

USB / RS-485 INTERFACE CONVERTER S2000-USB

INSTRUCTION MANUAL

1 GENERAL

1.1 Description

The S2000-USB, USB-to-RS485 Interface Converter is designed to convert USB interface signals to signals of two-wire trunk interface RS-485 with galvanic isolation. The S2000-USB is powered via a USB port of a personal computer (PC). The S2000-USB operates with such operating systems as Windows 2000, 2003, XP, Vista forming a virtual COM port. The S2000-USB is designed for round-the-clock operation.

1.2 Specifications

- 1) Input Power Voltage: +5V (via USB port of a PC);
- 2) Consumed Current: 100 milliamp max;
- 3) Baud rates: 110, 300, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400, 460800, 921600;
- 4) Operation Temperatures: – 30°C to +50°C;
- 5) Relative Humidity: up to 93 % at +40°C;
- 6) Overall Dimensions: 155 mm x 107 mm x 36 mm;
- 7) Weight: 0.2 kg max.

1.3 Standard Delivery

The S2000-USB standard delivery includes:

- S2000-USB: 1 pcs.;
- This Instruction Manual: 1 pcs.;
- USB-AB Cable: 1 pcs.;
- Bolid Information CD: 1pcs.;
- DIN 7982 Flat Head Tapping Screw 2.2×6.5: 1 pcs;
- Woodscrews: 3 pcs.;
- Wall Plugs: 3 pcs.;
- Package: 1 pcs.

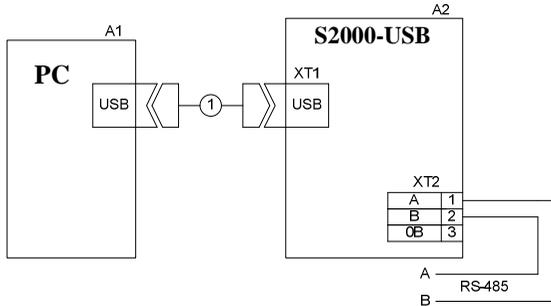
1.4 S2000-USB Operation Principle

S2000-USB operation is based on converting USB interface signals to the RS-485 interface signals and back. After connecting the S2000-USB to a PC and installing the software the interface converter is ‘seen’ as an additional COM port providing data transmission in the half-duplex mode. Parameters of transmitting data over the RS-485 (data transmission rate, parity, quantity of stop bits) are adjusted by the same way as for any other COM port of the PC.

2 OPERATING INSTRUCTIONS

2.1 External Connections

Figure 1 shows the typical schematic for connecting the S2000-USB.



A1: A personal computer with such installed operating system as Windows 2000, Windows 2003, Windows XP, or Windows Vista

A2: The S2000-USB

1: USB-AB cable (provided)

Figure 1 Schematic for connecting the S2000-USB.

2.2 Mounting the S2000-USB

The S2000-USB is attached by three woodscrews to a wall at a convenient place near the PC or on the DIN rail (see Figure 2).

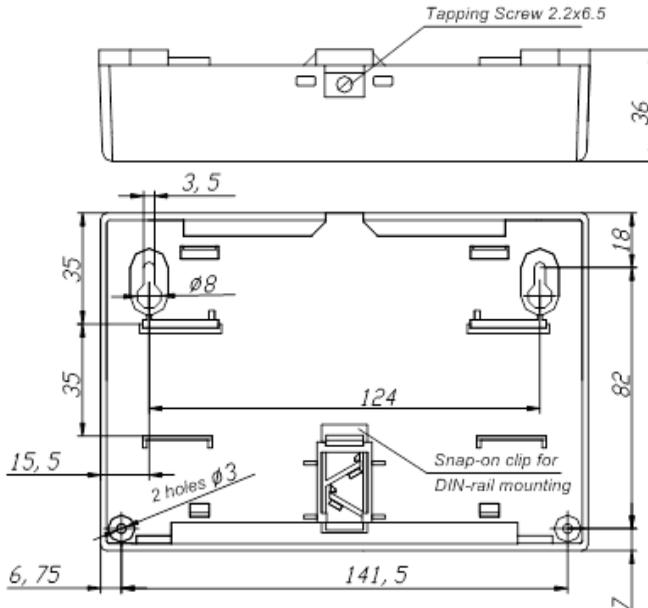


Figure 2. Overall and Mounting Dimensions of the S2000-USB

2.3 Operation of the Device

2.3.1 If the S2000-USB is the first or the last (end) device within the RS-485 interface bus then the termination resistor of 120 Ω should be brought in the line by putting on the jumper on the contacts which are located near the RS-485 terminal block. Otherwise, the jumper should be put off.

2.3.2 After defining the jumper position and connecting required wires the S2000-USB can be connected to a personal computer. READY indicator shall flash; it means that the S2000-USB is not initialized on the PC.

2.3.3 The S2000-USB to operate on your PC you should install the S2000-USB driver on the PC. To do so, select 'S2000-USB Driver' in the Program Setup section on the provided Bolid Information CD and follow the instructions.

2.3.4 After first connecting the S2000-USB to a PC the Found New Hardware Wizard window will appear on the display. Following is the description of driver setup process for Windows XP operating system:

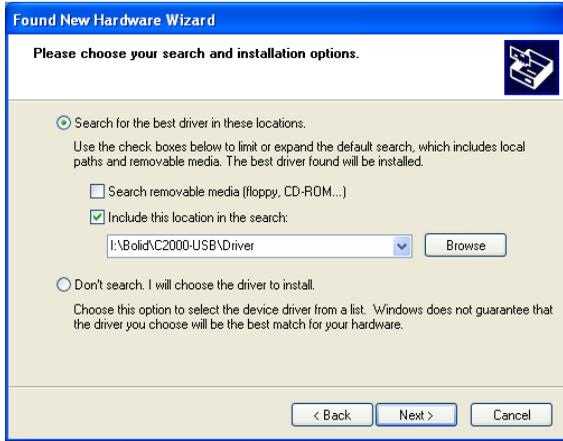
- Select 'No, not this time' and click Next:



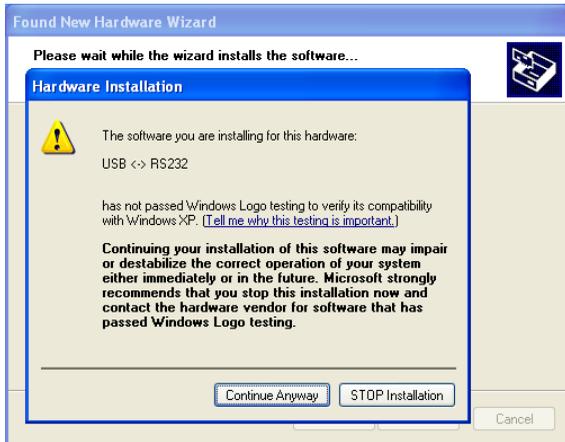
- Then, select 'Install from a list of specific location' and click Next:



- Next, in the window for selecting driver location select the options as shown in Figure below and specify the path to the S2000-USB driver. Click Next:



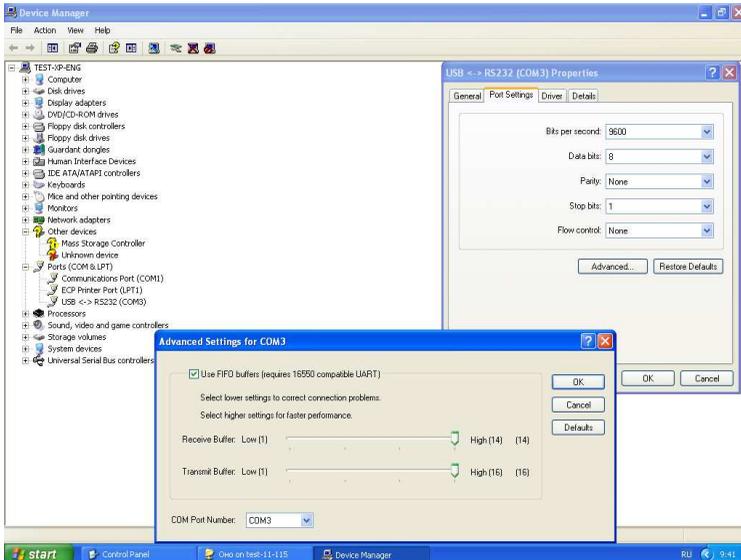
- Then, click Continue Anyway button in the appeared window:



- Click Finish in the appeared window:



- Now the S2000-USB driver has been installed. READY indicator on the S2000-USB face plate should be lit steady. After driver setup, Ports (COM&LPT) of the Device Manager will include the 'USB <-> RS-232 (COM x)' entry where 'x' is the number of the virtual COM port:



By clicking Advanced you can call the relevant window and change the number of the COM port. Let the parameters of the virtual COM port be rest by default (the parameters are adjusted by a program using this COM port).

2.3.5 Indicator Operation. The READY indicator shall be lit steady in green. USB or RS-485 indicator's lighting means receiving a signal from the relevant line.

3 MAINTENANCE

3.1 Maintaining the S2000-USB should be performed by operating personnel at least once every six months and includes the following:

- Cleaning the S2000-USB enclosure and its terminals from dust, dirt, and other contaminations;
- Checking the reliability of fastening cables and terminals of communication lines;
- Checking the reliability of attaching the S2000-USB.

4 MANUFACTURER DETAILS

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