

# RS232/USB, TTL/USB and RS485/USB ASYNCRONOUS SERIAL CONVERTER S117P1

## GENERAL DESCRIPTION

S117P1 is a converter that realizes a serial asynchronous connection via RS232, RS485 or TTL, using an USB port on the PC.

If the drivers are installed properly, the operating system treats the serial interface like a standard system serial port, allowing the use of the converter through any software that can communicate with the standard serial ports present in the operating system (COM1, COM2, ecc.).

RS232, RS485 and TTL ports are electrically isolated from the USB port, eliminating most of the problems of electrical noise that, for example, can affect the instrument connected if it is far from the PC.

The S117P1 has available from screw terminals an internal power supply of 12 Vdc @ 100 mA that it can be used to supply a Seneca module.

## GENERAL SPECIFICATIONS

- Driver support:
  - Windows 98, 98SE, ME, 2000, Server2003, XP.
  - Windows XP 64bit.
  - Windows Vista.
  - Windows XP embedded.
  - Windows CE.net 4.2 & 5.0.
  - Mac OS 8, 9, OS-X.
  - Linux con Kernel 2.4.20 or later, after which there is a direct support.
- USB standard 1.0, 1.1 e 2.0 compatible.
- Isolation between USB and RS232, RS485 or TTL: 1500 V.
- 12 Vdc @ 100 mA available from screw terminals to supply a Seneca module.
- Max current consumption: 50 mA.
- Power supply through USB.
- Baudrate: 300 bps – 250 kbps
- Serial RS232 Communication.
- Serial RS485 Communication, max 32 nodes.
- More S117P1 can be connected on the the same PC.
- Three leds visualize the instrument communication activity.
- Accessories: CD with drivers.  
USB connecting cable: USB A and MINI USB B connectors.
- RS232 connections: DB9 connector
- TTL connections: RJ-10 connector

## TECHNICAL SPECIFICATIONS

Environmental conditions	Temperature: -20..65°C. Humidity: 10%..90% non-condensing. Installation category: II. Pollution degree: 2.
Storage temperature	-40..85 °C
Internal protection:	IP20
Weight, dimensions:	S117P1: 55 g , 90 x 50 x 25 mm

Standards:



The instrument is compliant to the following standards:

- EN61000-6-4/2007 (electromagnetic emission, industrial environment)
- EN61000-6-2/2005 (electromagnetic immunity, industrial environment)
- EN61010-1/2001 (safety).

## INSTALLATION GUIDE

### INSTALLATION GUIDE FOR S117P1

The S117P1 converter is easy to install, therefore there aren't important rules to follow; just use a shielded cable for RS232 and RS485 line in noisy environment or if you use long cables.

**PIN CONNECTOR DB9-M**

Pin Index	Description
1	Data Carrier Detect
2	Received Data
3	Transmitted Data
4	Data Terminal Ready
5	Signal Ground
6	Data Set Ready
7	Request To Send
8	Clear To Send
9	Ring Indicator

**DB9-M**

**S117P1** Rx

USB to RS232/RS485/TTL CONVERTER Tx

CE ~~RoHS~~ POWER

**SENECA**

**PIN CONNECTOR RJ-10**

Pin Index	Description
1	Ground
2	Rx
3	Tx
4	Power

**PIN CONNECTOR 5 WAY SCREW TERMINALS**

Pin Index	Description
1	Power supply Ground
2	Max: +12Vdc @ 100 mA
3	B
4	A
5	Modbus Ground

## LED SIGNALLINGS

The module has three leds that can visualize the status of the connectivity of the instrument.

## LEDs indications

NAME	COLOUR	INDICATION
POWER	Green	If steady on, power supply is present.
Rx	Red	Data are being received through the RS485/RS232 communication port.
Tx	Red	Data are being transmitted through the RS485/RS232 communication port.

## TROUBLESHOOTING

If you have any problem with the use of the converter, please check the following points:

PROBLEM	RESOLUTION
"POWER" led doesn't power up	Check that USB port supplies 5 V necessary to power up the instrument.
"Rx" led is steady on	Check that RS232/RS485 cables are not crossed.

## DRIVER INSTALLATION

In the box containing the instrument, the user will find the CD containing the drivers.

In this section the installation driver procedure will be described carefully under Windows.

Under Linux, (with 2.4.20 Kernel or later) the installation is automatic and doesn't need the CD driver. The serial port under which the instrument is identified is: **/dev/ttyUSB0**.

For Windows OS, the installation procedure is made of two parts. In the first, the serial converter driver will be installed. In the second part the virtual driver will be installed, and the peripheral will be able to be used by the operating system as a standard serial port.

In the case you are using Windows 2000, Windows XP or Windows Vista, these two parts are identical and are now described "step by step", while in Windows 1998 the second part will be managed automatically by the operating system, without any other communication to the user. In the following section the installation procedure for Windows XP will be described.

### DRIVER INSTALLATION IN WINDOWS XP

First, connect the instrument to the PC turned on, in this way the operating system can detect the instrument automatically.

When the operating system detects the converter, the following window will appear:



If you click on the third option (No, not this time), and then Next, the following window will appear:



To begin the installation, click the “Next” button, and you will access the following window:



Select the first option, and the operating system will find the best driver for the device in the path chosen. In case the CD is not present in the CD-Rom device, please insert the mini-CD provided in the box, select the “**Search removable media**” and click “**Next**”. Once the correct driver has been found, the following window will appear:



To continue with the installation, click on the Next button. After a while, the correct installation window will appear.



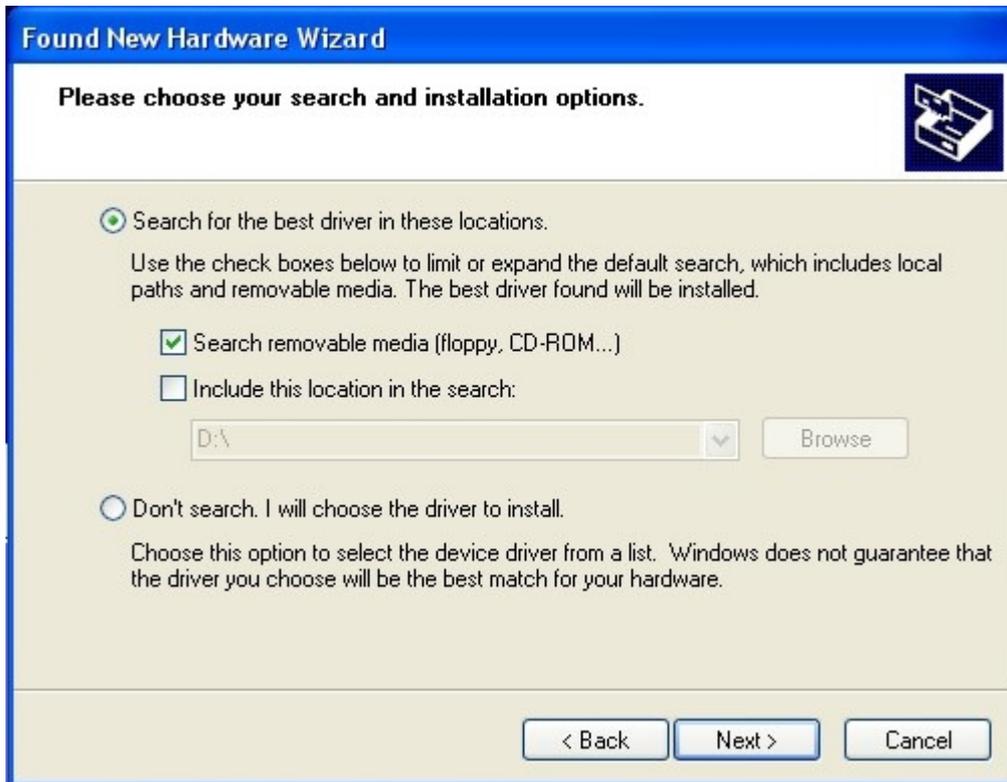
Once pressed the "Finish" button, the driver for the S117P1 converter has been installed. Now the second part of the installation begins: from now on, the **virtual driver** will be installed, and all the programs will use the converter as a standard serial port. The following signalling will appear, and a similar to the former procedure will begin:



To begin the installation procedure, click the **Next** button. The following window will appear:



Select the second choice, and in the following window specify the path where to search the driver in.



Once the correct driver has been found, the following window will appear:



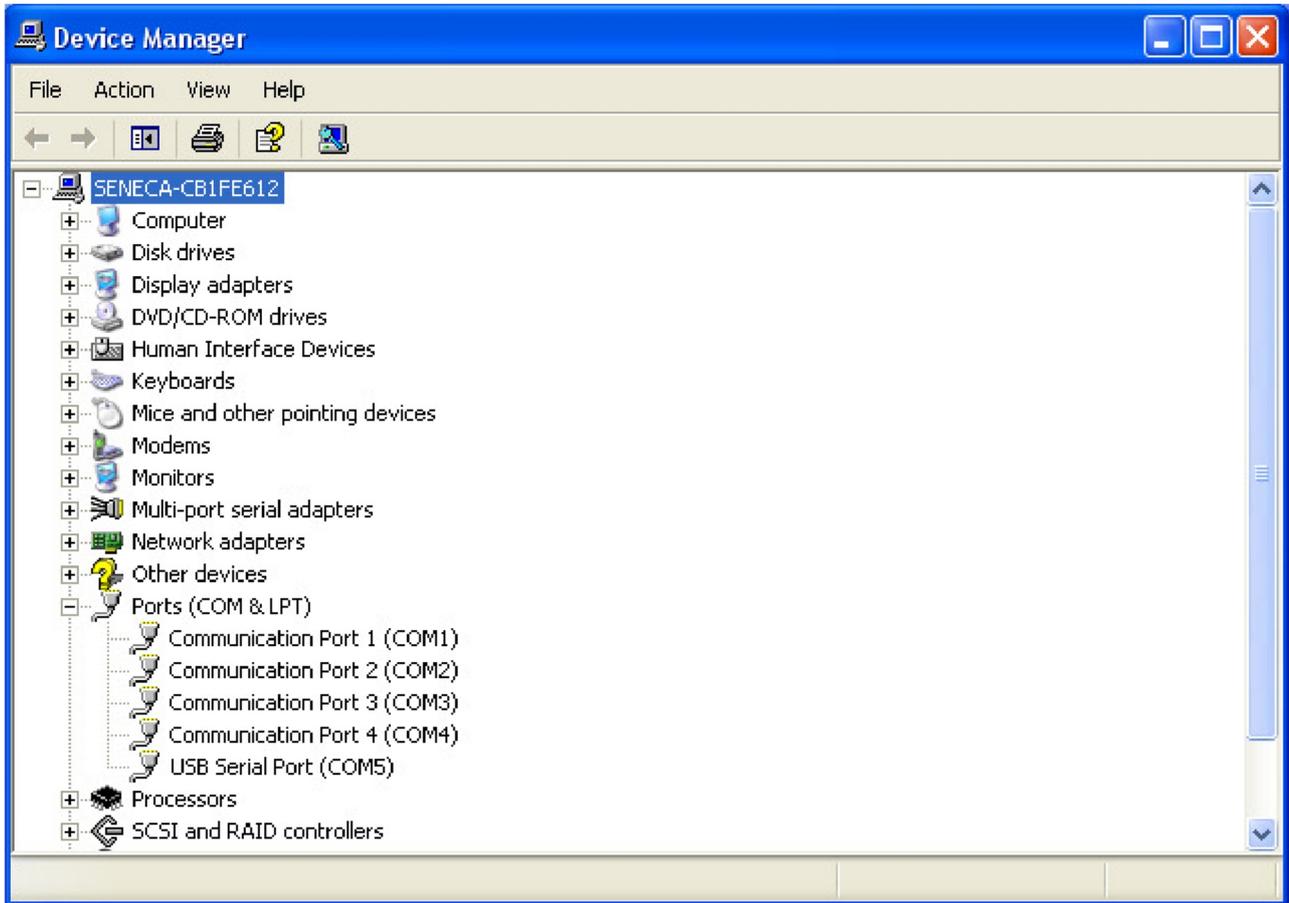
To continue with the installation, click on the Next button. After a while, the correct installation window will appear.



Now in the **Device Manager** panel it is possible to visualize the name assigned to the serial virtual port assigned to the S117P1 instrument.

#### **VISUALIZATION OF THE VIRTUAL COM PORT**

In the following example in the **Device Manager** panel, the COM port is COM5:

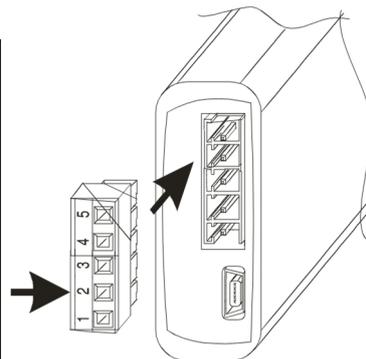


## **POSITION AND DESCRIPTION OF SCREW TERMINAL**

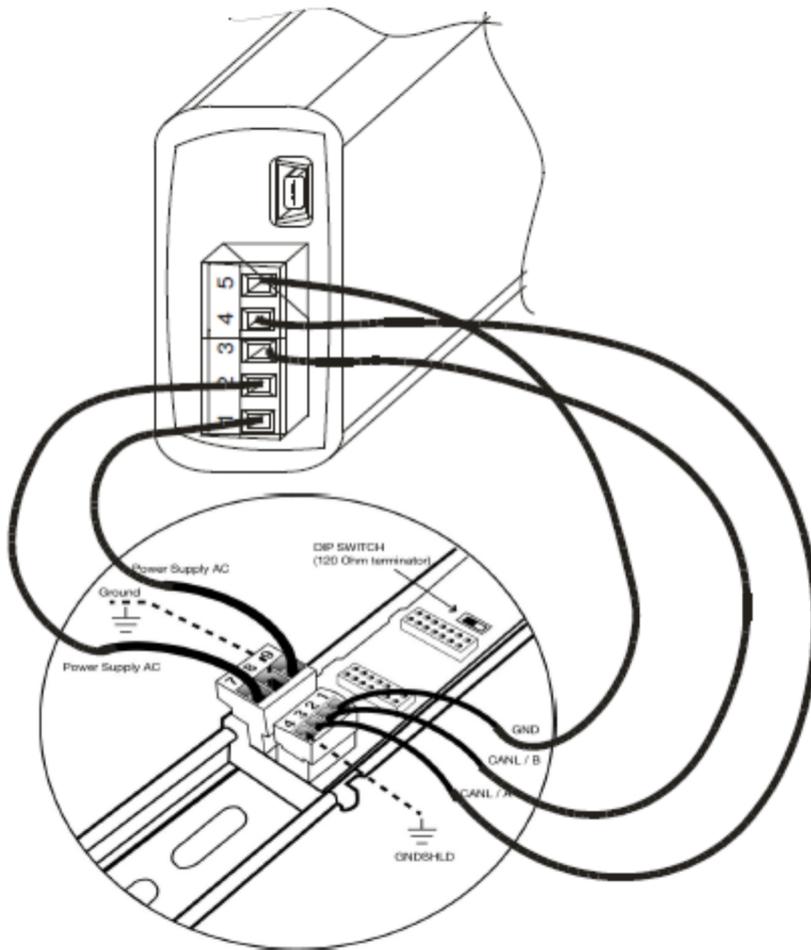
The following picture shows the functions of the screw terminal connector on the side of S117P1 :

- Supply a Seneca module 12 Vdc @ 100 mA
- Serial port communication with standard RS485

Pin Index	Description
1	Power supply Ground
2	Max: +12Vdc @ 100 mA
3	B
4	A
5	Modbus Ground



S117P1 can be connect to a Seneca bus as shown in the picture below:



UNI EN ISO 9001



CERTIFICATE  
Nr. 9115.SENE

### SENECA s.r.l.

Via Austria, 26 - 35127  
PADOVA - ITALY

Tel. +39.049.8705355 - 8705359

Fax +39.049.8706287

e-mail: [info@seneca.it](mailto:info@seneca.it)

[www.seneca.it](http://www.seneca.it)