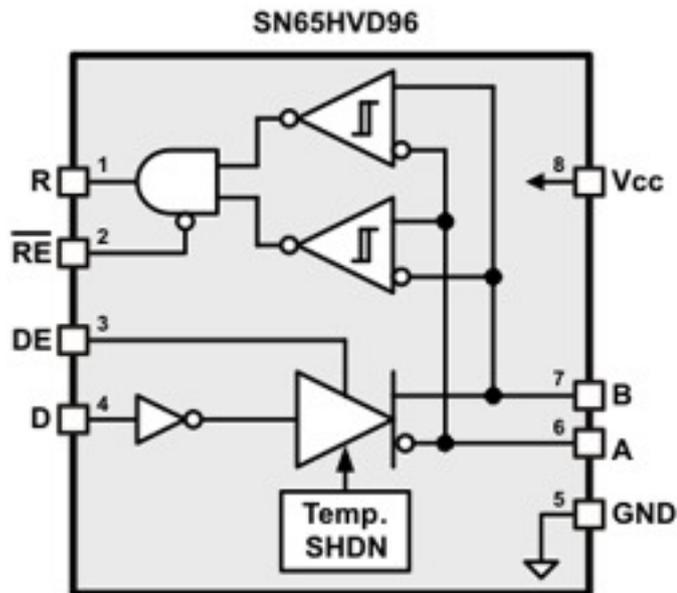


Transceiver Averts Damage if Signal Wires are Reversed



Texas Instruments introduced a symmetric-polarity transceiver that protects the system from communication losses and potential damage should the signal wires be inadvertently reversed during installation or maintenance. The SN65HVD96, using TI's patent-pending SymPol technology, provides high bus fault protection, making it desirable for harsh industrial environments where third-party installers often make the connections. The inverted bus wires are detected internally and corrected automatically, eliminating the need for intervention by the controller or operator without the need for firmware changes.

Applications that can benefit from this technology include [heating, ventilating, and air conditioning \(HVAC\) equipment](#) [1], [surveillance cameras](#) [2], [surveillance IP network cameras](#) [3], building automation, industrial lighting, and other industrial applications. This device works well with isolation devices such as TI's [ISO7241C](#) [4]. TI also provides IBIS models for the SN65HVD96, which designers can use for simulations.

Download a datasheet, request an evaluation module (EVM), or order free samples here: www.ti.com/sn65hvd96-pr [5].

Key features and benefits

- Reversed-wire-immunity saves the technical time-consuming fail search should a crossed-wire mistake be made.
- Using the same pin-out as RS-485 eliminates the need for board redesigns.

Transceiver Averts Damage if Signal Wires are Reversed

Published on Electronic Component News (<http://www.ecnmag.com>)

- Bus pins survive faults of up to -35V to +40V, minimizing damage from direct shorts to typical 24 Vac HVAC supplies.
- High input impedance for up to 32 nodes allows multiple nodes on a single network, reducing system cost by eliminating repeaters.

Availability and pricing

The SN65HVD96 is available now in a SOIC (D) package with eight pins and is priced at \$1.20 in quantities of 1,000.

Learn more about TI's interface portfolio at the links below:

- Order free samples and download a datasheet: www.ti.com/sn65hvd96-pr [5].
- Request EVMs: www.ti.com/sn65hvd96evm-pr [6].
- Quickly search TI's entire interface portfolio or download the latest selection guide: www.ti.com/interface-pr [7].
- Ask questions and help solve problems with fellow engineers in the [Industrial Interface Forum](#) [8] at the TI E2E™ Community.

Source URL (retrieved on 09/18/2014 - 9:57am):

<http://www.ecnmag.com/products/2010/08/transceiver-averts-damage-if-signal-wires-are-reversed>

Links:

[1] <http://focus.ti.com/docs/solution/folders/print/399.html>

[2] <http://focus.ti.com/docs/solution/folders/print/408.html>

[3] <http://focus.ti.com/docs/solution/folders/print/583.html>

[4] <http://focus.ti.com/docs/prod/folders/print/iso7241c.html>

[5] <http://www.ti.com/sn65hvd96-pr>

[6] <http://www.ti.com/sn65hvd96evm-pr>

[7] <http://www.ti.com/interface-pr>

[8] http://e2e.ti.com/support/interface/industrial_interface/default.aspx?DCMP=analog_e2e_sig&HQS=NotApplicable+EM+e2e-industrial-interface