

PHILIPS

Sensors

LRI8135/00



Specification Sheet

Outdoor Multisensor LRI8135/00

The Outdoor Multisensor, LRI8135, is designed to be mounted to the bottom of a smart outdoor luminaire or to an Outdoor Multisensor Kit, LCA7300.

The Multisensor contains multiple sensors and a local mesh radio network to support standalone or connected smart city applications.

The Multisensor adds motion and daylight sensing to luminaires and makes grouping of luminaires possible. Commissioning and configuration of a Multisensor is done via a mobile App.

In an Interact City connected deployment, the Multisensor can in addition report ambient noise, temperature, tilt, and acceleration.

LRI8135/00

General information

- The Multisensor shall be mounted to the bottom of a Zhaga-D4i certified luminaire or to an Outdoor Multisensor Kit (LCA7300).
- The Multisensor contains a rotatable base that can be used to direct the motion detection area.
- The Multisensor is designed according to IEC 62386-103 Multi-Master Control Devices and to IEC 62386-303 Input devices and to DALI Part 351 Luminaire-mounted Control Devices as a Type B device.
- The Multisensor contains:
 - Motion sensing (RADAR based)
 - Daylight sensing
 - Ambient noise sensing
 - Ambient temperature sensing
 - Tilt sensor
 - Impact sensor
- The Multisensor contains a LED to report its status after power-up and to show its location during blink.
- The Multisensor contains a radio that can be used to group luminaires and to light-up the road ahead.

Stand-alone operation

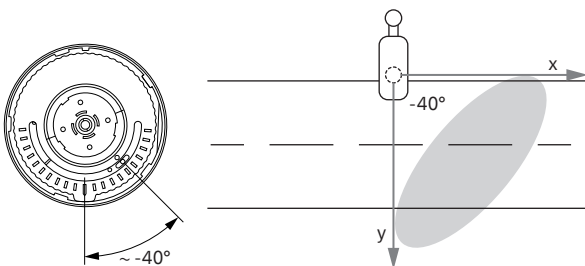
In a stand-alone deployment, the Multisensor works as application controller. The sensor can be configured via the Philips Outdoor Sensor Configurator mobile application available on GooglePlayStore.



Out of the box functionality:

- Mode: Photocell and motion
- Light-on level: 100%
- Hold time: 5 min.
- Background level: 50%
- Cut off: Disabled
- Sensitivity: 34 dB
- Direction: Approaching
- Switching level: 90 lux
- Hysteresis: 50 lux

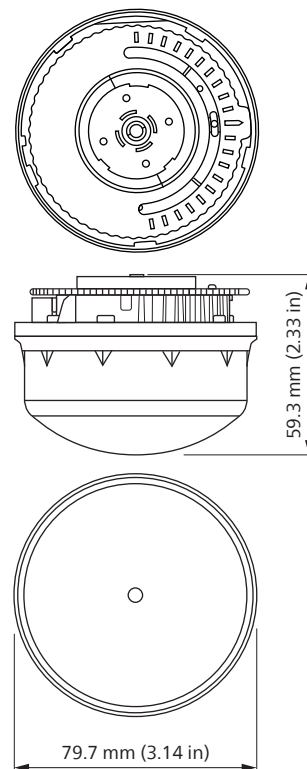
Default rotation and detection area



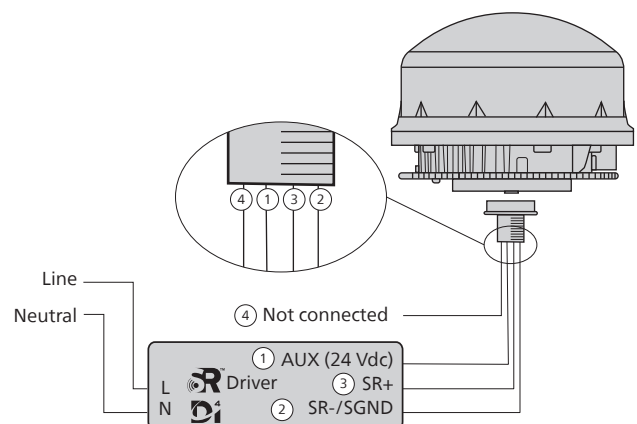
Connected operation

- In a connected deployment, the Multisensor works as input device. The sensor can be configured via the mobile App and via the Interact City lighting management system.
- The Multisensor works together with Signify's Type A D4i certified control devices (like LLC785x in Europe and LLC781x in NA).

Dimensional drawing



Wiring diagram



Specifications

Product Dimensions

Height	59.3 mm (2.33 in)
Diameter	79.7 mm (3.14 in)
Weight	0.12 kg (0.26 lb)

Housing

Color	Transparent smoke gray
Material	Polycarbonate

Temperature characteristics

Operating temperature	-40 to 70 °C (-40 to 158 °F)
Storage temperature	-40 to 80 °C (-40 to 176 °F)
Storage relative humidity	0 to 100% non-condensing

Lifetime

90% survivals after 11.5 years continuous operation (100,000 hours)

Degree of protection

Ingress protection	IP66
Impact resistance	IK08

Supply

Supply voltage	15 to 24 Vdc
Supply current	0.015 A
Supply power	0.36 W

Control interface

Control method	DALI-2, D4i
Intra-luminaire DALI bus	IEC62386-101

Surge immunity

Power supply (common mode)	6 kV acc. IEC61000-4-5. 2 Ω, 1.2/50 μs, 8/20 μs
Control surge (differential mode)	30 V acc. IEC61000-4-5. 40 Ω, 1.2/50 μs, 8/20 μs

Radar motion sensor

Mounting height	3 to 12 m
Max. detection distance	15 m for pedestrians and cyclists 30 m for cars *
Max. detection speed	145 km/hour (90 mph)
Radar frequency	24 GHz
Transmit power	12 dBm
Beam width	80°/34°
Rotation	-82.5° to 82.5°
Direction	Approaching, receding, any
Sensitivity	0 to 34 dB

Local network

Technology	Local mesh radio network **
Radio frequency	2.4 GHz
Radio transmit power	8 dBm
Radio range (max. pole distance)	70 m line of sight

Light sensor

Range	90 to 500 lux
Accuracy	10 lux

Tilt sensor ***

Range	-90° to 90°
Accuracy	2°
Default installation tilt angle	0°
Default threshold to trigger alarm	20°

Impact sensor ***

Range	1 to 10 G
Accuracy	0.5 G
Default threshold to trigger alarm	3G

Noise sensor ***

Range	60 to 120 dBA
Accuracy	3 dBA

Temperature sensor ***

Range	-40 to 70 °C
Accuracy	5 °C

Certificates and Standards

Approval markings	CE, UKCA, UL
Standard for Safety	UL 916
Certificate	DALI-2, Zhaga-D4i

* See Application guide for details.

** The Philips Outdoor Sensor Configurator APP is used to commission and configure an Outdoor Multisensor.

Outdoor Multisensors connect to each other using a mesh radio network.

*** Sensor data only available in Interact City.

Ordering Data

Type	12NC
LRI8135/00 Outdoor Multisensor	9137 010 57803

Sustainability

RoHS directive	2011/65/EU
REACH directive	2006/1907/EC

Radio Equipment Directive 2014/53/EU

Safety	EN 61347-1:2015 EN 61347-2-11:2001
EMC	ETSI EN 301 489-1 V2.1.1 ETSI EN 301 489-17 V3.1.1
Exposure	EN 62311: 2008
Radio	ETSI EN 300 328 V2.1.1
Radar	ETSI EN 300 440 V2.1.1

FCC-ID

Radio	QOQBGM13P
Radar	2ASYV-K-LD2

IC-ID

Radio	5123A-BGM13P
Radar	24358-KLD2



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