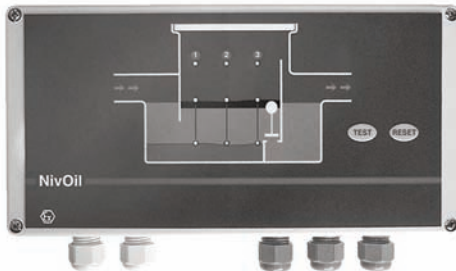


Alarm system for oil-water separator

NivOil® / 12 V DC



- Low power consumption
- 10...27 V DC power supply input
- Zone 0 ATEX certified
(Zone 2 for the alarm device location)
- Solar powered or standard electric battery
- Energy saving mode adjustable (*control frequency adjustable from 6 min up to 9 days*)
- 3 inputs, for any NIVOIL probes
- Automatic recognition of type probe
- 3 relay outputs with audible alarm

DESCRIPTION

Designed for the monitoring of hydrocarbon fluids separators, the alarm device NIVOIL may be connected to 1, 2 or 3 sensors.

- Hydrocarbon layer thickness sensor to detect when the maximum thickness is reached.
- Overfill sensor to detect when the fluids are on the highest level.
- Sludge layer sensor for alarming when maintenance is necessary.

The 3 sensors may be connected to any input of the alarm device NIVOIL. Any combination of the sensors can be wired. The instrument recognizes automatically the sensor type. A LED indicates the sensor type on the diagram on the front board. The alarm device NIVOIL has a built-in buzzer; it is possible to disable its function.

Low power consumption

This model working with a 10 to 27 V DC power supply has low energy consumption. It is designed for the use of a solar powered battery or any standard electric battery (*consumption is 0.1 W – 12 V DC – with 3 sensors connected with one complete control cycle per hour*).

Sleep mode

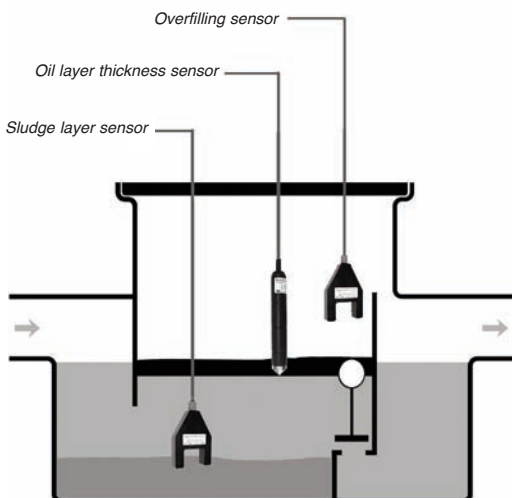
This mode is adjustable by modifying the frequency of control cycle (*from 6 minutes up to 9 days*). A continuous control mode could be switched on when there is no limit on consumption.

ATEX certified

All the components are ATEX certified. The sensors are for a location in zone 0 and the alarm device corresponds to a zone 2.

CODE NUMBERS AND REFERENCES

Code	Reference	Designation
531 040	NIVOIL-CU/12	Alarm device, 12 V DC, Housing IP 65
531 102	NIVOIL-OP/10	Hydrocarbon fluid layer thickness sensor, 10 m long cable
531 205	NIVOIL-HPS/10	Overfilling sensor U-S, 10 m long cable
531 301	NIVOIL-SP/10	Sludge layer sensor, 10 m long cable
531 550	NIVOIL-JT	Cable coupling, IP 65 for cable $\leq 4 \text{ mm}^2$
532 502	SK-PVC-2x1	Extension cable 2 wires, for 1 ATEX sensor



BAMO MESURES

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Alarm system for
oil-water separator
NivOil® / 12 V DC

23-04-2010

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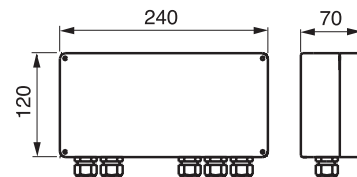
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TECHNICAL FEATURES

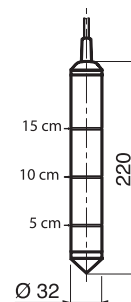
NivOil® CU/12 – Alarm device

Main power supply:	10...27 V DC
Power consumption:	0.1 W / 12 V DC (3 sensors connected and 1 control cycle per hour)
Housing protection:	IP65, according EN 60529
Temperature limits:	-20...+60°C
Sensor inputs:	3 inputs with automatic sensor type detection
Monitoring:	for hydrocarbon fluids layer thickness, overflow level, sludge layer level The alarm device NIVOIL has an auto-diagnostic of measuring loop An alarm signal occurs in case of dysfunction due to a short circuit or a broken cable.
Display and signals:	1 function signal LED (<i>green</i>) on each channel 1 alarm signal LED (<i>red</i>) on each channel Built-in audible alarm, disabled by DIP switch configuration
Front panel:	2 push buttons for diagnostic test and alarm clearance
Outputs:	3 relay outputs, Power switch 250 V AC as a maximum / 3A, Potential free change over contacts
ATEX Certificate:	BVS 10 ATEX E 011 / The alarm device may be mounted in Ex area, zone 2
Ex protection class:	Ex II 3 (1) G Ex nAC [ia Ga] IIB / IIA T4 Gc (<i>Intrinsic safety</i>)
CE Marks	According to EC directives (72/23/EEC), Low Voltage Guidelines: RL 2006/95/EG & RL93/68/EWG , EMV Guidelines: RL 89/336/EWG (EN 61326)
ATEX	RL 94/9/EG (ATEX 95) EN 60079-0 (General requirements) - EN 60079-11 (Intrinsic safety) - EN 60079-26 (Group II; category 1G)



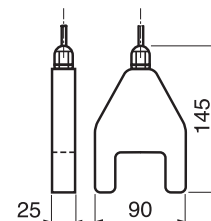
NivOil® -OP/10 – Hydrocarbon fluid layer thickness sensor (Only for use with an alarm device NIVOIL)

Sensor type:	Capacitive, high frequency
Wetted parts:	Antistatic PE stem; Stainless steel end probe
Cable:	Elastomer resistant to oils and hydrocarbon fluids, blue colour; wires 2x 1mm ² , connections to the alarm device NIVOIL on screw connectors; 10 m long cable (<i>other lengths on request - maximal length is 300 m</i>)
Protection:	IP68 acc. EN 60529
Temperature limits:	-20...+60°C
ATEX certificate:	BVS 07 ATEX E 091 X / This sensor is suitable for location in zone 0
Ex protection class:	Ex II 1 G Ex ia IIB T4 (<i>Intrinsic safety</i>)



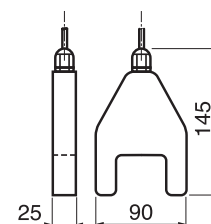
NivOil® -HPS/10 – Overflowing sensor (Only for use with an alarm device NIVOIL)

Sensor type:	Ultrasonic detection type
Wetted parts:	PVC; Elastomer cable
Cable:	Elastomer resistant to oils and hydrocarbon fluids, blue colour; wires 2x 1mm ² , wiring on screw connectors; 10 m long cable (<i>other lengths on request - maximal length is 300 m</i>)
Protection:	IP68 acc. EN 60529
Temperature limits:	-20...+60°C
ATEX certificate:	BVS 09 ATEX E 021 X / This sensor is suitable for location in zone 0
Ex protection class:	Ex II 1 G Ex ia IIB T4 (<i>Intrinsic safety</i>)



NivOil® -SP/10 – Sludge layer sensor (Only for use with an alarm device NIVOIL)

Sensor type:	Ultrasonic detection type
Wetted parts:	PVC; Elastomer cable
Cable:	Elastomer resistant to oils and hydrocarbon fluids, blue colour; wires 2x 1mm ² , wiring on screw connectors; 10 m long cable (<i>other lengths on request - maximal length is 300 m</i>)
Protection:	IP68 acc. EN 60529
Temperature limits:	-20...+60°C
ATEX certificate:	BVS 09 ATEX E 021 X / This sensor is suitable for location in zone 0
Ex protection class:	Ex II 1 G Ex ia IIB T4 (<i>Intrinsic safety</i>)



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