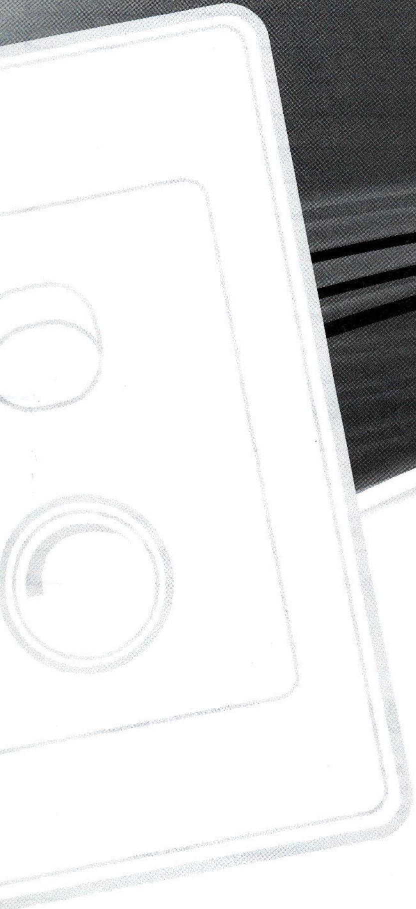
CLIPSAL®

LIVING ELECTRICAL



c-thru®

The Clear Choice

Universal Dimmer

32E450UD

Series

450W · SHORT CIRCUIT PROTECTION · ONE FITS ALL! True Universal Load Compatibility

Installation Instructions

REGISTERED DESIGN • REGISTERED PATENT

Table of **Contents**

1.0 Product Range

32E450UDM	Dimmer, Universal, 220-240Vac, 50Hz, 450W (30 Series Mechanism)
32E450UD	Dimmer, Universal, 220-240Vac, 50Hz, 450W (Standard Range)
2032E450UD	Dimmer, Universal, 220-240Vac, 50Hz, 450W (2000 Series)
C2032E450UD	Dimmer, Universal, 220-240Vac, 50Hz, 450W (Classic Series)
SC2032E450UD	Dimmer, Universal, 220-240Vac, 50Hz, 450W (Slimline® Series)
SL2032E450UD	Dimmer, Universal, 220-240Vac, 50Hz, 450W (Eclipse® Series)
M2032E450UD	Dimmer, Universal, 220-240Vac, 50Hz, 450W (Matisse® Series)
P2032E450UDM	Dimmer, Universal, 220-240Vac, 50Hz, 450W (Prestige™ Mechanism)
P2032E450UD	Dimmer, Universal, 220-240Vac, 50Hz, 450W (Prestige™ Series)
1920E450UDM	Dimmer, Universal, 220-240Vac, 50Hz, 450W (Heritage™ Mechanism)

*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 32E450UD Series Universal Dimmer is a separately switched, compact, modular dimming mechanism rated at 450W (1.8A), and 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, 240V 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

- Separately switched compact modular dimming mechanism
- 450W Power Rating
- Soft start operation
- Preset minimum brightness
- Wall or architrave mounting options
- Wide range of plate styles and colour variants available
- Suitable for 1-way or 2-way operation
- Suitable for new installations or retro-fit applications
- Suitable for a wide range of load types
- Incandescent (tungsten filament) lamps
- 240V Halogen / Dichroic Lamps
- Low voltage downlights using iron-core transformers
- Low voltage downlights using electronic transformers
- Small Motor Loads (such as Ceiling Sweep and Exhaust Fans)
- Inbuilt Over-Current and Over-Temperature protection
- 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.

Please note that the 32E450UD Series Dimmer is immune to the effects of high frequency (ripple) signal injection on the mains voltage supply. These signals are commonly injected onto the mains by the supply authority for such applications as off-peak hot water switching and remote meter monitoring.

This Patented Australian design innovation ensures true flicker-free dimming operation.

4.0 Load Compatibility

The Clipsal 32E450UD 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			
		32E450L	32E450T	32E500F	32E450UD
		BLUE	GREEN	AMBER	TRANSPARENT
		LEADING EDGE DIMMER	TRAILING EDGE DIMMER	FAN SPEED CONTROLLER	**UNIVERSAL DIMMER**
		450W	450W	500W	450W
	Incandescent lighting Halogen/Dichroic 240V lamps	✓	✓	✗	✓
	Low voltage Halogen/Dichroic lighting with iron-core transformers	✓	✗	✗	✓
	Low voltage Halogen/Dichroic lighting with electronic transformers	✗	✓	✗	✓
	Small Motor Loads Exhaust fans (shaded pole induction motors) ceiling fans (split-phase induction motors)	✗	✗	✓	✓

IMPORTANT NOTES:

- Any number of Low Voltage Lighting Transformers can be used providing the total lamp wattage does not exceed the maximum load rating of the universal dimmer.
- Mixed load types are permitted. Example: lighting circuit comprising a combination of both iron-core and electronic transformers. Compatibility depends on the model of transformer selected, and the quantity of each installed. Test thoroughly before commissioning - turn on at a minimum setting, then gradually advance to maximum setting to confirm satisfactory dimming performance.
- It is recommended that when using electronic transformers, each be loaded to at least 75% of their 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.

5.0 Incompatible Loads

Exercise care when using fluorescent or compact fluorescent load types. Use only lamps / ballasts that are compatible with phase angle control (leading or lagging). Refer to the lamp / ballast manufacturer's specifications for recommendations. Dimmer warranty is void when controlling incompatible load types as determined by Clipsal Australia.

6.0 Important Warning

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.

7.0 Installation Instructions

7.1 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 diagrams shown over the page
4. Refit switch plate to wall
5. Reconnect power
6. Turn switch on and check dimmer operation by turning control knob through full range

NOTE:
The Universal Dimmer does not incorporate a "Kick-Start" feature as is standard for other C-Thru Fan Controller models. The control knob must be sufficiently advanced when turned on, in order to achieve reliable motor starting.

7.2 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.

7.3 Minimum Brightness Settings

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

7.4 Multi-Gang Derating

For applications, where 32E450UD Series Dimmers are multi-ganged, derate the maximum load rating of the unit according to the derating table shown at right.

Number of Dimmers	Maximum Load per Dimmer
1	450W
2	350W
3	250W

7.5 Thermal Overload Protection Circuitry

The 32E450UD 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 Cutout

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.

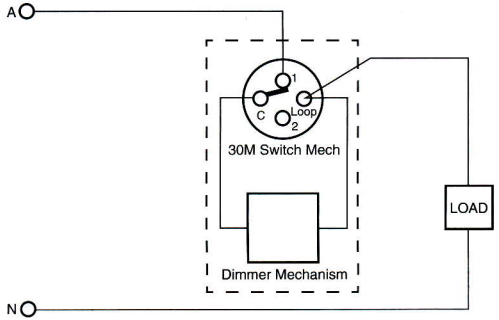
7.6 Short Circuit Protection

The 32E450UD Series Dimmers feature short circuit protection, designed to ensure the dimmer can survive in case of wiring fault, or catastrophic failure of the load.

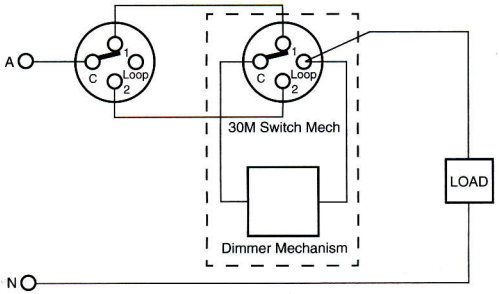
The short circuit protection feature also allows the dimmer to be used in conjunction with lamps oriented in the vertical direction as commonly found in chandeliers (something not previously recommended with any other dimmer available).

8.0 Wiring Diagrams

8.1 One Way Operation



8.2 Two Way Operation



NOTE:

- If the unit is wired for 2-way operation it can be switched ON or OFF from either location but the lamp brightness can only be adjusted from one location.
- Two or more dimmers **cannot** be connected in parallel or series to control the same load from two different locations.
- Dimmer Mechanism wiring is NOT polarity sensitive.

9.0 Electrical Specifications

Parameter	Value	
Nominal Operating Voltage	220 - 240V a.c.	
Nominal Operating Frequency	50 Hz	
Maximum Load	450W *Derate for multi-gang applications* (1.8A)	
Minimum Load	20W (0.1A)	
Dimming Technique	Leading Edge / Trailing Edge Phase Control (dynamically auto-selected)	
Compatible Loads		Incandescent light Halogen 240V lamps
		Low voltage lighting with electronic transformers
		Low voltage lighting with iron-core transformers
		Small motor loads - Exhaust fans (shaded pole induction motors) - Ceiling fans (split-phase induction motors)
Incompatible Loads		Fluorescent Lighting
Operating Temperature Range	0 to 40°C	
Operating Humidity Range	10 to 90% R.H.	
Mounting Centres	84mm Australian Pattern Plate	
Shipping Weight	25g Dimmer Mechanism Only	
EMC Emission Compliance	AS/NZS CISPR 15:2002	
Specifications Typical @ 25°C ± 5°C		
No User Serviceable Parts Inside		

10.0 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 the Clipsal Product, which the consumer has under the Commonwealth Trade Practices Act or any other similar State or Territory Laws.
2. The warrantor is Clipsal Australia Pty Ltd of 12 Park Terrace Bowden, South Australia 5007. Telephone (08) 8269 0511. With registered offices in all Australian States.
3. This Clipsal Product is guaranteed against faulty workmanship and materials for a period of two (2) years from the date of installation.
4. Clipsal 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 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 Clipsal 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 Product to the nearest office of Clipsal 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.

Product of Clipsal Australia Pty Ltd A member of the Schneider Electric Group
12 Park Terrace, Bowden, South Australia 5007

National Customer Service Enquiries: **clipsal.com**

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