

**CLIPSAL**<sup>®</sup>

by **Schneider Electric**



**C-Bus**<sup>®</sup>

**C-Bus Saturn Wall Switches**

**508xNL E508xNL** Series



Installation Instructions

# Contents

<b>1.0 Product Range .....</b>	<b>3</b>
<b>2.0 Important Notes.....</b>	<b>3</b>
<b>3.0 Description .....</b>	<b>3</b>
<b>4.0 Installation Considerations .....</b>	<b>4</b>
<b>5.0 Mounting Instructions.....</b>	<b>4</b>
5.1 Installation of 'A' Series Cover .....	5
5.2 Removal of 'A' Series Cover .....	5
5.3 Installation of 'E' or 'EA' Series Cover .....	6
5.4 Removal of 'E' or 'EA' Series Cover .....	6
<b>6.0 C-Bus Network Connection .....</b>	<b>6</b>
<b>7.0 C-Bus Power Requirements.....</b>	<b>7</b>
<b>8.0 Megger Testing.....</b>	<b>8</b>
<b>9.0 Programming Requirements .....</b>	<b>8</b>
<b>10. Electrical Specifications .....</b>	<b>8</b>
<b>11.0 Mechanical Specifications .....</b>	<b>9</b>
11.1 Saturn 'A' Series .....	9
11.2 Saturn 'E' Series .....	10
<b>12.0 Standards Complied.....</b>	<b>10</b>
<b>13.0 Limited Warranty.....</b>	<b>12</b>

© 2011 Schneider Electric. All rights reserved. Trademarks are owned by Schneider Electric Industries SAS or its affiliated companies.

The information in this manual is provided in good faith. Whilst Schneider Electric (Australia) Pty Ltd has endeavoured to ensure the relevance and accuracy of the information, it assumes no responsibility for any loss incurred as a result of its use. Schneider Electric (Australia) Pty Ltd. does not warrant that the information is fit for any particular purpose, nor does it endorse its use in applications that are critical to the health or life of any human being. Schneider Electric (Australia) Pty Ltd reserves the right to update the information at any time without notice.

## 1.0 Product Range

This document applies to the C-Bus Saturn™ Wall Switches listed below.

Catalog Number	Description
5082NL	C-Bus Saturn Wall Switch A Series, 2 button
5084NL	C-Bus Saturn Wall Switch A Series, 4 button
5086NL	C-Bus Saturn Wall Switch A Series, 6 button
E5082NL	C-Bus Saturn Wall Switch E Series, 2 button
E5084NL	C-Bus Saturn Wall Switch E Series, 4 button
E5086NL	C-Bus Saturn Wall Switch E Series, 6 button

Saturn wall switches are available with several fascia styles. Consult your Clipsal sales representative for fascia ordering options.

## 2.0 Important Notes

Do not connect mains wiring to the C-Bus Saturn wall switch. The C-Bus network uses Cat-5, unshielded twisted pair cables.

The use of any software not provided by Clipsal Integrated Systems (CIS) in conjunction with the installation of this product may void any warranties applicable to the hardware.

Connection to the C-Bus network is easy. The installer connects the C-Bus plus (+) and C-Bus minus (-) at the rear of the unit. The input units must never be connected to mains. The installer does not need to have an electrician's license.

## 3.0 Description

The C-Bus Saturn wall switch is a high-end C-Bus input unit. The Saturn™ range features multiple buttons, scene management and learn mode capability.

Because each unit has a unique address on the network, the input unit can be daisy chained with other C-Bus network devices or it can be placed at the end of a cabling run.

Refer to Electrical Specifications and C-Bus Network Connection for more details.

## 4.0 Installation Considerations

It is important to select the right location to install the C-Bus Saturn™ wall switch. Some considerations are listed below:

- Units are designed for indoor use only.
- Units may be mounted vertically or horizontally.
- Provide easy access to the unit for switching lights and selecting scenes.
- Choose a location free of water, humidity, direct sunlight and heavy dust.
- Allow adequate ventilation.
- Do not cover the unit.



No wet  
hands



No spray  
cleaner



No  
coverage



No direct  
sunshine



No dust

## 5.0 Mounting Instructions

'A' Series C-Bus Saturn™ wall switches suit standard rectangular 84mm centre mounting accessories, such as the Clipsal 155, 155VH and 157/1. Mounting using a 157 series wall box is shown in Figure 1. It is recommended that wall boxes be Earthed.

'E' Series C-Bus Saturn™ wall switch input units suit standard square 60.3mm centre mounting accessories, such as the Clipsal E157 and E5050MF. Mounting using an E157 series wall box is shown in Figure 2.

**NOTE:** Mounting accessories must be fitted a minimum distance of 10mm back from the finished surface of the wall. When mounting vertically, fit the grid plate to the wall with the release locks at the bottom.

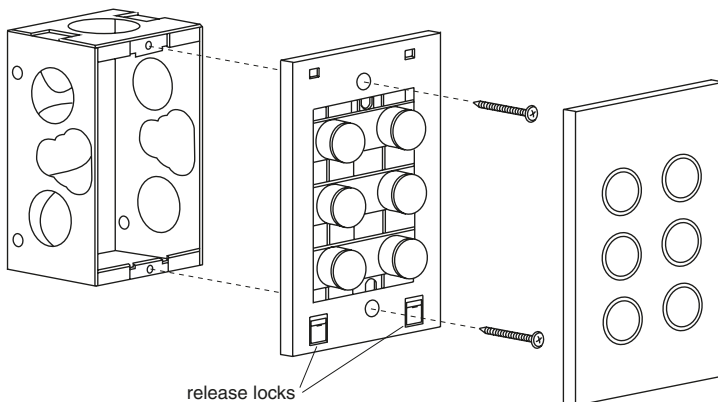


Figure 1 – Mounting an 'A' Series 6 button Saturn using a 157 Series wall box.

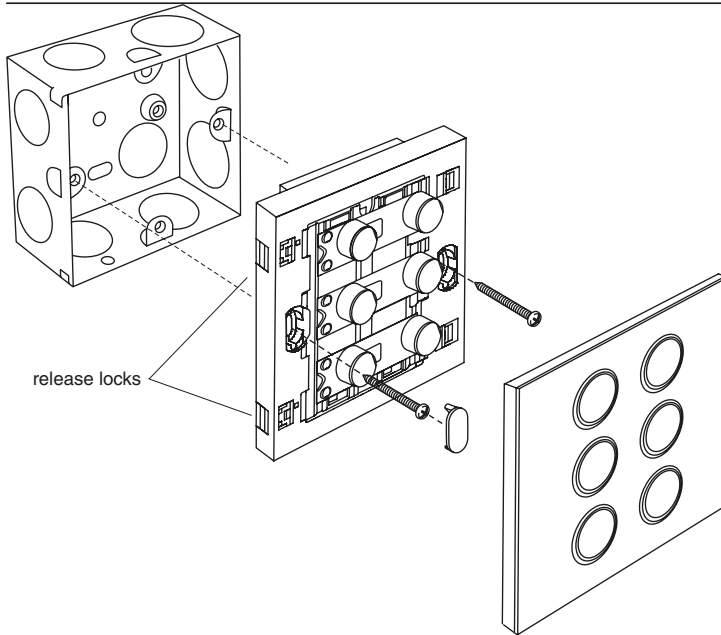


Figure 2. Mounting an 'E' Series Saturn Wall Switch using a E157 wall box

### 5.1 Installing the 'A' Series Fascia

1. Align the directional arrows on the back of the fascia to match the grid plate.
2. Fit the upper clips into the apertures at the top of the grid plate (the upper clips are longer than the lower clips).
3. Lower the bottom of the fascia to the grid, until the clips engage.

### 5.2 Removing the 'A' Series Fascia

1. To disengage the lower release locks, use a small flat head screwdriver to push the release locks upward.
2. Swing the lower end of the fascia about 5mm away from the grid, until it is free (refer to Figure 3).
3. Push the fascia upward and pull gently to release the upper clips.

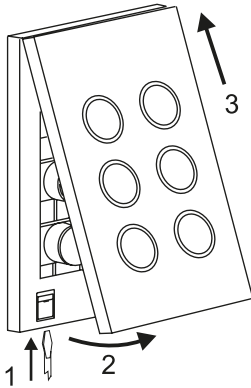


Figure 3 – The release slots provide easy removal of the cover plate.

### 5.3 Installing the 'E' Series Fascia

- Align the fascia so that the clips on its back align with those on the grid plate (the clips are on the side).
- Gently push the fascia toward the grid plate until the clips engage.

### 5.4 Removing the 'E' Series Fascia

1. Use a small flat head screwdriver to push the release locks at the side of the fascia.
2. Gently pull the fascia off the grid plate.

## 6.0 C-Bus Network Connection

Connect the C-Bus Saturn wall switch to the C-Bus network using an unshielded twisted pair C-Bus cable. See Figure 4. Twist or crimp the wire pairs together as shown. Do not use soldered connections; they are not reliable. Use Category 5 (Cat 5) data cable (Clipsal catalogue number 5005C305B).

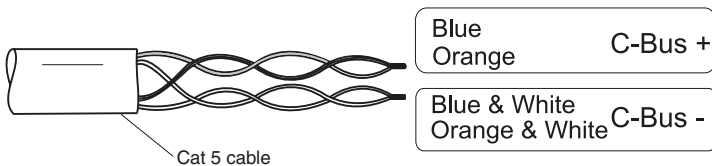


Figure 4. C-Bus cable conductor assignments

C-Bus Connection	Colour	Saturn™ C-Bus Connection
C-Bus Positive (+)	blue	yes
C-Bus Negative (-)	blue & white	yes
C-Bus Positive (+)	orange	yes
C-Bus Negative (-)	orange & white	yes
Remote ON	green	no
Remote ON	green & white	no
Remote OFF	brown	no
Remote OFF	brown & white	no

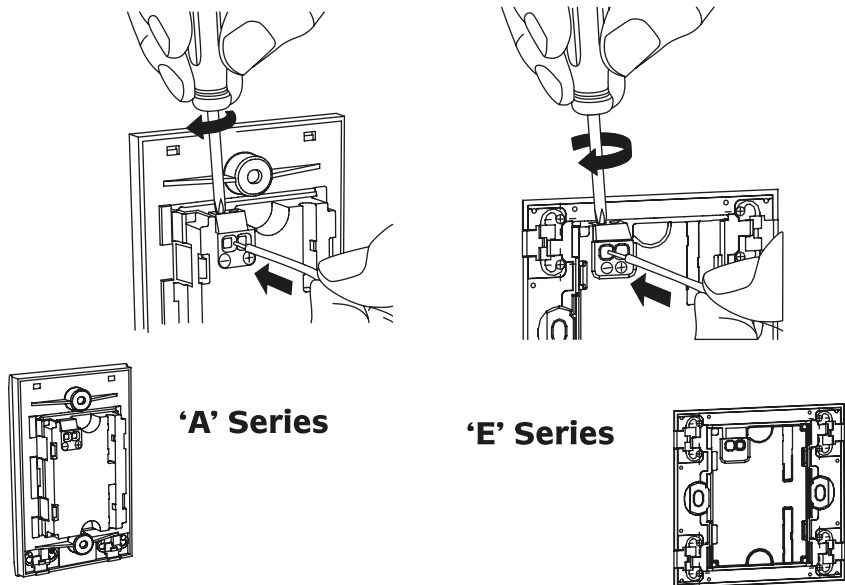


Figure 5 - Terminal Wiring

## 7.0 C-Bus Power Requirements

The C-Bus Saturn wall switch input unit draws 22 mA from the C-Bus network. Adequate C-Bus Power Supply Units must be installed to support the connected devices.

The network window of a C-Bus Toolkit project provides a summary of a C-Bus network according to the units added to the database. This can be helpful in determining the power supply requirements of a particular network.

## 8.0 Megger Testing

Never perform Megger testing on the pink C-Bus cabling or terminals as this may degrade the performance of the network.

## 9.0 Programming Requirements

C-Bus Saturn Range input units are learn-enabled devices. This means you can create relationships between input and output units without a computer (using learn mode).

Learn mode allows you to link multiple units into a common network. You can assign a load such (ie. a light on a dimmer unit), with a controller (i.e. a C-Bus Saturn Wall Switch), by touching the two units one after the other.

In a sophisticated installation, some of the basic settings created by learn mode may need to be overridden to create a particular effect. The latest C-Bus Toolkit software may be downloaded from the Clipsal Integrated Systems website ([www.clipsal.com/cis](http://www.clipsal.com/cis)).

## 10.0 Electrical Specifications

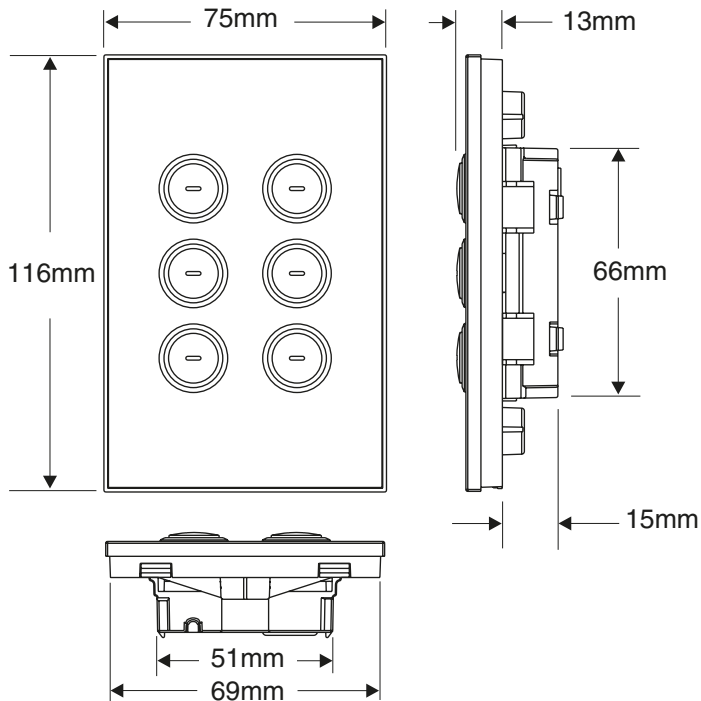
Parameter	Description
C-Bus supply voltage	15 to 36V d.c. 22 mA for normal operation. Does not provide current to the C-Bus network.
C-Bus AC input impedance	50 k $\Omega$ @ 1 kHz
Electrical isolation	3.75 kV RMS from C-Bus to mains (provided externally to 508xNL Series unit)
Maximum number of units on network	50
Control functions	Load switching, dimming, timers, scene control
Status indicators	User configurable orange and blue
Warm-up time	5 seconds
C-Bus connection	One terminal block to accommodate 0.2 mm <sup>2</sup> to 1.3 mm <sup>2</sup> (24 to 16 AWG)
Operating temperature range	0 to 45°C
Operating humidity range	10 to 95%, non-condensing



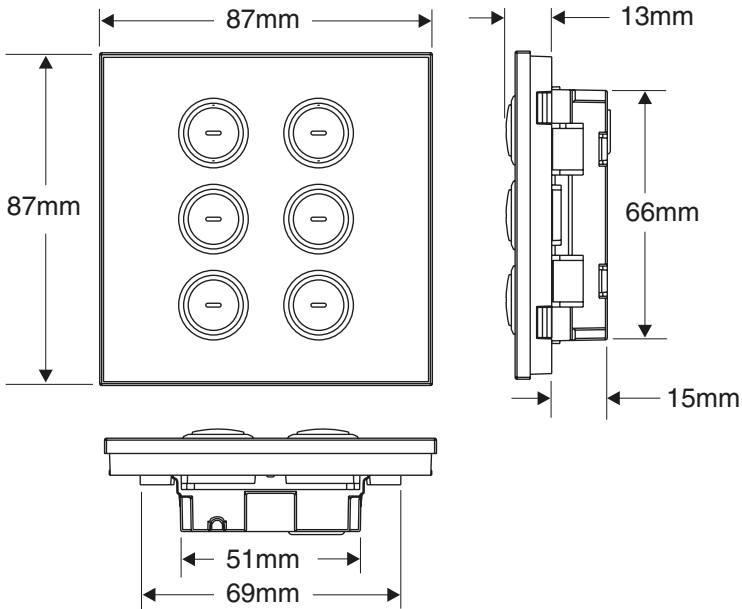
## 11.0 Mechanical Specifications

Parameter	'A' Series	'E' Series
Dimensions (WxHxD)	75 x 116 x 28mm	87 x 87 x 28mm
Protrusion from wall	13mm	13mm
Base depth (into wall)	15mm	15mm
Mounting Centres	84mm	60mm
Weight	51 to 54g	37 to 39g

### 11.1 Saturn 'A' Series



## 11.2 Saturn 'E' Series



## 12.0 Standards Complied

### DECLARATIONS OF CONFORMITY

**Warning:** Any changes or modifications not expressly approved by Clipsal Integrated Systems could void the users authority to operate this equipment.

The C-Bus Saturn™ Range 508xNL and E508xNL series comply with the following:

#### Australian/New Zealand EMC & Electrical Safety Frameworks and Standards



Regulation	Standard	Title
EMC	AS/NZS CISPR 14-1	Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 1: Emission
	AS/NZS CISPR 15	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment

## European Directives and Standards



Regulation	Standard	Title
EMC Directive 2004/108/EC	EN60669-2-1 Clause 26.1	Immunity to ESD, RFI, EFT, Surge Voltages, Voltage Dips and Interruptions
	EN 60669-2-1 Clause 26.2	RF and Low Frequency Emissions
	EN55014-1	RF and Low Frequency Emissions
	EN55015	RF and Low Frequency Emissions

## US FCC Regulations



Regulation	Title
FCC Part 15, Subart B	Radio Frequency Devices – Unintentional Radiators

## Supplemental Information

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesirable operation.

## Class B Product

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient or relocate the receiving antenna
- increase the separation between the equipment and receiver
- connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- consult the dealer or an experienced radio/TV technician for help.

## Other International Directives and Standards

Regulation	IEC Standard	Title
EMC	IEC 60669-2-1 Clause 26	RF and Low Frequency Emissions
	CISPR 14-1	RF and Low Frequency Emissions
	CISPR 15	RF and Low Frequency Emissions

## 13.0 Warranty

The C-Bus Saturn™ Wall Switch carries a two-year warranty against manufacturing defects.

### Warranty Statement

1. The benefits conferred herein are in addition to, and in no way shall be deemed to derogate; either expressly or by implication, any or all other rights and remedies in respect to Clipsal product, which the consumer has under the Commonwealth Trade Practices Act or any other similar State or Territory Laws.
2. The warrantor is Schneider Electric (Australia) Pty Ltd, with registered offices in all Australian States.
3. This Clipsal Integrated Systems product is guaranteed against faulty workmanship and materials for a period of two (2) years from the date of installation.
4. Schneider Electric (Australia) Pty Ltd reserves the right, at its discretion, to either repair free of parts and labour charges, replace or offer refund in respect to any article found to be faulty due to materials, parts or workmanship.
5. This warranty is expressly subject to the Clipsal Integrated Systems product being installed, wired, tested, operated and used in accordance with the manufacturer's instructions.
6. All costs of a claim shall be met by Schneider Electric (Australia) Pty Ltd, however should the product that is the subject of the claim be found to be in good working order, all such costs shall be met by the claimant.
7. When making a claim, the consumer shall forward the Clipsal Integrated Systems product to the nearest office of Clipsal by Schneider Electric Australia Pty Ltd with adequate particulars of the defect within 28 days of the fault occurring. The product should be returned securely packed, complete with details of the date and place of purchase, description of load, and circumstances of malfunction.

For all warranty enquiries, contact your local Clipsal sales representative. The address and contact number of your nearest Clipsal by Schneider Electric office can be found at <http://www.clipsal.com/locations> or by telephoning Technical Support Hotline 1300 722 247 (Australia Only)

---

**Schneider Electric (Australia) Pty Ltd**

Contact us: [clipsal.com/feedback](http://clipsal.com/feedback)

**National Customer Care Enquiries:**

**Tel 1300 2025 25**

**Fax 1300 2025 56**

**clipsal.com**

Schneider Electric (Australia) Pty Ltd reserves the right to change specifications, modify designs and discontinue items without incurring obligation and whilst every effort is made to ensure that descriptions, specifications and other information in this catalogue are correct, no warranty is given in respect thereof and the company shall not be liable for any error therein.

© 2011 Schneider Electric. All Rights Reserved.  
Trademarks are owned by Schneider Electric Industries SAS or its affiliated companies.