

# Model:UT-206

**RS-232 to RS-485/422 opto-isolated converter**

## Datasheet

## 1. Overview

UT-206 opto-isolated interface converter, compatible with RS-232C, RS-422, RS-485 standards, capable of converting single-ended RS-232 signals to balanced differential RS-422 or RS-485 signals, built-in opto-isolator, capable of providing up to 2500Vrms isolation voltage, fast transient voltage suppression protector, this protector is designed to protect RS-422/RS-485 interface with advanced TVS (TRANSIENT VOLTAGE SUPPRESSOR) transient voltage suppressor, the TVS tube is in a high resistance state under normal conditions, when the two ends of the TVS tube are subjected to an instantaneous high energy shock, it can reduce the impedance of its two ends at a very high rate and absorb a large current, thus clamping the voltage at its two ends to a predetermined value, to protect the back of the circuit components from damage due to transient high-voltage shock. This protector can effectively suppress lightning (LIGHTNING), providing 600W of lightning surge protection power per line, as well as various causes of surge voltage and transient over-voltage generated on the line, and the extremely small inter-pole capacitance ensures high-speed transmission of RS-422/RS-485 interface. The RS-232 interface side is connected to the compatible RS-232C standard interface through a DB9 female connector, and the RS-422 and RS-485 sides are connected through a DB9 male connector. The converter is equipped with zero-latency automatic transceiver, unique I/O circuitry automatically controls the data flow direction without any handshaking signal (such as RTS, DTR, etc.), and no jumper setting is required to achieve full-duplex (RS-422) and half-duplex (RS-485) mode conversion, plug-and-play. It ensures that it is suitable for all existing communication software and interface hardware, and does not require any software modification to the previous RS-232 based working method.

The UT-206 opto-isolated interface converter can provide reliable connections for point-to-point and point-to-multipoint communications, allowing 32 RS-422 or RS-485 interface devices to be connected to each point-to-multipoint converter. RS-232 to RS-422, RS-232 to RS-485 conversion.

## 2. Major Functions & Features

- Support RS-232/485/422 opto-isolated converter

## 3. Technical Parameters

- Interface features: Interface compatible with EIA/TIA RS-232C, RS-485/RS-422 standards
- Electrical interface: RS-232 interface input DB9 female connector, RS-422/RS-485 interface output DB9 male connector
- Protection level: RS-422, RS-485 interface 600W per line lightning surge protection
- Isolation degree: Isolation voltage 2500Vrms 500DC continuous
- Working mode: Asynchronous half-duplex or asynchronous full-duplex
- Signal indication: three signal indicators power (PWR), transmit (TXD), receive (RXD)
- Transmission medium: twisted pair or shielded wire
- Transmission rate: 115.2Kbps to 300m  
38.4Kbps to 600m  
9600bps to 1.2Km
- Dimension: 113mm×55mm×25mm

- Operating environment: -25~70°C
- Relative humidity: 5~95%
- Transmission distance: 0-1,200m (115200bps-9600bps)

## 4. PIN Definition

- RS-232C PIN Assignment

DB9 Female(PIN)	Interface signal
1	GND
2	Transmit data SOUT (TXD)
3	Receive data SIN (RXD)
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI

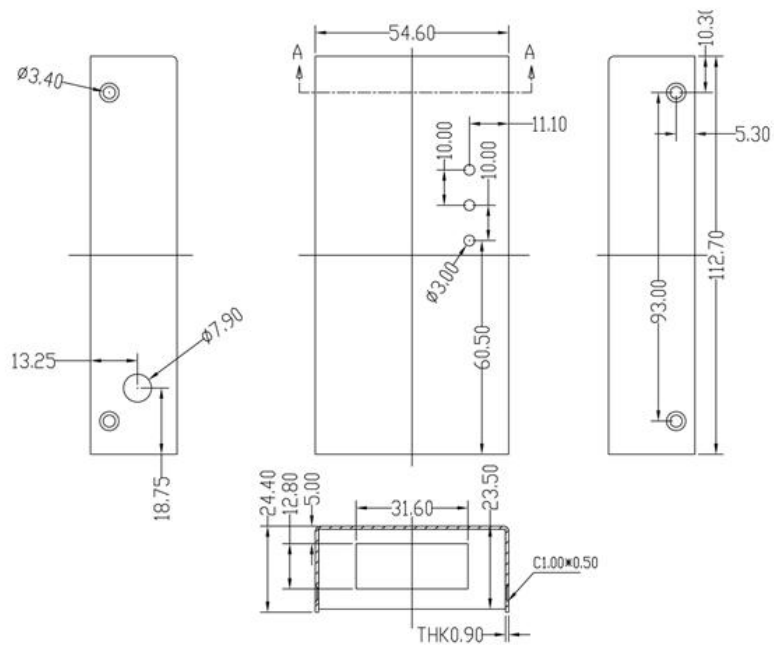
- RS-485/RS-422 output signal and terminal block pin assignment

DB9 Male (PIN)	Output signal	RA-422 full-duplex wiring	RS-485 half-duplex wiring
1	T/R+	Transmit (A+)	RS-485(A+)
2	T/R-	Transmit (B-)	RA-485(B-)
3	RXD+	Receive (A+)	-
4	RXD-	Receive (B-)	-
5	GND	GND	GND
6	VCC	Power supply 9-24VDC input or 9-24VDC output (100mA)	Power supply 9-24VDC input or 9-24VDC output (100mA)
7	N/A		
8	N/A		
9	N/A		

## 5. Product View (Appearance)



## 6. Structure Dimension



## 7. Ordering Information

### ORDERING

Model	Signal/Interface			Protection level		Baud rate	Operating Environment			Power	
	RS-232	RS-485	RS-422	RS-232	RS-485/422		Temperature		Humidity	plug and play	External power
	DB9 female	DB9 male					-25~70°C	-40~85°C	5~95%		
UT-206	√	√	√	±15KV ESD	±15KV ESD/600W surge	300bps-115.2 kbps	√		√		9-24VDC

