

Dimming Control Panel Product Brief

Four Channel, 0-10V LED/ Fluorescent Dimming Control

Applications

The Dimming Control Panel is intended for commercial applications where a 0-10 VDC signal is required to control the brightness of dimmable fluorescent or LED fixtures/luminaires. It can be standalone or used in conjunction with Lightstat's ALC, ALT or ELC lighting control products.

Description

Lightstat's Dimming Control Panel controls four channels, 0-10V dimming of fluorescent/LED lights in conjunction with, or independent of, Lightstat's lighting control products. Each channel can control multiple fixtures/luminaires up to 100mA and additional control boards can be added to increase the total number of system channels. Interior Light Sensors can be connected to each channel to dim lights based on ambient lighting conditions and an occupancy sensor can be connected to turn lights to their dimmest setting during unoccupied times. This panel, along with properly selected fixtures/luminaires, complies with the lighting regulations of California's 2013 Title 24 Code.

Features

Standard Features:

- Four channels of 0-10VDC output for continuous dimming control (300' max wiring) max 100mA output/channel
- One Interior Light Sensor input per channel for automatic daylighting and light level control (300' max wiring)
- One Remote Interface per channel to adjust light level setpoints and automatic/manual operation selection
- One optional Motion Sensor input for ON/OFF occupancy control (300' max wiring)
- One optional AUX (contact closure) input for factory customization of controls (e.g. demand response input, eStat integration) (300' max wiring)
- Dipswitch control to factory adjust channel response time
- Expandable for additional channels

Operation:

- Continuous dimming operation 0% - 100% (fixture dependent)
- Custom stepped dimming available
- Dim lights automatically in response to changing ambient light levels to maintain desired setpoint illumination
- Adjust setpoint illumination via Remote Interface

- Dim lights manually via Remote Interface
- Dim lights in response to a Demand Response request (optional)
- Occupancy Sensor to reduce lighting to minimum level during unoccupied times (optional)

Standards and Product Compatibility:

- UL 508A and UL 916
- CA Title 24
- Lightstat ALC
- Lightstat ALT
- Lightstat ELC
- Lightstat e-Stat thermostat

Installation Requirements

Wiring:

- Circuit Breaker Panel to Dimming Control Panel (power supply): 120VAC dedicated 20A circuit
- Dimming Control Panel to Light Sensor(s): 18-3 shielded cable, 300' max
- Remote Interface to Dimming Control Panel: 18-4 shielded cable, 300' max
- Motion Sensor to Dimming Control Panel: 18-3 shielded cable, 300' max
- Dimming Control Panel to Fixture/Luminaire, 18-2 shielded cable, 300' max
- Contact closure to AUX input: 18-2 shielded cable, 300' max

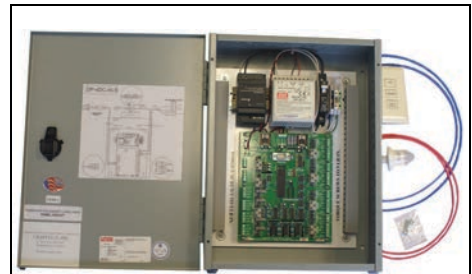
Configuration:

- Configurable to accommodate local building codes
- Dipswitch 1: On = setup; Off = normal operation
- Dipswitch 2 and 3 control dimming response time selection:
DIP 2 Off / DIP 3 Off = Slow
DIP 2 On / DIP 3 Off = Medium
DIP 2 Off / DIP 3 On = Fast
DIP 2 On / DIP 3 On = Fastest
- Multifunction Auxiliary Input, configurable for Demand Response, eStat thermostat interface or custom applications
- Dimming Control: Continuous or Stepped configurations

Calibration:

Easy light level calibration via the remote interface

- Step 1: place remote interface in Manual position for desired channel
- Step 2: use up and down buttons to adjust lights to desired illumination level
- Step 3: place remote interface in Automatic position
- Step 4: repeat steps 1, 2 and 3 for each lighting channel



4-Channel Dimming Control Module for dimmable fluorescent/LED fixtures/luminaires

Electrical Specifications:

General

Voltage Rating 120V AC
Current Draw..... 500mA max
Operating Temperature..... 32 – 158 °F
(0 – 70 °C)
Non-condensing

Each Fixture/Luminaire:

Wiring 18-2 Shielded Cable*
Wiring Distance (Max)..... 300 ft

Each Interior Light Sensor:

Wiring 18-3 Shielded Cable*
Wiring Distance (Max)..... 300 ft

Each Remote Interface:

Wiring 18-4 Shielded Cable*
Wiring Distance (Max)..... 300 ft
*Cable Included with system

Base System

- Enclosure: NEMA1, size varies per application
- Dimming control board
- Internal 24VDC power supply
- 0-10V interior light sensor to measure ambient lighting conditions (up to 4 sensors per board possible)
- 3-conductor, shielded #18AWG to connect interior light sensor
- Remote Interface controller
- 4-conductor, shielded #18AWG to connect Remote Interface
- 2-conductor #18AWG for connecting fixtures/luminaires to board terminals
- Installation and Operation Manual
- Mounting Hardware
- Customized per location, includes engineered drawings for distribution to architects, engineers and installers
- Technical support



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Dimming Control Panel

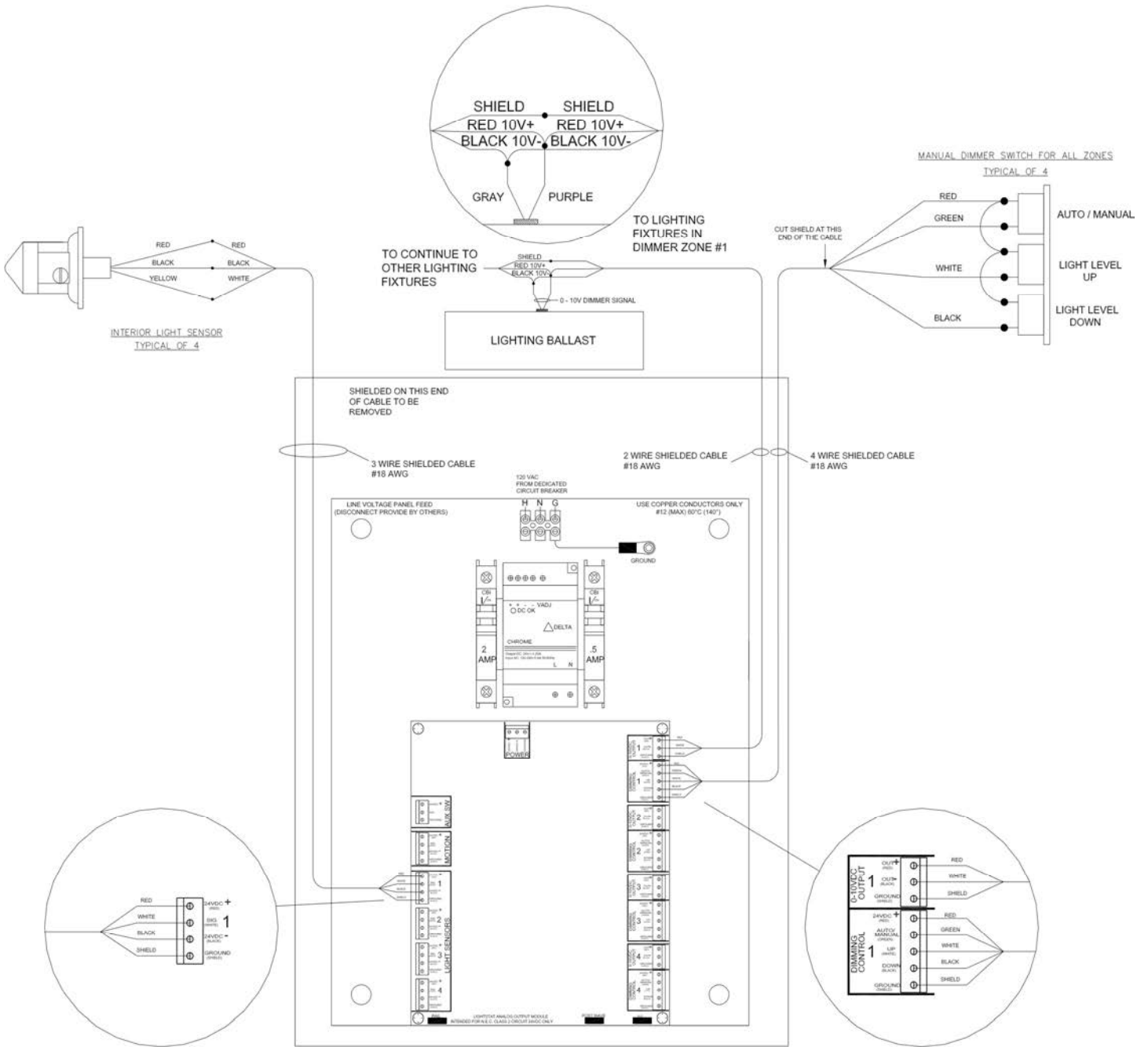


Figure 1. Wiring Schematic