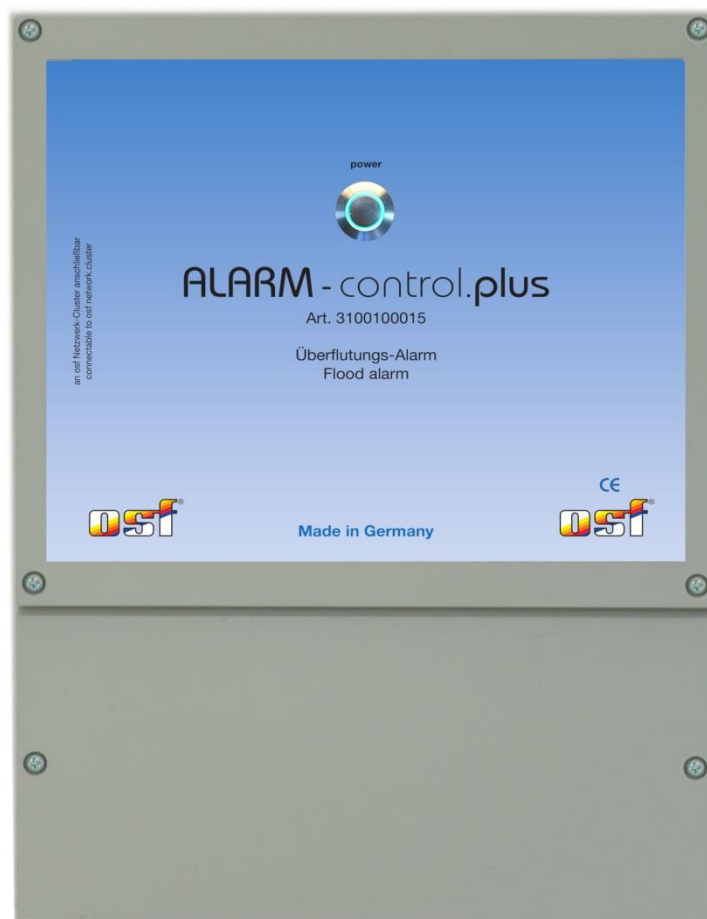


Installation and Operation Manual

Alarm-control.plus

Leak warning device
with integrated webserver




Art.No.: 310.010.0015

Technical data

Dimensions:	220mm x 285mm x 80mm
Operating voltage:	230V/50Hz
Power consumption:	<10 W
Load capacity of the potential-free contact:	max. 8A (230V)
Switching capacity of the 230V output:	max. 4A (AC1)
Protection class:	IP 40
Number of inputs for water sensors:	6
Operating voltage of the water sensors:	12V AC (SELV)
Climate sensor input:	digital sensor system „Klima 2“
Ambient temperature:	0-40°C
Air humidity:	0-95% non condensing

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General description

The electronic control system Alarm-Control.plus signals water leaks in the technical room of the pool. The device can signal alarms optically and acoustically, two relay outputs and automatic e-mail are also available. Alarm-Control.plus can work independently or as an extension unit for the PC-45-exclusiv system.

Up to 6 water sensors can be connected to the Alarm-control.plus unit. Suitable sensors are pairs of immersion electrodes or float switches.

A climate sensor can optionally be connected to the device, which enables the air temperature and humidity in the technical room to be monitored. If a parameter exceeds the set limit values, an alarm can be triggered.

With the colored illuminated button on the front of the housing you can:

- a) Switch off the Alarm-control.plus. The device is switched off by pressing the button for 3 seconds. When the device is switched off, the button does not light up and the device does not respond to leak sensors. The Alarm-control.plus device is switched on again by pressing the button again.
- b) Briefly press the button to turn the alarm on and off temporarily. During the pause, the backlight of the button lights up blue. The duration of the alarm pause is limited in time. The factory setting is 30 minutes, maximum 3 hours. After the pause time, the Alarm-control.plus device automatically switches to signaling.

The pause in the alarm enables service work to be carried out on the water sensors without them being triggered.

When switched on, the button lights up green until an alarm is triggered. The button flashes red during the alarm.

If the button is mostly green but flashes red every 5 seconds, it means that one of the leak sensors has recently had contact with water. This state must be confirmed by briefly pressing the button.

General instruction

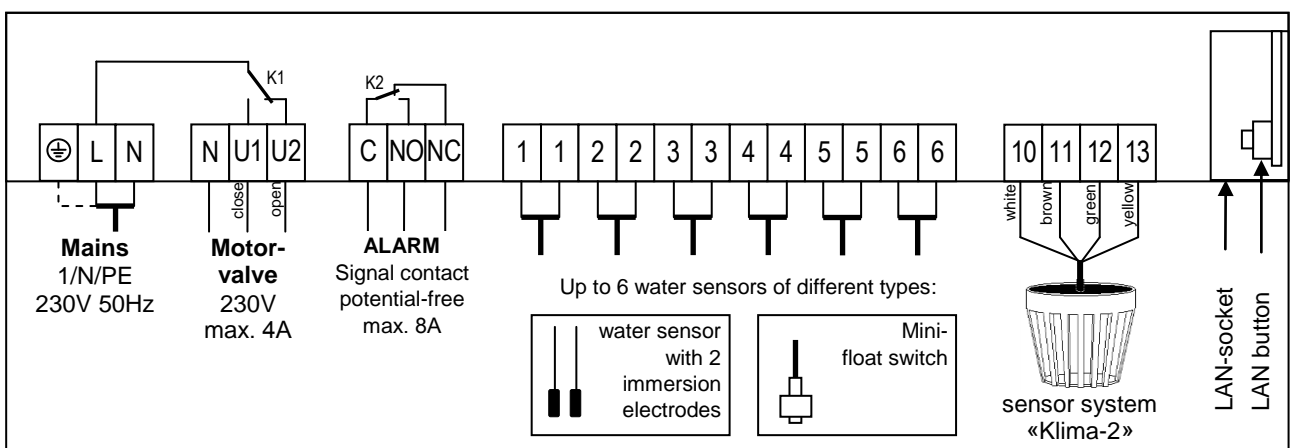
The control unit has been designed for safe and reliable operation in accordance with the provisions of these operating instructions. Therefore, read these operating instructions carefully before installing the device! The instructions contained therein for installation and operation must be followed exactly. If these conditions are met, the control unit will work properly for many years.

Mounting

The housing is fixed vertically and permanently to a solid wall with adequate load-bearing capacity. The place of installation must be dust-free and protected against water in order to ensure that the device works properly. The ambient temperature should lie between 0° C and + 40° C and should be as constant as possible. The relative humidity must not exceed 95% and no condensation may occur. Direct incidence of heat or sunlight on the device must be avoided. The control unit is not suitable for outdoor installation.

Electrical Connection

The control device must be fixed at a location where it is protected against moisture in accordance with its class of protection. The power supply to the device must be fed via an all-pin main switch with contact opening width of at least 3 mm and a residual current circuit breaker (RCCB) with $I_{FN} \leq 30 \text{ mA}$. **Before opening the housing, it is absolutely necessary to de-energize the device electrically. The electrical connection as well as the work of adjustment and servicing should be carried out only by an approved electrician! The connection diagrams enclosed and the relevant safety provisions applicable must be observed and followed.**



Low-voltage cables should not be laid along with three-phase or AC cables in the same cable duct. In general, laying low-voltage cables near three-phase or AC cables must be avoided.

Connection of the water sensors

Up to 6 water sensors can be connected to terminals 1-6. Depending on the requirements, a distinction is made between two types of water sensors. For correct operation, the type of sensor connected must be specified in the "Configuration" menu (see the "Configuration" section for more details). The factory setting for the sensor type is "two-electrode water sensor".

Two-electrode water sensor

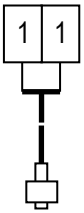


As the name suggests, a sensor of this type consists of two electrodes between which an alternating electrical current flows when immersed in water. Suitable electrodes are hanging electrodes made of stainless steel (Art. 303.000.0011) or another water sensor with two bare contacts.

The sensor cable (at least 1.5mm²) can be extended up to 20 meters. The polarity of the connection does not matter.

The two-electrode water sensor does not enable cable break detection. The advantage of these sensors is the possibility of connecting several sensors in parallel to one input.

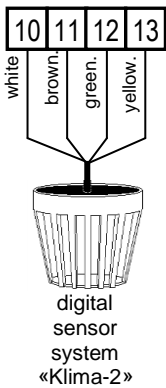
Float switch



A suitable float sensor with a cable length of 5 meters has the article number 303.000.0045. In the delivery condition, the sensor opens the contacts when the float rises. With this property you can identify a broken cable as a leak. The type of the connected sensor must be specified in the configuration menu.

The sensor cable can be extended up to 50 meters. The polarity of the connection does not matter.

Climate sensor connection



Digital sensor system "Klima-2" (temperature and air humidity)

The climate sensor (Art. No. 3110000068) is connected to terminals 10, 11, 12 and 13. When connecting, observe the color coding of the sensor cables. If necessary, the cable can be extended up to 30 m with a 4-core cable (cross-section min. 0.5 mm²). Due to possible interference, do not lay the sensor cable near power cables. The sensor must be protected from splash water.

Connecting to LAN

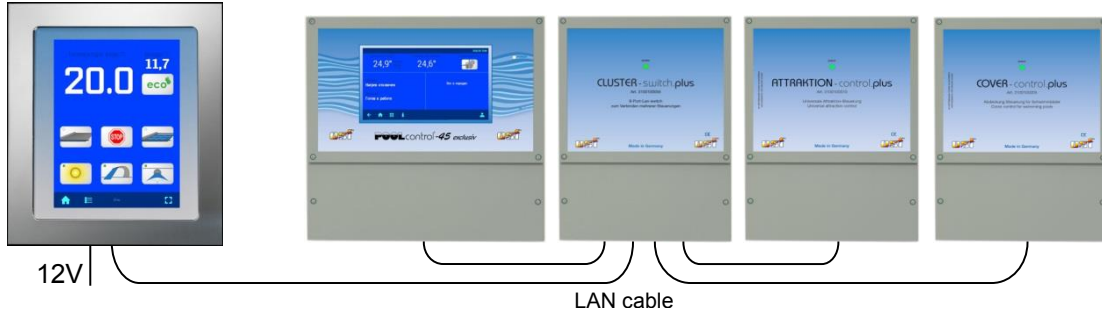
The control unit has a LAN connection (Ethernet, RJ45). The device is controlled and configured exclusively via the LAN network with the PC-45 exclusiv, an external smart touch panel, a computer or smartphone.

A standard network cable (patch cable, CAT5) must be used for the connection. Each device in a network cluster (PC-45 exclusiv, Alarm-control.plus etc.) must be in the same local network. The easiest way is to connect all devices to a network switch. Our product range includes a suitable network switch named "Cluster-switch.plus". For more information, see the "Connect to a Computer Network and the Internet" section.

Connection to the pool control PC-45 exclusiv

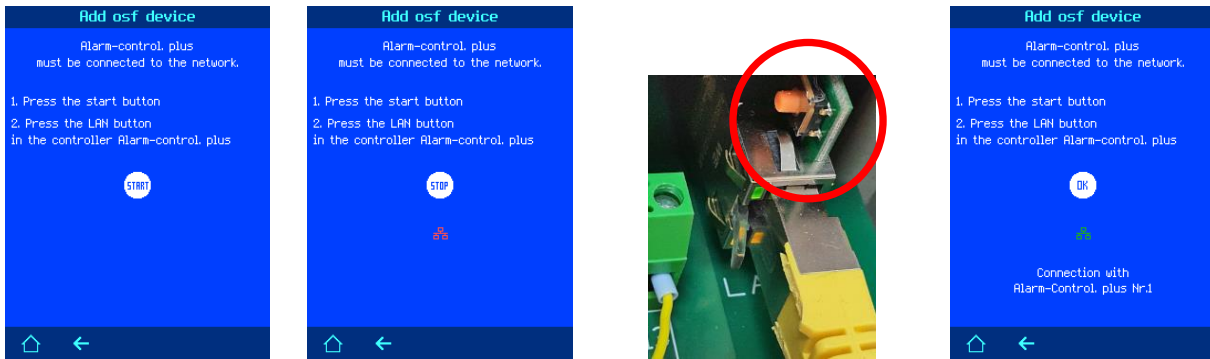
With the PC-45 exclusiv, several devices of the Plus series can be combined into a single network cluster for pool management. Data is exchanged between devices via a local computer network (LAN) and using its own communication protocol based on the UDP protocol.

To connect devices, both devices must be connected to the local network.



Connection to a “Smart-Touch” operating panel

To connect the devices with each other, both devices must be connected to the local network. On the screen of the external Smart-Touch control panel, go to the “Add OSF device” menu and select the “Alarm-control.plus” block. Then press the start button and then the LAN button in the Alarm-control.plus according to the instructions displayed. For more information, see the instructions for the external smart touch control panel.



Please also note the installation and operating instructions for the devices PC-45 exclusiv and external smart touch control panel.

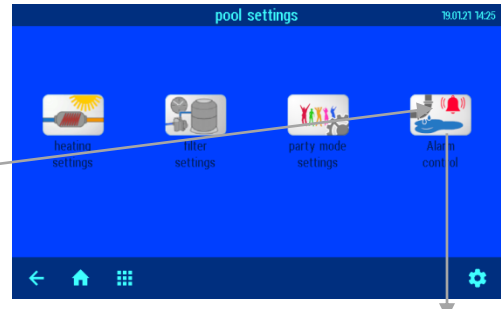
Setup and configuration

The configuration and setting of the Alarm-control.plus device can be done via the screen of the PC-45 exclusiv, from the computer or smartphone.

Configuration from the PC-45 exclusiv

After the two controls have been connected, an additional symbol appears in the main menu of the PC-45 exclusiv.

Clicking this button takes you to the configuration menu.

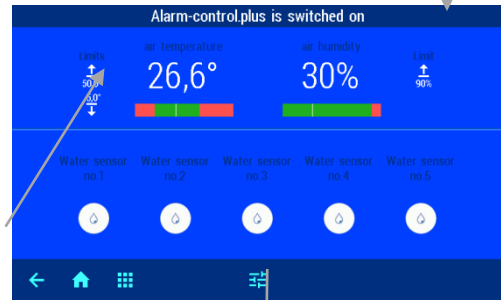


Alarm-control.plus menu

The screen shows the current status of the sensors connected to the Alarm-control.plus.






Attention! The connected sensors are configured on the Alarm-control.plus website

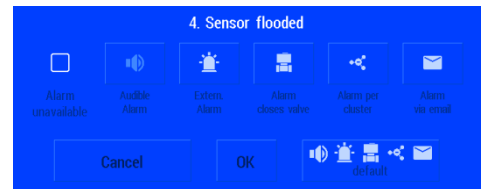
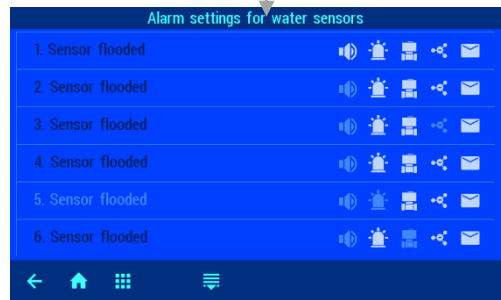
Set alarm limits
for air temperature and humidity



Alarm settings for water sensors




On this screen you can individually set the reaction of the Alarm-control.plus-unit when a water sensor is triggered. There are 5 ways to respond to a leak:

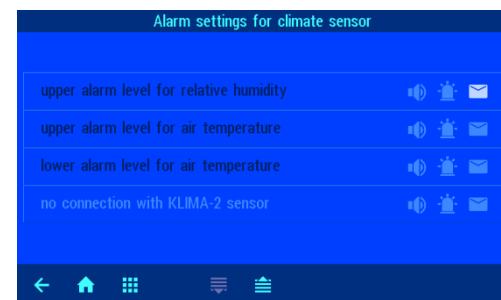
-  Audible alarm.
-  Potential-free contact of the alarm relay. The relay closes for the duration of the leak.
-  230V relay for valve control. The relay closes for the duration of the leak.
-  Stopping the PC-45 exclusive and all devices contained in its network cluster.
-  Send alarm by email. The email address is set via the Alarm-control.plus website.
- Deactivating the response to the leakage sensor.



Alarm settings for climate sensor

On this screen you can set the reaction of the Alarm-control.plus individually for each parameter that exceeds the set limit values. There are three ways to react to an alarming event:

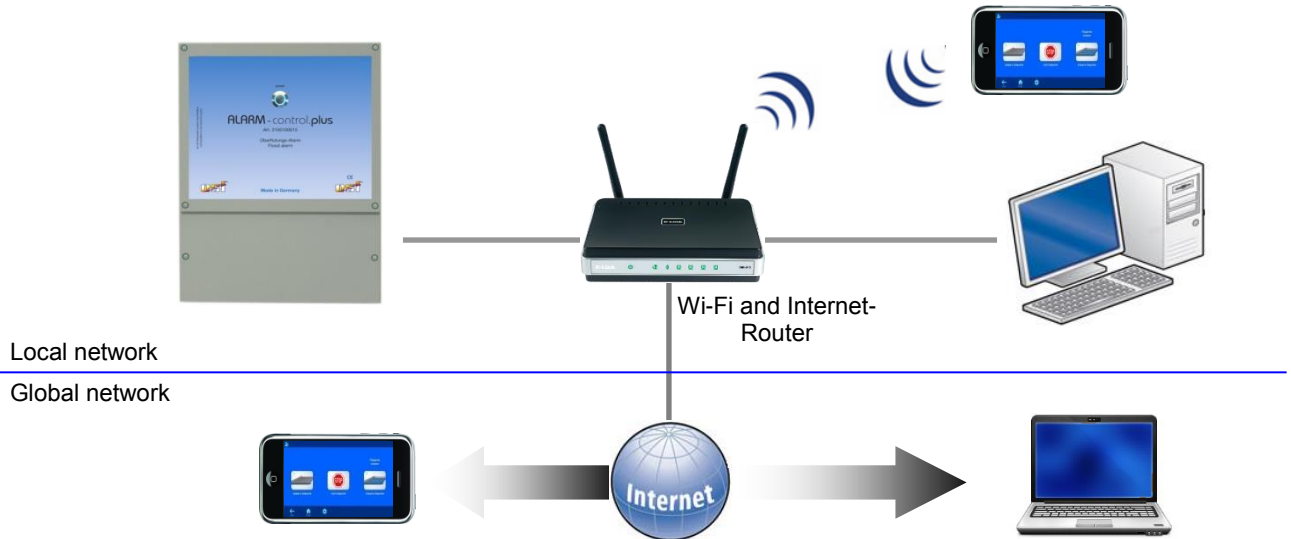
-  Audible alarm.
-  Potential-free contact of the alarm relay.
-  Send alarm by email.
- Disabling the response to the event.



Connect to a computer network and the Internet

The Alarm-control.plus has a LAN connection (RJ-45, Ethernet) and supports the Fast Ethernet protocol with a speed of up to 100 Mbit / s.

Below is a typical diagram for connection of the Cover-control.plus to a computer network that enables access to the device parameters both from the local network and via the global Internet.



A standard Ethernet network cable must be used for a connection. You can access the device remotely via the existing connection.

Enter the device's IP address in an Internet browser to access it over the network. The IP address can be read in the "Network OSF device cluster" menu.

If the local network has internet access and access to one of the OSF communication servers, you can easily organize remote access to the device from anywhere in the world via the internet.

Use of the OSF communication server

The communication server provides plug and play internet access to the coverage control unit. The Alarm-control.plus is permanently connected to the communication server

<http://devices2.osf.de/>.

Register When you visit the server for the first time, you will need to register and create a personal account.

Your profile Each device has an individual ID number consisting of 6 characters (numbers and letters). To get remote access to the device, you need to enter and save the ID number in your profile. You can find the number on the label attached to the device housing near the LAN port.

Ser.No.:0	ID: xxxxxx
IP: 192.168.123.165	
MAC: 00:50:c2:ee:0a:00	

Your devices The device then appears in the device overview and can be operated via the communication server.

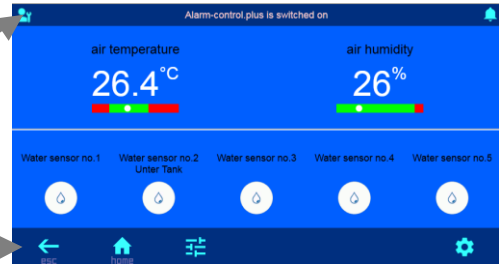
To delete a device from the list of devices, simply delete its identification number from the profile and click the update button.

Webserver

The web server creates HTML pages for Alarm-control.plus and sends them to the internet browser of a computer or smartphone on request.

The integrated web server enables remote monitoring of the sensors from any computer or smartphone. Thanks to the osf communication server, access from anywhere in the world is very easy.

The web server has three levels of access: overview page, user access, and service access.



About Alarm-control.plus

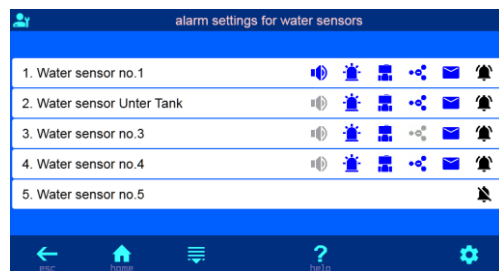
The page with information on the serial number and firmware number as well as the update option can be accessed by pressing the "esc" button on the main screen. The update link is displayed if the user has service access.



Alarm settings for water sensors

On this screen you can individually set the reaction of the Alarm-control.plus-unit when a water sensor is triggered. There are 5 ways to respond to a leak:

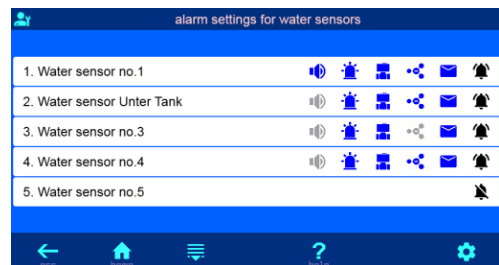
- Audible alarm.
- Potential-free contact of the alarm relay. The relay closes for the duration of the leak.
- 230V relay for valve control. The relay closes for the duration of the leak.
- Stopping the PC-45 exclusive and all devices contained in its network cluster.
- Send alarm by email.
- Deactivating the response to the leakage sensor.



Alarm settings for climate sensor

On this screen you can set the reaction of the Alarm-control.plus individually for each parameter that exceeds the set limit values. There are three ways to react to an alarming event:

- Audible alarm.
- Potential-free contact of the alarm relay.
- Send alarm by email.
- Deactivating the response to the climate sensor.



Service settings

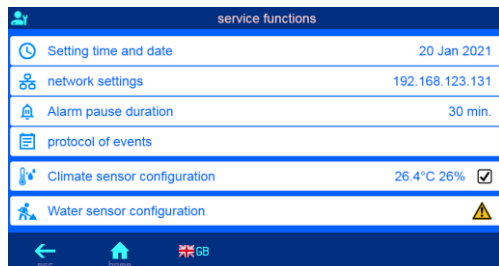
This menu can only be called up after the PIN code has been entered successfully.

Time and date settings

In this menu you can set the current time and date manually or automatically.

Settings for LAN network

In this menu you can enter an individual name for the Cover-control.plus, which will be displayed in the header of the Internet browser and on the overview page of the communication server.



Duration of the alarm pause

This parameter determines how long the alarm pause lasts when you press the button on the front of the Alarm-control.plus. After the pause time has elapsed, the device automatically returns to the active mode. The button's illumination is blue during the pause.

The factory setting is 30 minutes. The maximum setting is 180 minutes.

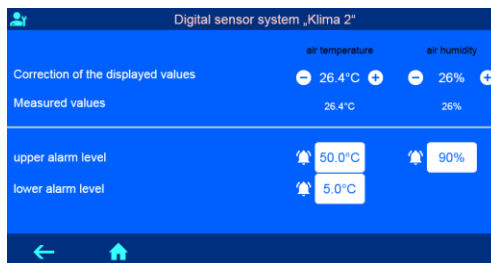
Event log

The event log shows in text form all events and changes that have recently been made.

Climate sensor configuration

If a climate sensor is used, on this page you can:

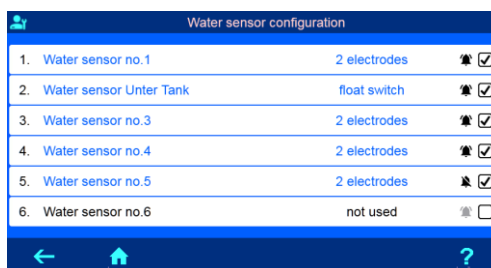
- Correct the displayed values of the measured temperature and humidity values.
- Set the alarm limits of climate measurements



Configuration of the water sensors

The water sensors are configured in this menu. The following settings are possible:

- Assigning individual names for the sensors
- Selecting sensor type: pair of electrodes or float switch.
- Activation or deactivation of the alarm message of the sensor in the event of leaks.
- To determine whether the respective sensor is present



Fuses

The following fuse is located on the motherboard:
A 0.25 A fuse protects the climate sensor connection

Factory setting

All parameters are reset to the factory setting by pressing and holding the button next to the LAN connection for ten seconds.

The following are the factory settings for important parameters required for a successful connection of the device to a computer network:

IP address automatically (DHCP server) - yes.

Automatic internet time - yes.

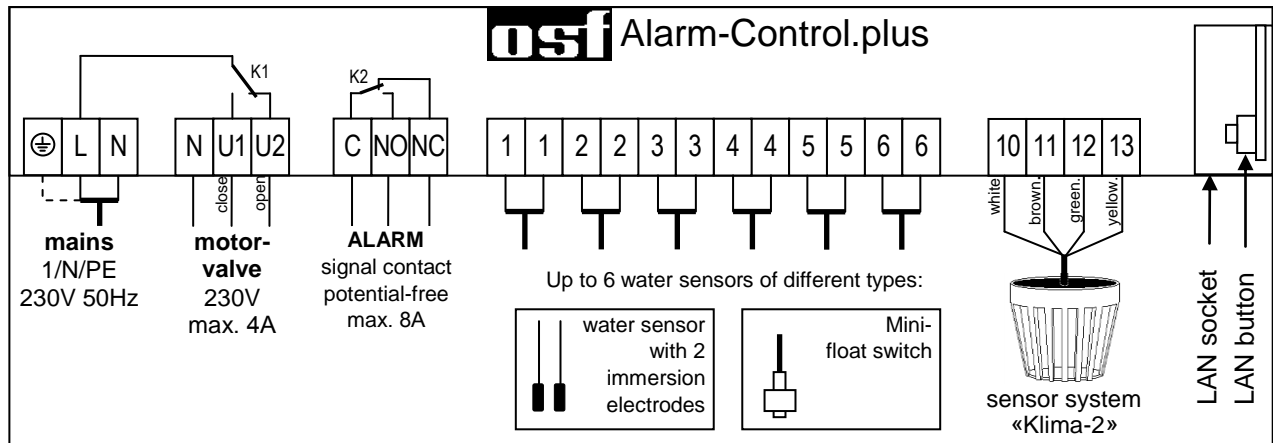
Time zone - GMT + 1. (Central Europe). The required time zone must be set manually for correct operation.

PIN for user access – 1234

PIN for service access – 5678

Resetting to the factory settings does not reset the statistical information on the operating hours. All operational logs remain unchanged.

Wiring diagram



Further information can be found on the Internet at the following address:

<https://osf.de/download/documents/documents.php?device=Alarm-control-plus>



We wish you a lot of fun and relaxation in your swimming pool