

±60V Fault Protected, 5V, RS-485/RS-422 Transceivers with ±25V CMR and ESD Protection

Manufacturers	<a href="#">Renesas Technology Corp</a>
Package/Case	8pin-MSOP 8pin-SOICN
Product Type	Interface ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for ISL32495EIBZ-T or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The ISL32490E, ISL32492E, ISL32493E, ISL32495E, ISL32496E, and ISL32498E are fault protected, 5V powered, differential transceivers that exceed the RS-485 and RS-422 standards for balanced communication. The RS-485 transceiver pins (driver outputs and receiver inputs) are fault protected up to ±60V and are protected against ±16.5kV ESD strikes without latch-up. Additionally, the extended Common-Mode Range (CMR) allows these transceivers to operate in environments with common-mode voltages up to ±25V (>2x the RS-485 requirement), making this fault protected RS-485 family one of the most robust on the market.

The transmitters (Tx) deliver an exceptional 2.5V (typical) differential output voltage into the RS-485 specified 54Ω load. This yields better noise immunity than standard RS-485 ICs, or allows up to six 120Ω terminations in star network topologies.

The receiver (Rx) inputs feature a full fail-safe design that ensures a logic high Rx output if the Rx inputs are floating, shorted, or on a terminated but undriven (idle) bus. The Rx outputs have high drive levels; typically, 15mA at

Half duplex (Rx inputs and Tx outputs multiplexed together) and full duplex pinouts are available. See Table 1 on page 3 for key features and configurations by device number.

For fault protected or wide common-mode range RS-485 transceivers with cable invert (polarity reversal) pins, see the ISL32483E datasheet.

## Features

Fault protected RS-485 bus pins: up to  $\pm 60V$

Extended CMR:  $\pm 25V$  (more than twice the range required for RS-485)

$\pm 16.5kV$  HBM ESD protection on RS-485 bus pins

1/4 unit load for up to 128 devices on the bus

High transient overvoltage tolerance:  $\pm 80V$

Full fail-safe (open, short, terminated) RS-485 receivers

High Rx  $I_{OL}$  for opto-couplers in isolated designs

Hot plug circuitry; Tx and Rx outputs remain three-state during power-up/power-down

Choice of RS-485 data rates: 250kbps to 15Mbps

Low quiescent supply current: 2.3mA

Ultra low shutdown supply current: 10 $\mu A$

## Related Products



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SOIC-14



### [ISL3170EIUZ](#)

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MSOP-10



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