

Certificate

No. ESY 075386 0343 Rev. 00

Holder of Certificate: Shenzhen Kstar New Energy Company Limited

The 9th Floor, R&D Building
Kstar Industrial Park, Guangming Hi-tech Industrial Zone
518107 Shenzhen, Guangdong Province
PEOPLE'S REPUBLIC OF CHINA

**Product: Converter
(Energy Storage Inverter & Hybrid Inverter)**

Model(s): Hybrid Inverter:
KAC125DP2, KAC110DP2, KAC100DP2,
KAC80DP2, KAC125DP2-S0,
KAC110DP2-S0, KAC100DP2-S0,
KAC80DP2-S0

Energy Storage Inverter:
KAC125D2, KAC110D2, KAC100D2,
KAC80D2, KAC125D2-S0, KAC110D2-S0,
KAC100D2-S0, KAC80D2-S0

Parameters: See pages 4-7

Applicable standards: NTS V2.1:2021-07
NTS SENP V1.1:2021-07

This Certificate confirms the compliance with the above listed standards on a voluntary basis. It refers only to the sample submitted to TÜV SÜD Product Service GmbH and does not certify the quality or safety of the serial products. It was issued according to TÜV SÜD Product Service certification program Photovoltaics and Grid Integration. For details see: www.tuvsud.com/ps-cert

Test report no.: 64290263031701

Date, 2026-06-02


(Billy Qiu)

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Certification Body TÜV SÜD Product Service GmbH performed assessment of the products listed below:

Type of PGM to be installed	Energy Storage inverter & Hybrid Inverter For models of KAC100DP2, KAC80DP2, KAC100DP2-S0, KAC80DP2-S0, KAC100D2, KAC80D2, KAC100D2-S0 and KAC80D2-S0 are defined as Type A & Type B For models of KAC125DP2, KAC110DP2, KAC125DP2-S0, KAC110DP2-S0, KAC125D2, KAC110D2, KAC125D2-S0, KAC110D2-S0 are defined as Type B
Test requirement	The certification complies with the requirements of the following documents: Technical standard for monitoring the compliance of electricity generating modules according to EU Regulation 2016/631. Version 2.1 (2021-07-09) + correction of errors of Version 2.1 (2021-10-08) Technical standard for monitoring the compliance of electricity generation modules according to P.O. 12.2 SENP. Version 1.1 (2021-07-09)
Manufacturer	Shenzhen Kstar New Energy Company Limited The 9th Floor, R&D Building, Kstar Industrial Park, Guangming Hi-tech Industrial Zone, 518107 Shenzhen, Guangdong Province, PEOPLE'S REPUBLIC OF CHINA
Model and Technical Data	See pages 4 to 7
Software version	V040B000D110

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Scope of assessment and results

Clause of NTS V2.1 (SEPE)	Requirement	Type A	Type B	Assessment
5.1	Limited frequency sensitive mode – overfrequency (LFSM-O)	Yes	Yes	Pass
5.2	Limited frequency sensitive mode – underfrequency (LFSM-U)	N/A	N/A	N/A
5.3	Frequency sensitive mode (FSM)	N/A	N/A	N/A
5.5	Active power control range and remote controllability	N/A	N/A	N/A
5.7	Reactive power capability at maximum capacity and below maximum capacity	N/A	Yes	Pass
5.8	Reactive power control in PPM	N/A	Yes	Pass
5.11	Robustness requirements: Active power recovery after a fault, fault ride through capability, and fast fault current injection capability (for generators connected below 110 kV)	N/A	Yes	Pass
5.11	Robustness requirements: Active power recovery after a fault, fault ride through capability, and fast fault current injection capability (for generators connected above 110 kV)	N/A	N/A	N/A

Clause of NTS V1.1 (SENP)	Requirement	Assessment
5.1	Limited frequency sensitive mode - overfrequency (LFSM-O)	Pass
5.2	Limited frequency sensitive mode - underfrequency (LFSM-U)	Pass
5.3	Frequency sensitive mode (FSM)	Pass
5.5	Active power control range and remote controllability	Pass
5.7	Reactive power capability at maximum capacity and below maximum capacity	Pass
5.8.	Reactive power control in PPM	Pass
5.11	Robustness requirements: Active power recovery after a fault, fault ride through capability, and fast fault current injection capability	Pass

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Parameters:

Model	KAC125DP2	KAC110DP2	KAC100DP2	KAC80DP2
PV terminal parameters				
Maximum input voltage [V _{DC}]	1000	1000	1000	1000
Rated input voltage [V _{DC}]	720	720	720	720
MPPT voltage range [V _{DC}]	250 - 950	250 - 950	250 - 950	250 - 950
MPPT voltage range (full load) [V _{DC}]	700 - 800	660 - 800	620 - 800	550 - 800
MPPT tracker number	8	8	8	8
Maximum input current [A _{DC}]	45*8	45*8	45*8	45*8
Isc PV [A _{DC}]	60*8	60*8	60*8	60*8
Maximum input power [W]	250000	200000	200000	160000
Battery input/output parameters				
Battery type	Lithium-ion	Lithium-ion	Lithium-ion	Lithium-ion
Battery rated voltage [V _{DC}]	820	820	820	820
Battery voltage range [V _{DC}]	200 - 950	200 - 950	200 - 950	200 - 950
Maximum charge power [W]	125000	110000	110000	88000
Maximum discharge power [W]	125000	110000	110000	88000
Maximum charge current [A _{DC}]	80/80	80/80	80/80	80/80
Maximum discharge current [A _{DC}]	80/80	80/80	80/80	80/80
Grid terminal input parameters				
Rated input voltage [V _{AC}]	3P+N+PE, 230/400	3P+N+PE, 230/400	3P+N+PE, 230/400	3P+N+PE, 230/400
Rated input frequency [Hz]	50	50	50	50
Maximum continuous input current from grid to battery [A _{AC}]	181	160	160	127
Maximum continuous input current [A _{AC}]	217	217	217	217
Maximum continuous input power from grid to battery [W]	125000	110000	110000	88000
Maximum continuous input active power [W]	150000	150000	150000	150000
Maximum continuous input apparent power [VA]	150000	150000	150000	150000
Power factor range	0.9 inductive - 0.9 capacitive			
Grid terminal output parameters				
Rated output voltage [V _{AC}]	3P+N+PE, 230/400	3P+N+PE, 230/400	3P+N+PE, 230/400	3P+N+PE, 230/400
Rated output frequency [Hz]	50	50	50	50
Rated output current [A _{AC}]	181	160	145	116
Maximum continuous output current [A _{AC}]	199	175	160	127
Rated output active power [W]	125000	110000	100000	80000
Maximum output active power [W]	125000	110000	100000	80000
Maximum continuous output apparent power [VA]	137500	121000	110000	88000
Power factor range	0.9 inductive - 0.9 capacitive			

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Model	KAC125DP2-S0	KAC110DP2-S0	KAC100DP2-S0	KAC80DP2-S0
PV terminal parameters				
Maximum input voltage [V _{DC}]	1000	1000	1000	1000
Rated input voltage [V _{DC}]	720	720	720	720
MPPT voltage range [V _{DC}]	250 - 950	250 - 950	250 - 950	250 - 950
MPPT voltage range (full load) [V _{DC}]	700 - 800	660 - 800	620 - 800	550 - 800
MPPT tracker number	8	8	8	8
Maximum input current [A _{DC}]	45*8	45*8	45*8	45*8
Isc PV [A _{DC}]	60*8	60*8	60*8	60*8
Maximum input power [W]	250000	200000	200000	160000
Battery input/output parameters				
Battery type	Lithium-ion	Lithium-ion	Lithium-ion	Lithium-ion
Battery rated voltage [V _{DC}]	820	820	820	820
Battery voltage range [V _{DC}]	200 - 950	200 - 950	200 - 950	200 - 950
Maximum charge power [W]	125000	110000	110000	88000
Maximum discharge power [W]	125000	110000	110000	88000
Maximum charge current [A _{DC}]	80/80	80/80	80/80	80/80
Maximum discharge current [A _{DC}]	80/80	80/80	80/80	80/80
Grid terminal input parameters				
Rated input voltage [V _{AC}]	3P+N+PE, 230/400	3P+N+PE, 230/400	3P+N+PE, 230/400	3P+N+PE, 230/400
Rated input frequency [Hz]	50	50	50	50
Maximum continuous input current from grid to battery [A _{AC}]	181	160	160	127
Maximum continuous input current [A _{AC}]	199	175	160	127
Maximum continuous input power from grid to battery [W]	125000	110000	110000	88000
Maximum continuous input active power [W]	125000	110000	110000	88000
Maximum continuous input apparent power [VA]	137500	121000	110000	88000
Power factor range	0.9 inductive - 0.9 capacitive			
Grid terminal output parameters				
Rated output voltage [V _{AC}]	3P+N+PE, 230/400	3P+N+PE, 230/400	3P+N+PE, 230/400	3P+N+PE, 230/400
Rated output frequency [Hz]	50	50	50	50
Rated output current [A _{AC}]	181	160	145	116
Maximum continuous output current [A _{AC}]	199	175	160	127
Rated output active power [W]	125000	110000	100000	80000
Maximum output active power [W]	125000	110000	100000	80000
Maximum continuous output apparent power [VA]	137500	121000	110000	88000
Power factor range	0.9 inductive - 0.9 capacitive			

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Model	KAC125D2	KAC110D2	KAC100D2	KAC80D2
Battery input/output parameters				
Battery type	Lithium-ion	Lithium-ion	Lithium-ion	Lithium-ion
Battery rated voltage [V _{DC}]	820	820	820	820
Battery voltage range [V _{DC}]	200 - 950	200 - 950	200 - 950	200 - 950
Maximum charge power [W]	125000	110000	110000	88000
Maximum discharge power [W]	125000	110000	110000	88000
Maximum charge current [A _{DC}]	80/80	80/80	80/80	80/80
Maximum discharge current [A _{DC}]	80/80	80/80	80/80	80/80
Grid terminal input parameters				
Rated input voltage [V _{AC}]	3P+N+PE, 230/400	3P+N+PE, 230/400	3P+N+PE, 230/400	3P+N+PE, 230/400
Rated input frequency [Hz]	50	50	50	50
Maximum continuous input current from grid to battery [A _{AC}]	181	160	160	127
Maximum continuous input current [A _{AC}]	217	217	217	217
Maximum continuous input power from grid to battery [W]	125000	110000	110000	88000
Maximum continuous input active power [W]	150000	150000	150000	150000
Maximum continuous input apparent power [VA]	150000	150000	150000	150000
Power factor range	0.9 inductive - 0.9 capacitive			
Grid terminal output parameters				
Rated output voltage [V _{AC}]	3P+N+PE, 230/400	3P+N+PE, 230/400	3P+N+PE, 230/400	3P+N+PE, 230/400
Rated output frequency [Hz]	50	50	50	50
Rated output current [A _{AC}]	181	160	145	116
Maximum continuous output current [A _{AC}]	199	175	160	127
Rated output active power [W]	125000	110000	100000	80000
Maximum output active power [W]	125000	110000	100000	80000
Maximum continuous output apparent power [VA]	137500	121000	110000	88000
Power factor range	0.9 inductive - 0.9 capacitive			

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Model	KAC125D2-S0	KAC110D2-S0	KAC100D2-S0	KAC80D2-S0
Battery input/output parameters				
Battery type	Lithium-ion	Lithium-ion	Lithium-ion	Lithium-ion
Battery rated voltage [V _{DC}]	820	820	820	820
Battery voltage range [V _{DC}]	200 - 950	200 - 950	200 - 950	200 - 950
Maximum charge power [W]	125000	110000	110000	88000
Maximum discharge power [W]	125000	110000	110000	88000
Maximum charge current [A _{DC}]	80/80	80/80	80/80	80/80
Maximum discharge current [A _{DC}]	80/80	80/80	80/80	80/80
Grid terminal input parameters				
Rated input voltage [V _{AC}]	3P+N+PE, 230/400	3P+N+PE, 230/400	3P+N+PE, 230/400	3P+N+PE, 230/400
Rated input frequency [Hz]	50	50	50	50
Maximum continuous input current from grid to battery [A _{AC}]	181	160	160	127
Maximum continuous input current [A _{AC}]	199	175	160	127
Maximum continuous input power from grid to battery [W]	125000	110000	110000	88000
Maximum continuous input active power [W]	125000	110000	110000	88000
Maximum continuous input apparent power [VA]	137500	121000	110000	88000
Power factor range	0.9 inductive - 0.9 capacitive			
Grid terminal output parameters				
Rated output voltage [V _{AC}]	3P+N+PE, 230/400	3P+N+PE, 230/400	3P+N+PE, 230/400	3P+N+PE, 230/400
Rated output frequency [Hz]	50	50	50	50
Rated output current [A _{AC}]	181	160	145	116
Maximum continuous output current [A _{AC}]	199	175	160	127
Rated output active power [W]	125000	110000	100000	80000
Maximum output active power [W]	125000	110000	100000	80000
Maximum continuous output apparent power [VA]	137500	121000	110000	88000
Power factor range	0.9 inductive - 0.9 capacitive			