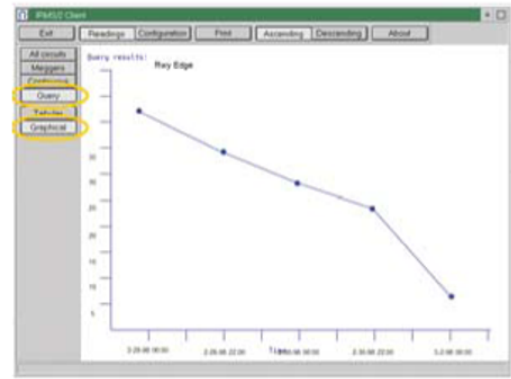


CONTROL & MONITORING

IRMS

Insulation Resistance Monitoring System



Compliance with Standards

FAA: AC 150/5340-26 chapter 3, section 2, para. 27.

ICAO: Annex 14 para. 8.3. and Aerodrome Design Manual, Part 5, para. 3.7.11.

System Overview

The IRMS provides state-of-the-art configurable insulation resistance measurements on airfield series circuits. Unique IRMS architecture allows up to 256 constant current regulators (CCRs) to be connected to a single IRMS communication server. The system can be provided either as a stand-alone system or as an integral part of an Airport Lighting Control and Monitoring System (ALCMS). See ADB data sheet 1041 for more information.

Uses

The IRMS performs scheduled cable insulation resistance measurements and can also perform manually requested measurements, allowing maintenance personnel to monitor the long-term degradation of airfield series circuit cabling. This data can be presented in text or graphical format.

- Aids airport in monthly circuit monitoring for cable degradation as recommended in AC 150/5340-30
- Provides tool to assist maintenance in troubleshooting series circuit failures

Features

- Provides a wide range of resistance measurements from less than 20 kΩ up to 2,000 MΩ (2 GΩ)
- Uses user selectable circuit charge voltages of 50, 500, or 1,000 VDC to provide accurate resistance measurement for varying circuit conditions
- Fiber optic interface insures isolation from high-voltage series circuit, providing the highest level of safety
- Automatic self-calibration checks the hardware to verify proper operation prior to taking measurements
- Can be used on energized or de-energized circuits
- User can easily add new circuits and change circuit names
- Resistance measurement data can be printed in graphical trend plots or in tabular format
- Data is automatically logged after each measurement for future analysis and can be easily backed up

- Programmable warning and alarm set points
- Data can be exported to allow for data manipulation by the user
- Compatible with CCRs made by all manufacturers

Electrical Specification

When integrated with an ALCMS, an ACE™ Unit, which interfaces with IRMS, is installed at each CCR. See ADB data sheet 2084 for more information.

An Insulation Resistance Monitoring Module (IRMM) is installed at each constant current regulator or circuit selector.

Two models available:	6.6 A RMS and 20 A RMS
Specifications:	50, 500, 1,000 VDC
	20 kΩ to 2,000 MΩ (2 GΩ)

An automatic self-calibration test is conducted prior to each circuit measurement. The IRMS can be programmed to automatically test energized or de-energized circuits on a regular basis.

Product Configuration

The IRMS is designed to airport specifications. Please contact the ADB Sales and provide the following information:

- Number of vaults
- Number of constant current regulators in each vault
- Number of L-847 Circuit Selector Switches for each CCR
- CCR output current type (6.6 A or 20 A)
- Maximum distance between CCRs

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Programmable Features

The IRMS will operate while the circuit is energized or de-energized and allows for automatic or manual readings during either condition. The IRMS is user programmable and allows for all of the following variables to be programmed by the user at the IRMS computer:

- Start Time 1 - This represents the first time of the day in which the IRMS is to take the first automatic reading of the series circuit
- Start Time 2 - This represents the second time of the day in which the IRMS is to take an additional automatic reading of the series circuit
- Period - This specifies how often the circuit is measured (i.e., daily, weekly, monthly, etc.)
- Warning Limit - This is a limit value, in ohms, at which point a resistance warning will be generated
- Alarm Limit - This is a limit value, in ohms, at which point a resistance alarm will be generated