



## Project: Hotel Bairro Alto



### Entities involved:

- Inspection:  FICOPE
- Electrical Installer:  SOTECNICA
- Integrator:  DOMÓTICA solutions - Building Automation and Home Automation Solutions

### Brands Used:

Electric Board Actuators KNX -  hager

Switchgear KNX -  Berker by hager

View / Server -  GIRA

Climate Control -  Zennio  thermokon®  
Keep in touch with the future

GTC interface -  Intesis  BACnet®

Multimedia Control -  CRESTRON®

## Project description:

Category: Hotel

Type: Remodeling

Conclusion: 2019

KNX Equipment: **Over 1300**

KNX installation type: Twisted pair / IP

Working hours: + 350 h

Project composed by 20 KNX lines, more than 1200 equipments which stand out:

- 8150 KNX Group Addresses (1/3 of **TOTAL** group address capacity for a used KNX project)
- 30 Line Couplers
- 31 KNX Power Supplies
- 86 Thermostats (86 Controlled Air Conditioning zones)
- 1687 Controlled Lighting Circuits
- 502 Blackout Blinds
- 256 Lighting Points Dali
- 1 Server with Full Building View
- 1 Dedicated Server for the Restaurant Zone
- 1 Dedicated Server for the Bar Zone

Hotel signed by Arch. Souto Mora and the Bastir Architecture office.

Sotécnica installer (the Vinci group holding for example of s Airport s in Portugal), a reference of the national electrical installers.

As you can see above, use of KNX's great capabilities when working with **7 KNX manufacturers** on the same project with everything interconnected.

Use of various protocols in which KNX manages and sends information to others, namely IP, EnOcean and BacNet.

The solution designed for this building is to optimize the energy efficiency and comfort of hotel guests.

In order to facilitate the building / room maintenance teams we have the information of the rooms occupied at various points of the hotel.

The integration of the HVAC system with KNX allows the management of rooms and common areas. As soon as you arrive at your room, the temperature will be as you wish or equal to the values used in the last stay.

Using the DALI protocol for Led lighting control, along with 1-10V control and power regulation, has enabled the customer to choose various types of lamps and spotlights to their taste for each room, without being limited to choosing a certain the product cannot be adjusted.

The convenience of the guest is privileged, getting up at night will automatically turn on a presence lighting to allow your travel without disturbing your companion. Using the outdoor brightness information, the KNX button presence LEDs are automatically turned off at night so as not to disturb guests.

All indoor and outdoor presence lighting is managed by timers and lighting levels so that the Hotel works automatically. Example: The runners during the day are 100% illumination, passing from 00.00 to 60% illumination, while maintaining its brightness for correct operation but reduced the energy consumed.

The hotel manager has access to these settings locally or remotely and thus has the convenience of managing the hotel without being present.

Room occupancy is all accessible from the server in the security room.

In the security room there are several levels of access, some users can only view the occupancy of the rooms, other users if the lights and blinds are on / off closed / open but cannot act on them and a premium user level in which visualizes all states and can from the security room act in any room of the Hotel, whether for lighting, blinds or even changing temperature setpoints, produce cold or heat in the space.

## Controls

- **Lighting:** ON / OFF, adjustment to 230V, Regulation 1-10V, Dali regulation, Scenarios, Schedule, Motion Detection
- **Shades:** Blind Control and Blakouts within each room.
- **Air Conditioning, Heated Towel Racks & Air Conditioning (HVAC):** Central Heating / AC Management, Time Control, Busy Room Detection, Zone Temperature Control, Control of each interior machine in each room, AC Speed Control, Setpoints, heating / cooling mode
- **Commands and Display:** KNX Pushbuttons, Display Software, Web Server, Touch Panels,
- **Automation and Remote Access:** Hours, Function as Logical, access to Internet, remote programming, notices (ex. email.)
- **Scenários:** In meeting and conference rooms, scenic and sound-controlled control, from a portable touchscreen (iPad), accesses scenarios and quickly changes room settings where events take place, from on-screen presentation to fast a sound scene with adequate lighting in space
- **Restaurant:** Controlling various customer preset scenarios through pre-programmed buttons, but also the ability to change the illumination from “lamp” to “lamp” within the space to create a multitude of lighting scenarios during a meal.