



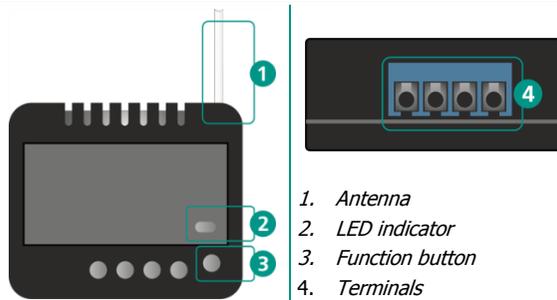
# Livi Relay 12/24 with "dry contact" output

## DESCRIPTION

Livi Relay actuating relay with electrically isolated "dry contact" output (hereafter referred to as the relay) is designed to control the power load connected to the relay output terminals. The relay starts and stops supplying power to the load at the command of [the Livi Smart Hub](#) (hereafter referred to as the hub).

The relay can be used for remote control of a wide range of equipment: sliding or swing gate drives, barrier drives, light-sound warning systems, electromagnetic or electromechanical locks. The relay also can be used for remote control of domestic machines and electrical appliance with powers of up to 3.5 kW. The relay has a thermostat mode for control of boiler equipment in case the relay is connected to the external room thermostat input of the equipment. The relay can operate in impulse control mode with customizable pulse duration.

## RELAY APPEARANCE



1. Antenna
2. LED indicator
3. Function button
4. Terminals

## CHOOSING LOCATION FOR THE RELAY

The relay is designed for discrete in-wall mounting or for installation in a switch box, in a deep socket box or in the enclosure of controlled equipment.

**DO NOT** install the relay outdoors, in places with high humidity, or at temperatures exceeding the operating temperature range (see "Specifications" table below).

## PRECAUTIONS

Observe the general electrical safety rules and regulations when installing and operating the relay.

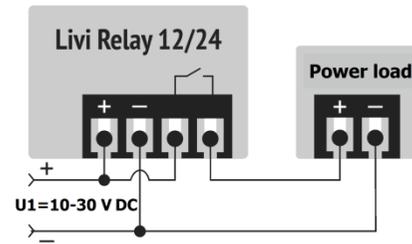
**DO NOT open the relay enclosure** before making sure that the relay does not carry any voltage.

The relay must be unpacked and allowed to reach room temperature for at least two hours before handling if it was transported or stored at low temperatures. The relay wiring and installation must be performed by an authorized person qualified in electrical work.

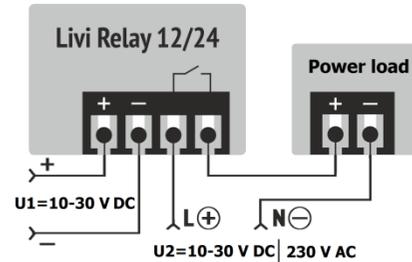
## RELAY INSTALLATION

1. Select an uninterruptible power supply (UPS) with output voltage of 10 – 30 V.
2. Connect the selected UPS to the relay terminals, and then connect the relay to a power load (e.g. third-party system, appliance or outlet). For connection refer to connection diagrams below, select the diagram according to the selected power load.
3. For connection use the sufficient cable cross section. Select the cable cross section according to the selected power load.
4. Bring the antenna (1) out and place it under the plastic frame of the socket if the relay is installed in a socket box. The farther the antenna will be located from any metal structures, the less chance of the radio signal shielding. **DO NOT** shorten the antenna.

## CONNECTION DIAGRAM FOR A COMMON UPS



## CONNECTION DIAGRAM FOR 2 SEPARATE UPS



## BINDING TO THE HUB

1. Supply power to the relay (and supply power to the power load if the load is connected to a separate UPS). The relay indicator blinks in blue (for 60 seconds) when the relay is switched to the binding mode.
2. In [the Livicom app](#), open the "Devices" screen, tap **+** in the upper right corner of the screen and select "Add Device". The relay indicator blinks in green 5 times after successful binding.

The relay switches to the binding mode only for 60 seconds. If you did not succeed to bind it to the hub within this period, then de-energize the relay, wait for 10 seconds and supply power to the relay again. The relay will be switched to the binding mode.

## EVALUATING SIGNAL STRENGTH

Check a quality of the connection between the relay and the hub at the relay location. There are two ways to evaluate the signal strength:

1. In the Livicom app on the relay settings screen.
2. With the help of LED indication on the relay: double-click on the function button (3) and look at the relay indicator (2). Interpret the indication using the table below.

Good signal	The indicator blinks green 3 times
Average signal	The indicator blinks green 2 times
Poor signal	The indicator blinks green once
No connection	The indicator blinks red 4 times

## CHECKING RELAY OPERATION

Send to the relay the turn on command from the Livicom app to check its functionality. Make sure that the power load connected to the relay is turned on and the indicator (4) lights green. Then send to the relay the turn off command from the Livicom app. Make sure that the power load is turned off and the indicator (4) is not lit. Do not use the relay and contact technical support (mailto: support@livicom.ru) if you see an incorrect operation of the relay.

## WARNING

In case of power failure, the relay will turn on automatically after power recovery if the relay has been turned on before the failure and the hub continues to run on battery power.

The relay will stay turned off after power recovery if the hub has stopped running due to power loss even if the relay has been turned on before the failure.

## RELAY DELETING

There are two ways to unbind the relay from the hub:

1. In the Livicom app on the Relay settings screen.
2. Using the function button (3): de-energize the relay, wait for 10 seconds and supply power to the relay again. Quickly click on the function button (3) until the indicator (1) starts blinking blue.

## SPECIFICATIONS

Operating frequency	868 MHz
Radio communication range*	1000 m
Radio channel power	25 mW
Period of sending test events to the hub	2 minutes
Supply voltage	10 – 30 V DC
Handled power	up to 3500 W
Resistive load (cosφ=1)	16 A / 230 V AC 10 A / 30 V DC
Inductive capacitive load (cosφ≠1)	8 A / 230 V AC 10 A / 30 V DC
Connecting wire cross section	up to 1,5 mm <sup>2</sup>
Power consumption	up to 1 W
Voltage protection	over 30 V
Operating temperature range	from -20 to +55 °C
Relative humidity	no more than 80% at 25 °C
Relay dimensions	43 x 36 x 17 mm

\* Radio communication range is the maximum distance between the hub and the relay in line of sight and without interference.

## SUPPLY SET

Livi Relay 12/24 with "dry contact" output	1
Packaging	1

## LED INDICATION OF THE INTERNAL INDICATOR

The relay is turned on (electrical circuit is closed)	The indicator lights green
The relay is turned off (electrical circuit is open)	The indicator is not lit
Binding mode	The indicator blinks blue for 1 minute
Confirmation of successful binding	The indicator blinks green 5 times

## WARRANTY

The manufacturer LLC "NPP Stels" guarantees that the relay meets AGNS.421453.001 TU technical requirements, provided that the consumer complies with the conditions of transportation, storage, installation and operation.

The warranty period is 5 years from the manufacturing date.

The warranty does not cover the following cases:

1. Non-compliance with the intended operating conditions;
2. Mechanical damage to the relay;
3. Repairs to the relay by a third party (a person or a company other than the Manufacturer).