



# Remote Control Light Dimmers

## Cats 1000ERC & 2000ERC Series

Specification:	1000ERC	2000ERC
(at 25°C)		
Supply voltage:	230-240Vac	230-240Vac
Frequency:	50Hz	50Hz
Max load at 25°C:	1000VA (i.e. 1000W incandescent, 1000VA fluorescent, 1000VA fan motor, 800W dichroic with wire wound transformer)	2000VA (i.e. 2000W incandescent, 2000VA fluorescent, 2000VA fan motor, 1600W dichroic with wire wound transformer)
Min load:	75VA (0.3A)	75VA (0.3A)
Approval no:	CS7298N	CS7298N

### Features:

The HPM Cats 1000ERC and 2000ERC dimmers are designed for applications where reliability and performance are important. It allows remote mounting of the main control unit, while having only two switches and one potentiometer on the switch plate. All dimmers can be used to control incandescent, fluorescent, or low voltage halogen (dichroic) lighting loads, however the effective VA rating must be observed when used on fluorescent loads. (See Table 1, PTO). These units, which comply with the highest standards of quality and workmanship, also feature:

- A conservatively-rated 'Triac' solid state switch, mounted on a large heat sink to ensure reliable operation.
- A resettable circuit breaker to provide over-current protection.
- A minimum preset adjustment control to enable minimum light levels to be preset.
- Effective filtering to minimise radio frequency interference.

### Installation

The dimmer unit is in a surface mounting enclosure complete with terminal cover. (Size: 100mm W; 45mm H; 190mm L, with Ø4mm mounting holes.) The remote control assembly is mounted on a Cat 770/3 plate, consisting of an ON/OFF switch, BYPASS switch and a control potentiometer. The mechanism will also mount SQ and XL range plates and grids as well as HPM Multigang panels.

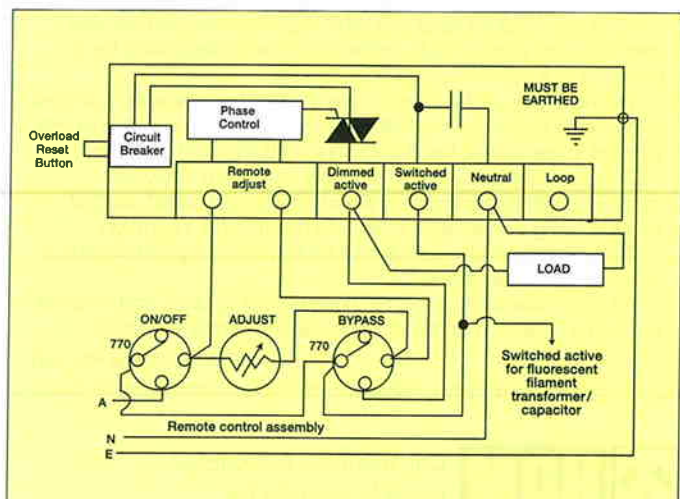


Fig 1. One-way wiring diagram

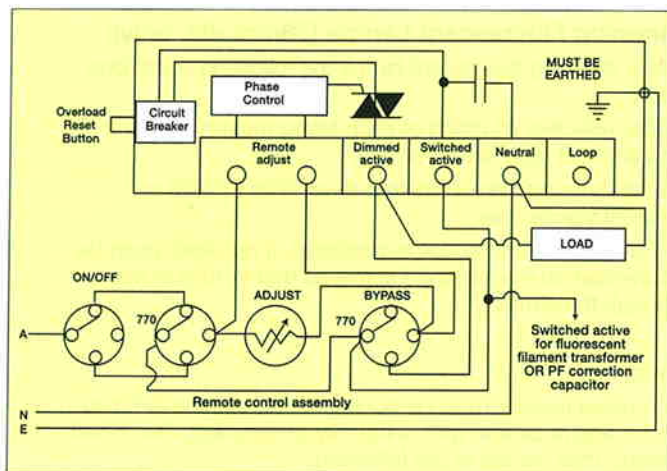


Fig 2. Two-way wiring diagram

Globes mounted with base down can produce high current through the dimmer if filaments fall across lead in wires. This does not occur if lamps are mounted normally with base up.

Dimmer units must not be mounted under insulation, and dimmer units mounted in enclosures must be either derated or adequately ventilated. Units must be derated when above their rated temperature up to their limit of 75°C max. Derate 2% for every 1°C above 25°C.

Account must also be taken of adjacent heat producing sources such as other dimmers etc.

All HPM dimmers have filters for radio frequency interference suppression, but care must still be taken to ensure that wiring between the dimmer and load is distanced from electronic equipment and aerial inputs.

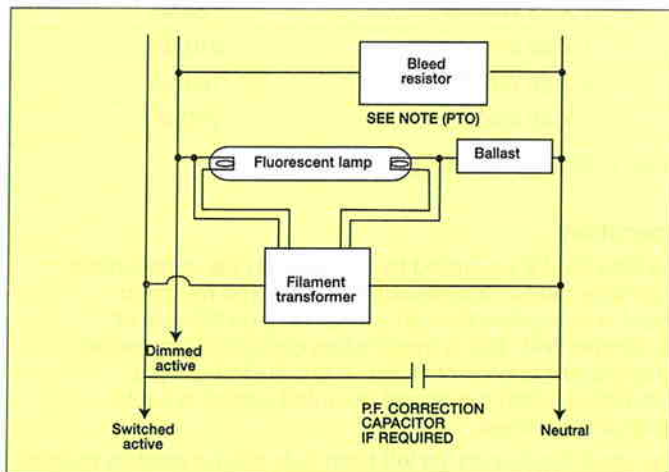


Fig 3. Fluorescent: filament transformer circuit

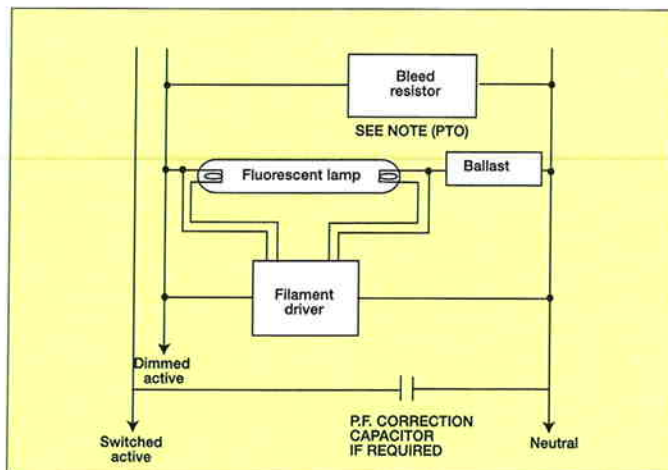


Fig 4. Fluorescent: filament driver circuit

### Dimming Fluorescent Lamps (38mm dia. only):

When dimming fluorescent lamps the following conditions apply:

- The effective VA rating of each fitting must be taken into account (See Table 1, PTO).
- Each tube requires a filament driver (Cat FD238) or filament transformer.
- Power factor correction capacitor(s), if required, must be connected on the switched active so that in-rush is not through the dimmer.

#### Note:

- A bleed resistor must be connected across the dimmed active and neutral to give uniformity of dimming. This bleed resistor may be any of the following:
  - a) 25 watt 2500Ω resistor.
  - b) 25 watt incandescent lamp.
  - c) Atco LLEC 36/40 - 12 low loss ballast - this is additional to the normal ballast.
- A bleed resistor is not required if a mixture of incandescent and fluorescent lamps are being used, and only one per 8 tubes is required.

**Note: The filament driver cannot dim 25mm (1") fluorescent tubes.**

**P.F. correction capacitor(s) must not be connected to dimmed active, only switched active.**

TUBE SIZE	EFFECTIVE LOAD
1 x 15 WATTS	85VA
1 X 20 WATTS	85VA
1 X 30 WATTS	85VA
1 X 40 WATTS	105VA
1 X 65 WATTS	170 VA
1 X 80 WATTS	210 VA
2 X 20 WATTS	185 VA
2 X 40 WATTS	210VA

Table 1. Effective VA ratings

#### Operation:

The light level is controlled by the knob on the control plate. Clockwise rotation increases brightness. The minimum preset is accessible through a small hole on the side of the dimmer unit. This is useful when controlling fluorescent lighting levels to prevent flicker. It is adjusted using a screwdriver, when the remote mounted control is set to minimum brightness.

The circuit breaker on the left hand side can be reset by pushing in the centre button. Before resetting, the cause of the overload should be found.

**POWER OUTLETS AND OTHER FIXED-WIRE DEVICES MUST BE INSTALLED BY AN ELECTRICAL CONTRACTOR OR SIMILARLY QUALIFIED PERSON**

#### Warranty

HPM Cat 1000ERC and 2000ERC are warranted as here and after appears, against faulty material and/or workmanship for a period of one year from date of purchase.

The obligation of the manufacturer, under this warranty, is limited to servicing and replacing defective parts when the unit is returned to HPM Industries, or the distributors in your state, freight pre-paid.

This warranty becomes void on any unit which has been tampered with or damaged by accident, short circuited, loaded beyond rating or damaged otherwise by improper operation.

The warranty is also conditional on the unit being installed by a licensed electrical contractor.

All other warranties, whether expressed or implied, and whether arising by operation of law or otherwise are hereby excluded.

HPM Industries Pty. Ltd.



Cat 1000ERC & 2000ERC  
Made in Australia by  
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