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## Differential Pressure (AP) Transducer

### Aviation Safety Shutdown and Meter Maintenance Tool

#### Features

- Monitors differential pressure (AP)
- System shutdown at a preprogrammed AP value
  - Maximum AP value and corresponding flowrate printed on fueling ticket

#### Benefits

- Increased safety
- Helps assure fuel purity
- Improves filter vessel maintenance
- Assists in ATA 103 and JIG Guidelines compliance

#### General Information

The differential pressure AP transducer is a safety shutdown device and a maintenance tool for aviation fueling systems. The AP transducer monitors the differential pressure between a point immediately upstream and a point immediately downstream of the filter vessel.

In conjunction with a **LCR-II**, **LCR 600** or **MASTERLOAD III** electronic register and a solenoid operated valve, the AP transducer can stop fuelings when the differential pressure (AP = pressure drop) across the filter vessel meets a preprogrammed AP shutdown value. Shutting the system down at a predetermined AP shutdown value eliminates the risk of rupturing the filter, which can lead to a tainted fueling and the costly process of defueling and refueling an aircraft. The AP shutdown value is determined by a setting on the LectroCount register.

The maximum AP registered by the AP transducer during a fueling and the flow rate at which it occurred can be recorded by the register and printed on the fueling ticket. The maximum AP is an reliable indicator of the condition of the filter. By monitoring the maximum AP, filters can be replaced at the appropriate time ensuring the health of the fueling system.

The AP transducer is designed for into-plane refueling by refuelers, hydrant trucks, and hydrant carts, and stationary systems. It is compatible with both the **LectroCount LCR-II**, **LectroCount LCR 600**, or **MASTERLOAD III** electronic registers.

US Patent: 7,765,978 - Differential pressure sensor for fuel delivery systems.

Differential Pressure (AP) Transducer

## Differential Pressure (AP) Transducer

### Specifications

#### Materials of Construction

**Body**  
Stainless steel (316L)

#### Wetted Materials

Stainless steel (316L), Viton® seals

#### Applicable Products

Class 2: Jet Fuel

#### Pressure Rating

**Differential measurement range**  
0 to 43.5 PSID (0 to 3 bar) for rated accuracy [60.0 PSID (4 bar) overpressure limit]

#### Line pressure range

0 to 150 PSI (0 to 10.3 bar)

#### Operating Temperature

**Range**  
-40 to 176 °F (-40 to 80 °C)

#### Accuracy

±0.2% of full scale  
±0.088 PSID from -4 to 104 °F (-20 to 40 °C)

#### Power

10 to 28 VDC, <4 mA

#### Communication Protocol

RS485

#### Register Compatibility

**LectroCount LCR-II**  
SR214 operating software  
ST250 ticket software

**LectroCount LCR 600**  
SR601 operating software  
ST601 ticket software

**Avery-Hardoll MASTERLOAD III**  
FlightConnect Ready or Enabled

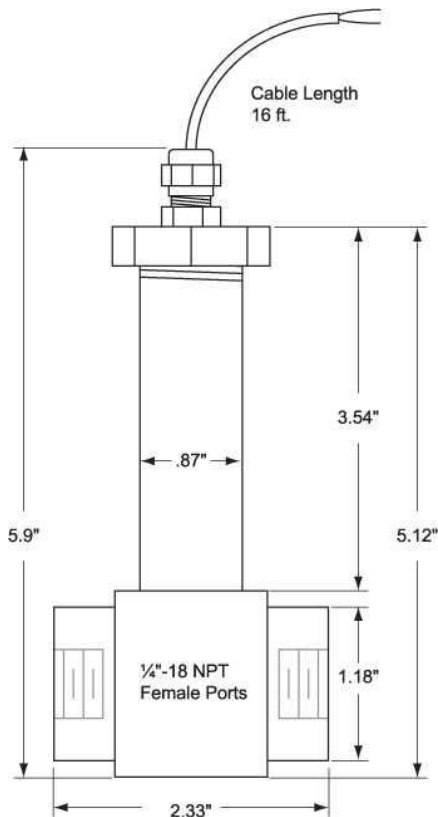
#### Environmental Rating

IP67 (similar to NEMA 4X)

#### Safety

Designed to meet Class I, Division 2 Groups C and D requirements

### Dimensions



Consult the factory when certified engineering drawings are required.  
Dimensions shown are not suitable for construction or modifications

### Sample Fueling Ticket

AIR LC O'HARE INTERNATIONAL AIRPORT 105 ALBRECHT DR. LAKE BLUFF IL 60044-2242 847.295.1050 AIRCRAFT SERVICE RECORD	
TICKET NUMBER	0827361380
Air Sleigh	
FLIGHT NUMBER	164
AIRCRAFT TYPE	B787
TAIL NUMBER	N4D8P
ORGIN	ORD
DESTINATION	LAX
TRANSACTION	Fuel 1
FUEL TYPE	Jet A 1
TRUCK NUMBER	1 1
FUELING LOCATION	Gate C2
FUELER	Degner
METER NUMBER	A Aviation 81
SALE NUMBER	259
TIME START	08/27/15 12:25:51
TIME END	08/27/15 12:42:16
START COUNT	0. Gallons
END GROSS COUNT	1147 Gallons
GROSS DELIUERY	1147 Gallons
START TOTALIZER	26061 Gallons
END TOTALIZER	27108 Gallons
DP 7.2 PSI e	656 GPM i
TOTAL DELIUERED	1147 Gallons
GROSS INUENTORY	953 Gallons
RECEIVED BY _____	—



## **LIQUID CONTROLS GROUP**



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