» OF14+

Contact temperature sensor

thermokon®
HOME OF SENSOR TECHNOLOGY

Datasheet

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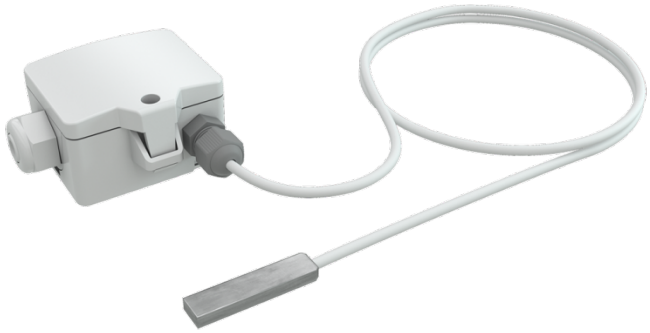


»APPLICATION

Sensor for temperature measurement on glass surfaces or similar. Designed for control and monitoring applications.

»TYPES AVAILABLE

Contact sensors 0..+50 °C – active 0..10 V | 4..20 mA

OF14+ TRV3 MultiRange L1000
OF14+ TRA3 MultiRange L1000

»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 (±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	temperature		
Output voltage	**TRV** 1x 0..10 V or 0..5 V, configurable via jumper, min. load 5 kΩ		
Output ampere	**TRA** 1x 4..20 mA, max. load 500 Ω		
Power supply	**TRV** 15..24 V = (±10%) or 24 V ~ (±10%) SELV	**TRA** 15..24 V = (±10%) SELV	
Power consumption	**TRV** typ. 0,4 W (24 V =) | 0,8 VA (24 V ~)	**TRA** typ. 0,5 W (24 V =)	
Output signal range temp. *Scaling analogue output	**TRV | TRA** default setting: 0..+50 °C selectable from 8 temperature ranges -50..+50 | -20..+80 | -15..+35 | -10..+120 | 0..+50 | 0..+100 | 0..+160 | 0..+250 °C, adjustable at the transducer		
Operating temperature range * Max. permissible operating temperature	**sensor pocket** -35..+70 °C	**enclosure** -35..+70 °C	**mounting base** -35..+90 °C
Accuracy temperature	±0,5 K (typ. at 21 °C within default measuring range)		
Enclosure	enclosure USE-S, PC, pure white		
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, connection wire PVC, 2x Ø=0,25 mm², grey, 1 m (default), 2 m, 4 m, 6 m, for other lengths please request		
Pocket	aluminium, dimensions: 35x10x6 mm		
Ambient condition	max. 85% rH short term condensation		
Mounting	Sensor attachment with double-sided adhesive tape (acrylic adhesive)		
Notes	other cable lengths on request		

» PRODUCT TESTING AND CERTIFICATION

CE

Declaration of conformity

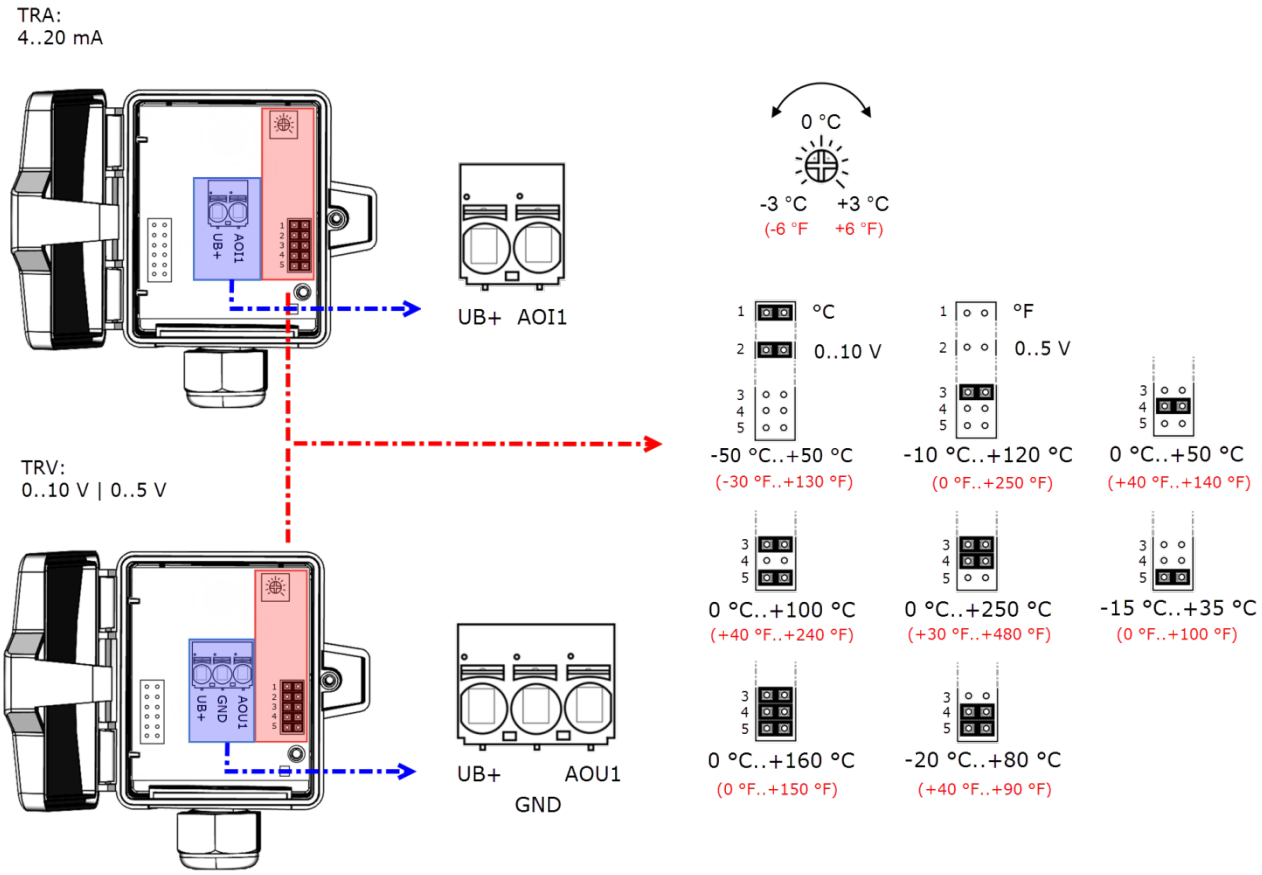
The declaration of conformity of the products can be found on our website https://www.thermokon.de/.

»MOUNTING ADVICES

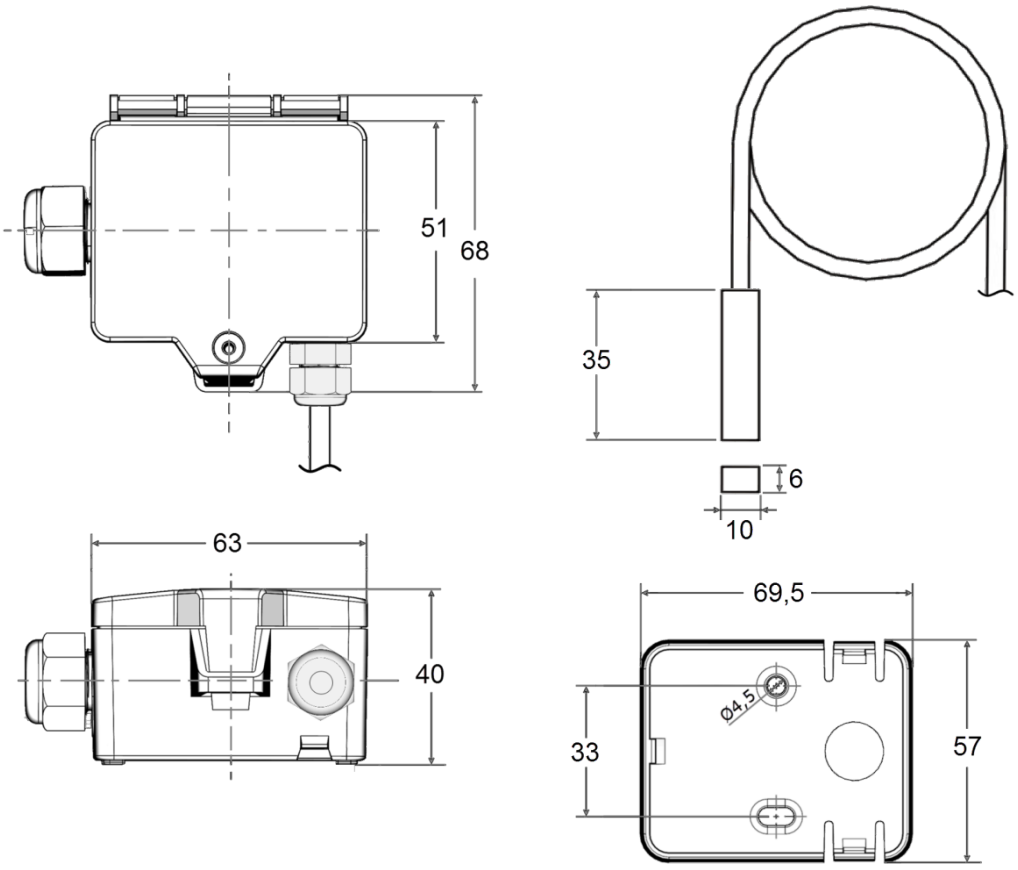
The OF14 + sensor is e.g. glued on the inside of windows to detect the internal pane temperature and to regulate the climate so that no condensation occurs. For use on flat surfaces, the acrylic adhesive is applied to the sensor surface (double-sided adhesive tape with protective foil).

»CONNECTION PLAN AND CONFIGURATION

The adjustment of the measuring ranges is made by changing the jumpers in a de-energized state. The output value of the new measuring range is available after 2 seconds. *Fig. (Measuring range and offset adjustment, default settings: 0 °C..+50 °C | 0 K)*



» DIMENSIONS (MM)



» ACCESSORIES (INCLUDED IN DELIVERY)

Mounting base enclosure USE pure white	Item No. 667722
Mounting kit universal	Item No. 698511

• Cover screw + screw cover• 2 Rawlplugs • 2 Screws (countersunk head) • 2 Screws (rounded head)

» ACCESSORIES (OPTIONAL)

Mounting clip enclosure USE-S pure white	Item No. 667739
Sealing insert M20 USE white, 2x Ø=7 mm (for 2 wire; PU 10 pieces)	Item No. 641333