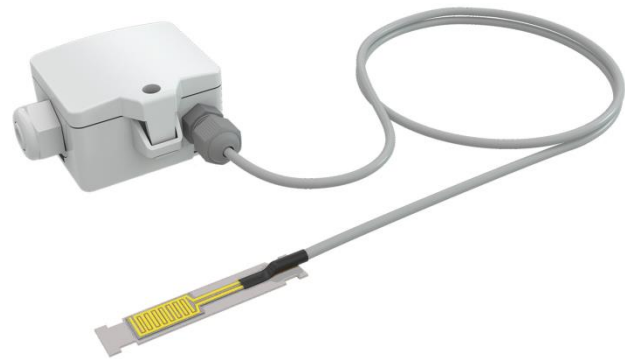


### Datasheet

Subject to technical alteration  
Issue date: 03.04.2018 • A002



### Application

Condensation sensor with LED signal designed to provide a switched output signal to prevent condensation on chilled surfaces such as chilled beams. With signaling LED and relay contact for control and monitoring applications or for series connection with the cooling valve in order to interrupt the cooling water flow directly at the beginning of condensation.

### Types Available

#### Condensation sensor – 24 V

WK01+ ext. 24 V L2000

### 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.

## Build-up of Self-Heating by Electrical Dissipative Power

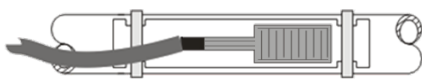
Temperature sensors with electronic components always have a dissipative power, which affects the temperature measurement of the ambient air. The dissipation in active temperature sensors shows a linear increase with rising operating voltage. This dissipative power has to be considered when measuring temperature. In case of a fixed operating voltage ( $\pm 0,2$  V) this is normally done by adding or reducing a constant offset value. As Thermokon transducers work with a variable operating voltage, only one operating voltage can be taken into consideration, for reasons of production engineering. Transducers 0..10 V / 4..20 mA have a standard setting at an operating voltage of 24 V =. That means, that at this voltage, the expected measuring error of the output signal will be the least. For other operating voltages, the offset error will be increased by a changing power loss of the sensor electronics. If a re-calibration should become necessary later directly on the sensor, this can be done by means of a trimming potentiometer on the sensor board.

**Remark: Occurring draft leads to a better carrying-off of dissipative power at the sensor. Thus temporally limited fluctuations might occur upon temperature measurement.**

## 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 = ( $\pm 10\%$ ) or 24 V ~ ( $\pm 10\%$ )
Power consumption	typ. 0,8 W (24 V =)   1,6 VA (24 V ~)
Display	LED green – power supply OK, LED red – condensation
Enclosure	enclosure USE-S, PC, pure white, with removeable cable entry
Protection	IP65 according to EN 60529
Cable entry	M20 for cable max. $\varnothing=8$ mm
Connection electrical	removable plug-in terminal, max. 2,5 mm <sup>2</sup>
Ambient condition	-20..+60 °C, max. 85% rH short term condensation
Delivery content	1x syringe with terminal contact fluid
Notes	with external sensor (PVC, diameter 0,25 mm <sup>2</sup> , L=2 m)

## Mounting Advice



A

For detection of water condensation, the sensor must be mounted on the coldest point of the medium. Please ensure a good thermal contact to the measuring medium. A thermal connection between sensor and medium with heat conducting paste is necessary. Mounting effects by means of included cable ties (binders). Mounting can be made directly on a pipeline.



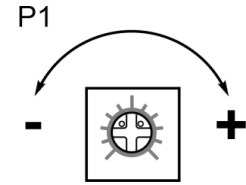
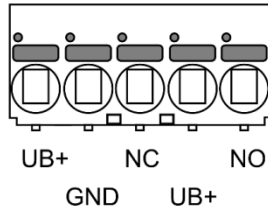
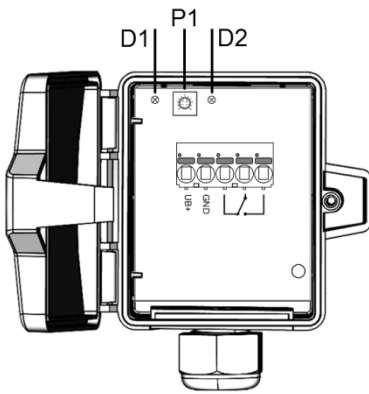
B

The sensor surface may be damaged by an aggressive and solvent-contaminated ambient. Always keep the sensor clean and free of dust and dirt. A dirt film may affect the sensor's switching characteristic.

Note the mounting side of the metal strip (see the figure A).

In order to avoid dust deposits, the sensor should be installed at the bottom of the pipe if possible (see the figure B).

## Connection Plan

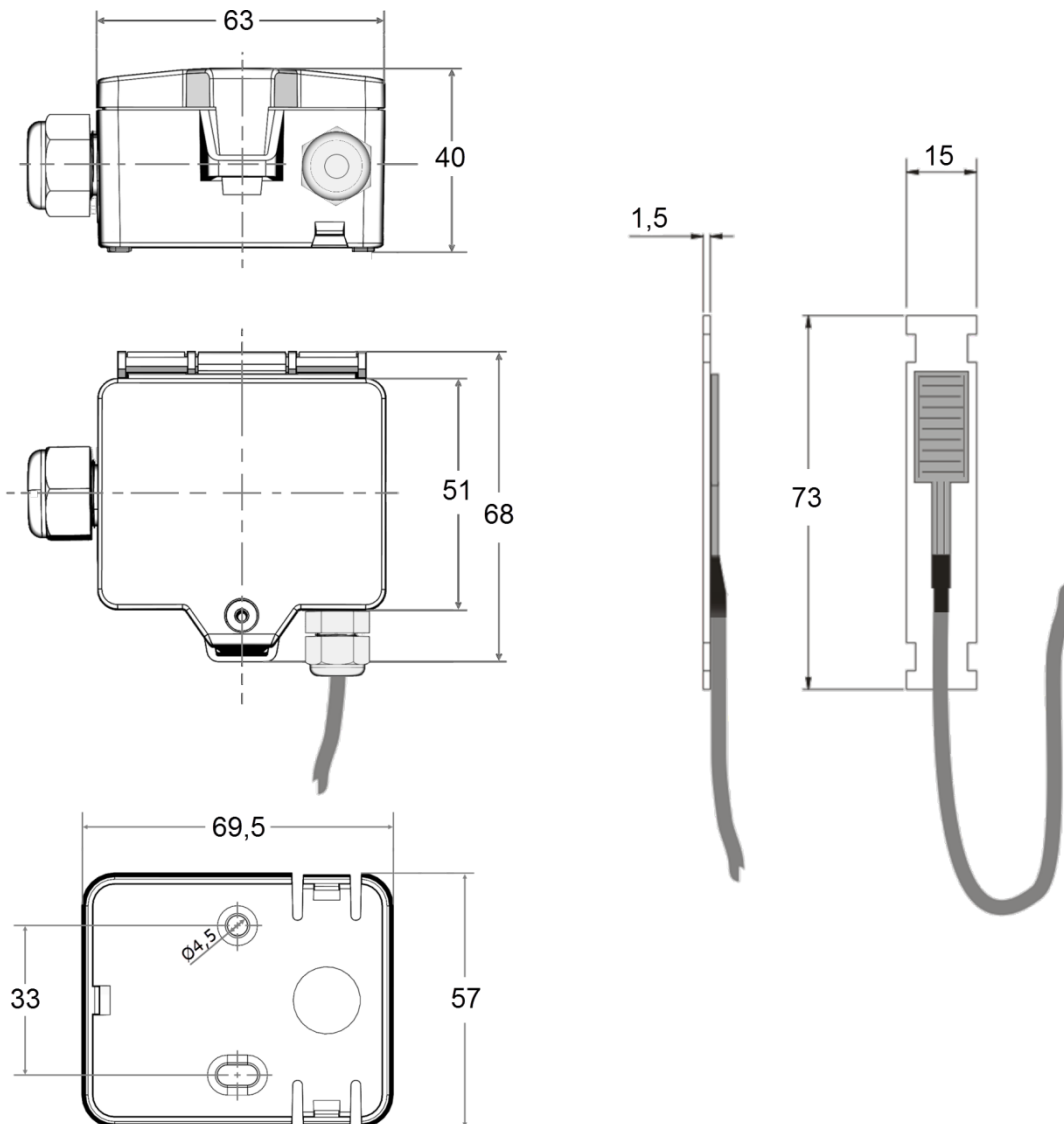


<b>D1</b>	LED red – dew permeation
<b>D2</b>	LED green – power supply OK
<b>P1</b>	Potentiometer for adaption of break-over-point + = more sensible - = less sensible

<b>1</b>	UB+ 24 V
<b>2</b>	GND
<b>3</b>	Relay NC
<b>4</b>	Relay C (common)
<b>5</b>	Relay NO

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

## Dimensions (mm)



### Accessories (included in delivery)

Mounting base enclosure USE pure white	Item No. 616430
Cable ties 140x3,6 mm	Item No. 007610
Syringe with terminal contact fluid	Item No. 102308
Mounting kit universal	Item No. 698511
• Cover screw + screw cover • 2 Rawlplugs • 2 Screws (countersunk head) • 2 Screws (rounded head)	

### Accessories (optional)

#### M20 Sealing inserts cable entry (packaging unit 10 pcs.)

for wire with Ø	2x6 mm	2x7 mm	6 mm	8 mm
Item No	641319	641333	641074	641081