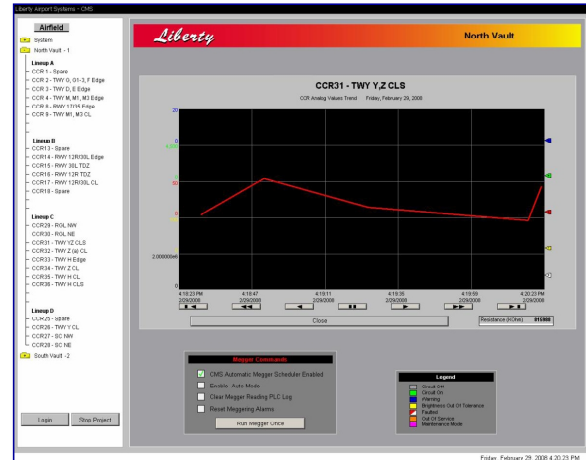


## Airfield Lighting Insulation Resistance Monitoring System (IRMS)

The *Spirit Series™* Insulation Resistance Monitoring System (IRMS) is a state-of-the-art system for monitoring the integrity of airfield lighting circuits. Also known as an “Automatic Megger”, the IRMS automatically measures the resistance to ground of each circuit. This information is invaluable to maintenance personnel and forms an integral part of the airport’s preventative maintenance program.

The *Spirit Series™* IRMS uses the same proven hardware and software used in our *Freedom Series™* IRMS, regulators and control systems and is a result of forty years experience providing power and control solutions.



### System Application

The *Spirit Series™* IRMS automatically measures cable insulation resistance on a scheduled basis or manually when required by maintenance personnel.

- Automatically monitors for cable degradation and eliminates the need to manually megger the circuits on a monthly basis as recommended in AC 150/5340-30.
- Provides automatic verification of contractor or maintenance staff work on series circuits at the end of each work day.
- An invaluable tool to assist in troubleshooting problems on the series circuit.

### Standards Compliance

- FAA Advisory Circular 150/5340-26, Maintenance of Visual Aid Facilities
- 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

- Compatible with any manufacturer, make or model of constant current regulator or circuit selector.
- Does not require interconnections to existing control system allowing the IRMS to operate as an independent, standalone system.
- Provides accurate readings over the full range from 0 ohms to 2G ohms using a 500VDC charge voltage. Does not require multiple voltages to maintain accuracy.
- Factory calibrated eliminating the need for field or self calibrations when measurements are taken.
- Can be used on energized or de-energized 6.6A or 20A circuits.
- Can be used with regulators only, or on circuits with regulators and L-847 circuit selectors. Any number of circuits in the vault can be accommodated.
- Operates in fully automatic scheduled mode or in manual mode. Automatic mode resumes once manual meggering is completed.
- Readings are displayed in trend plot or tabular formats and can be saved for future analysis using Excel or other analysis tools.
- Graphical screens display the circuit names, actual insulation resistance values, completion dates and times of last IRMS readings, time remaining until the next reading, warnings or alarms, and IRMS system status.

### Ordering Information

**Type:**

SIRM - Spirit Series IRMS

**Communication Between Locations:**

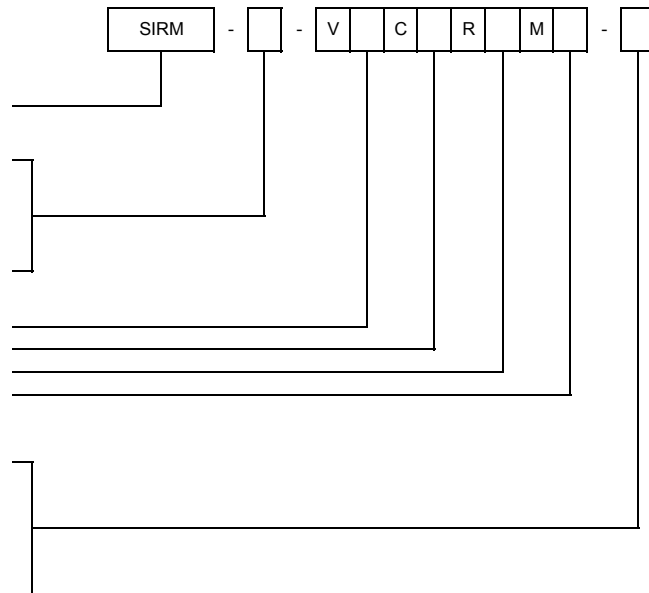
- A - None
- B - Multimode Fiber Optic Cable (up to 2 km)
- C - Singlemode Fiber Optic Cable (> 2km)
- D - DSL Modems over copper pair (up to 2km)
- E - Radio Modem (up to 5 km)

**Vault Details:**

- Number of Vaults
- Total Number of Airfield Lighting Circuits
- Total Number of Regulators
- Number of Maintenance Stations c/w 17" Monitors

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

- 01 - Separate IRM & Current Sensor for each Circuit Selector
- 02 - Upgradable to Spirit Series Control System
- 03 - Upgradable to Freedom Series Control System
- 04 - Dial-in Remote Access
- 05 - VPN Remote Access
- 06 - Printed Manual



### Technology Benefits

- The *Spirit Series™* IRMS system is built using programmable logic controller (PLC) technology. PLC's are robust, industrial grade components designed to provide a high level of reliability, and simplicity operating 24/7 over an extended life span.
- IRMS System can easily be upgraded to a *Spirit Series™* or *Freedom Series™* Airfield Lighting Control and Monitoring System (ALCMS) as requirements change. The scalability of this system provides an economical migration path from existing to new technology that can fit within the airport's budget.
- IRMS systems in each vault can be networked together and monitored remotely from a central maintenance shop. 100MB Ethernet communications support is available over fiber, wireless radio 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.
- Security measures are provided including site assignable user names and passwords, data encryption on remote access or wireless links.

### Configuration

- User configurable settings include: warm-up, energize and de-energize times, desired start time and frequency of readings, individual warning and alarm thresholds for each circuit, clear values, enable or disable each circuit for meggering.
- New regulators and circuits can be added by maintenance personnel as required, simply by adding off the shelf hardware and enabling the new circuits in software.



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