

## MD ENGINEERING, CONSULTING SERVICES

### MAGNETIC FIELD COMPENSATION SYSTEM MR-3

Three axis automatic compensation of magnetic field disturbances  
from DC to 1kHz





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### Features

- Continuous real time compensation of magnetic field disturbances from DC to 1 kHz
- Typical 40 dB attenuation of 50 Hz magnetic field
- Magnetic field measurement with high resolution fluxgate sensors
- Rugged analog design, no tedious programming
- Integrated power amplifiers for direct connection of compensation coils
- Field monitor and alarm functions

### Applications

- Improvement of electron microscope images (SEM/SDB and TEM)
- Biomagnetic and paleomagnetic applications
- Compensation of power line frequencies (50/60 Hz) and higher harmonics
- Attenuation of slow or stepped magnetic field changes caused by vehicles movement, moved magnetic objects, elevators, etc.
- Special versions for MRI applications available

### Specifications

Magnetic field sensor	triaxial fluxgate sensor
Zero drift	< 0.1 nT/K
Noise	< 0.7 nT RMS (0.1 Hz < f < 1000 Hz)
Analog outputs	1 V/ microT, BNC connectors for X, Y, Z
Bandwidth	0 to 1000 Hz (-3 dB)
Digital displays	show incremental DC or true rms AC magnetic field for X, Y, and Z
Analog meters	show coil current, range plm 3 A
Attenuation @ 50 Hz	typ. 40 dB at sensor position
Attenuation @ 250 Hz	typ. 20 dB at sensor position
Recom. compensation coil impedance	2 ohm
Subject to change	