



Livi RTRM repeater manual

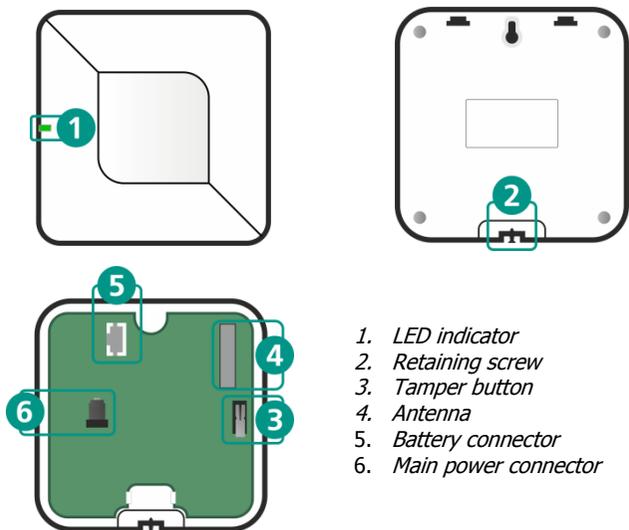
DESCRIPTION

The Livi RTRM repeater (hereafter referred to as *the repeater*) is designed to bind Livi radio devices, which are installed in the area of poor radio signal reception, to the [Livi Smart Hub](#) (hereafter referred to as the hub).

Guaranteed operating range of the hub can be increased by 2 times with the help of the repeater. You can bind up to three repeaters to one hub according to the "star" scheme.

The main power supply for the repeater is 230 V mains (through the power adaptor from the supply set). The repeater is completed with a backup battery to ensure autonomous operation in case of electricity failures lasting up to 24 hours.

DEVICE APPEARANCE



1. LED indicator
2. Retaining screw
3. Tamper button
4. Antenna
5. Battery connector
6. Main power connector

BINDING TO THE HUB

The repeater 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.

1. Open the repeater enclosure: loosen the retaining screw at the bottom of the enclosure using a crosshead screwdriver, and then pull the lid up.
2. Supply the backup power: insert the battery leads into the white connector on the repeater board.
3. Supply the main power: insert the power adapter into the black connector and plug it into the 230 V mains.
4. In [the Livicom app](#), open the "Devices" screen. In the upper right corner of the screen tap **+** and select "Add Device". The repeater indicator will blink green 5 times after successful binding.
5. Close the lid and tighten the retaining screw at the bottom of the enclosure.

Attention! The repeater switches to the binding mode only for 60 seconds. If you have not bound it to the hub within this period, de-energize the repeater (disconnect the battery and the power adaptor) and after 30 seconds supply power again. The repeater will switch to binding mode again.

CHOOSING A LOCATION FOR THE REPEATER

We recommend installing the repeater on the border of the stable radio signal reception area of the hub.

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

EVALUATING SIGNAL STRENGTH

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

1. In the Livicom app, on the repeater settings screen.
2. With the help of the LED indication on the repeater. Double-click on the tamper button and look at the repeater indicator. Interpret the indication using the table below.

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

REPEATER INSTALLATION

The repeater can be mounted on a wall, set upright on a shelf or lay down on a table.

Follow these steps to mount the repeater on the wall:

1. Open the repeater enclosure: loosen the retaining screw at the bottom of the enclosure using a crosshead screwdriver, and then pull the lid up.
2. Fasten the base of the repeater enclosure at the selected location using a supplied mounting kit.
3. Close the repeater enclosure and fasten the retaining screw.

REDIRECTING INFORMATION FLOW TO THE REPEATER

The hub will automatically switch Livi radio devices, which are installed in the area of poor radio signal reception, to send signals through the repeater.

The hub will dynamically change the scheme of information exchange with Livi devices to ensure the best quality of connection when at least one repeater is bound to the hub. The hub requests from the repeater signal levels for all Livi devices at the site, if it detects a problem in the direct information exchange. The hub will change the scheme of information exchange to force the device to send signals through the repeater, if the signal between the repeater and the device turns out to be stronger. If the quality of connection through the repeater deteriorates, the hub again requests signal levels and evaluates whether the scheme of information exchange should be changed again.

Thus, stable communication between all Livi devices is maintained.

DELETING THE REPEATER (UNBINDING FROM THE HUB)

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

1. In the Livicom app, on the repeater settings screen.

2. Using the tamper button (3). De-energize the repeater (disconnect the battery and the power adaptor) and after 30 seconds supply power again. Quickly click on the tamper button until the repeater indicator starts blinking blue.

All Livi devices, which are installed in the operating range of the hub, will automatically start sending signals directly to the hub, once the repeater is deleted.

MAINTENANCE

Keep the repeater free of dust and dirt. Do not wipe the repeater with substances containing alcohol, acetone, gasoline and other active solvents

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
Supported radio protocols	Livi
Number of radio devices that can work through one repeater	up to 256
Main power	230 V mains via the 5 V, 1 A power adapter
Backup power	Li-Po battery, 720 mAh
Battery life	up to 24 hours
Current consumption in active mode	up to 16 mA
Operating temperature range	from -20 to +55 °C
Relative humidity	no more than 80% at 25 °C
Dimensions	98 x 98 x 34 mm

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

SUPPLY SET

Livi RTRM repeater	1
Mounting kit	1
Rechargeable battery 3.7 V, 720 mAh	1
Power adapter 5V, 1A	1
Packaging	1

LED INDICATION

Binding mode	The indicator blinks blue for 1 minute
Confirmation of successful binding	The indicator blinks green 5 times
Charging the battery if it is deeply discharged	The indicator quickly blinks white

WARRANTY

The manufacturer LLC "NPP Stels" guarantees that the repeater 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 apply to batteries.

The warranty does not cover the following cases:

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