

# Light Dimming Module Kits

*P/N 603-0400, 603-0410, and 603-0420*

The Copeland Light Dimming Module is used to control light dimming ballast(s). The module is approximately 3" x 5" and uses a single 0-10VDC analog output from a MultiFlex board. The input and output voltages are listed in the following table:

Board Input (MultiFlex)	Board Output (Light Ballast)	Light Condition
0 VDC	0 VDC	Full Dim
10 VDC	10 VDC	Full Bright

The module has a proof output. The proof output is connected to a NC relay output. If proofing is used, the output should be connected to any available analog input on a MultiFlex board. The dip switch for the analog input should be ON.

For ordering information, refer to the table below:

Part Number	Description
<b>603-0400</b>	The module kit includes the dimming board, Snap-Track, signal isolator, connectors, 56 VA transformer, and this instruction sheet.
<b>603-0410</b>	The module kit includes the dimming board, Snap-Track, connectors, 56 VA transformer, and this instruction sheet. The 603-0410 module kit <u>does not</u> include the signal isolator.
<b>603-0420</b>	The module kit includes the dimming board, Snap-Track, connectors, and this instruction sheet. The 603-0420 module kit <u>does not</u> include a 56 VA transformer.

# Installation

The Light Dimming Module can be installed in any orientation. The module includes a Snap-Track. The Snap-Track should be mounted in a standard enclosure. The module requires 12VAC. **Connecting the power input to the AC1 and AC2 side of a standard 24V transformer will damage the module.** A center-tap 24V transformer should be used to power the module as shown in the wiring diagram (Figure 1 - Sensor Wiring Diagram). The dimmer module must be powered using a separate transformer. Do not connect other devices to the same transformer where the dimmer module is connected. Only one dimmer module can be connected to a single 56VA transformer.

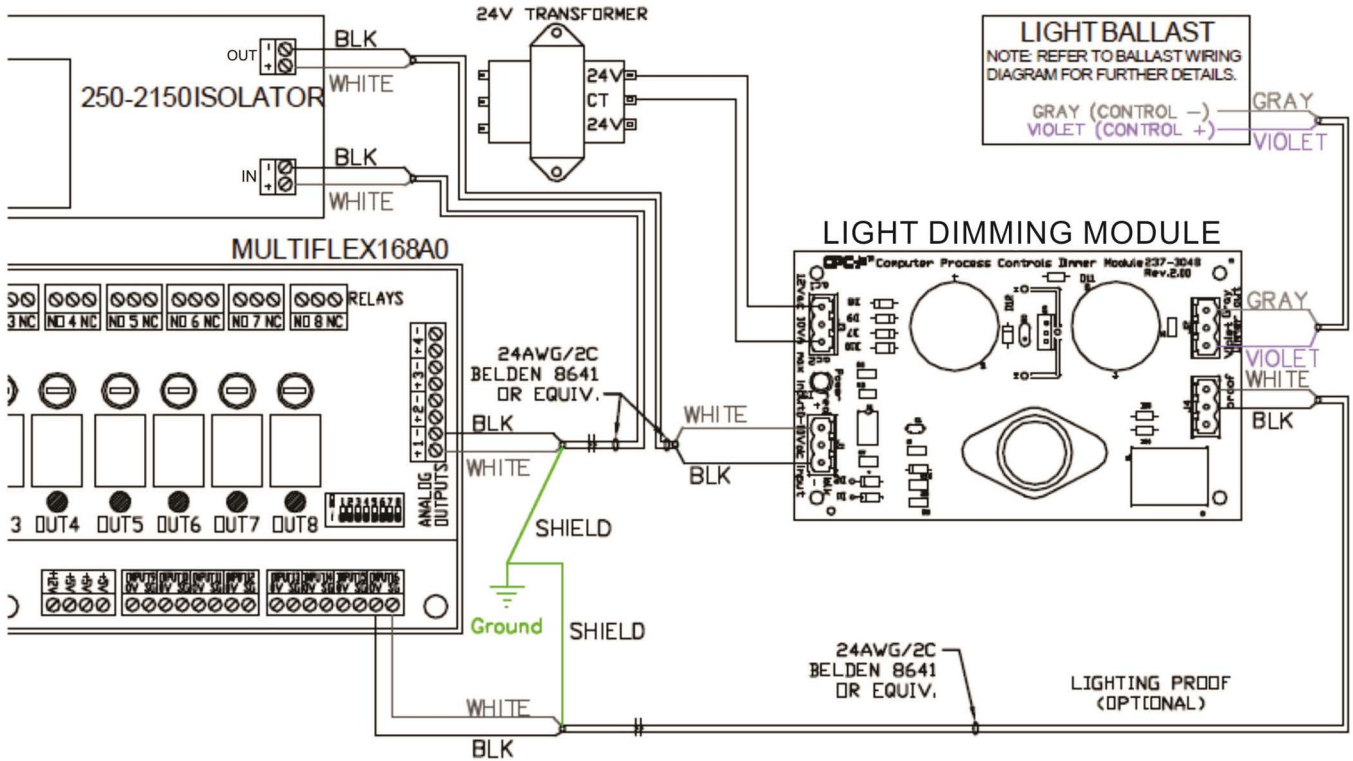


Figure 1 - Sensor Wiring Diagram

# Programming

- The Light Dimming Module is configured in a Lighting Control application on BX and CX models of E2.
- The E2/E2E software must be 3.08F01/4.08F01 or later.
- A light level sensor is required to control the light dimming.

Program the Lighting Application normally. Then, make the following additional programming changes:

1. Press **Log In/Out** and log in to the E2 with Level 4 access.
2. Press **F2** to view the **Lighting Summary** screen. If a list of Lighting Control applications appears, highlight the one you wish to edit and press **Enter**, then select **F5 : SETUP** to view the **C1:Setup** screen.

- If proofing is desired, change the **Enable Proofing** field to **Yes**. Change **Enable Dimming** field to **Yes**.

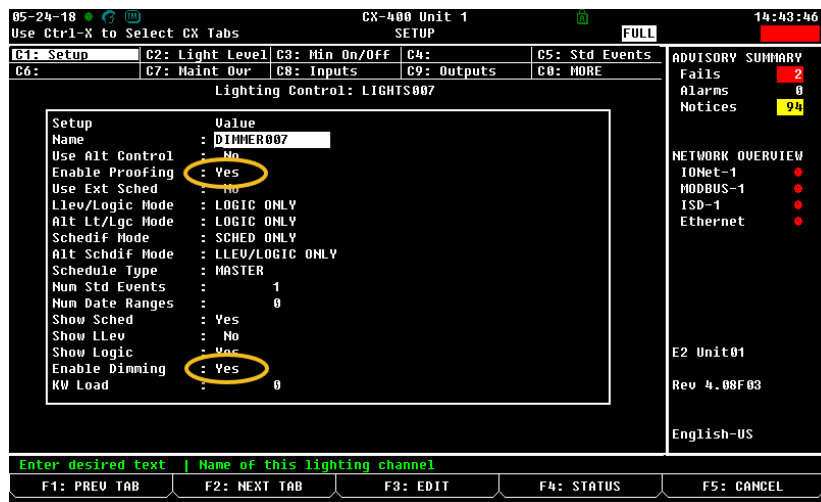


Figure 2 - Setup Screen

- Press **F2** to view the **C2: Light Level** screen.
- Set the values encircled in [Figure 3 - Light Level Screen](#) based on the desired lighting operation.
  - Dim Upper %**: Light output percent at Dim LL @ Upper % light level.
  - Dim LL @ Upper %**: Light level for Dim Upper % output.
  - Dim Lower %**: Light output percent at Dim LL @ Lower % light level.
  - Dim LL @ Lower %**: Light level for Dim Lower % output.
  - Dim Ramp Speed**: Ramp speed in percent change per minute.
  - Dim Fail %**: Light level output if light level sensor fails.

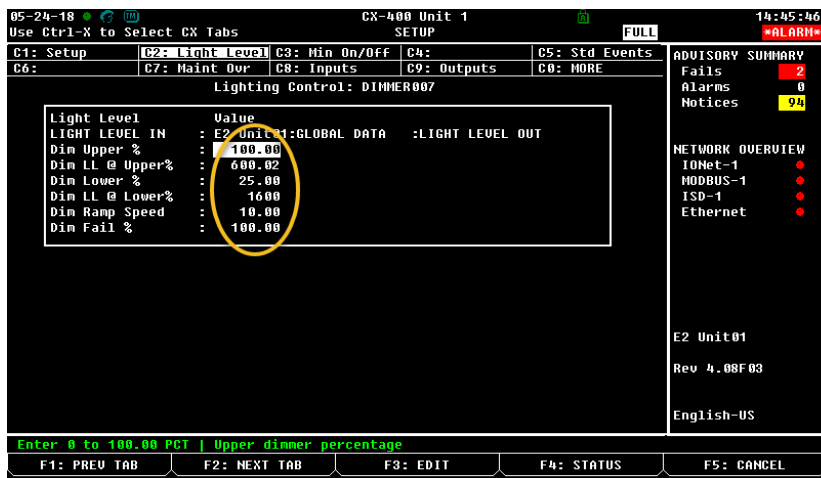


Figure 3 - Light Level Screen

- Press **Ctrl** + **9** to view the **C9: Outputs** screen.

- Assign the **Dimmer %** output to the MultiFlex Analog Output connected to the dimmer module.

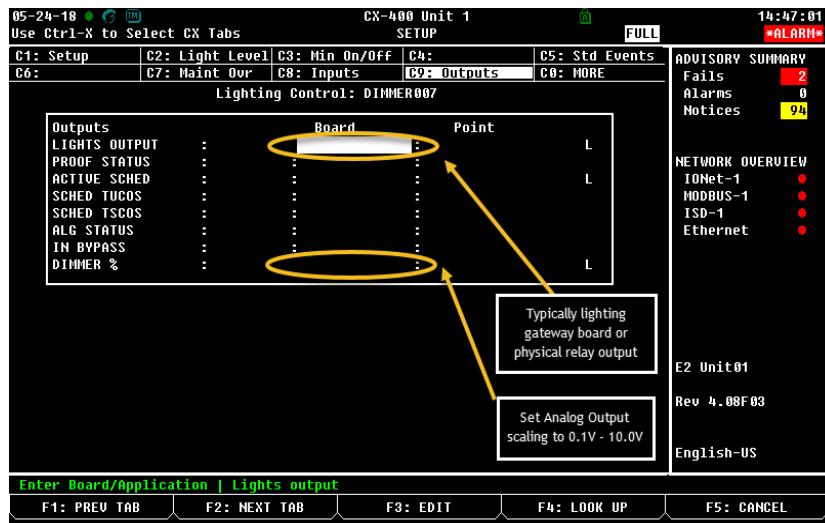


Figure 4 - Outputs Screen

- Press **F2** to view the **C0: More** screen.
- Change the **Proof Type** to **ON Only**.
- Assign the **Proof IN** input to the MultiFlex Analog Input connected to the dimmer module.

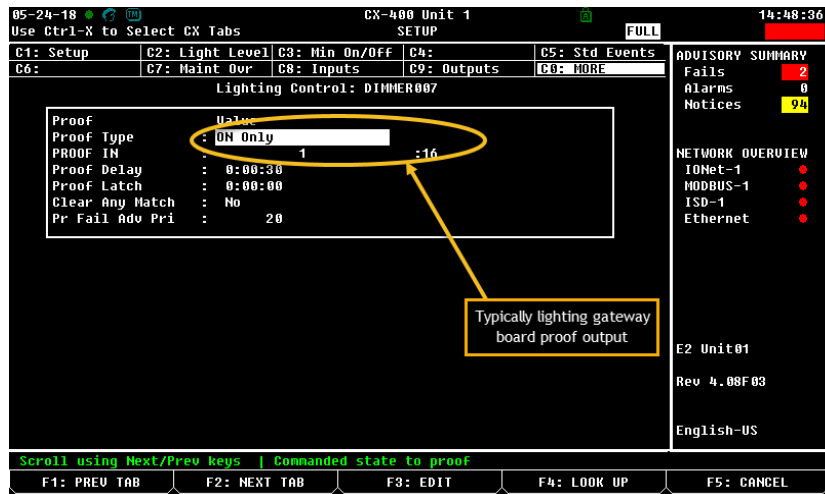


Figure 5 - C0: More Screen

## Application Notes

- Typically, the physical proof output from the Light Dimming Module is used as an alarm from a Digital Sensor Control application in the E2 controller. A delay of 5 minutes is recommended to minimize nuisance alarms.
- The isolator provides electrical isolation between the ballasts and the Light Dimming Module. The isolator separates the ground on the control wire from the Copeland input board. It is highly recommended that the signal isolator be used in all applications to prevent grounding issues with the lighting fixtures and the 4AO (-).

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