# RS-232/RS-485 Port-Powered Converter

## Model:MWE485-A

### ◆ Brief introduction

The MWE485-A can convert a 3 wires (RX,TX,GND) RS-232 serial port signal to a semiduplex RS-485 signal without external power supply.

### ◆ Main function

- Port powered,no need external power supply;
- Particular protecting circuit for the serial port, hot-Swappable;
- Automatically transmit with no delay,no need CTS flow control.

### ◆ Capability parameters

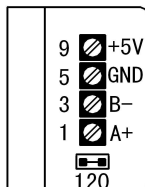| Power Supply | serial port powered,no need external power supply |
|---|---|
| Working Current | <10mA |
| Baud rate | 300～115.2Kbps |
| Distance | RS-485:<1.2Km(19.2Kbps),RS-232:15m |
| Max. node | 128 nodes |
| Isolation protection | 15Kv static and 600W/ms lightning protecting |
| Weight | 36g(with 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 | 6、7 |
|---|---|---|---|---|
| Define | A＋ | B－ | GND | Jumper（120Ω） |
| Specification | 485＋ | 485－ | GND | 120Ω terminal resistance |



- DO not connection any external power on +5V block, this block is only for measure and testing；
- A 120Ωresistor will be added in between the A+ and B- by plugging on the jumper marked as 120.
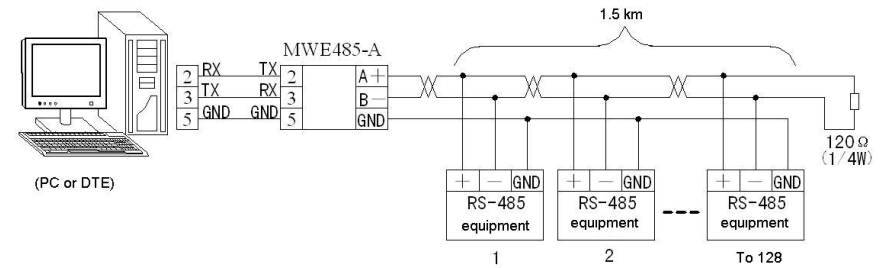
### ◆ Application



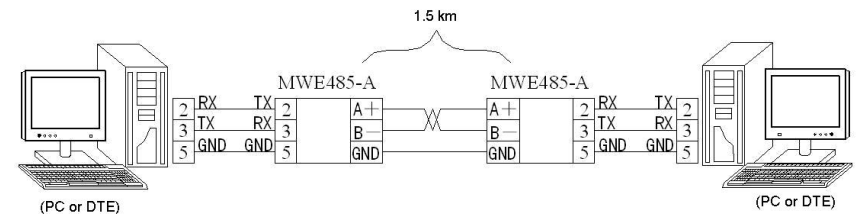Chart 1：Master-Slave and half duplex communication



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 1 years for the quality problem.

2、We guarantee to keep the product in good repair for 5 years.