

**CLIPSAL**<sup>®</sup>

by **Schneider** Electric



# Modena/Strato Universal Dimmer

Integrally Switched Push Button

**80E2PUD**

Series



Installation Instructions

REGISTERED DESIGN • REGISTERED PATENT

# Table of Contents

<b>1.0</b>	<b>Product Range</b> .....	<b>3</b>
<b>2.0</b>	<b>Description</b> .....	<b>3</b>
<b>3.0</b>	<b>Features</b> .....	<b>3</b>
<b>4.0</b>	<b>Dimmer Unit Operation</b> .....	<b>4</b>
4.1	Push Button Operation.....	4
4.2	LED Indicator .....	4
<b>5.0</b>	<b>Setup Mode</b> .....	<b>5</b>
<b>6.0</b>	<b>Load Compatibility</b> .....	<b>7</b>
<b>7.0</b>	<b>Incompatible Loads</b> .....	<b>8</b>
<b>8.0</b>	<b>Installation Instructions</b> .....	<b>8</b>
8.1	Wiring Details.....	8
8.2	Multi-Gang Derating.....	8
8.3	Thermal Overload Protection Circuitry.....	9
8.4	Short Circuit Protection.....	9
8.5	Power Up Status .....	9
<b>9.0</b>	<b>Wiring Diagram</b> .....	<b>9</b>
<b>10.0</b>	<b>Electrical Specifications</b> .....	<b>10</b>
<b>11.0</b>	<b>Warranty Statement</b> .....	<b>11</b>

## 1.0 Product Range

<b>80E2PUDM</b>	Universal Dimmer, ISPB, 220-240V~, 50Hz, 350W (80 Series Mechanism)
<b>M8081E2PUD</b>	Universal Dimmer, ISPB, 220-240V~, 50Hz, 350W (Modena 8000 Series)
<b>S8081E2PUD</b>	Universal Dimmer, ISPB, 220-240V~, 50Hz, 350W (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 80E2PUDM Series Universal Dimmer is an Integrally Switched, Push Button (ISPB), modular universal dimmer mechanism rated at 350W.

Incorporating a built-in (integral) switch, up to three 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.

## 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.
- User selectable soft-start / kick-start operation.
- User adjustable minimum brightness.
- Multi-gang capacity up to three (3) dimmer mechanisms per plate.
- Wide range of plate styles and colour variants available.
- Suitable for new installations or retro-fit applications.
- Inbuilt Over-Current and Over-Temperature protection.
- Short circuit protection.
- Fitted with suppressors to minimise radio frequency interference.
- Complies with Australian and International EMC Standards.

## 4.0 Dimmer Unit Operation

### 4.1 Push Button Operation

<b>SHORT PRESS</b>	<ul style="list-style-type: none"> <li>• Tap the Push Button to turn the dimmer On or Off.</li> <li>• The dimmer has memory and will remember the previous dim setting. When you tap the button to turn the light Off, the unit will store the current setting in memory. When you tap the button to turn the light On, the dimmer will restore the previous dim setting.</li> </ul>
<b>LONG PRESS</b>	<ul style="list-style-type: none"> <li>• Press and hold the button to dim up and down. Release the button to stop dimming.</li> <li>• The dimmer will cycle up and down alternately. When the light is On, the dimmer will dim down by default. When the dimmer is Off, it will dim upwards (increase brightness) by default. Subsequent Long Press will dim in the opposite direction.</li> <li>• Whilst dimming, if the dimmer reaches its maximum or minimum brightness level, the unit will pause for one (1) second, then start dimming in the opposite direction.</li> <li>• A single ramp cycle takes about six (6) seconds to complete.</li> <li>• If the button is not pressed for 15 seconds, the dimming is set to fade out by default again.</li> </ul>
<b>DOUBLE-CLICK</b>	<ul style="list-style-type: none"> <li>• Tap the button twice to turn the dimmer on to maximum brightness. The dimmer will reach maximum brightness in approximately one (1) second.</li> </ul>

### 4.2 LED Indicator

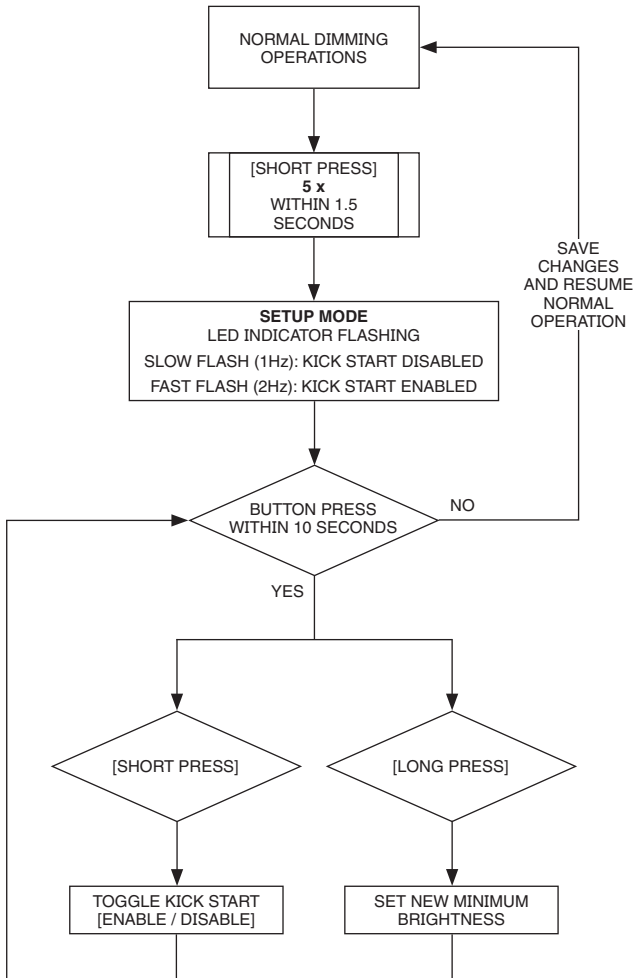
The unit incorporates an LED indicator to display the status of the load.

LOAD STATUS	INDICATOR STATUS
ON	ON
OFF	OFF







## 5.0 Setup Mode

The Push Button Dimmer allows the user to select various operating characteristics to suit the application, and to ensure compatibility with the connected load type.

<b>Start-Up Feature</b>	<p><b>Soft-Start / Kick-Start</b> (Default: Soft Start)</p> <p>The user can select a “Soft Start” or a “Kick Start” to occur at start-up, depending on the connected load type.</p> <p><b>Soft-Start</b> Used for normal light dimming applications providing a noticeably smooth lamp illumination at turn on. This feature also minimises lamp filament start-up stress, which may increase lamp life.</p> <p><b>Kick-Start</b> When the dimmer is turned on, the output will briefly set to around 75%, before ramping back down to the set brightness level. Used with Dimmable CFL Loads to maximise the probability of lamp strike at turn-on. Also can be used with small motor loads to overcome initial inertia.</p>
<b>Minimum Brightness Adjustment Feature</b>	<p><b>Minimum Brightness</b> (default setting at minimum)</p> <p>The user can configure the minimum output brightness to provide optimum performance with the connected load.</p> <p><b>Decrease</b> the minimum brightness to maximise the available dimming range.</p> <p><b>Increase</b> the minimum brightness to minimise flickering effects when connected to Dimmable CFL and other sensitive lighting loads.</p> <p>When connecting to motor loads, you can also increase the minimum brightness to ensure that the motor starts reliably, and that it does not stall at low speeds.</p>



## 6.0 Load Compatibility

LOAD SYMBOL	COMPATIBLE LOADS	80E2PUDM
		INTEGRALLY SWITCHED, PUSH BUTTON UNIVERSAL DIMMER "ISPB Series"
		350W
	Incandescent Lighting MV Halogen / Dichroic Lamps	350W
	Low Voltage Halogen / Dichroic Lighting with Iron-Core Transformers	350W
	Low Voltage Halogen / Dichroic Lighting with Electronic Transformers	350W
	Dimmable Compact Fluorescent Lamps (Selected makes/models only. Please contact CFL supplier for compatibility advice)	150W
	Dimmable LED Lighting (Please visit <a href="http://clipsal.com/load">clipsal.com/load</a> for recommended loads. For other loads, contact the LED supplier for compatibility advice.)	150W
	Small Motor Loads - Exhaust fans (shaded pole induction motors) - Ceiling fans (split-phase induction motors)	350W

### 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 maximise the probability of successful lamp strike, the "kick-start" feature may be enabled.
- 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, or installation in a roof space.
- 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.

## 7.0 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 Clipsal by Schneider Electric Australia.

## 8.0 Installation Instructions

### 8.1 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 9.
4. Fit switch plate to wall.
5. Reconnect power.
6. Operate the dimmer and ensure satisfactory performance throughout the full control range. If necessary, adjust minimum brightness and enable/disable kick-start feature to suit the connected load.

### 8.2 Multi-Gang Derating

For applications, where 80E2PUDM Series Dimmers are multi-ganged, derate the maximum load rating of the unit according to the derating table shown below.

#### CAUTION:

- Electronic switches such as push-button dimmers do not provide a 'full off-state'. Therefore, the circuit on the load side should be considered to be live.
- Turn off power at the switchboard before proper installation of the unit.
- Turn off power at the switchboard when changing the light source.
- It is illegal for persons other than an appropriately licenced electrical contractor or other persons authorised by legislation to work on the fixed wiring of any electrical installation. Penalties for conviction are severe.

Number of Dimmers per Grid Plate	Maximum Incandescent Load per Dimmer	
	Nominal Voltage 240V~	Nominal Voltage 220V~
1	350W	300W
2	240W	200W
3	200W	175W

Multi-Gang Dimmer Derating Table



### 8.3 Thermal Overload Protection Circuitry

The 80E2PUDM 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. 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.

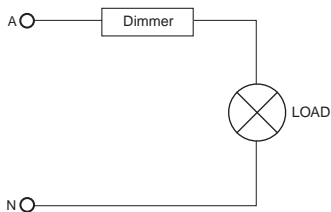
### 8.4 Short Circuit Protection

The 80E2PUDM 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.

### 8.5 Power Up Status

In the event of a power failure, the dimmer will shut down. Upon restoration of power, the dimmer will always power up in the OFF state.

## 9.0 Wiring Diagram










#### NOTE:

- 80E2PUDM 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 (80E450UDM).
- 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.**

## 10.0 Electrical Specifications

Parameter	Value
Nominal Operating Voltage	220 – 240V~
Nominal Operating Frequency	50Hz
Maximum Load	350W @ 240V~ 300W @ 220V~ Derate for multi-gang applications (refer to table on page 9)
Minimum Load	10W
Dimming Technique	Leading Edge / Trailing Edge Phase Control (dynamically auto-selected)
Compatible Loads	 Incandescent Lighting Halogen 240V 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 (Expecting 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	

## 11.0 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**

**clipsal.com**

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

**National Customer Care Enquiries:**

**Tel 1300 2025 25**

**Fax 1300 2025 56**

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.

© 2013 Schneider Electric. All Rights Reserved.

Trademarks are owned by Schneider Electric Industries SAS or its affiliated companies.