

DESCRIPTION

The Livi Water Control unit (hereafter referred to as the unit) is designed to cut off water automatically when a leakage is detected or remotely by user command.

The unit switches to the alarm mode when it detects a water leak:

1. An indicator (1) blinks red once.
2. The unit cuts off water with the help of two ball valves with electrical drives.
3. The unit sends an alarm alert to [the Livi Smart Hub](#) (hereafter referred to as the hub).

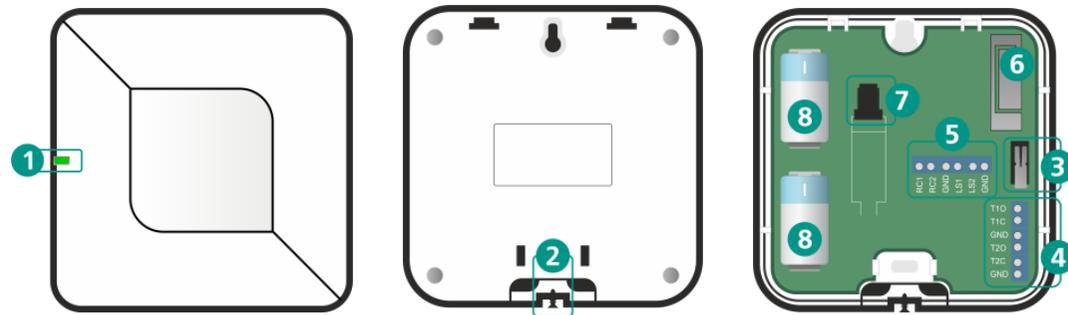
The unit can be connected to:

- Two ball valves with electrical drives (hereafter referred to as the valves) with the following features: DC motor, 12 V supply voltage and power consumption up to 2 W. For example, Neptun Bugatti Pro 12 V.
- Two external wired leak sensors which can be placed in two separate areas of potential flooding (sensors are included in the supply set).
- Two household water meters with pulse output of the "dry contact" type (reed switch). For example, ITELMA WFK 24.D080/24.D110, ITELMA WFW 24.D080/24.D110. The unit counts pulses generated at the output of the water meter and transmits the readings to the hub. The Livicom system converts the measured pulses into liters based on the pulse coding ("pulses/liter" value from the meter passport). The unit automatically transmits meter readings every 10 minutes.

The unit operates on two CR123A lithium batteries and does not require any other power sources to control the valves.

Optionally the unit can be connected to a 230 V network through a power adapter 5 V, 1 A. When connected to the 230 V mains, the unit does not discharge the batteries.

UNIT APPEARANCE



1. LED indicator
2. Retaining screw
3. Tamper
4. Terminals for connecting the valves
5. Terminals for connecting water meters and leak sensors
6. Antenna
7. Power adapter connector
8. Batteries

CHOOSING LOCATION FOR THE UNIT

The unit should be positioned so that the length of wires does not exceed:

- 1,5 m for wires between the unit and each valve.
- 2 m for wires between the unit and each household water meter.
- 10 m for wires between the unit and the external leak sensors.

External leak sensors should be fastened on the floor with contacts (10) down in areas of potential flooding (for example, under heating radiators, at the joints of pipes, under dishwashers and washing machines).

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

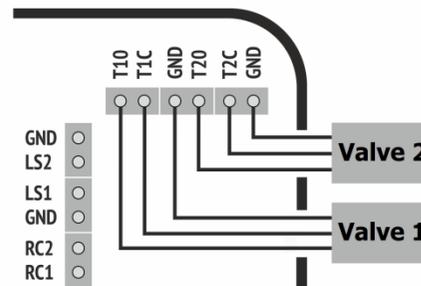
UNIT INSTALLATION

The unit 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.

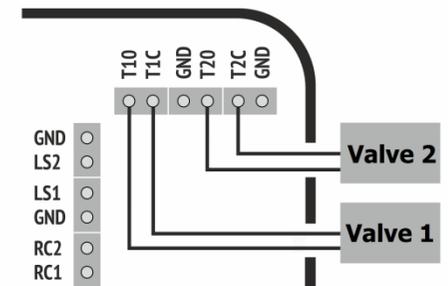
1. Loosen the screw (2) at the bottom of the unit enclosure using a crosshead screwdriver. Pull the lid up to open the unit enclosure.
2. Fasten the base of the enclosure at the selected location using a supplied mounting kit.
3. Make sure that the unit does not carry any voltage (protective films are present in battery compartments or batteries are removed, the power adapter is disconnected from the unit).
4. Connect the valves connecting wires to the unit terminals (4). Choose the connection diagram according to the documentation for the chosen valves.
5. Connect the wires of the water meter pulse outputs to the unit terminals (5) according to the connection diagram below.
6. If necessary change wires for connecting external leak sensors to the unit:
 - Select new wires (recommended wire cross-section is 0,12 mm²).
 - Remove the wires from the unit terminals (5).
 - Open the sensor enclosure: press one of the latches located near the wire using a flat-blade screwdriver.
 - Unsolder wires from the pad.
 - Connect sensors to the unit with new wires as shown in the connection diagram below.
 - Close the sensor enclosure.

CONNECTION DIAGRAMS

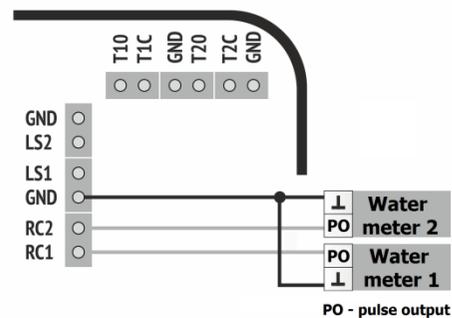
Connecting the valves to the unit
(3-wire connection)



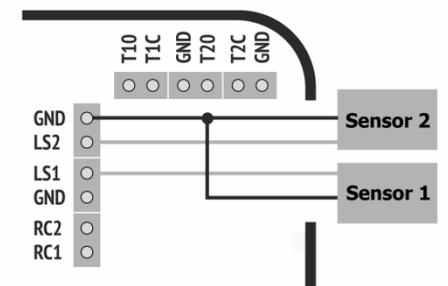
Connecting the valves to the unit
(2-wire connection)



Connecting water meters to the unit:



Connecting leak sensors to the unit:



BINDING TO LIVI SMART HUB

1. Open the unit enclosure if it has been closed.
2. Switch the unit to the binding mode: pull out protective films that come out of the battery compartment (or install two CR123A batteries, observing polarity, if the batteries were removed). The unit indicator blinks in blue (for 60 seconds) when the unit is switched to the binding mode.
3. In the Livicom app open the "Devices" screen, in the upper right corner of the screen tap **+** and select "Add device". The unit indicator blinks in green five times after successful binding.
4. Close the lid and tighten the screw (2) at the bottom of the unit enclosure.

The unit switches to the binding mode only for 60 seconds. If you have not bound it to the hub within this period, remove both batteries from the siren for 30 seconds, and reinstall them (observing polarity). The unit will switch to binding mode again.

EVALUATING SIGNAL STRENGTH

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

1. In the Livicom app, on the Unit settings screen.
2. With the help of LED indication on the unit: double-click on the tamper (3) and look at the unit indicator (1). 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 UNIT OPERATION

Check the operation of the unit after its installation. You can perform a check by short-circuiting two groups of the external leak sensor contacts (10) with water or a metal object (for example, a screwdriver).

Wait for the unit LED indication (the indicator will blink red once), for water shutoff (if the valves are connected) and for the alarm alert in the Livicom app.

The unit will automatically recover (the indicator will blink green once), after the sensor contacts opening (leak elimination).

Contact technical support (support@livicom.ru) if you see any incorrect operation of the unit.

WARNING

DO NOT perform any manipulations with connecting wires (disconnecting and reconnecting wires) until the unit no longer carries any voltage (both batteries are removed and the power adapter is disconnected).

UNIT DELETING

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

1. In the Livicom app, on the Unit settings screen.
2. Using the unit tamper (3): remove both batteries from the unit and after 30 seconds install them back, observing the polarity. Quickly click on the tamper (3) until the indicator (1) starts blinking blue.

MAINTENANCE

Keep the unit free of moist, dust and dirt. Replace both batteries as soon as possible after you receive a low battery notification in the Livicom app.

Do not wipe the unit 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	10 minutes
Number of the valves	2
The valve wire length	up to 1,5 m

The valve type and parameters	DC motor, 12 V supply voltage and power consumption up to 2 W
Number of water meters	2
The water meter wire length	up to 2 m
Water meter connection interface	pulse output of the "dry contact" type (reed switch)
Number of external leak sensors	2
External leak sensor wire length	1 m
Maximum length of external leak sensors wires	up to 10 m
Recovery period after an alarm (if no more water is detected)	10 sec
Power source (3 V)	2 batteries CR123A
Current consumption in sleep mode	26 µA
Current consumption in active mode	up to 1 A
Operating temperature range	from 0 to +55 °C
Relative humidity	no more than 80% at 25 °C
Unit dimensions	90 x 28 x 28 mm
External leak sensor dimensions	35 x 35 x 13 mm

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

SUPPLY SET

Livi Water Control unit	1
Livi LS C external wired leak sensor	2
Mounting kit	1
Lithium battery CR123A (3 V)	2
Protective films for batteries	2
Packaging	1

LED INDICATION OF THE INTERNAL INDICATOR

Water leak detected	The indicator blinks red once
Sensor recovered after an alarm (no more water)	The indicator blinks green once
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 unit 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 unit;
3. Repairs to the unit by a third party (a person or a company other than the Manufacturer).