NVE CORPORATION

Sensor and Isolator NEWS

June 2020

*Electrifying News From NVE*

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**New on YouTube**

World's Smallest DC-DC Convertor

IL3685 Problem-Free Power-Up and Power-Down

ABZ Noncontact TMR Encoder Sensor

AET500 Magnetic Linear Encoder Demonstration

Internet of Things Chessboard Metaphor

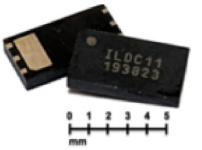
**COVID-19 Update**

NVE has operated effectively through the COVID-19 pandemic and Minnesota's Stay at Home Order has now been lifted.

We have plenty of inventory and you can order NVE sensors and isolators directly from our Website.

## World's Smallest DC-DC Convertor

NVE is launching the world's smallest isolated DC-DC convertor, based on its revolutionary IsoLoop isolation technology. Now you can eliminate ground loops and get the noise reduction and safety of isolated power in a package no bigger than an op-amp.



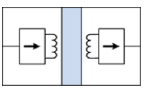

ILDC11-15E Ultraminiature Isolated DC-DC Convertor

**A (REALLY) Small Part**

The **ILDC11-15E** provides one-quarter watt of regulated, fully-isolated power with a 3.3 volt input and output in a 3 x 5.5 x 0.9 mm DFN package. The 0.015 cm³ package is the equivalent of 1/8000th brick, and provides an energy density of 17 W/cm³.

**Minimal Parts Count**

Three inexpensive bypass capacitors are the only external parts required. No additional regulation is needed and there is no minimum load. Frequency hopping and shielding quash EMI and make ferrite beads unnecessary.



ILDC11 Functional diagram.

**Big Features**

The ILDC11-15E generates a minimum of 80 mA of output current.

NVE's patented IsoLoop technology uses a unique ceramic/polymer composite barrier for full 2.5 kV isolation and virtually unlimited barrier life.

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

**Evaluation Board**

The ILDC11 evaluation board has an ILDC11-15E plus the three required external bypass capacitors as well as LEDs to show the device is operating. Screw terminals provide easy connections.

**RS-485 Demonstration Boards**

The ILDC11 is ideal for generating isolated bus supplies for RS-485 nodes. Two different boards demonstrate isolated RS-485 nodes.

A **3.3-volt node** uses an ILDC11-15E DC-DC convertor and a IL3685PE 3.3-volt isolated transceiver. The **5-volt node** uses an IL2985E low-power 5-volt transceiver, an ILDC11-15E, and a commodity boost regulator.

These 4 x 3 inch (100 x 75 mm) boards provide screw terminal and test point connections.

**Immediate Delivery**

The ILDC11-01 and demonstration boards are in stock for immediate delivery.

**Coming Soon: Versions With Integrated Transceivers**

Watch this space for the launch of isolated RS-485 and RS-422 transceivers with integrated DC-DC convertors. The new devices will provide best-in-class performance while minimizing board space and parts count.

**ILDC11 datasheet download »**

Buy Online
$9.95 shipping

## Upcoming Exhibitions

**Power Conversion and Intelligent Motion** (PCIM), July 28 to 30, Nürnberg, Germany.

NVE distributor Hy-Line Power Components (Stand 9-419) will display our products, including the new IL6xxCMTI Ultrahigh transient immunity Isolators and IL4685E / IL4622E RS-485 / RS-422 Transceivers with integrated DC-DC convertors.

**Sensors Expo**
(originally scheduled for June 23 to 24)
Postponed to November 16-18, 2020,
San Jose, Calif., Booth 1628.