

# The Power of Illumination



C-MAC | Energy Systems | [www.cmac.com/energy](http://www.cmac.com/energy)

## Nuance II and III

Rapid start electronic ballast  
for dimming and step dimming



Teamwork, Technology and Trust™

## CERTIFICATIONS

- FCC part 15, subpart C
- CSA C22.2 no. 74 on electronic ballast for 120 Volts, 277 Volts & 347 Volts models
- UL 935 on electronic ballast for 120 Volts & 277 Volts models

## PERFORMANCES

- **Energy saving of 40 to 70 %**
- Rapid start
- Total harmonic distortion < 7%
- Current crest factor < 1.5
- Flicker-free
- For F32T8, F25T8, F17T8 lamps
- Available for 120, 277 or 347 Volts
- Ballast efficiency factor of 1.49 max
- System efficiency (typical) >85 Lumens/Watt
- High power factor
- Inherent thermal protection
- Minimum starting temperature : 32 °F

## NUANCE II / Maximum Intensity Settings

MODEL NO.	INPUT	NUMBER OF LAMPS	CONTROL TYPE	CASING
NU 2	1 = 120 VOLTS AC 2 = 277 VOLTS AC 3 = 347 VOLTS AC	1 = 1 LAMP* 2 = 2 LAMPS	SEE TABLE 1	G = PLUG-IN CONNECTOR

\*DESIGN IN PROCESS

E X . : N U 2 - 1 2 - A G

**INTENSITY STEPS : 20% - 50% - 75% - 100 %**

VOLTS	AMP, MAX	B.F.				WATTS (TOTAL)			
		ADJUSTABLE LIGHT LEVELS							
		LOW	MIN	MED	MAX	LOW	MIN	MED	MAX
120	.53	.20	.50	.75	0.99	28	40	50	64
277	.23	.20	.50	.75	0.99	28	40	50	64
120	.18	.20	.50	.75	0.99	28	40	50	64

### OPTION : Wire Kit

Wire kits are mainly used to connect ballast to new lighting fixture installation.

## TABLE 1

X = STANDARD  
 A = 24 VOLTS CONTROL AC/DC ON/OFF REMAIN TYPE  
 B = 24 VOLTS CONTROL AC/DC HI/LOW REMAIN TYPE  
 C = 24 VOLTS CONTROL ON/OFF, 2 WIRES PULSE TYPE  
 D = 24 VOLTS CONTROL ON/OFF, 3 WIRES PULSE TYPE  
 E = TYPE B + TYPE A  
 F = TYPE B + TYPE C  
 G = TYPE B + TYPE D

- Nuance II ballasts for 24 V controls are compatible with all occupancy detectors.

# NUANCE III / 0-10 V Dimming Ballast

MODEL NO.	INPUT	NUMBER OF LAMPS	CONTROL TYPE	CASING
NU 3	1 = 120 VOLTS AC 2 = 277 VOLTS AC 3 = 347 VOLTS AC	2 = 2 LAMPS	SEE TABLE 2	G = PLUG-IN CONNECTOR

E X . : N U 3 - 1 2 - A G

**INTENSITY RANGE : 20% - 100 %**

## OPTION : Wire Kit

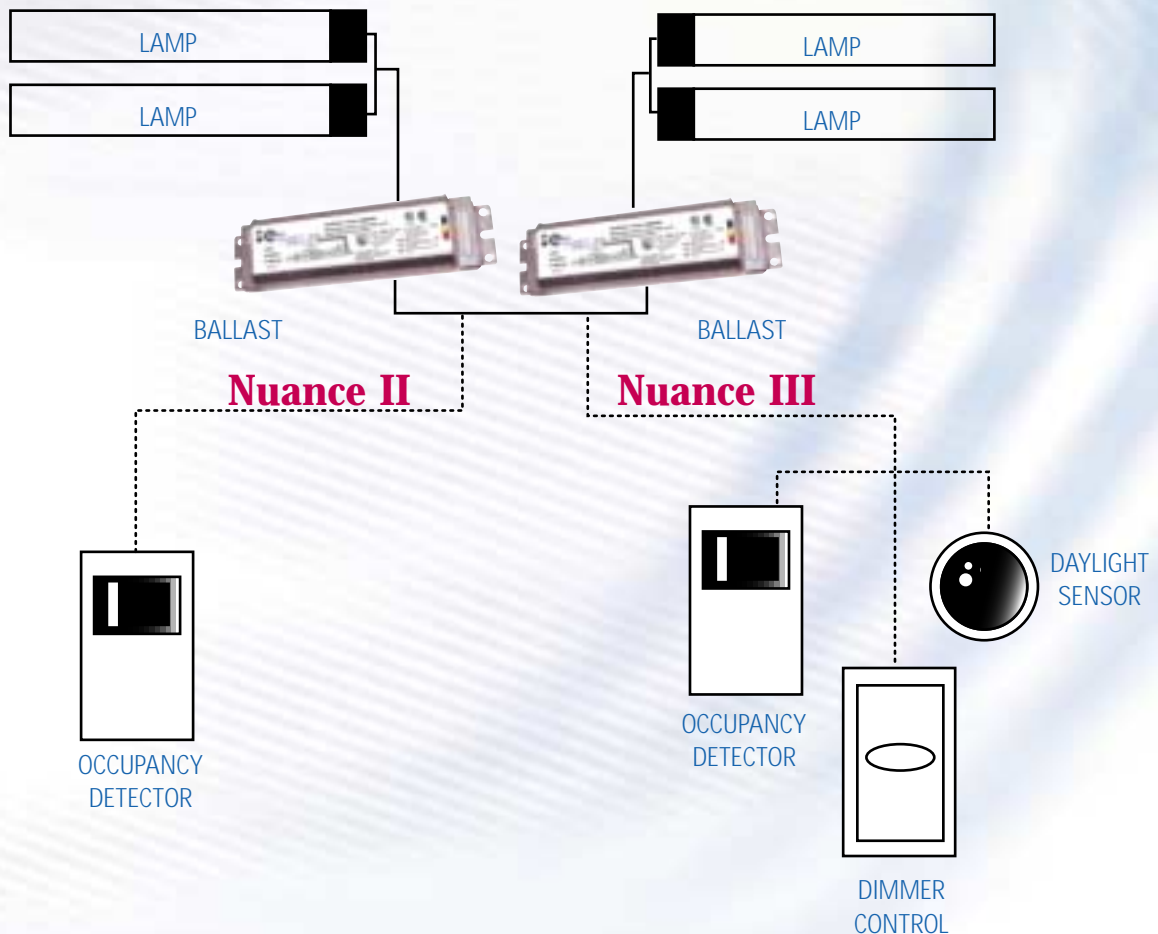
Wire kits are mainly used to connect ballast to new lighting fixture installation.

VOLTS	AMP, MAX	B.F.		WATTS (TOTAL)			
		ADJUSTABLE LIGHT LEVELS					
		LOW		MAX	LOW		MAX
120	.53	.20		0.99	28		64
277	.23	.20		0.99	28		64
120	.18	.20		0.99	28		64

- Nuance III ballasts are compatible with all 0-10V dimmers and daylight sensors.
- In addition, ballasts for 24 V controls are

## TABLE 2

X = STANDARD  
 A = 24 VOLTS CONTROL AC/DC ON/OFF REMAIN TYPE  
 C = 24 VOLTS CONTROL ON/OFF, 2 WIRES PULSE TYPE  
 D = 24 VOLTS CONTROL ON/OFF, 3 WIRES PULSE TYPE



## INSTALLATION METHOD:

- A. Must utilize #18 AWG solid copper wire of 1 cm/ 3/8 of an inch in length.  
Should the connector be damaged due to utilization of wrong type of wire, reimbursement of unit will not be honored.
- B. Be sure to always connect ground wire first.  
Verify suggested operation voltage on the label to ensure that you are using the correct voltage ;  
otherwise, damaged product will not be reimbursed.
- C. Verify that intensity jumper is in desired position.
- D. Use T8 tubes, make sure that lamp connectors are bipolar (two insulated contacts).
- E. Power up ballast only after all hookups such as lamps, dimmer and power have been made. This measure is necessary to reduce risk of shock and/or damage to the ballast.

## PROBLEM:

### *Light won't come on.*

- Verify that ballast is grounded and power connected.
- Verify that wires are connected in accordance with recommendations.
- Make sure that lamp connections are in good working order.

### *Lamp does not operate steadily and flickers at 10 second interval*

- Verify that lamp is in good condition and conform to ballast specifications.
- Verify lamp's wire connection.
- Verify that all connections to lamp and ballast are secured.

Note : All ballast models come equipped with a circuit detecting incorrect connection of lamps. Once this circuit becomes operational, the ballast enters interruption mode. This mode consists of making lighting attempts every 10 seconds.

## MAINTENANCE:

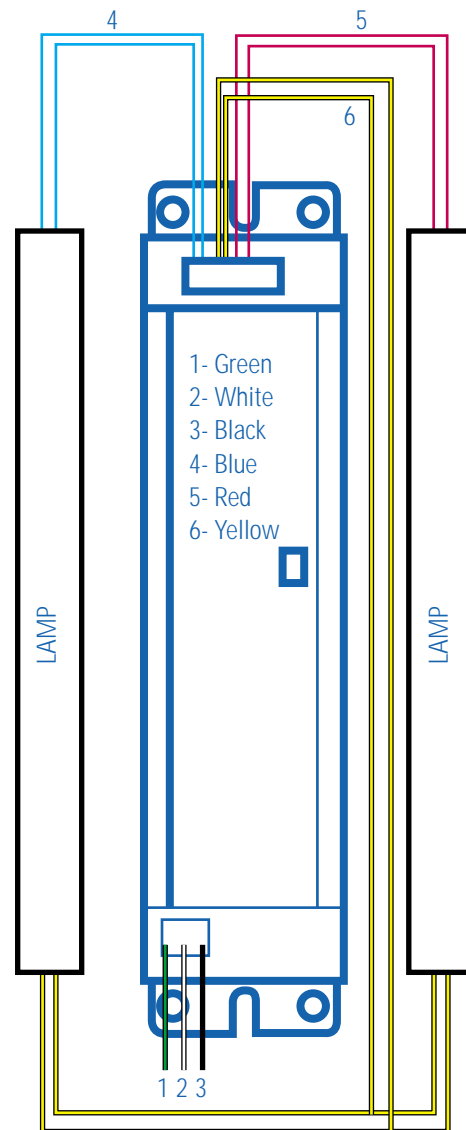
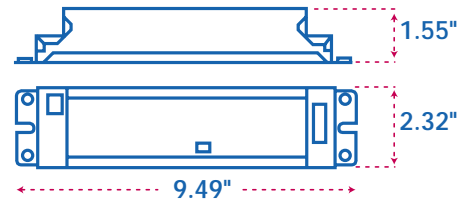
We suggest that you verify the status of the lamps daily to avoid leaving the ballast in interruption mode. This could deteriorate the ballast and the other lamp prematurely.

## WARRANTY:

5 years from delivery date for:

**Nuance II and III**

## WIRING DIAGRAM



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