Getting started

Configuring IOlog SS3000 modules using Winlog

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1. Introduction

In this guide we show how to set up communication parameters of IOlog SS3000 data acquisition modules using a **Winlog Lite/Pro** application.

Sielco Sistemi provides a series of flexible and easy to use data acquisition modules; available modules are:

SS 3014 4 RTD, Res, Pot Analog Inputs

SS 3015 4 V or mA Analog Inputs

SS 3016 4 Tc, mV, mA Analog Inputs

SS 3017 8 V or mA Analog Inputs

SS 3018 8 Tc, mV, mA Analog Inputs

SS 3024 4 0..10V - 0..20mA analog Outputs

SS 3130 4 Digital Inputs + 4 Relays

SS 3148 12 Digital Inputs

SS 3188 8 Digital Inputs + 8 Digital Ouputs

SS 3580 RS232 / RS485-422 Converter

SS 3580-USB USB / RS485-422 Converter

SS 3580-TCP Ethernet Modbus TCP / RS485 Modbus RTU Converter

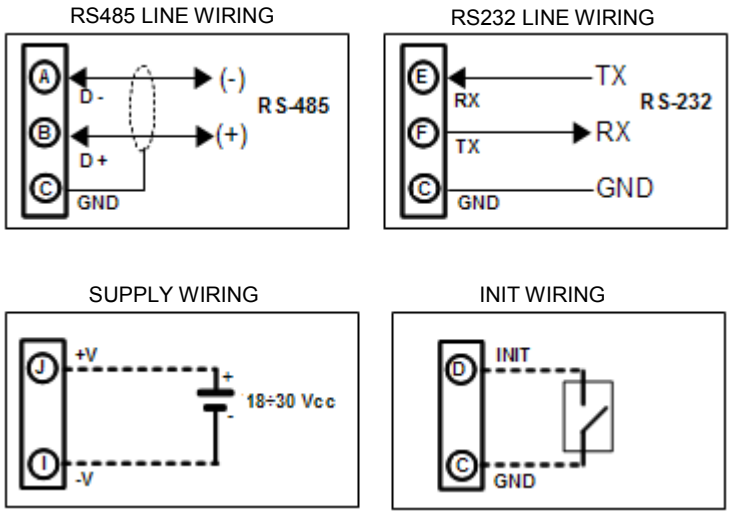
SS 3590 RS485-422 Repeater

IOlog SS3000 acquisition modules are released with the following configuration:

Protocol: MODBUS RTU - **Baud Rate**: 38400 - **Address** : 1

2. Preparation of the devices (init function)

If the exact configuration of a module is unknown, it can result impossible to establish a communication with it. To force your module to communicate using the parameters standard set , use the **INIT funtion**:



- Connect to the RS485 net only the device to configure.
- Turn off the device.
- Connect the INIT pin (D) to the GND pin (C).
- Turn on the device.
- Ensures that the “PWR” green LED on the front of the enclosure is lighted.

Communication port parameters have been set in the following way:

- **baud-rate** = 9600 bps
- **parity** = None
- **n° bit** = 8
- **stop bit** = 1

The device now communicates at the **address 01** with the **Modus RTU** protocol.

After programming the new parameters using Modbus protocol (see next chapter), follow the instructions :

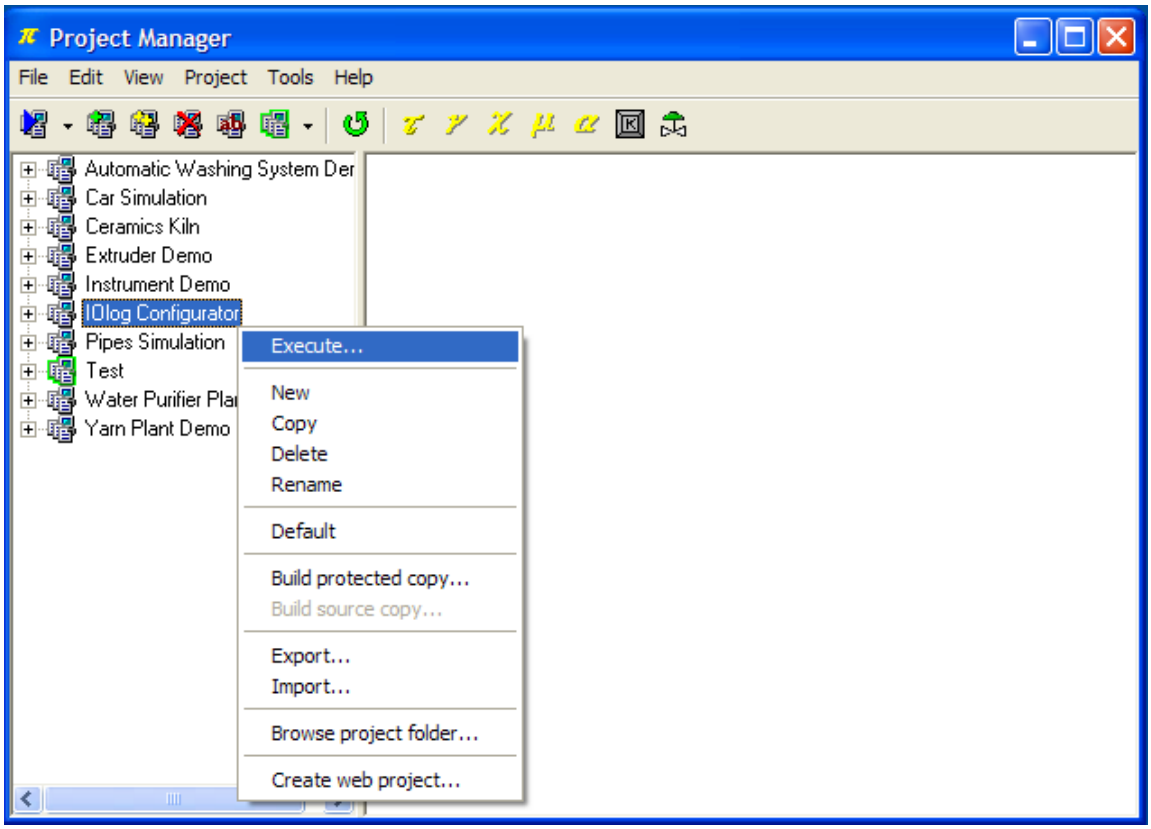
- Turn off the device.
- Disconnect the INIT pin from the GND pin.
- Turn on the device.
- Set the communication port at the programmed baud-rate.
- The device now communicates with the programmed address.

NOTE: The default manufacturer programmation is the following**:**

- **Address** : 01
- **Baud-rate** : 38400 bps
- **Protocol** : RTU

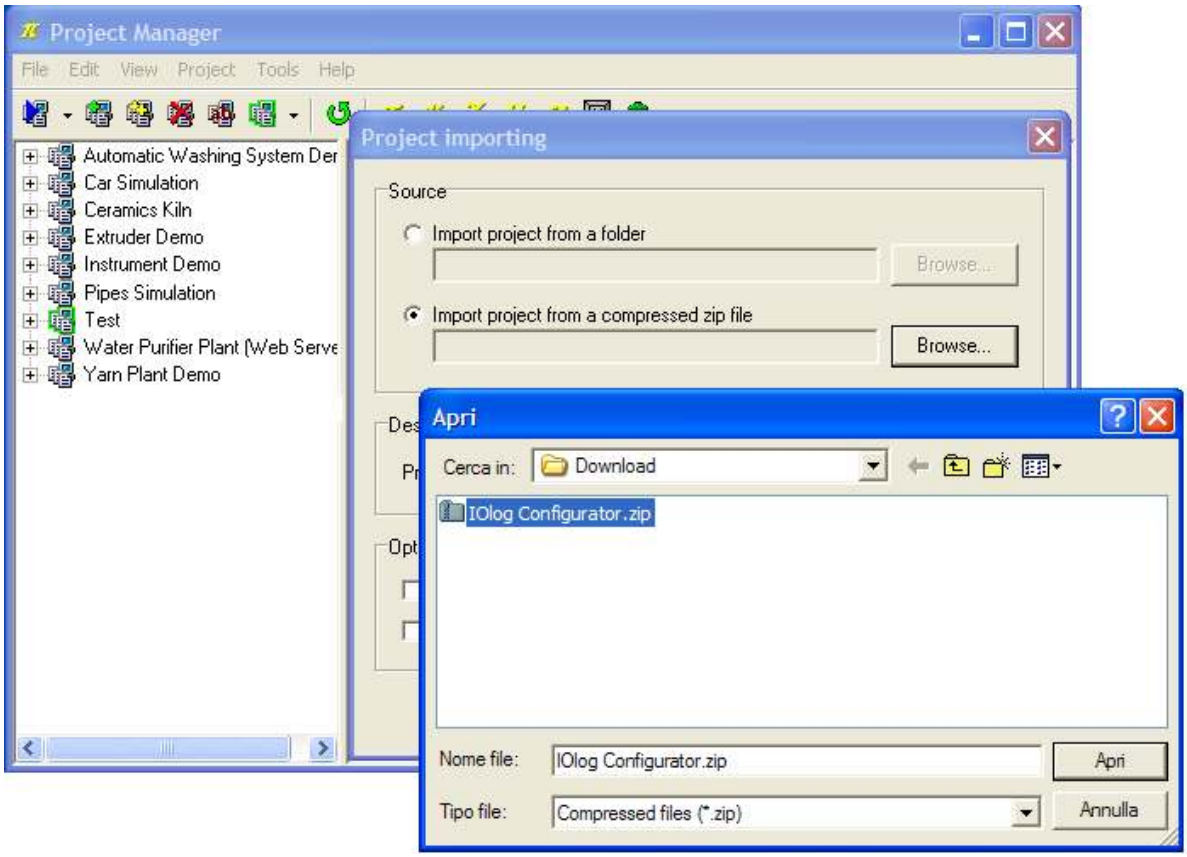
3. Communications parameters configuration

Install **Winlog Lite/Pro** and run **Project Manager** double-clicking the proper icon among the icons created during the installation (Winlog Lite: http://www.sielcosistemi.com/download/WinlogLite_Setup.exe)



Project Manager

Launch *IOlog Configurator* application among the default application in Project Manager; if it were not present, you can download it at: http://www.winlog.it/forum/example/IOlog Configurator.zip and import in Winlog Lite/Pro.



Choice of physical interface (RS485 or ethernet)

Choose which type of communications interface and its protocol will be used:

1. Serial line using **SS 3580** (COM port) or **SS 3580-USB** (USB port) with ***Modbus RTU*** protocol
2. Ethernet line using **SS 3580-TCP** (LAN port) with ***Modbus TCP*** protocol

When using the serial line is essential to know the COM port, whether physical (SS 3580) or virtual (SS-3580 USB), to which you connect

When using the Ethernet line is essential to know the IP address (eg 192.168.1.xxx) with which the converter Modbus TCP / RTU (SS 3580-TCP) is reached, possibly the PC configuration / monitoring must have an address belonging to the same subnet (eg 192.168.1.yyy).

3.1 Configuring a module over a serial line (Modbus RTU)

First you must choose the **COM** port to which the module is connected. The proposed port default is **COM 1**. If this is changed the application automatically restarts.

Configuring a module over a serial line (Modbus RTU)

Then choose the communication parameters desired::

- **Address** : 01-254
- **Baud-rate** : 1200, 2400, 4800, 9600, 19200, 38400, 115200 bps
- **Protocol** : Modbus RTU/ASCII

After running the new configuration parameters, perform the following steps:

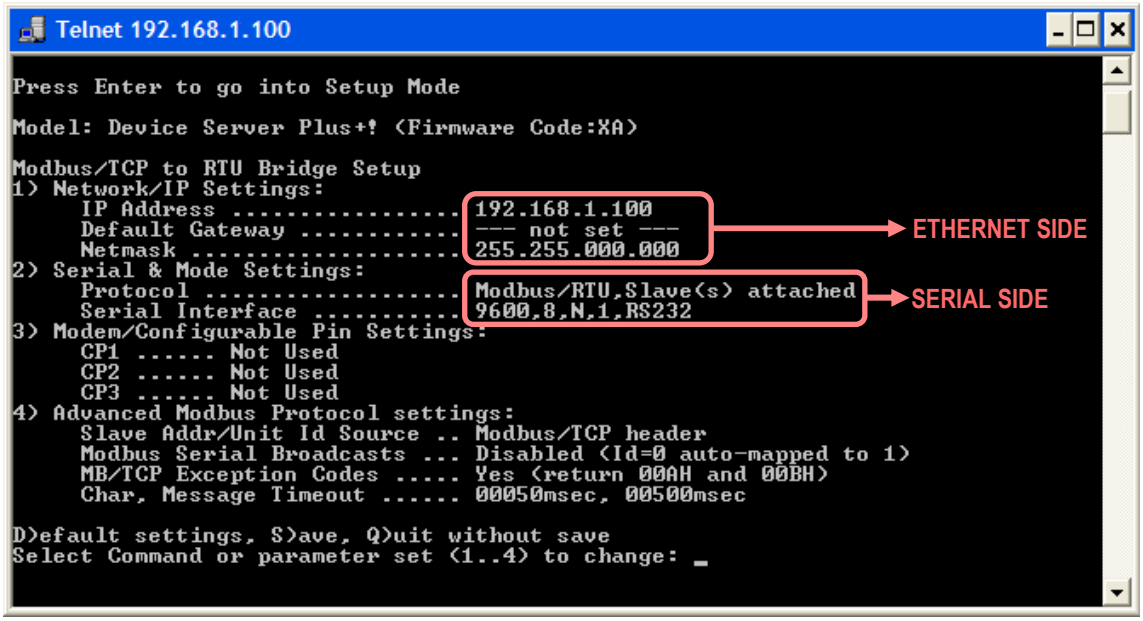
- Turn off the device.
- Disconnect the INIT pin from the GND pin.
- Turn on the device.
- Create a SCADA application that uses the new communication parameters (See the guide "*Creating a simple IOlog SS3000 modules Modbus Rtu application*")

3.2 Configuring a module on Ethernet line (Modbus TCP)

First you must choose the IP address (eg 192.168.1.xxx) with which the converter Modbus TCP / RTU (SS 3580-TCP) is reached. The default address is **192.168.1.100**. If this is changed the application automatically restarts.

Configuring a module on Ethernet line (Modbus TCP)

To change the IP address with which the converter Modbus TCP / RTU (SS 3580-TCP) is reached, you must configure the converter using the appropriate application (**SS3580 MBTCP Configuration**):



Then choose the communication parameters desired:

- **Address** : 01-254
- **Baud-rate** : 1200, 2400, 4800, 9600, 19200, 38400, 115200 bps*
- **Protocol** : Modbus RTU/ASCII

* The baud rate and protocol chosen must be equal to that selected during configuration of the converter (**SS3580 MBTCP Configuration – SERIAL SIDE**)

After running the new configuration parameters, perform the following steps:

- Turn off the device.
- Disconnect the INIT pin from the GND pin.
- Turn on the device.
- Create a SCADA application that uses the new communication parameters (See the guide "*Creating a simple IOlog SS3000 modules Modbus Rtu application*")
- Make changes to the communication channel to communicate. using the Modbus TCP