thebenHTS
energy saving comfort

Added value thanks to intelligent room automation with thePrema P360 KNX from ThebenHTS

Intelligent building and room automation allows a building to be controlled with ease – and makes it smart. And the fact that you don't need much hardware at all to do this is clearly in evidence at the AMTS in the Swiss municipality of Muttenz, which makes use of thePrema P360 KNX premium presence detectors from ThebenHTS.

Requirements

- Maintenance of minimum lighting in the corridors during working hours even when no movement is detected
- Efficient use of daylight
- Energy saving
- Cost saving thanks to fewer devices
- Intelligent control

Solution

- thePrema P360 KNX premium presence detectors from ThebenHTS
- Square detection area
- Adaptive time delay
- Constant light control
- Standby function

Surgeons from all over the world come to the Academy for Medical Training and Simulation (AMTS) in Muttenz near the Swiss city of Basel to find out all about the latest operating procedures and medical equipment.
Across three floors, they are met with state-of-the-art training, conference and meeting rooms. The entire electrical installation at the AMTS and the KNX light and blind controls are provided by Elektro Illi AG. The Herzog Kull Group from Aarau took on responsibility for planning.

Technology with optimum results

In terms of its KNX bus topology, the project is made up of just 180 devices distributed across two areas and five lines. This was first and foremost made possible by the fact that the lighting is primarily controlled via DALI, and secondly because thePrema premium presence detectors from ThebenHTS have been incorporated. Although they are round, they have a larger than average square detection area. This significantly reduces the number of presence detectors required in a project and saves costs.

Technology can be that beautiful

Most of the thePrema premium presence detectors are used in the corridors of the AMTS. The subtle droplet-shaped and transparent design ensures that the detectors cut a fine figure. They are a true style element on the ceiling that give no clue as to the technology hidden within.

Design-oriented, highly functional added-value energy-saving intelligence

This newly coined phrase perfectly describes the functionality of thePrema presence detectors.
And one aspect that is particularly worth mentioning is the self-learning time delay, which adapts the time delay depending on how the space is used. This is an extremely useful function in corridors in particular, where people either stop to talk or rush through from one end to the other. Working in the same manner is the short-stay function, which detects how long someone stays in the detection area and adapts the time delay based on this. Those who are more interested in energy efficiency can operate the detector in ecoplus mode, in which a whole host of parameters are further optimised to save energy (e.g. shorter time delays).

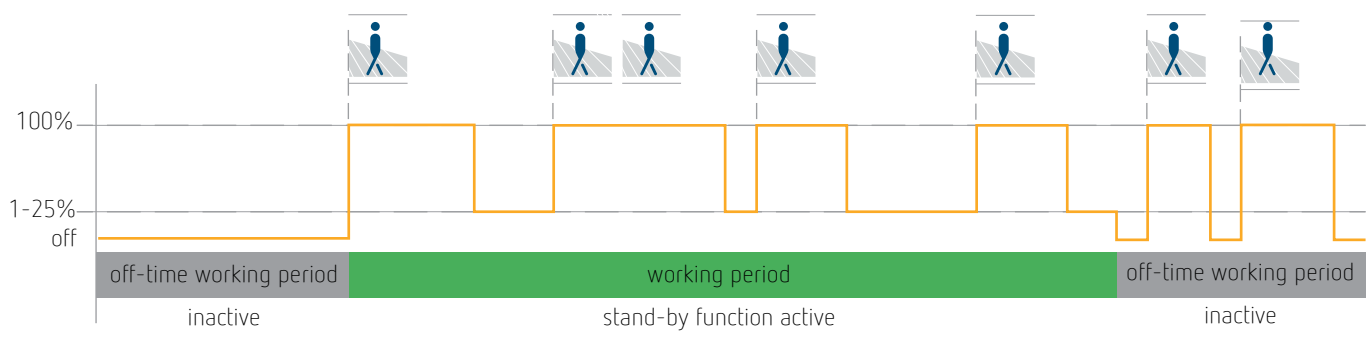
Virtually invisible and yet a real style element: thePrema P360 KNX on the ceiling detects people when they are both standing or sitting still.

> "We were able to incorporate the required logic directly into thePrema – this saved additional, unnecessary KNX devices, time and therefore also costs."
>
> Hubert Peter
> Head of Planning
> Elektro Illi AG

Save energy and gain comfort

One specific requirement of the owner was able to be satisfied quite simply and without the need for additional logic modules thanks to the special standby function offered by thePrema: during working hours, the lights in the corridors should never be completely switched off, and instead are to remain on at a minimum brightness of at least ten per cent even when no movement is detected (see Graphic 1). This reduction in brightness saves energy and increases comfort, as the corridor is not quite so dark during working hours. Once a person

Graphic 1:



Presence detectors are also ideal for use in reception rooms. The LED lights are controlled via the KNX DALI interface, which receives the switching and dimming commands via KNX from the presence detector. Several detectors are connected with a master/slave configuration.

enters the detection area, the light then gently brightens back to 100 per cent power. In outdoor areas with sufficient amounts of daylight, the light of course only switches on as required. This is possible thanks to thePrema's integrated, calibratable brightness measurement function.

Added value with KNX

The AMTS project demonstrates that even smaller KNX systems are capable of controlling complex buildings in a highly energy-efficient and intelligent manner. To ensure that the system can communicate with the higher-level building management system, it is connected to a higher-level visualisation via a KNX IP interface.

The AMTS, the Academy for Medical Training and Simulation, is an independent centre of excellence for product development and advanced surgical training offering first-class educational opportunities. Its area of focus is on musculoskeletal surgery. Since it opened in 2009, the AMTS has been offering industry partners, professional medical societies and doctors' associations the opportunity to conduct practical procedures on anatomical preparations in fully equipped operating theatres. Three state-of-the-art, fully kitted-out theatres are available in the new building in Muttenz.

Customer	AMTS | Muttenz
Project	Intelligent room automation
Electrical designer	HKG Engineering AG Aarau | Mühlemattstrasse 16 | 5001 Aarau | Switzerland | www.hkg.ch
Planning & integration	Elektro Illi AG | Seewag 2 | 6130 Willisau | Switzerland | www.elektro-illi.ch

Image source: raum consulting

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