ENSA™

ENergy Saving Wireless Automated Light Switch

AUTO   OFF

MAN   ON

ENSA ™ energy saving

Series I

N517 CE

Approval # N19019

International Patent: PCT/AU02/00705

Document: ENSA.doc

Release: 1 August 2003

Instructions

Designed and Manufactured in Australia by

RhinoCo TECHNOLOGY

LEADING THE CHARGE!

www.rhino.com.au

Introduction:

The ENSA™ ENergy SAving Wireless Automated Light Switch

is a unique device that replaces the standard light switch in a room. The lights can then automatically be turned on when installed along with a compatible wireless detector, remote control, or by an existing alarm sensor that is easily retro-fitted with a miniature transmitter. When used in auto mode, if the wireless detector senses movement, a door opening, or perhaps even smoke, the ENSA can automatically turn the lights on for a pre-determined period. In normal everyday use the product can save energy (i.e. reduce your power bill) by not turning on room lights unless there is activity in the room, and there is insufficient natural lighting. It can also be used simultaneously to increase your security by turning on room lights when an intruder is detected by your ENSA Equipped™ alarm sensors There is even a manual mode of operation, where you can turn the lights permanently on or off as per a normal light switch. For use in Australia, we chosen a quality HPM brand wall switch (which has a unique split switch) to integrate with our stat-of-the-art electronic ENSA™ receiver circuitry, giving a perfect combination for our application.

Front Cover On   Front Cover Removed

Wireless PIR Movement Detector

Note: The device used however can be any one of the following:

- An existing hardwired alarm sensor with a retro-fitted ENSA Transmitter
- A detector made by an electronic security manufacturer who has incorporated an ENSA transmitter as part of their design
- A Wireless PIR, Wireless Reed Switch, Wireless Smoke Sensor, Wireless Impact Sensor or Wireless Remote Control made by RhinoCo

Quick Installation Overview

Simply remove your existing light switch and replace with an ENSA Wireless Light Switch. In most Australian homes, you won't even have to drill any new holes, as the template for the existing wall switch will be identical to the ENSA. Now install a suitable wireless detector and learn it in to the ENSA. Now adjust the light on time & light level to suit your room. In fact, the whole installation process should take a licensed electrician less than 10 minutes!

Quick Operation Overview

|	
To turn the lights on & keep them on permanently: Flick both switches down (the manual - on position).	***To enable automatic activation of lights:*** Flick the left half of the switch up to the auto position. Flick the right hand half of the switch down to the on position i.e. switch is in the "auto -on" position.
To turn the lights off & keep them off permanently: Flick both switches up (the auto - off position).	

| Specifications:	
Load:	<u>Must</u> consist of a Resistive Element. EG: Fluorescent, Energy Saving Lights, Incandescent Light or Fan. Not suitable for Induction motor or inductor loads.
Load Limit:	400 Watts maximum
Power Supply:	240 Volts @ 50Hz

Note: Fluorescent lights may have transformers of similar ratings (approximately ±20Watts) to the light itself i.e. a 35W fluorescent light may have a 35W transformer, therefore the load for that one fluorescent tube would be 35W + 35W = 70Watt.
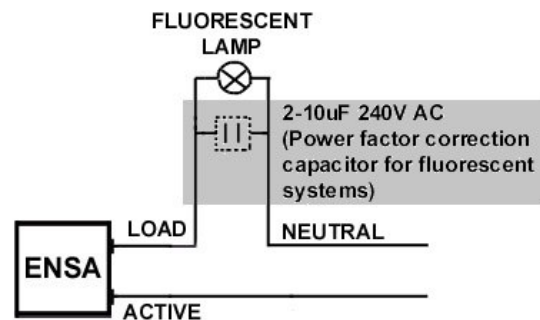
Installation

The ENSA is installed easily using the existing wires from your old light switch.
THIS SHOULD BE CARRIED OUT BY A LICENCED ELECTRICIAN.
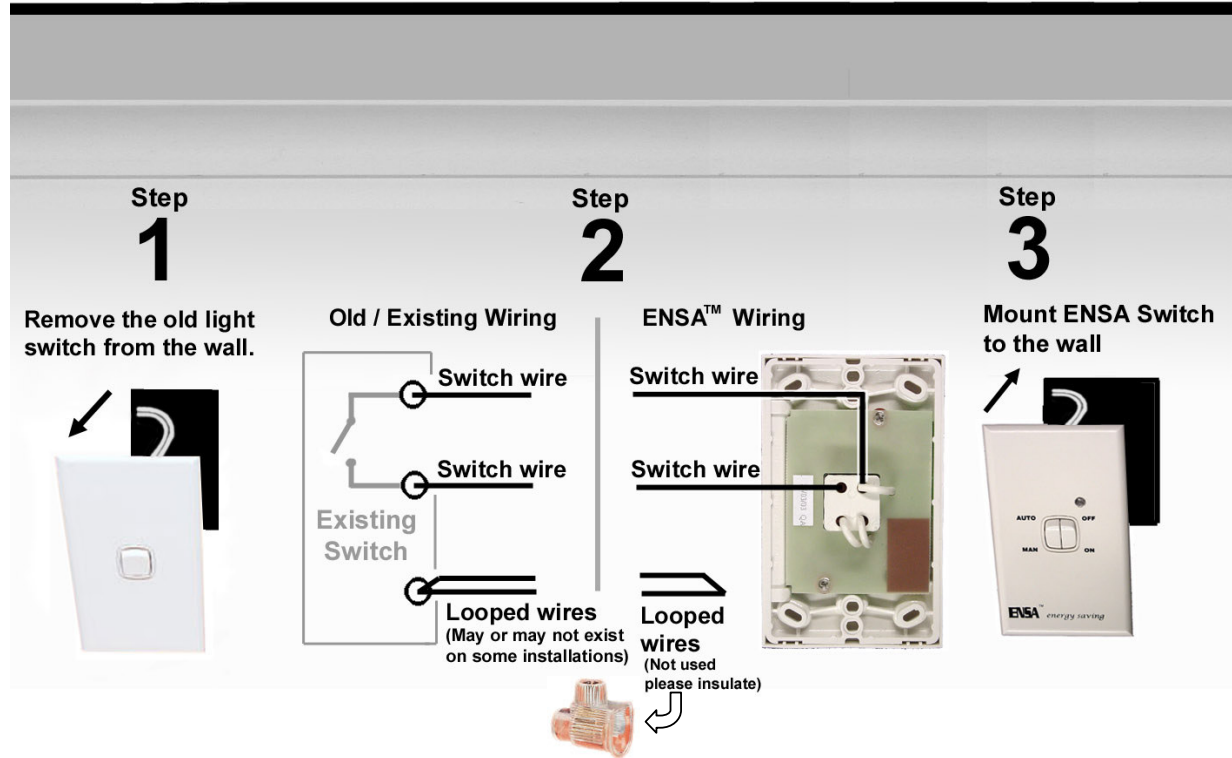

Standard Load Wiring Diagram
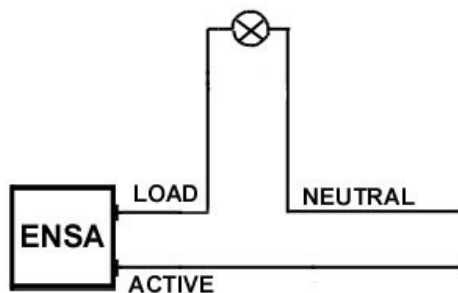
Fluorescent Lamp Wiring Diagram

On certain fluorescent light installations a power factor correction capacitor may need to be installed. If so refer to the diagram above.

IMPORTANT NOTE:
NEVER MOUNT LIGHT BLUBS WITH THE FILAMENT FACE UP **(see picture right). The filament will fall and short across the bulb terminals if and when the light globe blows. This will in-turn cause a component (the triac) on the ENSA to heat up and destroy itself.** This is not covered under warranty.
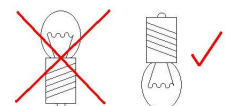
Adding A Wireless Device

A wireless device may be any product with the "ENSA Equipped" label (shown left) displayed on the product itself, its instructions or its packaging. ENSA Equipped products are available from where you bought your ENSA Wireless Automated Light Switch.

Step1
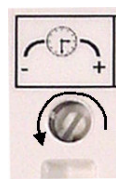Switch the left switch to AUTO and the right switch to ON.

Step2
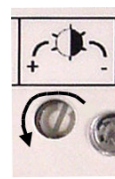Remove the front cover by pulling the front face plate out from the top edge.

Step3
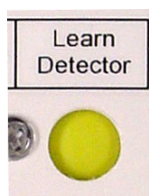Turn the timer setting to its most anti-clockwise position with the tool provided.

Step4
Turn the light sensitivity setting to its most clockwise position with the tool provided.

Step5
Press the yellow "Learn Detector" button using the plastic end of the screwdriver tool provided.
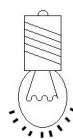
Step6
Immediately after pushing the yellow button trigger the wireless device.

TRIGGER THE WIRELESS DEVICE

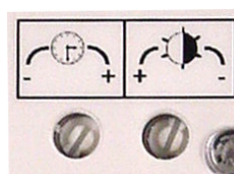See separate manual supplied with each device on how to trigger.

Step7
Test that each time the device is triggered that the light turns on for 3 seconds (approx).

If this doesn't work go back to step 6

Step8
Turn the light sensitivity setting and the timer setting to the desired level and replace the front face plate.

Adjusting the light sensor

This adjustment will set the level of light at which the ENSA will stop turning the light(s) on. Generally, the lights should not turn on when the natural light in the room is sufficient.

To adjust the light sensor you must remove the front face plate of the ENSA. Use the supplied tool to make the adjustment.
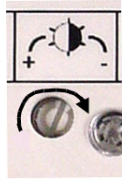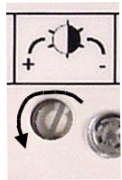
Turn the adjustment in the clockwise direction if the ENSA
• is turning on unnecessarily because there is already sufficient natural lighting in the room. That is, you don't want the lights to turn on until the room is darker.

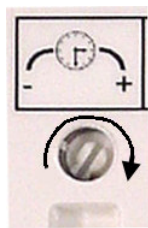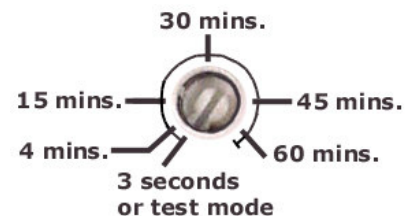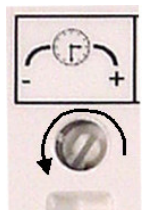| **Turn the adjustment in the anti-clockwise direction if the ENSA** |
|---|
| • is not turning on the light when there is insufficient natural lighting in the room.

That is, the room is dark and the lights aren't turning on. |

Adjusting the timer

This adjustment will set the duration the light will stay on for after the wireless device has triggered. This time will reset each time the wireless device(s) is triggered. Set this to suit your own desired requirements or specific application.

Turn the adjustment in the clockwise direction to <u>increase</u> the amount of time the light stays on for after being triggered.
If the adjustment is at its most clockwise position the setting will be maximum. **The maximum time is approximately 1 hour**.

| **Turn the adjustment in the anti-clockwise direction to <u>decrease</u> the amount of time the light stays on for after being triggered.** |
|---|
| If the adjustment is at its most anti-clockwise position the setting will be 3 seconds. If the adjustment is turned clockwise just a slight amount the **minimum time will be 4 minutes**. |

Operation

The LEFT Switch controls mode of operation. You can select between AUTO and MAN (Manual). The RIGHT switch controls the manual switching of the light(s) ON and OFF.
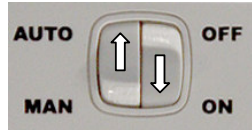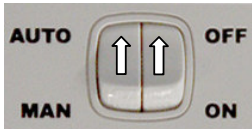

AUTOMATIC MODE
If you want the light(s) to turn on automatically when the wireless device is triggered set up the switches to the AUTO-ON positions by pressing the **left switch up to the *AUTO* position** and by pressing the **right switch to the down *ON* position**. REMEMBER the aim is to have your lights turn on only when the natural light level in the room is low (see adjusting the light sensor) to save energy. **Note: When switching to AUTO-ON mode the light will be turned on for the duration set by the timer adjustment.**
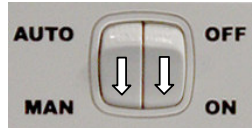
LIGHT(s) ON
If at any time you would like to turn the light on without needing the wireless device to trigger, you may press **both switches to the down position** (**MAN & ON**) to turn the light on just like you would on a regular light switch.

LIGHT(s) OFF
If you press **both switches to the up position** this will turn the light(s) off. This will disable the wireless device(s) from turning the light(s) on automatically.
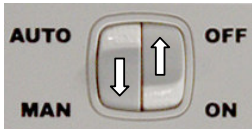
If the **right switch is in the down position** and the **left switch is in the up position** this will have the same effect (the lights will turn off).

Warranty Terms & Conditions

The expression "The Company", when referred to in these Terms and Conditions, refers to
CORNICK PTY LTD ABN 74 001 621 610 (T/as RhinoCo Technology).

The Company warrants its products to be in conformance with its own plans and specifications and to be free from defects in materials and workmanship under normal use and service for 12 (twelve) months from the date of original purchase.

The Company's obligation shall be limited to repairing or replacing, at its option, free of charge for materials or labor, any part which is proved not in compliance with The Company's specifications or proves defective in materials or workmanship under normal use and service. The Company shall have no obligation under this Limited Warranty or otherwise if the product is altered or improperly repaired or serviced by anyone other than The Company.

For warranty service, return the product (transportation prepaid) to:
RhinoCo Technology, 9 Hannabus Place, McGraths Hill, NSW 2756 Australia

There are no warranties, expressed or implied, of merchant ability, or fitness for a particular purpose or otherwise, which extend beyond the description on the face hereof. In no case shall The Company be liable to anyone for any consequential or incidental damages for breach of this or any other warranty, express or implied, or upon any other basis of liability whatsoever, even if the loss or damage is caused by its own negligence or fault. The Company's maximum liability shall not in any case exceed the purchase price of the product, which shall be the complete and exclusive remedy against The Company.

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ENSA™ Wireless Light Switch Warranty Card

Please return this card inside a stamped envelope to the address shown on the reverse.

Name			
Address			
Suburb		State	Postcode
Email			
Date of Purchase		Invoice Number	
Daytime Phone			

Where did you purchase your ENSA?

Store Location

Who installed your ENSA?

Do You Have Any Comments / Suggestions Regarding This Product:

This information will only be used by the manufacturer and will not be not be sold to any third parties.

Troubleshooting

Symptom	Solution
Light won't turn on at all	- Check your wiring - Press the right switch to the down position (ON), if the light turns on then your wiring is correct. If the light doesn't turn on then your wiring could be wrong. - Ensure that the load is not over the 400-Watt limit. - The ENSA is unserviceable, return it to your supplier for repair by the manufacturer.
The light only turns on for 3 seconds	- Turn the timer adjustment clockwise - See adjusting the timer section of this manual
The light stays on and will not turn off	- Press the right switch to the up position (OFF). - Turn the timer adjustment anti-clockwise - See adjusting the timer section of this manual
The light doesn't turn on after the wireless device triggers	- Turn the light adjustment anti-clockwise - Program the wireless device into the ENSA (see adding a wireless device section in this manual)

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RhinoCo Technology
9 Hannabus Place
McGraths Hill NSW 2756
AUSTRALIA