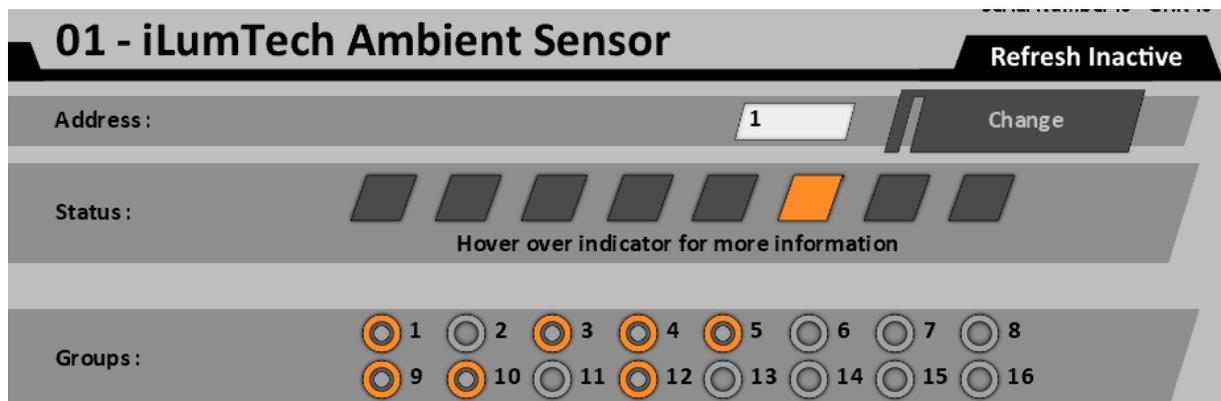


DALI Ambient Sensor

Reference function setting:

Reference function allows for using one DALI Ambient Sensor as source of reference measurement for other DALI Ambient Sensors. In other words the value of lux level and CCT measured by reference sensor is sent to the other sensors (defined by DALI group address) as Wanted lux level and CCT value. To achieve this function do following:

Select the sensors that should receive the reference values and add them to the same group by activating group address radio button. If the sensor doesn't have correct group address it will not receive the reference values. In this example Group address 1 is chosen.



Select the DALI Ambient Sensor that works as reference sensor (for example Outdoor sensor) Firstly setup **Sensor Reference Timing**. This parameter defines the period of sending the reference values (how often the reference sensor sends the data to other sensors) in half-seconds (15 means $(15/2)+1 = 8.5$ seconds, maximum input value is 64). Then select the group address of sensors that will receive the reference values. In this example it will be Group address 1. Finally toggle Reference function to Enabled state.



Now when selecting some of the sensors that were added to Group address 1 you should observe changes in values of Wanted LUX Level and CCT Level according to the data sent by the reference sensor.



Note:

In the FW version 1.6 and higher when you enable Reference function together with CCT regulation and Type 8 mode the Ambient sensor will directly send CCT values to the group address set as Type 8 group address. This allows for direct regulation of TW lamps with absolute CCT values measured by the Ambient sensor.

Threshold regulation setting:

Threshold Lux regulation is intended to be used with two-state light sources (mostly controlled by relay contact) so that only ON and OFF state are possible. There is an extra parameter called **Threshold Lux Level**. If the measured Lux Level is lower than Threshold Lux Level RECALL_MAX command is sent by the sensor to increase lux level (dark condition). This action immediately increases lux level so it will go over Threshold Lux Level. To prevent transition to off state there is period of no activity (**Threshold timeout**) which is configurable from 15 seconds to 60 minutes. When this period expires sensor is active again. Additionally to change state to ON state measured lux level has to be higher than **Wanted Lux Level** (daylight condition). When this happens OFF command is sent by sensor. In both cases the commands are sent to Brightness Group Address. That means in order to activate Threshold Lux Regulation you have to:

Setup correct Threshold Lux Level and Wanted Lux Level.

Setup correct Threshold Timeout.

Setup correct Brightness group address (address of luminaire which should be controlled)

Enable Threshold Lux Regulation (by toggling Lux regulation)

Enable Brightness/CCT mode

Final lux Level : (lx)	<input type="text" value="10000"/>	Change
Threshold lux level : (lx)	<input type="text" value="0"/>	Change
Final CCT Level : (K)	<input type="text" value="6000"/>	Change
Timing / Threshold Timeout :	<input type="range" value="0.5 s / 0.25 min"/>	

Example can be following. We want to switch on the luminaire when measured lux level is below 200 lx (dark condition). So **Threshold Lux Level** is 200 lx. When luminaires are switched on in the dark (no sunlight) the measured value by the sensor is 300 lx (this value has to be measured for correct function). That means that the condition for switching off the luminaire must be higher than (200+300) lx. Wanted Lux level therefore must be set to 500 lx. We setup also some period of Threshold Timeout to prevent non-intentional switching on transition, for example 10 minutes. Then correct Brightness group address is set, Threshold Lux Regulation and Brightness/CCT mode are enabled.

In the application the sensor is sensing outside lux level. In the evening the lux level decreases until it drops below Threshold Lux Level (200 lx). Luminaires are switched on and measured lux level increases to 502 lx. For next 10 minutes luminaires stays switched on even the lux level is higher the Wanted Lux Level. During the 10 minutes sunlight contribution to the measured lux level will be decreased and drops below 500 lx. That means that luminaires will stay switched off during whole night. In the morning the contribution of sunlight causes that measured light level will exceed Wanted Lux Level (500 lx). When this happens the luminaires are switched off. Measured lux level drops below 500 lx

but not below 200 lx as sunlight contribution raises. So the luminaires are kept in off state until the evening.

In case of short increase of daylight during the night (headlight from cars). Luminaires can be switched off (measured value is higher than 500 lx). However after the source of additional light disappears the measured lux level will be again below 200 lx, and the luminaires will be switched on again.