theben

Giving you flexibility
Optical sensor
thePixa KNX

GERMAN
INNO
VATION
AWARD '21
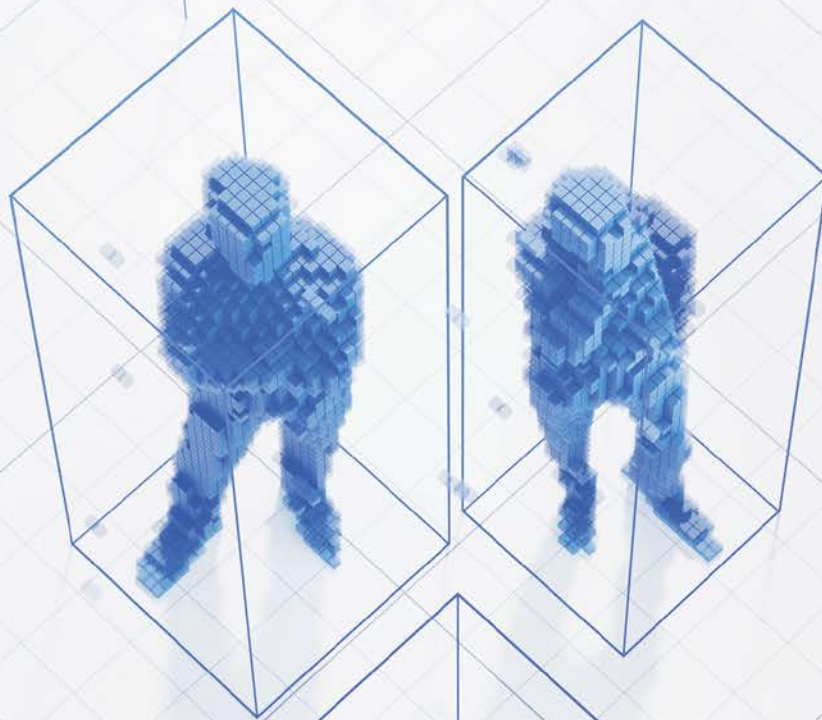GOLD
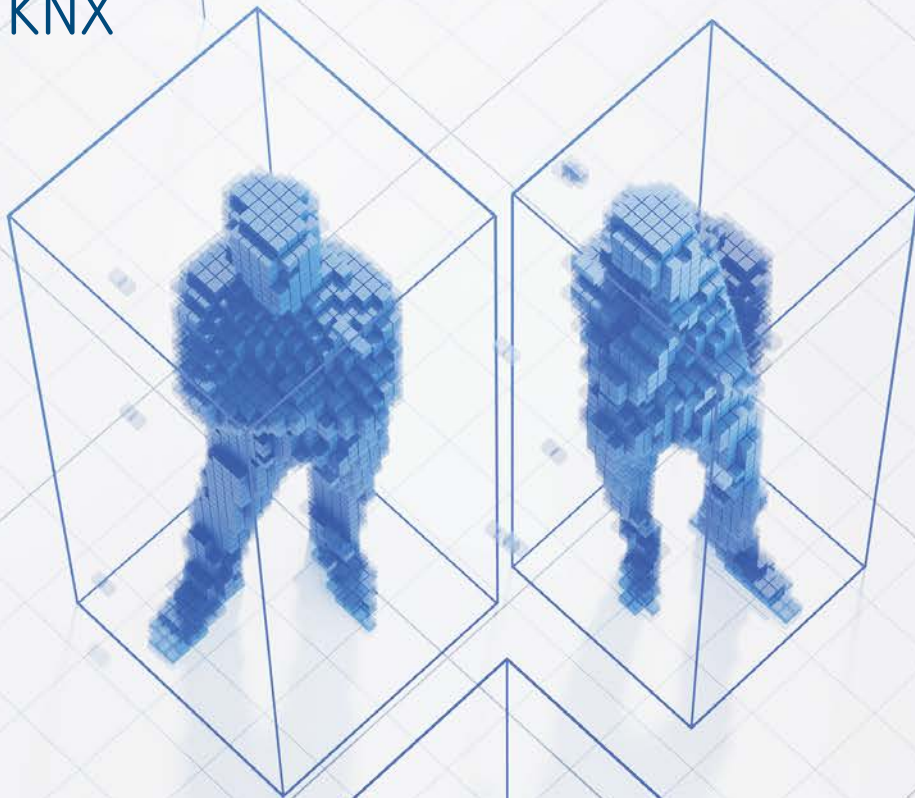
NEW!
Now also as
a 24 V variant.

Building Automation since 1921

Height 12 mm
Diameter 86 mm

Your new plus in flexibility inside the building can do more

→ Pixel-based detection technology
→ Detecting and counting objects/persons
→ 100 % GDPR compliant
→ Easy start-up via app programming
→ Triggering KNX building automation actions
→ Added value for building operators
→ Flexible detection zones
→ Tamper-proof thanks to KNX Data Secure

KNX®
Data Secure

Optimised building automation and building operation – simple and convenient

For decades, Theben's classic presence detectors with passive infrared technology have controlled the lighting and indoor climate of many rooms in a sustainable and energy-efficient manner. They detect people accurately and reliably based on their body heat and movements.

The optical sensorthePixa now opens up further applications with significant added value thanks to its pixel-based detection technology. These go far beyond the possibilities of PIR presence detectors. The optical sensorthePixa detects how many people are in a room and where they are. This information is used to trigger predefined actions in the KNX building control system. However, not just the building automation features stand to gain. There are completely new benefits, especially for building operators. For example, flexible options for configuring desk-sharing or for optimising room occupancy and building cleaning activities.

GERMAN INNO VATION AWARD '21 GOLD

The optical sensor
thePixa
has been checked by
DEKRA* for compliance
with **GDPR!**

Award-winning innovation

thePixa sets a milestone in the advancement of presence detector technologies. thePixa was awarded the German Innovation Award 2021. The jury's rationale emphasised, among other things, the versatile utilisation concepts, the easy-to-use app control, the high degree of user-centricity as well as the outstanding design of the Stuttgart-based design studio ID AID featuring clear, minimalist aesthetics. They also highlighted the added safety benefits during pandemics offered by the information on occupancy density.

GDPR-compliant detection

thePixa KNX uses very low-resolution images and therefore fully complies with GDPR requirements (DEKRA tested*). There is no live picture at any time. Using image analysis, the optical sensoridentifies differences in the situations that arise in the rooms being monitored and processes the associated information. thePixa can then detect how many moving objects are within the detection area and count them. Accurate, reliable and tamper-proof thanks to KNX Data Secure.

*www.theben.de/thepixa-datenschutz

Impressive added value
For architects, building operators and many more

The detection result is visually processed in the form of a heat map and can be called up together with detailed occupancy statistics in the thePixa Plug app. This information triggers a predefined action in the KNX building control system, such as starting up the ventilation systems in a fully occupied meeting room.

The visualisation of detected areas by means of the heat map offers you, as a building operator, a variety of added values. Product presentations in department stores can be optimised by identifying which products customers stop to look at most often and show the greatest interest in.

Valuable information can also be obtained in office facilities: by identifying which workstations are used more or less often, it is possible to open up advantages such as efficient desk-sharing management. This allows for a flexible response to peak workloads. Operating and energy costs for buildings can be reduced.

Discover a new dimension of flexibility

NEW!
Now also as a 24 V variant.

Architects

You are designing a commercial building. With shops on the lower floors. On the upper floors open-plan offices. Your building contractor needs a flexible presence detector. Future-oriented and platform-stable. You need: thePixa

→ Greatest freedom of design
→ GDPR-compliant solution

Planners

Each floor of a building, you plan for a different company. Using different utilisation plans that are constantly changing. You cannot see into the future, but you can plan for an optical sensorthat will suit everyone: thePixa.

→ Large detection area of up to 11 x 15.5 m
→ Variable division in 6 zones
→ **NEW:** 24 V and 230 V Version

KNX system-integrators

For KNX projects, you truly appreciate a KNX optical sensorthat is easy to install, simple to programme and versatile in its functionality. Install in the ceiling and with accurate adjustment via via app. In short: thePixa.

→ Programmable from ETS 5
→ Customisable and accessible via thePixa Plug app
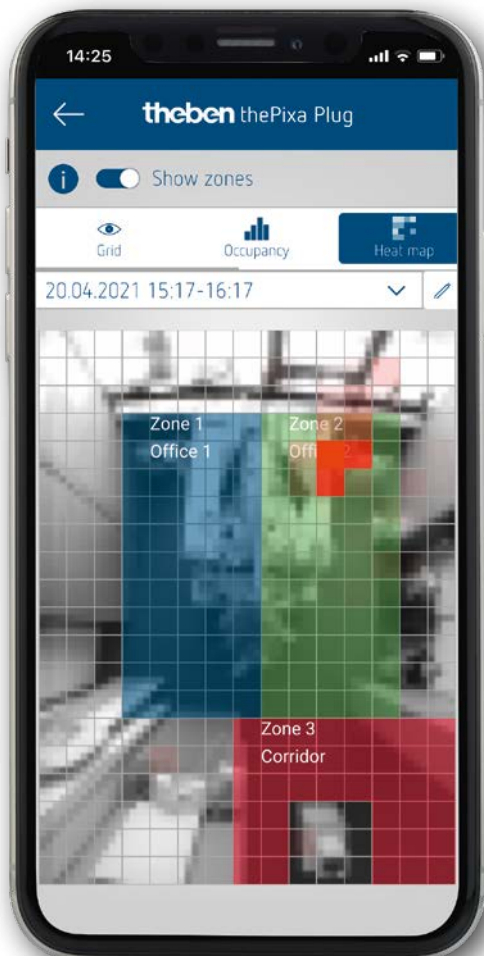
Heat map and occupancy statistics

Visualisation and evaluation of the recorded motions as well as the degree and density of movements over a defined period of time allow conclusions to be drawn and open up a variety of added values.

Owners

Your tenants should be able to freely furnish and use the rooms in your building. Over and over again, without any restrictions. This is exactly why you have chosen the optical sensor with flexible zone configuration: thePixa.

→ Easy restructuring

→ Flexible utilisation

→ Upgrade of existing KNX detectors with the 24 V variant

Employees

You work in an office with a consistent ideal indoor climate. The ventilation starts when there are more people in the room, and the lighting control takes into account which areas are really being used. Every day – and at night! So how can you achieve all that? By using thePixa.

→ Integrated temperature measurement

→ Integrated infrared LEDs for night vision

→ Occupancy-oriented ventilation control

→ Aura function

Shopkeepers

You run a shop and have a constant overview of your displays. Where do your customers stop – and where not? A GDPR-compliant optical sensor shows what is moving, but not who is moving. It is called: thePixa.

→ Heat map

→ Statistical analyses

Facility management

You coordinate the facility management and know at all times when which rooms are used and how, so you can arrange the cleaning in an effective way – process-optimised and efficient. It's made possible by: thePixa.

→ Statistical analyses

→ Efficient cleaning schedules

Easy programming
Via thePixa Plug app
For iOS and Android

Via thePixa Plug app, you can divide the detected area into up to 6 zones if desired and programme them freely. The precise subdivision of the detection area, with dimensions up to 11 x 15.5 m, enables accurate lighting control in larger rooms. False switching operations are effectively prevented.

The high installation costs that are often incurred after conversion or room restructuring are completely eliminated. It is easy to create new zones within the detection area in the app. The settings programmed in the app are then simply transferred from a smartphone or tablet to thePixa via Bluetooth.
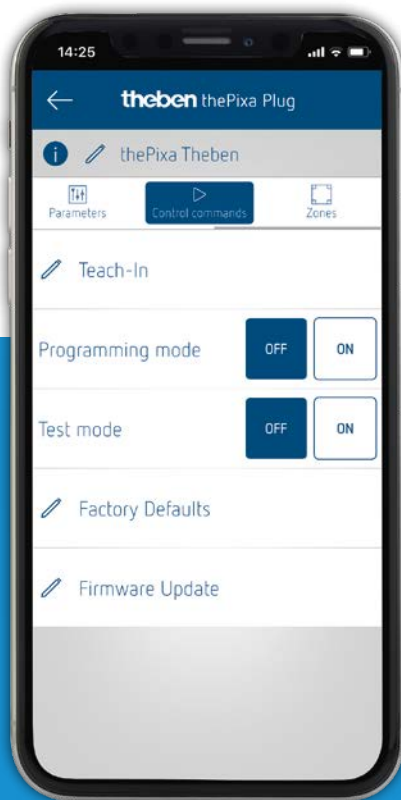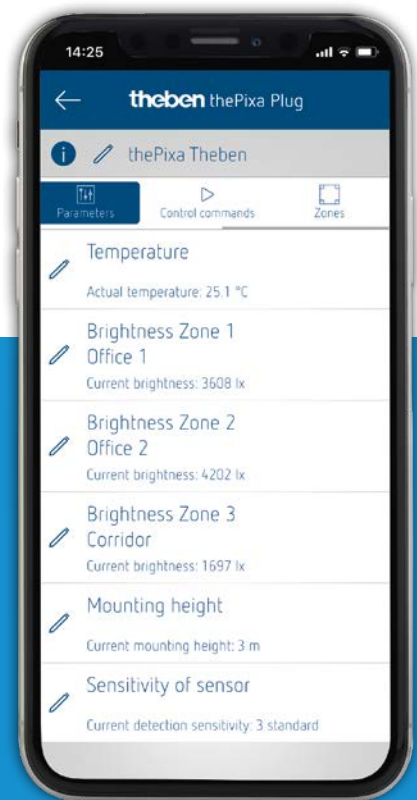

Control commands

→ Teach-in function
→ Activation of programming mode (KNX)
→ Activation of test mode
→ Reset to factory settings
→ Firmware update of the presence detector

Zones

→ Edit and label up to 6 zones
→ An exclusion zone can be added to each zone, to suppress existing sources of interference

Parameters

→ Actual temperature / temperature calibration
→ Actual brightness per zone / brightness adjustment per zone
→ Installation height
→ Sensitivity of the sensor
→ Definition of room type

# Technical data
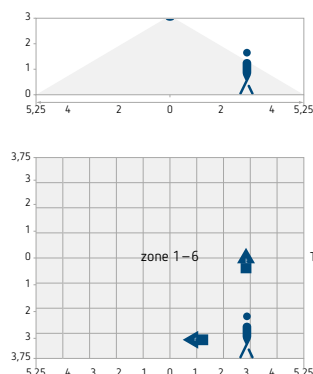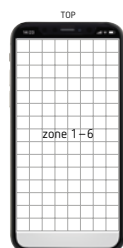## Optical presence detector
thePixa P360 KNX

Technical features

	NEW! thePixa P360 24V KNX UP	thePixa P360 KNX UP
○ Item no. white	2269210	2269200
● Item no. black	2269212	2269202
🌈 Item no. Custom colour	2269213	2269203
Operating voltage	20 - 35 V DC	230 − 240 V AC (50 Hz)
Auxiliary voltage current consumption	24 V DC: day mode: 38 mA night node: 67 mA KNX-Hilfsspannung (30 V DC) Day mode: 30 mA Night mode: 54 mA	Day mode: 4 mA (typ. 0.9 W) Night mode: 7 mA (typ. 1.6 W)
Frequency	50 Hz	
Recommended installation height	2.5 − 4.5 m (minimum height ≥ 2.5 m)	
Setting range of brightness switching value	5 − 3000 lx / measurement off	
Setting range of brightness setpoint value	5 − 3000 lx / light off	
Lighting time delay	0 s − 60 min	
Standby dimming value light	1 − 25 % of the dimming value	
Light standby time	0 s − 60 min / permanently on	
HVAC switch-on delay	0 s − 120 min	
HVAC time delay	0 s − 120 min	
HVAC runtime standby	0 s − 120 min	
HVAC standby value	0 − 255	
Setting range temperature	− 15 °C … +60 °C	
Connection type	Screw terminal | bus connection: KNX bus terminal	
Ambient temperature	− 5 °C … +45 °C	
Type of protection	IP 20 in accordance with EN 60529	

Scale drawing

Ø 86

51,9

36,4

12
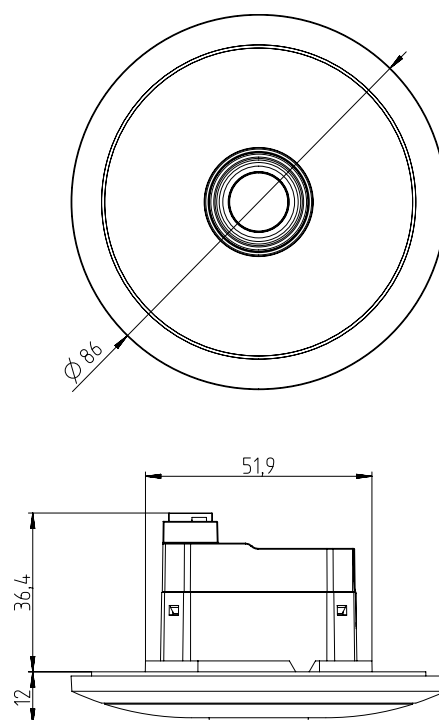
Detection area

Installation height (A)	Transverse walking (T) Front walking (R)	Detection area seated (S)
2,5 m	54 m² | 6,0 m x 9,0 m	22 m² | 4,0 m x 5,5 m
3 m	79 m² | 7,5 m x 10,5 m	35 m² | 5,0 m x 7 m
3,5 m	102 m² | 8,5 m x 12,0 m	51 m² | 6,0 m x 8,5 m
4 m	128 m² | 9,5 m x 13,5 m	79 m² | 7,5 m x 10,5 m
4,5 m	171 m² | 11,0 m x 15,5 m	102 m² | 8,5 m x 12,0 m

zone 1−6

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