

CLIPSAL[®]

by **Schneider** Electric




The Clear Choice

Universal Dimmer

Integrally Switched
Rotary Controlled

31E2RUD
Series



Installation Instructions

REGISTERED DESIGN • REGISTERED PATENT

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1.0 Product Range

| | |
|--------------------|---|
| 31E2RUDM | Universal Dimmer, ISRC, 220-240V~, 50Hz, 350W (30 Series Mechanism) |
| 31E2RUD | Universal Dimmer, ISRC, 220-240V~, 50Hz, 350W (Standard Range) |
| 2031E2RUD | Universal Dimmer, ISRC, 220-240V~, 50Hz, 350W (2000 Series) |
| C2031E2RUD | Universal Dimmer, ISRC, 220-240V~, 50Hz, 350W (Classic Series) |
| SC2031E2RUD | Universal Dimmer, ISRC, 220-240V~, 50Hz, 350W (Slimline Series) |
| SL2031E2RUD | Universal Dimmer, ISRC, 220-240V~, 50Hz, 350W (Eclipse Series) |
| P2031E2RUDM | Universal Dimmer, ISRC, 220-240V~, 50Hz, 350W (Prestige Mechanism) |
| P2031E2RUD | Universal Dimmer, ISRC, 220-240V~, 50Hz, 350W (Prestige Series) |
| 4061E2RUDM | Universal Dimmer, ISRC, 220-240V~, 50Hz, 350W (Saturn Mechanism) |
| 4061E2RUD | Universal Dimmer, ISRC, 220-240V~, 50Hz, 350W (Saturn Series) |

*Please note that these products are also available in other configurations and in a wide range of colours. For further information, please contact your nearest Clipsal Sales Representative.

2.0 Description

The Clipsal 31E2RUDM Series Universal Dimmer is an Integrally Switched, Rotary Controlled (ISRC), modular universal dimmer mechanism rated at 350W.

Incorporating a built-in (integral) switch, up to six dimmer mechanisms can be installed in a plate!

Designed for universal load compatibility, the unit utilises powerful and sophisticated dimming technology to provide full control of almost any type of load, whether it be incandescent lighting, mains voltage halogen or dichroic lamps, iron-core or electronic low voltage lighting transformers as used in downlight applications. Even small motor loads such as ceiling sweep and exhaust fans can be controlled.

The Universal Dimmer also incorporates over-current and over-temperature protection devices and is capable of withstanding persistent short circuit conditions, making it the most rugged, robust and reliable dimmer mechanism ever produced.







C-Thru®: The Clear Choice – helping you select the right dimmer, first time every time!

3.0 Features

- Integrally switched modular dimming mechanism.
- Built using Clipsal Universal Dimming Technology.
- 350W Power Rating.
- Suitable for a wide range of load types.
 - Incandescent (tungsten filament) lamps.
 - 240V Halogen / Dichroic Lamps.
 - Low voltage downlights using electronic transformers.
 - Low voltage downlights using iron-core transformers.
 - Small motor loads.
- Compatible with selected Dimmable CFL and LED loads.
- Preset minimum brightness.
- Multi-gang capacity up to six (6) dimmer mechanisms per plate.
- Wall or architrave mounting options.
- Wide range of plate styles and colour variants available.
- Suitable for new installations or retrofit applications.
- Inbuilt Over-Current and Over-Temperature protection.
- Full short circuit protection (!).
- Immune to high frequency (ripple) signal injection on mains supply.
- Fitted with suppressors to minimise radio frequency interference.
- Complies with Australian and International EMC Standards.

4.0 Load Compatibility

The Clipsal 31E2RUDM Series Dimmer is a part of the C-Thru® Dimmer Range. Each dimmer mechanism is colour coded to indicate load compatibility.

| LOAD SYMBOL | COMPATIBLE LOADS | C-THRU COLOUR | |
|--|---|---|---|
| | | 31E2RUDM | |
| | | TRANSPARENT | |
| | | INTEGRALLY SWITCHED, ROTARY CONTROLLED UNIVERSAL DIMMER "ISRC Series" | |
| | | 350W | |
|  | Incandescent Lighting MV Halogen / Dichroic Lamps | | ✓ |
|  | Low Voltage Halogen / Dichroic Lighting with Iron-Core Transformers | | ✓ |
|  | Low Voltage Halogen / Dichroic Lighting with Electronic Transformers | | ✓ |
|  | Dimmable Compact Fluorescent Lamps * 150W Maximum | | ✓ |
|  | Dimmable LED Lighting * 150W Maximum | | ✓ |
|  | Small Motor Loads - Exhaust fans (shaded pole induction motors) - Ceiling fans (split-phase induction motors) | | ✓ |

IMPORTANT NOTES:

- Dimming performance may vary between lamp manufacturers.
- Use only "Dimmable" CFL/PL/LED Lamp types, compatible with phase angle control dimming techniques.
- Due to the nature of Dimmable CFL loads, lamp strike cannot be guaranteed upon start-up. To strike the lamp simply advance the dimmer setting until the lamp ignites, and then dim back down to the desired brightness.
- Some lamps may exhibit unexpected performance characteristics when cold. Dimming performance should improve once the lamp warms up.
- It is recommended that when using electronic transformers, each be loaded to at least 75% of its maximum rated load. This reduces the possibility of lamp flicker when dimming, as is common with some transformers. Refer to the manufacturer's specifications for the transformer being used.
- Use only iron-core transformers compatible with electronic switches / phase controlled dimmers as recommended by the manufacturer.
- Any number of Low Voltage Lighting Transformers can be used providing the total lamp wattage does not exceed the maximum load rating of the dimmer.
- Mixed load types are permitted, though not recommended. Test thoroughly to ensure normal operation throughout the dimming range. Use at own risk.
- When controlling small motor loads, from time-to-time audible noise (hum) may be heard as a characteristic of normal operation. This is largely a function of the motor construction, and is consequently excluded from the warranty conditions provided with this product.
- This product is rated for indoor use only. It is not suitable for outdoor use, nor installation in a roof space.
- Specifications typical at 240V a.c., 25°C. Operation from elevated voltages or temperatures may cause the thermal protection circuitry to operate. In the case of significant overload, the thermal fuse may be blown, rendering the dimmer inoperable. This may occur if abnormal operating conditions are detected by the dimmer, even in the case where the lamp wattage does not exceed the dimmer rating. Reduce the size of the connected load or use a different brand of lamp to prevent reoccurrence.

5.0 Incompatible Loads

This dimmer is not compatible for use with non-dimmable linear / compact fluorescent lamps. Exercise care when using dimmable CFL / PL / LED load types. Use only lamps / ballasts that are compatible with phase angle control. Refer to the manufacturer's specifications for recommendations. Dimmer warranty is void when controlling incompatible load types as determined by Schneider Electric Pty Ltd.

6.0 Installation Instructions

6.1 Wiring Details

1. Disconnect power to the relevant circuit at the main switchboard.
2. Remove existing switch from wall.
3. Connect the dimmer in accordance with the wiring diagram shown on page 6.
4. Refit switch plate to wall.
5. Reconnect power.
6. Turn switch on and check satisfactory dimmer operation by turning control knob through full range.

6.2 Soft-Start Feature

The Universal Dimmer incorporates a soft-start feature providing a noticeably smooth lamp illumination at turn on. This feature also minimises lamp filament start up stress, which may increase lamp life.

NOTE:

The Universal Dimmer does not incorporate a "kick-start" feature as is standard for some other C-Thru® models. The control knob must be sufficiently advanced when turned on, in order to achieve reliable lamp strike / motor starting.

6.3 Minimum Brightness Settings

The minimum brightness level has been factory preset to suit most applications.

6.4 Multi-Gang Derating

For applications, where 31E2RUDM Series Dimmers are multi-ganged, derate the maximum load rating of the unit according to the derating table shown below.

| Number of Dimmers per Grid Plate | Maximum Load per Dimmer | |
|--|--------------------------|--------------------------|
| | Nominal Voltage 240V~ | Nominal Voltage 220V~ |
| 1 | 350W | 350W |
| 2 | 300W | 300W |
| 3 | 250W | 250W |
| 4 | 200W | 200W |
| 5 | 200W | 200W |
| 6 | 200W | 200W |

Multi-Gang Dimmer Derating Table

6.5 Thermal Overload Protection Circuitry

The 31E2RUDM Series Dimmers incorporates two levels of thermal overload protection:

Thermal Overload Compensation

Automatically reduces lamp brightness should the dimmer be inadvertently overloaded. Primary defence against overload or short circuit. Resets automatically once overload conditions are corrected.

Thermal Cut-Out

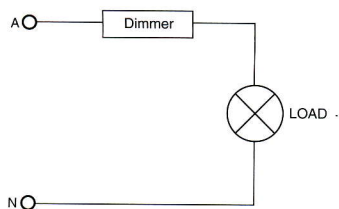
The unit contains a non-resettable thermal fuse device, designed to blow in case of catastrophic circuit failure. This is a secondary protection measure, intended to operate as a backup in case of persistent or prolonged overload conditions. If the thermal cut-out fuse blows, then the dimmer will be rendered permanently inoperable and must be replaced.

Any significant overload should be avoided in order to prevent damage to the load, fixed wiring of the installation or other hardware connected to the affected circuit.

6.6 Short Circuit Protection

The 31E2RUDM Series Dimmers feature short circuit protection, designed to protect the dimmer under most abnormal operating conditions, and ensure the dimmer can survive in case of wiring fault, or catastrophic failure of the load.

7.0 Wiring Diagram










NOTE:

- The 31E2RUDM Series dimmers incorporate an integral switch, and are designed for One-Way operation only. If Two-Way switching is required, then a separately switched dimmer mechanism must be used (32E450UDM).
- Two or more dimmers cannot be connected in parallel or series to control the same load from two different locations.
- Dimmer should be wired using the terminal block supplied.
- Dimmer Mechanism wiring is NOT polarity sensitive.

It is illegal for persons other than an appropriately licensed electrical contractor or other persons authorised by legislation to work on the fixed wiring of any electrical installation. Penalties for conviction are severe!

8.0 Electrical Specifications

| Parameter | Value |
|-------------------------------------|--|
| Nominal Operating Voltage | 220 – 240V~ |
| Nominal Operating Frequency | 50Hz |
| Maximum Load | 350W @ 240V~ 350W @ 220V~ Derate for multi-gang applications (refer to table on page 5) |
| Minimum Load | 10W |
| Dimming Technique | Leading Edge / Trailing Edge Phase Control (dynamically auto-selected) |
| Compatible Loads |  Incandescent Lighting MV Halogen lamps |
| |  Low Voltage Lighting with Iron-Core Transformers |
| |  Low Voltage Lighting with Electronic Transformers |
| |  Dimmable Compact Fluorescent Lamps (selected makes/models only, 150W Max) |
| |  Dimmable LED Lighting (selected makes/models only, 150W Max) |
| |  Small Motor Loads |
| Incompatible Loads |  Non-Dimmable Fluorescent / Compact Fluorescent Lighting |
| Mounting Centres | 84mm Australian Pattern Plate |
| Shipping Weight | 25g Dimmer Mechanism Only |
| Safety Compliance | AS/NZS3100, AS/NZS3133, IEC60669 Series |
| EMC Compliance | AS/NZS CISPR15, IEC60669-2-1 (26.1, 26.2), IEC61000-3-2 (Excepting when used in conjunction with electronic loads, e.g. Dimmable CFL Loads) |
| Specifications Typical @ 240V~ 25°C | |
| Suitable for Indoor Use Only | |
| No User Serviceable Parts Inside | |

9.0 Warranty Statement

1. This Clipsal product is guaranteed against faulty workmanship and materials for a period of two (2) years from the date of installation.
2. This warranty is expressly subject to the Clipsal product being installed, wired, tested, operated and used in accordance with the manufacturer's instructions.
3. The warrantor is Schneider Electric (Australia) Pty Ltd of 33-37 Port Wakefield Road, Gepps Cross, South Australia 5094. With registered offices in all Australian states.
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. 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.
6. When making a claim the consumer shall forward the Clipsal product to the nearest office of Clipsal by Schneider Electric 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.
7. 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 the Clipsal product, which the consumer has under the Commonwealth Competition and Consumer Act or any other similar State or Territory Laws.

Schneider Electric (Australia) Pty Ltd

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