Installation- and Operating Instructions

Level Control Skimmer Control
with failure indicator

With KF-3 sensor CE

Function

The nsi 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:	85mm x 55mm
cable length:	2,5m
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!

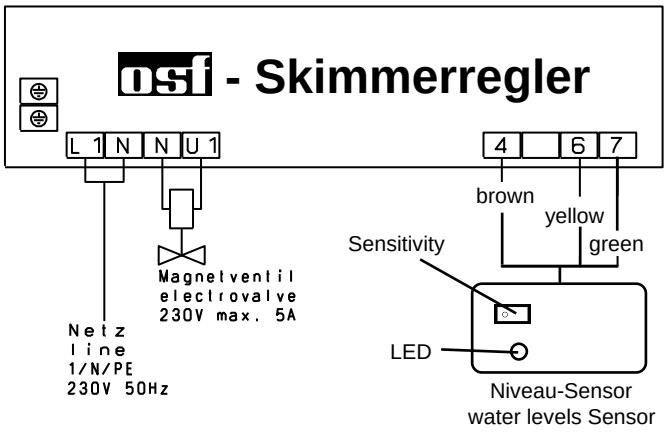
The level sensor is glued from the outside horizontally to the water tank, after the protective film has been removed from the self-adhesive layer. Subsequently it is sealed with a suitable adhesive, e.g. Silicone, to fix. The switching point is in the middle of the sensor. The splice must be clean, grease-free and flat. Any existing insulation must be removed.

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.

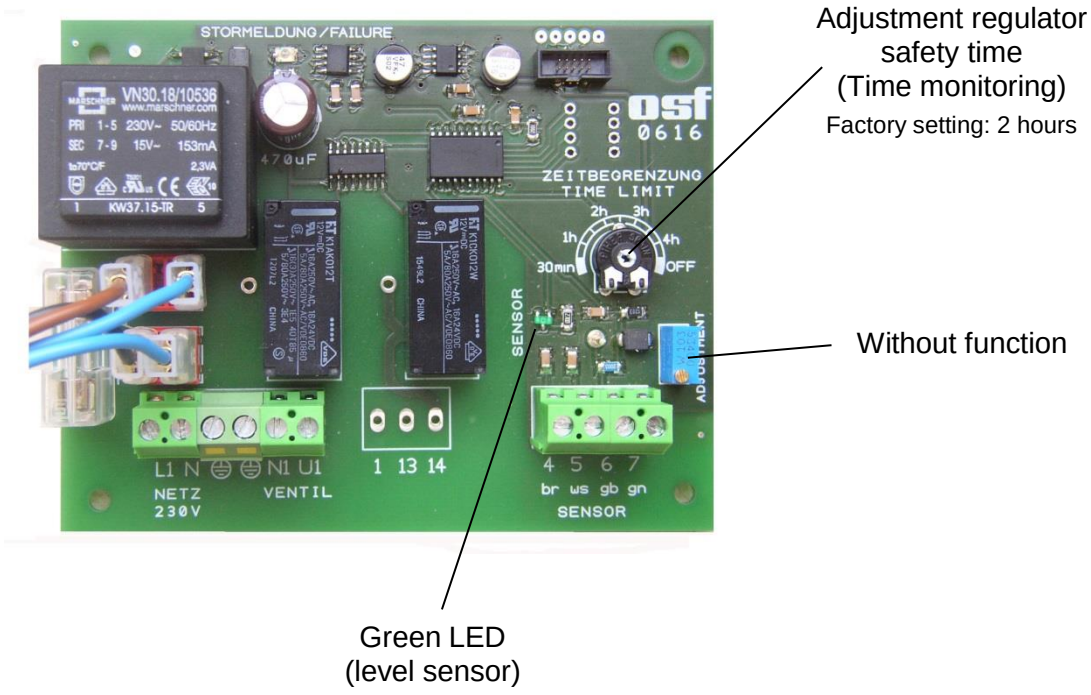
On finishing the installation the power supply can be switched on and you can carry out a functional test.

The green LED display built in the sensor unit will react 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).

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 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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