

## Airfield Lighting Control & Monitoring System (ALCMS)

The *Spirit LT Series™* ALCMS brings the latest in PLC and touchscreen technology to small airports. Designed as a replacement for L-821 pushbutton control panels, this L-890 certified control system is a scaled down version of the industry leading *Spirit Series™* ALCMS. This cost effective ALCMS is a result of over 20 years of control system experience.

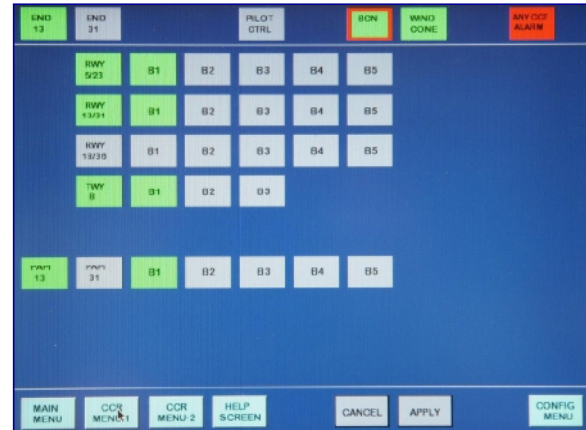
### System Application

The *Spirit LT Series™* ALCMS is a modular, expandable system designed for General Aviation and small regional airports. Having most of the basic control capabilities of the *Spirit Series™* ALCMS provides airports with high-end flexibility without the additional cost and complexity associated with features that are not required at smaller airports. System applications include:

- Control and monitoring of runway and approach lighting, taxiway lighting, rotating beacon, wind cone, apron floodlighting.
- Monitoring of diesel-generator and automatic transfer systems.

### Standards Compliance

- FAA Advisory Circular 150/5345-56, Spec L-890 L890-X-Y Classification types where:  
 X = A - Control Only  
     B - Basic Monitoring  
 Y = A - Preset Failsafe
- FAA Advisory Circular 150/5340-30, Design and Installation Details for Airport Visual Aids.
- ICAO Annex 14, Volume 1, Aerodrome Design and Operations.
- ICAO Aerodrome Design Manual Doc 9157, Part 5.
- Transport Canada Aerodrome Standards and Recommended Practices, Volume 1, TP-312E.
- Canadian Department of National Defence Standards.



### Features and Capabilities

- On/off and brightness control buttons are provided for each airfield lighting circuit or system (runway, taxiway, approach, etc.)
- Actual status of circuits can be displayed with current present monitoring option.
- Control of multiple regulators, circuit selectors, and other equipment in the electrical vault and control tower or Flight Service Station (FSS).
- Control of the airfield lighting from the tower or FSS with backup from the electrical vault.
- 100MB Ethernet communication between locations using fiber optic cables, radio or telephone lines.
- Photocell and air-to-ground control are provided for unattended operation.
- Adjustable soft-start feature extends lamp life.
- Adjustable on-delay feature minimizes in-rush when operating on backup diesel generator.
- Utilities include lock screen, touch-screen calibration, and background dimming.
- Set-up, layout and configuration of the system can be done by airport maintenance staff, systems integrators, consultants or contractors. No programming knowledge is required.
- Configuration menus and displays are accessible only to personnel authorized by the airport.

### Ordering Information

**Type:**

LCMS1 - Spirit LT Series ALCMS c/w 8.0" Touchscreen  
 LCMS2 - Spirit LT Series ALCMS c/w 10.4" Touchscreen  
 LCMS3 - Spirit LT Series ALCMS c/w 12.0" Touchscreen

**Communication:**

A - CAT6e Cable (up to 100m)  
 B - Multimode Fiber Optic Cable (up to 2 km)  
 C - Singlemode Fiber Optic Cable (> 2km)  
 D - DSL Modems over copper pair (up to 2km)  
 E - Radio Modem (up to 5 km)

**Vault Details:**

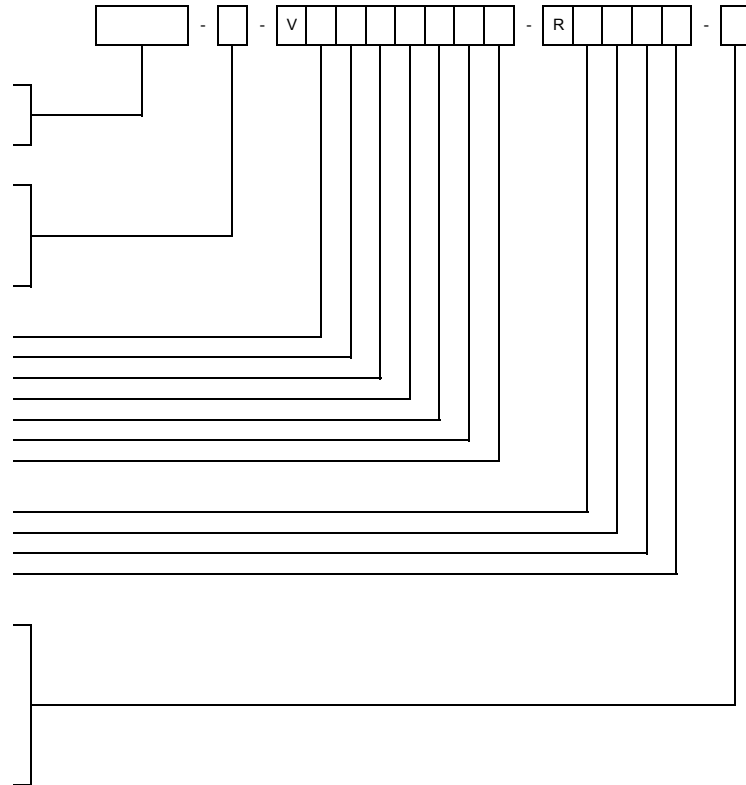
Number of Single Step Circuits (Enter Qty) \*  
 Number of 3 Step Circuits (Enter Qty) \*\*  
 Number of 5 Step Circuits (Enter Qty) \*\*  
 ARCAL Inputs (3) Required (Enter Y or N)  
 Photocell Input (1) Required (Enter Y or N)  
 Generator Inputs Required (Enter Qty)  
 Other Monitoring Inputs Required (Enter Qty)

**Remote Location (Tower or FSS) Details:**

Number of Single Step Circuits (Enter Qty) \*  
 ARCAL Inputs (3) Required (Enter Y or N)  
 Photocell Input (1) Required (Enter Y or N)  
 Other Monitoring Inputs Required (Enter Qty)

**Options (Select as Many as Required):**

01 - Monitoring Arm for Remote (Tower / FSS) Touch-screen  
 02 - Additional Touchscreen  
 03 - Installation of Touchscreen in Vault PLC Cabinet  
 04 - 24VDC Uninterruptible Power system with battery backup  
 05 - Dial-in Remote Access  
 06 - VPN Remote Access  
 07 - On/off Current Monitoring for each circuit  
 08 - Printed Manual



\* total # of single step circuits at vault and remote locations must not exceed 8  
 \*\* total # of 3 and 5 step circuits must not exceed 12

### Technology Benefits

- Reliability, simplicity and longevity of a PLC based system.
- Critical control logic provided by PLCs designed for twenty year life and 24/7 operation.
- Embedded industrial controllers with no hard drives, fans or moving parts provide critical touch-screen operator interface graphics.
- Off-the-shelf hardware and software ensures long-term support is always available. The airport is protected from any unforeseen supplier changes.
- 100MB Ethernet communication network with support for point-to-point fiber, wireless radio, CAT5 cables and DSL capable telephone lines.
- Remote access via high-speed internet or dial-up modem provides the ability to remotely upgrade the system or assist maintenance personnel.



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