHA-V1

On the basis of the tests undertaken, the sample<s> of the below product has been tested by an accredited 3rd party laboratory in accordance to the referenced specification<s>/standard<s> at the time the tests were carried out. This verification is part of the full test report<s> and should be read in conjunction with it <them>.

This document can be used in support of a claim in meeting relevant < EU Low Voltage Directive (LVD) (2014/35/EU)>legislation and mandatory Conformity Marking. And in accordance with EU / UK law, the claim is the sole obligation of the Manufacturer/ Importer.

Applicant Name & Address:	Afore New Energy Technology (Shanghai) Co., Ltd. Building 7, No.333 Wanfang Rd, Minhang District, Shanghai, China. 201112
Product Description:	Hybrid Inverter
Ratings & Principle Characteristics:	See Appendix(Specifications table)
Models/Type References:	AF*-TH (*=36K, 40K, 45K, 50K, 60K) AF*-TH-0 (*=36K, 40K, 45K, 50K, 60K) AF*-THA (*=19.99K, 20K, 24.99K, 25K, 29.99K, 30K, 36K) AF*-THA-0 (*=20K, 25K, 30K, 36K)
Brand Names:	Afore
Specification<s>/Standards:	IEC/EN 62109 1:2010 IEC/EN 62109-2:2011
Verification Issuing Office Name & Address:	Intertek Testing Services (Shanghai FTZ) Co., Ltd. Building No.86, 1198 Qinzhou Road (North), Shanghai 200233, China
Date of Tests:	2024-08-30 to 2024-12-23
Test Report Number(s):	2408B2790SHA-001/002
Additional information in Appendix.	

Signature



Name: Max Jin

Position: General Manager

Date: 2024-12-30

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APPENDIX: Test Verification of Conformity

This is an Appendix to Test Verification of Conformity Number: 2408B2790SHA-V1

Manufacture Name & Address: Same as applicant

Specifications table					
Model	AF36K-TH	AF40K-TH	AF45K-TH	AF50K-TH	AF60K-TH
PV input					
P pv Max (kW)	54	60	67.5	75	90
Vmax PV (Vdc) (absolute Max.)	1000				
Isc PV (absolute Max.) (A)	48*4				
Number MPP trackers	4				
Number input strings	2/2/2/2				
Max. PV input current (A)	40*4				
MPPT voltage range (Vdc)	150-850				
Vdc range @ full power (Vdc)	500-850				
Battery (charge/discharge)					
Battery type	Li-ion/Lead-acid etc.				
Battery Normal Voltage Range (Vdc)	150-800 (Field adapt battery voltage range)				
Max charge/discharge Current(A)	120				
Max charge/discharge Power(kW)	36	40	45	50	60
AC Grid (input and output)					
Normal AC Voltage (Vac)	3P+N+PE/3P+PE 230/400				
Frequency (Hz)	50				
Normal AC Current (A)	52.2	58	65.3	72.5	87
Max. cont. input/output current (A)	81.9 / 60.5	91.1 / 67	102.3 / 75.5	113.7 / 83.5	136.5 / 96
Rated Power (kW)	36	40	45	50	60
Rated Apparent Power (kVA)	36	40	45	50	60
Max. cont. input/output Power (kW)	54 / 39.6	60 / 44	67.5 / 49.5	75 / 55	90 / 66
Max. cont. Apparent input/output Power (kVA)	54 / 39.6	60 / 44	67.5 / 49.5	75 / 55	90 / 66
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)	52.2	58	65.3	72.5	87
Max. cont. current (A)	60.5	67	75.5	83.5	96
Rated Apparent Power (kVA)	36	40	45	50	60
Max. cont. Power (kW)	36	40	45	50	60
Max. cont. Apparent Power (kVA)	36	40	45	50	60
Power factor	1.0				
Others					
Ingress protection (IP)	IP66				
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 (DC)				
Firmware version	1.03				

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APPENDIX: Test Verification of Conformity

This is an Appendix to Test Verification of Conformity Number: 2408B2790SHA-V1

Specifications table					
Model	AF36K-TH-0	AF40K-TH-0	AF45K-TH-0	AF50K-TH-0	AF60K-TH-0
Battery (charge/discharge)					
Battery type	Li-ion/Lead-acid etc.				
Battery Normal Voltage Range (Vdc)	150-800 (Field adapt battery voltage range)				
Max charge/discharge Current(A)	120				
Max charge/discharge Power(kW)	36 / 39.6	40 / 44	45 / 49.5	50 / 55	60 / 66
AC Grid (input and output)					
Normal AC Voltage (Vac)	3P+N+PE/3P+PE 230/400				
Frequency (Hz)	50				
Normal AC Current (A)	52.2	58	65.3	72.5	87
Max. cont. input/output current (A)	81.9 / 60.5	91.1 / 67	102.3 / 75.5	113.7 / 83.5	136.5 / 96
Rated Power (kW)	36	40	45	50	60
Rated Apparent Power (kVA)	36	40	45	50	60
Max. cont. input/output Power (kW)	54 / 36	60 / 40	67.5 / 45	75 / 50	90 / 60
Max. cont. Apparent input/output Power (kVA)	54 / 36	60 / 40	67.5 / 45	75 / 50	90 / 60
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)	52.2	58	65.3	72.5	87
Max. cont. current (A)	60.5	67	75.5	83.5	96
Rated Apparent Power (kVA)	36	40	45	50	60
Max. cont. Power (kW)	36	40	45	50	60
Max. cont. Apparent Power (kVA)	36	40	45	50	60
Power factor	1.0				
Others					
Ingress protection (IP)	IP66				
Protective class	Class I				
Temperature (°C)	-25°C to +60°C (Derating 45°C)				
Inverter Isolation	Non-isolated (AC - BAT)				
Overvoltage category	OVC III (AC Main), OVC II (DC)				
Firmware version	1.03				

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APPENDIX: Test Verification of Conformity

This is an Appendix to Test Verification of Conformity Number: 2408B2790SHA-V1

Specifications table				
Model	AF19.99K-THA	AF20K-THA	AF24.99K-THA	AF25K-THA
PV input				
P pv Max (kW)	30	30	37.5	37.5
Vmax PV (Vdc) (absolute Max.)	1000			
Isc PV (absolute Max.) (A)	48*4			
Number MPP trackers	4			
Number input strings	2/2/2/2			
Max. PV input current (A)	40*4			
MPPT voltage range (Vdc)	150-850			
Vdc range @ full power (Vdc)	200-850			
Battery (charge/discharge)				
Battery type	Li-ion/Lead-acid etc.			
Battery Normal Voltage Range (Vdc)	150-800 (Field adapt battery voltage range)			
Max charge/discharge Current(A)	120			
Max charge/discharge Power(kW)	19.99	20	24.99	25
AC Grid (input and output)				
Normal AC Voltage (Vac)	3P+PE/3P 133/230			
Frequency (Hz)	50			
Normal AC Current (A)	50.2	50.2	62.7	62.7
Max. cont. input/output current (A)	78.8 / 58	78.8 / 58	98.6 / 72.5	98.6 / 72.5
Rated Power (kW)	19.99	20	24.99	25
Rated Apparent Power (kVA)	19.99	20	24.99	25
Max. cont. input/output Power (kW)	30 / 19.99	30 / 22	37.5 / 24.99	37.5 / 27.5
Max. cont. Apparent input/output Power (kVA)	30 / 19.99	30 / 22	37.5 / 24.99	37.5 / 27.5
Power factor(adjustable)	1.0(-0.8~ +0.8)			
AC Load output (stand-alone)				
Normal Voltage (Vac)	3P+PE/3P 133/230			
Frequency (Hz)	50			
Nominal Current (A)	50.2	50.2	62.7	62.7
Max. cont. current (A)	58	58	72.5	72.5
Rated Apparent Power (kVA)	19.99	20	24.99	25
Max. cont. Power (kW)	19.99	20	24.99	25
Max. cont. Apparent Power (kVA)	19.99	20	24.99	25
Power factor	1.0			
Others				
Ingress protection (IP)	IP66			
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 (DC)			
Firmware version	1.03			

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APPENDIX: Test Verification of Conformity

This is an Appendix to Test Verification of Conformity Number: 2408B2790SHA-V1

Specifications table				
Model	AF29.99K-THA	AF30K-THA	AF36K-THA	
PV input				
P pv Max (kW)	45	45	36	
Vmax PV (Vdc) (absolute Max.)	1000			
Isc PV (absolute Max.) (A)	48*4			
Number MPP trackers	4			
Number input strings	2/2/2/2			
Max. PV input current (A)	40*4			
MPPT voltage range (Vdc)	150-850			
Vdc range @ full power (Vdc)	200-850	200-850	240-850	
Battery (charge/discharge)				
Battery type	Li-ion/Lead-acid etc.			
Battery Normal Voltage Range (Vdc)	150-800(Field adapt battery voltage range)			
Max charge/discharge Current(A)	120			
Max charge/discharge Power(kW)	29.99	30	36	
AC Grid (input and output)				
Normal AC Voltage (Vac)	3P+PE/3P 133/230			
Frequency (Hz)	50			
Normal AC Current (A)	75.2	75.2	90.3	
Max. cont. input/output current (A)	118.2 / 87	118.2 / 87	133.9 / 96	
Rated Power (kW)	29.99	30	36	
Rated Apparent Power (kVA)	29.99	30	36	
Max. cont. input/output Power (kW)	45 / 29.99	45 / 33	51 / 36	
Max. cont. Apparent input/output Power (kVA)	45 / 29.99	45 / 33	51 / 36	
Power factor(adjustable)	1.0(-0.8~ +0.8)			
AC Load output (stand-alone)				
Normal Voltage (Vac)	3P+PE/3P 133/230			
Frequency (Hz)	50			
Nominal Current (A)	75.2	75.2	90.3	
Max. cont. current (A)	87	87	96	
Rated Apparent Power (kVA)	29.99	30	36	
Max. cont. Power (kW)	29.99	30	36	
Max. cont. Apparent Power (kVA)	29.99	30	36	
Power factor	1.0			
Others				
Ingress protection (IP)	IP66			
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 (DC)			
Firmware version	1.03			

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Specifications table				
Model	AF20K-THA-0	AF25K-THA-0	AF30K-THA-0	AF36K-THA-0
Battery (charge/discharge)				
Battery type	Li-ion/Lead-acid etc.			
Battery Normal Voltage Range (Vdc)	150-800 (Field adapt battery voltage range)			
Max charge/discharge Current(A)	120			
Max charge/discharge Power(kW)	20 / 22	25 / 27.5	30 / 33	36 / 39.6
AC Grid (input and output)				
Normal AC Voltage (VAC)	3P+PE/3P 133/230			
Frequency (Hz)	50			
Normal AC Current (A)	50.2	62.7	75.2	90.3
Max. cont. input/output current (A)	78.8 / 58	98.6 / 72.5	118.2 / 87	133.9 / 96
Rated Power (kW)	20	25	30	36
Rated Apparent Power (kVA)	20	25	30	36
Max. cont. input/output Power (kW)	30 / 20	37.5 / 25	45 / 30	51 / 36
Max. cont. Apparent input/output Power (kVA)	30 / 20	37.5 / 25	45 / 30	51 / 36
Power factor(adjustable)	1.0(-0.8~ +0.8)			
AC Load output (stand-alone)				
Normal Voltage (VAC)	3P+PE/3P 133/230			
Frequency (Hz)	50			
Nominal Current (A)	50.2	62.7	75.2	90.3
Max. cont. current (A)	58	72.5	87	96
Max. cont. Power (kW)	20	25	30	36
Rated Apparent Power (kVA)	20	25	30	36
Max. cont. Apparent Power (kVA)	20	25	30	36
Power factor	1.0			
Others				
Ingress protection (IP)	IP66			
Protective class	Class I			
Temperature (°C)	-25°C to +60°C (Derating 45°C)			
Inverter Isolation	Non-isolated (AC - BAT)			
Overvoltage category	OVC III (AC Main), OVC II (DC)			
Firmware version	1.03			

Signature



Name: Max Jin

Position: General Manager

Date: 2024-12-30

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