LIQUID MEASUREMENT SYSTEMS
SIGNAL CONDITIONER UNIT (SCU)

OVERVIEW

The Signal Conditioner Unit's (SCU) basic function is to excite the fuel probes, compensator, and temperature sensors and scale the return signals. Each SCU can interface with up to eight (8) fuel probes with temperature detection and/or fuel probes with compensators. It will process capacitive and resistive readings to determine the fuel heights for each probe and transmit the calculated fuel volume to the cockpit.

ENCLOSURE

- Material: Nickel plated aluminum
- Dimensions: 4.4" x 6.1" x 1.8" (11x15.5x4.5cm)
- Weight: 1.25 lbs (565 grams)
- EMI Filtered Connector to Aircraft: MS3114L14-19P
- EMI Filtered Connector to Fuel Tank: MS3114L16-26P

FEATURES

- Startup and Continuous Built-In-Test (SBIT and CBIT)
- Fuel temperature measurement
- No field calibration required when paired with LMS probes and sensors
- Slosh filtering
- High- and Low-Level detection

OPERATIONAL TEMPERATURE RANGE

- -55°C to +75°C

SYSTEM ACCURACY

- Standard unit: up to MIL-G-26988C Class II (±2% indication, ±0.75% full scale) when paired with LMS probes and sensors. Class I accuracy per customer requirement.

INPUTS

- Up to Eight (8) Probe or Compensator Channels
- Input: 28VDC
- Two (2) ID bits to select up to Four (4) different tank configurations via pin strapping

OUTPUTS

- ARINC 429 or customer specific requirement
- Up to Two (2) Discrete Open/GND Outputs for Low and High-Level Detection

POWER REQUIREMENTS

- Input: 28VDC per MIL-STD-704
- Current Draw: < 100mA
- Maximum Power Consumption: 7W

SIGNAL CONDITIONER UNIT (SCU)

LIGHT | SAFE | ACCURATE | BEST VALUE

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

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