thermokon®

HOME OF SENSOR TECHNOLOGY

VIEW

PRODUCT OVERVIEW

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 250 employees are working for your requests every day.

» Clear focus on the best possible benefit for customers

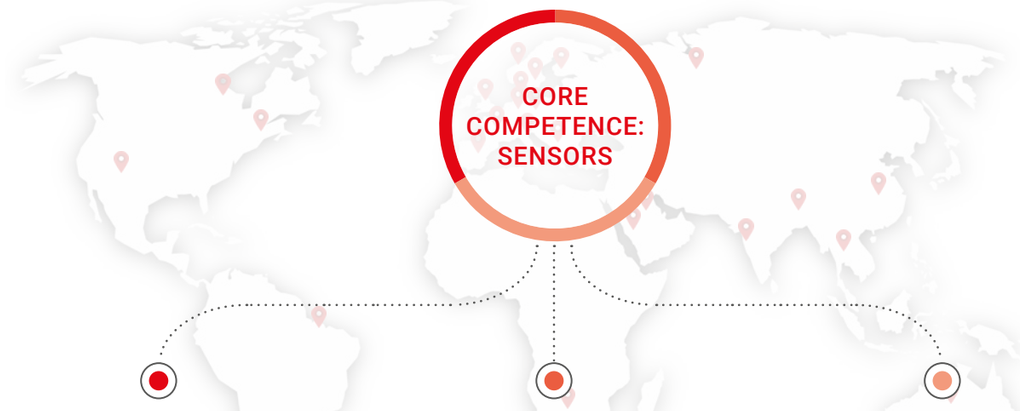
» Solution-oriented thinking and action

» 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 (IP65)** or the optionally available **roller burnishing (protection class IP67).**

» 16-point pressed (IP65)

» 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.

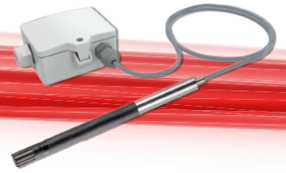
PRODUCT EXAMPLES

» FTK+
Duct Sensor

» NOVOS 5 rH LCD
Room Sensor with LCD

» NOVOS 3 rH
Room Sensor

» WRF06 rH
Room Sensor



» FTP+
Ceiling Pendulum Sensor

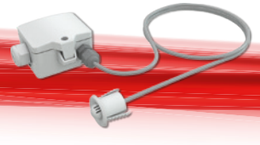
LEAKAGE SENSOR

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 two 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.

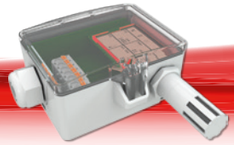
PRODUCT EXAMPLES

» LS02+ flex
Leakage Sensor

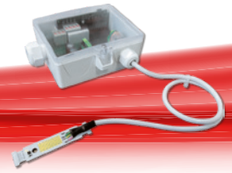


» FT-RDF18+
Ceiling Sensor

» FTB+
Wall-mounted Sensor



» FTA54+
Outdoor Sensor

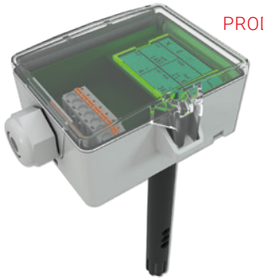


» WK02+
Condensation Sensor

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

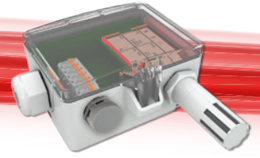
PRESSURE AND VELOCITY

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.

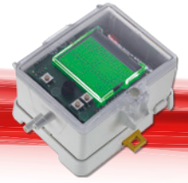
» NOVOS 5 CO2+VOC LCD
Room Sensor with LCD

» 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

enocean
KNX
LON
LOCAL OPERATING NETWORK
Modbus
BACnet

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 Design
Touch Room Operating Unit with Design Frame

PRODUCT EXAMPLES

» NOVOS 5 x LCD
Room Operating Unit

» NOVOS 3 x
Room Operating Unit

» thanos EVO
Touch Room Operating Unit

» NOVOS Touch Design
Touch Room Operating Unit

» NOVOS 7 Design
Room Operating Unit

» JOY
Fancoil Thermostat
Room Thermostat

» 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 LCD

NOVOS 3 x

NOVOS 5 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.

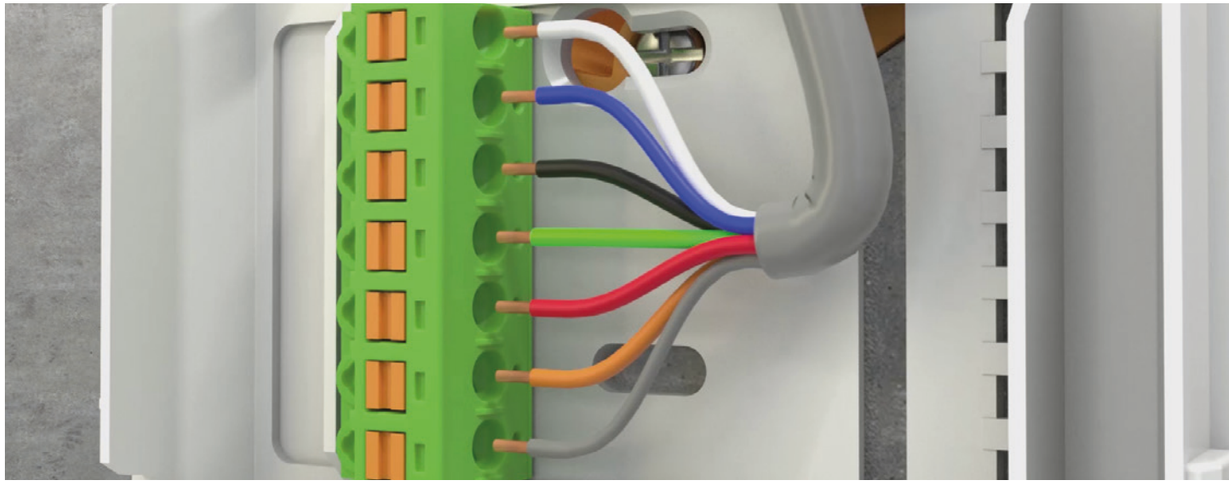
Additionally, each device can be customised post-integration to further extend the functionality to suit new requirements – from changing measuring ranges to configuration of displayed values (e.g. setpoints and fan stages), adjustment of offset values or adjusting thresholds for the traffic light indication.

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.

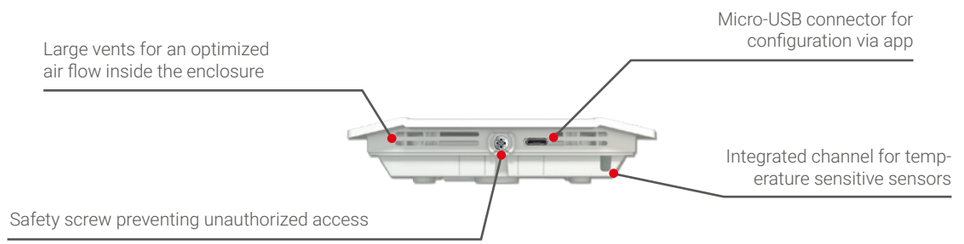
- Individual configuration of output signals
- Adjustment of display features and values
- Setting individual measuring ranges and maintenance intervals
- Parameterisation of live-zero signals (e.g. 1..10 V etc.)
- Subsequent setting of offset values to compensate external temperature influencing factors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

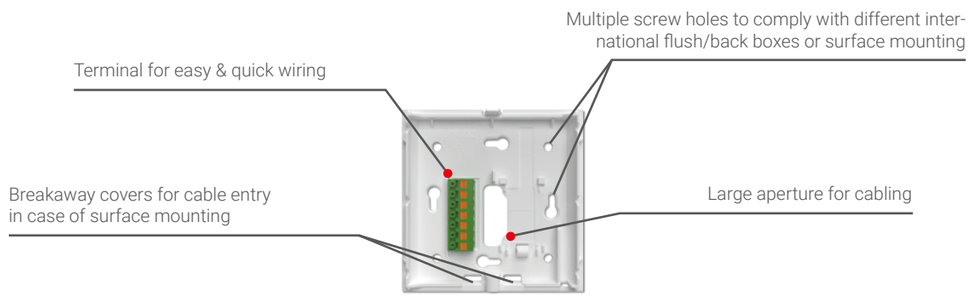
Download on the App Store

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

GENERAL INFORMATION

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.

In Switzerland, France and the Netherlands, telecommunications providers operate a nationwide network of gateways. In addition to the public networks, companies can also set up their own networks (private networks).

LoRaWAN®

STEP 1 – SENSOR:
Sensor value acquisition and bidirectional transmission

STEP 2 – GATEWAY:
Receiving and forwarding data

SYSTEM ARCHITECTURE: CLOUD

STEP 3 – NETWORK AND APPLICATION SERVER (CLOUD):
Network management and data routing

STEP 4 – APPLICATION:
Data processing through IoT platforms, e.g. visualisation (Datacake, etc.)

SYSTEM ARCHITECTURE: BMS

Network server integrated in gateway

Modbus
BACnet

STEP 3 – BUILDING MANAGEMENT SYSTEM (BMS):
Integration into building management systems e.g. via BACnet IP, Modbus TCP/IP, ...

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 ETHERNET KNX LON LOCAL OPERATING NETWORK Modbus