

# RS-232/RS-485/422 Port-Powered Converter

## Model:MWE485-C

### ◆ Brief introduction

The MWE485-C can convert a 3 wires (RX,TX,GND) RS-232 serial port signal to a 2 wires semiduplex RS-485 signal or to a 4 wires fullduplex RS-422 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-485/422:<1.2Km(19.2Kbps),RS-232:15m
Max. node	128 nodes
Isolation protection	15Kv static and 600W/ms lightning protecting
Weight	38g(with the terminal block)
Dimension	87mm×33mm×17mm(with the terminal block)
Working temperature	-40℃~85℃

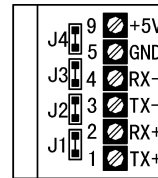
### ◆ PIN Setting

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

PIN	1	2	3	4	5	6	7	8	4
Jumper	J2		J3			J1		J4	
RS-485	A+(J2 ON)		B-(J3 ON)		GN D	J1 (ON)		Short circuit(ON) to add 120Ω	
RS-422	(J2 OFF)		(J3 OFF)		GN D	J1 (OFF)			
	TX +	RX+	TX-	RX-					



- 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

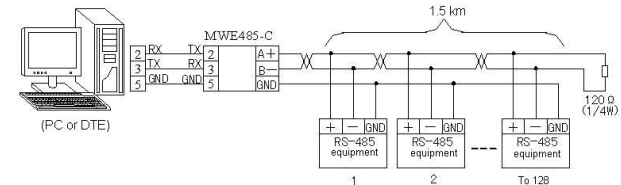


Chart 1 : Master-Slave and half duplex communication

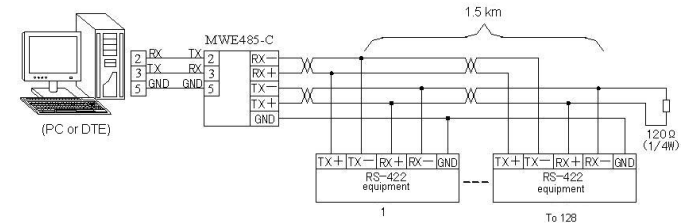


Chart 2 : Master-Slave and half duplex communication

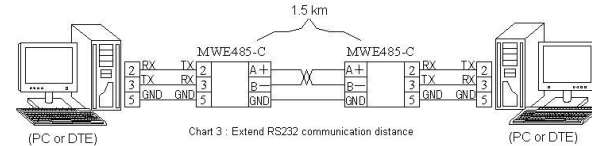


Chart 3 : Extend RS232 communication distance

### ◆ 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.

- RS-485 Grounding

It is necessary to 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.