



APPLICATION NOTE: Compact Turbine Meter Accurately Measures Aviation Fuel Flow Rate in Changing Environmental Conditions

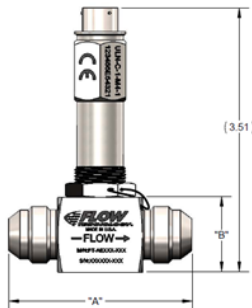
Fuel measurement in aircraft is an excellent application for turbine flow meters. The turbine meter offers one of the most accurate flow metering technologies in a compact, lightweight form factor with exceptional response time and resolution.

To enhance the performance of the turbine flow meter, signal processing can be accomplished to boost measurement range and compensate for changes

in fluid viscosity due to temperature. By calibrating the flow meter in fluids simulating the minimum and maximum fluid viscosity encountered during operation, advanced signal processing can determine the correct compensation to apply to the signal for the measurement condition. This allows the flow

meter to be used in aircraft that encounter significant operating temperature changes due to the mounting location of the meter in the aircraft and the aircraft altitude. microLinK pickoff outputs can be configured for volumetric or mass units. The result is a compact, lightweight, low cost, accurate solution for monitoring fuel, hydraulics or coolants on aircraft.

microLinK Smart Pickoff		
Input Power:		9 to 30 VDC
Temperature Range:		-40° to 125° C
Vibration: Tested to DO160F Section 8.7.2, Zone 5, Type 2, Cat. R		
Outputs (Volumetric or Mass):		
Analog	Frequency (Scalable)	Digital
4-20 mA	0-5000 Hz	CAN 2.0A
0-20 mA	0-5000 Hz	CAN 2.0A



Dimensions: Turbine Meter with microLinK



FT Series Turbine Meter with microLinK

AN or MS External Threads						
Series	Thread	A	B	Min Flow	Max Flow	Weight
	Inch	Inch	Inch	GPM	GPM	Lb.
FT4-6	0.375	2.45	1.00	0.03	3	0.5
FT4-8	0.5	2.45	1.00	0.03	3	0.5
FT6-8	0.5	2.45	1.00	0.05	5	0.5
FT8-8	0.5	2.45	1.00	0.08	8	0.5
FT-08	0.5	2.45	1.00	0.10	10	0.5

HIGHLIGHTS

Industry: Aerospace
Service: Flow Rate
Fluid: Aviation Fuels

Application

Provide real-time flow rate for fuel burn data monitoring

Problem

- Variable fluid characteristics due to changing environmental conditions during flight
- Real-time, accurate flow rates are required in order to determine accurate fuel levels

Solution

- FTI FT Series turbine flow meter supplied with microLinK advanced high-speed, temperature-compensating electronics