

LCM-300B MAGNETOMETER



LITEF has 60 years experience in the design, development and manufacturing of highly reliable and safety critical inertial sensors. Our renowned systems are used to navigate aircraft, ships and other vehicles safely around the world. The same superior airborne technology has been adopted for industrial solutions fulfilling highest quality standards.

The LCM-300 Magnetometer is a high performance three-axis magnetic field measurement system. The magnetic sensor head is based on flux gate technology where three sensor elements are orthogonally mounted in strap down configuration. This enables a reliable and highly accurate earth magnetic field measurement even under severe environmental conditions.

MAIN FEATURES

- Complies to airborne standards DO-178C, DO-254 level B and TSO/ETSO (C201 Category H2)
- Flux gate technology enabling wide operational temperature range with high linearity
- Highly ruggedized solid state design
- Fulfils very high levels of EMC and HIRF requirements
- No inclination limitation
- No active cooling or heating required
- Digital RS-422 control with extensive built-in test features
- Outstanding MTBF

TECHNICAL DATA LCM-300B MAGNETOMETER

GYRO PARAMETERS (* 95 % value)	
Measurement Range	± 80,000 nT (each axis)
Bandwidth	≥ 15 Hz
Noise	≤ 1 nT/√h (x-, y-axis) ≤ 4 nT/√h (z-axis)
Non-Linearity	≤ 80 nT*
Axes Misalignment	≤ 0.1 ° x-, y-axis ≤ 0.3 ° z-axis
Non-Orthogonality	≤ 0.1 ° *
Resolution	≤ 6 nT
Bias	≤ 250 nT *
Additional Bias (Ageing)	≤ 100 nT *
Scale Factor Error	≤ 0.1 % *
Scale Factor Differential Error	≤ 0.2 % *
POWER	
Power Consumption	1 W
Input Voltage Range	12 VDC ... 32 VDC (28 VDC nominal)
Low Voltage Operation	12 VDC
Built-in-Test (BIT)	Power up BIT, continuous BIT
Interface	Serial interface with RS-422 levels
Data Update Rate	50 Hz / 64 Hz
ENVIRONMENTAL	
Temperatur Range Short Time High Temperature	- 55 °C ... + 70 °C + 85 °C
Shock (3 axes) - operational - non operating	6 g half sine pulse for 20 ms 20 g impulse / sustained
Vibration - Standard Random - Robust Random	4.12 g _{RMS} 5.81 g _{RMS}
Electro Magnetic Compatibility	According DO-160G
DIMENSIONS	
Diameter	≤ 62 mm
Diameter Mounting Flange	≤ 86 mm
Height	≤ 54 mm
Weight (Magnetometer)	180 g
Weight (Cable & Connector)	145 g

FOR MORE INFORMATION,
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