Operating and instruction manual

Level regulation NR-3

CE

Art. No. 3130000035 (with solenoid valve) Art. 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 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)
Ambient temperature:	0-40°C
Air humidity:	0-95% non condensing
Protection class:	IP 40
Solenoid valve:	
Nominal diameter:	13mm (G½")
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)

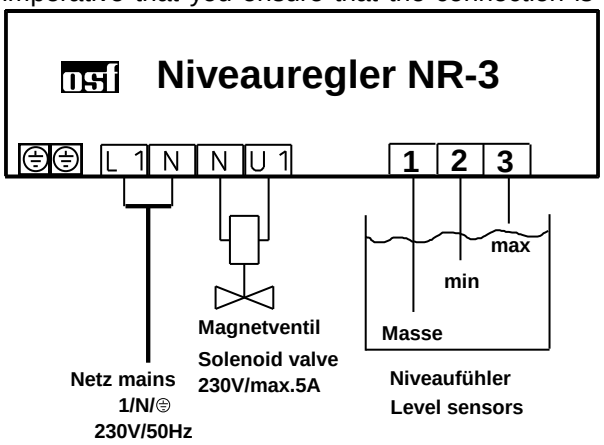
Installation

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 $I_{FN} \leq 30mA$. **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 (2x0,75mm^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

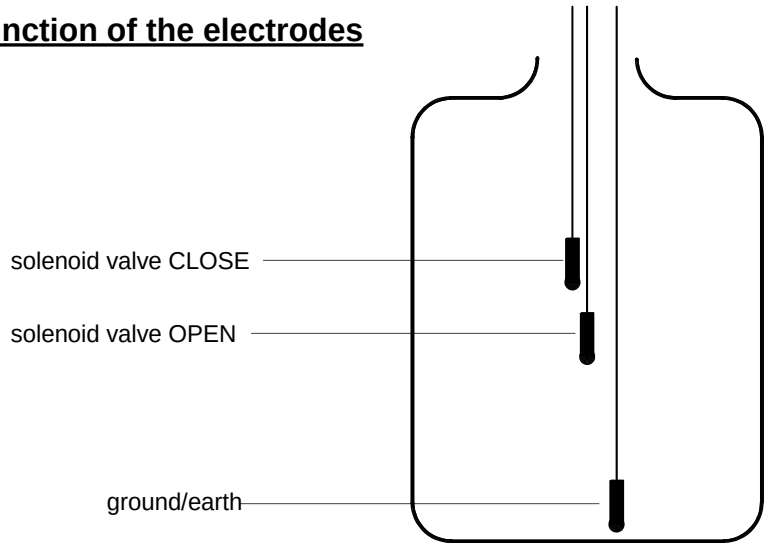
Two different systems are available for level recording.

- submerged electrodes for overflow collection tank
- 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 4x1.5mm^2) is then routed from the distribution box to the control system.

Function of the electrodes



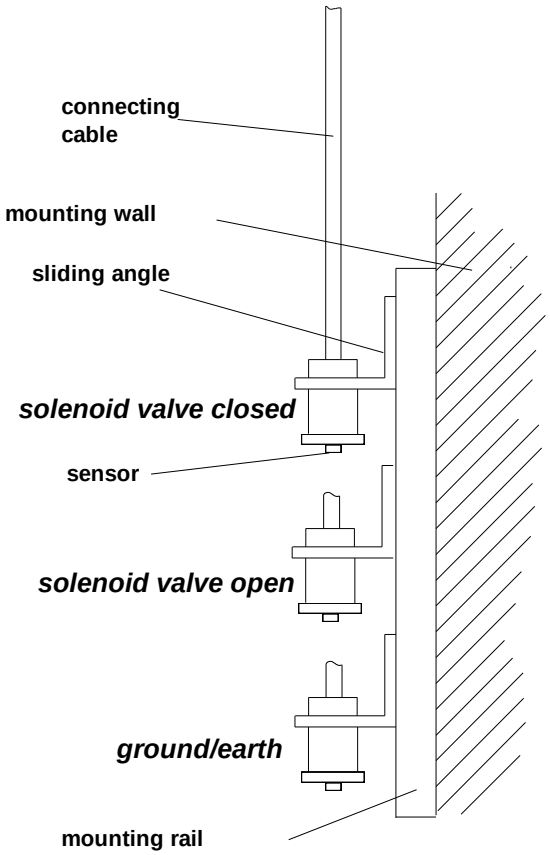
In normal operation, the water level varies between the "solenoid valve CLOSE" and "solenoid valve OPEN".

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.

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

Weitere Informationen finden Sie im Internet unter folgender Adresse:

https://osf.de/download/documents/documents.php?device=NR-3