

# Hardware Installation Instructions

# Revision History

Version	Date	Changes
1.0	2019/01/09	First Release
1.1	2019/03/06	Changed Gateway location instructions based on Allegion's suggestions.
1.2	2023/12/14	Updated with LE Lock and Controller Pro 2.0 support. Fixed Links Added Content Page

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# Supported Hardware

Kisi supports the following Allegion devices:

## Locks

- [Schlage NDE Networked Wireless Locks](#)
- [Schlage LE Mobile Enabled Wireless Mortise Lock](#)

## Gateways

- [Schlage GWE Gateway](#)

# Recommended Support Material

This document works under the assumption that both the Schlage NDE/LE Locks and the Kisi Controller Pro 1.1/2.0 are already physically installed. If not, you can refer to the following guides:

### **Kisi Installation**

- [Kisi Getting Started - Installation Guide](#)

### **NDE Lock Installation**

- [Schlage NDE Wireless Locks Installation Manual](#)
- [Schlage NDE Lock Installation Video](#)

### **LE Lock Installation**

- [Schlage LE Mobile Enabled Wireless Mortise Lock Manual](#)
- [Schlage LE Wireless Lock Installation Video](#)

Additionally, we recommend having the following GWE gateway installation guide at hand, even though the relevant information from it will be also available in this document:

- [Schlage GWE installation instructions](#)

# Hardware Limitations

The Kisi Controller Pro 1.1/2.0 can be connected to a single Schlage GWE gateway.

The Schlage GWE gateway can handle up to ten Schlage NDE/LE wireless locks.

A Controller - Gateway pair can thus manage up to ten Schlage NDE/LE wireless locks, on top of the four Kisi Pro readers the controller can manage on its own.

# Required Hardware Connections

Figure 3.1 shows all the terminals of the Schlage GWE gateway.

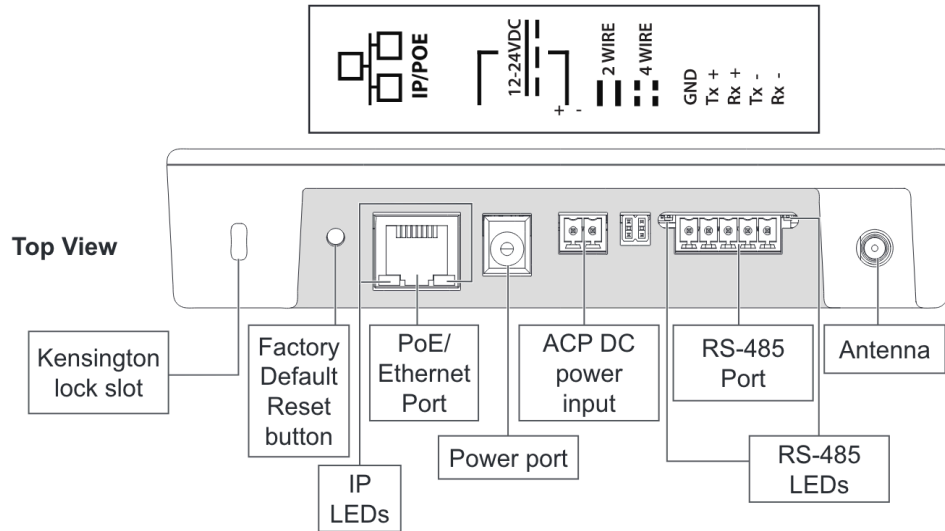


Figure 3.1: Schlage GWE terminals

## Power

The Allegion GWE gateway can be powered by the following sources. **Only one can be used at a time:**

- Power over Ethernet (PoE)
- Supplied 24V power adapter
- ACP DC power input

For convenience, we recommend using the 24V power adapter supplied with the gateway, but installers can make use of any of the other alternatives as they see fit without affecting performance.

## Power over Ethernet (PoE)

With the PoE option, power is supplied through Ethernet port. Category 5e (Cat5e) cabling is required, and your facility must have compatible powered Ethernet connection.

To power the gateway, plug the Power over Ethernet cable into the Ethernet port of the gateway.

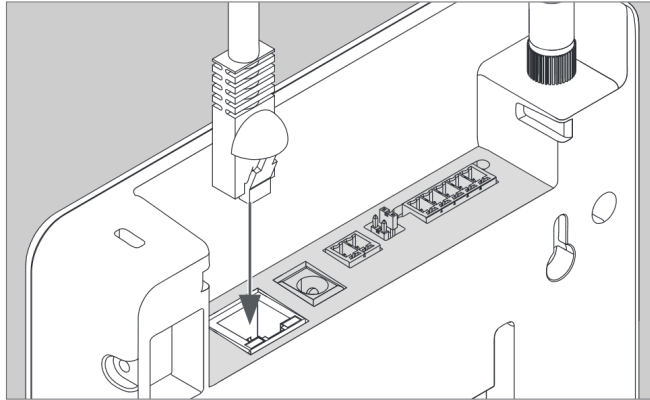


Figure 3.2: PoE connection

## Supplied 24V Power Adapter

To power the gateway with the supplied power adapter, plug the power adapter into the wall socket, and then plug the power cord into the socket.

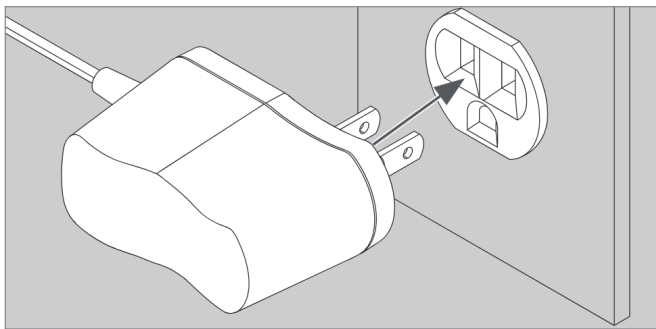


Figure 3.4: Socket - Adapter connection

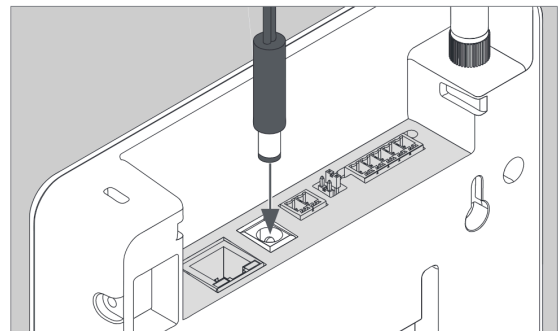


Figure 3.5: Adapter-Gateway connection

## ACP DC Power Input

To power the gateway through the ACP DC power input, you can choose between a 12V DC power source of at least 330 mA, or 24V of at least 100 mA. To connect the power source, plug the positive terminal (12V or 24V) to the port with the plus sign (+) and the ground terminal (GND) to the port with a negative sign (-).

## Gateway - Controller Connections

To connect the Schlage GWE gateway to the Kisi Controller Pro 1.1/2.0, we'll use the RS-485 port.

The Schlage GWE gateway RS-485 port has five signals: GND, Tx+ Rx+, Tx- and Rx-.

The Kisi Pro Controller RS-485 port has three signals: A, B, and GND.

To connect the gateway to the controller, run wires between the following signal terminals:

Gateway	Controller
GND	GND
Tx-	A
Rx+	B

Figure 3.6 (Controller Pro 1.1) & 3.7 (Controller Pro 2.0) shows a schematic of these connections:

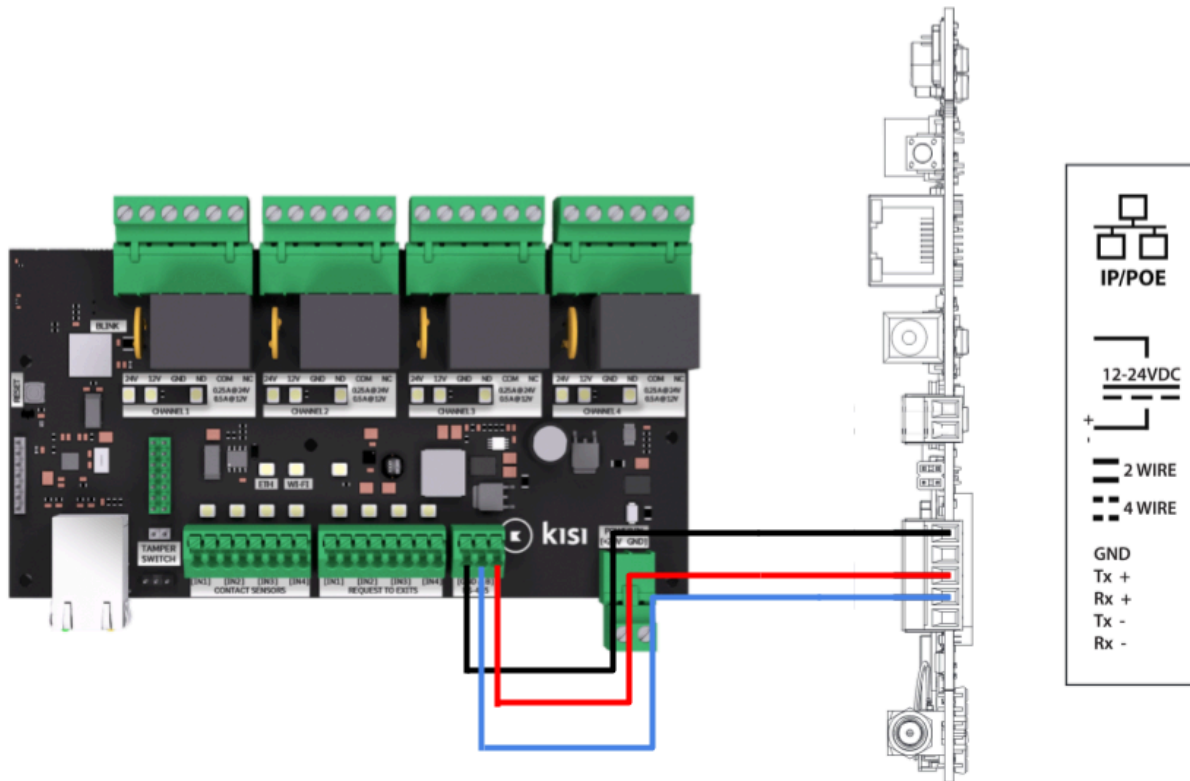


Figure 3.6: Gateway - Controller connection (Kisi Controller Pro 1.1)

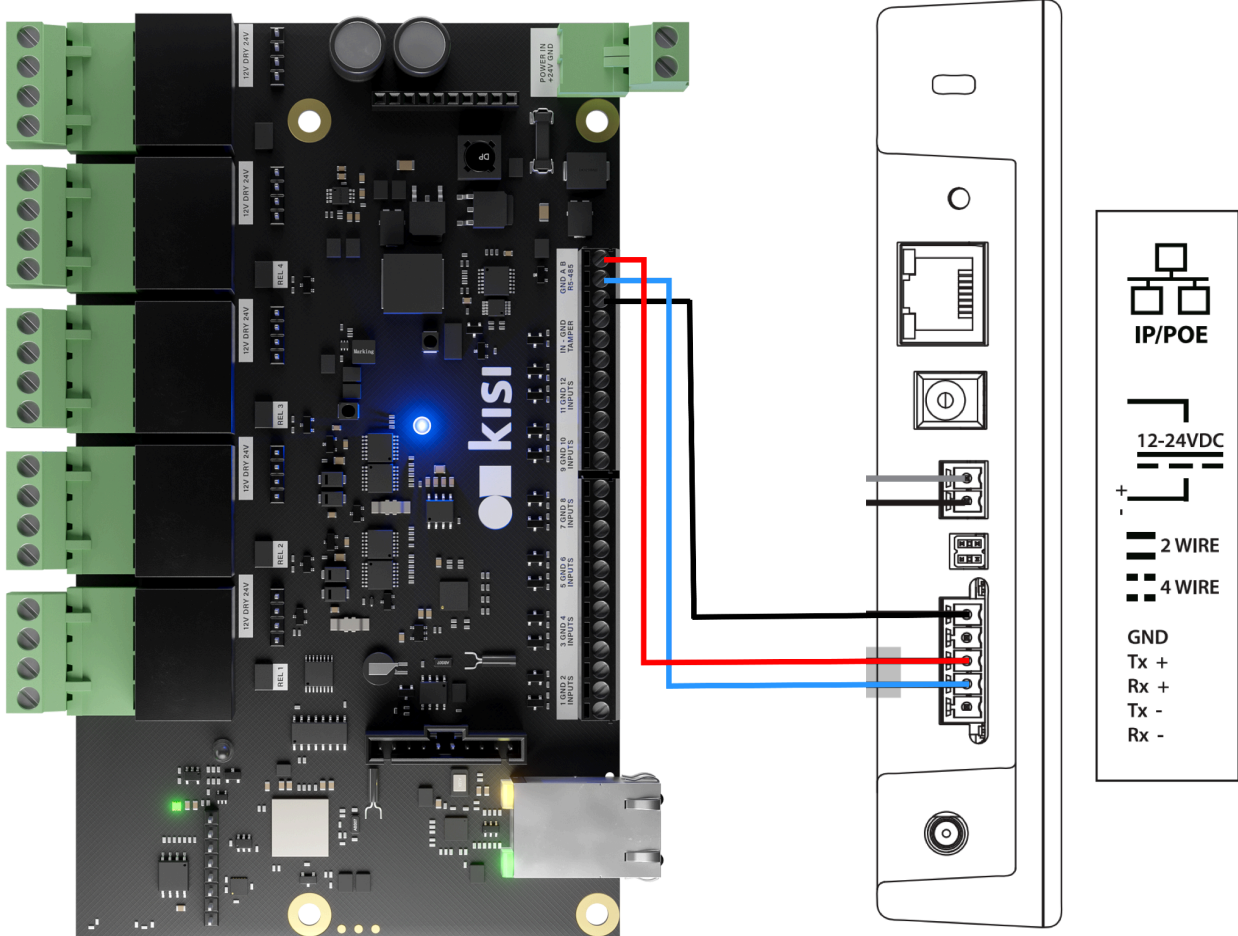


Figure 3.7: Gateway - Controller connection (Kisi Controller Pro 2.0)

# Additional Details

## Connection Order

The order in which you connect the various components of the system will not affect its behavior. The installer can power up the gateway, the controller, and connect them, in any order that is convenient to them.

## Gateway Location

The Gateway communicates wirelessly using Bluetooth to ENGAGE enabled devices/locks. Wireless signals are diminished by walls, distance, metal objects, or barriers.

Consider the following when placing the Gateway:

- The performance of wireless connectivity is highly dependent on the physical (geometry, construction materials, and furnishings) and RF environments of the install. In typical building environments, up to 30'(76 cm) line of sight to the door can be achieved with the 2.4GHz Bluetooth low energy.
- Do not mount the locks/devices and the Gateway on different floors. The signal will be degraded and functionality can be severely limited.
- Do not mount the Gateway on a metal surface. A separation of at least one inch must be maintained in all directions from any metal.
- Signals will not pass through metal walls or metal mesh in the walls (stucco).
- The Gateway antenna should be vertically oriented.

When planning, keep in mind that items can create interference that may reduce range. Items such as: Wi-Fi access points, metal furniture (shelving and cabinets), HVAC equipment, elevators, cellular repeaters, and microwave ovens can cause interference.

Do not install the gateway in a metal box or on a metal surface. Do not install the Gateway outdoors.