# FUEL GAUGING PROBES

## OVERVIEW

LMS capacitance Alternating Current (AC) and Direct Current (DC) fuel gauging probes use lightweight and durable carbon composite materials. In addition to being some of the lightest fuel probes in the industry, they are also virtually immune to corrosion, cracking, dents, and extreme field conditions. Our capacitance probes are inherently crash resistant by collapsing onto itself during hard impact landings to avoid tank penetration and fuel leaks. All electrical connections on the probe are bonded, and there are no friction or riveted electrical connections.

## FEATURES

- No support equipment required (when coupled with LMS signal conditioners)
- Robust composite two-tube design
- Will not dent, scratch, or absorb hand oils
- Designed for high vibration and slosh loads
- Weight savings in comparison to steel or aluminum probes
- Resistant to cracking or material fatigue
- No friction or riveted electrical connections
- Flange mounted or internal bracket mount

## FEATURES: AC SPECIFIC

- Simple design with no electrical components on probe
- Plastic end-caps
- Optional fuel temperature sensing
- Optional point sensor capability (High/Low Level)

## FEATURES: DC SPECIFIC

- Compatible with 200 V/m EMI environment
- Outer tube grounded to the airframe providing Faraday cage shield
- Standard fuel temperature sensing
- Low cabling complexity
- Nickel plated end-caps

## INPUT / OUTPUT

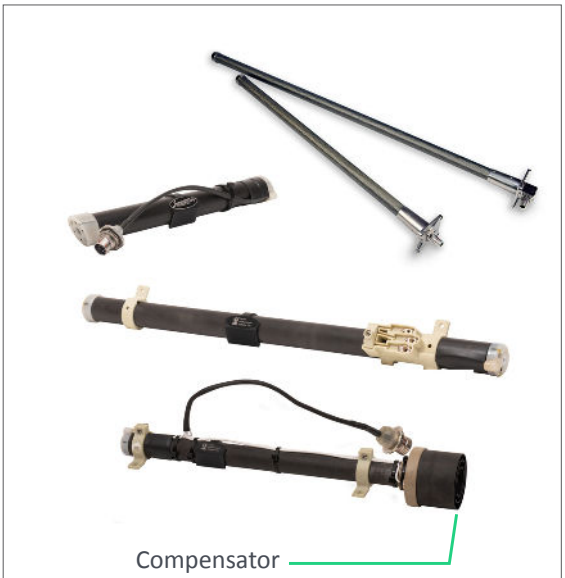
- Lo-Z Excitation and Hi-Z Response
- Ground (DC Probes)

## OPERATIONAL TEMPERATURE

- -55°C to +100°C

## COMPENSATOR *(OPTIONAL)*

- Direct measurement of fuel dielectric properties for improved accuracy across multiple fuel types and/or temperature variation




**FUEL GAUGING PROBES**

**Precise Measurement. Optimized Performance.**



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| DO-160G Section | Description | Category |
|---|---|---|
| 4 | Temperature & Altitude | B2 |
| 5 | Temperature Variation | A |
| 6 | Humidity | B |
| 7 | Operational Shocks and Crash Safety | B |
| 8 | Vibration | S (Curve T)<br>R (Curve G) |
| 9 | Explosive Atmosphere | E |
| 10 | Waterproofness | W |
| 11 | Fluids Susceptibility | F |
| 12 | Sand and Dust | X |
| 13 | Fungus Resistance | F |
| 14 | Salt Fog | S |
| 15 | Magnetic Effect | Z |
| 16 | Power Input | ZXX |
| 17 | Voltage Spike | A |
| 18 | Audio Frequency Conducted Susceptibility | Z |
| 19 | Induced Signal Susceptibility | ZCX |
| 20 | Radio Frequency Susceptibility (Radiated and Conducted) | R |
| 21 | Emission of Radio Frequency Energy | M |
| 22 | Lightning Induced Transient Susceptibility | A3J3L3 |
| 23 | Lightning Direct Effects | X |
| 24 | Icing | A |
| 25 | Electrostatic Discharge (ESD) | A |
| 26 | Fire, Flammability | C |


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