

GENERAL INFORMATION

1. A qualified electrician, in accordance with IEE wiring regulations, should carry out connection to mains wiring.
2. Ensure that the rated voltage and frequency requirements are compatible with the available mains supply.
3. Cleaning should be carried out using clean, soft and lint free cloths and anti-static cleaning fluid.
4. Do not carry out high voltage insulation test, i.e. 500/1000v this may damage internal components.
5. Electrically isolate during maintenance.

TECHNICAL SUPPORT

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Whitecroft
lighting

Routefinder Wireless Technical Data



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INTRODUCTION:

The Routefinder Wireless control gear complies to international safety and performance standards IEC 61347-1 and IEC 61347-2-11.

The Routefinder Wireless control gear is both a DALI controller and a DALI power supply which is designed to be connected to, and operate a single DALI self-contained emergency control gear as part of an emergency luminaire.

Routefinder Wireless is suitable for installation in healthcare, education, workspace and industrial applications.

Note: The Routefinder Wireless control gear should not be connected to any other external DALI network.

Routefinder Wireless control gear is provisioned wirelessly with the SP-BLE smartphone and tablet application (app) using Bluetooth 5.0 protocol. The app can be downloaded free of charge from the Google Play Store.

The Routefinder Wireless control gear will then form a secure wireless mesh network of up to 128 emergency luminaires all reporting back to the Routefinder Wireless panel.

Install equipment in accordance with the relevant national requirements and ensure that each complete luminaire complies with the Electro Magnetic Compatibility Directive and the Low Voltage Directive. Compliance is indicated by application of the CE Mark. Installation of equipment must be carried out by competent persons and suitable tests on the completed luminaire must be carried out to ensure compliance to relevant standards.

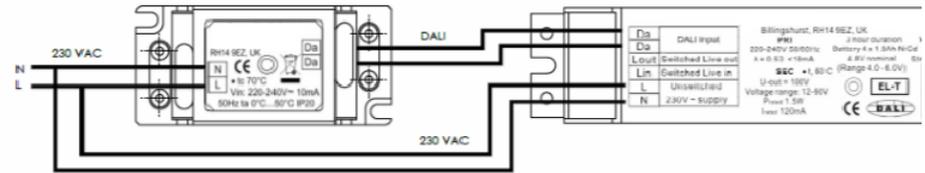
GENERAL GUIDELINES:

The important factors relating to operation and compliance are summarised below:

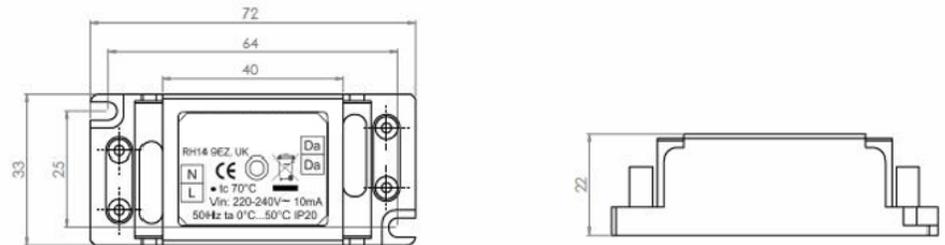
- Installing the control gear within a metal housed luminaire may significantly reduce the transmission range
- The control gear must be suitably positioned to avoid high temperatures.

Note: the ambient temperature range for the module is 0 to 50°C. The value of t_c for the module is 70°C. In some cases where the luminaire is physically too small to house the control gear or if the ambient temperature within the luminaire is too high, the control gear can be used as independent control gear outside of the luminaire as long as the covers/clamps are fitted.

- The control gear is supplied with push wire terminal blocks suitable for 0.5 – 1.5mm² cables, and the wires should be stripped 6-7mm from the end.
- To connect the control gear, see wiring diagram below:



DIMENSIONS:



SAFETY INFORMATION:

The Routefinder Wireless control gear does not rely on a luminaire enclosure to provide protection against accidental contact with live parts.

The control gear features double/reinforced insulation between the supply and the secondary circuit.

The electronics will be damaged by excessive temperatures and it is therefore important that they are always operated within the declared 'ta' ambient temperature range.

TECHNICAL DATA:**Mains input**

Voltage range 220 – 240VAC

Frequency 50Hz

Max. current 10mA

Power rating 1.13W nominal

DALI output

Voltage range 20.8-24V

Max no of DALI type 1 gear

Operating temperature

Ambient temp -20...+50°C

Max. case temp 70°C

Terminal block connections

Wire type Solid or stranded

Wire size 0.5-1.5mm²

Wire strip length 8mm

Wireless transceiver

Version 5.0

SIG Bluetooth Mesh

Operating frequency 2.4 – 2.483Ghz

Factory set output power 4dBm

Output power range (adjustable via app) 0.2 - 8dBm

Transmission range (indoors) Up to 50m

Transmission range (line of sight) Up to 100m

Mechanical

Dimensions L72 x W33 x H22mm

Mounting screws dia 2 x 4mm

Weight 50g

Degree of protection IP20

Protection class Class II

Built in

Independent

LUMINAIRE AND PANEL INSTALLATION:

The position of the Routefinder Wireless panel on site should be considered in relation to the first luminaire(s); this should not rely on a single luminaire for connectivity to the network (ie. single point of failure).

Site variations (structural and noise) may affect integrity of Routefinder Wireless communication.

Recommended spacing between BLE luminaires 15m.

CONFIGURATION:

The Routefinder Wireless node is shipped out from the factory in an un-provisioned state (unpaired) unless ordered with a predefined configuration.

In its un-provisioned state, the gateway node is ready to be added to BLE mesh network by using a dedicated provisioner app.

During provisioning, the node is named and network selected (either Network A or B).

The Routefinder Wireless can either be factory reset OR can be used to mask the short address of the DALI emergency control gear connected to it, by shorting the DALI terminals as described below.

SYSTEM COMMISSIONING:

Before commissioning the system, the BLE mesh network containing all the nodes must have been provisioned.

The provisioning process assigns keys to each node to form a wireless mesh network.

Refer to section 3.1 'Commissioning the Mesh Network' in the Routefinder Wireless User Manual for the details of the commissioning process.