
Light Level Sensor

with three inputs for PIR Sensors



Designed in Australia to
meet Australian Standards
and installation conditions



1. Product Item

This guide provides user operation and product specification information for the RAPIX Light Level Sensor, item number **DOZ-LLS-M**.

2. Product package contents

The Light Level Sensor package includes the following.

- 1 x Light Level Sensor
- 1 x Light Level Sensor patch lead
- 1 x eHub patch lead
- 3 x PIR Occupancy Sensor patch leads

3. Important notes and safety information

- The Light Level Sensor is **only suitable for use with the RAPIX eHub** (item Number DOZ-EHUB-4G-2S)
- The Light Level Sensor **does not have a mains supply connection**
- The Light Level Sensor is **powered via a RAPIX eHub (12Vdc)**
- There are **no user serviceable parts** inside the Light Level Sensor. Do not attempt to disassemble or operate the device with any covers removed
- The Light Level Sensor is intended for **indoor use only**.

If you require information or assistance regarding the installation, configuration, or operation of the Light Level Sensor, contact Technical Services at Diginet Control Systems. Contact details are provided on the back cover of this guide and also at www.diginet.net.au

4. Product summary and capabilities

The Light Level Sensor (DOZ-LLS-M) can be used as part of a RAPIX Lighting Control System to control a space based on ambient light measurement.

The RAPIX Light Level Sensor connects directly to an eHub and is used to measure light levels in a space and send this information to the eHub for logic processing. The required operation of the Light Level Sensor/eHub is configured in the RAPIX Integrator software package.

Up to three RAPIX PIR occupancy sensors can optionally be directly connected to the Light Level Sensor.

5. Product Features

- Connects to and powered from a RAPIX eHub.
- 0 to 4000 Lux sensing range.
- Allows connection to three PIR sensors.
- Fits standard Australian wall plate aperture.
- Suitable for ceiling and wall mount.

6. Possible operational setups:

- ‘Daylight harvesting’, where DALI luminaires connected to a RAPIX Lighting Control System are dimmed up or down to maintain a required illuminance (Lux) level on a desktop.
- Set PIR sensor operation based on Light Level, for example: movement detected by PIR turns a RAPIX Zone on, but only in dark; or movement detected by PIR turns a RAPIX Zone on, but only in light.
- Stepped light level response to allow different events to occur on a RAPIX Lighting Control System at different light levels.
- Sunset/sunrise switch operation. For example light switches on at low light/night/dusk and off for sunrise /daylight.
- Enable/disable the Light Level Sensor.
- Enable/disable PIR’s connected to the Light Level Sensor.

7. Mounting the Light Level Sensor

The RAPIX Light Level Sensor can be mounted in any electrical accessory plate than accepts standard Australian/New Zealand electrical accessory plates with a standard Australian mechanism aperture. For example, Clipsal 2000™ or C2000™.



RAPIX Light Level Sensor can be installed into any electrical accessory with a standard Australian plate aperture

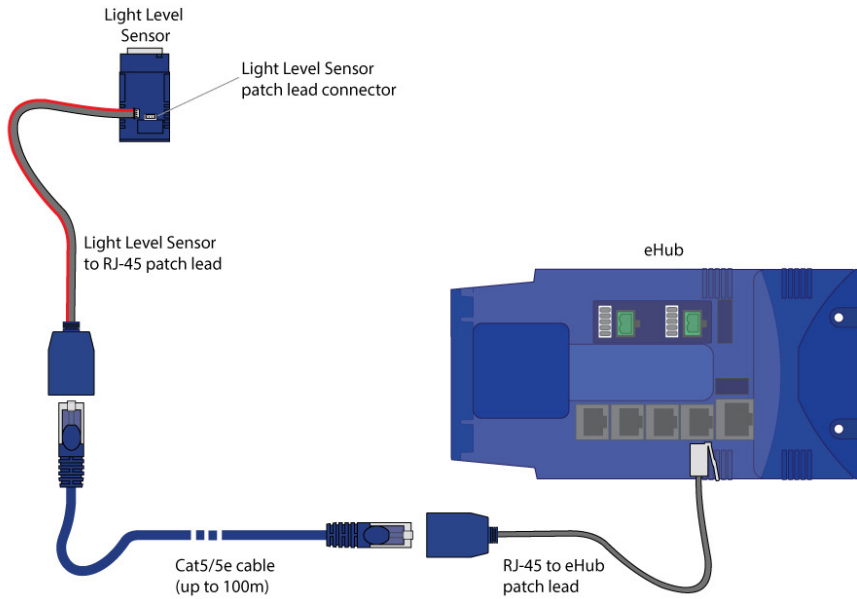


Light Level Sensor installed in Australian wall plate

8. Connecting the Light Level Sensor to a RAPIX eHub

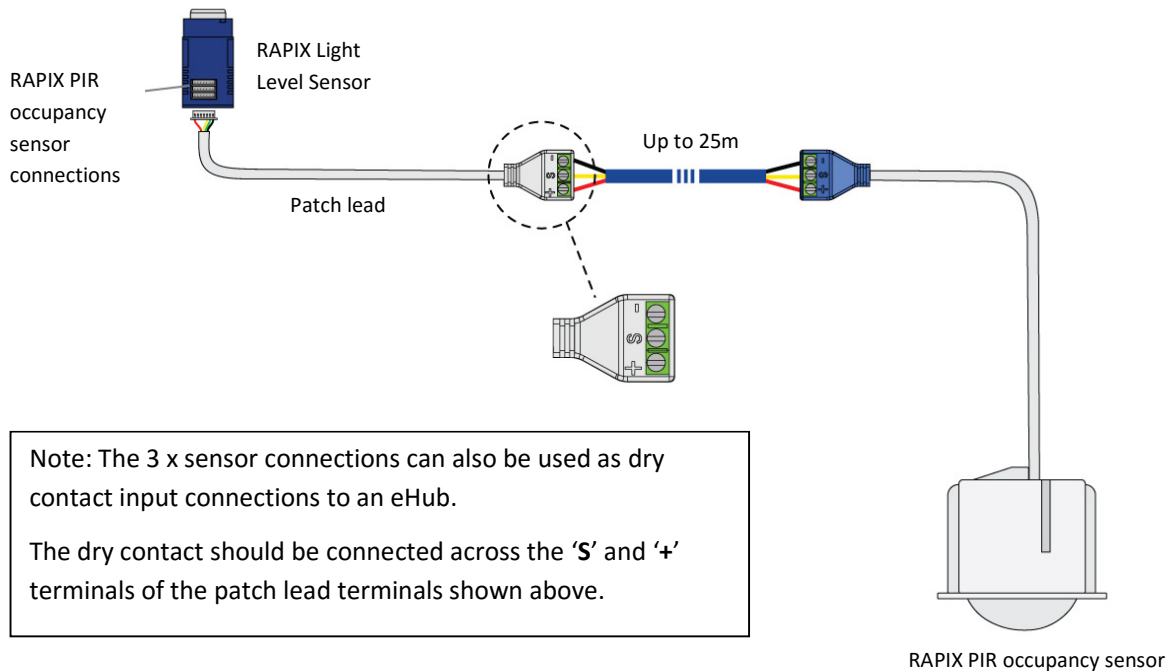
The Light Level Sensor is **only suitable for use with the RAPIX eHub**.

The Light Level Sensor can be connected and powered from any of the four eHub smart channel inputs. Patch leads are provided to connect the Light Level Sensor to the eHub as shown below.



9. Connecting a PIR sensor to the Light Level Sensor

Up to three RAPIX PIR sensors can be connected to a Light Level Sensor, as shown below.



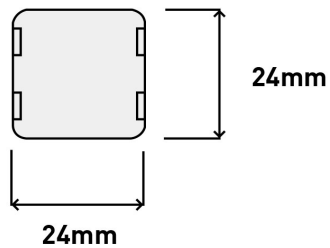
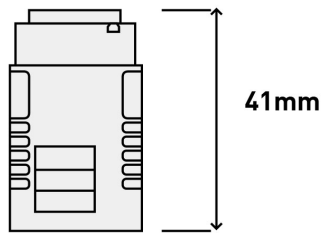
10. Configuration

The RAPIX Light Level Sensor is configured using 'RAPIX Integrator' PC software.

11. Specifications

Input Voltage	12Vdc (supplied via RAPIX eHub)
Input current	10 mA with no PIRS. Up to 160 mA fully populated with PIR's. Each PIR should have a current draw < 50 mA. A suitably sized eHub power supply should be used that can handle the total number of PIRs.
Light Level Measurement Range	1 to 4000 Lux
Automatic Light Level Maintenance Range	100 to 1000 Lux when used with RAPIX eHub
Automatic Light Level Maintenance Tolerance	10%
Light Level sensor Field of view	180°
Operating Temp	0-50°C
Number of PIR connections supported	3
Maximum distance between eHub and LLS	100m
Maximum distance between LLS and a PIR	25m using cat5/cat5e/cat6 cable
IP Rating	IP20
Identification LED indicator colour	Red

12. Product dimensions



13. Standards and compliance

The product is designed to meet/exceed the following Australian and International standards:

Australian/New Zealand EMC and Electrical Safety Frameworks and Standards

Regulation	Standard	Title
EMC	AS/NZS CISPR 22:2009	Information Technology Equipment – Radio Disturbance Characteristics – Limits and Methods of Measurement
	CISPR15	
	AS/NZS CISPR 22-A:2010	

The product is in conformity with the essential requirements of the following EC Directives and accordingly carries the CE marking.

EC Council Directive	Title
2004/108/EC	Electromagnetic Compatibility (EMC)
2011/65/EU	Restriction of Hazardous Substances (RoHS) in Electrical and Electronic Equipment

14. Product warranty

The Light Level Sensor has a two-year warranty against manufacturing defects in accordance with the following terms:

1. Nothing in this Warranty affects any person's rights under the Australian Consumer Law. The benefits to any person under the Gerard Lighting Warranty are in addition to the rights and remedies available under any Consumer Guarantees.
2. Subject to the other clauses of this Warranty, Gerard Lighting warrants that the Goods will be free of manufacturing defects and will perform to Gerard Lighting's specifications.
3. The benefit of the Gerard Lighting Warranty extends only to the owner of the property in which the Goods are installed (the Owner) for two (2) years after the date of purchase (Warranty Period).
4. If within the Warranty Period the Goods fail to perform to Gerard Lighting's specifications as a result of some defect in material or workmanship in the Goods (Defect) then Gerard Lighting will, at its option, repair the Goods or supply replacement Goods free of charge.
5. The Gerard Lighting Warranty will not apply to Goods:
 - 5.1. installed by any person other than a qualified tradesperson; or
 - 5.2. subjected to misuse, neglect, negligence or accidental damage; or
 - 5.3. operated in any way contrary to any operating or maintenance instructions; or
 - 5.4. improperly handled, installed or maintained; or
 - 5.5. altered or modified prior to or after installation.
6. The Gerard Lighting Warranty does not apply to faulty or defective design of Goods unless Gerard Lighting has designed the Goods and Gerard Lighting expressly accepts responsibility for such design in writing.
7. In order to make a claim under the Gerard Lighting Warranty, the Owner must:
 - 7.1. contact Gerard Lighting to obtain a Returned Goods Authorisation Number for the Goods and to be notified of Gerard Lighting's return address for the Goods by:
 - 7.1.1. freecall **1300 95 DALI (3254)**; or
 - 7.1.2. post to **PO Box 314, Padstow NSW 2211**; or
 - 7.1.3. fax to **1300 95 3257**; or
 - 7.1.4. email to sales@diginet.net.au.
 - 7.2. return the Goods at the Owners expense to the return address notified by Gerard Lighting together with all accessories, instructions, specifications or other material supplied with the Goods and a notice in writing:
 - 7.2.1. stating the Returned Goods Authorisation Number for the Goods;
 - 7.2.2. describing in detail the defect or fault in the Goods;
 - 7.2.3. setting out the Owner's contact details (including postal address, email address and telephone numbers at which the Owner can be contacted during usual business hours).
 - 7.3. Gerard Lighting will not accept any returned Goods which have not been returned strictly in accordance with the above instructions.
8. Gerard Lighting will examine any returned Goods and if Gerard Lighting determines that they are defective through no fault of the Owner and are otherwise undamaged, Gerard Lighting will repair or replace the Goods free of charge.
9. Gerard Lighting will notify the Owner whether it accepts the Goods are defective within a reasonable time of return.
10. Gerard Lighting will not be responsible for any costs of de-installation, re-installation, returning Goods or for redelivery of the Goods (whether original or repaired and/or replacement Goods) by Gerard Lighting and any other related expenses of the Owner in claiming under the Gerard Lighting Warranty.
11. Gerard Lighting will not be responsible for any loss or damage to the Goods occurring while the Goods are in transit (either on return to Gerard Lighting or upon redelivery to the Owner of the original or repaired and/or replacement Goods).
12. Gerard Lighting will not be responsible (whether arising in contract or tort (including negligence) or under any statute) for any special, indirect, incidental, consequential or economic losses or damages (including loss of data, business, profits, revenue, anticipated savings, bargain, opportunity or goodwill) whether or not the possibility of those losses or damages being suffered had been brought to the attention of Gerard Lighting.

The Australian Consumer Law requires the inclusion of the following statement with the Gerard Lighting Warranty:

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.



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Product of Gerard Lighting Pty Ltd

ABN 94 122 520 307
96-112 Gow Street
Padstow NSW 2211

Contact

General Enquiries: 1300 95 DALI (3254) or sales@diginet.net.au
Technical Services: 1300 95 3244 or support@diginet.net.au
Fax: 1300 95 3257

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