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Lokaset 20

Septic tank full alarm

Installation and Operation Instructions

SISÄLLYSLUETTELO

1 TECHNICAL DATA

Lokaset 20 Cental Unit		
Supply voltage	230 V ±10%, 50/60 Hz, 2,8 VA	
Probe	SET/LV or SET/L	
Operating limits within the entire temperature range	Alarm on < approx. 8 kΩ, alarm off > approx. 40 kΩ	
Operating indications	Green light: Power on/off Red light: Alarm Buzzer: Alarm sound	
Relay output	De-energised on alarm, potential-free switching contacts (µ). Max. connection values: 250 V / 4 A /100 VA	
Ambient temperature	0°C…+50°	
Enclosure	Polycarbonate, 130 x 80 x 35 [mm] (w x h x d), IP54	
Weight	Approx. 0,5 kg	
EMC Immunity Emission	. EN 50082-1 (1997) EN 50081-1 (1992)	 EN 61326 (1997) + A1:1998

SET/LV probe	
Cable	Oil PVC 2 x 0,5 mm² standard length 15 m
Material	RFe / PVC
Max. cable length	150 m, shielded instrumentation cable 3 x 0.5 mm²
Ambient temperature	-10ºC…+60 ºC
Weight	Approx. 1,3 kg with cable

2 GENERAL

The Lokaset 20 is a conductivity-operated limit switch which consists of a probe and central unit.

When the probe comes into contact with a conducting liquid the central unit will give an alarm; the red indicator light comes on, the buzzer starts to sound and the alarm relay is de-energised.

The buzzer is silenced by the alarm acknowledge button but the indicator light will stay on and the relay de-energised until the alarm is removed, i e the probe is no longer in contact with liquid. The alarm operations are provided with an approx. 4-5 s delay to eliminate unnecessary alarms caused by splashes.

When using the SET/LV probe, the probe and its cable are provided with fault detection, indicating any breakage in the probe circuit.

The device is powered by the 230 V mains via a connecting lead provided with a plug. When the device is not powered the alarm relay is in alarm state, i e de-energised. When power is connected it is indicated by the green light.

NOTE! THE DEVICE MUST NOT BE USED FOR INSTALLATIONS IN HAZARDOUS AREAS.

The SET/LV or SET/L probe must not be installed in a hazardous area.

The SET/LV or SET/L probe is not recommended to be installed in a location where steams, gases or liquids can have a corrosive effect on probe materials, e.g. aromatic and chlorated hydrocarbons (PVC), strong bases or acids.

3 OPERATION

Lokaset 20 is designed to be used as a tank full alarm for septic tanks.

4 INSTALLATION AND ELECTRICAL CONNECTIONS

WARNING! Ensure that the plug of the device is disconnected from the socket when the lid of the housing is open.

4.1 Installation of the Lokaset 20 central unit

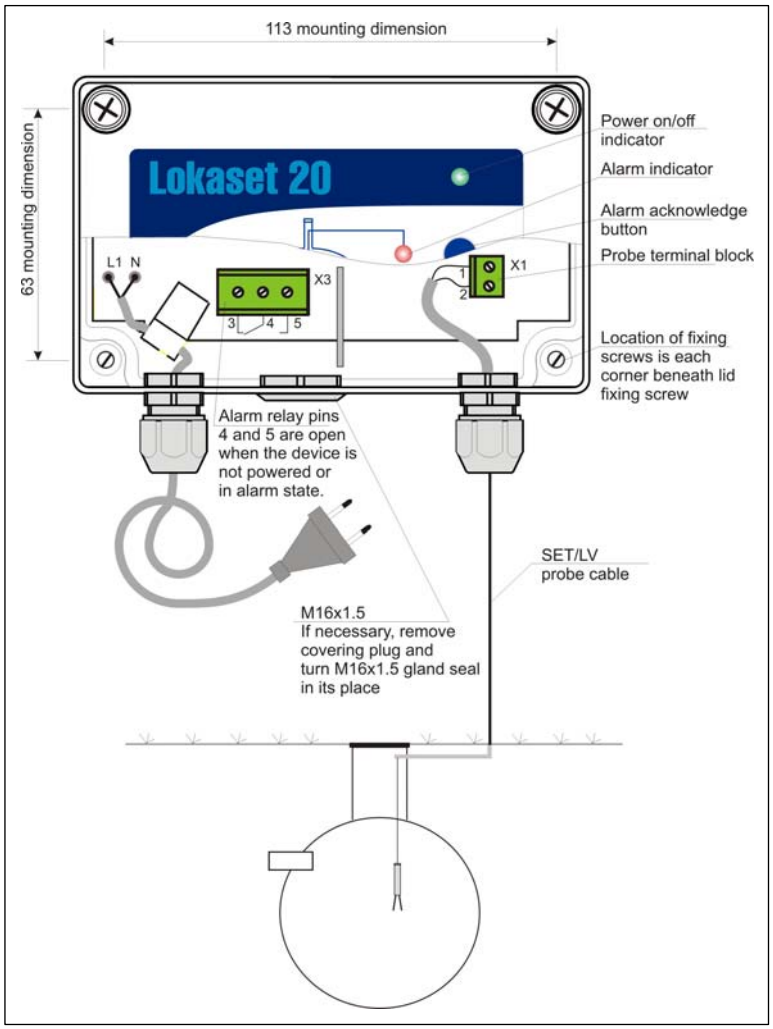

Figure 1.

The Lokaset 20 is installed in a dry indoor location. A good location is one which is visited sufficiently often so that the tank full alarm data is registered and emptying is made at the right time.
The device is fixed on wall with screws through the holes beneath the fixing screws of the lid.
The probe cable conductors are connected to poles 1 and 2 on terminal block X1 (see Fig. 1), the connection order has no significance.

If the relay is taken into use, the covering plug on the bottom of the housing is removed and the M16x 1.5 gland seal turned in its place. The potential-free contact data about the tank full alarm is received from terminal block X3 to the alarm central or building control system. The relay is provided with switching contacts. On alarm or mains failure the relay will be de-energised, pins 4 and 5 being opened and pins 3 and 4 closed.

The device is plugged to the 230 V mains by connecting its mains lead to the socket.

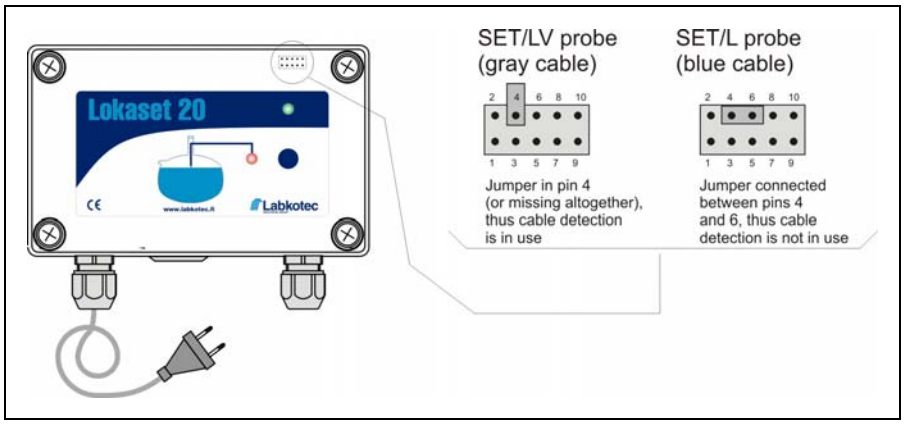

Figure 2.

The Lokaset 20 central unit is intended for use with the SET/LV probe (gray cable) which is provided with cable detection facility.

If the central unit is to be used with the SET/L probe (blue cable) without cable detection facility, cable detection must be removed from the central unit.

Cable detection is removed by connecting the jumper between pins 4 and 6 in the connection field (Fig. 2).

The recommended probe installation is such that the probe can be lifted up through the inspection tube for mechanical cleaning.

If the 15 m standard cable length is not sufficient, the cable extension must be made water-tight to ensure undisturbed operation. Max. cable length is 150 m.

5 SERVICE AND REPAIR

The sensing elements of the probe should be cleaned sufficiently often, e.g. when emptying the tank. The function of the probe can be tested by immersing its sensing element in water - then the central unit should give an alarm in 4-5 s.

The function of the central unit can be checked in conjunction with the probe function test. The function of the alarm indicator lamp, relay and buzzer on the central unit can be checked separately by first disconnecting line power, where after the alarm relay will be de-energised.

When reconnecting line power:

- the buzzer will give a short signal sound

- the red alarm indicator is on for about 1 s

- the alarm relay will be energised in about 4 s if the probe does not give an alarm

The central unit does not include serviceable parts. In the event of damage, please contact the supplier.

The mains lead of the central unit may be replaced only by the manufacturer of the device or a service organization authorized by the manufacturer.

6 OPERATING MODES OF THE DEVICE

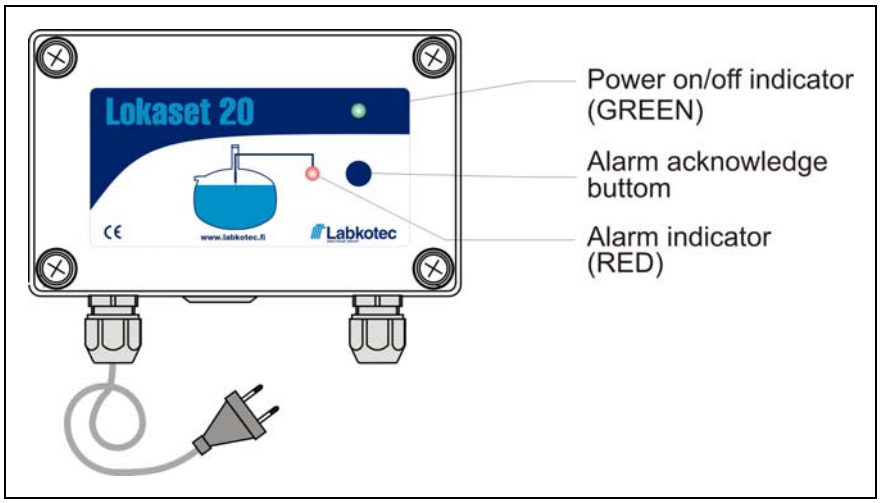

Figure 3.

		INDICATOR AND BUZZER STATES			
		Operation indicator status		Buzzer status	
		GREEN	**RED**		
1	Normal operation	ON	OFF	NO SOUND	The tank is not full.
2	Tank full alarm	ON	ON	CONTINUOUS SOUND	The tank is full. The alarm can be acknowledged and the buzzer silenced by pressing the acknowledge button.
3	Tank full alarm, acknowledged	ON	ON	NO SOUND	The tank is full.
4	Tank full alarm, disappeared	ON	FLASHING	NO SOUND	Tank full alarm which has disappeared before it has been acknowledged. The tank has been full and it has been emptied, or the tank is being filled up. Flashing can be stopped by pressing the acknowledge button.
5	Cable fault alarm	FLASHING	FLASHING	NO SOUND	The probe or its cable is damaged or the probe is not connected to the device, or a SET/L probe without cable detection facility is being used (see Fig. 2).
6	Power is not connected or the device is damaged	OFF	OFF	NO SOUND	Check that the device is connected to the mains.

The alarm relay is in alarm state, i.e. de-energised in states 2, 3, 5 and 6.

Labkotec
INDUTRADE GROUP

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Declaration of conformity

This declaration certifies that the below mentioned apparatus conforms with the essential requirements of the EMC directive 89/336/EEC (as amended by 91/263/EEC and 92/31/EEC), and Low-Voltage Directive (LVD) 2006/95/EC.

Description of the apparatus:
Conductivity alarm unit
Types:

Central unit:	LOKASET 20
Sensors:	SET/LV or SET/L
Manufacturer:	Labkotec Oy Myllyhaantie 6 33960 Pirkkala FINLAND

Standards which are used as a basic for conformity:
EMC:

EN 61000-6-1 (2001),	Electromagnetic compatibility, Generic emission standard, class: Residential, commercial and light industry.
EN 61000-6-2 (2001)	Electromagnetic compatibility, Generic immunity standard, class: Residential, commercial and light industry.
EN 61326 (1997)+A1:1998	Electrical equipment for measurement, control and laboratory use - EMC requirements
EN 61000-3 Part 2 (1995)	Electromagnetic compatibility (EMC), Limits for harmonic current emissions (equipment input current up to and including 16 A per phase)

The apparatus has been tested according to these standards by the FIMKO.
All requirements are fulfilled.

LVD:

EN 61010-1(2001)	Safety requirements for electrical equipment for measurement, control and laboratory use. Part 1: General requirements, Amendment A2.

Signature
The authorized signatory to this declaration, on behalf of the manufacturer, and the Responsible Person based within the EU, is identified below.

Pirkkala 12.3.2009

Heikki Helminen
CEO
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