

u-remote

Setting PROFIsafe on Siemens PLC with STEP 7 V5.5

Commissioning instructions

Revisions

Version	Date	Changes
01	05.2016	First edition

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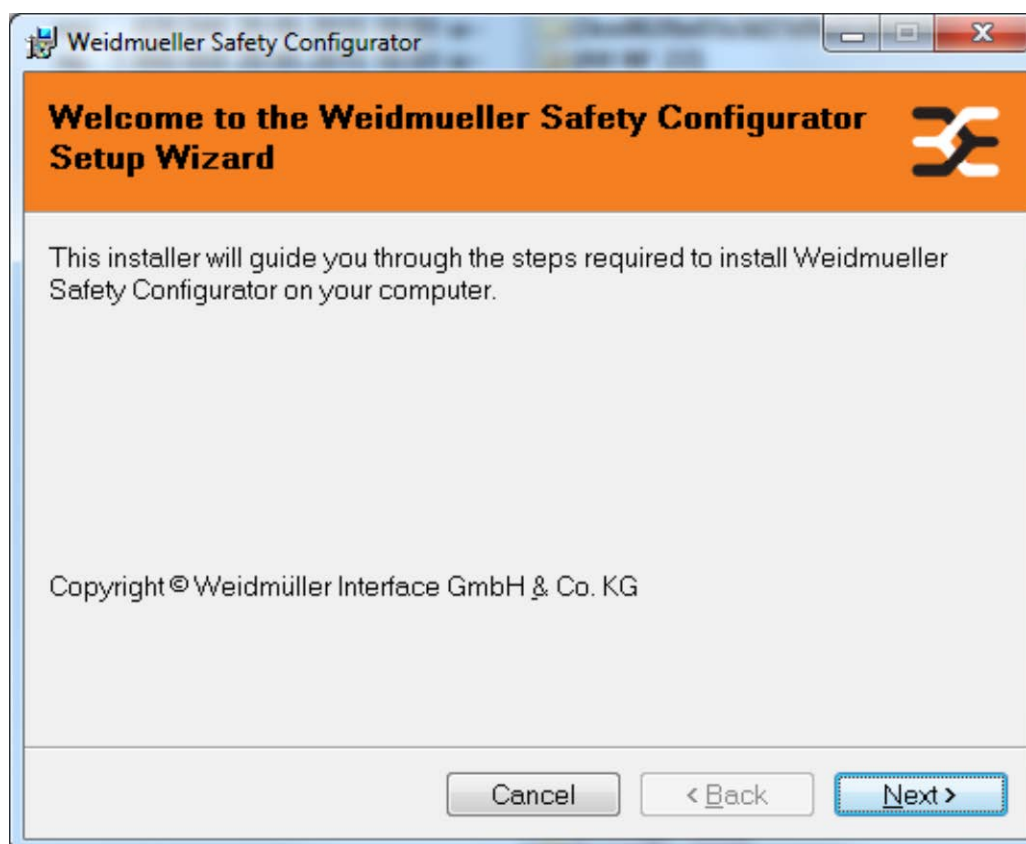
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1. Install the Weidmüller CPD – Tool

The Weidmüller CPD – Tool is an embedded program for the calculation of the check sum in STEP 7 or TIA Portal depending on the parameter set for the module UR20-4DI-4DO-PN-FSPS or UR20-8DI-PN-FSPS

- 1) Unzip the file "Setup_xx.zip"
- 2) Start the program "setup.exe" and wait until the installation is finished



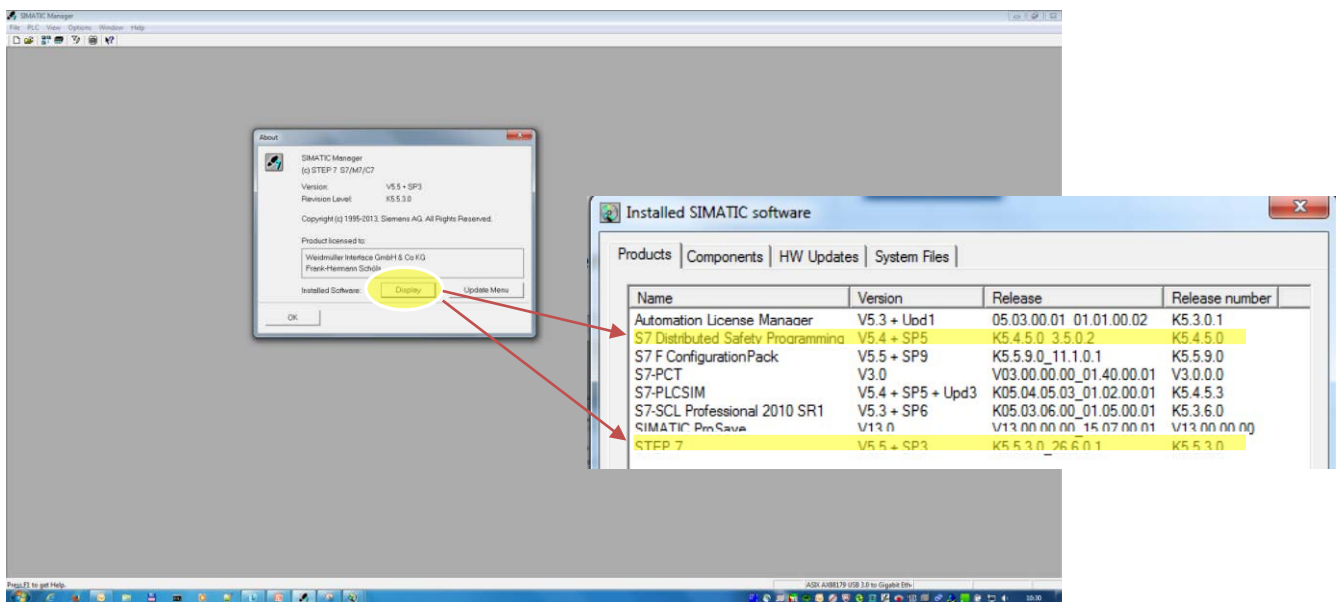
2. Creating a new project in Siemens STEP 7 V5.5

Start TIA Portal from the desktop

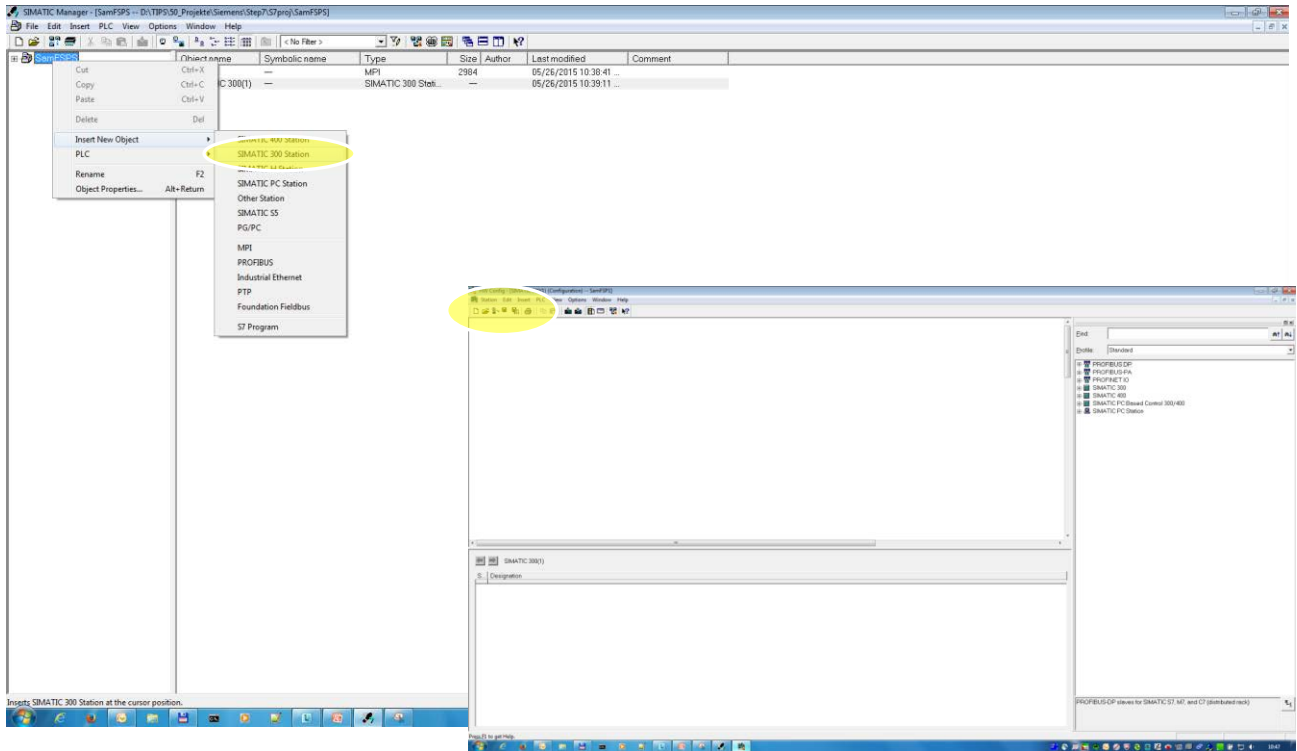
- 1) Double click the symbol like this



- 2) After STEP 7 is open, please check whether the required software is installed

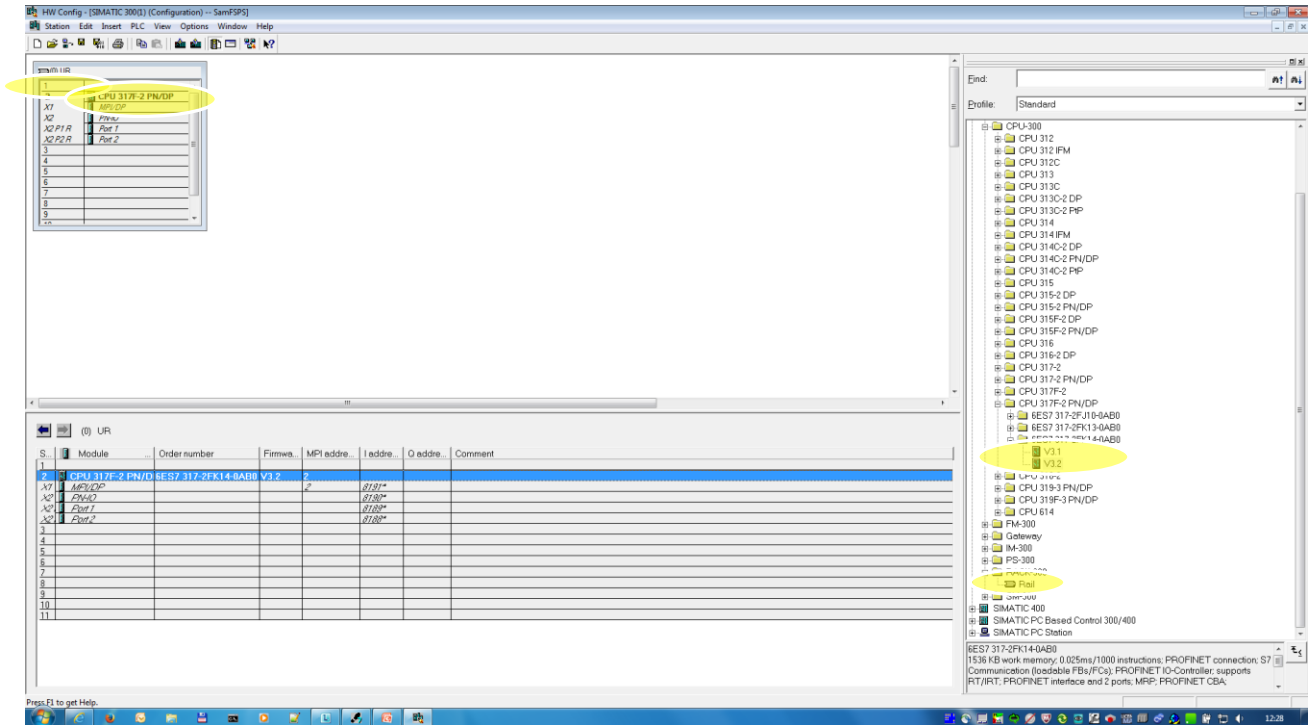


Create a new project

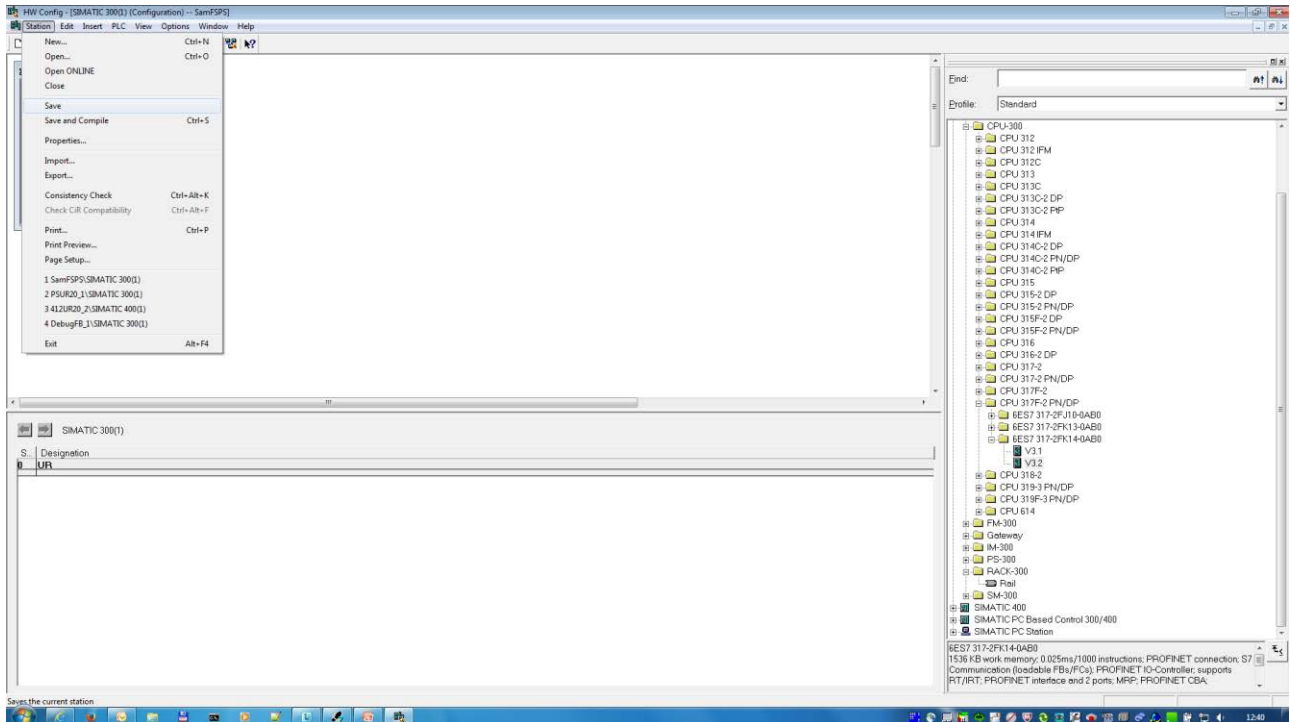


Setting PROFIsafe on Siemens PLC with STEP 7 V5.5

Add new device



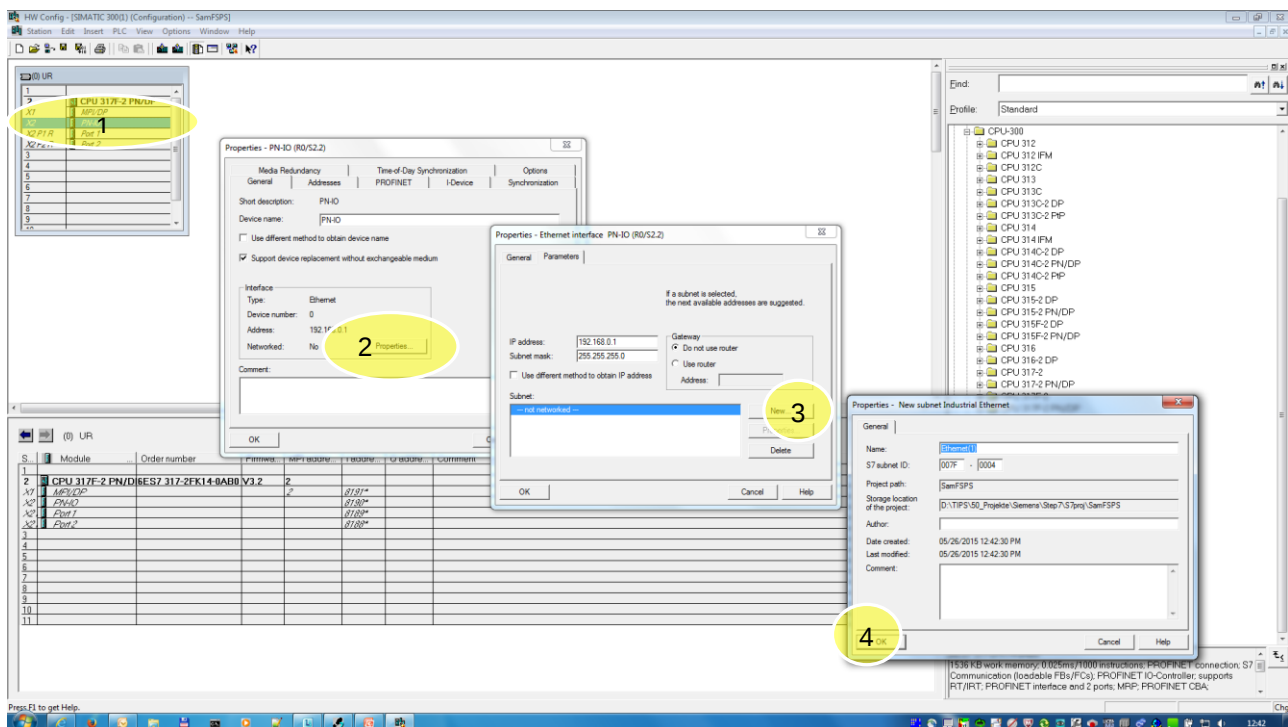
Save your Project



3. Integration of UR20-4DI-4DO-PN-FSPS and UR20-8DI-PN-FSPS on PROFINET

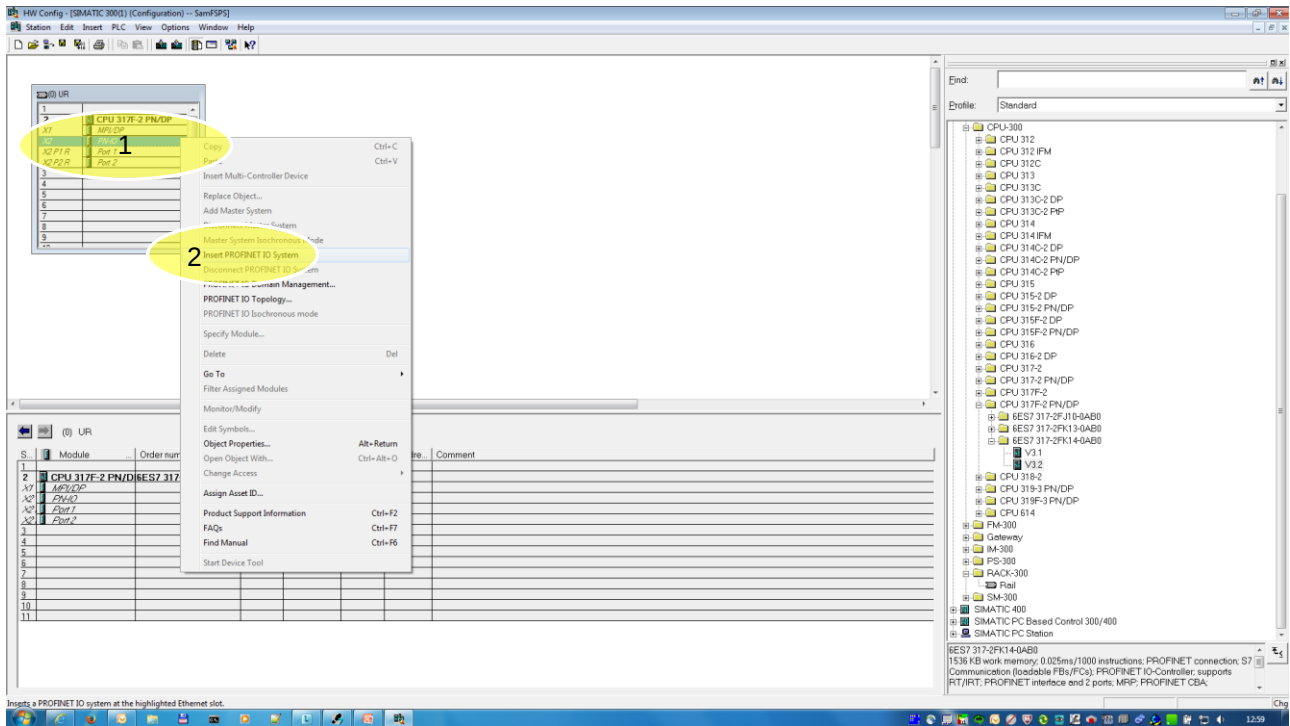
Insert a Ethernet network

- 1) Choose PN-IO and click on
- 2) Choose Properties set the IP address and subnet
- 3) Add new subnet by pressing the button "New"
- 4) Confirm your choice for the PROFINET settings by pressing "OK"



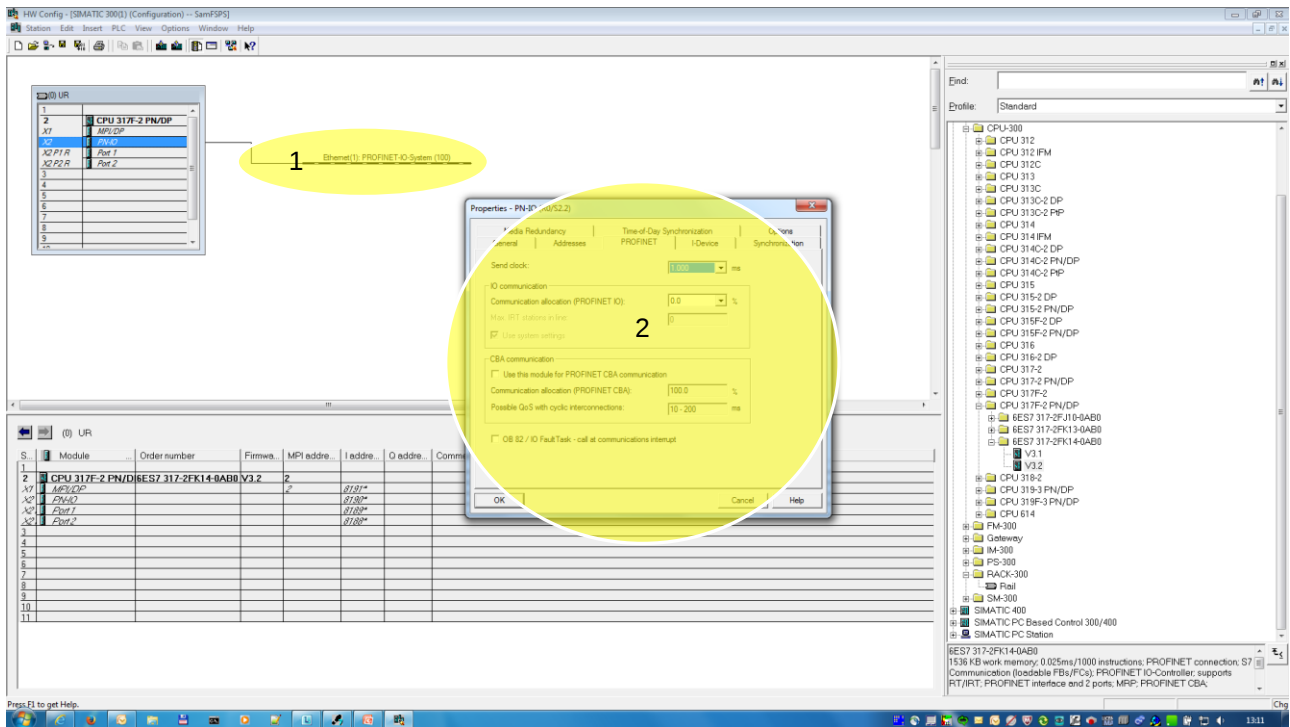
Insert a PROFINET network

- 1) Choose PN-IO again and click on
- 2) Click on "Insert PROFINET IO System"



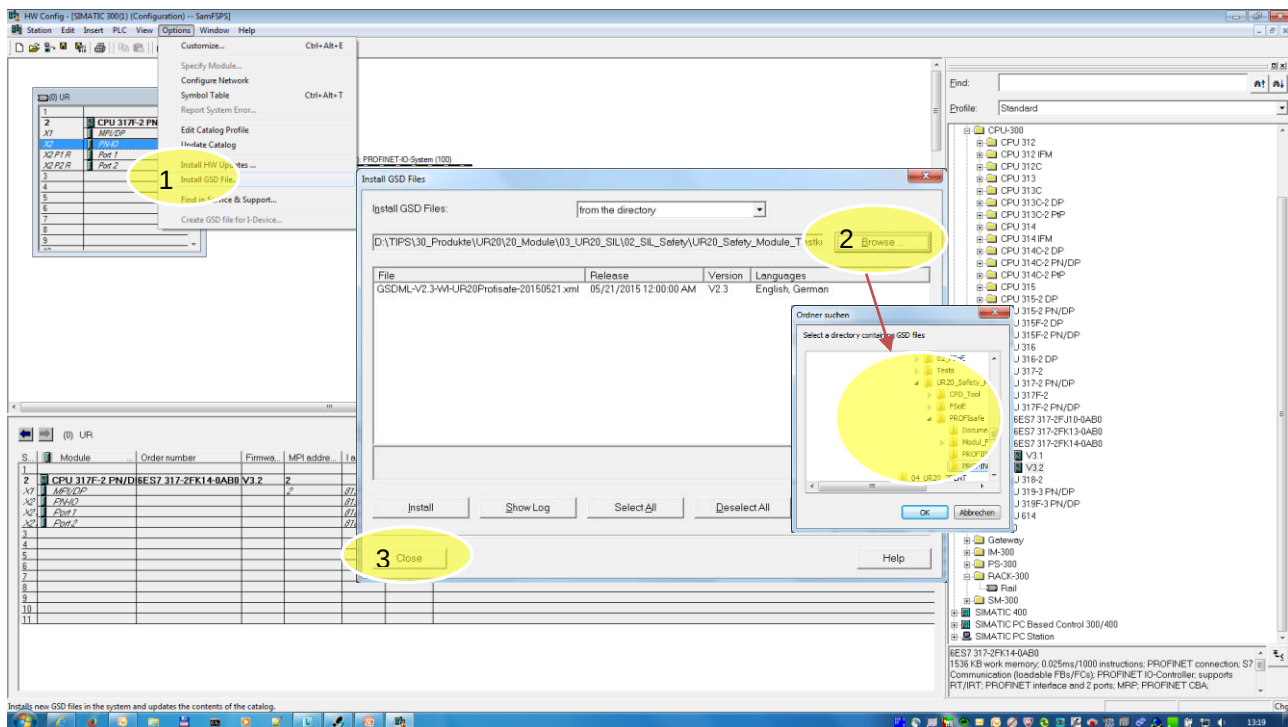
Advanced PROFINET settings

- 1) Double click on "Ethernet(1): PROFINET IO-System...."
- 2) Open the path and choose the GSDML file to install
- 3) Push the button "install". The files will be installed



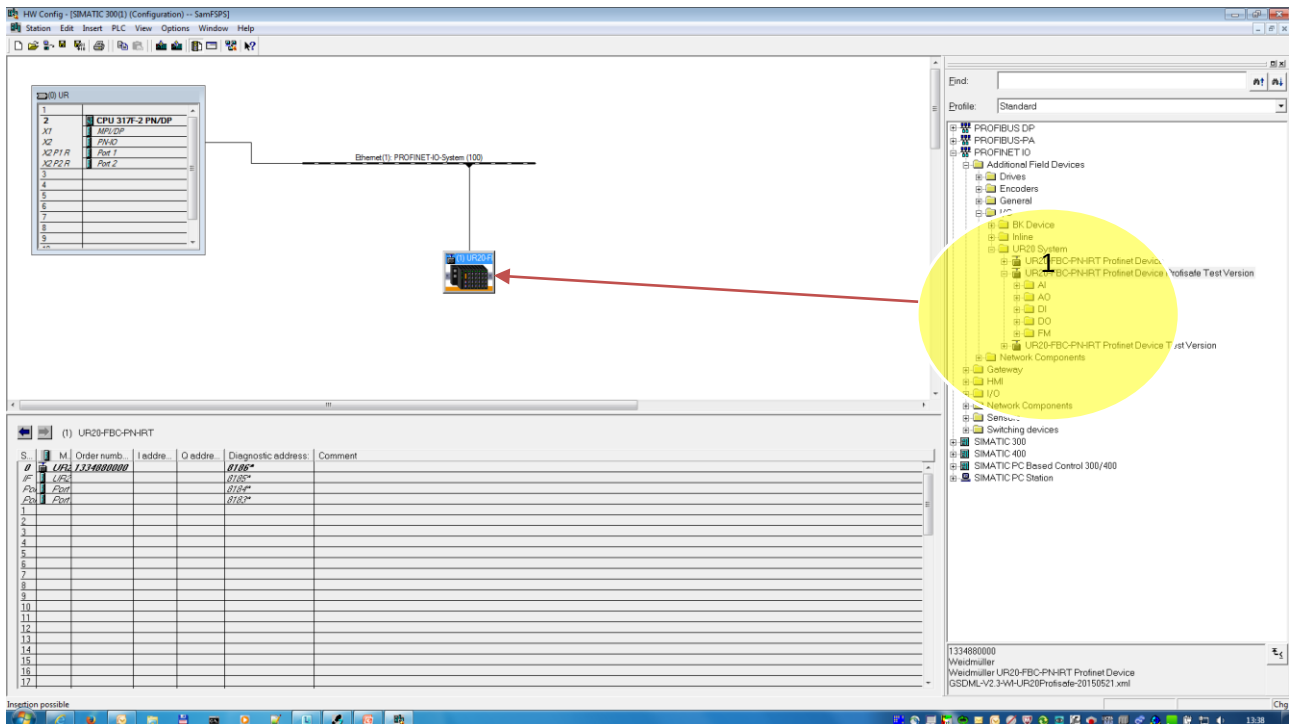
Install a GSDML file

- 1) Open "Options" and click "install general station description file (GSD)"
- 2) Open the path and choose the GSDML file to install
- 3) Push the button "install". The files will be installed and the catalogue will be updated



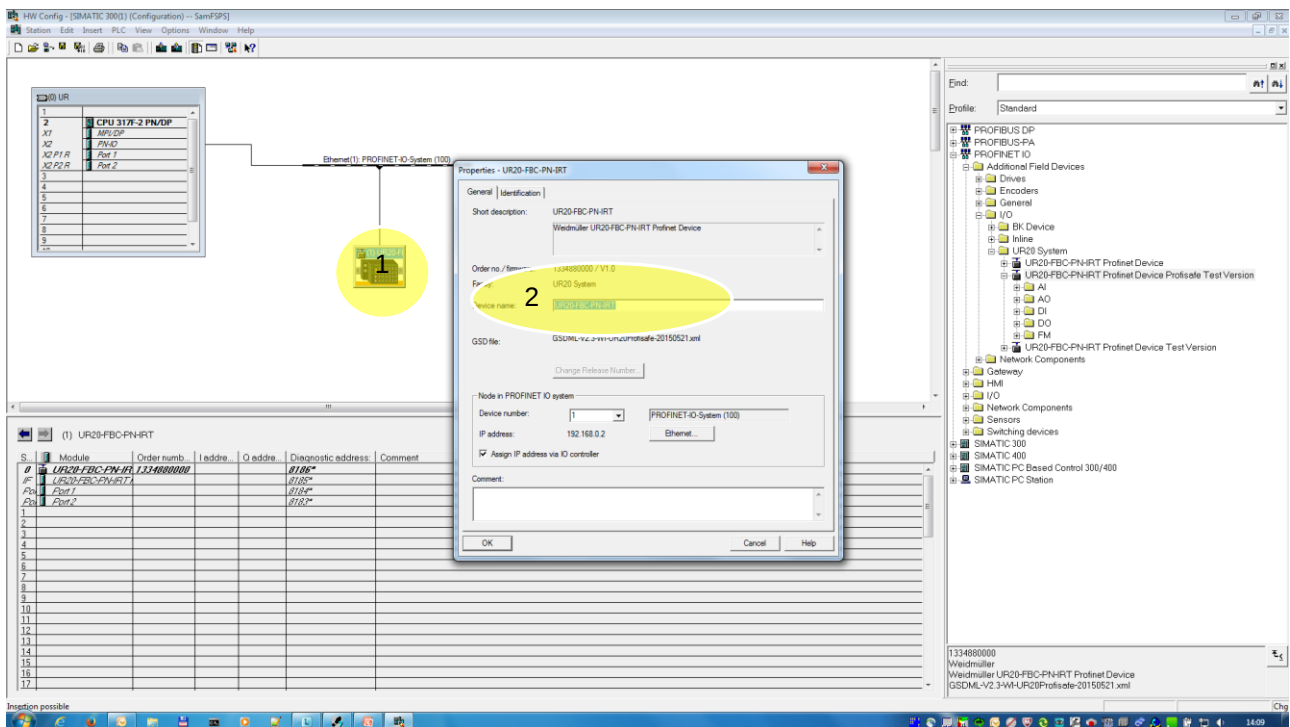
Insert UR20 to the PROFINET line

- 1) Expand the branch "Additional Field Devices" of the folder PROFINET IO and place UR20 by drag and drop



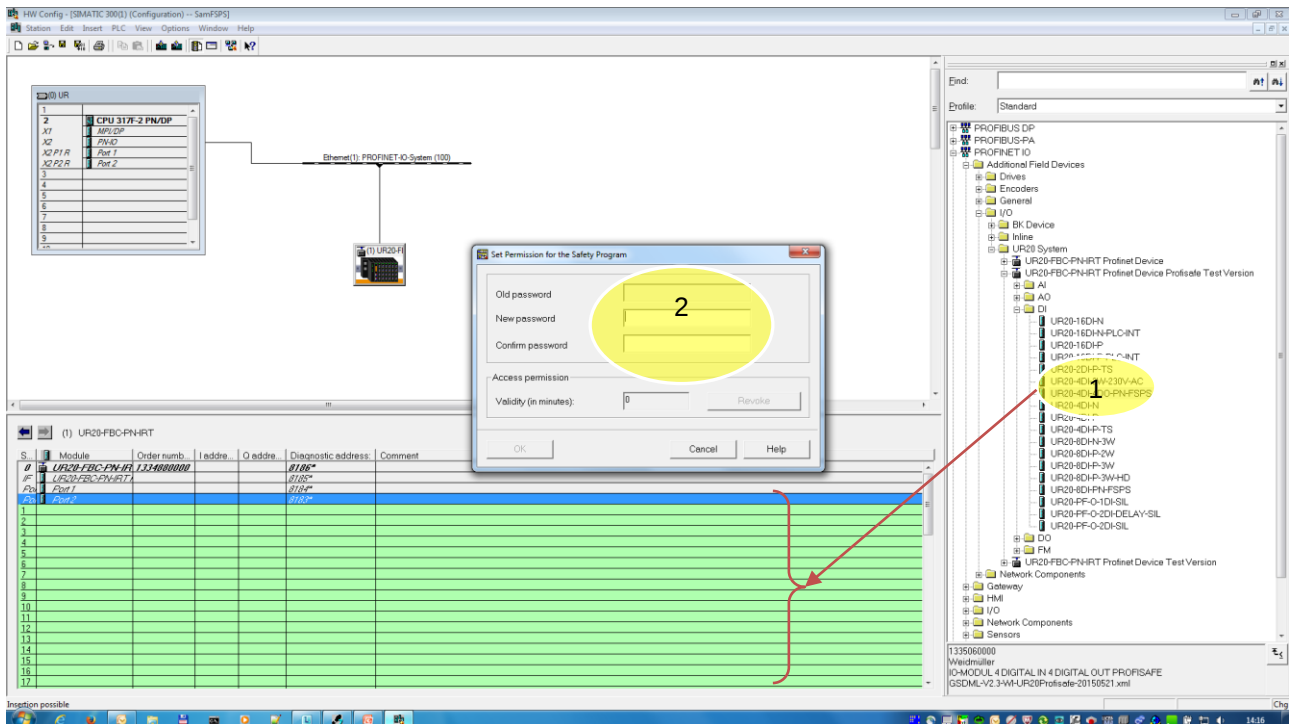
Further settings for UR20 PROFINET IO device

- 1) Double click the symbol of UR20
- 2) Change the name of UR20 to a unique name according to the PROFINET requirements



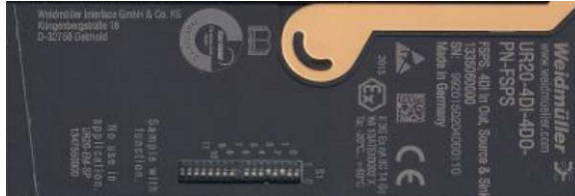
Add a UR20 safety module to the UR20 IO device

- 1) Choose a module e.g. "UR-4DI-4DO-PN-FSPS and place the module by drag and drop
- 2) While placing the module into the UR20 station a password has to be set and confirmed



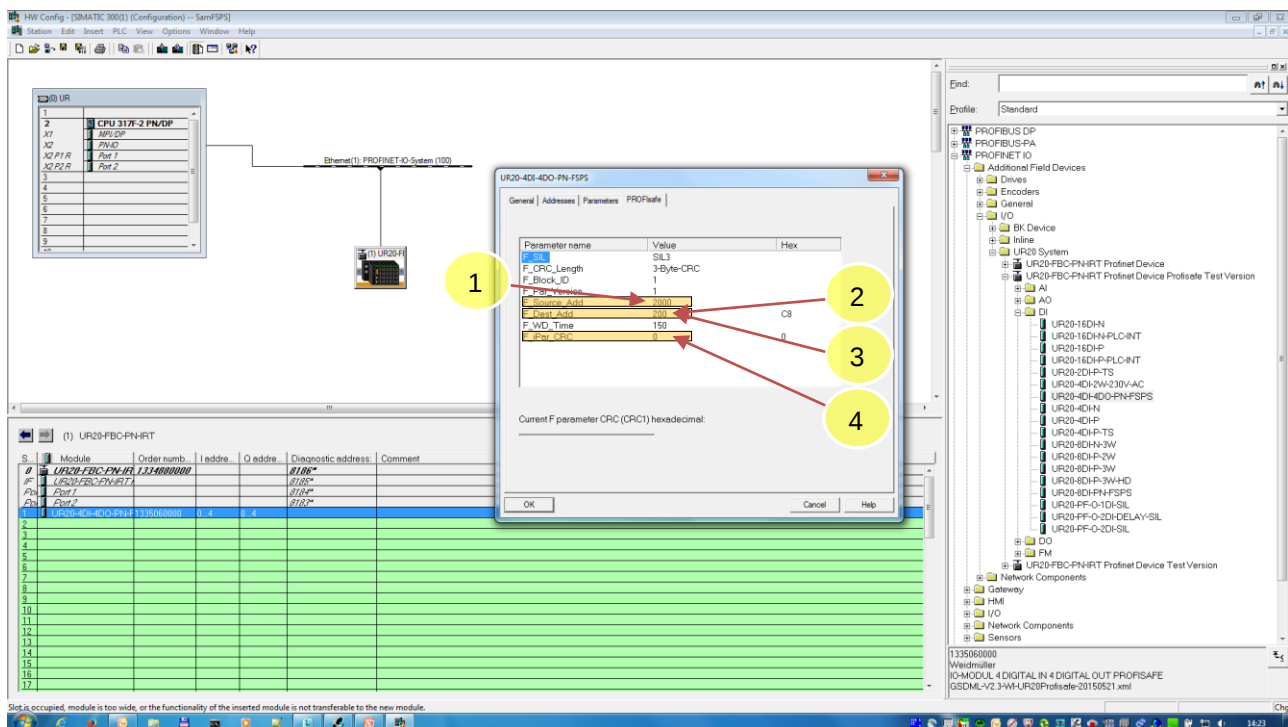
PROFIsafe parameter settings of the UR20 module

- 1) The Source F-Address (F-CPU) will be set automatically
- 2) Set the F-Address of the module with the DIP switches



NOTE: Each address change needs first an address set to "0" and power up the module. Then set the new address and power up the module again.

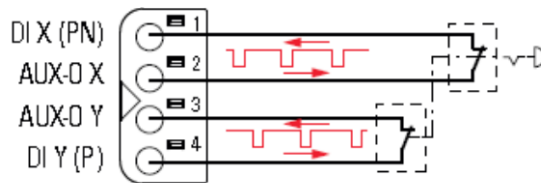
- 3) Set the Destination F-Address (I/O Device or DP-Slave e.g UR20) according to the DIP switches of the module
- 4) Set the check sum CRC getting from the CPD Tool (see the next page)



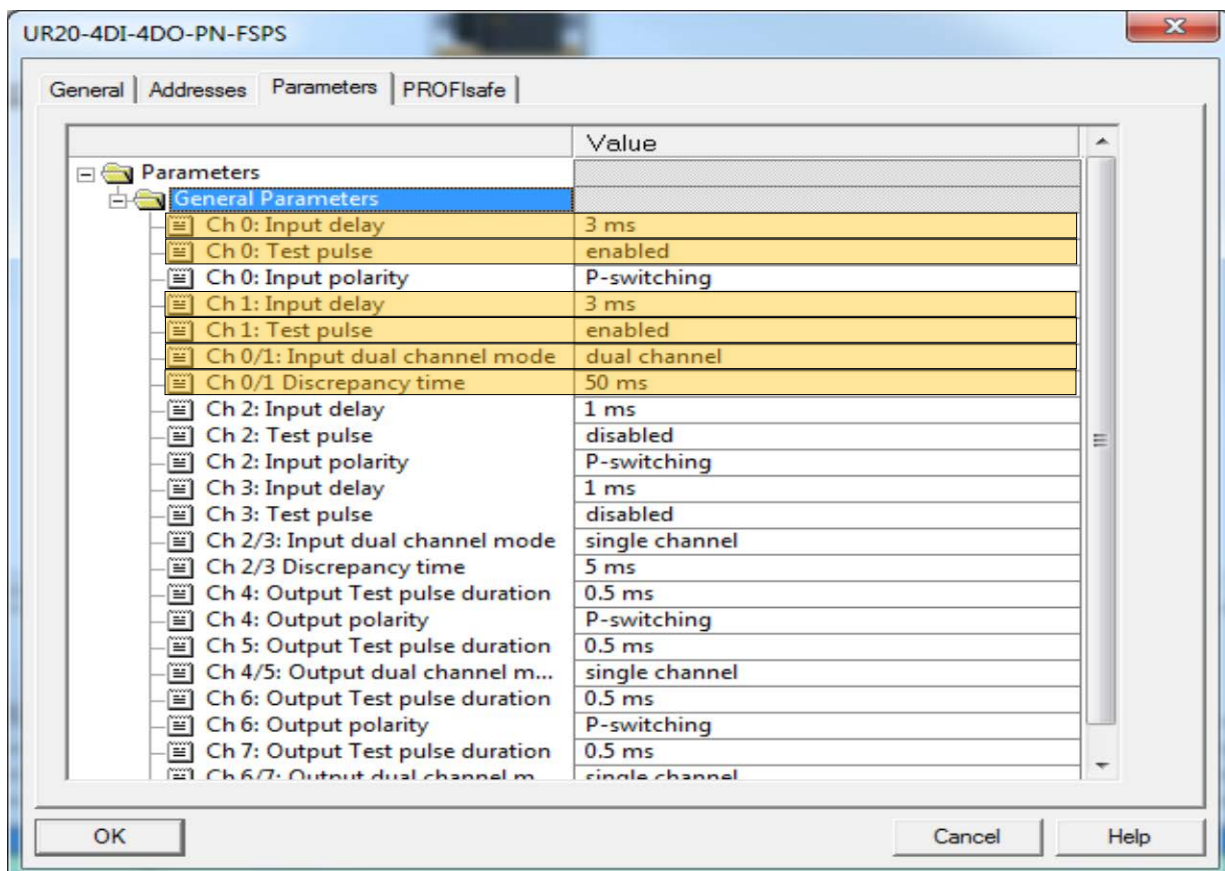
4. Examples of wiring and parameter settings of some safety devices to u-remote

Connecting an emergency STOP button

- Wire the emergency STOP – button as shown below (e.g. on CH0 and CH1)



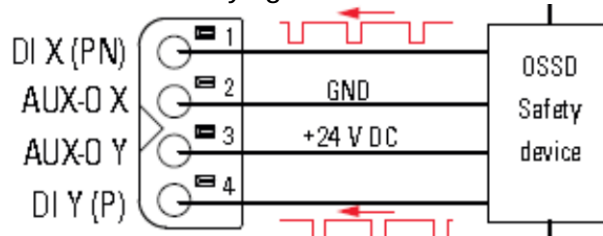
- For achieve the highest safety level test pulses of the module could be enabled



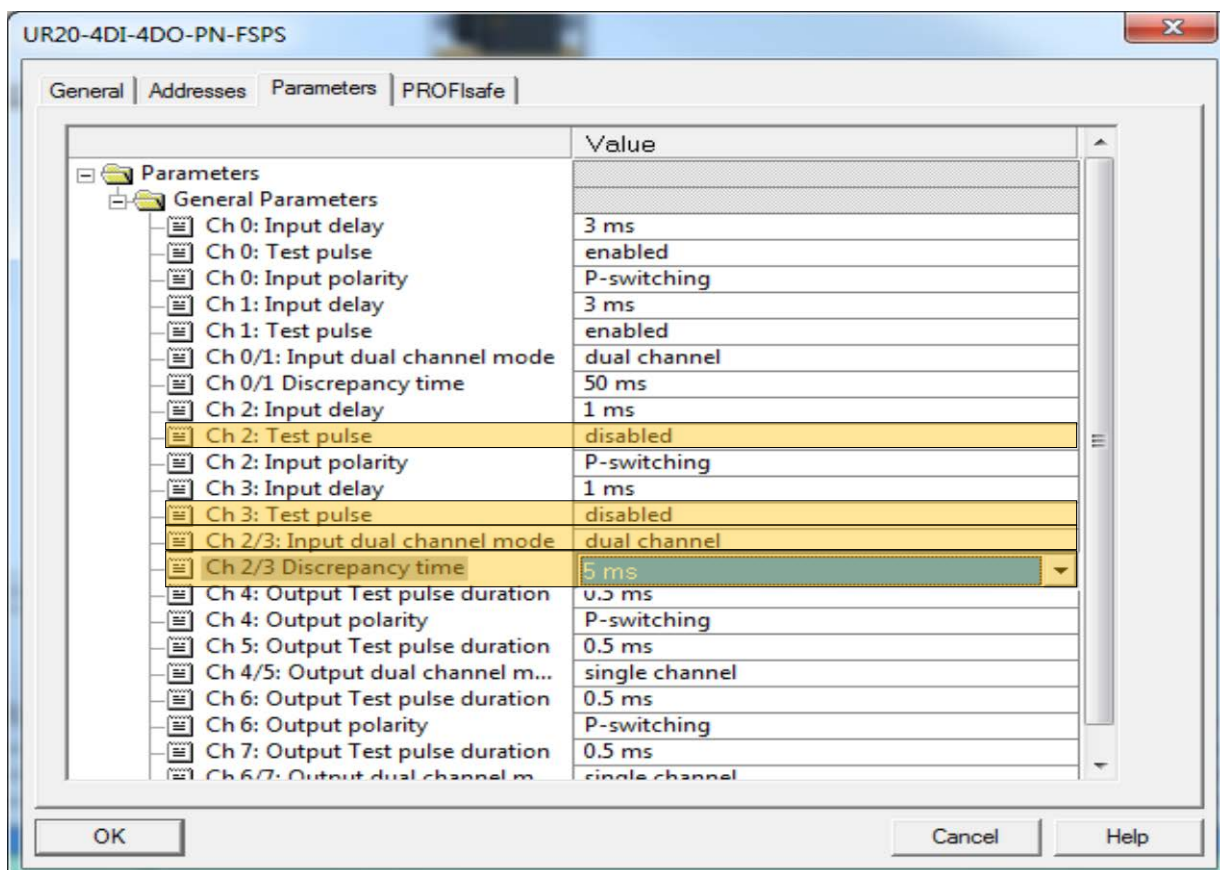
Further information you will find in the u-remote safety manual.

Connecting a safety device with OSSD output e.g. safety light curtain

- Wire the safety light curtain as shown below (e.g. CH2 and CH3).



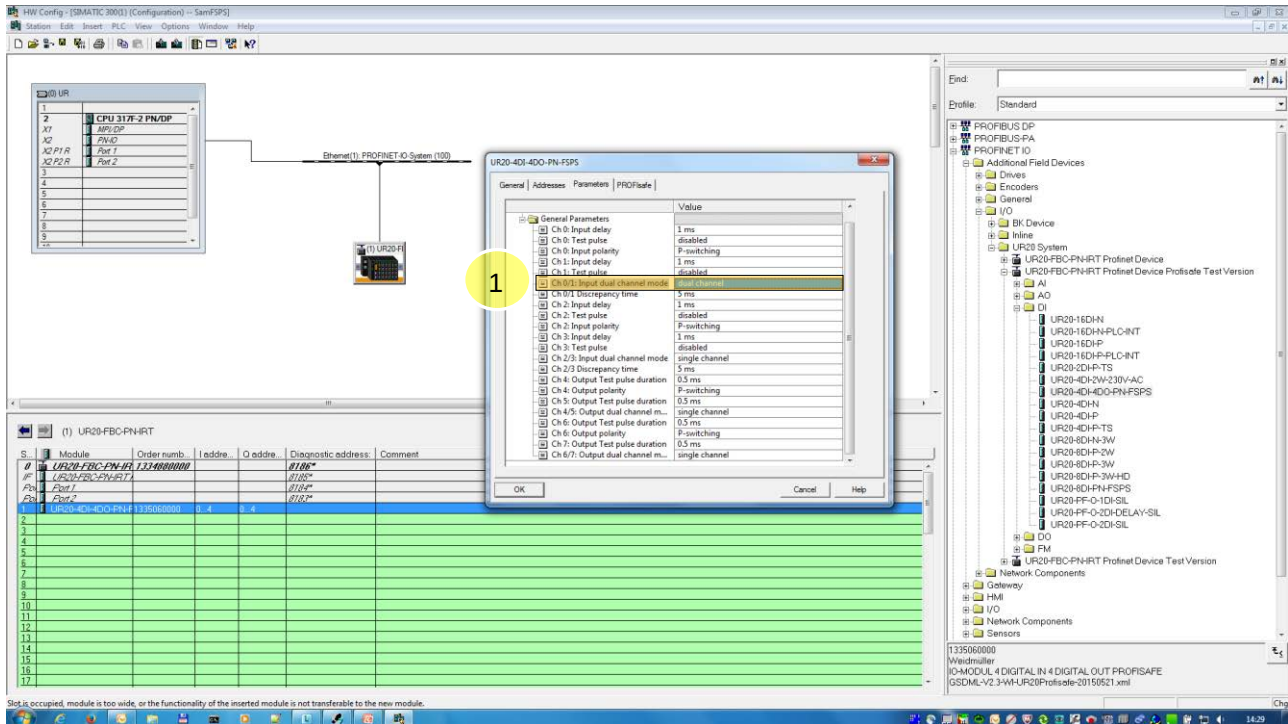
- For this using the test pulses have to be disabled.



Further information you will find in the u-remote safety manual.

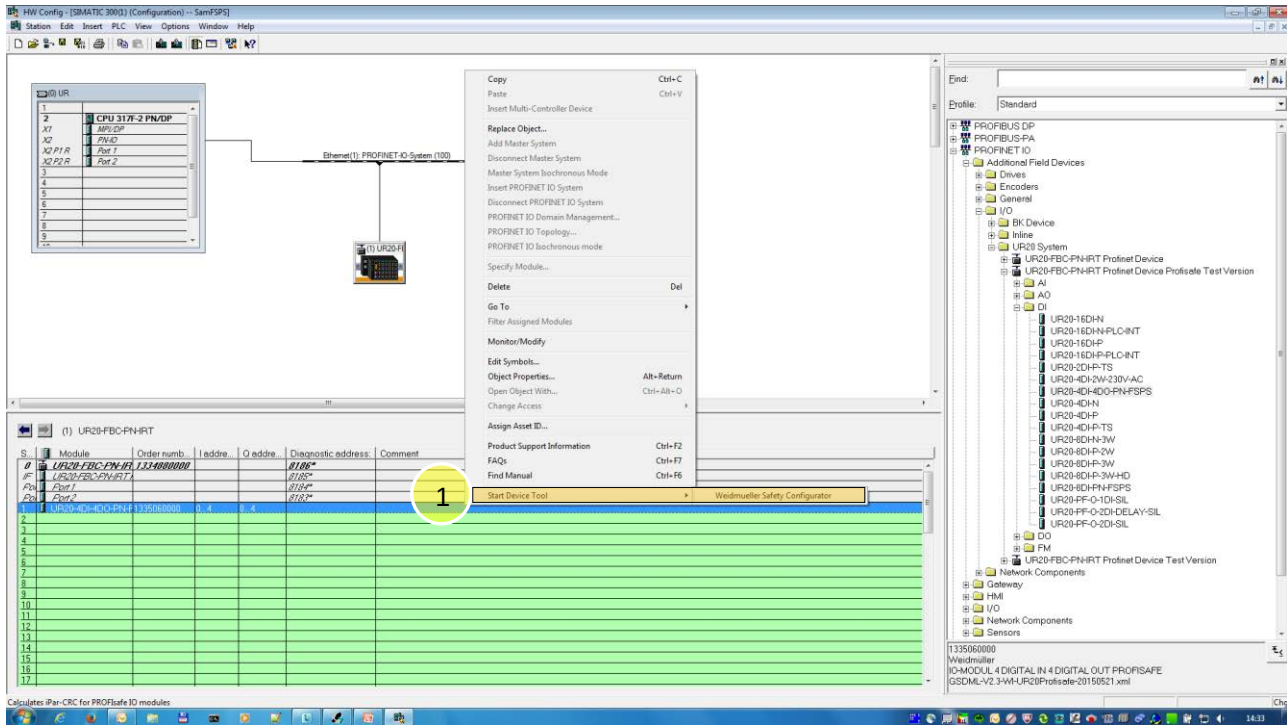
Further parameter settings of the UR20 module

1) The parameter are adjusted according to the samples on page 20 or 21



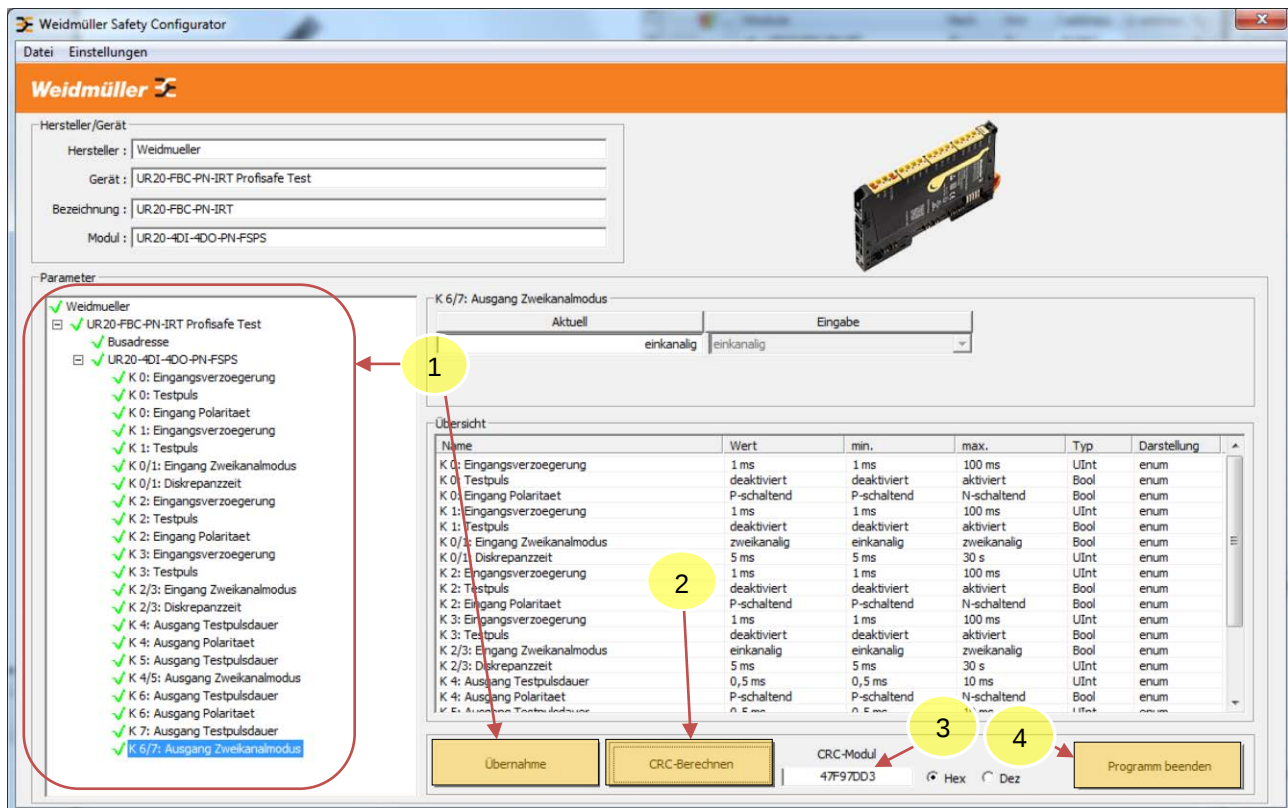
Start the Weidmüller CPD Tool

1) Start the device Tool by mark the module and right mouse click



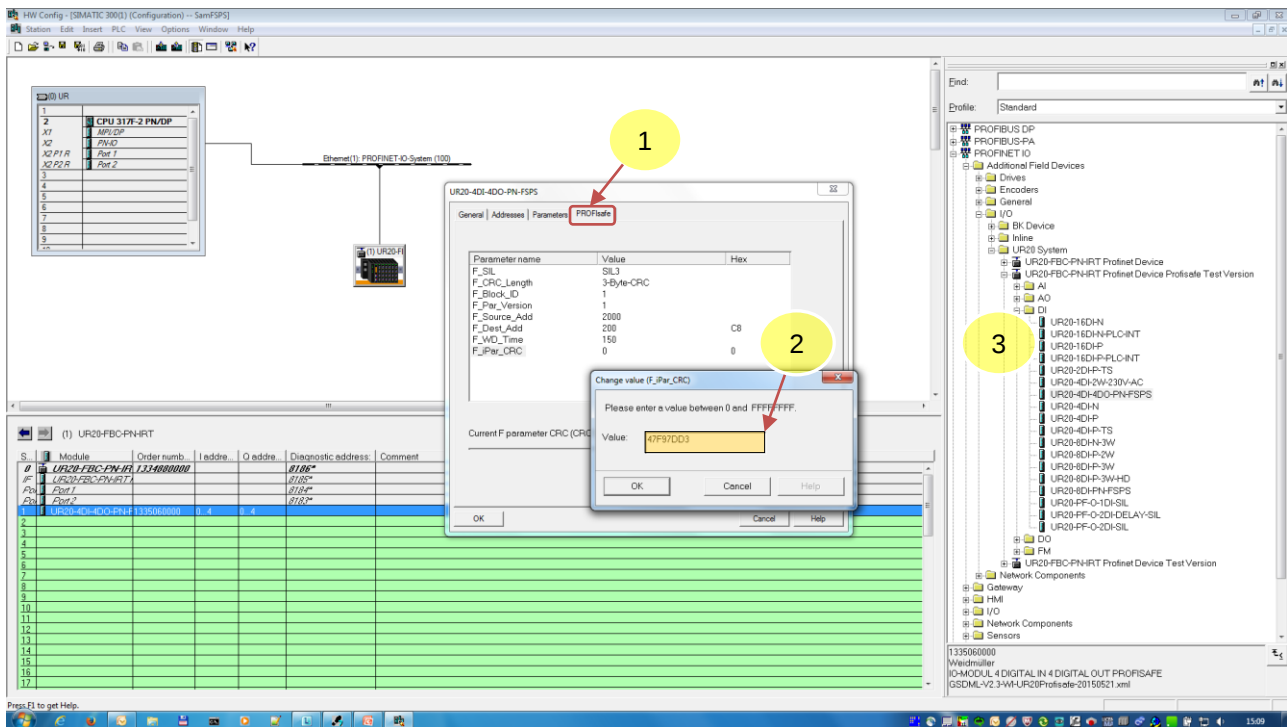
Calculate the check sum

- 1) Confirm each parameter
- 2) Click the button "CRC calculate" to get the CRC value
- 3) Mark and copy the CRC value
- 4) Close the program



Adjust the CRC value of the UR20 module

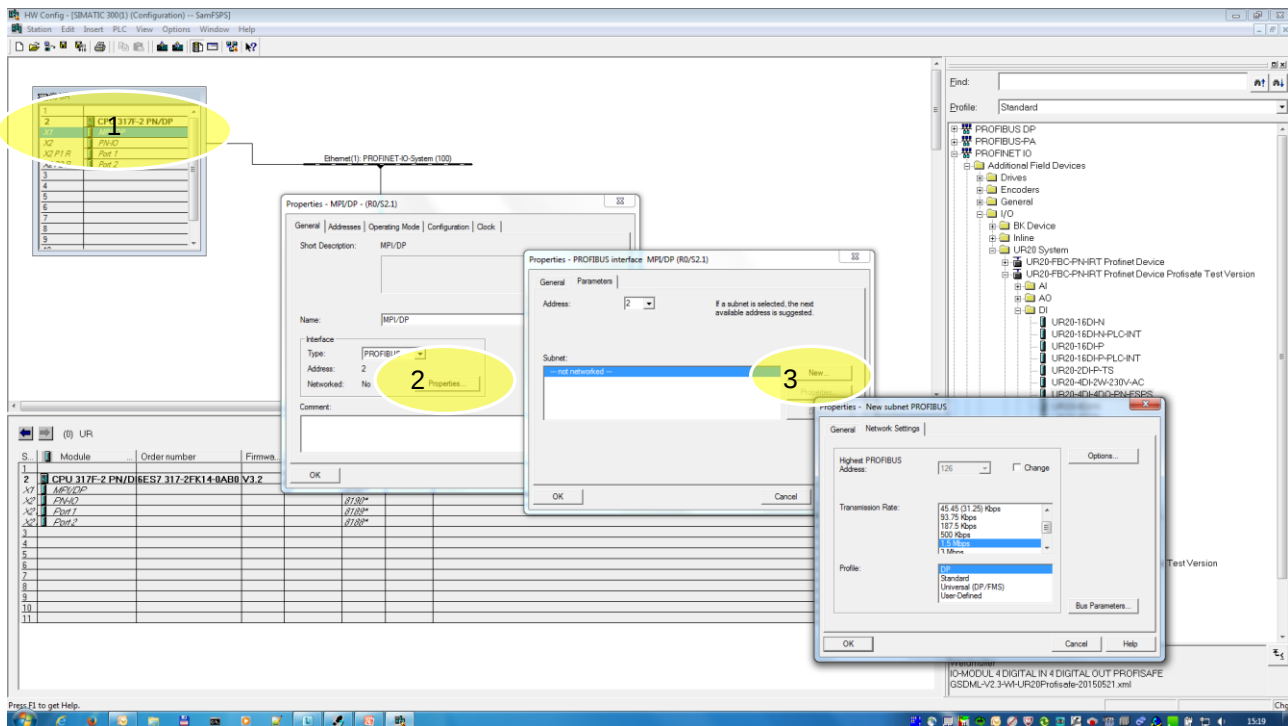
- 1) When the parameter settings have reopened again click on "PROFIsafe" It will open the PROFIsafe settings of the module
- 2) Paste the CRC value into "F_iPar_CRC"
- 3) Download the configuration into the PLC



5. Integration of UR20-4DI-4DO-PN-FSPS and UR20-8DI-PN-FSPS on PROFIBUS

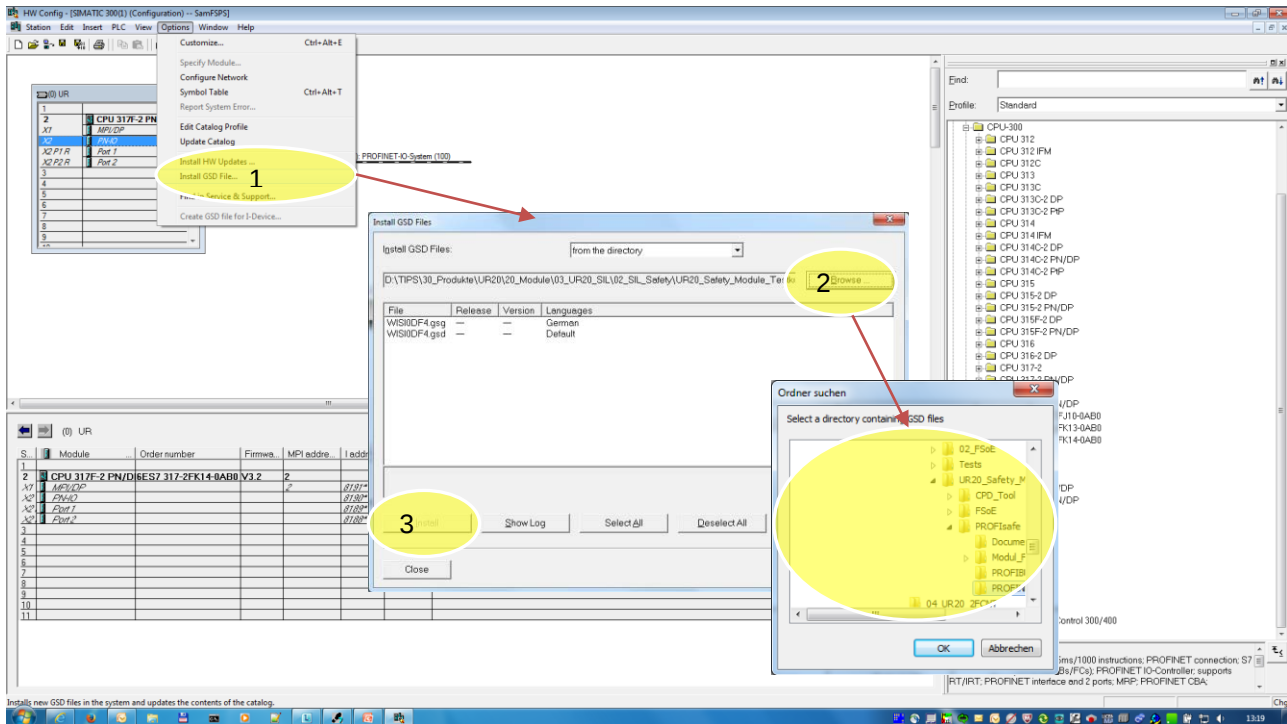
Insert a PROFIBUS network

- 1) Expand the tree “MPI/DP interface [X1]”
- 2) Click on “Properties” to open further settings for PROFIBUS
- 3) Click on “New” to insert a new subnet and make further settings for PROFIBUS



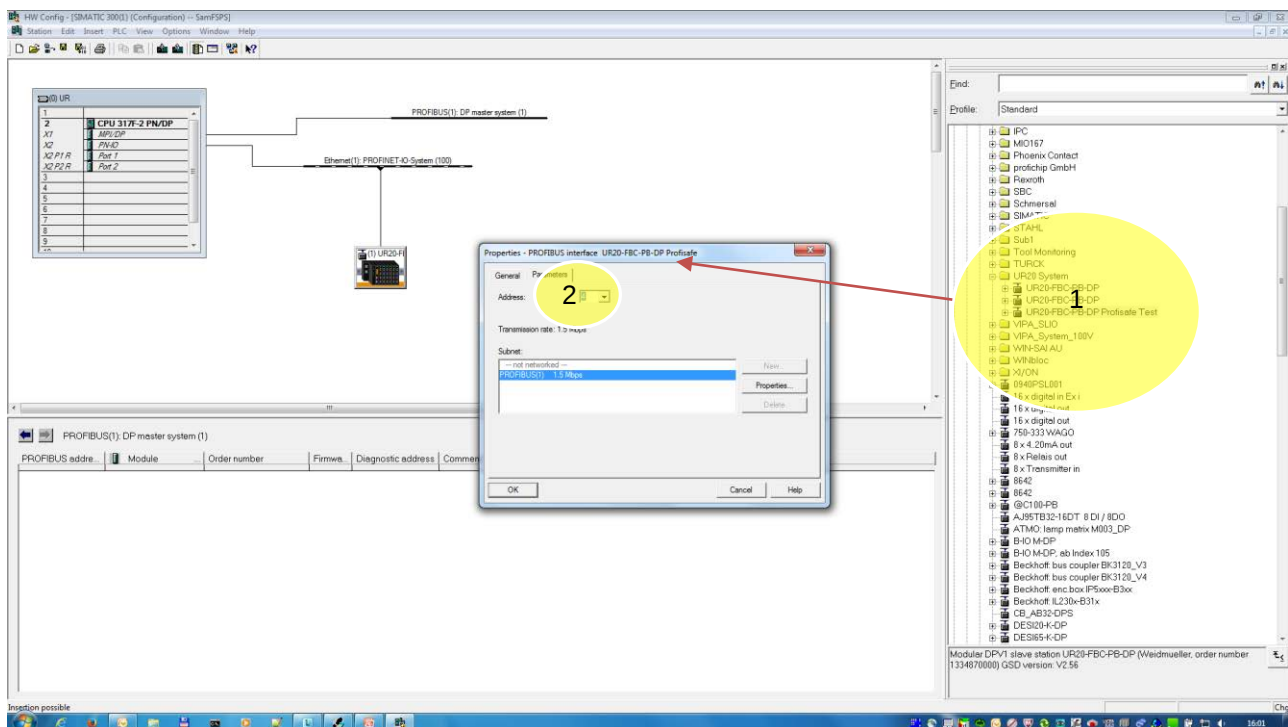
Install a GSD file.

- 1) Open "Options" and click "install general station description file (GSD)"
- 2) Open the path and choose the GSD file to install
- 3) Push the button "install". The files will be installed and the catalogue will be updated



Insert UR20 to the PROFIBUS line

- 1) Expand the branch "Additional Field Devices" of the folder PROFIBUS DP and place UR20 by drag and drop
- 2) Adjust the PROFIBUS DP address according to the rotary switches of the UR20 coupler



Possible further settings for UR20 PROFIBUS DP slave

- 1) Double click the symbol of UR20
- 2) Change further parameter of the UR20 coupler if it is necessary

