User Manual

Thank you for selecting Keyking products. Please read this manual thoroughly before using

USB-485 Converter

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USB to RS-485/422 or 232 Converter

1 Introduction

The USB-485/422/232 converter is a multi-functional converter which can convert RS232/RS485/RS422 signals to USB. It has many features including a small compact size, a long transmission distance, an automatic signal adjustment mode, is of excellent quality and very stable.

2 Features

o Standard: USB1.1, EIA RS232 standard, EIA RS485 standard, EIA RS422 standard

o USB Signal: VCC, DATA+, DATA-, GND

o RS232 Signal: RX, `TX, GND

o RS485 Signal: 485+, 485-, GND

o RS422 Signal: T+, T-, R+, R- GND

o Supports up to 32 or 128 RS485 devices depending upon firmware

o Work Mode: Simultaneous RS232 to RS485 or RS422 operation.

o Automatically adjusts for different baud rates

o Direction Control: adopts data flow control. It can distinguish and control the data transmission direction

o Transmission Distance: RS485/422 = 1200 meters @ 9600bps/h, USB = 5 meters, RS232 = 15 meters

o Ports: Uses a standard USB connection for the USB port and a DB9 for the RS232/422 port

o Input power: The power source is from the USB connection. It is unnecessary to use external power

o Plug and play once the drivers have been loaded

o Temperature: -50 -70 degrees

o Humidity: 5% - 95%

3 Modes of Operation

The USB-485/422/232 converter is a multi-functional converter which can convert RS232/RS485/RS422 signals to USB. It therefore has two modes of operation when used with the TRIMEC 7 Series of controllers.

Mode 1

It can be used as a standard USB to RS-232 converter for single panel communication where the panel is within 15 meters of the converter. The converter should be no more than 5 meters from the USB port on the computer. The USB lead plugs into the computer and the DB9 connects to the RS-232 of the controller.

Note: The DB9 cannot be connected to the computer otherwise damage will result.

Mode 2

It can be used a standard USB to RS-485 converter for multi panel communication where panels are connected on a RS-485 line. The converter should be no more than 5 meters from the USB port on the computer. The USB lead plugs into the computer and the RS-485 connector on the converter connects to the RS-485 line for the controllers. Up to 127 controllers can be connected to a single USB port using this method.
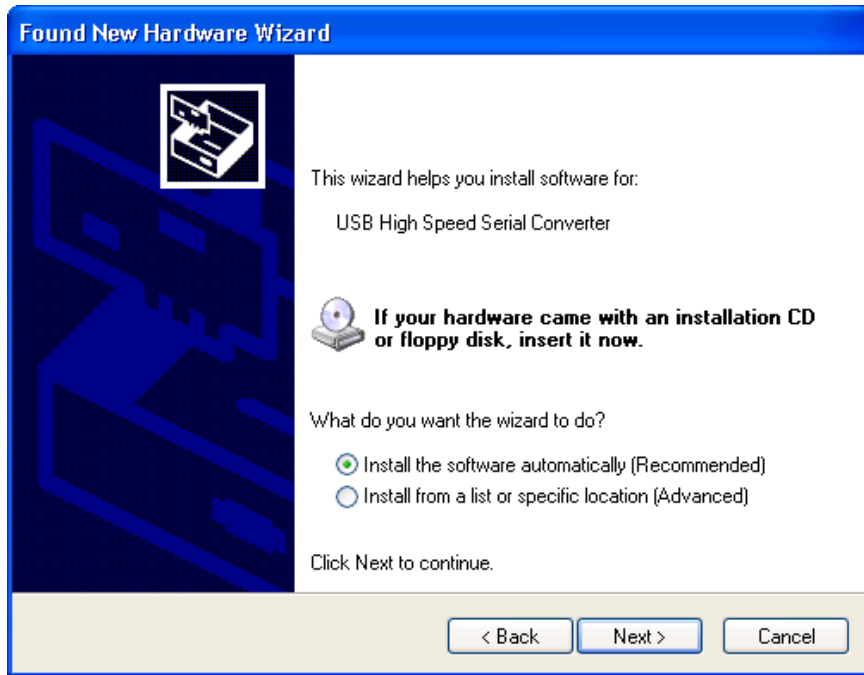
4 Driver Setup

Drivers must be loaded before the USB to RS485/422 or 232 converter can be used. To load the drivers follow the procedure outlined below.

> Connect the USB-485/232 converter to a spare USB port on the computer using the USB connection cable.

The computer should find the new hardware and display the Found New Hardware Wizard screen. Tick "No, not this time then click Next.
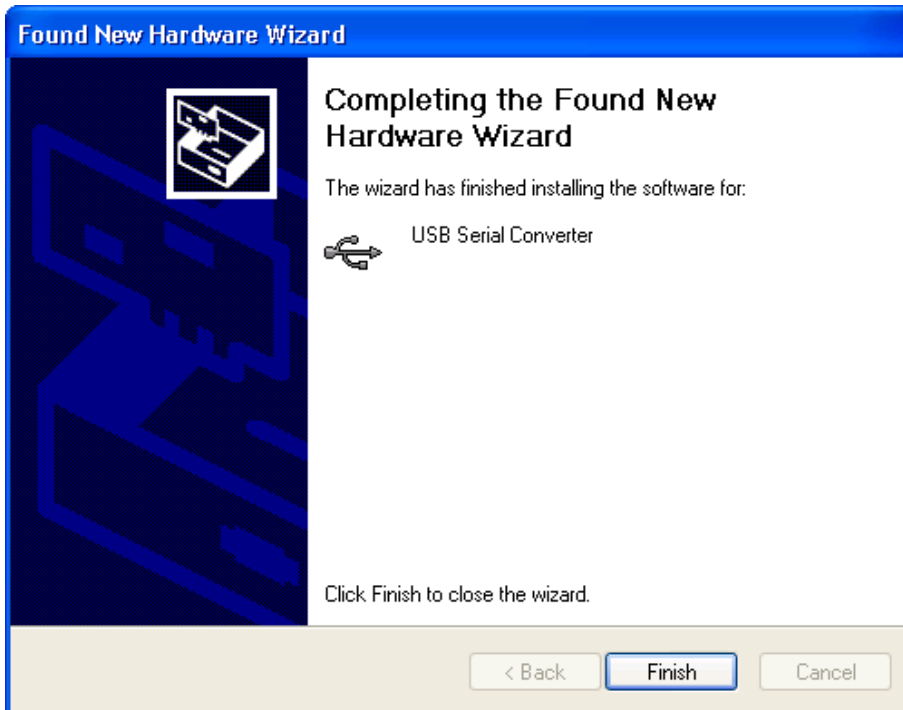

> Select the Automatic install option and click Next.

If the Hardware Installation warning screen appears then select the Continue Anyway button.

Windows will now install the drivers for the serial converter. Once complete the Finish Screen will appear. Click Finish to complete the driver installation.

Windows will now install the COM Port emulation driver. The procedure is the same for the serial converter installation.

Windows now needs to be checked to make sure that the converter has been correctly recognized and to find the Serial Com Port that Windows has allocated the device. Open the Control Panel, select and open Device Manager, click the Hardware Tab and click Device Manager. The device should appear under the Ports setting with the label USB Serial Port with the Com port in brackets.