Installation- and Operating Instructions

Level control SNR-1609

with failure indicator CE

Item no. 3130060060 (with magnetic valve) Item no. 3130060061 (without magnetic valve)



Function

The osf level control SNR-1609 is built up in **modern microprocessor technology** and consists of:

- electronic control unit
- mini liquid level switch
- magnetic valve (optionally)

The **waterproof miniature liquid level switch** (IP67) does not cause any electrolyte formation in water. The sensor cable may be extended up to 50m. The microprocessor controls the operate lag and the drop-out delay for the magnetic valve thus not causing a direct switching process with undulations; additionally short switching intervals are avoided. The liquid level switch is operated with safe extra-low voltage. The control unit itself has been produced according to the prevailing VDE regulations.

Technical Specifications

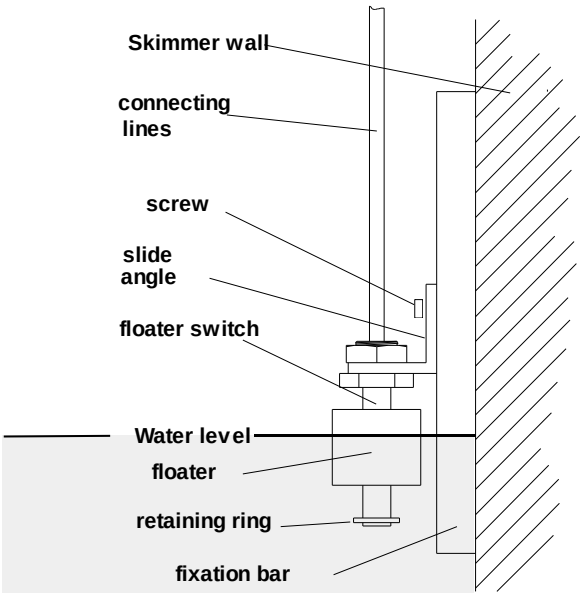
Control:	
dimensions:	140mm x 125mm x 80mm
operating voltage:	230V/50Hz
control power consumption controller:	ca.1.5VA
breaking capacity:	max. 1.1kW (AC3)
turn-on/off delay:	16s
Ambient temperature:	0-40°C
Air humidity:	0-95% non-condensing
protection type:	IP 40
Mini liquid level	
dimensions:	ø25mm x 56mm
cable length:	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 cannot 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 mini liquid level switch is fixed on the slide angle. Next the fixation bar is vertically fixed at the skimmer wall, roughly at the level of the required water level. By moving the slide angle in the bar, the water level can be chosen. The slide angle is fixed by fastening the screw. All parts easily fit into one another making use of force unnecessary.

Upon delivery the floater has been fixed on the guide so that the switch on point is down. This is the normal case for water refilling in the swimming pool. If the floater is fixed, twisted by 180°, onto the guide, the switch on point is top and the **switching function** contrariwise (see switch symbols at the floater).



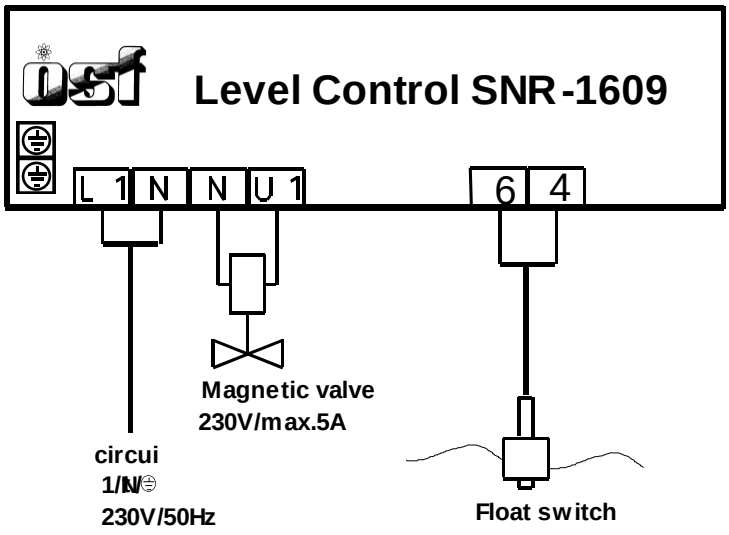
As part of the system maintenance, the mini liquid level switch should be checked regularly for damage and proper function.

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. A residual current circuit breaker with IFN≤30mA should be provided on site in the electrical system

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 electric cable of the float switch can be extended up to a length of 50m by use of a shielded cable (2x0.75mm²). The shielding is to be connected with clamp *4.* Please note, that it is absolutely necessary to carry out the connections water-proof. The connecting cable of the float switch must not be wired together with other live wires.

On finishing the installation the power supply may be switched on and you can carry out a functional check. Near the lower retaining ring the floater closes the float switch and opens it again approximately 5mm above.

The green LED display on the board flashes immediately when the water level (floater top) has reached, however, **the magnetic valve closes only some seconds later.** This time delay works in the same way on opening and on closing and prevents frequent switching processes caused by undulations of the water in the swimming pool.

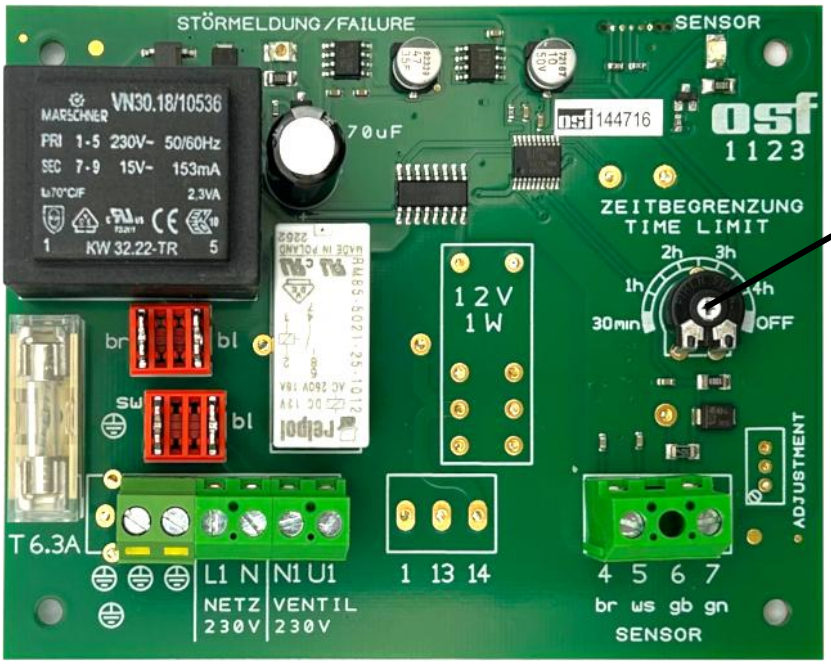
If the LED in the control unit glows slightly with opened float switch, you should probably check cable extensions for creeping current caused by humidity. The magnetic valve is closed in case of interruptions (damage) of the sensor cable, whereas **a short-circuit** (e.g. due to humidity) **of the sensor cable causes an opening of the magnetic valve!**

Time monitoring / failure indicator

A red pilot light is placed in the front lid of the control unit. This pilot light serves the purpose of indicating failure. 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 can be switched off by first switching off the level control with the rocker 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. A foreign body floating on the water could have blocked the floating body of the mini liquid level switch.

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) will become 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.



Adjustment regulator
safety time
(Time monitoring)

Factory setting: 2 hours

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, it must be cleaned from the inside. Make sure the pilot hole is clean and the valve anchor is in good condition.

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=SNR-1609

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