BIMBMS

Sensor Information

To access the demo, an account *must* be requested at**:** https://demo.bimkeeper.com

The demo can be accessed at: https://demo.bimkeeper.com/demos/sensors

This demo-instance is only intended for use with this particular demo. The focus of the demo is on this subject only. This means the navigation shows only what the user might need. Some features might not work for this reason. The first demo (basics) can be checked for a broader perspective of all the features BIMBMS offers. For more detailed information, the BIMBMS manual can be referenced, or IRP can be contacted at: contact@bimkeeper.com.

Contents

1 Using sensors in the viewer

This demo instance demonstrates the module for showing live sensor readings. First, start by selecting a complex, for example “Zekeringstraat”.

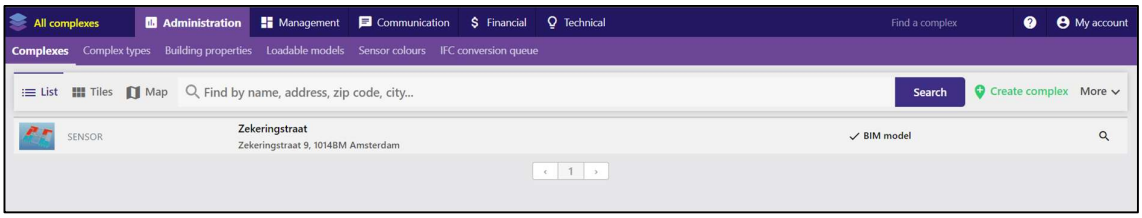

Figure 1: Selecting a complex

On the details page, click on “Open Default 3D Model” to load the default BIM model. Alternatively, navigate to the tab “BIM” to load a specific model. The default model of this specific complex is set to the first floor of the complex.

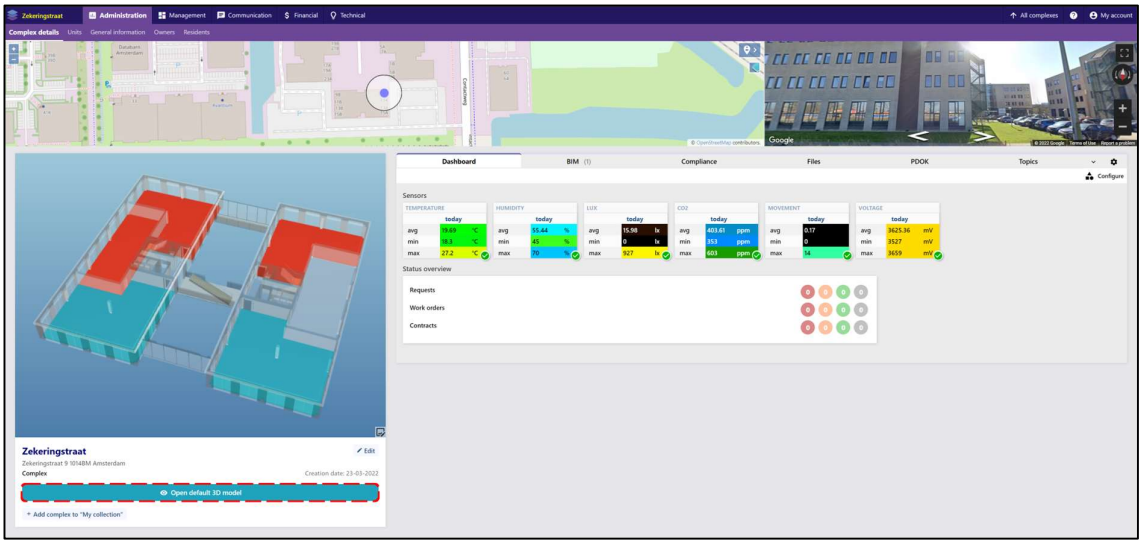

Figure 2: Opening the default 3D model

In the 3D viewer the structure of the model can be made transparent by clicking the “spaces” button.

The sensor readings are attached to spaces that receive a color according to the sensor value. To toggle between viewing the sensor readings and the structure of the building, click on “Disabled” in the sensor type dropdown.

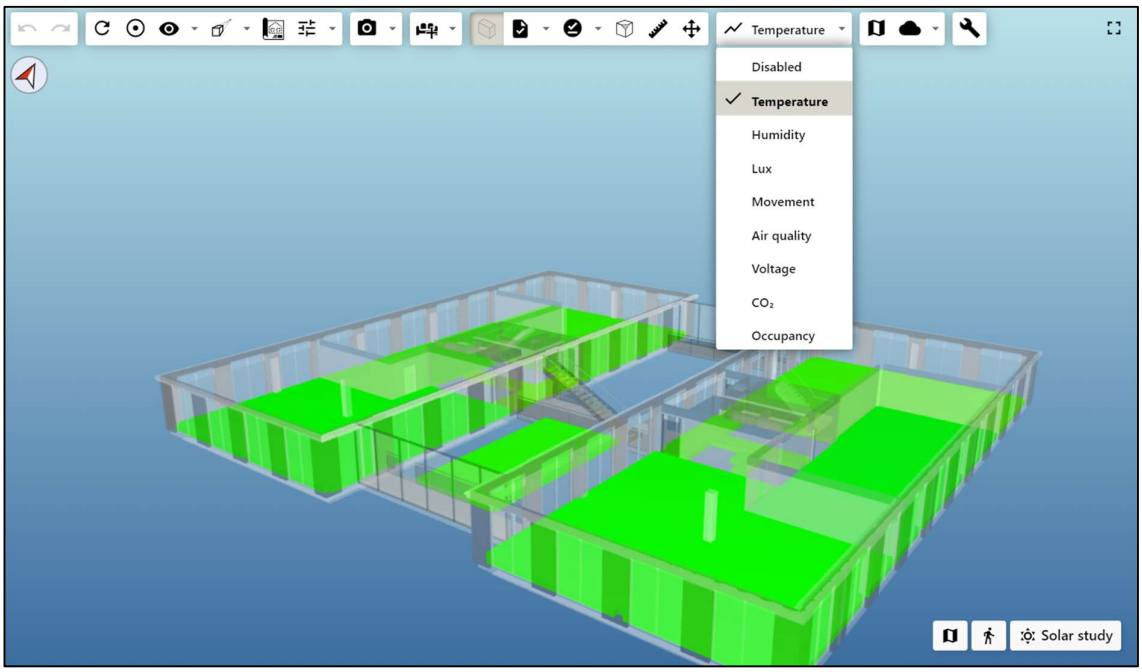

Figure 3: Selecting a sensor type

There are multiple types of sensors that can be used. For example, Temperature, Movement, Light, Humidity, CO_2, etc. The sensor values being displayed can be changed from the sensor type dropdown menu.

To show the actual sensor value(s) and measurement units, select a space and click on the right sidebar to extend it:

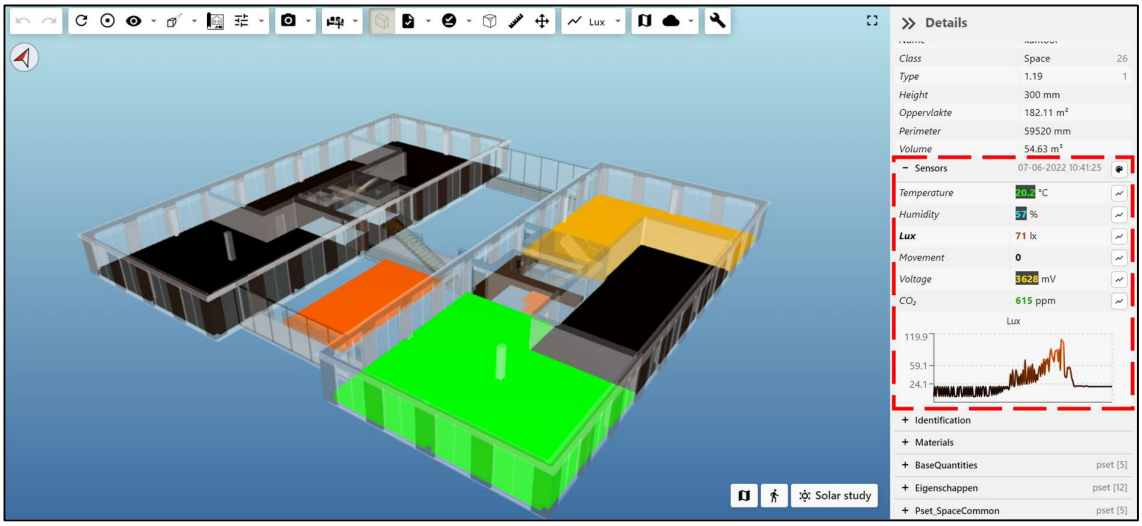

Figure 4: The "Sensors" tab under "Details"

The sensors tab under “Details” will show:

- The value and measurement unit for each installed sensor type
    - The currently selected sensor type is displayed in **bold**
- The time the sensor value was retrieved (on the top right)
- A graph, displaying the sensor values of the selected sensor type over time
    - By hovering the mouse over the graph, the value of the sensor and the time it was recorded will be displayed.

The default graph shows the change in values in one day. To show additional values, click on the graph icon:

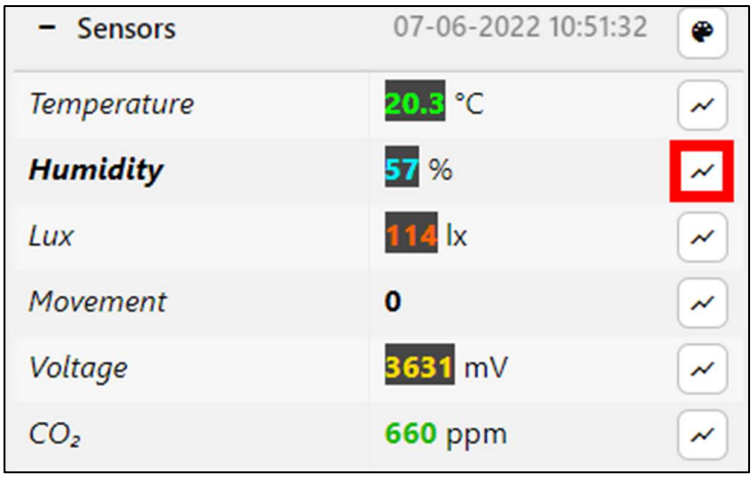

Figure 5: Navigating to the graph

This will open a screen containing a graph. This graph will display the sensor values over a selected period of time. The selected period of time can be managed with the calendars below the graph or using the buttons on the right side of the screen.

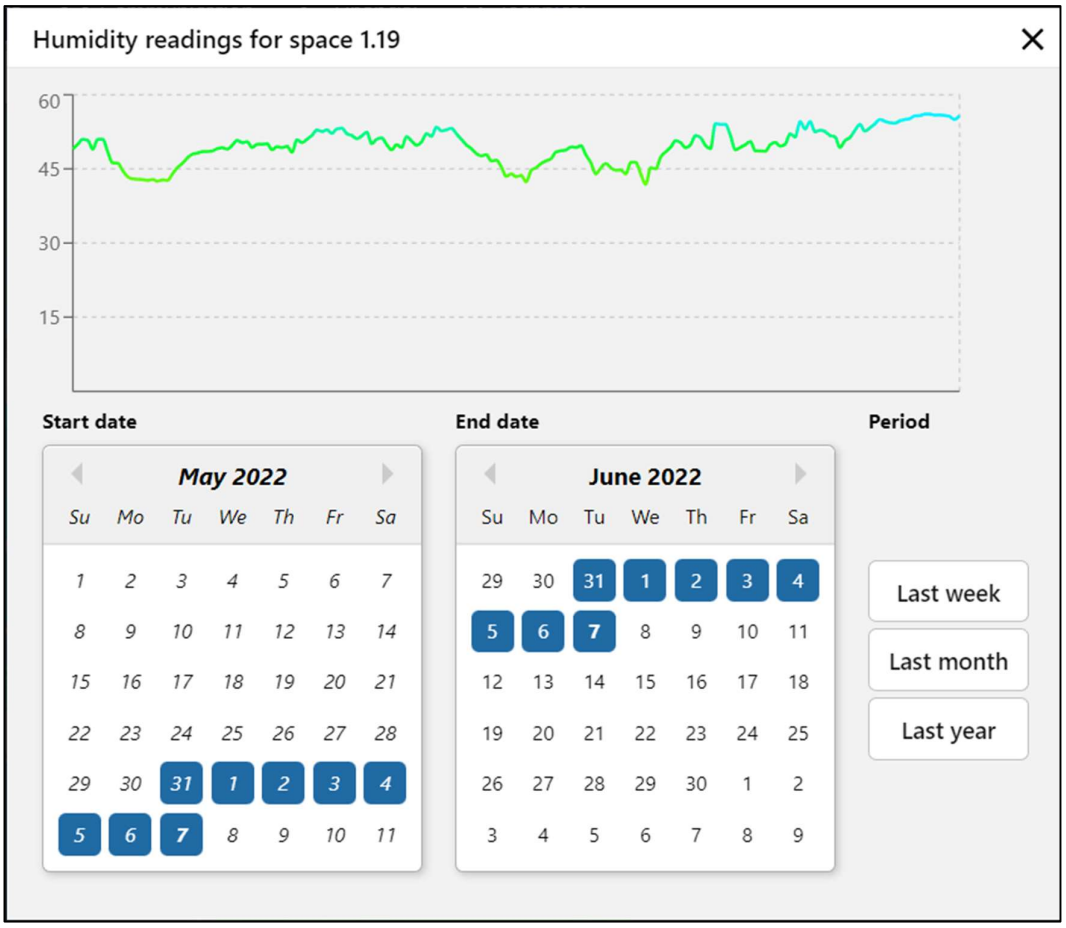

Figure 6: Viewing the graph of a sensor type

2 Sensor information on the complex dashboard

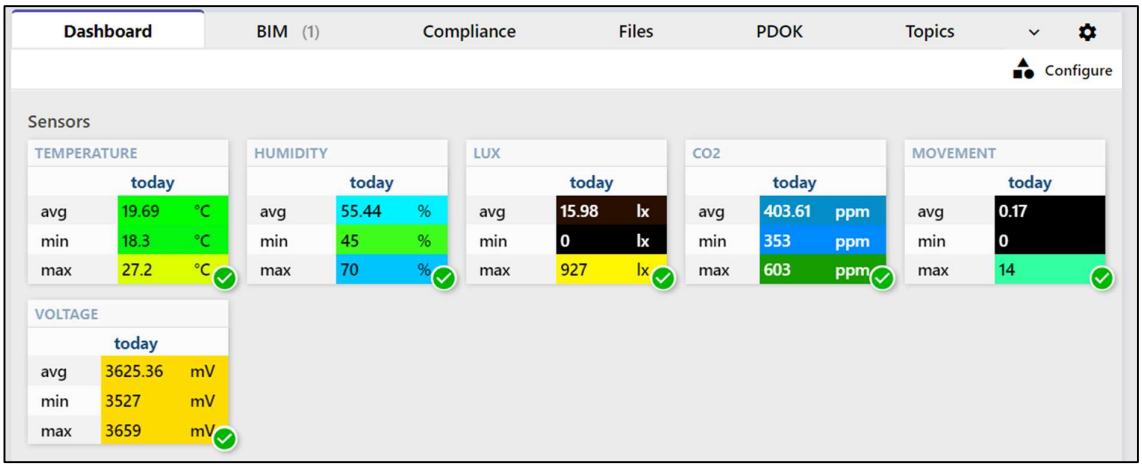

Figure 7: The complex dashboard displaying sensor values

Sensor values can also be displayed on the complex dashboard. For more information on how to display these values on the dashboard read this manual.

3 LoRa sensors

BIMkeeper makes use of LoRa(Long Range) sensors. These sensors are wireless and are made to work over long distances. Theoretically their data could be received tens of kilometres away, but their practical range is usually not that long due to obstacles such as buildings. The sensors also have a long lifetime of around 5 years[1].

The LoRa sensors used by BIMkeeper are configurable through a mobile application[2]. The application allows users to change the rates at which the sensors send their measurements. It is recommended to have them send as sparsely as possible to extend the sensor's lifetime and to stay within the fair-access policy[3]. Having sensors send data no more frequently than once every 10 minutes is recommended to ensure the policies will not be broken.

Registering a new sensor cannot be done by users for security purposes. If you as a user want to register a new sensor, let someone from IRP know and we will look into your request.

[1] Elsys, manufacturer of the sensors, has given this figure, but also states that lifetime is dependant on data interval.

[2] The application is called "Sensor Settings" and is created by "Elsys". It is not supported by Apple devices.

[3] The Things Network's fair access policy states that a sensor may not have an uplink airtime greater than 30 seconds per day.

End of manual

For other inquiries, please contact IRP at contact@irp.nl