Specification Sheet

Outdoor Multisensor
LRI8135/00

The Multisensor LRI8135 is intended for use in Zhaga-D4i certified outdoor luminaires, to be mounted to the bottom Zhaga socket. The device contains multiple sensors to support different smart city applications.

It can be used either stand-alone or in combination with Signify's CT nodes that connect the luminaire to the Interact City lighting management system. In a stand-alone deployment, the device can be used for dusk till dawn light control or light on demand applications in which the light level is increased when activity is detected. The neighboring luminaires can be controlled through a Internal mesh network.

In an Interact City connected deployment, the device can in addition be used to trigger unsafe light pole condition (for example due to crash) and to monitor ambient condition near the light pole.

LRI8135/00

General information

- The Multisensor shall be mounted to the bottom Zhaga socket of a Zhaga-D4i certified luminaire.
- 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 device contains multiple sensors:
  - a radar motion sensor to automatically increase the light level in case of activity,
  - a light sensor to enable dusk to dawn operation,
  - a noise and temperature sensor to monitor ambient condition near the light pole,
  - a tilt and impact sensor to trigger unsafe light pole condition.
- The Multisensor contains a status LED to check device health during power-up.
- Adjacent devices can be grouped via a local mesh radio network to increase the light ahead in case of activity.

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.
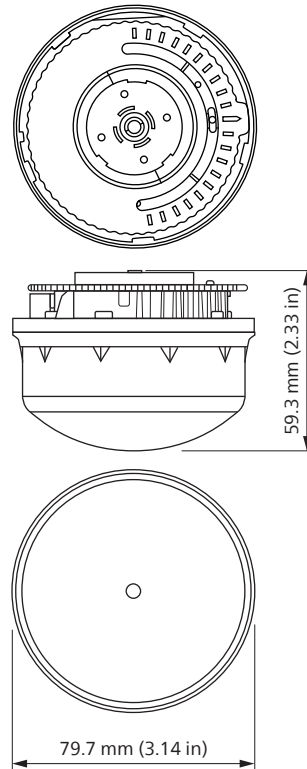
- Out of the box functionality: motion detection on at dusk, off at dawn, light-on level is 100%, Hold time is 5 min., background level is 10%, cut off time is 5 min.
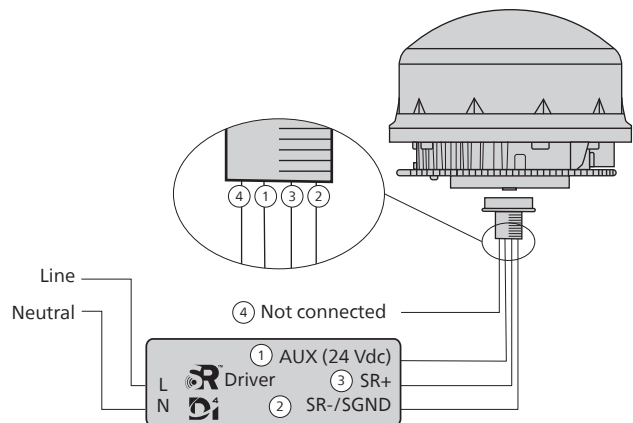
Connected operation

- In a connected deployment, the Multisensor works as input device. The sensor can be configured via the Interact City lighting management system.
- The Multisensor works together with Signify's Zhaga-D4i certified control devices.

Dimensional drawing

59.3 mm (2.33 in)

79.7 mm (3.14 in)

Wiring diagram

④ ① ③ ②

Line

Neutral

④ Not connected

① AUX (24 Vdc)

③ SR+

② SR-/SGND

L Driver

N

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	24 V ± 10%
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	4 to 12 m
Max. detection distance	15 m for pedestrians and cyclists 30 m for cars *
Max. detection speed	145 km/hour (90mph)
Radar frequency	24 GHz
Radar transmit power	12 dBm
Radar adjustment angle	-82.5° to 82.5°
Factory default angle	-45°

Local network

Technology	Bluetooth Mesh **
Bluetooth frequency	2.4 GHz
Bluetooth transmit power	8 dBm
Bluetooth radio range (max. pole distance)	70 m line of sight

Light sensor

Measurement range	90 to 500 lux
Measurement accuracy	10 lux

Tilt senor ***

Measurement range	-90° to 90°
Measurement accuracy	2°
Default installation tilt angle	0°
Default threshold to trigger alarm	20°

Impact sensor ***

Measurement range	1 to 10 G
Measurement accuracy	0.5 G
Default threshold to trigger alarm	3G

Noise sensor ***

Measurement range	60 to 120 dBA
Measurement accuracy	3 dBA

Temperature sensor ***

Measurement range	-40 to 70 °C
Measurement 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, used to commission and configure a Multisensor, connects via Bluetooth.

The Multisensor nodes connect to each other using Bluetooth Mesh.

*** Sensor data only available in Interact City.

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
Bluetooth	ETSI EN 300 328 V2.1.1
Radar	ETSI EN 300 440 V2.1.1

FCC-ID

Bluetooth	QOQBGM13P
Radar	2ASYV-K-LD2

IC-ID

Bluetooth	5123A-BGM13P
Radar	24358-KLD2

Ordering Data

Type	12NC
LRI8135/00 Outdoor Multisensor	913701057803

www.philips.com/lighting

R03   24 November 2021