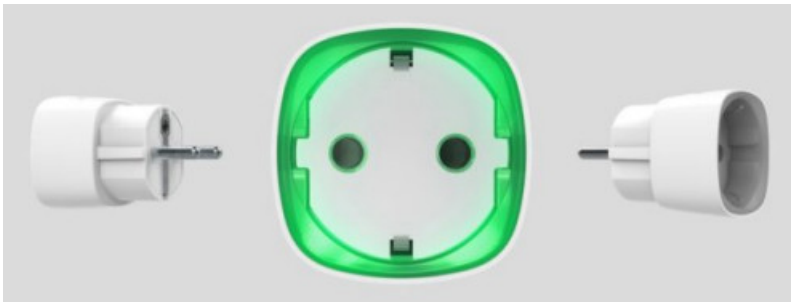
AJAX Socket Wireless Indoor Smart Plug with Power-Consumption Meter User Manual

Socket User Manual
Updated December 28, 2020



The socket is a wireless indoor smart plug with a power-consumption meter for indoor use. Designed as a European plug adapter (Schuko type F), the Socket controls the power supply of electrical appliances with a load of up to 2.5 kW. Socket indicates the load level and is protected from overload. Connecting to the Ajax security system via a secured Jeweller radio protocol, the device supports communication at a distance of up to 1,000 m in line of sight.

Socket operates with Ajax hubs only and does not support connecting via Oxbridge Plus or uartBridge integration modules.

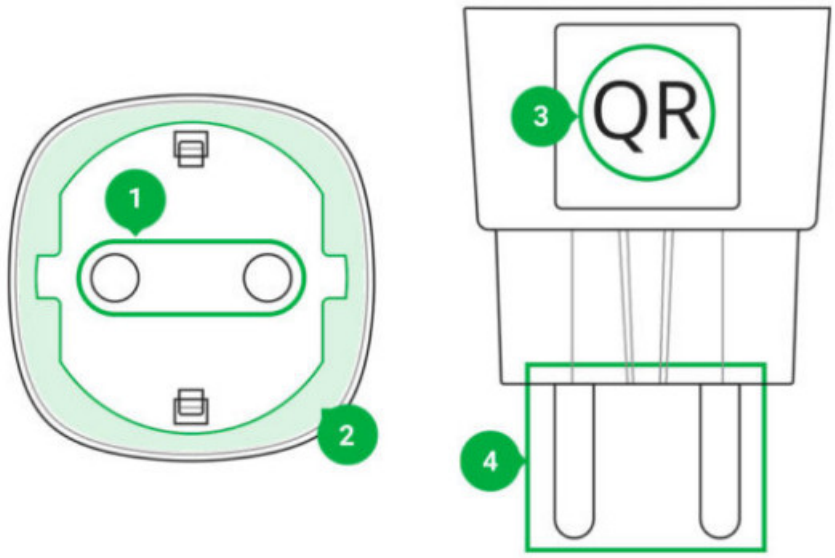
Use scenarios to program actions of automation devices (Relay, WallSwitch or Socket) in response to an alarm, Button press or a schedule. A scenario can be created remotely in the Ajax app.
How to create and cone a scenario in the Ajax security system
The Ajax security system can be connected to a central monitoring station of a security company.

Buy smart plug Socket

Contents

1 Functional Elements
2 Operating Principle
3 Connecting
4 To pair Socket with the hub
5 States
6 Settings
7 Indication
8 Maintenance
9 Warranty
10 Documents / Resources
10.1 References
11 Related Posts

Functional Elements



1. Two-pin socket
2. LED border
3. QR Code
4. Two-pin plug

Operating Principle

Socket switches on/off the 230 V power supply, opening one pole by the user command in the Ajax app or automatically according to a scenario Button press a schedule The socket is protected against voltage overload (exceeding the range of 184–253 V) or overcurrent (exceeding 11 A). In case of overload, the power supply switches off, resuming automatically when voltage is restored to normal values. In case of overcurrent, the power supply switches off automatically, but can only be restored manually by the user command in the Ajax app.

The maximum resistive load is 2.5 kW. When using inductive or capacitive loads, the maximum switching current is reduced to 8 A at 230 V!

Socket with eversion 5.54.1.0 and higher can operate in pulse or bistable mode. With this e-version you can also select the relay contact status:

- **Normally closed** — Socket stops supplying power when activated, and resumes when turned off.
- **Normally open** — Socket supplies power when activated, and stops feeding when turned off.

Socket with e-version below 5.54.1.0 only works in bistability mode with a normally open contact.
How to e-version the device?
In the app, users can check the power or amount of energy consumed by electrical appliances connected via Socket.

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

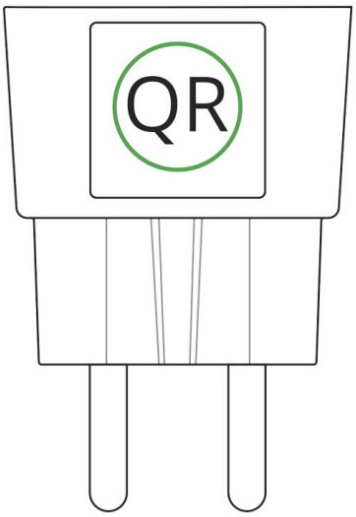
Connecting

Before connecting the device

1. Switch on the hub and check its Internet connection (the logo glows white or green).
2. Install the Ajax app. Create the account, add the hub to the app, and create at least one room.
3. Make sure that the hub is not armed, and it does not update by checking its status in the Ajax app.

Only users with administrator rights can add a device to the app.

To pair Socket 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. 

   Plug the Socket into a power outlet and wait 30 seconds — the LED frame will een.
4. Click Add — the countdown will begin.
5. The socket 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.

If the device failed to pair, wait 30 seconds and then retry.
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). A connection request is transmitted only at the moment of switching on the device.

When pairing the hub with the smart plug that was previously paired with another hub, make sure that it was unpaired with a former hub in the Ajax app. For correct unpairing, the device should be in the coverage area of the hub's wireless network (at the same object): when unpaired correctly, the Socket LED frame continuously blinks green.
If the device has not been correctly unpaired, do the following to connect it to the new hub:

1. Make sure that Socket is outside the coverage area of the former hub's wireless network (the indicator of the communication level between the device and the hub in the app is crossed out).
2. Select the hub with which you want to pair Socket.
3. Click Add Device.
4. Name the device, scan or enter the QR code manually (located on the case and packaging), select the room.
5. Click Add — the countdown will begin.
6. During the countdown, for a few seconds, give Socket at least 25 W load (by connecting and disconnecting a working kettle or lamp).
7. The socket will appear in the list of hub devices.

The socket can be connected to one hub only.

States

1. Devices
2. Socket

Parameter	Value
Jeweler Signal Strength	Signal strength between the hub and the Socket
Connection	Connection status between the hub and the Socket

Routed Through ReX	Displays the status of using the ReX range extender
Active	State of the Socket (turned on/off)
Voltage	The current input voltage level of Socket
Current	Current at the Socket input
Current protection	Indicates whether the overcurrent protection is enabled
Voltage protection	Indicates whether the overvoltage protection isenabled
Power	Current consumption in W
Electric Energy Consumed	The electric power is consumed by the device connected to the The counter is reset when the Socket lose the power
Temporary Deactivation	Displays the status of the device: active or completely disabled l
Firmware	Device e version
Device ID	Device identi

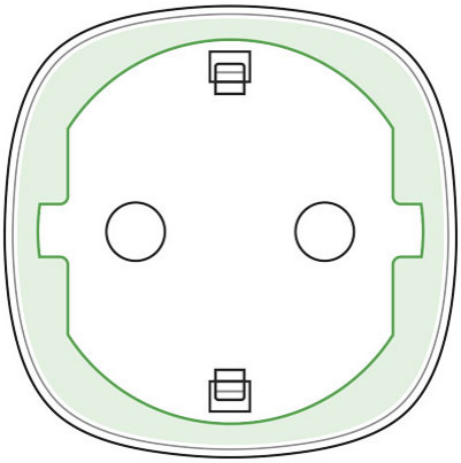
Settings

1. Devices
2. Socket
3. Settings 

Setting	Value
First field	The device name can be edited
Room	Selecting the virtual room to which the device is assigne d
Mode	Selecting Socket operation mode: **Pulse** — when activated, Socket generates a pulse of a given duration **Bistable** — Socket, when activated, changes the state of contacts to the opposite Settings are available with **e version 5.54.1.0 and higher**
Contact status	Normal contact state Normally closed Normally open
Pulse duration	Selecting the pulse duration in the pulse mode: From 0. 5 to 255 seconds

Overcurrent Protection	If enabled, power supply switches off if the current load exceeds 11A, if disabled the threshold is 6A (or 13A for 5 seconds)
Overvoltage protection	If enabled, the power supply switches off in case of a voltage surge beyond the range of 184 – 253 V
Indication	The option of disabling the LED frame of the device
LED Brightness	The option of adjusting the brightness of the LED frame of the device (high or low)
Scenarios	Opens the menu for creating and configuring scenariosLearn more
Jeweller Signal Strength Test	Switches the device to the signal strength test mode
User Guide	Opens the Socket User Guide
Temporary Deactivation	Allows the user to deactivate the device without removing it from the system. The device will not execute system commands and participate in automation scenarios. All notifications and alarms of the device will be ignored please note that the deactivated device will save it's the current state (active or inactive)
Unpair Device	Disconnects the device from the hub and deletes

Indication



Socket informs the user of the power level consumed by connected appliances using the LED.

Load level	Indication
No power on the Socket	Don’t have any indication
Socket turned off	Blue
Socket turned on, no load	Green
~550 W	Yellow
~1250 W	Orange
~2000 W	Red
~2500 W	Dark red
~3000 W	Purple
One or more types of protection triggered	Smoothly lights up and goes out red
Hardware failure	Quick red flashes

The exact power can be seen in the Ajax Security System application.

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
The location of the Socket depends on its remoteness from the hub, and obstacles hindering the radio signal transmission: walls, ge objects inside the room.

Do not install the device near sources of magnetic ed objects, wireless chargers, etc.) and inside rooms with temperature and humidity outside the permissible limits!

Check the Jeweller signal level at the installation location. If the signal level is low (one bar), we cannot guarantee the stable operation of the device.
If the device has a low or unstable signal strength, use a. ReX radio signal range extender
The socket is designed to connect to a European two-pin socket (Schuko type F).

Maintenance

The device does not require maintenance.

Tech specs

Actuating element	Electromagnetic relay
Service life	At least 200,000 switches
Voltage and type of external power supply	110–230 V, 50/60 Hz
Voltage protection for 230 V mains	Yes, 184–253 V
Maximum load current	11 A (continuous), 13A (up to 5 s)
Operating modes	Pulse and bistable (firmware version is 5.54.1.0 or higher. Manufacture date from March 4, 2020)Only bistable (firmware version is lower than 5.54.1.0)
Pulse duration	0.5 to 255 seconds (firmware version is 5.54.1.0 or higher)
Maximum current protection	Yes, 11 A if the protection is turned on, up to 13 A if the protection is turned off
Maximum temperature protection	Yes, +85°C. The socket turns off automatically if the temperature is exceeded
Electric shock protection class	Class I (with grounding terminal)
Energy consumption parameter check	Yes (current, voltage, power consumption)
Load indicator	Yes

Output power (resistive load at 230 V)	Up to 2.5 kW
Average energy consumption of the device on standby	Less than 1 W·h
Frequency band	868.0 – 868.6 MHz
Compatibility	Operates with all Ajax hubs, and range extenders
Maximum radio signal power	8,97 mW (limit 25 mW)
Radio signal modulation	GFSK
Radio signal range	Up to 1000 m (when there are no obstacles)
Installation method	In power outlet
Operating temperature range	From 0°C to +40°C
Operating humidity	up to 75%
Protection class	IP20
Overall dimensions	65.5 × 45 × 45 mm (with plug)
Weight	58 g

In the case of using inductive or capacitance load, the maximum switched current is reduced to 8 A at 230 V AC!

Complete Set

1. Socket

2. Quick Start Guide

Warranty

Warranty for the “AJAX SYSTEMS MANUFACTURING” LIMITED LIABILITY COMPANY products is valid for 2 years after the purchase.
If the device does not work correctly, you should t service—in half of the cases, technical issues can be solved remotely!

The full text of the warranty
User Agreement
Customer support: support@ajax.systems

Documents / Resources

	AJAX Socket Wireless Indoor Smart Plug with Power-Consumption Meter [pdf] User Manual Socket, Wireless Indoor Smart Plug with Power-Consumption Meter, Socket Wireless Indoor Smart Plug with Power Consumption Meter

References

- End user agreement - Ajax Systems
- Warranty - Ajax Systems
- Jeweller radio technology | Ajax Systems
- Current product lines of the Ajax security system
- Current product lines of the Ajax security system
- Current product lines of the Ajax security system
- Wireless panic button with control mode | Ajax Systems
- ocBridge Plus — Module for Ajax devices integration with wired systems
- ReX — Intelligent radio signal range extender | Ajax Systems
- Socket (type F) — Wireless smart plug with energy monitor
- uartBridge — Module for Ajax devices integration with third-party wireless alarms systems
- Automation scenarios | Your Ajax security automation
- Software | Ajax Systems
- How to find out the device firmware version | Ajax Systems Support
- How to create and configure a scenario in the Ajax system | Ajax Systems Support
- How to create and configure a scenario in the Ajax system | 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