thermokon®

HOME OF SENSOR TECHNOLOGY

VIEW 2022

PRODUCT OVERVIEW

SENSORS MADE IN GERMANY

HOME OF SENSOR TECHNOLOGY

LEADER FOR A GOOD REASON

Since 1987, Thermokon is recognized worldwide for leveraging standards in intelligent buildings with engineering, innovation and quality “Made in Germany”. Thanks to the development and production of sophisticated sensors and sensor systems we are creating an additional benefit for our customers all over the world. We focus on efficiency, sustainability and openness to new fields of technology as well as a close cooperation and thorough dialogue with our clients.

As a leader for innovation with a broad scope of applications we are continuously developing our portfolio further and offer decisive benefits with regards to product-related values, customised solutions and engineering. Our complete range of products is designed to energy-efficient buildings.

Made in Germany – Home in the world. With these goals in mind, our highly motivated 240 employees are working for your requests every day.

» Clear focus on the best possible benefit for customers

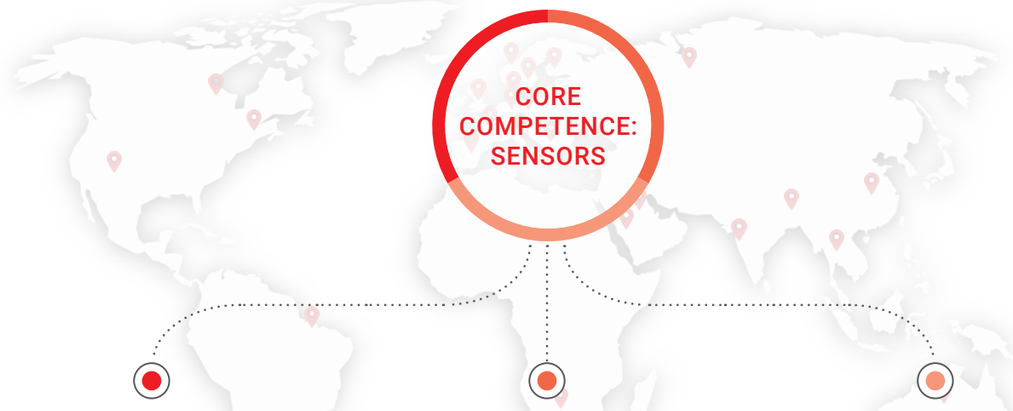
» Solution-oriented thinking and action

» Achieving highest available technology and quality standards

We are glad to count manufacturers, system integrators, controller firms as well as distributors of the HVAC industry and building automation among our clients.
Thanks to our success we are an A-supplier for various customers.

MADE IN GERMANY

A SUSTAINABLE AND ECONOMICAL PARTNERSHIP



APPLICATION KNOW-HOW
We know and understand your applications. Thus we also understand your challenges and can interact with you on the same level.

PROCESS KNOW-HOW
We anticipate your processes and make them more lean and efficient, enabling you to save time and money.

TECHNOLOGY KNOW-HOW
We have the required technical know-how to deliver you customised and efficient sensor solutions as well as services.

TEMPERATURE

TEMPERATURE

High-quality materials, modern production processes, and many years of experience: We produce temperature sensors for various applications in buildings for heating, refrigeration and air conditioning systems.

PRODUCT EXAMPLES

» NOVOS 3 Temp
Room Sensor

» RGS03
High Temperature
Duct Immersion Sensor

» AKF10+
Duct Sensor

» SFK(H)02+
Duct Immersion Sensor

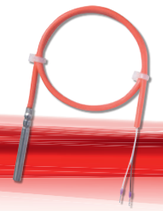
SENSOR PROTECTION: INNOVATIVE PRESSING AND ROLLING PROCESS

Ensuring the accuracy and reliability of our sensors is our highest priority. The proven **SI-Protection** for protection against corrosion damage, vibrations and measurement inaccuracies will be supported in future by the innovative **16-point segment pressing** or the optionally available **roller burnishing (protection class IP67).**

» 16-point pressed

» Roller burnished
(protection class IP67)

» RDF-IR (Dual)
Ceiling Sensor



» TF25
Cable Sensor

» VFG54+
Contact Sensor

» AGS55+
Outdoor Sensor

HUMIDITY

HUMIDITY

Humidity sensors for reliable detection of relative humidity and temperature in residential and commercial buildings, outdoor resp. in gaseous media of heating, ventilation and air conditioning systems.

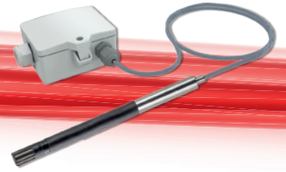
PRODUCT EXAMPLES

» FTK+
Duct Sensor

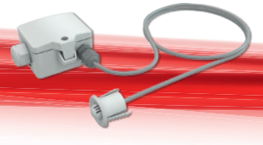
» NOVOS 5 rH LCD
Room Sensor with LCD

» NOVOS 3 rH
Room Sensor

» FTW06
Room Sensor

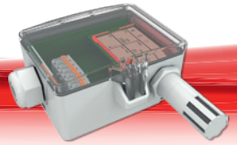


» FTP+
Ceiling Pendulum Sensor

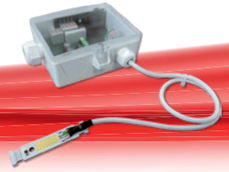


» FT-RDF18+
Ceiling Sensor

» FTB+
Wall-mounted Sensor



» FTA54+
Outdoor Sensor



» WK02+
Condensation Sensor

LEAKAGE SENSOR

Leakage sensor for the detection of liquid ingress (water leaks under air conditioners, pipe bursts...) With an electrolytic alternating voltage measurement, the leakage sensor measures point-like via 2 electrodes.

Thus, the leakage sensor detects water and liquid leaks along the entire sensor line. With a length of up to 30 m, even larger areas can be covered.

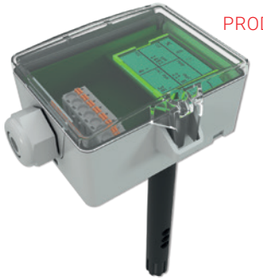
PRODUCT EXAMPLES

» LS02+ flex
Leakage Sensor

AIR QUALITY (CO2, VOC, Temp*, rH*)

CO2 and VOC sensors allow for individual and demand-controlled supply of fresh air. In modern buildings the use of these sensors is essential in creating energy savings and the comfort levels for everyday living and working conditions.

PRODUCT EXAMPLES



» LK+ CO2+VOC LCD
Duct Sensor

HIGH ACCURACY
DPA250+: only ± 1 Pa

» DPA+ Dual LCD
Differential Pressure and
Volume Flow Transducer

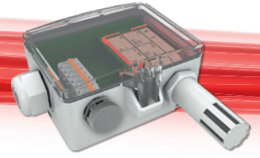
PRESSURE AND VELOCITY

Pressure and air flow sensors for cooling and air conditioning must resist extreme conditions. Therefore our products are customised to withstand even the harshest environments.

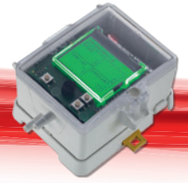
» NOVOS 5 CO2+VOC LCD
Room Sensor with LCD

» NOVOS 3 CO2+VOC TLF
Room Sensor

» WRF06 AQ TLF
Room Sensor



» LA+ CO2+VOC
Outdoor Sensor



» DPGe
Electr. Differ. Pressure manometer

» AVT
Air Flow Transducer

» PS
Differential Pressure Switch

» DLF
Pressure Transducer

*OPTION

LIGHT AND MOTION

Our intelligent sensing allows an increase in physical and emotional well-being of people in the room. Motion and brightness are detected reliably: For individual, comfortable and increased energy-savings.

1

» MDS
Ceiling Multi Sensor

2

» WRF04I
Surface Mount Room Motion Sensor

3

» WRF06I
Flush Mount Room Motion Sensor

4

» RDI
Ceiling Motion Sensor

» LDF+
Ceiling Light Sensor

» Li65+
Outdoor Light Sensor

ROOM OPERATING UNITS

ROOM OPERATING UNITS

Our room operating units are designed for an integrated operation of HVAC, lighting and blinds to increase energy efficiency. In addition, up to 4 measuring values can be read through one device: temperature, humidity, CO2 and VOC. A variety of precious designs and sophisticated state-of-the-art technologies are available.

» thanos EVO
Touch Room Operating Unit with Design Frame

NEW

PRODUCT EXAMPLES

» thanos EVO
Touch Room Operating Unit

» NOVOS Touch Design
Touch Room Operating Unit

» NOVOS 7 Design
Room Operating Unit

» JOY
Fancoil Thermostat
Room Thermostat

» NOVOS 5 x LCD
Room Operating Unit

» NOVOS 3 x
Room Operating Unit

» LCR Touch
Room Operating Unit

» LCF02 Touch
Touch Fancoil Controller

» WRF06 LCD
Room Operating Unit

» WRF07 P3T3D
Room Operating Unit

thanos EVO

NOVOS 7

NOVOS Touch

NOVOS 5 x Design LCD

NOVOS 3 x

NOVOS 5 Design LCD

NOVOS 3

ADVANTAGES AND HIGHLIGHTS

thanos EVO / NOVOS Touch

- Controlling room climate, lights and shutters
- Individually configurable scenes
- Up to four integrated sensors (temperature, relative humidity, CO2 and VOC)
- Clear visualization of values with trends and traffic light indication (TLF)
- 4,8” Touchscreen, glass surface
- Different enclosure colours available:
  thanos EVO: white, black
  Optionally available with design frames in brushed aluminum (silver, graphite, anthracite, gold)
  NOVOS Touch: white, black, aluminium
- Outputs: BACnet, KNX, LON, RS485 Modbus

NOVOS 7

- Controlling room climate, lights and shutters
- Individually configurable scenes
- Up to four integrated sensors (temperature, relative humidity, CO2 and VOC)
- Clear visualization of values with trends and traffic light indication
- 3,5” TFT display, push-and-rotary switch, four user defined buttons
- Different enclosure colours available (white, black, aluminium)
- Outputs: BACnet, KNX, LON, RS485 Modbus

NOVOS 5 x / 3 x

- Up to four integrated sensors (temperature, relative humidity, CO2 and VOC)
- Outputs: Passive, 0..10 V, 4..20 mA, BACnet, RS485 Modbus, KNX
- Setpoint adjuster, rotary switch and button with integrated RGB LED
- **NOVOS 3 x:**
  Available with EasySens® radio
- Different enclosure colours available (white, black, aluminium)
- Optionally available with RGB display and/or design cover (aluminium or black)

NOVOS 5 / 3

- Measuring of:
  Temperature, relative humidity, CO2 or VOC
- Outputs: Passive, 0..10 V, 4..20 mA, BACnet, RS485 Modbus, KNX
- **NOVOS 3:**
  Available with EasySens® radio
- Different enclosure colours available (white, black, aluminium)
- Optionally available with RGB display and/or design cover (aluminium or black)

passive | 0..10 V | 4..20 mA BACnet KNX LON Modbus

EASY CONFIGURATION VIA APP

Although every thanos EVO and NOVOS will come with a standard configuration that matches the majority of typical applications in room automation, the devices can be further customised with an individual configuration to suit also complex applications by means of the new app, which also simplifies the integration.

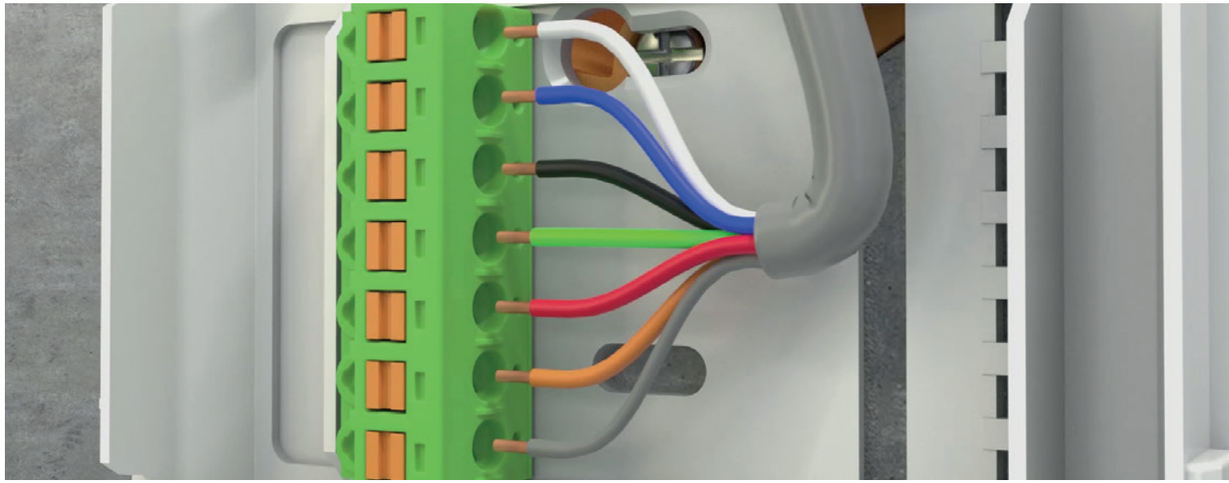
Additionally, each device can be customised post-integration to further extend the functionality to suit new requirements – from changing measuring ranges to configuration of displayed values (e.g. setpoints and fan stages), adjustment of offset values or adjusting thresholds for the traffic light indication.

The communication between the thanos EVO / NOVOS devices and a mobile end device is enabled by a Bluetooth® dongle, that is connected temporarily to the device.

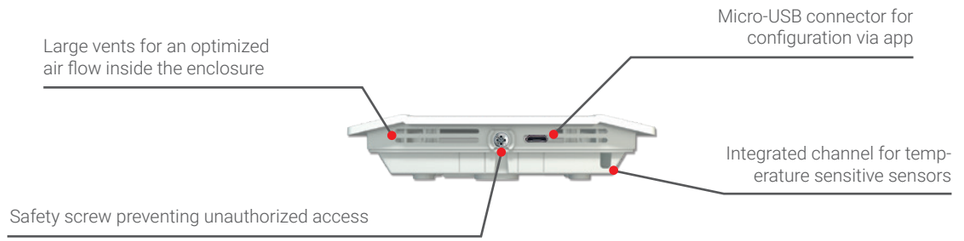
- Individual configuration of output signals
- Adjustment of display features and values
- Setting individual measuring ranges and maintenance intervals
- Parameterisation of live-zero signals (e.g. 1..10 V etc.)
- Subsequent setting of offset values to compensate external temperature influencing factors
- Modbus address offset (extendable up to 247 addresses)

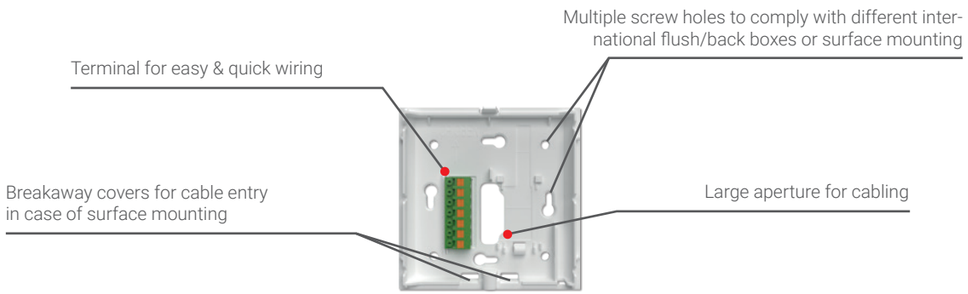
Download on the App Store

GET IT ON Google Play



HIGHLIGHTS





FAN COIL THERMOSTAT | ROOM THERMOSTAT

JOY FANCOIL

JOY HEATING/COOLING

JOY – MULTIFUNCTION WITH APPEALING DESIGN

Appealing design, touch sensitive operation, different communication options to adapt to all building infrastructures: JOY provides efficient and comfortable climate control in room applications.

The visual aspect equals a slimline housing, scratch-proof glass touch interface, exclusive stainless steel power button, large and clear backlit display.

The different models (BUS, standalone, wireless) and types provide flexible building infrastuctures meeting customer's requirements and integration into the existing BMS.

Human interaction and integration into the BMS, the JOY is easy to configure and control making it a JOYful experience for users as well as integrators to work with.

BACnet enocean Modbus

ONE PRODUCT – 5 OPTIONS

» **JOY FANCOIL 5DO**
5x normally open contact (for heating/cooling and 3x fan stages), 3x input (2x universal, 1x change-over 230 V)

» **JOY FANCOIL AO2DO**
2x normally open contact (heating/cooling),
1x 0..10 V output (for control of an EC fan),
3x input (2x universal, 1x change-over 230 V)

» **JOY FANCOIL 3AO**
3x 0..10 V output (for control of an EC fan or 6-way valve and for heating/cooling)

» **JOY HEATING/COOLING AO2DO**
2x normally open contact (for heating/cooling),
1x 0..10 V output (for 6-way valves)

» **JOY HEATING/COOLING 3AO**
3x 0..10 V output (for control of an EC fan and heating/cooling)

TECHNICAL HIGHLIGHTS

» Smart and flat high-quality design

» Various types provide high application flexibility

» Easy configuration

» Available with EasySens® radio

» Optional connection of an external temperature sensor for change-over applications

» Scheduler included for adapting to most different user profiles

» Integration into BMS (BACnet | EnOcean | Modbus)

» Integrated ECO function for high energy efficiency

FURTHER INFORMATION
THERMOKON.DE/EN-GB/HIGHLIGHTS/JOY

REALISATION OF FLEXIBLE AND INDIVIDUAL BUILDING AUTOMATION FOR NEW BUILDINGS AND RETROFIT PROJECTS

ADVANTAGES

» Cost savings due to Energy Harvesting:
Producing energy from the sensor environment

» Flexibility with sensor location – quick and easy mounting and commissioning

» Reduction of fire load – no need for wires

» Easy integration into existing buildings – no wiring

» High-end designs and direct mounting to all surfaces

» Compatibility to other manufacturers:
International Standard (IEC 14543-3-10)

» **airConfig:**
Convenient parameterisation of the devices using special remote commissioning commands

» **airScan:**
Field strength measuring system for evaluation and ideal placement of transmitters and receivers

EasySens®

The Self-Powered, Intelligent Wireless System

TRANSMITTERS

RECEIVERS (TRANSCEIVER)

TOOLBOX

airConfig

airScan

INTEROPERABLE SYSTEM INTEGRATION

BACnet · digitalSTROM · ETHERNET · KNX · LON LOCAL OPERATING NETWORK · Modbus

SR06 LCD

Stylish, compact, user-optimised – the self-powered room operating unit SR06 LCD enables a comfortable control of the room climate.

Besides displaying the actual room temperature it also allows for displaying the adjusted temperature setpoint and switching of lights and blinds (depending on the type).

SmartACK

TECHNICAL HIGHLIGHTS

» Energy self-powered thanks to Energy Harvesting Technology, no wiring and no batteries required

» Indication of actual temperature and setpoint temperature as well as room occupancy by means of the integrated display

» Adjustment of room temperature via function buttons

» Integrated temperature and humidity sensor (optional)

» Powerful energy storage system with very good energy balance

» Customised configuration options with airConfig

» Compatible with switch ranges of various manufacturers

MCS SR

NEW

The new MCS SR compact multi-sensors from Thermokon support the efficient automation of buildings. The small multi sensor can be mounted virtually everywhere and is connected through EnOcean wireless with the Building Management System (BMS).

Barely 15 cm in length and only 1 cm high, the slim sensors are ideal for an inconspicuous mounting on ceilings, walls or work desks. The enclosure, which is identical to the wireless window contact SRW03, ensures a consistent and homogeneous design. Besides the standard colours white and anthracite, the sensors can be painted in multiple other colours to match the installation spots to be as inconspicuous as possible.

TECHNICAL HIGHLIGHTS

» Variety of applications due to different types:
Occ – for detecting occupancy
Lum – for measuring luminosity
Temp/rH – for measuring temperature and humidity

» Long-lasting battery lifetime (up to 10 years)

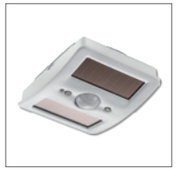
» Flexible positioning by means of adhesive pads or screws

» Standard colours: White, anthracite

» High design flexibility: Custom painting on request

enocean

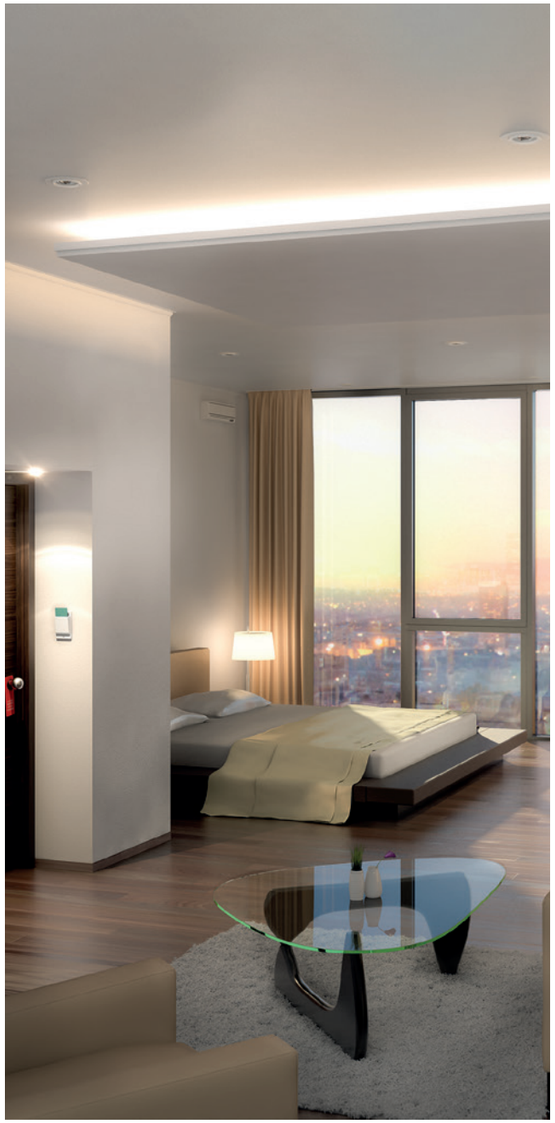
ROOM OPERATING UNITS
For temperature/humidity detection and integrated operation of HVAC, lighting and blinds.



LIGHT AND MOTION
For detection of light and motion in rooms (ceiling or wall mounting) or in outdoor areas.

SWITCHES
For control of lights and blinds. Available in switch programmes of different manufacturers.

WINDOW- / DOOR CONTACTS
For status monitoring of windows and doors.



EasySens® – PRODUCT EXAMPLES

TEMPERATURE
Temperature sensors for various applications in buildings. (e.g. heating, refrigeration and air conditioning systems).

HUMIDITY
For measurement of rel. humidity in rooms, ducts and outdoor areas. Also available with a combined temperature sensor.

GATEWAYS
For easy connection to common BUS systems (including BACnet, KNX, LON, RS485 Modbus).

ACTUATORS
Radio-controlled valve actuators and receivers for converting electrical signals.

ADVANTAGES AND HIGHLIGHTS

BACnet KNX LON Modbus

» High-resolution coloured display

» Application-specific, exchangeable inserts and cable entries

» Visualisation of device status and measured values using traffig light function (TLF)

» Modular platform consisting of base and option PCBs

» Threshold switch relays

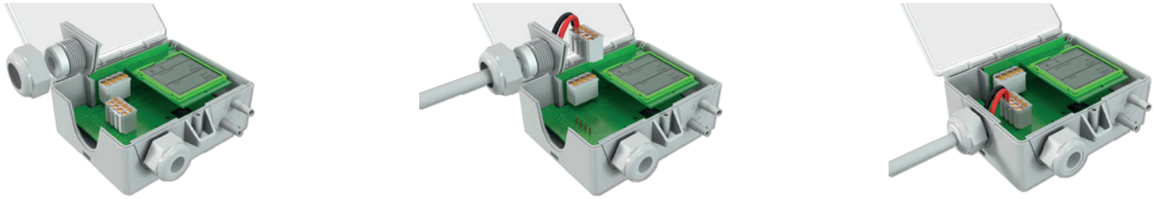
» Live-zero-signal (e.g. 1..10 V)

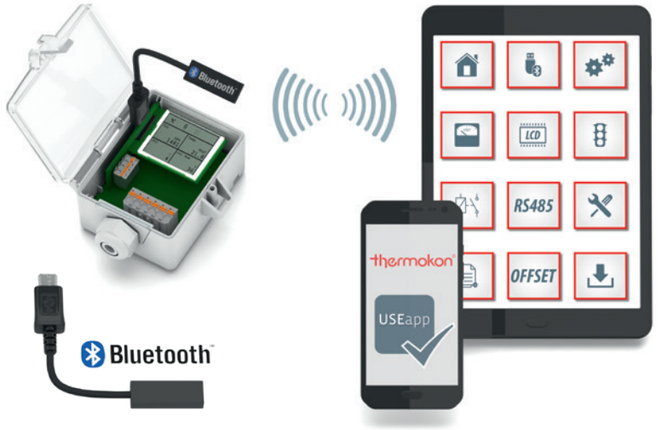
» Interfaces: BACnet, KNX, LON, Modbus

» Output signals 0..10 V and 4..20 mA

» Configuration via „USEapp" (Thermokon® APP)

Removable cable entry and plug-in terminal for easy pre-assembly:

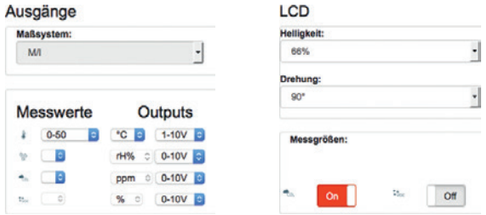




USEapp – FOR INDIVIDUAL CONFIGURATION

All „USEapp" based products are supplied with a fully functional standard configuration.

Via the „USEapp" it is possible to extend the range of use and to adapt the configuration individually to application requirements.



» Communication via Bluetooth® Low-Energy-Module (BLE)
» Individual configuration of output signals
» Setting of different measuring ranges

» Additional adjustment of offset values
» Parameterisation of Live-Zero-Signal (1...10 V etc.)
» Setting options for display indications
» Customised parameterisation of traffic-light function

» Setting of relay performance and thresholds
» Modbus address offset (extension)
» Possibility of firmware updates on-the-go (OTG)
» Adjustment of maintenance intervals

Download on the App Store

GET IT ON Google Play

Intelligent building technology requires a seamless communication between all components. When developing new solutions we take care, that our products are compatible with all common BUS systems to enable an easy interoperable system integration.

Modbus

Since its development in 1979 the Modbus protocol has become a standard in the industrial communication and plays an important role as an application pro-tocol for data transmission. As the Modbus TCP type, it had significantly advanced the Ethernet communication in the automation. The combination of manufacturer independent data visualization via Modbus and the universal network standard TCP/IP as well as Ethernet enable the open exchange of process data.

BACnet

The communication protocol BACnet, which is independent of manufacturers, is especially designed for applications in the building automation. The objective of BACnet is the allocation of uniform, non-committed standards for data communication. In Europe BACnet is represented by the BACnet Interest Group Europe (BIG-EU), the industrial association for the use of global BACnet standards according to ISO 16484-5. BACnet distinguishes itself by high transfer rates.

KNX

The KNX technology has established itself as a worldwide standard for all applications in the field of home and building system technology – from energy management, HVAC applications or security systems via lighting and shutter control up to the operation of household appliances and audio/video solutions. KNX is based on the installation tool ETS which is independent of manufacturers and products. ETS is equipped with a full set of transmission media as well as a configuration mode enabling an overall use.

LON

The idea of LON technology (Local Operating Network), a worldwide standardized communication and automation protocol, is the interoperability, a high application width and a comprehensive possibility of field applications enabling the realization of global building automation solutions. Data transmission is made directly from device to device. A central control system is not needed.

EasySens®

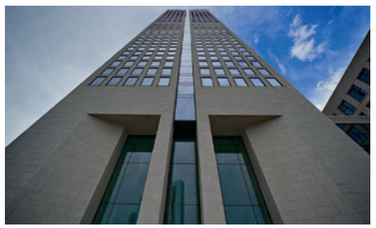
The use of innovative technology makes it possible: The wireless EnOcean based system EasySens® enables a networked building automation – self-powered, intelligent and maintenance-free. Thus, EasySens® offers best possible flexibility for realizing individual requirements in new buildings and refurbishments.

LoRaWAN®

Long Range Wide Area Network (short LoRaWAN®) is a radio technology that is capable of transmitting data over a long distance and even from remote and hard-to-reach locations in an energy-efficient, cost-effective and secure manner. Due to the low energy consumption, the batteries of the sensors are extremely durable and can last for several years. LoRaWAN® uses the so-called ISM frequency band around 868 MHz in Europe, for which no licence fees and no cellular costs are incurred. LoRaWAN® is heavily involved in the development of so-called „smart cities". In Germany for example, cities and municipalities in particular are building a sustainable and process-optimised infrastructure for building security and monitoring or controlling street lighting.

EUROPEAN CENTRAL BANK
FRANKFURT, GERMANY
MORE THAN 13.000 DEVICES

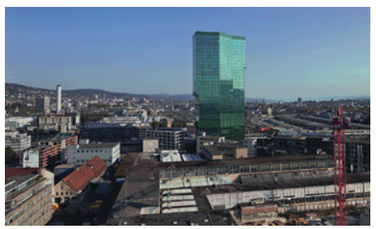
PRINCESS ELISABETH STATION
BELGIAN POLAR RESEARCH STATION,
QUEEN MAUD LAND, ANTARCTIC



OPERA TOWER
FRANKFURT, GERMANY

STADE ROLAND GARROS
TENNIS STADIUM, PARIS, FRANCE

SHELL GLOBAL HEADQUARTERS
THE HAGUE, NETHERLANDS



PRIME TOWER
ZURICH, SWITZERLAND

TOMSON RIVIERA APARTMENT TOWERS
SHANGHAI, CHINA

FONDATION LOUIS VUITTON
PARIS, FRANCE

INVESTMENT BANK SCHLESWIG-HOLSTEIN
KIEL, GERMANY

HAMAD INTERNATIONAL AIRPORT
DOHA, QATAR

SHEIKH ABDULLAH AL SALEM
CULTURAL CENTER, KUWAIT CITY

FAIRMONT HOTEL VIER JAHRESZEITEN
HAMBURG, GERMANY

UNIVERSITY OSLO
OSLO, NORWAY

GENERALI INSURANCE HEADQUARTERS
TRIESTE, ITALY

STATE OPERA
VIENNA, AUSTRIA

KONICA MINOLTA
MILAN, ITALY

thermokon®
HOME OF SENSOR TECHNOLOGY

CONTACT

Thermokon Sensortechnik GmbH
Platanenweg 1 | 35756 Mittenaar | Germany
Phone: +49 2778 6960-0 | Fax: +49 2778 6960-400
email@thermokon.de | www.thermokon.de

AUSTRIA
Thermokon Elektronik Components GmbH
Ausstellungsstraße 6 | 2020 Hollabrunn
Phone: +43 2952 50407-0
info@thermokon.at | www.thermokon.at

FINLAND
Thermokon Sensor Technology Finland OY
Edelfeltinkatu | 48200 Kotka
Phone: +358 45 230 7141
info@thermokon.fi | www.thermokon.fi

FRANCE
Thermokon Sensor Technology France S.A.S.
38 Rue des Mathurins | 75008 Paris
Phone: +33 6 40 16 62 25
contact@thermokon.fr | www.thermokon.fr

ITALY
Thermokon Sensor Technology S.r.l.
Via Giuseppe Mazzini 7 | 20030 Senago (MI)
Phone: +39 347 9679018 | Fax: +49 2778 6960-400
contatti@thermokon.de | www.thermokon.com

CHINA
Thermokon Automation Equipment Co. Ltd.
479 Chun Dong Road | Xin Zhuang Industry Park,
Building C-1, 2/Floor | 201108 Shanghai
Phone: +86 21 5176 0211 | Fax: +86 21 5176 0213
info@thermokon.asia | www.thermokon.asia

NETHERLANDS
Thermokon Sensor Technology Nederland B.V.
Rozenstraat 11 | 6361 HS Nuth
Phone: +31 65 05 5 61 99
email@thermokon.nl | www.thermokon.nl

SPAIN
Thermokon Sensor Technology Ibérica S.L.U.
Alfonso XII, 30 | 28014 Madrid
Phone: +34 621 006 027
info@thermokon.es | www.thermokon.es

SWEDEN
Thermokon-Danelko Elektronik AB
Girovägen 13 | 17562 Järfälla
Phone: +46 10 212 10 30
info@thermokon.se | www.thermokon.se

SWITZERLAND
Thermokon Sensortechnik Schweiz AG
Zürichstraße 46 | 8303 Bassersdorf
Phone: +41 447 5250-00 | Fax: +41 447 5250-01
email@thermokon.ch | www.thermokon.ch

HONG KONG
Thermokon Sensor Technology Ltd.
Flat 6, 21/F., Lucida Industrial Building
43, Wang Lung Street | Tsuen Wan | Hong Kong
Phone: +852 3628 3760 | Fax: +852 3628 3762
info@thermokon.asia | www.thermokon.asia