Model: UT-217E

(Product Name：RS-232 to RS-485/422 Port-Powered Converter with Isolation)

Datasheet

1. Overview

UT-217E is a port-powered converter with optoelectronic isolation. It complies with RS-232C, RS422, and RS-485 standards; it converts single side RS-232 signal to a balanced differential RS-422 or RS-485 signal. The built-in optoelectronic isolator can provide as high as 2,500Vrm isolated voltage; the fast transient voltage suppression is designed to protect RS-422/RS-485 interface; it adopts advanced TVS (TRANSIENT VOLTAGE SUPPRESSOR); normally, TVS tube is in high impedance state; when both sides of TVS tube suffer from high power impact in a sudden, the voltage suppression will fast lower the impedance from both sides, and soak in large current; with this, the voltage on both sides are fixed at presupposed value, protects the component of circuit from damage. This voltage suppression provides 600W each wire with lightning and ESD protection, and surge voltage and instant overvoltage protection on circuit which causing by all reasons; the tiny interelectrode capacitance ensures high speed transmission for RS-422/485 ports. RS-232 port connects with RS-232C standard port by DB9 female connector; RS-422/RS-485 adopts RJ-45 and 4 bits terminal block as output.

This converter is with built-in zero delay auto receiving and transmitting conversion and unique I/O circuit auto control data flow direction without any handshake signal (RTS, DTR); there is no need jumper wire setting for full duplex (RS-422) and half duplex (RS-485) mode, plug & play. It is compatible with current communication software and hardware, no need to set the previous working mode which base on RS-232.

UT-217E optoelectronic isolated port-powered converter provides connection for point to point, point to multipoint communication. For point to multipoint mode, each converter is allowed to connect 32 sets RS-422 or RS-485 devices with baudrate 300-115.2Kbps. The power and data flow indicators indicate the working status.

2. Major Functions & Features

- Supports RS-232 to RS-485/RS-422 Port-Powered Converter with Isolation
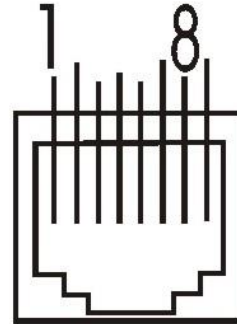
3. Technical Parameters

- Standards: RS-232C, RS-485/RS-422 TIA/EIA
- Connector: RS-232 DB9 female input, RS-422/RS485 interface RJ-45 four-position terminal blocks output
- Protection: RS-232 ±15KV ESD protection RS-485/422 provides with 1,500W lighting, surge each line
- Working mode: asynchronous half-duplex
- Isolation: 2.5KVrms 500VDC
- Signal indicators: three signal indicators power (PWR), transmit (TXD), receive (RXD)
- Transmission media: twisted-pair or shielded cable
- Transmission distance: 115.2Kbps to 300m
  38.4Kbps to 600m
  9,600bps to 1,200Km
- Dimension: 97×74×22mm
- Operating temperature: -25℃ to 70℃
- Relative humidity: 5% to 95%

4. Pin Definition

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	CTS
9	RI

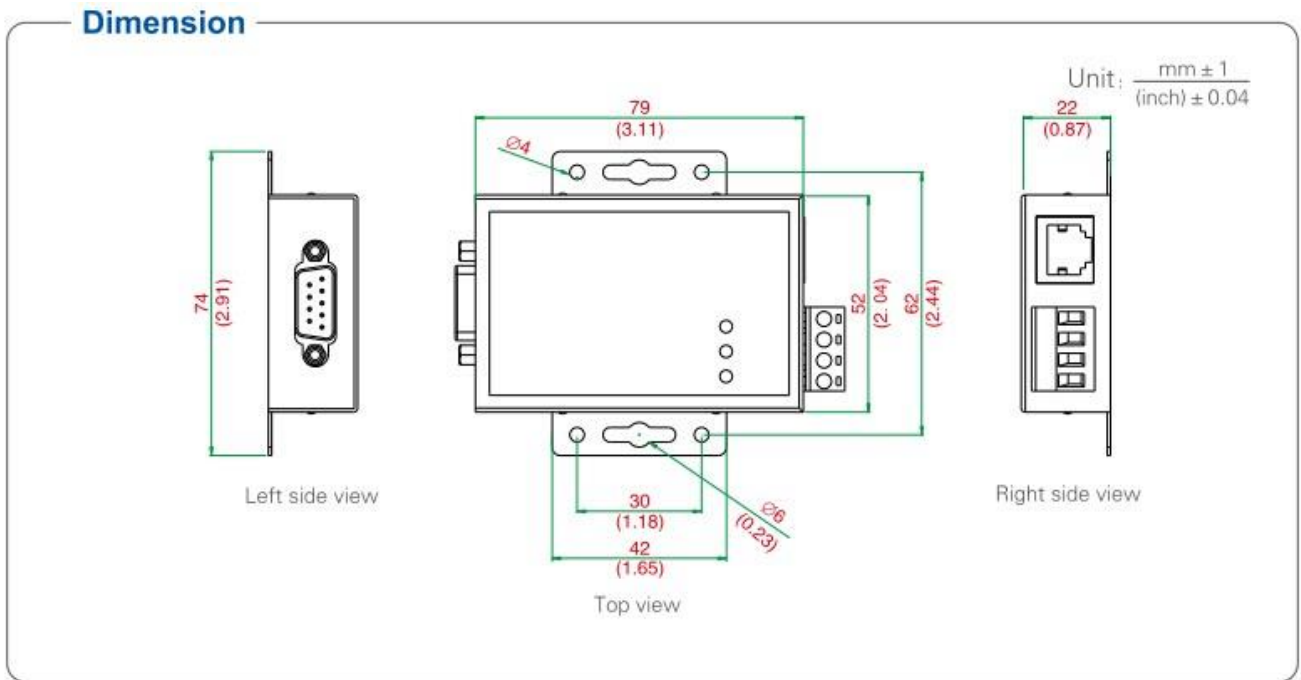## RJ 45 Socket pin assignment diagram

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

Four-Terminal blocks	RJ 45 (PIN)	Output signal	RS-485 Half-duplex	RS-422 Full-duplex
1	1	T/R+	RS-485(A+)	Sending+
2	2	T/R-	RS-485(B-)	Sending-
3	3	RXD+	-	Receive+
4	6	RXD-	-	Receive-
	4,5,7,8	GND	GND	GND

5. Product View (Appearance)

6. Structure dimensions

7. Ordering

Model	Signal/Port			Protection		Baudrate	Environment			Power	
	RS-232	RS-485	RS-422				Temperature		Humidity		
	DB9 female	Terminal block/RJ45		RS-232	RS-485/422		-25/70℃	-40/85℃	5-95%	Port-Powered	External Power
UT-217E	✓	✓	✓	±15KV ESD	±15KV ESD/600W Surge	300bps–115.2kbps	✓		✓	✓	

Accessaries: Terminal block