

CERTIFICATE

of conformity with the following European Directives

Low Voltage Directive 2014/35/EU

This certifies that below described products of the applicant:

Jiangsu Koyoe Energy Technology Co., Ltd.

No.40, Wangwu Road, Wuzhong District,
Suzhou City, Jiangsu Province, P.R. China

comply to the essential requirements of the above mentioned European Directive and the following standards, taking into account the German national deviations:

Product(s):	Hybrid Inverter
Model type(s):	KY-EST06KH, KY-EST08KH, KY-EST10KH, KY-EST12KH, KY-EST15KH, KY-EST17KH, KY-EST20KH
Standard(s):	EN 62109-1:2010, EN 62109-2:2011, EN 62477-1:2012+A1:2017

This certificate of conformity is based on the evaluation of samples of the product. It does not imply an assessment of the production and it does not permit the use of a mark of conformity or of a safety mark of the TÜV NORD CERT GmbH. The holder of this certificate may use this Certificate together with his EC-Declaration of Conformity.

Registered no.:	44 799 21 406749 - 119
Test report no.:	492011780.001 492011714.001
File no.:	PVP04039/21E-01 PVP04039/21E-02



TÜV NORD CERT GmbH
Certification Body
Energy Storage System



Essen, 2021-10-11

TÜV NORD CERT GmbH

Langemarckstraße 20 45141 Essen

www.tuev-nord-cert.de

prodcert@tuev-nord.de

Please also pay attention to the information stated overleaf.

 The CE marking may be affixed on the product if all relevant and effective Directives are complied with 

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Description of product(s):

Model type	KY-EST20KH		
General information			
Type of inverter	Non-Isolated	Separated by	Transformer-less
Safety Class	Class I	IP grade.....	IP65
Over-voltage Category.....	PV & Battery: II, Main: III	Pollution degree	External:3 Internal:2
Operating temperature.....	-25°C ~60°C (>45°C derating)	Altitude	4000m
Weight.....	28kg	Dimension (W x H x D)	505mm x 630mm x 220mm
Firmware of ARM.....	V32000	Firmware of DSP.....	V30000(main) V31000(slave)
PV input			
Vmax	1000V d.c.	Isc.....	25/25A d.c.
MPP voltage range	180-900V d.c.	Number of MPPT tracking.....	2
Back-feed current.....	0A	Rated input current.....	23/23A d.c.
Grid AC output/input			
Rated Output Voltage	400/380V a.c., 3L/N/PE	Rated Output Frequency.....	50/60Hz



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Max. continuous power	20000W	Rated. apparent power	20000VA
Rated. output current	31A a.c.	Power factor	>0.99(-0.8 ~+0.8)
Off-Grid AC output			
Rated Output Voltage	400/380V a.c., 3L/N/PE	Rated Output Frequency.....	50/60Hz
Max. continuous power	20000W	Rated. apparent power	20000VA
Rated. output current	31A a.c.	Power factor	>0.99(-0.8 ~+0.8)
Battery Port			
Operating voltage range	180-700V d.c.	Rated. Charge/Discharge current	50/50A d.c.
Max. input/output power	20000W/20000 W	Battery type	Li-ion/Lead-acid

Model type	KY-EST17KH		
General information			
Type of inverter	Non-Isolated	Separated by	Transformer-less
Safety Class	Class I	IP grade	IP65
Over-voltage Category.....	PV & Battery: II, Main: III	Pollution degree	External:3 Internal:2



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Operating temperature.....:	-25°C ~60°C (>45°C derating)	Altitude.....:	4000m
Weight.....:	27kg	Dimension (W x H x D).....:	505mm x 630mm x 220mm
Firmware of ARM.....:	V32000	Firmware of DSP.....:	V30000(main) V31000(slave)
PV input			
Vmax.....:	1000V d.c.	Isc.....:	25/25A d.c.
MPP voltage range.....:	180-900V d.c.	Number of MPPT tracking.....:	2
Back-feed current.....:	0A	Rated input current.....:	23/23A d.c.
Grid AC output/input			
Rated Output Voltage.....:	400/380V a.c., 3L/N/PE	Rated Output Frequency.....:	50/60Hz
Max. continuous power.....:	17000W	Rated. apparent power.....:	17000VA
Rated. output current.....:	25A a.c.	Power factor.....:	>0.99(-0.8 ~+0.8)
Off-Grid AC output			
Rated Output Voltage.....:	400/380V a.c., 3L/N/PE	Rated Output Frequency.....:	50/60Hz
Max. continuous power.....:	17000W	Rated. apparent power.....:	17000VA



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Rated. output current	25A a.c.	Power factor.....	>0.99(-0.8 ~+0.8)
Battery Port			
Operating voltage range	180-700V d.c.	Rated. Charge/Discharge current.....	50/50A d.c.
Max. input/output power	17000W/17000 W	Battery type.....	Li-ion/Lead-acid

Model type	KY-EST15KH		
General information			
Type of inverter	Non-Isolated	Separated by	Transformer-less
Safety Class	Class I	IP grade	IP65
Over-voltage Category.....	PV & Battery: II, Main: III	Pollution degree.....	External:3 Internal:2
Operating temperature.....	-25°C ~60°C (>45°C derating)	Altitude	4000m
Weight.....	27kg	Dimension (W x H x D)	505mm x 630mm x 220mm
Firmware of ARM	V32000	Firmware of DSP	V30000(main) V31000(slave)



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PV input			
Vmax.....:	1000V d.c.	Isc	13.5/25A d.c.
MPP voltage range	180-900V d.c.	Number of MPPT tracking	2
Back-feed current.....:	0A	Rated input current.....:	12.5/23A d.c.
Grid AC output/input			
Rated Output Voltage	400/380V a.c., 3L/N/PE	Rated Output Frequency	50/60Hz
Max. continuous power.....:	15000W	Rated. apparent power	15000VA
Rated. output current	22A a.c.	Power factor.....:	>0.99(-0.8 ~+0.8)
Off-Grid AC output			
Rated Output Voltage	400/380V a.c., 3L/N/PE	Rated Output Frequency	50/60Hz
Max. continuous power.....:	15000W	Rated. apparent power	15000VA
Rated. output current	22A a.c.	Power factor.....:	>0.99(-0.8 ~+0.8)
Battery Port			
Operating voltage range	180-700V d.c.	Rated. Charge/Discharge current.....:	50/50A d.c.
Max. input/output power	15000W/15000 W	Battery type.....:	Li-ion/Lead-acid



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Model type	KY-EST12KH		
General information			
Type of inverter	Non-Isolated	Separated by	Transformer-less
Safety Class	Class I	IP grade.....	IP65
Over-voltage Category.....	PV & Battery: II, Main: III	Pollution degree	External:3 Internal:2
Operating temperature.....	-25°C ~60°C (>45°C derating)	Altitude	4000m
Weight.....	26kg	Dimension (W x H x D)	505mm x 630mm x 220mm
Firmware of ARM	V32000	Firmware of DSP.....	V30000(main) V31000(slave)
PV input			
Vmax.....	1000V d.c.	Isc.....	13.5/13.5A d.c.
MPP voltage range	180-900V d.c.	Number of MPPT tracking.....	2
Back-feed current.....	0A	Rated input current.....	12.5/12.5A d.c.
Grid AC output/input			
Rated Output Voltage	400/380V a.c., 3L/N/PE	Rated Output Frequency.....	50/60Hz
Max. continuous power	12000W	Rated. apparent power	12000VA



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Rated. output current	18A a.c.	Power factor	>0.99(-0.8 ~+0.8)
Off-Grid AC output			
Rated Output Voltage	400/380V a.c., 3L/N/PE	Rated Output Frequency.....	50/60Hz
Max. continuous power	12000W	Rated. apparent power	12000VA
Rated. output current	18A a.c.	Power factor	>0.99(-0.8 ~+0.8)
Battery Port			
Operating voltage range	180-700V d.c.	Rated. Charge/Discharge current	50/50A d.c.
Max. input/output power	12000W/12000 W	Battery type	Li-ion/Lead-acid

Model type :	KY-EST10KH		
General information			
Type of inverter :	Non-Isolated	Separated by :	Transformer-less
Safety Class :	Class I	IP grade..... :	IP65
Over-voltage Category..... :	PV & Battery: II, Main: III	Pollution degree :	External:3 Internal:2
Operating temperature..... :	-25°C ~60°C (>45°C derating)	Altitude :	4000m



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Weight..... :	24kg	Dimension (W x H x D)	505mm x 570mm x 220mm
Firmware of ARM..... :	V32000	Firmware of DSP..... :	V30000(main) V31000(slave)
PV input			
Vmax..... :	1000V d.c.	Isc..... :	13.5/13.5A d.c.
MPP voltage range	180-900V d.c.	Number of MPPT tracking..... :	2
Back-feed current..... :	0A	Rated input current..... :	12.5/12.5A d.c.
Grid AC output/input			
Rated Output Voltage	400/380V a.c., 3L/N/PE	Rated Output Frequency..... :	50/60Hz
Max. continuous power	10000W	Rated. apparent power	10000VA
Rated. output current	15A a.c.	Power factor	>0.99(-0.8 ~+0.8)
Off-Grid AC output			
Rated Output Voltage	400/380V a.c., 3L/N/PE	Rated Output Frequency..... :	50/60Hz
Max. continuous power	10000W	Rated. apparent power	10000VA
Rated. output current	15A a.c.	Power factor	>0.99(-0.8 ~+0.8)
Battery Port			



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Operating voltage range	180-550V d.c.	Rated. Charge/Discharge current	25/30A d.c.
Max. input/output power	10000W/10000 W	Battery type	Li-ion/Lead-acid

Model type	KY-EST08KH		
General information			
Type of inverter	Non-Isolated	Separated by.....	Transformer-less
Safety Class	Class I	IP grade.....	IP65
Over-voltage Category.....	PV & Battery: II, Main: III	Pollution degree	External:3 Internal:2
Operating temperature.....	-25°C ~60°C (>45°C derating)	Altitude	4000m
Weight.....	24kg	Dimension (W x H x D)	505mm x 570mm x 220mm
Firmware of ARM.....	V32000	Firmware of DSP	V30000(main) V31000(slave)
PV input			
Vmax.....	1000V d.c.	Isc.....	13.5/13.5A d.c.
MPP voltage range	180-900V d.c.	Number of MPPT tracking.....	2



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Back-feed current..... :	0A	Rated input current..... :	12.5/12.5A d.c.
Grid AC output/input			
Rated Output Voltage	400/380V a.c., 3L/N/PE	Rated Output Frequency..... :	50/60Hz
Max. continuous power	8000W	Rated. apparent power	8000VA
Rated. output current	12A a.c.	Power factor	>0.99(-0.8 ~+0.8)
Off-Grid AC output			
Rated Output Voltage	400/380V a.c., 3L/N/PE	Rated Output Frequency..... :	50/60Hz
Max. continuous power	8000W	Rated. apparent power	8000VA
Rated. output current	12A a.c.	Power factor	>0.99(-0.8 ~+0.8)
Battery Port			
Operating voltage range	180-550V d.c.	Rated. Charge/Discharge current	25/30A d.c.
Max. input/output power	8000W/8000W	Battery type	Li-ion/Lead-acid

Model type	KY-EST06KH		
General information			
Type of inverter	Non-Isolated	Separated by.....	Transformer-less
Safety Class	Class I	IP grade.....	IP65



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Over-voltage Category.....:	PV & Battery: II, Main: III	Pollution degree	External:3 Internal:2
Operating temperature.....:	-25°C ~60°C (>45°C derating)	Altitude	4000m
Weight.....:	23kg	Dimension (W x H x D)	505mm x 570mm x 220mm
Firmware of ARM	V32000	Firmware of DSP	V30000(main) V31000(slave)
PV input			
Vmax.....:	1000V d.c.	Isc.....:	13.5/13.5A d.c.
MPP voltage range	180-900V d.c.	Number of MPPT tracking.....:	2
Back-feed current.....:	0A	Rated input current.....:	12.5/12.5A d.c.
Grid AC output/input			
Rated Output Voltage	400/380V a.c., 3L/N/PE	Rated Output Frequency.....:	50/60Hz
Max. continuous power	6000W	Rated. apparent power	6000VA
Rated. output current	10A a.c.	Power factor	>0.99(-0.8 ~+0.8)
Off-Grid AC output			
Rated Output Voltage	400/380V a.c., 3L/N/PE	Rated Output Frequency.....:	50/60Hz



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Max. continuous power	6000W	Rated. apparent power	6000VA
Rated. output current	10A a.c.	Power factor	>0.99(-0.8 ~+0.8)
Battery Port			
Operating voltage range	180-550V d.c.	Rated. Charge/Discharge current	25/30A d.c.
Max. input/output power	6000W/6000W	Battery type	Li-ion/Lead-acid

Remark:

For detailed product information, please refer to CDF (Constructional Data Form) in Annex 1 of test report.



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