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**2010 Back Issues**


Thrilling news, hilarious sidebars, and ingenious applications.

Catch up on what you missed in the [Sensor and Isolator News archives](#).

**Interesting Facts**
**REALLY** rugged...


Because they rely on electron spin, NVE sensors and isolators are inherently much less susceptible to ionizing radiation than conventional charge-based devices.

Customers have tested NVE basic elements at up to 1.1 terarad per second without failure. That would be a fatal X-ray dose in less than a nanosecond.

[<More Interesting Facts>](#)

**2010 Year in Review**

We wish our readers a successful and prosperous 2011. It was a good year for NVE with many new customers, new products, added distributors, and prestigious awards:


**New Products**

- [IL41050 Isolated CAN Transceiver](#)

Wide and narrow-body single chip solutions with integrated isolation and transceiver functions.

- [IL721 CAN Isolator](#)

Bidirectional isolators in small packages with best-in-class propagation delay; ideal for CAN isolation with stand-alone transceivers.

**New Distributors**

- [Shanghai Channel](#), China (sensors and isolators)

- [CS Component Company](#), Korea

**Awards and Accolades**

- [100 Best Small Public Companies in America](#) according to *Forbes*

- [Fastest Growing Public Companies in Minnesota](#) according to the *Minneapolis/St. Paul Business Journal*

- [Top 100 Largest Minnesota-Based Public Companies](#) according to the *Star Tribune*

- [Product of the Month](#)

awarded for NVE magnetic switches by *Konstruktion & Engineering*

- [Top 5 Semiconductor Company](#) according to *TheStreet*.

**New Year Application Corner**
**Resolving Gear Teeth**

 By [Jayne](#), Sensor Applications Virtual Engineer

If you have a New Year's resolution to get more more resolution for your gear-tooth encoders (and who doesn't!), we have the solution.

NVE GT Sensors use high-sensitivity, low-hysteresis GMR to detect even the smallest gear teeth. That means you can use finer-tooth encoder gears for more angular resolution and better accuracy.

GT Sensors are designed for detection of ferrous gear teeth and magnetic encoder wheels in industrial speed sensing. The sensor produces a sinusoidal output with one cycle per tooth with wide air-gap and temperature tolerances.

Click on our [new video](#) for practical tips on using GT Sensors:


[Video: Jayne's Tips to Resolve Gear Teeth](#)

GT Sensors are available with analog or digital outputs. Dual-output versions are available with the second output phase shifted with respect to the first for quadrature to determine direction.

Low profile MSOP8, TDFN SO8, and TDFN6 packages allow GT Sensors to fit in the tightest spaces. An evaluation kit is available with a variety of sensors, magnets, and PCBs.

So resolve to be more precise this year with GT Sensors. Order an [evaluation kit](#) and try them yourself:

[Buy Online](#)  
\$9.95 shipping

[<Download GT Sensor Data Sheet>](#)

**Distributor News**
**Korean Distributor**


CS Component Company has joined NVE's world-class distributor network, providing IsoLoop Isolator sales, marketing, and application support in South Korea.

NVE's award-winning products are available in more than 75 countries and our distributors speak many languages, including Korean.

[<Isolator Distributor Network>](#)

**From the Application Desk**
**Real-world questions from the NVE Application Desk**

 By [Sandy Templeton](#)
*Director, Isolator Product Development and Applications*

**Q. I have a circuit where the supply voltage may dip below the 3 V spec. (as low as 2.8 V under some circumstances). Is there anything I can do to increase the chances the isolator will continue to work?**

**A.** While we can't guarantee the parts will work below the 3 V spec., IsoLoop isolators are remarkably forgiving. Some suggestions to maximize supply voltage design margin:

- Place ceramic decoupling capacitors as close to the power and ground pins as possible to limit losses due to stray inductance. In this case we'd recommend two decoupling capacitors—100 pF in parallel with 100 nF. The smaller capacitor will have lower ESR and inductive losses; the larger provides most of the switching energy. The smaller capacitor should be the one closer to the pins.
- Increase the data rate (1 Mbps or higher if possible). Because of their unique design, IsoLoop Isolators actually work better at higher speed. Similarly, do not limit slew rate of the input signals.
- NVE is known for exceptional customer service, and we can screen isolators and sensors to unique requirements such as this. Contact us for minimum orders and setup charges.