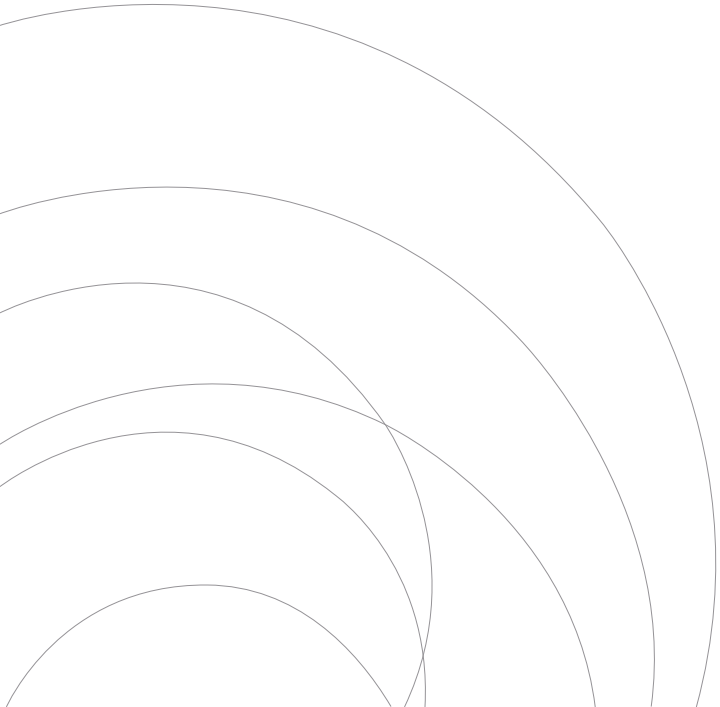
Installation / User Manual

The Optimizer Concentrator



Ver:1.0.0

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About This Manual

The manual mainly targets the optimizer concentrator independently developed and produced by Ningbo Deye Inverter Technology Co., Ltd.

➢ Purpose

The purpose of this manual is to provide readers with detailed information about the product and installation, operation, and maintenance instructions.

➢ Targeting readers

The manual is applicable to professional technicians and users who need to install, operate, and maintain external optimizers.

➢ Manual usage

Please read this manual carefully before using this product and store it properly in a location that is easy for operation and maintenance personnel to locate.

➢ Symbolism

The following are symbols that may be used in this manual. Please read them carefully to better use this manual.

Danger

"Danger" indicates a high potential danger that, if not avoided, could result in death or serious injury to personnel.

Warning

"Warning" indicates a moderate potential danger if a situation that could result in death or serious injury is not avoided.

Caution

"Caution" indicates a low potential danger, and failure to avoid situations that may result in moderate or mild injury to personnel.

Attention

"Attention" indicates potential risks, if not avoided, which may result in equipment malfunction or property damage.

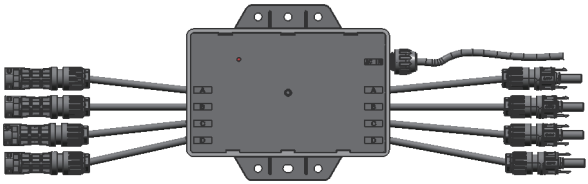
1. Safety Instructions

In order to ensure the safe installation and operation of the optimizer, reduce the risk of electric shock, and minimize equipment damage, the following safety precautions need to be strictly followed during operation and maintenance.

Warning

(1) All installation operations must be completed by professional technicians only. Professional technicians must:
(2)After specialized training;
(3)Have read this manual completely and mastered the safety precautions related to operation;
(4)Familiar with the relevant safety regulations of electrical systems.

2. XL20-B Optimizer Concentrator



2.1 Points for attention

- During the loading, unloading, and transportation of the product, please handle it with care and avoid being subjected to heavy external pressure to prevent damage;

If it is not for maintenance reasons, do not frequently open or unplug the connection system, as this will reduce the waterproof sealing and service life.

2.2 Installation and wiring requirements

2.2.1 Installation steps instructions

Warning

Before installation, please read all instructions and warnings in this manual, as well as the warning labels on the inverter and component array.

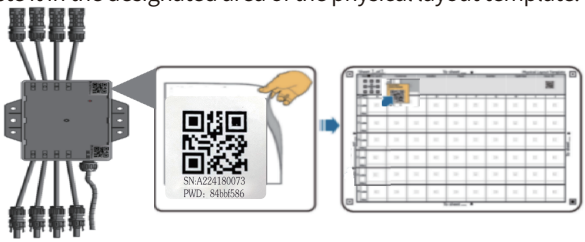
Warning

Before installation, please shut down the inverter and disconnect it from the component array.

2.2.2 Installation and wiring of optimizer concentrator

The optimizer concentrator supports up to 4 strings, and a single string can support up to 25 components (depending on the capacity of the inverter). For example, if the on-site inverter supports two string inputs, the optimizer concentrator only needs two strings connected to the PV inputs of the string and the inverter. The communication distance between the optimizer concentrator and the strings should not exceed 350m.

1. Tear off the QR code and remove the QR code label at the indicated position as shown in Figure f, and paste it in the designated area of the physical layout template.



f. Schematic diagram of optimizer concentrator QR code tearing and pasting

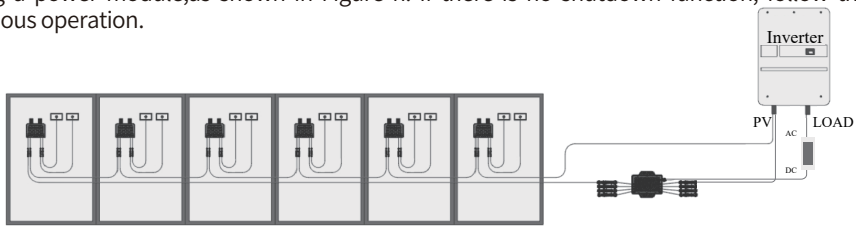
2. Optimizer concentrator fixed

The optimizer concentrator is equipped with built-in WIFI and powered by an adapter. It is necessary to consider the coverage of WIFI signals and the connection of AC power to the adapter.

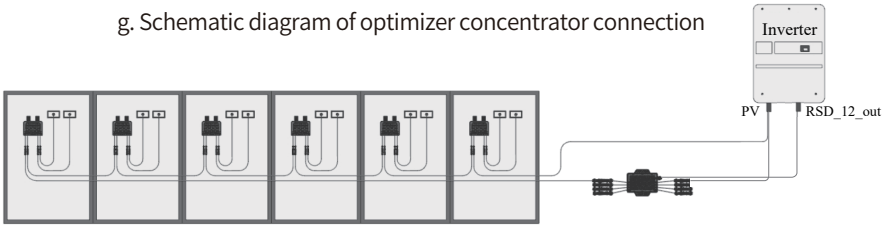
3. Optimizer Concentrator Connection

Connect the PV+or PV - in the connected string sequentially through the string end of the optimizer concentrator and then connect it to the inverter, as shown in Figure g.

If the machine has a rapid shutdown function, you can connect the inverter directly without using a power module,as shown in Figure h. If there is no shutdown function, follow the previous operation.



g. Schematic diagram of optimizer concentrator connection



h. Use the RSD port of inverter to supply the concentertor

Note:

1.To minimize electromagnetic interference, it is recommended to shorten the length of the cables from the optimizer to the inverter and optimizer concentrator as much as possible.

2.To ensure the commuinication stable, it's recommended to dividually layout the PV cable and AC cable of this solar system, make sure the distance between them is more than 10cm.

3. Installation And Wiring Requirements For Rail Type Power Supply

3.1 Fixed power supply

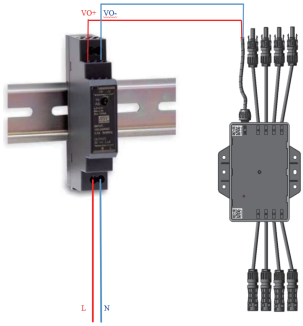
The rail power supply must be installed in the distribution cabinet or waterproof box, and fixed as shown in the diagram.



i. Schematic diagram of fixed rail power supply

3.2 Power connection

After confirming the correct connection, turn on the power and the working indicator light will turn on, indicating that the optimizer concentrator is working properly and system parameter configuration can be performed. Please refer to the system software operation instructions for details.



4. Appendix

4.1 Optimizer concentrator specification sheet

Model	SUN-XL20-B
Project	**Parameter**
Operating voltage	DC 12-15V
Maximum input current	20A
System	1000V/1500V
Number of connected strings	4
Size	229*109*38mm
Weight	1600g
Communication	PLC
Connector	MC4 or MC4 compatible
Operating temperature	-40 ~ + 65 °C
Protection level	IP68
Product certification	CE

4.2 Guideway Power Supply Specification

Model	HDR-30-15
Project	**Parameter**
Input the operating voltage range	85~264VAC
Output voltage	15VDC
Output current	2A
Rated power	30W
Operating temperature	-30~+70°C
Product certification	CE

5. Download APP

If you are an household user,please scan QR code below to download DeyeCloud APP. Or you can log in to https://deyecloud.com/

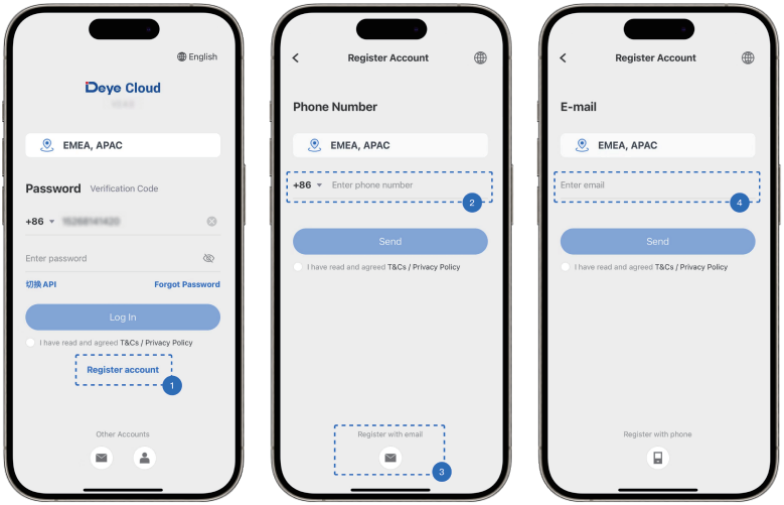
If configuration failure occurs,please check the following reason and try it again.
1)Make sure WLAN is ON.
2)Make sure WiFi is normal.
3)Make sure wireless router does not implement the white-blacklist.
4)Remove the special characters in Wi-Fi network.
5)Shorten the distance between the phone and device.
6)Try to connect to other Wi-Fi.
7)Use the web page to configure the network

6. User Manual For Deye Cloud APP

Please make sure Bluetooth and WiFi are ON and the router can connect to the network normally.

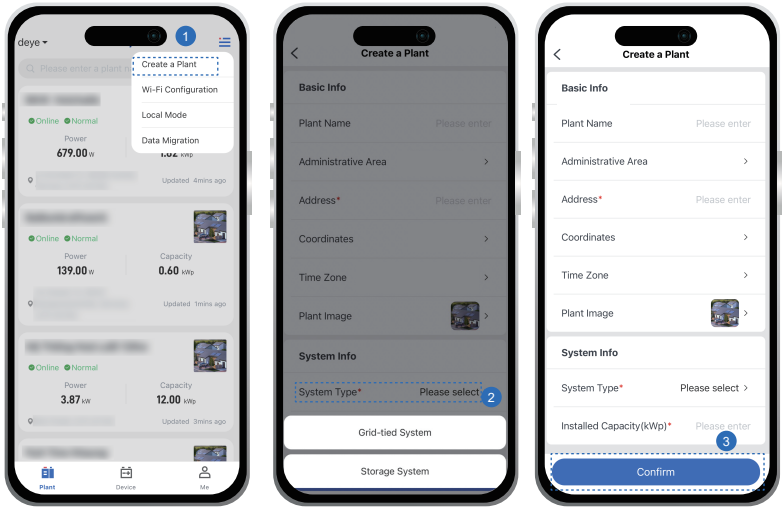
6.1 Registration

Go to Deye Cloud App and register.
Click "Register"and create your account here.



6.2 Create a Plant

Click "Create a Plant" to create your plant.
Please fill in plant basic info and other info here.



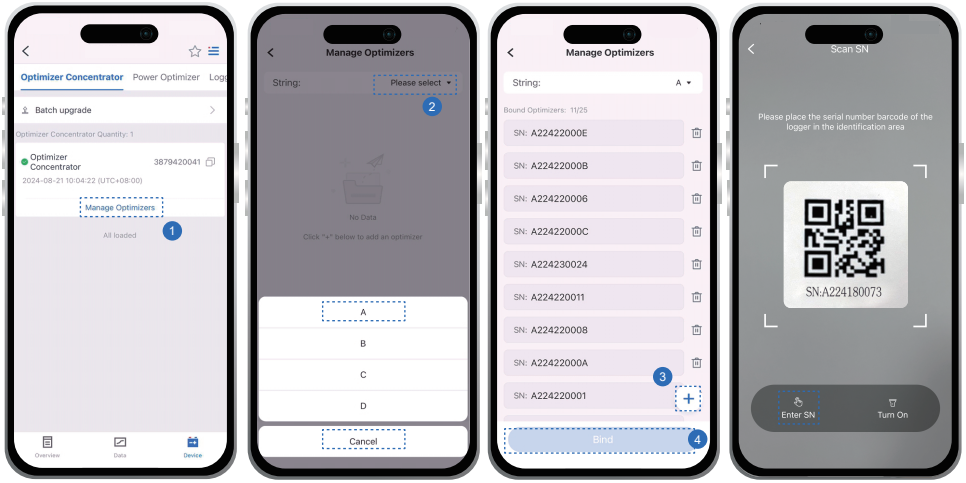
6.3 Add a Optimizer Concentrator

Step 1:Choose a Plant.
Step 2:Goto"Device"page and click on"Add a Logger".
Step 3:Scan QR code of the optimizer concentrator ,which can be found on the optimizer concentrator body.Or enter the optimizer concentrator SN manually.



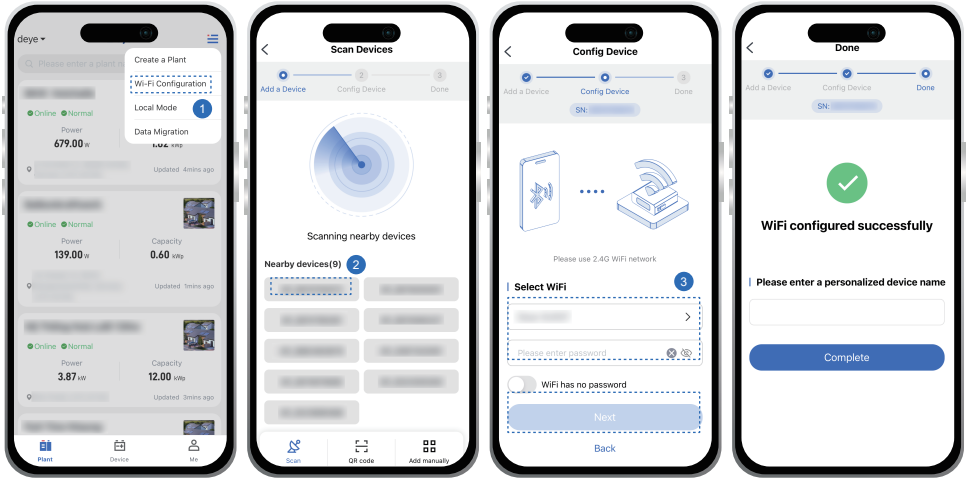
6.4 Add a Optimizer

Step 1: Go to "Manage Optimizers"
Step 2: Select the corresponding string based on the wiring of the optimizer concentrator
Step 3:Choose "+", and scan QR code of the optimizer, which can be found on the optimizer,or enter the SN manually
Step4 : Choose the "Bind".



6.5 Network Configuration

Step 1:Click"Wi-fi Configuration"to set the network.(Please make sure Bluetooth and WiFi are ON.)
Step 2:Please wait for a few seconds,then select corresponding SN
Step 3:Please connect 2.4G wifi
Step 4:Complete WiFi configuration



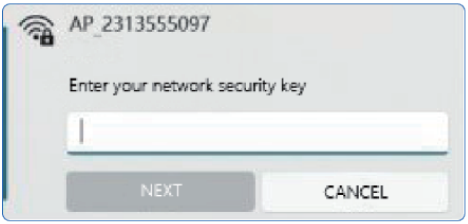
Notice:
5G WIFI is not supported.

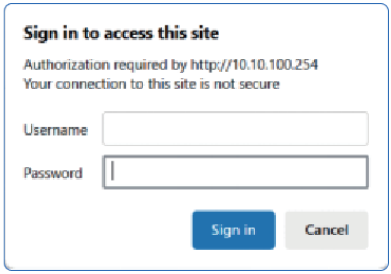
Please make sure the product is working properly before you leave the site. If there is anything abnormal, please do not leave the site and contact customer service at the first time. Service Email:service@deye.com.cn.

7. Use The Web Page To Configure The Network

7.1 Login to the web page

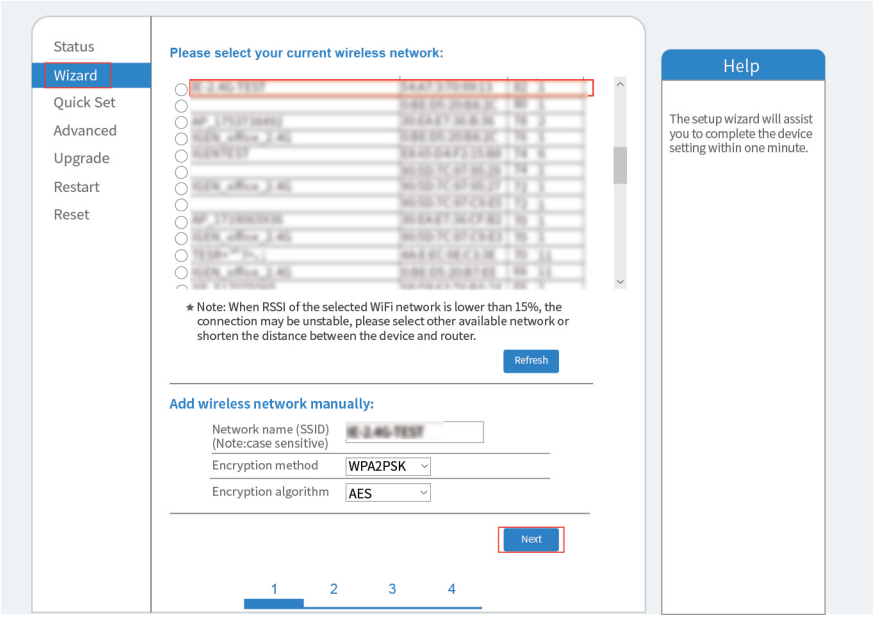
The phone/computer connects to the WIFI with the name AP XXXXXXXXX and logs in to the Web page with the IP address 10.10.100.254.with Username admin And Password admin; NOTES:XXXXXXXXX means loggerSN,and the password is displayed in the label.



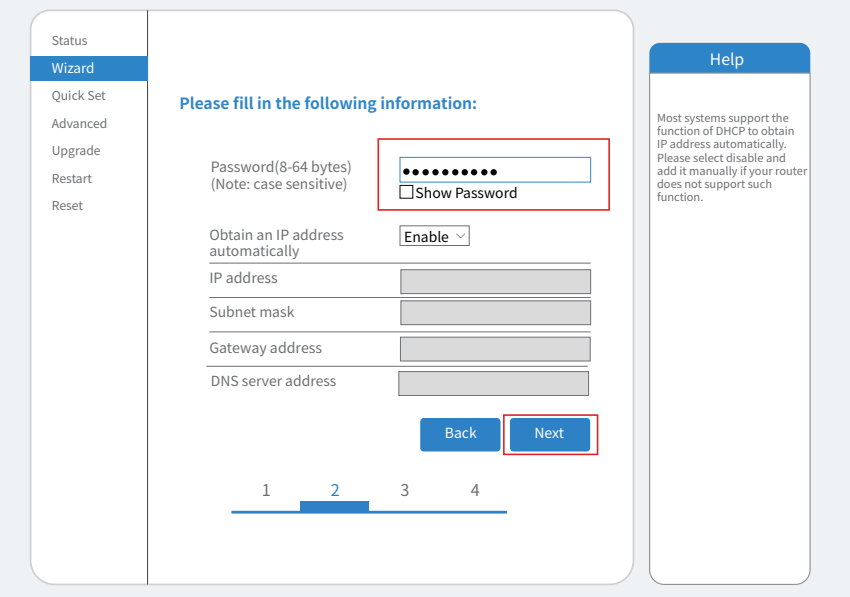


7.2 Set up a wireless network

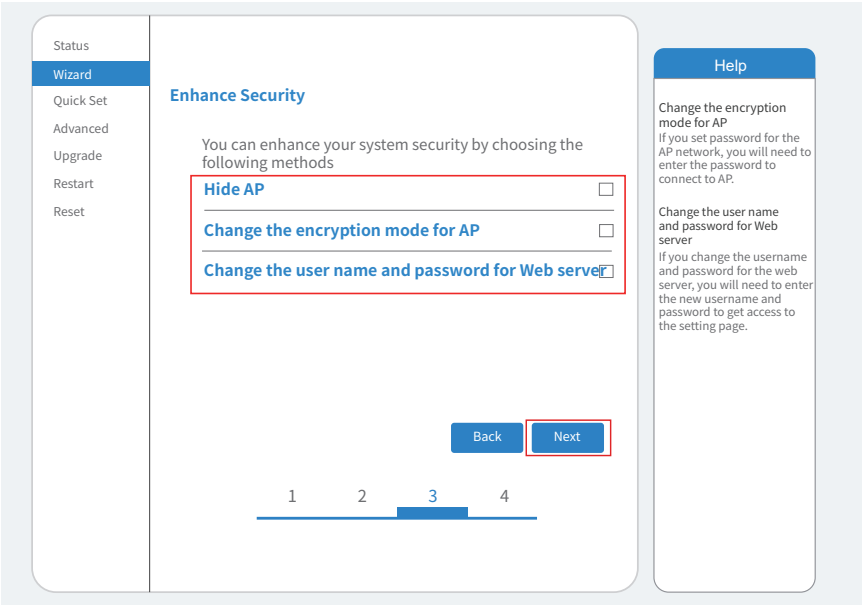
Click "Wizard"page,select the wireless network that needs to be configured;



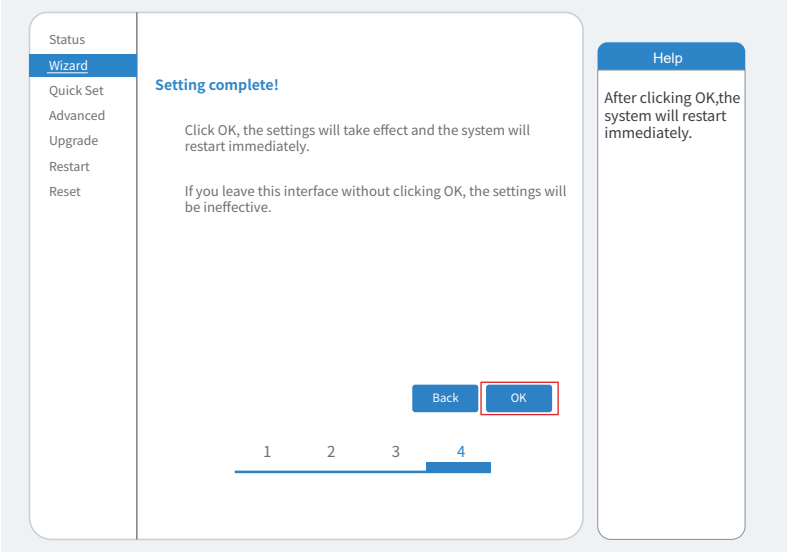
Enter the password and set “Obtain an IP address automatically” to “Enable”.



Select the network security settings you need;



Click ” OK” to Complete the wireless network setup;



If you have any technical queries about our products, please contact us and provide the following information:
1.Product model and serial number .
2.Product model and serial number of connected inverter.
Thank you for your support and cooperation

8. EU Declaration of Conformity

within the scope of the EU directives

- Radio Equipment Directive 2014/53/EU (RED)
- Restriction of the use of certain hazardous substances 2011/65/EU)(RoHS)

NINGBO DEYE INVERTER TECHNOLOGY CO.,LTD. confirms herewith that the products described in this document are in compliance with the fundamental requirements and other relevant provisions of the above mentioned directives. The entire EU Declaration of Conformity and certificate can be found at https://www.deyeinverter.com/download/#pv-optimizer.

241011001
www.deyeinverter.com

EU Declaration of Conformity

Product:Optimizer Concentrator
Models:SUN-XL20-B

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 restriction of the use of certain hazardous substances (RoHS) Directive 2011/65/EU and the Radio Equipment Directive (RED) 2014/53/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:

EN 62109-1:2010	●
EN 62109-2:2011	●
EN 300328 V 2.2.2:2019	●
EN 301489-1 V 2.2.3:2019	●
EN 301489-17 V 3.2.4:2020	●
EN IEC 62311:2020	●
EN IEC 61000-6-1:2019	●
EN IEC 61000-6-2:2019	●
EN IEC 61000-6-3:2021	●
EN IEC 61000-6-4:2019	●

Nom et Titre / Name and Title:

Bard Dai
Senior Standard and Certification Engineer

宁波德业变频技术有限公司
NINGBO DEYE INVERTER TECHNOLOGY CO.,LTD.

Au nom de / On behalf of:
Ningbo Deye Inverter Technology Co., Ltd.
Date / Date (yyyy-mm-dd):
2024-10-11
A / Place:
Ningbo, China

Ningbo Deye Inverter Technology Co., Ltd.
No. 26 South YongJiang Road, Daqi, Beilun, NingBo, China

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