# » LS02+ ext.

Leakage Sensor

**thermokon**®

HOME OF SENSOR TECHNOLOGY

## Datasheet

Subject to technical alteration
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## » APPLICATION

Leakage sensor for the detection of liquid ingress (e.g. water leaks under air conditioners, pipe bursts, otherwise conductive liquids). With an electrolytic alternating voltage measurement, the leakage sensor measures point-like via 2 electrodes. For connection to controller and display systems. The device contains sensor and evaluation electronics with relay contact and signalling LED.

## » TYPES AVAILABLE

**Leakage sensor**

LS02+ ext.

## » SECURITY ADVICE – CAUTION

⚠️

The installation and assembly of electrical equipment should only be performed by authorized personnel.

The product should only be used for the intended application. Unauthorised modifications are prohibited! The product must not be used in relation with any equipment that in case of a failure may threaten, directly or indirectly, human health or life or result in danger to human beings, animals or assets. Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Please comply with

- Local laws, health & safety regulations, technical standards and regulations
- Condition of the device at the time of installation, to ensure safe installation
- This data sheet and installation manual

## » NOTES ON DISPOSAL

As a component of a large-scale fixed installation, Thermokon products are intended to be used permanently as part of a building or a structure at a pre-defined and dedicated location, hence the Waste Electrical and Electronic Act (WEEE) is not applicable. However, most of the products may contain valuable materials that should be recycled and not disposed of as domestic waste. Please note the relevant regulations for local disposal.

## » TECHNICAL DATA

| | |
|---|---|
| **Measuring values** | humidity |
| **Output switch contact** | changeover contact, 24 V: max. 24 V / 1,0 A (resistive, floating) |
| **Power supply** | 15..24 V = (±10%) or 24 V ~ (±10%) |
| **Power consumption** | typ. 0,8 W (24 V =) \| 1,6 VA (24 V ~) |
| **Display** | LED green – power supply OK, LED red – Leakage |
| **Enclosure** | enclosure USE-S, PC, pure white, cover PC, transparent, with removable cable entry |
| **Protection** | IP65 according to EN 60529 |
| **Cable entry** | Flextherm M20, for wire Ø=4,5..9 mm, removable |
| **Connection electrical** | removable plug-in terminal, max. 2,5 mm² |
| **Ambient condition** | -20..+60 °C, max. 85% rH short term condensation |
| **Notes** | with external sensor (PVC, diameter 0,25 mm², L=5 m) |

## » USE ENCLOSURE WITH UV AND WEATHER RESISTANCE

After some time, outdoor mounted plastics can lose their color and quality. Therefore, all USE housings are made of special white polycarbonate (PC). The light-stable colorants and additives are used to achieve optimum protection of the polymer while maintaining color stability. The titanium dioxide used is specially developed for polycarbonate and offers excellent UV protection through the reflection of the entire light spectrum including the UV component by 340 nm. This effectively counteracts the otherwise occurring photochemical polymer degradation. The colors stay full for a long time without fading. The material is also resistant to cold and frost.

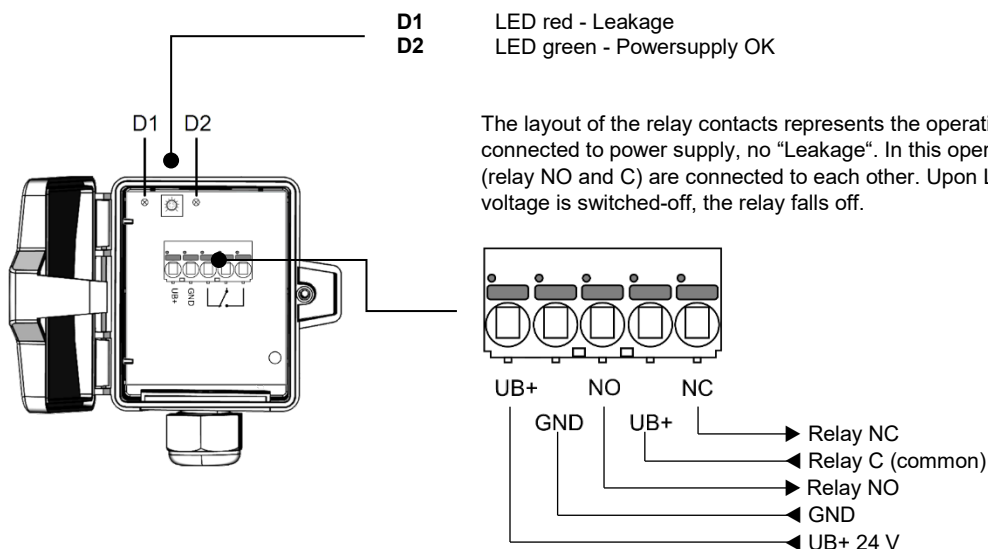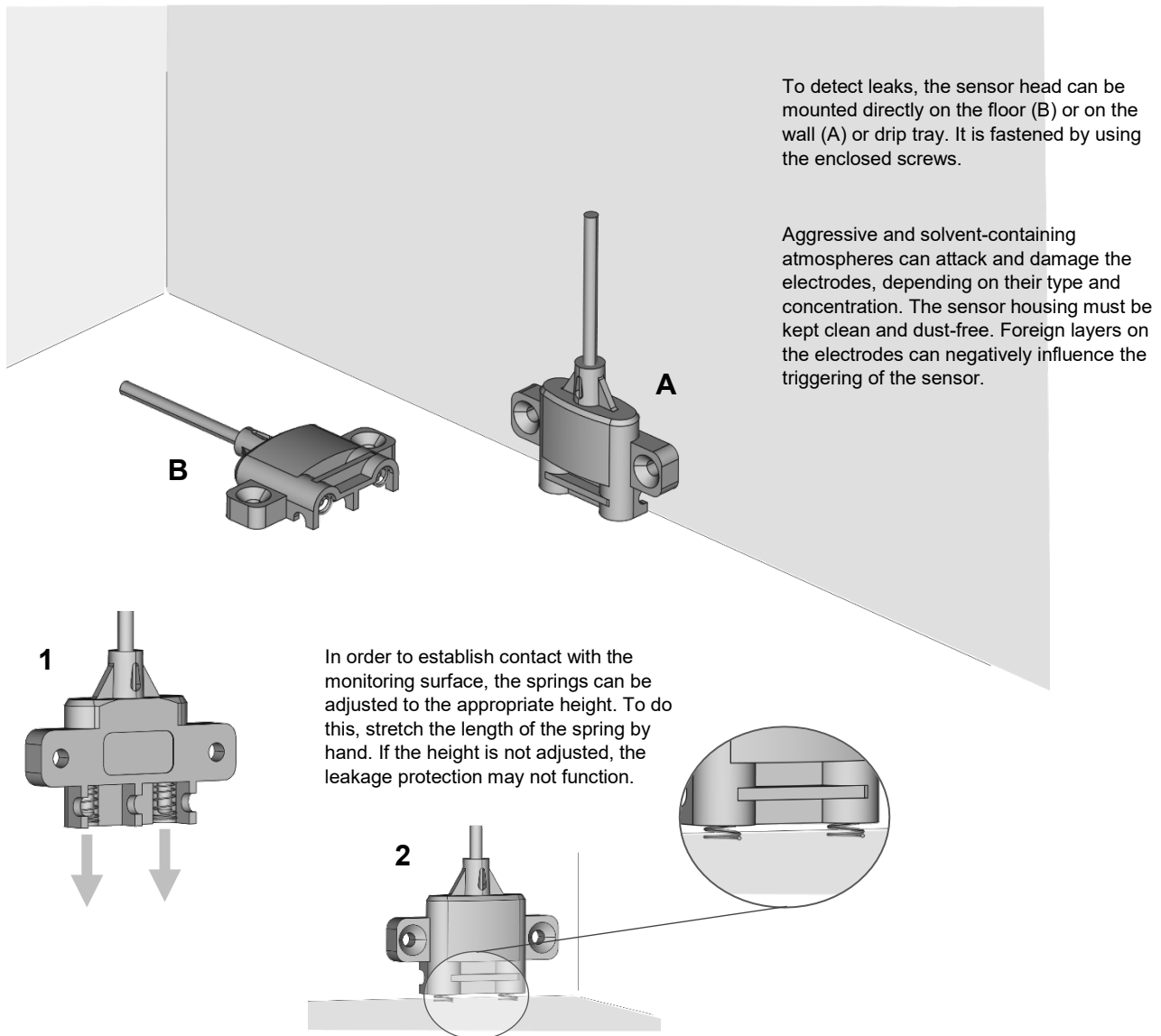## » PRODUCT TESTING AND CERTIFICATION

CE

**Declaration of conformity**

The declaration of conformity of the products can be found on our website https://www.thermokon.de/.

## » CONNECTION PLAN

The power supply must not be interrupted. If the leakage protection is not permanently supplied with power, a possible leakage cannot be detected.

**D1**   LED red - Leakage
**D2**   LED green - Powersupply OK

The layout of the relay contacts represents the operation status of „devices connected to power supply, no "Leakage". In this operating state, contacts 3 and 4 (relay NO and C) are connected to each other. Upon Leakage or when the operating voltage is switched-off, the relay falls off.



UB+   NO   NC
GND   UB+

▶ Relay NC
◀ Relay C (common)
▶ Relay NO
◀ GND
◀ UB+ 24 V

## » MOUNTING ADVICE

To detect leaks, the sensor head can be mounted directly on the floor (B) or on the wall (A) or drip tray. It is fastened by using the enclosed screws.

Aggressive and solvent-containing atmospheres can attack and damage the electrodes, depending on their type and concentration. The sensor housing must be kept clean and dust-free. Foreign layers on the electrodes can negatively influence the triggering of the sensor.

**A**

**B**

**1**

In order to establish contact with the monitoring surface, the springs can be adjusted to the appropriate height. To do this, stretch the length of the spring by hand. If the height is not adjusted, the leakage protection may not function.

**2**

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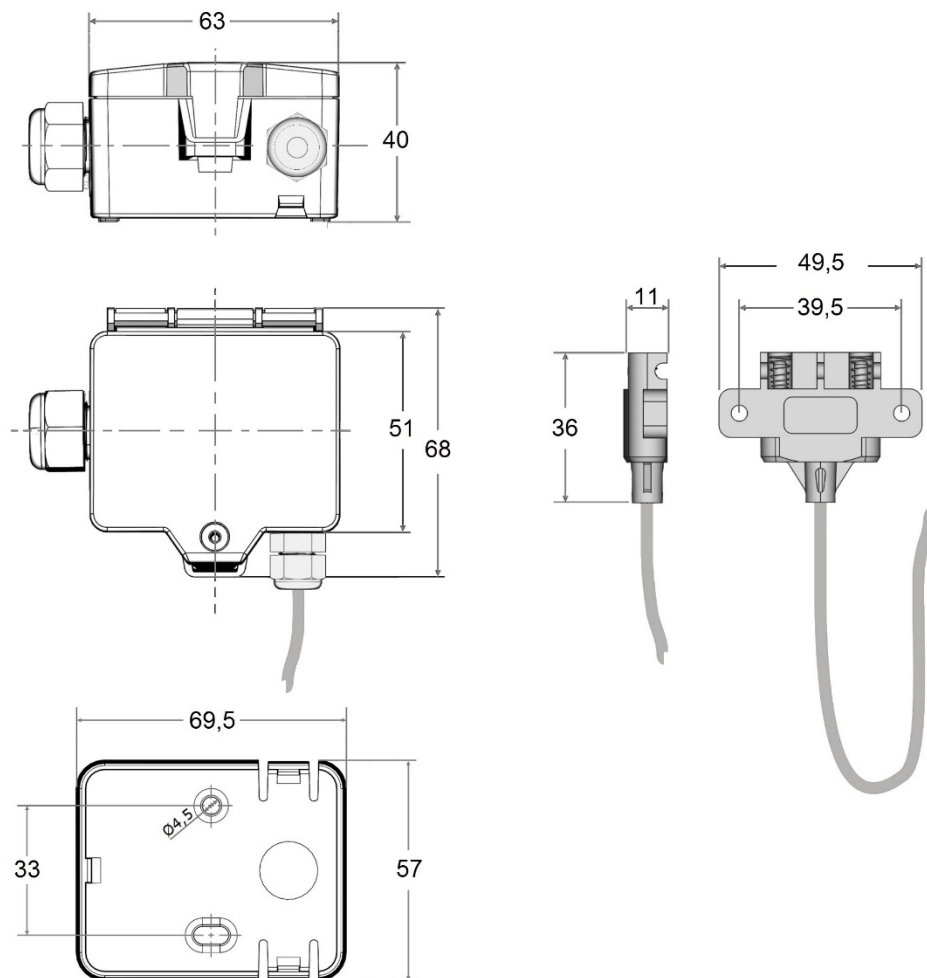## » MAINTENANCE/INSPECTION

▶ Carry out a functional check at least once a year. Short-circuit the sensor electrodes and check the switching process of the relay.

▶ If heavily soiled, disassemble and clean the sensor housing.

▶ After a leakage, the sensor must also be tested again for function.

## » DIMENSIONS (MM)



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## » ACCESSORIES (INCLUDED IN DELIVERY)

Mounting base enclosure USE pure white                                                    Item No. 616430
Mounting kit universal                                                                    Item No. 698511
• Cover screw + screw cover• 2 Rawlplugs • 2 Screws (countersunk head) • 2 Screws (rounded head)

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## » ACCESSORIES (OPTIONAL)

Sealing insert M20 USE white, 2x Ø=7 mm (for 2 wire; PU 10 pieces)                        Item No. 641333

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