

RS-232 to RS-485 opto-isolation converter

MWE485-B

◆ Brief introduction

The MWE485-B can convert a 3 wires (RX, TX, GND) RS-232 serial port signal to a semiduplex RS-485 signal, with 2500V optic isolation. It needs a +5V DC power supply and also port power from RS-232 port.

◆ Main function

- Optic isolation between the RS-232 and RS-485 signal;
- Particular protecting circuit for the serial port, plus-and-play supported;
- Automatically transmit with no delay, no need CTS flow control.

◆ Capability parameter

Power Supply	external power DC5V.
Working Current	<15mA
Baud rate	300~38.4Kbps
Distance	RS-485:<1.2Km(19.2Kbps), RS-232:15m
Max node	128 nodes
Isolation protection	15Kv static protecting and 600W/ms lightning protecting, 2500V optic isolation
Weight	36g(with the terminal block)
Dimension	87mm×33mm×17mm(with the terminal block)
Working temperature	-40℃~85℃

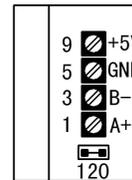
◆ PIN Setting

The RS-232 end is DB9 female, the pin definition is as below:

PIN	1	4	6	7	8	2	3	5
Define	short circuit			short circuit		TX	RX	GND

The RS-485 end is DB9 male, the pin definition is as below:

PIN	1	3	5	9	6、7
Define	A+	B-	GND	5V	short circuit(120Ω)
Specification	485+	485-	GND	5V	Short circuit 120Ω resistance



- Connect an DC5V external power between the block +5V and GND;
- A 120Ω resistor will be added in between the A+ and B- by plugging on the jumper marked as 120.

◆ Application

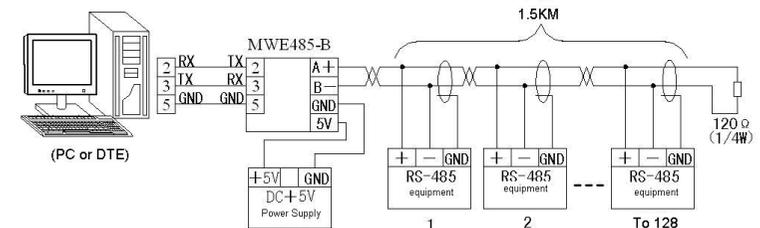


Chart 1: Master-Slave and half duplex communication

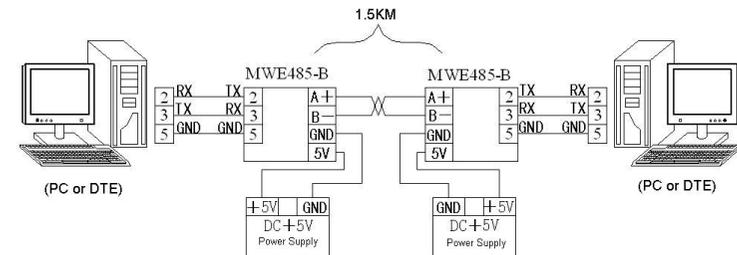


Chart 2: Extend RS232 communication distance

◆ Attention

- RS-485 matching resistance

The RS-485 is difference-signal. It is necessary to add a 120Ω matching resistor on the head and end of the communications circuit. When 120 short films (ON), the load ability will reduce when using the matching resistance. We suggest that it is necessary to use it only when the rate is above 19.2Kbps or the circuitry length is above 200m.

- RS-485 Grounding

It is necessary to connect the GND of the circuitry together, but do not connect it to the earth.

◆ Quality promises

- 1、 We can exchange the product in 2 years for the quality problem.
- 2、 We guarantee to keep the product in good repair for 5 years.