ИСО 9001

INTERFACE CONVERTER

USB-RS232

USER'S MANUAL

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This user's manual explains the principles of operating the USB-RS232 Interface Converter.

Only the personnel who have studied this manual are allowed to operation activities. All activities on mounting, programming and commissioning shall be performed in compliance with the requirements of the regulatory documentation in force at the place of operation.

1 Description and Operation

1.1 Intended Purpose

1.1.1 USB-RS232 Interface Converter is designed to convert USB interface signals to the RS-232 standard providing galvanic isolation.

1.1.2 The product can be applied for converting interfaces to set up fire and intrusion alarm systems, access control systems, CCTV systems, fixed fire suppression systems as well as to arrange building automation systems.

1.1.3 USB-RS232 Interface Converter is to be powered via a USB port of a PC.

1.1.4 The USB-RS232 interface converter is to be operated by such systems as Windows 2000, XP, Server 2003, Vista, Server 2008, Windows 7, Server 2008 R2, Windows 8 (x86 / x64), Windows 10, representing a virtual COM port.

1.1.5 USB-RS232 Interface Converter is designed for round-the-clock operation.

1.1.6 USB-RS232 Interface Converter is classified as a serviceable and recoverable item.

1.1.7 The design of the USB-RS232 Interface Converter doesn't provide its operating in aggressive and dusty environments or in ex-hazardous premises.

1.2 Specifications

No.	Parameter	Value
1.2.1	Power voltage, V	+5 (USB port of a PC)
1.2.2	Consumed current, mA	200 max
1.2.3	Baud Rates, bit/s	110, 300, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200
1.2.4	Operating temperature range, °C	Minus 30 to +50
1.2.5	Relative humidity, %	Up to 95 % at +40°C
1.2.6	RFI caused by the equipment as per GOST R 50009-2000	Not exceed
1.2.7	Weight, gram	11
1.2.8	Overall dimensions, mm	19×67×11 max
1.2.9	Enclosure protection degree	IP20
1.2.10	Non-stop operation	Round-the-clock
1.2.11	MTBF in the quiescent mode, hours	80,000
1.2.12	Survival probability	0.8758
1.2.13	Expected lifetime, years	10

1.2.14 The interface converter passes the man-made radio disturbance standards prescribed for Class 'Б' equipment as per GOST R 51318.22.

1.2.15 As to immunity to man-made radio disturbance, the product meets the requirements for Severity Level III as per GOST R 50009.

1.3 Scope of Delivery

Item	Quantity, pcs.
USB-RS232 Interface Converter	1
Operations Manual	1
Individual package	1

1.4 Design and Operation

The interface converter provides converting USB signals to RS-232 standard and backward. Upon connecting the interface converter to a PC and installing the driver, it operates as a virtual COM port. Parameters of transferring RS-232 data (rate, parity, stop bits) are to be set similarly to relevant parameters for a hardware COM port of the PC.

1.5 Measuring Instruments, Tools, and Accessories

While mounting, commissioning, and maintaining the device please use the instruments, tools, and accessories shown in Table 1.5.1.

Table 1.5.1

Instrument	Specifications
Digital multimeter	AC/DC voltage up to 500V, AC/DC current up to 5A, resistance up to 2M Ohm
Cross slot screwdriver	2 x 100 mm
Side-cutting pliers	160 mm

1.6 Marking and Sealing

1.6.1 Every device has a marking placed on the back side of its closure.

1.6.2 The marking contains the device name, its decimal number, factory number, the year and quarter of production, and conformity marks.

1.7 Packaging

The device coupled with operation documentation is packaged in a separate cardboard box.

2 Intended Use

2.1 Operating Restrictions

The design of the interface converter doesn't provide its operation in aggressive and dusty environments or in ex-hazardous premises.

2.2 Preparing for Use

2.2.1 Safety Precautions

- The design of the interface converter meets the requirements of electric and fire safety including emergency operation in accordance with Russian standards GOST 12.2.007.0-75 and GOST 12.1.004-91;
- There are no potential hazard circuits within the device;
- Do SHUT OFF power from the device before mounting, installing, and maintaining this one;
- Mounting and maintenance of the USB-RS232 shall be carried out by persons with the second or higher accident prevention level.

2.2.2 Design

The view and overall dimensions of the USB-RS232 interface converter are presented in Figure 2.1.

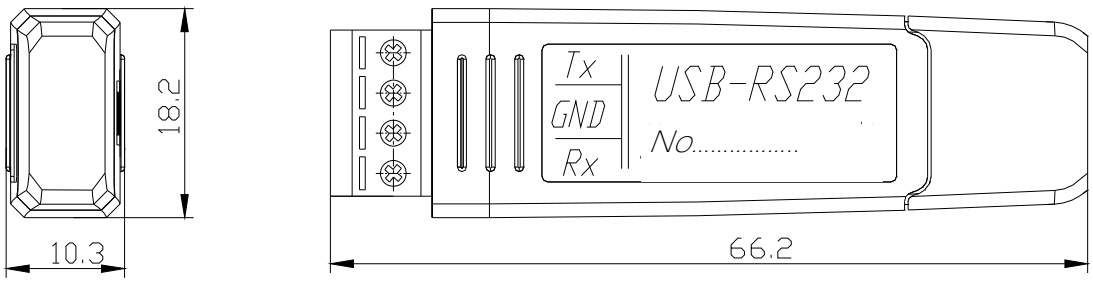


Figure 2.1 Overall Dimensions of USB-RS232

2.2.3 Mounting

The interface converter shall be operated at locations protected against atmospheric precipitations and mechanical damage.

The screw terminal block provides connecting wires with 0.13 to 0.82 mm^2 cross section. Connection lines are to be erected in line with the schematic shown in Figure 2.2.

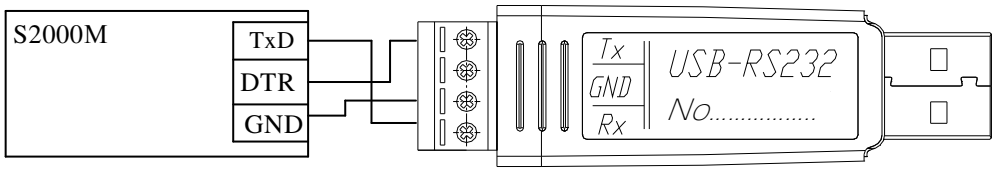
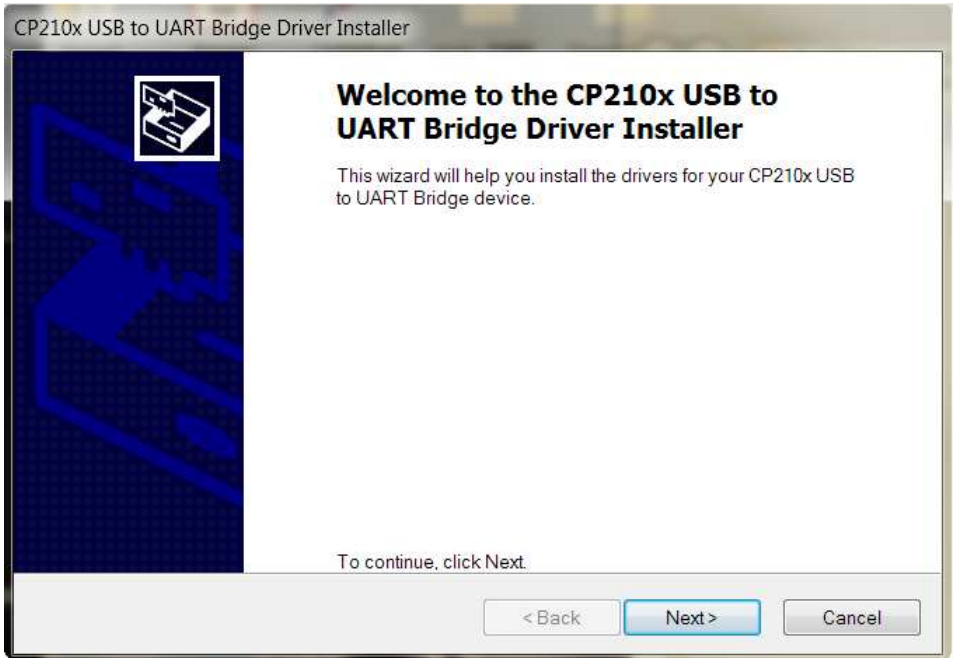


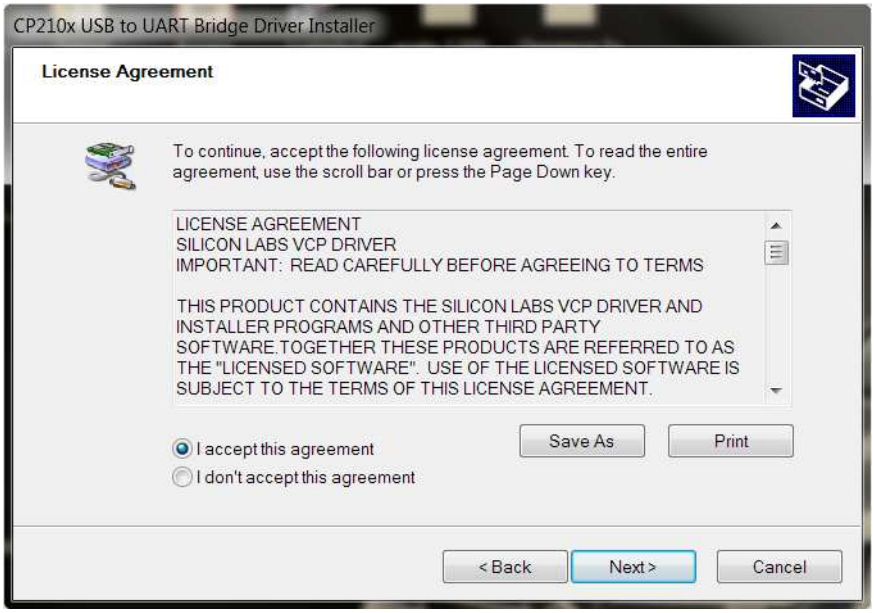
Figure 2.2 How to Connect USB-RS232 to an S2000M Panel

2.2.4 Connecting to the PC

2.2.4.1 Prior to connecting the interface converter to a PC, you should install its driver (can be found at the company site http://bolid.ru in the section PRODUCTS on the page of the USB–RS232 interface converter). Unpack CP210x_VCP_Windows.zip and run the driver installation file that relates to the current operating system bitness: CP210xVCPInstaller_x86.exe for a 32-bit system or CP210xVCPInstaller_x64.exe for a 64-bit system. The Installer window appearing, click Next:



2.2.4.2 In the next Installer window select the option “I accept this agreement” and click Next:



2.2.4.3 The driver being installed, a relevant window appears. Click Finish to complete installation

2.2.4.4 Connect the interface converter to the PC with RS232 interface bus disconnected from the interface converter (detach the terminal block). Wait for the message about successful completion of driver installation and device being ready for operation. Upon installation of the interface converter driver, the group Ports (COM&LPT) of the Device Manager shall contain the entry “CP2104 USB to UART Bridge (COM x)” (where x is the number of the virtual COM port).

2.2.4.5 After the necessary connections are carries out, connect the interface converter to the RS232 interface bus via the removable terminal block.

2.2.5 Testing Operability

Testing operability of the interface converter is conducted as described in Clause 3.4 of this manual.

2.2.6 Extreme Situation Actions

Warning!
If sparks, fire, smoke, and / or smell of burning are found at the installation site of the device, the device must be de-energized and sent for repair

3 Maintenance

3.1 General

The product is to be maintained according to a planned preventive strategy which provides annual scheduled maintenance.

3.2 Safety Precautions

The detector should be maintained by personnel qualified for the Accident Prevention Level of II or higher.

3.3 Maintenance Procedures

Scheduled maintenance works include:

- Visual checking of the interface converter conditions;
- Checking conditions of external installation wires and contact joints;
- Checking operability as per Clause 3.4 of this manual.

WARNING!
Removing the device's PC board from its housing automatically voids the manufacturer's warranty

3.4 Performance Testing

3.4.1 Testing operation capability of the interface converter as part of an S2000M panel is testing the panel for stable communications with a personal computer using PProg utility. Put the panel to the programming mode, and then conduct reading / writing the S2000M configuration.

3.4.2 Indicator's illuminating means receiving / transmitting signals over the RS-232 interface line.

3.5 Technical Examination

Technical examination is not applicable for this equipment.

3.6 Preservation (Depreservation, Represervation)

Preservation is not applicable for this equipment.

4 Repair

4.1 Repair of faulty equipment is to be conducted by the manufacturer or in authorized repair centers. The equipment shall be sent for repair in line with established procedures.

Attention!
The equipment shall be submitted for repair being assembled and clean and along with all the parts listed in the documentation.
Claims are accepted only if a reclamation report describing the failure is applied to the submitted equipment.

4.2 An equipment fault resulted from consumer's not observing rules of mounting and operation is not a reason for claims and warranty repair.

4.3 Claims shall be submitted to the following address:
NVP BOLID, #4 Pionerskaya Str., Korolyov, Moscow Region, 141070, Russia
Tel./fax: +7 (495) 775-71-55 (PBX), Email: info@bolid.ru.

4.4 In case of any issue related to use of the product, please contact the technical support: +7 (495) 775-71-55 or e-mail: support@bolid.ru.

5 Storage

5.1 Storage in a transport container is permitted at ambient temperatures -50°C through +50°C and relative humidity up to 95% at +35°C.
5.2 Storage in the consumer package is permitted only in heated premises at temperatures +5 through +40°C and relative humidity up to 80% at +20°C.

6 Transporting

6.1 The devices can be transported in a transport container at ambient temperatures minus 50 through +50°C and relative humidity up to 95 % at +35°C.

7 Disposal

7.1 The product can be disposed of considering that there are no toxic components in it.
7.2 The content of precious materials: doesn't require accountability for storage, retirement, and disposal (Clause 1.2 of GOST 2.608-78).
7.3 The content of non-ferrous metals: does not require accountability for retirement and further disposal.

8 Manufacturer Warranty

8.1 The manufacturer guaranties the product meets with technical requirements stated in the manuals if the user follows the instructions for transportation, storage, installation, and usage.
8.2 The warranty period is 18 months since putting the product into operation but no more than 24 months from the manufacturer's date of production.

9 Certification Information

9.1 The USB-RS232 interface converter meets the requirements of the Technical Regulations TR CU 020/2011 and is covered by Conformity Certificate RU C-RU.ME61.B.01641.

9.2 The USB-RS232 interface converter is covered by the certificates of conformity of transport safety technical arrangements with requirements for their functional properties No. МВД РФ.03.000036, No. МВД РФ.03.000037.

9.3 The USB-RS232 interface converter is comprised in Rupor Voice Alarm System, which meets the requirements for functional properties of public notification technical means and is covered by the conformity certificate No.C-RU.08ГО.B.00001.

9.4 The production of USB-RS232 is awarded with Conformity Certificate GOST R ISO 9001. The Certificate is available on the website https://bolid.ru in the section ABOUT.