

CERTIFICATE

Shenzhen Hopewind Technology Co., Ltd.

A1 area, Building 6 of Jinhaoyuan, Yanshan Road, Yanchuan Street,
Song-gang Town, Bao'an District, Shenzhen, 518105
PEOPLE'S REPUBLIC OF CHINA

is authorized to provide the product(s) mentioned below with the mark as illustrated:



Description of product(s) (details see Annex 2):

Grid-connected PV inverter

It is certified by TÜV NORD CERT GmbH that the product(s) described above has(have) been assessed according to the certification program mentioned below and found in compliance with the requirements of below specified certification fundamental(s). This certification is based on evaluation results as documented in test report(s) referenced below and production site(s) audit results as documented in factory inspection report(s) referenced in Annex 1. This certificate is valid in conjunction with these quoted report(s).

Certification program:	P33-VA-01 Rev. 02 04.20	
Certification fundamental(s):	IEC 62109-1:2010; IEC 62109-2:2011	
Registered no.:	44 780 20 406749 - 122M1	
Manufacturer and factory(-ies):	See Annex 1	
Test report no.:	492011452.002	Valid from: 2020-08-24
File no.:	PVP07109/20B-01	Valid until: 2025-07-13



Essen, 2020-08-24

TÜV NORD CERT GmbH
Certification Body
Balance of System (BOS) for Photovoltaics

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.

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Manufacturer:

Shenzhen Hopewind Technology Co., Ltd.

A1 area, Building 6 of Jinhaoyuan, Yanshan Road, Yanchuan Street
Song-gang Town, Bao'an District, Shenzhen, 518105
PEOPLE'S REPUBLIC OF CHINA

Factory(-ies):

Factory 1:

Shenzhen Hopewind Technology Co., Ltd.

A1 area, Building 6 of Jinhaoyuan, Yanshan Road, Yanchuan Street
Song-gang Town, Bao'an District, Shenzhen, 518105
PEOPLE'S REPUBLIC OF CHINA
Factory inspection report no.: 862010492.001

Remark:

Factory inspection is mandatory to be performed annually. Please refer to factory inspection report for detailed information.

A handwritten signature in blue ink, appearing to read "Shawne Ute".

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Description of product(s):

Model type(s)	hopeSun 36KTL		
General Information:			
Type of inverter	Non-Isolated	Over voltage Category (OVC) ..:	PV Input: II, AC Output: III
Protective Class	Class I	Enclosure Protection (IP).....:	IP65
Operating Temperature Range [°C]	-40 to 60 (>40 derating)	Pollution degree (PD)	PD 3(external) PD 2(internal)
Weight [kg]	72	Size (W x H x D) [mm].....:	650*705*275
Firmware Control board	V104.000.000		
Firmware LCD	V101.000.000		
PV Input:			
Vmax [Vd.c.].....:	1100	Isc [Ad.c.].....:	15*8
MPP Voltage Range [Vd.c.]	250-1000	MPP Full Power Voltage Range [Vd.c.].....:	540-880
Max. Input Current [Ad.c.]	12*8	Back-feed Current [A]	0
MPPT tracking.....:	4		
AC Output:			
Rated Output Voltage [Va.c.]	400/230; 3P+N+PE	Rated Output Frequency [Hz]...:	50/60



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Rated Output Power [kW]..... :	36	Max. Apparent Power [kVA]..... :	39.6
Max. Output Current [Aa.c.]..... :	57.2	Power Factor cosφ [λ]..... :	[-0.8,0.8]

Model type(s)..... :	hopeSun 40KTL		
General Information:			
Type of inverter..... :	Non-Isolated	Over voltage Category (OVC) .:	PV Input: II, AC Output: III
Protective Class..... :	Class I	Enclosure Protection (IP)..... :	IP65
Operating Temperature Range [°C]..... :	-40 to 60 (>40 derating)	Pollution degree (PD)..... :	PD 3(external) PD 2(internal)
Weight [kg]..... :	72	Size (W x H x D) [mm]..... :	650*705*275
Firmware Control board..... :	V104.000.000		
Firmware LCD..... :	V101.000.000		
PV Input:			
Vmax [Vd.c.]..... :	1100	Isc [Ad.c.]..... :	15*8
MPP Voltage Range [Vd.c.]..... :	250-1000	MPP Full Power Voltage Range [Vd.c.]..... :	540-880
Max. Input Current [Ad.c.]..... :	12*8	Back-feed Current [A]..... :	0
MPPT tracking..... :	4		



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AC Output:			
Rated Output Voltage [Va.c.]	400/230; 3P+N+PE	Rated Output Frequency [Hz]..:	50/60
Rated Output Power [kW]	40	Max. Apparent Power [kVA]	44
Max. Output Current [Aa.c.]	64	Power Factor $\cos\phi$ [λ].....	[-0.8,0.8]

Model type(s)	hopeSun 40KTL-M		
General Information:			
Type of inverter	Non-Isolated	Over voltage Category (OVC) ..:	PV Input: II, AC Output: III
Protective Class	Class I	Enclosure Protection (IP).....	IP65
Operating Temperature Range [°C]	-40 to 60 (>40 derating)	Pollution degree (PD)	PD 3(external) PD 2(internal)
Weight [kg]	72	Size (W x H x D) [mm].....	650*705*275
Firmware Control board	V104.000.000		
Firmware LCD	V101.000.000		
PV Input:			
Vmax [Vd.c.].....	1100	Isc [Ad.c.]	15*8



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MPP Voltage Range [Vd.c.]..... :	250-1000	MPP Full Power Voltage Range [Vd.c.]	540-880
Max. Input Current [Ad.c.]..... :	12*8	Back-feed Current [A]..... :	0
MPPT tracking	4		
AC Output:			
Rated Output Voltage [Va.c.]..... :	500; 3P+PE	Rated Output Frequency [Hz] .:	50/60
Rated Output Power [kW]..... :	40	Max. Apparent Power [kVA]..... :	44
Max. Output Current [Aa.c.]..... :	50.8	Power Factor cosφ [λ]	[-0.8,0.8]

Model type(s)	hopeSun 50KTL-M		
General Information:			
Type of inverter	Non-Isolated	Over voltage Category (OVC) .:	PV Input: II, AC Output: III
Protective Class	Class I	Enclosure Protection (IP)	IP65
Operating Temperature Range [°C]..... :	-40 to 60 (>40 derating)	Pollution degree (PD)	PD 3(external) PD 2(internal)
Weight [kg]..... :	72	Size (W x H x D) [mm]..... :	650*705*275
Firmware Control board	V104.000.000		
Firmware LCD..... :	V101.000.000		



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PV Input:			
Vmax [Vd.c.].....:	1100	Isc [Ad.c.].....:	15*8
MPP Voltage Range [Vd.c.].....:	250-1000	MPP Full Power Voltage Range [Vd.c.].....:	540-880
Max. Input Current [Ad.c.].....:	12*8	Back-feed Current [A].....:	0
MPPT tracking.....:	4		
AC Output:			
Rated Output Voltage [Va.c.].....:	500; 3P+PE	Rated Output Frequency [Hz]..:	50/60
Rated Output Power [kW].....:	50	Max. Apparent Power [kVA].....:	55
Max. Output Current [Aa.c.].....:	64	Power Factor cosφ [λ].....:	[-0.8,0.8]

Model type(s).....:	hopeSun 50KTL		
General Information:			
Type of inverter.....:	Non-Isolated	Over voltage Category (OVC) ..:	PV Input: II, AC Output: III
Protective Class.....:	Class I	Enclosure Protection (IP).....:	IP65
Operating Temperature Range [°C].....:	-40 to 60 (>40 derating)	Pollution degree (PD).....:	PD 3(external) PD 2(internal)



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Weight [kg]	92	Size (W x H x D) [mm]	650*705*283
Firmware Control board	V104.000.000		
Firmware LCD	V101.000.000		
PV Input:			
Vmax [Vd.c.]	1100	Isc [Ad.c.]	15*9
MPP Voltage Range [Vd.c.]	250-1000	MPP Full Power Voltage Range [Vd.c.]	540-880
Max. Input Current [Ad.c.]	12*9	Back-feed Current [A]	0
MPPT tracking	3		
AC Output:			
Rated Output Voltage [Va.c.]	400/230; 3P+N+PE	Rated Output Frequency [Hz] ..:	50/60
Rated Output Power [kW]	50	Max. Apparent Power [kVA]	55
Max. Output Current [Aa.c.]	80	Power Factor cosφ [λ]	[-0.8,0.8]

Model type(s)	hopeSun 60KTL		
General Information:			
Type of inverter	Non-Isolated	Over voltage Category (OVC) ..:	PV Input: II, AC Output: III



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Protective Class	Class I	Enclosure Protection (IP).....	IP65
Operating Temperature Range [°C]	-40 to 60 (>40 derating)	Pollution degree (PD)	PD 3(external) PD 2(internal)
Weight [kg]	92	Size (W x H x D) [mm].....	650*705*283
Firmware Control board	V104.000.000		
Firmware LCD	V101.000.000		
PV Input:			
Vmax [Vd.c.].....	1100	Isc [Ad.c.].....	15*12
MPP Voltage Range [Vd.c.]	250-1000	MPP Full Power Voltage Range [Vd.c.].....	540-880
Max. Input Current [Ad.c.]	12*12	Back-feed Current [A]	0
MPPT tracking.....	4		
AC Output:			
Rated Output Voltage [Va.c.]	400/230; 3P+N+PE	Rated Output Frequency [Hz] ..:	50/60
Rated Output Power [kW]	60	Max. Apparent Power [kVA]	66
Max. Output Current [Aa.c.]	95	Power Factor cosφ [λ].....	[-0.8,0.8]



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Model type(s)	hopeSun 60KTL-M		
General Information:			
Type of inverter	Non-Isolated	Over voltage Category (OVC) ..:	PV Input: II, AC Output: III
Protective Class	Class I	Enclosure Protection (IP).....:	IP65
Operating Temperature Range [°C]	-40 to 60 (>40 derating)	Pollution degree (PD)	PD 3(external) PD 2(internal)
Weight [kg]	92	Size (W x H x D) [mm].....:	650*705*283
Firmware Control board	V104.000.000		
Firmware LCD	V101.000.000		
PV Input:			
Vmax [Vd.c.].....:	1100	Isc [Ad.c.].....:	15*12
MPP Voltage Range [Vd.c.]	250-1000	MPP Full Power Voltage Range [Vd.c.].....:	540-880
Max. Input Current [Ad.c.]	12*12	Back-feed Current [A]	0
MPPT tracking.....:	4		
AC Output:			
Rated Output Voltage [Va.c.]	500; 3P+PE	Rated Output Frequency [Hz] ..:	50/60
Rated Output Power [kW]	60	Max. Apparent Power [kVA]	66



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Max. Output Current [Aa.c.]	76	Power Factor cosφ [λ].....	[-0.8,0.8]
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Model type(s)	hopeSun 70KTL		
General Information:			
Type of inverter	Non-Isolated	Over voltage Category (OVC) ..	PV Input: II, AC Output: III
Protective Class	Class I	Enclosure Protection (IP).....	IP65
Operating Temperature Range [°C]	-40 to 60 (>40 derating)	Pollution degree (PD)	PD 3(external) PD 2(internal)
Weight [kg]	92	Size (W x H x D) [mm].....	650*705*283
Firmware Control board	V104.000.000		
Firmware LCD	V101.000.000		
PV Input:			
Vmax [Vd.c.].....	1100	Isc [Ad.c.].....	15*12
MPP Voltage Range [Vd.c.]	250-1000	MPP Full Power Voltage Range [Vd.c.].....	540-880
Max. Input Current [Ad.c.].....	12*12	Back-feed Current [A].....	0
MPPT tracking.....	4		
AC Output:			



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Rated Output Voltage [Va.c.]	400/230; 3P+N+PE	Rated Output Frequency [Hz] ..:	50/60
Rated Output Power [kW]	70	Max. Apparent Power [kVA]	77
Max. Output Current [Aa.c.]	111	Power Factor cosφ [λ].....	[-0.8,0.8]

Model type(s)	hopeSun 70KTL-M		
General Information:			
Type of inverter	Non-Isolated	Over voltage Category (OVC) ..:	PV Input: II, AC Output: III
Protective Class	Class I	Enclosure Protection (IP).....	IP65
Operating Temperature Range [°C]	-40 to 60 (>40 derating)	Pollution degree (PD)	PD 3(external) PD 2(internal)
Weight [kg]	92	Size (W x H x D) [mm].....	650*705*283
Firmware Control board	V104.000.000		
Firmware LCD	V101.000.000		
PV Input:			
Vmax [Vd.c.].....	1100	Isc [Ad.c.]	15*12
MPP Voltage Range [Vd.c.]	250-1000	MPP Full Power Voltage Range [Vd.c.].....	540-880



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Max. Input Current [Ad.c.]	12*12	Back-feed Current [A]	0
MPPT tracking.....	4		
AC Output:			
Rated Output Voltage [Va.c.]	500; 3P+PE	Rated Output Frequency [Hz] ..	50/60
Rated Output Power [kW]	70	Max. Apparent Power [kVA]	77
Max. Output Current [Aa.c.]	89	Power Factor cosφ [λ].....	[-0.8,0.8]

Model type(s)	hopeSun 75KTL		
General Information:			
Type of inverter	Non-Isolated	Over voltage Category (OVC) ..	PV Input: II, AC Output: III
Protective Class	Class I	Enclosure Protection (IP).....	IP65
Operating Temperature Range [°C]	-40 to 60 (>40 derating)	Pollution degree (PD)	PD 3(external) PD 2(internal)
Weight [kg]	92	Size (W x H x D) [mm]	650*705*283
Firmware Control board	V104.000.000		
Firmware LCD	V101.000.000		
PV Input:			
Vmax [Vd.c.].....	1100	Isc [Ad.c.]	15*14



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MPP Voltage Range [Vd.c.]	250-1000	MPP Full Power Voltage Range [Vd.c.].....	540-880
Max. Input Current [Ad.c.]	12*14	Back-feed Current [A]	0
MPPT tracking.....	4		
AC Output:			
Rated Output Voltage [Va.c.]	400/230; 3P+N+PE	Rated Output Frequency [Hz]..:	50/60
Rated Output Power [kW]	75	Max. Apparent Power [kVA]	82.5
Max. Output Current [Aa.c.]	119	Power Factor cosφ [λ].....	[-0.8,0.8]

Model type(s)	hopeSun 80KTL-M		
General Information:			
Type of inverter	Non-Isolated	Over voltage Category (OVC) ..:	PV Input: II, AC Output: III
Protective Class	Class I	Enclosure Protection (IP).....	IP65
Operating Temperature Range [°C]	-40 to 60 (>40 derating)	Pollution degree (PD)	PD 3(external) PD 2(internal)
Weight [kg]	92	Size (W x H x D) [mm].....	650*705*283
Firmware Control board	V104.000.000		



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Firmware LCD	V101.000.000		
PV Input:			
Vmax [Vd.c.].....	1100	Isc [Ad.c.].....	15*14
MPP Voltage Range [Vd.c.]	250-1000	MPP Full Power Voltage Range [Vd.c.].....	540-880
Max. Input Current [Ad.c.]	12*14	Back-feed Current [A]	0
MPPT tracking.....	4		
AC Output:			
Rated Output Voltage [Va.c.]	500; 3P+PE	Rated Output Frequency [Hz]..	50/60
Rated Output Power [kW]	80	Max. Apparent Power [kVA]	88
Max. Output Current [Aa.c.]	102	Power Factor cosφ [λ].....	[-0.8,0.8]

Remark:

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

