

# WK01+ ext. 24 V

Condensation detector

**thermokon**<sup>®</sup>  
HOME OF SENSOR TECHNOLOGY

## Datasheet

Subject to technical alteration

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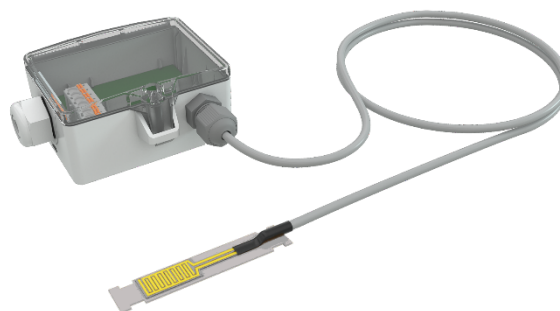


Illustration similar

### » 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

### » PRODUCT TESTING AND CERTIFICATION



#### Declaration of conformity

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

## » 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, cover PC, transparent, with removable cable entry
Protection	IP65 according to EN 60529
Cable entry	Flextherm M20, for wire $\varnothing=4,5..9$ mm, removable
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)

## » USE ENCLOSURE WITH UV AND WEATHER RESISTANCE

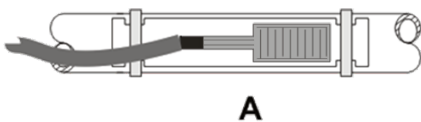
After some time, outdoor mounted plastics can lose their color and quality. Therefore, all USE housings are made of special white polycarbonate (PC). The light-stable colorants and additives are used to achieve optimum protection of the polymer while maintaining color stability. The titanium dioxide 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.

## » 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.

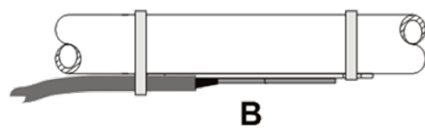
## » MOUNTING ADVICE



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.

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.



B

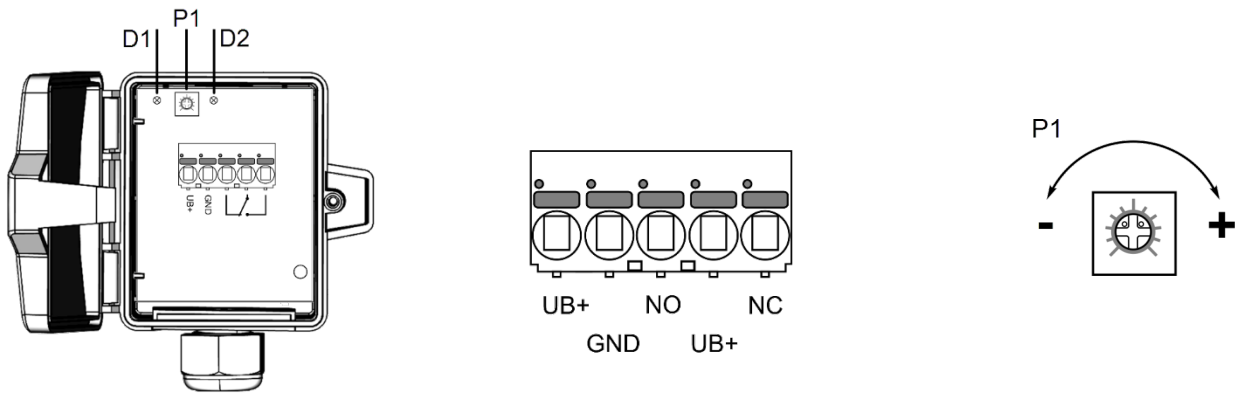
Note the mounting side of the metal strip (see the figure A). In order to avoid dust deposits, the sensor should be installed at the bottom of the pipe if possible (see the figure B).

## » APPLICATION NOTICE



After a certain time, dirt in the air can collect on the sensor and then adversely affect the operation of the sensor. Under normal ambient condition an annual maintenance is recommended. Rinse the sensor after cleaning with distilled water and dry it using clean oil-free air or nitrogen.

» CONNECTION PLAN

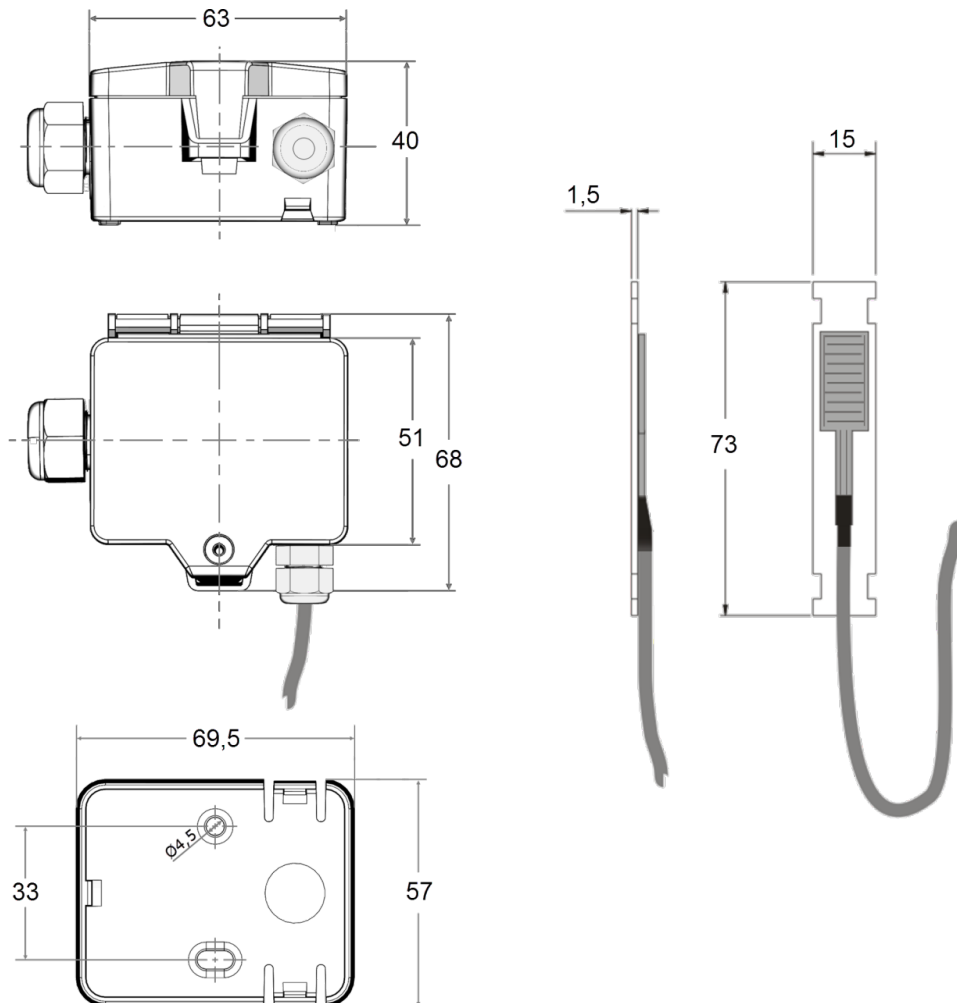


<b>D1</b>	LED red – dew permeation
<b>D2</b>	LED green – power supply OK
<b>P1</b>	Potentiometer for adaption of break-over-point + = higher switching threshold (higher condensation) - = lower switching threshold (less condensation)

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

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 NO 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)

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**» ACCESSORIES (OPTIONAL)**

Sealing insert M20 USE white, 2x Ø=7 mm (for 2 wire; PU 10 pieces)

Item No. 641333