

Three Phase String Inverter

SUN-40/45/50K-G04



Max. 4 MPP trackers, Max. efficiency up to 98.7%



Zero export application, VSG application



String intelligent monitoring (optional)



Wide output voltage range



Anti-PID function (Optional)

Deye

Stock Code: 605117.SH

Model	SUN-40K-G04	SUN-45K-G04	SUN-50K-G04
PV String Input Data			
Max. PV Input Power (kW)	52	58.5	65
Max. PV Input Voltage (V)	1100		
Start-up Voltage (V)	250		
MPPT Voltage Range (V)	200-1000		
Rated PV Input Voltage (V)	600		
Max. Operating PV Input Current (A)	40+40+40	40+40+40+40	
Max. Input Short Circuit Current (A)	60+60+60	60+60+60+60	
No. of MPP Trackers/ No. of Strings MPP Tracker	3/3+3+3	4/3+3+3+3	
AC Output Side			
Rated AC Output Active Power (kW)	40	45	50
Max. AC Output Apparent Power (kVA)	44	49.5	55
Rated AC Output Current (A)	60.6/58	68.2/65.2	75.8/72.5
Max. AC Output Current (A)	66.7/63.8	75/71.7	83.3/79.7
Rated Output Voltage/Range (V)	220/380V, 230/400V 0.85Un-1.1Un		
Grid Connection Form	3L/N/PE		
Rated Output Grid Frequency/Range(Hz)	50/45-55, 60/55-65		
Power Factor Adjustment Range	0.8 leading to 0.8 lagging		
Total Current Harmonic Distortion THDi	<3%		
DC Injection Current	<0.5In		
Efficiency			
Max. Efficiency	98.7%		
Euro Efficiency	98.1%		
MPPT Efficiency	>99%		
Equipment Protection			
DC Polarity Reverse Connection Protection	Yes		
AC Output Overcurrent Protection	Yes		
AC Output Overvoltage Protection	Yes		
AC Output Short Circuit Protection	Yes		
Thermal Protection	Yes		
DC Terminal Insulation Impedance Monitoring	Yes		
DC Component Monitoring	Yes		
Ground Fault Current Monitoring	Yes		
Power Network Monitoring	Yes		
Island Protection Monitoring	Yes		
Earth Fault Detection	Yes		
Overvoltage Load Drop Protection	Yes		
Residual Current (RCD) Detection	Yes		
Surge Protection Level	TYPE II(DC), TYPE II(AC)		
Interface			
Communication Interface	RS485/RS232		
Monitor Mode	GPRS/WIFI/Bluetooth/4G/LAN(optional)		
General Data			
Operating Temperature Range (°C)	-25 to +60°C, >45°C Derating		
Permissible Ambient Humidity	0-100%		
Permissible Altitude (m)	4000m		
Noise (dB)	<65		
Ingress Protection(IP) Rating	IP 65		
Inverter Topology	Non-Isolated		
Over Voltage Category	OVC II(DC), OVC III(AC)		
Cabinet Size (WxHxD mm)	434×570×243 (Excluding Connectors and Brackets)		
Weight (kg)	37.1		
Warranty	5 Years		
Type of Cooling	Intelligent Air Cooling		
Grid Regulation	IEC 61727, IEC 62116, CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002, OVE-Richtlinie R25, G99, VDE-AR-N 4105		
Safety EMC/Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2		

EU Declaration of Conformity

Product: **Grid-connected PV Inverter**

Models: SUN-50K-G04;SUN-45K-G04;SUN-40K-G04;

Name and address of the manufacturer: Ningbo Deye Inverter Technology Co., Ltd.

No. 26 South YongJiang Road, Daqi, Beilun, NingBo, China

This declaration of conformity is issued under the sole responsibility of the manufacturer. Also this product is under manufacturer's warranty.

This declaration of conformity is not valid any longer: if the product is modified, supplemented or changed in any other way, as well as in case the product is used or installed improperly.

The object of the declaration described above is in conformity with the relevant Union harmonization legislation: The Low Voltage Directive (LVD) 2014/35/EU;the Electromagnetic Compatibility (EMC) Directive 2014/30/EU;the restriction of the use of certain hazardous substances (RoHS) Directive 2011/65/EU.

References to the relevant harmonized standards used or references to the other technical specifications in relation to which conformity is declared:

LVD:	
EN 62109-1:2010	●
EN 62109-2:2011	●
EMC:	
EN IEC 61000-6-1:2019	●
EN IEC 61000-6-2:2019	●
EN IEC 61000-6-3:2021	●
EN IEC 61000-6-4:2019	●
EN IEC 61000-3-2:2019+A1:2021	●
EN 61000-3-3:2013/A2:2021/AC:2022-01	●
EN IEC 61000-3-11:2019	●
EN 61000-3-12:2011	●
EN 55011:2016/A2:2021	●

Nom et Titre / Name and Title:

Bard Dai

Senior Standard Certification Engineer

NINGBO DEYE INVERTER TECHNOLOGY CO.,LTD.

Au nom de / On behalf of:

Ningbo Deye Inverter Technology Co., Ltd.

Date / Date (yyyy-mm-dd):

2023-10-16

A / Place:

Ningbo, China

Zertifikat *Certificate*

Zertifikatsnummer *Certificate No.:*
R 50626970 0001

Berichtsnummer *Report No.:*
CN24TVPF 001

Genehmigungsinhaber *License Holder:*
NingBo Deye Inverter Technology
Co., Ltd.
No. 26 South YongJiang Road, Daqi,
Beilun NingBo
315800 Zhejiang
P.R. China

Fertigungsstätte *Manufacturing Site:*
NingBo Deye Inverter Technology
Co., Ltd.
No. 26 South YongJiang Road, Daqi,
Beilun NingBo
315800 Zhejiang
P.R. China

Prüfzeichen *Test Mark:*



Geprüft nach *Tested according to:*

IEC 62109-1:2010
IEC 62109-2:2011
EN 62109-1:2010
EN 62109-2:2011

Geräteidentifikation

Product Identification

Produkt: PV-Inverter
Product: (Grid-connected PV Inverter)

Modell: Modelle sind auf nächste(r) Seite(n) gelistet
Type: *Type designation(s) are listed on the next page(s)*

Technische Daten: Refer to the next page(s)
Technical Data: ANLAGE (Appendix): 1.0

Gültig ab: 2024-04-17
Valid from:

Zertifizierungsstelle:
Certification body:

Ausstellungsdatum: 2024-04-17
Date of issue:


Dean Cao



Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.
This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg
<http://www.tuv.com/safety> E-mail: markcheck@tuv.com
Fax: +49 221 806-3935

Zertifikat Certificate

Zertifikatsnummer Certificate No.:

R 50626970 0001

Berichtsnummer Report No.:

CN24TVPF 001

Produkt Product: PV-Inverter
(Grid-connected PV Inverter)

Modell Type: **Bezeichnung Designation:**

For models : 1) SUN-40K-G04
2) SUN-45K-G04
3) SUN-50K-G04

PV side :
V_{max} PV [Vd.c.] : 1100
Max. Input current [Ad.c.] : 1)40+40+40
2)40+40+40
3)40+40+40+40
I_{sc} PV [Ad.c.] : 1)60+60+60
2)60+60+60
3)60+60+60+60

MPPT Voltage Range [Vd.c.] : 200-1000
MPPT Full Power Voltage Range [Vd.c.]: 450-850
Overvoltage Category (OVC) : II

On-grid AC side :
Rated Output Volt [Va.c.] : 3L/N/PE, 220/380, 230/400
Rated Output Freq. [Hz] : 50/60
Rated Output Power [kW] : 1)40
2)45
3)50

Max. Output Apparent Power[kVA] : 1)44
2)49.5
3)55

Rated Output Current.[Aa.c.] : 1)60.6/58.0
2)68.2/65.2
3)75.8/72.5

Max. Output Current.[Aa.c.] : 1)66.7/63.8
2)75.0/71.7
3)83.3/79.7

Power Factor : 0.8 leading-0.8 lagging
Overvoltage Category (OVC) : III

Protective Class : I
Ingress Protection (IP) : IP65
Pollution Degree (PD) : PD3
Operating Temperature [°C] : -25 to 60, >45°C Derating
Altitude [m] : 4000
Type of Inverter : Non isolated

Remark(s) :
The installation has to be carried out according to the attached installation instruction.
Any additional requirements in countries where the product is going to be marketed have to be considered additionally.





CERTIFICATE



This is to certify that

Ningbo Deye Inverter Technology Co., LTD.

No.26 south Yongjiang Road, Daqi. Beilun Area
315806, Ningbo, Zhejiang
China

Unified Social Credit Code: 91330200665572062U

has implemented and maintains a **Quality Management System**.

Scope:

Design and production of solar inverter control panels, inverter circuit control panels and photovoltaic gridconnected inverters.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 9001 : 2015

Certificate registration no. 50052889 QM15
Valid from 2023-11-13
Valid until 2026-11-12
Date of certification 2023-11-09



DQS GmbH

Christian Gerling
Managing Director

DQS IS A MEMBER OF



Accredited Body: DQS GmbH, August-Schanz-Straße 21, 60433 Frankfurt am Main, Germany

Responsible Office: DQS AP Ltd., 906-907, Waterfront Place Block E, No.31, Lane 168, Daduhe Road, Putuo District, Shanghai, China, Post Code: 200062

The validity of this certificate can only be verified by the QR-code as well as CNCA official website www.cnca.gov.cn.

The certificate will be valid only in case that the certified organization undergoes successful periodic surveillance audit.



ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATE

Certificate No. 00123E34434R2M/3302

We hereby certify that

Ningbo Deye Inverter Technology Co.,Ltd.

Business Registration Number: 91330200665572062U

No.26 Yongjiang South Road Daqi, Beilun District, Ningbo City, Zhejiang Province, P.R.China

by reason of its

Environmental Management System

has been awarded this certificate for compliance with the standard

ISO 14001:2015

The Environmental Management System Applies in the following area:

Design and production of solar inverter control panels, variable frequency circuit control panels, and photovoltaic grid connected inverters, as well as related management activities.

Certified since: November 30, 2017 Valid from: November 14, 2023 Valid until: November 29, 2026

After a surveillance cycle, the certificate is valid only when used together with an Acceptance Notice of Surveillance Audit issued by CQC.

Please access www.cqc.com.cn for checking validity of the certificate.

This certificate and its relevant information can query in the website of Certification and Accreditation Administration of the People's Republic of China (www.cnca.gov.cn).



中国认可
国际互认
管理体系
MANAGEMENT SYSTEM
CNAS C001-M

谢肇煦

Signed by: Xie ZhaoXu



CHINA QUALITY CERTIFICATION CENTRE

Section 9, No.188, Nansihuan(the South Fourth Ring Road) Xilu(West Road), Beijing 100070, China

<http://www.cqc.com.cn>

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2022年版