

Fuel Quantity Gauging System

High accuracy / High integrity

Low power consumption

Fault tolerant

Withstands extreme environmental conditions

Introduced by ELDEC France in 1996, the Fuel Quantity Gauging System is made using proven technology to continuously measure the fuel remaining in the aircraft tanks.

The ELDEC France Fuel Quantity Gauging System incorporates unique characteristics making it a state-of-the-art Capacitance Fuel Quantity Gauging System. It withstands all existing environmental conditions encountered in Aeronautical applications and is also suitable for all-composite structure aircraft where the EMC environment is more severe.

Our systems can be adapted to measure other liquids, such as oil, hydraulic liquid (e.g. Skydrol) and water.

Probes

- Capacitance type
- Linear
- Metallic
- Temperature compensated
- Low voltage excitation signal
- Very low current
- Extremely high intrinsic safety protection (very low energy)

Control Unit

- 1 microcontroller per channel
- Various sizes of computers available
- Up to 12 probes processing per channel



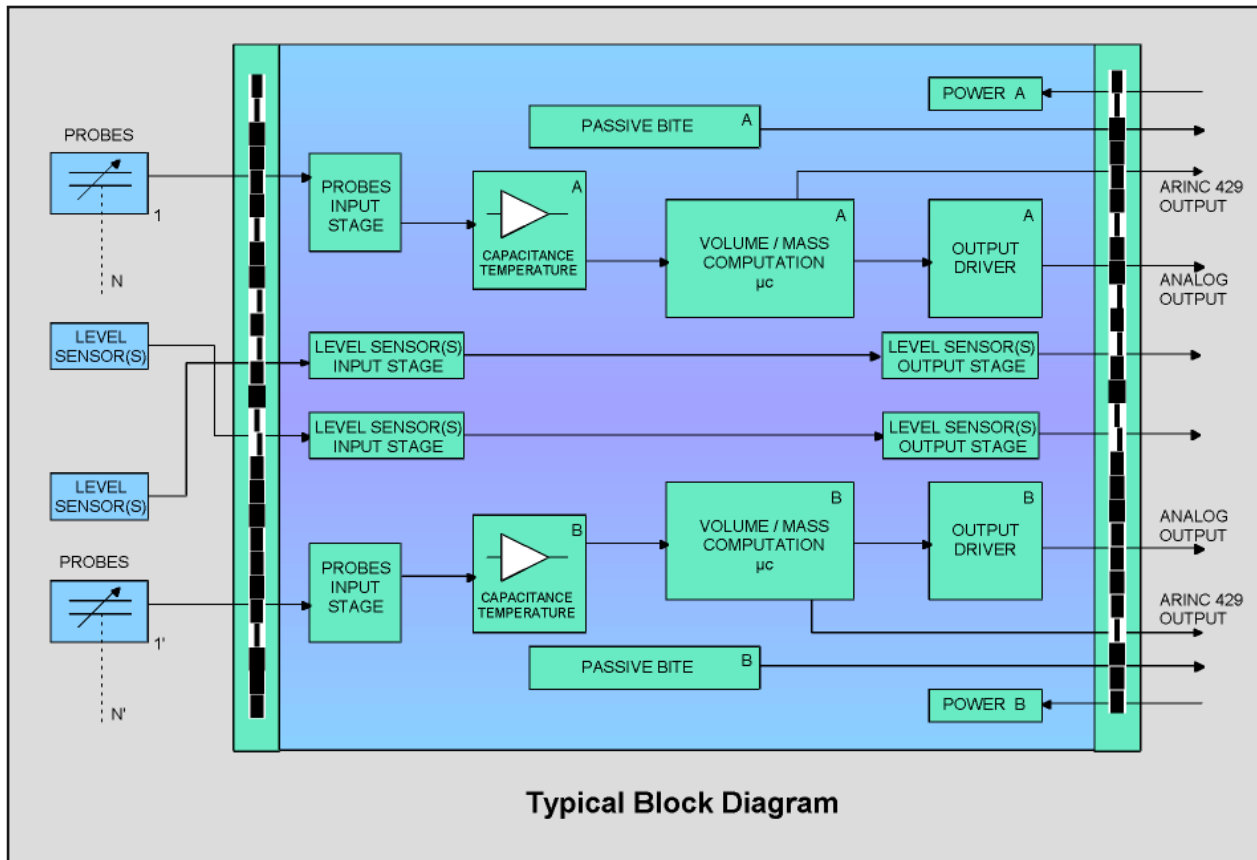
- Measurements performed for each probe processing:
 - probe monitoring (short circuit & open circuit)
 - probe capacitance
 - probe temperature
- Detection of water in tank
- Probe protection against short circuits
- Balancing/pump management
- ARINC429 or RS422 output with fuel quantities and fault location/identification
- Analog outputs available
- Independant channels
- Independant low level warning



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System

- Capacitance Probe System
- Passive and continuous BITE
- Software design as per D0178B
- Fault tolerant
- High accuracy / High integrity
- Pitch and roll compensation
- Fully interchangeable (no need for calibration or setting after replacement)
- Easy to update volume look-up tables in case of tank geometry modification
- Very low power consumption
- Full protection against lightning and EMI effects
- Insensitive to line parasitic capacitance and line resistance
- Microcontroller used for:
 - Height / Volume / Mass conversions
 - Tank geometry data



ELDEC France

18 rue du 35^{ème} Régiment d'Aviation
 69500 BRON, France
 Phone: 33 4 78 26 10 10
 Fax: 33 4 72 37 72 30

www.craneae.com

Crane Aerospace & Electronics

16700 - 13th Avenue West
 Mail: P.O. Box 97027
 Lynnwood, WA 98046-9727
 Phone: (425) 743-1313
 Fax: (425) 743-8234

