Model:UT-890A

USB to RS-485/422 Converter

User Guide Manual

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1. Overview

UT-890A is a universal USB/RS-485/422 converter without external power supply, compatible with USB, RS-422 and RS-485 standards, capable of converting single-ended USB signal to balanced differential RS-422 or RS-485 signals, providing per-line surge protection power and surge voltages generated on the line for various reasons and very small The inter-pole capacitance ensures high speed transmission of RS-422/RS-485 interfaces, with the RS-422 and RS-485 ends connected via DB9 male connectors. The converter is equipped with no-latency automatic transceiver, unique I/O circuitry automatically controls the data flow direction without any handshaking signal (such as RTS, DTR, etc.) No jumper line setup 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.

UT-890A interface converter can provide reliable connection for point-to-point and point-to-multipoint communication, point-to-multipoint each converter can allow 32 RS-422 or RS-485 interface devices to be connected, data communication rate 300-921.6Kbps, with power indicator and data flow indicator to indicate the fault situation, supported communication methods are USB to RS-422 The supported communication methods are USB to RS-422, USB to RS-485 conversion.

2. Major Functions & Features

● Supports USB to RS-485/422 Converter

3. Technical Parameters

● Standards: USBV.1, 1.0, 2.0, RS485, RS422 ELA
● USB Signal: VCC, DATA+, DATA-, GND, FG
● RS-485 signal: T/R+, T/R-, GND
● RS-422 signal: T/R+, T/R-, RXD+, RXD-, GND
● Operating mode: asynchronous, point to point or point to multi-point, 2 lines half-duplex or 4 lines full-duplex
● Direction control: adopts data flow direction auto control technology to distinguish and control the direction
● Baud rate: 300-921.6Kbps auto-detect serial signal
● Loading capacity: supports point to multi-point communication, allows to connect 32 sets RS-422 or RS-485 device
● Transmission distance: 1,200m(9,600bps) for RS-485/422, no more than 5m for USB
● Port protection: surge, ±15KV ESD protection
● Connector: USB-A male, DB9 male
● LED for indicating PWR TXD, and RXD activity
● Transmission media: twisted-pair or shielded cable
● Dimension: 1555mm×36mm×16mm（L×W×H）
● Operating temperature: -40 ~ 85℃
● Relative humidity: 5 ~ 95%
● Transmission distance: 0-1,200m
● Supports Win2000/2003/2008/2012/XP/Vista/7/8/8.1/10/CE/Mac/Linux

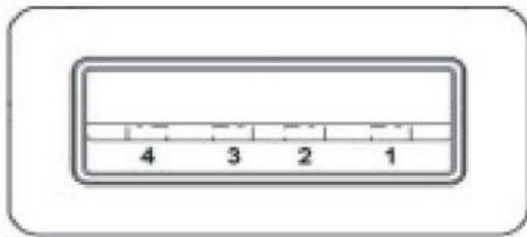## 4. Pin Definition Description
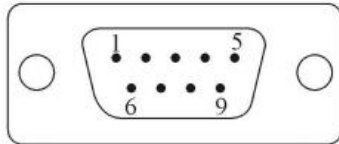
DB9 Pin

DB9 PIN	Output signal	RS-422 Full-duplex wiring	RS-485 Half-duplex wiring
1	T/R+	TX (A+)	RS-485(A+)
2	T/R-	TX (B-)	RS-485(B-)
3	RXD+	RX (A+)	-
4	RXD-	RX (B-)	-
5	GND	GND	GND
6	N/A		
7	N/A		
8	N/A		
9	N/A		

USB-A: USB Input signal and pin assignment
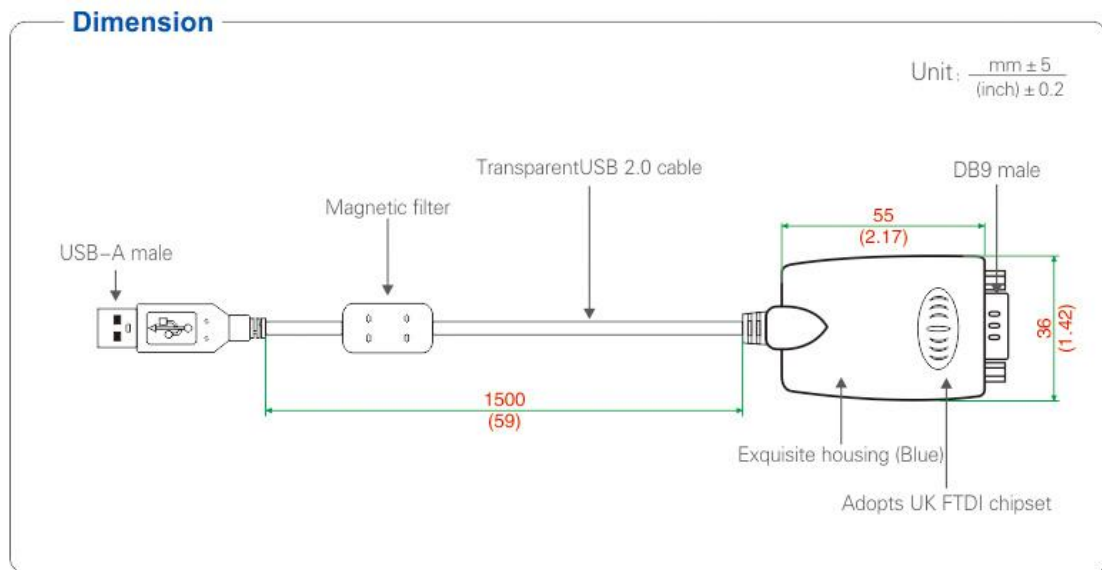

1、VCC   3、DATA+(DP)
2、DATA-(DM)   4、GND

5. Product View (Appearance)

6. Structure Dimensions

7.Ordering Information

Model	Signal/ Interface			Protection level		Baud rate	Operating Environment			Power	
	USB	RS-232	RS-422/485				Temperature		Humidity		
	USB A male	DB9 Male		RS232	RS-422/485		-25~70 ℃	-40~85 ℃	5~95%	plug and play	External power
UT-890A	√		√		600W Surge	300bps~921.6kbps		√	√	√	