

# Labkotec alarm devices for oil and grease separators

Protect the environment by preventing pollution accidents

Monitor excessive levels of liquid, grease, oil and sludge in separators

Monitor leakage in separators

Indication when separator needs emptying – reduce waste management cost

Ensure undisturbed oil and grease separator operations

Fulfils requirements of EN 858-1&2 standards

Fail-safe



Measures for better tomorrow

 **Labkotec**  
INDUTRADE GROUP



# Protecting the environment

## Detect dangers to protect the environment

**Water is the basis of all life and is a valuable resource that must be protected from contamination. The protection of ground water and the drainage system against contamination from mineral oils is essential.**

Nowadays, oil and grease separator systems play a vital part in preventing environmental damage. In spaces such as garages, service stations, restaurants, and in industrial processes, where there is a risk of oil spills or grease leaking into sewer system or into the ground, sewage water is first lead to oil or grease separators.

However, such system must be checked regularly, and monitored continually, in order to ensure that it operates reliably. Reliable operation of a separator can only be achieved when separator alarm devices are installed. This is the only way that one can effectively prevent environmental damage, and avoid associated liability risks.

Furthermore, maintenance costs can be significantly reduced with efficient alarm systems which ensure that the separator is emptied only when necessary.

All Labkotec alarm systems for oil separators have ATEX approval and the sensors are suitable for installation in hazardous areas. They are compact and robust, and do not incorporate moving parts. For areas where there are no people or supply voltage, a system with an alarm trigger offers a protective function via a 3G mobile phone network around the clock.

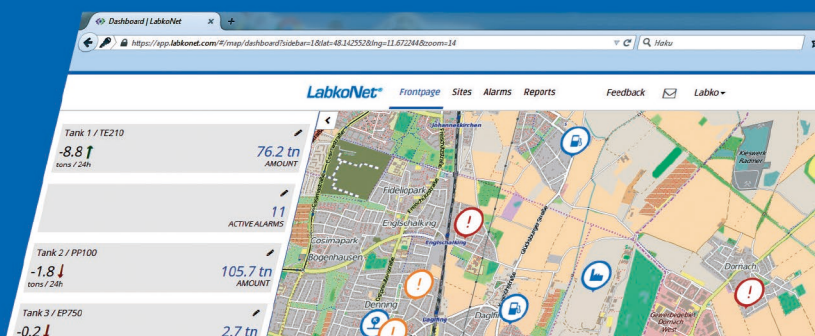


**The EN 858-1&2 standard stipulates that alarms must be used in oil separators, and simultaneously form the basis for the CE-mark on oil separators.**

Labkotec alarm devices are approved in accordance with the ATEX directive 2014/34/EU and IECEx.

## LabkoNet® compatible

Labkotec alarm devices can be connected to the cloud based LabkoNet system with an internal 3G modem or with the separate Labcom modem. LabkoNet is an easy and reliable way to transfer and control alarm data. For further information on LabkoNet and its key benefits, please visit [www.labkonet.com](http://www.labkonet.com)



## Key advantages of Labkotec alarm devices

**Labkotec offers the widest range of alarm devices on the market for oil and grease separators. Special attention to the design of various models, has improved reliability and performance, which benefits the environment globally.**

- Meets the demands for various standards and regulations.
- There is an immediate alarm if, for example, a serious oil spill occurs, thus preventing severe environmental damage.
- The costs of routine servicing are kept to a minimum. The separator will be emptied only when the alarm indicates that the grease, oil or sludge levels have been exceeded.
- Separator leakage into the environment is also monitored.

# Alarm devices for oil and grease separators

## idOil® alarm devices for oil separators

### idOil control units



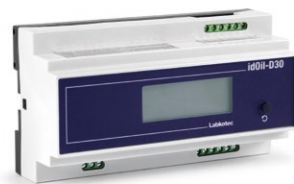
#### idOil-30 oil separator alarm



LabkoNet®  
COMPATIBLE

The design of the new generation idOil-30 is the result of Labkotec's long experience and customer feedback, as well as the latest requirements from European norms.

Up to three idOil sensors of any type can be connected polarity-free, and they are identified automatically with a one-touch commissioning feature. The idOil-30 offers extremely easy commissioning, flexible configuration locally via WLAN, as well as alarm logging. Available also with 3G modem and in 12 V DC operation voltage.



#### idOil-D30 oil separator alarm



The idOil-D30 has the same features as the idOil-30, but is smaller in size, and can be mounted in an electrical cabinet on DIN rails.



#### idOil-20 oil separator alarm

The idOil-20 is an easy to use oil separator alarm control unit that offers all necessary basic features. Up to three different types of idOil sensors can be connected polarity-free, and they are identified automatically with a one-touch commissioning feature.

### idOil sensors

All idOil sensors are polarity free digital sensors. This speeds up installation and commissioning, and saves on cabling costs.

#### idOil-LIQ high liquid level sensor

Indicates when the liquid level in the oil separator rises excessively e.g. in an outlet blockage situation.



#### idOil-OIL oil sensor

Detects oil and indicates when the separator's oil storage is full.



#### idOil-SLU sludge sensor

Monitors the sludge layer in the oil separator and indicates when the sludge layer has reached its maximum level.





## Complete idOil alarm system packages

idOil alarm systems are available in complete packages.

Choose a control unit and sensors and create an alarm system according to your needs.

Below is an example of a typical idOil alarm system package and coding of the package name.

**idOil-20 LOS** package consists of:

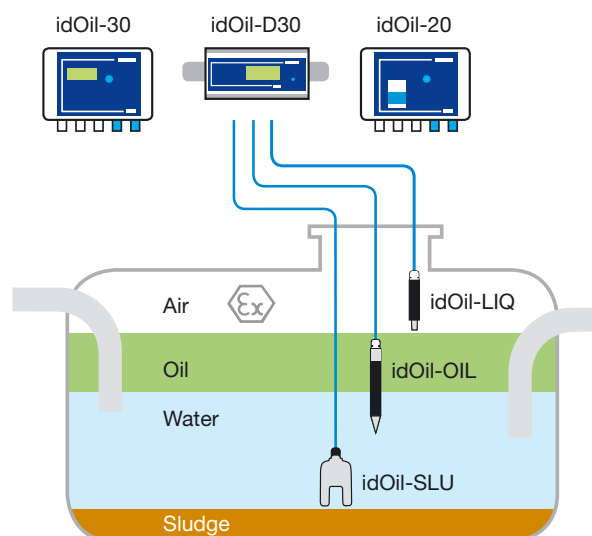
- Control unit **idOil-20**
- idOil-LIQ high liquid level sensor
- idOil-OIL oil sensor
- idOil-SLU sludge sensor
- Cable connector LCJ1-3
- Mounting kits for control unit and sensor



*idOil-20 LOS alarm system package*

## Applications

With the idOil alarm system, excessively high liquid levels, oil layer thickness and sludge layer thickness can be monitored.



### Most common application areas

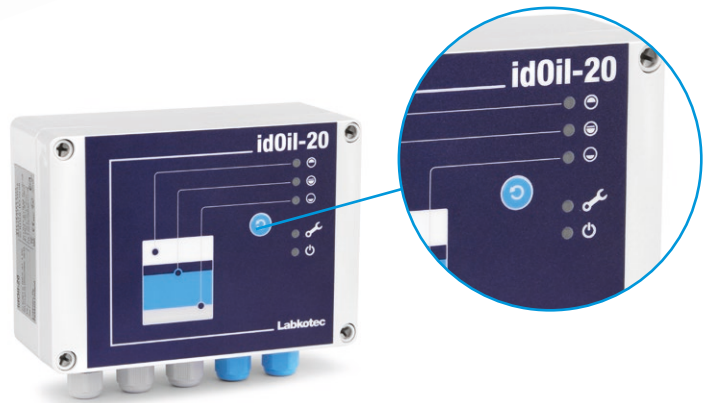
- Petrol stations
- Garages
- Airports
- Motorways
- Parking lots
- Oil handling areas

# Flexible separator alarm system build-up



## idOil-20 front panel

LED lights for alarms, sensor fault and power. Buzzer for alarm indication.



## idOil-30/idOil-D30 user interface



### Display

4 line monochrome LCD display for system status and alarms information. Buzzer for alarms indication.



### Browser user interface for settings and configuration

WLAN connection locally between control unit and laptop/tablet/smartphone. When further settings and configurations are needed they can be performed via inbuilt browser user interface. Also alarms information, the service and maintenance diary and the data log are accessible via the user interface.

## idOil-30 special applications



### idOil Solar oil separator alarm

The idOil Solar is a solar powered oil separator alarm for off-grid areas. It can be equipped with a beacon light and/or 3G modem.

In an alert situation, the beacon light will flash and/or an alarm message will be sent to the user's mobile phone. The idOil Solar control unit has the same features as the idOil-30.

### idOil-30 Battery and idOil-30 3G special versions

The idOil-30 control unit is also available with a 12 V DC power supply and the option of a 3G modem. With the 3G modem an alarm message will be sent to the user's mobile phone whenever an alert situation occurs.



## idOil control units' main features

	idOil-30	idOil-D30	idOil-20	Notes
Mounting	Wall mounted	M36 DIN rail mounted	Wall mounted	
100-240 V AC supply voltage	✓	✓	✓	Multi voltage.
12 V DC supply voltage	idOil-30 Battery			Low power version.
Solar power	idOil Solar			For off-grid areas.
Alarm status LEDs			✓	
Display	✓	✓		4 lines monochrome LCD with backlight. Operation and alarm status indication.
3G modem	idOil-30 3G			SMS alarm information to mobile phone.
Relay output	2 pcs fully configurable	2 pcs fully configurable	2 pcs, 1 alarm & 1 fault	
Sensor input	1-3 any idOil sensors combination	1-3 any idOil sensors combination	1-3 any different idOil sensors	
One push button quick commissioning	✓	✓	✓	
Automatic sensor type detection	✓	✓	✓	Detects automatically connected sensors and sensor types.
Polarity free sensor connection	✓	✓	✓	2 sensor wires can be connected both ways.
WLAN	✓	✓		Web browser based user interface for settings and configuration. WLAN connection locally with laptop/tablet/smartphone.
Data logging	✓	✓		Downloadable log file with time stamp for alarm, alarm reset, power break and maintenance events.
Service and maintenance diary	✓	✓		Free text input for diary marking.
Alarm repeat 24 h setting	✓	✓	✓	Alarm repeats after reset in 24 h if reason not removed.
Adjustable alarm delay	✓	✓		Delay adjustable for each sensor.

# OMS-1 alarm device for oil separators

## OMS-1 oil separator alarm

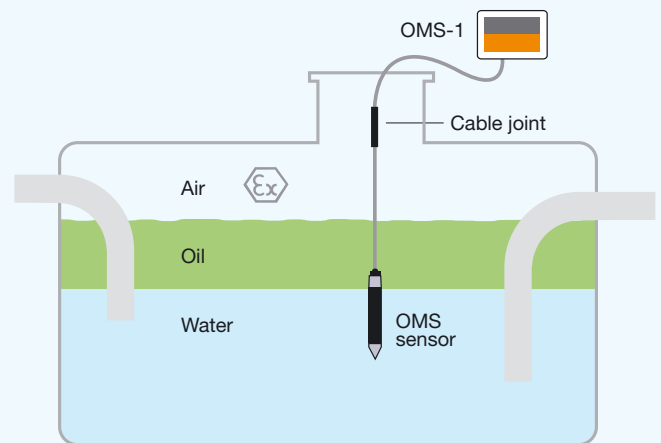
OMS-1 alarm device is specially designed for oil separators.

It indicates when it is time to empty the oil separator, which prevents harmful hydrocarbon emissions from being released into to the sewer system.

*OMS-1 control unit  
and OMS sensor*



## Application



# GA-1/GA-2 alarm devices for grease separators

## GA-1 and GA-2 grease separator alarms

GA-1 and GA-2 alarm devices are specially designed for grease separators. They indicate when it is time to empty the grease separator, which prevents harmful grease emissions from being released into to the sewer system.

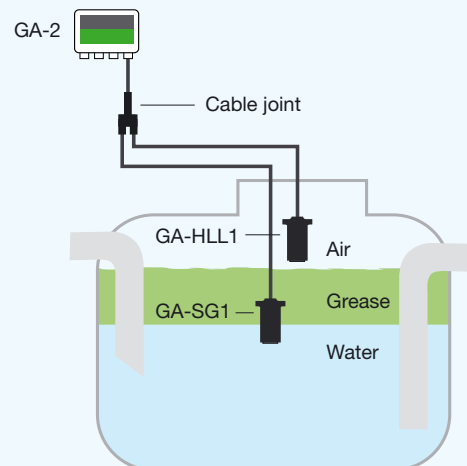
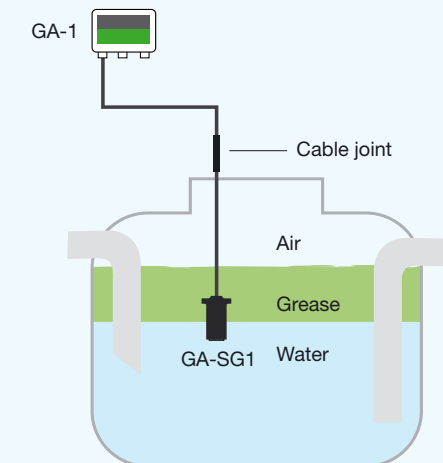
*GA-1 control unit  
and GA-SG1 sensor*



*GA-2 control unit and  
GA-HLL1/GA-SG1  
sensors*



## Application



GA-1/GA-2 devices are not ATEX approved and cannot be used in oil separators.



# Technical data

## idOil control units

	idOil-30	idOil-D30	idOil-20	idOil-30 3G	idOil-30 Battery (3G)	idOil Solar
Enclosure material	Polycarbonate	Lexan 940 (top) Noryl VO 1550 (base)	Polycarbonate			
Weight	780 g	380 g	750 g	900 g	680 g (800 g 3G version)	8000 g
IP classification	IP65	IP20	IP65			IP43 with two ventilation devices
Ambient temperature	-30 °C...+60 °C					
Supply voltage	100-240 V AC, 50/60 Hz				11-17 V DC	
Compatible sensors	idOil-LIQ, idOil-OIL, idOil-SLU					
Relay outputs	5 A, 250 V AC/30 V DC, 100 VA potential free, 2 pcs				5 A, 30 V DC, 100 VA potential free, 2 pcs	
EMC	IEC/EN 61000-6-2 IEC/EN 61000-6-3					
Electrical safety	Class I, IEC/EN 61010-1, UL 61010-1 CAN/CSA-C 22.2 NO. 61010-1-12				Class III, IEC/EN 61010-1, UL 61010-1 CAN/CSA-C 22.2 NO. 61010-1-12	
Overvoltage category	II					
ATEX	VTT 16 ATEX 018X					
IECEX	IECEX VTT 16.0005X					
Ex-classification	⊕ II (1) G [Ex ia Ga] IIB					

## idOil sensors

	idOil-LIQ	idOil-OIL	idOil-SLU
Measurement principle	Vibration	Conductive	Ultrasonic
Wetted parts	PVC, aluminium, PA, CR, Viton	PVC, AISI 316, PA, CR, NBR	PP, AISI 316, PA, CR, silicon
Weight incl. 5 m cable	240 g	395 g	530 g
IP classification	IP68		
Ambient temperature	-30 °C...+60 °C		-25 °C...+60 °C
Supply voltage	12 V DC		
Cable	2 x 0.75 mm <sup>2</sup> PUR unshielded		
ATEX	EESF 19 ATEX 002X	EESF 19 ATEX 001X	EESF 19 ATEX 003X
IECEX	IECEX EESF 19.0002X	IECEX EESF 19.0001X	IECEX EESF 19.0003X
Ex-classification	⊕ II 1 G Ex ia IIB T5 Ga	⊕ II 1 G Ex ia IIA T5 Ga	⊕ II 1 G Ex ia IIB T5 Ga

# Technical data

## OMS-1 and GA-1/GA-2 control units

	OMS-1	GA-1	GA-2
Enclosure material	Polycarbonate		
Weight	250 g		
IP classification	IP65		
Ambient temperature	-30 °C...+50 °C		
Supply voltage	230 V AC ± 10 %, 50/60 Hz	230/115 V AC ± 10 %, 50/60 Hz	
Power consumption	1 VA	5 VA	
Compatible sensors	OMS sensor	GA-SG1	GA-HLL1, GA-SG1
Relay outputs	Potential-free relay output 250 V, 5 A, 1 pc	Potential-free relay output 250 V, 5 A, 1 pc	Potential-free relay output 250 V, 5 A, 2 pcs
Electrical safety	Class I, IEC/EN 61010-1, UL 61010-1 CAN/CSA-C 22.2 NO. 61010-1-12	Class II, IEC/EN 61010-1, UL 61010-1 CAN/CSA-C 22.2 NO. 61010-1-12	
Overvoltage category	II		
ATEX	VTT 12 ATEX 003X	Not ATEX approved. Not for use in oil separators.	
IECEx	IECEx VTT 12.0001X		
Ex-classification	⊕ II (1) G [Ex ia Ga] IIB		

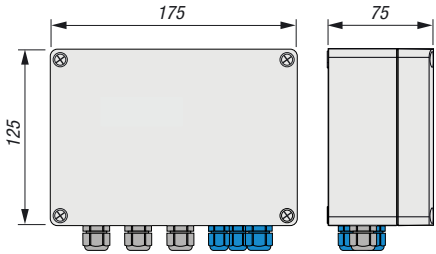
## OMS-1 and GA-1/GA-2 sensors

	OMS sensor	GA-HLL1 and GA-SG1
Measurement principle	Conductive	Capacitive
Material	PVC, AISI 316	POM, AISI 316
Weight incl. 5 m cable	450 g	350 g
IP classification	IP68	
Ambient temperature	-30 °C...+60 °C	-25 °C...+90 °C
Cable	Oil proof 2 x 0.75 mm <sup>2</sup>	2 x 0.75 mm <sup>2</sup> chlorinated polyethylene rubber CM
Ex-classification	⊕ II 1 G Ex ia IIA T6 Ga According to IEC/EN 60079-11 simple apparatus.	Not ATEX approved. Not for use in oil separators.

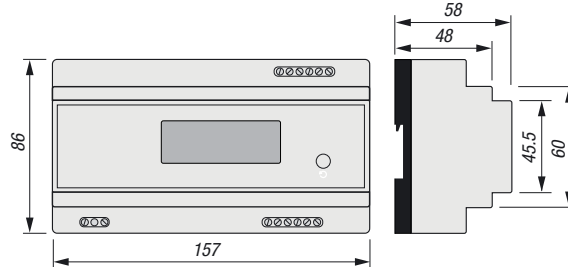
# Dimensions (mm)

## idOil

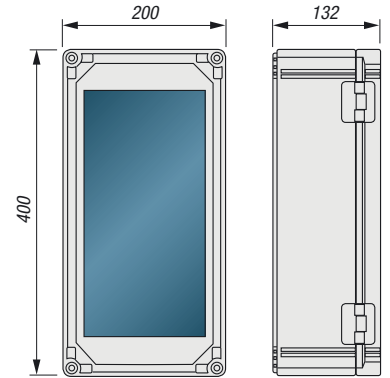
idOil-30, idOil-20, idOil-30 3G,  
idOil-30 Battery, idOil-30 Battery 3G



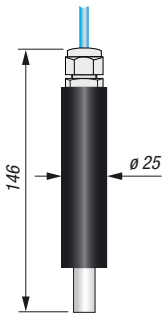
idOil-D30



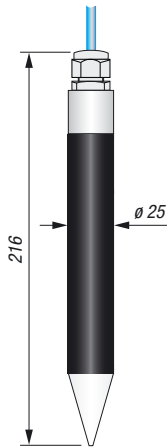
idOil Solar



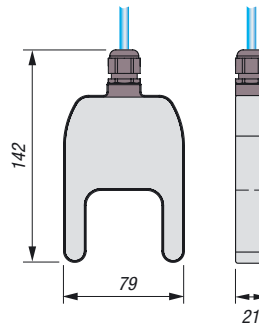
idOil-LIQ



idOil-OIL

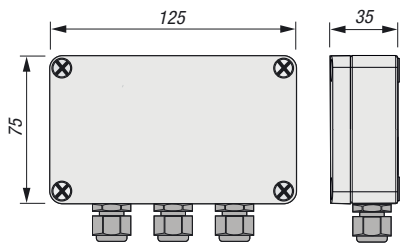


idOil-SLU

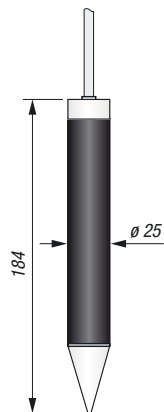


## OMS-1 and GA-1/GA-2

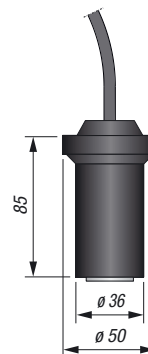
OMS-1, GA-1, GA-2



OMS sensor



GA-HLL1, GA-SG1





## Measures for better tomorrow

Labkotec is a leading measurement equipment manufacturer, and related services provider for various industrial applications. Founded in 1964, Labkotec has decades of experience in providing innovative measurement solutions for a myriad of applications. Our mission is to provide measurement solutions which enhance our customers' business and help them to protect the environment and people.

Labkotec's comprehensive export product range comprises alarm devices for oil and grease separators, ice detection systems, level measurement equipment for petrol storage and distribution, as well as a wide range of level measurement and detection instruments. We also provide our own unique cloud based measurement data monitoring system LabkoNet®, which offers our customers remote onsite monitoring of measurement and alarm information.

Since most of our products are intended for use in hazardous areas, they are designed and certified in strict accordance with EX-norms.

In addition to our export range Labkotec's domestic market includes a wide range of imported level measurement devices, flow measurement equipment, detection technology and analyzers as well as related services. We also provide complete control systems for municipal water supply and sewerage.

Labkotec is ISO 9001:2015 and ISO 14001:2015 quality certified, while our environmental systems are certified by Lloyd's Register Quality Assurance.

Labkotec Oy reserves the rights to alterations without prior notice. Due to policy of continuous improvement in R&D, technical specifications may change. Installation shall always be made as documented in manufacturer's instructions.



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Measures for better tomorrow



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