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Document Updates

[AFL-Series Ultrasensitive Low-Voltage Magnetic Switches](#)

(added AFL006; see story at right)

[Sensor Catalog](#)
(added AFL006)

[Analog sensor datasheet](#)
(added AAL004—The world's smallest analog sensor)

[ADL-Series Nanopower digital sensor datasheet](#)
(new reference circuits)

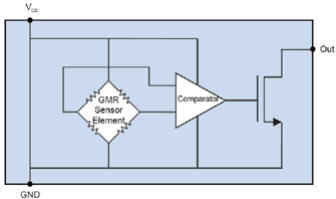


The World's Most Sensitive Magnetic Switch

The newest member of NVE's industry-leading family of magnetic switches, the AFL006, is also the most sensitive, with a remarkable 4 Oersted typical operate point.

Key AFL006 features include:

- 4 Oe operate point for ultrahigh sensitivity
- 0.9 V – 2 V operating voltage for single-cell battery operation
- Power less than 100 microwatts
- 2.5 mm x 2.5 mm x 0.8 mm TDFN6 for miniaturization



Applications include portable instruments, utility meters, and noncontact overcurrent protection.

Like most of our GMR switches, the AFL006 is omnipolar, meaning the applied field can be of either polarity, and the operate point is extremely stable over supply voltage and temperature. Magnetic hysteresis is low for precise operation.

There are now three off-the-shelf versions of NVE's AFL-Series ultrasensitive low-voltage magnetic switch family:

Part Number	Typ. Magnetic Operate Point	Supply Voltage	Typical Power	Package
NEW AFL006-10E	4 Oe	0.9 – 2 V	Button cell	2.5 mm TDFN6
AFL000-10E	10 Oe		Lithium battery or 3.3 V logic	
AFL200-00E	10 Oe	2.7 – 3.6 V		MSOP8

All three parts are in stock and available for immediate delivery.

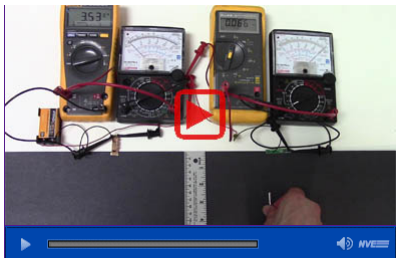
Buy Online
\$9.95 shipping

We can also provide a custom magnetic operate points, supply voltages, or packages. [Contact us](#) with your requirements.

Lab Results

GMR vs. Hall Effect Demonstration

We went into the lab to demonstrate the world's most sensitive magnetic switch—the new AFL006—compared to a typical Hall effect sensor:



GMR is a "hall of a lot" better than Hall.

We showed that compared to a Hall effect sensor, the AFL006 GMR sensor is:

- thirty times **more sensitive**;
- two orders of magnitude lower **power**;
- **omnipolar**, so you don't have to worry about magnet polarity; and
- **smaller**.