



# eSensorCalibration Software

## **USER MANUAL**

Translation of the original instructions

Version: **1.0**

Date: **11/04/2023**

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VERSION	DATE	CHANGES
1.0	11/04/2023	-

## 1. Purpose of the manual

“eSensorCalibration” by Eelectron SpA is a simple software to calibrate the sensor by setting the internal curve of the lamp and the ratio between natural light and artificial light. The software can be used with sensor Eelectron product: PD00E1xKNX.

## 2. Installation requirements

To install and use the application, it is necessary WINDOWS® operating system (WINDOWS 7 or higher) and Microsoft® .NET Framework 4.6.1 or higher ; this one is already present if used on a PC with ETS5 or ETS6 installed.

## 3. Download application

Download the application from site [www.eelectron.com](http://www.eelectron.com) and save it on the PC. The application does not require installation, it is enough to extract the files in a PC directory.

## 4. Connect the device

- Power on the device, the sensor must be connected both to the bus KNX;
- Connect the PC to a KNX interface, then launch the application by clicking on the executable file eSensorCalibration.exe.
- Verify terms and conditions of the manufacturer before using the software by clicking on “Help - About”.
- Use the drop down list to select the KNX interface and click on ‘Connect’ to start the configuration.
- Click on “Refresh” to update the list of available connections.

## ETS Parameters

Download | Info | Reset | Unload | Print Search

Number	Name	Object Function	Description	Group Address	Length	C	R
9	<Illuminance> Output	Lux	New group addre...5/6/123	9	2 bytes	C	R
10	<Illuminance> Calibration Setpoint	Lux	New group addre...0/1/244		2 bytes	C	R
11	<Illuminance> Calibration Action	0-255	New group addre...5/6/124		1 byte	C	R
12	<Illuminance> Command/Status Lamp	0-100%	New group addre...0/4/70		1 byte	C	R

### STEP 1

In ETS, in the “**Group objects**” page set the addresses for every object by clicking the right mouse button in the Group Adres fields 9 and select “**link with**”.

Link With Group Address

--- Presence Detector SPACE BLE Sensor E13

Object: 9: <Illuminance> Output - Lux

Existing New

Group Address

Name

OK Cancel

Fill the cell with the corresponding address.

## Calibration procedure

Help

Connection  
Address: 9.9.153    Name: KNX/USB Interfaccia (TP)    1    Refresh    Add IP IF    Connect

Calibration

Calibration    Memory View

Lux set	<input type="text" value="5/6/123"/>	<input type="button" value="Send setpoint value"/>	<span style="border: 1px solid gray; border-radius: 50%; padding: 2px;">3</span>	
Action	<input type="text" value="5/6/124"/>	<input type="button" value="Acquire setpoint value"/>	<span style="border: 1px solid gray; border-radius: 50%; padding: 2px;">4</span>	200 (use keyboard arrows for finer resolution)
Zone 1 lamp	<input type="text" value="0/4/70"/>	<input type="button" value="Send Lamp Value"/>	<span style="border: 1px solid gray; border-radius: 50%; padding: 2px;">5</span>	<input type="range" value="200"/>
Zone 2 lamp	<input type="text" value="5/5/113"/>	<input type="button" value="Acquire 100% artificial"/>	<span style="border: 1px solid gray; border-radius: 50%; padding: 2px;">6</span>	
Zone 3 lamp	<input type="text" value="5/4/112"/>	<input type="button" value="Start lamp 1 sampling"/>	<span style="border: 1px solid gray; border-radius: 50%; padding: 2px;">7</span>	
Setpoint [lux]	<input type="text" value="500"/> <span style="border: 1px solid gray; border-radius: 50%; padding: 2px;">2</span>	<input type="button" value="Acquire 100% natural"/>	<span style="border: 1px solid gray; border-radius: 50%; padding: 2px;">8</span>	<input type="text" value="350"/> <input type="button" value="Set NOT 100% natural"/>
		<input type="button" value="Calibration end"/>	<span style="border: 1px solid gray; border-radius: 50%; padding: 2px;">9</span>	<input type="button" value="Reset calibration"/>

09:02:29.872 - Bus successfully initialized

<b>STEP 2</b>	Enter in the text boxes: <span style="border: 1px solid gray; border-radius: 50%; padding: 2px;">1</span> <ul style="list-style-type: none"> <li>the physical address of the device</li> <li>the group address of the calibration setpoints</li> <li>the group address of the lamp</li> <li>the control setpoint</li> </ul>
<b>STEP 3</b>	Set the regulation setpoint (the calibration will give values optimal around that point), setting the text box <b>"Setpoint [Lux]"</b> <span style="border: 1px solid gray; border-radius: 50%; padding: 2px;">2</span> and pressing the <b>"Send setpoint value"</b> <span style="border: 1px solid gray; border-radius: 50%; padding: 2px;">3</span> button
<b>STEP 4</b>	Inform device to memorize sent setpoint using the button <b>"Acquire setpoint value"</b> <span style="border: 1px solid gray; border-radius: 50%; padding: 2px;">4</span> and waiting for the confirmation of the device.
<b>STEP 5</b>	Put yourself in 100% artificial light condition (evening or rolling shutters lower).
<b>STEP 6</b>	Change the brightness of the lamp so that you have on the luxmeter the desired setpoint from the table, using the trackbar and the button <b>"Send lamp value"</b> <span style="border: 1px solid gray; border-radius: 50%; padding: 2px;">5</span>
<b>STEP 7</b>	Inform the device to store the measured Lux value using the <b>"Acquire 100% artificial"</b> <span style="border: 1px solid gray; border-radius: 50%; padding: 2px;">6</span> button and wait for confirmation (10 seconds).
<b>STEP 8</b>	Launch the lamp points acquisition command ( <b>"Start lamp 1 sampling"</b> ) <span style="border: 1px solid gray; border-radius: 50%; padding: 2px;">7</span> , the software will control the lamp using the configured group address and wait for confirmation (two minutes).
<b>STEP 9</b>	Minimize the input of artificial light and achieve the setpoint on luxmeter using only natural light
<b>STEP 10</b>	Inform the device to store the measured Lux value using the <b>"Acquire 100% natural"</b> <span style="border: 1px solid gray; border-radius: 50%; padding: 2px;">8</span> button and wait for confirmation (10 seconds).
<b>STEP 11</b>	Press the <b>"Calibration end "</b> button <span style="border: 1px solid gray; border-radius: 50%; padding: 2px;">9</span> and the calibration is completed.

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