
LEDsGO®

Control Hierarchy

The control hierarchy allows manual lighting control and automatic lighting control to work together. Manual control is any physical action, like selecting a scene by tapping on the scene icon in the app, pushing a switch, push button, or rotary control. Automated control is, for example, commands generated by presence sensors and timers. Each control action has a specific priority and if multiple controls are simultaneously active on the same luminaire it will adhere to the highest priority.

When the highest priority control is removed, the luminaires will fade into next highest priority. If the hierarchy is empty, the luminaire will fade to OFF.

Priority levels

- Manual control (App, switches, push buttons, rotary control) — 1ste priority
- Date timer (with sensor override) — 2nd priority
- Week timer (with sensor override) — 3rd priority
- Presence sensors — 4th priority
- Date timer — 5th priority
- Week timer — 6th priority

Commands with the higher priority in the hierarchy are actioned, even if lower priority commands are still active due to sensor linger times, timers etc.

A higher priority command with a lower dim level will still override a lower priority command that has a higher dim level.

Commands with the same priority level are actioned in “latest takes precedence” order. If multiple sensors are simultaneously affecting the dimmed level of the same luminaire, the highest dimmed level will take priority.

- <u>Manual control:</u>

  Manual lighting control has the highest priority and will always override the automated control. It can be set to timeout or stay on luminaires indefinitely. There are configurable timeouts for manual control assigned for day and night periods of each weekday.

  When the timeout is reached, the manual control will be removed and the luminaire fades to the next highest priority control. Setting the timeout value to zero will disable timeout, but in this case manual control is always overriding any presence sensors and timers.

  Timeout options are:
  - Always timeout will always cause manual control of a luminaire to expire (based on the timeout period).
  - Timeout if automation waiting will cause manual control of a luminaire to expire only if it is being controlled by the control hierarchy. For example, a presence sensor or a timer.
  - Don’t timeout will prevent any network automation from affecting any manually controlled luminaires.

Up to date version

LEDSGO BV
Drieslaan 6 | B-8560 Wevelgem (Moorsele) | Tel +32 (0) 56 424 992
BTW BE 0824.326.685 | ING IBAN BE47 3630 7083 3480 | BIC BBRUBEBB

When luminaires display the @ icon, it indicates that it is under automated lighting control (presence sensors or timers). Tapping the @ button will remove the manual control from all luminaires or opened group of luminaires.

- Presence Sensors:

  Presence sensors operate on second highest priority (unless a timer has been set to Override presence) and use scenes to control the luminaires. Up to 30 sensors (for an Evolution network, 10 for a Classic network) can simultaneously control an individual luminaire. When multiple sensors are affecting the same luminaire, it will be following the presence scene with the highest dim level.

  Each presence sensor has a setting for linger time which dictates how long the scenes will stay on after presence is no longer detected. After the linger time passes, the associated luminaires will be faded over the configured duration.

  Presence control functionality can be assigned to smart switching, push button or dedicated presence sensors. Each sensor can trigger up to two scenes. A typical use case is to use one scene for the actual controlled area and another scene for associated emergency route luminaires. Note, that if multiple scenes are used, there should not be an overlap between affected luminaires (i.e., no luminaire can be used in both scenes).

- Timers

  There are two categories of Timers: date based (meaning start / end times are based on specific date) and other timers. Date based timers have a higher priority than the other timers, so they will override weekday-based timers. Thus, it is possible to use them to implement, for example, holiday season override.

  Timers can also be set to override presence sensors. This could be used, for instance, to prevent sensors from activating luminaires at a certain time of day.

  It is also possible to configure the timers to automatically activate when luminaires are powered on (Activate timers on startup). After receiving network time, the luminaire will determine the expected timer state and activate them. Note that after switching the power ON, there will be a small delay before this happens.

  Suggestion: To allow easier testing during commissioning, the luminaire control hierarchies can be reset by selecting More > Network Setup > Configure all luminaires > Reset Network.

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Control options

The control options page allows you to define the basic and automation controls (Control Hierarchy) of a Casambi network.

Fade time options allow you to alter the Fade time for powering up a Casambi luminaire (i.e. When switching the mains supply on), Fade time for toggling ON or OFF (i.e. Using the Casambi app, Xpress switch or Casambi Enabled switch) and the Fade time for switch dimming (i.e. when dimming using the Xpress + or – buttons or a Casambi enabled switch).

Remember last state Activating this option will allow luminaires to return to their previous state when toggled on from the app or a Casambi enabled switch. Note that this is not the same as a luminaire's STARTUP STATE FOR POWER ON, which is the startup condition when a luminaire is powered on.

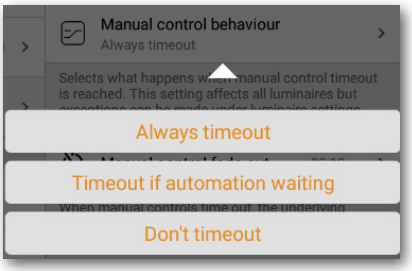
Activate timers on startup When a luminaire is powered on and has received the network time, any timers associated with it will then activate.

Use control hierarchy For a detailed explanation of the Control hierarchy, its priorities and its use with sensors and timers, please select the More information option, which can be found directly below the User control hierarchy option. The same information can be found in the Appendix of this guide.

When the Control hierarchy is activated, a number of options will then become available and a @ button will appear in the lower left of the Luminaires tab screen to allow the end-user to manually resume network automation if needed.

The Control hierarchy options are:

- Manual control behaviour This option selects how luminaires should react to manual control and if/when network automation should resume.
  - Always timeout will always cause manual control of a luminaire to expire (based on the timeout period).
  - Timeout if automation waiting will cause manual control of a luminaire to expire only if it is being controlled by the control hierarchy. For example, a presence sensor or a timer.
  - Don't timeout will prevent any network automation from affecting any manually control led luminaires.



- Manual control fade out This option sets the time within which a luminaire will fade once manual control has expired.
- Manual control timeout The timeout value is the length of time a luminaire can remain under manually control before network automation resumes.

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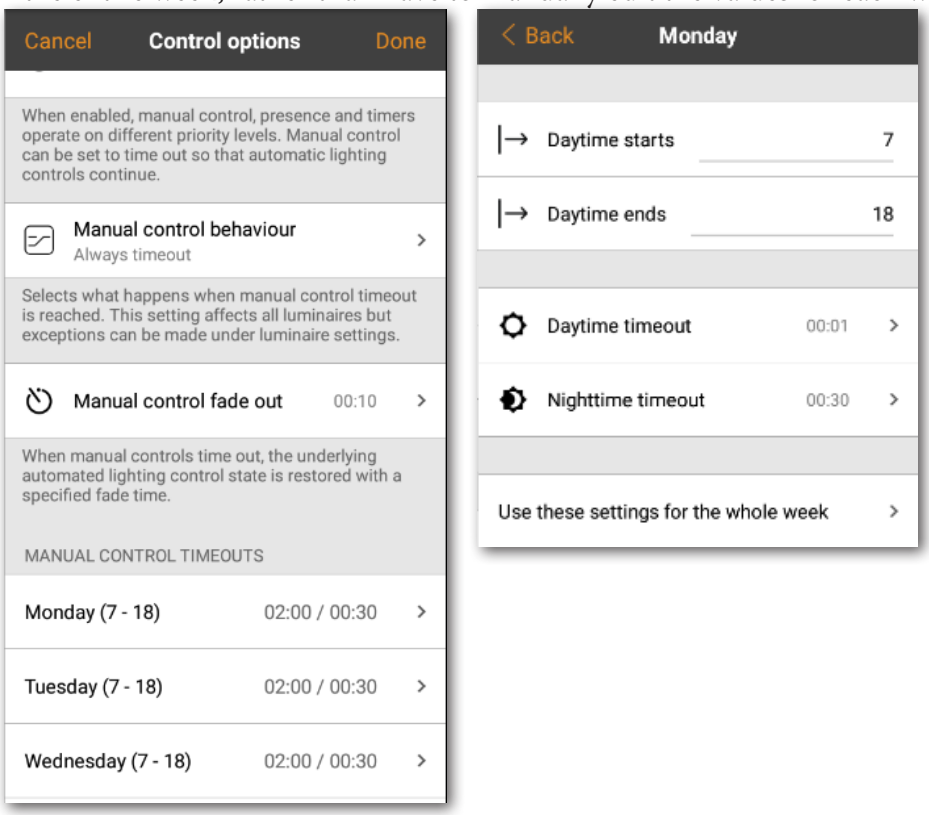
Manual control timeout

The manual control timeout is as mentioned earlier, the length of time a luminaire can remain under manually control before network automation resumes.

A separate timeout value can be set for each individual weekday, its evening and night. The default values are 2 hours in the day and 30 minutes in the evening, but these can be changed to suit your installation.

The Use these settings for the whole week option allows you to set the same day and night values for the entire week, rather than have to manually edit the values for each weekday.



Crucial!: When you press a button that turns off a lamp, you have to wait for the 'daytime timeout' value to expire before a timer or sensor can control that lamp again. For example, if you set a time of 3 hours to turn on a lamp when a sensor detects presence and set the 'daytime timeout' to 1 hour. If you then turn off the light with a button/app, and someone walks past the light for the first hour, the sensor will turn on an hour after you have turned it off. The light will stay on for the time set by your sensor.

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