

Tiger Neo N-type 66HL4M-BDV 600- 625 Watt

BIFACIAL MODULE WITH
DUAL GLASS

N-Type

Positive power tolerance of 0~+3%

IEC61215(2016), IEC61730(2016)

ISO9001:2015: Quality Management System

ISO14001:2015: Environment Management System

ISO45001:2018

Occupational health and safety management systems



Key Features



SMBB Technology

Better light trapping and current collection to improve module power output and reliability.



PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.



Higher Power Output

Module power increases 5-25% generally, bringing significantly lower LCOE and higher IRR.



Hot 2.0 Technology

The N-type module with Hot 2.0 technology has better reliability and lower LID/LETID.



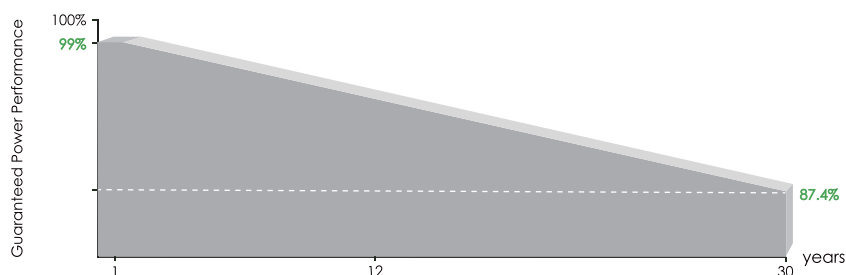
Enhanced Mechanical Load

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).



Continuous Quality Assurance

LINEAR PERFORMANCE WARRANTY

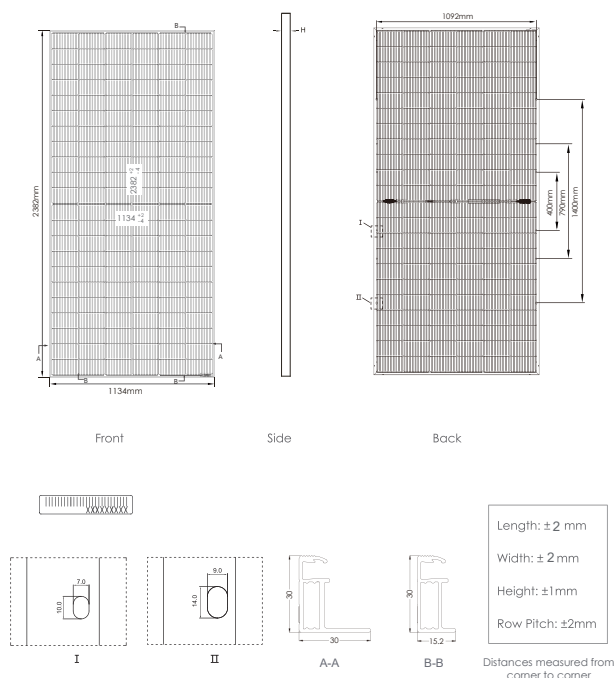


12 Year Product Warranty

30 Year Linear Power Warranty

0.40% Annual Degradation Over 30 years

Engineering Drawings



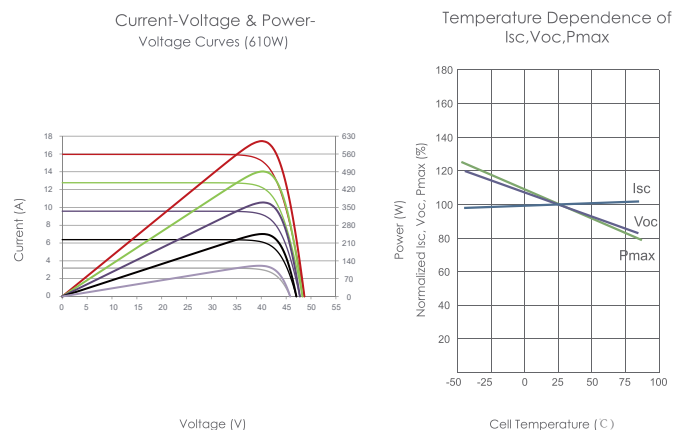
For detailed sizes and tolerance specification, please consult detailed module drawing

Packaging Configuration

(Two pallets = One stack)

36pcs/pallets, 72pcs/stack, 720pcs/ 40'HQ Container

Electrical Performance & Temperature Dependence



Mechanical Characteristics

Cell Type	N type Mono-crystalline
No. of cells	132 (2×66)
Dimensions	2382×1134×30mm (93.78×44.65×1.18 inch)
Weight	32.4 kg (71.43 lbs)
Front Glass	2.0mm, Anti-Reflection Coating
Back Glass	2.0mm, Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68 Rated
Output Cables	TUV 1×4.0mm ² (+): 400mm, (-): 200mm or Customized Length

SPECIFICATIONS

Module Type	JKM600N-66HL4M-BDV		JKM605N-66HL4M-BDV		JKM610N-66HL4M-BDV		JKM615N-66HL4M-BDV		JKM620N-66HL4M-BDV		JKM625N-66HL4M-BDV	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	600Wp	453Wp	605Wp	457Wp	610Wp	461Wp	615Wp	464Wp	620Wp	468Wp	625Wp	472Wp
Maximum Power Voltage (Vmp)	40.16V	37.60V	40.31V	37.76V	40.46V	37.92V	40.60V	38.10V	40.74V	38.25V	40.88V	38.44V
Maximum Power Current (Imp)	14.94A	12.05A	15.01A	12.10A	15.08A	12.15A	15.15A	12.19A	15.22A	12.24A	15.29A	12.28A
Open-circuit Voltage (Voc)	48.28V	45.86V	48.48V	46.05V	48.68V	46.24V	48.88V	46.43V	49.08V	46.62V	49.28V	46.81V
Short-circuit Current (Isc)	15.84A	12.79A	15.90A	12.83A	15.96A	12.88A	16.02A	12.93A	16.08A	12.98A	16.14A	13.03V
Module Efficiency STC (%)	22.21%		22.40%		22.58%		22.77%		22.95%		23.14%	
Operating Temperature(°C)	-40°C~+85°C											
Maximum system voltage	1500VDC (IEC)											
Maximum series fuse rating	35A											
Power tolerance	0~+3%											
Temperature coefficients of Pmax	-0.29%/ °C											
Temperature coefficients of Voc	-0.25%/°C											
Temperature coefficients of Isc	0.045%/°C											
Nominal operating cell temperature (NOCT)	45±2°C											
Refer. Bifacial Factor	80±5%											

*STC: Irradiance 1000W/m²

Cell Temperature 25°C

AM=1.5

NOCT: Irradiance 800W/m²

Ambient Temperature 20°C

AM=1.5

Wind Speed 1m/s

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JKM600-625N-66HL4M-BDV-F1-EN

Jinko Solar Co., Ltd.
Registered in China

TrinaTracker Vanguard™-1P

Single-Row



Compatible with Latest Modules

Compatible with N/P - Type modules up to **690W**.



Higher Stability

Bi-damper system improves the tracking system's resistance to wind by **20%**.



Higher Reliability

Optimized torque tube improves the torsional resistance by **29.6%** and the bending resistance by **12.4%**.



SuperTrack Smart Tracking Algorithm

Compared with conventional tracking algorithm, increase energy generation by as much as **6%**.

BILATERAL DAMPER SYSTEM

The bilateral damper system can shorten the tracker oscillation time, thus preventing oscillation. Dynamic responses are reduced and the critical wind speed increased.



SPHERICAL BEARING

Global patented spherical bearings with up to 30% angle adjustability, alleviate the damage caused by uneven foundation settlement during operations. The spherical bearings dissipate the extra stress caused by the deformation of the tracker system, thus reduce the load and failure rate of each component.





TECHNICAL SPECIFICATIONS

GENERAL FEATURES

Solar tracker type	Single row Single-Axis
Tracking range	$\pm 60^\circ$ (120°)
Driver	Slewing drive
Configuration	One modules in portrait (1P) up to 93 modules per tracker (1500V string)
Solar module supported	Framed
Foundation options	Direct ramming / Pre-drilling+ramming/Micropile / PHC piles
Pile section	W, compatible with IPE, IPEA, HEA and HEB
Modules attachment	Bolts, Rivets
Piles per MW (690Wp module)	~258 piles/MW ⁽¹⁾ (64 modules per row)
Terrain adaptability	15% W-E, 15% N-S ⁽²⁾
Wind and snow loads tolerance	Tailored to site requirement
GCR	$\geq 25\%$
Design wind speed	55 m/s (This value depends on project conditions)

STRUCTURE

Material	High Yield Strength Steel
Coating	HDG, Pregalvanizide & ZM ⁽³⁾

CONTROLLER

Controller	Electronic board with microprocessor
Ingress protection marking	IP65
Tracking method	SuperTrack Smart Tracking Algorithm ⁽⁴⁾ / Conventional Tracking Algorithm
Advanced wind control	Customizable
Anemometer	Cup / Ultrasonic
Night-time stow	Configurable
Communication with the tracker	Wireless option: LoRa/Zigbee
Operating conditions	Altitude < 4000 m ⁽⁵⁾ Temperature: -30~60°C ⁽⁵⁾
Sensors	Digital inclinometer
Power (motor drive)	DC motor: 0.15 kW
Power supply	String-powered / Self-powered / AC-powered

WARRANTY

Warranty period of 10 years for the structural set of elements which build the tracker up and have been supplied by Trina Solar.

Warranty period of 5 years for commercial components (including but not limited to drive system, electrical system, bearing set, fasteners, etc.)

*1 Depending on layout

*2 For scenarios beyond the scope of use, please consult TrinaTracker

*3 Standard configuration, Other coating under request, please consult TrinaTracker

*4 Includes smart tracking algorithm and smart backtracking algorithm

*5 Standard configuration. Different conditions under request, please consult TrinaTracker

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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Doc number: DT-T-0004 Rev:D



SUN2000-330KTL-H1

Output Characteristics Curve



Huawei Technologies Co.,Ltd

Version	Created by	Date	Remarks
01	Huawei	08/22/2022	preliminary

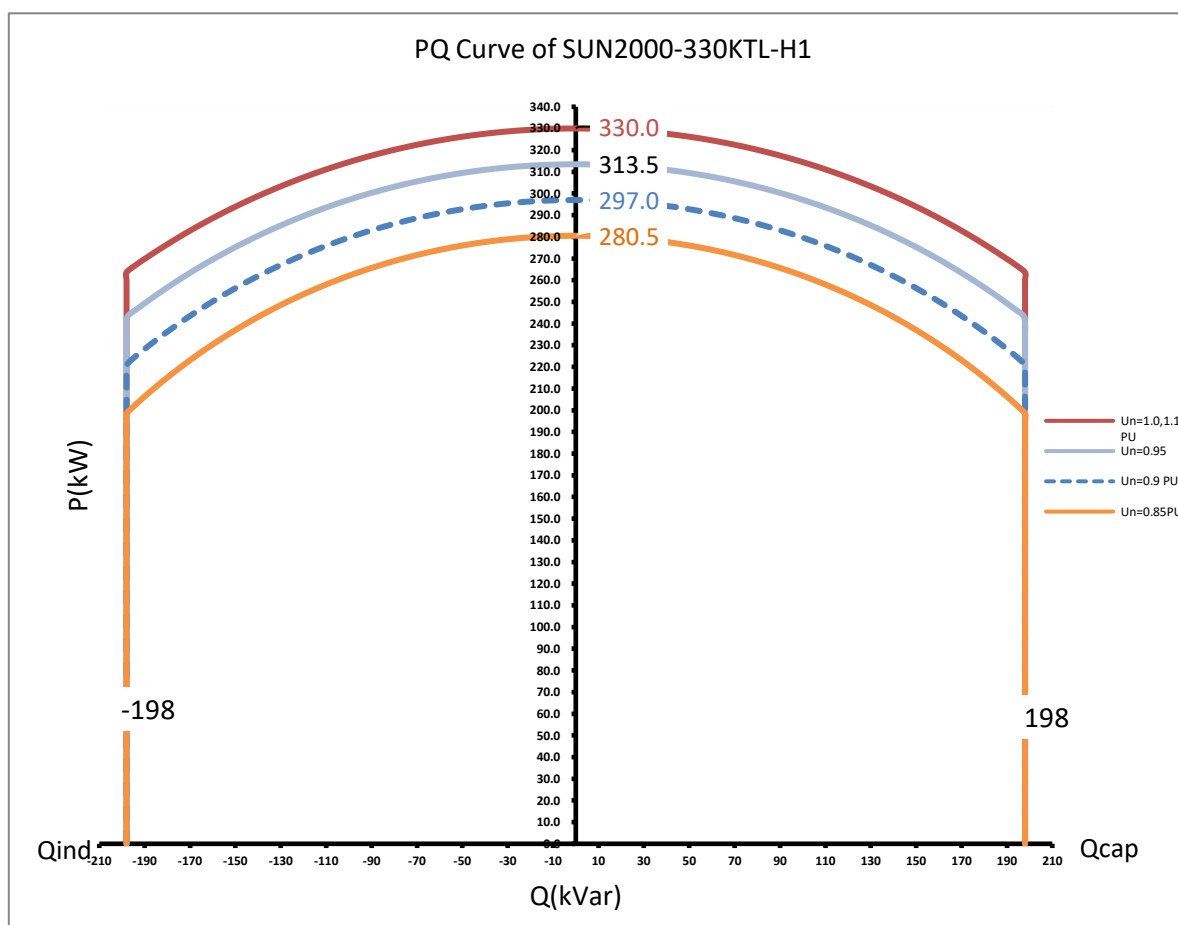
1. Description

This document describes output characteristics curve of the SUN2000-330KTL-H1, including the P-Q curve, temperature derating curve, and high altitude derating curve.

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2. Output Characteristics Curve

2.1 P-Q curve

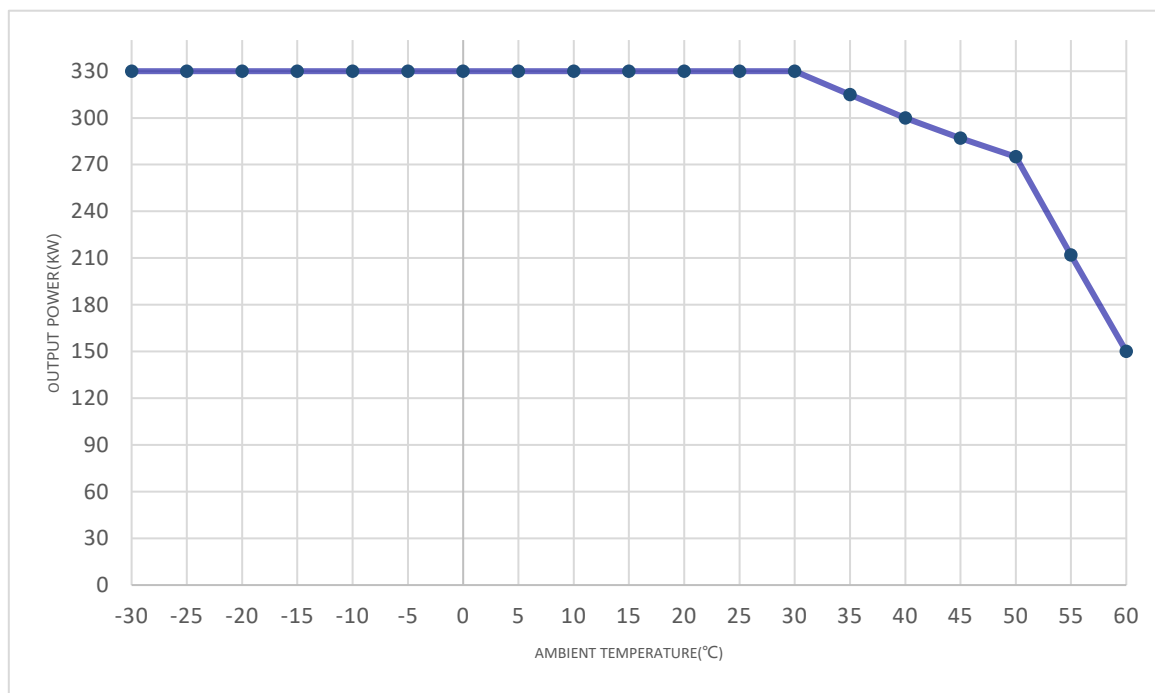


For SUN2000-330KTL-H1 inverter, its rated AC active power is 300kW and maximum AC active power is 330kW, maximum apparent active power is 330kVA, maximum reactive power range is -198kVar~+198kVar.

2.2 Power De-rating Curve VS. Ambient Temperature

When the ambient temperature is high, the inverter reduces the output power to ensure product safety and service life. The following figure shows the temperature derating curve of the SUN2000-330KTL-H1.

Power De-rating Curve VS. Ambient Temperature of SUN2000-330KTL-H1



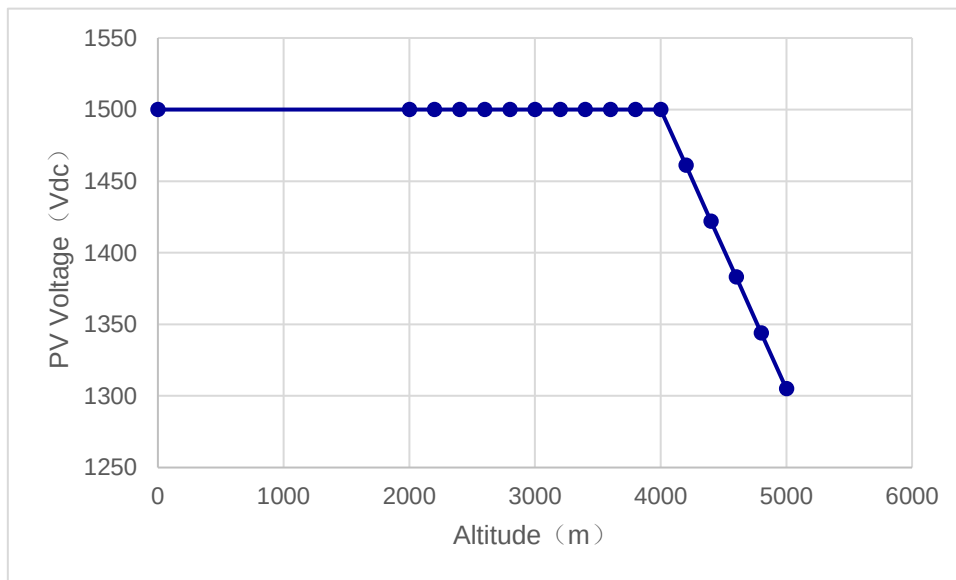
Grid Voltage:800Vac,PF=1

Model	-30°C	-25°C	-20°C	-15°C	-10°C	-5°C	0°C	5°C	10°C	15°C
SUN2000-330KTL-H1	330 kW	330 kW	330 kW	330 kW	330 kW	330 kW	330 kW	330 kW	330 kW	330 kW
	20°C	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C	
	330 kW	330 kW	330 kW	315 kW	300 kW	287 kW	275 kW	212 kW	150 kW	

2.3 DC Voltage Curve VS. Altitude

As the altitude increases, the air density decreases and the heat dissipation effect of the inverter decreases. In addition, the air density decreases, the free travel of electrons increases, the kinetic energy increases which may cause easier breakdown and ionization. Therefore, to ensure product safety, the maximum input voltage of the inverter needs derating. In actual applications, PV modules should be properly configured in high-altitude scenarios to prevent improper high voltage at the DC side of the inverter. The altitude derating curve is as follows:

DC Voltage Curve VS. Altitude of SUN2000-300KTL-H1



Technical Specifications

(Preliminary)

Efficiency	
Max. Efficiency	≥99.0%
European Efficiency	≥98.8%
Input	
Max. Input Voltage	1,500 V
Number of MPP Trackers	6
Max. Current per MPPT	65 A
Max. Short Circuit Current per MPPT	115 A
Max. PV Inputs per MPPT	4/5/5/4/5/5
Start Voltage	550 V
MPPT Operating Voltage Range	500 V ~ 1,500 V
Nominal Input Voltage	1,080 V
Output	
Nominal AC Active Power	300,000 W
Max. AC Apparent Power	330,000 VA
Max. AC Active Power (cosφ=1)	330,000 W
Nominal Output Voltage	800 V, 3W + PE
Rated AC Grid Frequency	50 Hz / 60 Hz
Nominal Output Current	216.6 A
Max. Output Current	238.2 A
Adjustable Power Factor Range	0.8 LG ... 0.8 LD
Total Harmonic Distortion	< 1%
Protection	
Smart String-Level Disconnect(SSLD)	Yes
Anti-islanding Protection	Yes
AC Overcurrent Protection	Yes
DC Reverse-polarity Protection	Yes
PV-array String Fault Monitoring	Yes
DC Surge Arrester	Type II
AC Surge Arrester	Type II
DC Insulation Resistance Detection	Yes
AC Grounding Fault Protection	Yes
Residual Current Monitoring Unit	Yes
Communication	
Display	LED Indicators, WLAN + APP
USB	Yes
MBUS	Yes
RS485	Yes
General	
Dimensions (W x H x D)	1,048 x 732 x 395 mm
Weight (with mounting plate)	≤108 kg
Operating Temperature Range	-25 °C ~ 60 °C
Cooling Method	Smart Air Cooling
Max. Operating Altitude without Derating	4,000 m (13,123 ft.)
Relative Humidity	0 ~ 100%
AC Connector	Waterproof Connector + OT/DT Terminal
Protection Degree	IP66
Topology	Transformerless



Smart Transformer Station De-rating Curve JUPITER-9000K-H1 Series

Preliminary



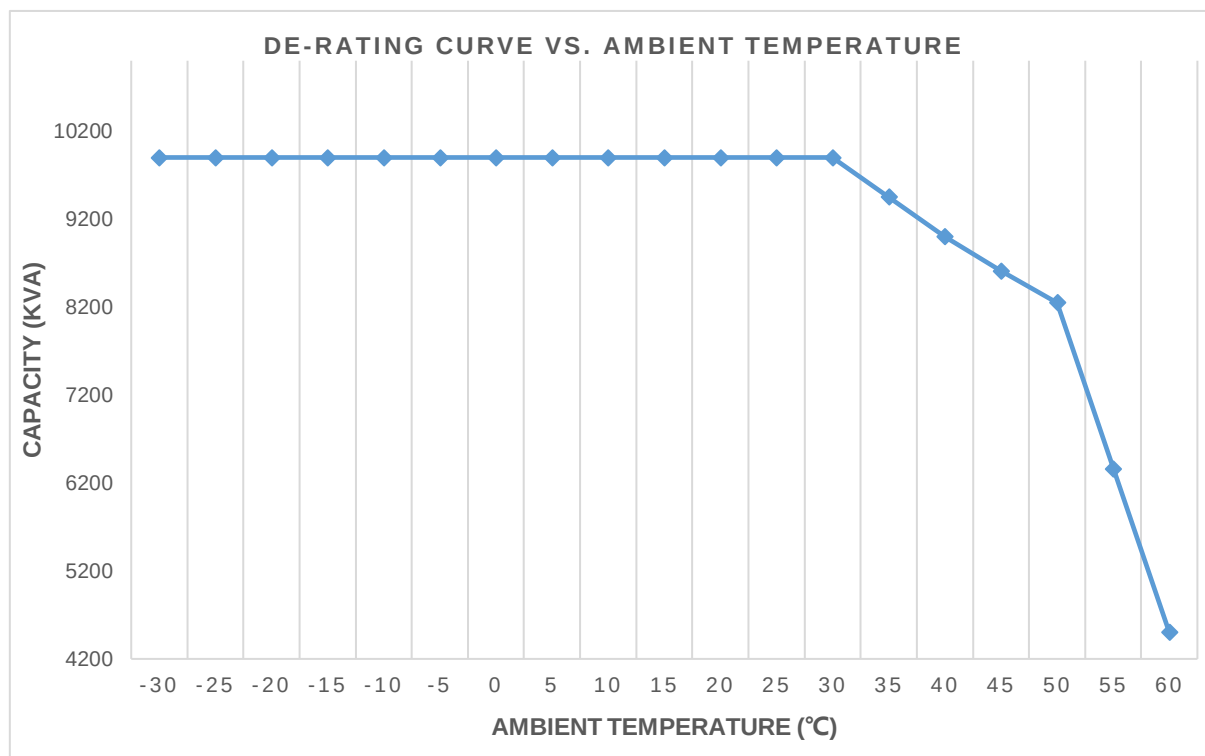
Huawei Technologies Co., Ltd.

Version	Created by	Date	Remarks
V1.0	Wangwei	2022.8.26	Preliminary

De-rating Curve VS. Ambient Temperature

De-rating curve VS. ambient temperature of smart transformer station

JUPITER-9000K-H1



Model	Type	-25 °C	30 °C	35 °C	40 °C ^[1]	45 °C	50 °C ^[2]	55 °C	60 °C
JUPITER-9000K-H1	Rated	9,900 kVA	9,900 kVA	9,450 kVA	9,000 kVA	8,610 kVA	8,250 kVA	6,360 kVA	4,500 kVA

Note:

[1] at Ambient temperature max./monthly (hottest month)/annual average (°C) 40 / 30 / 20

[2] at Ambient temperature max./monthly (hottest month)/annual average (°C) 50 / 40 / 30

[3] Altitude 1000 m

JUPITER-9000K-H1 (Preliminary)

Smart Transformer Station



Simple

Prefabricated and Pre-tested, No Internal Cabling Needed Onsite
Compact 20' HC Container Design for Easy Transportation



Efficient

High Efficiency Transformer for Higher Yields
Lower Self-consumption for Higher Yields



Smart

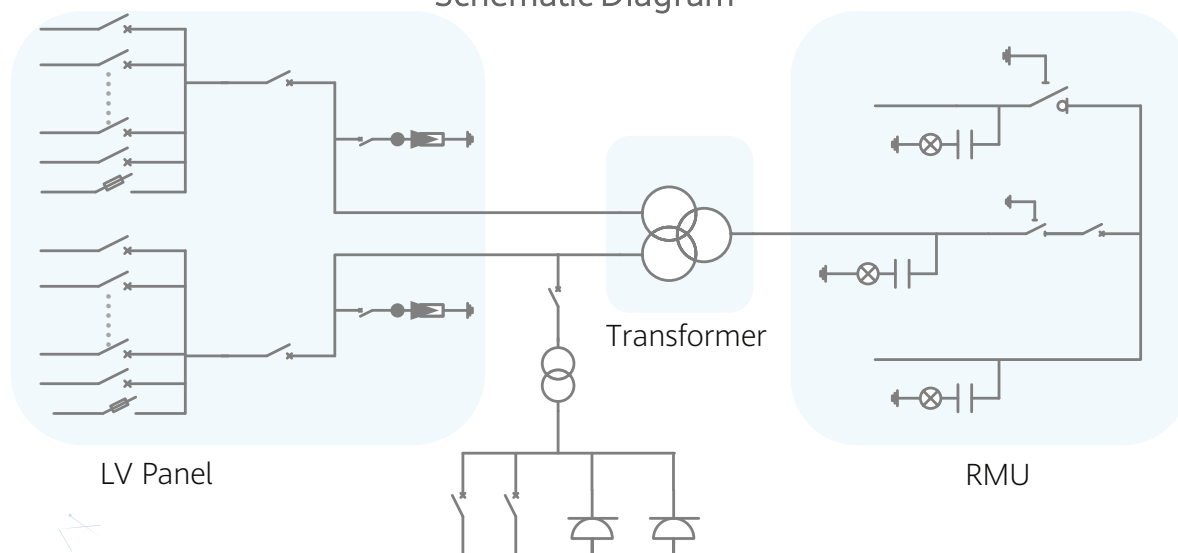
Real-time Monitoring of Transformer, LV Panel and RMU
High Precision Sensor of LV Electricity Parameters
Remote Control of ACB and MV Circuit Breaker



Reliable

Robust Design against Harsh Environments
Optimal Cooling Design for High Availability and Easy O&M
Comprehensive Tests from Components, Device to Solution

Schematic Diagram



Technical Specifications(Preliminary)

Input		
Available Inverters	SUN2000-330KTL-H1/ SUN2000-330KTL-H2	
Max. LV AC Inputs	30	
AC Power	9,000 kVA @40°C / 8,250 kVA @50°C ¹	
Rated Input Voltage	800 V	
LV Main Inputs	ACB (4,000 A / 800 V / 3P, 2 x 1 pcs), MCCB (400 A / 800 V / 3P, 2 x 15 pcs)	
Output		
Rated Output Voltage	22 kV, 30 kV, 33 kV, 35 kV ²	34.5 kV ²
Frequency	50 Hz	60 Hz
Transformer Type	Oil-immersed, Conservator Type	
Transformer Cooling Type	ONAN	
Transformer Tappings	± 2 x 2.5%	
Transformer Oil Type	Mineral Oil (PCB Free)	
Transformer Vector Group	Dy11-y11	
Transformer Min. Peak Efficiency Index	Tier 1 or Tier 2 In Accordance with EN 50588-1	
RMU Type	SF ₆ Gas Insulated	
RMU Transformer Protection Unit	MV Vacuum Circuit Breaker Unit	
RMU Cable Incoming / Outgoing Unit	Direct Cable Unit or Cable Load Break Switch Unit	
Auxiliary Transformer	Dry Type Transformer, 5 kVA	
Protection		
Transformer Monitoring & Protection	Oil Level, Oil Temperature, Oil Pressure and Buchholz	
Protection Degree of MV & LV Room	IP 54	
Internal Arcing Fault of STS	IAC A 20 kA 1s	
MV Relay Protection	50/51, 50N/51N	
LV Overvoltage Protection	Type I+II	
Anti-rodent Protection	C5 in accordance with ISO 12944	
Features		
2 kVA UPS	Optional ³	
MV Surge Arrester for MV VCB	Optional ³	
General		
Dimensions (W x H x D)	6,058 x 2,896 x 2,438 mm (20’ HC Container)	
Weight	< 28 t	
Operating Temperature Range	-25°C ~ 60°C ⁴ (-13°F ~ 140°F)	
Relative Humidity	0% ~ 95%	
Max. Operating Altitude	1,000 m ⁵	1,500 m ⁵
MV-LV AC Connections	Prewired and Pretested, No Internal Cabling Onsite	
LV & MV Room Cooling	Smart Cooling without Air-across for Higher Availability	
Communication	Modbus TCP, Preconfigured with SmartACU2000D	
Applicable Standards	IEC 62271-202, EN 50588-1, IEC 60076, IEC 62271-200, IEC 61439-1	

1 - More detailed AC power of STS, please refer to the de-rating curve.

2 - Rated output voltage from 10 kV to 35 kV, more available upon request

3 - Extra expense needed for optional features which standard product doesn't contain, more options upon request.

4 -When ambient temperature ≥55°C, awning shall be equipped for STS on site by customer.

5- For higher operating altitude, pls consult with Huawei.