

# RS-232 to RS-485/422 port-powered opto-isolation converter

Model: MWE485 – E

## ◆ Brief introduction

The MWE485-E can convert a RS-232 serial port signal to a two wires semi duplex RS-485 signal or a four wires full duplex RS-422 signal,with 2500V optic isolation.

## ◆ Main function

- Optic isolation between the RS-232 and RS-485/422 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           | serial port powered,no need external power supply                             |
| Working current        | <10mA                                                                         |
| Baud rate              | 300~38.4Kbps                                                                  |
| Communication distance | RS-485/ RS – 422 1.2Km(in 19.2Kbps)                                           |
| Max node               | 64 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℃                                                                      |

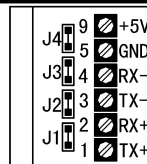
## ◆ PIN Setting

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

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

The RS-485/RS-422 end is DB9 male,the pin male definition is as below:

|               |                 |   |                 |   |         |             |   |                               |   |
|---------------|-----------------|---|-----------------|---|---------|-------------|---|-------------------------------|---|
| PIN           | 1               | 2 | 3               | 4 | 5       | 6           | 7 | 8                             | 4 |
| short circuit | J2(ON、 OFF)     |   | J3(ON、 OFF)     |   |         | J1(ON、 OFF) |   | J4(ON)                        |   |
| RS-485        | A+(J2 ON)       |   | B-(J3 ON)       |   | GN<br>D | J1 (ON)     |   | Short<br>circuit(ON<br>) 120Ω |   |
| RS-422        | (J2 OFF)<br>TX+ |   | (J3 OFF)<br>RX+ |   | GN<br>D | J1 (OFF)    |   |                               |   |



●DO not connection any external power on +5V block, this block is only for measure and testing;

●A 120Ωresistor can be added in between the A+ and B- by plugging on the jumper J4.

## ◆ Application

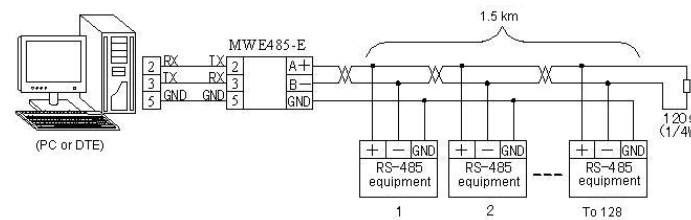


Chart 1 : Master-Slave and half duplex communication

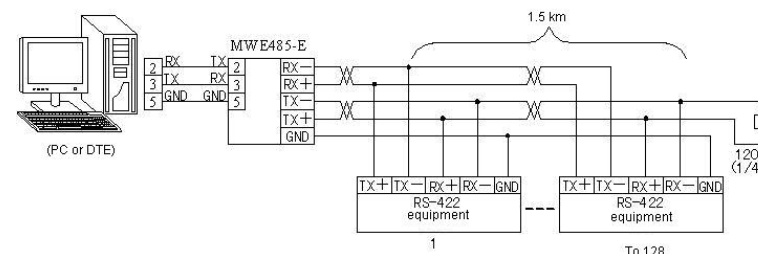


Chart 3 : Extend RS232 communication distance

## ◆ 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.

## ◆ 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.