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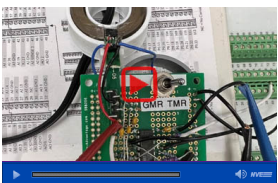
Upcoming Trade Shows

Visit our distributor Dimac Red September 25 to 29 at **RADECS** in Toulouse, France, organized by Centre national d'études spatiales. NVE products are inherently reliable, intrinsically safe, and radiation tolerant. They've been selected for Level 1 missions such as the Europa Flyby Mission.

NVE will exhibit at **MD&M** October 10 to 11 at the Minneapolis Convention Center. It's billed as the region's most comprehensive medical design and manufacturing event. NVE has decades of experience with medical sensors, including life sustaining applications. See us at booth 3630.

Current Sensing With the World's Most Sensitive Magnetometers

We demonstrate sub-milliamp current detection using NVE's ultrasensitive GMR and TMR magnetometers. The magnetometers have enough resolution for a coil-free Ground-Fault Circuit Interrupter (GFCI):



Better Than Coils

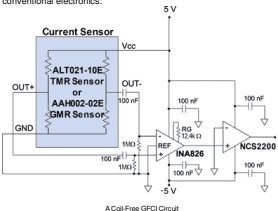
Unlike inductive, coil-based solutions, NVE's sensors are ultraminiature and inherently DC-correct, enabling higher-performance solutions to the most demanding current sensing requirements.

The World's Most Sensitive Magnetometers

With sensitivities as high as 500 mV/V/mT, NVE magnetometers are as sensitive as coils, and can precisely measure fields of less than a microtesla.

Simple Interface

The simple Wheatstone bridge configuration easily interfaces to conventional electronics:



A Broad Product Line

NVE offers several high-sensitivity analog magnetometers for applications such as low-current detection, Earth-field detection, position and speed sensing, and non-destructive analysis:

Part Number <small>(click for info)</small>	Technology	Sensitivity (mV/V/mT)	Linear Range (mT)	Package
ALT025-10E	TMR	20	0 to 10	2.5 x 2.5 mm DFN6
ALT023-10E		200	0 to 1	
[NEW] ALT021-10E		500	0 to 0.25	
AAH004-00	GMR	40	0.15 to 0.75	MSOP8
AAH002-02		150	0.06 to 0.3	SOIC8

[Download the TMR Magnetometer Datasheet »](#)

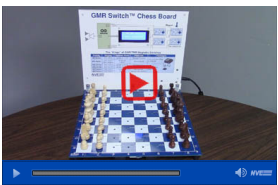
[Download the GMR Magnetometer Datasheet »](#)

Buy Online
\$9.95 shipping

Chessboard Demonstration with Magnetic Switches

A New Demonstration

NVE's [AD024-10E](#) GMR Switch™ sensors are at the heart of a new chessboard demonstration:



Versatile

Unlike most sensors, these sensor outputs can be wire-OR'ed together, which allows 64 sensors to be multiplexed to 16 I/O pins. The sensors are mounted on breakout boards and wired to an Arduino. The Arduino scans the 64 sensors, displays the moves on an LCD display, and reports the moves with voice synthesis.

Sensitive

The GMR sensors are sensitive enough to activate with the basic ferrite magnets in a magnetic chess set and accommodate a wide range of magnet strengths.

Fast

The sensors' high speed allows the multiplexing demonstrated in the chessboard, or duty cycling to reduce power consumption.

Omnipolar

GMR sensors are activated by positive or negative fields, which is essential since the magnet orientation is random.

A Family of Magnetic Switches

NVE offers seven series of magnetic switch sensors, as summarized below:

Series <small>(click for info)</small>	Supply Voltage	Min. Operate Point	Features	Packages
AD-Series	4.5 – 30 V	1 mT	General Purpose	2.5 x 2.5 mm DFN6 or MSOP8
AFL-Series	0.9 – 5.5 V (4 ranges)	0.4 mT	Ultra-sensitive	
ADL-Series	2.4 – 4.2 V	2 mT	Ultralow power; Ultra-miniature	1.1 x 1.1 mm DFN4
AHL-Series	0.9 – 2.4 V	1 mT		
ADT-Series	2.4 – 4.2 V	1.5 mT	Nanopower without duty-cycling	
AHT-Series	0.9 – 1.8 V	1.5 mT		
AHK991	0.9 – 1.8 V	350 mT	Omni-directional	

Ideal Proximity Sensors

So when it's "your move" to specify a proximity sensor, don't get "rooked" into using cheap, sloppy Hall-effect switches.

[AD-Series Sensor datasheet »](#)

[Breakout board information »](#)

[GitHub repository for the Arduino code »](#)

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