

How to configure a TesysU on Profibus with Siemens Step7

I- Type of publication

☐	Typical application	☐	Level 2 use
☒	Best know Method (BKM)	☐	Internal use
☐	Troubleshooting guide	☒	Customer

II- Product

- Product range :

- Product family :

III- Introduction

This document will describe you how to configure TeSysU on a network Profibus with a PLC Siemens S300 station. The CPU is a CPU 315 - 2 DP with Profibus port embedded.

We use **Simatic S7**, STEP 7 V5.4 SP3. Into Simatic you have two sub-software to configure the Profibus Network : NetPro and HW Config.

NetPro: you define which kind of product you need on your Profibus network (TesysU, TesysT...)

HW Config:

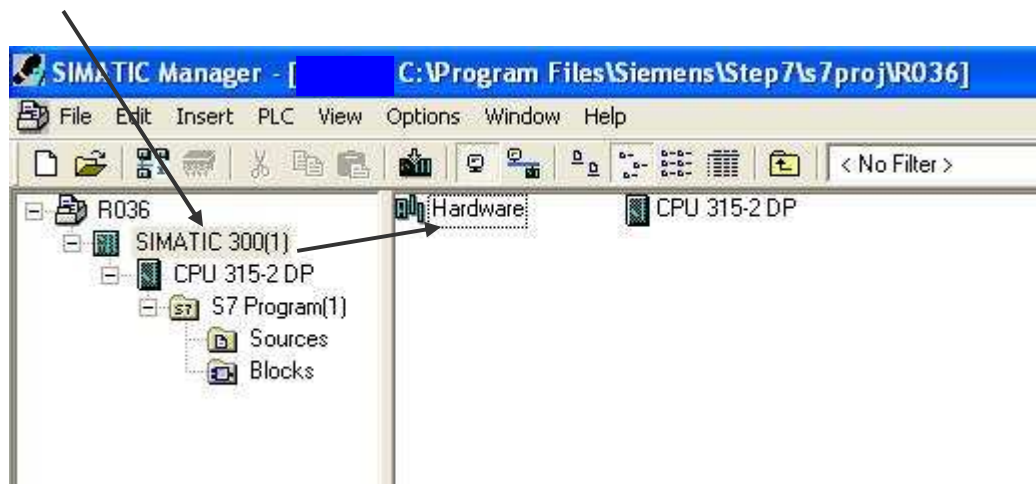
- PLC hardware configuration
- Configuration for each device Network (TesysT with or without expansion module, which control unit for TesysU and which information you want to exchange on the network)

IV- Description

Before starting the configuration, few words about Simatic platform:

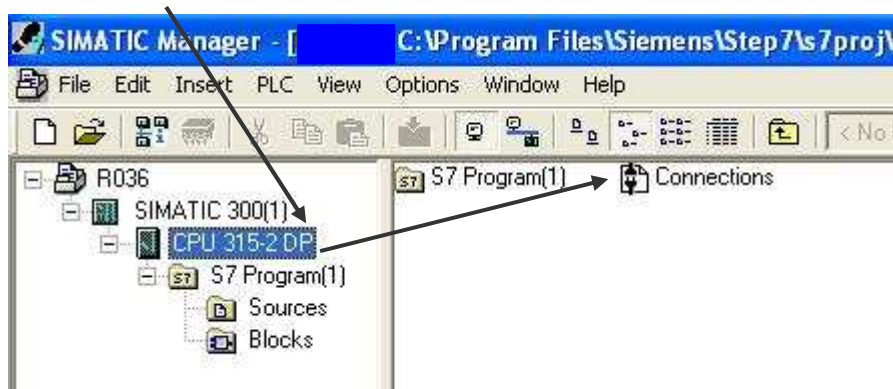
-How to access to HWConfig:

Each time into the technical resolution we tell you to go into HWConfig you have:



-How to access to NetPro

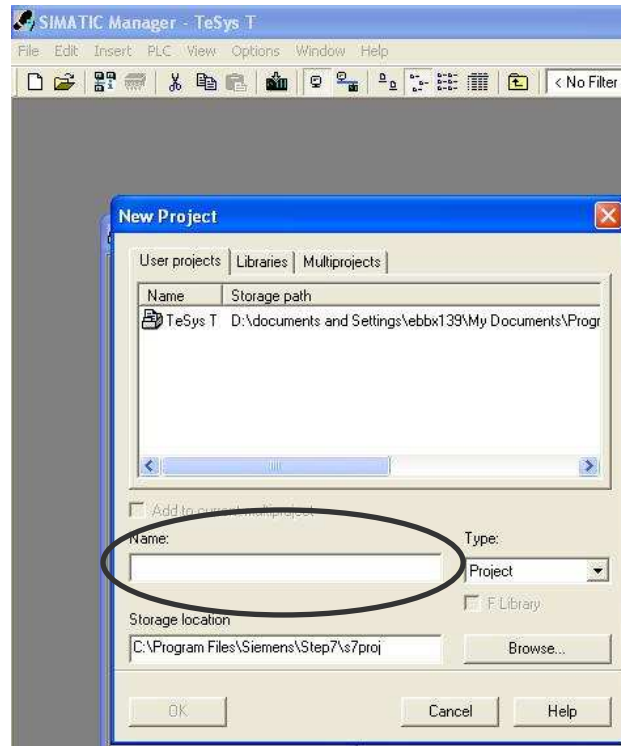
Each time into the technical resolution we tell you to go into NetPro you have:



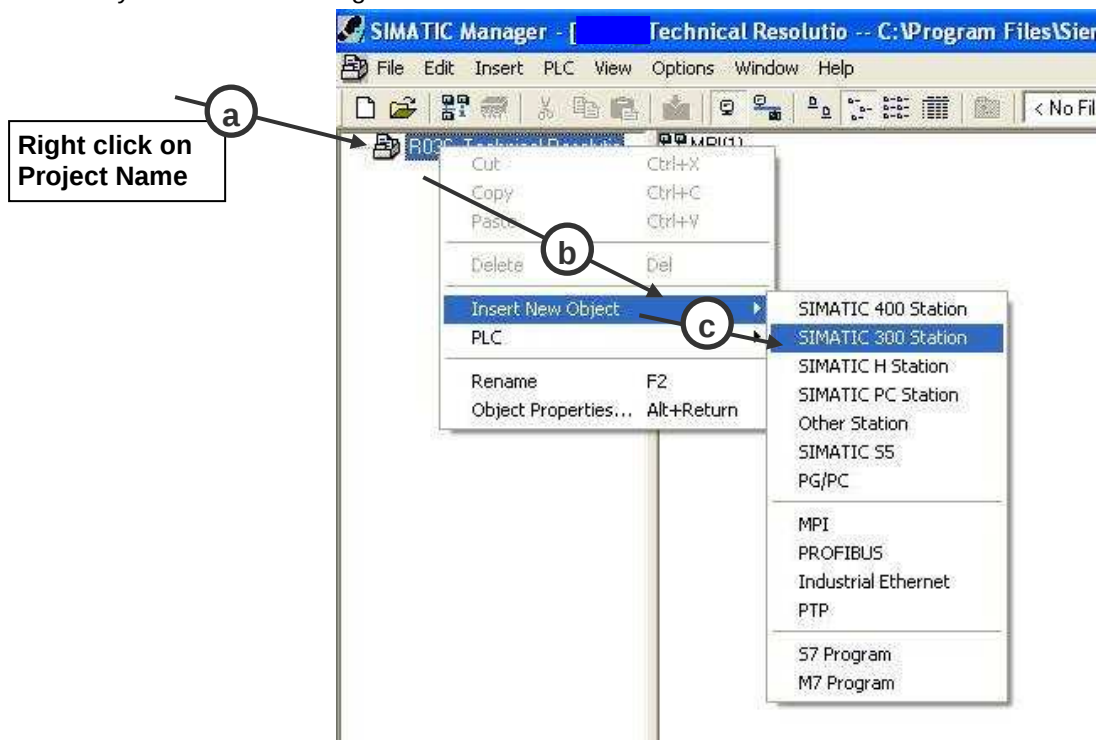
Step 1: Hardware Configuration for PLC

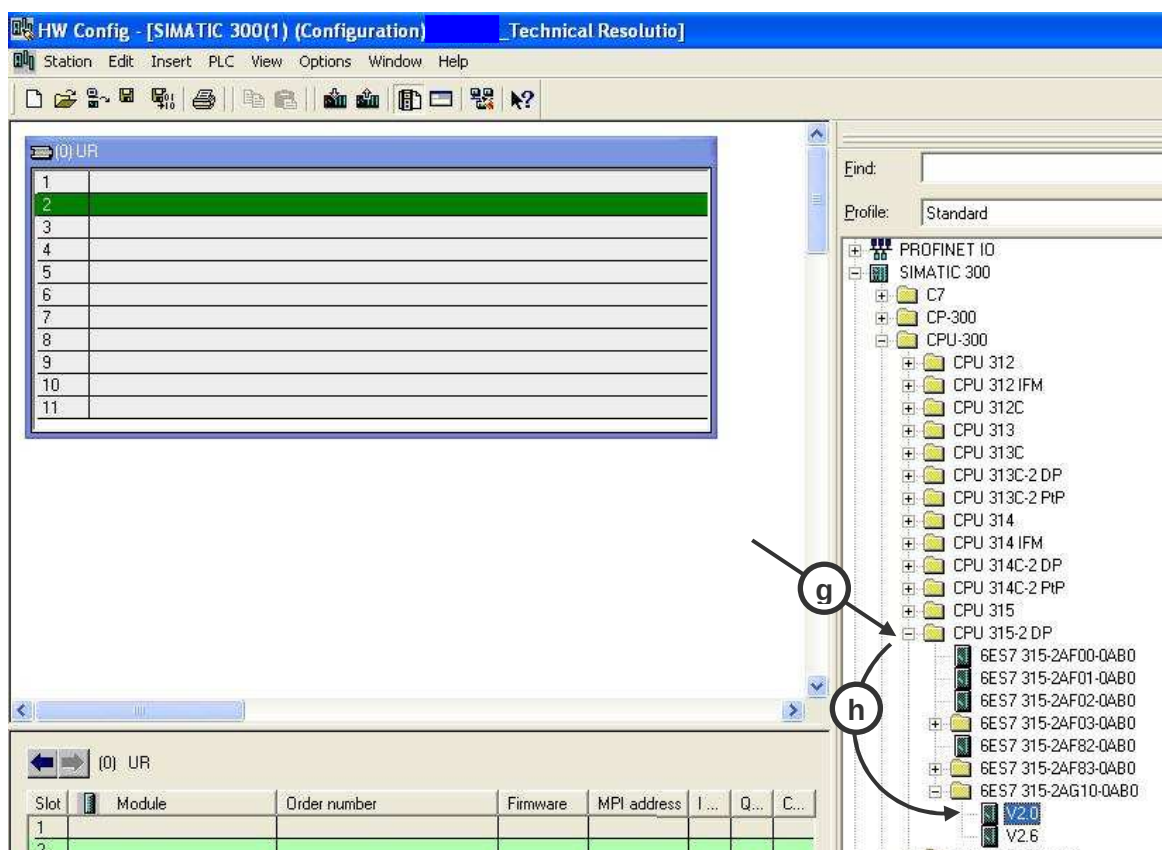
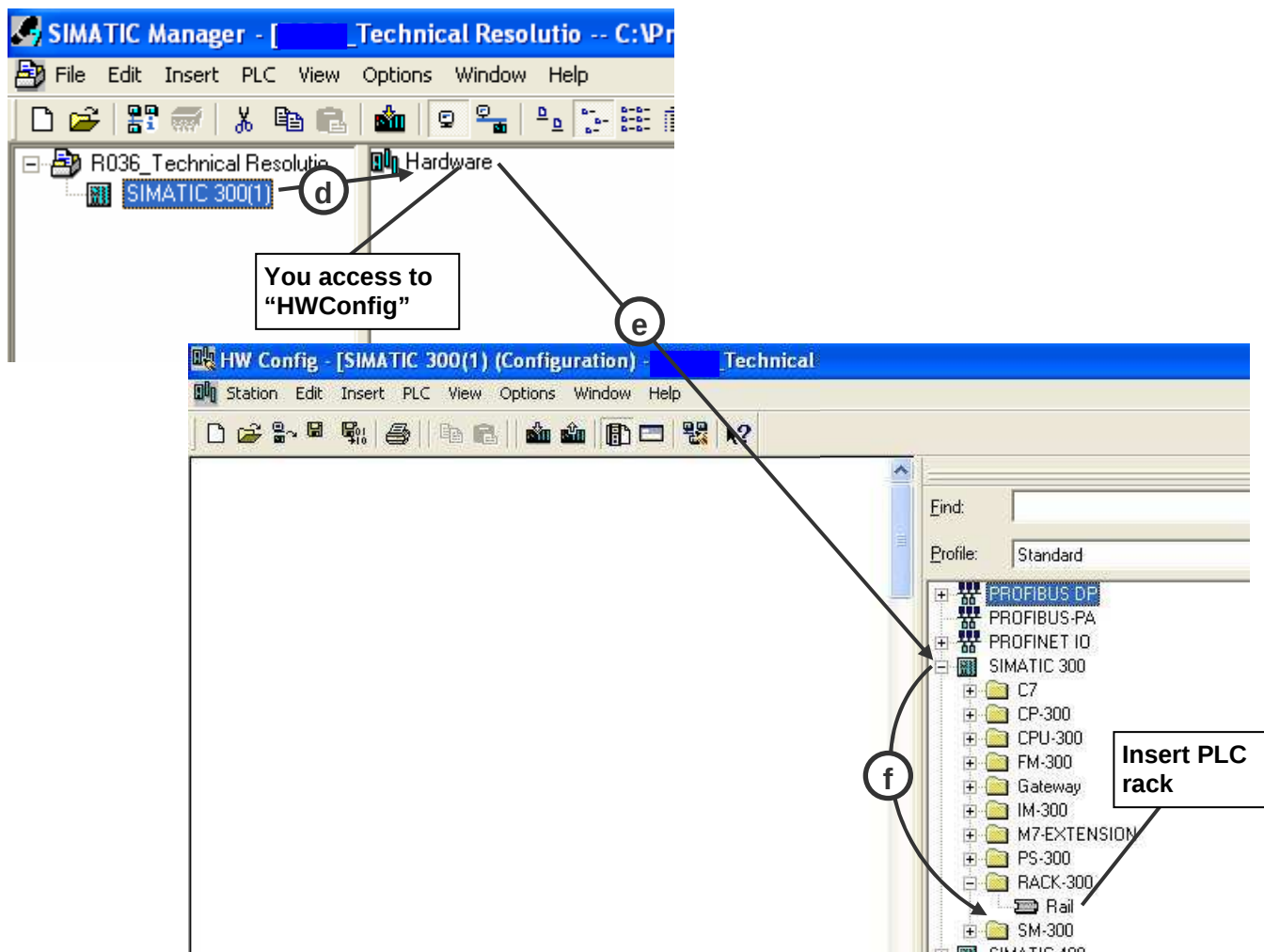
We show this configuration without using Wizard tool of Simatic software because it is more difficult to configure without Wizard tool.

Enter a project Name. Go into File/New:

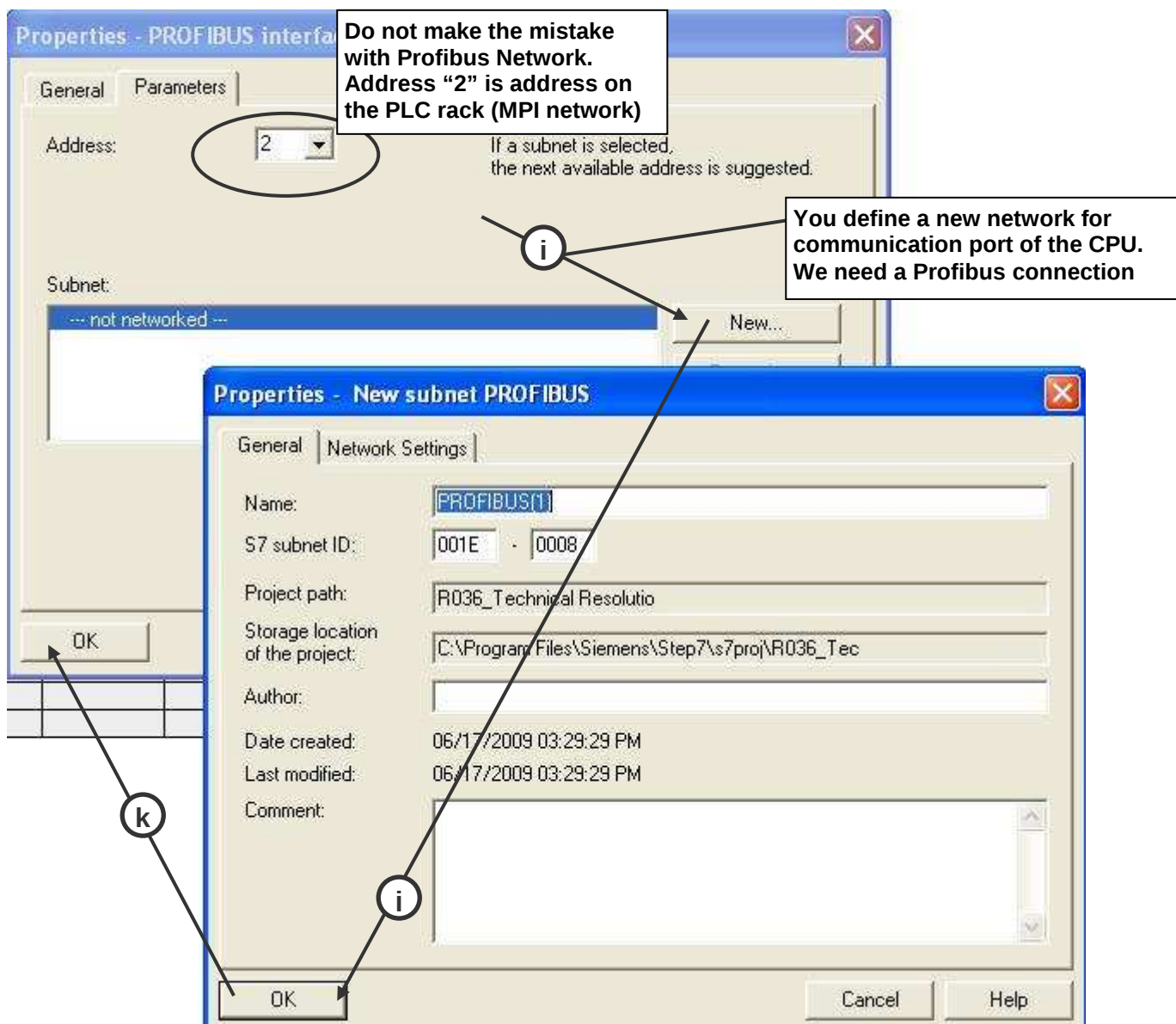


After you can create your hardware configuration:

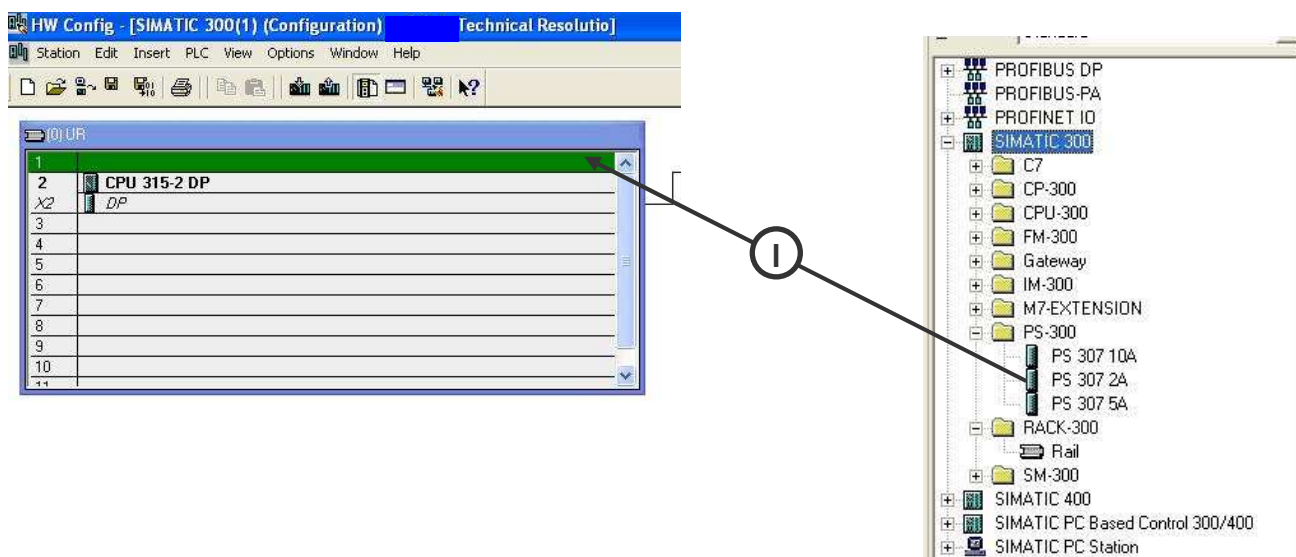




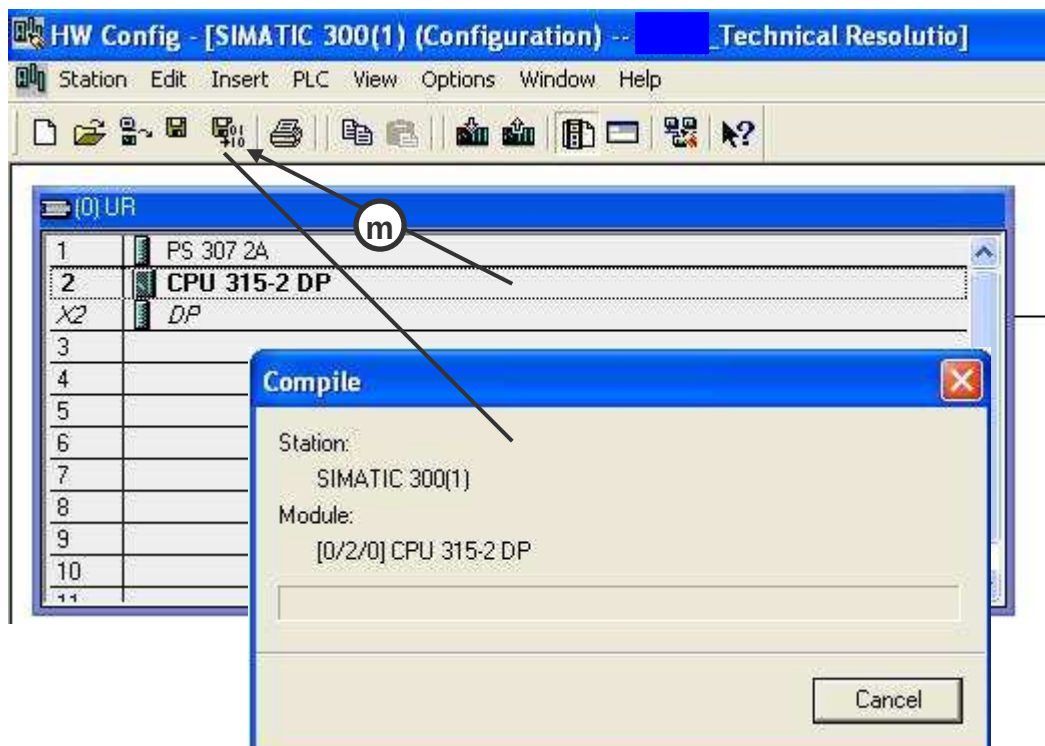
You can click on the CPU reference that you have (see above) to insert it into the rack. A configuration window occurs (you add a Profibus connection because Profibus master is embedded into the CPU):



You need to define your power supply for the PLC. On our bench we have a PS 307 2A:



The hardware configuration for the PLC is finished so you can compile and save the step1:



Step 2: Configuration of the Network

2.1.) Import GSD file

You have to copy GSD file from Schneider-electric website.

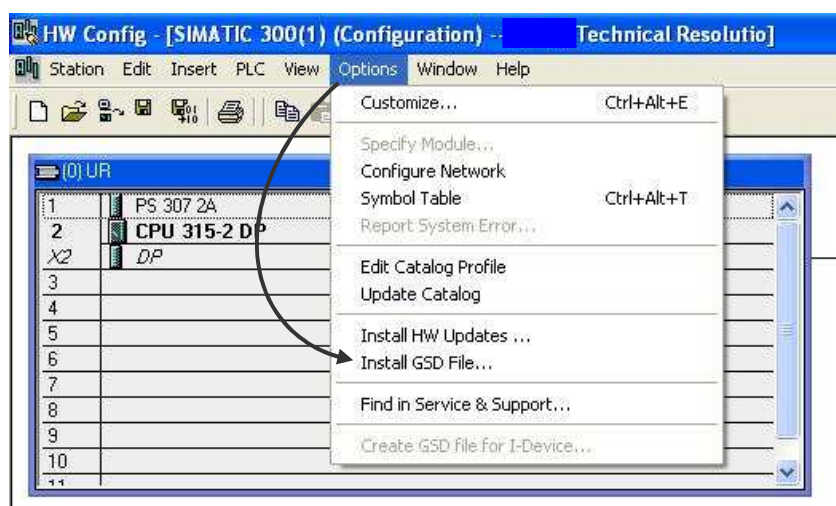
-Web link:

[http://www.global-download.schneider-electric.com/852575620060EF70/all/C125713F005265E2C125724B005BAA7F/\\$File/lulc07_gsd_dib_files_v100.exe](http://www.global-download.schneider-electric.com/852575620060EF70/all/C125713F005265E2C125724B005BAA7F/$File/lulc07_gsd_dib_files_v100.exe)

-Manual Link:

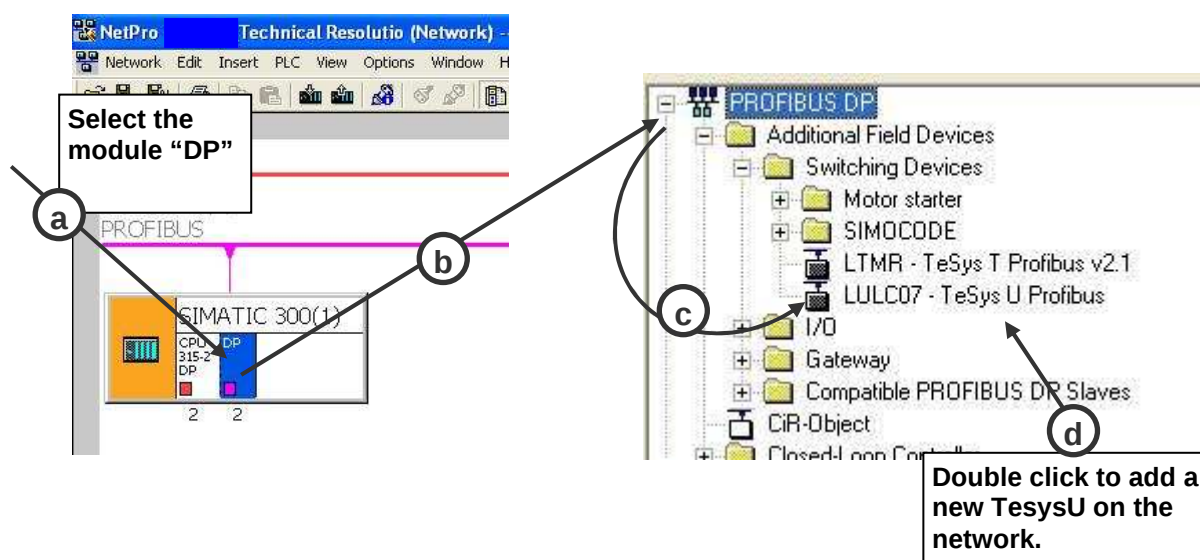
[www.schneider-electric.com/Products and Services/Automation and control/Motor Control/On-off motor starters/TesysU/Downloads/Software](http://www.schneider-electric.com/Products%20and%20Services/Automation%20and%20control/Motor%20Control/On-off%20motor%20starters/TesysU/Downloads/Software) and “Communication module TesysU profibus LULC07”.

After you can import the GSD with Simatic on HWConfig interface:

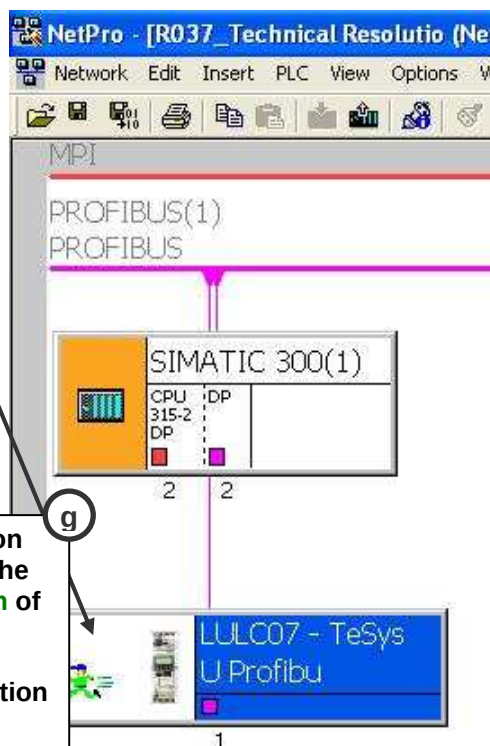
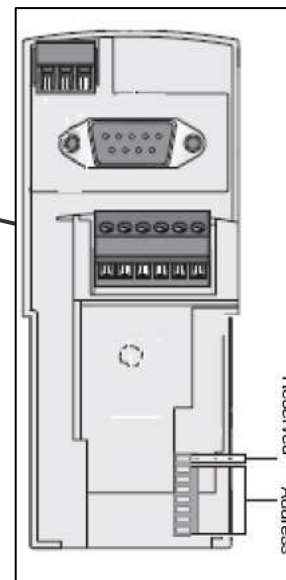
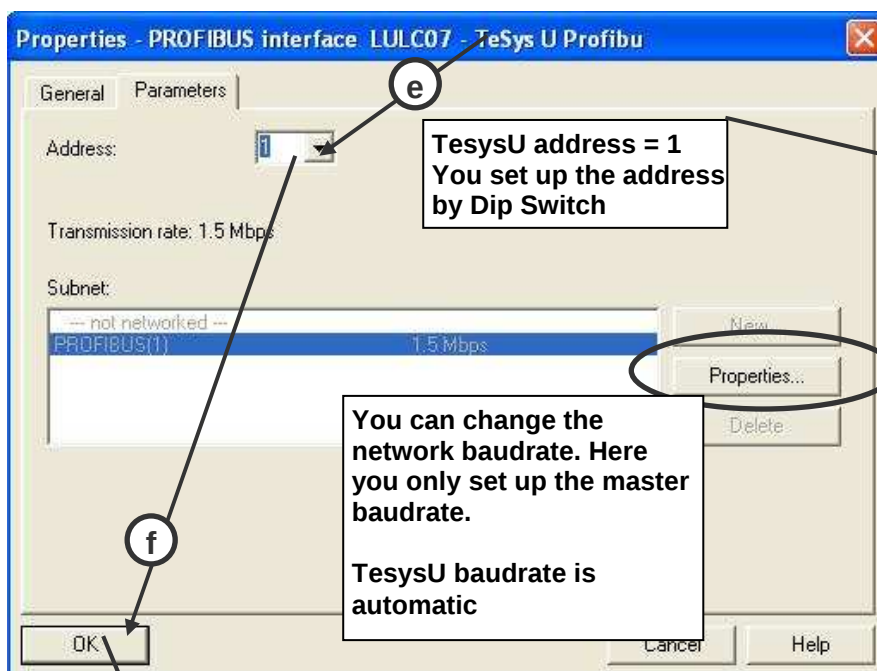


2.2.) Insert TesysU on Profibus Network

Go on NetPro interface (see page 2 to remind where is NetPro):



Once you double click on the device a window occurs:



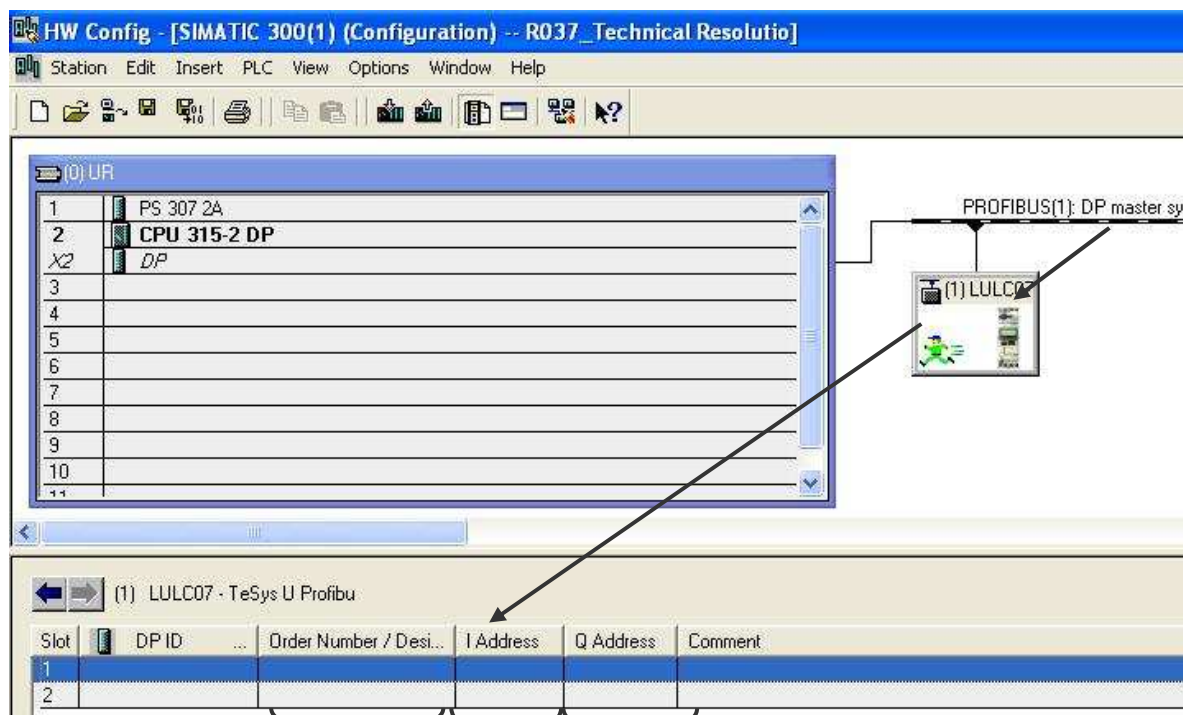
You can double click on the icon to access to the **Software configuration** of the product, you will define:

- The length of information exchanged
- Which information you want to read/write
- which control unit and base you have

(see next step: step 3)

Step 3: Software Configuration for TesysU

After double click on the device under “NetPro” automatically a window occurs to configure the software configuration of the product:



Information exchanged

First address for reading
information PLC <= TeSysU

First address for writing
information PLC => TeSysU

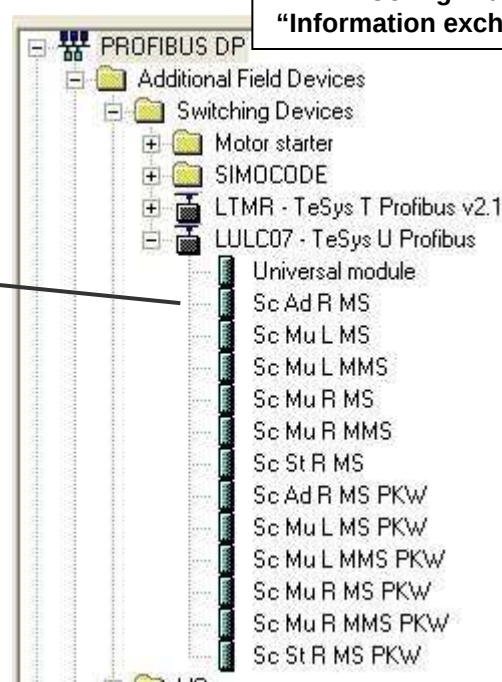
HWConfig Library
“Information exchanged”

Configuration modules:

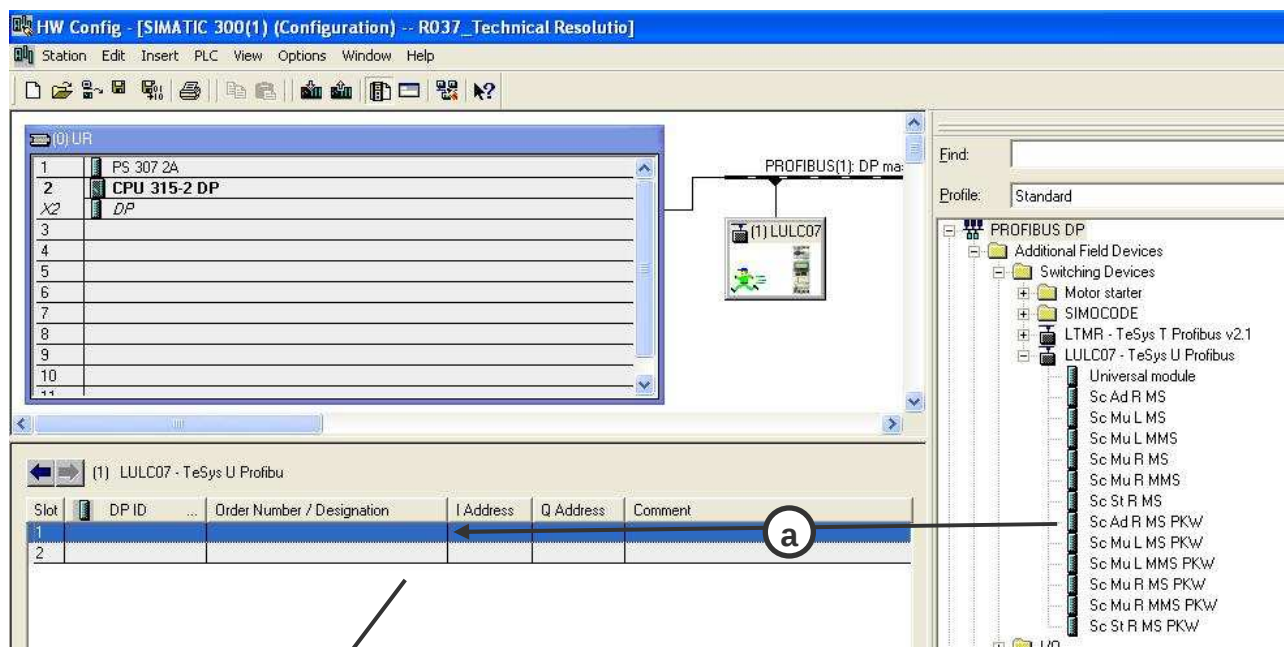
- R: Remote Configuration
- L: Local Configuration
- Sc: TesysU with Power base (with controller base LULC07 cannot work)
- Mu: TesysU with LUCM control unit
- Ad: TesysU with LUCB/C/D control unit
- St: TesysU with LUCA/L control unit
- PKW: Network configuration DPV0 to read/write all information
- MS: control command set up with maintained bit value
- MMS: control command set up with rising edge bit value

For more information about “L” and “PKW” see user manual March 2009 page 36.

Link: [http://www.global-download.schneider-electric.com/852575A6007E5FD3/all/5E44318D6618F493852575D0006A10AD/\\$File/1672610_02a55.pdf](http://www.global-download.schneider-electric.com/852575A6007E5FD3/all/5E44318D6618F493852575D0006A10AD/$File/1672610_02a55.pdf)



For the TesysU address "1" we choose a configuration power base with control unit LUCB (advanced control unit) and we want to read/write all informations so we select St Ad R MS PKW:



Slot	DP ID	Order Number / Designation	I Address	Q Address	Comment
1	196	Sc Ad R MS PKW	20..27	20..23	
2	183	-> Sc Ad R MS PKW	30..37	30..37	

To change the address of cyclic information exchanged double click on the area

To change the address of PKW information exchanged double click on the area

First address for writing cyclic information

First address for reading cyclic information

First address for writing information in PKW service

First address for reading information in PKW service

Properties - DP slave

Address / ID | Parameter Assignment

I/O Type: Out-input

Output

Address: Start: 20, End: 23, Length: 4, Unit: Byte

Process image: DB1 PI

Input

Address: Start: 20, End: 27, Length: 8, Unit: Byte

Process image: DB1 PI

Manufacturer-specific data: 12.00.00.00

OK

Properties - DP slave

Address / ID

I/O Type: Out-input

Output

Address: Start: 30, End: 37, Length: 8, Unit: Byte

Process image: DB1 PI

Input

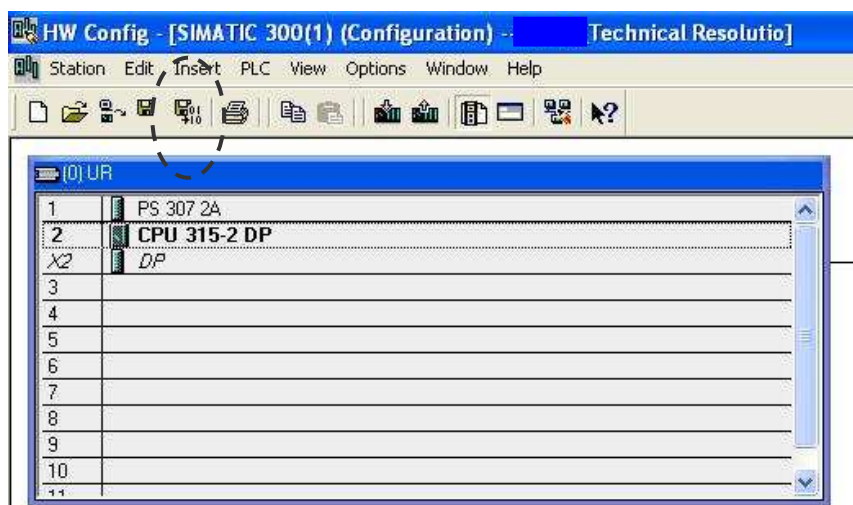
Address: Start: 30, End: 37, Length: 8, Unit: Byte

Process image: DB1 PI

Manufacturer-specific data:

OK

Compile the last information and after you can download the configuration into the PLC:



Step 4: Downloading of the configuration

