Data sheet

idSET-OTM

idSET®-OTM
oil separator alarm system

idSET-OTM is a measuring device for real-time measurement of oil layer thickness in oil separators. An idSET-OTM sensor can be connected to the control unit, as well as an idOil-LIQ high level and an idOil-SLU sludge sensor.

The equipment is used to monitor:

- Oil layer thickness; idSET-OTM sensor measures oil layer thickness, allowing the emptying of the separator to be planned, and scheduled well in advance

- Liquid level rise; the idOil-LIQ high-level sensor alerts you if the liquid level in the oil separator rises too much, for example, due to a blockage in the outlet pipe

- Sludge layer; idOil-SLU sludge sensor alerts when silt layer accumulated at the bottom has reached its maximum thickness

- Decrease in fluid level; The idSET-OTM sensor alerts you if the the liquid level in the separator drops abruptly

In alarm and fault situations, the buffer of the device gives an audible alarm, the display shows the reason for the alarm and the relays switch to the alarm position. The analog signal of the device indicates the amount of accumulated oil in real time. idSET-OTM sends alarms and scheduled measurements to the LabkoNet ser-vice, from where the data can be easily shared with everyone who needs it, regardless of location.

The idSET-OTM control unit is compatible with LabkoNet CONNECTED. The device can be easily connected to the LabkoNet service by reading the QR code on the device cover. This enables quick and effortless commissioning as well as remote monitoring and management of the device via LabkoNet.

The device s data transfer to the LabkoNet server has been implemented with a cyber-secure data connection. The price of the idSET-OTM control unit includes the use of the LabkoNet service for 12 months.

Specifications

idSET-OTM control Unit

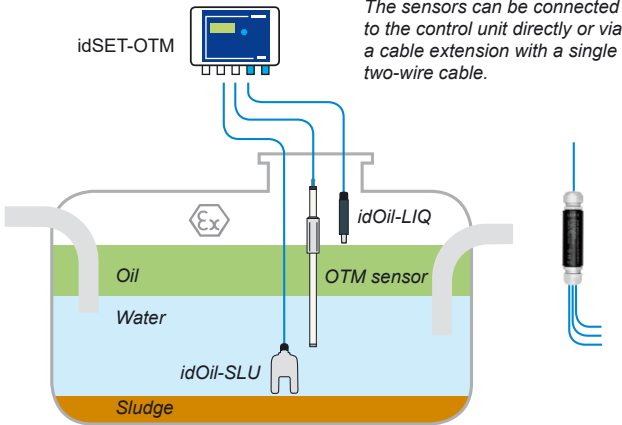|	
Mounting	Wall mount
Case material	Polycarbonate
Weight	1500 g
IP classi cation	IP65
Display	Four-line monochrome LCD display
Modem	LTE-M, NB-IoT (4G)
LabkoNet	Data transfer interval adjustable
Ambient temperature	-30 C...+60 C
Supply voltage	230 V C 1 Supply power fuse Max. 10 A
Power consumption	Max. 12 VA
Relay outputs	4 relays, 5 A, 250 V AC/30 V DC, 100 VA potential free changeover contacts
Analog output	4-20 mA, oil layer thickness
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 Surge class II
Ex classi cation	⟨Ex⟩ II (1) G Ex ia Ga IIB ATEX IECEx, U EX
Exi interface values	U_o = 14,5 V, I_o = 78 mA, P_o = 363 mW, R = 243
Max values in IIB	C_o = 4,0 µF, L_o = 15,0 mH

idSET-OTM sensor

Operating principle	Capacitive
Measuring range	0-400 mm
Measurement accuracy	±10 mm under normal operating conditions, when the value 10 mm
Installation	Suspension by wire, 2 mm, AISI 316
IP Classification	IP
at ials	PP P I I31 P
i t it ca l	1
i nt t at	3 C C
l olta	1 C
Cable	Length 5 m, 2 x 0,75 mm², PUR, 5 mm
EMC	IEC/EN 61000- 6- 2 IEC/EN 61000- 6- 3
Ex-classi cation	⟨Ex⟩ II 1 G Ex ia IIA T4 Ga ATEX, IECEx, U EX Certi ed
Exi connection values	U_i = 15 V, I_i = 100 mA, P_i = 550 mW C_i 4,3 nF, L_i 1,8 mH

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Measures for a better tomorrow

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Application

idSET-OTM

The sensors can be connected to the control unit directly or via a cable extension with a single two-wire cable.

idOil-LIQ

OTM sensor

Oil

Water

idOil-SLU

Sludge
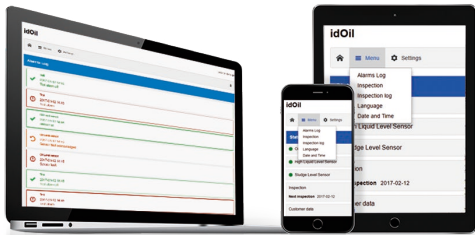
Settings, configurations and information via browser user interface
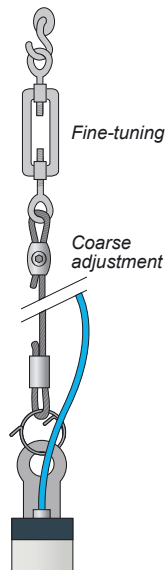

- System status view with current alerts
- Date and time settings
- Language selection
- Measurement and alarm log, downloadable
- Inspection settings
- Write inspection notes
- Service history, downloadable
- Customer data input for display
- Alarm settings
- Sensor detection and naming
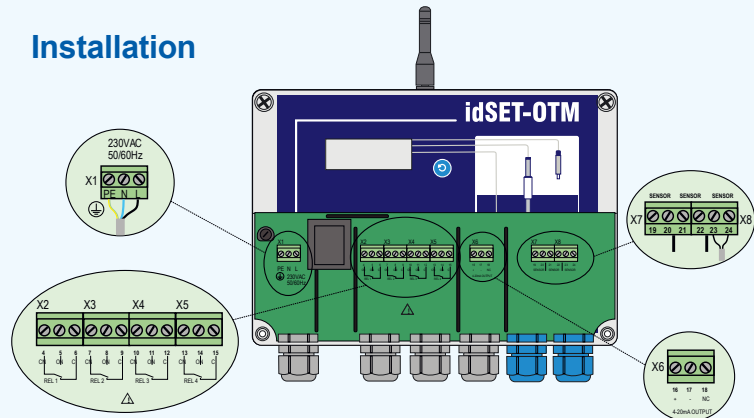- Relay configuration
- Software update

Equipment

LCJ1-1
Cable extension for one sensor

LCJ1-2
Cable extension for two sensors

LCJ1-3
Cable extension for three sensors

LMS-SAS6
Sensor suspension parts

Sensor suspension

Fine-tuning

Coarse adjustment

Installation

	Relay 1 Oil layer thickness sensor X2	Relay 2 High-level alarm X3	Relay 3 Sludge alarm X4	Relay 4 Failure X5
Supply voltage	X1			
Ground conductor	PE			
Neutral conductor	N			
Phase conductor	L1			
Relay outputs				
Relay common contact	4	7	10	13
Contact opened in case of alarm	5	8	11	14
Contact closing in case of alarm	6	9	12	15
Analog output for oil layer thickness measurement	X6			
+	16			
-	17			
NC not connected	18			
Sensor connectors X7 and X8	Sensor 1	Sensor 2	Sensor 3	
Connection 1	19	21	23	
Connection 2	20	22	24	

All sensor connectors are part of the same bus. The sensors can be connected separately to their own connectors or to one pair of connectors.

Dimensions (mm)

250

75

232

175

725

Ø50

Ø34

Active measurement range
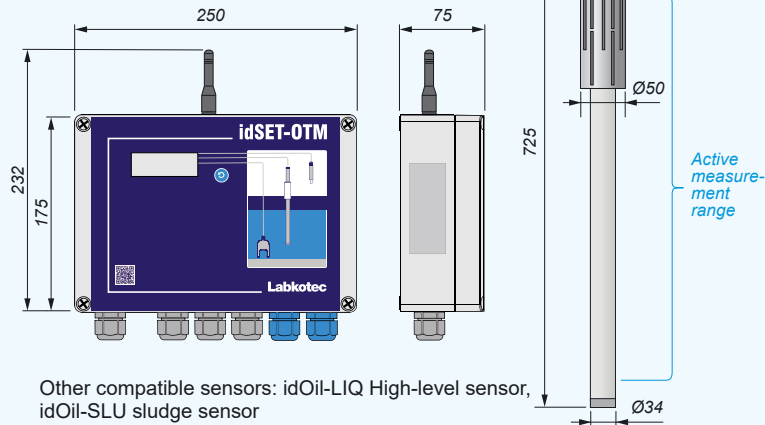
Other compatible sensors: idOil-LIQ High-level sensor, idOil-SLU sludge sensor

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