Manuals+ — User Manuals Simplified.

AJAX WallSwitch Indoor Power Relay User Manual

Contents

AJAX WallSwitch Indoor Power Relay

Wall Switch is a wireless indoor power relay featuring a power consumption meter. The miniature body of the device is adapted for installation in a European-type socket.Regardless of the type of electrical circuit, only a qualied electrician should install WallSwitch!wall switch operates only within the Ajax security system (integration into third-party security systems is not provided), communicating with a hub via the protected Jeweller protocol. The communication range is up to 1,000 meters in the line of sight. Use scenarios to program actions of automation devices press, or schedule. A scenario can be created remotely in the Ajax app.
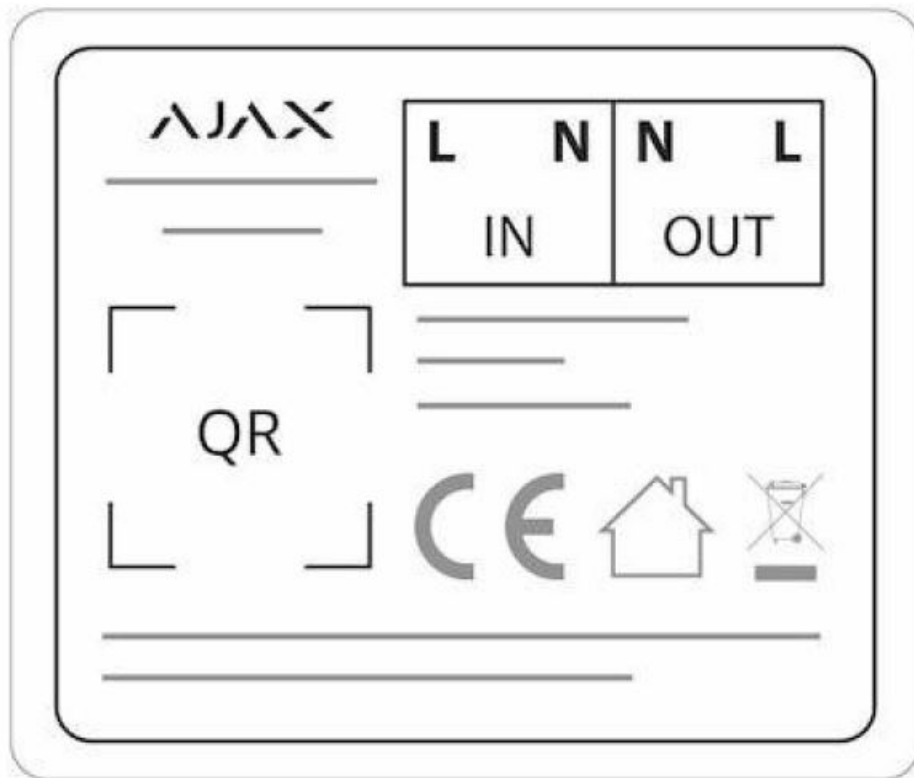
How to create and con gure a scenario in the Ajax security system

The Ajax security system can be connected to the central monitoring station of a security company.

Functional Elements
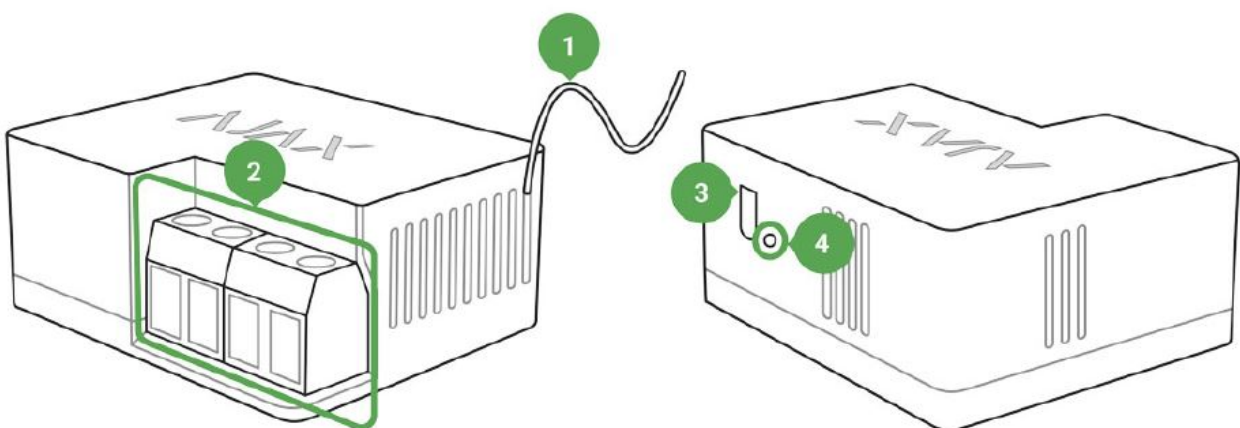
1. Antenna
2. Terminal blocks
3. Functional button
4. Light indicator

- L terminal — power supply phase terminal.
- N terminal — power supply neutral terminal.

OUT terminals:

- N terminal — connected device neutral output contact terminal.
- L terminal — connected device phase output contact terminal.

Operating Principle

wall switch input terminals are connected to the grid, and the output terminals are connected to the socket or electrical appliance/system. WallSwitch closes/opens the electric circuit, controlling the power supply by the command of the security system user through the Ajax app. The state of WallSwitch contacts can be switched manually: by holding the function button for 2 seconds. To make WallSwitch react to alarm or schedule automatically, you can congure a scenario. WallSwitch features a protection system against voltage surge beyond the range of 184V – 253V or overcurrent above 13A. In this case, the power supply is interrupted, resuming after normalizing the voltage and current values. The maximum resistive load on the relay is 3 kW. You can check the power usage by the electrical appliance connected via WallSwitch through the app. There is a power consumption meter. Wall Switch, with firmware version 5.54.1.0 and higher, can operate in pulse or bistable mode. With this firmware version, you can also select the normal relay contact state:

- Normally closed (NC) — the contacts open when the relay is activated and closed when the relay is inactive.
- Normally open (NO) — the contacts close when the relay is activated and open when the relay is inactive.

wall switch, with firmware version below 5.54.1.0, only works in bistable mode with a normally open contact.

How to nd out the firmware version of the device?

At low loads (up to 25 W), current and power consumption indications may be displayed incorrectly due to

hardware limitations.

Connecting to the hub

1. Switch on the hub and check its Internet connection (the logo glows white or green).
2. Install the Create the account, add the hub to the app, and create at least one room.Only users with administrator rights can add a device to the app.

To pair WallSwitch with the hub:

1. Click Add device in the Ajax app.
2. Name the device, scan it, or enter the QR code manually (located on the case and packaging), select the room.
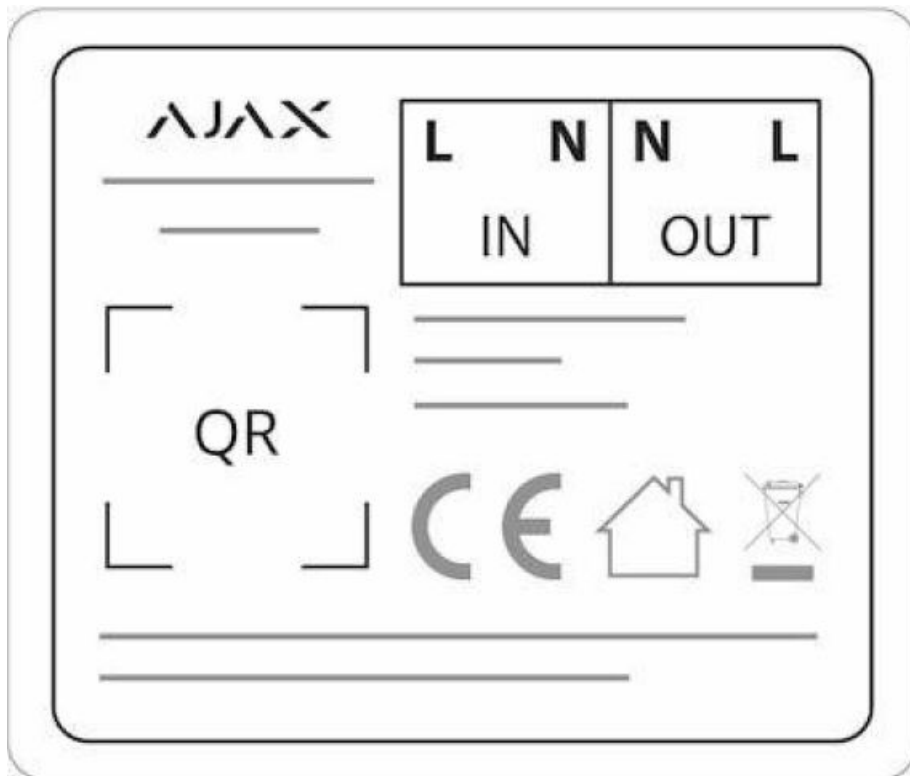
3. Click Add — the countdown will begin.
4. Press the functional button. If you can't do this (the device is mounted in the wall), give WallSwitch at least 20 W load for seconds (by connecting and disconnecting a working kettle or lamp). For detection and pairing to occur, the device should be located in the coverage area of the hub's wireless network (at the same object). The connection request is transmitted only at the moment of switching on the device.If the device failed to pair, wait 30 seconds and then retry. WallSwitch will appear in the list of hub devices. The device statuses update depends on the ping interval set in the hub settings. The default value is 36 seconds.When switching on for the rst time, WallSwitch contacts are open! When deleting WallSwitch from the system, contacts open!

States

Parameter	Value
Jeweller Signal Strength	Signal strength between hub and device
Connection	Connection status between hub and device
Routed Through ReX	**Displays the status of using a radio signal range extender**
Active	State of the relay (switched on/off)
Voltage	The input voltage of WallSwitch
Current	The input current of WallSwitch
Power	Current consumption in W
Electric energy consumed	The electric power consumed by the device connected to the relay. The counter is reset when the relay loses the power supply
Temporary deactivation	Displays the status of the device: active or completely disabled by the user
Firmware	Device firmware version
Device ID	Device identifier

Settings

1. Devices
2. WallSwitch
3. Settings

Setting	Value
First field	Device name, can be edited
Room	Selecting the virtual room to which the device is assigned
Relay Mode	Selecting relay operation mode: **Pulse** — when activated, WallSwitch generates a pulse of a given duration

Indication
The wall switch light indicator can light green depending on the device status.
When not paired with the hub, the light indicator blinks periodically. When the functional button is pressed, the light indicator lights up.

Functionality testing
The Ajax security system allows conducting tests for checking the functionality of connected devices. The tests do not start immediately but within a period of 36 seconds when using default settings. The test time start depends on the settings of the detector ping interval (the Jeweller menu in the hub settings).

Jeweler Signal Strength Test
Installation of the Device Regardless of the type of electrical circuit, only a qualied electrician should install WallSwitch! wall switch is designed for installation inside a socket box with a diameter 50 mm and more and the depth no less than 70 mm. The relay can also be installed within extension cords and other circuits powered by 230 V.
The communication range with the hub in the line of sight is up to 1,000 meters. Take this into account when choosing the location for WallSwitch.

Installation process:

1. De-energize the cable to which WallSwitch will be connected.
2. Connect the grid wire to the wall switch terminals according to the following scheme:
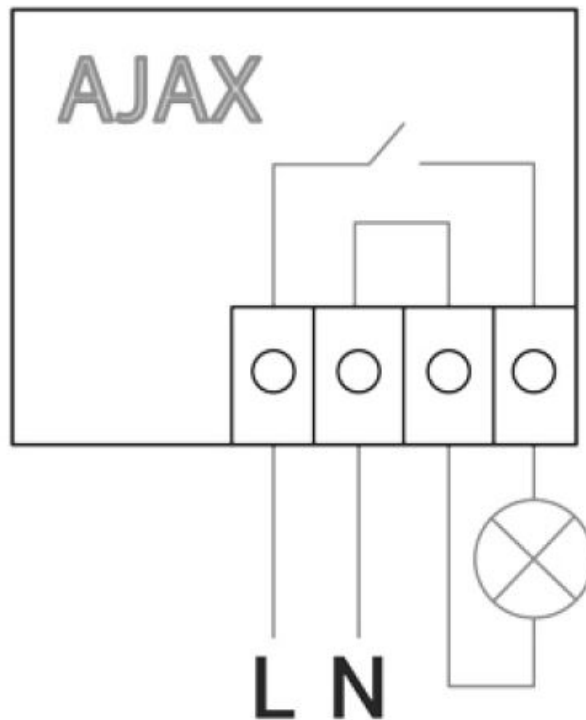
3. Connect a socket using bundled connecting wires or an electrical appliance using a wire with the sucient cross-section to WallSwitch. It's recommended to use wires with a cross-section of 1.5 – 2 mm².Do not connect more than 3 kW load to WallSwitch. When connecting the load, strictly observe the connection diagram since an incorrect connection may cause the device to malfunction and/or damage the property.When installing WallSwitch in the box, lead out the antenna and place it under the plastic frame of the socket. The bigger the distance between the antenna and metal structures, the lower the risk of interfering (and impairment) of the radio signal.
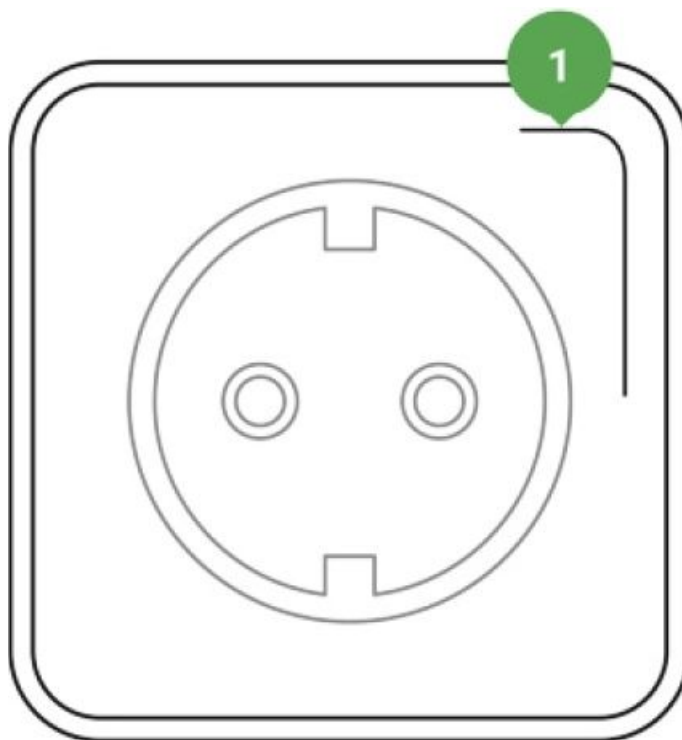
4. Do not shorten the antenna! Its length is optimal for operation within the used radio frequency range!During the installation and operation of WallSwitch, follow the general electrical safety rules and the requirements of electrical safety regulatory acts.It is strictly forbidden to disassemble the device. Do not use the device with damaged power cables.

Do not install the wall switch:

1. Outdoors.
2. In metal wiring boxes and electrical panels.
3. In places with temperature and humidity exceeding the permissible limits.
4. Closer than 1 m to a hub.

Maintenance

The device does not require maintenance.

Tech specs

Actuating element	Electromagnetic relay
The service life of the relay	200,000 switching-ons
Supply voltage	110 – 230 V AC ± 10% 50/60 Hz
Voltage protection	For 230 V mains: max — 253 V, min — 184 V For 110 V mains: max — 126 V, min — 77 V
Maximum load current	13 A
Maximum current protection	Yes, 13 A

Power output (resistance load 230 V)	Up to 3 kW
Operating modes	Pulse and bistable (firmware version is 5.54.1.0 or higher. Manufacture date from March 5, 2020) Only bistable (firmware version under 5.54.1.0) **How to find out the manufacture date of a detector or device**
Pulse duration	0.5 to 255 seconds (firmware version is 5.54.1.0 or higher)
Electricity meter function	Yes
Power consumption parameters control	Yes: current, voltage, consumed power
The power consumption of the device in the standby mode	Less than 1 W
Radio communication protocol	Jeweller **Learn more**
Radio frequency band	866.0 – 866.5 MHz 868.0 – 868.6 MHz 868.7 – 869.2 MHz 905.0 – 926.5 MHz 915.85 – 926.5 MHz 921.0 – 922.0 MHz Depends on the region of sale.
Compatibility	**Operates with all Ajax hubs, and radio signal range extenders**

Maximum RF output power	Up to 25 mW
Modulation	GFSK
Radio signal range	Up to 1,000 m (any obstacles absent) Learn more
Shell protection rating	IP20
Operating temperature range	From 0°C to +64°C
Maximum temperature protection	Yes, 65°C
Operating humidity	Up to 75%
Overall dimensions	39 × 33 × 18 mm
Weight	30 g
Service life	10 years

Documents / Resources

WallSwitch User manual *(image of manual)*	**AJAX WallSwitch Indoor Power Relay** [pdf] User Manual WallSwitch Indoor Power Relay, WallSwitch, Indoor Power Relay

References

- ⏎ **End user agreement - Ajax Systems**
- ⏎ **Jeweller radio technology | Ajax Systems**
- ⏎ **Automation devices in the security system | Ajax Systems**
- ⏎ **Wireless panic button with control mode | Ajax Systems**
- ⏎ **Security system control panels | Ajax Systems**
- ⏎ **Security system control panels | Ajax Systems**
- ⏎ **Signal range extenders in the security system | Ajax Systems**
- ⏎ **Ajax WallSwitch — Wireless power relay with energy monitor**
- ⏎ **Jeweller and Wings radio protocols in the Ajax security system**
- ⏎ **Software | Ajax Systems**
- ⏎ **Ajax devices standards compliance list**
- ⏎ **Warranty - Ajax Systems**
- ✉ **How to find out the device firmware version | Ajax Systems Support**
- ✉ **How to find out the the Ajax device production date | Ajax Systems Support**
- ✉ **Jeweller radio protocol: technology and capabilities | Ajax Systems Support**
- ✉ **How to create and configure a scenario in the Ajax system | Ajax Systems Support**

- **[What is Jeweller Signal Strength Test | Ajax Systems Support](#)**

- **[What is Jeweller Signal Strength Test | Ajax Systems Support](#)**