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Recent Shows

Thanks to everyone who visited us at MD&M in Minneapolis in October. The most popular demonstrations were ultrasensitive and ultralow-power magnetometer sensors.

New Documents

Revised Datasheet:
[IL761xV / IL781xV Data Couplers with Integrated DC-to-DC Convertors](#)

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

Holidays

NVE will be **open** on Veterans' Day (Friday, November 10).

We will be **closed** Thursday and Friday, November 23 and 24 for the Thanksgiving holiday.

Online orders placed during holidays will be processed the next business day.

Product support is available 365 days a year, including holidays, at:
sensor-apps@nve.com
or
iso-apps@nve.com

CE Marking for NVE Isolators With Integrated DC-to-DC Convertors

CE NVE's popular IL761xV / IL781xV line of data couplers with integrated DC-to-DC convertors is now CE marked under an EU Declaration of Conformity including general safety and EMC.

Safety

The isolation channels and DC-to-DC convertor are fully isolated with a remarkable 4 kVrms isolation voltage. A unique ceramic/polymer composite isolation barrier provides the industry's best barrier resistance and virtually unlimited life. All parts are UL1577 registered and certified under the stringent new VDE 0884-17 standard.

Electromagnetic Compatibility

IL761xV / IL781xV 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, these parts only require a small overlapping stitching capacitance on inner PCB layers for EMI mitigation. The latest [datasheet](#) and a new [application bulletin](#) have details on how to ensure your designs to pass EMC testing the first time, every time.

Revolutionary Technology

NVE's revolutionary IsoLoop[®] DC-to-DC convertor module and patented GMR isolation technology provide best-in-class performance.

High Power

Integrated 250 milliwatt DC-to-DC convertors have enough current for plenty of channels or a variety of external circuitry.

Boost Convertor Models

Versions are available with either 3.3-to-3.3 volt integrated DC-to-DC convertors (IL761xVE) or 3.3-to-5 volt integrated boost convertors (IL781xVE).

Fully Regulated

Some DC-to-DC convertors are only "semi-regulated," but these parts' supplies have excellent line and load regulation.

Lowest Ripple

One millivolt peak-to-peak ripple on the DC-to-DC convertor outputs is an order of magnitude less than conventional parts and means low noise and reliable systems.

High Speed

The couplers are rated at 110 megabits per second for speed, transmission distance, and signal fidelity.

Standard Package

Creepage is a true eight millimeters in accordance with IEC60601 in a JEDEC-standard 16-pin wide-body package.

A Range of Configurations

Two-, three-, and four-channel versions are available with either 3.3-to-3.3 volt DC-to-DC convertors or 3.3-to-5 volt boost convertors:

Model	Isolator Channel Config.	DC-to-DC Convertor
IL7611VE	2/0	
IL7612VE	1/1	
IL7614VE	2/1	3.3-to-3.3 volt
IL7615VE	4/0	
IL7616VE	2/2	
IL7617VE	3/1	
IL7811VE	2/0	
IL7812VE	1/1	
IL7814VE	2/1	3.3-to-5 volt boost convertor
IL7815VE	4/0	
IL7816VE	2/2	
IL7817VE	3/1	

Evaluation Boards

An [evaluation board](#) is available that provides a complete isolated four-channel SPI node plus isolated power using an IL7817VE.

The four-by-three-inch (100 mm by 75 mm) board provides screw terminals for connections, plus test points for checking voltages and I/O. There are also LEDs to indicate DC-to-DC convertor input and output power. It uses a 2s2p board with thermal vias for optimal thermal performance.

[Download Eval Board Manual >](#)

Immediate Delivery

All IL761xV / IL781xV models are [in stock](#) for immediate delivery.

Demonstration Videos

[▶ IL7612 Demonstration >](#)

[▶ IL7617 Demonstration >](#)

Buy Online
\$9.95 shipping

More Ways to Buy NVE Parts



NVE's award-winning [online store](#) now accepts all major credit cards.

[Sensors](#), [isolators](#), [evaluation kits](#), [circuit boards](#), and [magnets](#) are available online with no minimum order, \$9.95 flat-rate shipping in the United States and affordable worldwide shipping via FedEx.

Most items are in stock and normally ship within one business day.

Of course, if you prefer, we also have worldwide networks of top-notch [sensor](#) and [isolator](#) distributors.

Buy Online
\$9.95 shipping

Halloween Application Corner

PROFIBUS Compliance Doesn't Have to Be Scary

Many designers don't realize that PROFIBUS standards limit transceiver differential output voltage, which rules out many transceivers on the market.

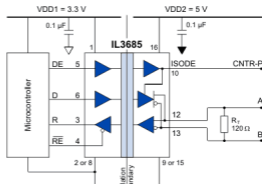
That's frightening.

A key PROFIBUS specification is, "The differential voltage between A- and B-line shall be a minimum of 4 V and a maximum of 7 V." But most RS-485 transceivers don't specify bus voltages that way. They specify a maximum and a minimum differential voltage between A and B, and it's almost always quoted with a single output state under low and high loads. Furthermore, the specification must be met at the 5.5 V maximum power supply voltage.

Most manufacturers comply with the 4-volt minimum, but miss the less obvious 7-volt maximum, perhaps in the mistaken belief that maximizing differential output voltage must be a good thing.

That's a nasty trick that will get your product rejected.

But NVE has a PROFIBUS treat—our [IL3685 line](#) of fully PROFIBUS-compliant isolated transceivers. Here's a proven circuit:



A True PROFIBUS-Compliant Circuit

Now that wasn't so scary, was it?

[PROFIBUS Hardware Design Guide >](#)

Buy Online
\$9.95 shipping