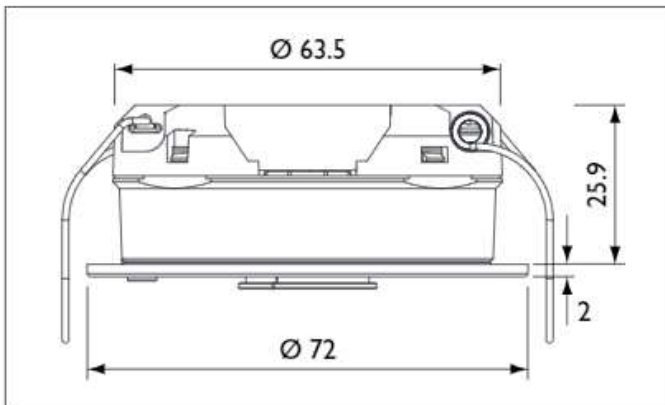


LRI8134/00

Multi-sensor



Dimensions in mm



General Description

The multi-sensor is a compact unit containing 3 different sensors required to provide the comfort and energy saving benefits of a lighting control system. It contains a light sensor, a PIR motion sensor and an Infrared receiver module for manual override by means of an infrared remote control unit. It can be used with most of Philips Lighting Control Systems including LightMaster Modular, Helio, Trios, and Scenio.

The unit is intended for indoor use in (e.g.) an office environment to provide localised control information concerning occupancy and lighting conditions as well as a receiver for infra red wireless user operation. Performance is optimised for mounting heights between 2.4 and 3.2 meters above the floor. The individual components, which are described below, can be disabled via a DIP switch when necessary.

The multi-sensor is connected to a lighting controller, which provides its power (12 – 24V dc), via a range of modular sensor cables using RJ12 connectors.

Light Sensor

The internal light sensor component detects the ambient light level within a defined area. This information is used by the connected lighting controller to determine the level of artificial lighting required.

The type of controller that it is connected to ultimately determines the actual performance and control characteristics of the light sensor.

Movement detector

The movement detector uses a small form integrated pyro-electric passive infra-red sensor. The unit is triggered when a moving thermal signal is picked up from a person within its detection zone. The detection pattern is virtually rectangular and the area covered is affected by the actual mounting height.

Infra-red receiver

The IR receiver is provided to allow local users to override the lighting conditions via a 'wireless' remote controller. It can also be used during the commissioning and set-up process. The receiver accepts IR signals using Philips' RC5 code within a 100 degree cone.

This element of the multi-sensor can only be used with controllers that are able to process the RC5 code. In all other applications this element should be disabled.

Features

- Compact design.
- High sensitivity motion sensor, with rectangular coverage.
- Photo sensor with built-in colour correction filter for visible radiation.
- Excellent linearity (light sensor).
- Push button for automatic gain calibration (light sensor).
- Flush- or Surface ceiling mounting (surface mounting by means of easy to install accessory).
- Possibility to start gain calibration by means of an infrared RC5 message.
- LED indication to check Infrared communication and motion detection.
- DIP switches to set the switch-off delay time (5,10,15,20,25,30 or 35 minutes)
- DIP switch to enable/disable the walk test LED.
- DIP switches to enable/disable sensor elements.
- The sensor can be parallel wired for multi-unit applications.
- The sensor accepts 12...24VDC power supply.
- The sensor consumes not more than 10 mA of current over the complete supply voltage range.
- The sensor has one modular jack entry with possibility to connect modular T-adaptor f/f/m RJ12 6c/6p – type LCC8025/00

Application area

The application area is indoor (offices etc.), in normally heated and ventilated areas (IP20). No protection against aggressive chemicals or water is foreseen (pollution degree 2)

The multi-sensor is designed for flush-mounted ceiling installation. Surface mounting is possible by means of easy to install ceiling box (LRH8100)

The multi-sensor is backwards compatible with LRI 8133 (TRIOS multi-sensor) and accepts only RC5 infrared commands.

General Characteristics

All specified properties are valid for the full operating ambient temperature and voltage range unless otherwise specified.

Environmental conditions

Operating Temperature	+5°C...+50°C
Storage Temperature	- 25°C...+85°C
Humidity Operating	20%...85% No condensation
Humidity Storage	10%...95% No condensation

Electrical characteristics

$T_{amb}=22^{\circ}C, V_{supply}=12Volt,$

Characteristic

Operation current	LED enabled	Typ. 9mA	Max. 10mA
	LED disabled	Typ. 7,5mA	Max. 8,5mA
Operation voltage		Min. 11VDC	Typ. 12VDC Max. 24VDC
Voltage ripple		5%	
Supply protection		Reverse polarity protected	
IR output		RC5	
LS output		0...10V, Ro=1K	
MD Output		Open collector output; active LOW state	
	Voltage, in-active	Max. 45V	
	Voltage, active state	Max. $100 \times I_{sinking} + 0.7$ Volt	
	Current, active state	Max. 10 mA (sinking)	
	Stable time after power-up	Max. 30 seconds.	
Switch off delay timer		The switch-off delay can be set between 5 and 35 minutes by 3 DIP switches: 5, 10 and 20 minutes. All switches off results in 1-second switch-off delay. Accuracy: $\pm 2\%$	

Safety

Standards	EN 60950 Safety of information technology equipment.
IEC protection class	Class III
Pollution degree	2
Ingress protection	IP20,
Marking	CE

EMC

Generic standards for Residential, Commercial, Light-industrial environment:

- Emission CENELEC EN 50081-1
- Immunity CENELEC EN 50082-1

Product Family standards for Information Technology Equipment

- EN55022; radiated emission 30 to 1000 MHz