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New Documents

Revised Datasheet:
[ILDC-Series DC-to-DC convertors »](#)

New Application Bulletin:
[Simple Radiated Emissions Control for NVE's Isolated DC-DC convertors »](#)

In the News

» **“This study uses the ABT series sensors developed by NVE Corporation of the United States.** The models are [ABT375-00E](#) and [ABT600-00E](#), both of which are back magnetic TMR sensors... The sensor's output signal has extremely low distortion and excellent linearity, as well as low hysteresis and a wide peak-to-peak signal range. In addition to the small size of the product, it can also be used for speed and position measurement of linear or rotary motion.”
P. -Y. Chen and P. -J. Wang, “Design and Analysis of Linear Incremental Encoder Based on Back Magnetic TMR Sensors,” *2023 Photonics & Electromagnetics Research Symposium (PIERS)*, Prague, Czech Republic, 2023, pp. 2142-2148.

» **“If you're the DIY type,** you may even be interested in an electronic chessboard like this one from the NVE Corporation team, which was made possible by practical magnetic switches.”“Practical magnetic switches make this electronic chessboard possible.”
[The Official Arduino Blog](#), Sept. 15, 2023.

CE Marking for NVE's Isolated DC-to-DC Convertors

NVE's line of the world's smallest DC-to-DC convertors is now CE marked under an EU Declaration of Conformity including general safety, electromagnetic compatibility (EMC), and RoHS.

General safety

ILDC-Series DC-to-DC convertors have a unique ceramic/polymer composite isolation barrier, providing the industry's best barrier resistance and virtually unlimited life. The ultraminiature DFN6 versions are rated at a full 2.5 kVrms, and the SOIC16W versions are rated at a remarkable 4 kVrms. All parts are UL1577 registered and tested under the stringent new VDE 0884-17 standard.

EMC

The parts meet the stringent CISPR32 Class B (FCC Class B/ EN 55032:2017/A11:2020) standards for radiated emissions without any additional external components. Unlike conventional parts that require ferrite beads, inductors, or large capacitors, NVE's DC-to-DC convertors only require a small overlapping stitching capacitance on inner PCB layers. Check out the [revised datasheet](#) and a new [application bulletin](#) for details on getting your designs to pass EMC testing the first time, every time.

RoHS

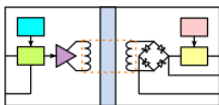
NVE's ILDC-Series, like all NVE part numbers, are offered with a RoHS-compliant package (“E” suffix). Need a Pb-Sn package (no “E” suffix) for non-RoHS applications? NVE offers leaded parts too!

Ultraminiature

The 3 x 5.5 mm DFN6 is the world's smallest isolated DC-to-DC converter. JEDEC-standard SOIC16 package versions are also available with true eight-millimeter creepage and 4 kV isolation.

Minimal Parts Count

Three simple bypass capacitors are the only external parts required. No additional regulation is needed and there is no minimum load.



ILDC-Series functional diagram.

Ample Power

250 milliwatts of fully-regulated power means plenty of current for an isolated RS-485 bus or high-side MOSFET drivers.

Low Ripple

Less than one millivolt peak-to-peak ripple means low noise and reliable systems.

Soft Start

A smooth output ramp-up with a minimum two millisecond startup facilitates power sequencing such as allowing control electronics to start before an H-bridge is powered.

Rugged

A 175 °C maximum junction temperature allows full power up to 125 °C ambient with no derating. Integrated short-circuit protection prevents excessive power dissipation.

Versatile Applications

ILDC1x parts are ideal for a number of applications, including:

- Ground-loop mitigation
- RS-485 / RS-422 bus supplies
- Isolated SPI / Microwave interfaces
- Isolated ADC and DAC power supplies
- “2 x MOPP” medical systems requiring true 8 mm creepage

Evaluation Boards

ILDC1x-Series [evaluation boards](#) have everything you need, which is just the part and three bypass capacitors. There are also LEDs to show the convertor is operating, and screw terminals for easy connections. No ferrite beads or external regulators are necessary.

Immediate Delivery

ILDC-Series parts and evaluation boards are [in stock](#) for immediate delivery.

Part Number	Eval Board	Package	Output Voltage	Isolation Voltage
ILDC11VE	ILDC11V-01	SOIC16W	3.3 V	4 kV
ILDC11-15E	ILDC11-01	DFN6		2.5 kV
ILDC12VE	ILDC12V-01	SOIC16W	5 V	4 kV
ILDC12-15E	ILDC12-01	DFN6		2.5 kV
ILDC13VE	ILDC13V-01	SOIC16W	6 V	4 kV
ILDC13-15E	ILDC13-01	DFN6		2.5 kV

[ILDC1x datasheet »](#)

[Demonstration video »](#)

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\$9.95 shipping

NVE at MD&M Minneapolis

Oct 10 - 11
2023

Minneapolis, MN
Minneapolis Convention Center

Booth # 3630

GMR and TMR Magnetic Sensors for Medical Devices

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Use promo code SPECIAL23 to get a free expo pass and 20% off a 2-day or 1-day conference pass.

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. Click on the banner above or use this [link](#) to get your free entry ticket. We'll see you at booth 3630!

If you can't attend, you can visit our [online booth](#) and send your inquiry to us at sensor-apps@nve.com. We're looking forward to helping you achieve your latest and greatest designs!