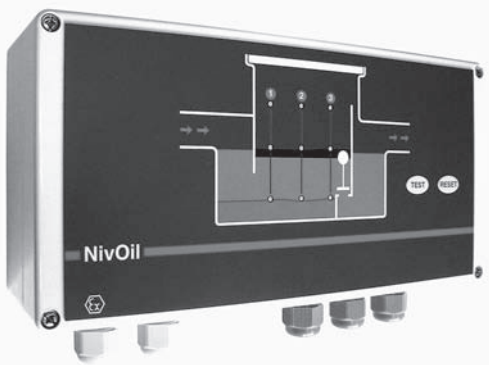


# Alarm system for oil-water separator

## NivOil® / 230 V AC



- 3 inputs, for any NIVOIL probes
- Automatic recognition of type probe
- 3 relay outputs
- Audible alarm disable by DIP switch
- Front system drawing with lightning alarms
- Wall mounting cabinet, IP 65
- Intrinsic safety acc.:  $\text{Ex} \text{II} (1) \text{G} [\text{Ex ia}] \text{IIB}$
- Certification: BVS 07 ATEX E 090
- Suspended cable probes with 10 m long cable

### 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; this can occur in case of dysfunction of a filter, when a float-valve closes to prevent an overfilling, when the level of fluid is too high.

Sludge layer sensor to alarm when maintenance is necessary.

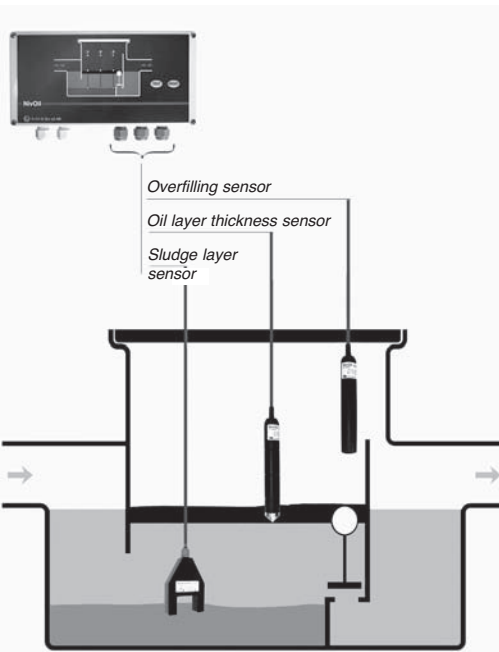
The 3 sensors may be connected to any input of the alarm device NIVOIL. Any combination of the sensors can be wired.

The instrument recognizes automatically the sensor type. A LED indicates the sensor type on the diagram on the front board. When an input is not wired, the LED is off.

The alarm device NIVOIL has a built-in buzzer; it is possible to disable its function by a DIP switch configuration.

### CODE NUMBERS AND REFERENCES

Code	Reference	Designation
531 050	NivOil-CU/220	Alarm device, 230 V AC, Housing IP 65
531 102	NivOil-OP/10	Hydrocarbon fluid layer thickness sensor, 10 m long cable
531 103	NivOil-OP/15	Hydrocarbon fluid layer thickness sensor, 15 m long cable
531 200	NivOil-HP/10	Overfilling sensor 10 m long cable
531 201	NivOil-HP/15	Overfilling sensor 15 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



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Alarm system for  
oil-water separator

**NivOil® / 230 V AC**

26-11-2009

531 I1 01 B

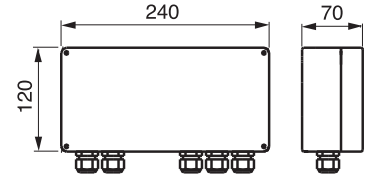
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## TECHNICAL FEATURES

### NivOil® -CU/220 – Alarm device

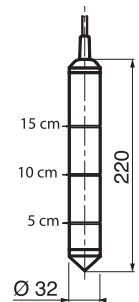
Main power supply:	230 V - 50 Hz
Power consumption:	9 VA approximately (3 sensors connected)
Housing protection:	IP65, according EN 60529
Temperature limits:	-20...+60°C
Sensor inputs:	3 inputs with automatic sensor type detection for hydrocarbon fluids layer thickness, overflow level, sludge layer level
Monitoring:	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 (green) on each channel 1 alarm signal LED (red) 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, 230 V AC, 3A, potential free change over contacts



ATEX Certificate:	<b>BVS 07 ATEX E 090</b>
Ex protection class:	<b>Ex II (1) G [Ex ia] IIB</b> (Intrinsic safety) / The alarm device NIVOIL must be mounted in safe area
CE Marks	According to <b>EC</b> directives (72/23/EEC), Low Voltage Guidelines: <b>RL 2006/95/EG &amp; RL93/68/EWG</b> , EMV Guidelines: <b>RL 89/336/EWG</b> (EN 61326)
ATEX	RL 94/9/EG (ATEX 95) <b>EN 60079-0</b> (General requirements) - <b>EN 60079-11</b> (Intrinsic safety) - <b>EN 60079-26</b> (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 <sup>2</sup> , 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:	<b>BVS 07 ATEX E 091X</b> / The detection probe may be mounted in Ex area, zone 0
Ex protection class:	<b>Ex II 1 G Ex ia IIB T4</b> (Intrinsic safety)

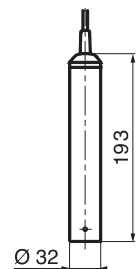


### NivOil® -HP/10 – Overflowing sensor *(Only for use with an alarm device NIVOIL)*

Sensor type:	PTC sensor
Wetted parts:	Antistatic PE stem; Stainless steel end sensor
Cable:	Elastomer resistant to oils and hydrocarbon fluids, blue colour; wires 2x 1mm <sup>2</sup> , 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:	<b>BVS 07 ATEX E 092X</b> / The detection probe may be mounted in Ex area, zone 0
Ex protection class:	<b>Ex II 1 G Ex ia IIB T3</b> (Intrinsic safety)

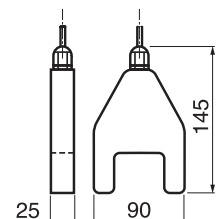


**Not to use with 12 V NivOil model**



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

Sensor type:	Ultrasonic detection type
Wetted parts:	PVC
Cable:	Elastomer resistant to oils and hydrocarbon fluids, blue colour; wires 2x 1mm <sup>2</sup> , 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:	<b>BVS 09 ATEX E 021X</b> / The detection probe may be mounted in Ex area, zone 0
Ex protection class:	<b>Ex II 1 G Ex ia IIB T4</b> (Intrinsic safety)



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