



Powerful Sensing Solutions for a Better Life

CRM500-510

REMOTE MAGNETOMETERS

The CRM-Series remote magnetometers are high performance three-axis strapdown magnetic field measurement systems. They are designed as a local magnetic field reference for use with high performance Attitude & Heading Reference Systems. The CRM-Series remote magnetometers are easy to install, and they incorporate MEMS accelerometers to support automated co-alignment with the AHRS500GA, AHRS510GA or third party AHRS.



FAA CERTIFIED



Primary Flight Display Heading Reference



Unmanned Aerial Vehicle Control

The CRM Series remote magnetometers provide an RS-422 serial digital data bus with a Baud rate of 38,400. They are configured to operate in an auto send mode so that data is automatically and continuously transmitted following power up. Output data is transferred in a compact binary format that includes three-axis magnetic field data and built-in-test status.

Features

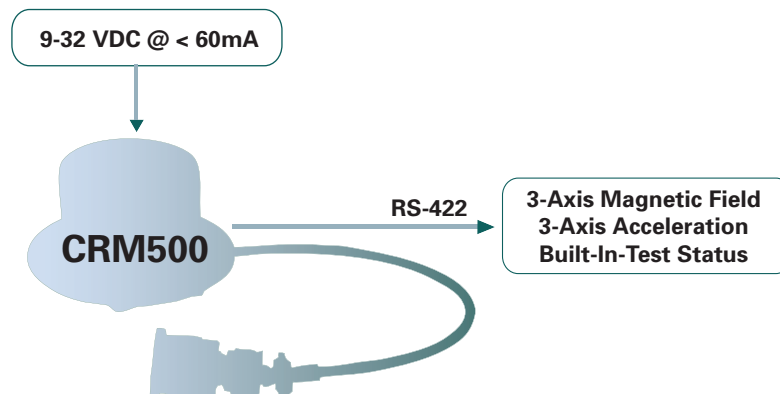
- 3-Axis Magnetic Field Sensor
- High Resolution Flux Gate Sensors
- Compatible with MEMSIC FAA Certified AHRS500GA and AHRS510GA
- For use in DO-160E Wing or Tail Mount Environments

Certifications

- TSO-C6d with MEMSIC AHRS
- DO-178B Level B (Level A Pending)

Applications

- Primary Flight Display Heading Reference
- Unmanned Aerial Vehicle Control



Performance CRM-Series

Magnetic Field	
Range (Gauss)	± 0.65
Bias (Gauss)	± 0.005
Non-Linearity (% full scale)	± 0.1
Sensor Axis Alignment to Case (°)	± 0.2
Noise (nT/√Hz)	2
Data Output Rate (Hz)	>50

Specifications

Environment	
Operating Temperature Range (°C)	-55 to +70

Qualification	
CRM500GA (RTCA/DO-160D)	D2XBBB[(TEE1P)(UFF1)]XWXXXZBABC[WWW]MA3G33XAA
CRM510GA (RTCA/DO-160E)	D2XBBB[(REE1)(HP)]XXXXXXZXXCC[XW]XMZ2J33XXAX

Electrical	
Digital Interface	RS-422
Baud Rate (Bits/s)	38400
Input Voltage (V)	9 to 32
Power Consumption (W)	<1.5

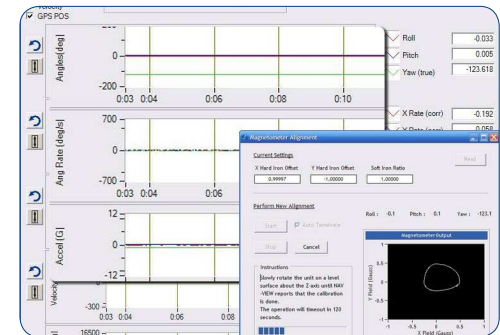
Physical	
CRM500GA	
Size (in)	3.370 OD x 2.03
(cm)	8.56 OD x 5.15
Weight (lbs)	<0.5
Connector	6-pin non-magnetic circular (D38999/26FA35PN)
CRM510GA	
Size (in)	4.37 x 2.62 x 1.65
(cm)	11.10 x 6.70 x 4.20
Weight (lbs)	<0.5
Connector	13-pin non-magnetic circular (D38999/25NB35PN)

Ordering Information

Model	Description
CRM500GA-200	Strapdown 3-Axis Fluxgate Magnetometer (Circular Flange)
CRM510GA-200	Strapdown 3-Axis Fluxgate Magnetometer (Rectangular Flange)

This product has been developed exclusively for commercial applications. It has not been tested for, and makes no representation or warranty as to conformance with, any military specifications or its suitability for any military application or end-use. Additionally, any use of this product for nuclear, chemical or biological weapons, or weapons research, or for any use in missiles, rockets, and/or UAV's of 300km or greater range, or any other activity prohibited by the Export Administration Regulations, is expressly prohibited without the written consent and without obtaining appropriate US export license(s) when required by US law. Diversion contrary to U.S. law is prohibited. Specifications are subject to change without notice.

MAG-ALIGN 2.0 Configuration & Display Software



MEMSIC's MagAlign software is included to assist users with the Hard and Soft Iron magnetometer alignment process.

Other Components

Each CRM-Series remote magnetometer is shipped with an interface cable, MEMSIC's CRM-Series User's Manual and MagAlign configuration and display software.

Support

For more detailed technical information please refer to the CRM-Series User's Manual available online at: www.memsic.com/Support