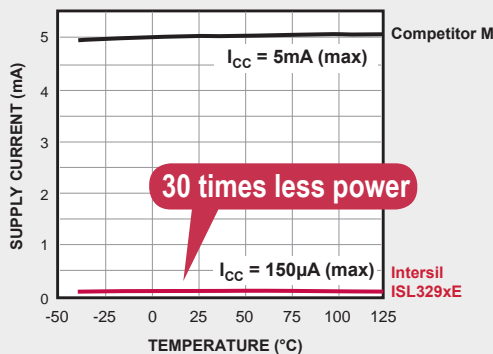


# World's Most Power-Efficient RS-485/RS-422 Single Receiver and Driver Deliver Superior ESD Protection in Tiny Packages

## Ultra Low Supply Current

Intersil's ISL328xE and ISL329xE draw **30 times** less power than competitive device.



## Ultra Small Package

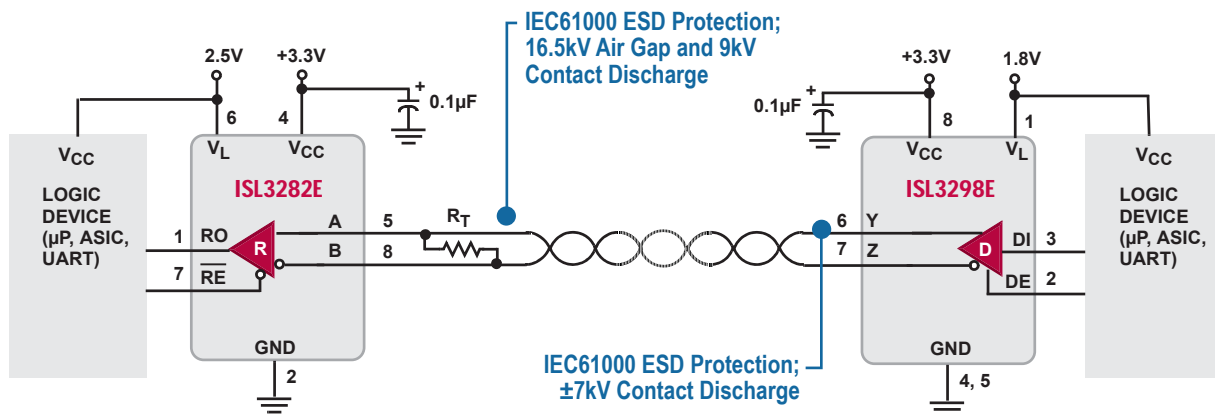


8 Ld TDFN  
Actual Size  
(2mm x 3mm)

Ideal for space-constrained RS-485 enabled systems.

## Key Features

- Specified for 125°C Operation
- Optional Logic Supply Pin (V<sub>L</sub>): Eliminates external level translator in mixed supply systems.
- Wide Supply Range: 3.0V to 5.5V



## 3.3V, Fractional UL, High ESD, Full Failsafe - Rx Only or Tx Only



	Device	# of Tx / # of Rx	Devices Allowed on Bus	High ESD	Hot Plug	Data Rate (Mbps)	Slew Rate Limited	Tx/Rx Enable	I <sub>S</sub> EN/DIS (typ) (µA)	SHDN I <sub>CC</sub> (µA)	V <sub>CC</sub> Range (+V)	Package
Rx	ISL3280E	1 Rx	256	Yes-IEC61000	No	20	N/A	No	400	N/A	3.0 to 5.5	5 Ld SOT-23
	ISL3282E	1 Rx with V <sub>L</sub> Pin	256	Yes-IEC61000	No	20	N/A	Active Low with V <sub>L</sub> Pin	400	<20	3.0 to 5.5	8 Ld TDFN
	ISL3283E	1 Rx	256	Yes-IEC61000	No	20	N/A	Active Low	400	<20	3.0 to 5.5	6 Ld SOT-23
Tx	ISL3296E	1 Tx with V <sub>L</sub> Pin	256	Yes-IEC61000	Yes	0.25	Yes	Yes	120	0.01	3.0 to 5.5	8 Ld TDFN
	ISL3297E	1 Tx with V <sub>L</sub> Pin	256	Yes-IEC61000	Yes	0.5	Yes	Yes	120	0.01	3.0 to 5.5	8 Ld TDFN
	ISL3298E	1 Tx with V <sub>L</sub> Pin	256	Yes-IEC61000	Yes	20	No	Yes	120	0.01	3.0 to 5.5	8 Ld TDFN

See Datasheet for Complete Listing

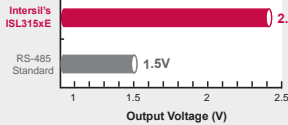
**PROTEC GmbH**  
 Vertrieb elektronischer Bauteile  
 Laurinweg 1 - 85521 Ottobrunn bei München  
 Telefon: 089-6 60 29 23 - Fax: 089-6 09 8170  
 sales@protec-semi.de - www.protec-semi.de  
 Ansprechpartner: Christian Mayer



# Best-in-Class Full-Featured, ESD Protected RS-485/RS-422 Transceivers in Tiny Packages

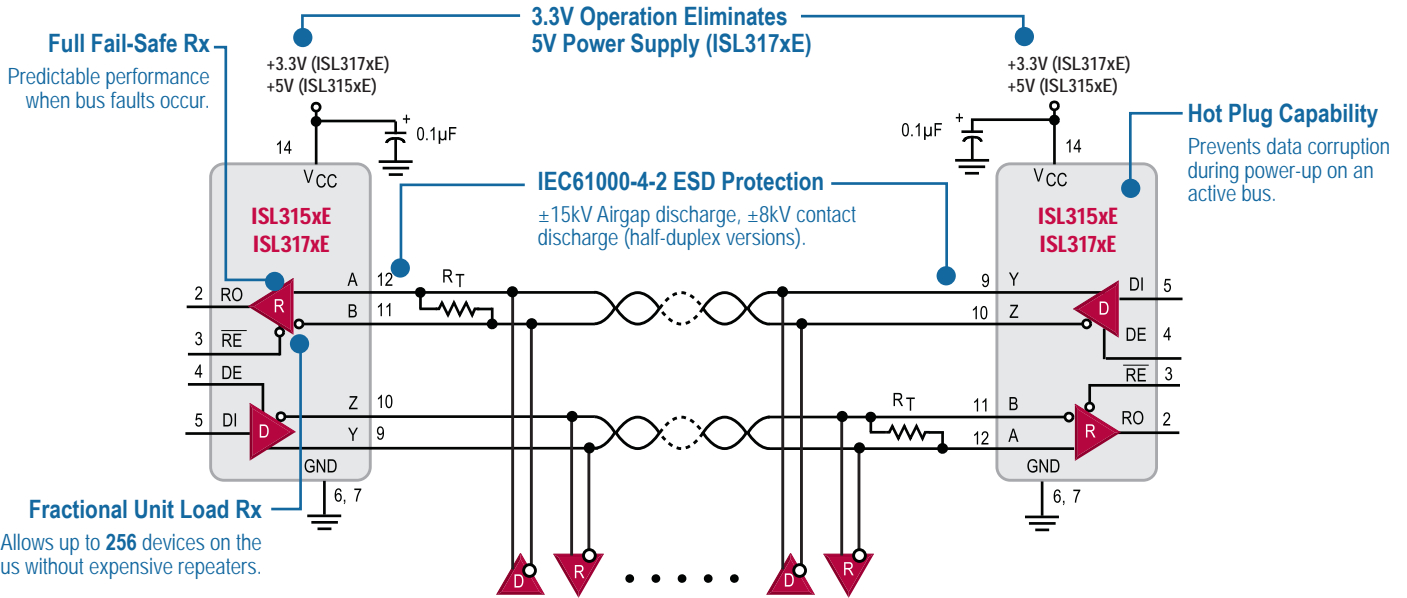
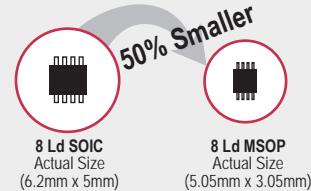
## Enhanced Noise Immunity

60% Higher Output Voltage (ISL315xE)



Provides enhanced noise immunity and can drive longer cable lengths or more cable terminations.

## Space-saving Small Package



### 5V, Fractional UL, 15kV ESD, Full Failsafe



Device	# of Tx / # of Rx	Devices Allowed on Bus	Half/Full Duplex	High ESD	Hot Plug	Data Rate (Mbps)	Slew Rate Limited	Tx/Rx Enable	I <sub>S</sub> EN/DIS (µA)	SHDN I <sub>CC</sub> (µA)	V <sub>CC</sub> Range (+V)	Package
ISL3150E	1/1	256	Full	Yes-IEC61000	Yes	0.115	Yes	Yes	800/700	0.07	4.5 to 5.5	10 Ld MSOP, 14 Ld SOIC
ISL3152E	1/1	256	Half	Yes-IEC61000	Yes	0.115	Yes	Yes	800/700	0.07	4.5 to 5.5	8 Ld MSOP, 8 Ld PDIP, 8 Ld SOIC
ISL3153E	1/1	256	Full	Yes-IEC61000	Yes	1	Yes	Yes	800/700	0.07	4.5 to 5.5	10 Ld MSOP, 14 Ld SOIC
ISL3155E	1/1	256	Half	Yes-IEC61000	Yes	1	Yes	Yes	800/700	0.07	4.5 to 5.5	8 Ld MSOP, 8 Ld SOIC
ISL3156E	1/1	256	Full	Yes-IEC61000	Yes	20	No	Yes	800/700	0.07	4.5 to 5.5	10 Ld MSOP, 14 Ld SOIC
ISL3158E	1/1	256	Half	Yes-IEC61000	Yes	20	No	Yes	800/700	0.07	4.5 to 5.5	8 Ld MSOP, 8 Ld SOIC

### 3.3V, Fractional UL, 15kV ESD, Full Failsafe

ISL3170E	1/1	256	Full	Yes-IEC61000	Yes	0.25	Yes	Yes	510/480	0.01	3.0 to 3.6	10 Ld MSOP, 14 Ld SOIC
ISL3171E	1/1	256	Full	Yes-IEC61000	No	0.25	Yes	No	510	N/A	3.0 to 3.6	8 Ld MSOP, 8 Ld SOIC
ISL3172E	1/1	256	Half	Yes-IEC61000	Yes	0.25	Yes	Yes	510/480	0.01	3.0 to 3.6	8 Ld MSOP, 8 Ld SOIC
ISL3173E	1/1	256	Full	Yes-IEC61000	Yes	0.5	Yes	Yes	510/480	0.01	3.0 to 3.6	10 Ld MSOP, 14 Ld SOIC
ISL3174E	1/1	256	Full	Yes-IEC61000	No	0.5	Yes	No	510	N/A	3.0 to 3.6	8 Ld MSOP, 8 Ld SOIC
ISL3175E	1/1	256	Half	Yes-IEC61000	Yes	0.5	Yes	Yes	510/480	0.01	3.0 to 3.6	8 Ld MSOP, 8 Ld SOIC
ISL3176E	1/1	256	Full	Yes-IEC61000	Yes	20	No	Yes	510/480	0.01	3.0 to 3.6	10 Ld MSOP, 14 Ld SOIC
ISL3177E	1/1	256	Full	Yes-IEC61000	No	20	No	No	510	N/A	3.0 to 3.6	8 Ld MSOP, 8 Ld SOIC
ISL3178E	1/1	256	Half	Yes-IEC61000	Yes	20	No	Yes	510/480	0.01	3.0 to 3.6	8 Ld MSOP, 8 Ld SOIC

# 15kV HBM ESD Protected Dual Protocol Transceivers with User Configurable Ports Deliver Exceptional Protection

Selectable RS-232 or RS485/422 Port in One Package

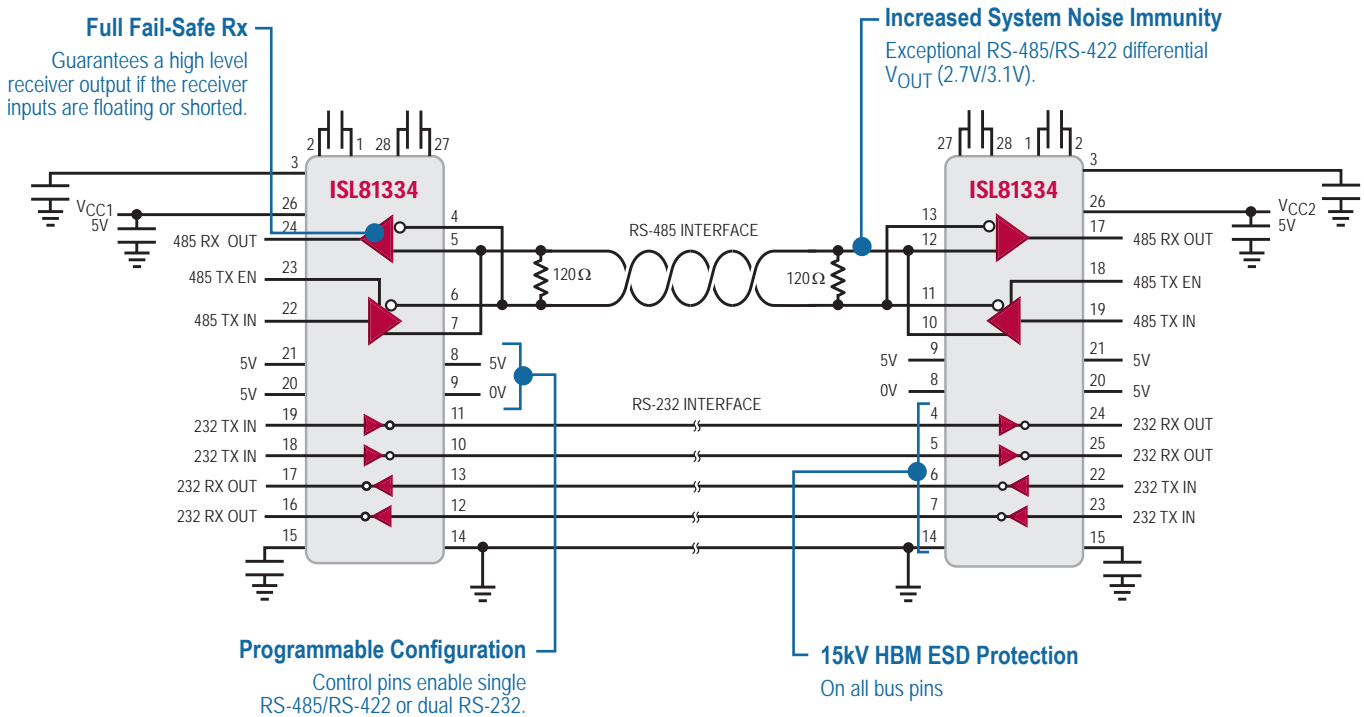
## Single Port

2.2V min. Tx output voltage for exceptional noise immunity in RS-485/422 protocols and 1Mbps Rx data rate in RS-232 mode.



## Dual Port

Additional port on two-channel version allows option for two RS-485/422 transceivers or four RS-232 transceivers.



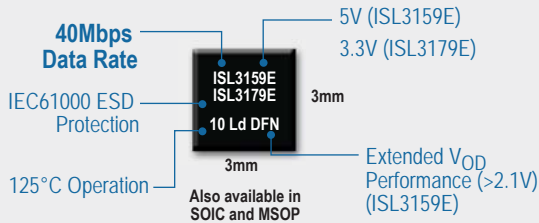
## Multi-Protocol - RS-232 and RS-485 - High ESD



Device	Supported Protocols	# of Ports	# of Tx/Rx per Port	High ESD (kV)	Data Rate RS-485/RS-232 (Mbps)	RS-485 Rx Failsafe Type	V <sub>LOGIC</sub> Supply Pin?	RXEN Polarity	Loopback Feature?	V <sub>CC</sub> (V)	Package
ISL41334	RS-232, RS-422, RS-485	2	1/1 RS-485, RS-422; 2/2 RS-232	15	20, 0.46, 0.115/0.5	Full	Yes	Low	Yes	5	40 Ld QFN
ISL3333										3.3	
ISL41387	RS-232, RS-422, RS-485	1	1/1 RS-485, RS-422; 2/2 RS-232	15	20, 0.46, 0.115/0.5	Full	Yes	High and Low	Yes	5	40 Ld QFN
ISL3331										3.3	
ISL81334	RS-232, RS-422, RS-485	2	1/1 RS-485, RS-422; 2/2 RS-232	15	20/0.5	Full	No	None	Yes	5	28 Ld SOIC, 28 Ld SSOP
ISL3332										3.3	
ISL81387	RS-232, RS-422, RS-485	1	1/1 RS-485, RS-422; 2/2 RS-232	15	20, 0.46/0.5	Full	No	High	Yes	5	20 Ld SOIC, 20 Ld SSOP
ISL3330										3.3	

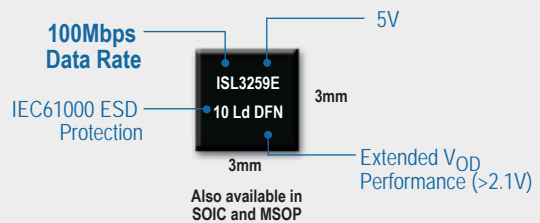
# World's Fastest RS-485/RS-422 Transceiver Gives Best-in-Class ESD Protection

## ISL3159E/ISL3179E

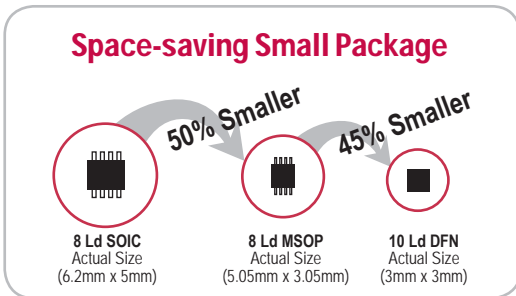
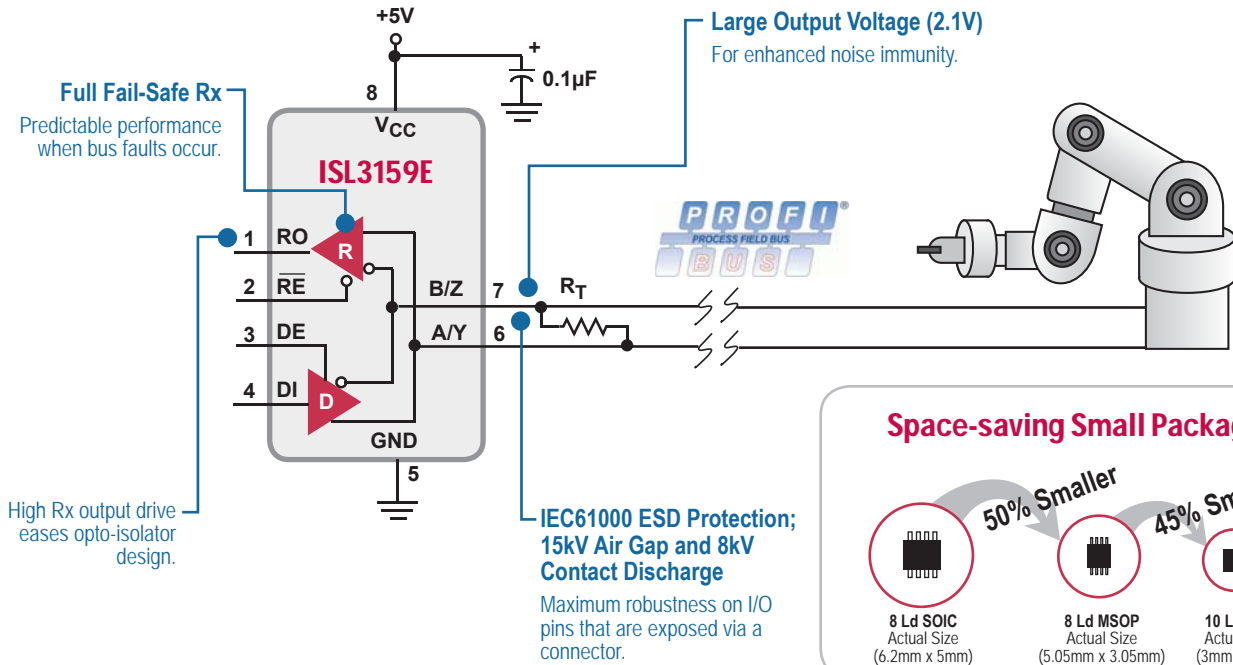


Fast data rate of 40Mbps for high speed factory automation applications.

## ISL3259E



Ultra-fast data rate of 100Mbps enables precise control of motor positioning in factory automation.



## RS-485/RS-422 - 40Mbps to 100Mbps



Device	# of Tx / # of Rx	Devices Allowed on Bus	Half/Full Duplex	High ESD	Hot Plug	Data Rate (Mbps)	Slew Rate Limited	Tx/Rx Enable	I <sub>S</sub> EN/DIS (µA)	SHDN I <sub>CC</sub> (µA)	V <sub>CC</sub> Range (+V)	Package
ISL3159E	1/1	160	Half	Yes-IEC61000	Yes	40	No	Yes	2600/2600	<1	4.5 to 5.5	10 Ld DFN, 8 Ld MSOP, 8 Ld SOIC
ISL3179E	1/1	160	Half	Yes-IEC61000	Yes	40	No	Yes	2600/2600	<1	3.0 to 3.6	10 Ld DFN, 8 Ld MSOP, 8 Ld SOIC
ISL3180E	1/1	160	Full	Yes	Yes	40	No	Yes	2600/2600	<1	3.0 to 3.6	14 Ld SOIC
ISL3259E	1/1	160	Half	Yes-IEC61000	Yes	100	No	Yes	2600/2600	<1	4.5 to 5.5	10 Ld DFN, 8 Ld MSOP, 8 Ld SOIC