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NVE in the News

IsoLoop isolators are featured in a full-length article in the September issue of the German magazine *Design & Elektronik*.

The article describes how IsoLoop isolators operate and describes their advantages compared to "Optokoppler" and "Transformatoren."

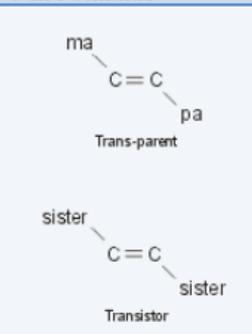
Voicemail Playlist

Currently playing on our voicemail background music is "The Elements" by Tom Lehrer ([link to lyrics](#)).

NVE uses exotic elements such as ruthenium, platinum, and magnesium to make the world's best sensors and isolators.

Call (952) 996-1639, option 9 to hear our background music continuously.

Fun Formulas



Thanksgiving

NVE will be closed for business Thursday and Friday, November 26 and 27. Orders will be processed the following Monday.

Supply Chain

Allocation? Not here!

Allocation is a dirty word, and you won't hear it with NVE. While distributors are reporting lead times up to 30 weeks for other components, NVE and its distributors have virtually all part types in stock for same day shipment and next-day delivery.



That's not the only word that makes NVE different:

<p>Industry Speak Allocation Lead time Minimum order We'll get back to you</p>	<p>NVE Says In stock Same-day shipment The minimum is one We'll ship</p>
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NVE's extraordinary record of on-time shipments is unmatched. While other manufacturers cut capacity during the downturn, NVE expanded its facilities and equipment.

You move fast; so should your suppliers. Call (800) GMR-7141 or [buy online](#).

Awards & Accolades

NVE's CEO was named one of **America's Best CEOs** for the third consecutive year. He was one of two CEOs recognized in the semiconductors and semiconductor equipment industry.



The November 2, 2009 issue of *Forbes* ranked NVE eighth in its list of the **200 Best Small Companies in America**.

"This Eden Prairie, Minn. company uses nano-technology to make miniature sensors (some weighing less than a mosquito)..."

—*Forbes*, November 2, 2009

[<Links to Accolades>](#)

Isolator Application Centers

[Isolator Application Centers](#) were recently launched on NVE's acclaimed Website, [nve.com](#).



Each Applications Center includes illustrative applications based on real-world customer experience, links to selector guides, application bulletins, practical tips, and more.

The new Applications Centers are:

- PLCs
- RS-422/RS-485/PROFIBUS
- CAN Bus
- Other Serial Interfaces
- ADCs/DACs/SPI
- Precision Audio
- Power Interfaces

New Application Notes



[AB-20: NVE's IL600 Series: The True Optocoupler Alternative \(pdf\)](#)

This new bulletin describes the features of **IL600-Series isolators** that make them ideal replacements for optocouplers, including wide input voltage range, no input-side power supply, differential inputs, channel-to-channel isolation, and CMOS or open-drain outputs. The bulletin includes a number of example circuits.



[AB-19: PROFIBUS Compliance: A Hardware Design Guide \(pdf\)](#)

An overview of best hardware design practices for **Profibus DP nodes**. Three important but sometimes tricky design considerations are covered: isolation, Profibus compatibility, and bus node polarity.

[<All Isolator Application Notes>](#)

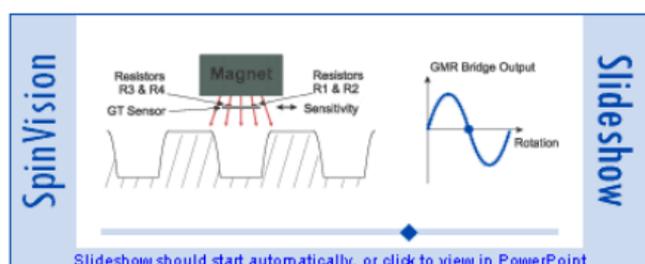
Thanksgiving Application Corner

Thankful for Gear-Tooth Sensor Airgap

By [Jay Brown](#)
Vice President, Sensors

For rotational gear-tooth sensors, engineers often tell us how thankful they are for airgap.

Rotational sensors are designed for industrial speed applications where magnetic detection of gear teeth or magnetic encoder wheels is required:



Slideshow should start automatically, or click to view in PowerPoint

GT Sensor Operation

Airgap refers to the spacing between the gear teeth and the sensor. As the figure at right shows, GMR sensors have a much wider airgap operating range than Hall effect sensors.



Model AKL001-12 GT Sensors™, for example, are specified for 1.0 mm to 3.5 mm over the full operating temperature and voltage.

AKL-Series GT Sensors have integrated signal processing that compensates for temperature, sensor output variation, and magnet/target variation.

Some GT Sensor tips:

- Approximately 1.5 mm between the back of the sensor and the face of the bias magnet keeps flux lines "flexible" and able to follow gear teeth. Locating the sensor and magnet on opposite sides of a circuit board often provides good spacing.
- Use a thicker circuit board with a machined magnet pocket to precisely position the magnet on a board. Most board manufacturers offer such machining.
- If zero-speed operation is not required, AC couple the sensor to eliminate offset caused by mechanical imperfections.
- Ceramic 8 magnets are inexpensive and have good field characteristics. Alnico 8 magnets are a good choice for high-temperature. Rare-earth magnets are not recommended because they tend to saturate the sensors.

GT Sensors are available with analog or digital outputs. Dual-output phase-shifted versions provide quadrature for rotational direction determination.

Low profile MSOP-8, TDFN-8, and TDFN-6 packages allow GT Sensors to fit in tight spaces. An [evaluation kit](#) is available with a variety of sensors, magnets, and PCBs.

So happy Thanksgiving, and don't let airgaps turn your systems into turkeys.

[<GT Sensor Catalog \(pdf\)>](#)



Buy Online
\$9.95 shipping