

## Short user instruction of the Aquacolor biofilm sensor

### Application

The biofilm sensor is placed in the drinking water line and measures the quality of the drinking water for poultry and biofilm formation in the water line.

### Installing the sensor

The sensor wires with numbers 1 and 2 are connected to +12V and 0V respectively. The sensor wires with numbers 3 and 4 provide a sensor output signal between 0V and 5V. Wire #3 is the plus, wire #4 is 0V. A voltage difference of 0 Volt between wires 3 and 4 corresponds to clean water and a voltage difference of 5V between wires 3 and 4 with dirty water.

### Monitoring the sensor using a smartphone

After taking the sensor in operation, you can connect to it through wifi using a laptop or smartphone. You can do this by connecting to the wifi network with ssid Biofilm\_Sensor and when prompted you type the password Biofilm007.

You can now open a browser and type the following in the address bar: 192.168.4.1 or <http://www.aquacolor.start>. Adding this address to your favorites, facilitates quick future connections. After connecting, you'll see the sensor menu and the sensor output.

### Changing the network name (ssid)

In case you use several sensors at the same farm, it can be convenient to change the network name of the sensors so that you can recognize them easily. Example:

Biofilm\_sensor\_stable\_1 and Biofilm\_sensor\_stable\_2.

Example: In case you want to change the default network name into Biofilm\_sensor\_stable\_1 you type in the input field: newssidBiofilm\_sensor\_stable\_1 and press send. If you now disconnect the power from the control-unit and switch it on again, the new setting will be activated.

### Calibration of the biofilm sensor

The sensor is already calibrated ex works and plug and play.

At poultry farms using naturally colored drinking water caused by the presence of humic acids in the water, the clean water value needs to be adjusted. For this purpose, a connection to the sensor is made and the sensor is filled with clean water. The sensor value is read and typed in the input field followed by pressing the send button. The result of this action is that the sensor reads 0 Volt when it is filled with clean water containing humic acids.

### Connecting the sensor to a flushing computer

The sensor can be connected to an analog input of a flushing computer (0 - 5V) through connection wires 3 and 4. This way, the flushing computer can be activated at the desired sensor output at which the water line should be flushed. It is advised to flush the water line at

a sensor signal of 3 Volt.

Connecting the sensor to the control-unit

The sensor can be used in combination with a control-unit with LED alarm indication. Besides this alarm indication, the control-unit also has relay functionality to activate a flushing computer or dosing pump. For connecting the sensor to the control-unit, please read the short instruction manual of the control unit.