

Application note: Setup and operation of Active+ solution

GENERAL DESCRIPTION

Active+ solution is

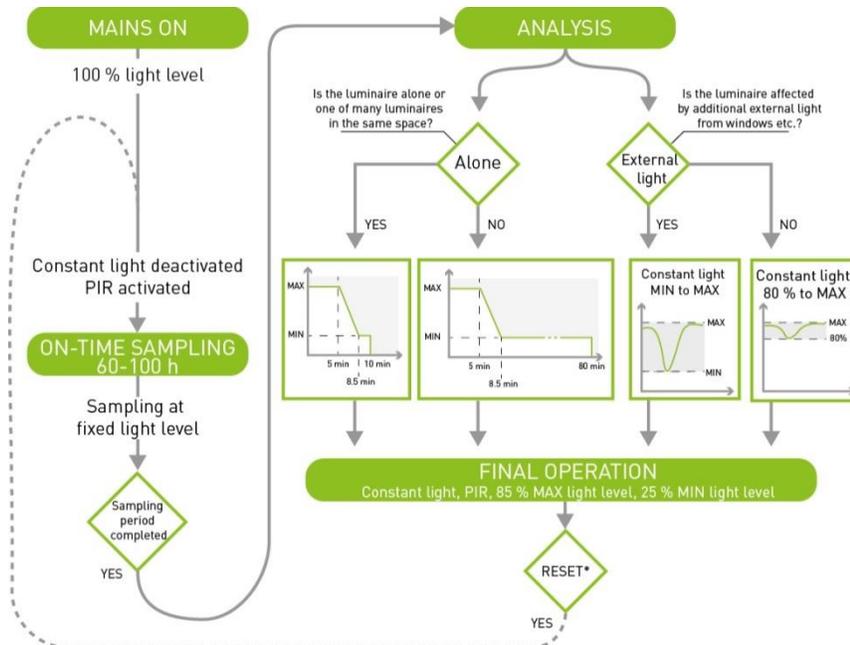
- Stand-alone, inbuilt lighting control solution for luminaires with LED lamps
- Fully automatic setup through smart learning function
- Optimized occupancy detection for different situations
- Light level compensation over entire life cycle (CLO)
- Automatic daylight harvesting
- No programming, configuration or external control wiring
- Manual override of settings by Mobile App

PRODUCTS NEEDED

The only products needed for each luminaire:

- Active+ LED driver – intelligent dimmable LED driver with inbuilt power supply
- Active+ Sense – extremely small and capable sensor

AUTOMATIC SETUP



FINAL OPERATION

Energy saving is achieved when the daylight harvesting and the occupancy detection are activated. The initial light level is set at approximately 85-90 % to avoid over-illumination of new luminaires (CLO). This is close to the designed luminaire light level, which will be maintained over the entire life cycle generating further energy saving. The sensor fade down time is made slow enough (3.5 min) to make reduction in light level invisible for the eye.

- If the luminaire is alone, such as a storage room, cupboard, copy room et.c. then the luminaire goes to minimum level and OFF in 10 minutes.
- If the luminaire is one of many luminaires, such as an open plan office or a retail store then the light stays on minimum level for more than an hour before switching OFF. This is done not to disturb other people in the working area and to create a safe and comfortable lighting scene.
- When the luminaire is affected by additional external light, i.e. close to a window, energy saving is utilized over the entire dynamic dimming area: 25-100 %
- When there is no external light affecting the luminaire additional energy saving cannot be utilized by daylight harvesting. The minimum light level is in this case clamped to 80 %, which ensures stable and reliable functioning of several luminaire sensors acting close to each other, preventing “waving effect” of sensors.

* RESET

If there is a need to restart the learning process, i.e. during a layout change of an office, the luminaires can be reset to start the learning period. You can reset either a single luminaire or an entire electrical circuitry with multiple luminaires.

1) Reset of single luminaire

Cover the light sensor preventing light from entering the sensor for a period of 60 seconds or more. The sensor must be connected. The luminaire must be switched on.

2) Reset of entire electrical circuitry

Perform the following switching sequence of the mains:

- 6 successive ON/OFF periods
- Length of ON period must be 5-10 seconds
- OFF period in between can be of any length

A successful resetting is acknowledged by shortly flashing the light.

MANUAL OVERRIDE

If there is a need to adjust the automatic settings a personnel override can be achieved by using the Active+ Mobile app. To use this app you must have an approved smart phone for the application running Android version 4.0 (or later) equipped with an LED flash. Settings that can be adjusted are:

- Lights on and Power Save light levels
- Occupancy time-outs
- Fade times
- Transition time-outs
- Daylight dimming ranges
- Bright-out functionality

Further information of the app- operation can be found in the User Guide: Operation of Active+ Mobile Application