

Guide to dimming NIPPO seamlessline™ ballasts and lamps.

Overview

Lutron controls work with NIPPO dimming ballasts for NIPPO *seamlessline* lamps. This guide provides answers to typical questions encountered by Lutron's Technical Assistance and Applications personnel. The following lists the various control options and required NIPPO fixture configurations.

CONTROL DEVICE



OPTION



FIXTURE



*NOTE: DC-PWM converter may be remote mounted.

The following are three options for various configurations of Lutron controls and NIPPO ballasts.

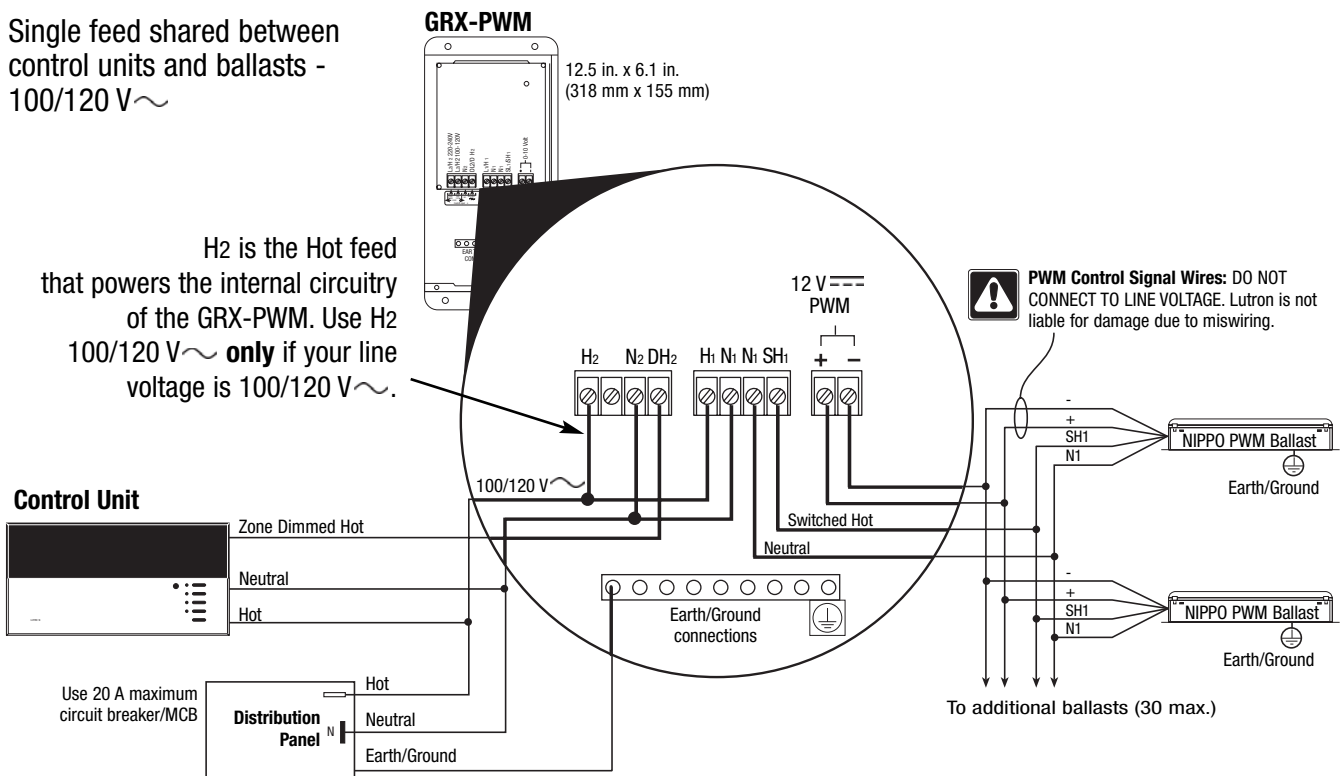
Option 1 - GRX-PWM

The GRX-PWM interface converts a phase control input signal into a high-current PWM output signal (400 mA, 12 VDC, 1 kHz). It also contains 1,000,000 cycle Softswitch technology rated at 16 A for switching a full "20 A" circuit of ballasts. It can be wired directly to the ballast.

Compatible with: GRAFIK Eye 3000 and GRAFIK Eye QS control units, Lutron GP, LP, CCP, LCP and Homeworks panels.

Wiring Diagram - LUTRON GRAFIK Eye® 3000/QS with GRX-PWM (shared feed):

Single feed shared between control units and ballasts - 100/120 V ~

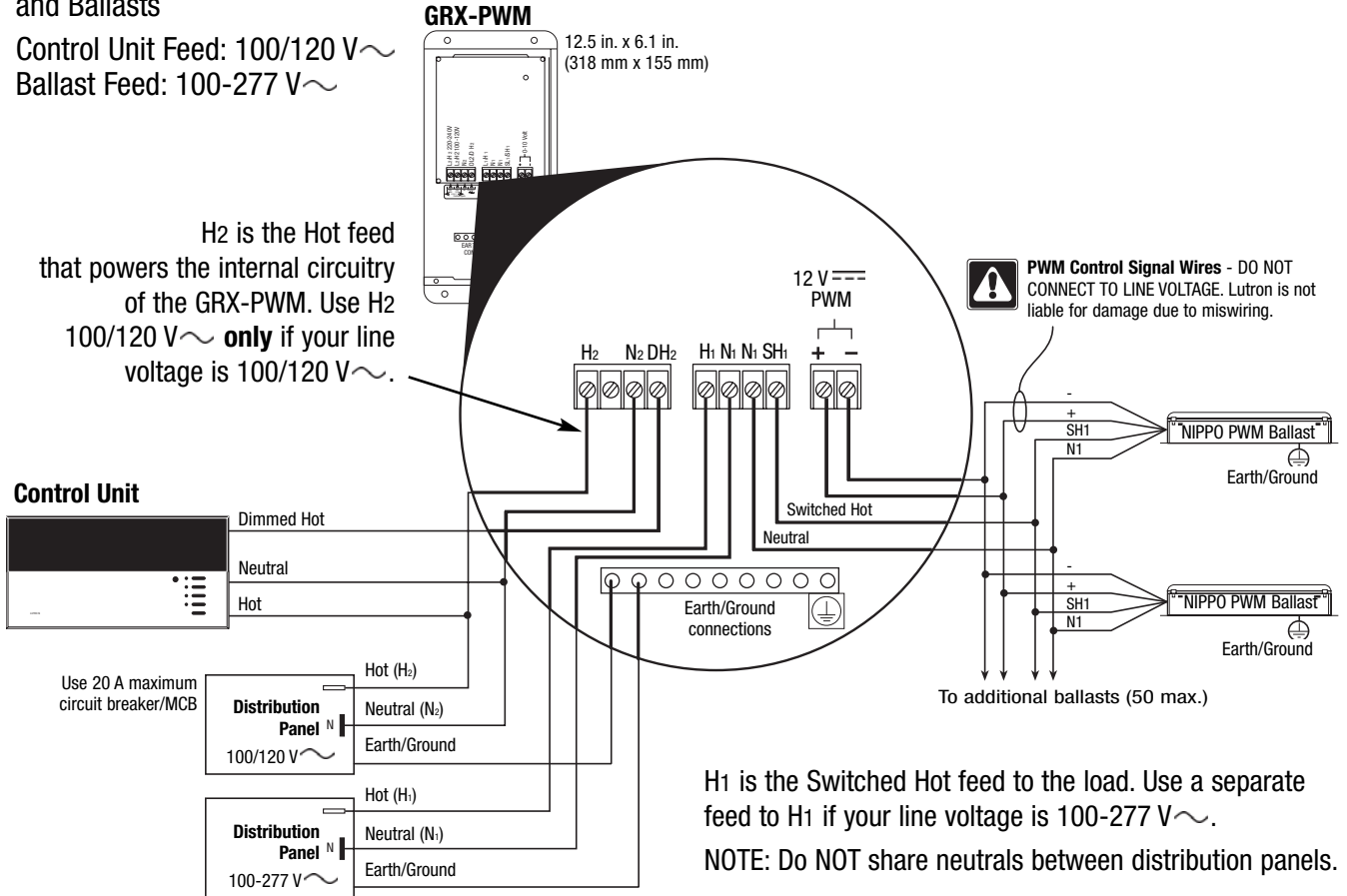


Need additional assistance? Call the Lutron Technical Support Center +1-800-523-9466. Please provide exact model number when calling.

Wiring Diagram - LUTRON GRAFIK Eye® 3000/QS with GRX-PWM (separate feeds):

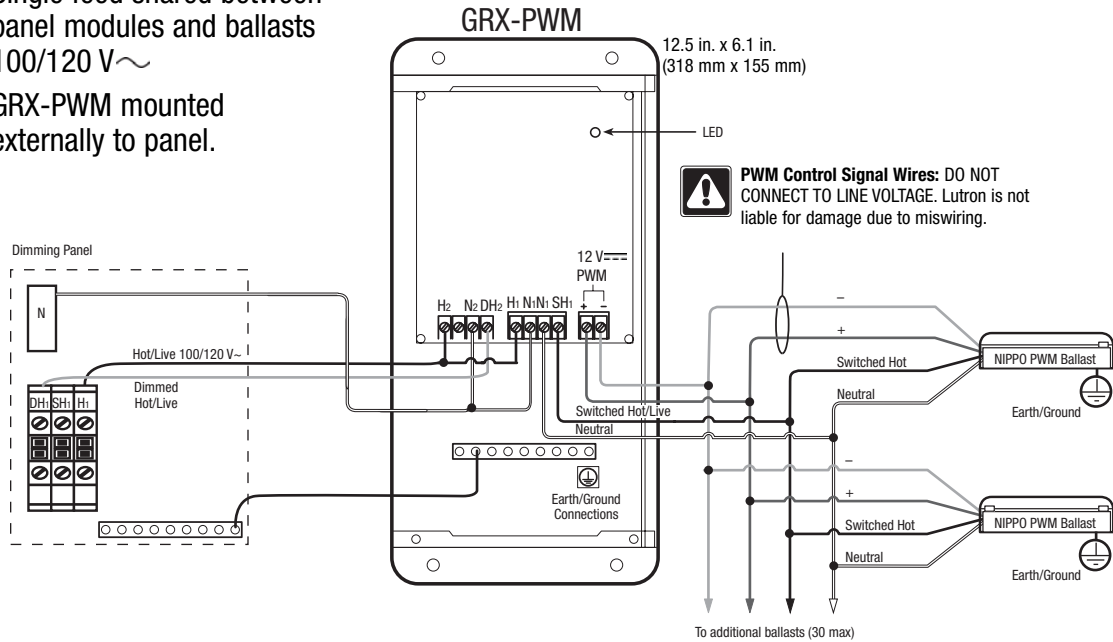
Separate feeds for Control Unit and Ballasts

Control Unit Feed: 100/120 V~
Ballast Feed: 100-277 V~



Wiring Diagram - Lutron GP Panels with GRX-PWM (shared feed):

- Single feed shared between panel modules and ballasts 100/120 V~
- GRX-PWM mounted externally to panel.



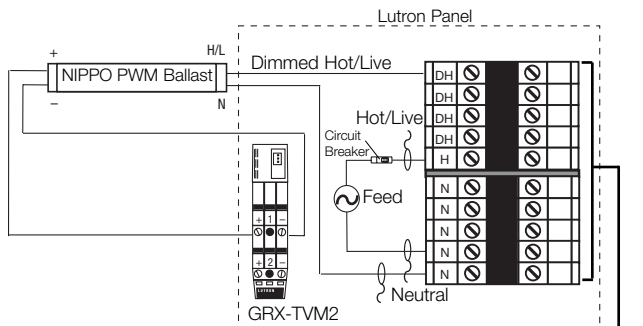
Option 2 - GRX-TVM2*

The GRX-TVM2 interface is mounted within a dimmer panel. It has 2 output channels that can each provide a variety of control signal outputs, including a PWM and a 0-10 V output. **It has a lower current limit of 50 mA per channel** on the control signal wires. This option is useful for a large number of **small** circuits of NIPPO ballasts due to the current limit. It also requires an available channel on a line-voltage module to provide the line-voltage switching capability for the ballast. When used as a PWM output, this does not require a DC-PWM converter. However, if a DC-PWM converter is already installed, the load type can be changed so that the GRX-TVM2 provides a 50 mA 0-10 V signal output.

Compatible with: GP, LP, LCP, CCP, XP, XPS Panels and Homeworks.

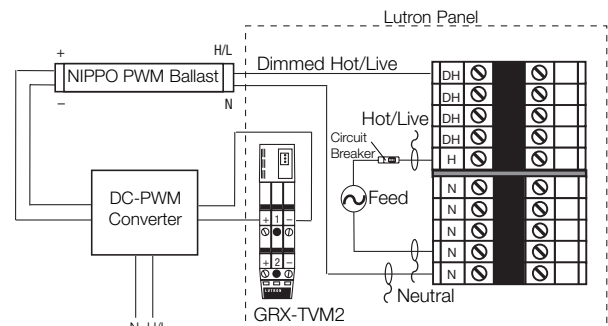
* May not allow for a full circuit of ballasts. Check current draw ratings from manufacturer to determine number of ballasts (50 mA max)

PWM Output



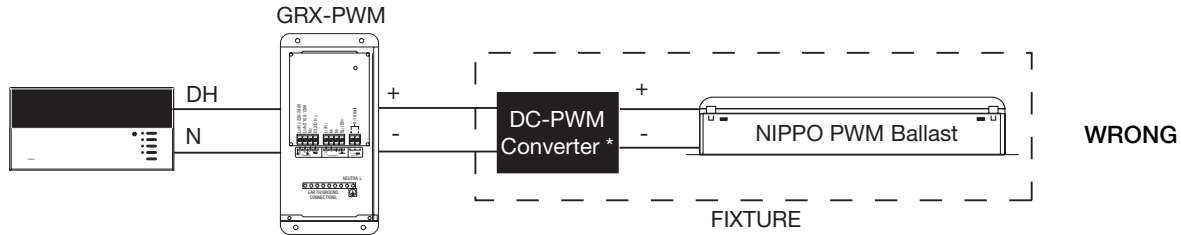
Internal panel wiring to module.
Output of module set to non-dim when used with a TVM.

0-10 V Output



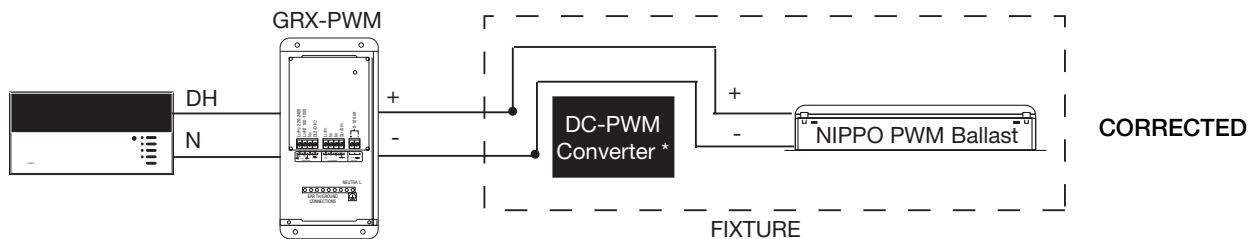
Troubleshooting

The GRX-PWM was designed to work with NIPPO PWM ballasts without additional interfaces. In some instances a GRX-PWM has been installed with a NIPPO fixture that has a built-in DC-PWM converter as shown in the diagram below:



In this configuration, the lighting behavior is reversed. A 'Raise' command causes the lights to become dimmer, while a 'Lower' command makes them brighter.

FIX: Change wiring in the fixture to bypass the DC-PWM converter and instead wire to the GRX-PWM directly to the ballast as shown in the diagram below:



NOTES: If a DC-PWM converter is installed in a fixture that is controlled with a GRX-TVM, the load-type on the GRX-TVM can be changed to a 0-10 V load with no additional wiring changes.

If the fixture cannot be rewired as indicated above, a GRX-TVI may be used to replace the GRX-PWM.

* DC-PWM converter may be remote mounted.

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