Integration with LG airconditioner by LG PMBUSB00A module

This tutorial presents the integration of LG airconditioner with Grenton

> The presented configuration was performed on:
>
> - Object Manager v.1.6.1 (build 221101),
> - Gate Modbus 2.0 (FW v1.1.10 (build 2140)) nazwany Gate_Modbus ,
> - Moduł LG PMBUSB00A

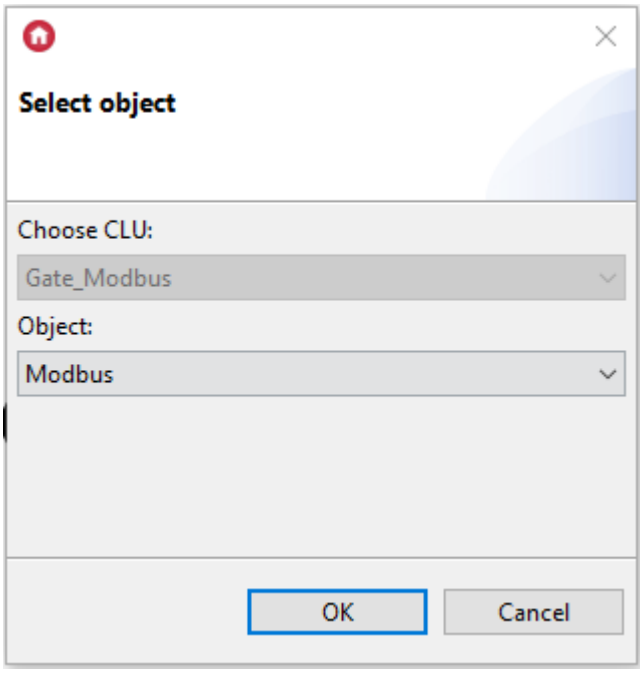
The instruction of the LG PMBUSB00A module can be found here.

To integrate Grenton system with airconditioner, please follow the steps described below:

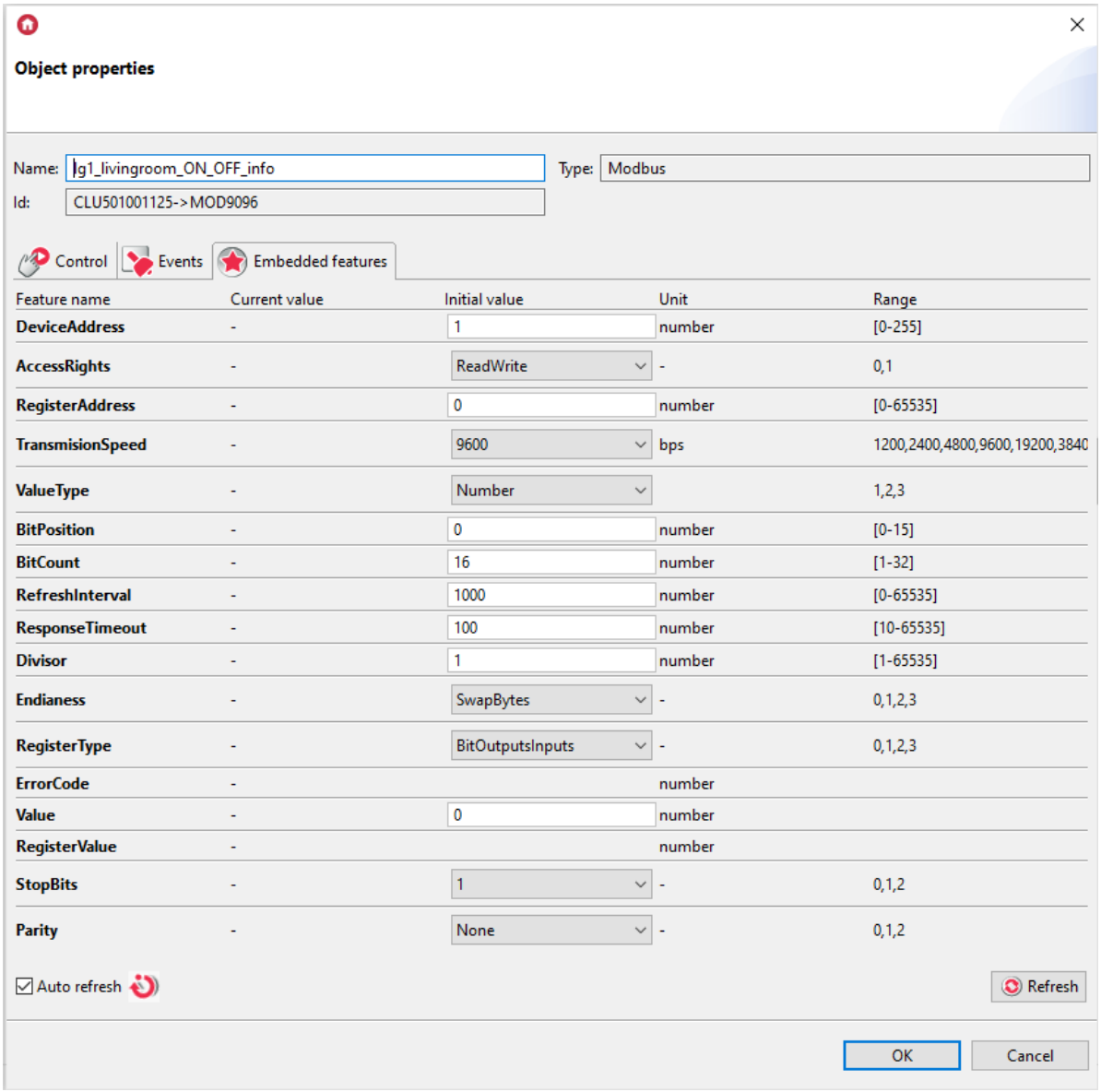
1. Turning on / off the air conditioner

Preparing

- Create virtual object `Modbus`

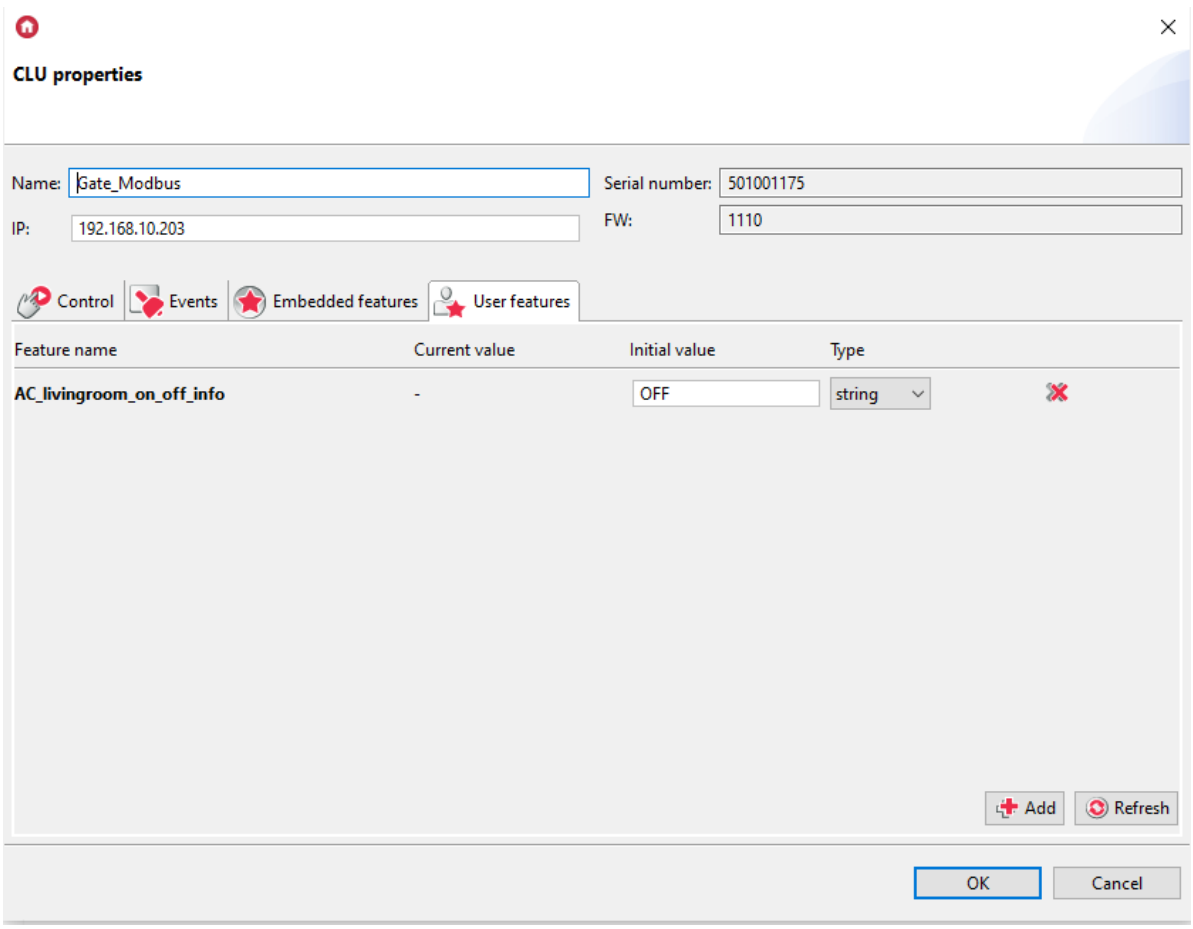


- Enter the name of the object `lg1_livingroom_ON_OFF_info` and complete embedded features:




```
DeviceAddress - 1
RegisterAddres - 0
```

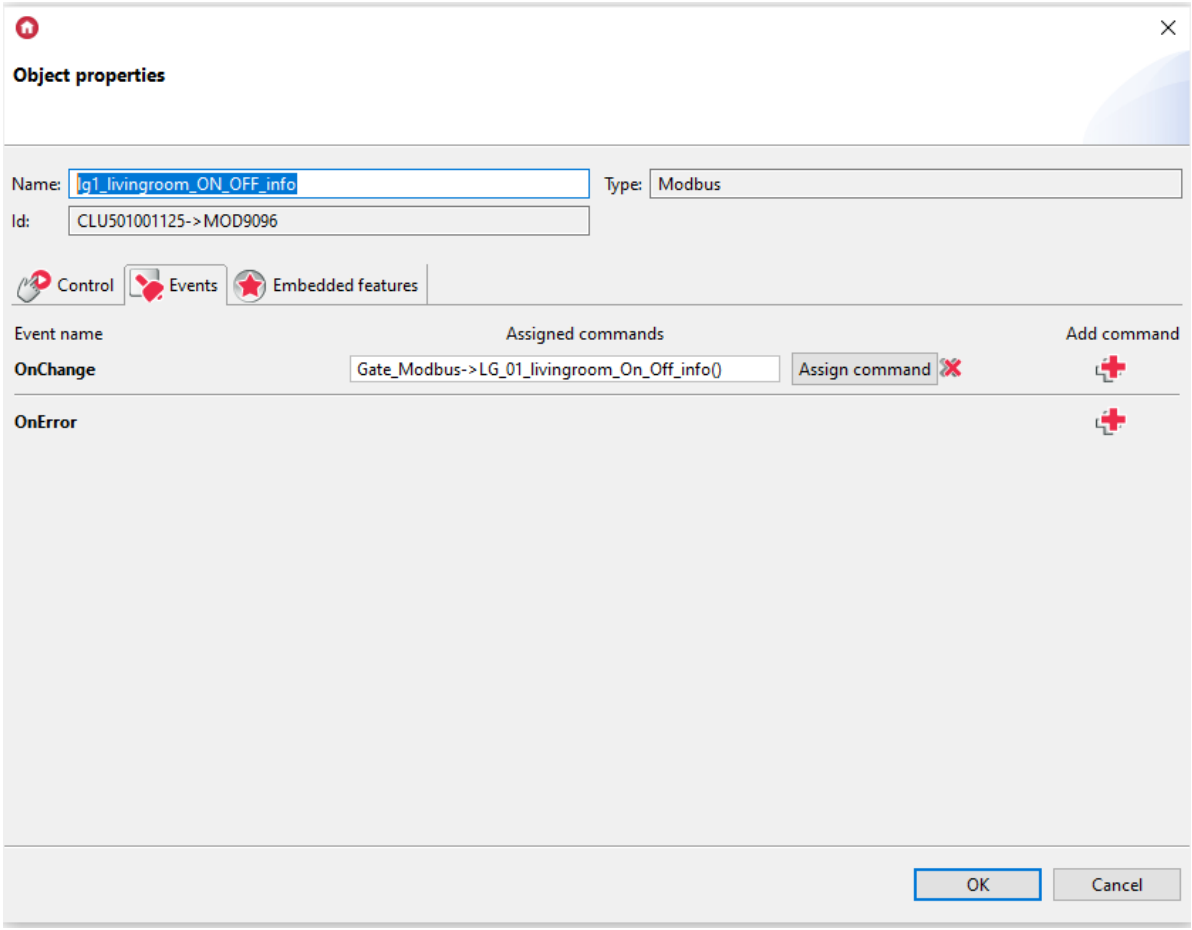
- Create user feature `AC_livingroom_on_off_info`, as a initial value enter "OFF":



- Cerate script `LG_01_livingroom_On_Off_info` which will allow you to switch on and off airconditioner:

```
if(Gate_Modbus->lg1_livingroom_ON_OFF_info->Value==0) then
Gate_Modbus->AC_livingroom_on_off_info="OFF"
else
Gate_Modbus->AC_livingroom_on_off_info="ON"
end
```

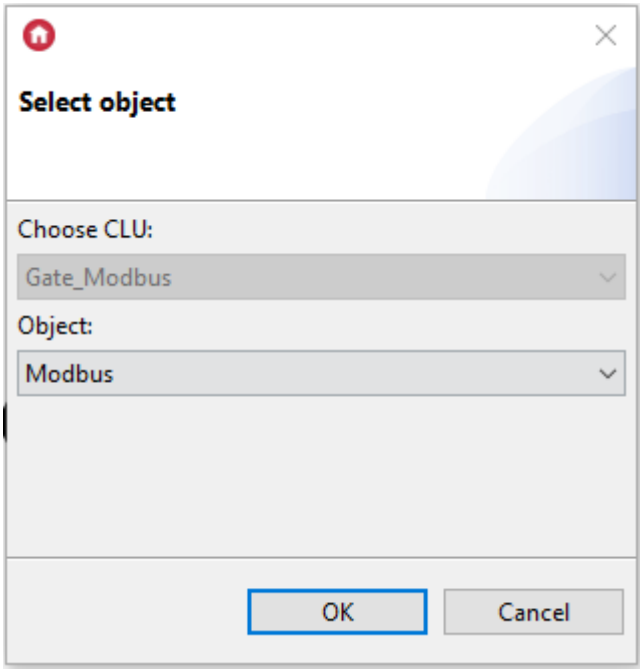
- Attach this script to the `lg1_livingroom_ON_OFF_info` object's OnChange event



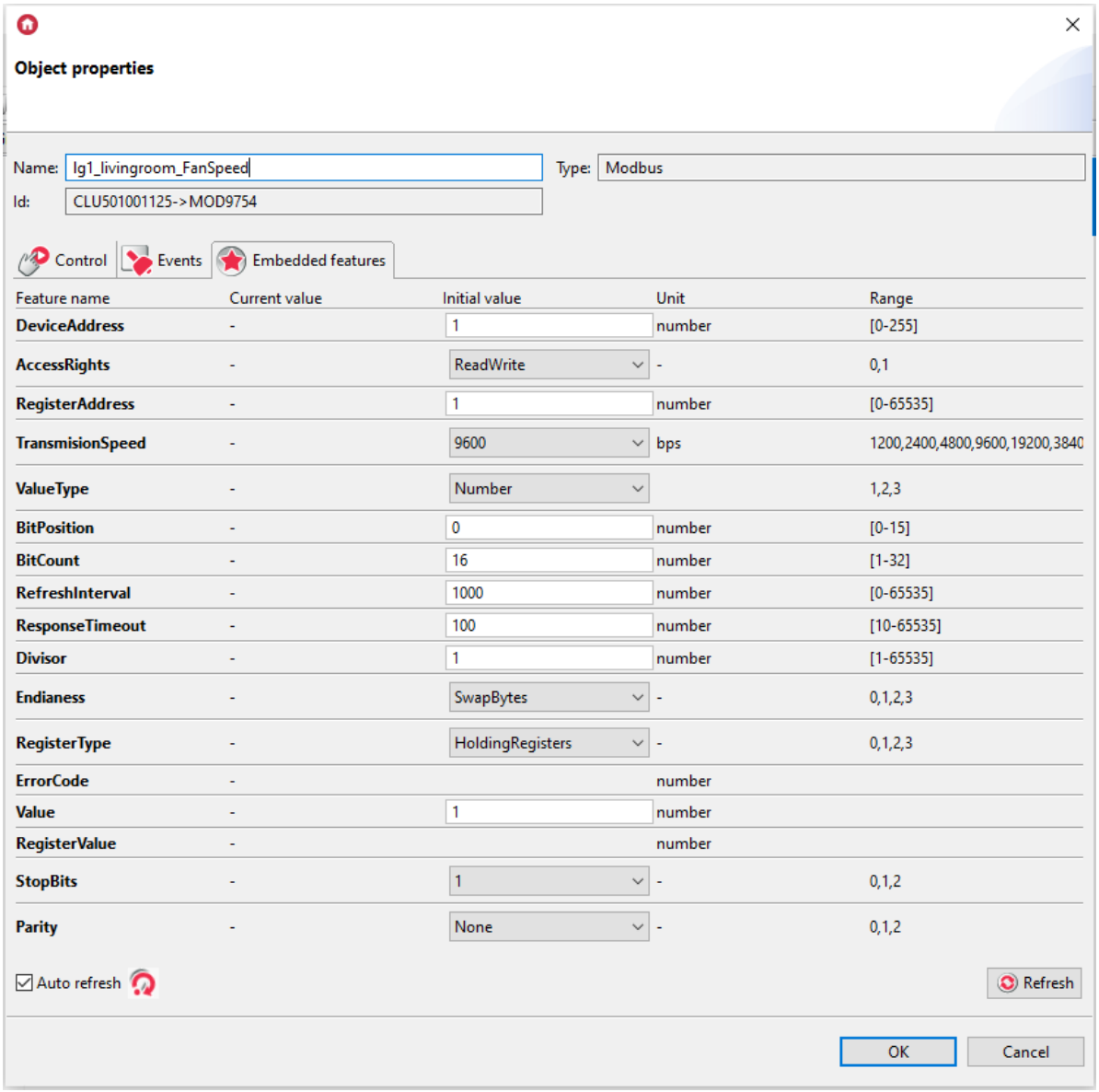
2. Airflow rate change

Preparation

- Create a virtual object `Modbus`



- Enter the name of the object `lg1_livingroom_FanSpeed` and complete embedded features:




```
DeviceAddress - 1
RegisterAddres - 1
```

- Create a script `LG_01_livingroom_FanSpeed_up` which will allow you to increase the airflow rate

```
if(Gate_Modbus->lg1_livingroom_ON_OFF_info->Value==0) then
Gate_Modbus->lg1_livingroom_ON_OFF_info->SetValue(1)
elseif(Gate_Modbus->lg1_livingroom_FanSpeed->Value==1) then
Gate_Modbus->lg1_livingroom_FanSpeed->SetValue(2)
elseif(Gate_Modbus->lg1_livingroom_FanSpeed->Value>=2) then
Gate_Modbus->lg1_livingroom_FanSpeed->SetValue(3)
end
```

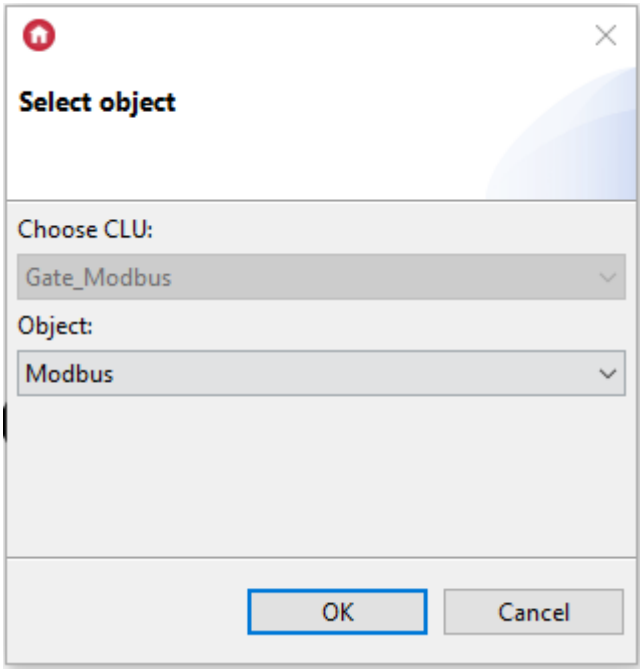
- Create a script `LG_01_livingroom_FanSpeed_down` which will allow you to decrease the airflow rate

```
if(Gate_Modbus->lg1_livingroom_ON_OFF_info->Value==3) then
Gate_Modbus->lg1_livingroom_ON_OFF_info->SetValue(2)
elseif(Gate_Modbus->lg1_livingroom_FanSpeed->Value==2) then
Gate_Modbus->lg1_livingroom_FanSpeed->SetValue(1)
elseif(Gate_Modbus->lg1_livingroom_FanSpeed->Value<=1) then
Gate_Modbus->lg1_livingroom_FanSpeed->SetValue(0)
end
```

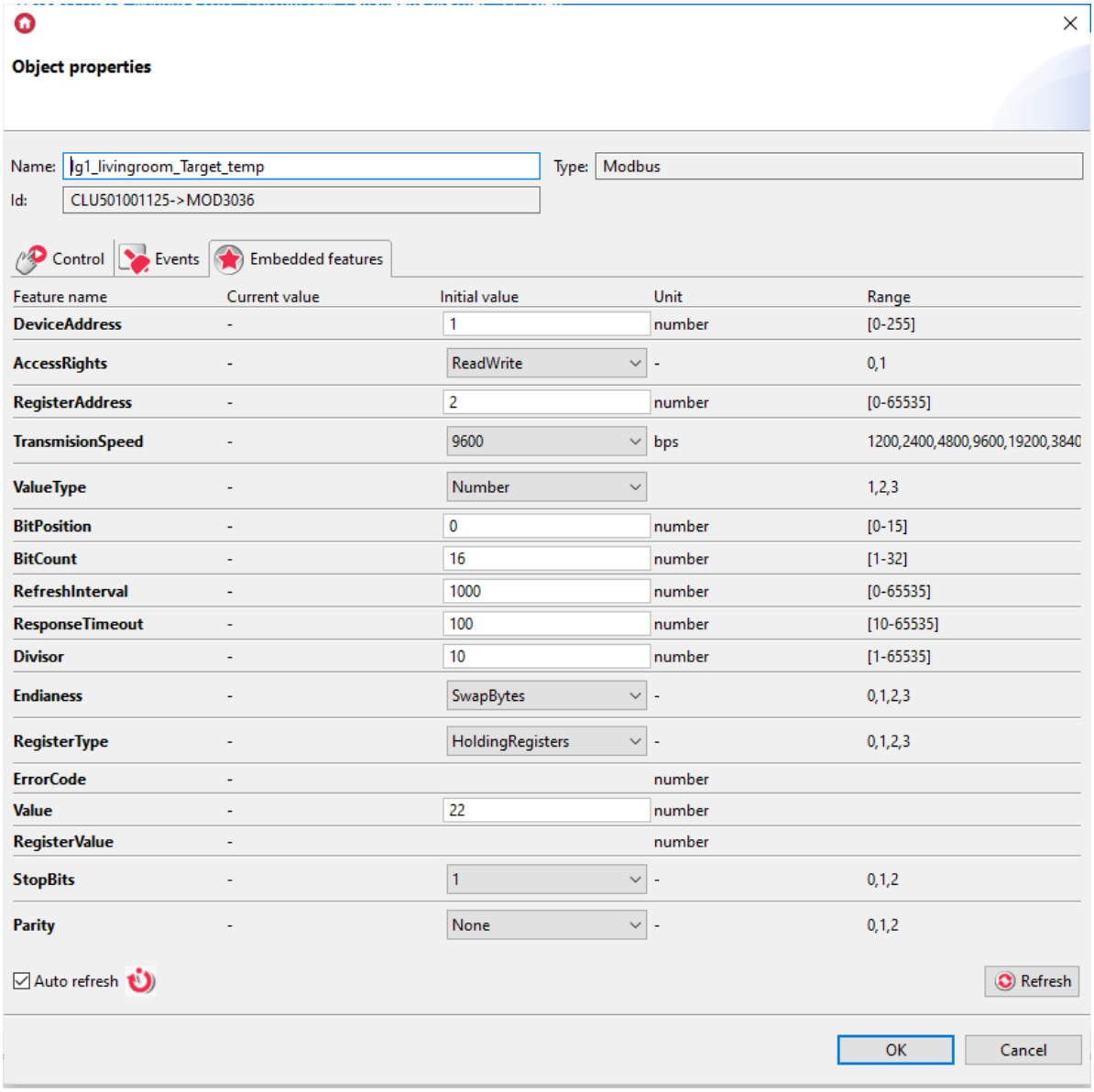
3. Temperature control

Preparing

- Create virtual object `Modbus`



- Enter the name of the object `lg1_livingroom_Target_temp` and complete embedded features:




```
DeviceAddress - 1
RegisterAddres - 2
```

- Cerate script `LG_01_livingroom_Target_temp_up` which will allow you to increase the set temperature:

```
if(Gate_Modbus->lg1_livingroom_ON_OFF_info->Value==0) then
Gate_Modbus->lg1_livingroom_ON_OFF_info->SetValue(1)
elseif(Gate_Modbus->lg1_livingroom_Target_temp->Value>=18 and Gate_Modbus-
>lg1_livingroom_Target_temp->Value<=24) then
Gate_Modbus->lg1_livingroom_Target_temp->SetValue(Gate_Modbus-
>lg1_livingroom_Target_temp->Value+1)
else
Gate_Modbus->lg1_livingroom_Target_temp->SetValue(18)
end
```

- Cerate script `LG_01_livingroom_Target_temp_down`, which will allow you to decrease the set temperature:

```
if(Gate_Modbus->lg1_livingroom_ON_OFF_info->Value==0) then
Gate_Modbus->lg1_livingroom_ON_OFF_info->SetValue(1)
elseif(Gate_Modbus->lg1_livingroom_Target_temp->Value>=19 and Gate_Modbus-
>lg1_livingroom_Target_temp->Value<=25) then
Gate_Modbus->lg1_livingroom_Target_temp->SetValue(Gate_Modbus-
>lg1_livingroom_Target_temp->Value-1)
else
Gate_Modbus->lg1_livingroom_Target_temp->SetValue(25)
end
```

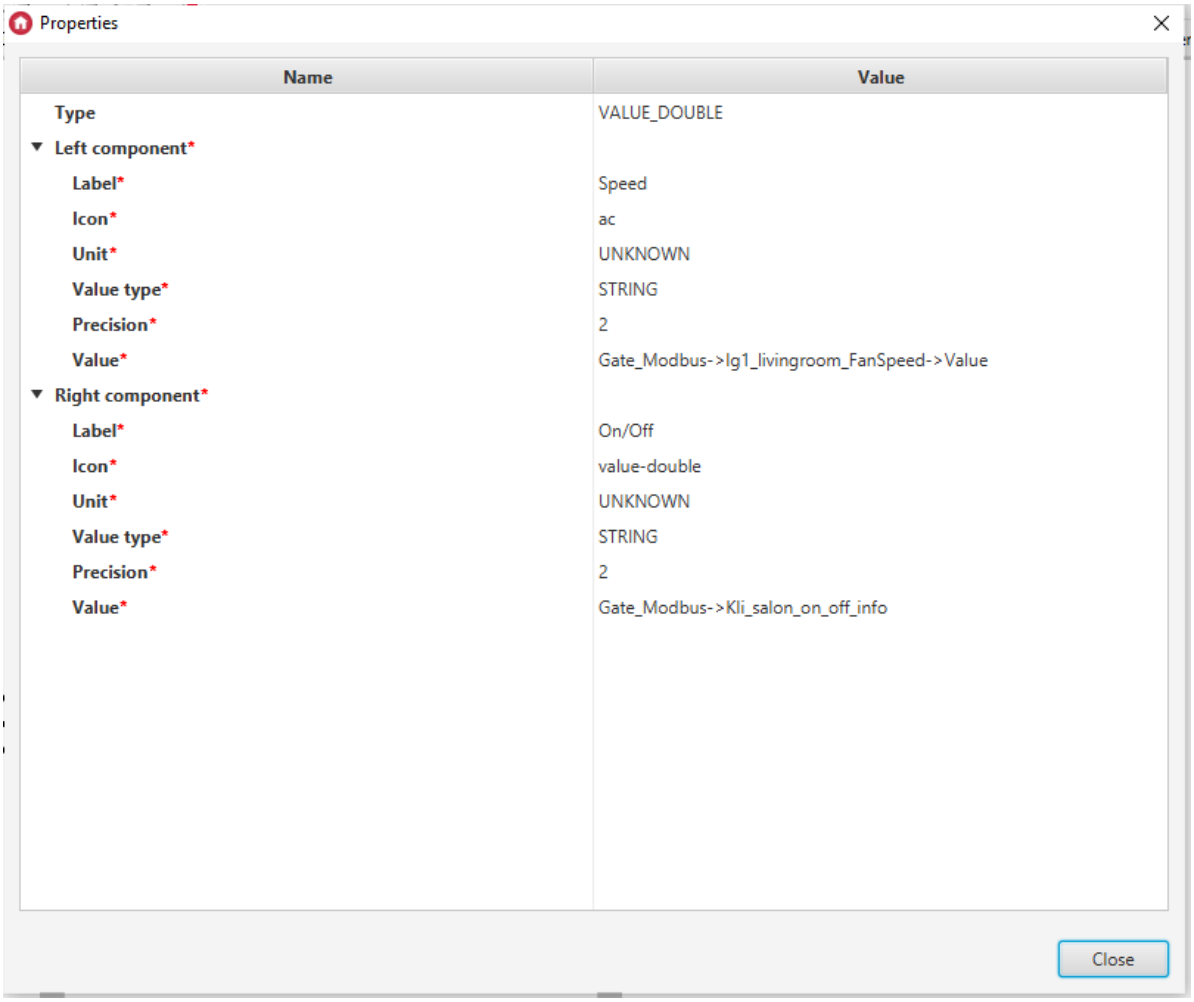
Send the configuration to the Gate module

4. Creating the myGrenton interface

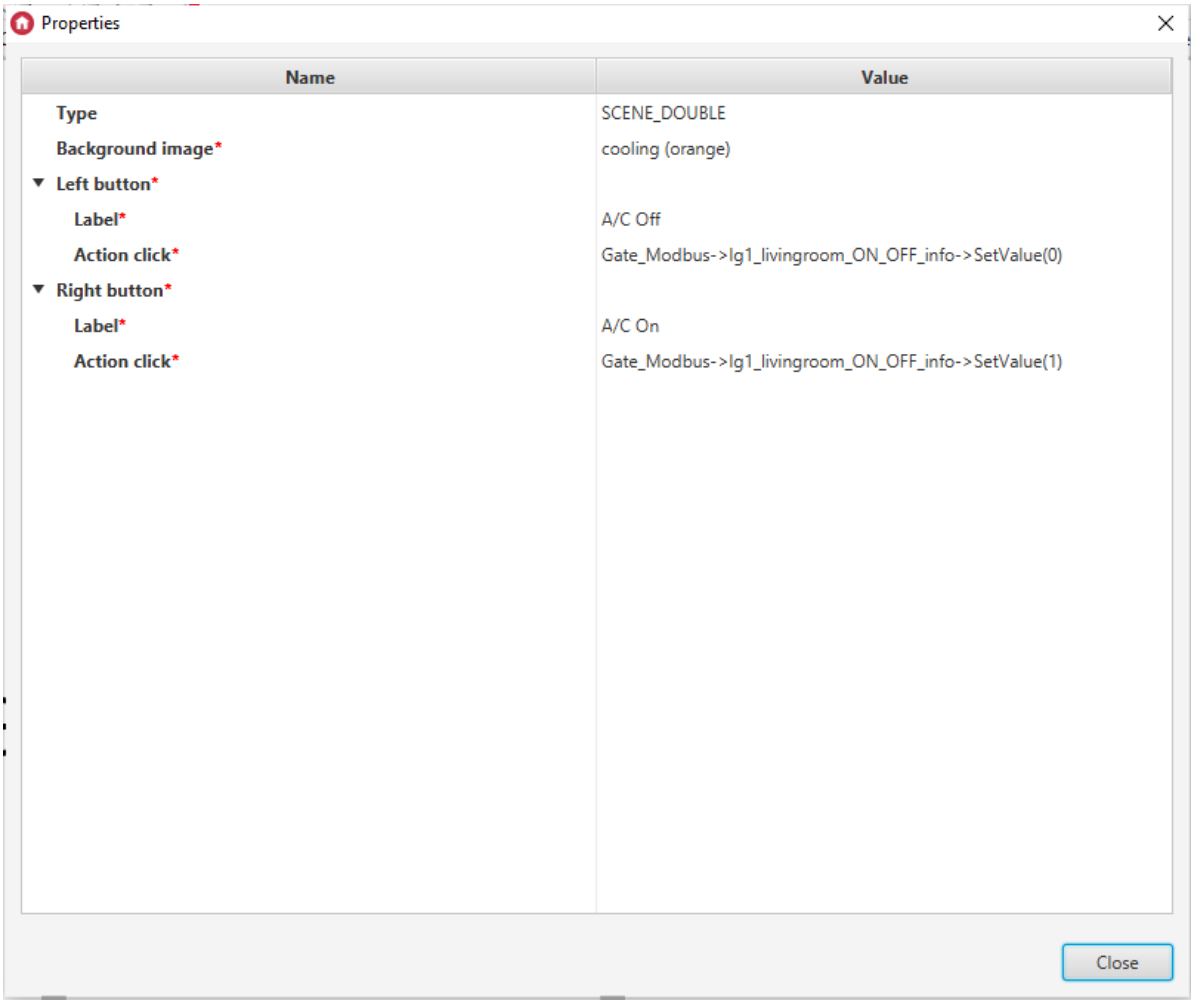
"Air conditioning" page

In the interface, create a page called **Air conditioning** and then add and configure widgets as shown in the screenshots below.

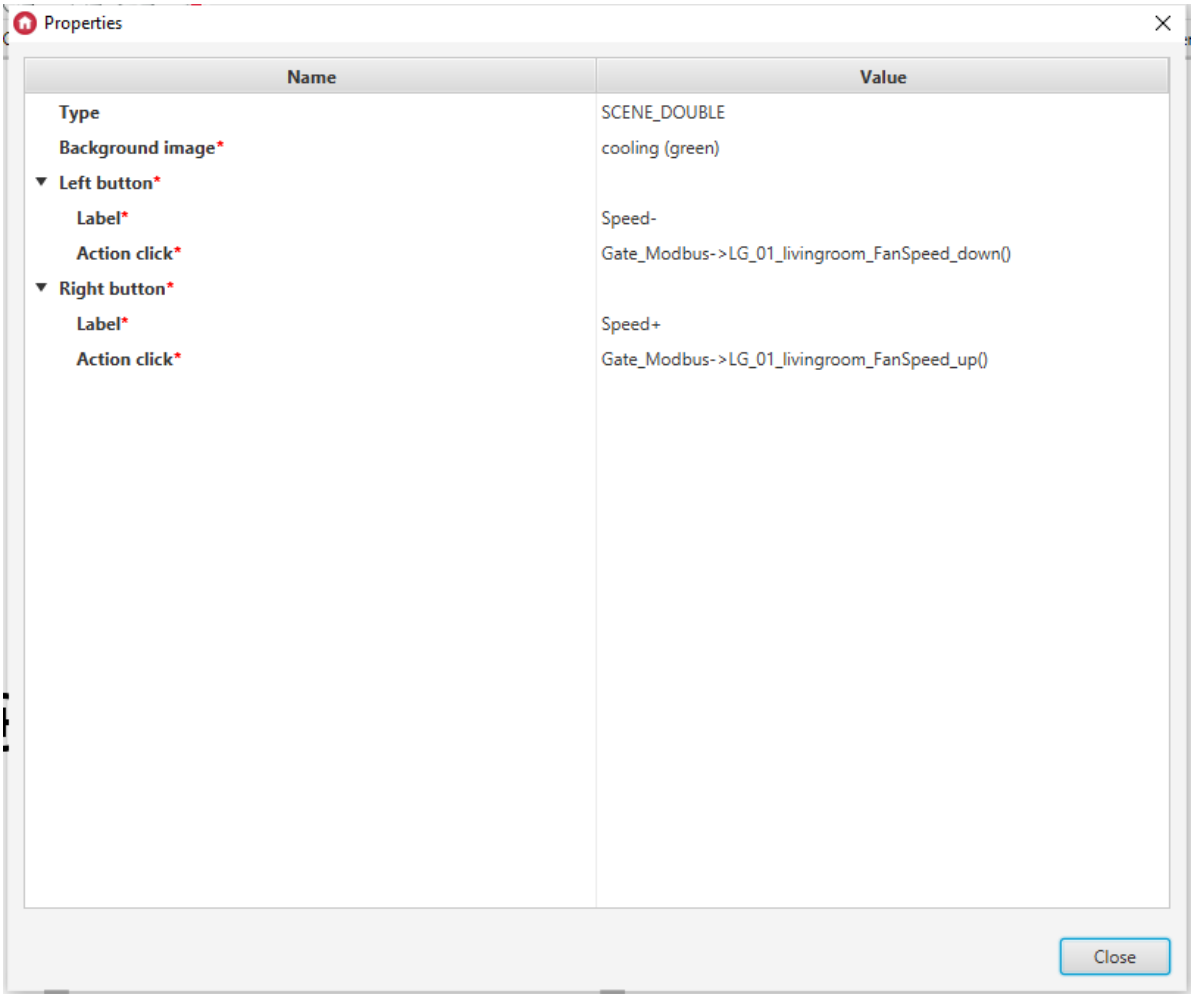
Widget - Type: VALUE_DOUBLE:



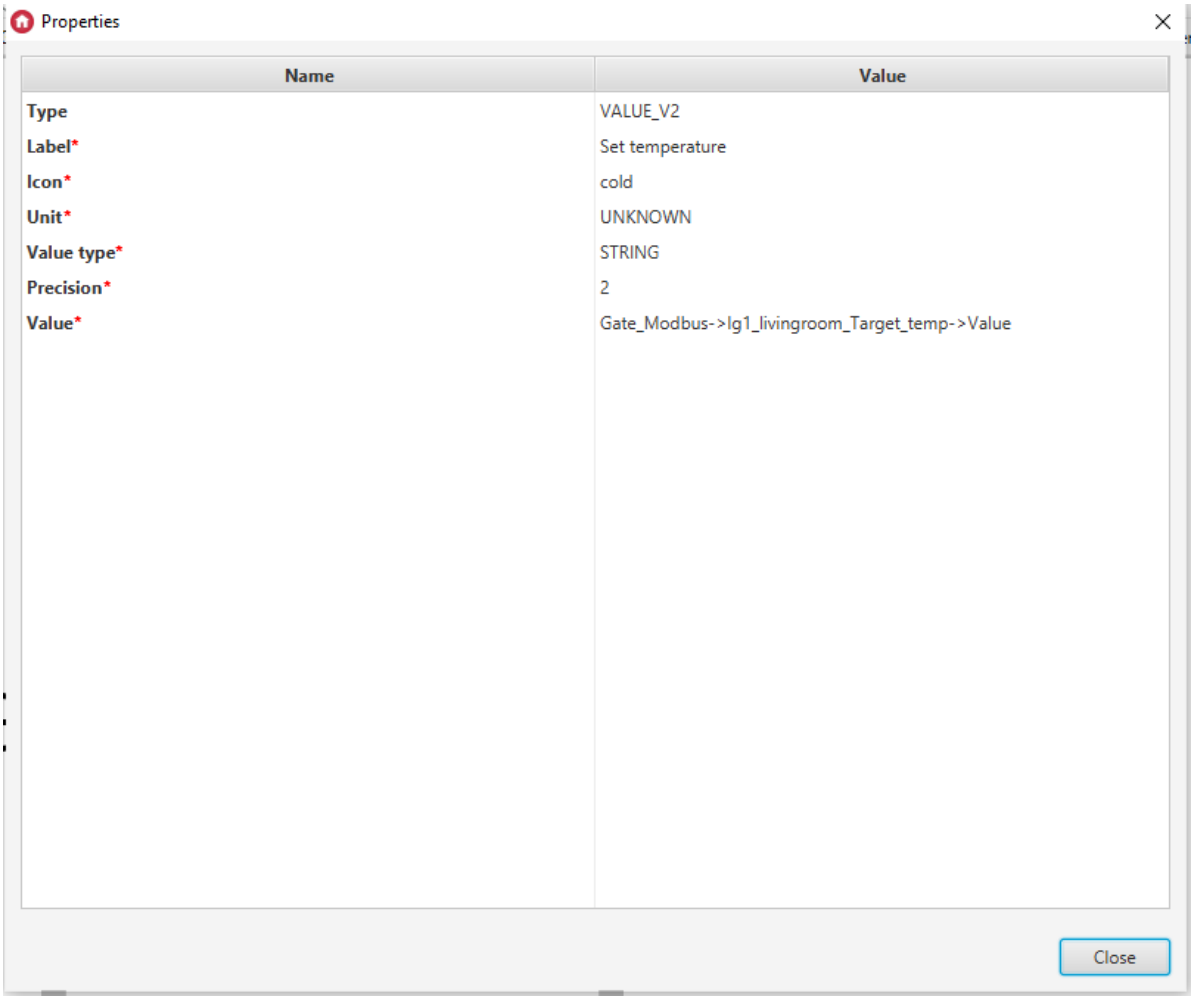
Widget - Type: Scene_DOUBLE:



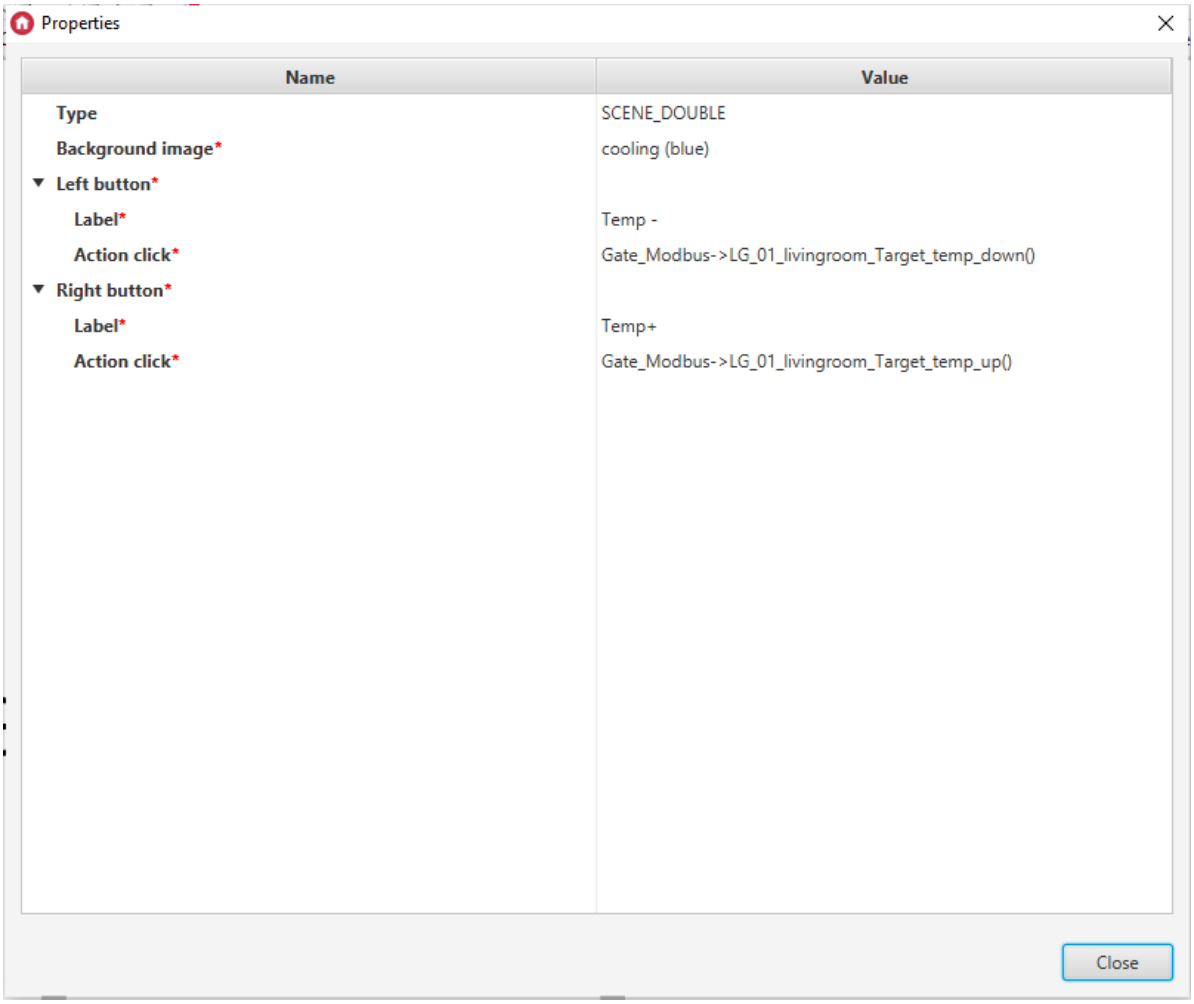
Widget - Type: Scene_DOUBLE:



Widget - Type: VALUE_V2:



Widget - Type: Scene_DOUBLE:



Send the created interface to a mobile device

After sending the interface to the phone, it will look like this: