Midea Internet Dongle

User Manual

Model: MDC-HKA

Brand: Midea

Warning notices: Before using this product, please read this manual carefully and keep it for future reference.
The design and specifications are subject to change without prior notice for product improvement.
Consult with your dealer or manufacturer for details.
The diagram above is just for reference. Please take the appearance of the actual product as the standard.

THANK YOU LETTER

Thank you for choosing Midea! Before using your new Midea product, please read this manual thoroughly to ensure that you know how to operate the features and functions that your new appliance offers in a safe way.

Contents

Ⅰ Introduction

The internet dongle collects the working data of the inverter for the energy control system to manage the PV and other power generation systems in a long-term and effective manner. The internet dongle is connected to the inverter through the circular connector, obtains the working data of the inverter at a preset interval, and sends such data to the energy control system through the wireless channel, so that the user can know the working status of the energy system through the APP timely and use the system properly.

Ⅱ Basic Parameters of Product

Table 1: Basic Parameters

Category	Parameter	Description
Wireless parameters	Working frequency	2.400GHz~2.4835GHz
	Transmitting power	802.11b: +17dBm±2dBm(@1Mbps) +17dBm±2dBm(@11Mbps)
		802.11g: +16dBm±2dBm (@6Mbps) +14dBm±2dBm (@54Mbps)
		802.11n: +16dBm±2dBm (@HT20, MCS0) +13dBm±2dBm (@HT20, MCS7)
	Antenna	Out-board PCB antenna
Hardware parameters	Data interface	RS485/TTL
	Working voltage	DC5V ~DC12V
	Working power	1.5W
	Indicator lights	COM: Indicating the connection and communication status of the internet dongle
		NET: Indicating the network connection status
		READY: Indicating the working status
	Working temperature	-30℃~+70℃
	Working humidity	Relative humidity of 10%-90%; No condensation
	Storage temperature	-45℃~+90℃
	Storage humidity	<40%
	IP grade	IP65
	External interface	Big circular connector

Note: The internet dongle does not support 5GHz band.

Ⅲ Definitions of Product Interfaces

3.1 MDC-HKA pinout

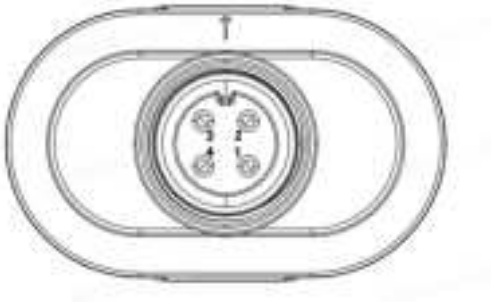


Table 2: Big Circular Connector Pinout

Pin	Description	Network	Note
1	Power input	VCC	Power supply
2	Power GND	GND	Power GND
3	Data communication	A	RS485_A
4	Data communication	B	RS485_B

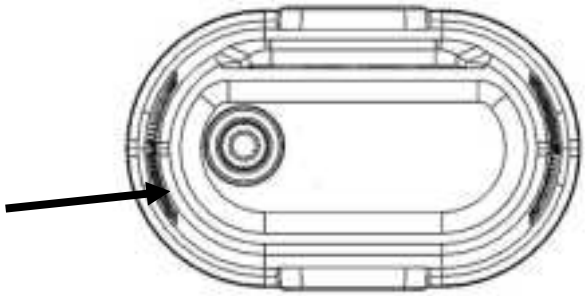
Ⅳ Button and Indicator Lights

The internet dongle has three indicator lights and one button. The indicator lights indicate the working status (e.g., network connection status) of the internet dongle, while the button is used for resetting, networking and authentication. For details, please refer to the sections below.

4.1. Button and Definition

There is one button on the internet dongle, and different functions can be used by long or short pressing the button for 10s or 3s. The functions include resetting (by long pressing), network configuration and authentication (by short pressing).

Resetting/network configuration/authentication



4.2. LED indicator lights and definitions

Table 5 sets out the definitions and status descriptions of the indicator lights

Table 5: Definitions of Indicator Lights

Sign	Definition	Status Description
	Indicating the status of communication and network connection between the internet dongle and the router.	1. Slow flashing: Network to be configured. 2. Quick flashing: Connecting. 3. Constant on: Connected. 4. Off: Idle.
	Indicating the status of communication between the internet dongle and the inverter.	1. Constant on: The internet dongle and the inverter have been connected. 2. Quick flashing: The internet dongle and the inverter are in communication. 3. Off: The internet dongle fails to connect with the inverter.

	Indicating the working status of the internet dongle.	1. Slow flashing: The internet dongle works normally. 2. Quick flashing: The internet dongle has been reset. 3. Off: The internet dongle works abnormally.

4.3. Indications of system working abnormally

Table 6 sets out the common anomalies of the internet dongle and recommended solutions.

Table 6: Anomalies and Solutions

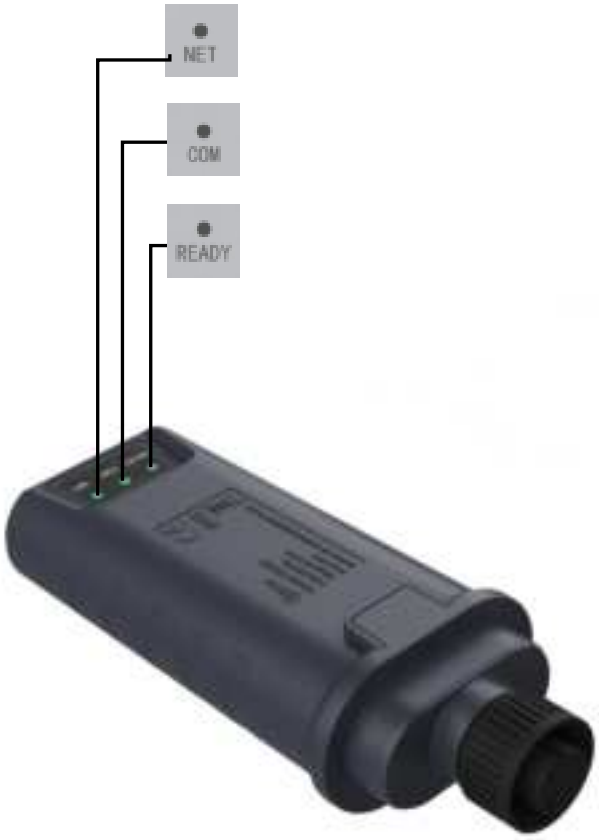
NET	COM	READY	Anomaly	Cause	Solution
/	Off	Slow flashing	The communication between the internet dongle and the inverter is abnormal.	The connection between the internet dongle and the inverter is loose.	1. Check if the connection between the internet dongle and the inverter is abnormal, and re-insert the internet dongle.
				The communication rate of the inverter does not match that of the internet dongle.	2. Check if the communication settings of the inverter are in line with those of the internet dongle. 3. Long press the button for 10s to reset the internet dongle.
Off	Off	Off	The power supply is abnormal.	The connection between the internet dongle and the inverter is abnormal and loose.	Check the connection status, and re-insert the internet dongle.
				The inverter is underpowered.	Check if the output power of the inverter meets the requirements.
				The internet dongle is abnormal.	Consult with our after-sales support team for solution.
Quick flashing for 2s and off for 2s	/	/	The internet dongle fails to connect with the router.	The router signal is poor.	Keep the internet dongle as close to the router as possible.
				The router cannot be found.	Check if the router name entered is correct.
				The router password is wrong.	Enter the correct router password.
				The signal is strong and the password is correct, but the connection fails.	Contact our after-sales support team.
Slow flashing for 4s and off for 2s	/	/	The internet dongle is connected with the router, but cannot access the network.	The internet dongle is connected with the router during network configuration, but cannot be connected	Check if the household broadband is normal.

				with the server due to timeout.	

Ⅴ Product Appearance and Dimensions

This specification applies to MDC-HKA, MDC-HKB and MDC-DB9 models.

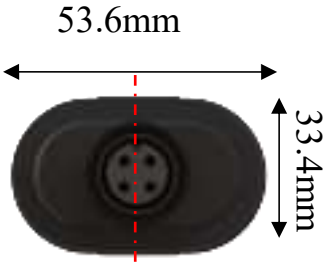
5.1. Appearance



MDC-HKA

Note: The above is a rendering, for reference only.

5.2. Dimensions



MDC-HKA

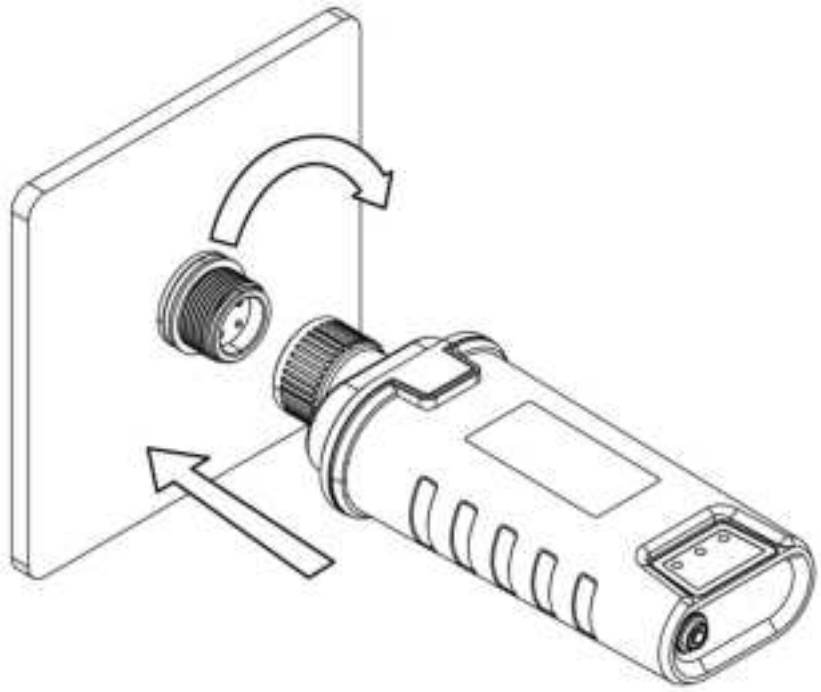
Note: The tolerance is 2%.

Ⅵ Installation and Network Configuration

6.1 Installation

6.1.1. Installation of MDC-HKA

Insert the internet dongle into the interface of the inverter, as shown in the figure below.



Do not perform the following actions, otherwise, the internet dongle can be damaged.

Caution

Do not rotate the internet dongle during installation or removal.

Caution

Do not remove the soft rubber button on the internet dongle.

6.2 Network Configuration

6.2.1. Download APP

Search for SmartHome in the App Store (Google Play Store / Apple App Store), download and install it on your smartphone. You can also scan the QR code below to download the APP.

6.2.2. Register and log in

Open SmartHome, and create a new account (or register with a third-party account). If you already have an account, log in to SmartHome or web version (https://ems.aiiciot.com) via this account.

6.2.3. Start network configuration mode

1. Install the internet dongle into the inverter properly.
2. After the internet dongle is powered on, short press the button for 3s. Then, the NET indicator light will flash slowly, and the internet dongle will enter the network configuration mode.
3. If network configuration is completed in 10 minutes, it means that device authentication has also been completed. If network configuration is not completed in 10 minutes or network configuration is performed in self-start mode, manual authentication is required. You can complete authentication according to the prompts of the APP.

6.2.4. Configure network for internet dongle

1. Make sure that your smartphone is connected to a wireless network. If not, go to Settings, and turn on Wi-Fi and Bluetooth.

2. Make sure that your internet dongle is powered on and is in the network configuration mode.

3. Open SmartHome on your smartphone.

4. When the prompt "Found Smart Device Nearby" pops up, tap Add.

5. If no such a prompt pops up, tap "+" on the page, and select your device from the list of available devices nearby. If your device is not on the list, manually add your device by type and model.

6. Connect your internet dongle to the wireless network according to the prompts of the APP. If the connection fails, proceed according to the prompts of the APP.

VII Vendor Information

Table 7: Vendor Information

Manufacturer Information	
Manufacturer	Manufacturer Address
GD Midea Air-Conditioning Equipment Co.,Ltd.	Lingang Road, Beijiao, Shunde , Foshan, Guangdong, PEOPLE'S REPUBLIC OF CHINA
Importer Information	
Importer	Importer address
4-ECO sp. z o.o.	Ul. Zagnańska 15325-563 Kielce

FCC Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.