

Operating and instruction manual

Level regulation **NR-3**

Item No. 3130000035 (with solenoid valve)



Item No. 3130000025 (without solenoid valve)

Function:

The osf NR-3 level regulator is constructed with integrated circuitry and consists of:

- electronic controller
- sensors (optional)
- solenoid valve (optional)

The sensor line can be extended by up to 50 m without requiring electronics compensation. However, the line may not be routed close to alternating current or three-phase power cables. The difference between switching on and switching off can be individually set through the electrode location.

The level sensors are operated using non-hazardous safety low voltage. The controller itself has been designed to comply with the currently applicable German VDE regulations.

Specifications:

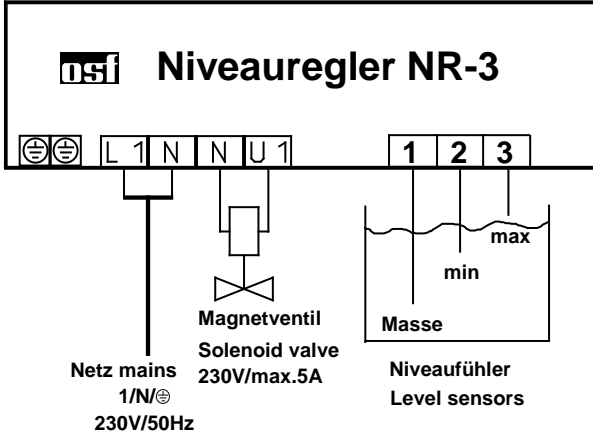
Control system:	
Dimensions:	140mm x 125mm x 80mm
Operational voltage:	230V/50Hz
Control system power consumption:	ca. 1,5VA
Switching capacity:	max. 1.1kW (AC3)
Protection class:	IP 40
Solenoid valve:	
Nominal diameter:	13mm (G1/2")
Operational voltage:	230V/50Hz
Nominal pressure:	0.5...10 bar
Electr. connection:	device plug in acc. w. DIN 43650
Protection class:	IP 65 (with device plug)

Installation:

The controller must be mounted protected against moisture in accordance with its protection class. The device must be powered via a multi-pole main switch with a contact opening width of at least 3mm and a residual current circuit breaker with $I_{FN} \leq 30\text{mA}$. **The device must be isolated before opening the housing. It is imperative that you observe the throughflow direction (arrow direction) indicated on the solenoid valve.**

Electrical power supply:

The electrical power supply may only be installed by an approved specialist electrician. The following wiring diagram and the relevant applicable safety regulations must be observed. The electrical equipment must include a residual current circuit breaker with $I_{FN}=30mA$ on site. All relevant components must be included in the equipotential bonding.



The sensor cables can be extended up to 50 m in length with a screened cable ($2 \times 0,75mm^2$). It is imperative that you ensure that the connection is made waterproof. The sensor connection line may not be routed next to other current-carrying cables.

When assembly is complete, the power supply can be switched on and a function test carried out.

Level sensor:

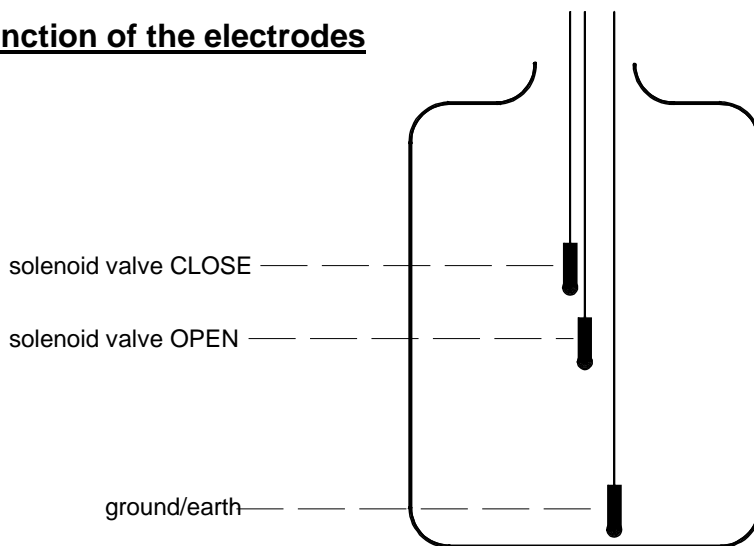
Two different systems are available for level recording.

1. submerged electrodes for overflow collection tank
2. 3-fold sensor system for skimmer fitting or wall fixing.

Operation with submerged electrodes:

osi submerged electrodes are supplied as series with waterproof and ozone-proof special cables. The tensile strength of the cable is sufficient for hanging the electrodes from the special cable in the overflow collection reservoir, and it is also possible for individual electrodes to touch each other. Fixing takes place above the reservoir. Fixing should be made with the aid of strain-relief clamps, cable clamps, cable binders or similar elements in accordance with the relevant local conditions. The special cables are connected in a distribution box to be installed on site. A cable (e.g NYM-0 $4 \times 1.5mm^2$) is then routed from the distribution box to the control system.

Function of the electrodes



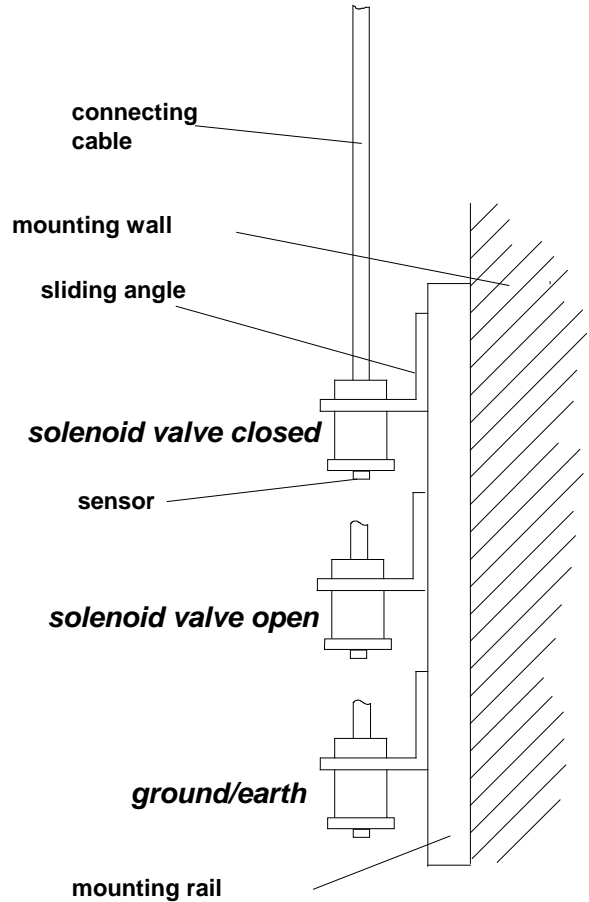
In normal operation, the water level varies between the "solenoid valve CLOSE" and "solenoid valve OPEN".

The height difference is dependent on individual conditions. A minimum of 5 cm should be ensured to achieve sufficient sensing distance.

Operation with 3-fold sensor system for wall fixing:

A plastic rail and three individual sensors can be supplied for this application case. Each of these sensors is supplied with water-resistant cable. The plastic rail is mounted vertically at the necessary height in a permanent position. Each of the three individual sensors is placed in the rail and pushed to the required height. The rail may not be damaged or bent while doing this to ensure that the necessary fixing force for the sensors is not lost. The earth electrode is always located facing downwards.

In normal operation, the water level varies between the "solenoid valve CLOSE" and "solenoid valve OPEN".



Reversing the switch function

There is a small, 5 mm long wire jumper located to the right of terminals 1-3. It is soldered to the PCB at both ends. The wire jumper must be cut through with a small side cutter to reverse the switching function.

The controller can be used for pumping liquids out if the switching function is reversed.

We hope you have a lot of enjoyment and relaxation in your swimming pool

Subject to alterations!

