iSoft 5.0 Master DALI 2

Configuration Software for ELT programmable drivers

User's guide

September 2019

Content

Introduction

ELT drivers offer multiple operation modes. They need to be configured quickly and intuitively.

iSoft has been designed with this goal in mind. In essence, with this software you will be able to:

1. Create configuration files (**templates**), which contain all the parameters to be configured in the driver.
2. Select a template and **program** one or more drivers.
3. **Perform additional functions**, such as **reading** the current configuration of the driver, monitoring of different parameters of the driver or sending DALI commands through a specially designed console.

The first function does not require connecting any driver to the PC, which means that configuration templates can be generated without connecting an iProgrammer to the PC.

The other two functions require connecting an iProgrammer. A connection scheme is showed in the following section.

Connections

To send a template to the drivers, it is necessary to have an iProgrammer.
Fig. 1 shows the connection of the PC, the iProgrammer and the drivers.
For details on installing the FTDI drivers (for iProgrammer), see section 6.

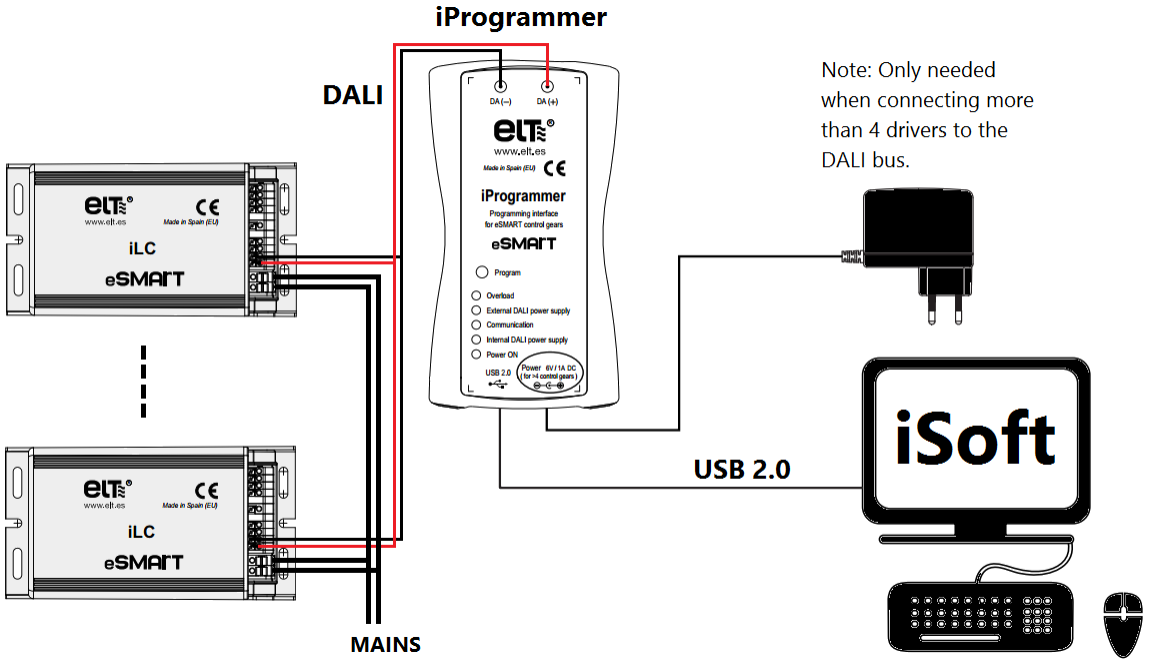


Fig. 1- Connections of drivers, iProgrammer and PC

Running iSoft

When running iSoft, the following window pops up:

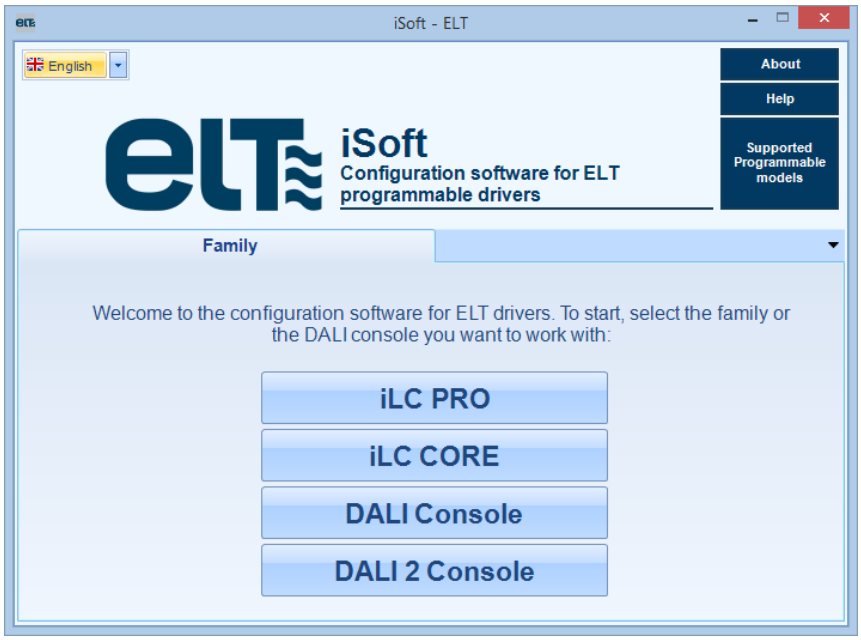


Fig. 2.- Initial Menu

In this window the user must select the family or the Dali console to work with.

1. iLC PRO

Fig. 3- iLC PRO Family initial menu

1.1. Template generation

A template is a file that contains a complete configuration for a driver. Templates make the driver configuration process simpler: once they are generated, they can be used as many times as the user wants to program a driver or a group of drivers.

In this part no connection with the iProgrammer is needed. It is only intended for setting a Template file, which will be used later in the "Programming" zone (Section 0).

The template generation depends on the model to be configured. Therefore, when the "Template generation" option is clicked, the first step is to choose a model:

Once the model is chosen, the Template generation window pops up. The images correspond to the 75W model.

WARNING: Templates are only compatible with the iSoft version with which they have been created. This means that if a template is created with a certain iSoft version, once iSoft is updated to a newer version, that template **will no longer be usable**, and a new template must be created.

Summary tab

This tab gathers all programmable features and the dimming method settings.

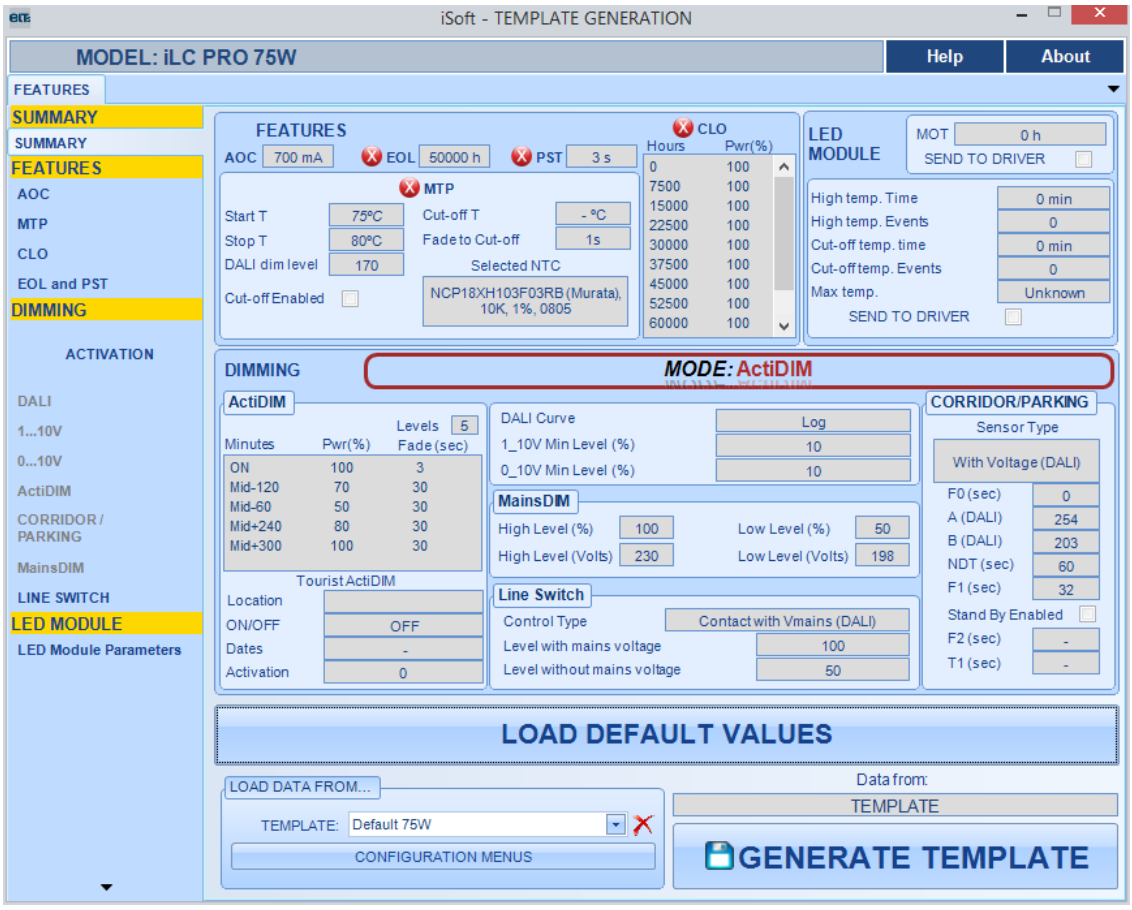


Fig. 4- "Summary" tab.

Data shown in this tab is **"read-only"**. It can only be modified from specific tabs (AOC, MTP, CLO, ActiDIM, MainsDIM, etc.).

All changes are automatically loaded in the "Summary" tab. New configurations are saved in **JSON files**, which are stored in the PC (*C:\ELT Files\Files*) to load them any time they are needed.

iSoft also provides **default configurations**. These are not modifiable, although new files can be created from them.

When selecting the "Summary" tab, the data from each feature's tab is **loaded**. This data can only be loaded from:

- Profiles (default or custom).
- Reading a configuration from the iSoft controls.

If a tab, different from the Summary tab, is selected, when the Summary tab is selected again the data from "Features" will be loaded.

The field titled "Data from", in the lower part of the Summary tab, shows where the data comes from:

- Configuration tabs.
- A template.

Zones

The **"Features" zone** is a summary of the programmable characteristics:

- Enabled features:

	Indicates enabled feature
	Indicates disabled feature
	Indicates that the feature is not implemented

- Details, if they are any.
- AOC level.

The **"LED Module"** zone contains the configuration regarding the LED Module (see section 0).

The **Dimming zone** contains information about the selected dimming method and its configurable characteristics, if applicable.

*Fig. 5- The text indicates the **dimming method.***

Zones dedicated to **"Main switch" and "Line switch**".

"Loading data from...". Data can be loaded from templates or iSoft controls.

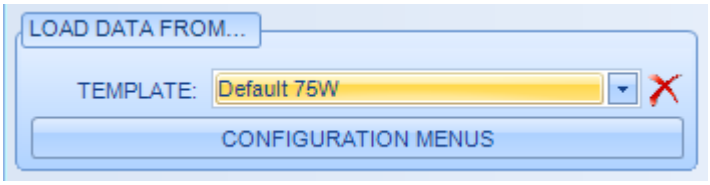


Fig. 6- Loading data from drivers, templates or controls.

The drop-down combo box contains all templates, either the default templates or the user defined templates. When a template is selected, the "Summary" tab is updated with the template data.

To delete a template, select it through the combo box and click on the red cross on the right. Default templates cannot be deleted.

Fig. 7-Template selection

Once the desired data is loaded into the summary tab, the user can generate a new template through the "**GENERATE TEMPLATE"** button. The software asks the user to type a name for the new template.

AOC (Adjustable output current)

This feature selects the driver nominal output current. This allows the user to adapt to the application requirements and to the fast LED technology evolution.

The selected output current will be considered as 100% light level. It can be dimmed through the chosen dimming method (see section 0, "Dimming method Activation") in the whole allowed dimming range.

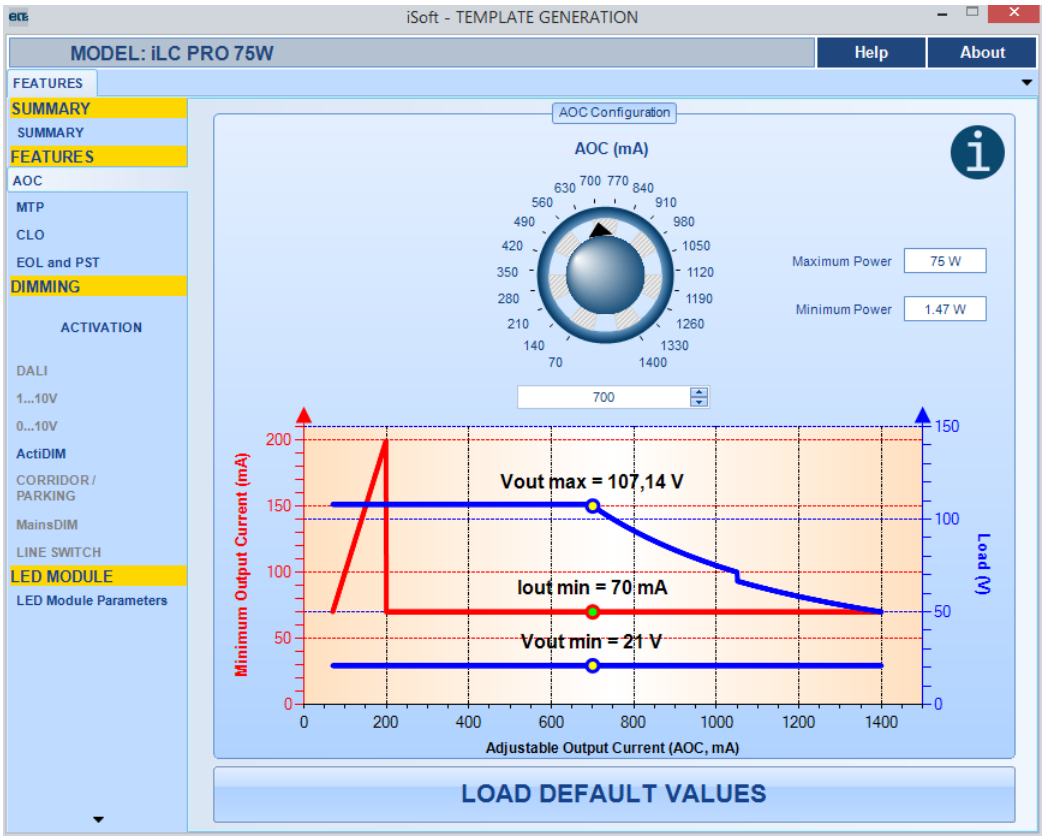

iSoft - TEMPLATE GENERATION
MODEL: iLC PRO 75W
Help
About
FEATURES
SUMMARY
SUMMARY
FEATURES
AOC
MTP
CLO
EOL and PST
DIMMING
ACTIVATION
DALI
1...10V
0...10V
ActiDIM
CORRIDOR / PARKING
MainsDIM
LINE SWITCH
LED MODULE
LED Module Parameters
AOC Configuration
AOC (mA)
630 700 770 840 910 980 1050 1120 1190 1260 1330 1400 70 140 210 280 350 420 490 560
700
Maximum Power
75 W
Minimum Power
1.47 W
Vout max = 107,14 V
Iout min = 70 mA
Vout min = 21 V
Minimum Output Current (mA)
Load (V)
Adjustable Output Current (AOC, mA)
LOAD DEFAULT VALUES

Fig. 8- "AOC" tab

The AOC range depends on the selected model. As an example, the 75W model range is included. For more information, refer to the catalogue.

Model	iLC 75W PRO
Range	70 to 1400mA
Vout min	21V
Output current ranges	Ø **70-199mA:** the driver will operate in ON-OFF mode, i.e. without dimming possibility. If the AOC is set within this range and the driver was configured with a dimming method it will be automatically configured to ON-OFF mode. The maximum output voltage is 108V.
	Ø **200-1400mA:** the driver operates as dimmable. The minimum output current is 70mA in the whole range. Three operation zones are defined in this range: ***1)*** 200-700mA: Constant output voltage (108V). ***2)*** 701-1050mA: Constant output power (75W). ***3)*** 1051-1400mA: Constant output power (70W).

The user must take into account that **the absolute minimum cannot be altered**, nor the device can operate below such minimum, regardless the driver's operation point.

The selected AOC will not take effect until it is sent to the selected driver, like the other features.

MTP (Module Temperature Protection)

This feature allows protecting the LED module by monitoring its temperature through an external NTC located at the module. When temperature exceeds a certain limit, the output current decreases.

Parameters to be set

- **Start T** (protection activation temperature) output current starts to decrease.
- **Stop T**: temperature at which minimum light level is reached.
- **Minimum Dim level**.
- **Cut-off T**: Cut-off temperature.
- **Fade time** to cut-off.
- **NTC**: there are four NTCs available.

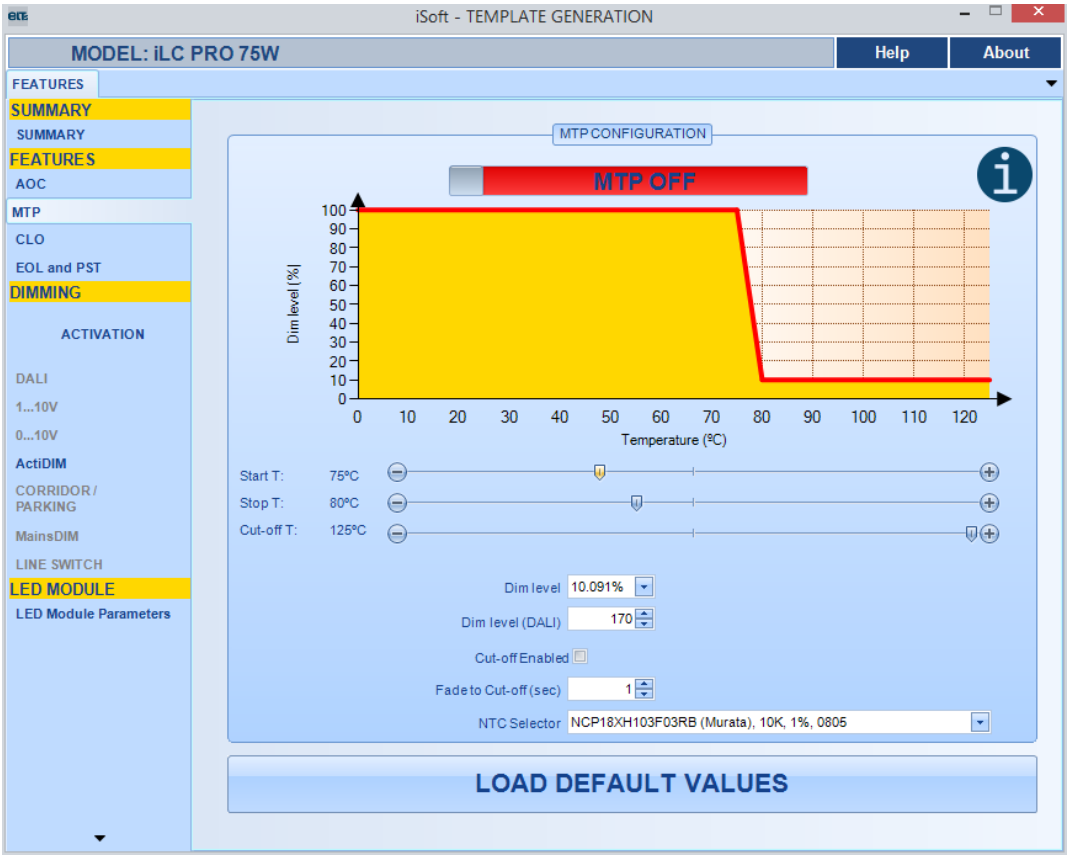


Fig. 9- "MTP" tab.

There are two **MTP modes**:

- **With cut-off temperature** (Fig. 10). The driver will restart when temperature falls 5ºC below Start T.
- **Without cut-off temperature** (Fig. 11).

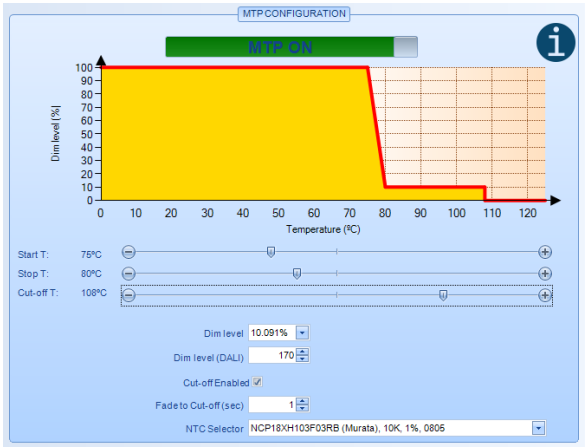


Fig. 10- MTP with cut-off temperature

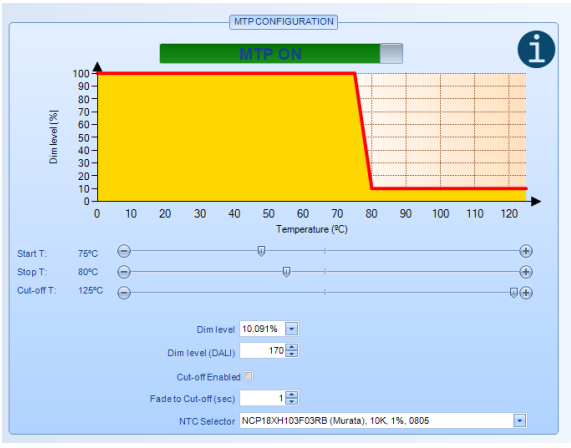


Fig. 11- MTP without cut-off temperature

Method for changing values

- Changing **temperatures**.

Place the cursor over the horizontal temperature bars until a "hand" appears. Then, drag and drop the bar to the desired position. The upper chart will be updated automatically.

Some rules regarding changing temperature values have been defined:

- The maximum Start T value is Stop T – 5ºC.
- The minimum Stop T value is Start T + 5ºC.
- The maximum Stop T value is 120ºC if Cut-off T temperature is disabled and Cut-off T – 5ºC if Cut-off T temperature is enabled.

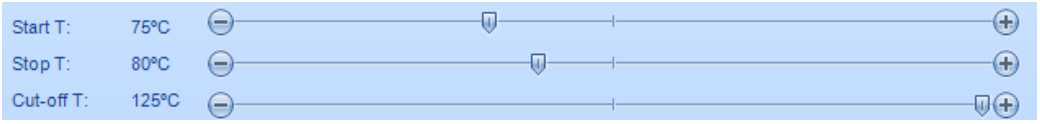


Fig. 12- Sliders to select initial, end and cut-off temperatures.

- Changing the **Dim level**: this is carried out through the text fields "Dim level" or "Dim Level (DALI)". The chart will be updated automatically.

Fig. 13- Dim level setting fields.

- Changing the **fade time to cut off:** it is carried out through the text field "Fade to Cut-off (sec)". The chart is not updated because this feature depends on time, not on temperature. With Cut-off T enabled and with the dim level above the device absolute minimum, when cut-off temperature is reached the driver will start a dimming from the dim level to the driver's minimum in the period of time shown in this field, in seconds.

Fig. 14- Setting the Fade time to Cut-Off

- **NTC** type: you can select one of the four NTCs available in the drop combo box under the title "NTC Selector". The driver will compute the LEDs temperature module taking into account the selected NTC.

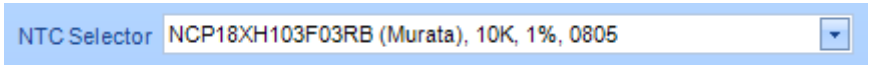


Fig. 15- NTC selection

CLO (Constant Lumen Output)

This feature increases the light level progressively to compensate a known depreciation of the LED module lumen flux. It offers several advantages:

- **It saves energy,** in case the user wants to guarantee a constant lumen flux during the entire LED module's useful life, if this feature was not available the driver would have to deliver more power than desired to the load, so that at the end of the useful life the load would reach its nominal value.
- **It avoids excessive brightness** at the beginning of the LED useful life, which could cause glare in certain applications.
- **It extends the LED module's useful life**, because it is initially fed at lower current than nominal.

If this feature is enabled, a lumen depreciation compensation table has to be defined, assigning a percentage output value to an operating time interval in hours. The output value assigned to greater operating time intervals will increase according to the known depreciation curve. This way, the table will set initial values lower than maximum, increasing with the LED aging and depreciation. The user needs to know the LED performance decrease depending on its operating hours.

The output value can be set with increments of 1% in a range from 0 to 100%, **where 100% is the value defined by AOC.**

Together with the CLO, the MOT (Module Operating Time) is set; see Fig. 16. This is because the driver applies the CLO level that corresponds to the current MOT.

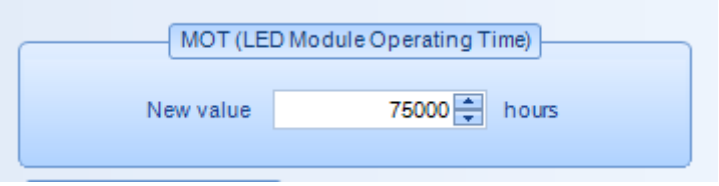


Fig. 16- MOT Selection

IMPORTANT: when the CLO setting is sent to the driver, the MOT setting is always sent as well. For this reason, it is advisable to set an adequate MOT value before sending the CLO configuration. This means that **the new MOT value must be the real LED Module operating time.** Otherwise, the driver could apply an incorrect CLO level to the LED module.

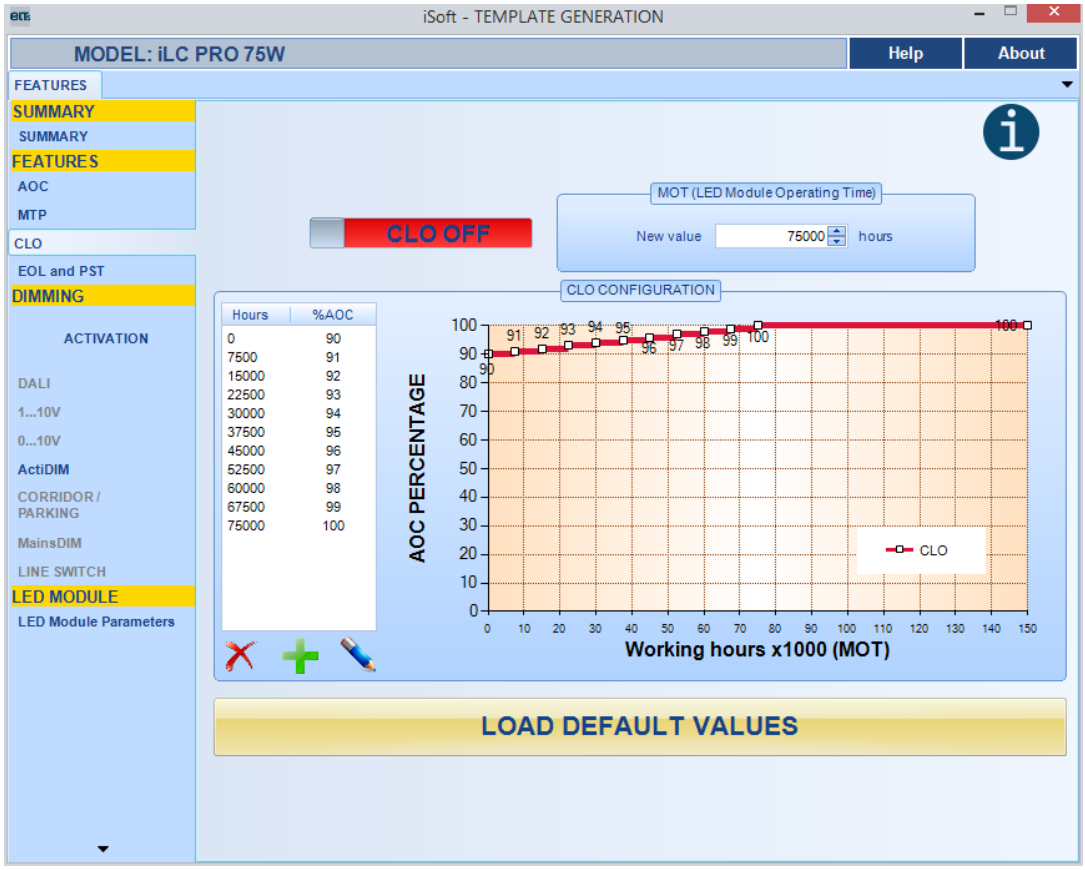


Fig. 17- "CLO" tab.

Admissible CLO values

- Maximum number of levels: 16. Thus, 17 levels are needed to draw the chart. The initial and final points are special:
  - In the initial point, the x coordinate is not modifiable. It is fixed at 0 hours.
  - The final point is not represented in the list of values. Its y-coordinate is the same as the y-coordinate of the previous value, and its x coordinate is fixed at 150000 hours.
- **Maximum number of working hours:** 150000 hours.
- **Minimum working hours step:** 500 hours.
- **Maximum dim level:** 100%.
- **Minimum dim level:** 0%. The driver will not go to Stand By mode, but to the minimum dim level.
- **Minimum dim level step:** 1%

Value modification

Values can be modified in two ways:

- **With the mouse**, dragging the red line over the chart drawing to the desired position. The change becomes effective when the line is dropped. While dragging, the software shows a label with the current coordinates:

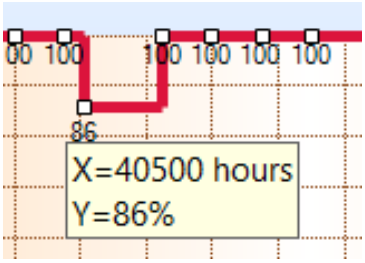


Fig. 18- Changing the CLO values through the chart.

There are several rules:

- The last point cannot be modified.
- The x-coordinate of the first point cannot be modified.
- The movement range of the x coordinate is limited by:
  - The x-coordinate of the previous point plus 500 hours.
  - The x-coordinate of the next point minus 500 hours.

- **Through the keyboard**, writing the desired values in the list of values: double-click over the value to be modified, to make it editable. The new value is validated pressing "Enter" or clicking outside the field being edited.

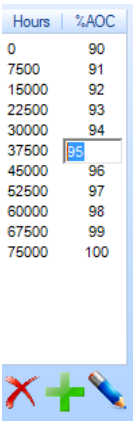


Fig. 19- CLO modification with the keyboard.

There are several rules:

- Only numerical values can be typed.
- The x-coordinate of the first point cannot be modified.
- When the x-coordinate (operation hours) of any point is modified, the software carries out the following automatic operations:
  - If the new value is not multiple of 500 hours, it will be rounded to the nearest multiple.
  - If the value is equal to or lower than the operation hours of the previous point, it will be changed to the previous point plus 500 hours.
  - If the value is equal to or higher than the operation hours of the previous point, it will be changed to the previous point minus 500 hours.

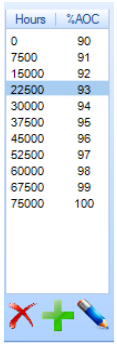
Deleting and adding values to the list

To delete or add values, use the controls below the list:

 "Delete"

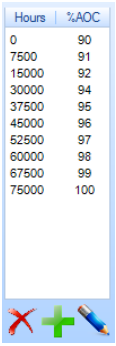
 "Add"

To delete a value, click on its row. When a row is selected, it is highlighted in blue. Then click on "Delete".



Hours	%AOC
0	90
7500	91
15000	92
22500	93
30000	94
37500	95
45000	96
52500	97
60000	98
67500	99
75000	100

Fig. 20- Selection of a row to be deleted.



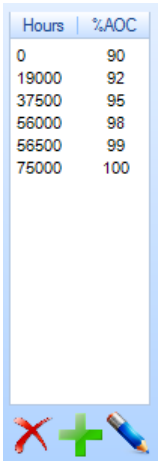
Hours	%AOC
0	90
7500	91
15000	92
30000	94
37500	95
45000	96
52500	97
60000	98
67500	99
75000	100

Fig. 21- Deleted row.

To add a value, make sure there is space in the list. If there is space, select a row and click "Add". The new value is added after the selected row.

Hours	%AOC
0	90
19000	92
37500	95
56000	98
75000	100

Fig. 22- Selection of a row after which a new row is added.



Hours	%AOC
0	90
19000	92
37500	95
56000	98
56500	99
75000	100

Fig. 23- Added row.

In the new row, the software automatically assigns the following values:

- The working hours are the same as the previous point plus 500 hours.
- The lumen value is the same as the previous point plus 1%.

To add a row, there must be at least 1000 hours between the points where the new row is added. If the row is added at the end of the list, the last value of working hours has to be equal or lower than 149500 hours.

EOL (End of Life) and PST (Programmable Start-up Time)

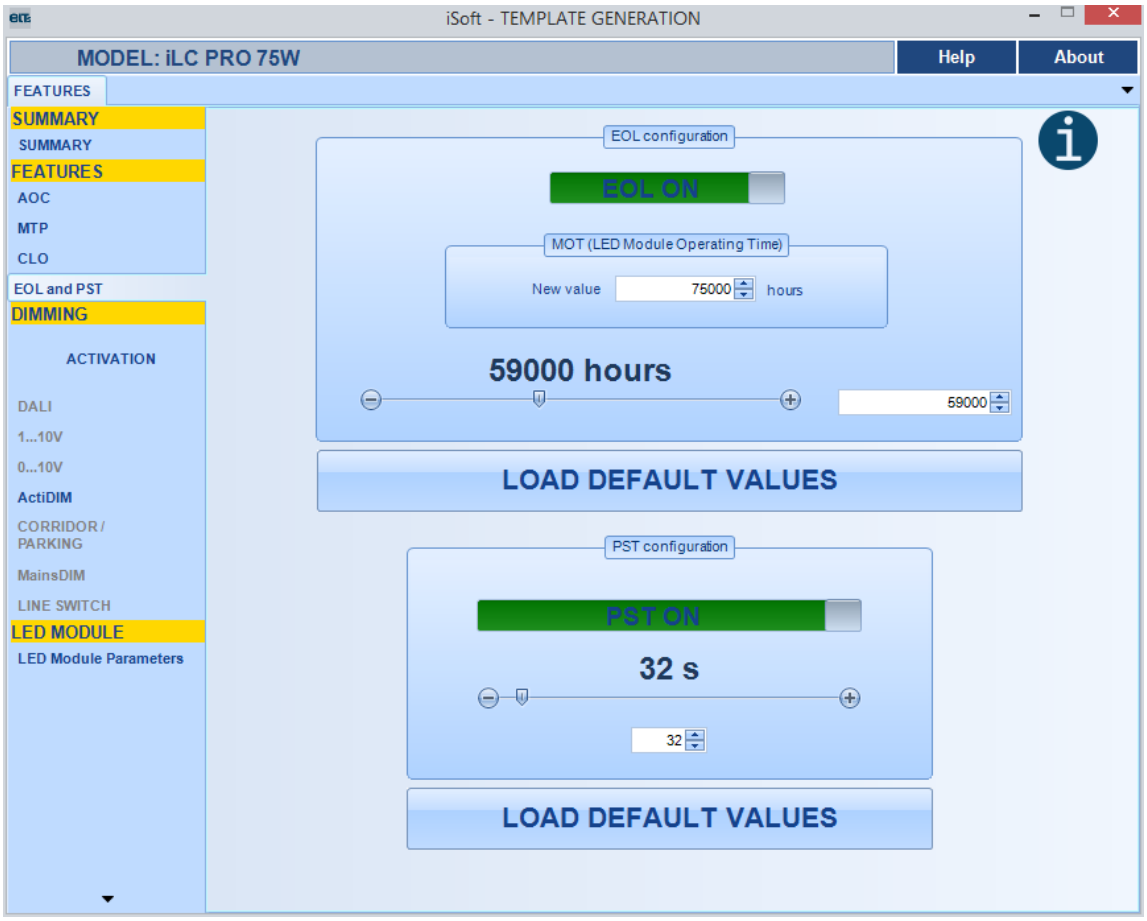


Fig. 24- "End of Life" and "Programmable startup time" tab

EOL

This feature is used to indicate that the LED module has reached its end of useful life, so it is recommended to replace it.

If this feature is enabled, the user has to introduce the useful lifetime of the LED module declared by the manufacturer in multiples of 500 hours. In every power-on, the lifetime value is compared to a counter. If the real working time is higher than the hours that have been introduced, the driver will make the LEDs blink after turn-on during three seconds. After that it will carry on in normal operation. During the three seconds, the driver will not respond to dimming commands, except for DALI commands.

Together with the EOL, the MOT (Module Operating Time) is set; see Fig. 25. This is because the driver computes the time to end of life by subtracting the MOT value to the EOL setting.

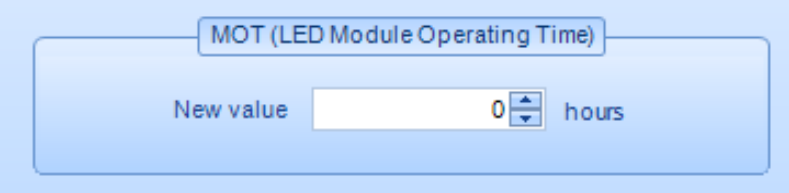


Fig. 25- MOT Selection

IMPORTANT: when the EOL setting is sent to the driver, the MOT (Module operating time) is always sent as well. For this reason, it is advisable to set an adequate MOT value before sending the EOL configuration. This means that **the new MOT value must be the real LED Module operating time.** Otherwise, the driver could interpret that the LED module has reached the end of life incorrectly.

PST

This feature configures a soft and pleasant start-up, avoiding sudden sensations during the start-up.

If this feature is enabled, the time from mains turn-on to 100% output current can be set in a range from 3 to 600 seconds, in increments of 1 second.

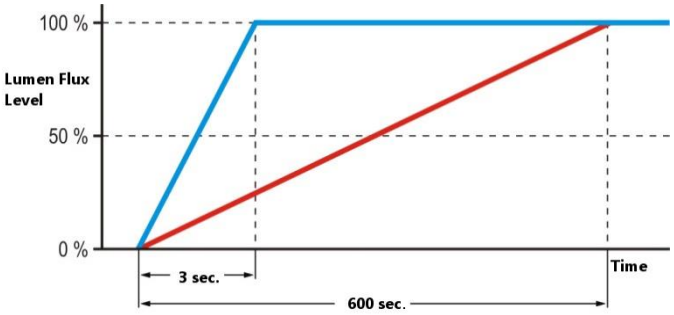


Fig. 26- "Lumen Flux Level" vs. "Start-up time"

By default, this feature offers a soft start-up in three seconds.

It only takes effect only when mains voltage is switched. If the driver is in Stand By mode (with mains voltage), when it receives a command to leave Stand By Mode, the start-up will not be soft.

The PST is **compatible with ON-OFF mode, 1...10V and 0...10V,** but **not with the rest of the dimming modes**, because most of them allow setting a start-up ramp. Others, like DALI, must fulfil regulations about start-up time.

The PST ramp is computed so that the driver reaches the maximum output level linearly from the minimum.

If the PST feature is enabled and there is an EOL warning, such warning has priority over the PST ramp. When the warning ends, the PST ramp starts at the level that would have been set if there had not been any EOL warning.

Editing values

Values can be modified in two ways:

- Through the slider.
- Changing the value in the text field by double-clicking and writing a new one, or with the arrows.

Dimming method selection

Fig. 27 shows the Dimming method Activation window, which allows to read and activate the desired dimming method.

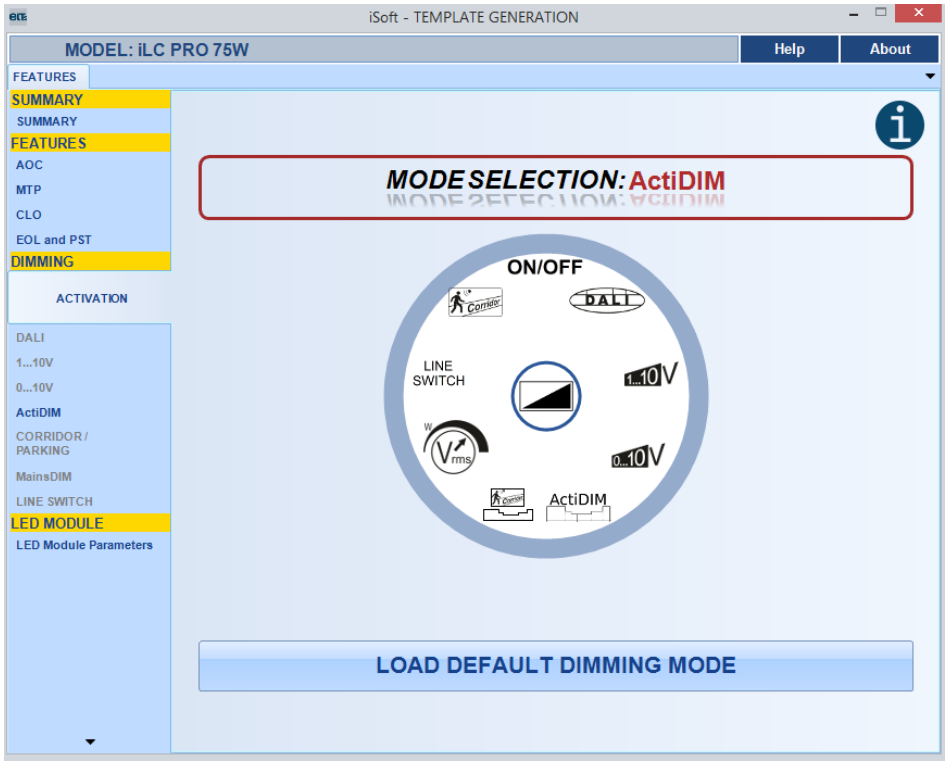


Fig. 27- Dimming mode selection tab.

This tab provides a control for selecting a dimming method. When clicking on it, a circular menu pops up (Fig. 28).

WARNING: The available dimming modes depend on the model of the selected driver.

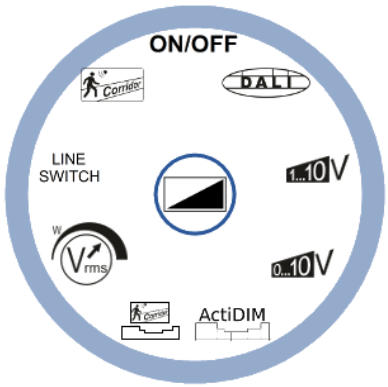


Fig. 28- Dimming mode selection control

The specific features of each method can be configured in the following tabs, reserved for each method. When a dimming method is selected, the corresponding configuration tab is enabled.

Fig. 29- Configuration tabs for each dimming method

DALI

In this tab the user can choose between linear and logarithmic curve for the DALI dimming mode.

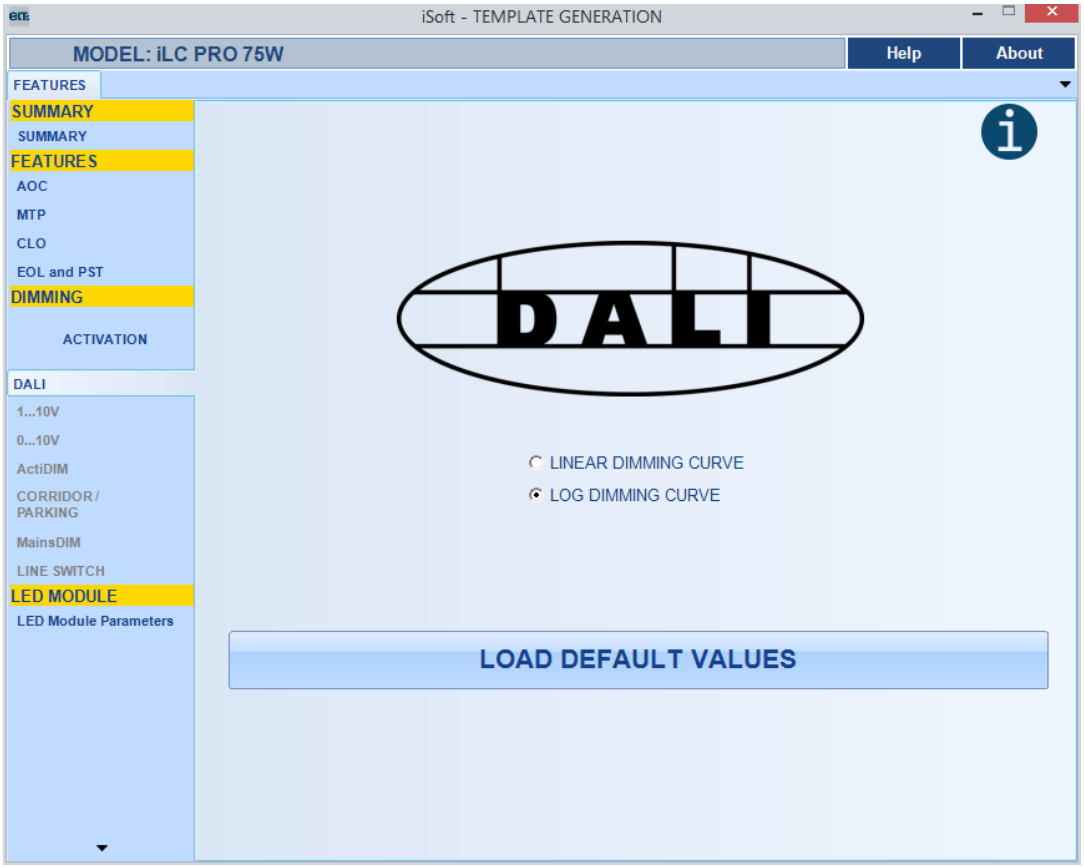


Fig. 30- DALI curve selection

1...10V

In the 1...10V input terminal you can connect a passive element (rheostat or potentiometer) or an active element (power supply, which must not be over 10V).

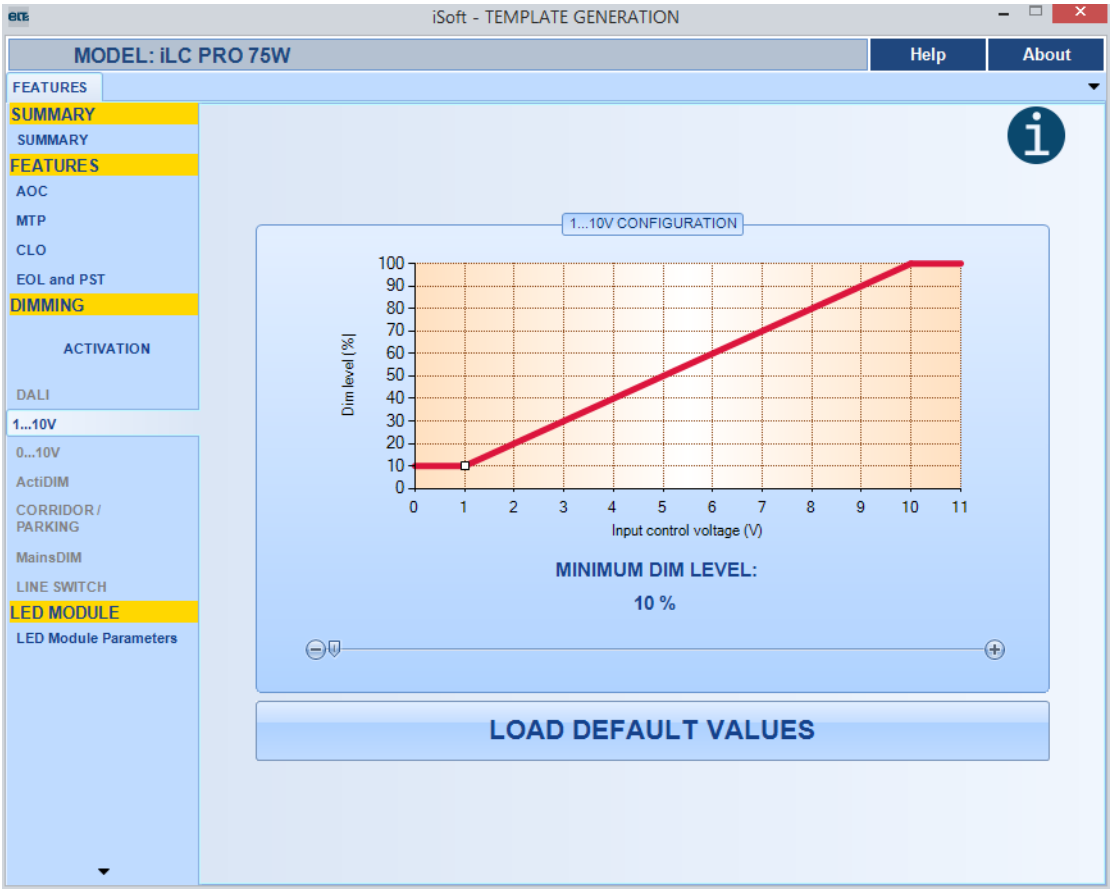


Fig. 31- 1...10V tab

The light level varies from a minimum (set by the user) to a maximum, depending on the input value of the mentioned input terminal. The minimum input terminal value does not take the driver to Stand By mode, but it stays at the minimum dim level selected by the user.

The only parameter that can by changed in this tab is the minimum dim level, in the range from 10 to 100%. Change the value with the slider or directly in the chart, dragging the white square.

0...10V

This dimming mode behaves the same way as 1...10V described in the previous section, except that when the control element (active or passive) is at its minimum the driver goes to Stand By mode.

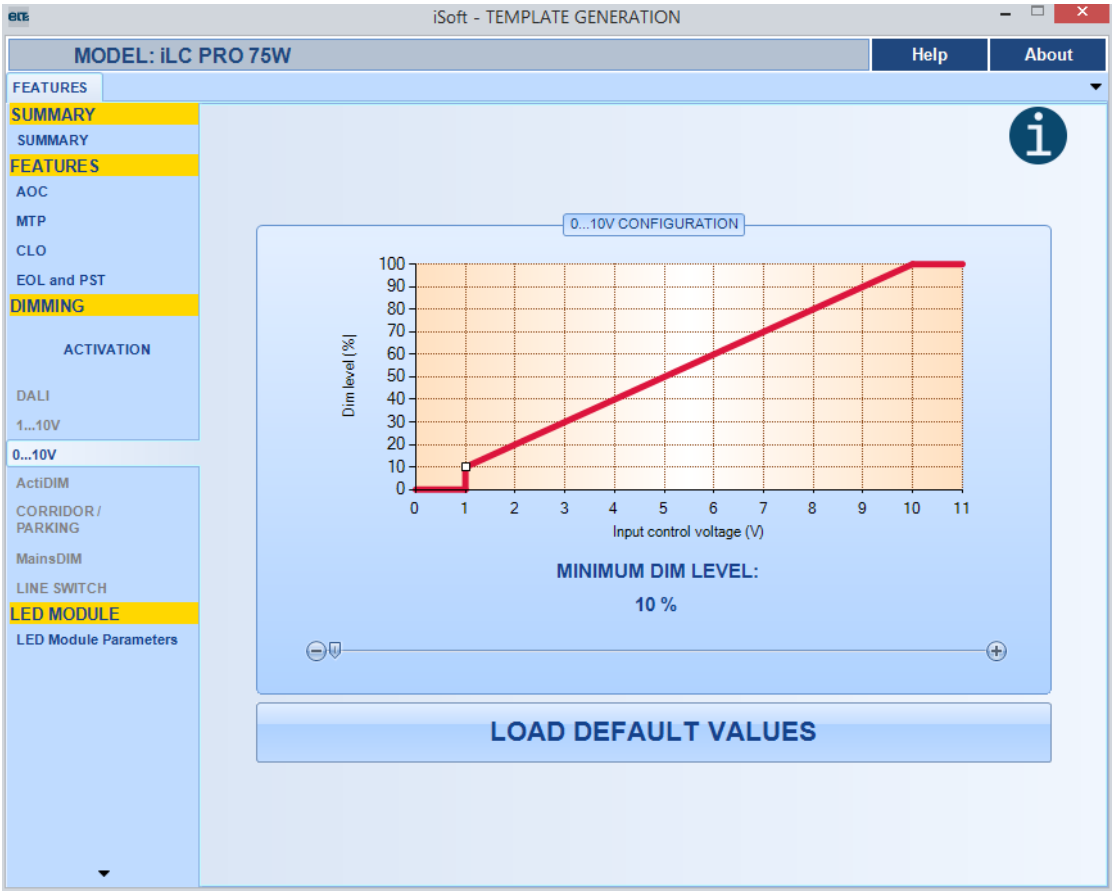


Fig. 32- 0...10V tag

The **only parameter that can by changed in this tab is the minimum dim** level, in the range from 10 to 100%. Change the value with the slider or in the chart, dragging the white square.

ActiDIM

This feature reduces the power delivered by the driver from a certain moment of the night. It is used together with an astronomical clock, a device that automatically computes the sunrise and sunset time depending on the geographical location and the date. With this information, the astronomical clock activates and deactivates the power supply of the driver to make the most of the sunlight.

To achieve this, the driver incorporates a synchronized circuit commanded by a microcontroller. This microcontroller computes the duration and the midpoint of the night. Taking this midpoint and the power-on time as references, it automatically sets the instant when the dim levels must change.

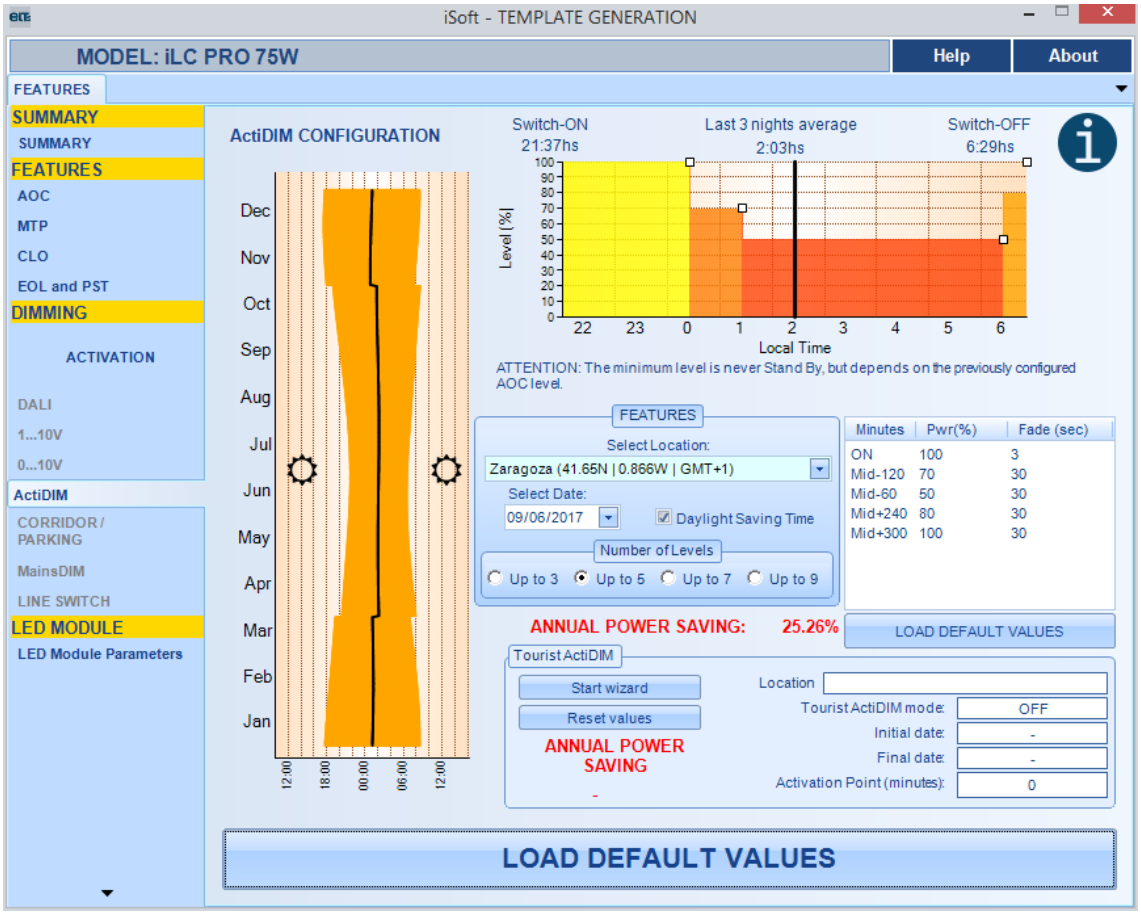


Fig. 33- ActiDIM tab

To compute the night midpoint, the system measures and stores the operation time of the last three nights. With this data the average night time is computed. This average night time allows to predict the following night time and to determine its midpoint.

The microprocessor does not take into account operation times lower than 4 hours (e.g. maintenance) or higher than 20 hours for computing the average night.

In Fig. 33, the chart on the left shows the duration of the night for the selected year. The orange area shows the night-time hours. The black line represents the midpoint of the night-time hours.

When the cursor passes over the chart, a label with the data for that point is shown: the exact sunset and sunrise hours and the night-time midpoint in the corresponding date (Fig. 34).

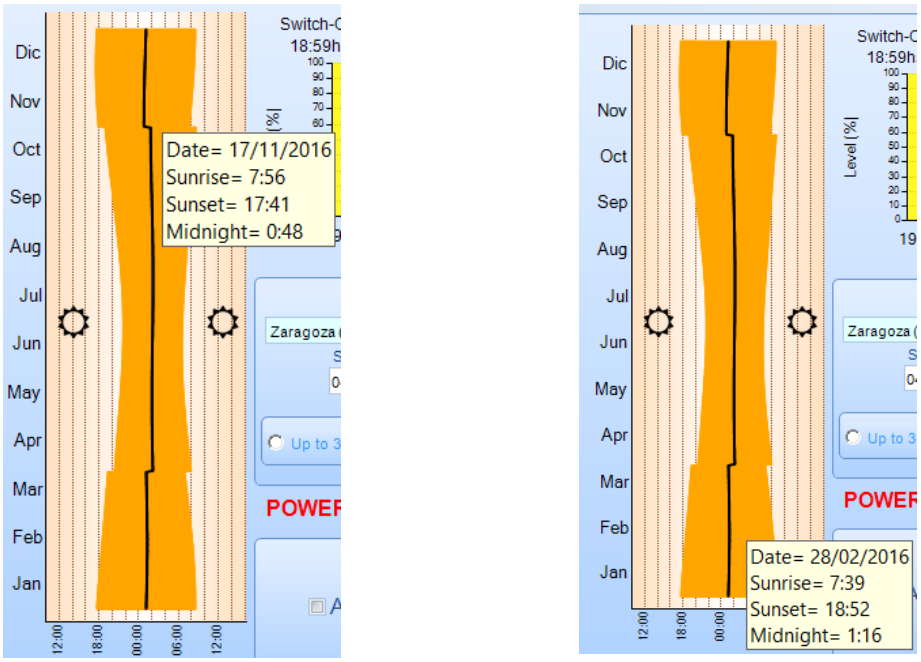


Fig. 34- Examples of positions in the chart "Date vs. hour"

To draw the chart, the exact sunset and sunrise time are computed using three variables that the user has to select:

- Location.
- Year.
- Day saving or not.

The Software includes around 200 locations (cities) that the user can choose from. Each city comes with its coordinates and time zone.

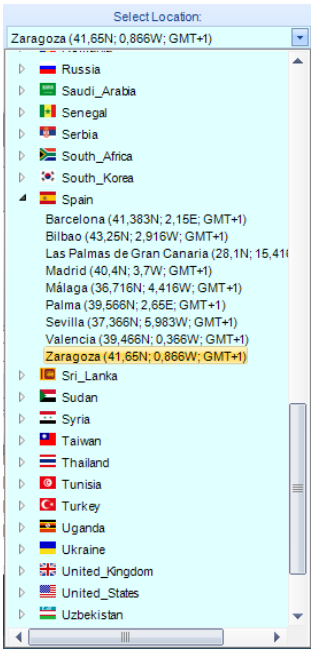


Fig. 35- Combo Box with the list of locations (cities)

The option "DAYSAVING" indicates whether the time change is taken into account or not to compute the energy saving (Fig. 36 y Fig. 37).

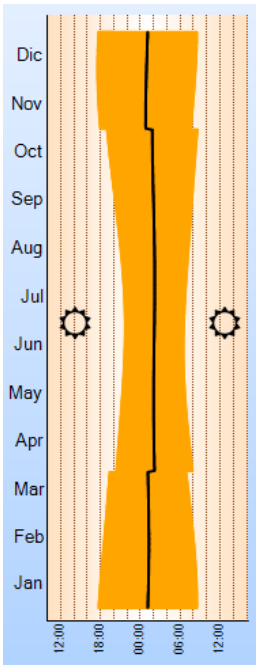


Fig. 36- Day saving enabled

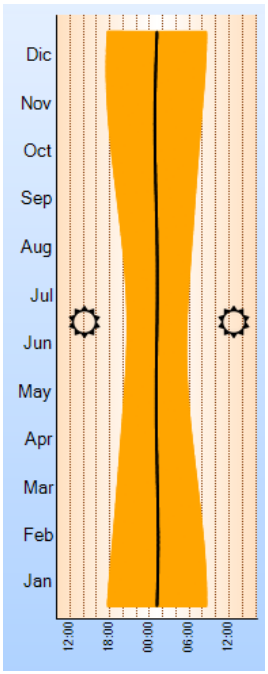


Fig. 37- Day saving disabled

The chart in the upper right represents the ActiDIM profile to apply (Fig. 38). It shows **power percentage delivered by the driver vs. local time.**

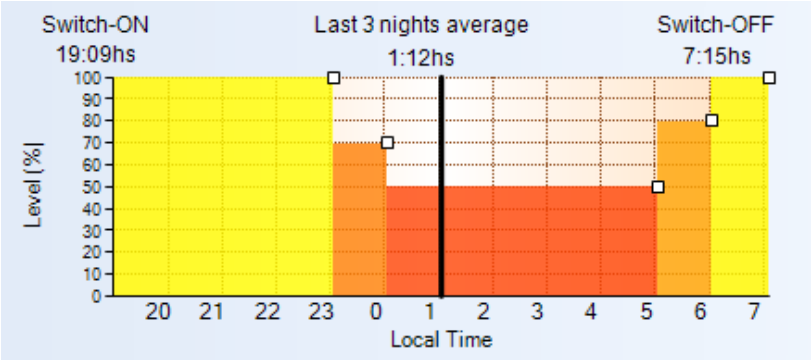


Fig. 38- "Power delivered by the driver" vs. "Local Time" chart

Regarding the **minimum power level**, it is important to notice that it is never 0W (Stand By), but it depends on the previously configured AOC level in the driver:

- With an AOC between 0 and 199mA, the driver is not dimmable (it works in ON/OFF mode), so ActiDIM mode cannot be applied.
- With an AOC between 200mA and 1400mA, the minimum output current is constant (70mA), so the **minimum power percentage is variable,** depending on the AOC (despising the output voltage variations):

$$P_{min}(\%) = \frac{70mA}{\boldsymbol{AOC}} * 100$$

For example, if AOC = 1295mA, the minimum output power will be:

$$P_{min}(\%) = \frac{70mA}{\mathbf{1235mA}} * 100 = 5{,}66\%$$

Colours of the different parts of the chart represent different power levels; they range from red (minimum power) to yellow (maximum power).

The **black line** represents the night midpoint for the selected location and date.

The graph shows only the **night-time hours**; it auto-adjusts its x-axis according to the time zone and date. During daytime, in normal operation, devices are unplugged.

You can select four profile options, depending on the selected number of levels:

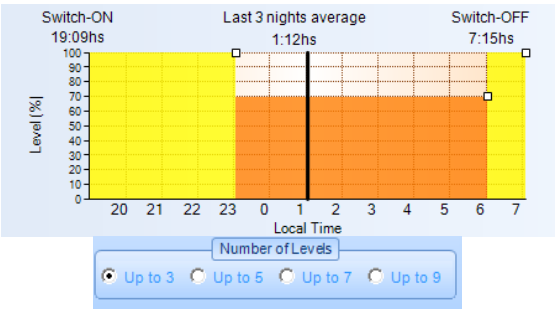


Fig. 39- Up to 3 levels

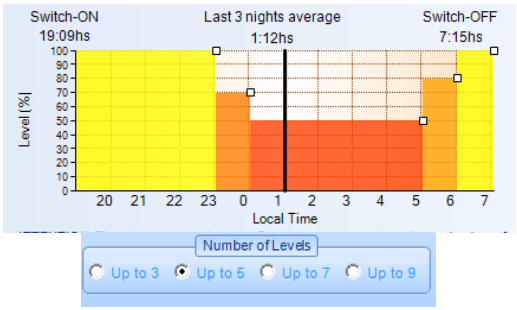


Fig. 40- Up to 5 levels

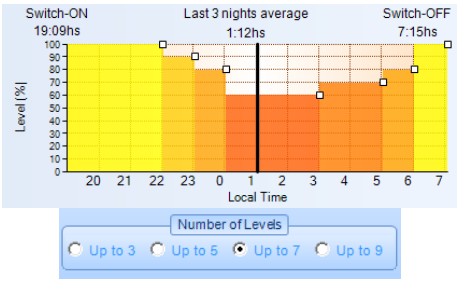


Fig. 41- Up to 7 levels

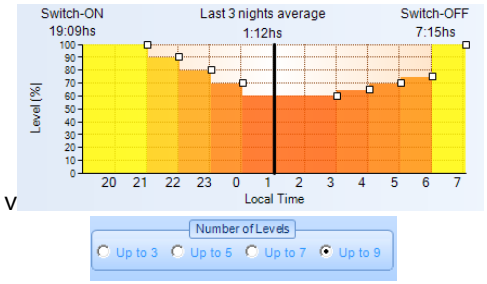


Fig. 42- Up to 9 levels

The table shows the numerical values of the selected configuration (Fig. 43).

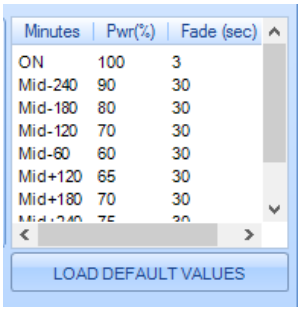


Fig. 43- Table with numerical values.

Level durations are given in minutes and they are shown with reference to the midpoint of the night.

The "**Fade**" column indicates the level change duration. Values range from **0 seconds to 600 seconds**. The fade time in the first row is the rise time to the first level; the second fade time is the rise/drop time from the first to the second level, and so on. The fade time is represented as a ramp (Fig. 44).

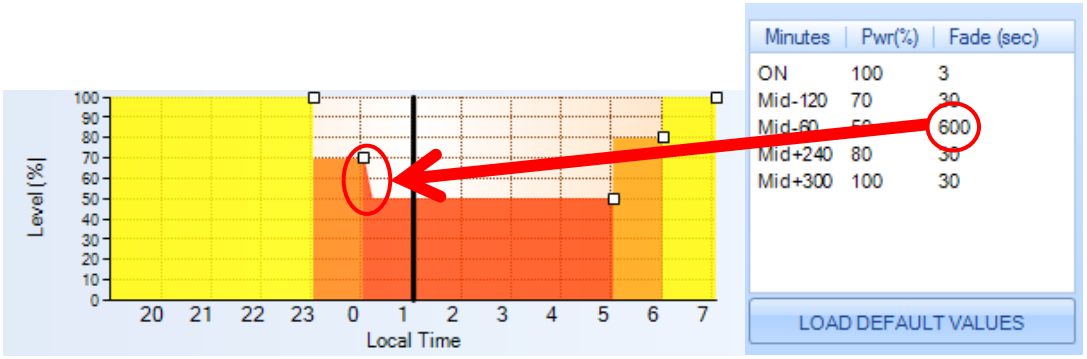


Fig. 44- Fade time set to 600 seconds

The user can change the default settings to suit the application needs. To do this there are two options:

- Change settings in the table.
- Change the chart.

The fade time can only be changed from the table.

To change the values from the table double click on the value to be changed and type the desired number. The change is validated by pressing "Enter" or by clicking outside the active text box.

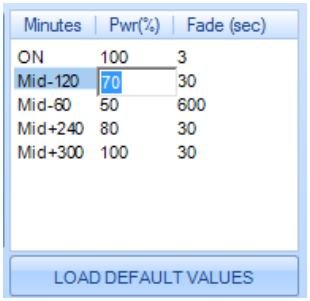


Fig. 45- Changing the default values of the table.

The chart is automatically updated with the new value.

To change settings from the chart click on one of the square indicators and drag the mouse to the desired position. The value being modified is shown on screen. When you release the mouse the change becomes effective.

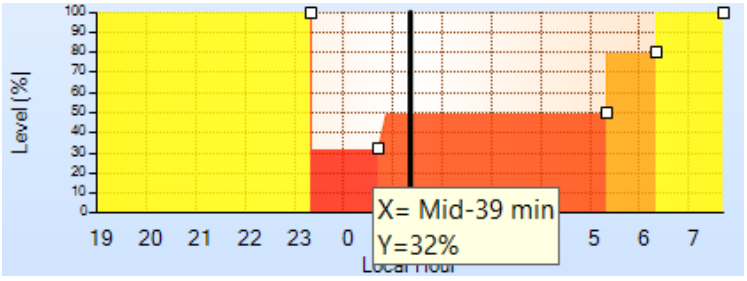


Fig. 46- Changing levels from the chart.

Profiles can include 3, 5, 7 or 9 levels. To reduce the number of levels just set two consecutive levels to the same power. Fig. 47 is an example of how to create a four-level profile from a five-level profile.

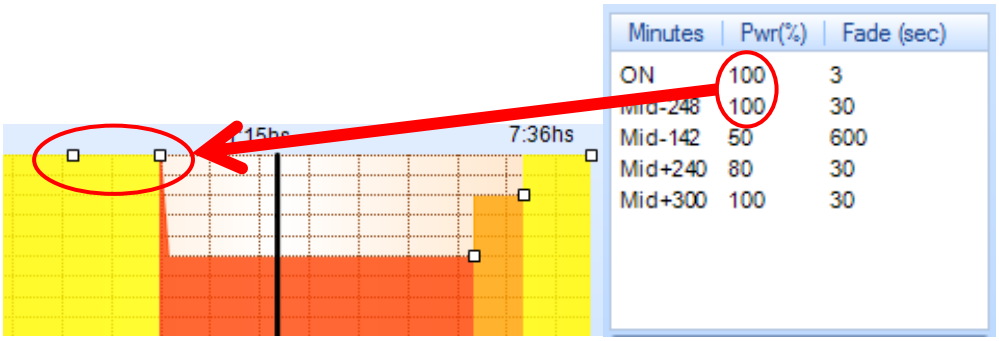


*Fig. 47- Creating a **four-level profile** from a five-level profile.*

The "LOAD DEFAULT VALUES" button restores the default values for the selected number of levels.

The software computes the **estimated power saving** when applying a certain ActiDIM profile at a given location. The computation considers the annual savings: it computes an average that takes into account not only the selected day but every day of the year. The resulting value is valid only for the selected location and year.

WARNING: the computed power saving is just an **approximated estimation** to get an idea of the impact of this feature on power consumption.

Tourist ActiDIM

This option is intended for situations in which, for a certain period of time in the year, the user wants a **partial disabling of the ActiDIM feature**:

- In a first portion of the night the driver operation is normal (i.e. with the initial power level).
- The rest of the night the ActiDIM configuration takes place (not "Tourist").

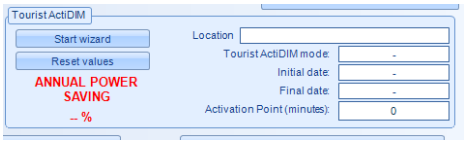


Fig. 48- Tourist ActiDIM panel.

For example, up to the night midpoint the dim level could be 100%, thus turning the first steps off, and thereafter the normal ActiDIM configuration takes place.The Tourist ActiDIM feature is an added value to normal ActiDIM function. It allows setting normal operation (not ActiDIM) without the need of an external control to switch from one mode to another.

The Tourist ActiDIM setting is done through a wizard (button "Start Wizard", Fig. 48).

1) *Initial window: warning and turning ON/OFF.*

Fig. 49- Initial window: warning and turning on.

Once the warning message is accepted, the feature can be turned ON or OFF with the horizontal switch. If the feature is turned ON, the user can continue the configuration in the next window. Otherwise, the configuration can be cancelled (nothing is saved) or finished (the turn-off state is saved).

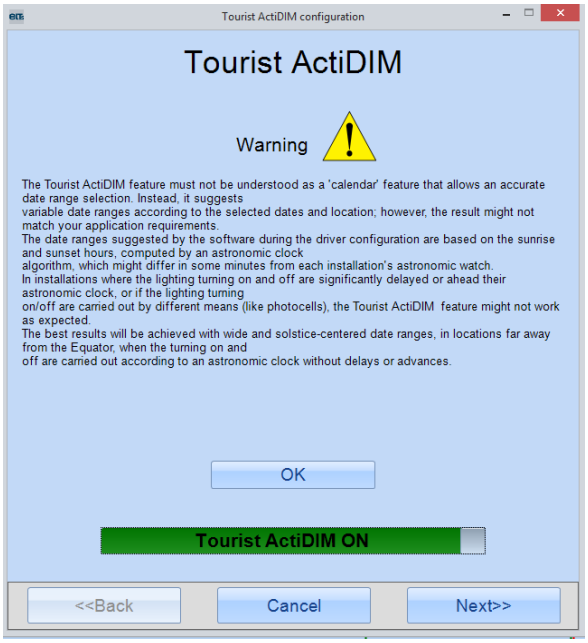


Fig. 50- When the feature is turned ON, the "Next" button appears.

2) *Window 2: setting the initial and final dates.*

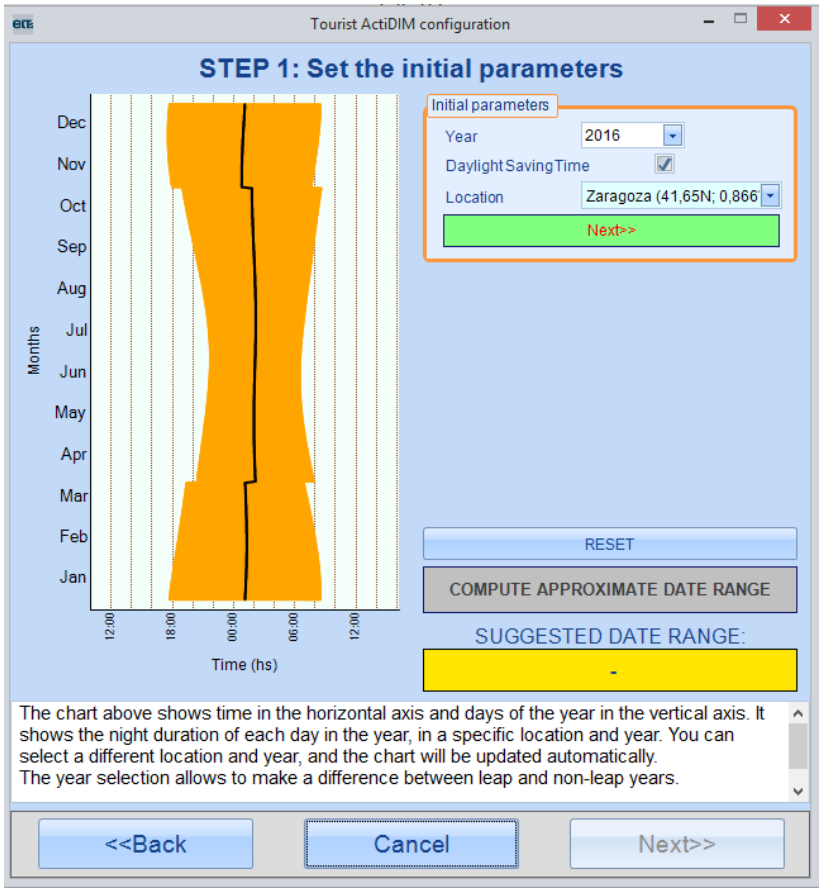


Fig. 51- *Window 2: setting the initial and final dates.*

In this window there is a chart that shows night minutes in the horizontal axis and months of the year in the vertical axis. The orange zone represents the nights in the year. The black line represents the nights' midpoints.

At this point, select a location, a year (to make a difference between leap and non-leap years) and also indicate whether the daylight saving time should be considered or not. The final result of the ActiDIM Configuration depends on the selected location because each place has different night durations along the year. Once the dates are selected, click "Next".

Then request a **range of dates in which the Tourist mode should be turned on**. The software will gather this information and it will compute a range of dates which is **closest to the one requested by the user**. Due to the way the driver works, the resulting date range will always be centred with respect to one of the two solstices. For this reason, it is advisable to request a date range that is centred with respect to one of the two solstices so that the final result is as close as possible to the requested range.

In any case, it is ensured at all times that the final range covers *at least* the range requested by the user.

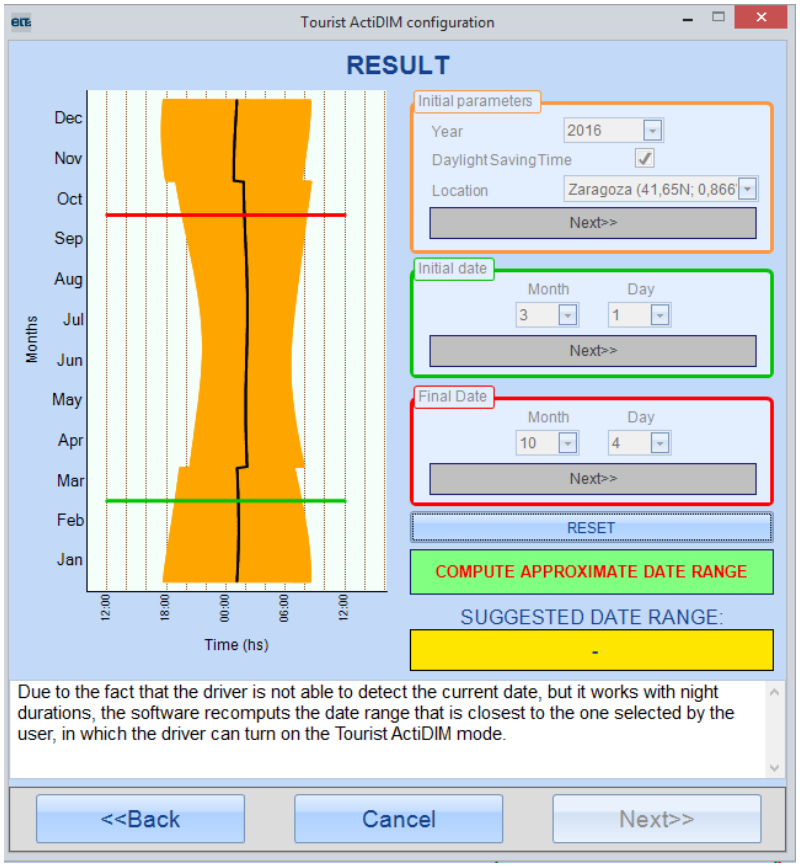


Fig. 52- Selection of initial and final dates.

Once the initial and final dates have been selected, click on the "**Compute approximate date range**" button. The software will compute the closest possible range to the one selected by the user. If the proposed range is sufficiently close to the preliminary requirements, click "Next" to continue. Otherwise, there are two possibilities: to cancel the wizard (nothing is saved, not even the turning ON of the feature) or to select a new range of dates by clicking on the Reset button.

WARNING: The range of dates proposed by the software is "**approximated**": **it may not be fulfilled with full precision** since it is an **ORIENTATIVE** range. The actual dates may vary with respect to the final result.

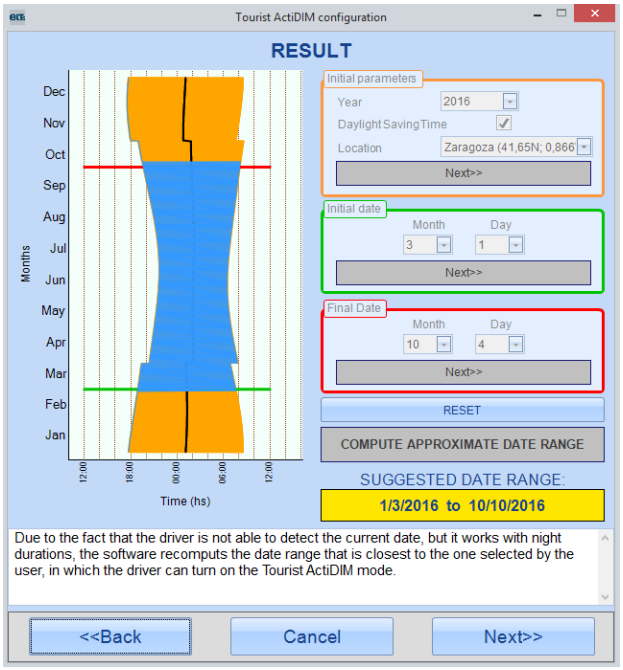


Fig. 53- Approximate date range computation.

3) Window 3: ACTIVATION POINT selection

The ACTIVATION POINT is the parameter that determines how long the tourist ActiDIM mode is on for each night. That is to say, it determines the instant of the night in which it passes from delivering the current percentage of the first ActiDIM step to delivering the current level corresponding to the step configured in the normal ActiDIM mode for that instant of the night.

This parameter is measured in minutes, and it is interpreted as time counted from the night midpoint. Its range is from -720 to 720 minutes (Fig. 54 and Fig. 55).

- Negative values: the activation point is BEFORE the night midpoint (Fig. 54).
- Positive values: the activation point is AFTER the night midpoint (Fig. 55).

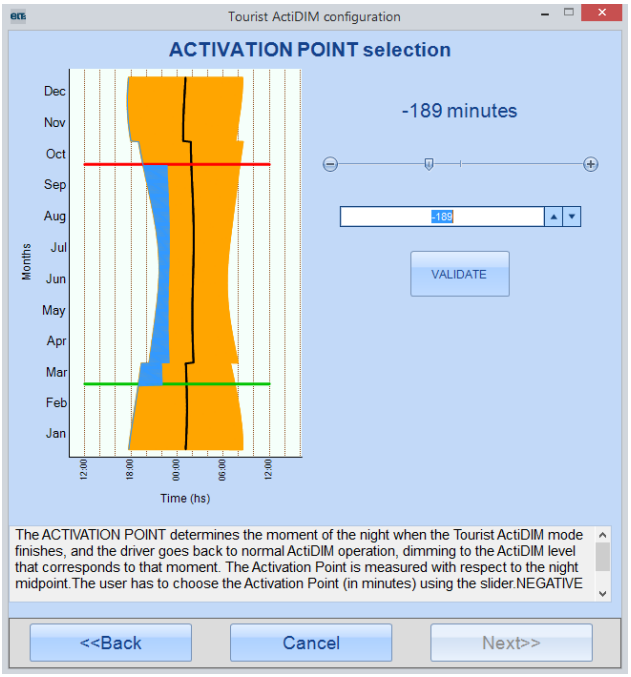


Fig. 54- NEGATIVE activation point.

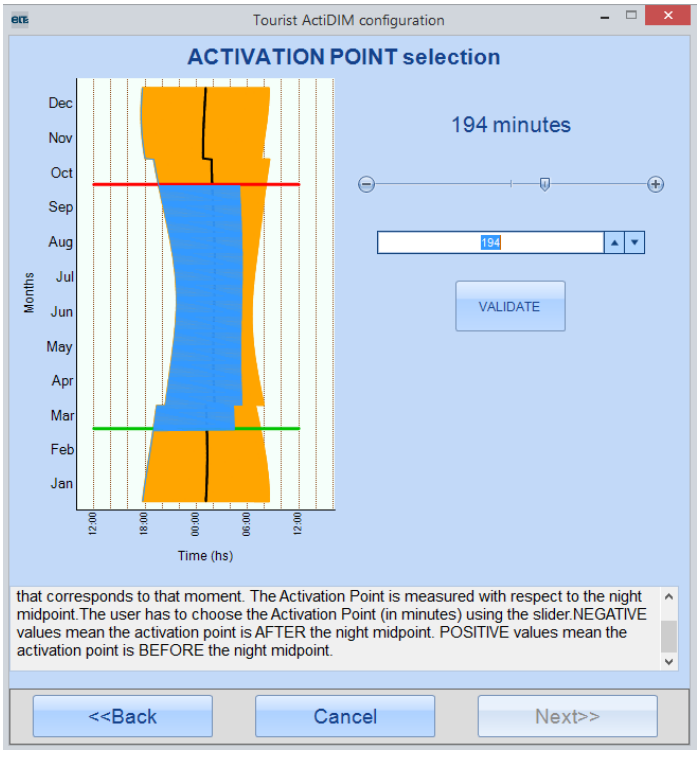


Fig. 55- POSITIVE activation point.

4) Window 4: summary

Window 4 is simply a summary of the configuration. At this point it is still possible to leave the wizard without saving ("Cancel"). To exit the wizard saving the resulting configuration, click "FINISH".

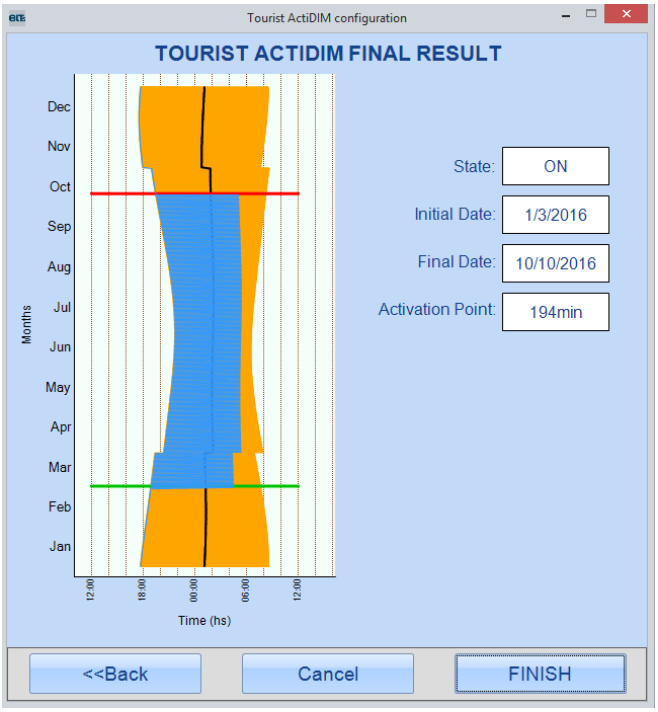


Fig. 56- Summary Window.

When you exit the wizard saving the new configuration, the configuration obtained will appear in the ActiDIM tab (Fig. 57). In addition, a new power saving estimation is computed taking into account the Tourist ActiDIM feature.

WARNING: The computed power saving value is only an approximate estimation to get an idea of the impact of the feature on power consumption.

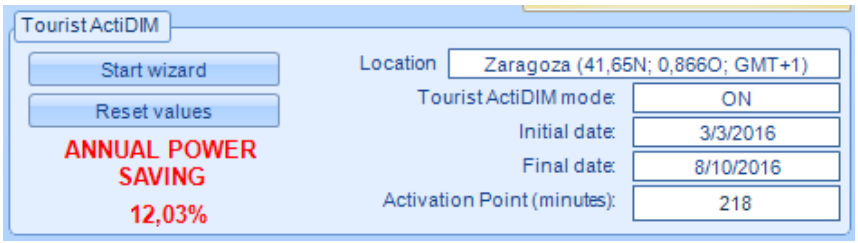


Fig. 57- Tourism ActiDIM panel: result obtained.

Corridor / Parking

The driver will respond to a profile similar to the following:

- When **presence** is detected, the driver switches from level **B to A in F0 seconds**. In case *Stand By* is enabled, the driver switches from OFF to level A in F0 seconds.
- When the **presence disappears level A** is maintained for a period of time called **NDT** (Non Detection Time).
- If presence is detected during the NDT period, the cycle restarts.
- After NDT the driver switches linearly **to level B** in **F1 seconds.**
- The driver **remains at level B** until a new presence is detected or until **T1 time** is completed. This time can be programmed so that the driver never turns off (stand by disabled).

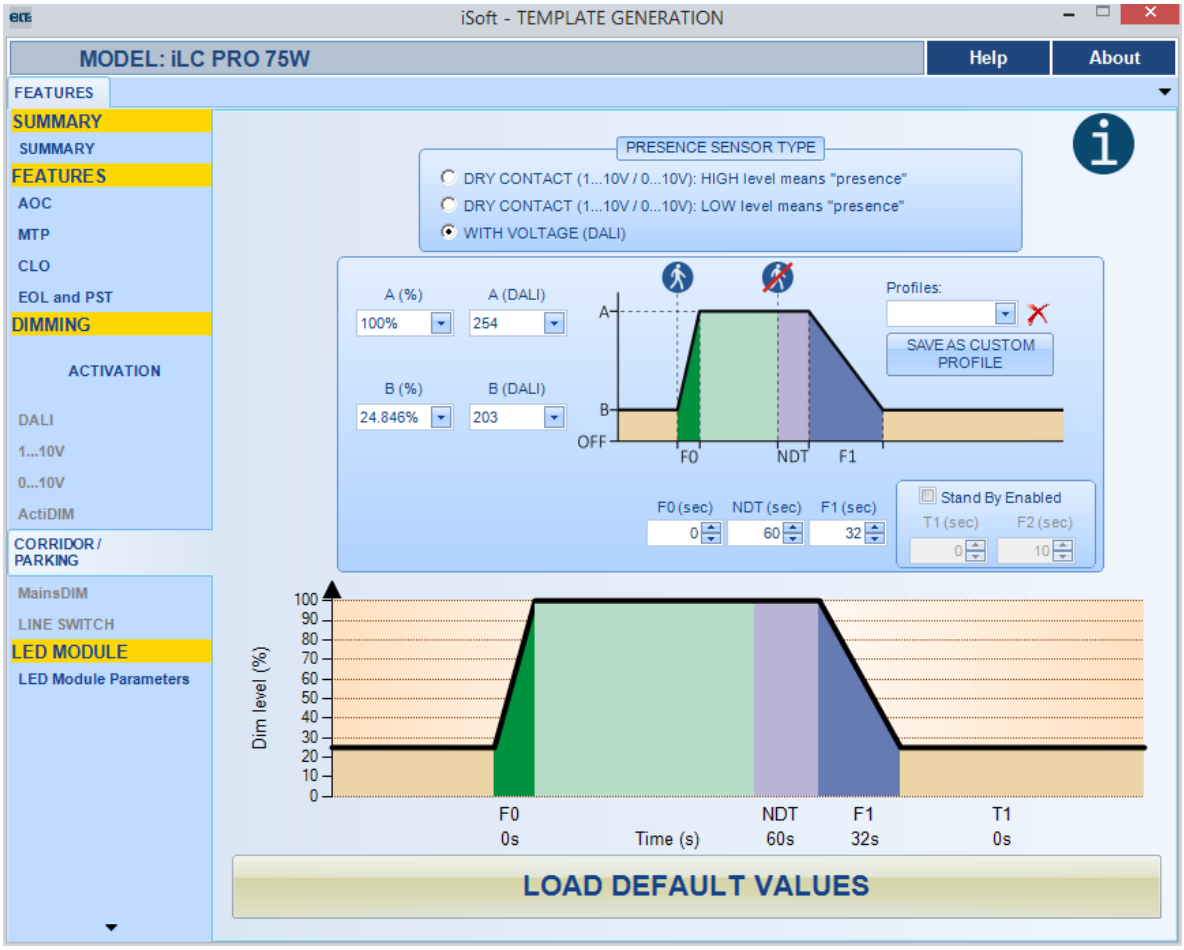


Fig. 58- "Corridor/Parking" tab: stand By disabled.

b

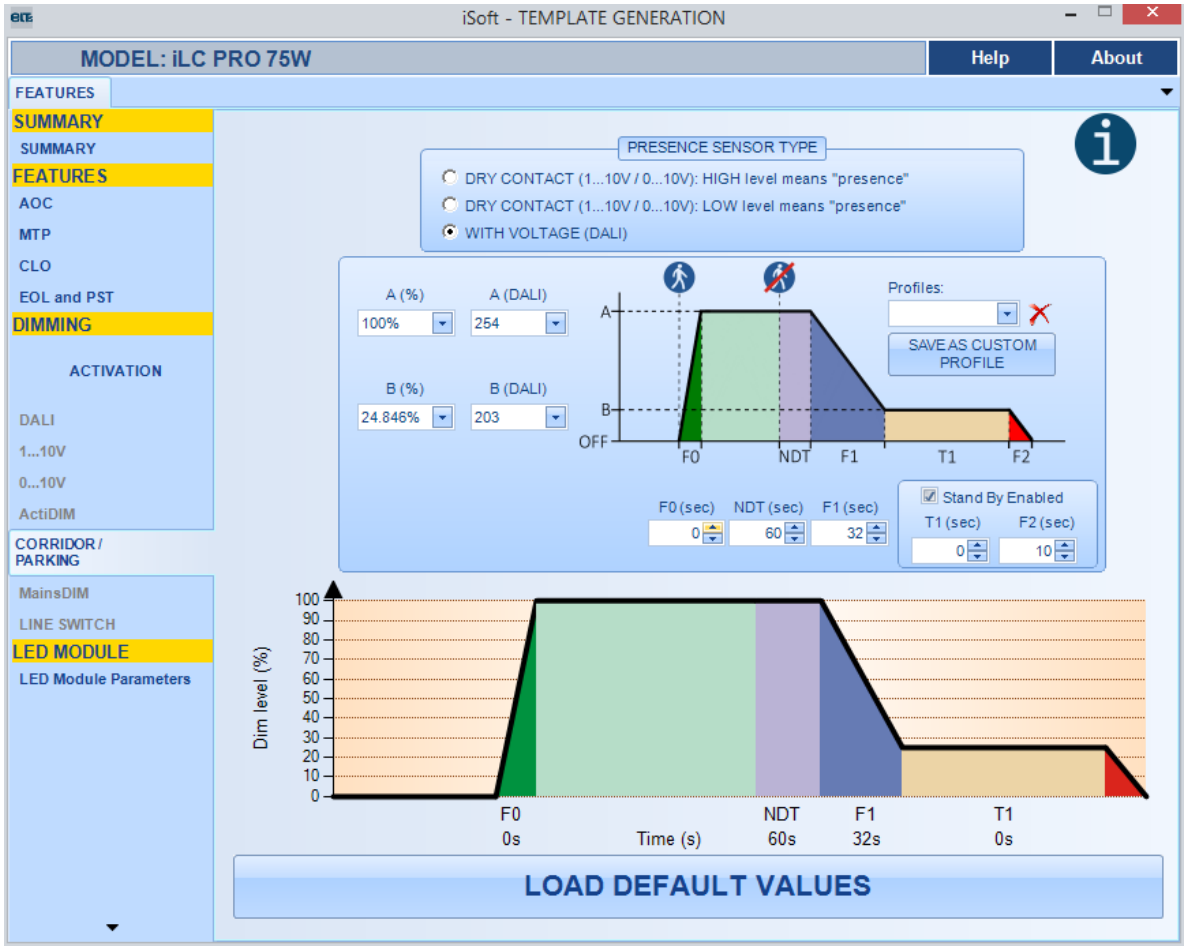


Fig. 59- "Corridor/Parking" tab: stand By enabled.

The Parking / Corridor feature has the following states, each represented by a different colour:

	Reduced dim level (B). The driver will remain in this state until a presence is detected or until the Stand By mode is activated (if enabled).
	Transition time between the reduced dim level and the unreduced level. The transition to this state occurs when a presence is detected.
	Unreduced dim level. The driver remains in this state during presence detection.
	NDT (Non Time Detection). The driver remains at non reduced level during a predetermined period of time after no-presence is detected.
	Transition time between the NDT state and the reduced dim level.
	Transition Time to Stand By. This state is optional, and it will only take place if Stand By is enabled.

The levels are modified by changing the values of the text boxes in the area on the left inside the "Features" box (Fig. 60).

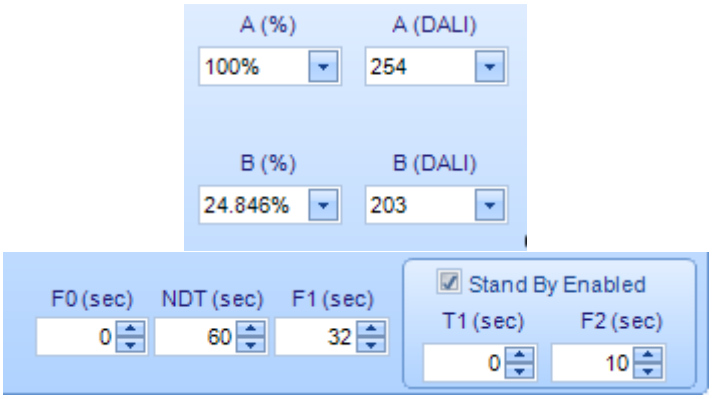


Fig. 60- "Corridor" value modification

Brightness levels (variables **A and B**) correspond to the DALI standard and are given in two ways:

- Logarithmic dimming values (0-254).
- Percentage.

NOTE: It is not possible to set the "A" level below "B" level.

There are several alternatives for connecting the presence sensor, depending on the model of each device. For example, in the 75W model the presence sensor can be connected to 1 ... 10V / 0 ... 10V or DALI terminals. The desired input and its settings are selected in the control group "Presence Sensor Type". In the case of 1 ... 10V / 0 ... 10V terminals, a voltage free contact must be used, while DALI terminals are connected to mains voltage.

CAUTION: Do not exceed the maximum voltage at the input terminals of the driver. Otherwise the driver may be damaged irreversibly.

There are three predefined profiles, "Default1", "Default 2" and "Default 3". The user can create custom profiles using the "Save as Custom Profile" button. The software prompts the user for a descriptive name for the new profile. The custom profile is stored permanently in the PC memory (C:\ELT Files\Files), in a **JSON** file, which can be loaded in the Summary tab and also in the Programming window, to send it to the driver.

NOTE: ".bin" profiles created with older iSoft versions are not compatible with this version.

Profiles are shown in the "Profiles" drop-down list (Fig. 61).

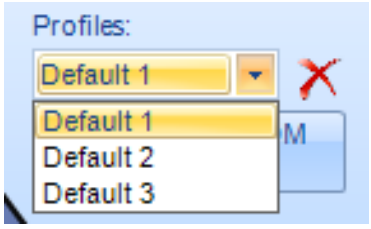


Fig. 61-Custom and default profile selection combo box.

To **delete a custom profile** click the cross to the right of the drop-down profiles. Predefined profiles cannot be deleted.

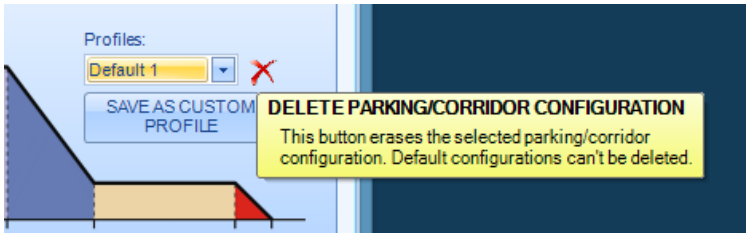


Fig. 62-Deleting custom profiles.

NOTE: During turn-on, initialization takes three seconds, a period of time during which the driver delivers low level dimming (level B) or Stand By (if enabled).

ActiDIM & Corridor / Parking

This mode combines the ActiDIM mode and some features of the Corridor/Parking mode.

The driver operates as a standard ActiDIM device, but when presence is detected the light level switches to level "A". When no presence is detected any more, the driver remains in level "A" during "NDT" seconds. When this period of time ends, the driver switches back to the ActiDIM level.

CAUTION: If level A is lower than the current ActiDIM level, the driver remains in the ActiDIM Level.

If there were special cases, such as presence Detection during an ActiDIM fade from a level to another, the maximum dim level between ActiDIM and Corridor levels is set.

MainsDIM

This dimming mode is based on the mains voltage. When the mains voltage changes, the delivered dim level changes.

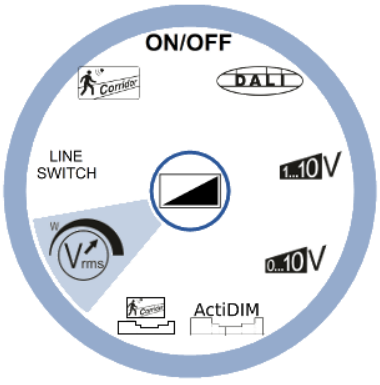


Fig. 63-MainsDIM selection

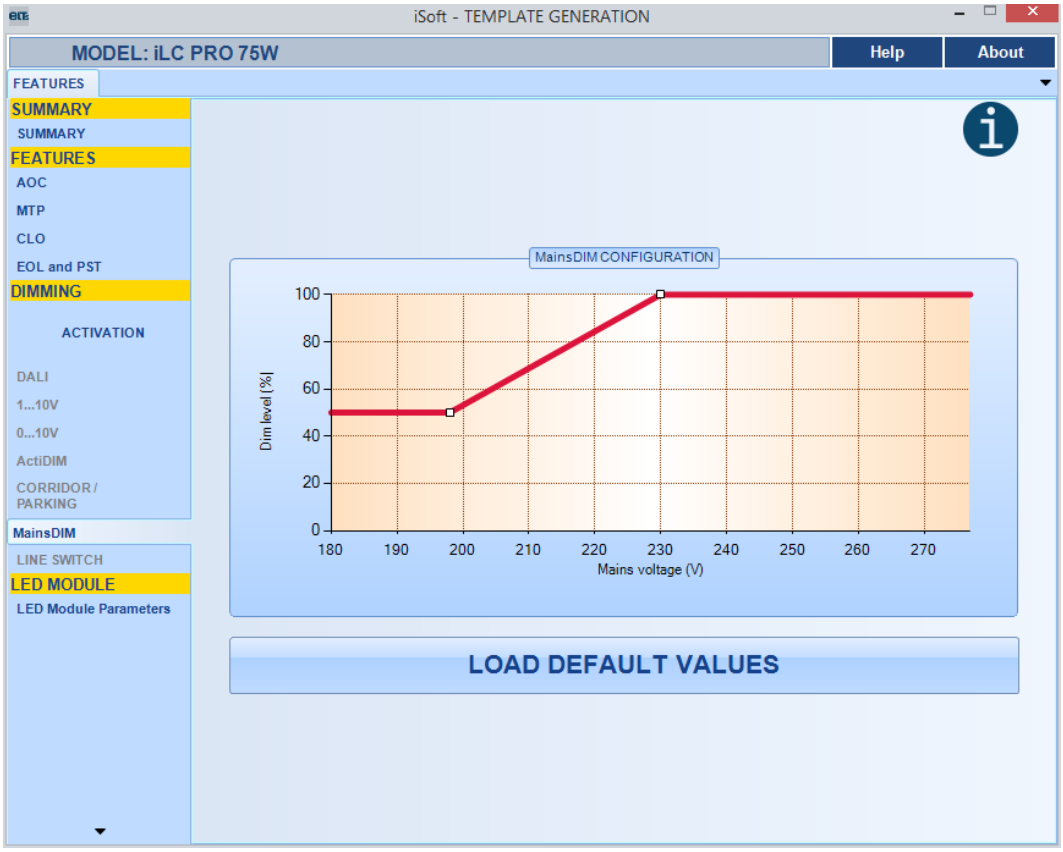


Fig. 64-MainsDIM tab

The standard mains voltage and dimming values depend on the selected device model. For example, in the 75W model these values are:

- Vlow=198V
- Vhigh=230V
- Dim Low=50%.
- Dim High=100%

There must be a margin of 20V between Vlow and Vhigh.

The dimming percentage of Vlow can be higher than the one of Vhigh (Fig. 65).

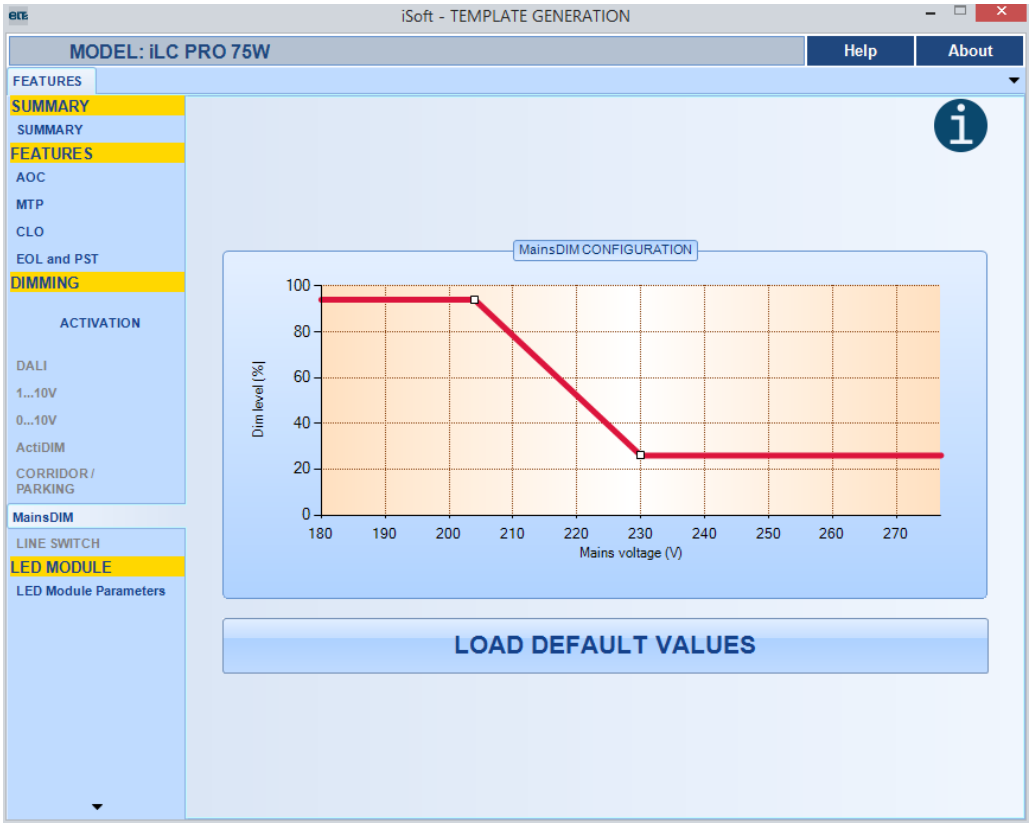


Fig. 65- %Vlow>%Vhigh.

The voltage range also depends on the device model technical specifications. In the 75W model, the range extends from 180V to 277V. The mains voltage read has a tolerance; in order to ensure that the driver reaches the maximum and minimum levels of dimming, a safety margin of 15V is set. Therefore, the setting range is from 195V to 262V.

Line Switch

Depending on the selected device model, the dimming mode can be controlled through certain interfaces. In the case of the 75W model, the dimming mode is controlled through the DALI terminal or through the 1...10/0...10V terminal (Fig. 66).

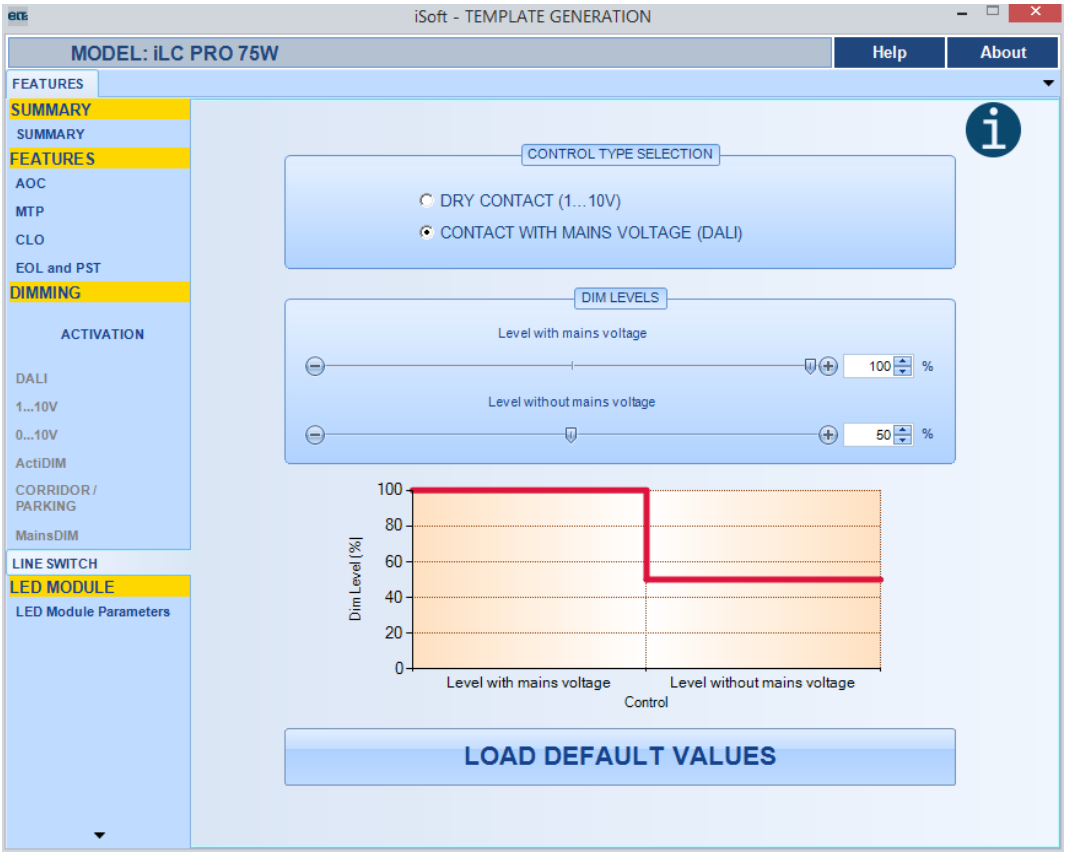


Fig. 66-Line Switch tab

1...10V/0...10V terminal

A voltage free contact must be used to switch between the two states (high voltage level or low voltage level). The Dim level, in percentage, can be set with the slider or by changing the percentage in the box. Both percentages can be set as the high level, i.e., you can use positive or negative logic.

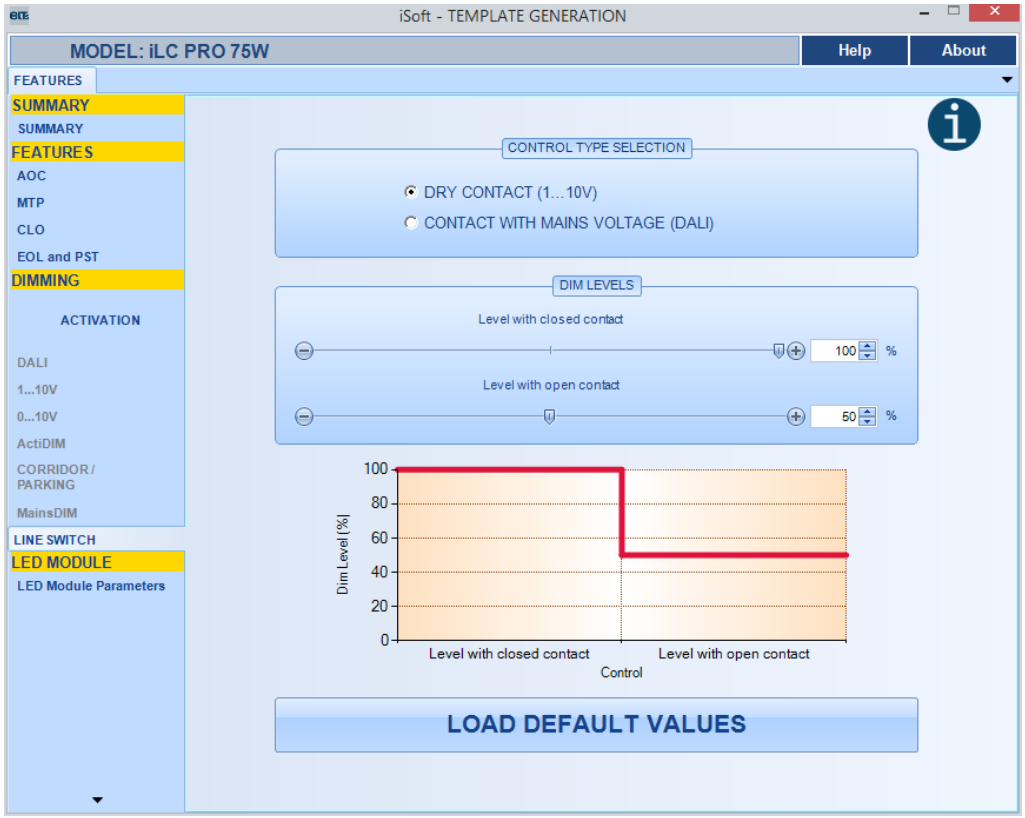


Fig. 67- Line Switch using 1…10V/0…10V terminal

DALI terminal

Mains Voltage is used to discriminate between states.

- **Level with Mains Voltage**: mains voltage is detected in DALI terminal.
- **Level without Mains Voltage**: no voltage is detected in DALI terminal.

The method to change levels is the same as with 1…0V/0…10V, as well as the option to choose a positive or negative logic.

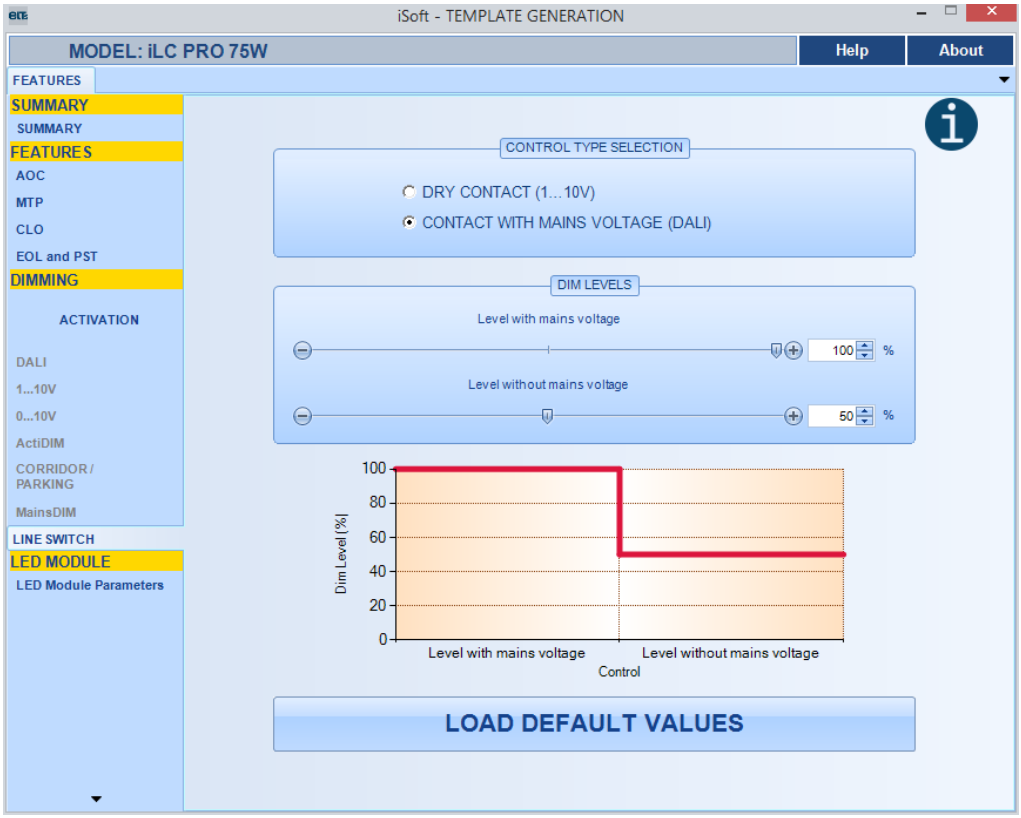


Fig. 68- Line Switch with DALI terminal

In both cases the "**Reset**" button restores the default values in the tab.

LED Module Parameters

In this tab you can set parameters regarding the LED Module:

- MOT (Module Operating Time).
- High Temperature: number of events and time.
- Cut-off temperature: number of events and time.
- Led Module maximum temperature.

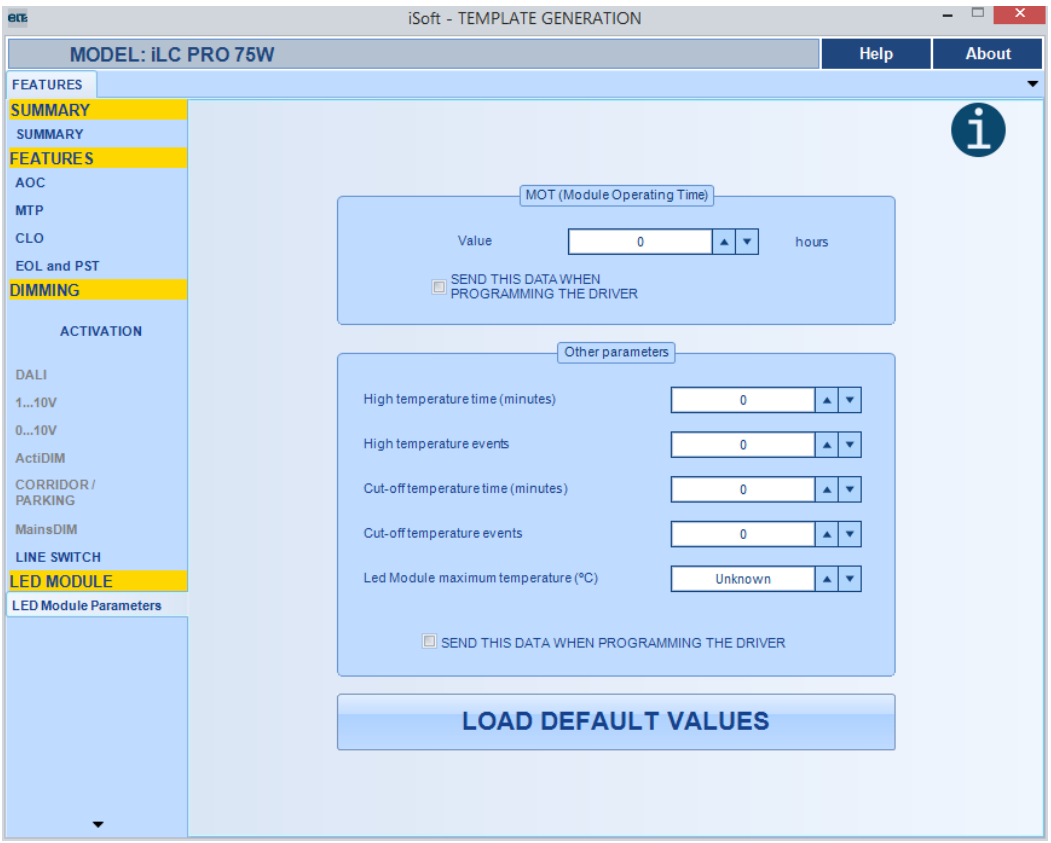


Fig. 69-"LED Module Parameters" tab

These parameters are configurable because it is possible to change either the driver only or the module only in the final installation. In both cases, the Led Module parameters must be correctly updated.

The MOT parameter is especially important, because it is used to define the driver's behaviour with the CLO and/or EOL features active. In case the CLO feature is active, if the MOT value is incorrect, the driver will apply a current level that does not correspond to the real age of the LED module. In case the EOL feature is active, an incorrect MOT value will cause the driver to give an "end of life" warning before or after the real module's end of life.

The user must decide if the generated template in the "Summary" tab should send the chosen LED Module values or not through the "SEND THIS DATA WHEN PROGRAMMING THE DRIVER" checkboxes. If these checkboxes are checked the software generates a template in the "Summary" tab that will also send the LED

module parameters. This way, the user is able to avoid sending LED module parameters when it is not necessary.

1.2. Programming

This window is where configuration templates are selected and sent to the drivers.

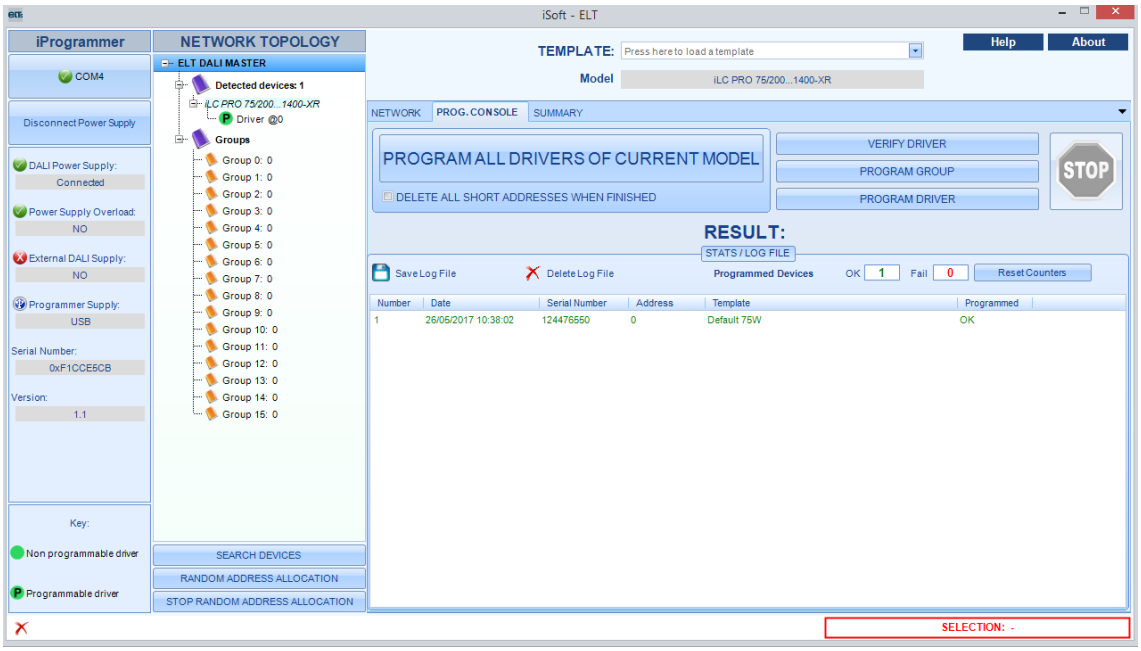


Fig. 70- Template programming window.

The way to connect drivers and the iProgrammer to a PC is shown in Fig. 1.

The following sections describe how iSoft manages connected drivers, through a virtual serial port.

iProgrammer Section

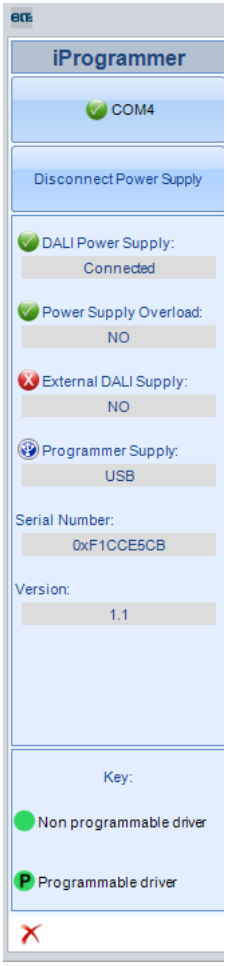


Fig. 71- iProgrammer section.

The FTDI drivers must be installed for the iProgrammer to communicate with the PC (see section 6). Once those drivers have been installed, select the virtual serial port of the iProgrammer, through the "**Comm**" button, which opens a window to choose the Virtual Serial Port. If the iProgrammer's port does not appear, make sure the FTDI drivers are properly installed, and that the port number of the iProgrammer is between 0 and 16 (both included).

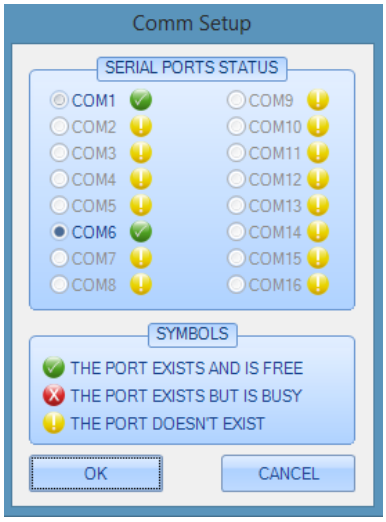


Fig. 72- Virtual Serial Port selection window

If the DALI bus does not count with an external power supply, enable the iProgrammer DALI bus power supply through the "Connect Power Supply" button. One of the two alternatives must be available in order to work with the DALI bus.

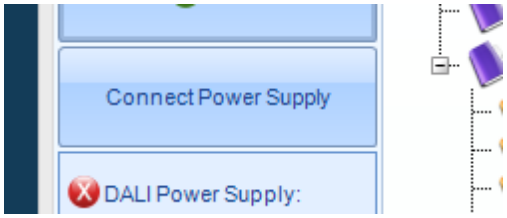


Fig. 73- iProgrammer Power Supply for the DALI bus

When the Programming window is loaded, it tries to detect the iProgrammer. **If the connection with the iProgrammer is successful** and the detection is carried out properly, the software reads the iProgrammer's status every second. These readings must not interfere with DALI communications that are sent to the driver, so they are interrupted if there is a DALI communication in progress.

The periodic reading is shown to the user through the colour change (black<->green) of the word "COM".

Fig. 74- Indication of successful communication with the iProgrammer.

Once the iProgrammer has been detected, its **status** is updated.

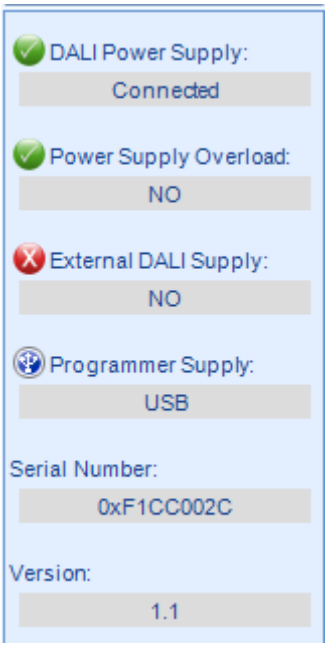


Fig. 75- iProgrammer status information.

The iProgrammer **status zone** shows the following information:

- DALI Power Supply connected/disconnected
- DALI Power Supply Overload.
- External DALI Power Supply.
- iProgrammer Power Supply: USB or external supply.
- iProgrammer Serial Number.
- iProgrammer Firmware version.

If the iProgrammer is detected successfully, drivers can be searched in the DALI bus. **If communication with the iProgrammer fails**, the "COM" button is shown with a red cross. The software tries to communicate with the iProgrammer every second.

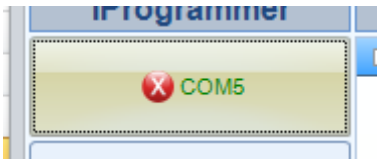


Fig. 76- Communication with the iProgrammer failed.

The bottom status bar includes

- Help information for the user.
- The device selection (an individual driver, or all devices).

NOTE: If the iProgrammer is fed with the USB cable, only 4 drivers can be connected to the DALI bus. To connect more devices, feed the iProgrammer with its external supply.

Network topology

In the "Network Topology" tab (Fig. 77) you can carry out searches and addressing of devices connected to the DALI bus. Also, devices and groups of devices are shown graphically, together with their names and short addresses.

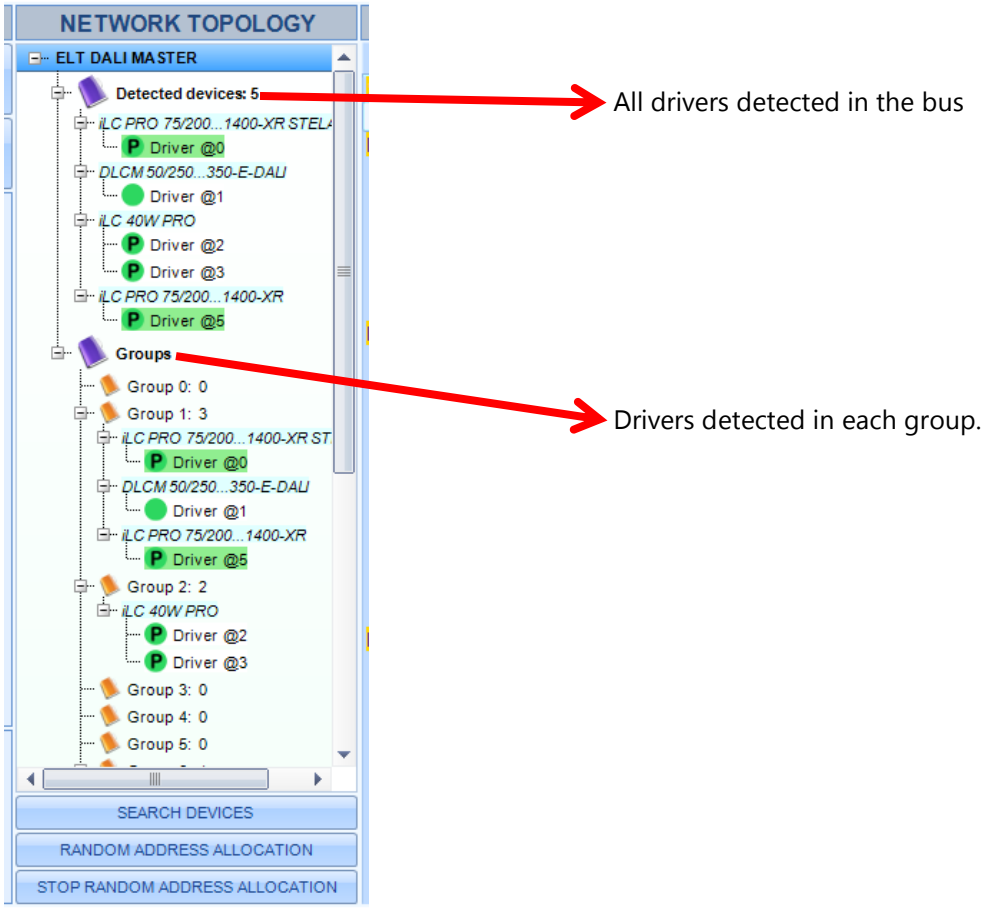


Fig. 77- "Network topology" Tab

"SEARCH DEVICES" button

If a new device is present at the DALI bus, press the "**SEARCH DEVICES**" button to detect it. When a driver is found, it is given an automatic name, for example "Driver @0". As seen in Fig. 77, **each driver is grouped under its model node**. Besides:

- If the device already has a short address, it is indicated in the name. For example, "@0" means address 0.
- If the driver belongs to one or several groups, it is added to the corresponding group/s node/s.
- Those devices **with no address** will be grouped in a single sub-node under the "Detected devices" node (Fig. 78) with an indication saying that is has no address. If there is a driver with the "Driver/s with no address" indication it means there is at least one driver without address, but there could be more than one.
- If there are two devices or more that have the same address, they will be grouped under a single sub-node with the title "Duplicated addresses" (Fig. 79).

If there are devices with duplicated addresses or without address, perform a "Random address allocation" to assign a unique address to each device.

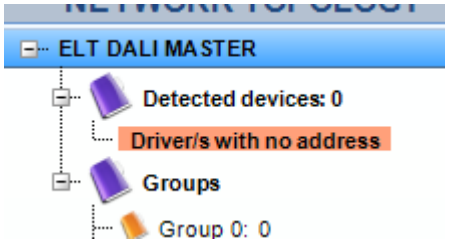


Fig. 78- One device or more with no allocated address.

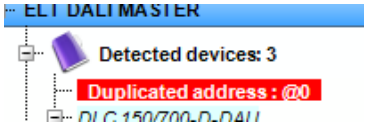


Fig. 79- Example: address 0 is duplicated:
There are 2 or more devices with address @0.

As shown in the key (Fig. 80), each driver is labelled as programmable or not programmable. Only programmable drivers are selectable, and their nodes will be highlighted with green background (Fig. 81).

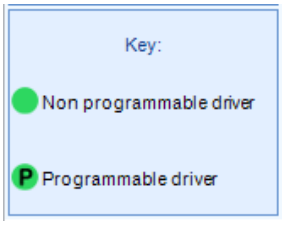


Fig. 80- Key for symbols detected in the net.

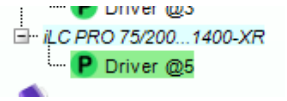


Fig. 81- Selectable node.

"RANDOM ADDRESS ALLOCATION" button

It performs an algorithm that allocates short addresses to devices in the DALI bus. Some considerations have to be taken into account:

- The short address range is 0 to 63 (both included), according to DALI regulations.
- If there is a device without short address, the software allocates it with the lowest available address.
- Devices with short address already assigned will keep it, except for duplicated short addresses. In that case, one of them will keep the address and the rest will be allocated with the lowest address available.
- The execution time of the address allocation algorithm depends on the number of connected devices. The button "**STOP RANDOM ALLOCATION**" stops the process.

"NETWORK" tab

This tab shows the DALI net connected to the programmer. The functions of this tab are the following:

- It highlights in green all connected devices.
- It highlights in yellow those devices that the user has selected.
- Select/unselect devices.
- Delete the short address of one device/all devices with the buttons below (Fig. 82).

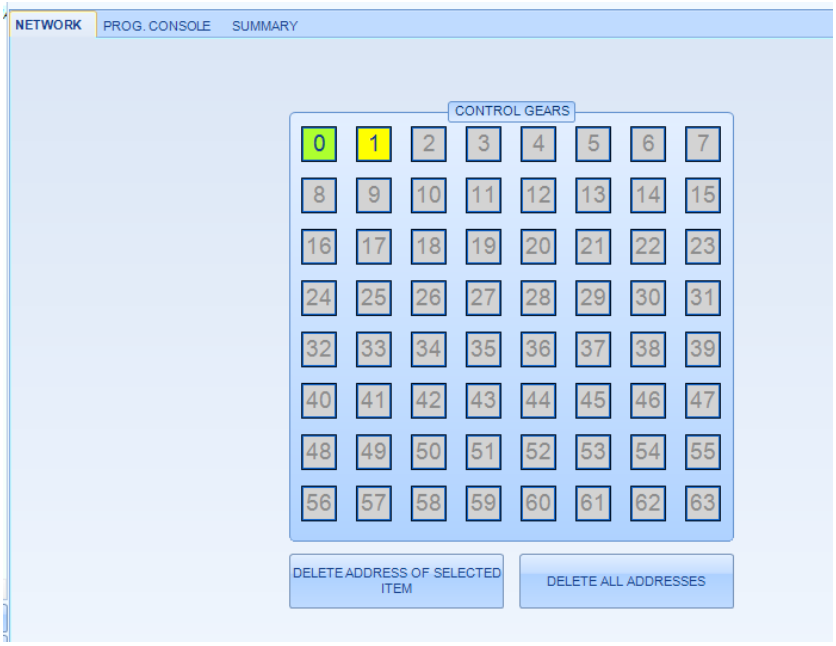


Fig. 82- "NETWORK" tab

Device selection

You can select:

- A driver with short address.
- A group.

To select a driver or a group, click on its node or on its button in the "NETWORK" tab, where the selected driver or group will appear in **yellow**.

The selection state is shown in the lower status bar (Fig. 83).

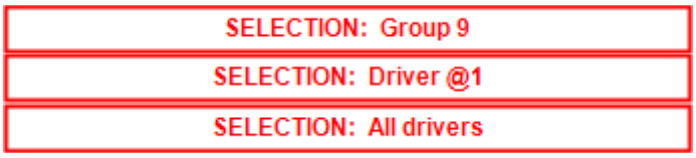


Fig. 83- Selection examples in the status bar.

Programming Console

This tab is used to program one or several drivers using a template selected by the user.

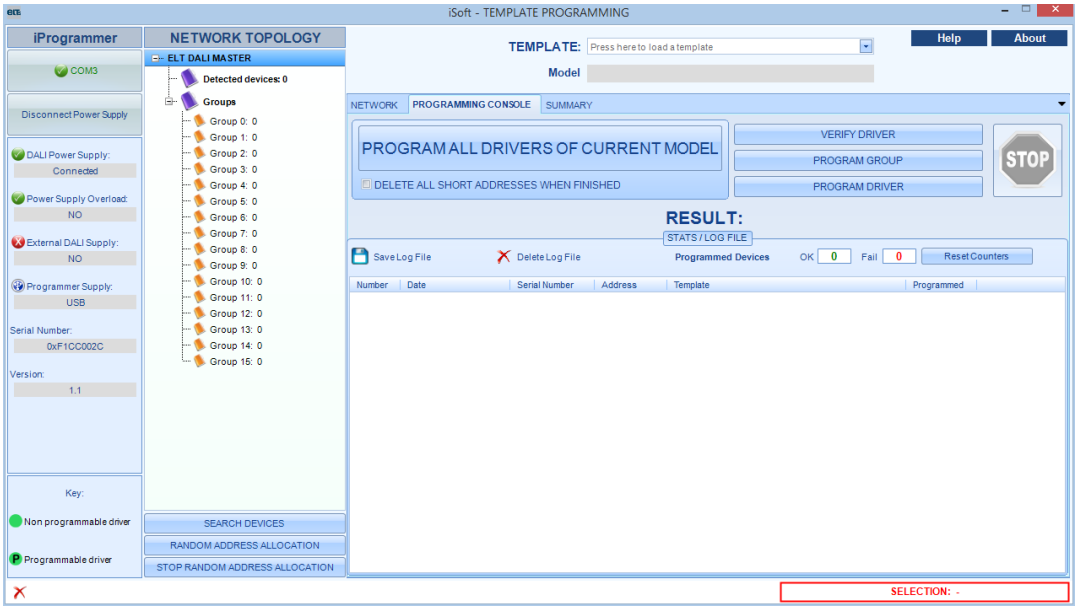


Fig. 84-Programming Console tab

The "Template" dropdown list contains templates supplied by default with the software, or user defined templates. Files can be found in the following path: C:\ELT Files\Files.

- Programming buttons:
  - "PROGRAM **ALL** DRIVERS OF CURRENT MODEL".
  - "PROGRAM **GROUP**": it programs all drivers that belong to the selected group and model.
  - "PROGRAM **DRIVER**".
- "**VERIFY** DRIVER" button:
  It checks that the selected template matches the current driver settings. It should only be used when you want to check whether a driver has loaded a specific template. In that case you must select a

template and a driver, click the "Check the selected driver" button and the software will respond "RESULT: OK" if data matches or "RESULT: FAILURE" in the case of divergence.

Drivers must have a short address so they can be programmed. If they don't have one, run a "Random Address Allocation".

If you want to delete **ALL** addresses after completing the programming, click the "DELETE SHORT ADDRESSES WHEN FINISHED" option. This will delete short addresses of **ALL CONNECTED DRIVERS**, even when just a group is programmed.

Note: When a template is programmed, the software automatically verifies that the programmed values are correct. Therefore it is not necessary to "VERIFY DRIVER" after each programming.

It is a good practice to perform verification after turning the driver OFF and ON. This way we can see that the programming parameters have been successfully stored in the internal memory of the driver.

If you want to stop the verification or programming process click the "Stop" button (Fig. 85).

Fig. 85-Stop Button and Progress indicator

The programming and verification process involves sending and receiving various commands, so it takes some time to perform it. The time it takes to perform a "Random Address Allocation" basically depends on the number of connected devices without short address. Once all drivers are allocated, the time it takes to program each one of them is fixed: it takes approximately 13 seconds.

When you are programming a group of drivers and an error occurs in one of them, the software carries on with the next driver. The "RESULT" label shows the result of the last action ("RESULT: OK" or "RESULT: FAILURE ") and not the overall result. Thus, if we program two drivers and the first one fails, the label will show "RESULT: FAILURE" at the end of the first driver programming, and "RESULT: OK" at the end of the second one. Therefore, when the software programs several drivers the "RESULT" label is not an indicator of the final result.

To see the detailed result of the process see the "STATISTICS / LOG FILE" panel. An example is shown in Fig. 86. During the first programming the DALI bus was disconnected to simulate a failure. As can be seen, in the first line, corresponding to the first driver, there is a "FAIL" indication.

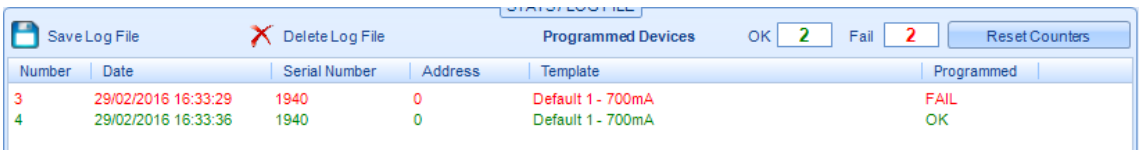


Fig. 86-"STATISTICS / LOG FILE".

The following columns are included:

- Row Number.
- Programming date and time.
- Serial Number of the Programmed Device. In case of failure, the serial number might appear or not, something common if communication with the programmer is lost, like the example shown.

- Short address of the programmed device.
- Name of the loaded template.
- Result of the programming: OK or FAIL.

In addition there are two counters indicating the number of successfully programmed drivers (Fig. 87).

Fig. 87- Program counters

The "Save Log File" and "Delete log file" buttons are used to save the log to a file (.csv) or to delete the list.

A progress indicator is also included to provide an estimation of the writing progress.

Summary

The “Summary” tab shows the content of the selected template.

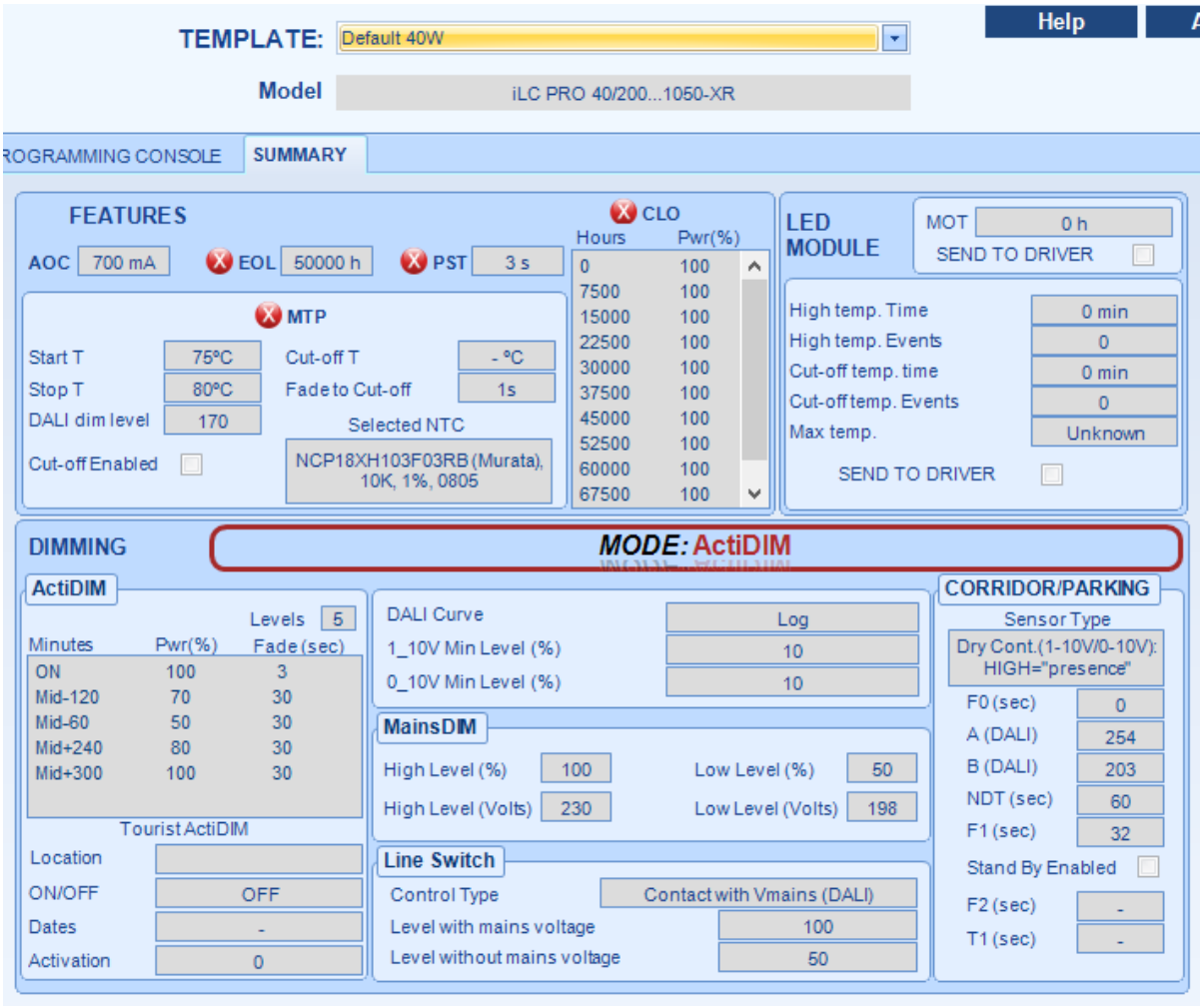


Fig. 88.- Summary tab

Automatic Mode

See Annex 2.

1.3. Reading

In this window data from drivers can be read. When clicking the "READ" button in the initial menu, the user is prompted to select a model. Once the model has been selected, the Reading window is shown.

The part regarding connected drivers management is exactly the same as the programming window.

The information is grouped in three tabs:

- "Detailed status": data related to DALI features.
- "Summary": driver's configuration.
- "Monitoring": parameters registered by the driver, regarding operating times, temperatures, voltage and current measurements, etc.

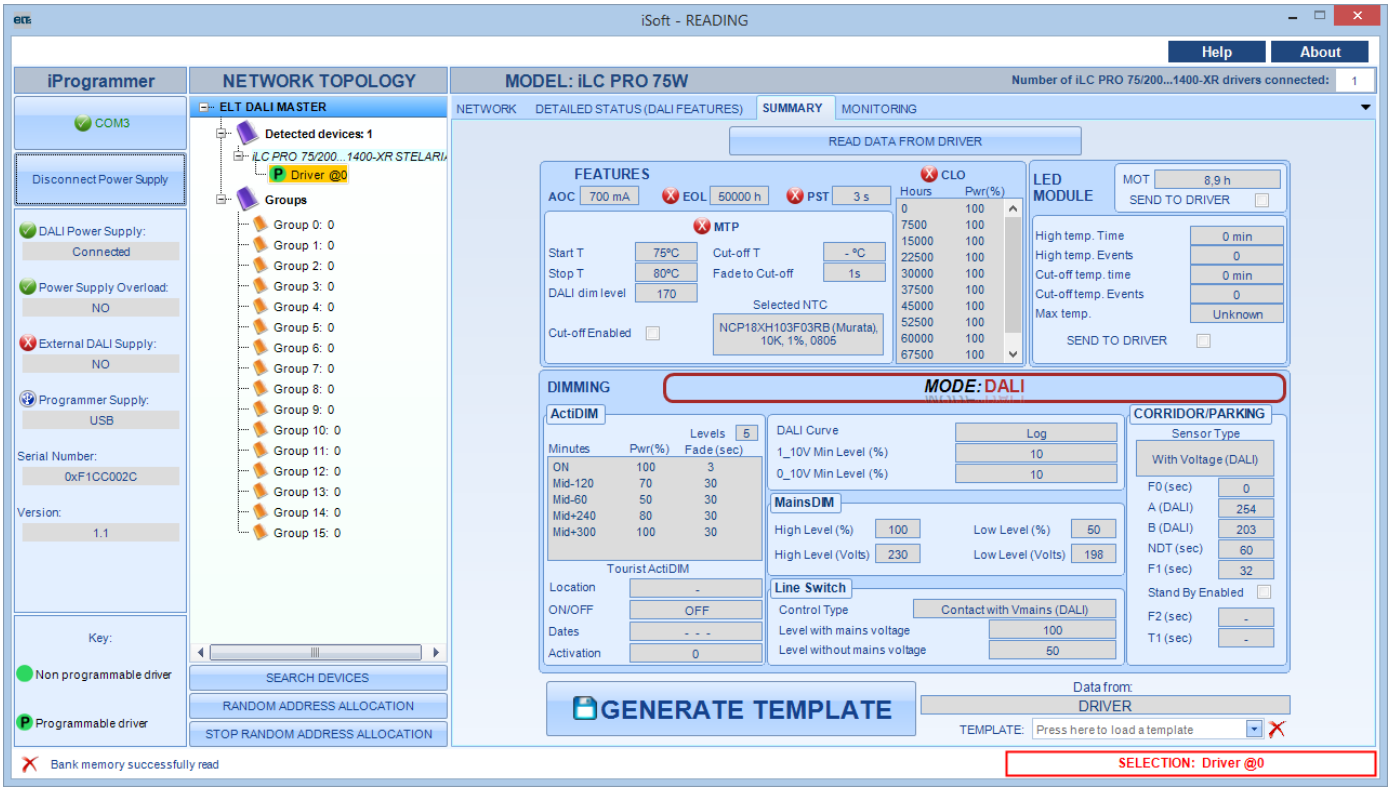


Fig. 89.- Reading Window.

Detailed Status

This window reads and displays a driver's information without having to retrieve one data at a time in the DALI console.

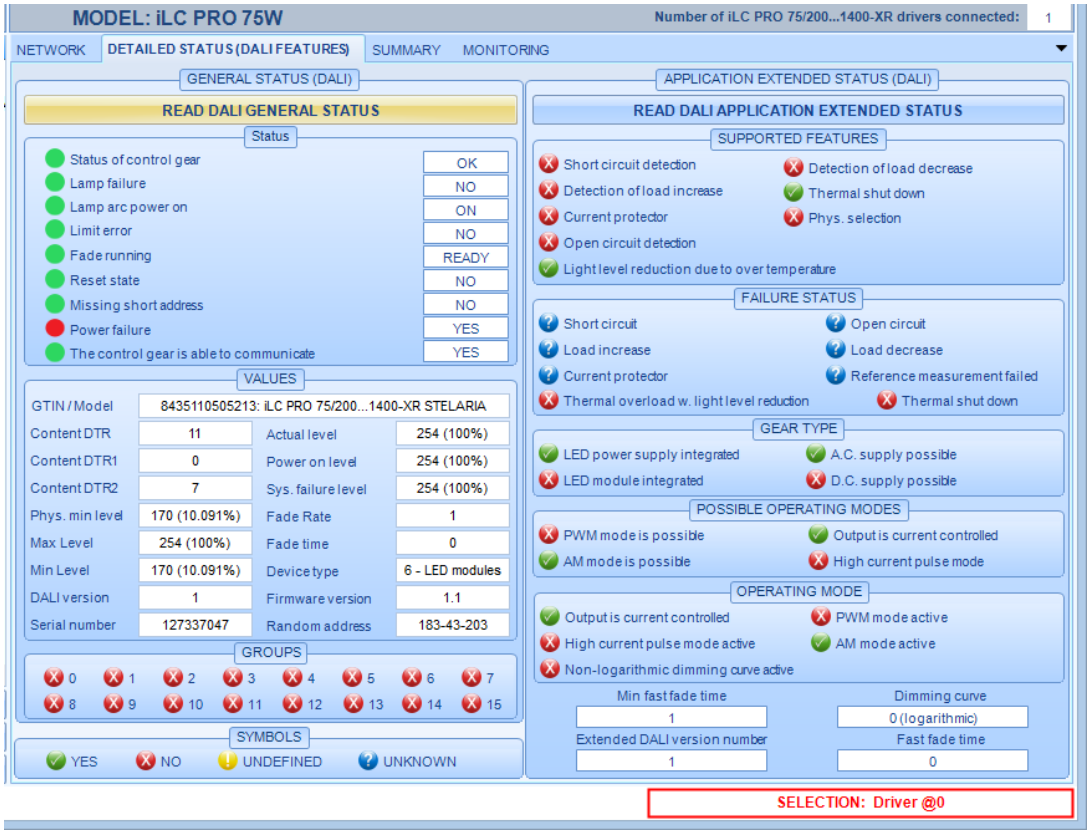


Fig. 90-Detailed Status tab

Only drivers with a short address can be read.

By clicking the "**READ GENERAL STATUS**" button, the left side is updated, showing **general information** about the driver.

The information and symbols are shown as indicated by the standard, for example, "YES" in "lamp failure" means that the lamp is ok; "YES" in "power failure" means that the lamp has been reset or it received an arc power control command since the last turn-on. As in previous tabs, a description appears when the cursor is placed over the labels.

By clicking on "**READ APPLICATION EXTENDED STATUS**", the right side is updated, and it displays **specific information**. It only applies to devices of Class 6 (LED modules).

As in "General State", this feature allows the user to have quick access to the main information regarding application extended functions in an organized layout without having to retrieve them one by one in the DALI console.

Summary

The "Summary" tab shows a driver's complete configuration. To visualize a driver's configuration, just select it in the topology network tree and click "READ DATA FROM DRIVER".

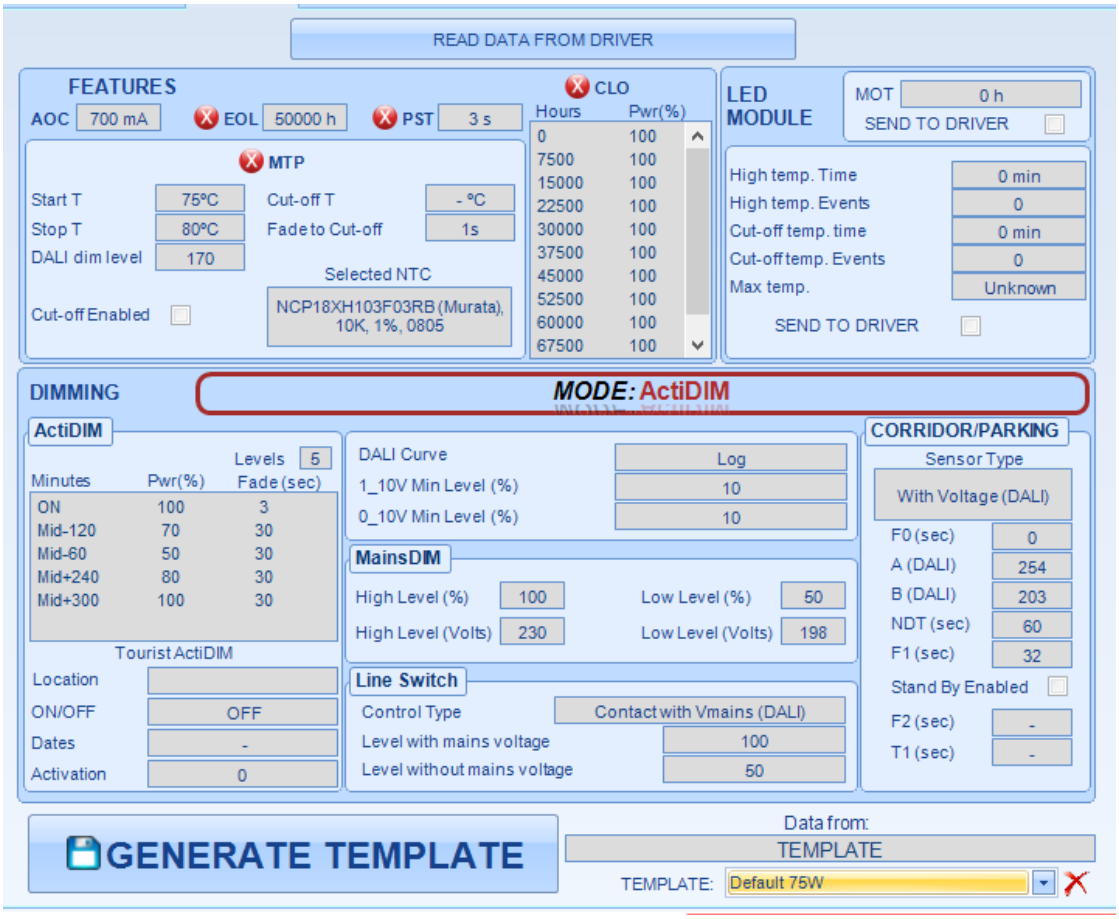


Fig. 91-Summary tab

Additionally, a template can also be loaded from the combo box at the lower right corner.

Moreover, through the "GENERATE TEMPLATE" button the user can create configuration files with the data read from a driver.

When reading data from a driver, the Tourist ActiDIM mode (see section 0) might be set to ON in the driver. In that case, a message will appear asking the user to select a location. This location will be used to compute the dates in the Tourist ActiDIM zone. If no location is selected, only the status (ON/OFF) and activation point will be shown.

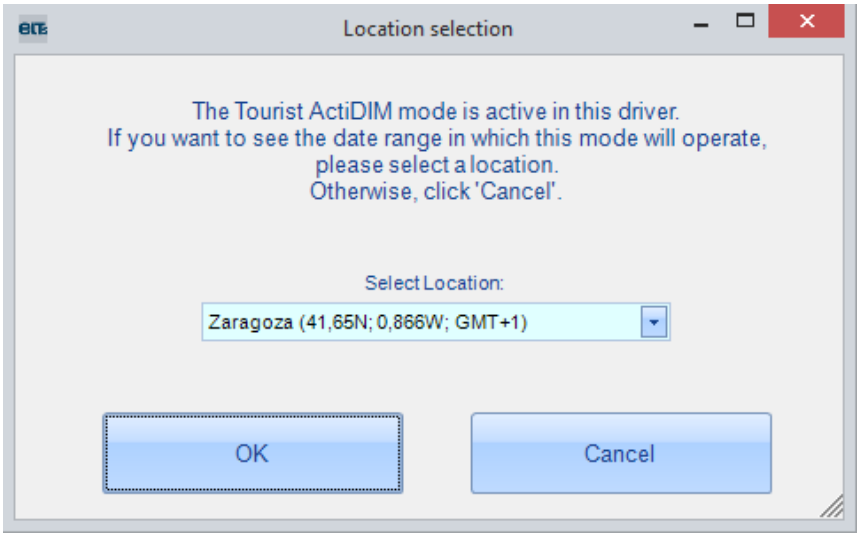


Fig. 92- When reading the driver, if the ActiDIM tour mode is active, the user will be required to choose a location.

Monitoring

In this tab different parameters of the driver and the load are monitored.

Parameters are classified in two groups:

- **Counters**
  They count maximum and minimum values, and number of different kind of events.
- **Real time measurements** provided by different sensors installed in the driver and in the load

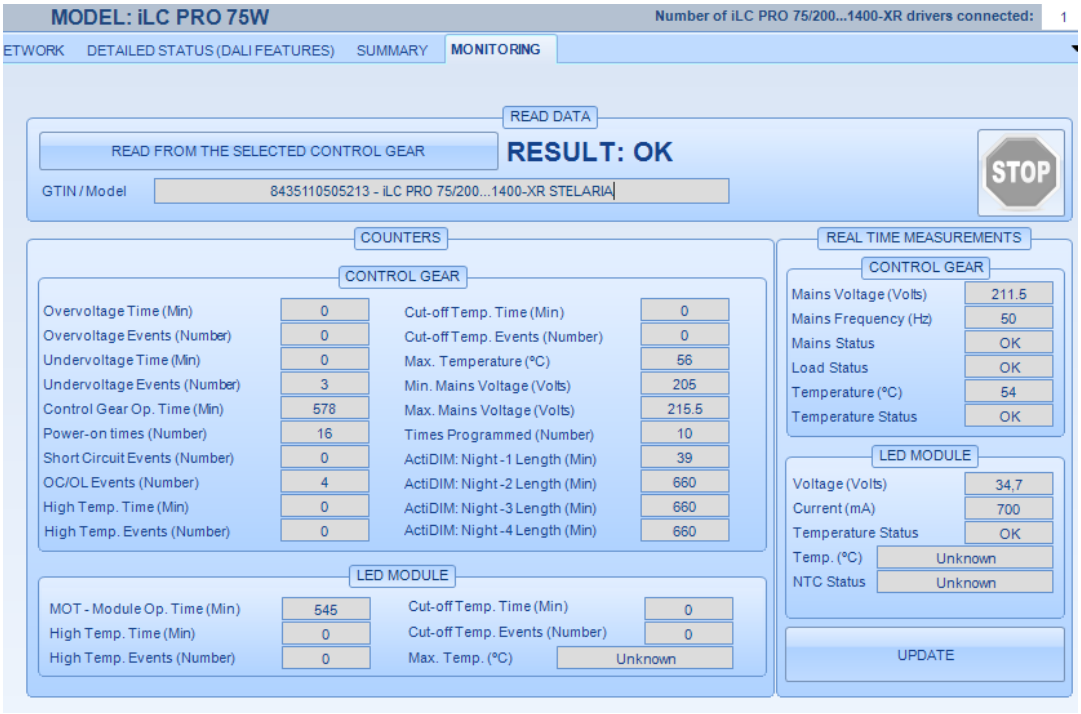


Fig. 93-Monitoring tab

Counters are stored in the internal memory of the driver. Real-time measurements are not stored in memory.

The "READ FROM THE SELECTED CONTROL GEAR" button updates both counters and measurements in real time. The "UPDATE" button only updates the real time measurements.

The “LED module” voltage can only be monitored when the driver operates in normal mode. Otherwise, the field shows a “-”.

The tab includes a progress indicator and a button to stop reading if necessary.

2. iLC CORE

When the user selects the iLC CORE family, a different window pops up. In this case, only two buttons are available:

Fig. 94- iLC CORE Family initial menu

2.1. Template generation

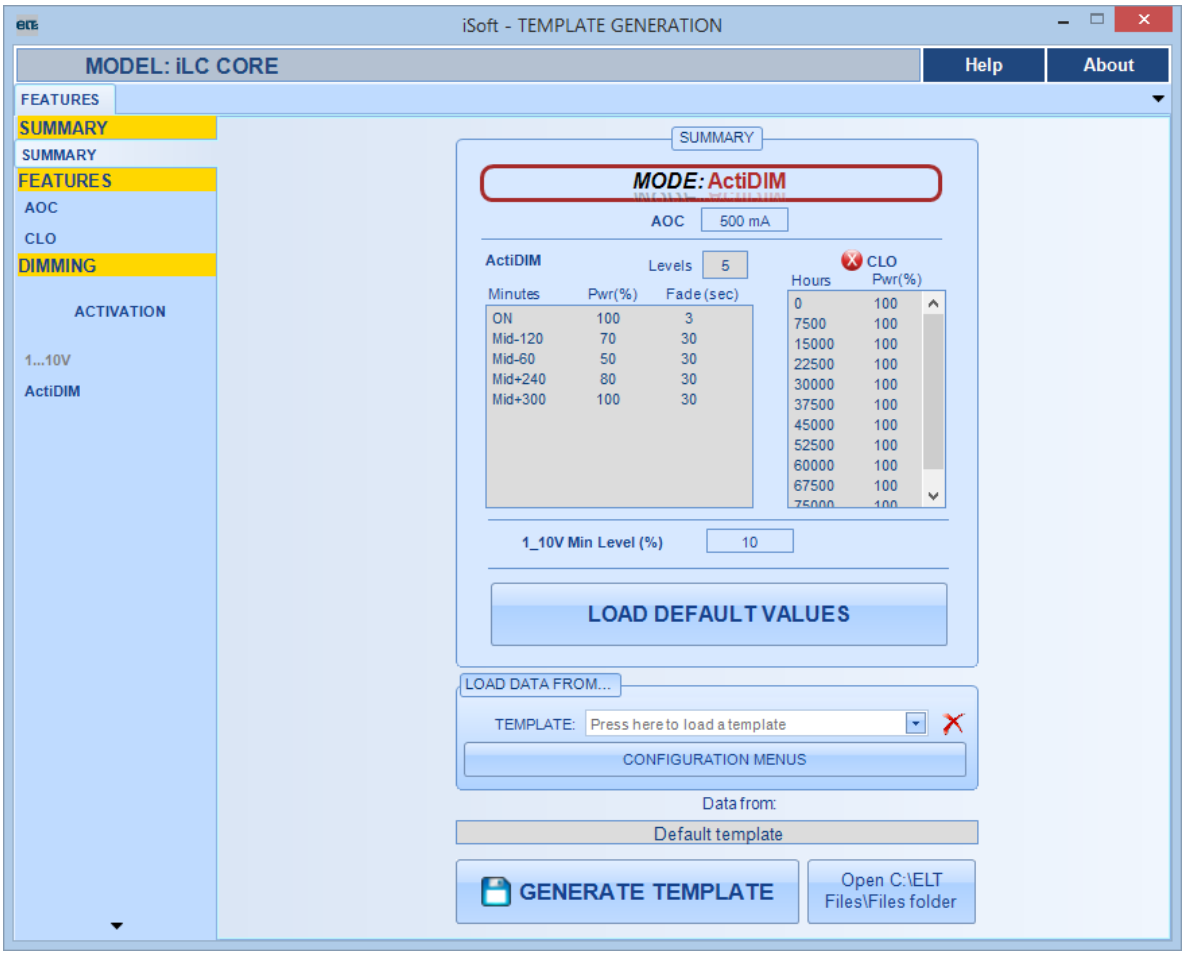


Fig. 95- iLC CORE Family: template creation

The approach is the same as with iLC PRO family: the user must create templates to use them afterwards in the send/read window.

2.2. Send / Read

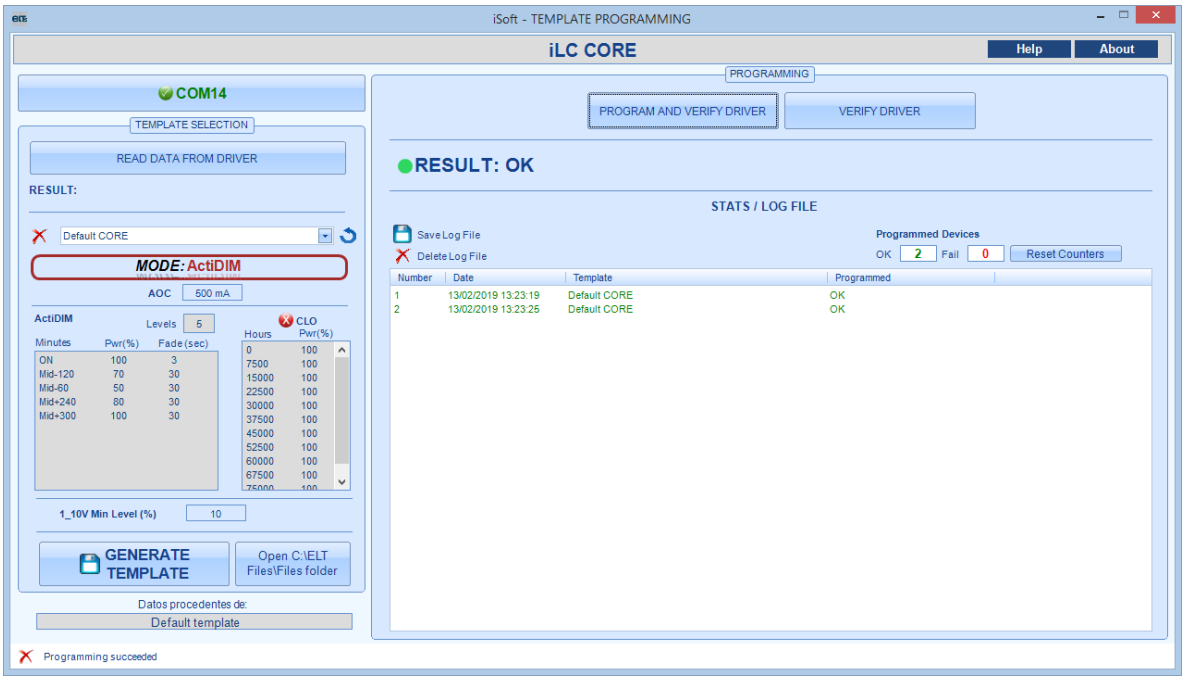


Fig. 96- iLC CORE Family: send / read window

This window is intended not only for programming previously generated templates (“PROGRAM AND VERIFY DRIVER” button), but also for reading the drivers’ current configurations (“READ DATA FROM DRIVER” button), and for comparing the selected template with the current content of the driver (“VERIFY DRIVER” button).

3. DALI Console

This window is accessed through the main menu. It counts with a section for the iProgrammer and for the Network Topology. The third part is different: it counts with the DALI Console tab, which implements DALI standard commands. Moreover, tabs Network and Detailed Status are included. The Detailed Status tab is the same as the one included in the “Reading” window.

Connected drivers management

Drivers connected to the network can be grouped in three categories:

1. Non-programmable drivers. Any DALI command can be sent to them.
2. Programmable drivers that are not configured in DALI dimming mode. These drivers can receive any DALI command, but power commands would have no immediate effect. For this reason power commands are restricted only for drivers that are in DALI mode. To activate the DALI mode, simply select the driver and click on the “ENABLE DALI MODE” button, in the "Topology of the Network" area.
3. Programmable drivers, configured in DALI dimming mode. Any DALI command can be sent to them.

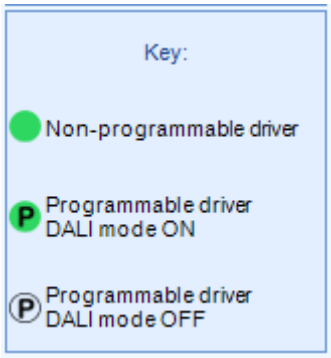


Fig. 97-Legend

DALI Console

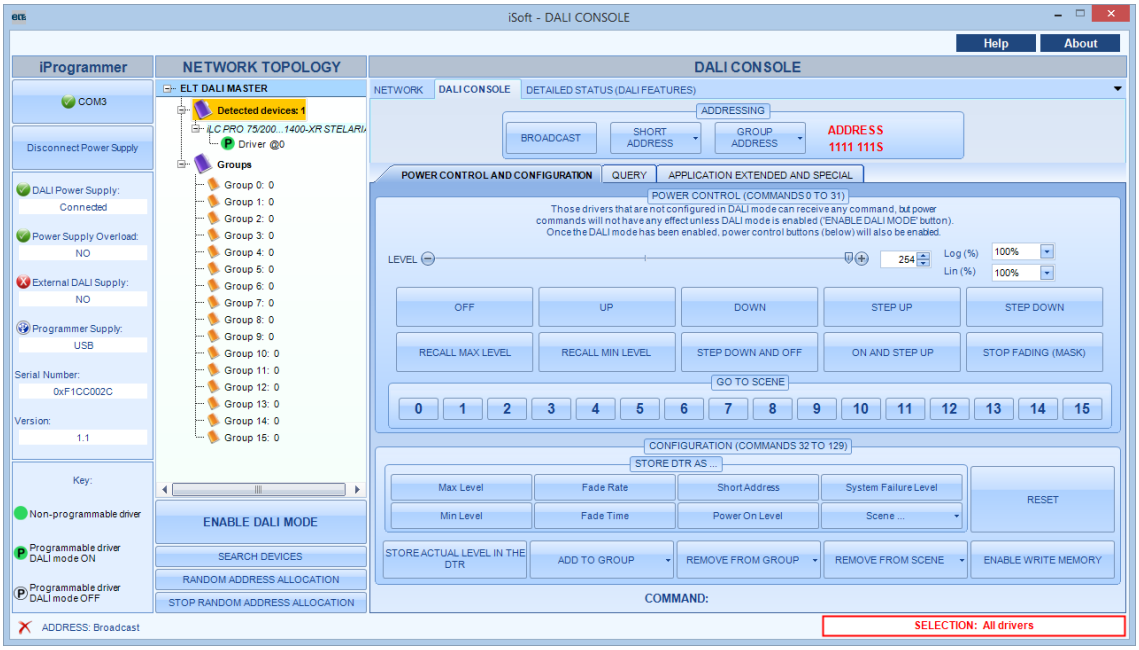


Fig. 98- DALI Console

Addressing

The upper part handles device addressing (Fig. 99), to select where to send commands:

- To all devices (BROADCAST).
- To a short address (a single driver).
- A Group.

The address to which commands will be sent appears in red. Sending commands to an address that does not match any connected driver or to a group without drivers has no effect.

Fig. 99-Addressing in the DALI console.

Power control and configuration

In this tab you can set the output current of the driver by means of a slider, a text field and two percentage fields. When one of them is modified, the others are automatically updated.

There are also several buttons with commands for turn-on, turn-off and level change, as well as level modification according to a predefined scene. Scenes must be user-defined.

In this tab you can also send multiple **configuration commands**. In some cases it is required to store a value in the Data Transfer Registry (DTR) before sending the command, according to the configuration set by the standard.

When the cursor is placed over the buttons, a brief description about their function appears, with the requirements of the standard.

NOTE: Each time a device is added to one or more groups click the SEARCH DEVICES button to visualize the device under the new group in the tree on the left.

Query

In this tab you can perform various queries. It should be noted that such queries will be directed to the address set at the top of the window (in red), which can be a group, a driver or all devices. The answers vary depending on the number of devices to which the query is addressed. Some queries can only be addressed to drivers and not to groups or to all devices.

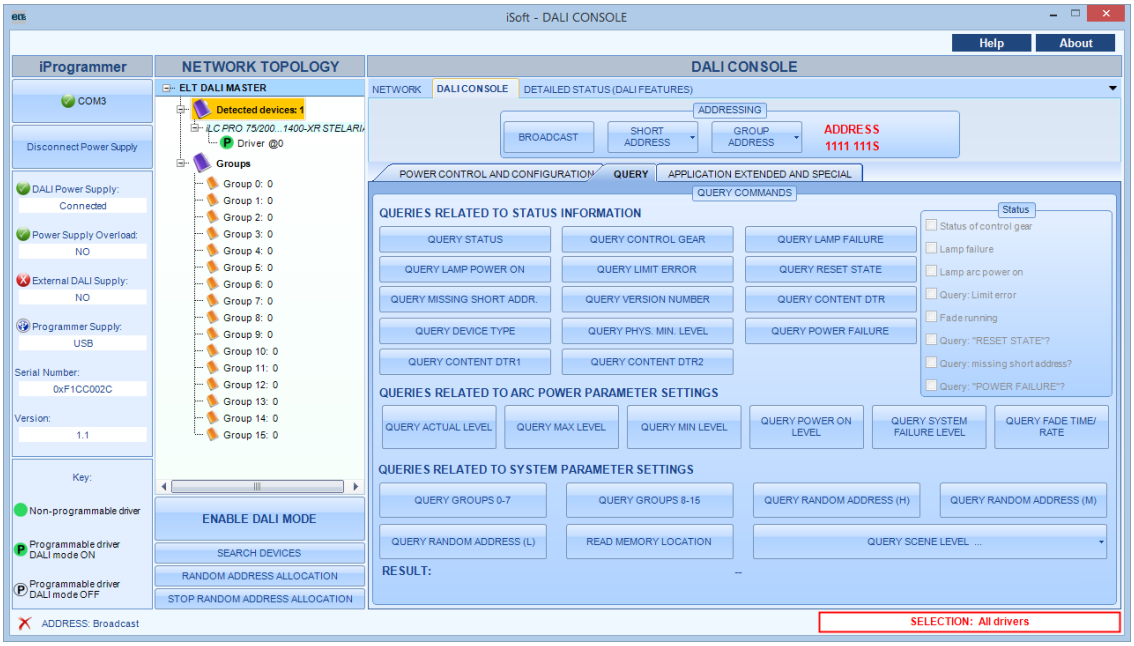


Fig. 100- Query tab

Application Extended and Special commands

This tab includes application commands and special commands, according to the DALI standard. As in previous sections, when the cursor is placed over the buttons, a brief description of their function appears. Bear in mind that for some special commands a previous sequence of commands has to be performed for proper operation. Such sequences are available in the DALI standard.

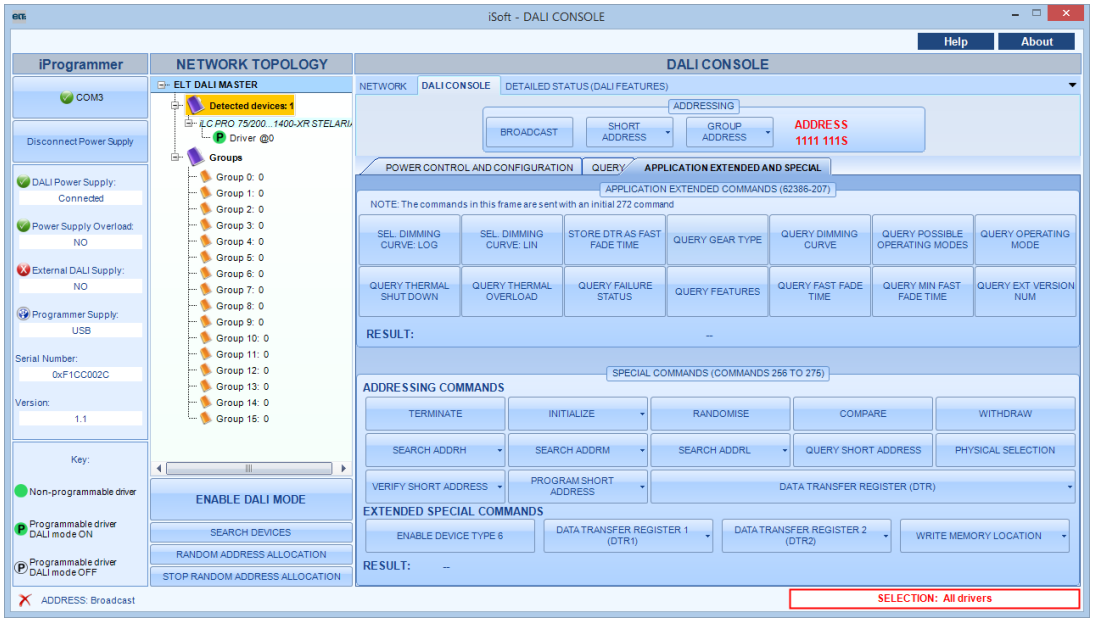


Fig. 101- Application Extended and Special Commands tab

4. DALI 2 Console

The main new feature of this iSoft version is that it supports DALI 2 devices. There is a whole new console for these devices. This window is accessed through the main menu.

Fig. 102- DALI 2 Console in the start menu

It counts with a section for the iProgrammer and for the Network Topology.

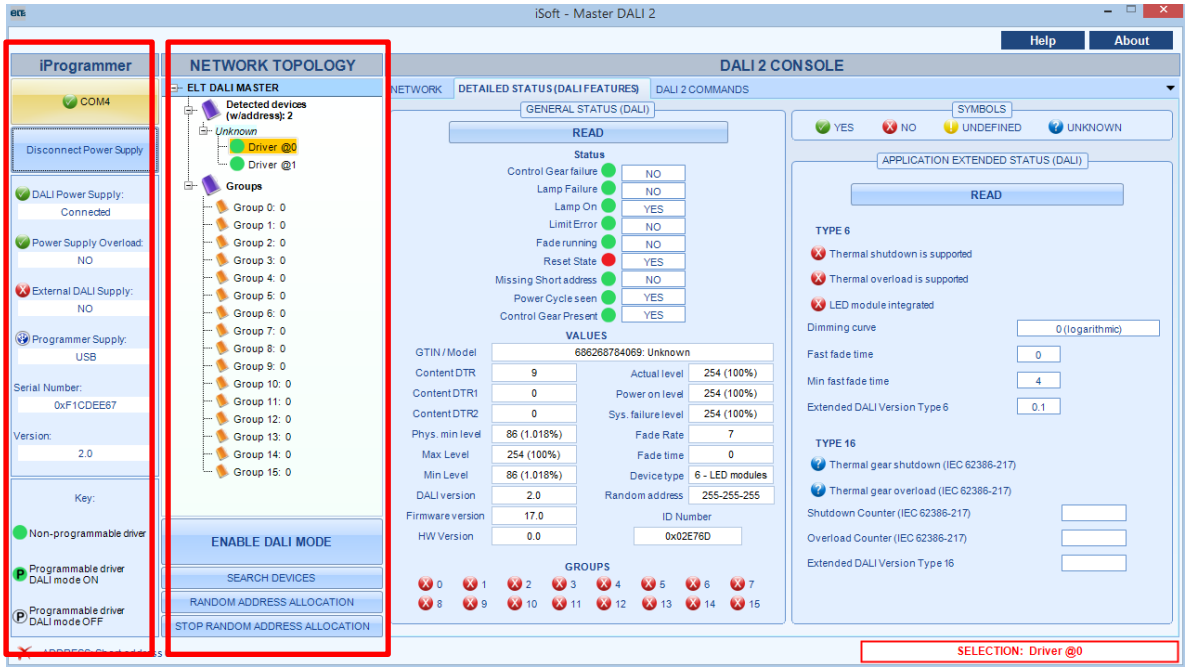


Fig. 103- iProgrammer and Network topology

The third part includes:

- Network topology tab, which shows the connected devices with their short addresses.
- Detailed status tab, which shows basic DALI 2 information of the driver.
- DALI 2 commands tab, or “DALI 2 Console”.

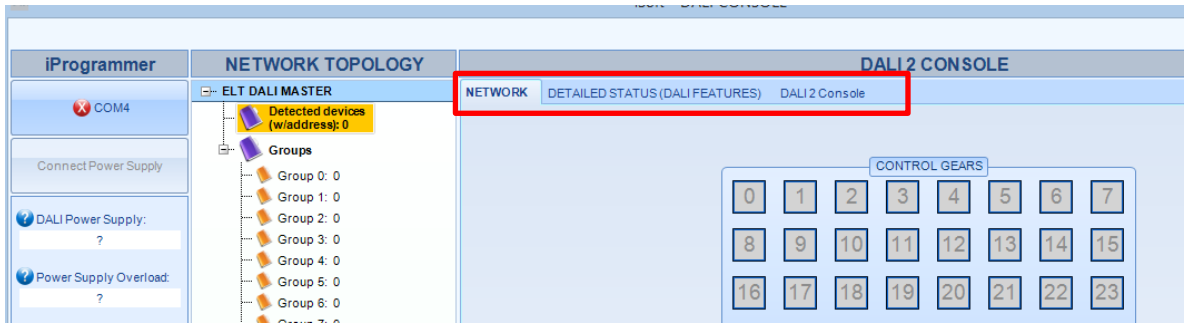


Fig. 104- DALI 2 tabs

Connected drivers management

Drivers connected to the network can be grouped in three categories:

1. Non-programmable drivers. Any DALI command can be sent to them.
2. Programmable drivers that are not configured in DALI dimming mode. These drivers can receive any DALI command, but power commands would have no immediate effect. For this reason power commands are restricted only for drivers that are in DALI mode. To activate the DALI mode, simply select the driver and click on the “ENABLE DALI MODE” button, in the "Topology of the Network" area.
3. Programmable drivers, configured in DALI dimming mode. Any DALI command can be sent to them.

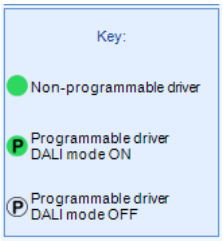


Fig. 105-Legend

Detailed status (DALI 2 Features)

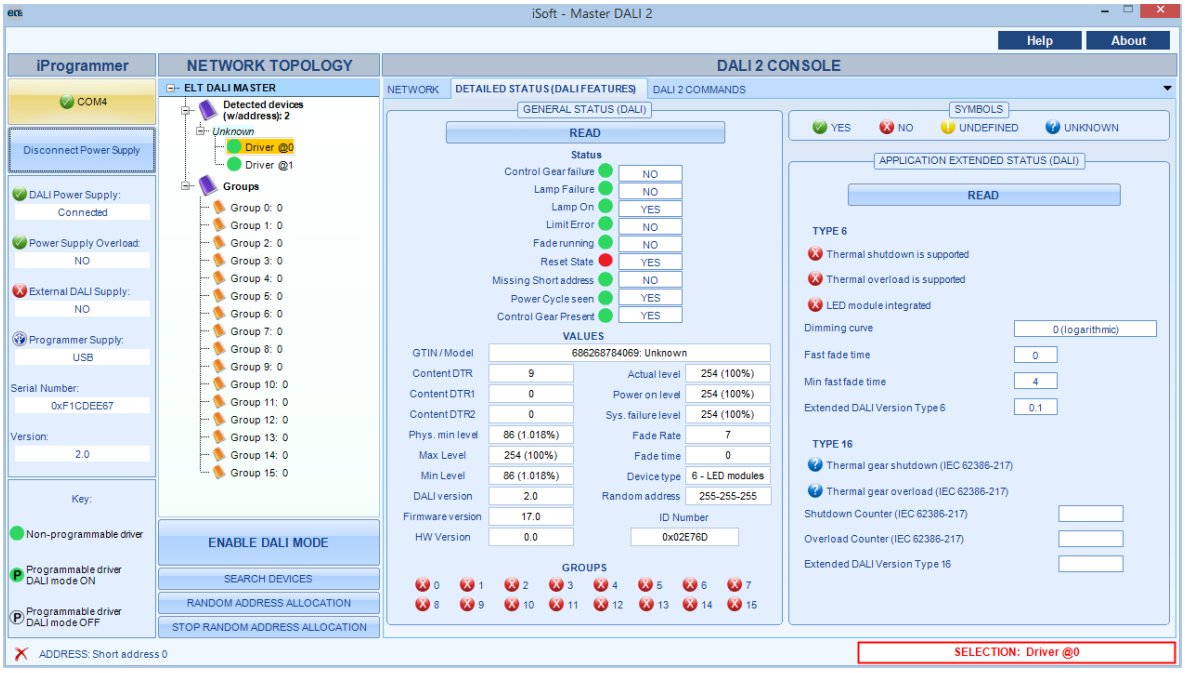


Fig. 106-Detailed status (DALI 2 features)

This tab includes relevant information of the control gear. The left part is based on Standard Commands. The right part depends on the device type of the control gear. Not all commands are included here. More commands can be found in the "Dali 2 Console" tab.

DALI 2 COMMANDS

Addressing

The upper part handles device addressing (Fig. 99), to select where to send commands:

- To all devices (BROADCAST).
- Broadcast unaddressed: this type of addressing is a DALI 2 new feature. It is a type of address used to address all control devices in the system that have no short address at once.
- To a short address (a single driver).
- A Group.

The address to which commands will be sent appears in red. Sending commands to an address that does not match any connected driver or to a group without drivers has no effect.

Fig. 107-Addressing in the DALI 2 console.

Power control and configuration

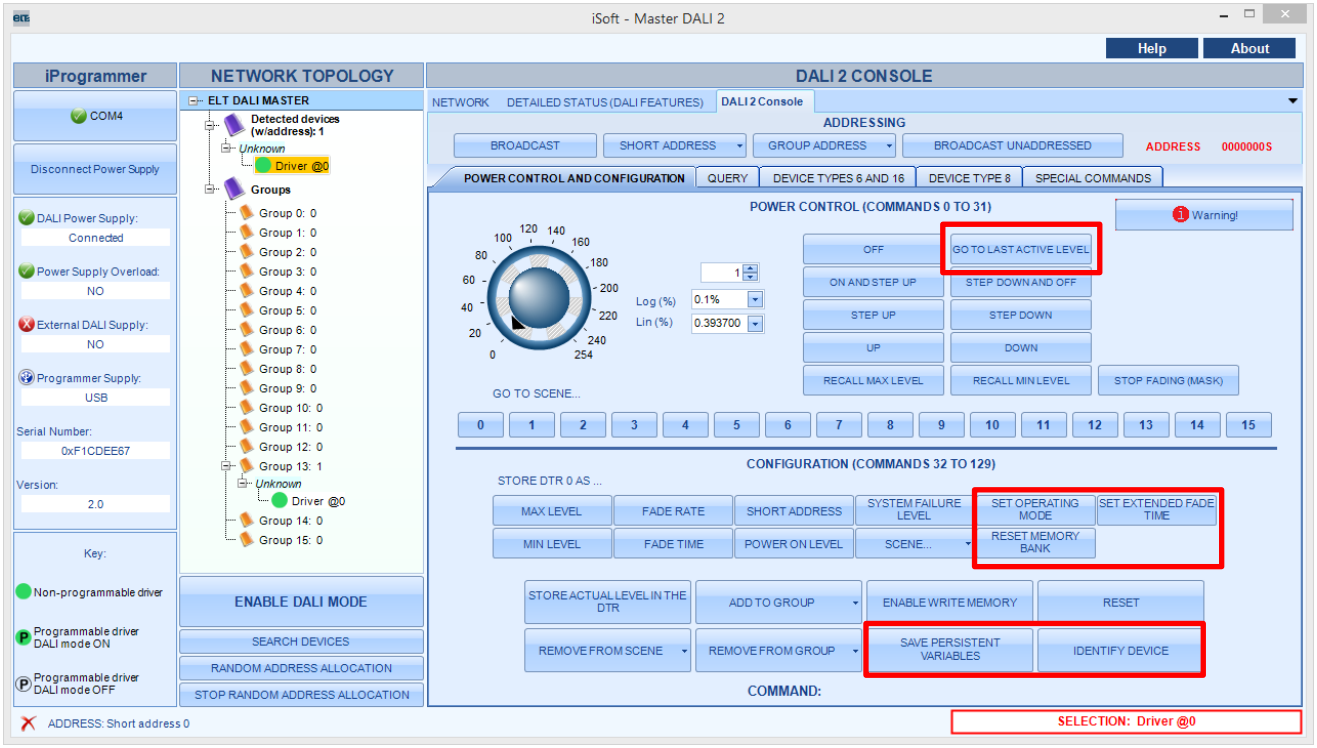


Fig. 108- DALI 2 Console- New features in the Power Control and Configuration tab

In this tab you can set the output current of the driver by means of a **knob control**, a text field and two percentage fields. When one of them is modified, the others are automatically updated.

Power commands

These commands can only be used if the control gear is in "DALI Mode". The user can turn Dali mode "on" through the "ENABLE DALI MODE" button. The new command "GO TO LAST ACTIVE LEVEL" is included in this tab. Scenes can also be sent; they are user-defined.

Configuration commands

In some cases it is required to store a value in the Data Transfer Registry (DTR) before sending configuration command, according to the configuration set by the standard.

New DALI 2 commands are included in this tab (see *Fig. 108*).

When the cursor is placed over the buttons, a brief description about their function appears, with the requirements of the standard.

NOTE: Each time a device is added to one or more groups click the SEARCH DEVICES button to visualize the device under the new group in the tree on the left.

Query

Queries will be addressed to the address set at the top of the window (in red), which can be a group, a driver, all devices, all unaddressed devices. The answers vary depending on the number of devices to which the query is addressed. Some queries can only be addressed to drivers and not to groups or to all devices.

The only new special command in DALI 2 is the one shown in the figure. Refer to the standard for more details (62386-102).

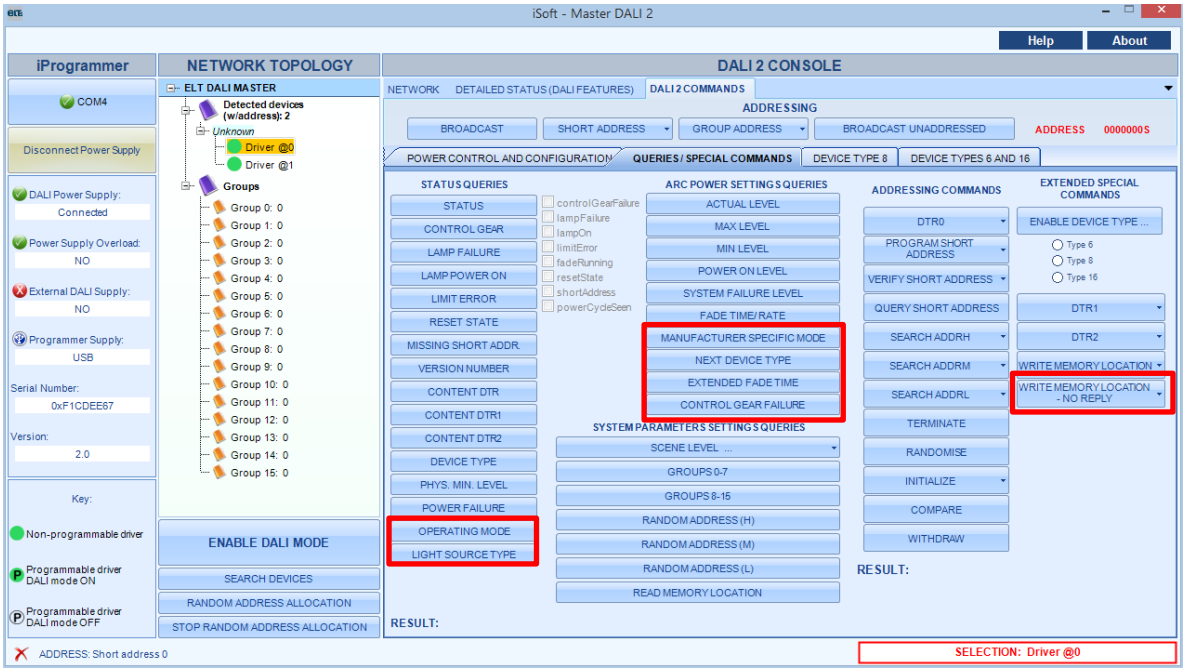


Fig. 109- Query tab- New DALI 2 commands

Device types 6 and 16

Commands for Device types 6 and 16 (thermal protection) can be found in this tab.

Relation with the DALI 2 standard:

- Device type 6 → (62386-207)
- Device type 16 → (62386-217)

As in previous sections, when the cursor is placed over the buttons, a brief description of their function appears. For some special commands a previous sequence of commands has to be performed for proper operation. Such sequences are available in the DALI standard.

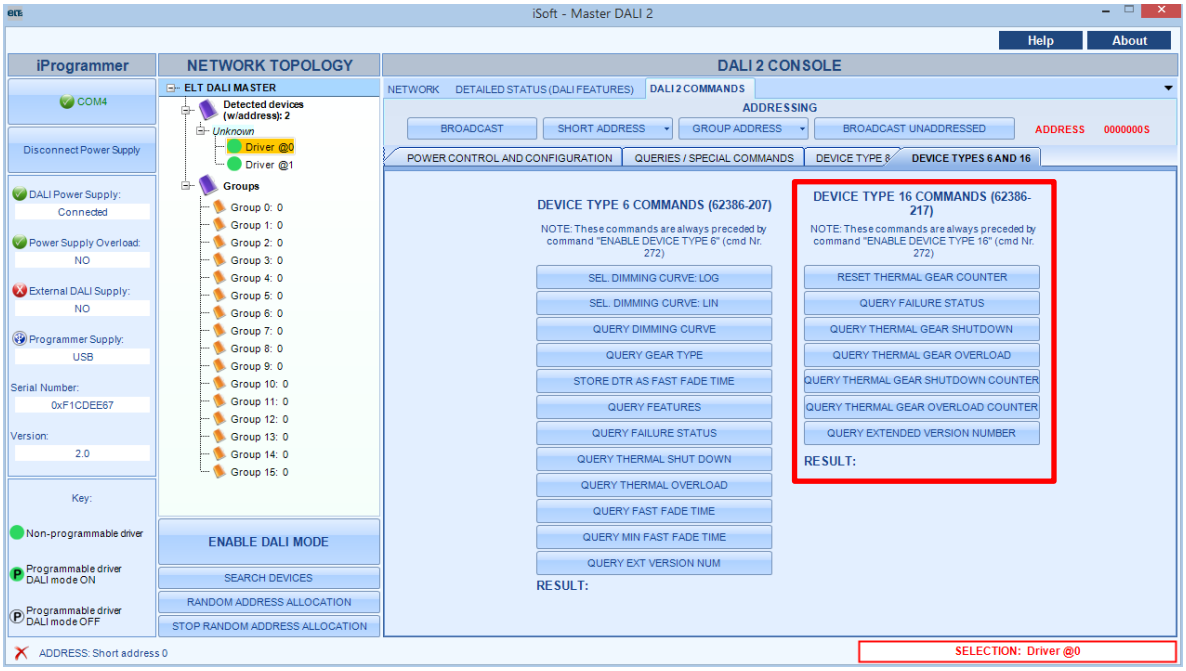


Fig. 110- Device Type 6 and 16 DALI 2 commands

Device type 8

Commands for Device types 8 (colour temperature) can be found in this tab.

Standard: 62386-209

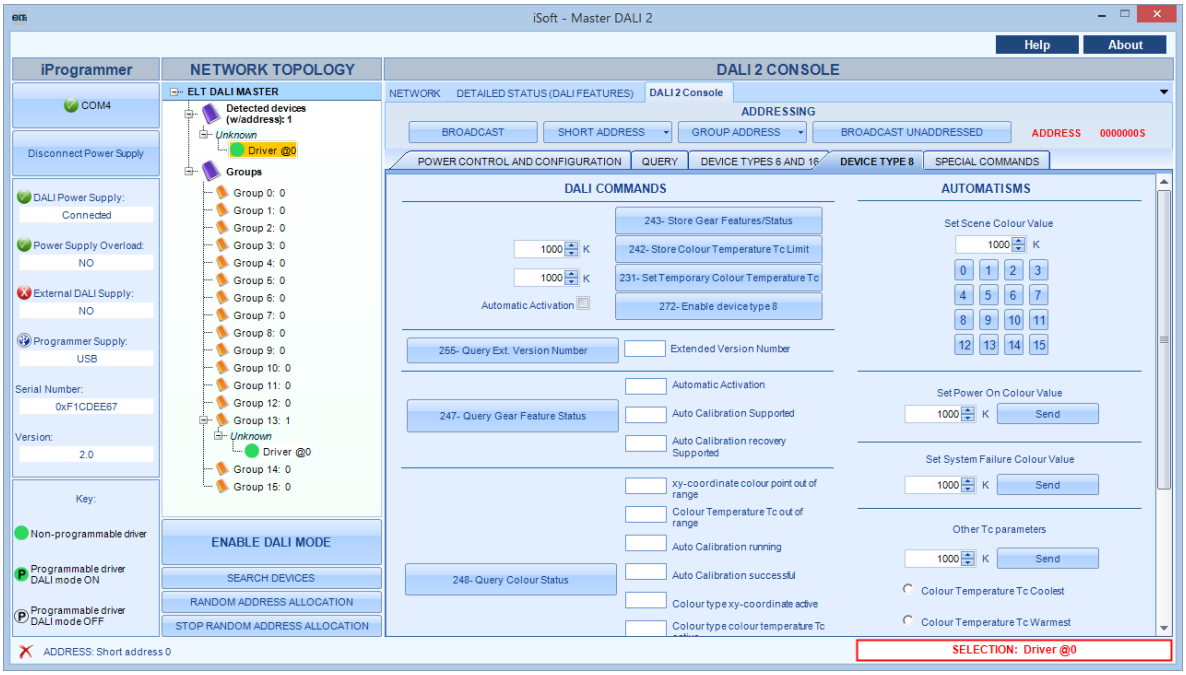


Fig. 111- Device Type 8 (62386-209)

5. Updates

5.1. iSoft updates

Each time the user runs iSoft, the program checks if there is a new version available in the ELT website. This requires an Internet connection. If the currently installed iSoft version is the last one available, the software runs as normal. But if there is a newer version than the current one, the software notifies this to the user, giving him the possibility to download the new version (Fig. 112).

Fig. 112- Update Window.

If the user clicks "YES", he is prompted to select a path where the compressed file of the new iSoft version will be downloaded. Then, the download starts.

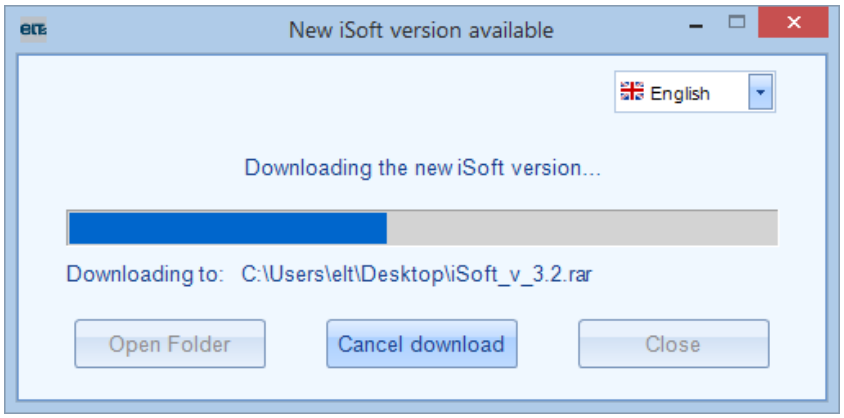


Fig. 113- Download progress.

Once the download is complete, iSoft continues to run normally. The installation of the new iSoft version must be done manually, going through the following steps:

1. Close the old iSoft.
2. Decompress the downloaded file, which is located in the path the user selected before the download.
3. Run the ".exe" installation file.

If the user decides not to download the new version, the download process can be restarted from the "*ISOFT UPDATE*" button.

Fig. 114- "ISOFT UPDATE" and "IPROGRAMMER UPDATE" buttons.

5.2. iProgrammer updates

When the software connects with an iProgrammer in any of its windows, it tells the user if there is a firmware update available. The download process is identical to the iSoft update. If the user decides not to download the update, the initial menu counts with the "NEW IPROGRAMMER FIRMWARE AVAILABLE" button, to restart the download process at any time.

Fig. 115- "ISOFT UPDATE" and "IPROGRAMMER UPDATE" buttons.

Section 6.5 explains how to install the downloaded update in the iProgrammer.

6. Annex 1: iProgrammer installation

6.1. FTDI drivers

iSoft communicates with the iProgrammer using Virtual Serial Ports (VCOM), so **FTDI drivers** are required to be installed in the PC.

FTDI drivers for each operating system are available in the FTDI web site: http://www.ftdichip.com/Drivers/VCP.htm

The process description to install the FTDI drivers for each operating system can be found in the FTDI web site: http://www.ftdichip.com/Support/Documents/InstallGuides.htm.

6.2. Serial Port Configuration

Once the FTDI drivers have been installed, the serial port needs to be configured. Two configurations have to be performed:

- **Latency**: 1ms.
- **Serial Port Number**, if needed. The Software only works with serial ports between 1 and 16 (both included).

The process to carry out these configurations depends on the Operating System. Following, there is a description of the steps to take in four different operating systems: Windows XP, Windows 7, Windows 8 and Windows 10.

Note: To configure the port, the iProgrammer must be connected to the computer, but the software must be closed.

6.2.1. Serial Port Configuration: Windows XP

The steps to take are the following:

1) Open the Control Panel: Start--> Control Panel

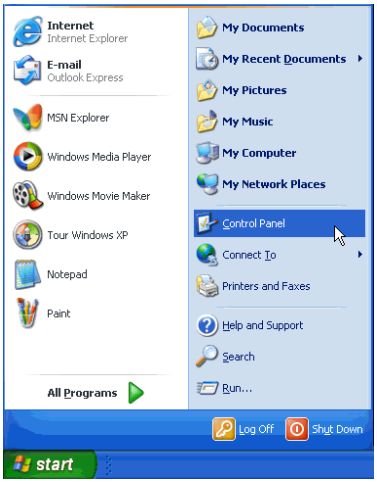


Fig. 116- Control Panel

2) Double-click on "System"

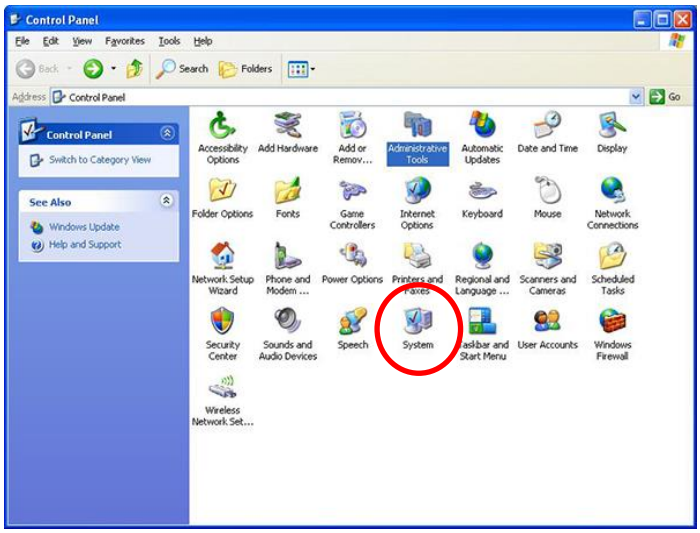


Fig. 117-System

3) Select "Hardware" tab; click on "Device Manager"

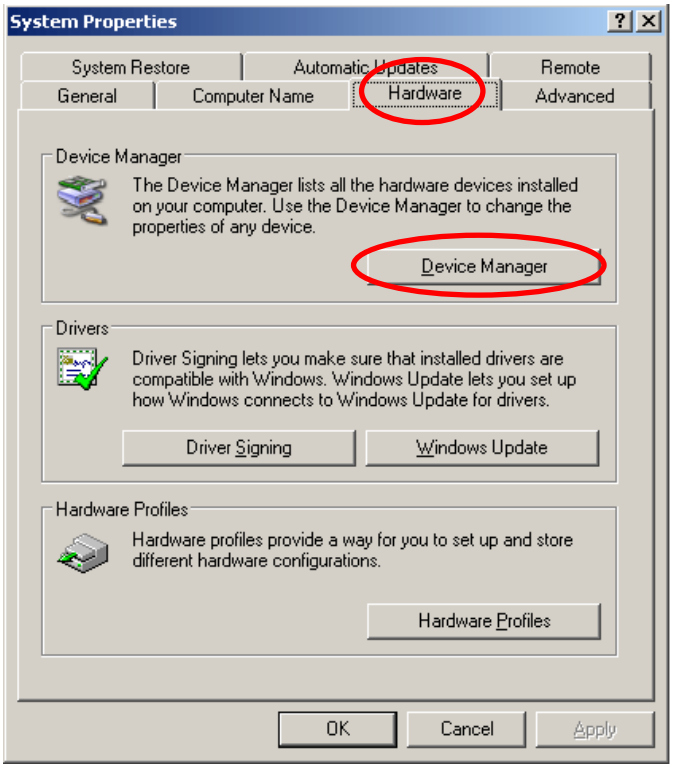


Fig. 118-System Properties: Hardware

4) Drop the "Ports (COM & LPT)" menu; double click on the iProgrammer port. In the example (Fig. 119), the port is "USB Serial Port (COM3)".

Fig. 119-Device Manager

5) Click "Advanced…"

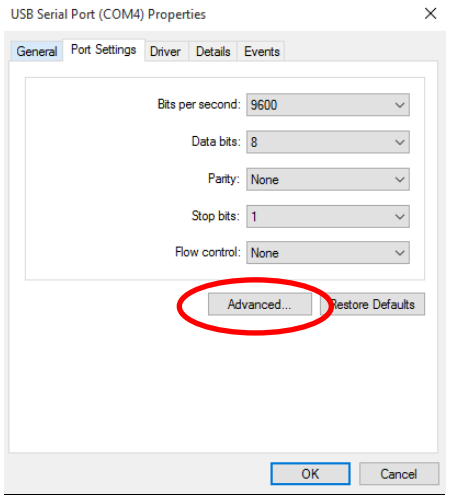


Fig. 120- USB Serial Port properties

6) Select the desired port number (between 0 and 16) and set the latency to 1ms.

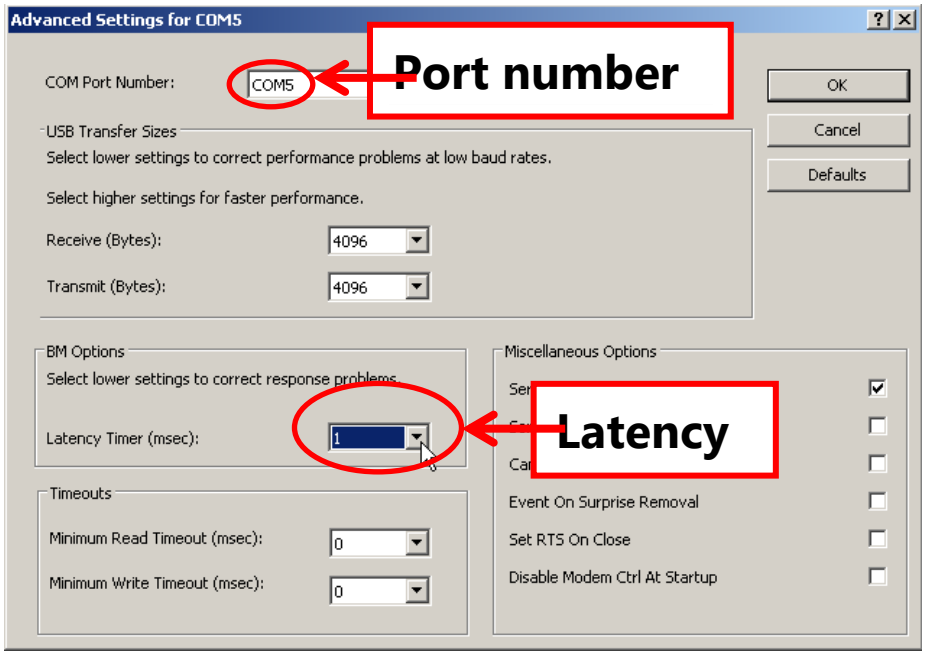


Fig. 121- USB Serial Port advanced configuration

6.2.2. Serial Port Configuration: Windows 7

The steps to take are the following:

1) Open the Control Panel: Start--> Control Panel

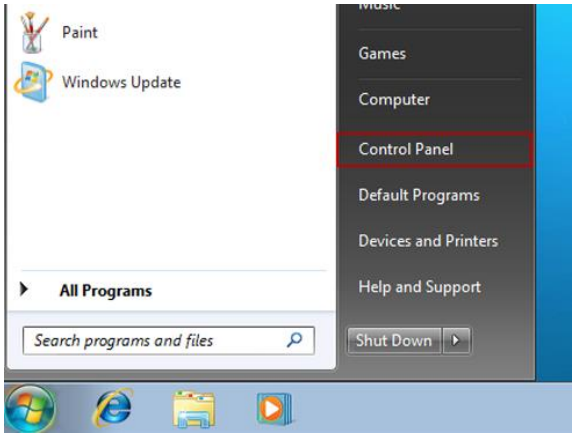


Fig. 122-Control Panel Selection

2) Click on "Hardware and Sound".

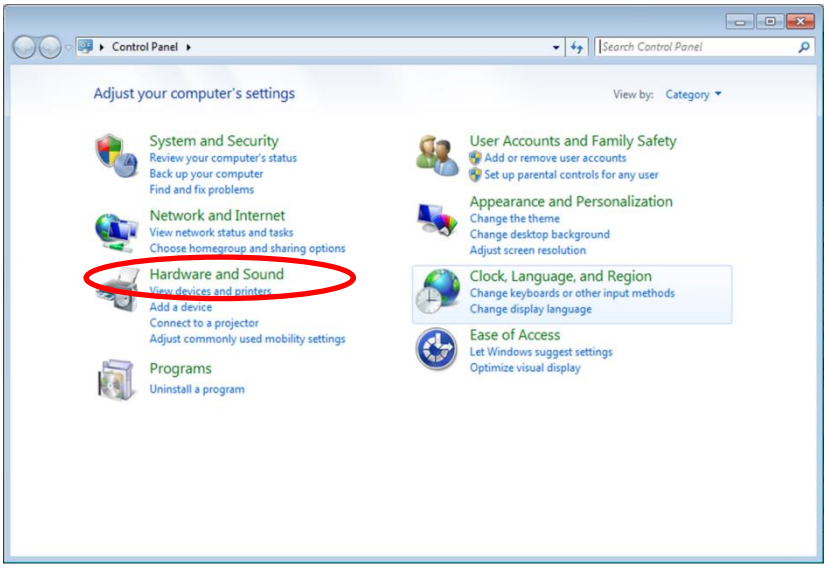


Fig. 123-Control Panel-->Hardware and Sound

3) Click on "Device Manager"

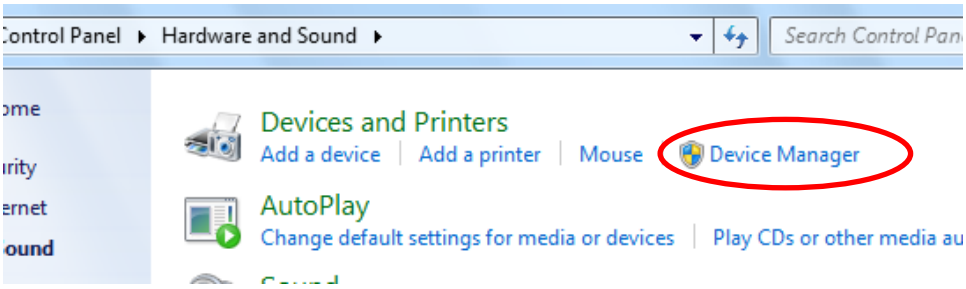


Fig. 124-Device Manager selection

4) Drop the menu of "Ports (COM & LPT)"; double click on the iProgrammer port. In the example (Fig. 125), the port is "USB Serial Port (COM4)".

Fig. 125-Device Manager

5) Click on "Advanced..."

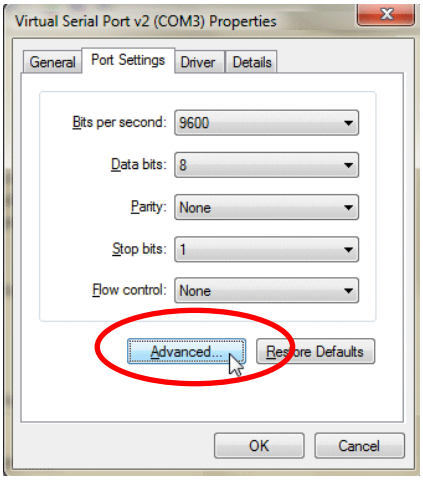


Fig. 126- USB Serial Port properties

6) Select the desired port number (between 0 and 16) and set the latency to 1ms.

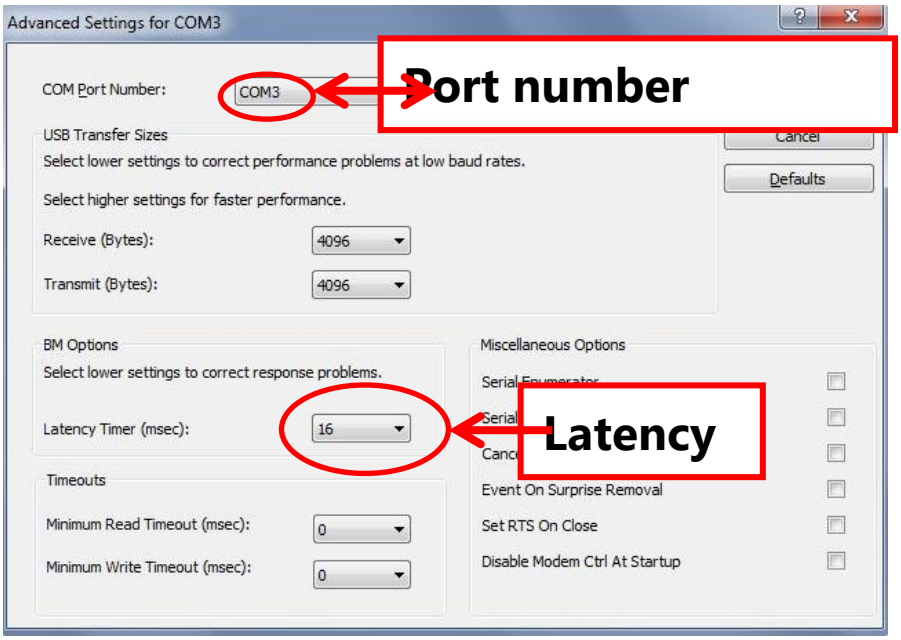


Fig. 127- USB Serial Port (COM3) advanced configuration

6.2.3. Serial Port Configuration: Windows 8.1

The steps to take are the following:

1) Open the Control Panel: press the Windows key or click on the start button. Type "Control Panel". At the right there is a search sidebar. The first result is "Control Panel". Click on it.

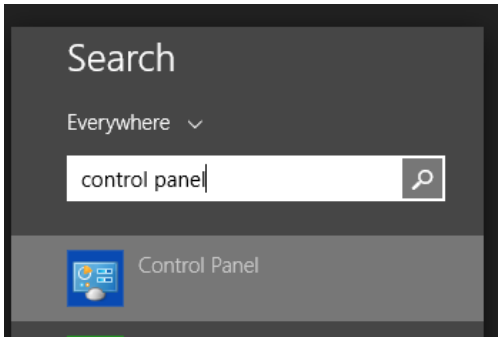


Fig. 128-Search sidebar.

2) Click on "Hardware and Sound".

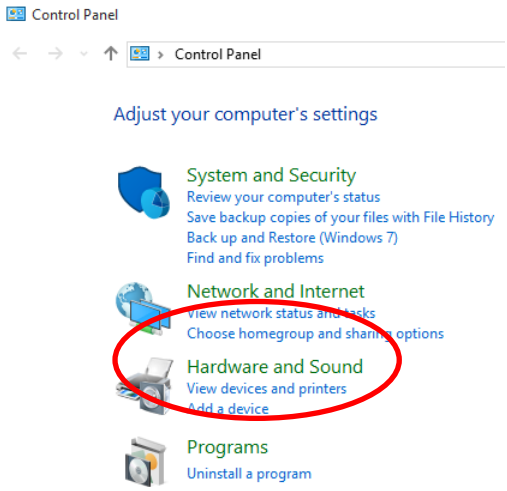


Fig. 129-Hardware and Sound

3) Click on "Device Manager"

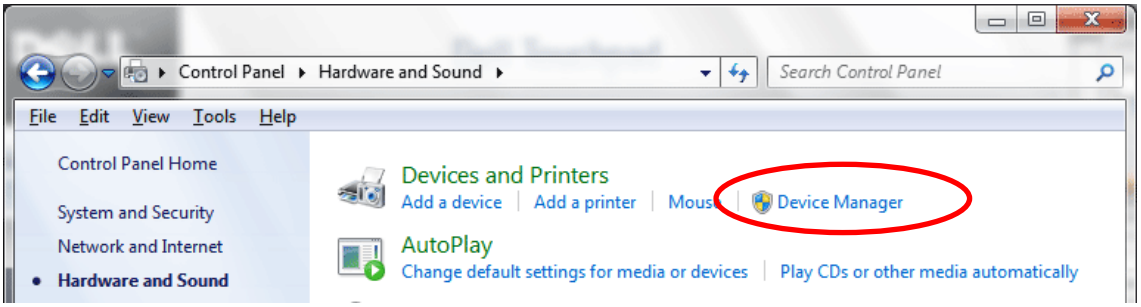


Fig. 130- Device manager selection

4) Drop the menu of "Ports (COM & LPT)"; double click on the iProgrammer port. In the example (Fig. 119*Fig. 119*), the port is "USB Serial Port (COM4)".

Fig. 131-Device Manager

5) Click on "Advanced…"

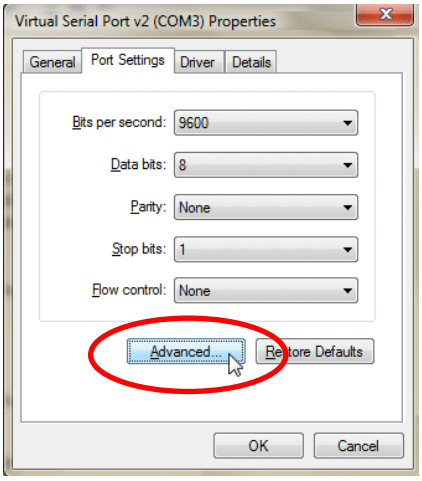


Fig. 132- USB Serial Port (COM4) properties

6) Select the desired port number (between 0 and 16) and set the latency to 1ms.

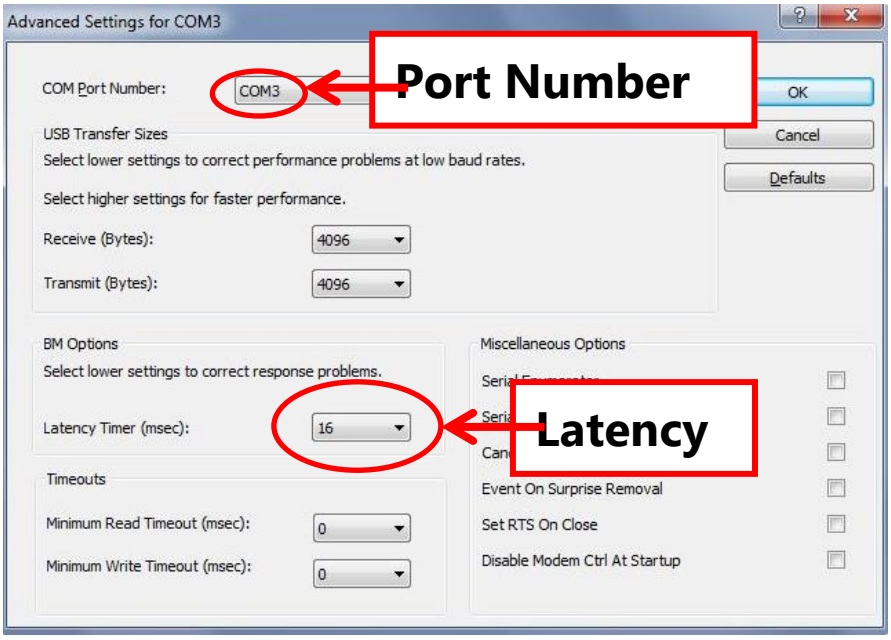


Fig. 133- USB Serial Port (COM3) advanced configuration

6.2.4. Serial Port Configuration: Windows 10.

The steps to take are the following:

1) Open the control Panel: press the Windows key or click on the Start button. Type the words "Control Panel". A search list appears. The first result is "Control Panel"; click on it.

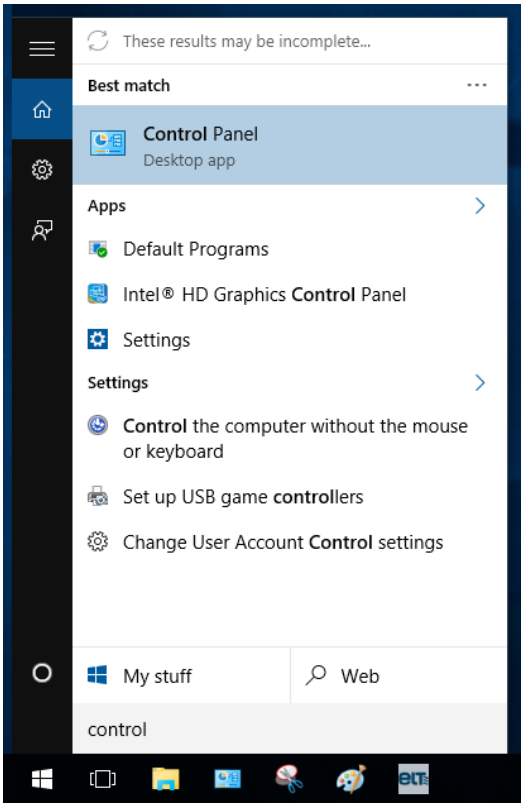


Fig. 134-Start menu in Windows 10

2) Click on "Hardware and Sound".

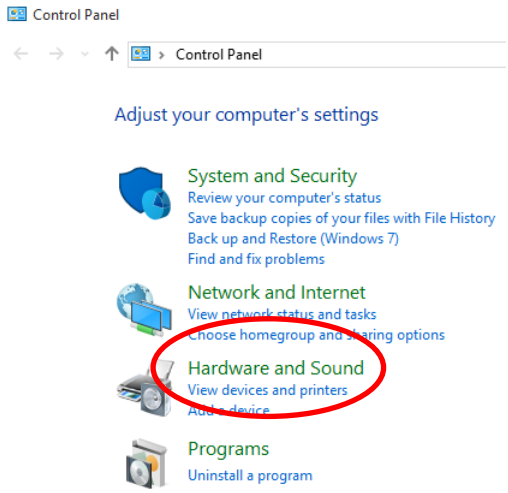


Fig. 135- Control Panel --> Hardware and Sound

3) Click on "Device Manager"

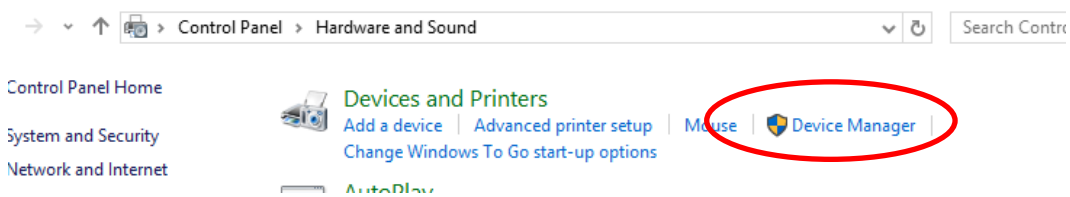


Fig. 136-Device Manager selection

4) Drop the "Ports (COM & LPT)" menu and double-click on the serial port of the iProgrammer. In the example, the port is "USB Serial Port (COM4)".

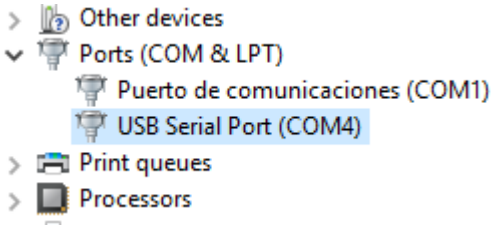


Fig. 137- Device Manager

5) Click on "Advanced Options"

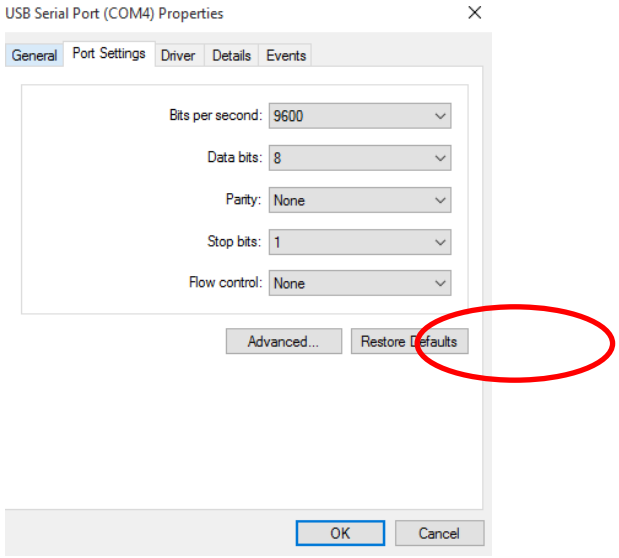


Fig. 138- USB Serial Port (COM4) properties

6) Select the desired port number (between 0 and 16) and set the latency to 1ms.

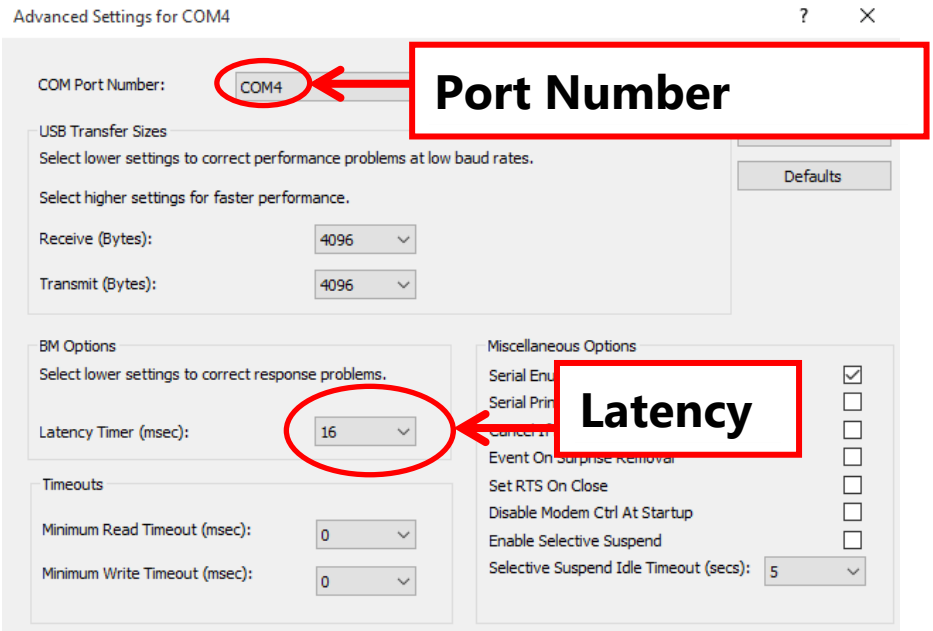


Fig. 139- USB Serial Port (COM4) advanced configuration

6.3. iProgrammer plugging/unplugging

The following considerations should be taken into account when working with iProgrammer to ensure proper operation:

- Connect the USB cable to the PC before starting the software, not while it is already running.
- Do not unplug the cable while the software is running.
- After closing the software, you can unplug the cable.

The software includes protection routines that detect iProgrammer's disconnections and connections, so communication can be restored and Windows error messages that could suddenly close the software are avoided.

It is also possible to enable or disable the iProgrammer's internal power supply.

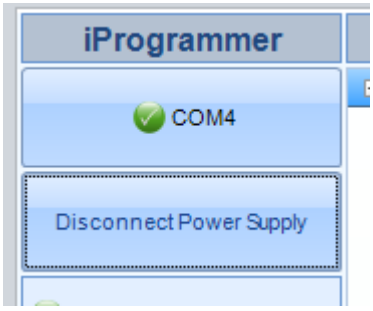


Fig. 140.- iProgrammer's Internal Power Supply disabling.

6.4. iProgrammer Special Functions

The meaning of each LED is the following:

- *Power ON*: ON/OFF LED.
- *Internal Dali Power Supply:* Only active if the iProgrammer DALI power supply is connected. The LED will be blinking if the supply comes from the USB cable and it will be permanently ON if the supply comes from the iProgrammer's supply.
- *Communication*: it indicates if there is DALI communication through a visible sequence. If there is no communication, this LED is off.
- *External DALI power supply:* It turns on if the bus power supply is an external power supply. If it is ON, it is not allowed to feed the bus through the iProgrammer.
- *Overload*: It turns ON if there is an overload in the internal power supply. If this happens, it will be disconnected after 0.5 seconds.

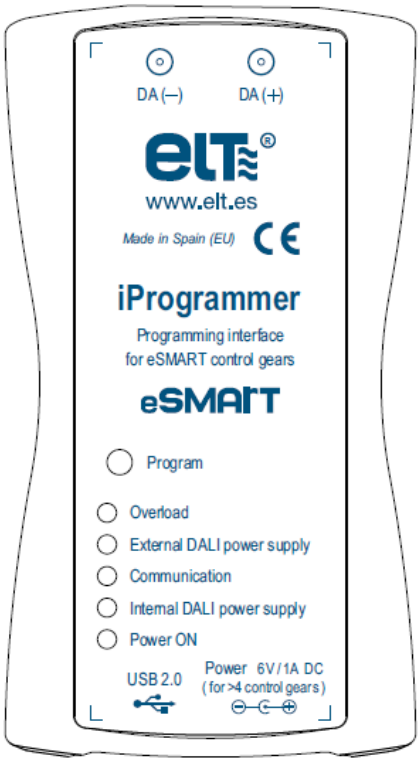


Fig. 141- iProgrammer Marking

NOTE: If the iProgrammer is powered with the USB cable, only 4 devices can be connected to the DALI bus. To connect more devices, power the iProgrammer with the external power supply.

6.5. iProgrammer firmware update

In case a firmware update of the iProgrammer is required, you will be given a file.

To update the firmware follow these steps:

1. With the iProgrammer disconnected from the DALI bus and from the USB port, press the “Program” button.
2. While the button is being press, plug the iProgrammer USB cable to the PC.
3. The PC will recognize the device as a storage device. This can take several seconds. Now you can release the Program button.
4. Delete the existing file and then copy the provided file for the update in the mentioned storage device.
5. When the file is copied, unplug the iProgrammer from the PC.
6. The firmware is now updated. Plug the iProgrammer to the PC and to the DALI bus for normal operation.

7. Annex 2: New features

7.1. Automatic Mode

In order to speed up the programming of drivers, in version 4.00.0 the feature 'AUTOMATIC MODE' is added. This mode is designed for situations in which many drivers need to be programmed with the same template.

To run this mode **it is assumed that only one device is connected to the DALI bus**. It is also required to previously select the template that will be programmed. This template must match the driver family that will be programmed, that is, it must have the GTIN corresponding to the family of the driver model that will be programmed.

When running this mode, the software 'searches' for a driver in the DALI bus, assigns an address to it (always address 0), reads its serial number, programs it with the previously selected template and verifies that the device has been programmed correctly.

When the programmed device is removed from the DALI bus and a new device is added, the software automatically performs the same action onto the new device.

Once the automatic mode is started, the only action required by the user is to add the next driver to be programmed to the DALI bus.

Once the driver is programmed, the programming is no longer retried. To re-program it, it is required to restart the automatic mode.

Automatic mode will stop if any of the following conditions occur:

- The user clicks on the 'automatic mode' button.
- A template has not been previously selected.
- The GTIN of the selected template does not match the family of the connected driver.
- 5 minutes passed without detecting any new driver.

7.2. New JSON templates

Old templates with a .bin extension are replaced by plain text files in JSON format, which are easily modified in any text editor.

All generated templates are saved into the following path: ***C:\ELT Files\Files***

As an example, the following is a JSON template:

```
{
  "FILE_NAME": "example template",
  "ISOFT_VERSION": "4.00.0",
  "GTINS": [
```

```
    8435110492896,
    8435110505213,
    8435110506869,
    8435110506890,
    8435110509105
  ],
  "PROGRAMMING_STATUS": {
    "clo_status": "off",
    "eol_status": "off",
    "pst_status": "off",
    "mtp_status": "off"
  },
  "DIMMING_MODE": "actidim",
  "DALI_CURVE": "log",
  "AOC": 700,
  "MTP": {
    "mtp_cut_off_status": "off",
    "mtp_cut_off_temperature": 255,
    "mtp_dim_level": 170,
    "mtp_fade_to_cut_off": 1,
    "mtp_ntc": "NCP18XH103F03RB_MURATA_10K",
    "mtp_temperature_end": 80,
    "mtp_temperature_start": 75
  },
  "CLO": {
    "clo_step1_level": 100,
    "clo_step2_hours": 7500,
    "clo_step2_level": 100,
    "clo_step3_hours": 15000,
    "clo_step3_level": 100,
    "clo_step4_hours": 22500,
    "clo_step4_level": 100,
    "clo_step5_hours": 30000,
    "clo_step5_level": 100,
    "clo_step6_hours": 37500,
    "clo_step6_level": 100,
    "clo_step7_hours": 45000,
    "clo_step7_level": 100,
    "clo_step8_hours": 52500,
    "clo_step8_level": 100,
    "clo_step9_hours": 60000,
    "clo_step9_level": 100,
    "clo_step10_hours": 67500,
    "clo_step10_level": 100,
    "clo_step11_hours": 75000,
    "clo_step11_level": 100
  },
  "EOL": 50000,
  "PST": 3,
  "LEVEL_1_10": 10,
  "LEVEL_0_10": 10,
  "ACTIDIM": {
    "actidim_number_of_levels": 5,
```

```
    "actidim_time_1": -120,
    "actidim_time_2": -60,
    "actidim_time_3": 240,
    "actidim_time_4": 300,
    "actidim_level_0": 100,
    "actidim_level_1": 70,
    "actidim_level_2": 50,
    "actidim_level_3": 80,
    "actidim_level_4": 100,
    "actidim_fade_to_level_0": 3,
    "actidim_fade_to_level_1": 30,
    "actidim_fade_to_level_2": 30,
    "actidim_fade_to_level_3": 30,
    "actidim_fade_to_level_4": 30
  },
  "TOURIST_ACTIDIM": {
    "final_date": "-",
    "init_date": "-",
    "location": "-",
    "tourist_actidim_activation": 0,
    "tourist_actidim_on_when_nights_are_longer_than_threshold": "no",
    "tourist_actidim_status": "off",
    "tourist_actidim_threshold": 650
  },
  "CORRIDOR": {
    "corridor_a_dali_level": 254,
    "corridor_b_dali_level": 203,
    "corridor_f0": 0,
    "corridor_f1": 32,
    "corridor_f2": 10,
    "corridor_ndt": 60,
    "corridor_sensor_type": "contact_with_mains_voltage",
    "corridor_stand_by_status": "off",
    "corridor_t1": 0
  },
  "MAINS_DIM": {
    "mains_dim_high_percentage": 100,
    "mains_dim_high_voltage": 230,
    "mains_dim_low_percentage": 50,
    "mains_dim_low_voltage": 198
  },
  "LINE_SWITCH": {
    "line_switch_high": 100,
    "line_switch_low": 50,
    "line_switch_type": "contact_with_mains_voltage"
  },
  "LED_MODULE_DATA": {
    "cut_off_events": 0,
    "cut_off_time": 0,
    "high_temp_events": 0,
    "high_temp_time": 0,
    "module_maximum_temperature": -128,
    "Module_Operation_Time": 0
```

```
  },
  "LED_MODULE_FLAGS": {
    "save_mot_in_template": true,
    "save_others_in_template": false
  }
}
```

7.3. Partial templates

iSoft 4.00.0 supports "partial" templates, that is, it is not mandatory to include absolutely all the features. This speeds up the programming process.

Partial templates must meet the following requirements:

- The template must be correctly written according to the **JSON format.**

NOTE: not all fields are numeric. Some only support text strings, or they are Boolean (true / false). It is recommended to take as reference the complete template example included in the previous section.

- The **"GTINS" field is mandatory**. At least one GTIN must be included. In the button "Supported models" (initial menu) the gtin corresponding to each model is included.
- Templates with **"partial" characteristics** are not allowed, that is, the characteristics that appear within a template must be complete.
- Not any value is allowed within each field; the values must be within the established ranges. Ranges can be observed in the template generation window.
- Regarding the ACTIDIM feature, only the fields corresponding to the selected number of levels must be configured. For example, if the number of levels is 5, only fields ending between 0 and 4 should be configured.
- Regarding the CLO feature, only the levels to be active must be configured. In addition, between the first and the last configured level, no intermediate level should be missing.

Example 1

Wrong template (GTINS field missing):

```
{
"MTP": {
    "mtp_cut_off_status": "off",
    "mtp_cut_off_temperature": 255,
    "mtp_dim_level": 170,
    "mtp_fade_to_cut_off": 1,
    "mtp_ntc": "NCP18XH103F03RB_MURATA_10K",
    "mtp_temperature_end": 80,
    "mtp_temperature_start": 75
  },
}
```

Example 2

Wrong template (missing the "mtp_ntc" and "mtp_temperature_end" fields within the MTP feature):

```
{
  "GTINS": [
    8435110492896,
    8435110505213
  ],
"MTP": {
    "mtp_cut_off_status": "off",
    "mtp_cut_off_temperature": 255,
    "mtp_dim_level": 170,
    "mtp_fade_to_cut_off": 1,
    "mtp_temperature_start": 75
  }
}
```

Example 3

Correct template: valid partial template that only contains one feature (in addition to the GTIN, which is the only required field). When using this template, only the MTP feature will be written to the device.

```
{
  "GTINS": [
    8435110492896,
    8435110505213
  ],
"MTP": {
    "mtp_cut_off_status": "off",
    "mtp_cut_off_temperature": 255,
    "mtp_dim_level": 170,
    "mtp_fade_to_cut_off": 1,
    "mtp_ntc": "NCP18XH103F03RB_MURATA_10K",
    "mtp_temperature_end": 80,
    "mtp_temperature_start": 75
  },
}
```

Example 4 (a)

Wrong template (in the Actidim feature the number of levels is 5, while 6 levels have been configured):

```
 {
 "GTINS": [
    8435110492896,
    8435110505213
  ],
"ACTIDIM": {
    "actidim_number_of_levels": 5,
```

```
    "actidim_time_1": -120,
    "actidim_time_2": -60,
    "actidim_time_3": 240,
    "actidim_time_4": 300,
    "actidim_time_5": 310,
    "actidim_level_0": 100,
    "actidim_level_1": 70,
    "actidim_level_2": 50,
    "actidim_level_3": 80,
    "actidim_level_4": 100,
    "actidim_level_5": 100,
    "actidim_fade_to_level_0": 3,
    "actidim_fade_to_level_1": 30,
    "actidim_fade_to_level_2": 30,
    "actidim_fade_to_level_3": 30,
    "actidim_fade_to_level_4": 30,
    "actidim_fade_to_level_5": 30
  }
}
```

Example 4 (b)

Correct template (correction of example 4 (a)):

```
  {
  "GTINS": [
    8435110492896,
    8435110505213
  ],
"ACTIDIM": {
    "actidim_number_of_levels": 5,
    "actidim_time_1": -120,
    "actidim_time_2": -60,
    "actidim_time_3": 240,
    "actidim_time_4": 300,
    "actidim_level_0": 100,
    "actidim_level_1": 70,
    "actidim_level_2": 50,
    "actidim_level_3": 80,
    "actidim_level_4": 100,
    "actidim_fade_to_level_0": 3,
    "actidim_fade_to_level_1": 30,
    "actidim_fade_to_level_2": 30,
    "actidim_fade_to_level_3": 30,
    "actidim_fade_to_level_4": 30
  }
}
```

Example 5

Wrong template: configuration of level 4 of the CLO characteristic is missing.

```
{
  "GTINS": [
    8435110492896,
    8435110505213,
    8435110506869
  ],
   "CLO": {
    "clo_step1_level": 100,
    "clo_step2_hours": 7500,
    "clo_step2_level": 100,
    "clo_step3_hours": 15000,
    "clo_step3_level": 100,
    "clo_step5_hours": 30000,
    "clo_step5_level": 100,
    "clo_step6_hours": 37500,
    "clo_step6_level": 100,
    "clo_step7_hours": 45000,
    "clo_step7_level": 100,
    "clo_step8_hours": 52500,
    "clo_step8_level": 100,
    "clo_step9_hours": 60000,
    "clo_step9_level": 100,
    "clo_step10_hours": 67500,
    "clo_step10_level": 100,
    "clo_step11_hours": 75000,
    "clo_step11_level": 100
  }
}
```

If a template does not meet any of these requirements, iSoft generates a "log" file indicating the reason for the rejection (C:\ELT Files\log). The template can be corrected in any text editor.

Example of a **"log" file** when trying to load the template with the misconfigured MTP:

```
-------------FILE NAME-------------
MyTemplate.json
-------------ISOFT_VERSION-------------
4.00.0
-------------MTP-------------
Feature wrongly set. The following fields are missing or contain an error:
MTP.mtp_ntc
MTP.mtp_temperature_end
```

7.4. JSON template examples

Default template (75W PRO)

```
{
  "GENERAL_COMMENT": [
```

```
    "Esta plantilla contiene los valores por defecto para los modelos de la
familia iLC 75W PRO",
    "This template contains the default values for the iLC 75W PRO family."
  ],
  "FILE_NAME": "default_75W_PRO",
  "ISOFT_VERSION": "4.00.0",
  "GTIN_COMMENT": [
    "Se incluyen varios GTINs de la familia 75W PRO. Pero sólo un GTIN es
obligatorio",
    "Several GTINs form the 75W PRO family are included. But just one GTIN is
mandatory."
  ],
  "GTINS": [
    8435110492896,
    8435110505213,
    8435110506869,
    8435110506890,
    8435110509105
  ],
  "PROGRAMMING_STATUS_COMMENTS": [
    "La activación de CLO, EOL, PST y MTP se realiza a continuación, mientras que
la configuración de cada una de esas características se realiza más adelante.",
    "CLO, EOL, PST and MTP are activaed here. However, the configuration of each
of them is done later. "
  ],
  "PROGRAMMING_STATUS": {
    "clo_status": "off",
    "eol_status": "off",
    "pst_status": "off",
    "mtp_status": "off"
  },
  "DIMMING_MODE_COMMENTS": [
    "Los modos de regulación son: // The dimming modes are:",
    "actidim",
    "on_off",
    "dali",
    "1_10V",
    "0_10V",
    "mains_dim",
    "line_switch",
    "corridor",
    "actidim_corridor"
  ],
  "DIMMING_MODE": "actidim",
  "DALI_CURVE_COMMENTS": [
    "Las curvas dali son: // The dali dimming curves are:",
    "lin",
    "log"
  ],
  "DALI_CURVE": "log",
  "AOC_COMMENT": [
    "El rango de AOC depende de cada familia (ver hoja de características).",
    "The AOC range depends on each family (see datasheet)."
```

```
    ],
  "AOC": 700,
  "MTP_COMMENT": [
    "La ntc puede ser una de entre cuatro posibles referencias: // The ntc can be
one of four possible references: ",
    "NCP18XH103F03RB_MURATA_10K",
    "NCP15XW153E03RC_MURATA_15K",
    "NCP18XW153J03RB_MURATA_15K",
    "NTCS0805E3153GMT_VISHAY_15K"
    ],
  "MTP": {
    "mtp_cut_off_status": "off",
    "mtp_cut_off_temperature": 255,
    "mtp_dim_level": 170,
    "mtp_fade_to_cut_off": 1,
    "mtp_ntc": "NCP18XH103F03RB_MURATA_10K",
    "mtp_temperature_end": 80,
    "mtp_temperature_start": 75
  },
  "CLO_COMMENT": [
    "Los niveles deben ser entre 0 y 100%. Las horas deben ser entre 0 y 149500,
y deben ser múltiplos de 500.",
    "Levels must be between 0 and 100%. Hours must be between 0 and 149500, and
they must be multiples of 500."
  ],
  "CLO": {
    "clo_step1_level": 100,
    "clo_step2_hours": 7500,
    "clo_step2_level": 100,
    "clo_step3_hours": 15000,
    "clo_step3_level": 100,
    "clo_step4_hours": 22500,
    "clo_step4_level": 100,
    "clo_step5_hours": 30000,
    "clo_step5_level": 100,
    "clo_step6_hours": 37500,
    "clo_step6_level": 100,
    "clo_step7_hours": 45000,
    "clo_step7_level": 100,
    "clo_step8_hours": 52500,
    "clo_step8_level": 100,
    "clo_step9_hours": 60000,
    "clo_step9_level": 100,
    "clo_step10_hours": 67500,
    "clo_step10_level": 100,
    "clo_step11_hours": 75000,
    "clo_step11_level": 100
  },
  "EOL_COMMENT": [
    "Rango: // Range:",
    "0 to 150000"
  ],
  "EOL": 50000,
```

```
  "PST_COMMENT": [
    "Rango: // Range:",
    "3 to 600"
  ],
  "PST": 3,
  "LEVEL_1_10_COMMENT": [
    ""
  ],
  "LEVEL_1_10": 10,
  "LEVEL_0_10_COMMENT": [
    ""
  ],
  "LEVEL_0_10": 10,
  "ACTIDIM_COMMENT": [
    "Sólo deben configurarse el número de niveles especificados en
'actidim_number_of_levels'",
    "Only the number of levels specified in 'actidim_number_of_levels' must be
configured."
  ],
  "ACTIDIM": {
    "actidim_number_of_levels": 5,
    "actidim_time_1": -120,
    "actidim_time_2": -60,
    "actidim_time_3": 240,
    "actidim_time_4": 300,
    "actidim_level_0": 100,
    "actidim_level_1": 70,
    "actidim_level_2": 50,
    "actidim_level_3": 80,
    "actidim_level_4": 100,
    "actidim_fade_to_level_0": 3,
    "actidim_fade_to_level_1": 30,
    "actidim_fade_to_level_2": 30,
    "actidim_fade_to_level_3": 30,
    "actidim_fade_to_level_4": 30
  },
  "TOURIST_ACTIDIM_COMMENT": [
    "Sólo los siguientes campos son obligatorios: // Only the following fields
are mandatory:",
    "tourist_actidim_activation (minutes)",
    "tourist_actidim_on_when_nights_are_longer_than_threshold: yes/no",
    "tourist_actidim_status: on/off",
    "tourist_actidim_threshold (minutes)"
  ],
  "TOURIST_ACTIDIM": {
    "final_date": "-",
    "init_date": "-",
    "location": "-",
    "tourist_actidim_activation": 0,
    "tourist_actidim_on_when_nights_are_longer_than_threshold": "no",
    "tourist_actidim_status": "off",
    "tourist_actidim_threshold": 650
  },
```

```
  "CORRIDOR_COMMENT": [
    "Los posibles valores para el tipo de sensor son: // The possible values for
the sensor type are: ",
    "contact_with_mains_voltage",
    "dry_contact_low_means_presence",
    "dry_contact_high_means_presence"
  ],
  "CORRIDOR": {
    "corridor_a_dali_level": 254,
    "corridor_b_dali_level": 203,
    "corridor_f0": 0,
    "corridor_f1": 32,
    "corridor_f2": 10,
    "corridor_ndt": 60,
    "corridor_sensor_type": "contact_with_mains_voltage",
    "corridor_stand_by_status": "off",
    "corridor_t1": 0
  },
  "MAINS_DIM_COMMENT": [
    ""
  ],
  "MAINS_DIM": {
    "mains_dim_high_percentage": 100,
    "mains_dim_high_voltage": 230,
    "mains_dim_low_percentage": 50,
    "mains_dim_low_voltage": 198
  },
  "LINE_SWITCH_COMMENT": [
    "Los posibles valores para el tipo de sensor son: // The possible values for
the sensor type are: ",
    "contact_with_mains_voltage",
    "dry_contact"
  ],
  "LINE_SWITCH": {
    "line_switch_high": 100,
    "line_switch_low": 50,
    "line_switch_type": "contact_with_mains_voltage"
  }
}
```

AOC CONFIGURATION TEMPLATE

```
{
  "GENERAL_COMMENT": [
    "Esta plantilla es un ejemplo de configuración del AOC para el modelo iLC 75W
PRO XR. Sólo el AOC se enviará al driver.",
    "This template is an example of AOC configuration for the iLC 75W PRO XR
model. Only the AOC will be sent to the driver."
  ],
  "GTINS": [
    8435110492896
```

```
  ],
  "AOC": 1400,
}
```

ACTIDIM CONFIGURATION TEMPLATE

```
{

  "GENERAL_COMMENT": [
    "Esta plantilla es un ejemplo de configuración del modo de regulación ACTIDIM con 7 niveles para el modelo iLC 75W PRO XR. Sólo el modo de regulación y la configuración ACTIDIM se enviarán al driver.",
    "This template is an example of ACTIDIM dimming mode configuration with 7 levels for the iLC 75W PRO XR model. Only the dimming mode and the ACTIDIM configuration will be sent to the driver."
  ],
  "GTINS": [
    8435110492896
  ],
  "DIMMING_MODE": "actidim",
  "ACTIDIM": {
    "actidim_number_of_levels": 7,
    "actidim_time_1": -230,
    "actidim_time_2": -140,
    "actidim_time_3": -60,
    "actidim_time_4": 110,
    "actidim_time_5": 183,
    "actidim_time_6": 300,
    "actidim_level_0": 85,
    "actidim_level_1": 68,
    "actidim_level_2": 62,
    "actidim_level_3": 48,
    "actidim_level_4": 68,
    "actidim_level_5": 80,
    "actidim_level_6": 100,
    "actidim_fade_to_level_0": 45,
    "actidim_fade_to_level_1": 45,
    "actidim_fade_to_level_2": 45,
    "actidim_fade_to_level_3": 45,
    "actidim_fade_to_level_4": 45,
    "actidim_fade_to_level_5": 45,
    "actidim_fade_to_level_6": 100
  }
}
```

0...10V configuration template

```
{
  "GENERAL_COMMENT": [
```

```
    "Esta plantilla es un ejemplo de configuración del modo de regulación 0...10V para el modelo iLC 75W PRO XR. Sólo el modo de regulación y el nivel 0...10V se enviarán al driver.",
    "This template is an example of 0...10V dimming mode configuration for the iLC 75W PRO XR model. Only the dimming mode and the 0...10V level will be sent to the driver."
  ],
  "GTINS": [
    8435110492896
  ],
  "DIMMING_MODE": "0_10V",
  "LEVEL_0_10": 54,
}
```

1...10V configuration template

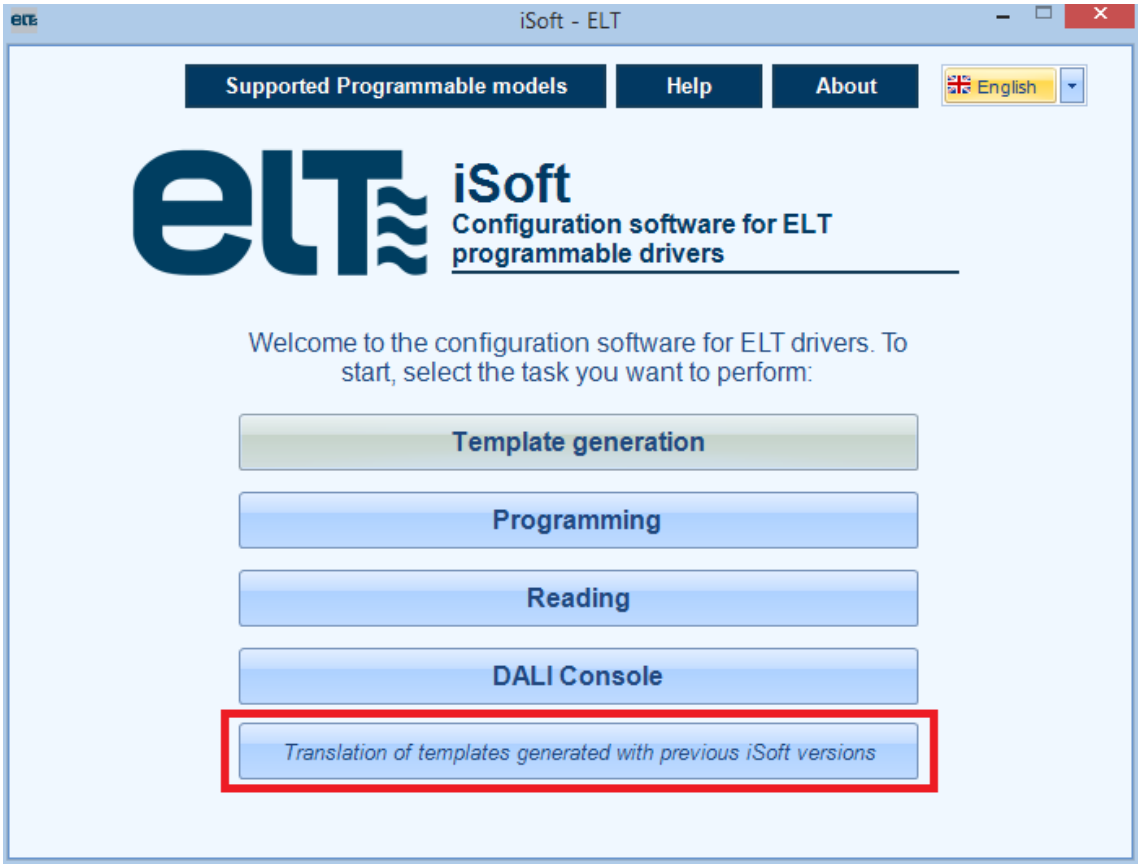
```
{
  "GENERAL_COMMENT": [
    "Esta plantilla es un ejemplo de configuración del modo de regulación 1...10V para el modelo iLC 75W PRO XT IP67 STELARIA. Sólo el modo de regulación y el nivel 1...10V se enviarán al driver.",
    "This template is an example of 1...10V dimming mode configuration for the iLC 75W PRO XT IP67 STELARIA model. Only the dimming mode and the 1...10V level will be sent to the driver."
  ],
  "GTINS": [
    8435110506890,
  ],
  "DIMMING_MODE": "1_10V",
  "LEVEL_1_10": 27,
}
```

DALI configuration template

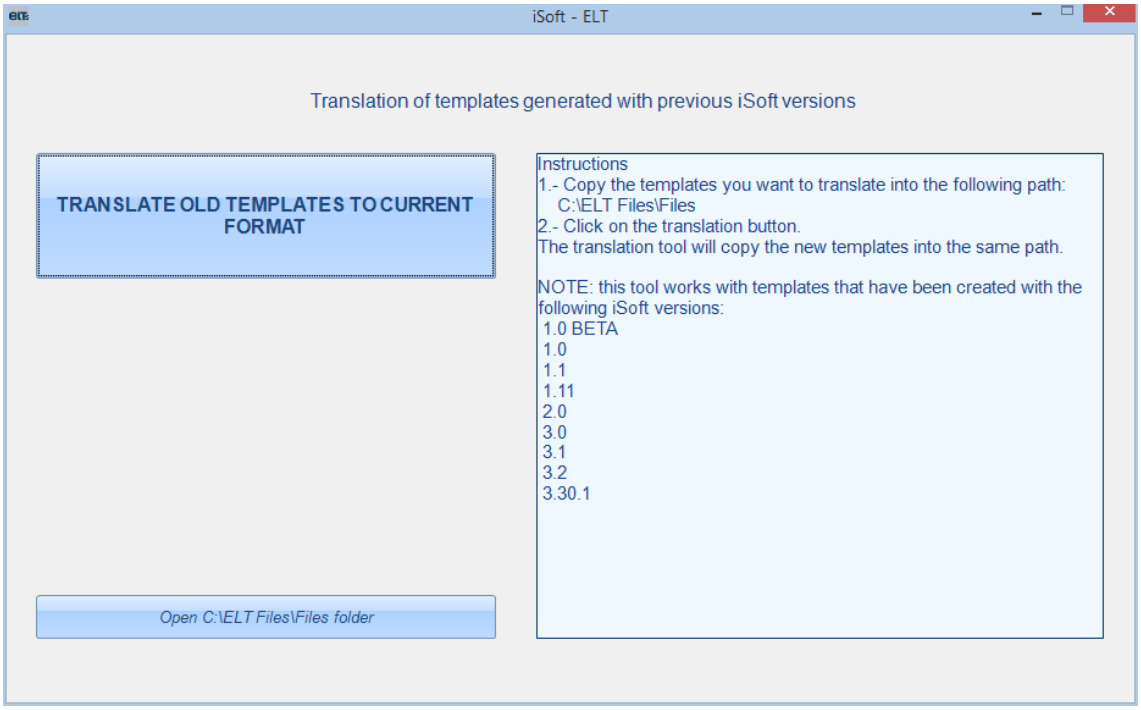
```
{
  "GENERAL_COMMENT": [
    "Esta plantilla es un ejemplo de configuración del modo de regulación DALI para el modelo iLC 75W PRO XR. Sólo el modo de regulación y la configuración DALI se enviarán al driver.",
    "This template is an example of DALI dimming mode configuration for the iLC 75W PRO XR model. Only the dimming mode and the DALI configuration will be sent to the driver."
  ],
  "GTINS": [
    8435110492896
  ],
  "DIMMING_MODE": "dali",
  "DALI_CURVE": "log",
}
```

7.5. Translation of old '.bin' templates

In the initial menu, the 'Translation' button runs the window for translating old templates. The instructions for translating ".bin" templates created with previous versions of iSoft to the new JSON format are included in this window.



The translation window includes a button that runs the translation and another button that opens the folder where the .bin templates to be translated should be placed, and also where the translated .json templates are generated. In addition, it is from that path from where templates are retrieved in the different windows of iSoft.



7.6. ‘Corridor’ templates

In previous iSoft versions, there were specific '.bin' templates for the Corridor mode. In the new version, Corridor templates have been replaced by normal json templates. This way, in the configuration window of the Corridor mode (within the template generation section) it is possible to load any json template created. If the selected template contains the Corridor feature, it will be loaded. In addition, the user configuration can be saved as a new json template, so that it can be used as is within the programming window.