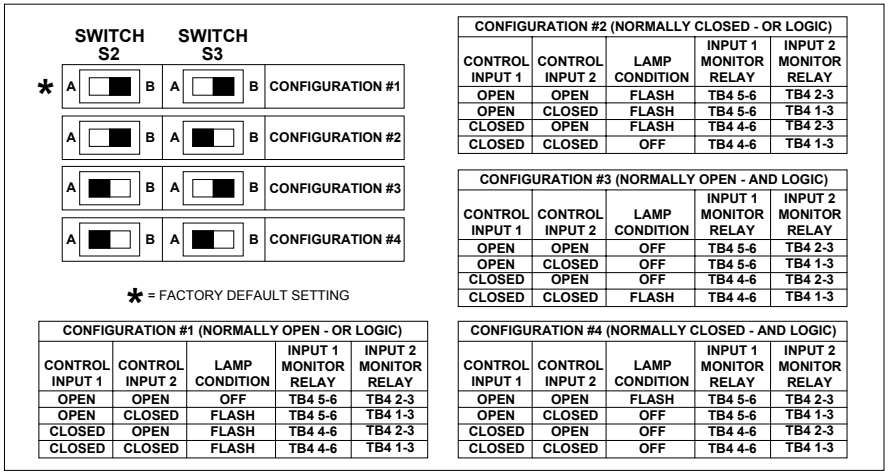

CONFIGURATION #1 (NORMALLY OPEN - OR LOGIC)

CONTROL INPUT 1	CONTROL INPUT 2	LAMP CONDITION	INPUT 1 MONITOR RELAY	INPUT 2 MONITOR RELAY
OPEN	OPEN	OFF	TB4 5-6	TB4 2-3
OPEN	CLOSED	FLASH	TB4 5-6	TB4 1-3
CLOSED	OPEN	FLASH	TB4 4-6	TB4 2-3
CLOSED	CLOSED	FLASH	TB4 4-6	TB4 1-3

CONFIGURATION #2 (NORMALLY CLOSED - OR LOGIC)

CONTROL INPUT 1	CONTROL INPUT 2	LAMP CONDITION	INPUT 1 MONITOR RELAY	INPUT 2 MONITOR RELAY
OPEN	OPEN	FLASH	TB4 5-6	TB4 2-3
OPEN	CLOSED	FLASH	TB4 5-6	TB4 1-3
CLOSED	OPEN	FLASH	TB4 4-6	TB4 2-3
CLOSED	CLOSED	OFF	TB4 4-6	TB4 1-3

CONFIGURATION #3 (NORMALLY OPEN - AND LOGIC)

CONTROL INPUT 1	CONTROL INPUT 2	LAMP CONDITION	INPUT 1 MONITOR RELAY	INPUT 2 MONITOR RELAY
OPEN	OPEN	OFF	TB4 5-6	TB4 2-3
OPEN	CLOSED	OFF	TB4 5-6	TB4 1-3
CLOSED	OPEN	OFF	TB4 4-6	TB4 2-3
CLOSED	CLOSED	FLASH	TB4 4-6	TB4 1-3

CONFIGURATION #4 (NORMALLY CLOSED - AND LOGIC)

CONTROL INPUT 1	CONTROL INPUT 2	LAMP CONDITION	INPUT 1 MONITOR RELAY	INPUT 2 MONITOR RELAY
OPEN	OPEN	FLASH	TB4 5-6	TB4 2-3
OPEN	CLOSED	OFF	TB4 5-6	TB4 1-3
CLOSED	OPEN	OFF	TB4 4-6	TB4 2-3
CLOSED	CLOSED	OFF	TB4 4-6	TB4 1-3

WLC1 INPUT LOGIC CONFIGURATION CHART

BCS Product Warranty

Bradshaw Communication Systems (BCS) products are warranted to be free from defects in material or workmanship for one (1) year from the date of sale to the original purchaser. Any part of the product covered by this warranty that, with normal installation and use, becomes defective will be repaired or replaced by BCS, at our option, provided the product is shipped insured and prepaid to: BCS Service Department, 94 Worldwide Drive Dawsonville, Georgia 30534, USA. The product will be returned to you freight prepaid. This warranty does not extend to any BCS products that have been subjected to abuse, misuse, improper storage, neglect, accident, improper installation or have been modified, repaired or altered in any manner whatsoever, or where the serial number or date code has been removed or defaced. No employee, agent, dealer, or other person is authorized to give any warranties on behalf of BCS.

The foregoing limited warranty is the BCS sole and exclusive warranty and the purchaser's sole and exclusive remedy. BCS makes no other warranties of any kind, either express or implied, and all implied warranties of merchantability or fitness for a particular purpose are hereby disclaimed and excluded to the maximum extent of the law. BCS liability arising out of the manufacture, sale or supplying of products or their use or disposition, whether based upon warranty, contract, tort or otherwise, shall be limited to the repair or replacement of the product. In no event shall BCS be liable for special, incidental or consequential damages (including, but not limited to, loss of profits, loss of data or loss of use damages) arising out of the manufacture, sale or supplying of products, even if BCS has been advised of the possibility of such damages or losses. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

Products that are out of warranty may also be repaired by the BCS Service Department. The parts and labor involved in out of warranty and general repairs are warranted for 90 days when repaired by the BCS Service Department. All shipping charges in addition to parts and labor charges will be at the owner's expense. All returns require a Return Authorization Number that may be obtained by contacting the BCS Service Department prior to return of the product.

BRADSHAW COMMUNICATION SYSTEMS
94 WORLDWIDE DR. • DAWSONVILLE, GEORGIA • TEL 706-216-6400 • FAX 706-216-6401 • www.bcstech.com

WLC1

WEATHERPROOF LAMP CONTROLLER INSTALLATION MANUAL

PART NUMBER:

- P/N 05-01000-1
  WLC1 w/ 4 Cable Entry Glands (2 Glands Factory Installed & 2 Glands Provided Loose)

READ ALL INSTRUCTIONS CAREFULLY BEFORE INSTALLATION. SAVE THIS INSTALLATION MANUAL FOR FUTURE REFERENCE. INSTALLATION SHOULD ONLY BE PERFORMED BY QUALIFIED SERVICE PERSONNEL.

BCS reserves the right to change specifications contained herein without notice. (Release Date: 10MAR05)

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DESCRIPTION:

The WLC1 Weatherproof Lamp Controller, developed by Bradshaw Communication Systems, is a warning/signal lamp controller that provides for low voltage controlled on-off flashing of a 115 or 230 VAC incandescent lamp. The flash rate is internally user adjustable and the dual low voltage control inputs allow either Boolean AND or OR logic conditions to control the lamp flashing. The WLC1 is typically used to flash AC incandescent lamps used in earth station antenna systems that signal and/or warn of active transmitters, failure conditions, and other conditions where it is desirable to have a flashing visual indication of an event occurrence.

The WLC1 is housed in an IP66/NEMA 4X enclosure, thus supporting the most rugged outdoor applications. The WLC1 is provided with two factory installed watertight cable entry glands for input power and lamp output cables as well as two additional glands that may be user installed at installation for control and monitor cables.

With a internally user adjustable flash rate from 2.4 seconds to continuously on, internal low voltage power source for control, and either contact closure or open collector input control, the WLC1 allows great flexibility for use in many applications. Power is cycled to the lamp when the correct logic is provided at the low voltage control inputs. Two isolated Form C relay outputs are provided that mimic the low voltage control inputs to allow for controller monitoring. Solid-state relay lamp control provides reduced cold filament inrush current for longer lamp life. WLC1 electrical terminations are provided via screw type pluggable terminal blocks, providing fast, easy, and accurate termination of interface wiring.

The WLC1 has been designed to provide long life and ease of adjustment while still allowing the system integrator great flexibility in use, configuration, and mounting.

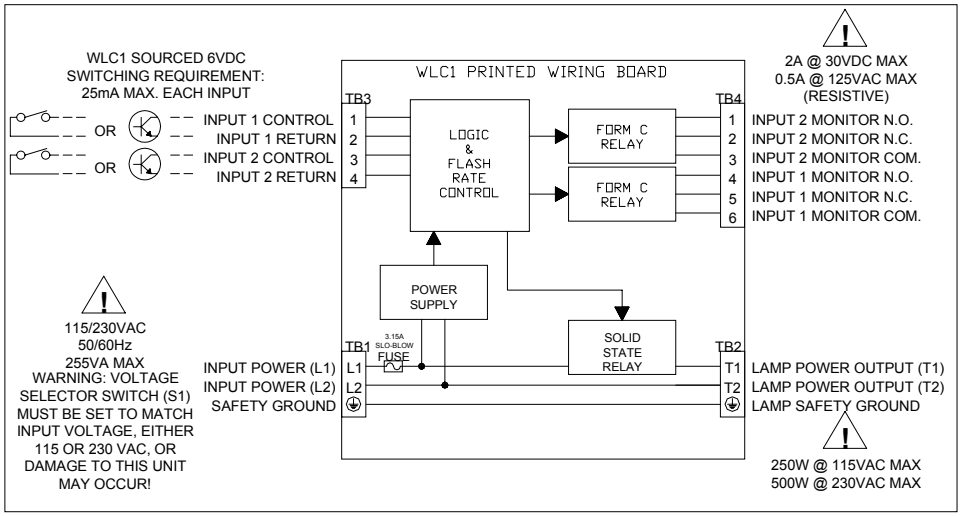
SPECIFICATIONS:

- **Low Voltage Control Input**
  - Two Internally Configurable Inputs
  - Either Boolean AND or OR Logic
  - Either Normally Open or Closed Control
  - Control Voltage - 6 VDC @ 25mA
  - Either Contact Closure or Open Collector Control
- **Flash Rate Adjustment Range**
  - 0.2Hz to 10Hz at 50% on to off duty cycle
- **Lamp Control Method**
  - Zero Crossing Solid State Relay
    (Reduces cold filament inrush current)
- **Electrical**
  - Internal Voltage: 115/230VAC (Switch Selectable)
  - Internal Frequency: 50/60Hz
  - Internal Power Consumption: 2.5VA MAX.
  - Lamp Load: 250 Watts @ 115VAC MAX.
  - Lamp Load: 500 Watts @ 230VAC MAX.
  - Monitor Relays: 2A@30VDC/0.5A@125VAC MAX.
- **Electrical Termination**
  - Screw Type Pluggable Terminal Blocks
  - 26-14 AWG Wire Size
- **Mounting**
  - Four 0.190” Diameter Mounting Holes
  - Hole to Hole Dimensions 4.53” Square
- **Environmental**
  - -40° F to +122° F, 100% humidity, condensing
  - (-40° C to +50° C, 100% humidity, condensing)
  - Enclosure Rating: IP66 (NEMA 4X)
- **Physical**
  - Enclosure Dimensions
    5.12” wide x 5.12” high x 2.95” deep
    (130mm wide x 130mm high x 75mm deep)
  - Weight: 1 LB (0.45 Kg)
  - Enclosure Color/Type: Light Gray/Polystyrene
  - Cable Gland Protrusion: 1.25” (31.75mm) Nominal
- **Cable Entry**
  - Cable O.D. Range: 0.230-0.530 inches
- **Approvals**
  - The WLC1 has been designed to meet or exceed CE, UL, & CSA safety requirements.

INSTALLATION & ADJUSTMENT:

Mount the WLC1 in an easily accessible location on the antenna. 8-32 Socket Head Cap Screws and associated hardware are normally used to secure the WLC1 to a mounting bracket or similar. Refer to the WLC1 Outline Mounting Drawing (provided separately) and verify the WLC1 is securely mounted.

Open the cover to the WLC1. Locate switches S1, S2, and S3 on the WLC1 Printed Wiring Assembly (PWA). Using a small flat blade pocket screwdriver (or similar) adjust S1 to the appropriate input voltage either 115 or 230 VAC. Adjust S2 & S3 configuration switches per the WLC1 Input Logic Configuration Chart to provide for the appropriate low voltage input logic configuration. Install the input power, lamp output, low voltage logic input, and monitor cables into the WLC1 cable glands. Power input and lamp output cable glands are factory installed, depending upon installation location and configuration, install either one or both of the remaining cable glands supplied loose with the WLC1 by carefully removing the most appropriate knockout/s. Electrically connect TB1, TB2, TB3, and TB4 per the WLC1 Functional Diagram below. TB4 Monitor Outputs are isolated, mimic the low voltage logic inputs at TB3, and are not required for basic operation. Apply power to the WLC1. Apply the correct logic to the low voltage logic inputs at TB3. Verify the lamp is flashing. If the lamp fails to flash or a different flash rate is desired, adjust the VR1 trimmer on the WLC1 PWA. Close the cover securely to ensure a watertight seal (DO NOT OVERTIGHTEN COVER SCREWS OR ENCLOSURE DAMAGE WILL RESULT!). The WLC1 will now automatically start flashing the lamp at the preset flash rate whenever the correct input logic is observed at TB3.



WLC1 FUNCTIONAL DIAGRAM