

avoltik 2451171

Huawei SDongleA-05 Smart Dongle User Manual

Model: SDongleA-05 | Brand: Avoltik

1. INTRODUCTION

The Huawei SDongleA-05 Smart Dongle is a communication module designed to enable wireless communication between Huawei SUN2000 inverters and a management system. It supports both Wi-Fi and Fast Ethernet (FE) connectivity, providing flexible options for monitoring and managing your photovoltaic installation.

This dongle is built for reliability, featuring an IP65 protection rating and an automatic connection restoration mechanism in case of failure. It also supports cascading multiple inverters, making it suitable for various system configurations.



Figure 1: Huawei SDongleA-05 Smart Dongle, a compact black device with Huawei branding and a USB connector.

2. SETUP AND INSTALLATION

Follow these steps to properly install your SDongleA-05 Smart Dongle with a compatible Huawei SUN2000 inverter.

1. **Prepare the Inverter:** Ensure your Huawei SUN2000 inverter is powered off before installation.
2. **Insert the Dongle:** Locate the USB port on your inverter. Carefully insert the SDongleA-05 Smart Dongle into the USB port. Ensure it is fully seated.
3. **Secure the Connection:** If applicable, tighten the securing nut or mechanism on the dongle to ensure a firm and waterproof connection. The recommended torque is 0.8-1.1 Nm.
4. **Connect Ethernet (Optional):** If using a wired Fast Ethernet connection instead of Wi-Fi, connect an Ethernet cable to the dongle's Ethernet port.
5. **Power On:** Once the dongle is securely installed, power on your inverter. The dongle's LED indicator will illuminate, showing its status.

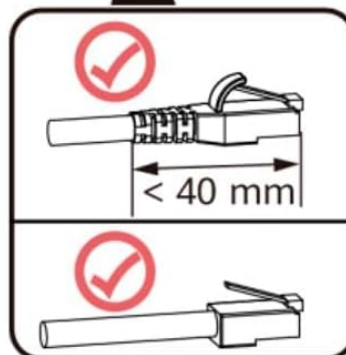
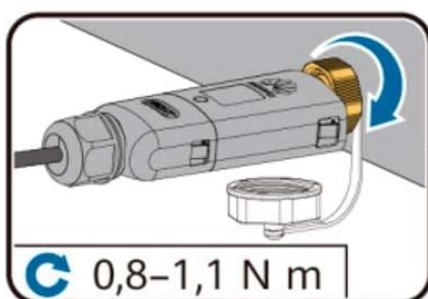
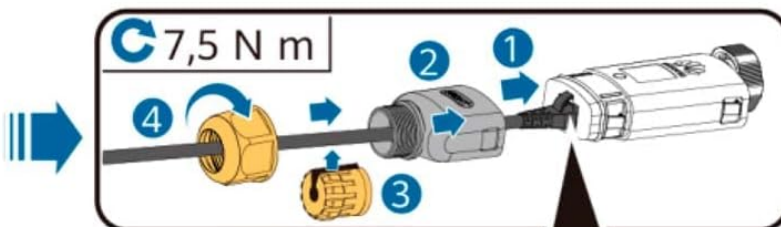
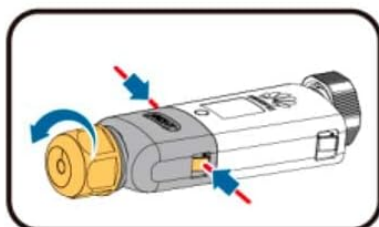
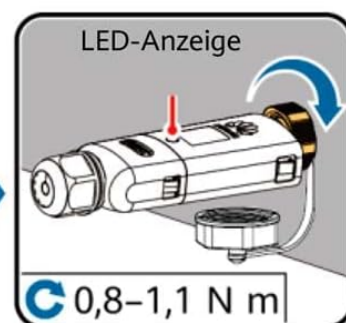
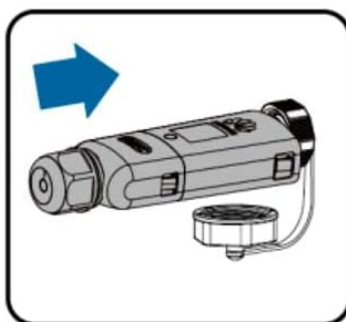


Figure 2: Step-by-step installation diagram showing how to connect the dongle to the inverter's USB port, secure it, and connect an Ethernet cable if needed. It also illustrates the LED indicator and torque specifications.



Figure 3: The Huawei Smart Dongle detached, showing the Ethernet port and USB connector, highlighting its modular design.

3. OPERATING INSTRUCTIONS

The SDongleA-05 facilitates communication between your Huawei SUN2000 inverter and the management system, typically a monitoring platform or app.

3.1 Communication Modes

- **Wi-Fi Communication:** The dongle connects to your local Wi-Fi network, allowing the inverter to transmit data wirelessly to the management system.
- **Fast Ethernet (FE) Communication:** For a wired connection, the dongle uses an Ethernet cable to connect to your network, providing a stable data link.

3.2 Device Cascading

One dongle can be used to cascade multiple inverters via RS485 communication. This allows a single dongle to manage data from several inverters, simplifying system setup.

- A maximum of 10 devices can be cascaded.
- If the cascaded inverters include a single-phase inverter or are connected to batteries, a maximum of three inverters can be cascaded.

3.3 LED Indicator

The dongle features an LED indicator that provides status information. Refer to the inverter's or dongle's specific manual for detailed LED status interpretations (e.g., solid green for normal operation, blinking for connection attempts).

4. MAINTENANCE

The Huawei SDongleA-05 Smart Dongle is designed for minimal maintenance due to its robust construction and intelligent features.

- **IP65 Protection:** The device has an IP65 protection class, meaning it is dust-tight and protected against low-pressure water jets from any direction. This makes it suitable for outdoor installation.
- **Automatic Connection Restoration:** In the event of a connection failure, the dongle attempts to automatically restore the connection, minimizing downtime and ensuring continuous data transmission.
- **Cleaning:** Periodically, you may gently wipe the exterior of the dongle with a soft, dry cloth to remove any dust or debris. Do not use harsh chemicals or abrasive materials.
- **Inspection:** Occasionally inspect the physical connection to the inverter and any connected cables for signs of wear or damage.



Figure 4: The Huawei Smart Dongle installed on a solar inverter, with solar panels visible in the background, demonstrating its outdoor suitability.

5. TROUBLESHOOTING

If you encounter issues with your SDongleA-05 Smart Dongle, consider the following common troubleshooting steps:

- **No Communication:**

- Check the dongle's LED indicator. Refer to the inverter or dongle manual for LED status meanings.
- Ensure the dongle is securely inserted into the inverter's USB port.
- Verify that the inverter is powered on.
- If using Wi-Fi, check your Wi-Fi network's status and ensure the dongle is within range and correctly configured (refer to the inverter's network setup guide).
- If using Ethernet, ensure the Ethernet cable is properly connected to both the dongle and your network router/switch.

- **Intermittent Connection:**

- Check for potential sources of interference if using Wi-Fi.
- Ensure the dongle's firmware is up to date (check Huawei support resources).
- Verify network stability.

- **Cascading Issues:**

- Ensure the RS485 communication cables between inverters are correctly connected.
- Verify that the number of cascaded devices does not exceed the maximum limits (10 devices in general, 3 if single-phase or battery-connected inverters are present).

For persistent issues, consult the detailed troubleshooting section of your Huawei inverter manual or contact Huawei/Avoltik technical support.

6. SPECIFICATIONS

Below are the technical specifications for the Huawei SDongleA-05 Smart Dongle:

Technische Daten	
Modell	SDongleA-05
Allgemeine Daten	
Max. Unterstützte Geräte	10
Max. Unterstützte Wechselrichter	10
Verbindungsschnittstelle	USB
Ethernet-Schnittstelle	10/100M Ethernet
Installation	Plug-and-play
Anzeige	LED - Indikator
Abmessungen (B x H x T)	146 x 48 x 33 mm
Gewicht	90 g
Schutzart	IP65
Leistungsaufnahme (typisch)	2,5 W
Modbus TCP	Ja (muss aktiviert werden)
Verschlüsselung	WPA/WPA2
	TKIP/CCMP/AES
WLAN Parameter	
Unterstützte Standards und Frequenzen	802.11b/g/n (2,412GHz—2,484GHz)
Umwelt	
Betriebstemperaturbereich	-30°C bis +65°C
Rel. Luftfeuchtigkeit im Betrieb	5% RH - 95% RH
Lagertemperaturbereich	-40°C bis +70°C
Max. Betriebshöhe	4000 m
Normenkonformität (weitere auf Anfrage)	
Zertifikate	SRRC, CE, RCM
Wechselrichter-Kompatibilität	
Wechselrichtermodell	SUN2000-2KTL-L1 / SUN200-3KTL-L1 / SUN200-3.68KTL-L1 / SUN200-4KTL-L1 / SUN200-4.6KTL-L1/ SUN200-5KTL-L1/ SUN200-6KTL-L1
	SUN2000-3KTL-M0/M1 // SUN2000 4KTL-M0/M1// SUN2000-5KTL-M0/M1//SUN2000-6KTL-M0/M1// SUN2000-8KTL-M0/M1// SUN2000-10KTL-M0/M1
	SUN2000-12KTL-M0/M2 / SUN2000-15KTL-M0/M2/ SUN2000-17KTL-M0/M2/ SUN2000-20KTL-M0/M2
	SUN2000-30KTL-M3 / SUN2000-36KTL-M3/ SUN2000-40KTL-M3

Figure 5: Detailed technical data table for the SDongleA-05, including general data, WLAN parameters, and environmental conditions.

Huawei SDongleA-05 Technical Specifications

Category	Specification
Model	SDongleA-05
Brand	Avoltik
Item Model Number	2451171
Max. Supported Devices	10
Max. Supported Inverters	10
Connection Interface	USB
Ethernet Interface	10/100M Ethernet
Installation	Plug-and-play
Indicator	LED indicator
Dimensions (L x W x H)	15L x 4.5W x 4H cm (146 x 48 x 33 mm)
Weight	90 g
Protection Class	IP65
Typical Power Consumption	2.5 W
Modbus TCP	Yes (must be activated)
Encryption	WPA/WPA2, TKIP/CCMP/AES
Supported WLAN Standards & Frequencies	802.11b/g/n (2.412GHz–2.484GHz)
Operating Temperature Range	-30°C to +65°C
Relative Humidity in Operation	5% RH - 95% RH

Category	Specification
Storage Temperature Range	-40°C to +70°C
Max. Operating Altitude	4000 m
Certifications	SRRC, CE, RCM
Compatible Devices	Huawei Inverter
Compatible Inverter Models	SUN2000-2KTL-L1 / SUN200-3KTL-L1 / SUN200-3.68KTL-L1 / SUN200-4KTL-L1 / SUN200-4.6KTL-L1/ SUN200-5KTL-L1 / SUN200-6KTL-L1 / SUN2000-3KTL-M0/M1 / SUN2000-4KTL-M0/M1/ SUN2000-5KTL-M0/M1/SUN2000-6KTL-M0/M1/ SUN2000-8KTL-M0/M1/ SUN2000-10KTL-M0/M1/ SUN2000-12KTL-M0/M2 / SUN2000-15KTL-M0/M2/ SUN2000-17KTL-M0/M2/ SUN2000-20KTL-M0/M2/SUN2000-30KTL-M3 / SUN2000-36KTL-M3 / SUN2000-40KTL-M3
International Article Code	04063811156492

7. WARRANTY AND SUPPORT

For warranty information regarding your Huawei SDongleA-05 Smart Dongle, please refer to the warranty documentation provided at the time of purchase or contact your seller/installer. Warranty terms typically cover manufacturing defects and may vary by region and retailer.

For technical support, product inquiries, or service requests, please contact the manufacturer, Huawei Technologies, or your product supplier, Avoltik. You may find contact information on their official websites or through your purchase documentation.

Please note that information regarding spare parts availability and guaranteed software updates is not explicitly provided for this product. It is recommended to inquire directly with the manufacturer or seller for the most current information.