



Light management with PlanoCentro KNX presence detectors



PlanoCentro KNX

The story of medical technology was written in Tuttlingen. Surgical instruments and state-of-the-art implant technology from the city on the Upper Danube are used worldwide. Aesculap AG is part of the B. Braun Group and thereby one of the global leaders in the field of medical technology.

Framed by the modern architecture of the Aesculapium and highly technical production plants, the historic Aesculap building is a Tuttlingen landmark. The industrial architecture of 1898 is listed and is now used as office space. The historic exterior of the building houses modern offices that meet the demands of today's working environment. That's why it's now being modernised. In updating the electrical installations and room lighting, the company is focusing on energy efficiency.

Target

- Energy saving and well-being
- Automatic and semi-automatic control
- Accurate detection
- Use of daylight
- Transient light
- Control of heating and lighting
- Central control
- Visualisation
- Subtle design

Solution

- Control using the PlanoCentro KNX presence detector
- Fully or semi-automatic function
- Square detection area (10 m x 10 m at an installation height of 3.5 m)
- Constant light control
- Short presence with reduced run-on time
- HVAC channel with switch-on delay
- Networking via KNX (EIB), remote configuration via ETS
- Award-winning design



The 1898 Aesculap building by industrial architects Philipp Jakob Manz.

Presence detectors tried and tested

The Aesculap office concept sets out clear requirements for lighting control: "No more manual switches as the lighting in the room should be set automatically to meet the employees' requirements." Explained system administrator Patrick Lochbaum. In the central area, with its printer section, communications corner, cafeteria and access to the work stations, eight presence detectors, discretely mounted in the ceiling, register all movement by staff and visitors. The decision to opt for the PlanoCentro KNX presence detector, with its "iF product design award 2010", took account of the flat flush-mounted design and its functionality.

Presence signal for HVAC

Anybody in the detection can rely on pleasant lighting (500 lux). Natural daylight can reduce the need for artificial lighting here as the PlanoCentro KNX presence detector is equipped with a constant light control. The devices are set to fully automatic with the exception of the two meeting rooms. The light is turned on via a wall switch and off automatically after the presence signal stays off and a self-taught run-on time is completed. The presence si-

"We test and compare with other devices. And we have discovered that ThebenHTS products have better detection qualities and switch more reliably."

Patrick Lochbaum
System administration AESCULAP AG

gnal is also used to switch from standby and comfort mode with HVAC. Switch-on delay and run-on time of the relevant presence channel thereby prevents brief reactions. The lighting for workstations equipped with floor lamps are also switched on and off automatically. Employees can operate the dimmer function individually and manually. The brightness in the central area is reduced by ten per cent if it is unoccupied. Complete darkness

outside working hours only happens if the "Off command" comes from the building management system. And this can be overridden by people working late using an emergency switch.

Energy comparisons old and new

These and other functions ensure energy efficiency, security and the feeling of well-being. Everybody at Aesculap is justifiably proud of the successful integration of the different bus systems used: "The main control is a central SPS where we bring together the KNX (EIB) bus technologies, of the presence detector, BACnet IP of the HVAC technology, DALI for the lighting and EnOcean radio control of window contacts and temperature sensors," explained Markus Stoll.

It also connected to the building management system at the same time. The SPS controller provides direct visualisation for local controls. And even the lighting power consumption is recorded. In future, this will be used to compare power consumption in new and old offices and will demonstrate whether the predicted savings of 40 to a maximum of 70 per cent can be achieved.



Visualisation of current performance: Divided into lighting and power consumption of office devices such as computers etc..

Customer	Aesculap AG, Tuttlingen
Project	Lighting management in administration building
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