



### **User's Guide for SC-232 RS232 photoelectric isolation long-term transceiver**

Many RS232 interface between devices used for data communications, due to the communications distance can only reach 15 meters because of the limit of RS232 standards. The long-term isolation optical transceivers (also known as: serial pump), due to convert the RS232 interface data transmission into Floating Isolation double-balanced transmission, the distance of data communicate between equipment could be extended to two kilometers. And the use of the photoelectric isolation makes no electrical contact between devices, only photoelectric transport. Then the anti-jamming capabilities of system has greatly improved, and the anti-lightning system built-in ensure the safety of the circuit.

This product's appearance designed as DB9/DB9 (only four-wire) or DB25/DB25 adapter box.

The DB9 (Hole Block) or DB25 (Hole Block) is set as RS232 interface , directly connect with the 9-pin or 25-pin RS232 socket. And its corresponding signal is as follows:

9pin	1	2	3	4	5	6	7	8	9
25pin	8	3	2	20	7	6	4	5	22
signal	DCD	RXD	TXD	DTR	GND	DSR	RIS	CTS	RI

**technical parameters:**

1. Optical isolation voltage: not less than 500 V DC, 3500 V pulse
2. Power: without an external power supply, power supply has not rely on initializing serial ports.
3. Telecommunications Distance: 2 kilometers (9600 bps)
4. Telecommunications rate: maximum 57600 bps
5. Transmission Line: 0.75 mm<sup>2</sup> or more, ordinary or twisted pair wire
6. Work: full-duplex difference transmission.
7. Dimensions: 60 × 35 × 17 (DB9, with Connection), 60 × 50 × 17 (DB25)
8. Weight: 25 grams (DB9), 45g (DB25).
9. Temperature: -20 ~ 70 °C.
10. Humidity: 0 to 95%

Note: This product is filling plastic seal before manufactured; the quality problems will not be responsible for manufacturers if user open it.

**Software:**

Because of the unique serial Fault Tolerant technology, this product doesn't need to initialize RS232 serial port to get power, no matter what state the RS232 interface be, or only TXD, RXD, GND three lines, unique serial Fault Tolerant circuit can Secure a stable supply for work. So it's applicable to all communications software, plug and play. You don't need to make any changes on software when using this product.

**Model:**

This product based on the number of signal transmission is divided into the following types of specifications, users specify when ordering.

SC-232: Four-wire standard, send TXD, RXD

SC-232E: 8-wire, send TXD, RXD, RTS, CTS, DTR, DSR

**Connection:**

Connect the DB9 (Hole Block) or DB25 (Hole Block) with the Serial ports RS232, and the other end (needle Block) connect with the product. Depend on the product you buy is is DB9/DB9 (with Connection) or the DB25/DB25 ,you can wire it follow the law as following : " Send to receive, receive to sent, positive to positive and negative to negative". As the Figure:



Notated, RXD, GND, COM as the basic four-signal system is have to be received in the figure above, and other signals in accordance with your product model.

Special note: Use of this product requires the RS232 port as a standard DTE (Data Terminal Equipment) signal. See table of the signal definition in front. If the RS232 port equipment for the DCE (data communications equipment) or other non-standard signal pin, you should produce a conversion cable to converse the interface into standard DTE way.