Installation- and Operating Instructions

Level Control Skimmer Control

with failure indicator

Item Nr. 3130000075 (with magnetic valve) Item Nr. 3130000071 (without magnetic valve)



Function

The osf level control „Skimmer control“ is built up in modern microprocessor technology and consists of:

- electronic control unit
- level sensor
- magnetic valve (optionally)

The fully encapsulated level sensor (IP67) does not cause any electrolyte formation in water. The sensor cable may be extended up to 10m with the use of a shielded four-conductor cable. The microprocessor controls the operate lag and the drop-out delay for the magnetic valve thus not causing a direct switching process with undulations; short switching intervals are avoided. The level sensor is operated with safe extra-low voltage. The control unit itself has been produced according to the prevailing VDE regulations.

Technical Specifications

Control:	
dimensions:	140mm x 125mm x 80mm
operating voltage:	230V/50Hz
control power consumption:	approx. 1.5VA
breaking capacity:	max. 1.1kW (AC3)
turn-on/off delay :	16s
Ambient temperature:	0-40°C
Air humidity:	0-95% not condensing
protection type:	IP 40
Level sensor:	
dimensions:	ø20mm x 50mm
cable length:	3m (optionally 5m)
operating voltage:	12V
protection type:	IP 67
Magnetic valve:	
nominal width:	G½”
operating voltage:	230V/50Hz
nominal pressure:	0.5...10bar
protection type:	IP 65 (with device plug)

Installation

The control unit has to be installed humidity protected, corresponding to its protection type. The power supply of the device has to be carried out via an all-pole main switch having a contact opening of at least 3mm. The swimming pool shall be designed in such a way that a possible technical defect, a power failure or a defective control system can not cause a consequential damage. Before opening the housing it is absolutely necessary to switch the device to zero potential. The flow direction (arrow direction) as indicated on the magnetic valve is strictly to be observed!

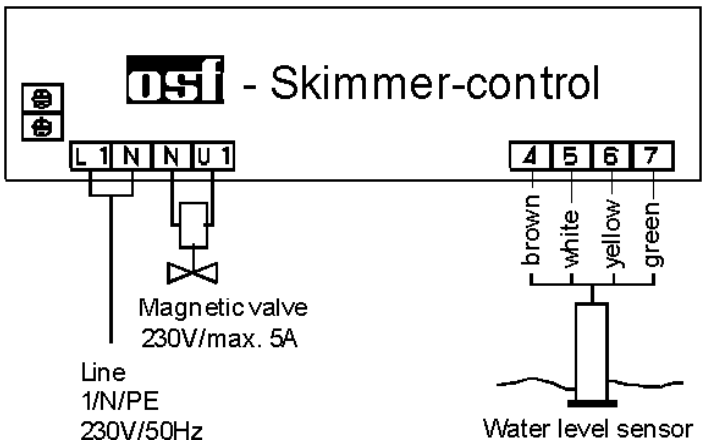
The profile bar is vertically fixed at the required inner skimmer wall. Then the angle support with the level sensor is placed at the correct height of the water level (the cable of the level sensor and the holding arm of the mounting bracket must be top). The slide angle is fixed by fastening the grub screw. Subsequently the level sensor is screwed into the holding angle support (on doing so take care that the cable will not be damaged!) The switching point of the sensor has then been reached when the sensor head is approx. 1mm immersed into the water). All parts easily fit into one another making use of force unnecessary.

Electrical connection

The electrical connection may only be carried out by an accredited electrical specialist! The following connecting diagram and the corresponding prevailing safety regulations must be observed. The supplier of the electric device should provide an earth leakage circuit breaker with $I_{FN} \leq 30mA$.

Small voltage lines

Small voltage lines must not be laid together with three-phase or alternating current cables in a cable duct. The installation of small voltage lines near three-phase or alternating current lines is to be avoided.



The sensor cable can be extended with a shielded four-conductor cable. The extension has to be carried out water-proof in order to avoid creeping current due to penetrating humidity. The shielding of the extension is to be connected with the shielding of the sensor cable (and with the green wire). The shielding must not be connected in the control unit.

On finishing the installation the power supply can be switched on and you can carry out a functional test. The switching point of the level sensor is approx. 1mm above the lower end of the sensor.

The green LED display built in the control unit will flash immediately when the set water level has reached. However, the magnetic valve will only close some seconds later. If the water level falls below the set level, some further seconds will pass until the magnetic valve will open. This time delay ensures that no direct switching process is caused by undulations. You can carry out a functional test at any time by manually touching the end of the sensor (simulated test without water).

Functional test and adjustment of the level control SK-1

All maintenance- and service work may only be carried out by an authorized electrical specialist.

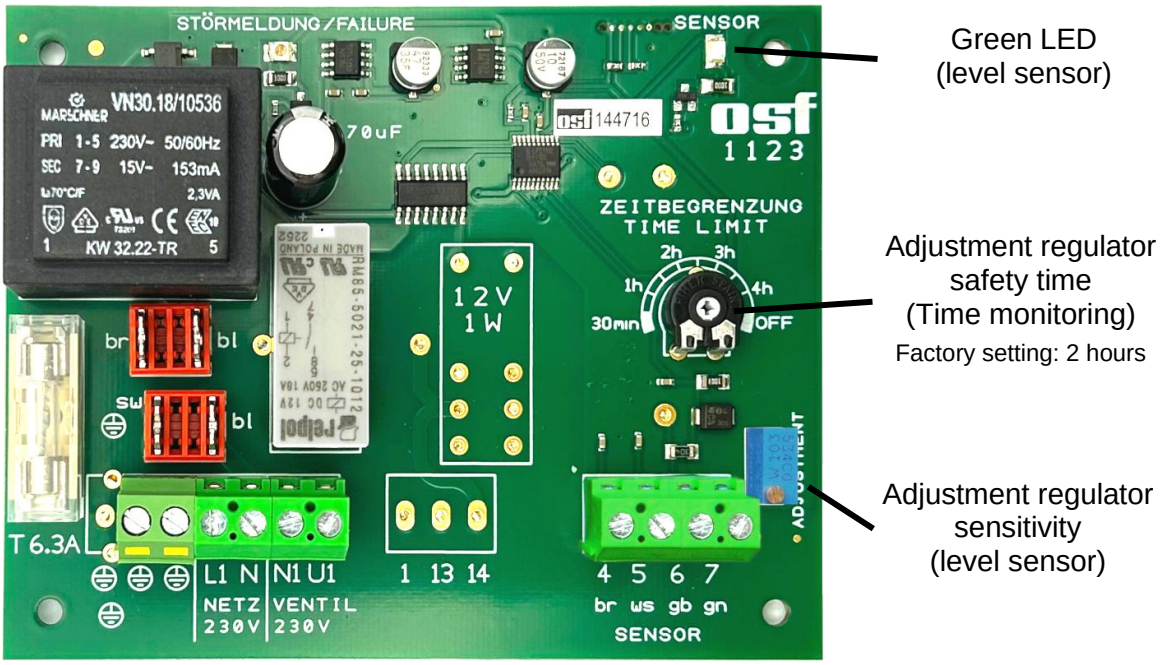
The green LED on the board must flash with immersed sensor. If this is not the case you have to check the cable extension for creeping current caused by humidity. With the help of a voltmeter the sensor adjustment can be checked and probably corrected. The measuring instrument is jammed at the connecting terminals 6 and 7 (clamp 6 *PLUS*, clamp 7 *MASSE*). With immersed sensor there must be a direct voltage ranging from 7 to 8 volt. If this is not the case you carefully have to turn the screw of the adjusting regulator until a voltage of 7 to 8 volt is displayed and the green LED flashes respectively. A clockwise turning will cause a reduction of the voltage and a simultaneous reduction of the sensitivity. If the LED does not flash with immersed sensor, the screw has to be turned anti-clockwise. The adjusting regulator is placed right down on the board next to the connection terminals for the level sensor.

Time monitoring / failure indicator

A red pilot light is placed in the front lid of the control unit. This serves the purpose of indicating failures. If this pilot light flashes there is a failure and the magnetic valve for the refilling of water is switched off. After having settled the cause of the defect, the failure indicator may be switched off by first switching off the level control with the rocket switch in the front lid and another switching on after some seconds. The cause of the defect may be found in the area of the level sensor.

The control unit also has a green indicator light that is visible on the front cover. The green indicator light lights up when the water reaches the mini liquid level switch.

The time monitoring (overflow protection) is active if the magnetic valve has been uninterruptedly opened for a longer period of time (safety time). An adjustment regulator is placed on the control board that is used to select the safety time. On exceeding this safety time period the magnetic valve will be switched off.



Installation instructions solenoid valve

- The piping system must be cleaned before the valve installation, because dirt will malfunction.
- If necessary, a strainer should be mounted in front of the valve inlet.
- Mechanically clamping the valve housing, for example for non-aligned pipes or improper sealing material is to be avoided.
- Use only suitable tools.
- Do not use the solenoid coil during mounting as a lever arm.
- **The direction of flow (direction of the arrow on the brass body) must be observed during installation.** The valve closes tightly only in the specified direction of flow. In the opposite direction, the solenoid valve may be damaged.
- The preferred installation location is "solenoid vertical on top". In this position, the wear and contamination risk is lowest.

Electrical connection

The electrical connection may only be carried out by an authorised electrician taking into account the applicable regulations. The protective earth connection is essential.

The junction box may be inserted or removed only when the power is off. AC solenoids are destroyed when operating without armature.

Maintenance

Maintenance work must be performed by an expert only when the pipework is pressure-free and the magnet is voltage-free.

Trouble shooting

If the valve does not open or close, the control bores and the armature must be cleaned.

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

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

https://osf.de/download/documents/documents.php?device=Skimmerregler

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