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EDN

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**Fun Facts**

IsoLoop Isolators use very little power because they switch in just 2.5 nanoseconds using only one-third of a nanojoule of energy. The devices can switch over 100 million times with less than the nutritional energy in one cracker crumb (0.00001 Calories).

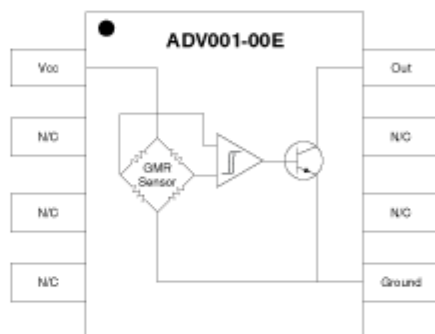
Speaking of crumbs, two bits are known as a "crumb," and two-channel IsoLoop Isolators are available in packages as small as MSOPs.

[<More Fun Facts>](#)

**Product News**

**Bipolar Magnetic Sensor**

The new ADV001-00E is a unique GMR digital magnetic switch with a bipolar output. The sensor maintains an operate point with the application of a negative (south) field, and a release point with the application of a positive (north) field. Extremely low magnetic operate points allow large air gaps.



Applications include magnetic encoders, pneumatic cylinder position sensing, and speed sensing.

Summary specifications are as follows:

- MSOP8 or 2.5 mm x 2.5 mm TDFN
- Magnetic Operate/Release Point  $\pm 4$  Oe
- Operating Supply Voltage 4.5 - 30 V
- Output Drive Current 20 mA
- Temperature Range -40°C to +125°C



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**MSOP Isolator Line Expanded**



The IL510-1 and IL511-1 are new additions to the IsoLoop MSOP8 Isolator line. The world's smallest isolators of their type, MSOPs can reduce board area by up to a factor of ten compared to single-channel PDIP isolators.

Like all IsoLoop Isolators, MSOP isolators feature excellent magnetic immunity and unlimited life. A "-1" suffix on isolator part numbers designates an MSOP. IsoLoop MSOP Isolators are available in a variety of input, output, and channel configurations. And, of course, NVE also offers the industry's broadest line of SOIC, PDIP, narrow-body, and wide-body isolators.

More than a dozen MSOP isolator part types are currently [in stock](#) and available for immediate delivery.

Key MSOP isolator features include:

- 3 mm by 3 mm MSOP-8
- Passive or Digital Inputs
- One or Two Channels
- CMOS or Open-Drain Outputs
- 150 Mbps (S-Series)
- 125°C (T-Series)
- External Clock Option (IL510-1)
- DC Correct (IL500-Series)
- 2.5 kVrms Isolation (1 min.)
- IEC 61010-2001

[<MSOP Selector Guide>](#)

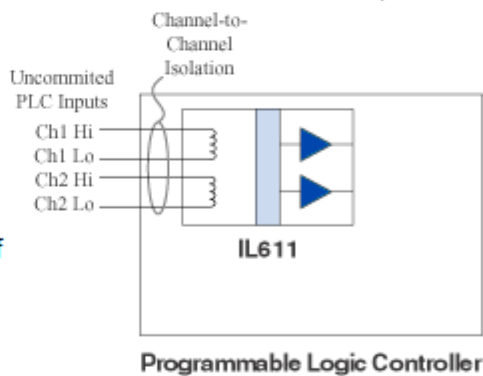
**Application Corner**

**True Channel-to-Channel Isolation**

**IsoLoop**  
The Opto Alternative

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

In addition to 2,500 Vrms input-to-output withstand voltage, the IL600 series of IsoLoop isolators provide outstanding isolation of 400 Vrms between adjacent channels. These unique devices allow very simple channel separation in industrial process control applications, especially PLCs, where the reference ground of each channel may be different. The data line is powered by the signal, so no input power supply is required. With two channels available in the tiny MSOP footprint, more functionality can be crammed into a smaller space without sacrificing channel-to-channel or ground-to-ground isolation.



[<More Illustrative Applications>](#)