

MicroLuxSense™

Provides daylight regulation via a single miniature sensor

MicroLuxSense is a DayLight Regulation option (DLR) for luminaires equipped with a Philips Advance Mark 7 0-10V or EssentialLine 0-10V ballasts. 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.

MicroLuxSense can be installed in the luminaire either mounted between the louvers or recessed in the housing.



Connect to the 0-10VDC control input of the Mark 7 or EssentialLine ballast

Provides a potential energy savings of up to 32% without sacrificing visual comfort*

Maximize visual comfort

Automated regulation of artificial lighting allows for task illumination to be maintained.

Arrives from the factory in a standard preset configuration

No need for complex commissioning. Field adjustment possible if needed.

Regulate up to 20 luminaires

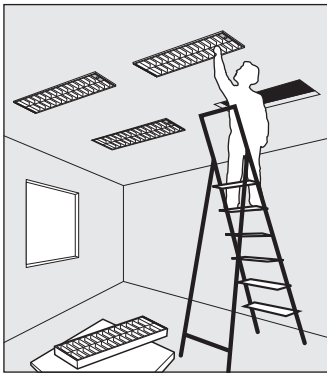
Utilize one sensor for continuous rows or multiple sensors with single luminaires

Uses common sensor footprint with ActiLume and ActiLume Color

One luminaire design now has the capability to provide various control options

* Galasiu, A.D. "Energy saving lighting control systems for open-plan offices: a field study," National Research Council Canada, v4 no 1, July 2007 pg. 7-29

Installation

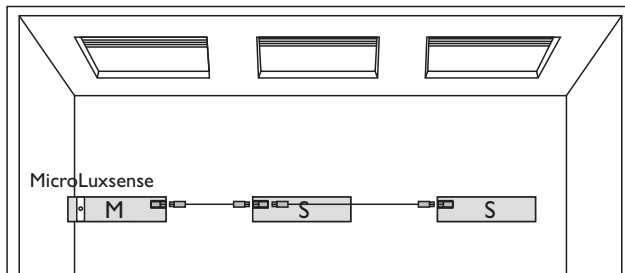


Mount the luminaire with MicroLuxSense daylight Regulation option.

Interconnecting MicroLuxSense Master fixture (M) to Satellite fixture (S).

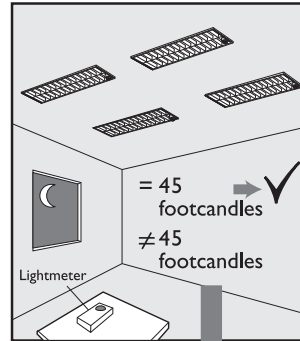
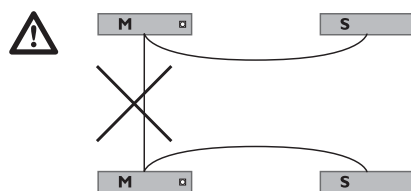
Up to 19 satellite fixtures can be looped through to 1 Master fixture, if all of them are equipped with Philips Advance Mark 7® 0-10V or EssentialLine 0-10V ballasts.

Satellite fixture should have similar daylight conditions to the master.

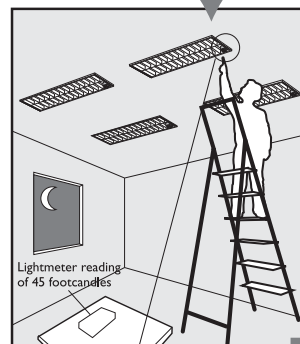


Connect 0-10V "+" to "+" and "-" to "-". (See diagram above)

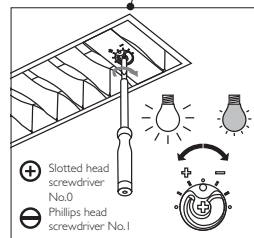
Never loop through 2 Master fixtures!



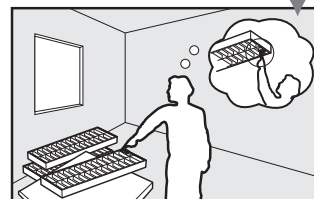
Measure the light level under each MicroLuxSense sensor with no or negligible daylight contribution.



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



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.



You can easily copy the new set point to other rooms when similar daylight and reflector conditions exist.

Warning: the required light level should be no more than 30% lower than the average installed light level, without daylight contribution (e.g. 55 footcandles installed, adjustment down to 39 foot candles is possible). Please note that MicroLuxSense is not designed for maintaining a constant light level.

General Specifications

Technical data

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

Connection

20 AWG, flying leads, length 27 inches.

Color coding of cable

white/grey +, white -.

Connecting the wires in the reverse will result in minimum light output.

Housing material

Polycarbonate UL94 V-0

Color bottom part

Ultra Dark Grey (similar to RAL 7024)

Color cover part

Light Grey (similar to RAL 7035)

Weight/dimensions

Approx. 25 grams, 47x19x19 mm

Control signal input

operating voltage	+1.5 - +10Vdc
operating current sink	100µA-3mA (sufficient for 20 Philips Advance Mark 7 0-10V or EssentialLine 0-10V ballasts)
control voltage variation	< 0.7V over current and temp. range
max. input voltage	15 Vdc (maximum rating)
max. current sink	50 mA (maximum rating)

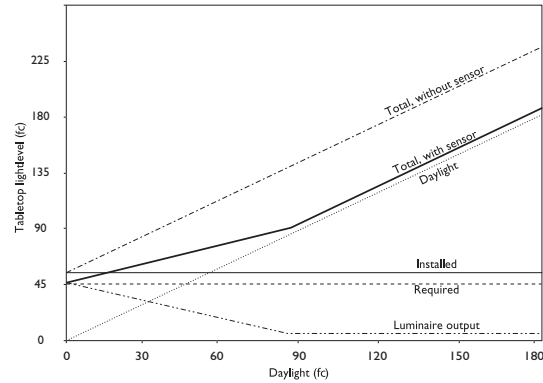
Optical characteristics

- It is assumed that the reflection in a room is such that a light level of 45 fc on a table (2.6 ft. in height) will result in 2.3 fc seen by the controller at ceiling height (8 ft.) 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.

MicroLuxSense control characteristics

The control characteristics are described 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.



Dimensions in mm

