pn 5253-r4

B&B ELECTRONICS

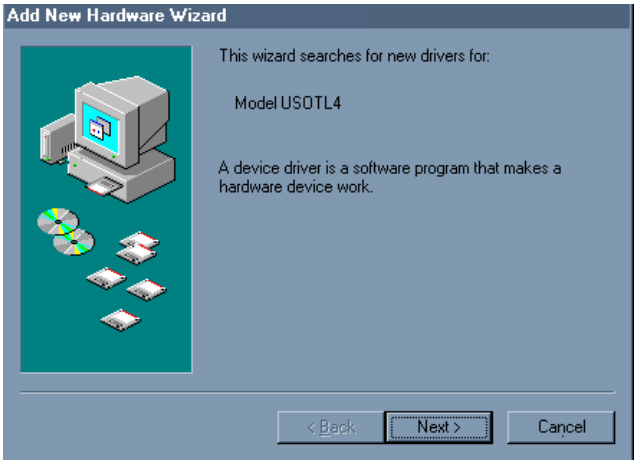
PRODUCT INFORMATION

Model USOTL4

Connect and Isolate an RS-485/RS-422 Network to the USB Port CE

The **USOTL4** is a USB (Universal Serial Bus) port to 2 or 4 wire isolated RS-485/422 converter. This converter requires no PCI/ISA slots or IRQs. Simply plug the converter into an available USB port on your computer or hub. Windows will configure the converter as an additional COM port, compatible with your Windows applications. The serial port side can be set up for an RS-422 or RS-485 network. A pair of LEDs shows when RS-485/422 data is being received or transmitted. The USB side permits quick setup. Just plug in the USOTL4 and Windows will install the drivers and set up the converter. USB bus supplies power so no separate power supply is needed. 2000 volt RMS of isolation.

Installation for Windows



#1. Plug the USOTL4 into an available USB port on your computer or connected hub. The screen above appears, telling you that there is a new device plugged into the USB bus. Click on the **Next>** button.

#2. The screen above appears. Make sure *Search for the best driver for your device* is selected. Then select the **Next>** button.

#3. The screen above appears. Make sure *CD-ROM drive* is selected. Insert the *USOTL4 Driver* CD into the CD-ROM drive. Then select the **Next>** button.

#4. The screen above appears. Make sure *Model USOTL4 (B&B's USB to Isolated RS-485)* is listed as the device. Then select the **Next>** button.

B&B electronics MANUFACTURING COMPANY

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#5. The screen above will appear. Click the **Finish** button to complete the installation.

#6. You will also need to continue to install the serial port the same as installing the converter. Click the **Next** button followed by the **Finish** button. It will take a couple seconds for the serial port to be installed.

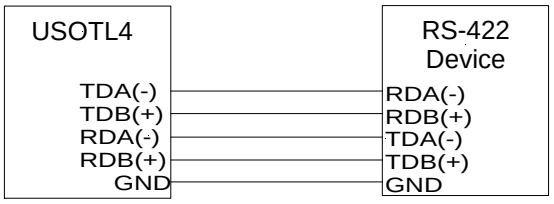
RS-485 Control

No special software is required to control the RS-485 receiver or transmit line driver. The driver is automatically enabled during each byte transmitted in RS-485 mode. The transmitter is always enabled in RS-422 mode. The receiver is tri-stated during each byte transmitted in the echo-off mode. The receiver is always enabled in the echo-on mode. There are 4.7k Ohm pull-up/pull-down resistors on the RDA and RDB lines. A termination resistor may be added to R16 if needed. See B&B's RS-422/RS-485 Application Note (available on our website or by mail) for more information on termination and DC biasing of an RS-485 network.

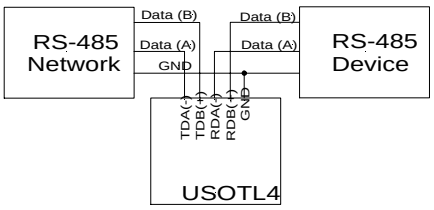
Dip Switch Set-up

Dip switches allow the module to be configured for two-wire or four-wire, RS-422 or RS-485 modes. In two-wire mode the TDA (-) and RDA (-) are tied together and so are TDB (+) and RDB (+), making multi-dropping this converter into an existing network easy.

Switch	OFF	ON
One	TD always enabled **(TD 422)**	TD only enabled during data transmission. **(TD 485)**
Two	RD always enabled **(ECHO ON)**	RD disabled during data transmission. **(OFF)**
Three	Four-wire mode **(4-Wire)**	Two-wire mode **(2-Wire)**
Four	Four-wire mode **(4-Wire)**	Two-wire mode **(2-Wire)**



USOTL4 in a four-wire set-up with all switches in the OFF position.



USOTL4 in a two-wire set-up with all switches in the ON position.

Specifications

Dimensions:	2.7 x 5.1 x 0.9 in (6.9 x 13.0 x 2.3 cm)
Temperature Range:	0 to 70°C (32 to 158°F)
RS-485/422 Baud Rate:	Up to 460.8 kbps
USB Baud Rate:	High speed device
USB Power:	Low power device (draws < 100mA)
Operating System:	Windows 98/SE, 2000, ME, XP
Accessories:	Driver CD
Isolation:	2000 V RMS

DECLARATION OF CONFORMITY

Manufacturer's Name:	B&B Electronics Manufacturing Company
Manufacturer's Address:	P.O. Box 1040 707 Dayton Road Ottawa, IL 61350 USA
Model Numbers:	USOTL4
Description:	Optically Isolated USB to RS-422/485 Converter
Type:	Light industrial equipment
Application of Council Directive:	89/336/EEC
Standards:	EN 55022 EN 61000-6-1 EN 61000 (-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11)

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