VA-SIGNAL

Full Tank Alarm for sewage tanks

CONTENT:

Keep this manual for future use!

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MORE INFO

Function Description

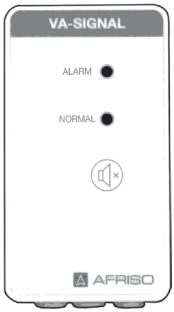
VA-SIGNAL for sewage tanks is a unit with conductive probe that use AC technology for the sensor. The unit is designed to be mounted directly onto a wall indoors and is powered by 3 AA batteries with a life expectancy of at least 3 years.

VA-SIGNAL has an internal relay which allows connection to alarm lamp or SMS-alarm unit.

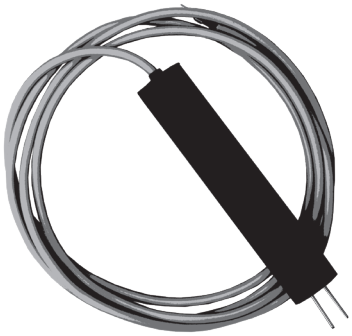
VA-SIGNAL is used for cisterns / tanks containing electrically conductive liquids. Alarm is given when the contents of the tank has reached to the two electrodes of the sensors lower part. The unit has built-in warning for low battery voltage, which warns of battery replacement in due time before the battery is exhausted (about 3-6 months before).

Components parts

Alarm panel



VA-sensor



Safety / important to consider

- Carefully read the installation manual ***before assembly***
- Alarm Device may only be installed in dry indoor areas.
- The equipment may only be used for indication of high level alarms in sewage tanks or water tanks.
- Can not be used in connection with oil or petrol! Nor in hazardous areas!
- If the tank is to be below ground, be sure that the sensor can be accessed simply by installing a manhole, etc. This is to avoid having to dig to access the sensor for any future sensor replacement.
- The sensor is available with 2 or 10 m cable. If sensor cable needs to be extended: Use RKK 2 x 0.75 mm^2. Do not use multiconductor cable (for pump control signals or the like). *See more in "Splicing" on page 3.*

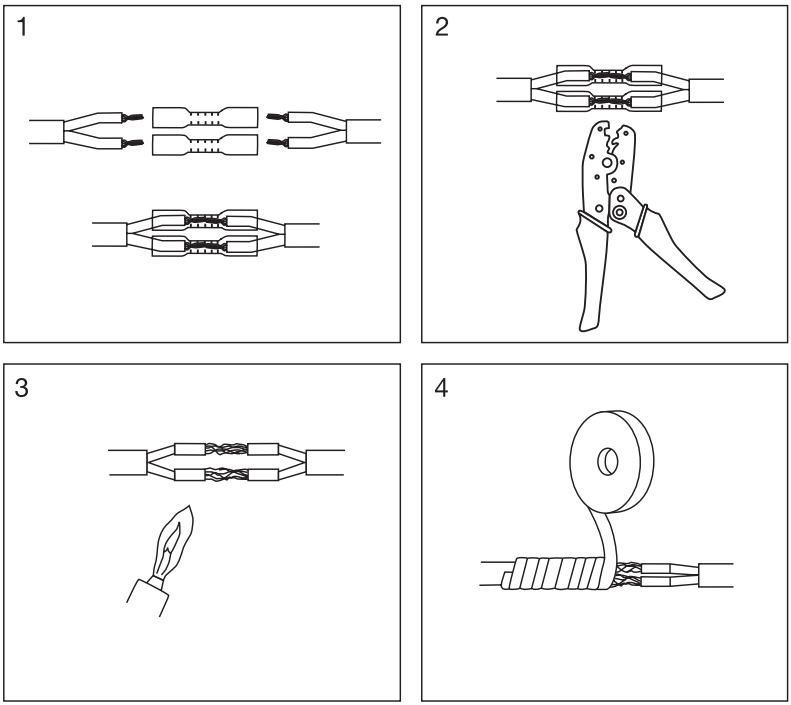
Alarm panel must not be disposed with household garbage, but should be handled as electronic waste.

Installation

Installation should be done by a qualified and competent installer.

Installation of sensors:
Mount sensor by the cistern connection and screw the sensor connector in the cistern sleeve.

Installation of signal wire / splice:
Use a sensor cable such as RKK 2 x 0.75 mm^2 to an appropriate location for the alarm device. The interconnection of the signal line and the sensor is made using the supplied coupling piece. Do not connect the signal line in a multiconductor cable together with other signals (230 V pump control, etc.).



Fix the joint location with electrical tape, insulating tape or equivalent. Protect the power cord in the ground with conduit or the like.

NOTE! The sensor with 10 m cable is not supplied with connector.

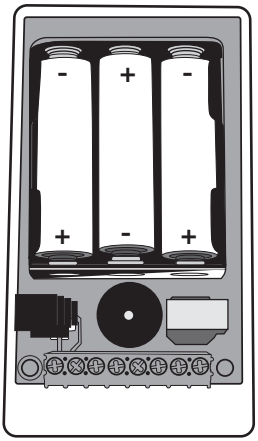
If the tank is below ground, ensure that the sensor can be accessed in a simple way, eg by installation of a manhole. This is to avoid having to dig for accessing the sensor for any future sensor replacement.

Activating the alarm panel:

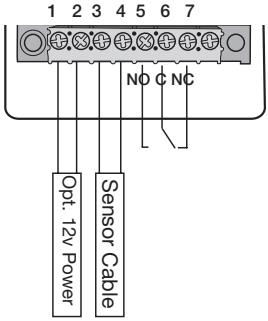
- Install the alarm panel in a location where it can be easily observed and checked. The sensor cable is connected to 3 and 4 on the terminal block. If an external power supply is used (optional), use connector 1 and 2 on the terminal block. Connection of external equipment can be made via the voltage-free relay output contacts at 5,6,7.
- After sensors and other connections are complete, put 3 x AA batteries of alkaline type in the battery holder (calculated life-span about 3.5 years).

  When using external power no batteries should be used. (Mains / battery eliminator 8-12 VAC or 8-12 VDC is optional.
- Insert the batteries into the holder and verify that the polarization is correct (see symbols in the battery holder). The unit will now give a quick flash about every two seconds. If this occurs, the unit is in operation.
- If flash is not delivered, verify polarization or replace the batteries.

Back side of the front to the Alarm panel



Wiring on terminal



*** Used only if the external power source to be used, batteries should then not be mounted.**

Functional testing of sensors and alarm device:

To test the alarm: Immerse the sensor in water (do not use rainwater or battery water, as this is to clean and has poor conductivity). Alternatively, the sensor electrodes could be short circuited with a cable stub or a cable clamp. Once this is done, the unit reacts after about, the buzzer will sound (every 30 seconds) and the red LED flashes every two seconds. The relay contacts will switch. By pressing the button, the sound is muted. If this occurs, the alarm is properly functioning. If this does not happen, check the Troubleshooting section.

Operation:

CAUSE / ERROR	SOLUTION
Normal operation/no alarm Green LED ”Normal” flashes faster in network operation.	Normal operation - no action
Tank full The built-in buzzer will sound and the red LED ”Alarm” flashes every second. To reset press the ”Mute” - button.	Order emptying of the tank!
Low Battery Voltage (on battery) The built-in buzzer sounds, the red LED ”Alarm” and the green LED ”Normal” will flash, every two seconds. (To reset the sound press the ”Mute” button).	Replace batteries with new AA batteries (3 pcs) of alkaline type.

Troubleshooting:

CAUSE / ERROR	SOLUTION
No LED flashes	Check that the batteries are not reversed. If necessary, replace the batteries.
Sensor in liquid but no alarm (the red LED ”Alarm” does not flash)	Check that the sensor is properly connected and that there is no cable break. If necessary, short-circuit with a cable stub or cable clamp and alarm shall be given.
Sensor in air but the unit gives an alarm (red LED)	Check that no moisture has entered in the the cable joint.
”Alarm” flashes and the buzzer sounds	If necessary, disconnect the sensor-cable from terminals 3 and 4. If the alarm disappears fix the cable joint or check the sensor in the tank.
Both LEDs will flash (and buzzer)	Replace batteries with new 3 pcs AA batteries of alkaline type.

Technical data:

VA-SIGNAL alarm panel

Measuring principle:	Conductive.
Power Supply:	3 x AA-batteries alt. mains adapter/transformer 12 VAC or 12 VDC
Life expectancy when on battery:	At least 3 years
Measurements:	62x112x32 mm (WxHxD)
Weight:	Approx 100 g Approx 165 g (incl. batteries)
Temperature range:	-40 - +70 °C
Relay contacts:	Voltage free
Um:	50 VAC, 75 VDC
Im:	2 A
Degree of protection:	IP 42

Option / accessory

Mains /
battery eliminator
8-12 VAC or 8-12 VDC
Art. No: 1357

EU Declaration of Conformity (DoC)

We

Afriso Ema AB
Kilvägen 2
232 37 Arlöv

declare that this DoC is issued under our sole responsibility and belongs to the following product(s):

VA-Signal

to which this declaration relates is in conformity with the following standard and directive.

Directive		**Harmonized Standard**
Low Voltage Directive	2014/35/EU	EN IEC 61010-1 (2010)/A1(2019)
EMC Directive	2014/30/EU	EN IEC 61000-6-4 (2019) EN IEC 61000-6-1 (2019)

Signed for and on behalf of Afriso Ema AB

Date of issue: 2023-10-12

Signature of authorized person:

Jonas Ericson Nihlstorp, CEO

Notes:

AFRISO

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