ADVANCE

LED DRIVERS

PRODUCT OVERVIEW:

The LED Dimming Controller provides the required dim level to 12 Volt and 24 Volt LED lighting systems enabling flexibility to the user to add their own personal touch to the illumination settings.

As with all of Advance's LED drivers, the new products support such standard features as leaded design, UL and CSA Class 2 rating including inherent short-circuit protection, high power factor, and operation down to –40°C. In addition, the drivers are rated for 50,000+ hours of life and carry Advance's full five-year warranty.

For additional information on LED drivers, please visit us at www.ledcentral.com

Xitanium®

LED Dimming Controller for 12vdc and 24vdc LED Systems

DESIGN HIGHLIGHTS:

- Pulse Width Modulation (PWM) Dimming
  - Provides 0-10V Dimming control
- Power efficiency
  - Optimization of the usage of the total system power
- UL Class 2
  - Designed for use with any 12V or 24V UL Class 2 devices
- UL Outdoor Damp location rated, IP66
  - Fully potted for moisture resistance
- Small, compact size
  - Facilitates new, low-profile fixture design
- Extreme low temperature performance (-40°C)
  - Suitable for any outdoor application
- Generous high temperature capability (+60°C ambient; 80°/90°C case rating)
  - Margin flexibility to facilitate fixture design
- 5-year warranty
  - Peace of mind for your new products and for end-users...from the industry's most trusted component maker
- Powered by Advance
  - Advance is preferred by end-users -- enhance the value of your product

APPLICATIONS:

- *Rough Service Lighting*
- *Landscape Lighting*
- *Channel Letters*
- *Wall Sconces*
- *Orientation/Step Lighting*
- *Contour Lighting*
- *Refrigeration*
- *Architectural Lighting*
- *Edge Lighting*

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www.advancetransformer.com

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LED Dimming Controller Quick Selection Table and Specifications

Selection Guide

Part Number	Description
913710830902	0-10V LED Dimming Controller

Electrical Characteristics

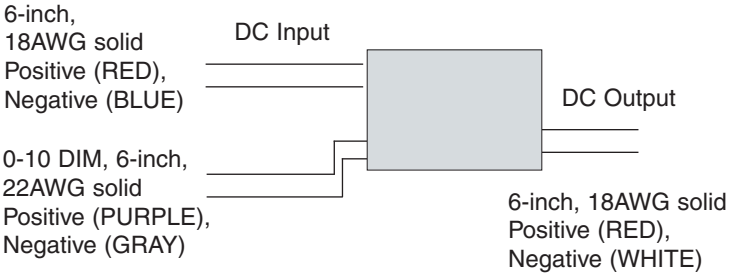
Parameter	Symbol	913710830902	Units
Input Voltage Range	V_{in}	12 – 24	VDC
Efficiency	–	>98% typical	%
Output Current	I_o	5.0 Max.	ADC
Output Voltage	V_o	12.0 - 24.0	VDC
Dimming Control	-	0-10V *(see Technical Requirements)*	–

Notes:
1. Electrical characteristics at 25°C ambient temperature and at full power.

Environmental Ratings

Parameter	Symbol	Minimum	Maximum	Units
Operating Ambient Temperature	T_{op}	-40/-40	+60/+140	°C/°F
Storage Ambient Temperature	T_{st}	-40/-40	+80/+176	°C/°F
Relative Humidity	RH	–	80	%
Lifetime (failures after 50,000 hours)	L_{50K}	–	5	%

Mechanical Dimensions & Wiring Diagram



Technical Requirements for Control Equipment

1. The light output of the LEDs operated by the Dimmable Driver is controlled by DC voltage applied to the control input leads (0-10V DIM purple and gray).
2. The control device must be capable of accepting, or sinking, the DC current flow from the driver. The maximum under any condition is 500 microamps per driver.
3. The control terminals of the driver are isolated from the power lines and are suitable for use as Class II terminals. As many drivers as desired for use with the particular control device may be connected in parallel in a bus configuration. The length of the bus, the wire size of the bus and the number of drivers connected on the bus must be configured so that the DC voltage drop as a function of the resistance of the wire and the control current flowing does not exceed 0.2 volts for dimming controls. For controls used as a minimum/maximum, or hi-lo 2-level application, the maximum DC voltage drop must not exceed 0.5 volt.
4. If the control bus is opened, or if the control device internally opens the control bus under some conditions, the voltage on the control bus will then be a function of the ballast, which is 10V ± 0.5 volt. Maximum light output will be delivered under this condition.
5. If the control bus is shorted either by a mechanical switch in the control or by the circuitry of the control device, or inadvertently in the wiring, the current on the control bus will be 500 microamps per driver maximum. All drivers on the control bus will then operate at minimum light level.
6. As can be determined from the two above items, simple two-level operation of the driver can be achieved by proper usage and application of a simple open/close switch on the control bus with maximum light being achieved when the switch is open and minimum light when the switch is closed.
7. The driver is intended for use with control voltages between 0 (zero) and 10 (ten) VDC. The control equipment must not impose a voltage greater than 11.0-volt peak maximum on the driver control terminals.
8. The DC control voltage should have a maximum peak to peak ripple (low and high frequency ripple) not exceeding 10% of the average VDC. Short-term transient voltage of the control devices must not exceed 14 volts.
9. Control equipment intended to control more than one driver must be capable of sinking the current supplied to the control bus by the maximum number of drivers specified for the control device. At any given level setting it must maintain control bus voltage constant within a range of ±5% as the number of drivers connected to the control bus varies from a minimum of one driver up to the maximum number specified for the control device.
10. Drivers of various ratings (120V, 230V…) may be mixed on the same control system.
11. Since the control bus is Class II wiring, all control devices that are connected to the power line must have proper isolation between the power line and the control leads. Any control devices that are connected to the power line must have UL approval/recognition as Class II equipment.

Please contact Advance at 800-372-3331 if any technical assistance is required.

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