



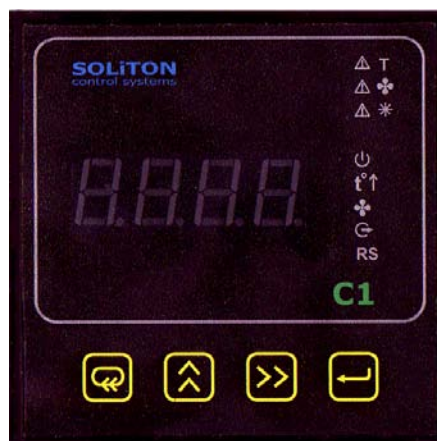
Modbus Protocol – Use Case

*Using the Modicon Modbus protocol driver
with extended functionality with PLC Soliton C1-M*

1.1 Necessary Equipment & Software

For configuration of IGSS with the ModBus protocol and the Soliton C1-M PLC, you will need following equipment and software:

- PLC SOLITON C1-M (Picture 1).



Picture 1 – PLC C1-M

- Interface converter RS485/USB MOXA UPort 1130 (Picture 2).

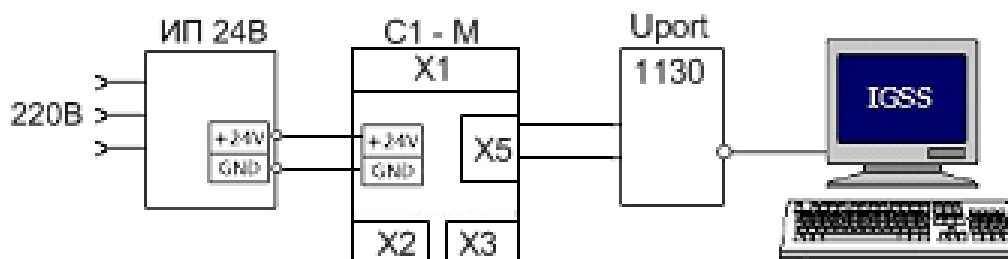


Picture 2 – converter UPort 1130

- 24 V Power supply
- SCADA system IGSS 8.0 DEMO
(http://www.7t.dk/company/IGSS_OrderDemoForm.asp?type=IGSSDemo&source=WebFront)

1.2 Connection of Equipment

Before proceeding to installation and configuration of the software, you need to connect the equipment according to the scheme in Picture 3.

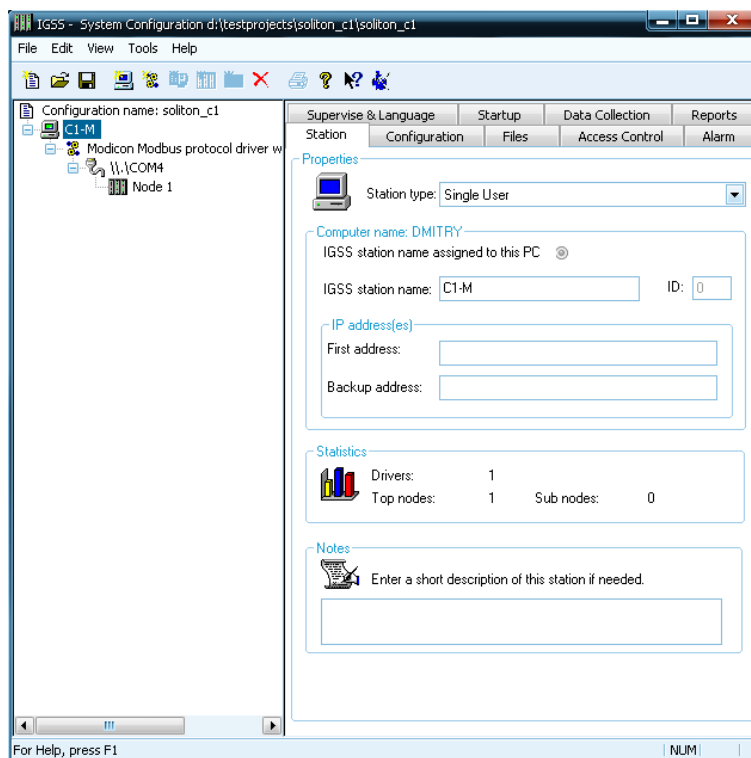


Picture 3 – Connection scheme

1.3 IGSS Configuration

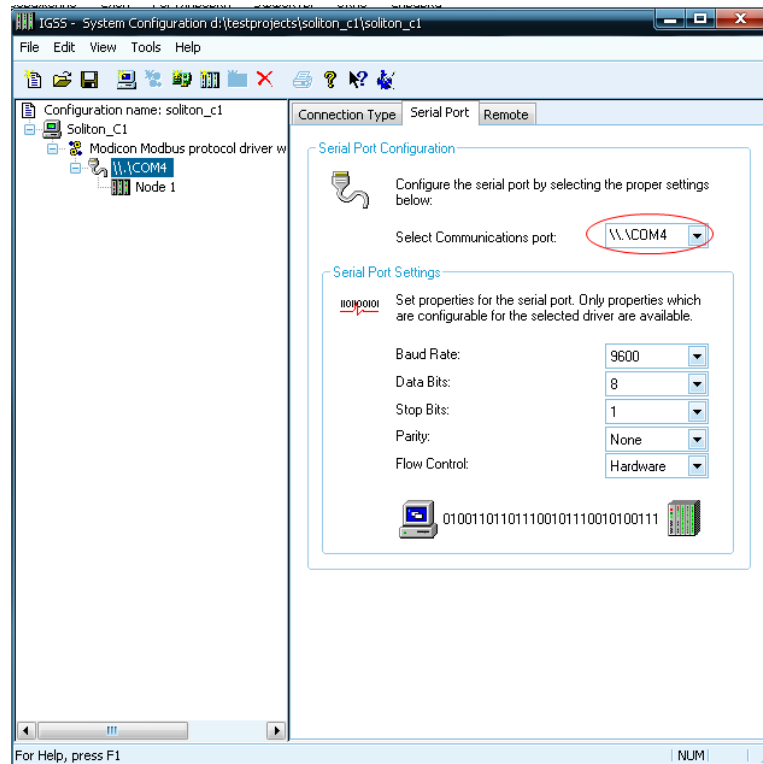
Install all the necessary software (IGSS 8.0 Demo, interface connector UPort 1130 driver) on the PC.

1. Run the program **System Configuration** (Picture 4) from the menu **Start – Programs – IGSS 8.0**.
2. Right-click the configuration name and create a new station named **C1-M**.
3. Add driver no. 76 - Modicon Modbus protocol driver with extended functionality.
4. Right-click the driver and create the interface (COM).
5. Finally, create a network node (Node 1).



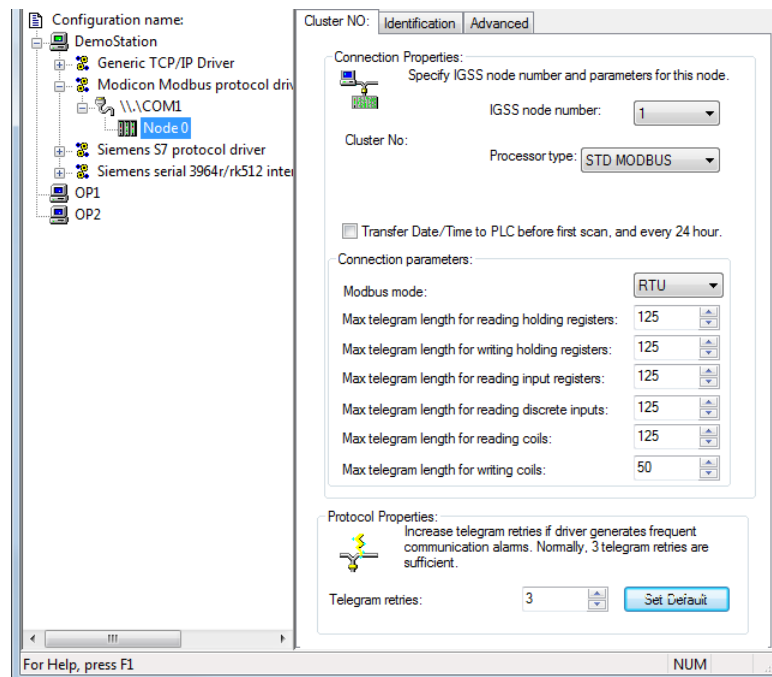
Picture 4 – Configuration of connection

- Now set up the communication interface by selecting the COM port address specific for your PC (Picture 5).



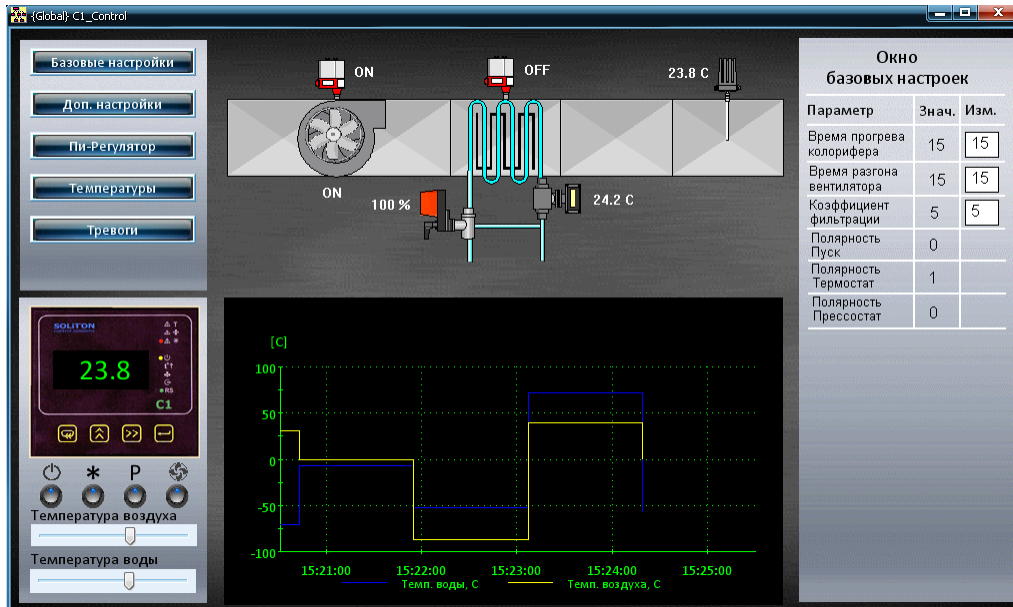
Picture 5 – COM-port setup

- PLC Soliton C1-M uses the default Modbus network address – 1. Address of PLC in the Modbus network is specified in the field – IGSS node number.



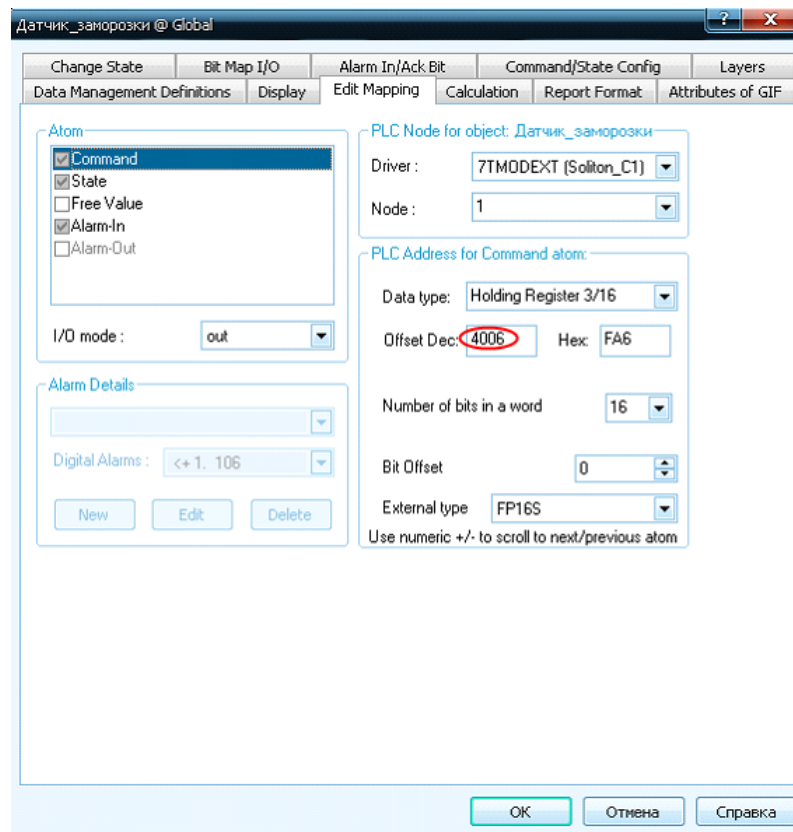
Picture 6 – PLC node setup.

8. Now IGSS system is ready to communicate with PLC Soliton C1-M. Go to the **Definition** module and use diagrams to control the PLC (Picture 7).



Picture 7 – Example of diagrams for Soliton C1-M

9. Double-click the control elements of the diagrams to bring up the object properties dialog box. On the tab **Edit Mapping** (Picture 8) you can setup or change the address of Soliton C1-M PLC data tags.



Picture 8 – PLC data address setup

10. After specifying the correct addresses to all the necessary parameters you need in C1-M, you can start the project by installing it with the command **Install Configuration** from the **File** menu
11. Then click the **Start** and **Supervise** buttons in the **IGSS Starter** panel.