

# Model: UT-211

(Product Name: RS-232 3 Bits Isolated Converter)

# Datasheet

## 1. Overview

UT-211 is a RS-232 serial port optoelectronic isolator. It adopts advanced optoelectronic isolation technology, maximally protects RS-232 serial interface devices from harsh environment damage, such as ground loop circuit voltage, surge, lightning, ESD, hot-plug and electromagnetic interference, etc. The damage of RS-232 port is related to communication hardware. For example, device A connects device B with RS-232 port, if the voltage difference of ground line between A and B is up to 50V (usually up to 80V), RS-232 port will not work normal; the isolated voltage of RS-232 port will reach 2,500Vrms instantly, together with 500VDC continuous peak voltage difference; it also soaks in ESD and electromagnetic interference, so as to protect RS-232 port. The optoelectronic isolation technology is fully isolating the electrical devices and ground loop circuit on both ends; it converts the electrical signal to optic signal, then transmits the signal to another end, finally converts it back to electrical signal. This protects the communication device from ground loop circuit and surge interference, which greatly improve the reliability and stability of the communication system.

UT-211 gets widely application in point to point RS-232 communication system, UNIX multi-user system, monitoring system, and ATM for power, insurance, telecommunications, railway, post office, finance, banking, securities and program control, etc.

## 2. Major Functions & Features

- Supports RS-232 serial port optoelectronic isolation converter

## 3. Technical Parameters

- Standards: RS-232 & CCITT V.24 asynchronous protocol
- Connector: two DB9 on both sides
- Transmission mode: asynchronous full-duplex, full transparent
- Isolated voltage: 2,500Vrms impulse or 500VDC
- Baudrate: 300bps-57,600bps
- Power: from RS-232(TXD, RTS or DTR)
- Dimension: 62mm×34mm×18mm
- Weight: 30g
- Operating temperature: -40°C to 85°C
- Relative humidity: 5% to 95%

## 4. Hardware Definition and Initial Setup

### RS-232C pin assignment

| DB9 Female (PIN) | RS-232C Interface Signal |
|------------------|--------------------------|
| 1                | DCD                      |
| 2                | Send data SOUT(TXD)      |
| 3                | Receive data SIN(RXD)    |

|   |     |
|---|-----|
| 4 | DTR |
| 5 | GND |
| 6 | DSR |
| 7 | RTS |
| 8 | CTD |
| 9 | RI  |

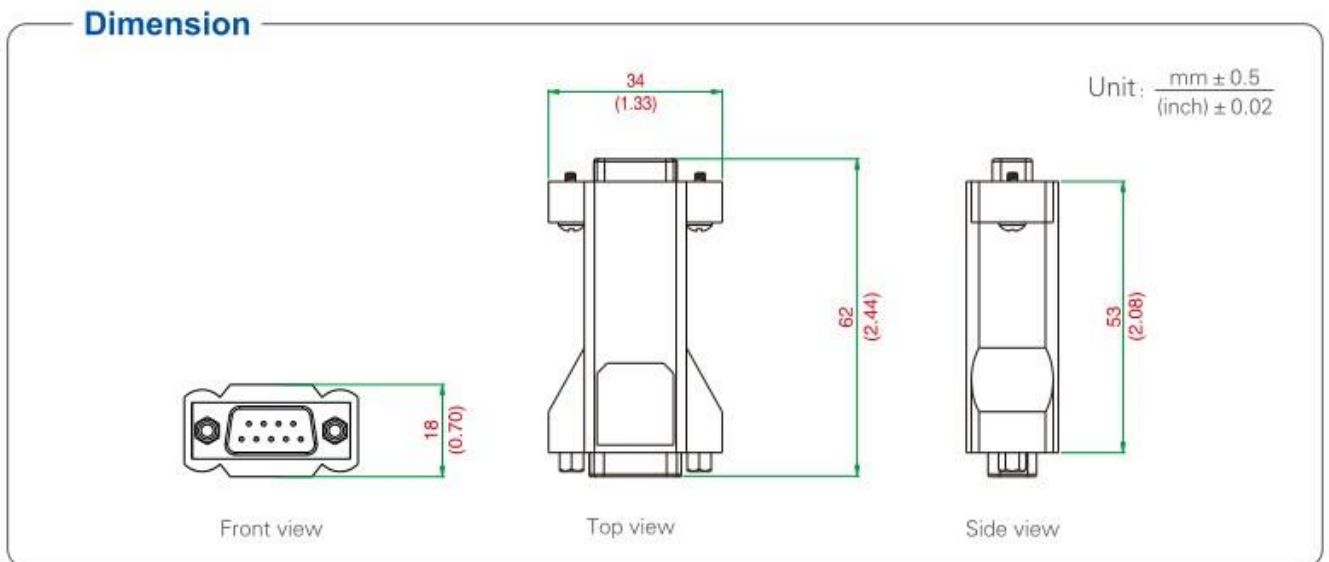
**RS-232C DE pin assignment**

| DB9 Male (PIN) | RS-232C Interface Signal |
|----------------|--------------------------|
| 1              | DCD                      |
| 2              | Send data SIN (TXD)      |
| 3              | Receive data SOUTRXD)    |
| 4              | DTR                      |
| 5              | GND                      |
| 6              | DSR                      |
| 7              | RTS                      |
| 8              | CTS                      |
| 9              | RI                       |

**5. Product View (Appearance)**



## 6. Structure dimensions



## 7. Ordering

## Ordering

| Model  | Signal/Port |          | Protection | Baudrate         | Environment |          |          | Power        |                |
|--------|-------------|----------|------------|------------------|-------------|----------|----------|--------------|----------------|
|        | RS-232      | RS-232   |            |                  | Temperature |          | Humidity | Port-Powered | External Power |
|        | DB9 female  | DB9 male | RS-232     |                  | -25/70°C    | -40/85°C | 5-95%    |              |                |
| UT-211 | ✓           | ✓        | ±3KV ESD   | 300bps-57,600bps |             | ✓        | ✓        | ✓            |                |