

How to configure a TeSysU on DeviceNet with RSNetworx?

I- Type of publication

<input type="checkbox"/> Typical application	<input type="checkbox"/> Level 2 use
<input checked="" type="checkbox"/> Best know Method (BKM)	<input type="checkbox"/> Internal use
<input type="checkbox"/> Troubleshooting guide	<input checked="" type="checkbox"/> Customer

II- Product

- Product range :

TesysU ▼

- Product family :

LULC09 ▼

III- Introduction

This document will describe you how to configure TeSysU on a network DeviceNet with a PLC Allen Bradley. The CPU is a Logix 5561 and the communication card is 1756-DNB.

IV- Description

Step 1: Download EDS files for TeSysU and DeviceNet Network

Adresse <http://www.schneider-electric.com/sites/corporate/en/products-services/automation-control/products-offer/function-pr>

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- Contactors 0,06 kW to 75 kW **TeSys D**
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Protection components

- Circuit breakers 0,37 kW to 15 kW **TeSys G**
- Circuit breakers up to 30 kW **TeSys GV3**
- Circuit breakers up to 110 kW **TeSys GV7**
- Fuse carriers, fuse disconnectors **TeSys**
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- Electronic thermal relays 18,5 kW to 315 kW **TeSys LR9**
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- Controllers TeSys U up to 450 kW **TeSys L**
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Document Name	Category	Version	Language	Date	Size
Patch 3 for TeSys U V2.5.0	Software - Updates	V2.5.0	English	2 Oct 2008	143 MB
Patch 2 for TeSys U V2.5.0	Software - Updates	V2.5.0	English	25 Jul 2008	135 MB
Patch 1 for TeSys U V2.5.0	Software - Updates	V2.5.0	English	4 Jan 2008	97 MB
Patch 1 for PowerSuite V2.4.0	Software - Updates	V2.4.0	English	19 Jan 2007	62 MB
PowerSuite Update V1.4	Software - Updates	V1.4	English	9 Mar 2006	23 MB
Communication Module TeSys U PROFIBUS LULC07	EDS files	V100	English	5 Apr 2007	67 MB
Communication Module TeSys U Canopen	EDS files	V100	English	5 Apr 2007	119 KB
Old EDS Files 1.0 for LULC09 1.3	EDS files	1.0	All	23 Nov 2007	132 KB
EDS Files 1.4 for LULC09 1.4	EDS files	1.4	All	22 Nov 2007	71 KB

e

f

g

EDS file for TeSysU LULC09 firmware version 1.3

EDS file for TeSysU LULC09 firmware version 1.4

Step 2: Install Software to configure TesysU

For this technical resolution I use RsLinx 2.53 and RsNetworkx V5.00.
After, we are going to create an example of configuration for one TesysU with a control unit Advanced (LUCB/C/D****) and a power base (LUB**).

Step 3: Configure TeSysU

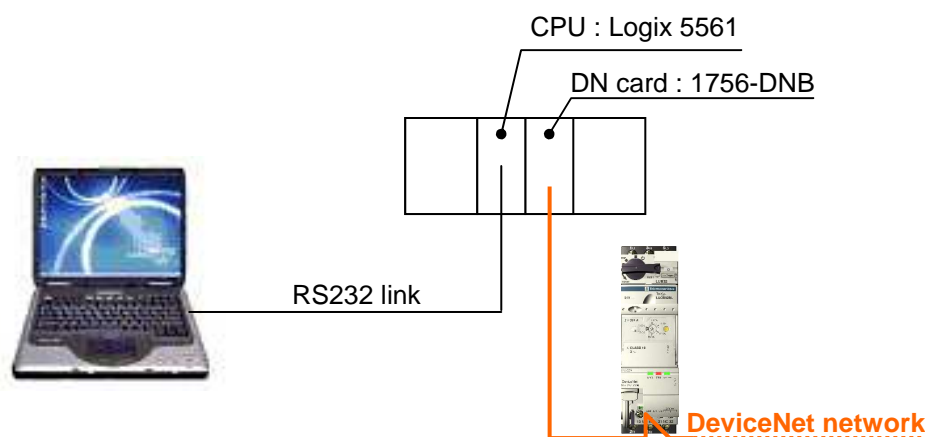
On DeviceNet you can configure the slaves (TesysT or TesysU + LULC09 ...) with RsLinx and RsNetworkx so we start by RsLinx.

3.1.) RsLinx: Configure the information transfer (computer driver) between your computer and the DeviceNet network

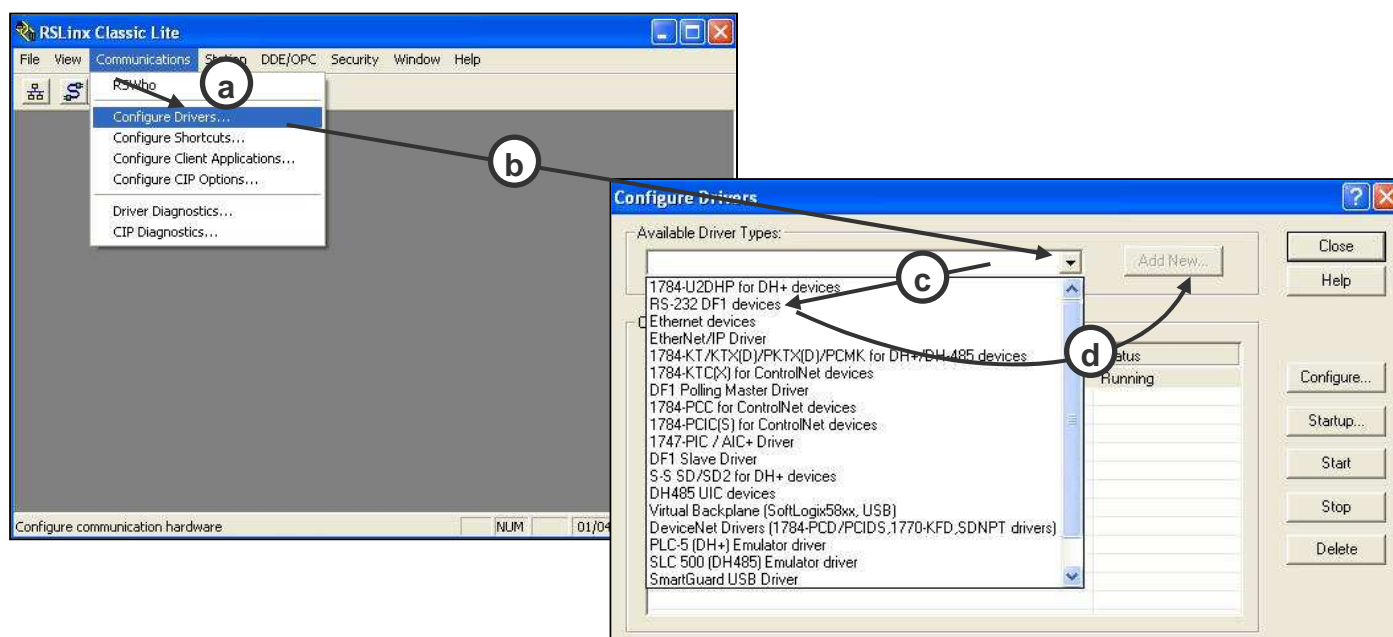
We use a RS232 link provided by Allen Bradley manufacturer (cable available when you buy an Allen Bradley CPU) to connect the serial port of the computer to the serial port of the CPU. Through, the processor (CPU) we exchange all informations from the DeviceNet network (by the master card 1756-DNB).

To summarize, this software can establish the transfer of configuration datas to TesysU and the program to the Allen Bradley PLC from your computer.

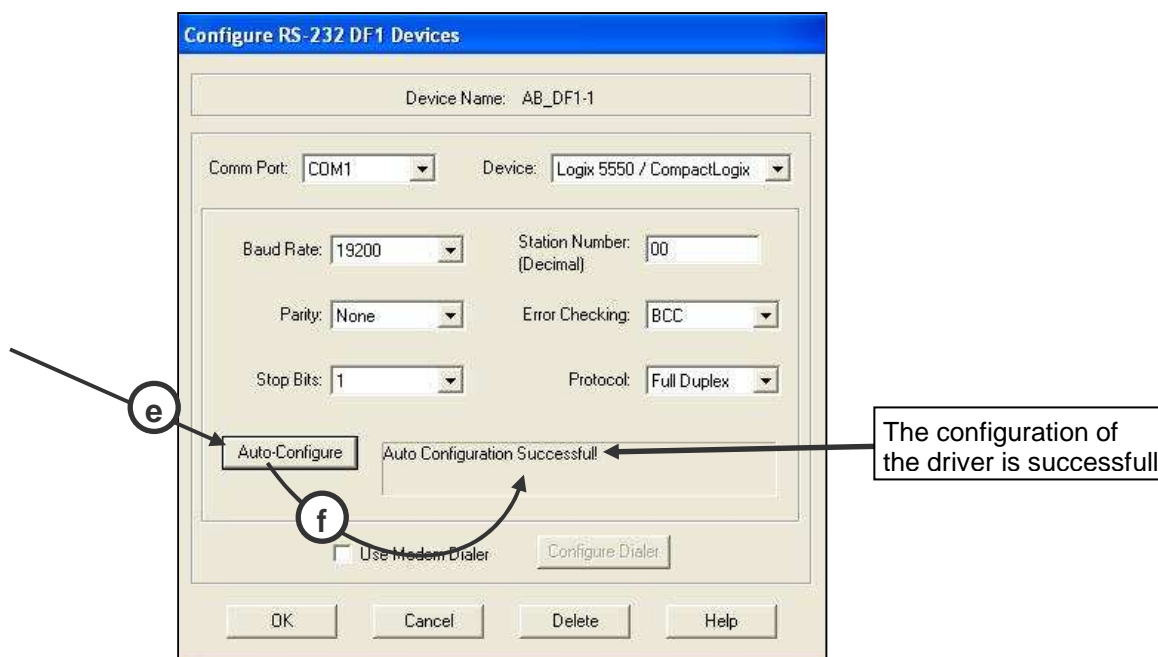
Diagram:



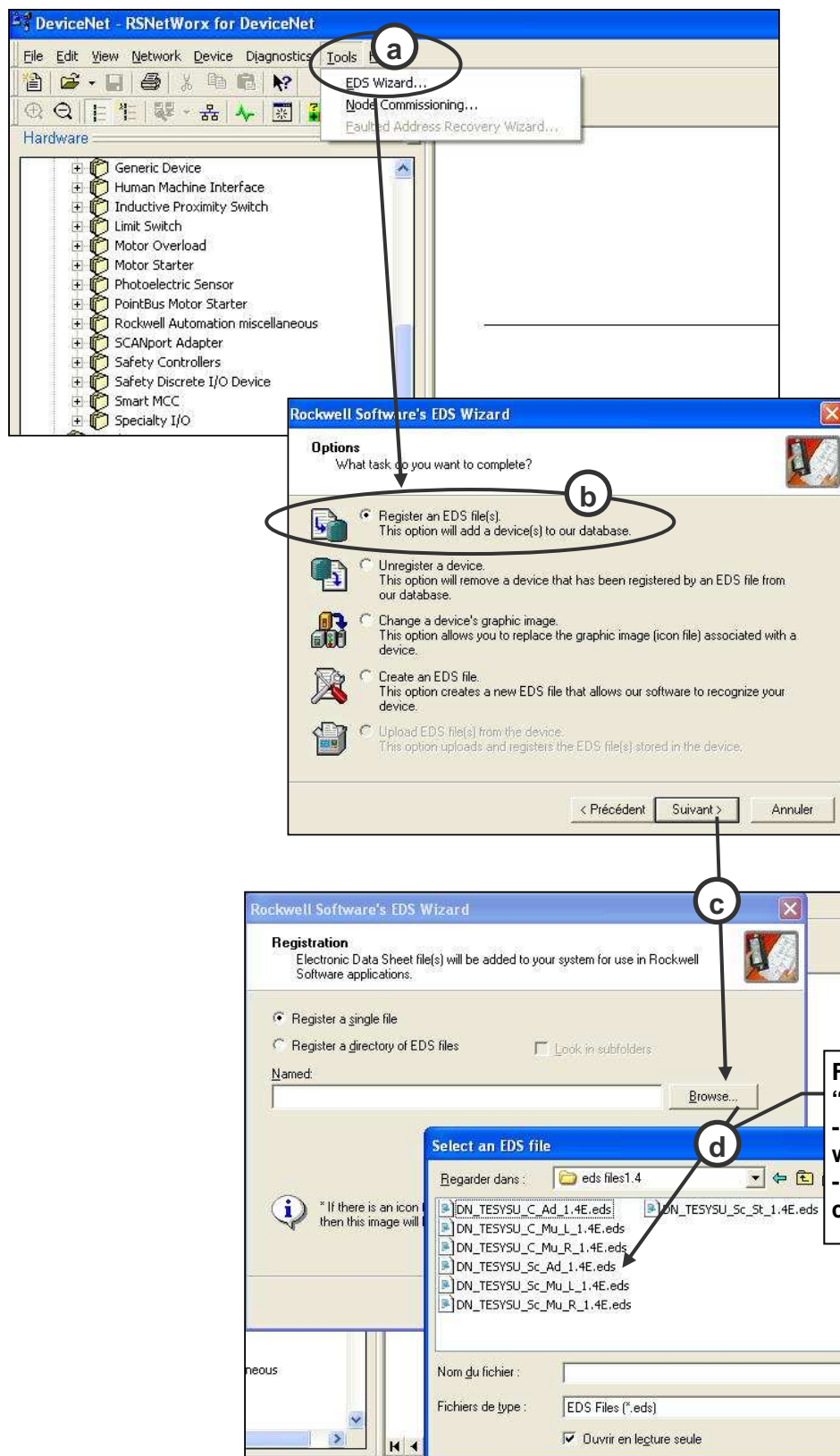
- Start RsLinx:



After clicking on “Add New” and validate “Ok” for Driver Name you have this window:

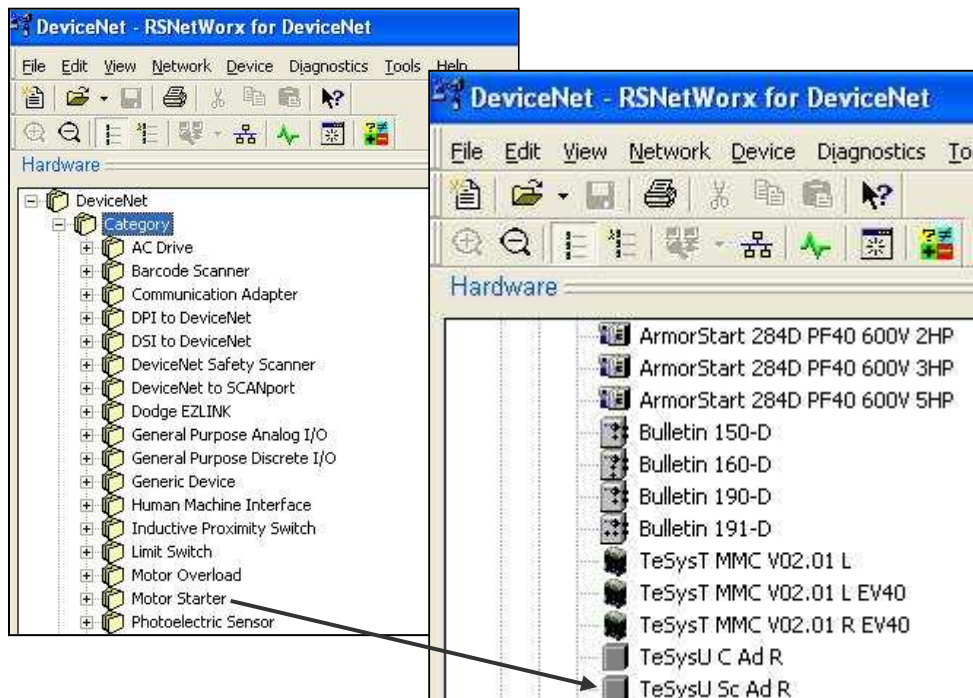


3.2.) RsNetworx: “EDS recording”



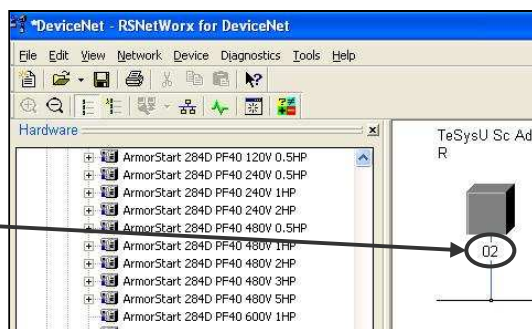
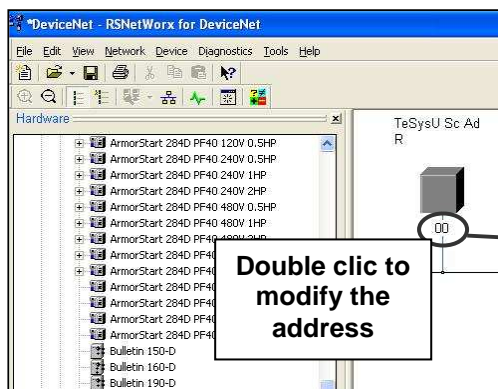
You validate the last windows by “Open” and you validate other windows to go back to the main screen of RsNetworx.

Now you can find the EDS recorded into the RsNetworkx library "Motor Starter":

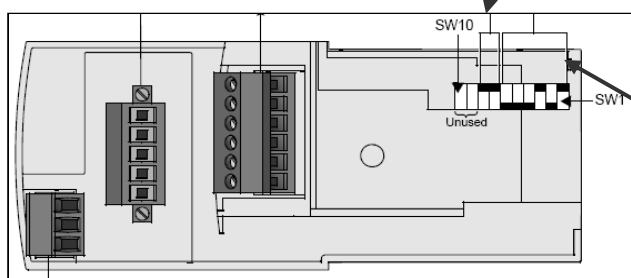


3.3.) RsNetworkx: "Configure TesysU"

Select "TesysU Sc Ad" into the library (TesysU with power base and control unit LUCB/C/D**). For our example we take address "2" for a network speed 125 kbits/s (configure the address and network baud rate by dip switch situated under the module LULC09).



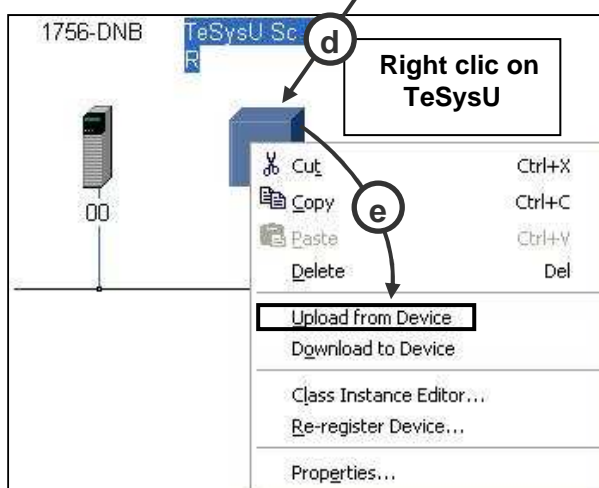
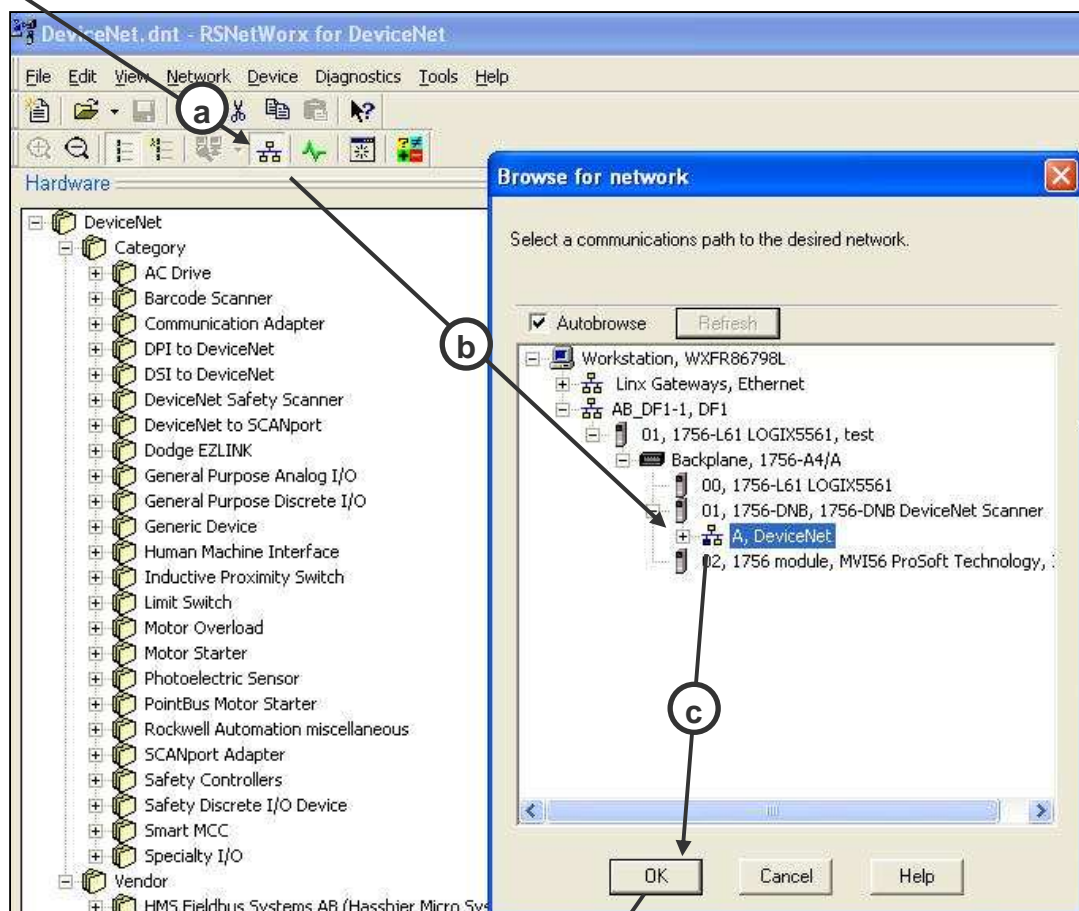
SW8	SW7	Baud Rate
0	0	125 kbps (default value)
0	1	250 kbps
1	0	500 kbps
1	1	Autobaud



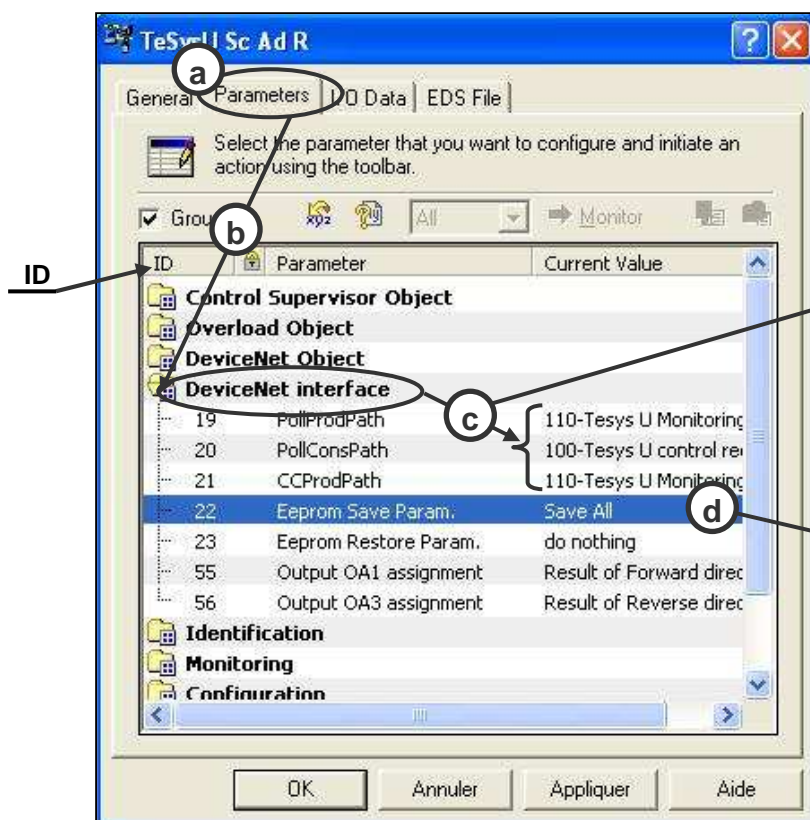
SW1-SW6 (address value)
Example:
SW1=0, SW2=1, SW3=0 SW4=0,
SW5=0, SW6=0
=> Address TesvsU = 2

Uploading information from TeSysU by RsNetworkx:

Go Online with RsNetworkx:



After Uploading, you click on TeSysU icon and you can configure TesysU information:



-Into the ID19-20-21: select instances 110,100 & 110. For our example we take these instances (an instance defines which information you want to read or write).

If you want to look which other informations you can access with other instance then see user manual TeSys U LULC09 page 58.

TeSysU returns cyclically registers 455, 458 & 461 for instance 110.

You can write cyclically registers 704, 703 & 700 for instance 100.

- The ID22 is dedicated to save the DeviceNet settings (all IDs values) when you do a power cycle on LULC09. If you do not select "Save All" the settings of this window will go back by default. (if you use a LUCM control unit the settings are automatically saved)

Link for user manual TeSysU LULC09:

You go on this link:

http://www.schneider-electric.com/corporate/en/products-services/automation-control/products-offer/range-presentation.page?p_function_id=27&p_family_id=283&p_range_id=682#

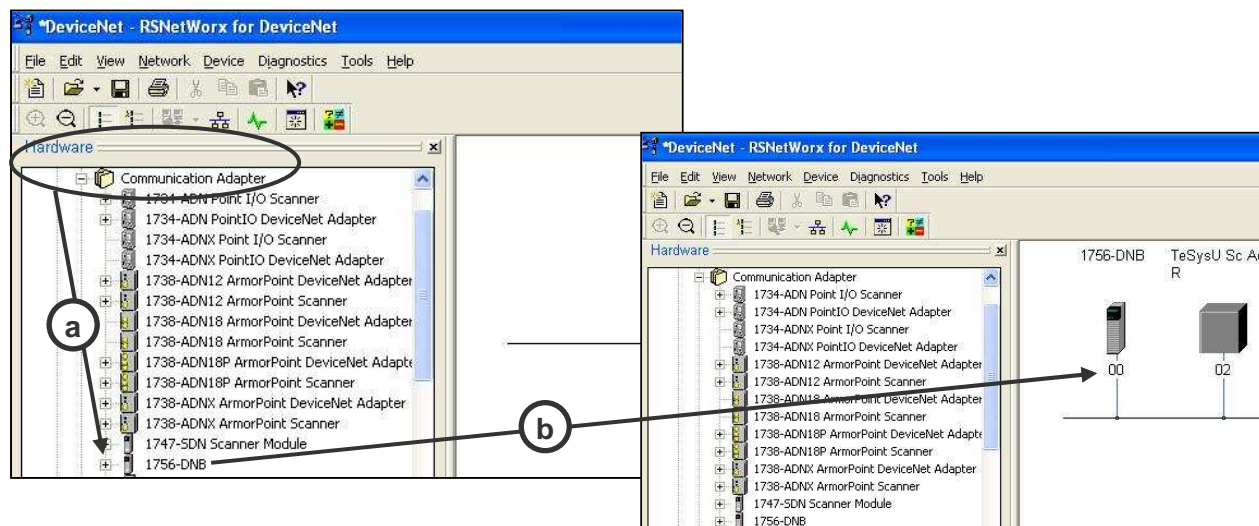
After you select: Download/Technical publication/DeviceNet communication module (EN)
(Note: the downloading can take few minutes)

You validate all windows by "OK" and the information will be downloaded into TeSysU. (be sure that you are still On-Line)

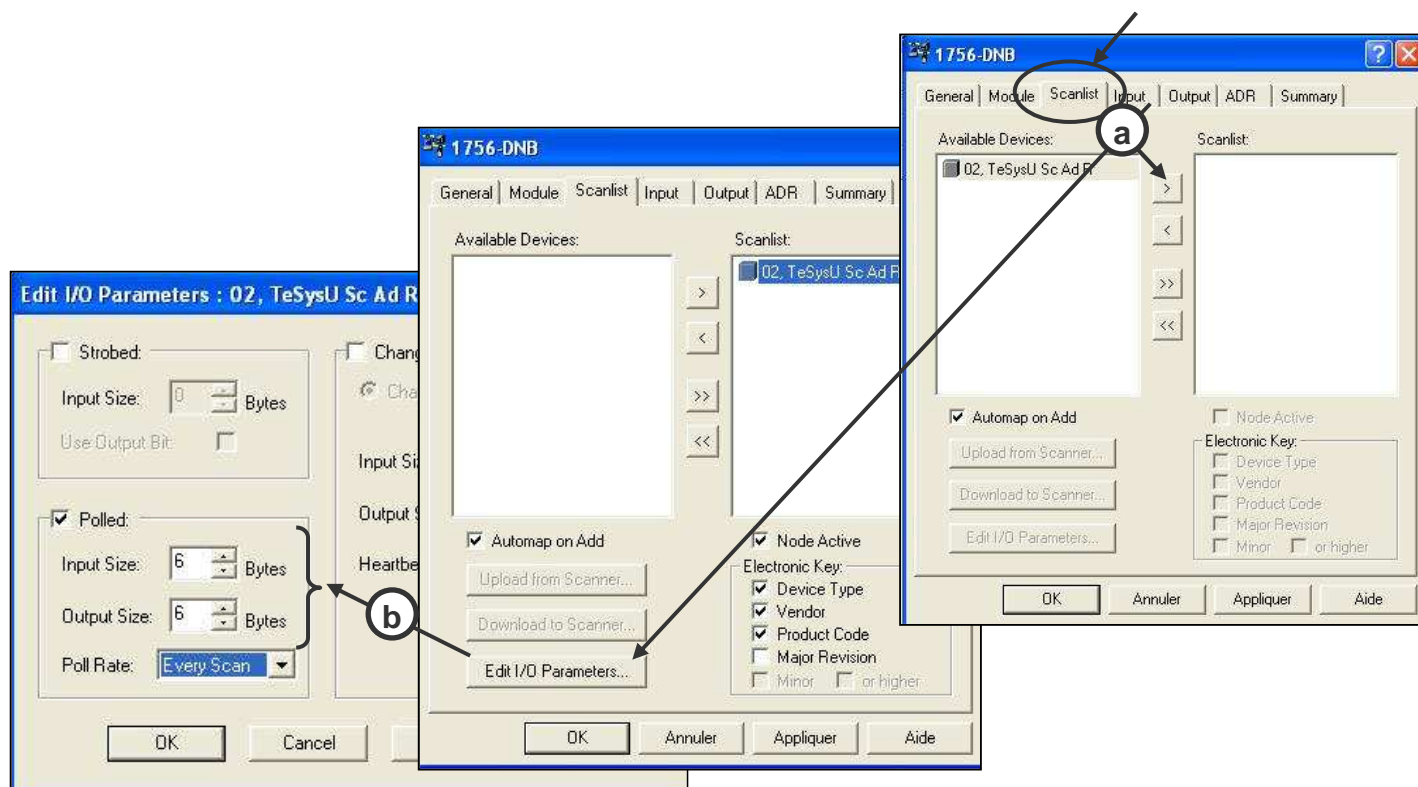
Step 4: Configure Master Card

We remind you that for TeSysU we have selected instances 110, 100 & 110 (cyclic exchange for reading informations registers 455, 458 & 461 and writing informations registers 704, 703, 700).

You take into the library "Communication Adapter" the master card "1756-DNB":



Go Online and Upload information from the master card 1756-DNB as seen on the page 7.



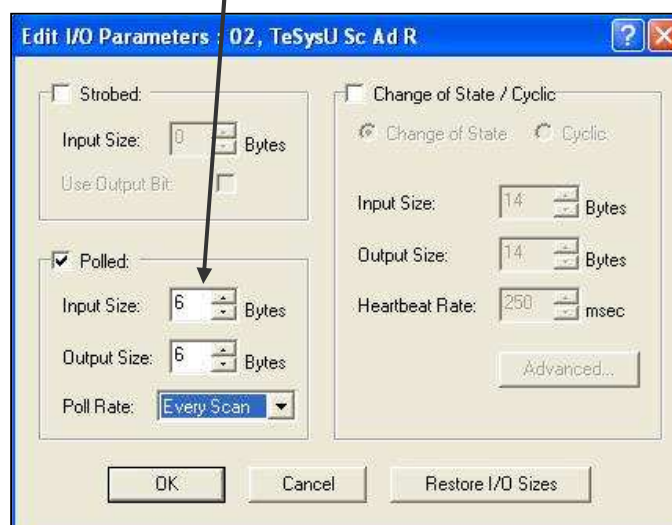
According to the instance selected (see page 8 - 3.3) the input data and output data exchanged have different size.

For our example:

- The instance 110 has 6 bytes (3 words): we read register 455 (TesysU status), 458 (Status Inputs/Outputs) and 461 (Warning register).

- The instance 100 has 6 bytes (3 words): we write 704 (TesysU command), 703(Reset communication loss), 700 (Other control command)

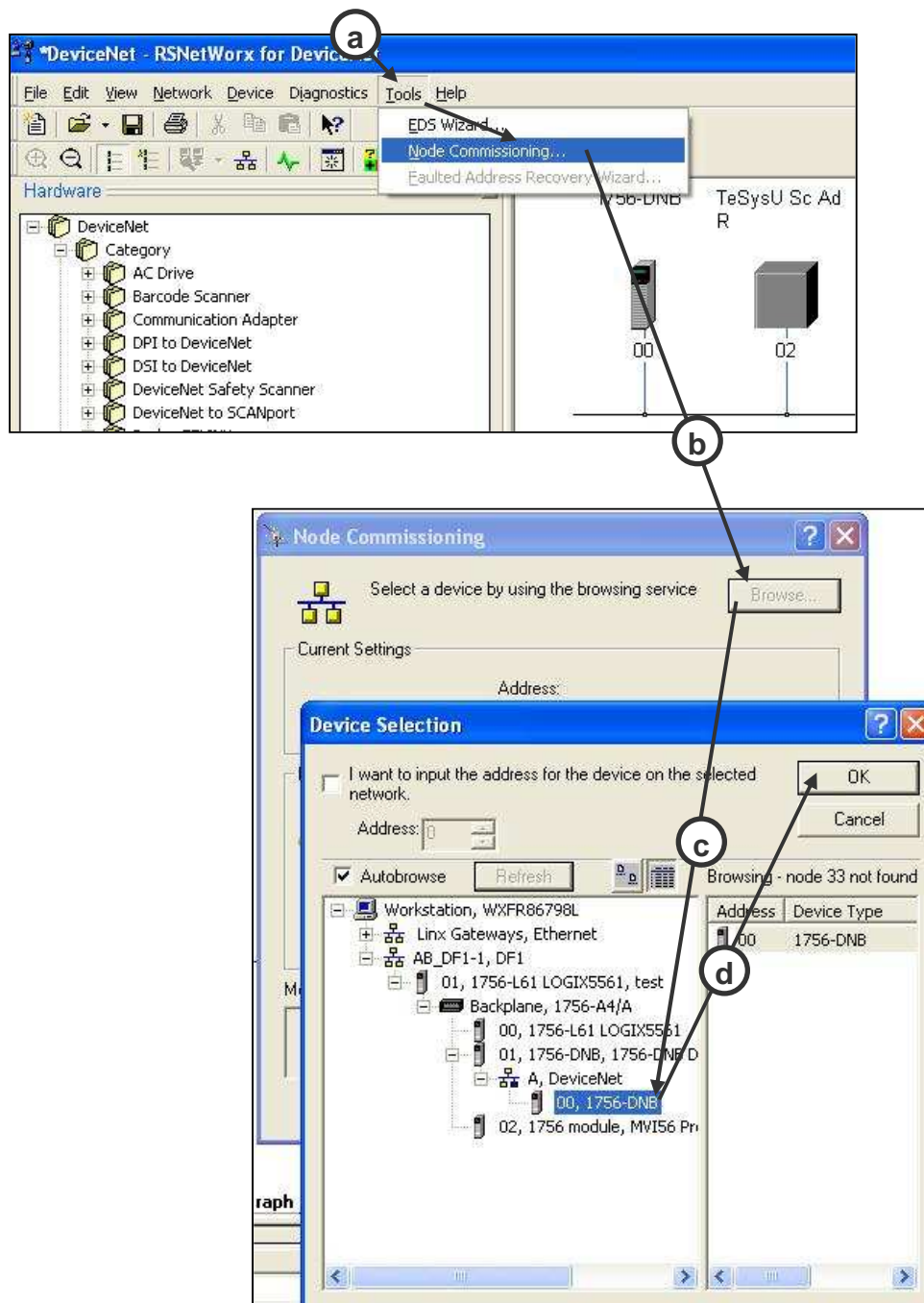
(see user manual TeSysU DeviceNet LULC09 03/2008).



You validate all windows by "OK" and all informations will be downloaded (be sure that you are still On-Line and the Key of the PLC is on program mode)

Step 4: Additional information

In this example (TsysU address is '2' and baudrate is '125 kbps'), we keep the baudrate value by default so we do not change the network speed managed by the master card DeviceNet (1756-DNB). However if you want 500 kbps, you can change the network speed by this way:



Now the window is refreshed and you can access to the area of baudrate and address for the master card:



V- Limitation

The TeSysU does not support the “ADR” service of DeviceNet network (you have this option in the settings of the master card 1756-DNB: check that this option is disabled into the menu “ADR”).