

Access controller SMK-AC-2

USER MANUAL





1. Safety Instructions

To ensure safe and proper operation of the SMK-AC-2 Access Controller, please follow these safety guidelines:

General Safety

- Read this manual carefully before installation and operation.
- Only qualified personnel should install and maintain the device.
- Do not expose the device to extreme temperatures, humidity, or direct sunlight.
- Keep the device away from liquids, dust, and corrosive substances.
- Use only the recommended power supply 12VDC to prevent damage.

Electrical Safety

- Disconnect power before installation or maintenance.
- Ensure all wiring connections comply with local electrical regulations.
- Do not use the device if the power cable is damaged.

Operational Safety

- Do not disassemble or modify the unit, as this may void the warranty and affect compliance.
- Use only recommended accessories and components.



2. Installation Steps

2.1 Pre-Installation Checklist

Before installing the SMK-AC-2, ensure you have the following:

- ✓ SMK-AC-2 Access Controller
- ✓ Compatible power supply or adapter (e.g., Mean Well APV-12-12 power supply).
- ✓ WiFi connection credentials (if using network connectivity)
- ✓ Smart phone with Internet connection



2. Installation Steps

2.2 Register Controller

Step 1

Download the Smart MasterKey app from the **App Store** or **Google Play**.



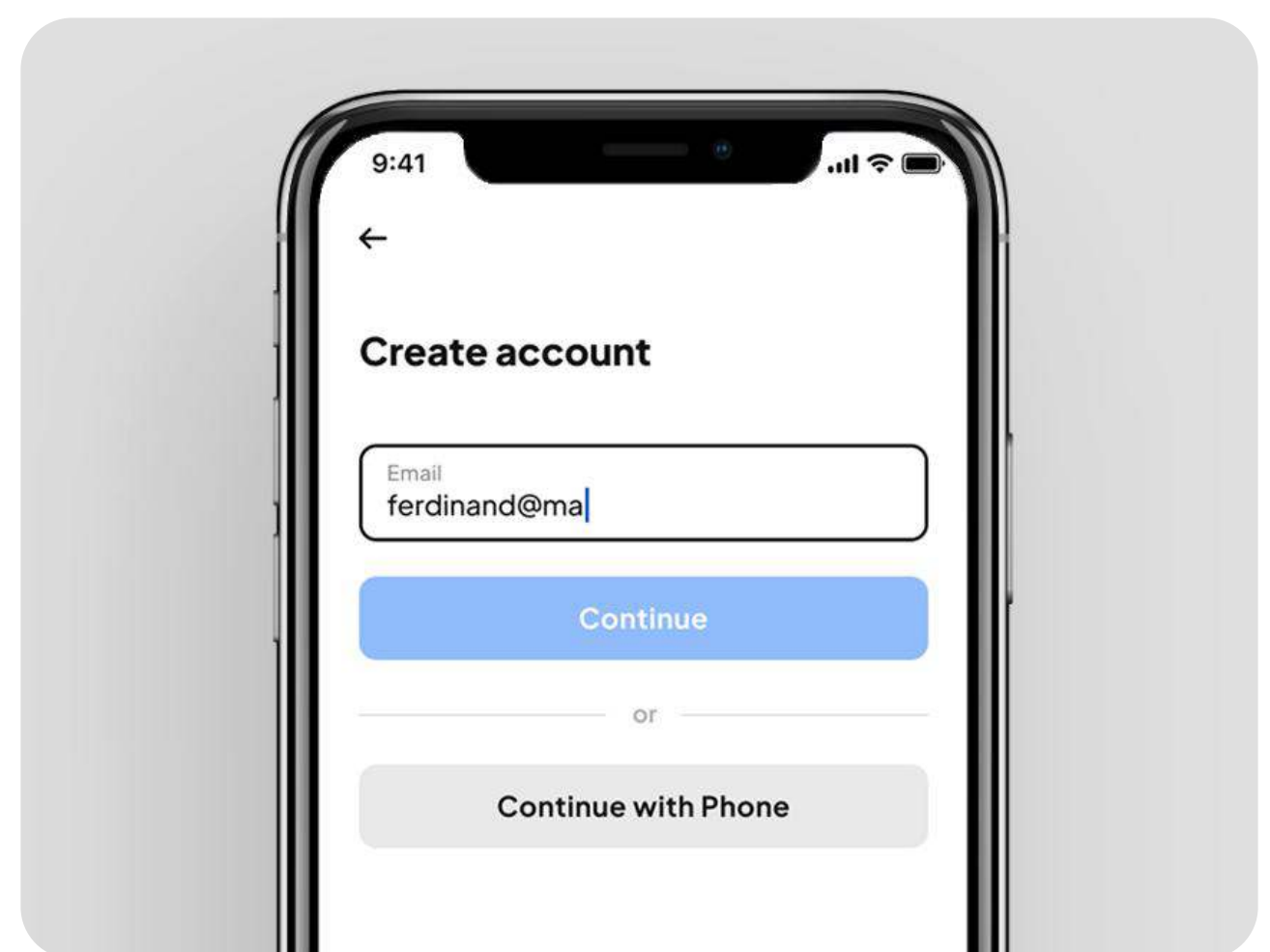
App Store



Google Play

Step 2

Tap **Get Started** to create an account in the app and/or log in.



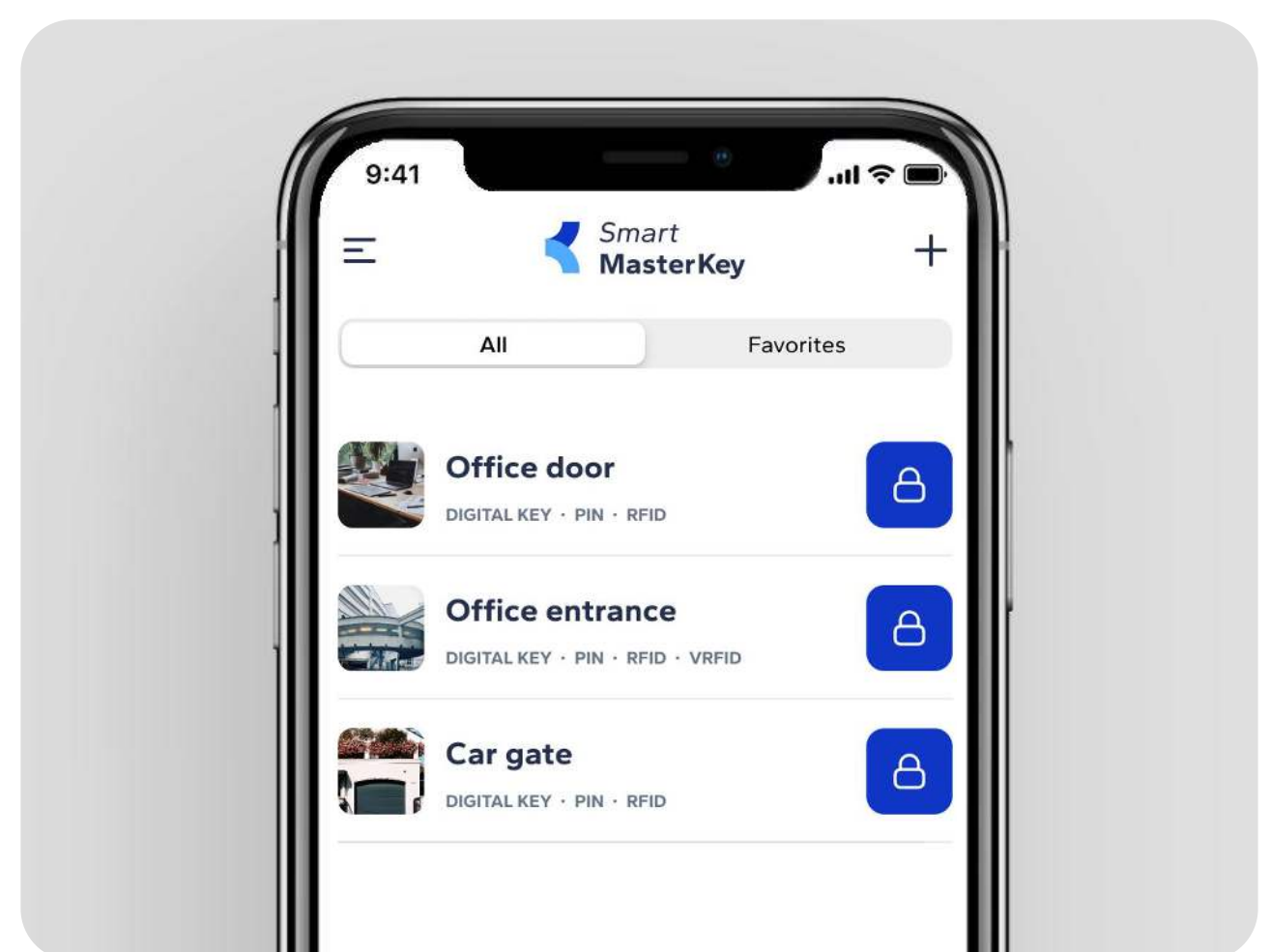
Step 3

Tap **Add a lock controller** and scan the QR-code that's on the controller.



Done!

You are ready to use your lock. Tap the **lock button** in the app to unlock the lock.



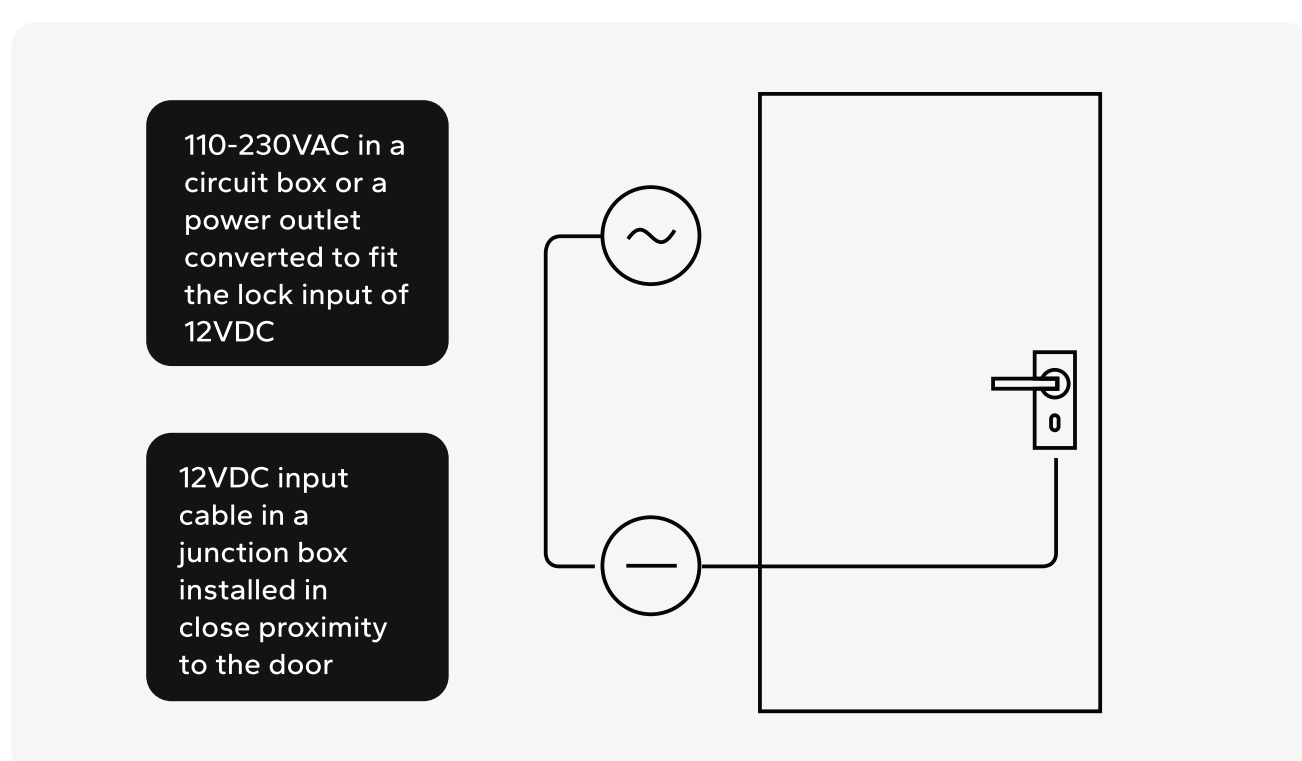
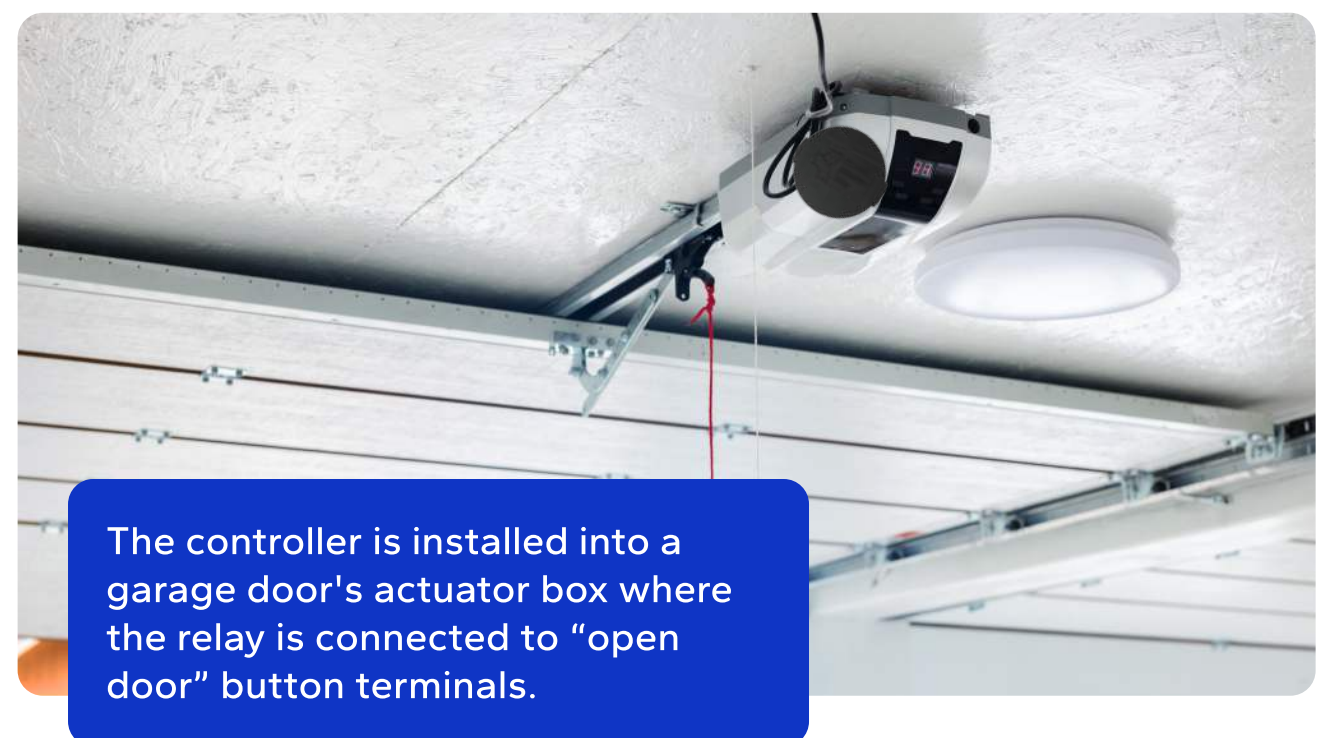


2. Installation Steps

2.3 Installation Procedure

Step 1: Select Installation Location

- Choose a location near the access point (e.g., door, gate) where the controller can be securely mounted.
- Ensure a stable power source is available.



Step 2: Connect Power & Peripherals

Power Supply: Connect the 12VDC power supply.

Access Control Devices: Connect Wiegand supported RFID readers or keypads (if applicable).

Network Connection: Use WiFi for network integration.

Door Lock Mechanism: Connect electric locks/magnetic locks according to the wiring diagram.

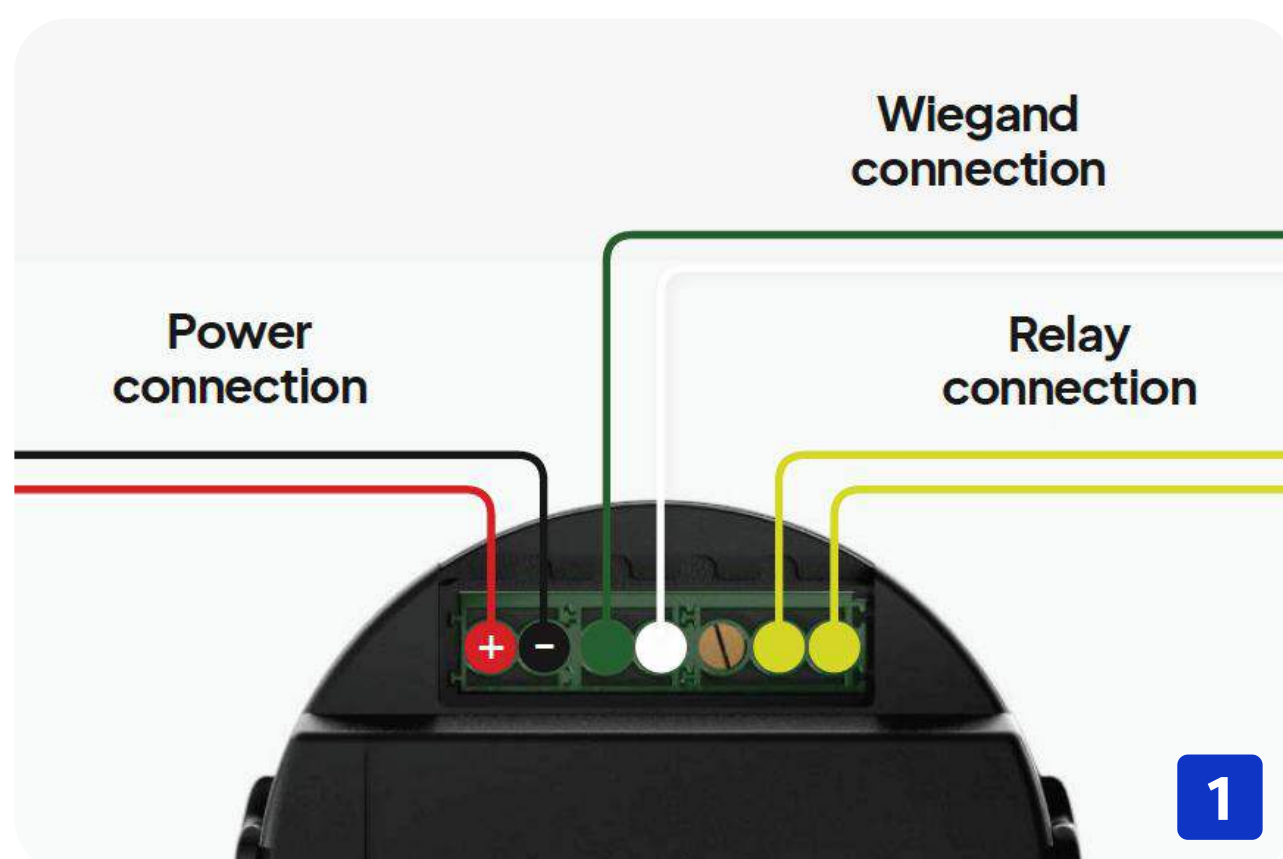


2. Installation Steps

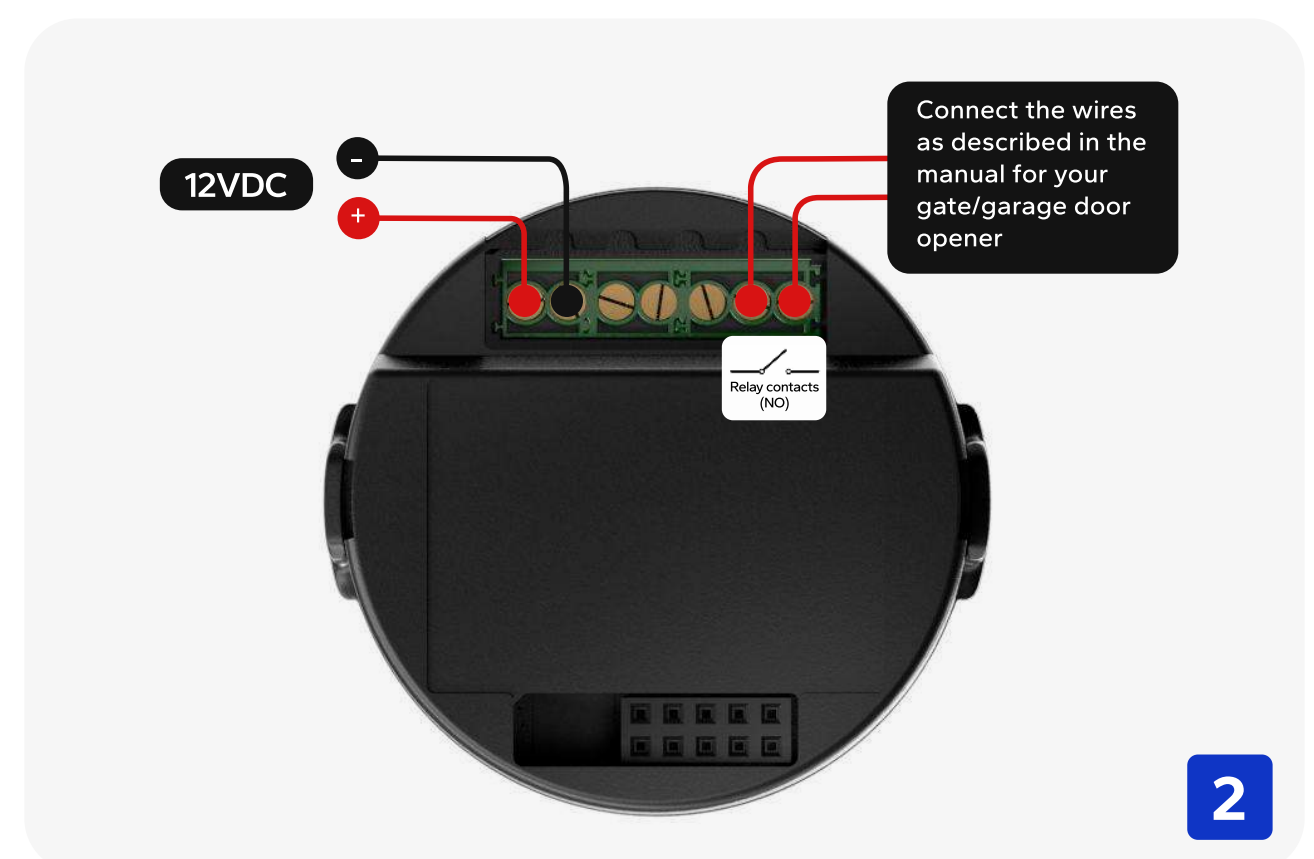
Wiring Diagrams

There are two connection options. The relay can be connected either as a power-free relay switch (NO) for garage doors and car gates or with supply power for door locks, magnets and strike plates.

Door Lock Opener



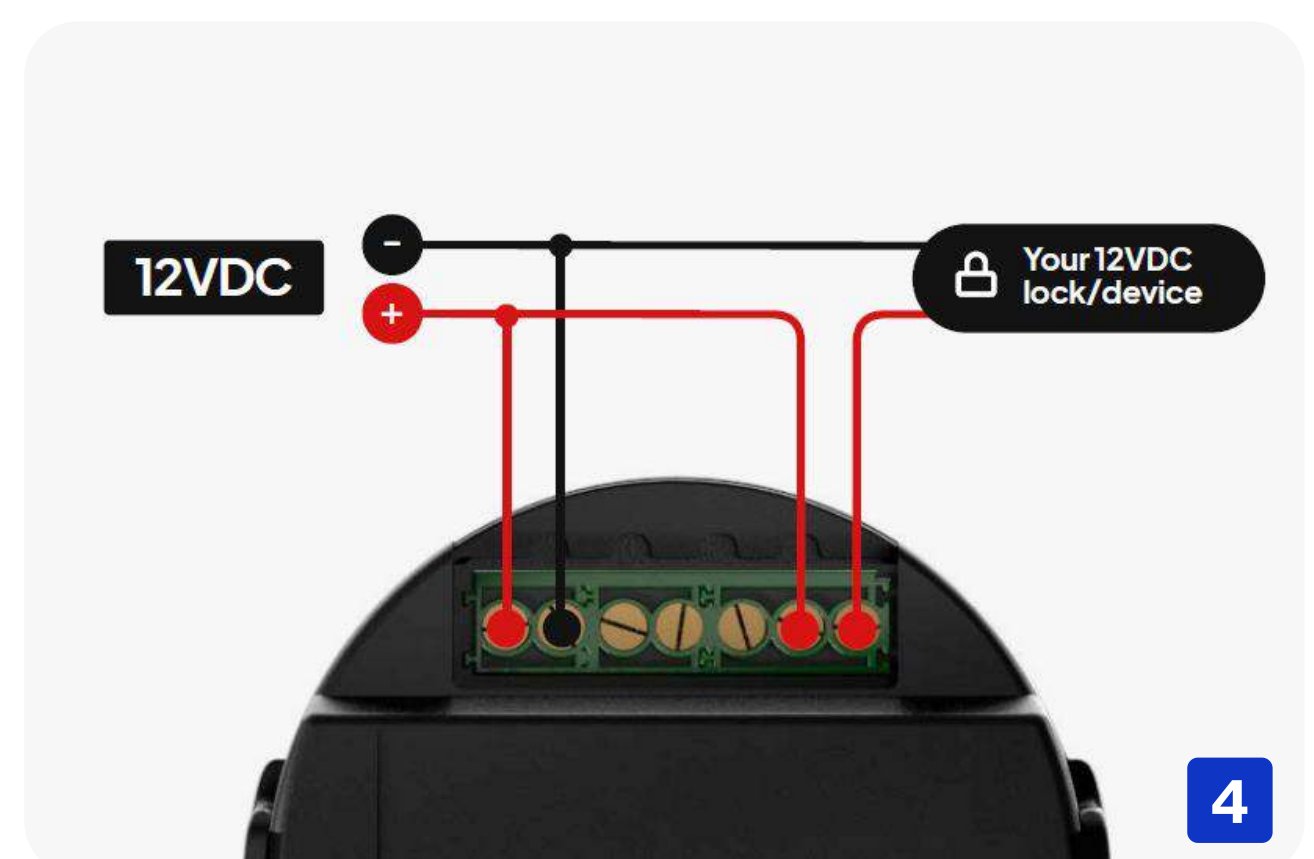
Gate / Garage Door Opener



LED Indication



12 VDC Power Source

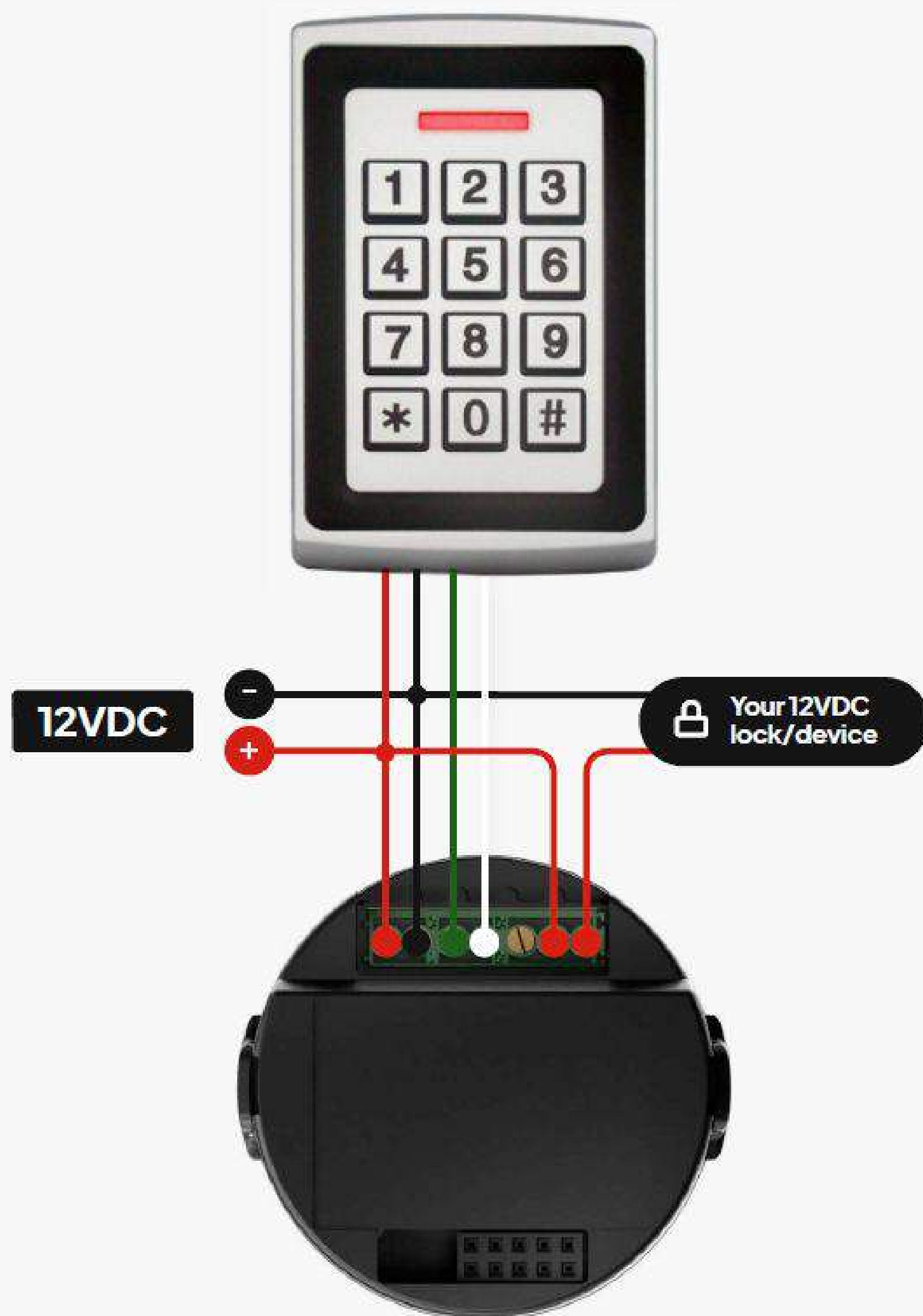




Install SMK-AC-2

Wiegand card reader / PIN pad (Optional)

Card reader / PIN pad access types require WiFi connection in order to work.





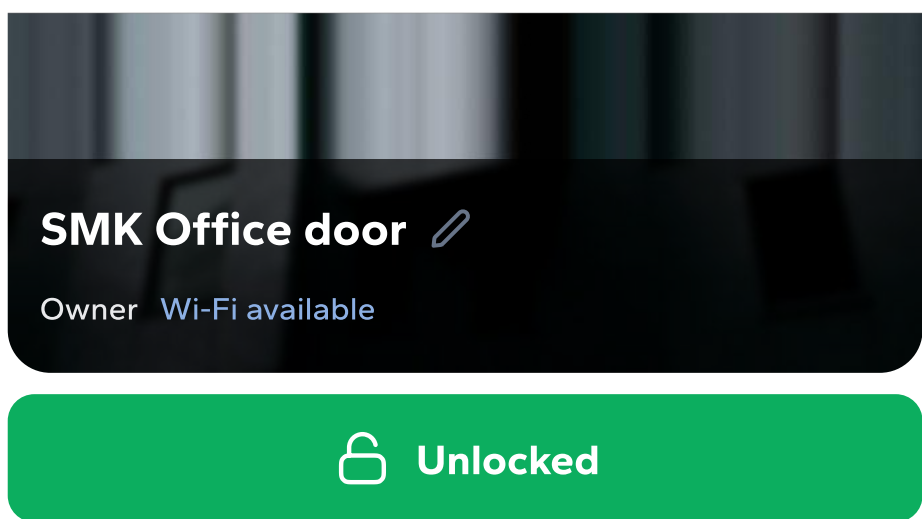
2. Installation Steps

Step 3: Configure the Device

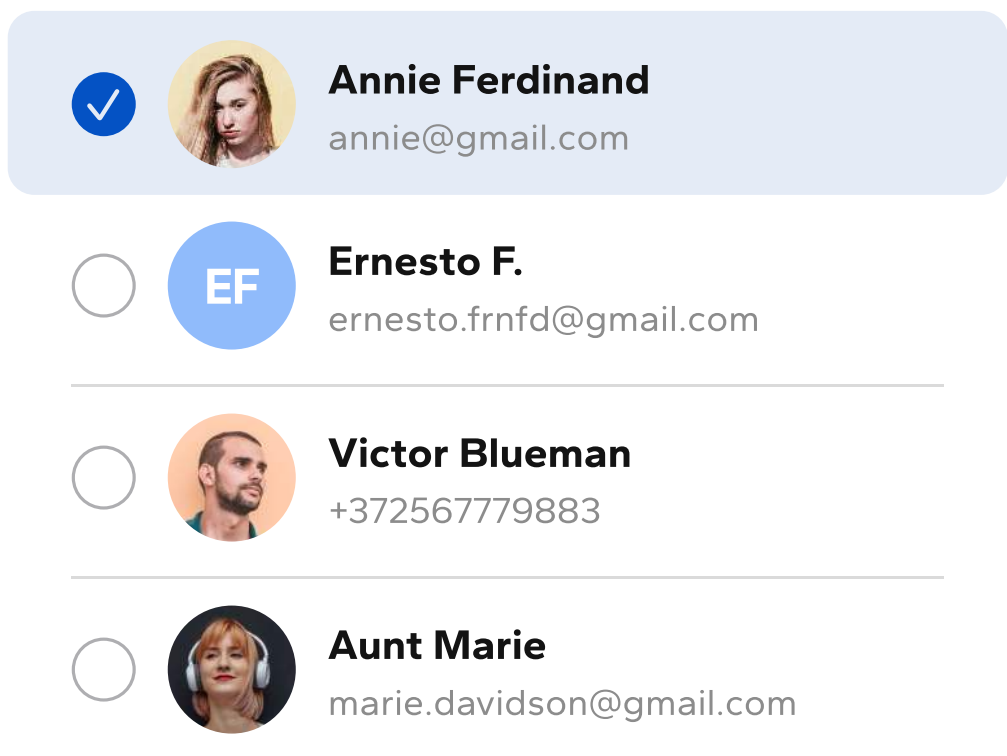
- Power on the controller.



- Access the Smart MasterKey mobile app to test if opening doors/gates work as expected.



- Enroll users (digital keys, RFID cards, or PINs).



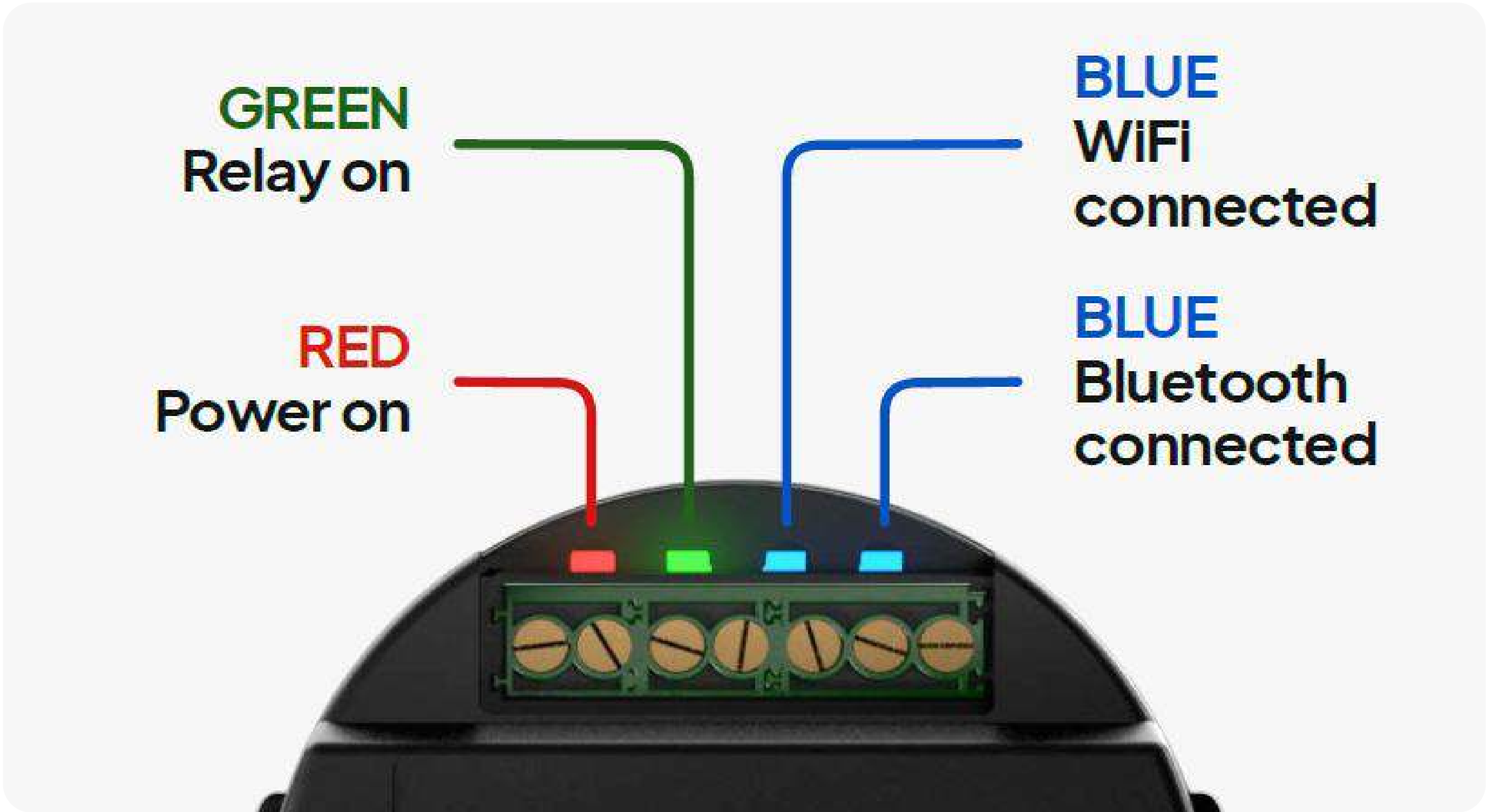
Step 4: Test and Verify

- Perform functionality tests (door opening with different access types).
- Verify connectivity with the management system.
- Ensure proper access logging.



3. Troubleshooting Guide

LED Indication



Issue	Possible cause	Solution
Controller does not work Red LED is off.	Faulty power adapter or wiring.	Check power source and connections.
Door Not Unlocking Green LED lights up.	Incorrect wiring from controller to lock.	Verify lock wiring and configuration. Diagram 1
Door Not Unlocking when using digital key over bluetooth Green LED does not light up.	You are too far from the controller.	Move closer to the controller.
	Problem with mobile bluetooth.	Disable and re-enable mobile Bluetooth. Restart the mobile phone.
	Controller hardware fault.	Restart controller.



3. Troubleshooting Guide

Issue	Possible cause	Solution
Door Not Unlocking when using digital key remotely. Green LED does not light up. Blue WiFi LED is on.	The mobile device does not have an internet connection.	Ensure that your mobile phone have an internet connection. A good WiFi connection does not guarantee a connection to the internet.
Blue WiFi LED is blinking.	The controller lacks a reliable internet connection.	The strength of the WiFi signal for the controller can be found in the Smart MasterKey mobile app's WiFi settings section.
Door Not Unlocking when using PIN code or RFID card. Green LED does not light up.	The controller lacks internet connectivity.	The strength of the WiFi signal for the controller can be found in the Smart MasterKey mobile app's WiFi settings section.
	Incorrect PIN code or RFID card number.	Confirm the accuracy of the PIN code or RFID card number.
	The PIN pad/RFID card reader configuration is incorrect.	Wiegand reader must be reconfigured according to reader manual.
	Malfunction of the PIN pad / RFID card reader wiring.	Verify the wiring connections. Diagram 5
	The PIN pad/RFID card reader is malfunctioning.	Replace the Wiegand reader.
No Network Connection Blue WiFi LED is off.	WiFi is not configured.	The WiFi connection for the controller can be configured within the WiFi settings section of the Smart MasterKey mobile application.
No Internet Connection Blue WiFi LED is blinking.	The controller is unable to locate a WiFi network, or the signal strength is insufficient.	Relocate either the controller or the WiFi router.
Device Not Responding.	Firmware issue or hardware fault.	Restart device, update firmware if needed.



4. Good to know



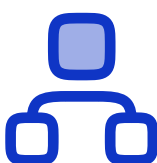
Bluetooth

To operate the lock via Bluetooth, the phone (Smart MasterKey app) needs to be in the Bluetooth range. Range is higher in environments with direct visibility (~50m) and lower where there is no direct visibility to the lock.



Power Failure

After power failure, SMK-AC-2 will continue operation as soon as power supply is restored. To operate the lock during power failure, a relevant backup battery needs to be connected to the controller and the lock.



Operation

A connection between the lock and the app is established over Bluetooth or Wi-Fi connectivity.



Wi-Fi

To use the lock with Wi-Fi, the controller must be connected to 2,4 GHz Wi-Fi and "Remote access" must be enabled in the Smart MasterKey app. That way the lock can be opened even from another country.



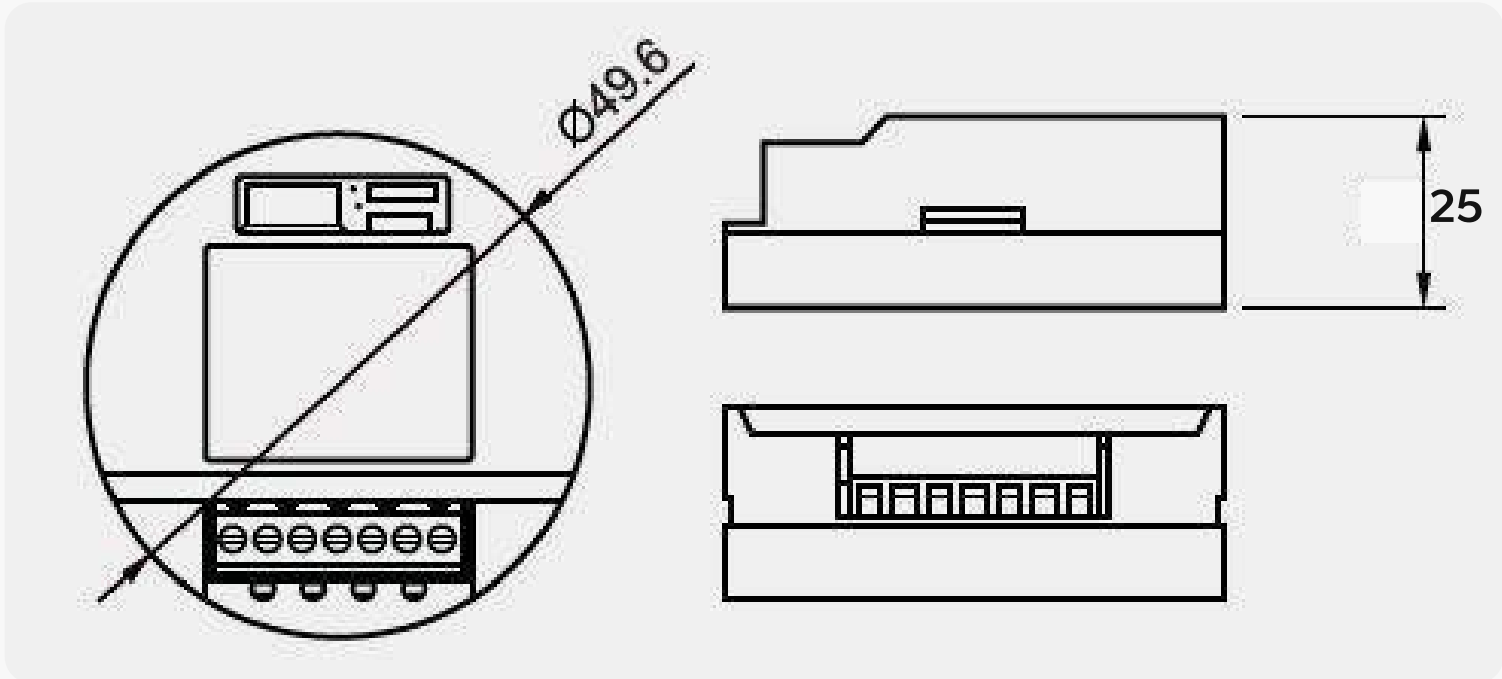
Loss of Your Phone

In case your phone gets lost, all keys may be revoked via the Smart MasterKey web admin portal (admin.smartmasterkey.com). You may generate new keys for the lock as soon as you have downloaded the Smart MasterKey app into your new phone and logged in to the app (logging in on the new device will automatically log you out of the app on the old device).



5. Technical specification

Power supply	12 VDC
Relays (quantity and type)	1 x non-latching, maximum load 10 A, 240VAC or maximum load 10 A, 12VDC
Radio protocols & network	Wi-Fi 802.11 b/g/n (2,4 GHz) Bluetooth v4.2 BR/EDR and BLE External WiFi/BT antenna (optional accessory)
Additional connectivity	1 x Wiegand reader or 2× analogue inputs for hardware switch / PIRsensor / Hall-effect sensor 1× open collector output Supports 4bit and 6bit Wiegand PIN codes Supports 26bit, 32bit, 34bit, and 37bit card reader settings OSDP (readiness possible with OSDP to Wiegand converter)
Physical connectors	Relay in / out, power, input switch 7 - gang terminal for cables up to 1 mm ²
IP rating	IP41
Power consumption	Normal operation 50 mA Maximum 200 mA
Operating temperature	-40°C to 75°C
Weight	40g



Physical properties

Dimensions:
ø =49.6mm, h=25.0mm
Weight: 40g
Working temp.: -40 kuni 75 °C

Note: The module requires a 12 VDC power supply with a nominal power of at least 3W.



6. Compliance Details

EU Declaration of Conformity

The SMK-AC-2 Access Controller complies with the essential requirements of the following EU Directives:

RoHS Directive (2011/65/EU)

- Compliance with RoHS Directive is ensured by sourcing RoHS-compliant components from the supply chain.
- The device is free from hazardous substances as per RoHS requirements.

Radio Equipment Directive (RED)

The SMK-AC-2 has been assessed and complies with the following standards:

- ETSI EN 301 489-1 V2.2.3 (2019-11) – Electromagnetic compatibility (EMC) for radio equipment.
- EVS-EN 55032:2015+A11+A1:2020 – EMC requirements for multimedia equipment.
- EVS-EN 61000-6-1:2019 – EMC immunity for residential, commercial, and light-industrial environments.

Regulatory Symbols

- ✓ CE Mark – Indicates conformity with European Union health, safety, and environmental standards.
- ✓ WEEE Symbol – Do not dispose of this product in regular waste; follow electronic waste disposal regulations.
- ✓ RoHS Compliance Symbol – Confirms the product is free from hazardous substances like lead and mercury.
- ✓ Caution Symbol – Indicates important safety instructions.

