



# TLC485

## RS-232 to RS-485 Converter (DB9)

### Introduction:

The TLC485 is a bi-directional port-powered RS232 to RS485 converter. It can convert any standard full duplex RS232C port to any two-wire balanced half duplex RS485 port. In simple terms, it will convert any RS232 signal to a RS485 signal and vice versa. The unit is powered from the RS232 data lines. It also supports data direction auto-turnaround. Therefore, no external power or flow control is required. The data direction auto-turnaround automatically enables the RS485 driver when data is present on the RS232 side making the device plug-and-play, requiring no software drivers.

### Packing List:

TLC485 is shipped with following items.

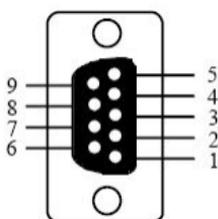
1. TLC485 × 1
2. Separate terminal block(DB9F to 3 bit) × 1
3. User manual × 1

### Features:

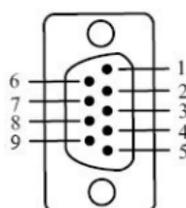
1. Port-powered from RS232 port (TXD, RTS, DTR): no external power is necessary
2. Convert RS-232(TXD, RXD signal) to RS-485 signal
3. Plug-and-Play (hot-pluggable, Data format Auto-sensing & Self-adjusting)
4. Data direction auto-turnaround, no flow control is required
5. Point to multi point, support 128 nodes loopback

### Pinout Configuration:

RS-485 port adopt DB9M (DB9F to 3 bit terminal block), RS-232 port adopt DB9F (Female), no power supply Input.



DB9F (Female/hole)



DB9M (Male/needle)

<b>RS-232 (DB9F)</b>	2	TXD
	3	RXD
	5	GND
<b>RS-485 (DB9M)</b>	1	485-
	2	485+
	5	GND
<b>3 bit terminal block</b>	485-	Data-
	485+	Data+
	GND	GND

## Specifications:

Standards: EIA RS-232C, RS-422 standard

Working mode: Asynchronism, point to point, 4 wire full-duplex

Transfer rate: 300~115200bps, auto test serial signal rate detect  
signal speed automatically, zero delay time

Flow control: Data direction auto-turnaround, no flow control is  
required

Max number of drops: 128 nodes

Transfer distance: RS-485 side: 1.2Km

RS-232 side: no less than 5m

Port protect: 1500W surge protection, 15KV ESD protection

Connector: RS-232 side DB9 female

RS-485 side DB9M ( DB9F to 3 bit terminal block)

## Power

Power input: No power supply need, powered from RS-232 port  
TXD, RTS, DTR

Consumption: Static less than 10mA, dynamic less than 40mA

## Environment

Operating temperature: -10°C to 60°C

Storage temperature: -40°C to 85°C

Humidity: 5% to 95% (no condensation)

## Appearance

Dimensions: 90.0mm×33.0mm×16.5mm(DB9)

Material: Plastic (shell)

Weight: 40g

Warranty: 5 years

## Troubleshooting instructions:

Perform a loop back test on two TLC485 converters. Attach the two TLC485s to two serial ports on a PC and using two instances of a HyperTerminal program send a character from one and see if it echoes to the other. This will test both transmit and receive functions.

## Applications:

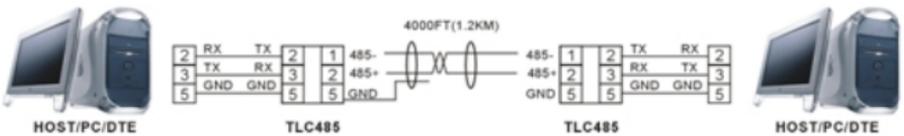


Figure 1: Extending the RS232 data distance

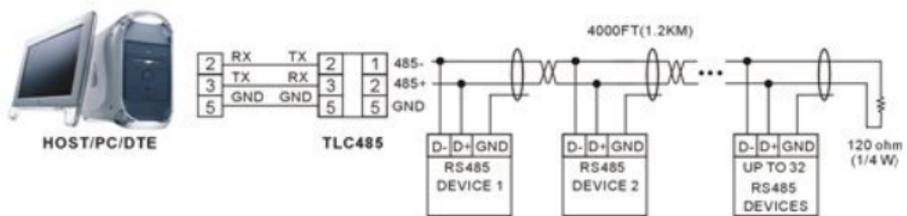


Figure 2: Master/Slave multi-drop configuration

## Certifications:



# 3onedata

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