

# SQUEALER-WRL – manual

- 3 inputs
- 1 output
- GSM
- battery powered
- solar supply input
- USB

The battery alarm module is used to measure and control levels of sludge, oil, oil, petroleum and tank overflows. It is equipped with a GSM communication module, which enables notification of tank status.



## WARNING

The device works with SIM cards of different operators after the security PIN and PUK have been removed. To avoid problems in operating the unit, it is recommended to read this manual thoroughly before using it. Do not interfere with construction or carry out repairs yourself. Maintenance or repair work should be carried out by qualified personnel (installer or company service). The manufacturer assumes no responsibility for any damage resulting from improper assembly, malfunction (device, software) or damage to the controller. If the alarm module is equipped with an additional battery, after its service life, do not dispose of it but dispose of it in accordance with the applicable regulations.

*NOTE: The unit starts 60 seconds after the power supply to stabilize the sensor.*

## System description based on SQUEALER controller.

SQUEALER controller is a modern microprocessor device for continuous monitoring of the status of selected probes (MAX, OILER, SLUDO). Basic functions of the siren:

- 3 sensor inputs (overflow, oil level, grease, petroleum and sludge);
- 1 relay output
- Status of the controller, sensors and alarms can be controlled (on the front panel (LEDs), beeps of the buzzer, SMS messages)
- In the event of an alarm, the controller converts the signal from the sensors, from the measurement zone to the visual

- signal (LEDs on the housing), activates the acoustic signal (internal buzzer) and activates one potential-free output
- Battery power
- USB port programming via NCONFIG software
- Sending SMS messages to 4 phone numbers (built-in GSM module)
- memory of the last 255 events
- TMP - additional tamper input

## Front panel description



 - green LED lights continuously when the power is ON.

 - Blinking LED indicates the correct operation of the GSM + SIM card. Number of flashes indicates the strength of the GSM (max 4 flashes).

 - LED is ON constantly, when the sensors are connected and the dipswitches are properly set. A detailed description of the switch settings is in the Configuration chapter. Blinking LED indicates an alarm sensor. Each sensor has a separate red LED.

 - The alarm is shown by the steady light of the red LED + acoustic signal.

 - A short press [ $<1$ ] s button - delete the buzzer alarm. Long press button [ $> 2s$ ]- clearing the alarm and restore the relay to the state without an alarm.

 - Checking the optical and acoustic signals and relay outputs. Test can be activated only when there is no alarm sensors. Each time you press the button activates / deactivates the function test.

## Technical data

Power supply: R20 3,6V  
Power consumption (instantaneous, during GSM transmission): 7,6VA

Relay outputs REL1 (potential-free contacts)  
NO or NC, 0,5A/125VAC or 2A/30VDC

Ambient temperature: -40 to + 60 ° C  
Mechanical strength: IK 07

Dimensions of the housing (without glands) (H x W x D): 187 x 122 x 90 mm

Cable glands:

- Probe inputs: 3 x M12, cable dimensions  $\varnothing$  4.0-6.0 mm
- Power supply: 1xM12 for cable  $\varnothing$  4.0-6.0 mm
- Sabotage: 1xM12 for cable  $\varnothing$  4.0-6.0 mm

## Cooperating devices



OILER - thickness measurement of fat, oil, mineral oil, organic, petroleum substances.



COUPLER-01 – hermetic coupling plug



SLUDO - detecting the sediment layer in the separator or the maximum level



NFIX-01 – set for mounting the probe



CABLE-5, CABLE-10 – sensor extension cable

## Probes assembly

The sensor mounting should be carried out as follows:

1. Lower the sensor so that the measuring point is at a exceeding level.
2. Attach the sensor cable to the mounting bracket.
3. Use the COUPLER connector to lengthen the sensor cable

### MAX sensor

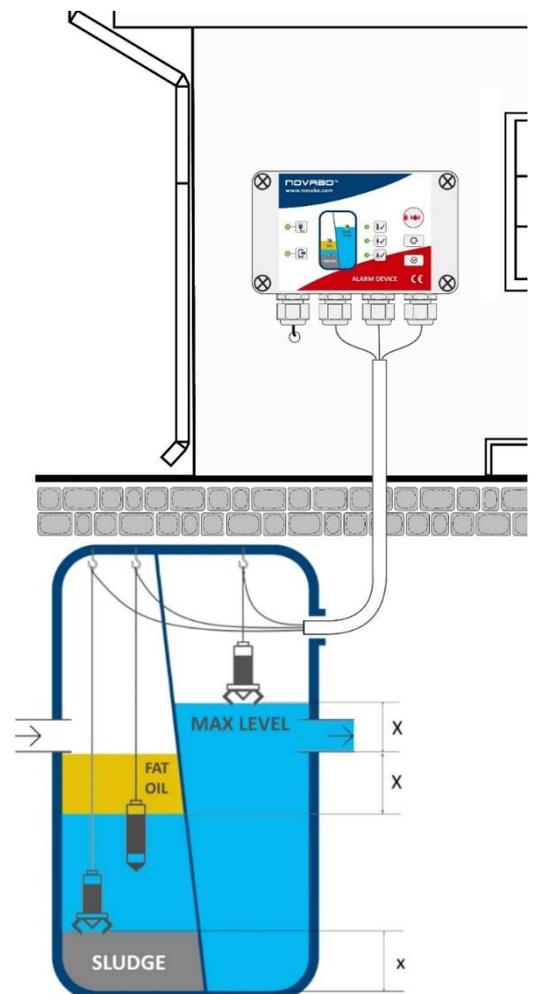
The probe with a standard length of 5 m should be hung on the FIX holder, which should be placed directly under the manhole - preferably in the inspection hole in the separator cover.

### OILER sensor

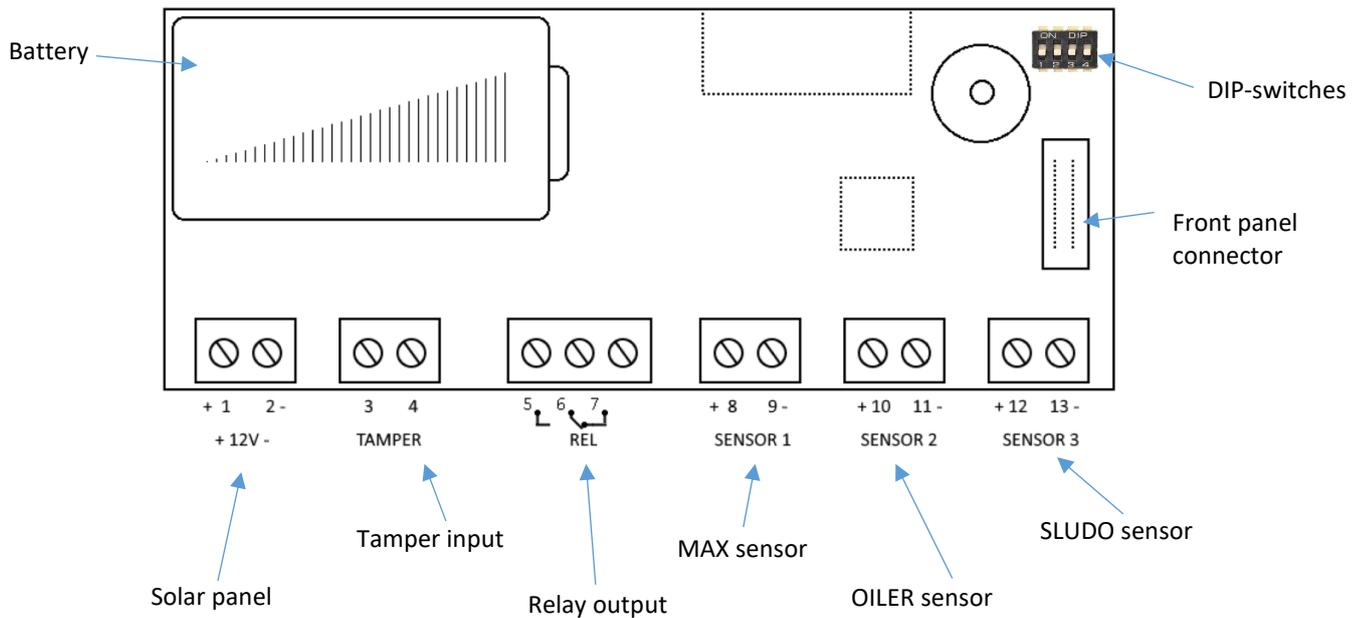
The probe should be placed at the appropriate depth / height and the sensor cable should be wound around the mounting eye (FIX) in such a way that the cable is blocked and the probe does not change its position on the handle during operation.

### SLUDO sensor

The mounting height of the sensor depends on the volume of the sludge in the separator. The amount of accumulated sludge can not exceed  $1/3 \div 1/2$  of the height between the bottom of the outlet pipe and the bottom of the tank. When installing the sensor, it should be noted that the deposit usually accumulates in the measurement zone at different heights, which depends mainly on the speed of the flowing sewage. Where the flow velocity is the smallest, it will gather the most and vice versa. Connect the probe with a 5 m standard cable to the holder. The handles should be placed directly under the hatch - preferably in the inspection hole in the separator cover.



## Description of controller connectors



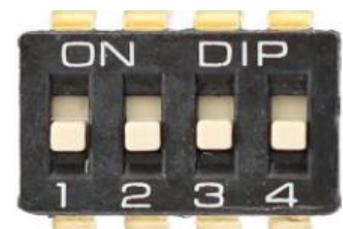
## PC programming

1. Programming via the **Nconfig** program, available on the website:
  - a). install the driver for the USB cable: [www.novabo.com](http://www.novabo.com) >>> products >>> USB driver
  - b). install NCONFIG software: [www.novabo.com](http://www.novabo.com) >>> products >>> Nconfig
2. In addition, a four-position "DIPSWITCH" type switch is available on the device board inside the housing. It is used to configure the operation of probes.



## DIP SWITCH programming

|             |   |
|-------------|---|
| <b>DIP1</b> | "ON" - sensor MAX active - probe 1 connected<br>"OFF" - sensor MAX inactive - probe 1 not connected       |
| <b>DIP2</b> | "ON" - sensor OILER active - probe 2 connected<br>"OFF" - sensor OILER inactive - probe 2 not connected   |
| <b>DIP3</b> | "ON" - sensor SLUDO active - probe 3 connected<br>"OFF" - sensor SLUDO inactive - probe 3 not connected   |
| <b>DIP4</b> | "ON" - inverse input logic SENSOR 1 (15mA - normal)<br>"OFF" - normal input logic SENSOR 1 (9mA - normal) |



## Control and reviews

The manufacturer recommends inspection the entire system every 6 months, or when emptying the separator. For this purpose, download, print and complete the **PeriodicReviewCard.pdf**:

[www.novabo.com](http://www.novabo.com) >>> products >>> downloads >>>> **PeriodicReviewCard.pdf**

During the inspection clean the controller and connected probes, check for mechanical damage. Then perform an electrical and functional test of the operation of all components of the alarm system.