Model: UT-2216

(Product Name： RS-232 to RS-485 Converter)

Datasheet

1. Overview

UT-2216 is a converter which complies with RS-232C, and RS-485 standards; it converts single side RS-232 signal to a balanced differential RS-485 signal. The fast transient voltage suppression is designed to protect 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 big 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 protection, and surge voltage and transient overvoltage protection on circuit which causing by all reasons; the tiny inter-electrode capacitance ensures high speed transmission for RS-485 ports. RS-232 port connects with RS-232C standard port by DB9 female connector; 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 (RTU, DTR); there is no need jumper wire setting for 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-2216 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-485 devices with baud rate 300-115.2Kbps. The power and data flow indicators indicate the working status.

2. Major Functions & Features

- Supports RS-232 to RS-485 converter

3. Technical Parameters

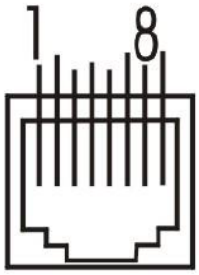
- Standards: RS-232C/ RS-485, /RS-422 EIA/TIA
- Connector: RS-232 DB9 female input; RS-485 DB9 male, RJ-45 output
- Protect level: RS-485 each line 600W lightning, surge protection
- Working mode: asynchronous half-duplex
- Signal indicators: three signal indicators power (PWR), transmit (TXD), receive (RXD)
- Transmission media: twisted-pair or shielded cable
- Baud rate: 115.2K BPS to 300M
  38.4K BPS to 600M
  9,600 BPS to 1.2KM
- Dimension: 97mm×87mm×22mm
- Operating temperature: -25℃ to 70℃
- Relative humidity: 5% to 95 %
- Transmission distance: 0-1,200m (115,200bps-9,600bps)

4. Connectors and Signals

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

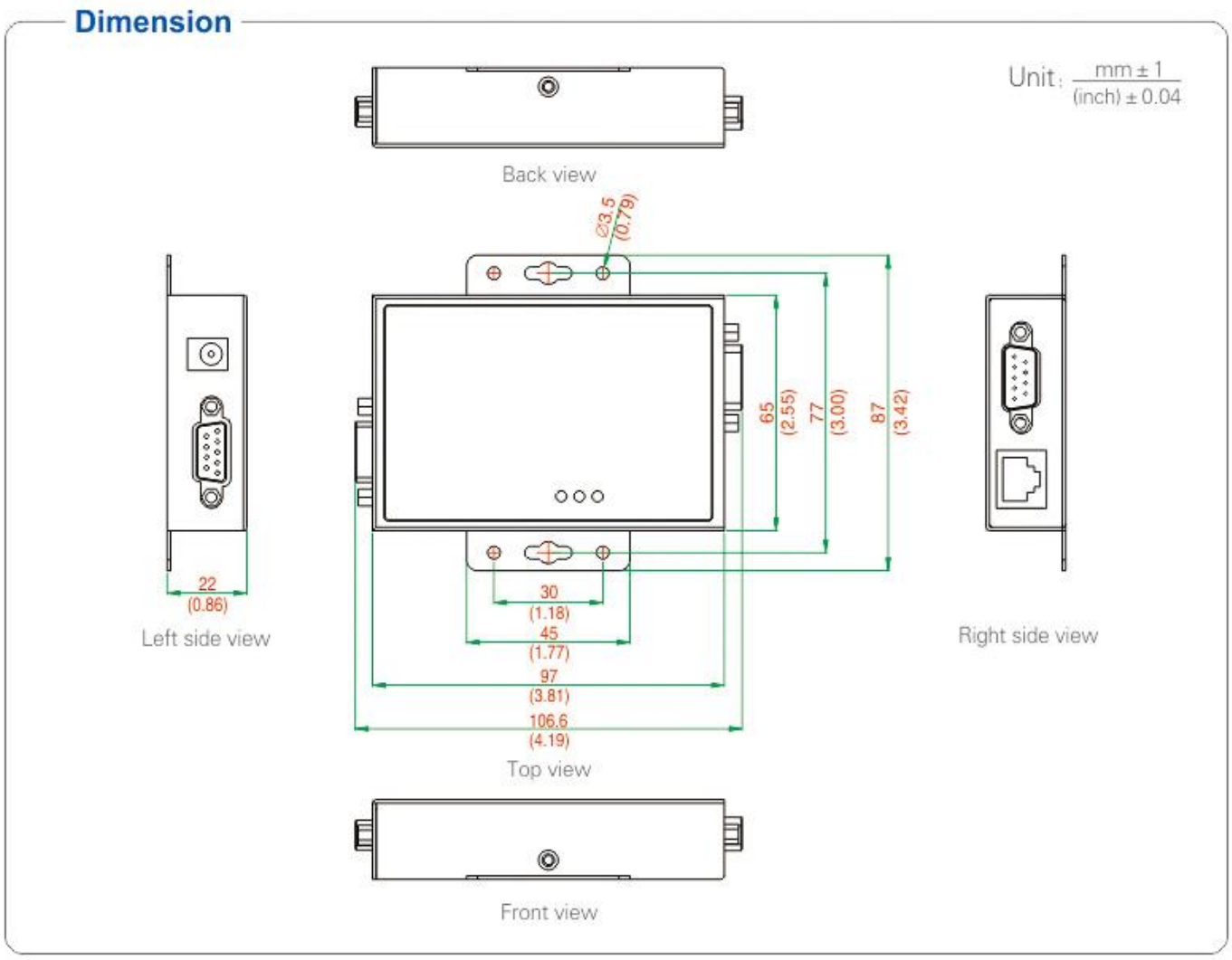


RS-485 output signal and terminal pin assignment

DB9 Female(PIN)	RJ 45 Pin	Output signal	RS-485 Half-duplex
1	1	T/R+	RS-485(A+)
2	2	T/R-	RS-485(B-)
3	3	N/C	N/C
4	6	N/C	N/C
5	4,5,7,8	GND	GND
6	N/C	VCC	9-24VDC input
7	N/C	N/C	N/C
8	N/C	N/C	N/C
9	N/C	N/C	N/C

5. Product View (Appearance)

6. Structure dimensions



7. Ordering

Ordering

Model	Signal/Port			Protection		Baudrate	Environment			Power	
	RS-232	RS-485	RS-422				Temperature		Humidity		
	DB9 female	DB9 male/RJ45		RS-232	RS-485/422		-25/70℃	-40/85℃	5-95%	Port-Powered	External Power
UT-2216	✓	✓		±15KV ESD	±15KV ESD/600W Surge	300bps-115.2kbps	✓		✓		9-24VDC

Accessaries: Power cord/serial cable/terminal block