Product	DVP	Type/Series	DVPSCM12-SL	Appl. Note Nr. 009	Delta DVP Communication Module
Issued by	DEN	Author	Victor Ogedegbe	Release Date	December , 2018
Title	Using DVPSCM12-SL for Upload and Download of program to DVP-S PLC guide				

Devices and special tools/equipment

- ✓ DVPSCM12-SL+ PC
- ✓ DVP28SV2 PLC
- ✓ ISPSoft: Software programing Delta PLC
- ✓ COMMGR: Communication driver set up software
- ✓ DCISoft- SCMSoft is built-in DCISoft
- ✓ SCMSoft - Configuring software for DVPSCM12-SL
- ✓ DOPSoft – Software to program DOP Series

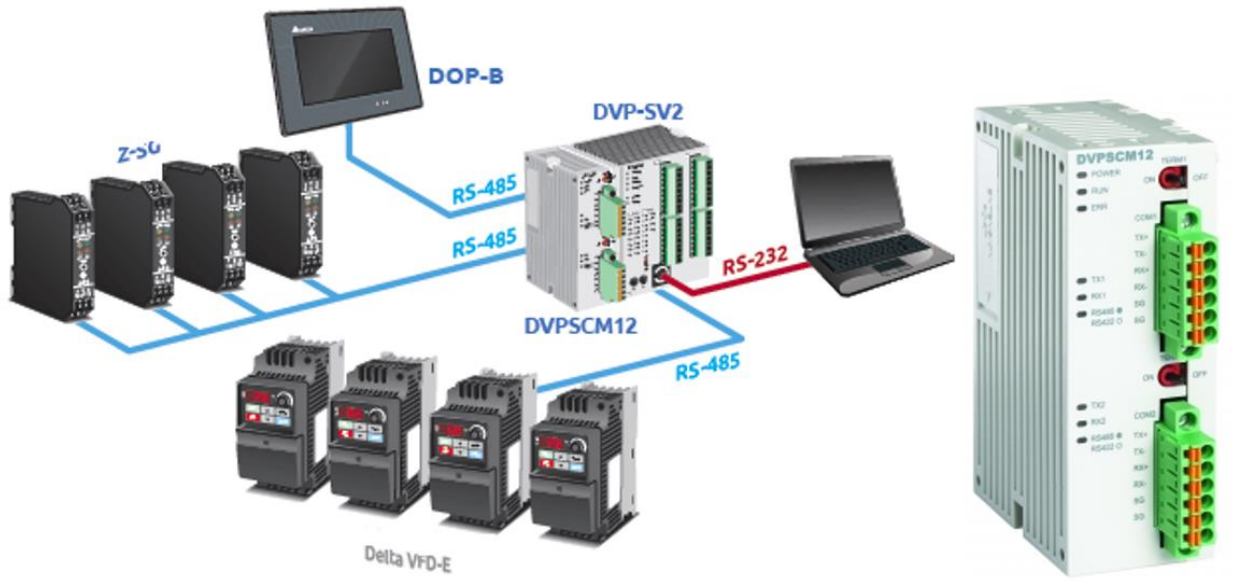
Test setup

N/A

Contents

1. Introduction

DVPSCM12-SL is a serial communication module. It supports Modbus RS-422, RS-4854, and can be used as RS-422 communication port or RS-485 communication port to upload or download WPLSoft/ISPSoft.



Functions

- It provides RS-422 and RS-485 communication ports (COM1 & COM2).
- Each communication port can connect to at most 32 devices.
- It can be used as PLC COM3 to upload or download WPLSoft.
- It has Modbus RS-422 data exchange and RS-485 data exchange (MODBUS Advance)

2. Software setup

SCMSoft, the setting software of DVPSCM12-SL, is built in Delta Communication software DCISoft. Please download the latest DCISoft from Delta website: http://www.deltaww.com/DownloadCenter

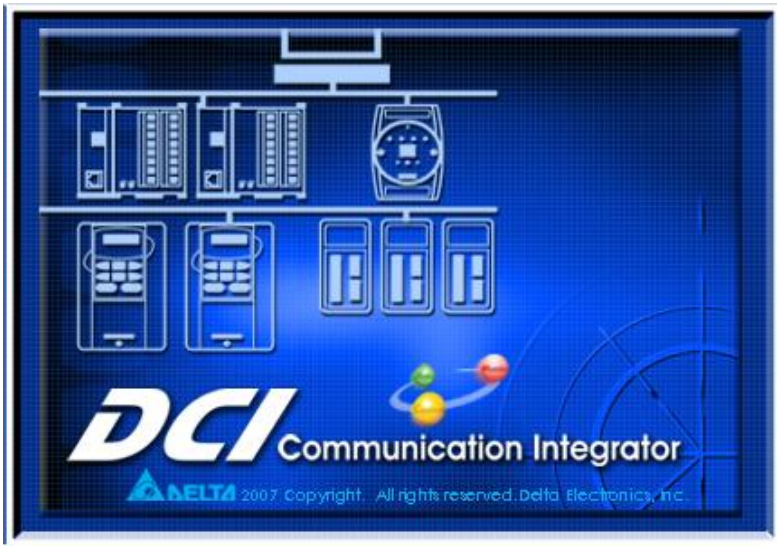


Figure 1: Delta DCISoft

3. Setting of DVPSCM12-SL communication Ports

You have to ensure that you set the parameters of the Communication Ports of the DVPSCM12-SL please then follow the steps below.

1. Start up DCISoft

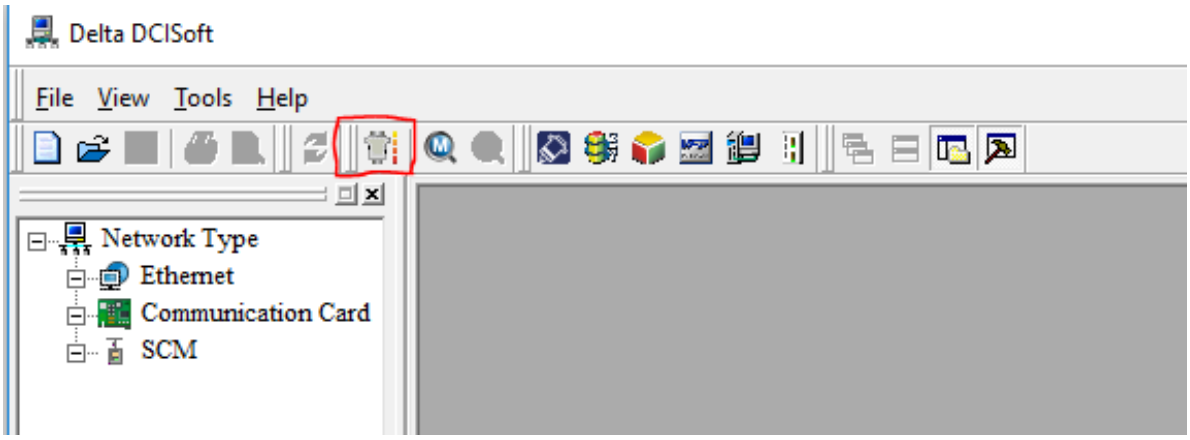


Figure 2: DCISoft setup

Open DCISoft, click “Tools” and choose “Communication Setting” as above. Then set the communication between your PC and the DVPSCM12-SL module. The user can choose the Communication type, and set the related parameters. If an Ethernet module is used with DVPSCM-SL module, the user can choose “Ethernet” for the upload/download of the configuration as in the figure below.

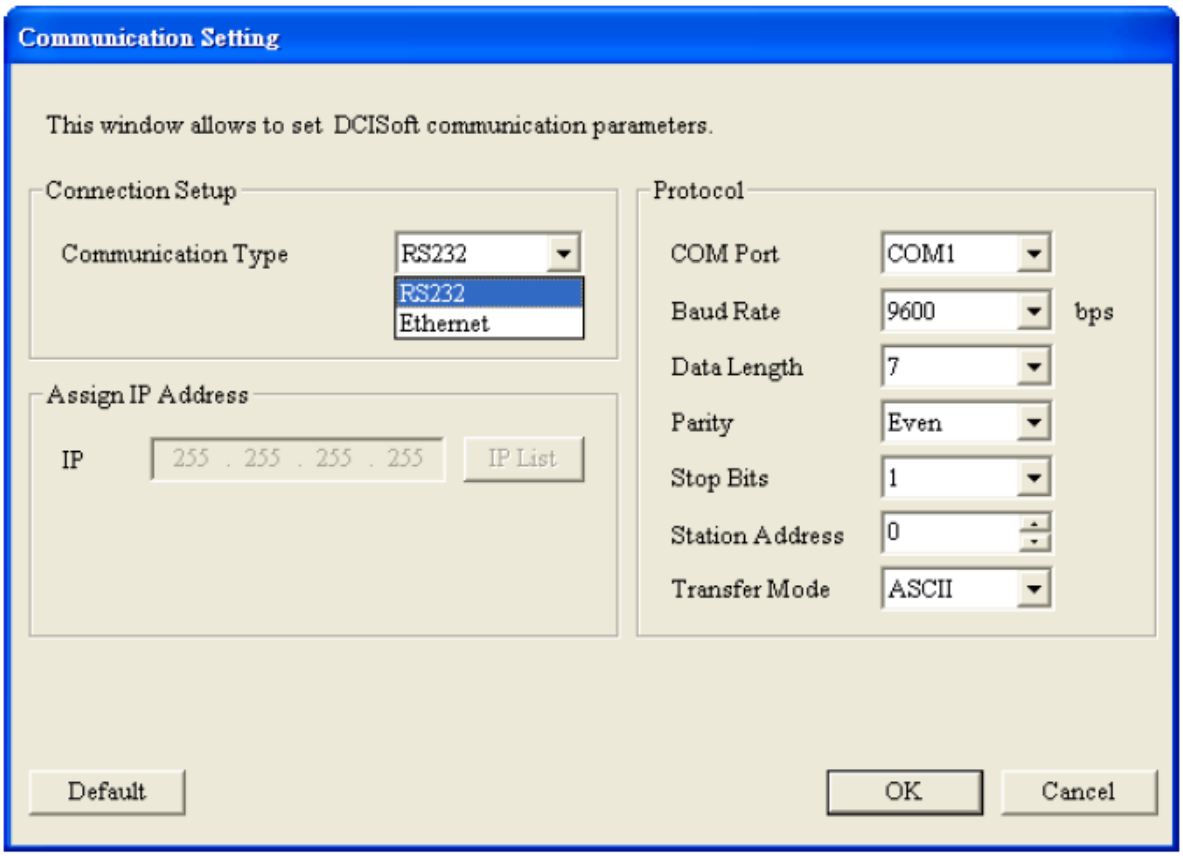


Figure 3: Communication setting between PC and the DVPSCM12-SL module

2. Create SCM project

Click “SCMSoft” in DCISoft to open the setting page of SCMSoft.

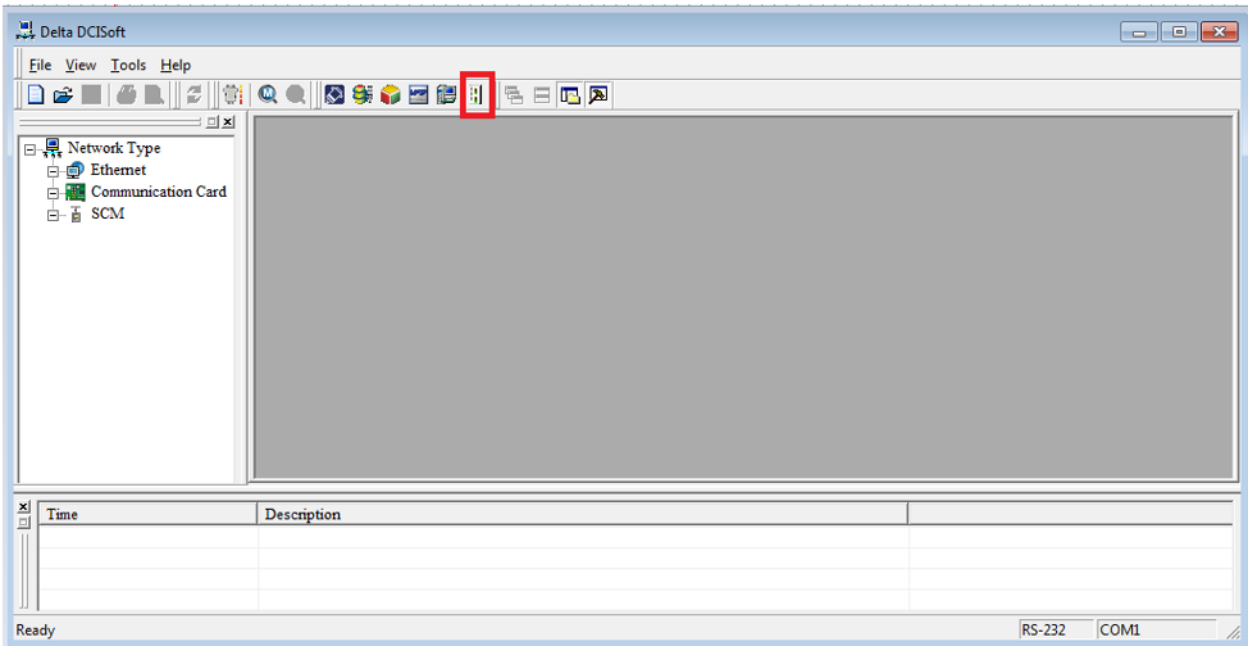


Figure 4: Start up SCMSoft

Then, click “New Project” in SCMSoft to create an SCM project as below.

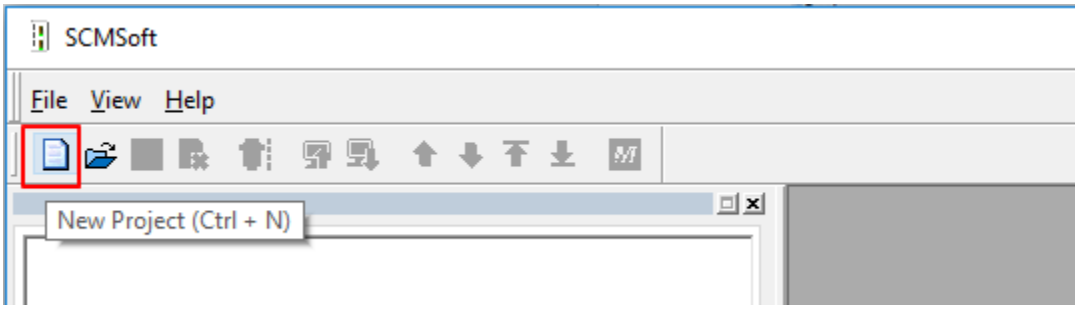


Figure 5: Creating New Project in SCMSoft

The screen below will appear

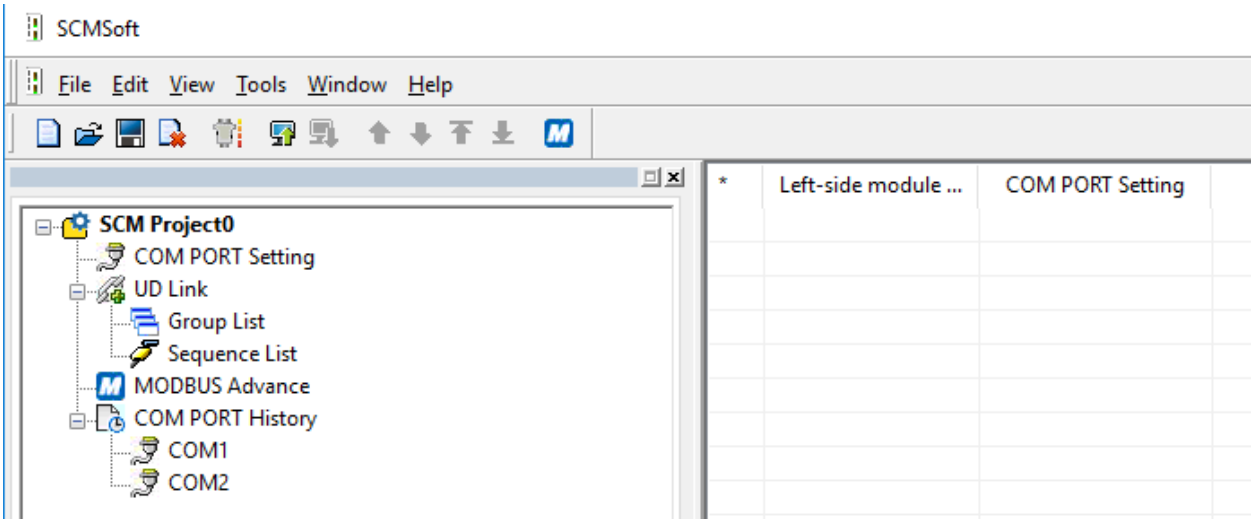
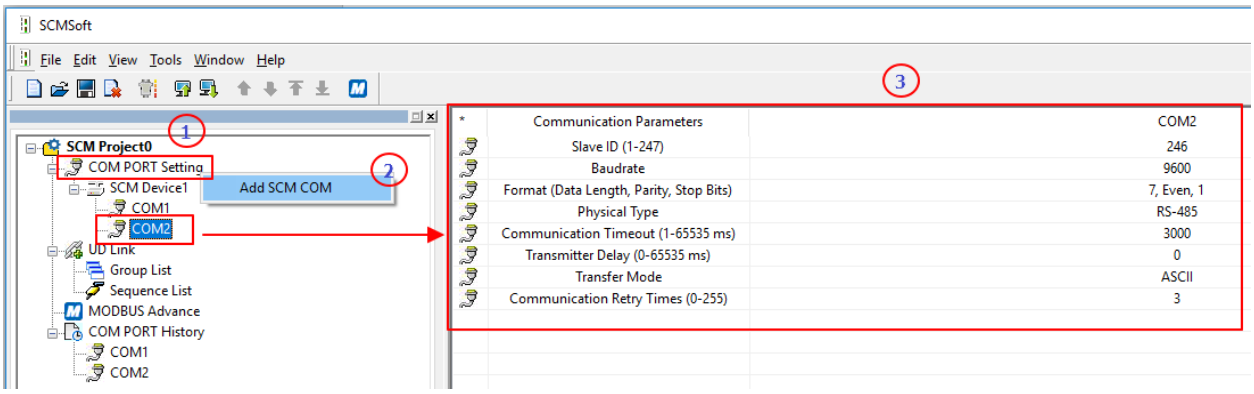


Figure 6: New project page in SCMSoft

3. Set the communication Parameter of SCM COM2

Once you have created a new project;



1. Right click COM PORT setting:
2. Click “Add SCM COM”
3. Then click COM2 and Set the communication parameters of COM 2 of the SCM module. This is the Port we will use to connect the PLC to the PC as in the figure below.

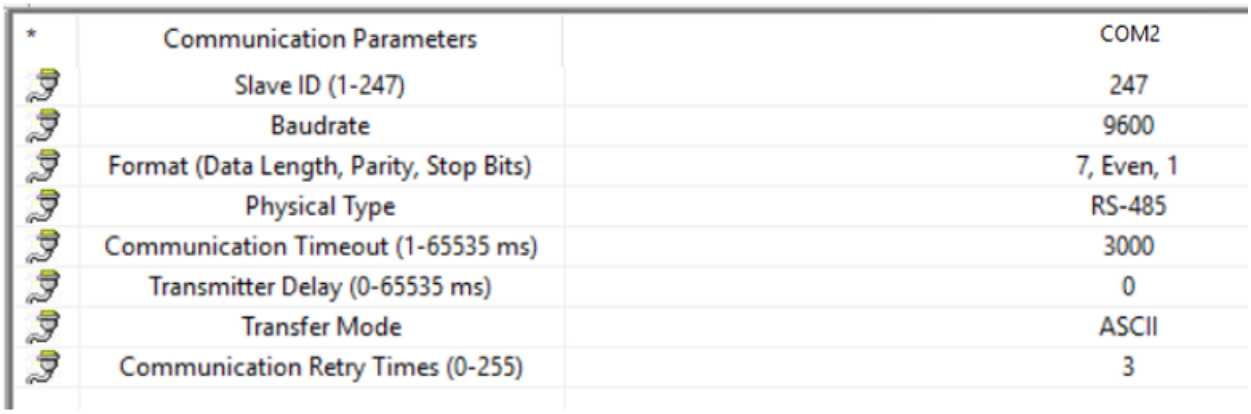


Figure 7: Setting the communication parameters of COM2: station number 246 (default), Modbus ASCII, 9600, 7, Even, 1 of the DVPSCM12

4. Download the Configuration to the SCM module

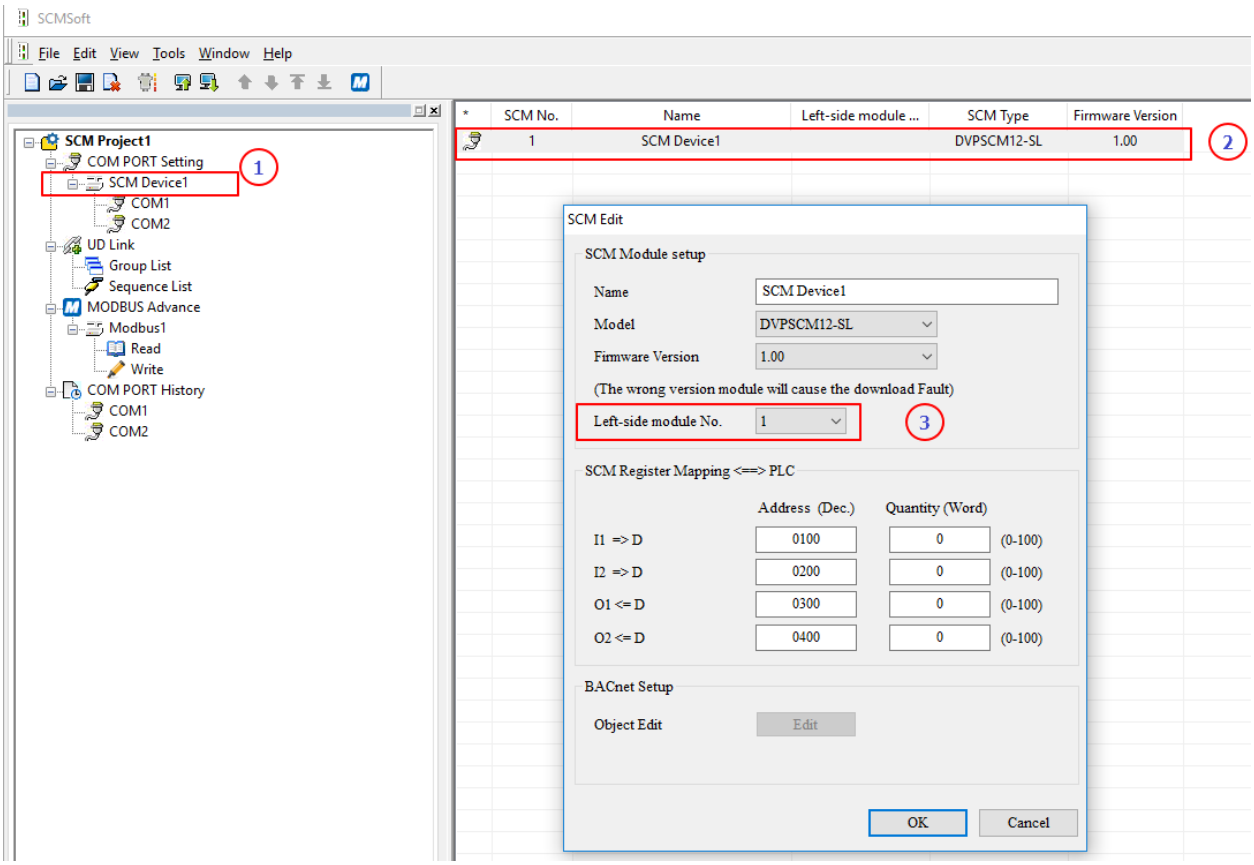


Figure 8: Specify the Position the SCM module on the DVP PLC CPU before downloading

Choose the position of the DVPSCM12-SL in left-side module so that we can download this configuration into it, and click “OK”. If only one device is connected, click “OK” directly.

After the setting is complete, check whether the other parameter settings conform to the slave setting. Then, click “Download”.

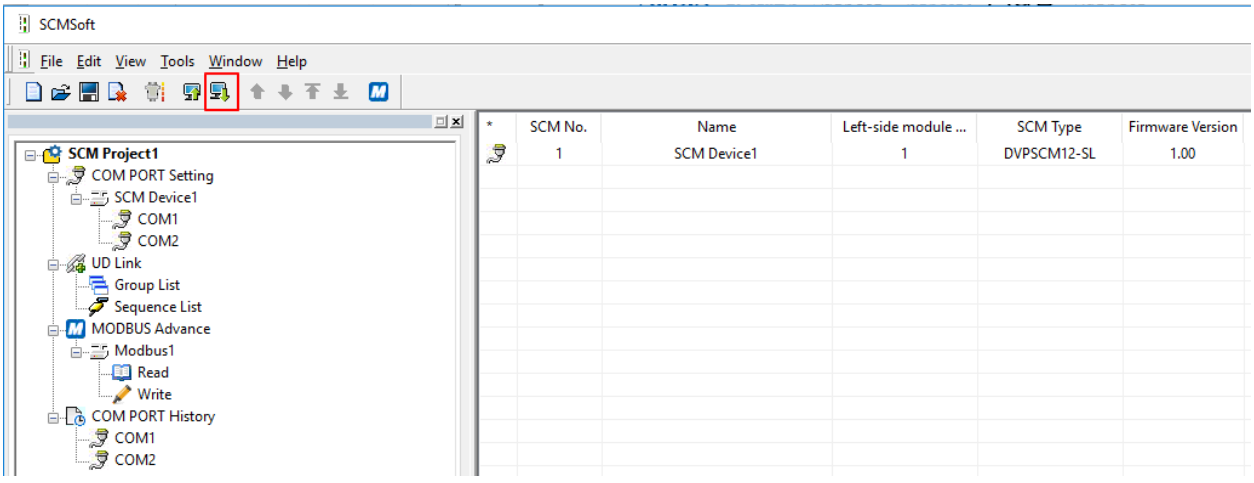


Figure 9: Download Tab

Then Click on the SCM module as below to select it.

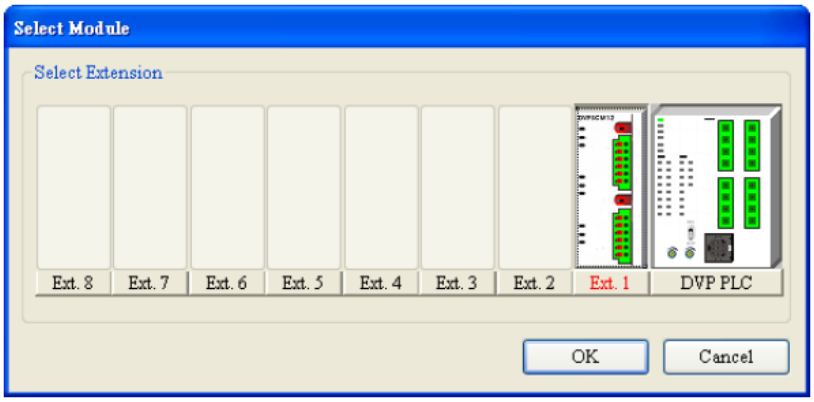


Figure 10: Select the SCM module

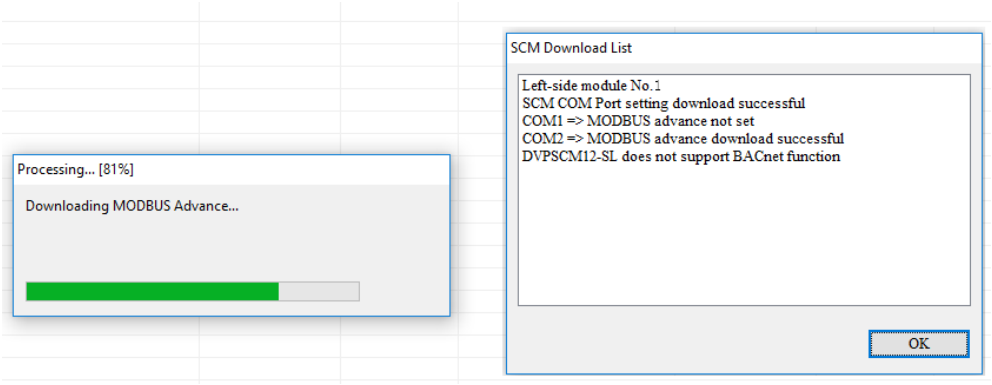


Figure 11: Downloading progress Window

4. Upload/download of program to DVP PLC via DVPSCM12-SL

You can use the DVPSCM12-SL to upload/download your ISPSoft program to the PLC. As shown below. Connect the DVPSCM12-SL module to the PC using IFD6500 (USB to RS-485 Converter)

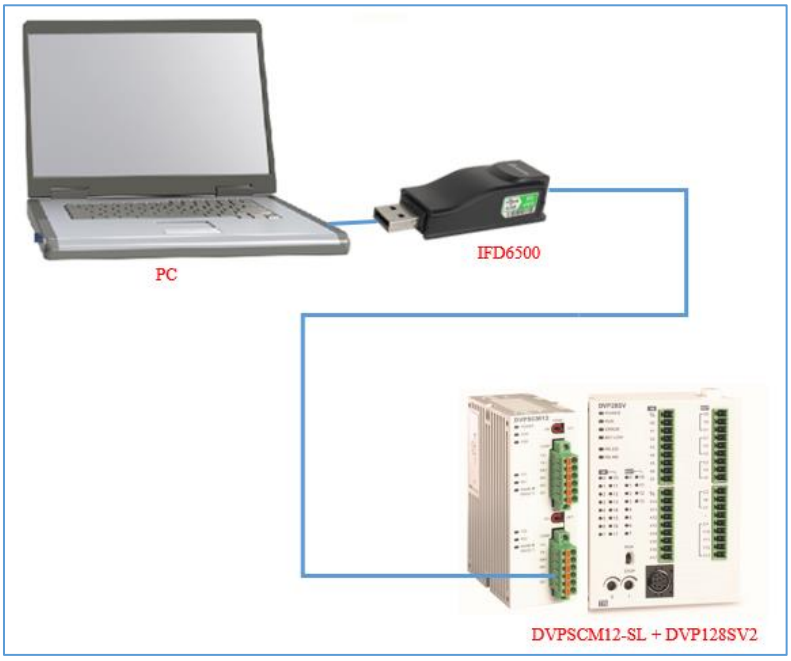


Figure 12: Connecting the PC with DVPSCM12-SL through RS-485

Step 1: Enable COMMGR

After setting the communication parameters and the station address of the COM Port of the DVPSCM12-SL module that the PC is connected to as explained in the previous section above, proceed to Enable COMMGR and click [Add] before opening Delta ISPSoft software.

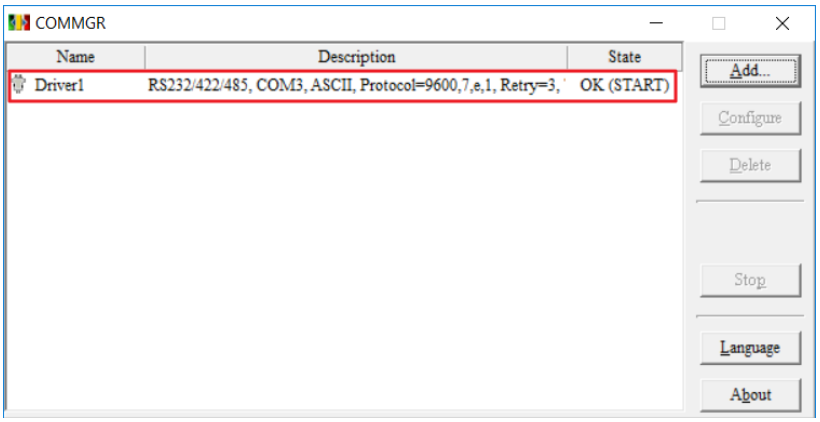


Figure 13: COMMGR

Step 2: Create RS232/422/485 Driver in COMMGR

Select [RS232/422/485] as the connection set up type, Select your COM Port of your PC to which the DVPSCM12-SL is connected to using IFD6500 converter (USB-RS-485 converter) and Make sure the communication protocol is the same as the SCM module. Then, select ok. If you remove and insert the cable connection to the PC, the driver should show (Start) as in figure 13 above.

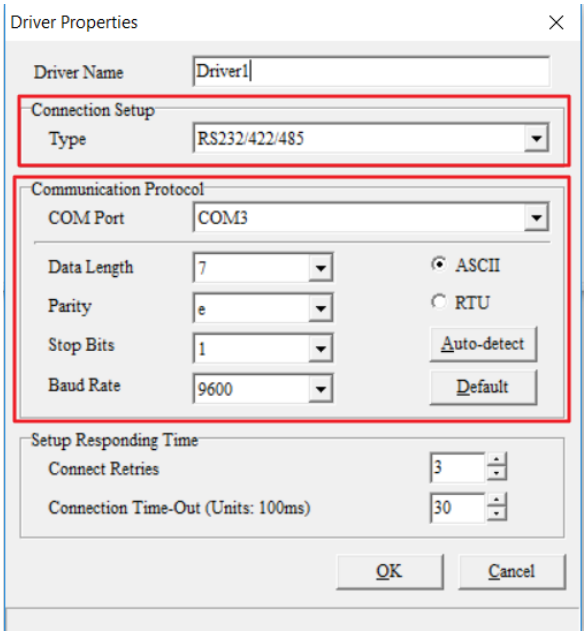


Figure 14: COMMGR Settings for RS232/422/485 connection setup type

Step 3: Set ISPSoft Communication

Open Delta ISPSoft software and enter [Tools] > [Communication Settings] dialog box.

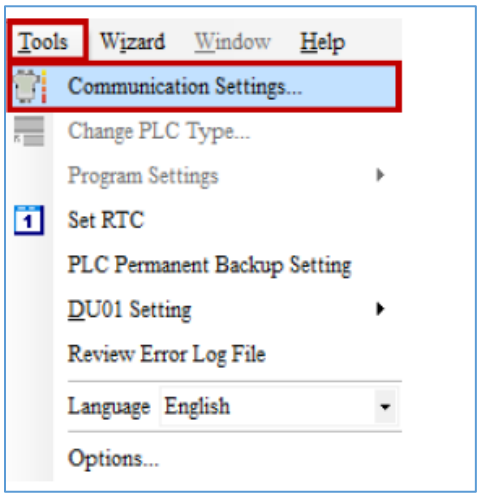
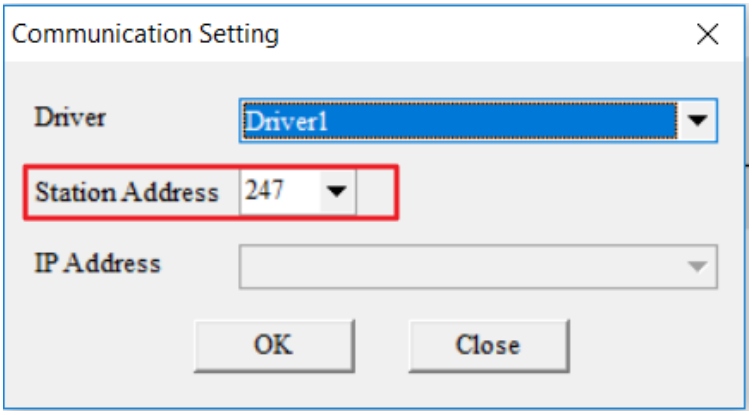


Figure 15: Communication setting In ISPSoft

Select [Driver 1] and set the station address to 247(this was the station address we set for COM2 of the DVPSCM12-SL module).



When the setting is complete, go to [PLC] > [System Information] to check if the communication is successful.

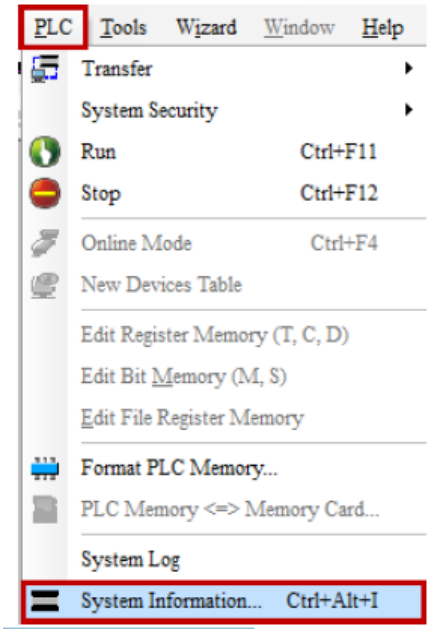


Figure 16: ISPSoft system Information

Then, the screen will be shown as below confirming that the communication is ok.

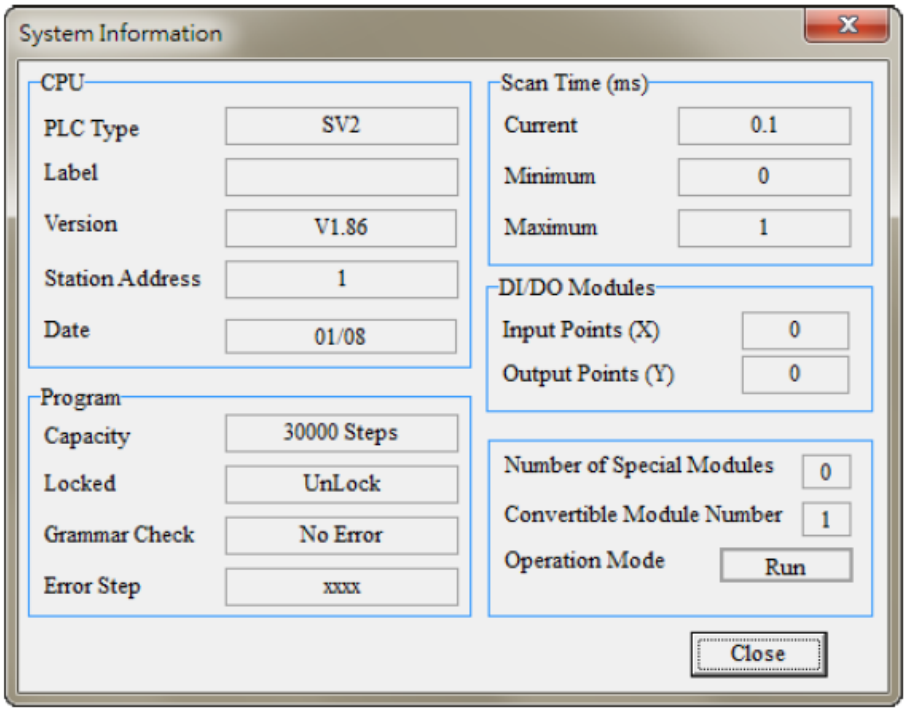


Figure 17: System information of the connected PLC

When the communication is ok, users can upload /download files to the PLC.

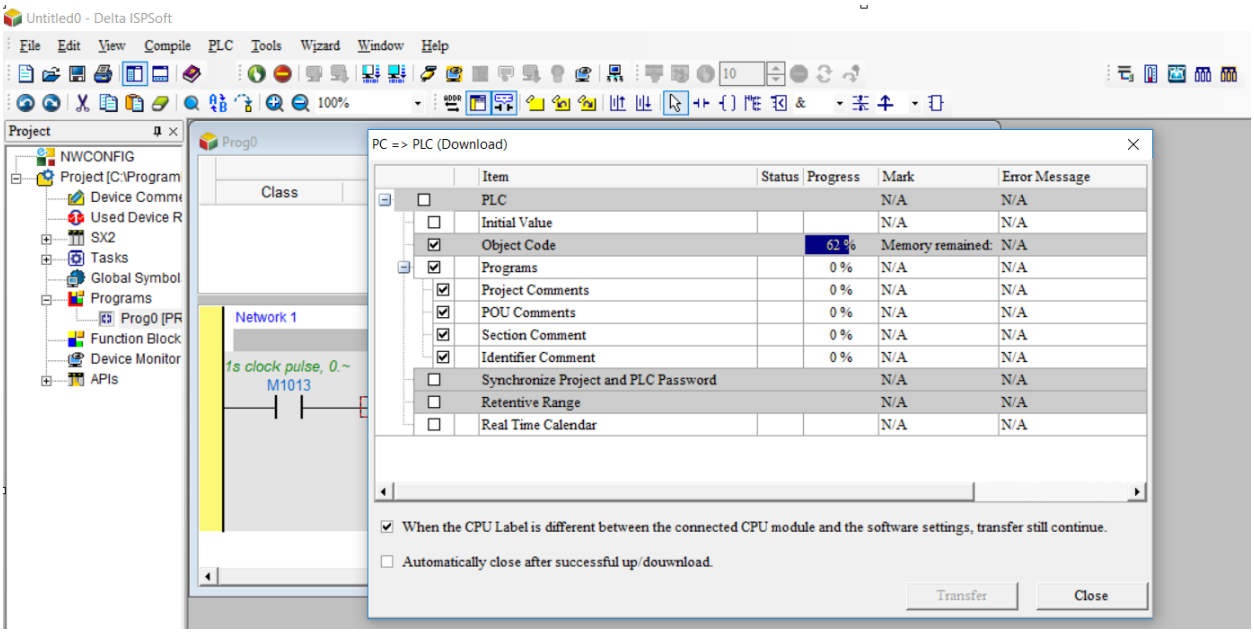


Figure 18: Download/Upload to the PLC via the DVPSCM12-SL(RS-485)