

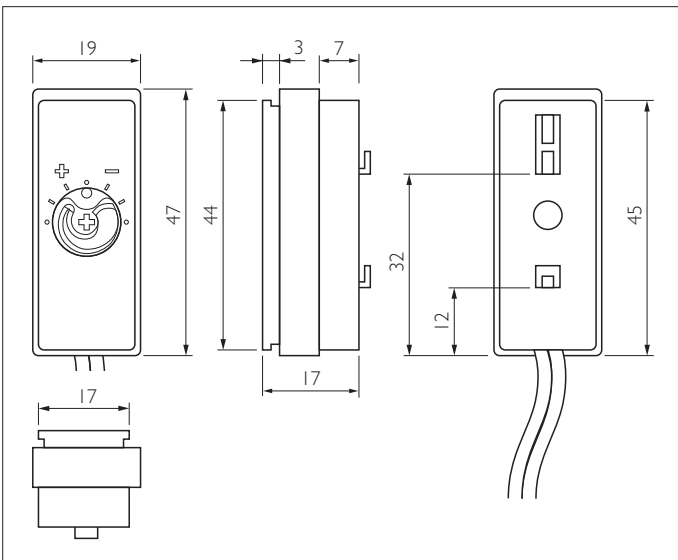


Product details

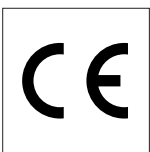
- ActiLume MicroLuxSense is a DayLight Regulation option (DLR) for luminaires equipped with a Philips HFR ballast. The sensor measures the reflected light coming from the surface below. It dims down the lamp output when the light level exceeds the required light level defined by the light sensor set point.
- ActiLume MicroLuxSense can be installed in the luminaire either clicked between the optics or next to the optics.

Features

- ActiLume MicroLuxSense is connected to the $1-10V_{DC}$ control input of the HFR ballast.
- ActiLume MicroLuxSense dims light down close to the minimum level of the ballast.
- ActiLume MicroLuxSense is calibrated for use in a standard office situation with 600 lux installed and 500 lux required.
- If needed, ActiLume MicroLuxSense can be manually adjusted by a rotating diaphragm to adjust the setpoint. The sensitivity of the sensor can be changed within a range from 1/3 to 3.
- The new setpoint can be copied for all ActiLume MicroLuxSense luminaires with similar daylight and reflection conditions
- ActiLume MicroLuxSense can regulate up to 20 luminaires equipped with Philips HFR ballasts
- The light sensor can either be clicked between the optics or next to the optics. The sensor has latching rills (equivalent to the ActiLume sensor).



Dimensions in mm



Application

ActiLume MicroLuxSense is meant to save energy by reducing excessive light due to:

- over design (e.g. 600 lux installed and 500 lux required)
- daylight ingress (see savings potential below)

| | | South | North |
|--------|---------------|-------|-------|
| Summer | Window side | 45% | 35% |
| | Corridor side | 25% | 25% |
| Winter | Window side | 35% | 25% |
| | Corridor side | 15% | 10% |

Energy saving potential of ActiLume MicroLuxSense depending on location and season.

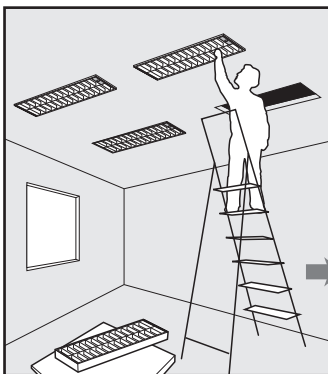
Assumptions: 600 lux installed, 500 lux required, average European office building, luminaire position on 1 m resp 3,5 m from the window, compared to an equivalent installation with electronic non dimmable ballast (HFP).

- ActiLume MicroLuxSense is designed for average ceiling heights of 2.5 to 3 m.
- ActiLume MicroLuxSense can be used alone or in combination with other controls products in order to add the daylight regulation functionality. (e.g.: combination of ActiLume MicroLuxSense with OccuSwitch).

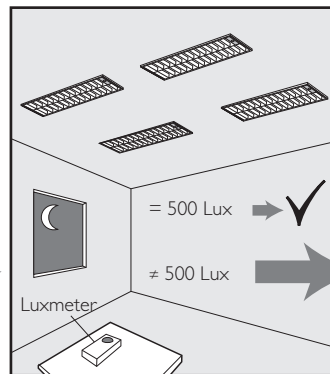


Application with sensor attached to the lamella

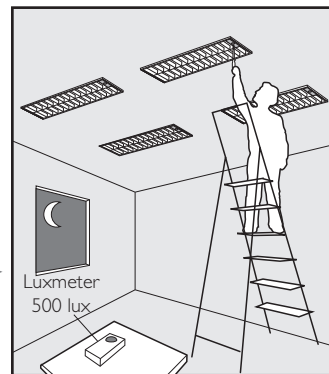
Installation



Mount the luminaire with ActiLume MicroLuxSense daylight Regulation option.



Measure the lux level under the light sensor (with no or negligible daylight contribution).

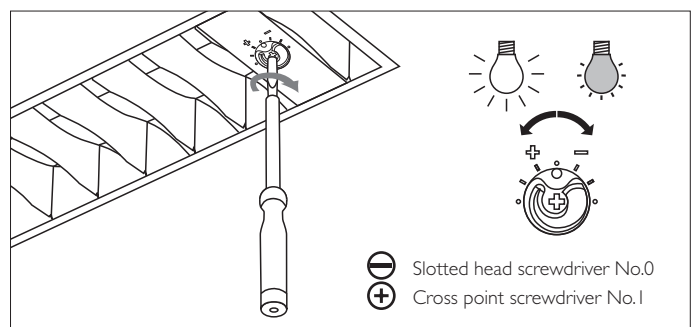


If needed, turn the diaphragm until the required light level is reached (with no or negligible daylight contribution).

Manual adjustment

The setpoint of the sensor can be changed manually by using a screwdriver to turn the control ring on the front, which influences the diaphragm. The housing is equipped with an indication of the default setting.

Note: This manual adjustment facility should preferably only be used in the commissioning phase, not by the users of the room.



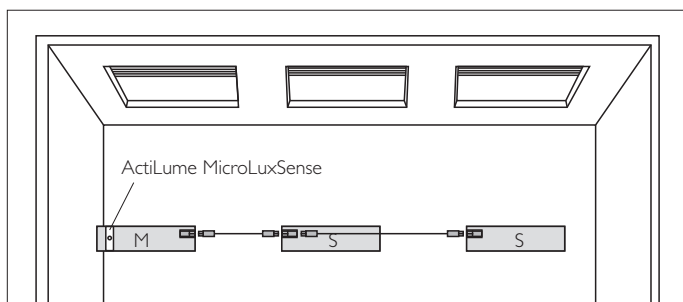
- ⊖ Slotted head screwdriver No.0
- ⊕ Cross point screwdriver No.1

Installation warning

In most cases you will see that every luminaire will have its own sensor (ease of installation and low cost of luminaire, less complex logistics). However for optimizing the installation it is possible to use one ActiLume MicroLuxSense for multiple luminaires.

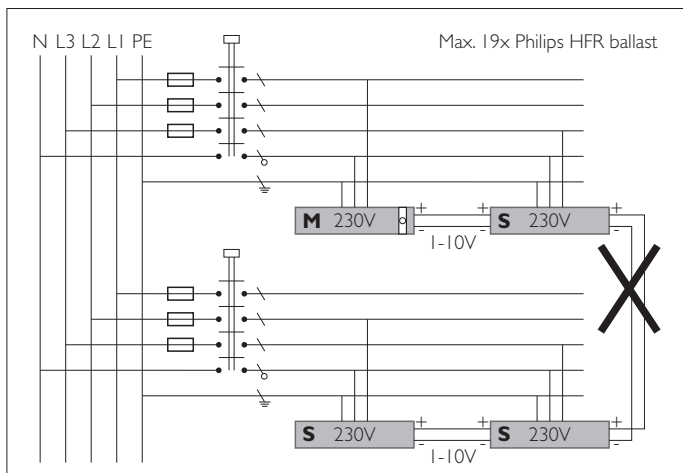
Throughlooping ActiLume MicroLuxSense Master luminaire (M) to slave luminaire (S)

- Up to 19 slave luminaires can be looped through to 1 Master luminaire if all luminaires are equipped with Philips HFR ballasts.
- Slave luminaires should have similar daylight conditions as the Master luminaire.

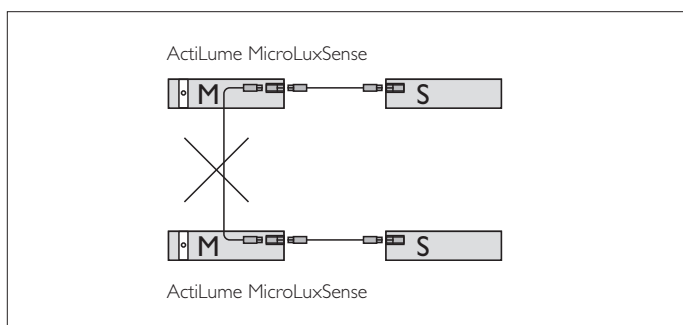


Cable = mains rated FELV (so not SELV)

- Through looping shall be done by connecting 1-10V "+ to +" and "- to -"
- Through looping of luminaires shall only be done within the same distribution circuit



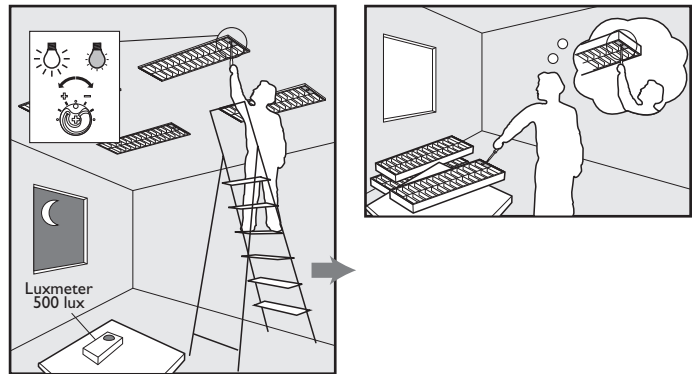
- Never loop through 2 Master luminaires



Commissioning

Under normal circumstances the factory setting is such that in office environments, no adjustments with the rotary control are required.

However, if commissioning is needed; the following steps can be executed:



- Find a room in the building that can be considered to be representative for the whole building.
- Install the luminaires with daylight control in this room and convince yourself that the installed light level and the required light level are reasonably close to each other (within 30% range, say 600 lux and 500 lux respectively). Light levels should be measured on the table, preferably without daylight contribution (e.g. at night).
- Manually adjust the rotary control such that the required light level is realized. Memorize the position of the control ring.
- Instruct installer to copy the position of the rotary control ring of every luminaire to be installed in comparable circumstances.

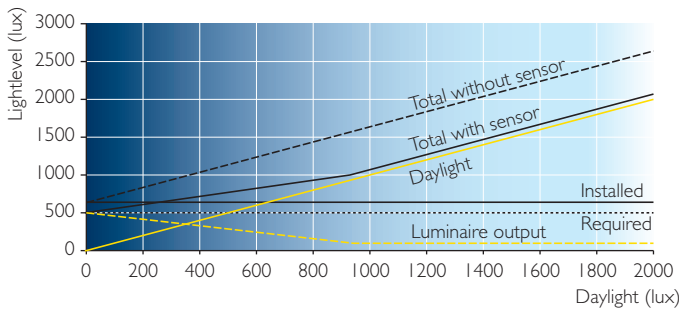
A separate document is available that describes the commissioning process in detail.

Application warnings

The ActiLume MicroLuxSense represents a basic, straight forward solution to save energy. When applied with care as described in this document, it will perform its function properly. The light sensor should however not be used in the following applications:

- When light levels are required with a higher accuracy than 10% of the desired value. In that case, sensors and controllers (such as ActiLume) with a higher performance should be used.
- When the required light level is significantly lower than the installed level, e.g. more than 30% lower. In that case a more sophisticated control system (like ActiLume) should be installed instead.

General Characteristics



ActiLume MicroLuxSense control characteristics

The control characteristics are shown in the graph. The light sensor roughly compensates for 50% of the ingressing daylight by dimming the artificial light output, until the minimum output is reached.

Technical data

Environmental conditions

Operation conditions
 Ambient temperature 5°C to 55°C
 Rel. humidity 5% to 90%, no condensation
 Max. allowed temperature 55°C
 Anywhere on the sensor housing

Storage conditions
 Ambient temperature -25°C to 70°C
 Rel. humidity 5% to 95% at 25°C

Safety
 When connected to the control input of a Philips HFR ballast, the sensor has double isolation to mains connected parts.

Connection
 2x0.5mm², flying leads, length 1000mm.

Color coding of cable
 violet +, gray -.
 When connected wrongly to the ballast dim input, the ballast input is short circuited, resulting in minimum light output.

Housing material Polycarbonate UL94 V-0
 Glow wire test 850°C/30sec

Color bottom part Ultra Dark Gray (similar to RAL 7024)

Color cover part Light Gray (similar to RAL 7035)
 White (similar to RAL 9016)

Weight/dimensions

Approx. 25 grams, 47x19x19 mm

EMC

According to CISPR15 Ed. 7.1

Control signal input

- operating voltage
 - operating current sink

2.5 ... 10V_{DC}
 100µA-3mA (sufficient for 20 Philips HFR ballasts)

- control voltage variation

< 0,7V

- default setting

over current and temp. range
 5V_{DC} at 37.5 lux/140µA (factory calibration tool)

- step response

within 2 sec. on 5V
 after power-up in case of insufficient ambient light

- max. input voltage

15 V_{DC} (maximum rating)

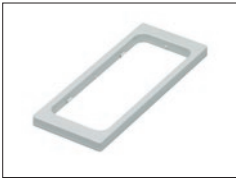
- max. current sink

50 mA (maximum rating)

Optical characteristics

- It is assumed that the reflection in a room is such that a light level of 500 lux on a table (0,8 mtr in height) will result in 25 lux seen by the controller at ceiling height (2.5 mtr) under a viewing angle of 45°

- The opening angle can be adapted by the diaphragm control, realizing an attenuation factor between 1/3 and 3.



LCA8001/00 Ring for ActiLume sensors
Ring around the cover of the ActiLume multisensor + cover, ActiLume luminaire based extension sensor + cover, ActiLume I-10V sensor or ActiLume MicroLuxSense to fit in the micro-optics of a luminaire.



LCA8002/00 ActiLume sensor clip for TL5
Clip to be used for ActiLume multisensor; ActiLume Luminaire based extension sensor; ActiLume I-10V sensor and the ActiLume MicroLuxSense. With this clip the sensor can be directly clicked on the TL5 lamp.



LCA8003/00 ActiLume sensor clip for TL-D
Clip to be used for ActiLume multisensor; ActiLume Luminaire based extension sensor; ActiLume I-10V sensor and the ActiLume MicroLuxSense. With this clip the sensor can be directly clicked on the TL-D lamp.



LCA8005/0x ActiLume mounting clip for use in luminaire.
Clip to be used for ActiLume multisensor; ActiLume Luminaire based extension sensor; ActiLume I-10V sensor and the ActiLume MicroLuxSense. With this clip the sensor can be mounted in the luminaire housing.

Packing data

| Type | Box dimensions (mm) | Qty | Material | Weight (Kg) | |
|------------|------------------------|-----|------------|-------------|-------|
| | | | | net | gross |
| LRL1222/10 | 175x110x38,5 | 12 | card board | 0.3 | 0.52 |
| LRL1222/15 | 175x110x38,5 | 12 | card board | 0.3 | 0.52 |
| LCA8001/00 | 216 x 93 x 70 | 100 | Cardboard | 0.155 | 0.221 |
| LCA8002/00 | 216 x 93 x 70 | 50 | Cardboard | 0.450 | 0.455 |
| LCA8003/00 | 216 x 93 x 70 | 50 | Cardboard | 0.450 | 0.455 |
| LCA8005/00 | 220 x 97 x 71 | 50 | Cardboard | 0.780 | 0.810 |
| LCA8005/05 | 220 x 97 x 71 | 50 | Cardboard | 0.780 | 0.810 |

Ordering Data

| Type | MOQ | Ordering number | EAN code level 1 | EAN code level 3 | EOC |
|------------|-----|-----------------|------------------|------------------|-----------|
| LRL1222/10 | 12 | 9137 003 46403 | 8718291 152385 | 8718291 152392 | 152385 00 |
| LRL1222/15 | 12 | 9137 003 54803 | 8718291 752257 | 8718291 752264 | 752257 00 |
| LCA8001/00 | 1 | 9137 003 38303 | 8727900 882780 | 8727900 882797 | 882780 00 |
| LCA8002/00 | 1 | 9137 003 40803 | 8727900 952940 | 8727900 952957 | 952940 00 |
| LCA8003/00 | 1 | 9137 003 40903 | 8727900 952988 | 8727900 952995 | 952988 00 |
| LCA8005/00 | 1 | 9137 003 48803 | 8718291 196242 | 8718291 196259 | 196242 00 |
| LCA8005/05 | 1 | 9137 003 55103 | 8718291 719632 | 8718291 719649 | 719632 00 |



3222 636 35132
02/2014
Data subject to change

www.philips.com/controls