MyKNX Home
KNX Home functional model

Project powered by:

AMAISYS training

Our KNX Team

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Challenge: Sustainable Homes, Buildings and Cities

Objectives

- Objective 11: Making cities and human settlements inclusive, safe, resilient and sustainable
- Objective 12: Ensuring sustainable consumption and production modalities
- Objective 13: Take urgent action to combat climate change and its effects

Features


Awning control
Facilities design
HVAC
Intrusion System
Switchable and adjustable lighting
Voice Assistant
Remote facility management
Weather Station
Door Alarms
Temperature and Humidity

Tasks

- Analysis of requirements and functions
- Material selection
- Prototype assembly
- Installation wiring
- Training in distributed bus systems
- System setup, programming and commissioning

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- Visit to the IAAC (Institute of Advanced Architecture of Catalonia)
  - New materials, 3D printing techniques

Results

- Switchable and adjustable lighting system
- Air conditioning system: ventilation and underfloor heating
- Environmental management: weather station
- Access control and intrusion
- Technical alarm control
- Motorized awning control
- Remote viewing and management of facilities
- Voice Assistant
- Wireless technology

Comfort and efficient management

- Turn on of lights on detection with low level of external light.
- Light dimming
- Outdoor light control (DALI) according to outdoor conditions.
- Scenes: general shutdown by plants, global closure (toldo, lights, HVAC) when going on vacation.
- Ventilation control (simulated with PC fan) based on temperature and humidity (KNX probe).
- Radiant floor control (simulated with PC cooling system) depending on temperature.
- Wireless Pushbuttons (Enocean)
- Voice commands: on/off lights, scenes, weather gear/stop.
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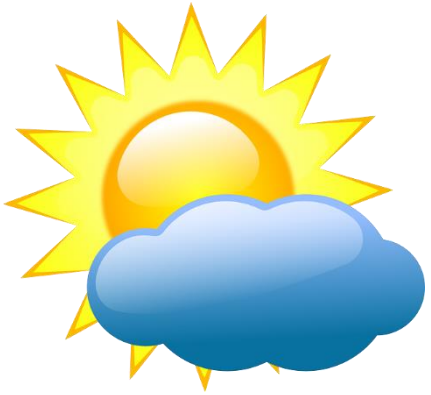
Environmental management



Use of meteorological central for automated management of lights, awnings and HVAC according to environmental conditions

Configuration from the display of limit values and alarms:

- wind: if the wind is high we turn up the awning and block it

- ice: if there's a risk of frost, we'll go up the awning and block it. In addition, we turn on the underfloor heating.

- outdoor cold: if there is cold outside we turn on the underfloor heating.

- precipitation: if there is a risk of rain we lower the awning.

- Outdoor brightness: if excessive, we turn off the outside light and the other way around.

- Darkness: Only in darkness, you can turn on the outside light when it is detected.

Personal security

Activation of alarm mode if there are improper accesses.

To do this we control an open/closed door that generates visual alarm if opened with the anti-intrusion system active.

Home connected to the IOT

The different systems (HVAC, Lighting...) are displayed with InVendi BMS.

The user has remote control (validated permissions) from any web browser/smartphone/tablet.

Thank you for your attention

We can only see little part of the future, but enough to realize that there is much to be done

Alan Turing