

LIQUID CONTROLS GROUP

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LectroCount FlightConnect™ Data Acquisition System for Aviation Refueling





Premier products, premier performance

FlightConnect™ Features

- **Simultaneous operation** of two or more meters on multimeter systems.
- **LectroCount® LCR-II® platform** to support additional system peripherals including, but not limited to, a button reader and RF communication.
- **Weights and Measures** custody transfer transactions.

LectroCount® FlightConnect™ is a user-friendly, data acquisition and management system designed by Liquid Controls specifically for **Aviation Refueling** applications. FlightConnect is installed directly onto fueling vehicles where it controls delivery functions, pulls valuable data from the fueling system, and processes that data into useful security, diagnostic, and inventory information. All of this important data is easily transmitted to back office computers and uploaded into your fuel management/ accounting software.

Because FlightConnect streamlines data flow and simplifies deliveries, a Liquid Controls metering system with FlightConnect will increase accounting and inventory accuracy, reduce fueling time and data entry errors, and expedite fuel transfers from tank farm to truck (or hydrant cart) and into the plane.

DMS i1000 Features

- **8 line, 30 character backlit display**
- **32 megabyte flash card**
- **USB port and 2 serial communication ports**
- **133 MHz, 486 microprocessor**
- **Temperature range:** -22° to 158°F (-30° to 70°C)
- **RF spread spectrum radio or USB memory device** data transfer of delivery information.

A complete Liquid Controls FlightConnect system includes: a Liquid Controls positive displacement meter, a LectroCount® LCR-II® Electronic Register, a printer, a DMS i1000 factory loaded with FlightConnect software, and FlightConnect Office software.



FlightConnect Software and the DMS i1000

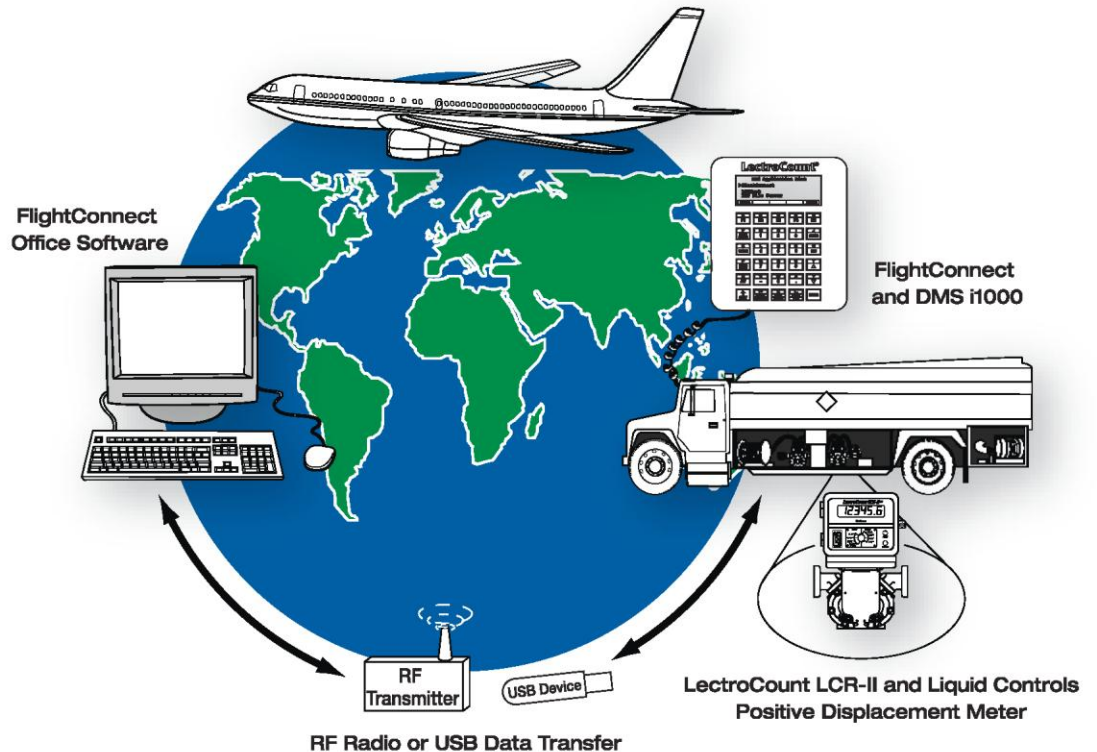
FlightConnect software allows you to personalize security settings, track inventory, and monitor the status of the components and product in the delivery system. FlightConnect reads and records data such as: refueling date and time, fuel type, gallons delivered, airport ID, refueler ID, aircraft type, tail number, gate number, origin, and destination. In addition to FlightConnect, the DMS i1000 provides software for full configuration, calibration, and operation of the LectroCount LCR-II electronic register.

FlightConnect's hardware components, the DMS i1000 module and lap pad, are designed for heavy use and harsh conditions. The rugged DMS i1000 lap pad has an 8 line, 30 character backlit display and large, petroleum-resistant buttons. The powder-coated steel DMS i1000 module serves as a power supply and data hub for 3 LCR-II registers, a printer, and 2 auxiliary peripherals.



DMS i1000 Module and Lap Pad

FlightConnect transfers fueling data to and from the office computer via RF spread spectrum radio or USB memory device. FlightConnect Office software, a Windows® database manager, receives the data from FlightConnect units in the field and appends the data to an easily accessible file on your office computer. From this file, your fuel management/accounting software can retrieve data and drop off any database updates such as new customers/planes, airport codes, and running clock resets for FlightConnect units in the field.



Sample Aviation Ticket

Custom Header

LC AVIATION
105 ALBRECHT DRIVE
LAKE BLUFF, IL 60644
847-295-1050

AIRCRAFT SERVICE RECORD

Customer Information

TICKET NUMBER 010089 **Ticket Sequence Number**

ABC Airlines
FLIGHT NUMBER AB1234
AIRCRAFT TYPE 737
TAIL NUMBER RT2356

ORIGIN ORD
DESTINATION LAS

TRANSACTION Fuel
FUEL TYPE JET A
TRUCK NUMBER 278
FUELING LOCATION Gate H8
FUELER Sorrentino
ON ROAD NO

Start & Finish Time Stamp

METER NUMBER M80 AVIATION 1
SALE NUMBER 89 **Sale Sequence Number**

TIME START 12/05/08 10: 23: 25
TIME END 12/05/08 10: 24: 20

START COUNT 0 GALLONS
END GROSS COUNT 1364 GALLONS
GROSS DELIVERY 1364 GALLONS
START TOTALIZER 814800 GALLONS
END TOTALIZER 816164 GALLONS

Non-resettable Totalizer Numbers on Every Ticket

TOTAL DELIVERED 1364 GALLONS
RECEIVED BY -----

NOTE: Differential Pressure information is only available with a LectroCount® LCR-II® electronic register loaded with SR214 software and with a differential pressure transducer installed.

Other System Components

Liquid Controls is recognized throughout the world for its highly accurate and reliable positive displacement (PD) flowmeters. As a proven leader for nearly 50 years in the field of liquid measurement, our engineering, manufacturing, and application expertise allow us to provide complete, integrated solutions that work.

Liquid Controls PD Meters feature a unique 3-rotor measuring instrument that precisely segments flow into discrete, fixed-volume units for extremely accurate flow measurement. The rotors turn in a synchronized relationship without any metal-to-metal contact within the measuring chamber, making use of a capillary liquid film to provide hydraulic sealing. These features ensure minimal wear, sustained accuracy, low pressure drop, minimal resistance to flow, and the longest service life for this class of meter in the industry.

Liquid Controls **LectroCount Electronic Registers** have been widely used for meter registration for over two decades. Meter & register features include:

- Multi-Point calibration
- Multi-Product selection
- Electronic Temperature Volume Compensation
- Accuracy over a wide flow range, and more

The optional **LectroCount Remote Display** is among the largest, backlit, digital displays available in the industry. This display is designed for application with all LectroCount

Electronic Registers. The LectroCount Remote Display includes:

- 6-digit Backlit Display with 2¼" digits
- Class I, Div. 2 Group C & D NEMA 4X enclosure
- Viewing up to 100 feet
- Mounting up to 100 feet from the primary signal source
- Operating Temp. Range: -22° to 158° F (-30 to 70° C)
- Power: +5 to 28 VDC

The **Epson™ Printers** supplied with the FlightConnect system are a standard in the industry. These printers include:

- Alphanumeric output
- Various print formats
- Photoelectric eye for ticket/paper sensing
- 40 foot power and communications cable
- Stand-alone design for easy upgrade or replacement
- Operating temperature range from -40° to 158° F (-40° to 70° C)



*PD Meter & LectroCount LCR-II
Electronic Register*



Optional LectroCount Remote Display



Optional Epson Slip or Roll Printer



A tradition of excellence that benefits you

Over fifty years ago, Liquid Controls set a new standard of excellence in engineering by designing and building the finest flow meter products possible. Soon after Liquid Controls gained their first customer, metering aviation fuel for the United States Air Force, the Liquid Controls name became synonymous with dependability and accuracy. Because of their constant innovations in flow meter technology, a worldwide distribution network and an ever-expanding industry base, Liquid Controls quickly became the premier name for controlling and measuring high-value liquids and gases.

In 2001, Liquid Controls joined the IDEX team of companies and became part of the Liquid Controls Group. The Liquid Controls Group is a collection of well respected companies brought together to assure secure custody control and precision management of high-value fluids and gases. IDEX is a leader in the manufacturing of a broad range of pump products, dispensing equipment and other engineered technologies. Maintaining a theme of leadership, IDEX delivers **Innovation**, **Diversity** and **EXcellence** to thousands of valued customers around the world.

Our commitment to excellence will never change. The professionals at the Liquid Controls Group are driven to bring you products that perform efficiently and accurately with minimum maintenance for years to come. Delivering everything you'd expect from the very best—that's our goal.

LIQUID CONTROLS GROUP

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Pub. 500326 (5/15/08)

