

5.7 kV RMS 500kbps Full Duplex Signal and Power Isolated RS-485 Transceiver with ± 15 kV IEC ESD

Manufacturers	Analog Devices, Inc
Package/Case	28-Lead SOIC (Wide, Finer Pitch)
Product Type	Interface ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for ADM2863EBRNZ 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 ± 12 kV contact and ± 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°C to $+105^{\circ}\text{C}$

High common-mode transient immunity: 250 kV/ μs

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

Supports 192 bus nodes (72 k Ω 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