

## Model:UT-M232

# Operating Manual for Embedded Isolation TTL to RS-232 Transceiver

## I. Overview

UT-M232 series isolation transceiver module, integrating power isolation, electrical isolation and RS-232 interface chip, combines isolation and profibus protection function; it's convenient for embedding users' equipment and enables the product to have the function of connecting with RS-232 network. The modules of this series apply embedment technology, with excellent isolation characteristics and maximum 1000V DC isolation voltage. It's applicable for communications in industries, coal mine industry, power monitoring, building automation, petrochemical engineering, PLC and frequency converter.

## II. Performance Parameters

- ◆ DC5V power supply
- ◆ Transmission rate of UT-M232 is 300bps~115200bps
- ◆ RS-232 signals: 232RXD, 232TXD, SGND
- ◆ TTL signals: RXD, TXD, GND
- ◆ RS-232 signals with 600W anti-surge protection
- ◆ Isolation voltage: 1000VDC
- ◆ Working humidity: 5~95% non-condensate
- ◆ Working temperature: -40~+85°C
- ◆ Overall dimension: 32×20×9.5mm

## III. Pin Information

### 1.1 UT-M232 series module pin information

Real Product Picture



## Pin definition

Table 1.1 UT-M232

Pin No.	Pin Name	Pin Definition
1	TXD	TTL send pin
2	RXD	TTL receive pin
3	VCC	Power input
4	GND	Input power ground
5、6	SGND	Isolation signal ground
7	232 TXD	232 signals send pin
8	232 RXD	232 signals receive pin

## Electrical parameters

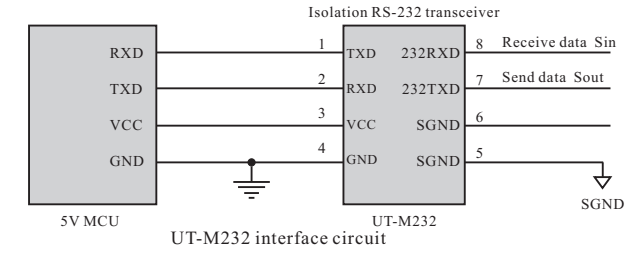
Characteristic parameters of UT-M232 series module

Item	Model	UT-M232
Input voltage		DC: 4.75 ~ 5.25V
Module static current		Less than 50mA
Module send current		Less than 60mA
RS-422 profibus interface		With ESD profibus protection function, twisted-pair output, 600W surge protection function
Serial port		Compatible with +5V, standard UART interface
Input data baud rate		Max. 115200bps
Data delay		Delay time from data receiving to data sending: min. 30 μs, max. 100 μs
Isolation voltage		1000VDC
Humidity		5 ~ 95% non-condensate
Temperature range		-40°C ~ +85°C

## IV. Typical Applications

### 4.1 UT-M232 and 5V MCU typical circuit

The matching level of TXD and RXD interface of UT-M232 is 5V, doesn't support 3.3V level; as indicated in Figure 4.1, it's the connection diagram of UART interface of 5V high-low level MCU with UT-M232 interface module.



## V. Dimension

When installing UT-M232 series modules by the user, please refer to the mechanic dimension as provided in the diagram (unit: mm (inch)) in which the length, width, height and partial mechanic dimensions of the UT-M232 series module is indicated.

