

## ESR.4 Four channel wireless ON/OFF receiver Specification.

RF input	433.92Mhz 10m/w
Antenna connection	Screw terminal
Antenna	433Mhz 1/4 wave (included)
RF range	100—200m line of sight
Learning capacity.	16 devices per zone. 64 in all.
Number of channels	4
Operating voltage	220-240 volts 50Hz
Relay contact ratings	2kw resistive. 300 watts inductive each.
Maximum switch rating	4KW total shared by 4 relays (16 amps)
Enclosure	ABS L190 W140 H90mm
IP rating	65

### Luminite *Easyswitch wireless* product range

PIR detectors Wide angle	ESD.1
PIR detectors Long range	ESD.2
PIR detectors Pet ally	ESD.3
Single zone ON/OFF receiver.	ESR.1
Four zone ON/OFF receiver.	ESR.4
ESR.4 & ESF.4 Kit.	ES4X4
Plug adaptor.	ESA.1
Plug in bleeper.	ESB.1
Wall switch transmitter.	EST.1
Key fob 1 button	ESF.1
Key fob 2 button	ESF.2
Key fob 4 button	ESF.4

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# **ESR.4 & ES4X4**

## **4 channel**

## **receiver**

# **Installation**

# **Handbook**

**Type: ESR.4 & ES4X4**

*Issue 1.*

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## PRE-INSTALLATION NOTES

### Unpacking.

On receipt, inspect the package and contents for signs of damage. If damage has occurred, advise the carrier and/or suppliers immediately. Inspect the contents to confirm that all items are present and undamaged. If any items are missing or damaged, contact the supplier immediately. It is advisable that the original carton is retained as this forms the safest transport container in the event that a unit has to be returned for any reason.

### Servicing.

This unit should not require general servicing. Any repair work should only be undertaken by Luminite Electronics Ltd.

### Moisture.

Do not expose the internal electronics of this unit to moisture i.e. take care during installation not to allow rain or damp into the product. When the product is sealed it is water resistant to IP66.

### Box Contents.

**ESR.4** 1 x Easyswitch ESR.4 receiver switcher

**ES4X4** 1 x Easyswitch ESR.4 receiver switcher and 1 x ESF.4 four button fob.

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A different MODE may be selected for each relay if required.

### SINGLE WAY MODE.

Use this mode when one switch is used or when more than one receiver is to operate from the same transmitter. This will prevent them from getting out of step.

### TWO WAY mode.

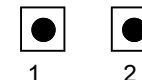
Use this mode when more than one transmitter is to work the same channel on the ESR.4 receiver. Each transmission from any of the learned transmitters will operate the relay and counter the previous command.

### MIMIC mode.

In this mode the relay will operate only as long as the transmission. It is normally used with the key fobs to provide a momentary output  
Do not use this mode with a PIR detector unless a momentary contact change is required.

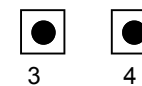
### LEARNING THE TRANSMITTERS.

Each channel can learn up to 16 mixed transmitters.  
The learn buttons and LED indicator are located as shown.



### TO LEARN A KEY FOB. (ESF)

momentarily press the appropriate button on the ESR.4 until the red LEARN led lights. Now press the appropriate button on the key fob. The LEARN led on the ESR.4 will flash three times indicating that the transmitter has been learnt.



○ LEARN

Do the same for each additional fob that is to be learnt.

### TO LEARN A WALL SWITCH. (EST)

momentarily press the appropriate button on the ESR.4 until the red LEARN led lights. Now press the appropriate switch on the wall plate. The LEARN led on the ESR.4 will flash three times indicating that the transmitter has been learnt.  
Do the same for each additional switch that is to be learnt.

### TO LEARN A PIR DETECTOR. (ESD)

momentarily press the appropriate button on the ESR.4 until the red LEARN led lights. Now connect a 9 volt battery to the PIR detector. The LEARN led on the ESR.4 will flash three times indicating that the transmitter has been learnt.  
Do the same for each additional PIR that is to be learnt.

### TO CLEAR THE MEMORY.

Each channel can be cleared individually as follows.  
Press and hold the appropriate LEARN button for up to ten seconds or until the LEARN led goes out. This will have flushed the entire memory for that channel.  
Re-learning can begin again in the usual way.

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## POSITIONING & WIRING.

**IMPORTANT:** All wiring must be carried out by a qualified electrician in accordance with IEE and part P regulations.

This product is IP65 rated and may be fitted outdoors. Choose a suitable position for easy wiring but make sure that the aerial is clear of obstructions and metal objects. The cable glands must face down and the aerial skywards.

Remove the circuit board from the enclosure by first unscrewing the aerial and ground terminals and removing the aerial cable. Now unscrew the three fixing screws as shown in Fig 1 and remove the whole circuit board. Fix the enclosure using countersunk screws through the screw cups on the base of the enclosure. Seal these screws with a suitable waterproof sealant to maintain the IP rating of the enclosure. Re-fit the board and connect the aerial cable making sure that the screen connects to the ground terminal as shown.

This product can switch up to a maximum of 4KW resistive shared over four relays. Each relay has a maximum 2KW resistive switch capacity. EG: If two relays are switching 2KW each then the remaining relays cannot be used. Alternatively all four relays can be used up to a maximum of 1KW each.

The mains supply should be from a fused spur or consumer unit and be fused correctly according to the load. Pass a round 1.5mm flex through the left hand gland and tighten to provide cable restraint and a waterproof seal. Maximum outside diameter 8mm. Connect the LIVE and NEUTRAL to the MAINS IN terminal as shown.

For each channel that is to be used, slacken one of the glands and remove the bung to enable round 1.5mm cable to be passed through. Tighten the gland to provide a waterproof seal and cable restraint. Connect the cable to one of the four channel outputs as shown. Ensure that the load does not exceed the maximum rating.

The EARTH block is common and purely used as a convenient means of connecting all the earths.

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## MODE SETTING.

**TYPES OF MODES:** SINGLE way mode.    TWO WAY mode.    MIMIC mode.

<ul style="list-style-type: none"><li><input type="radio"/> No jumper</li><li><input type="radio"/> for SINGLE</li><li><input type="radio"/> way mode</li></ul>
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<ul style="list-style-type: none"><li><input checked="" type="checkbox"/> Jumper top two</li><li><input checked="" type="checkbox"/> pins for TWO</li><li><input type="checkbox"/> WAY mode</li></ul>
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<ul style="list-style-type: none"><li><input type="radio"/> Jumper bottom</li><li><input checked="" type="checkbox"/> two pins for</li><li><input checked="" type="checkbox"/> MIMIC mode</li></ul>
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## Introduction

The ESR.4 receiver works in conjunction with all other products in the easyswitch range.

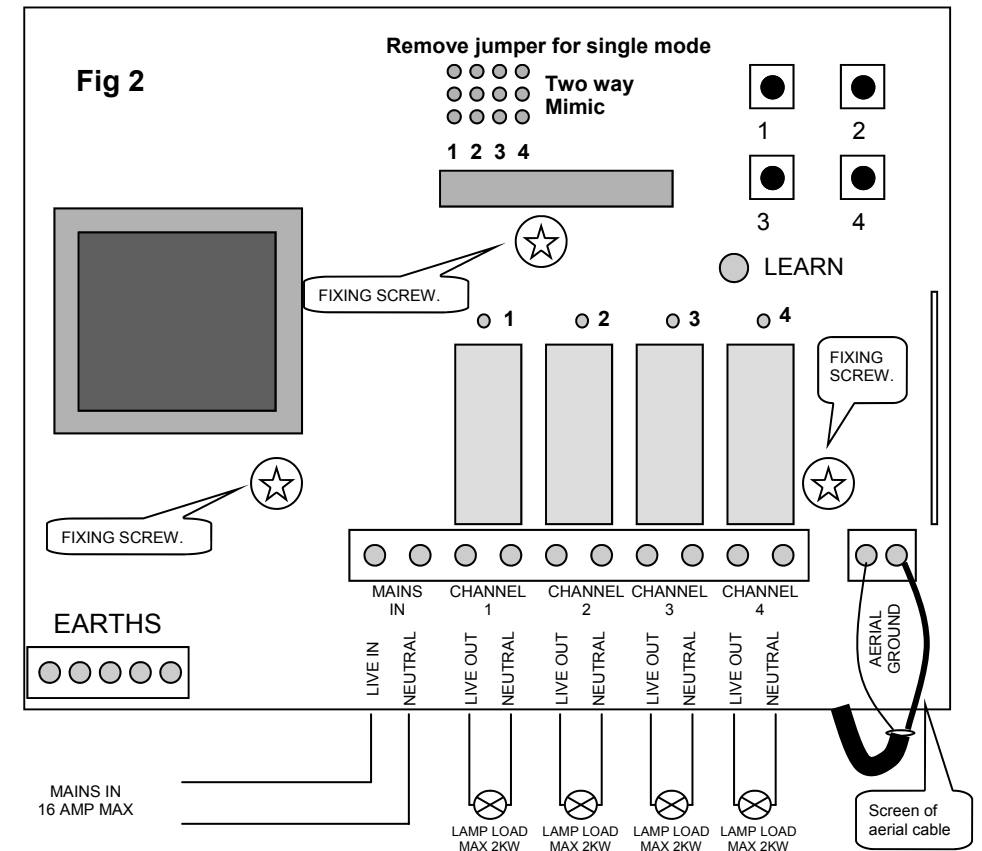
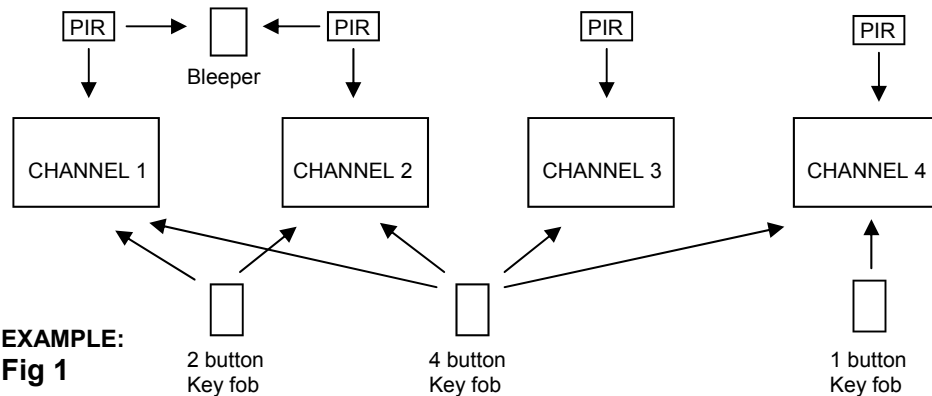
There are four relays each capable of switching 2kw resistive load or 300 watts inductive. The product has a maximum power handling of 16 amps resistive shared over four relays. Each relay operates independently and is described as a CHANNEL. The ESR.4 can learn up to 16 mixed transmitters for each channel. The memory is non volatile and will not be lost if the power fails.

The ESR.4 will operate up to a distance of up to 200 metres line of sight from any of the easyswitch transmitters.

### TYPES OF TRANSMITTERS:

EST.1 Wireless wall switch. One to three gang.  
 ESF.1, 2 & 4 Wireless key fob. One, two or four button versions.  
 ESD.1, 2 & 3 Wireless PIR detector. Choice of three detection patterns.

This example shows one PIR per zone but with a combination of key fobs which will over-ride the PIR's. Two of the PIR's are shown also operating a remote bleeper. In all. This product will learn 64 devices in all.



### AERIAL CONNECTION:

This product works well using the aerial supplied however there are other types of aerial available for longer reception range if required. Please contact your dealer for information.

Unscrew the dome nut on the top of the enclosure and fit the wire aerial supplied. This aerial must be vertical and point skywards.

Keep the aerial away from large metal objects such as pipes, tanks and even electrical cables.

If an alternative aerial is required, remove the coaxial cable from the Ground and aerial terminals as shown and replace with the new aerial cable.

**IMPRTANT:** Make sure that the removed cable cannot short out on the circuit board as this will result in serious injury or death through electric shock.