# NOVOS 3 Occ Lum V-R

Room sensor with motion and luminosity sensors

thermokon®
HOME OF SENSOR TECHNOLOGY

## Data sheet

Subject to technical changes
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## »APPLICATION

The maintenance-free sensor provides the basis for a comfortable indoor climate and enhanced wellbeing. Typical applications include schools, office buildings, hotels, and cinemas. The device can be used for intelligent control of lighting and HVAC systems based on occupancy and ambient conditions. Threshold values can be individually configured via the Thermokon NOVOSapp.

## »TYPES AVAILABLE

**Room sensor – active**

- NOVOS 3 Occ Lum V-R

## »INTENDED USE

Room sensor for acquiring measured values of the sensor-specific parameters. It must not be used in conjunction with devices that serve, directly or indirectly, health- or life-safety purposes, or whose operation may pose a risk to people, animals, or property.

**The device is intended solely for its intended use. Unauthorized modifications or alterations are prohibited!**

## »SAFETY NOTICE – CAUTION

The installation and mounting of electrical devices may only be carried out by an authorized qualified electrician.
Devices with a power supply connection may only be connected when the supply line has been disconnected from the power source.

The following must also be observed:

- Applicable laws, standards, and regulations
- The state of the art at the time of installation
- The device's technical data and operating instructions

## »PRODUCT COMPLIANCE

**Declaration of Conformity**
Explanations regarding the conformity of our products can be found on our website:
https://www.thermokon.de/direct/categories/novos-3

## »DISPOSAL NOTICE

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

## » TECHNICAL DATA

| | |
|---|---|
| **Housing** | PC V0, pure white, design cover (optional) |
| **Degree of protection** | IP20, according to DIN EN 60529 |
| **Ambient conditions** | -20..+60 °C, max. 85 % (non-condensing) |
| **Mounting** | Surface-mounted on a standard flush-mounted wall box (Ø = 60 mm) or screwed directly onto a flat surface. The housing base can be pre-mounted and wired separately from the housing cover. |
| **Measured values** | Motion, luminosity |

| | | |
|---|---|---|
| **Voltage output** | Luminosity, 0..10 V<br>Motion, potential-free NO contact for 24 V =/~, max. load 1 A (Ω) | |
| **Power supply** | 15..35 V = or 19..29 V ~ SELV | |
| **Power consumption** | **Relay energized**<br>Typ. 0,3 W (24 V =)<br>Typ. 0,7 VA (24 V ~) | **Relay de-energized**<br>Typ. 0,2 W (24 V =)<br>Typ. 0,6 VA (24 V ~) |
| **Electrical connection** | Tool-free spring clamp terminal, max. 1,5 mm² | |
| **Cable entry** | Rear-side opening, bottom-side knock-outs, and top-side drill marking. | |
| **Notes** | Configurable via software | |

### » Motion (Occ)

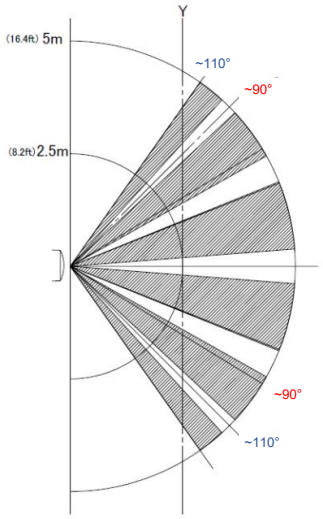
| | |
|---|---|
| **Sensor** | PIR (passive infrared) |
| **Delay time** | 120 s |

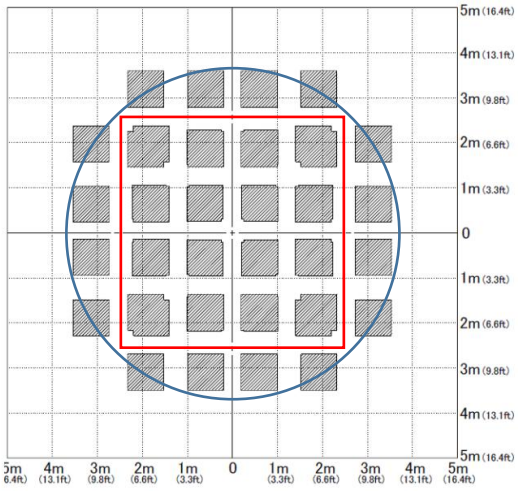
### » Luminosity (Lum)

| | |
|---|---|
| **Measuring range luminosity** | 0..1000 lux |
| **Accuracy luminosity** | ±5 % from the measured value, Field calibration via the BMS or controller required. |

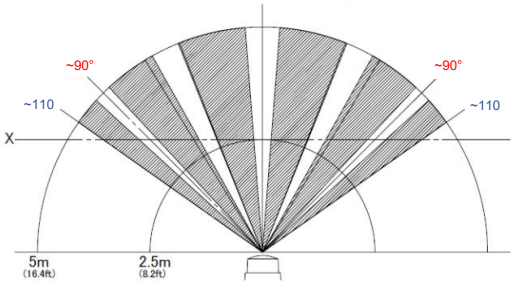
## » DETECTION AREA

| | |
|---|---|
| **Detection area** |  |
| **Range** | Max. 7 m |
| **Horizontal opening angle** | 89,4° |
| **Vertical opening angle** | 89,4° |
| **Measurement zones** | 32 |




X–Y Cross Section (2.5m)

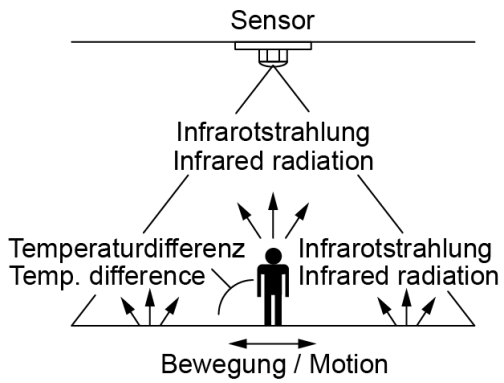



**Formula: tan (55) × Mounting height = Detection radius x**

**Formula: tan (46,5) × Mounting height = Detection radius y**

**Functional Test**
Perform a simple functional test to verify that movement is detected within the sensor's optical detection area. To do so, walk through the detection area and check whether a radio telegram has been transmitted.

## »FUNCTIONAL DESCRIPTION




This sensor detects changes in infrared radiation that occur when a person (or an object) moves and its temperature differs from the ambient temperature. The specified detection ranges are based on average conditions at a defined mounting height and should therefore be regarded as guideline values.
To avoid false triggering, the motion detector should not be installed near sources of heat interference such as lamps, radiators, fans, or similar devices. The detection range may vary significantly under changing temperature conditions.

| Object properties: | |
|---|---|
| Temperature difference<br>(between object and ambient temperature) | min. 4 °C |
| Speed | min. 0,3 to 1,0 m/s |
| Minimum object size | 700 × 250 mm |

## »MOUNTING ADVICE

The accuracy of the room sensors is influenced not only by their technical specifications but also by their positioning and method of installation.

**When installing the device, observe the following:**

- Seal the flush-mounted wall box (if present).
- The installation location, drafts, heat sources, radiant heat, or direct sunlight may affect the measured values.
- The construction-specific characteristics of the installation site *(e.g. brick, concrete, stud-partition, or cavity walls)* may affect the measured values.

**Installation is not recommended:**

- in areas exposed to drafts (e.g. near windows, doors, fans, etc.)
- in the immediate vicinity of heat sources
- in direct sunlight
- in niches or behind furniture

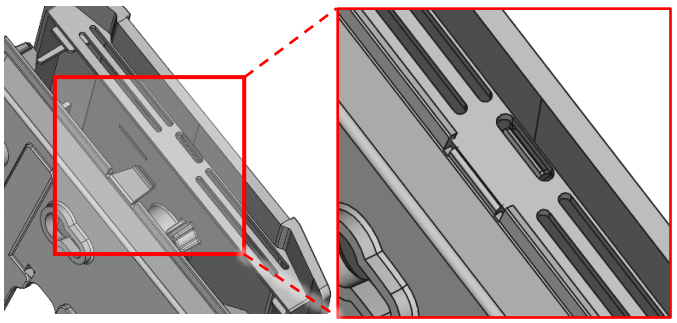
**Ensure that the device is disconnected from the power supply before installation.**

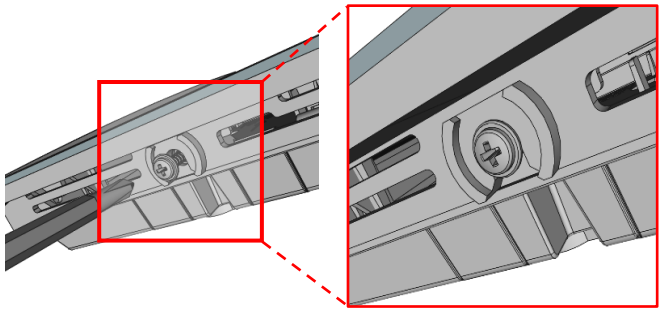
The device can be installed either on a flat wall surface or on a flush-mounted wall box. A representative location should be selected for the values to be measured. Direct sunlight and drafts, for example from installation conduits, must be avoided to prevent measurement errors. If necessary, seal the end of the installation conduit.

- For wiring, the device cover must be removed from the base plate. The base plate and cover are connected by releasable snap latches.
- Mount the base plate on a flat wall surface using wall plugs and screws.
- Finally, attach the device to the base plate and secure it with the screw.

**Opening and closing the housing**

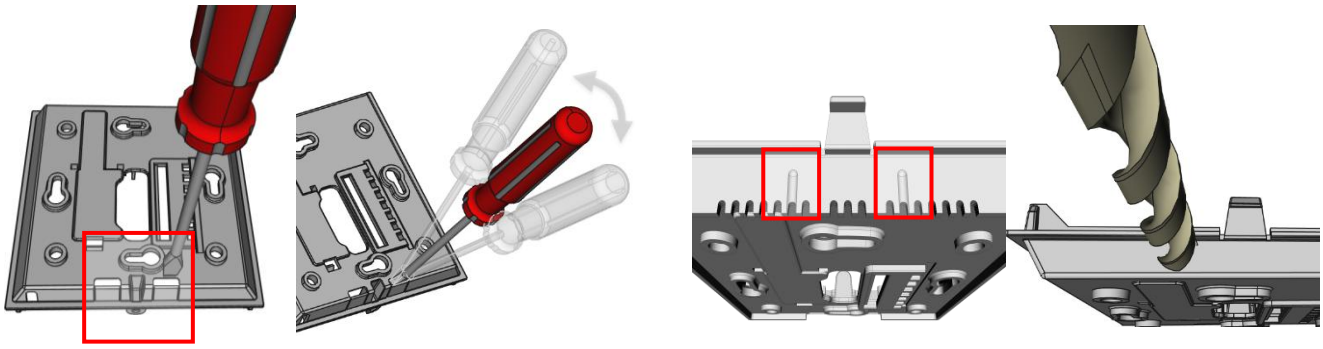
| Hook the upper part of the housing into the latch at the top. | Secure the lower part of the housing with the supplied screw. |
|---|---|





**Cable entry for surface mounting**

| The bottom side of the base plate features knock-out sections for two optional cable entries. | The top side of the base plate includes reference markings indicating drilling positions for holes with a max. Ø 6 mm. |
|---|---|



When using a drill, ensure that the base plate is securely clamped in place. Before drilling through, reduce the drilling pressure and continue drilling carefully to prevent chipping or cracking at the drill exit point.

## »WIRING DIAGRAM

**Room sensor – active**

**NOVOS 3 Occ Lum V-R**



7 |–C———— Relay
6 |–NO ———— Relay
5 |–n.c.
4 |–n.c.
3 |–AOU1 ——— (Luminosity)
2 |–GND——— 0 V⊥
1 |–UB+——— 15..35 V ⎓ / 19..29 V ∼ ⚠

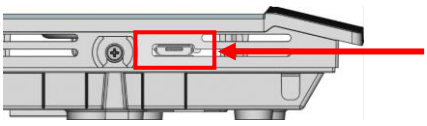
**For AC voltage, ensure correct polarity. Observe the technical data.**

## »CONFIGURATION

Configuration is performed while the device is powered. The following options are available for configuring the device:

| Connection to the device | Micro USB | Micro USB |
|---|---|---|
| Configuration adapter | Thermokon USB interface  | USB Bluetooth dongle   |
| Configuration software | PC/notebook with uConfig software<br>*Partial parameterisation via Thermokon uConfig software, via Thermokon USB interface* – Art.-No.: 597838.* | Smartphone/tablet with NOVOSapp<br>*Parameterisation using mobile devices via Bluetooth and NOVOSapp. A separately available Bluetooth dongle* is required for this purpose – Art.-No.: 668262.* |

**Commercially available Bluetooth dongles or USB-to-Micro-USB adapter cables are not compatible. You will need a mobile device that supports at least Bluetooth version 4.1. The configuration app and the corresponding instructions are available for download from the Google Play Store and the Apple App Store.*

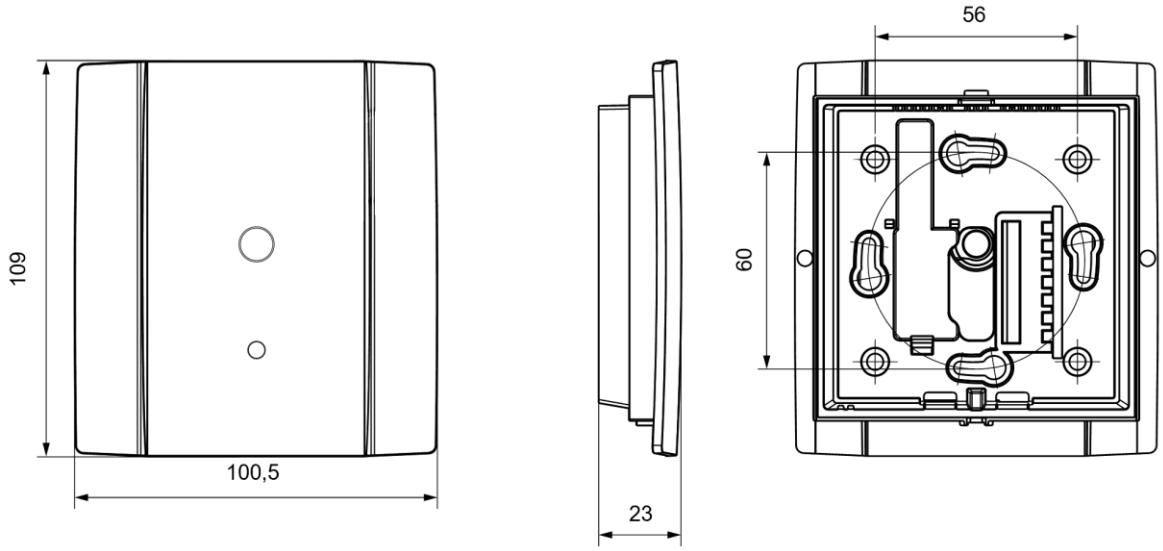


Location of the Micro USB port on the underside of the device for configuration using a Bluetooth dongle or Micro USB programming interface.

## »FURTHER DOCUMENTS

Assembly instructions:
https://www.thermokon.de/direct/alterra-base/mimes/get/10c26aed80543aee83

## »DIMENSIONS (MM)




## »OPTIONAL ACCESSORIES

| | |
|---|---|
| Wall plugs and screws (2 pcs. each) | Art.-Nr.: 102209 |
| PSU-UP 24 – flush-mounted power supply, 24 V (AC input: 100..240 V ~ \| DC output 24 V = 0,5 A) | Art.-Nr.: 645737 |
| NOVOS 3 surface-mounting base, white | Art.-Nr.: 795050 |
| NOVOS 3 surface-mounting base, black | Art.-Nr.: 795074 |
| | |
| Bluetooth dongle | Art.-Nr.: 668262 |
| Thermokon USB interface | Art.-Nr.: 597838 |