

Model: UT-2016

RS-232 to RS-485/422 Opto-electronic Isolated Converter

Datasheet



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1. Overview

UT-2016 is a 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 2,500V_{rm} 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 quickly 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 surge protection, and surge voltage and transient 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 DB9 male connector.

2. Major Functions & Features

- Supports RS-232 to RS-485/422 opto-electronic isolated converters

3. Technical Parameters

- Standards: EIA/TIA , RS-232C, RS-485/RS-422
- Interfaces: RS-232 input DB9 female connector, RS-422/RS-485 output DB9 male, RJ45 connector
- Protection level: 600W per line lightning surge protection for both RS-422 ,RS-485
- Isolation: Isolation voltage 2500V_{rms} 500DC. DC/DC module
- Operating mode: asynchronous half duplex/ full duplex
- Signal indication: three signal indicators power (PWR), transmit (TXD), receive (RXD)
- Transmission medium: twisted pair or shielded cable
- Transmission rate: 115.2Kbps to 300M
- 38.4Kbps to 600M
- 9600bps to 1.2KM
- External Dimensions: 107mm×87mm×22mm
- Operating environment: -25 ~70°C, relative humidity 5% ~ 95%
- Transmission distance: 1200m

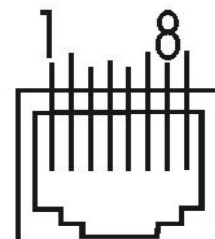
4. Interfaces Definitions

RS-232C Pin assignment

DB9 Female/Hole type(PIN)	RS-232C Signal
1	GND
2	Sending data SOUT (TXD)
3	Receiving data SIN (RXD)

RJ-45

Pin assignment diagram for sockets



4	Data terminal preparation DTR
5	Signal ground GND
6	Data device preparation DSR
7	Request to be sent RTS
8	Clear send CTS
9	Ringing instructions RI

RS-485/RS-422 Output signal & pin assignment

DB9 Male/Pin type(PIN)	RJ-45(PIN)	Output	RS-422 Full Duplex	RS-485 Half Duplex
1	1	T/R+	Sending (A+)	RS-485 (A+)
2	2	T/R-	Sending(B-)	RS-485 (B-)
3	3	RXD+	Receiving(A+)	N/C
4	6	RXD-	Receiving(B-)	N/C
5	4, 5, 7, 8	GND	GND	GND
6		VCC	9-24VDC Input	9-24VDC Input
7		N/A		
8		N/A		
9		N/A		

5.Product View (Appearance)



6. Structure Dimensions

