RDF-IR

Ceiling sensor surface temperature

thermokon®
HOME OF SENSOR TECHNOLOGY

Datasheet

Subject to technical alteration
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Illustration similar

» APPLICATION

Ceiling flush-mounted sensor for surface temperature measurement in room, office spaces and other workplaces. Using the infrared measuring principle, an averaged temperature over the circular detection range (optical detection range 80 ±5°) is performed. If two IR sensors are used, the mean, minimum or maximum value of both temperature signals can be provided in addition to the individual temperatures of each sensor (configurable via Thermokon USEapp).

» TYPES AVAILABLE

Ceiling flush mount sensor temperature – active 0..10 V | 4..20mA

- RDF-IR V L1500
- RDF-IR A L1500

Ceiling flush mount sensor temperature – active 2x 0..10 V | 2x 4..20 mA

- RDF-IR VV L1500
- RDF-IR AA L1500

Ceiling flush mount sensor temperature – active 2x 0..10 V + Relay

- RDF-IR VV L1500 Relay

» 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



The crossed-out wheelie bin symbol indicates that the product or removable batteries must not be disposed of with household or commercial waste. Within the EU, you are legally obliged to dispose of the product separately and appropriately in accordance with the national laws of your country. Alternatively, please contact your supplier or Thermokon Sensortechnik GmbH. Further information can be found at: www.thermokon.com

» PRODUCT TESTING AND CERTIFICATION

CE

Declaration of conformity
The declaration of conformity of the products are available on our website
https://www.thermokon.de/direct/en-gb/categories/rdf-ir

» TECHNICAL DATA

Measuring values	surface temperature	
Output voltage	1x/2x 0..10 V or 0..5 V (adjustable via jumper; live-zero configuration via Thermokon USEapp), min. load 10 kΩ	
Output ampere *(type-dependent)*	**A | AA** 1x/2x 4..20 mA, max. load 500 Ω	
Output switch contact *(type-dependent)*	**Relay** 2x floating contact NO for 24 V ~ or 24 V = / 3 A	
Power supply *(type-dependent)*	**V | VV | Relay** 15..35 V = or 19..29 V ~ SELV	**A | AA** 15..35 V = SELV
Power consumption	typ. 0,6 W (24 V =) | 1,5 VA (24 V ~)	
Output signal range temperature **Scaling analogue output*	0..+50 °C (default setting) selectable from 4 temperature ranges -40..+60 °C | 0..+50 °C | -20..+80 °C | -15..+35 °C adjustable at the transducer	
Operating temperature range ** Max. permissible operating temperature*	-20..+70 °C	
Accuracy Temperature	±0,5 K (typ.at 21 °C within default measuring range) mounting height max. 7 m, > 7m ± 1,5 K	
Sensor	PIR (passive infrared), optical aperture angle (50% sensitivity): 80 ±5° Emissivity = 1.0, other values on request	
Enclosure	enclosure USE-M, PC, pure white	
Protection	IP30 according to EN 60529	
Cable entry *(type-dependent)*	**V(V) | A(A)** Flextherm M20, for wire Ø=4,5..9 mm, removable	**Relay** M25 with fourfold cable entry for wire with max. Ø=7 mm, removable
Connection electrical	removable plug-in terminal, max. 2,5 mm², sensor wire length=1,5 m (default), max. 10 m, plug RJ45	
Ambient condition	max. 85% rH short term condensation	

» CONFIGURATION

The Thermokon bluetooth dongle with micro-USB is required for communication between USEapp and USE-M / USE L (Item No.: 668262). Commercial bluetooth dongles are not compatible.

GET IT ON Google Play

Download on the App Store

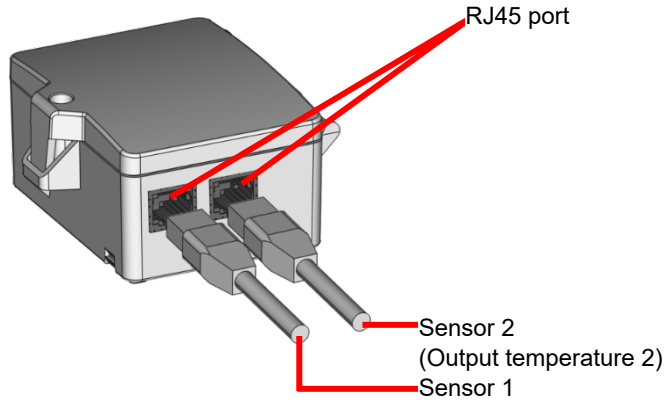
Application-specific reconfiguration of the devices can be performed using the Thermokon USEapp.
The configuration can be performed only when the device is powered

The configuration-app and the app description can be found in the Google Play Store or in the Apple App Store.

»APPLICATION NOTICE

The Bluetooth dongle snaps into the socket easily. When removing, please fix the plug-in card (option PCB) so that it is not unintentionally pulled out.
The ceiling flush mounted sensor is installed in a 26 mm diameter hole.

»APPLICATION

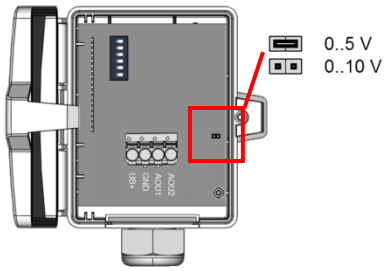


Basic version can be extended with additional temperature sensor.

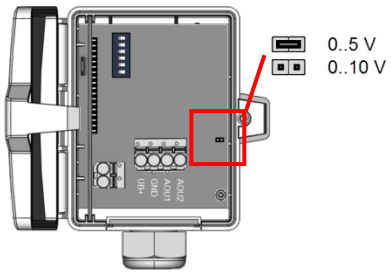
Connection with 2 sensors with a shielded cable with up to 10 m length possible.

»CONNECTION PLAN

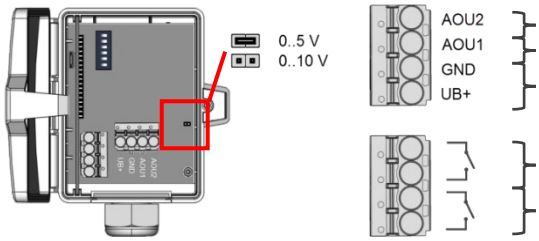
RDF-IR V | RDF-IR Dual VV



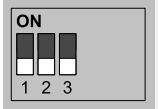
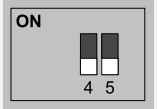
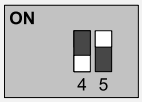
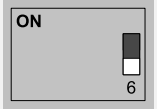
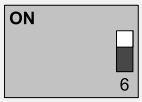
RDF-IR A | RDF-IR Dual AA



RDF-IR V Relay | RDF-IR Dual VV Relay

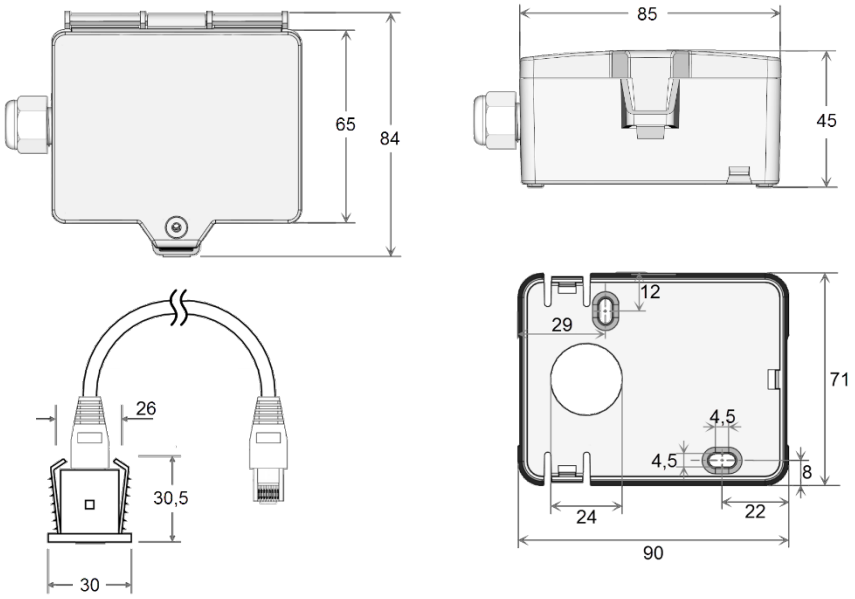


» DIP SWITCH CONFIGURATION

DIP 1..3	Measuring range temperatur – DIP 4 | 5 [SI / IMP]				System of units– DIP 6	
reserved	**OFF OFF**	ON OFF	OFF ON	ON ON	**OFF**	ON
						
0..+50	-20..+80	-40..+60	-15..+35 °C		**SI**	
+40..+140	0..+200	-40..+160	0..+100 °F			IMP

bold = factory default

» DIMENSIONS (MM)



» ACCESSORIES (INCLUDED IN DELIVERY)

Mounting base — Item No. 631228
Mounting kit universal — Item No. 698511
• Cover screw + screw cover• 2 Rawlplugs • 2 Screws (countersunk head) • 2 Screws (rounded head)

» ACCESSORIES (OPTIONAL)

Bluetooth dongle — Item No. 668262
Cable entry M25 USE white, sealing insert 4x Ø=7 mm (4 pcs) — Item No. 641364