

# FT-100/200 FUEL TOTALIZER SYSTEM



PILOT'S OPERATING HANDBOOK

SDI P/N 702048-1 OR 2



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## GENERAL SYSTEM DESCRIPTION

The FT-100/200 systems are designed to maximize the efficiency of fuel system management by displaying the precise amount of fuel the engine has consumed.

The FT-100/200 systems consist of a panel mounted instrument and fuel flow transducer(s) designed for installation in the aircraft fuel lines.

<u>MODEL</u>	<u>AIRCRAFT TYPE</u>	<u>TRANSDUCERS REQUIRED</u>
FT-100	Single Engine	One
FT-200	Twin Engine	Two

The system is designed for use in all single and twin engine aircraft having no more than 60 GAL/HR continuous consumption or 78 GAL/HR intermittent consumption. (Take off Power)

### Panel Mounted Instrument

The panel mounted instrument contains four seven segment incandescent displays and system electronics that will precisely count Gallons Used up to 999.9.

The seven segment displays are fully sunlight readable and dim automatically for night and low light level flight conditions.

The FT-100/200 utilize an internal memory to store the gallons used quantity during aircraft shutdown, which provides the pilot with not only the capability to track gallons used per flight but gallons used per week, per month, or over an entire year.

A test push-button is also provided so the pilot may verify all segments are functioning before each flight.

### Fuel Flow Transducer

The turbine flow transducer(s), mounted in the fuel line, measure flow of hydrocarbon fuel such as gasoline, kerosene, and diesel fuel. The transducers are rated for a continuous operation to 60 gallons per hour and for intermittent flows in excess of 60 gallons per hour. In addition, the transducers are precisely accurate down to 0.6 gallons per hour.

The transducer(s) supply the FT 100/200 Totalizer with a pulse signal from a self contained opto-electronic pickup. A neutrally buoyant rotor spins with the liquid between V-jewel bearings. The rotor movement is sensed when notches in the rotor interrupt an infra-red light beam between a light emitting diode and a photo-transistor.

The transducers are designed totally fail safe and complete rotor blockage cannot interrupt fuel flow. The transducer life expectancy is 5,000 Hours Minimum.

### OPERATING PROCEDURES

Turn on the aircraft master switch. On activating the aircraft electrical system the FT 100/100 will display gallons used from the previous flight provided the reset button was not depressed before aircraft shutdown.

The FT-100/200 may be used as a single flight totalizer or as a long term totalizer. Both methods are explained herein.

### Single Flight Totalizer

Turn on the aircraft master switch. On activating the aircraft electrical system the FT 100/200 will display the gallons used from the previous flight. Push the reset button. The FT-100/200 will start at zero and display gallons used as the engine consumes fuel.

Note: Aircraft should be topped with fuel on first flight so you know exactly how much fuel you can burn.

### Long Term Totalizer

Turn on the aircraft master switch. On activating the aircraft electrical system the FT-100/200 will display the gallons used from previous flights. DO NOT PUSH THE RESET BUTTON! On starting the engine or engines the FT-100/200 will continue counting the gallons used up to 999.9 gallons.

### Test Button

The test button when depressed, provides the pilot with a visual indication that all digits are functioning.

# **FT-100/200**

## **SYSTEM SPECIFICATIONS**

**OPERATING TEMPERATURE RANGE:**

**-30°C TO +55°C**

**ALTITUDE: -1000 TO 40,000 FEET**

**VIBRATION: 5 G'S**

**SHOCK: 10 G'S**

**HUMIDITY: 95% AT 50°C**

**ACCURACY: ± 2%**

**APPLICABLE DOCUMENTS: TSO C44A, RTCA DO-160**

**INPUT VOLTAGE RANGE: 14-28 VOLTS D.C.**

**INPUT CURRENT: .5 AMPS MAXIMUM**

**MEMORY CURRENT: .54 MILLIAMPS AMP MAXIMUM**

**WEIGHT: 0.63 POUNDS**

**MAXIMUM DISPLAY CAPABILITY: 999.9 GALLONS**

**FLOW RATE RANGE: 0.6 to 60 GPH/ENGINE**

# MOUNTING SPECIFICATIONS:

