LK Webserver

DESIGN

LK Webserver is used to access and control LK Room Temperature Control ICS.2 and/or LK Water Safety System WSS via the Internet or a local network. The interface is suitable for cell phones, tablets or computers and can be reached via a website or an app for Android and Apple IOS. Interface updates continually take place and new functions will be available, see the latest manual at www.lksystems.se/en.

LK Webserver continually logs the floor heating system (temperatures, heat to/from etc.) to enable optimization of the performance of the floor heating systems. The logged data can be retrieved and analyzed with LK Analyzer ICS.2 software which can be downloaded from the LK Systems website.

Installation of the LK Webserver

The webserver can only be connected to the LK Receiver 8 ICS.2 and LK Water Safety System WSS. The webserver is placed near a room temperature control if it is to be used for both floor heating and water safety system. Otherwise it can be located near a network socket and then communicate wirelessly with the master unit of the water safety system.

The webserver can be installed in three different ways:

① Only for an LK Receiver 8 ICS.2, start the installation at point 1 in the instructions below.

② Using two webservers to create a wireless bridge when an internet connection is not available near the receiver of the floor heating installation. Begin installation as shown below in point 1 in the instructions.

③ Only for the LK Water Safety System WSS, begin installation as shown below in point 11 in the instructions.
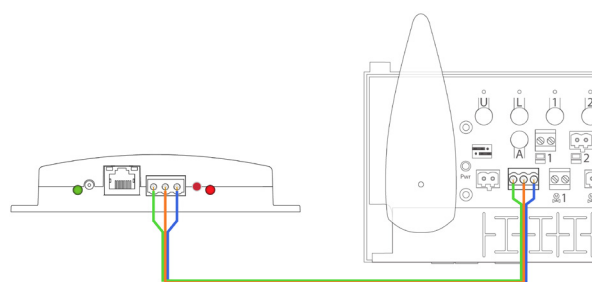
① Connecting the LK Receiver 8 ICS.2 with LK Webserver

An example of a system with the webserver connected by cable to the router. The webserver is connected to both the water safety system and room temperature control ICS.2.

1. Attach the webserver with a suitable screw.
2. Switch off the power to the LK Receiver.
3. Connection is done with a three-conductor cable (> 0.25 mm²). Connect the LK Receiver 8 ICS.2 (Master) three-pole busbar marked- *BUS* with cable to the three-pole connection of the LK Webserver marked BUS ICS.2. Connect pole to pole, i.e. plus [+] is connected to plus [+], minus [-] to minus [-] and zero [0] to zero [0].

BUS cable

4. Energize the LK Receiver.
5. Connect the cable from the mains adapter to the input Power 5 V DC input on the webserver, connect the mains adapter to a wall socket.
6. Connect the network cable between the webserver's ethernet-connection and a network socket with internet access.

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② Connecting the communication bridge via two webservers

It is possible to create a wireless communication bridge between the receiver of the floor heating installation and a network socket with internet access.

An example of a system with a webserver as a communication bridge. The webserver is connected to both the water safety system and room temperature control ICS.2.

7. Mount the other webserver near a network socket.

8. Connect the cable from the mains adapter to the input Power 5 V DC input on the webserver, connect the mains adapter to a wall socket.

9. Connect the network cable between the webserver's ethernet-connection and a network socket with internet access.

10. On the webserver connected to the receiver, press and release the red button. The LED lamp will begin to blink.

   Within three minutes, press and release the red button on the webserver connected to a network socket.
   Thecommunication bridge settings are done in the tab *Network* in the webserver's user interface, channel 6 is normally used.

③ Connecting LK Master Unit WSS with LK Webserver

11. The LK Master unit WSS communicates wirelessly with the webserver connected to the network socket with internet access.

12. Connect the cable from the mains adapter to the input Power 5 V DC input on the webserver, connect the mains adapter to a wall socket.

13. Connect the network cable between the webserver's ethernet-connection and a network socket with internet access.

14. Programming the webserver is carried out by simultaneously pressing the Open and Timer buttons on the Master Unit for 2 seconds (the radio symbol begins flashing). After that press and release the red button on the webserver (the right LED flashes red). When the connection is established, the right LED will show a red solid light for a few seconds.

Web interface in the LK Webserver

1. Go to the homepage below on a computer connected to the Internet or mobile device https://my.lk.nu

   If the webserver does not have internet access, continue to point 9.

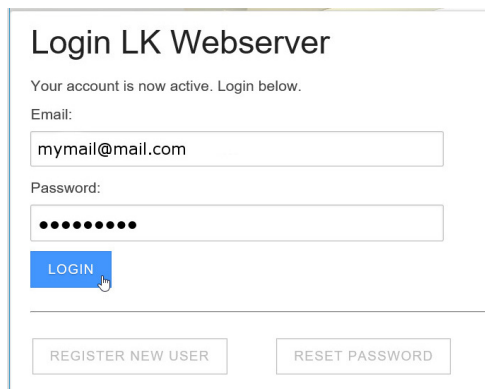*QR code for the login page.*

2. Click on *Register new user*

Log in, new user

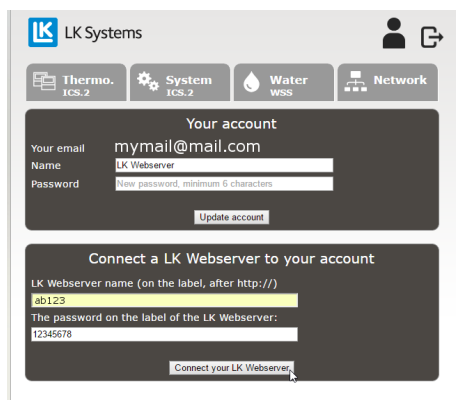3. Fill in the email address, chosen password and your name. Click on *Register new user*.

Register new user

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4. Check your email for a new message, or the spam folder, activate your account by clicking on the link in the email from noreply@lkics.net. Your browser will open a new window.

5. Login with your email address and chosen password given in step 3, click on *Login*.

Login

6. Connect your account with the webserver by indicating the name of the webserver printed on the label (ab1234) and password on the label. Click on *Connect your LK Webserver*.
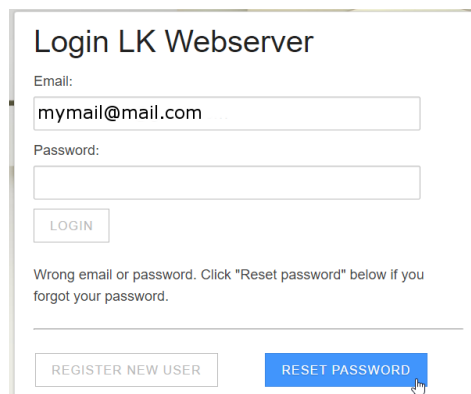

Your account

7. Information on room temperature control is in the tab *Thermo.* and *System*. The water safety system is in the tab *Water*. Possible settings are in the tab *Network*. For a description of each tab, see the section user interface.

   There is also an app for the webserver that can be downloaded from Google play and the Apple Appstore. The app is called **LK AtHome**
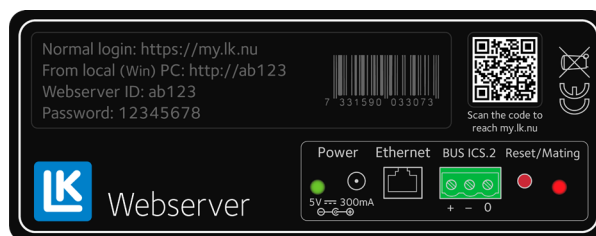
8. Reset the password on the login page.

Login, Reset password

The password can be reset with the *Reset password* function. An email with instructions is sent to the registered email address.

9. If the webserver does not have internet access, connect a computer using Windows to your local network. Enter the address that is printed on the webserver connected to the router, see the image below. http://ab123, then a dialogue box will appear for you to enter the Username lk and Password that is printed on the webserver.

Webserver label.

10. When the webpage is loaded, information is shown for room temperature control in the tab *Thermo.* and *System*. The water safety system is in the tab *Water*. Possible settings are in the tab *Network*. For a description of each tab, see the section *User interface*.
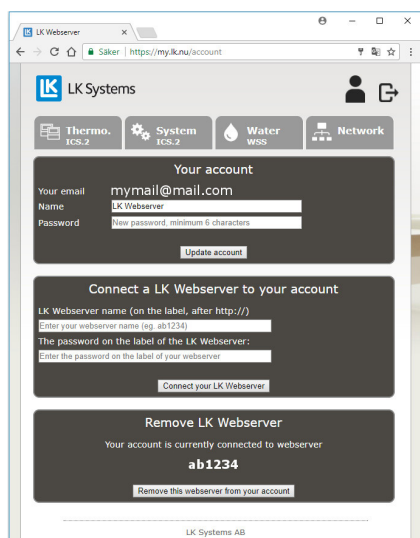
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User interface, functions

LK Webserver makes a simpler and more transparent user interface to adjust system settings via the room thermostat's menu and installation parameters. The LK Webserver always begins by searching for LK Room Temperature Control ICS.2. If the webserver is only connected to the LK Water Safety System, the tab *Water* can be clicked on as no room temperature control is found. The webserver is cloud-based and there may be updates of the user interface and functions that becomes directly available to the user, see the latest manual at www.lksystems.se.

Menu
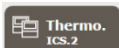
Log out from the account

Account

By clicking on the account icon, this allows a change of name to the account and password on the page below. Connect several webservers to the account and remove a webserver from the account.
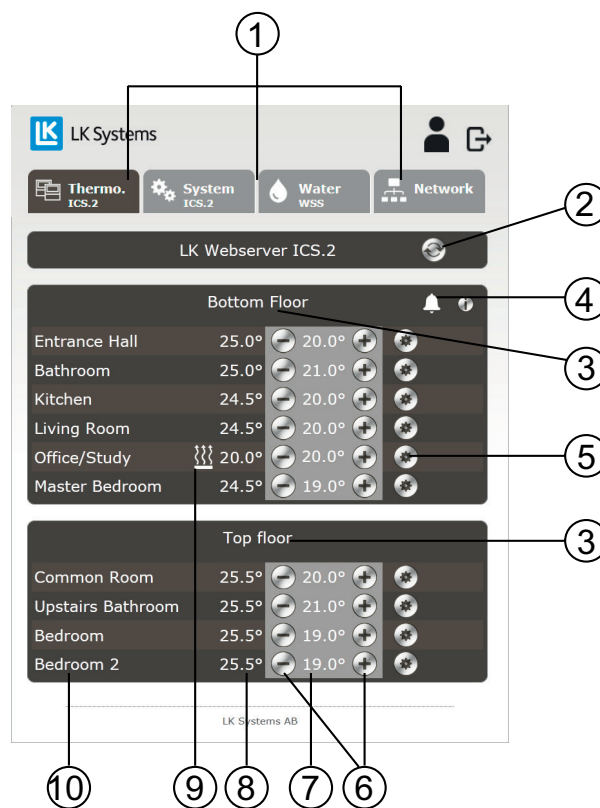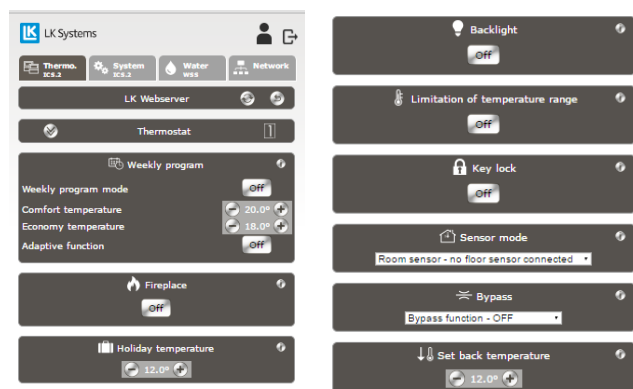
Account

Menu tab Thermo.

From the tab *Thermo.* this allows an overview of the system's receivers and connected room thermostats.

Basic functions

1. Menu tabs.
2. Update button. The webpage is automatically updated as soon as a change is made to the webpage or every tenth minute.
3. Device name, preselected as Receiver 1, i.e. Receiver 1. Click on the name *Receiver 1* and rename the unit to a chosen name, for example after its location or the part of the system that it serves. Max. 15 characters.
4. Any alarm symbol can be shown. A thermostat can also be shown. Click on the icon to get information about the alarm.
5. Gear icon, clickable, to return to thermostat settings.
6. Reduce/increase the desired room temperature.
7. Display of the set room temperature.
8. Display of the room temperature. If two temperatures are displayed, the left is the room temperature / the right is the floor temperature.
9. Heating symbol. If the heating symbol is on, this means that the room thermostat has switched on the heating.
10. Room thermostat, preselected as *Thermostat*. Click on the name *Thermostat* and rename the thermostat to a custom name, for example its location i.e. room name/room designation. Max 15 characters.

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The desired room temperature can be set with the round buttons ⊖ or ⊕. Beside this displays the measured/current room temperature. There is a gear icon for each thermostat ⚙. Clicking on the icon brings you to the menu system for that specific room thermostat. All settings that can be made from the physical room thermostat are easily made from here.
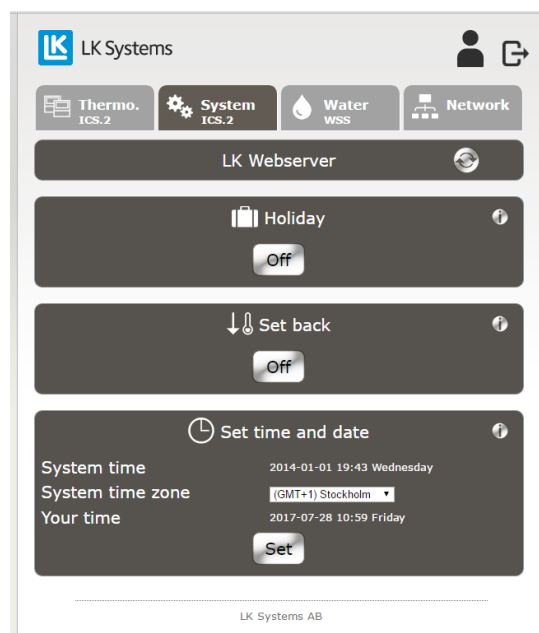

Menu page for settings of each room thermostat.

For each function, there is a clickable icon/information icon ℹ. Summarized information is obtained for the function. Additional information is in the accompanying manual **LK Room Temperature Control ICS.2**.
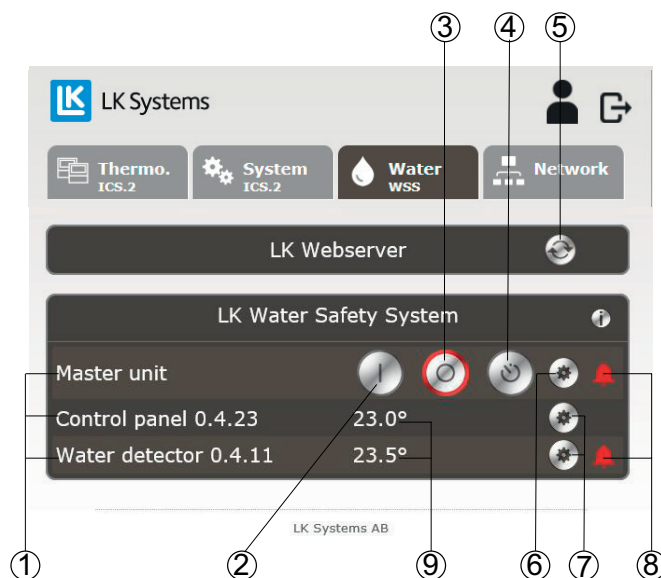
Any alarm will be displayed as an icon in the shape of a clock 🔔. The alarm icon is clickable. Information about the current alarm will be displayed. For more information, see the accompanying manual **LK Room Temperature Control ICS.2**.

Menu tab System

Under the tab *System*, overall system functions can be set, i.e. functions that affect all room thermostats in the facility. An example of a function is *Holiday* (vacation function). If this is activated, all thermostats of the facility will lower the set room temperature. There is a clickable icon/information icon for each function. An important function *System* tab is *Set time and date*, i.e. the system's date and time are set. This should always be done. Click on the *Set* button and the system will synchronize the time with your unit. For more information, see the accompanying manual **LK Room Temperature Control ICS.2**.

Menu tab System

Menu tab Water

Menu tab Water

In the *Water* tab, the overall functions for the system can be read and set.
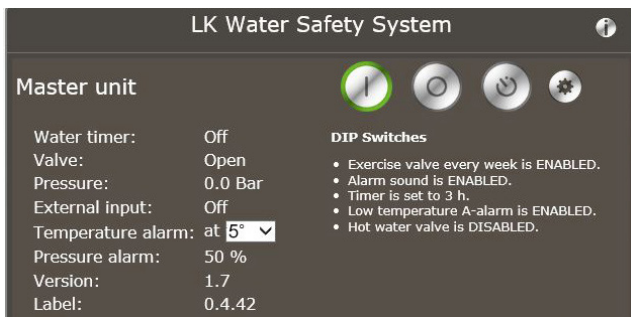
1. Click on the text to change the name of the unit. Max 15 characters.
2. Open for water.
3. Close for water.
4. Activate the timer function.

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5. Update button. The webpage is automatically updated as soon as a change is made to the webpage or every tenth minute.

6. A clickable gear icon to show more information about the master unit.

7. A clickable gear icon to show more information about the connected unit.

8. Any alarm symbol can be shown. This is also shown for a control panel, leakage detector or input link. Click on the icon to get information about the alarm. During an alarm, an email is sent to the address given during registration and a push notice will occur in the app.

9. Current temperature for the connected unit.

Master unit

The information is shown below when clicking on the gear icon of the Master Unit. Only the value for cold water is shown if the warm water valve is not activated in the Master Unit.

- Timer value.
- Valve status for cold and warm water.
- Current pressure for cold and warm water.
- Status for external input.
- Adjust the temperature alarm value between 0 and -15°C (default +5°C).
- Value for the pressure alarm.
- Software version.
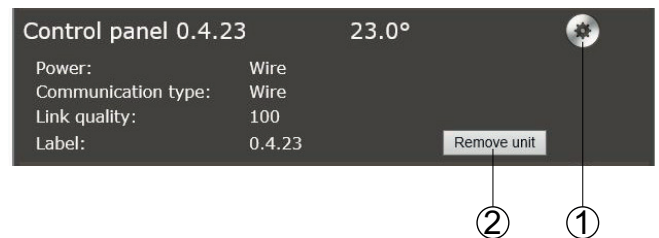- Address of the unit.
- Values for DIP switches.

Menu tab Water, Master Unit expanded

Control panel & Input link are shown as (Control panel)

When clicking on the gear for Control panel, the information below is shown:

- Power supply: battery status, external or BUS supply.
- Communication, wireless or wired.
- Communication quality.
- Address of the unit.

1. The clickable gear icon to display less information about the unit.

2. Option to remove the unit from the Master Unit.

Menu tab Water, Control panel expanded

Water detector

When clicking on the gear for a water detector, the information below is shown:

- Power supply: battery status, external or BUS supply.
- Communication, wireless or wired.
- Communication quality.
- DIP Switch values.
- Address of the unit.

1. Clickable gear icon to display less information about the unit.
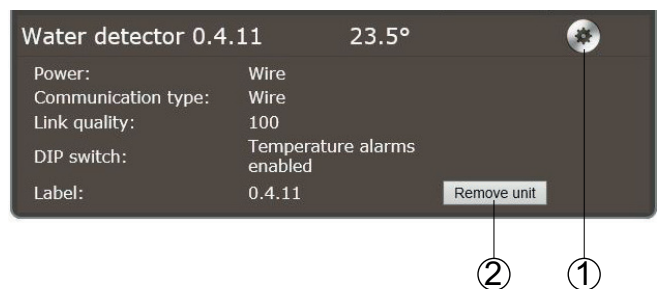
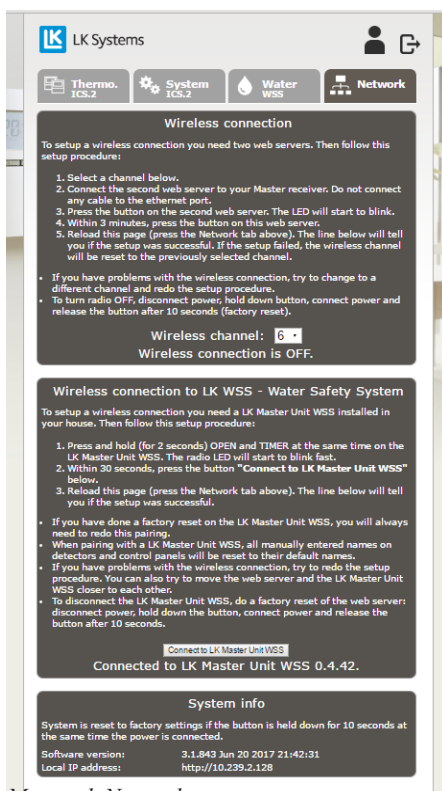2. Option to remove the unit from the Master Unit.

Menu tab Water, Water detector expanded

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Menu tab Network

In the *Network* tab, there are settings and information for:

- Network connection/webserver set-up for a local network or Internet. Only access for local login to the webserver.
- Communication bridge configuration.
- Status for wireless communication to LK Master Unit WSS.
- Change the password for local login. Only access for local login to the webserver.
- DHCP settings. Only access for local login to the webserver.
- System info, software version and IP address.

Menu tab Network

Password

For local login it is possible to change the password from your default password to a chosen password in the *Network* tab.

N.B., please consider using a strong password containing a combination of lower-case and upper-case letters as well as numbers.

Reset the webserver

The webserver can be reset to factory settings. During a reset, an assigned password may possibly be erased and the one printed on the label will be active again. All names on the unit under *Thermo* tab and *Water* tab as well as all log data will also be erased. The wireless connection to the master unit of the Water Safety System will be terminated.

The webserver is reset as follows:

- *Remove the charger to the unit.*
- *Hold the red Reset/Mating button down.*
- *Reconnect the charger and continue to hold down the red button.*
- *After 10 sec., release the red button.*

Versions

From version: 3.1.850 in the permanent software when cloud services are available. Older versions can be updated, contact LK.

Generation 1   *Generation 2*

Cloud service

LK Systems intend to provide cloud service for web login and apps for at least five years after LK Webserver is no longer in LK's regular product range. The product can be obtained without cloud service via the external IP address and port 8080 (e.g. http://123.456.789.123:8080). The current IP address is shown in the *Network* tab.

Technical Data

RSK number	241 70 35
Product name	LK Webserver
Power supply	230V AC / Mains adapter 5V DC <2 W
Working temperature	-10 to +60°C 10-90% RH
Storage temperature	-30 to +85°C 10-90% RH
Connection MODBUS	RS485
Ethernet contact	RJ45, 10Mbit
Radio	433 Mhz <10 mW
Channel separation	25 kHz, 69 channels
Modulation	GFSK
Cable protection class	IP20
Dimensions LxHxD	137 x 62 x 31 mm

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