

ILC-450™ Intelligent Lighting Controller

CS-Bus™ LED Controller for Constant Current RGBW or Monochrome Fixture Control

Remote Power/Control for multiple full color (RGBW) or monochrome(W) LED fixtures- flicker- free dimming

Networkable system enables up to 254 CS-Bus Controllers to be connected (per gateway) over a 4000 ft. digital bus

Gamma-corrected Color Output for the smoothest dimming to .001% totally without Flicker



Licensed Technology from Philips Lighting

Din-Rail form factor can be remotely mounted for group fixture control

Sophisticated Programmable Software

Product Description

Background

The Intelligent Lighting Controller (ILC-450™) is an ingenious state-of-the art networkable controller for **constant current** (full color/RGBW or monochrome/W) LED Fixtures. Unlike traditional LED ballasts, LED drivers or DMX controllers which control just a single fixture (per output), the ILC-450 enables remote power/control of multiple fixtures¹ with full color (16.7 million) selection, as well as accurate color temperature and Circadian rhythm selection all with flicker-free dimming to .001%. Best of all, virtually all popular automation and lighting systems support the product through custom drivers/internet connection. Many enhanced features including static and dynamic (moving) scene selection, bi-directional feedback, as well as low-end gamma correction (for the smoothest dimming to black) are all built-in.

Operation

One or more ILC-450™ controllers (max 65,025) can be networked to control nearly an unlimited number of LED supported fixtures. A family of Decora[®]-style keypads are available to select colors or color temperature or Circadian output as well as to function as simple "exit" control devices. Automation systems and 3rd party lighting panels can operate ILC-450 networks up to 4000 feet away.

Easy Setup and Configuration

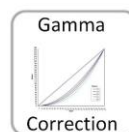
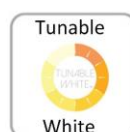
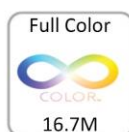
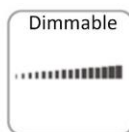
The controller's incredibly small size enables the unit to be positioned seamlessly within a soffit, equipment rack, J-Box or control panel. A built-in microprocessor allows easy system programming while the unique CS-Bus™ discovery technology allows one or more keypads to be quickly interfaced to control lighting functions and scenes. Popular building and home automation systems have developed customized device drivers which enable simple to sophisticated control of scenes and functions. In addition, a family of CS-Bus™ interface adapters are available which enable ILC-450™ LED lighting controllers to be connected to nearly any type system!

Applications

The system is designed to operate either as a standalone device or within an integrated system controlling constant voltage full color (RGBW) or mono(W) fixtures. Typical applications include architectural lighting, general purpose illumination, navigational/accessibility lighting, decorative ambient, focal point, and object of interest illumination. Bi-directional feedback enables automation systems to indicate any actual lighting states selected (on touchscreens and iPads). The ILC-450™ allows you to be the designer for LED lighting.

Features

- Full support of Constant Current Fixtures¹
- Full tunable white (1600K to 7000K) and Circadian Color control (measurement of Big Island, HI natural sun)
- Wide range of network control options
- Support from all popular lighting and automation systems
- IP connectivity-254 controllers (up to 762 fixtures per gateway)¹
- 64K dimming steps (compared to 100 or 200 with typical systems)



Specifications

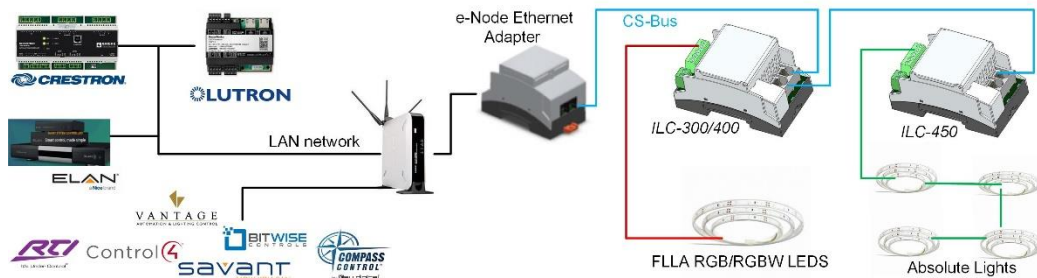
Feature	Detail
Constant Current LED Fixture Control	Supports constant current RGBW or Monochrome LED fixtures. Note: "xxx" suffix in the Model ILC-450:xxx specifies the constant current output (in milliamps) provided to each pair of output terminals on the ILC-450 regardless of the number of fixtures daisy-chained to each output pair
LED Fixture Compatibility ¹ (consult factory)	Model ILC-450:700 RGBW Mode: 700 ma current draw max per LED element 4CH Mono Mode: 700 ma max current draw
Multiple Fixture Support ¹	Depending upon the voltage rating of attached Class 2 Power Unit multiple daisy-chained fixtures can be supported
Wiring Topology	-20/8 awg solid wire should be employed to connect ILC-450 to first fixture (and from head-end fixture to each permitted down-stream fixture(s)). CAT cable should not be used. -EOL shunt (pin1-2, pin 3-4, pin 5-6, pin 7-8) to be installed on last fixture in chain
Communication (between ILC-450 and Communication Gateway)	CS-Bus™ (3-pair 6 CAT-type bus—Brown pr. not used). On-board powered RJ-11/25 connector (for powering keypads) and one RJ-25 connector for additional downstream CS-Bus™ connections
CS-Bus Monitoring	Built-in CS-Bus monitoring signals in case of faults or shorts
Addressability	-Individual addressability for up to 16.3 million Controllers (254 per gateway) -System Limits—Unlimited gateways (subject to integration platform limits)
Failsafe I/O	Unique circuitry permits failsafe operation for all units on the CS-Bus even if one unit fails or shuts down

Feature	Detail
Lighting and Automation System Compatibility	-Pilot app Virtual keypad PC application -Any compatible 3 rd party lighting or automation panel (AMX, Crestron, Control4, Elan, Key Digital, Kramer, Lutron (RR Select, RR2, HWQS), RTI, Vantage)
Control Options*	-Keypad: CS-Bus keypads (BSKP-xxx) -IR: Through IR receiver on BSKP keypads -RS-232: Through IBT-100 serial adapter -IP: Through e-Node *CS-Bus wiring length 4000 feet or less
Size	Din-Rail mount allows easy installation in equipment racks OEM Version: 1.96" (86.42mm) x 2.12" (53.785mm) x 2.4" (50.90mm) Standalone: 3.52" (89.74mm) x 2.12" (53.76mm) x 2.4" (50.90mm) (not including extendable Din lugs)
Power Requirements	-Class 2 Power Unit required -Voltage of Power Unit should be selected depending upon quantity of fixtures that are planned to be supported. (see ILC-450 tech note) ¹
Weight	PCB Version: 1.0 oz. (28 gm) Standalone: 3.3 oz. (93 gm)
Compliance	RoHS, UL 2108 Recognized Component, Rated to work with UL rated Category 2 power supplies
Manufacturing	Designed and Manufactured in California

Controllers | ILC-450™ Intelligent Lighting Controller

Overview

Wiring



Application

The ILC- x00 family of LED controllers and associated LED luminaires of single color, full color and adjustable color temperature are ideal for a variety of applications. They are widely used in a variety of application areas where **precise color settings, 3rd-party lighting and automation control, networkable functionality, expandability** and **bi-directional feedback** are demanded. Your application may be easily adapted from our core technology. Contact us for more information.

- Architectural Lighting
- Soffit and Alcove Lighting
- Object of Interest Illumination
- Cabinet Lighting
- Marine/Boat applications
- Energy savings applications
- Enhanced functionality for Lighting Panels
- Space saving requirement

Note: ¹ Contact factory for specific fixtures supported, maximum number of fixtures per controller, required power supplies and wiring directions.