

Installation and Operation Manual

RLC-0206

Universal
LED & Incandescent
A-3 Controller



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itl International
Tower Lighting, LLC™

Front Matter

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Please send any comments regarding the manual to support_doc@itl-llc.com.

Safety Warning



This equipment uses lethal voltages which can cause serious injury and/or death. Do not attempt to service this equipment with line power applied.

Do not rely on interlock switches to remove lethal voltages from the system. Measure for voltages using a voltmeter to ensure that power is off and has been completely removed.

Do not wear any jewelry. Gold and silver are excellent conductors of electricity.

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Introduction

Congratulations! You have purchased one of the most advanced control solutions for red LED and incandescent obstruction lighting systems available today. This product is the result of many years of engineering with extensive input from field service personnel.

Please take the time to read and familiarize yourself with this manual. It contains the information necessary to install, test and troubleshoot the RLC-206.

Product Description

The RLC-0206-UNI is capable of controlling 4, 5 or 6 L-864 red LED or incandescent beacons and 2 or 3 levels, up to five per level L-810 red LED or incandescent markers. Individual alarm relays are provided for indication of beacon alarm, marker alarm, and system mode. Virtually all information necessary for installation and operation of the RLC-206 is available on the “quick info” card located in the door of the enclosure.

RLC-206-UNI



Specifications

Designed to comply with AC 150/5345-43 and ICAO Annex14

Environment

Temperature	-40°C to +55°C
Humidity	less than 95% relative humidity (non-condensing)

Obstruction Lights

Beacon	4, 5 or 6 Incandescent Beacons two 620W/120 Vac lamps or two 700W/230 Vac lamps 4, 5 or 6 ITL IFH-1700-000 or Dialight D464 Series LED Beacons or Dialight D264 Series LED Beacons
Side Lights	2 or 3 levels, Up to Five per level 116W / 120 Vac Incandescent or 100W / 230 Vac Incandescent or ITL MKR-ILED-1DH or Dialight RTO Series

Mechanical

Dimension	Height:	22.25" (556mm)
	Width:	16.75" (425mm)
	Depth:	7.50" (191mm)
Weight	32 lbs	(14.5Kg)

Electrical

Input Power	120/230 VAC at 50/60Hz, 12VA
Alarm Relays:	120/230 VAC, 1 Amp
PEC:	120/230 Vac, 50/60 Hz, 1 VA
Suppression	70 Joule, 130V, Input Power, Beacon, Side Lights & PEC 23 Joule, 275V, All alarm relays

Installation

The following section describes how to install the RLC-206 controller. The Incandescent Beacons or LED Beacons, and Obstruction Lights (markers) should be installed according to the manufacturer's instructions.

Unpacking your RLC-206 Controller

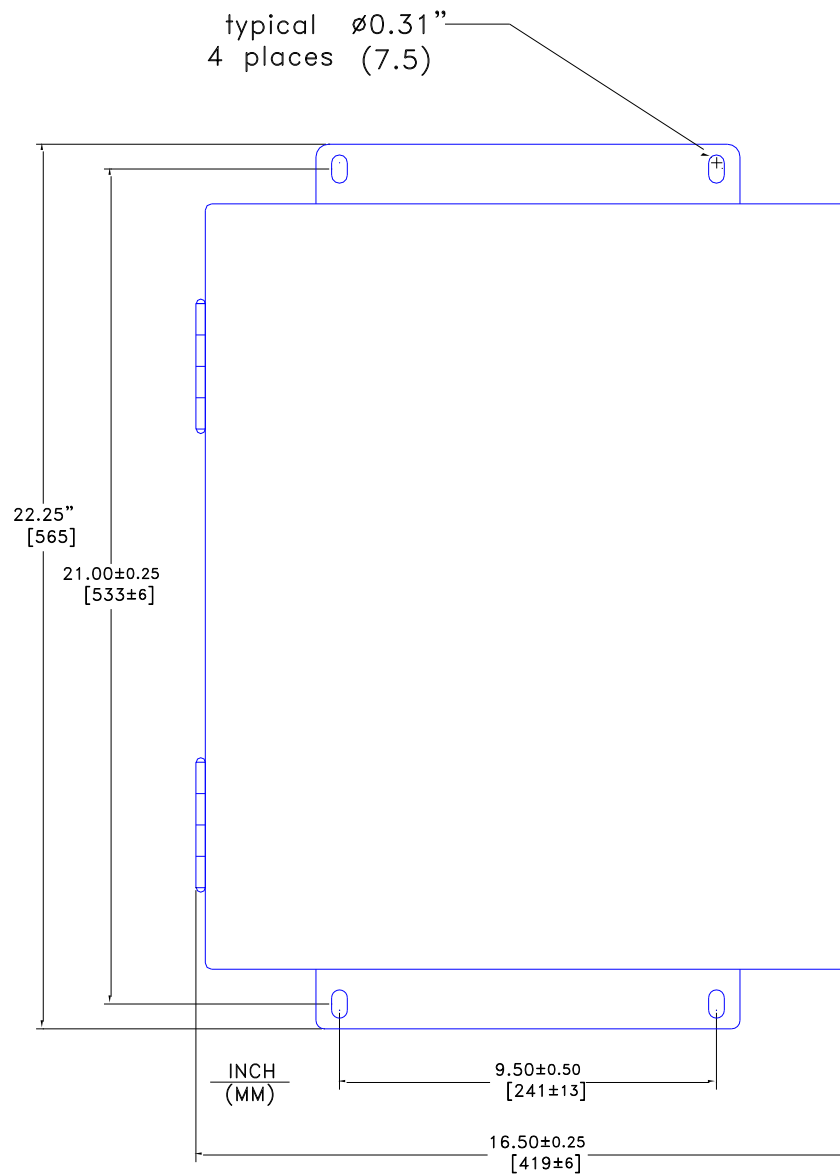
Please examine the shipping containers and their content thoroughly upon receipt and report any potential shipping damage to the carrier.

Quick Installation Guide

The quick start guide shows how to install the RLC-206 controller.

- Remove RLC-206 controller from packaging material.
- Mount the RLC-206 enclosure.
- Install FAA type L-864 Incandescent Beacons or
- FAA type L-864(L) LED Beacons per manufacturer's instructions and FAA requirements.
- Install electrical cable from RLC-206 to Incandescent Beacons or LED Beacons per manufacturer's instructions.
- Install FAA type L-810 incandescent or FAA type L-810(L) LED obstruction lights per manufacturer's instruction and FAA requirements.
- Install cable from RLC-206 to L-810 obstruction lights (markers) per manufacturer's instructions.
- Install Photoelectric Cell and socket (ITL P/N: PEC-NITE-120, PEC-SOCK-000).
- Install 120Vac line power to the RLC-206 Controller.

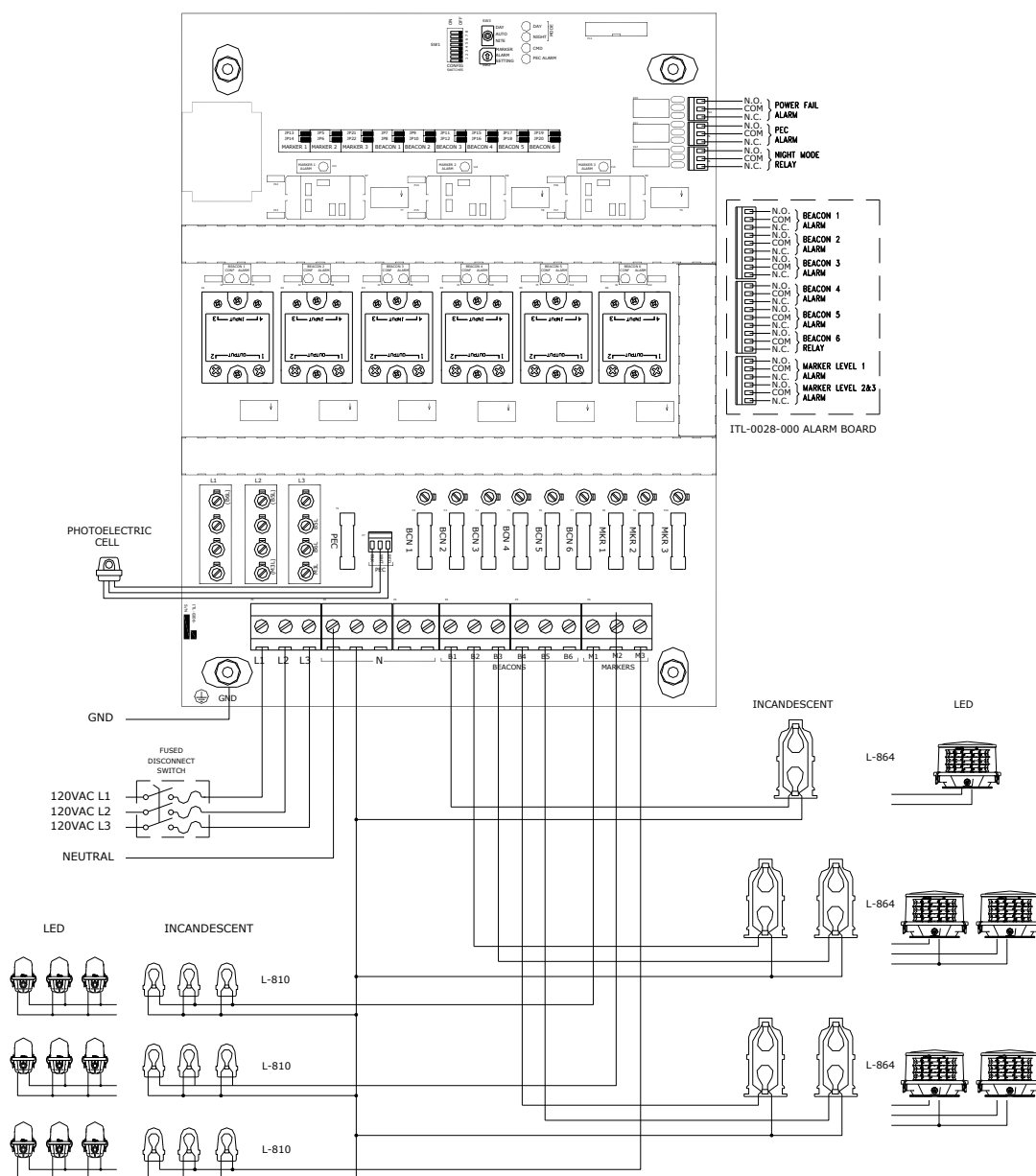
RLC-206 Controller Mounting



Electrical Connections

All electrical control connections are made on P1 thru P7 located at the bottom of the controller. Connections for alarm relays are made on P8, P9, P10 and the ITL-0028-000 Alarm Board located on the right side of the controller. Typical connections for a 120VAC system are shown below.

It is the responsibility of the installer to comply with all applicable local, state, and federal regulations for installation and operation of this device.



Connector Descriptions

Connector Descriptions		
Connector	Terminals	Function
P1	L1	Input Power Line Voltage 1
	L2	Input Power Line Voltage 2
	L3	Input Power Line Voltage 3
P2	N	Input Power Neutral
	N	Input Power Neutral (L-864 & L-810 obstruction light power)
	N	Input Power Neutral
P3	N	Input Power Neutral
	N	Input Power Neutral
P4	B1	Beacon 1 Power
	B2	Beacon 2 Power
	B3	Beacon 3 Power
P5	B4	Beacon 4 Power
	B5	Beacon 5 Power
	B6	Beacon 6 Power
P6	M1	Marker Tier 1 Power
	M2	Marker Tier 2 Power
	M3	Marker Tier 3 Power
P7	BLK	Photoelectric Cell Line Power
	WHT	Photoelectric Cell Neutral
	RED	Photoelectric Cell Signal (120Vac=Night, 0Vac=Day).

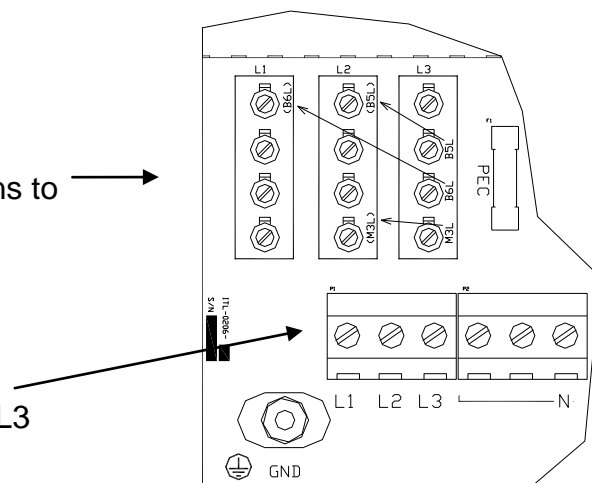
Note:

The RLC-206 is setup at the factory for 3 phase 120V power.

For 120/240V power move L3 connections to L1 and L2 as indicated:

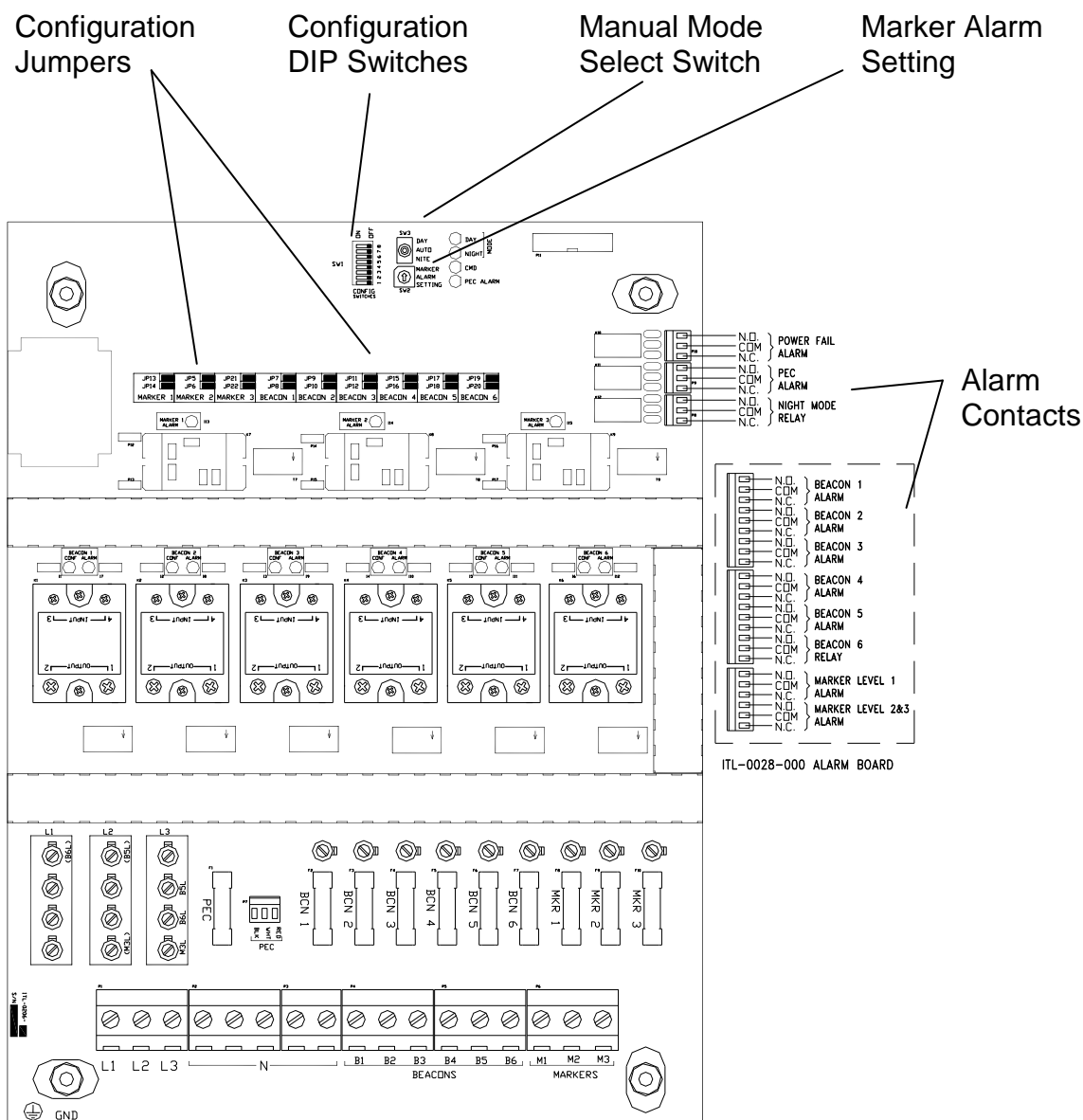
- Move "B5L" to "(B5L)"
- Move "B6L" to "(B6L)"
- Move "M3L" to "(M3L)"

For single phase 120V, jumper L1, L2 & L3 together on P1.
(Typically done on LED systems)



Setup and Operation

Setup and operation of the RLC-206 is performed using the Configuration Jumpers, Configuration DIP Switches, the Marker Alarm Setting dial, and the Manual Mode Select Switch.



Configuration Jumpers

The configuration jumpers must be set to match the type of obstruction lights used with the RLC-206 controller. Jumper settings for typical markers are shown in the figure below. Contact the factory if your model lights are not shown.

JUMPERS AND DIP SWITCHES MUST BE SET CORRECTLY FOR PROPER ALARMING.

■ = JUMPER INSTALLED

□ = JUMPER REMOVED

FACTORY DEFAULT FOR ALL JUMPERS IS INSTALLED (INCANDESCENT).

MARKERS				BEACONS			
INCANDESCENT	ITL MKR-ILED-1DH	DIALIGHT 860 Series	DIALIGHT RTO Series	INCANDESCENT	ITL IFH-1700	DIALIGHT D264 Series	DIALIGHT D464 Series
JP5 ■ JP6 ■ MARKERS	JP5 ■ JP6 ■ MARKERS	JP5 ■ JP6 ■ MARKERS	JP5 □ JP6 □ MARKERS	JP11 ■ JP12 ■ BEACON	JP11 ■ JP12 ■ BEACON	JP11 □ JP12 □ BEACON	JP11 □ JP12 □ BEACON
SW1-4=OFF SW1-1=OFF	SW1-4=ON SW1-1=OFF	SW1-4=OFF SW1-1=ON	SW1-4=ON SW1-1=ON	SW1-3=OFF SW1-1=OFF	SW1-3=ON SW1-1=OFF	SW1-3=OFF SW1-1=ON	SW1-3=ON SW1-1=ON

Configuration Switches

SW1 - Configuration Switches		
Number	Description	Function
1	Light Manufacturer	ON – Dialight OFF* – ITL
2	Flash rate is 30 FPM	ON – Flash rate is 30 FPM OFF* – Flash rate is 20 FPM
3	Beacon Type	See Beacon configuration Jumpers above
4	Marker Type	See Marker configuration Jumpers above
5	Marker Level 2 Disable	ON – Marker Level 2 Disabled OFF* – Marker Level 2 Enabled
6	Marker Level 3 Disable	ON – Marker Level 3 Disabled OFF* – Marker Level 3 Enabled
7	Beacon 5 Disable	ON – Beacon 5 Disabled OFF* – Beacon 5 Enabled
8	Beacon 6 Disable	ON – Beacon 6 Disabled OFF* – Beacon 6 Enabled
* The factory default setting for all switches is OFF		

Marker Alarm Setting

The Marker Alarm Setting switch sets the number of marker lamps at which a marker alarm will be generated. The switch is adjustable from zero to four lamps. The factory default setting is one, meaning that a marker alarm will be generated when one or less marker lamps are burning.

Manual Mode Select Switch

The Manual Mode Select Switch overrides the photoelectric cell (PEC) to allow selection of Day mode or Night Mode for test or troubleshooting purposes. The Day or Night Mode lights flash when in manual mode. This switch should be left in the AUTO position for normal operation. In the AUTO position the operating mode is determined by the photoelectric cell.

Indicator Lights

Indicator Lights	
Description	Function
DAY MODE	Steady – Day mode operation via photoelectric cell. Flashing – Day mode operation via manual mode select switch.
NITE MODE	Steady – Night mode operation via photoelectric cell. Flashing – Night mode operation via manual mode select switch.
CMD	On when the RLC-206 commands the beacon to flash.
BCN 1-6 CONF	On when the RLC-206 confirms that the beacon is drawing the correct current.
BCN 1-6 ALM	Indicates a beacon lamp alarm.
MKR 1-3 ALM	Indicates a marker alarm.
PEC ALM	Indicates a photoelectric cell alarm (controller defaults to night mode on PEC alarm)

Spare Parts & Replacement Parts

ITL Part Number	Description
RLY-2440-B00	Solid State Relay
BCN-0300-000	L-864 Beacon (Incandescent)
IFH-1700-000	L-864(L) Beacon (LED)
MKR-S750-0DH	L-810 Obstruction Light (Incandescent)
MKR-ILED-1DH	L-810(L) Obstruction Light (LED)
LMP-620W-120	620W, 120VAC Beacon Lamp
LMP-700W-230	700W, 230VAC Beacon Lamp
LMP-116W-120	116W, 120VAC Marker Lamp
LMP-116W-230	116W, 230VAC Marker Lamp
LMP-100W-120	100W, 120VAC Marker Lamp
LMP-100W-230	100W, 230VAC Marker Lamp

Technical Support and Contact Info

Contact Info

For information on the RLC-206 controller's basic functions, refer to this manual. For additional help with the installation or operation of any ITL products, please contact ITL, LLC at one of the following below.

Web and Internet Sites

Corporate home page: <http://www.itl-llc.com>



Customer Support Technicians

8:00 AM - 5:00 PM Central Time

US and Canada call: +1-615-256-6030

Toll Free: +1-866-624-8309

Email: support@itl-llc.com

RMA

Please contact ITL, LLC before returning equipment for repair and obtain a Return Material Authorization (RMA) number.

Revision	Description of Change	Date	Preparer / Approval
3	Updated configuration jumpers and SW1 - configuration switches	12/18/2012	Prepared By: Elke Hinson Approved By: Andy Rudolph
2a	Add detail of Fuse Disconnect Switch (not included) Electrical Connections diagram	9/27/2012	Prepared By: Elke Hinson Approved By: Andy Rudolph
2	Updated cover sheet, Changed FAA Type for LED marker to L-810(L), Changed FAA Type for LED beacon to L-864(L), Updated Configuration Jumpers for Beacons.	7/05/2012	Prepared By: Elke Hinson Approved By: Andy Rudolph