Compact Fluorescent Dimmer

32E2CFLD Series

Installation Instructions

REGISTERED DESIGN • REGISTERED PATENT
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Disclaimer
Clipsal Australia Pty Ltd reserves the right to change specifications or designs described in this manual without notice and without obligation.
1.0 Product Range

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>32E2CFLDM</td>
<td>CFL Dimmer, 220-240V~, 50Hz, 300W (30 Series Mechanism)</td>
</tr>
<tr>
<td>32E2CFLD</td>
<td>CFL Dimmer, 220-240V~, 50Hz, 300W (Standard Range)</td>
</tr>
<tr>
<td>2032E2CFLD</td>
<td>CFL Dimmer, 220-240V~, 50Hz, 300W (2000 Series)</td>
</tr>
<tr>
<td>C2032E2CFLD</td>
<td>CFL Dimmer, 220-240V~, 50Hz, 300W (Classic Series)</td>
</tr>
<tr>
<td>SC2032E2CFLD</td>
<td>CFL Dimmer, 220-240V~, 50Hz, 300W (Slimline Series)</td>
</tr>
<tr>
<td>SL2032E2CFLD</td>
<td>CFL Dimmer, 220-240V~, 50Hz, 300W (Eclipse Series)</td>
</tr>
<tr>
<td>P2032E2CFLDM</td>
<td>CFL Dimmer, 220-240V~, 50Hz, 300W (Prestige Mechanism)</td>
</tr>
<tr>
<td>P2032E2CFLD</td>
<td>CFL Dimmer, 220-240V~, 50Hz, 300W (Prestige Series)</td>
</tr>
<tr>
<td>1920E2CFLDM</td>
<td>CFL Dimmer, 220-240V~, 50Hz, 300W (Heritage Mechanism)</td>
</tr>
</tbody>
</table>

*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 32E2CFLD Series Compact Fluorescent Dimmer is a separately switched, modular dimming mechanism rated at 300W, and has been specifically designed for use with dimmable compact fluorescent lamps.

Utilising Clipsal’s patented Trailing Edge Dimming Technology, the Compact Fluorescent Dimmer has been optimised for control of energy efficient lighting, and incorporates a “kick-start” feature, intended to ignite the lamp and overcome CFL lamp strike limitations commonly experienced with traditional dimmers.

Offering considerable flexibility, the CFL Dimmer may also be used to control other types of loads, including incandescent lamps, 240V halogen or dichroic lamps, low voltage lighting using iron-core or electronic transformers.

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

3.0 Features

- Separately switched modular dimming mechanism
- 300W power rating
- Compatible with Dimmable CFL loads
- “Kick-start” operation to ensure lamp ignites
- Suitable for a wide range of other load types:
  - Incandescent (tungsten filament) lamps 300W
  - 240V halogen / dichroic Lamps 300W
  - Low voltage downlights using electronic transformers 300W
  - Low voltage downlights using iron-core transformers 200W
- 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
- Inbuilt overcurrent and overtemperature 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

Please note that the 32E2CFLD 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 32E2CFLD Series Dimmer is a part of the C-Thru® Dimmer range. Each dimmer mechanism is colour coded to indicate load compatibility.

<table>
<thead>
<tr>
<th>LOAD SYMBOL</th>
<th>COMPATIBLE LOADS</th>
<th>C-THRU COLOUR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TRANS - GREY</td>
</tr>
<tr>
<td></td>
<td></td>
<td>COMPACT FLUORESCENT DIMMER</td>
</tr>
<tr>
<td></td>
<td></td>
<td>300W</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Dimmable Compact Fluorescent Lamps - Self-Ballasted CFL Lamps - Separately Ballasted PL Lamps</td>
<td>✓</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Dimmable LED Lighting</td>
<td>✓</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Incandescent Lighting Halogen / Dichroic 240V Lamps</td>
<td>✓</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Low Voltage Halogen / Dichroic Lighting with Electronic Transformers</td>
<td>✓</td>
</tr>
<tr>
<td>![Symbol]</td>
<td>Low Voltage Halogen / Dichroic Lighting with Iron-Core Transformers (Maximum Load 200W)</td>
<td>✓</td>
</tr>
</tbody>
</table>

IMPORTANT NOTES:
- Use only “Dimmable” CFL/PL/LED lamp types, compatible with phase control dimmers.
- Dimming performance may vary between lamp manufacturers.
- Some lamps may exhibit unexpected performance characteristics when cold. Dimming performance should improve once the lamp warms up.
- The maximum load rating is specified at 240V~, 25°C. Operation from elevated voltages or temperatures may cause the thermal protection circuitry to operate. Reduce the size of the connected load or use a different brand of lamp to prevent reoccurrence.
- 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 load or use a different brand lamp to prevent re-occurrence.
- 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.
- Use only iron-core transformers compatible with electronic switches / phase controlled dimmers as recommended by the manufacturer.
- Mixed load types are permitted, though not recommended. Test thoroughly to ensure normal operation throughout the dimming range. Use at own risk.
- It is recommended that when using electronic transformers, each is loaded to at least 75% of its maximum rated load. This reduces the possibility of lamp flicker when dimming. Refer to the manufacturer’s specifications for the transformer being used.

5.0 Incompatible Loads

This dimmer is not compatible for use with non-dimmable linear or 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 Australia.
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 diagrams shown over the page.
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 Kick-Start Feature
The CFL Dimmer unit incorporates a “kick-start” feature to ensure that the CFL lamp ignites correctly. When necessary, the unit will kick-start to approximately 70% of maximum output brightness at turn on before smoothly ramping to the set brightness level.

NOTE:
When the dimmer is connected to other load types, the user may notice a brief “flash” at start-up. This will occur only when the set brightness is low at the time of turn on, and is a normal characteristic of the dimmer.

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 32E2CFLD Series Dimmers are multi-ganged, derate the maximum load rating of the unit according to the derating table shown at right.

<table>
<thead>
<tr>
<th>Number of Dimmers</th>
<th>Maximum Load per Dimmer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>300W</td>
</tr>
<tr>
<td>2</td>
<td>200W</td>
</tr>
<tr>
<td>3</td>
<td>150W</td>
</tr>
</tbody>
</table>

6.5 Thermal Overload Protection Circuitry
The 32E2CFLD 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.
6.6 Short Circuit Protection

The 32E2CFLD 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 Diagrams

7.1 1-Way Operation

7.2 2-Way Operation

NOTES:
• 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.

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Operating Voltage</td>
<td>220 - 240V(^\sim)</td>
</tr>
<tr>
<td>Nominal Operating Frequency</td>
<td>50 Hz</td>
</tr>
<tr>
<td>Maximum Load</td>
<td>300W Derate for multi-gang applications</td>
</tr>
<tr>
<td>Minimum Load</td>
<td>5W</td>
</tr>
<tr>
<td>Dimming Technique</td>
<td>Trailing Edge Phase Angle Control</td>
</tr>
<tr>
<td>Compatible Loads</td>
<td>Dimmable Compact Fluorescent Lamps</td>
</tr>
<tr>
<td></td>
<td>Dimmable LED Lighting</td>
</tr>
<tr>
<td></td>
<td>Incandescent Lighting</td>
</tr>
<tr>
<td></td>
<td>Halogen 240V Lamps</td>
</tr>
<tr>
<td></td>
<td>Low Voltage Lighting with Electronic</td>
</tr>
<tr>
<td></td>
<td>Transformers</td>
</tr>
<tr>
<td></td>
<td>Low Voltage Lighting with Iron-Core</td>
</tr>
<tr>
<td></td>
<td>Transformers (Maximum Load 200W)</td>
</tr>
<tr>
<td>Incompatible Loads</td>
<td>Non-Dimmable Fluorescent / Compact</td>
</tr>
<tr>
<td></td>
<td>Fluorescent Lighting</td>
</tr>
<tr>
<td></td>
<td>Small Motor Loads</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>0 to 45°C</td>
</tr>
<tr>
<td>Operating Humidity Range</td>
<td>10 to 90% R.H.</td>
</tr>
<tr>
<td>Mounting Centres</td>
<td>84mm Australian Pattern Plate</td>
</tr>
<tr>
<td>Shipping Weight</td>
<td>25g Dimmer Mechanism Only</td>
</tr>
<tr>
<td>Safety Compliances</td>
<td>AS/NZS3100, IEC60669-2-1</td>
</tr>
<tr>
<td>EMC Emission Compliance</td>
<td>AS/NZS CISPR15:2002</td>
</tr>
</tbody>
</table>

Specifications Typical @ 240V\(^\sim\), 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 re-occurrence.
### 9.0 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 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. 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.