

# TRU COMPONENTS RS232 USB Converter Instruction Manual

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## **TRU COMPONENTS RS232 USB Converter**



#### **Product Information**

The RS232-USB Converter (Item No. 2615316) is a device that allows you to connect a device with an RS232/UART interface to a USB port (USB1.1 or USB2.0). The converter can convert interfaces with RS232 level, TTL level (5V) and 3.3Volt level to USB. The product complies with the statutory national and European requirements.

## **Delivery Content**

- RS232 USB converter
- Pin strips
- · CD with driver
- · Operating instructions

### **Latest Product Information**

Download the latest product information at <a href="https://www.conrad.com/downloads">www.conrad.com/downloads</a> or scan the QR code shown. Follow the instructions on the website.

## **Technical Specifications**

- Supply voltage: +5 V / DC
- Maximum current consumption (depending on baud rate): approximately 100mA
- Dimensions: 33 x 16 x 13mm
- · Pinout:
  - 1. XRXD
  - 2. XCTS
  - 3. XDSR
  - 4. XDCD
  - 5. XRI
  - 6. XTXD
  - 7. XRTS
  - 8. XDTR
  - 9. TXD\_5V
  - 10. GND
  - USB\_Vcc = supply voltage via USB, +5V= Data- = Data line for USB Data+ = Data line for USB
  - 12. RS232 UB
  - 13. SUSPEND\_5V
  - 14. ENABLE
  - 15. SUSPEND\_3V
  - 16. CTS
  - 17. TXD
  - 18. DSR
  - 19. RXD
  - 20. DTR
  - 21. RTS

### **Important Safety Instructions**

The symbol with the exclamation mark in the triangle indicates important information in this operating manual. Always read this information carefully.

#### Installation/Mounting

The circuit board of the converter can be soldered in directly or via a socket strip. It is also possible to solder on a 9-pole SubD plug (e.g. Conrad order no. 742066) and attach a USB cable to the other end of the circuit board (+5V=, Data+, Data-, GND).

If you do not solder on a 9-pole SubD plug, it is possible to break off the corresponding part of the circuit board at a predetermined breaking point to save space on the own application.

#### **Software Installation**

- 1. Install the supplied driver software first!
- 2. Only then may the converter be connected to the USB port.

#### **Disposal**

This product must be disposed of in accordance with local regulations.

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1, D-92240 Hirschau (www.conrad.com). Copyright 2022 by Conrad Electronic SE.

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#### **Product Usage Instructions**

- 1. Read the operating instructions carefully and store them in a safe place. Make this product available to third parties only together with the operating instructions.
- 2. Install the supplied driver software first before connecting the converter to the USB port.
- 3. If soldering on a 9-pole SubD plug, attach a USB cable to the other end of the circuit board (+5V=, Data+, Data-, GND).
- 4. If not soldering on a 9-pole SubD plug, it is possible to break off the corresponding part of the circuit board at a predetermined breaking point to save space on your own application.
- 5. Dispose of the product in accordance with local regulations.

#### Intended use

This product serves to connect a device with an RS232/UART interface to a USB port (USB1.1 or USB2.0). The converter can convert interfaces with RS232 level, TTL level (5V) and 3.3Volt level to USB.

The circuit board of the converter is soldered in directly or via a socket strip. It is also possible to solder on a 9-pole SubD plug (e.g. Conrad order no. 742066) and attach a USB cable to the other end of the circuit board (+5V=, Data+, Data-, GND).

If you do not solder on a 9-pole SubD plug, it is possible to break off the corresponding part of the circuit board at a predetermined breaking point to save space on the own application.

The product complies with the statutory national and European requirements. For safety and approval pur-poses, you must not rebuild and/or modify the product.

Read the operating instructions carefully and store them in a safe place. Make this product available to third parties only together with the operating instructions.

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## **Delivery content**

- RS232 USB converter
- Pin strips
- · CD with driver
- · Operating instructions

## Latest product information

Download the latest product information at <a href="https://www.conrad.com/downloads">www.conrad.com/downloads</a> or scan the QR code shown. Follow the instructions on the website.

## **Description of symbols**

The following symbols are on the product/appliance or are used in the text:

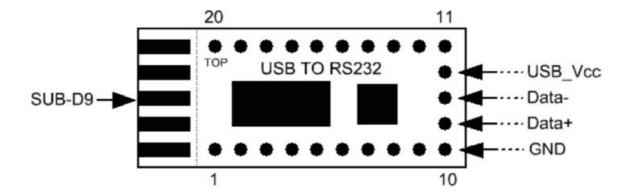
The symbol with the exclamation mark in the triangle is used to indicate important information in these operating instructions. Always read this information carefully.

## Safety instructions

Read the operating instructions carefully and especially observe the safety information. If you do not follow the safety instructions and information on proper handling in this manual, we assume no liability for any resulting personal injury or damage to property. Such cases will invalidate the warranty/guarantee.

- For safety reasons, any unauthorized conversion and/or modification to the product are not permitted.
- The product is not a toy and must be kept out of the reach of children.
- The product must not get damp or wet.
- Do not leave packaging material laying around carelessly. These may become dangerous playing mate-rial for children.

## Pin assignment



#### 1 Pin assignment/name

- 1. = XRXD
- 2. = XCTS
- 3. = XDSR
- 4. = XDCD
- 5. = XRI
- 6. = XTXD
- 7. = XRTS
- 8. = XDTR
- 9. = TXD 5V
- 10. = GND
- 11. = RS232 UB
- 12. = SUSPEND 5V
- 13. = ENABLE
- 14. = SUSPEND\_3V
- 15. = CTS
- 16. = TXD
- 17. = DSR
- 18. = RXD
- 19. = DTR
- 20. = RTS

## Pin assignment/name

- USB Vcc = supply voltage via USB, +5V=
- Data- = Data line for USB
- Data+ = Data line for USB

### Note

- Pins 1 to 8 carry RS232-conform levels
- Pin 10 is the mutual ground (GND)
- Supply voltage +5V from USB port (max. 100mA!)
- Pin 9 must be used for microcontrollers requiring a %v level on the RX input.
- Pin 15 to pin 20 are I/Os, the RXD detects voltages from 3.3V to 5V, TXD emits a level of 3.3V. If controllers with 5V are applied, you have to use the connection TXD 5V.
- If the RS232-conform level is required on pins 1 to 8, you have to make a connection between pin 14 (SUSPEND\_3V) and pin 13 (ENABLE).
- Via pin 12/14 (SUSPEND\_3V/SUSPEND\_5V), you can tell the external hardware (e.g. microcontroller) whether a USB connection was established. These pins are on high level when the USB connection is detected!

## Installation /assembly

• The converter can be equipped with a SubD plug and a 4-pole USB connection cable (+5V=, Data+, Data-, GND) as well as plugged into a corresponding socket on another circuit board via pin strips.

When soldering on the 9-pole SubD plug, check the right alignment of the plug on the circuit board (4 resp. 5 contact strips on the circuit board and on the socket).

When connecting a USB connection cable, make sure that the cable connections are established cor-rectly. In case of wrong polarity, not only the converter is destroyed but also the corresponding USB port. Loss of warranty/guarantee!

- If you do not need the small circuit board part for the 9-pole SubD plug, carefully snap it off at the predetermined breaking point.
- Solder in the enclosed pin strips for installation in a plug-type socket. Make sure that the soldering pro-cess is
  as short as possible to prevent overheating of the circuit board and the other elements. Observe all usual
  safety instructions when soldering.

The pin strips must be soldered on at the bottom of the circuit board so that the elements are located on the other (top) side.

#### Software installation

- 1. First install the enclosed driver software!
- 2. Then connect the converter with the USB port.

## **Disposal**

This symbol must appear on any electrical and electronic equipment placed on the EU market. This symbol indicates that this device should not be disposed of as unsorted municipal waste at the end of its service life. Owners of WEEE (Waste from Electrical and Electronic Equipment) shall dispose of it separate-ly from unsorted municipal waste. Spent batteries and accumulators, which are not enclosed by the WEEE, as well as lamps that can be removed from the WEEE in a non-destructive manner, must be removed by end users from the WEEE in a non-destructive manner before it is handed over to a collection point.

Distributors of electrical and electronic equipment are legally obliged to provide free take-back of waste. Conrad provides the following return options free of charge (more details on our website):

- · in our Conrad offices
- at the Conrad collection points
- at the collection points of public waste management authorities or the collection points set up by manufacturers or distributors within the meaning of the ElektroG

End users are responsible for deleting personal data from the WEEE to be disposed of.

It should be noted that different obligations about the return or recycling of WEEE may apply in countries outside of Germany.

#### **Technical data**

• Supply voltage+5V / [	$^{\circ}$
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Max. power consumption
 (depending on baud rate)......approx. 100mA

 Admissible ambient temperature range......0°C to +70°C

· Admissible relative

ambient air humidity......20 – 60% (non-condensing)

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### **Documents / Resources**



TRU COMPONENTS RS232 USB Converter [pdf] Instruction Manual RS232 USB Converter, RS232, USB Converter, Converter

#### References

- Conrad Electronic » Your Sourcing Platform
- © Document

Manuals+,