

**CLIPSAL**<sup>®</sup>

by **Schneider Electric**



# Modena/Strato Universal Dimmer

**8000**  
Series



Installation Instructions

REGISTERED DESIGN • REGISTERED PATENT

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## 1.0 Product Range

<b>80E450UDM</b>	Dimmer, Universal, 220-240V a.c., 50Hz, 450W (80 Series Mechanism)
<b>M8082E450UD</b>	Dimmer, Universal, 220-240V a.c., 50Hz, 450W (Modena 8000 Series)
<b>S8082E450UD</b>	Dimmer, Universal, 220-240V a.c., 50Hz, 450W (Strato 8000 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 8000 Series Universal Dimmer is a separately switched, compact, modular dimming mechanism rated at 450W, 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.





## 3.0 Features

- Separately switched, compact, modular dimming mechanism.
- 450W power rating.
- Soft start operation.
- Preset minimum brightness.
- Wide range of plate styles and colour variants available.
- Suitable for one-way or two-way operation.
- Suitable for new installations or retrofit 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 8000 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

LOAD SYMBOL	COMPATIBLE LOADS	80E450L	80E450T	80E500F	80E450UD
		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 Ceiling Fans	✗	✗	✓	✓

### 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.
- Use only iron-core transformers compatible with electronic switches/phase controlled dimmers as recommended by the manufacturer.
- 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 dimmable linear fluorescent or compact fluorescent load types (maximum load 200W). Use only lamps/ballasts that are compatible with phase angle control (leading or lagging). Refer to the lamp/ballast manufacturer's specifications for further recommendations. Dimmer warranty is void when controlling incompatible load types as determined by Schneider Electric (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

- Disconnect power to the relevant circuit at the main switchboard.
- Remove existing switch from wall.
- Connect the dimmer in accordance with the wiring diagrams shown over the page.
- Refit switch plate to wall.
- Reconnect power.
- 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 Clipsal 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 8000 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 8000 Series Dimmers incorporate 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. It 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.

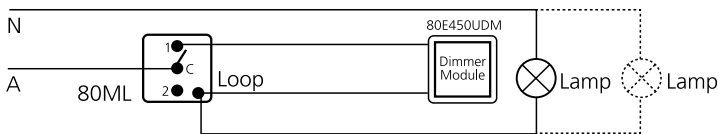
## 7.6 Short Circuit Protection

The 8000 Series Dimmers feature short circuit protection, designed to ensure the dimmer can survive in case of wiring fault or catastrophic failure of the load.

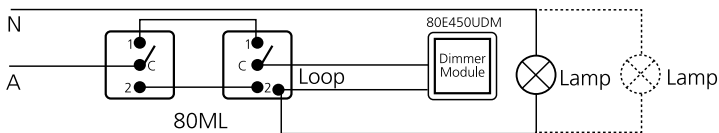
The short circuit protection feature also allows the dimmer to be used in conjunction with lamps orientated in the vertical direction, as commonly found in chandeliers (something not previously recommended with any other dimmer available).

## 8.0 Wiring Diagrams

### 8.1 One-Way Operation
















### 8.2 Two-Way Operation



#### NOTE:

- If the unit is wired for two-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								
<b>Nominal Operating Voltage</b>	220 - 240V a.c.								
<b>Nominal Operating Frequency</b>	50Hz								
<b>Maximum Load</b>	450W @ 240V a.c., 400W @ 220V a.c. Derate for multi-gang applications								
<b>Minimum Load</b>	10W								
<b>Dimming Technique</b>	Leading edge/Trailing edge phase control (dynamically auto-selected)								
<b>Compatible Loads</b>	<table border="1"> <tbody> <tr> <td></td> <td>Incandescent lamps Halogen 240V lamps</td> </tr> <tr> <td></td> <td>Low voltage lighting with electronic transformers</td> </tr> <tr> <td></td> <td>Low voltage lighting with iron-core transformers</td> </tr> <tr> <td></td> <td>Small motor loads: - Exhaust fans (shaded pole induction motors) - Ceiling fans (split-phase induction motors)</td> </tr> </tbody> </table>		Incandescent lamps 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)
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	Low voltage lighting with iron-core transformers								
	Small motor loads: - Exhaust fans (shaded pole induction motors) - Ceiling fans (split-phase induction motors)								
<b>Incompatible Loads</b>	 Fluorescent lighting								
<b>Operating Temperature Range</b>	0 to 45°C								
<b>Operating Humidity Range</b>	10 to 90% RH								
<b>Mounting Centres</b>	84mm Australian Pattern Plate								
<b>Shipping Weight</b>	25g (dimmer mechanism only)								
<b>Safety Compliance</b>	AS/NZS3100, IEC60669-2-1								
<b>EMC Emission Compliance</b>	AS/NZS CISPR15:2002								
Specifications Typical @ 240V a.c., 25°C									
No User Serviceable Parts Inside									

#### WARNING:

Operation at elevated temperatures or voltages may cause the thermal protection circuitry to operate. Decrease the size of the connected load to prevent reoccurrence.

## 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 Competition and Consumer Act or any other similar State or Territory Laws.
2. 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.
3. This Clipsal 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 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 product to the nearest Clipsal by Schneider Electric office 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.

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**Schneider Electric (Australia) Pty Ltd**

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

**clipsal.com**

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