

5.7 kV RMS Signal and Power Isolated RS-485 Transceiver with  $\pm 15$  kV IEC ESD

Manufacturers	<a href="#">Analog Devices, Inc</a>
Package/Case	28-Lead SOIC (Wide, Finer Pitch)
Product Type	Interface ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for ADM2865EBRNZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The ADM2861E, ADM2863E, ADM2865E, and ADM2867E are 5.7 kV rms signal and power isolated RS-485 transceivers. These devices are designed for balanced transmission lines and comply with ANSI/TIA/EIA-485-A-98 and ISO 8482:1987(E). The devices pass radiated emissions testing to the EN 55032 Class B standard with margin on a 2-layer printed circuit board (PCB) using two small external 0402 ferrites on isolated power and ground pins. The device features an integrated, low electromagnetic interference (EMI), isolated dc-to-dc converter, which eliminates the need for an external isolated power supply. The isolation barrier provides immunity to system level electromagnetic compatibility (EMC) standards. The family of isolator devices features  $\pm 12$  kV contact and  $\pm 15$  kV air IEC61000-4-2 ESD protection on the RS-485 A, B, Y, and Z pins. The devices also features cable invert pins, allowing the user to quickly correct reversed cable connection on the A, B, Y, and Z bus pins while maintaining full receiver fail-safe performance.

Slew rate limited versions are available, which are optimized for low speed over long cable runs, and have a maximum data rate of 500 kbps. Half duplex and full duplex variants are available. The full duplex generics allow independent cable inversion of the driver and receiver for additional flexibility.

### Applications

### Features

- 5.7 kV rms isolated RS-485/RS-422 transceiver
- Low radiated emissions, integrated, isolated dc-to-dc converter
- Passes EN 55032 Class B with margin on a 2-layer PCB
- Cable invert smart feature
- Correct reversed cable connection on A, B, Y, and Z bus pins while maintaining full receiver fail-safe feature

### Application

- Heating, ventilation, and air conditioning (HVAC) networks
- Industrial field buses
- Building automation
- Utility networks
- Energy meters

ESD protection on RS-485 A, B, Y, and Z pins

High speed 25 Mbps data rate (ADM2865E/ADM2867E)

Low speed 500 kbps data rate for EMI control (ADM2861E/ADM2863E)

Flexible power supplies

Input V

CC

Logic V

IO

V

SEL

ISO

CC

Correct reversed cable connection on A, B, Y, and Z bus pins while maintaining full receiver fail-safe feature

Input V

CC

Logic V

IO

V

SEL

ISO

CC

PROFIBUS compliant for 5 V V

ISO

Wide operating temperature range:  $-40^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$

High common-mode transient immunity: 250 kV/ $\mu\text{s}$

Short-circuit, open-circuit, and floating input receiver fail-safe

Supports 192 bus nodes (72 k $\Omega$  receiver input impedance)

Full hot swap support (glitch free power-up/power-down)

Safety and regulatory approvals (pending)

CSA Component Acceptance Notice 5A, DIN V VDE V 0884-11, UL 1577, CQC11-471543-2012, IEC 61010-1

Complies with ANSI/TIA/EIA-485-A-98 and ISO 8482:1987(E)

28-lead, fine pitch SOIC\_W package (10.15 mm × 10.05 mm) with >8.0 mm creepage and clearance

## Related Products



### [ADV7181CBSTZ](#)

Analog Devices, Inc  
LQFP-64



### [ADV724JR](#)

Analog Devices, Inc  
SOIC-16



### [ADV7391WBCPZ](#)

Analog Devices, Inc  
LFSCP-3



### [ADV7341BSTZ](#)

Analog Devices, Inc  
LQFP-64



### [AD8170AR](#)

Analog Devices, Inc  
SOP8



### [ADV7393BCPZ](#)

Analog Devices, Inc  
LFCSP-VQ-40



### [ADV7390BCPZ](#)

Analog Devices, Inc  
QFN32



### [ADUM4160BRIZ](#)

Analog Devices, Inc  
SOIC-16