Installation guide

for Noke On-Wall Controller w/ Battery

October 2019

The Noke On-Wall Battery Powered Unit Controller could be mounted on a wall, sheet metal or any other similar surface. It could operate as a standalone lock controller or a switch to control electrical locks, using the Relay PCBA.

Installing the Backplate

Place the backplate on the surface where you want to install the unit controller. Use the backplate as a stencil and outline all the drill holes.

Use the marking to drill pilot holes into the surface for the mounting screws and routing the necessary wires.

If mounting the unit onto a concrete or brick surface, we suggest you use 3/16” flat-head Tapcons. If you’re mounting onto a different surface like wood or sheet metal, use the screws designed to be mounted to those surfaces.

Fasten the screws into the 3 mounting holes. Make sure the foam backing on the backplate is squeezed considerably. The foam will ensure water does not get into the controller.

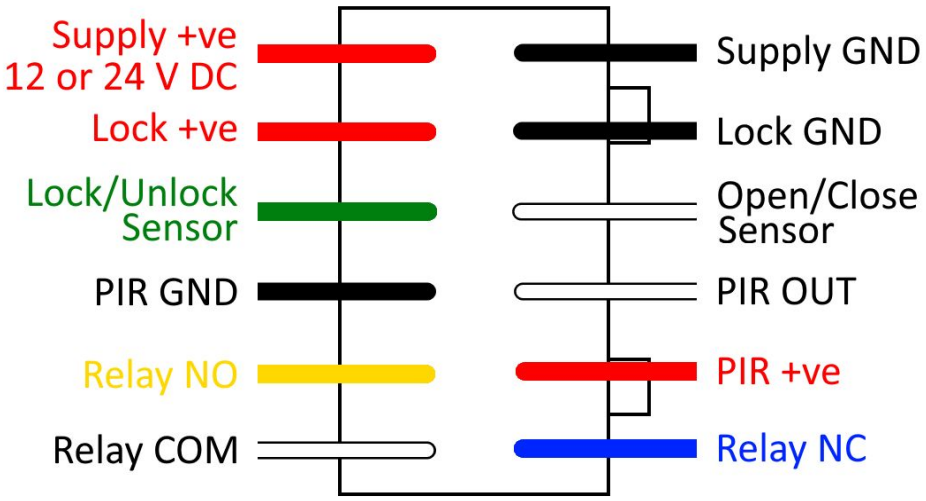
Once the backplate is mounted securely onto the surface, pass the harness through the oval-shaped hole.

Wiring the Controller

You’ll need to plug the wiring harness into the only connector on the controller. See the picture shown on the right. Before you do that, make sure to label all the required wires that are needed for your electronic lock.

The wiring schematic is shown below. Make sure you note down which wires are needed for the electronic lock you are using.

Each type of electronic lock needs a different type of electronic signal to function. We have listed the common ones later in this guide. Make sure you to identify the type of lock that is being used.



Here's the pinout of the connector which is used for this controller. The above schematic as viewed from the tail end of the connector, with the wires split along the center. Label all the necessary wires needed to interface with your lock before proceeding.

i) Connections needed for Storage Unit Locks:

To control a storage unit lock using this controller, you'll need to make the following connections.

To the SecurGuard Lock:

- Lock +ve: Connect this to the **red** wire from the SecurGuard lock cable.
- Lock GND: Connect this to the **black** wire from the SecurGuard lock cable.
- Lock/Unlock Sensor: Connect this to the **green** wire from the SecurGuard lock cable.
- Open/Close Sensor: Connect this to the **white** wire from the SecurGuard lock cable.

To the Motion Sensor (if applicable):

- PIR +ve: Connect this to the **red** wire from the Motion Sensor cable.
- PIR GND: Connect this to the **black** wire from the Motion Sensor cable.
- PIR OUT: Connect this to the **yellow** wire from the Motion Sensor cable.

To the Power Supply (if applicable):

This controller could be hardwired if necessary, but please make sure the battery is not installed in the unit.

- Supply +ve: Connect this to 12v/24v DC supply or the **brown** wire from the Power Cable.
- Supply GND: Connect this to GND of the supply or the **blue** wire from the Power Cable.

ii) Connections needed for Door Strikes or other Solenoid based locks:

Follow these connections to use this controller work with Electronic Door Strikes, Cabinet locks, etc. These connections would work with other locks that use an electronic magnetic solenoid to unlock.

When battery-powered, the controller can provide a short pulse up to 30v DC and then will maintain a sustained discharge of a few volts for about 5 seconds. This is usually sufficient for most door strikes (12v and 24v) or similar locks.

When hardwired the controller will bypass the input voltage. So you could use any electronic lock needing the same voltage.

To the Door Strike/Cabinet Lock:

- Lock +ve: Connect this to the **Positive** terminal of the electronic lock.
- Lock GND: Connect this to the **Ground** terminal of the electronic lock.

To the Door Position Sensor (if applicable):

- Open/Close Sensor: Connect this to one terminal of the Door Position Sensor.
- Lock GND: Connect this to the other terminal of the Door Position Sensor.

To the Motion Sensor (if applicable):

- PIR +ve: Connect this to the **red** wire from the Motion Sensor cable.
- PIR GND: Connect this to the **black** wire from the Motion Sensor cable.
- PIR OUT: Connect this to the **yellow** (output) wire from the Motion Sensor cable.

To the Power Supply (if applicable):

This controller could be hardwired if necessary, but please make sure the battery is not installed in the unit.

- Supply +ve: Connect this to 12v/24v DC supply or the **brown** wire from the Power Cable.
- Supply GND: Connect this to GND of the supply or the **blue** wire from the Power Cable.

iii) Connections needed for Magnetic Locks or other Relay based solutions:

Follow these connections to use this controller work with Magnetic Locks. These connections would work with other locks that use an electronic magnetic solenoid to unlock.

Usually, Magnetic Locks need a continuous supply of power to stay locked. The on-board battery is not capable of providing such a constant supply to the lock. So, the battery-powered controller could be used to control the lock, but the lock would need a dedicated power source.

Since the Magnetic Locks already need a power supply, this controller could also be hardwired to the same power source. All other the wiring connections remain the same in either case though.

To the Magnetic Lock:

- Relay NC: Connect this to the positive terminal of the power supply.
- Relay COM: Connect this to the positive terminal (if applicable) of the Magnetic Lock.
- Connect the ground terminal of the power supply to the ground terminal of the power supply.

To the Exit Button (if applicable):

- Lock/Unlock Sensor: Connect this to one terminal of the Exit Button.
- Lock GND: Connect this to the other terminal of the Exit Button.

To the Motion Sensor (if applicable):

- PIR +ve: Connect this to the **red** wire from the Motion Sensor cable.
- PIR GND: Connect this to the **black** wire from the Motion Sensor cable.
- PIR OUT: Connect this to the **yellow** wire from the Motion Sensor cable.

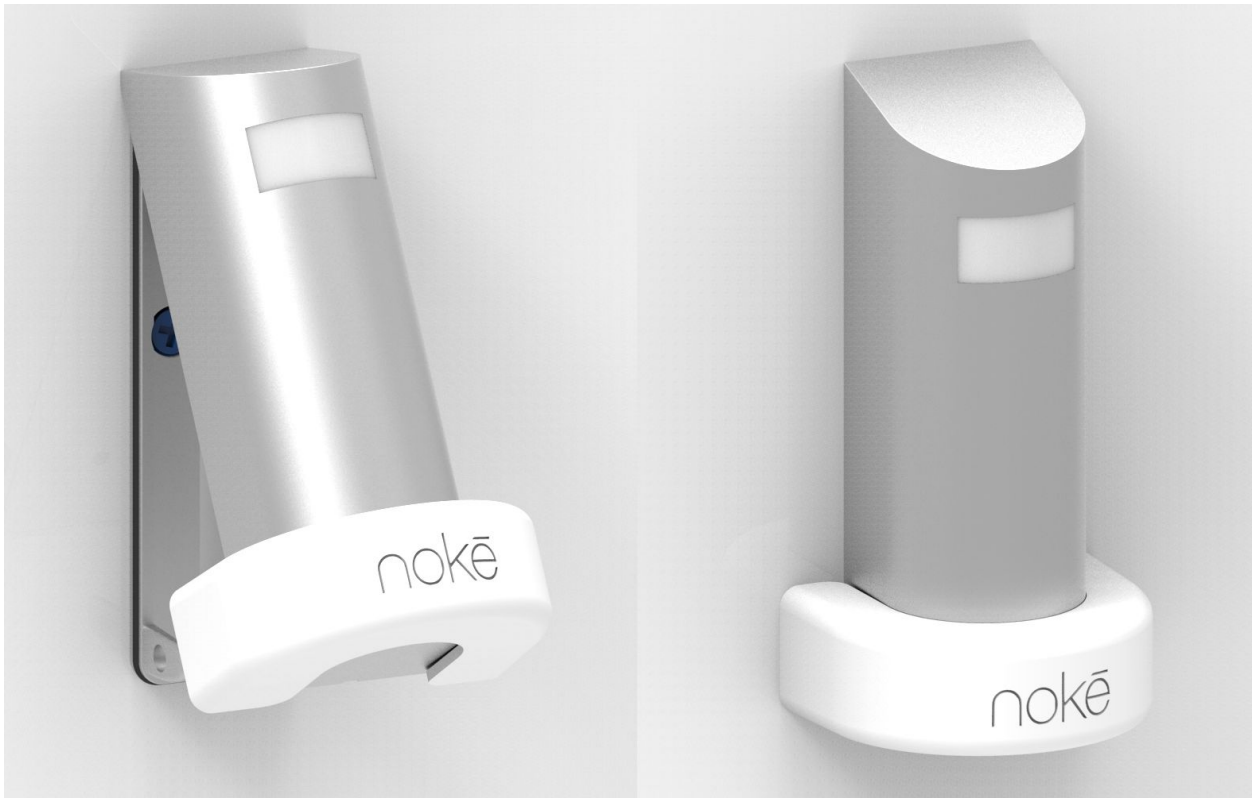
To the Power Supply (if applicable):

This controller could be hardwired if necessary, but please make sure the battery is not installed in the unit.

- Supply +ve: Connect this to 12v/24v DC supply or the **brown** wire from the Power Cable.
- Supply GND: Connect this to GND of the supply or the **blue** wire from the Power Cable.

Assembling the Unit

Plugin the harness, that has been routed through the backplate, into the only connector on the controller. You need not make any connections inside the Unit, other than plugging in the harness. To mount the unit controller onto the backplate, you'll need the proprietary Removal Tool. It should have been provided to you when you purchased the controller.



Attach the removal tool by placing it on the bottom end of the controller, as shown in the picture above. This will unlock the magnetic locking mechanism within the enclosure. With the removal tool still attached at the bottom end, slide the controller from the top as shown in the

picture below. The notch in the backplate should catch a groove in the enclosure. Now, while allowing the controller to pivot on the top edge of the enclosure, rotate the controller and removal tool until they are vertical.

Once the controller has seating well onto the backplate, you can remove the removal tool. This should engage the magnetic locking mechanism. The controller should now be secure and it cannot be removed.

Check if you can pull the controller out without the removal tool. If that happens, repeat the mounting process.

Disassembling the Unit

To Disassemble the unit, you'll just have to follow the assembly process in reverse. You'll need the removal tool to disassemble the unit.

If the controller is still secured to the backplate even after attaching the removal tool, try to wiggle the removal tool while not removing it from it's positive with respect to the controller. This should unlock the magnetic mechanism and you can remove the controller from the backplate.

Replacing the Battery

The battery used in this unit controller has a special chemistry and replacing it with an off-the-shelf Alkaline D-cell would not work. Alkaline D-cells can only provide 1.5V.

Please check with Noke Support when you need to replace the battery.

Support

If you have any questions during the installation process of our Door Controllers, please call or email us at the number or address provided below.

Phone: 385-645-4567
E-mail: support@noke.com
Address: 2000 W. Ashton Blvd., Suite 375
Lehi, UT 84043

FCC Statement

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.

To assure continued compliance, any changes or modifications not expressly approved by the party.

Responsible for compliance could void the user's authority to operate this equipment. (Example- use only shielded interface cables when connecting to computer or peripheral devices).

This equipment 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.

RF warning statement:

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.