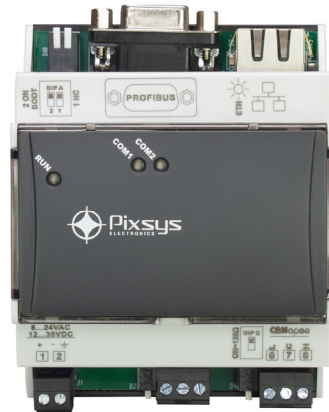


75AŽ5@V510-PNET-CAN-A

Software version SW67607

PROFINET Slave / CANOPEN master Converter



User Manual

WARNING:

Pixsys srl reserves the right to change information in this manual about our product without warning.
Pixsys srl is not responsible for any error this manual may contain.

TRADEMARKS:

All trademarks mentioned in this document belong to their respective owners.

SECURITY ALERT:**GENERAL INFORMATION**

To ensure safe operation, the device must be operated according to the instructions in the manual. When using the device are required for each individual application, legal and safety regulation. The same applies also when using accessories.

INTENDED USE

Machines and systems must be designed so the faulty conditions do not lead to a dangerous situation for the operator (i.e. independent limit switches, mechanical interlocks, etc.).

QUALIFIED PERSONNEL

The device can be used only by qualified personnel, strictly in accordance with the specifications.

Qualified personnel are persons who are familiar with the installation, assembly, commissioning and operation of this equipment and who have appropriate qualifications for their job.

RESIDUAL RISKS

The device is state of the art and is safe. The instrument can represent a potential hazard if they are inappropriately installed and operated by personnel untrained. These instructions refer to residual risks with the following symbol:



This symbol indicates that non-observance of the safety instructions is danger for people to serious injury or death and / or the possibility of damage.

CE CONFORMITY

The declaration is made by us. You can send an email to support@pixsys.net or give us a call if you need it.

EXAMPLE OF CONNECTION:



CONNECTION SCHEME:

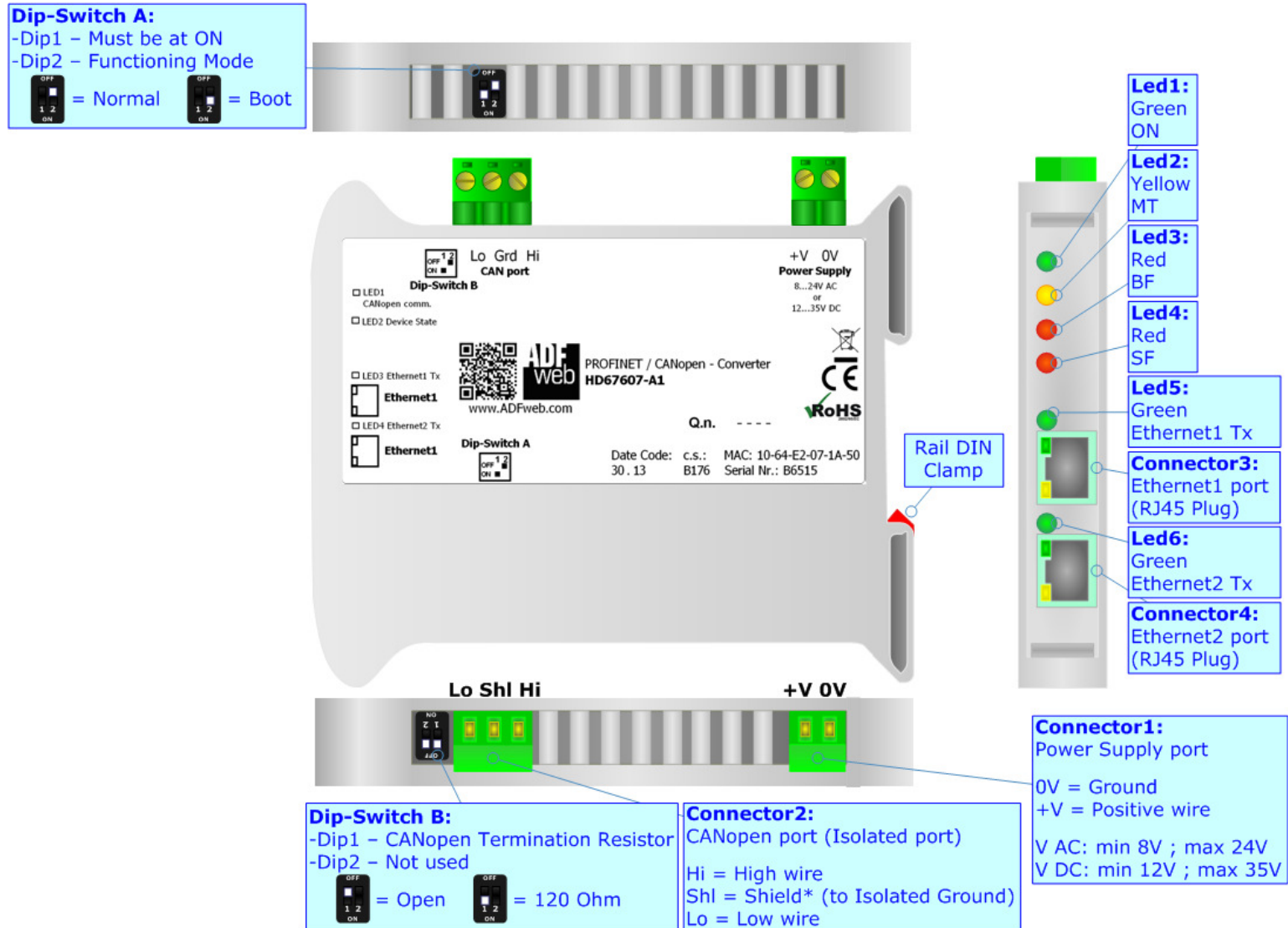


Figure 1: Connection scheme for CNV510

CHARACTERISTICS:

The CNV510-PNET-CAN-A is a PROFINET / CANopen Converter.

It has the following characteristics:

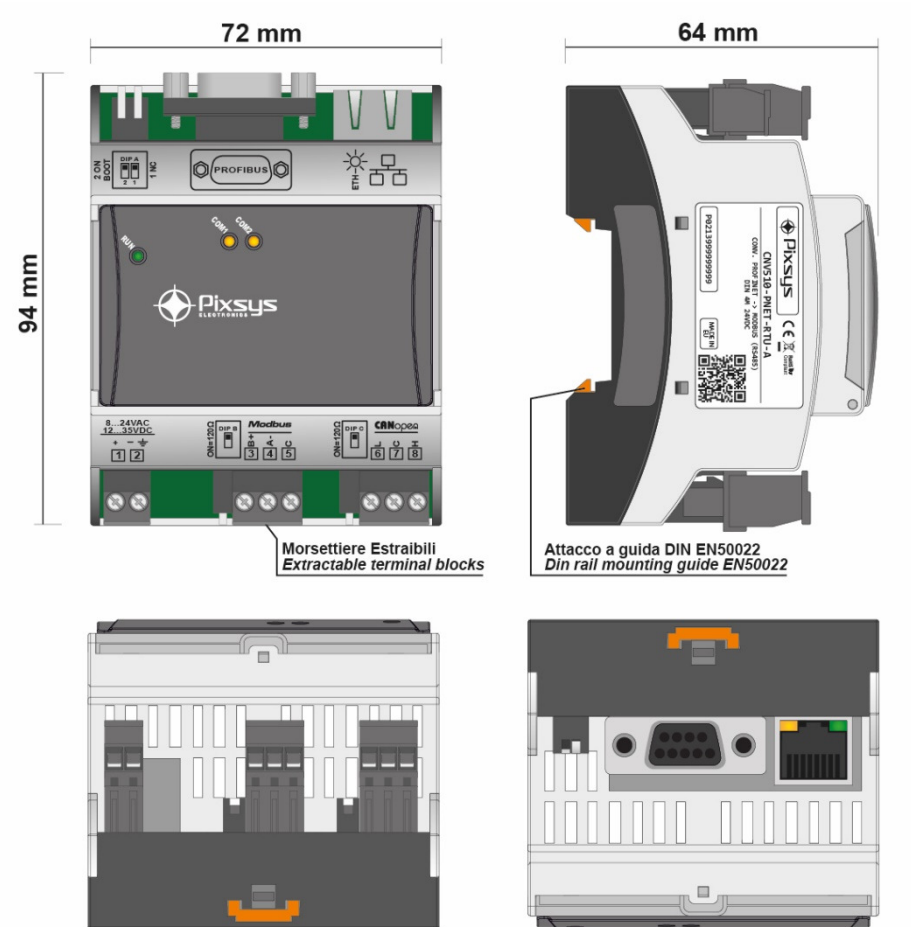
- Up to 1440 bytes in reading and 1440 bytes in writing
- Triple isolation between CAN - Power Supply, CAN - Ethernet, Power Supply - Ethernet
- Two-directional information between CANopen bus and PROFINET bus
- Mountable on 35mm Rail DIN
- Wide power supply input range: 8...24V AC or 12...35V DC
- Wide temperature range: -40°C / 85°C [-40°F / +185°F].

CONFIGURATION:

You need Compositor SW67607 software on your PC in order to perform the following:

- Define the parameter of PROFINET line
- Define the parameter of CAN line
- Define SDO Server information
- Define SDO Client information
- Define PDO information (RPDO/TPDO);
- Define Node Guarding
- Update the device.

MECHANICAL DIMENSIONS:

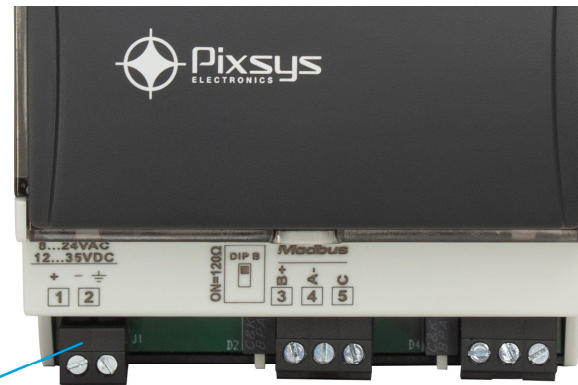


POWER SUPPLY:

Connector1:
Power Supply port

- = Ground
- + = Positive wire

V AC: min 8V ; max 24V
V DC: min 12V ; max 35V



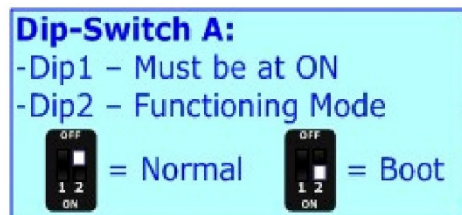
FUNCTION MODES:

The device has got two functions mode depending on the position of the 'Dip2 of Dip-Switch A':

- The first, with 'Dip2 of Dip-Switch A' at "OFF" position, is used to the normal working of the device.
- The second, with 'Dip2 of Dip-Switch A' at "ON" position, is used to upload the Project and/or Firmware.

For the operations to follow for the updating, see 'UPDATE DEVICE' section.

According to the functioning mode, the LEDs will have specifics functions, see 'LEDS' section.



Warning:

Dip1 of 'Dip-Switch A' must be at ON position for working even if the Ethernet cable isn't inserted.

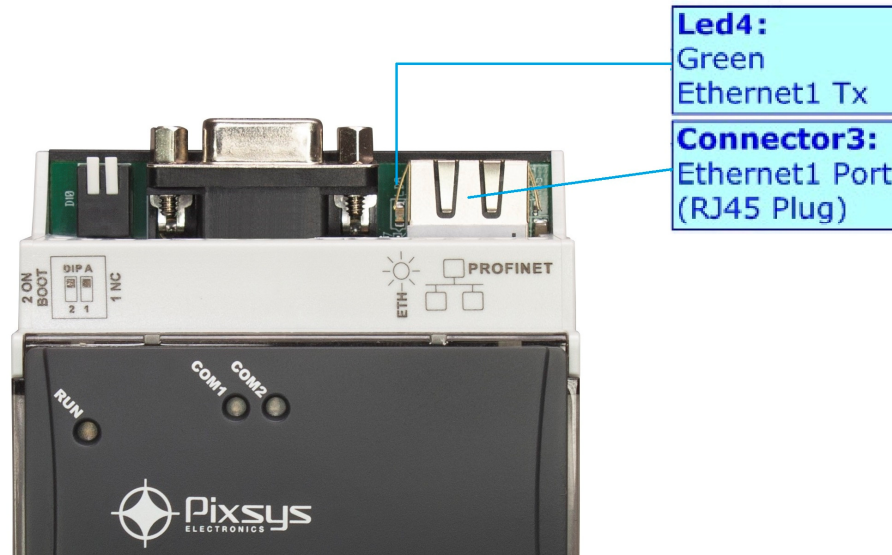
LEDS:

LEDs that are used to give information of the functioning status.
The various meanings of the LEDs are described in the table below.

LED	Normal Mode	Boot Mode
1: ON [supply voltage] (green)	ON: Device powered OFF: Device not powered	ON: Device powered OFF: Device not powered
2: PT [PROFINET state] (yellow)	ON: PROFINET transmissions present FLASHING: No PROFINET transmissions present	
3: MT [Modbus state] (yellow)	ON: MODBUS-RTU transmissions present FLASHING: No MODBUS-RTU transmissions present	
4: Ethernet1 Tx (green)	Blinks when is transmitting Ethernet frames	Blinks quickly: Boot state Blinks very slowly (~0.5Hz): Update in progress
Internal LED (green)	Blinks very slowly (~0.5Hz): Device is working in normal mode	

PROFINET:

The PROFINET connection must be made using Connector3 and/or Connector4 of CNV510 with at least a Category 5E cable. The maximum length of the cable should not exceed 100m. The cable has to conform to the T568 norms relative to connections in cat.5 up to 100 Mbps. To connect the device to an Hub/Switch is recommended the use of a straight cable, to connect the device to a PC/PLC/other is recommended the use of a cross cable.



CANOPEN:

For terminate the CANopen line with a 120Ω resistor it is necessary that the Dip1 of 'Dip-Switch B' is at ON position.



Connector2:

CANopen port (Isolated port)

H = High wire

C = Shield* (to Isolated Ground)

L = Low wire

Dip-Switch C:

-on - CANopen Resistor used

-off - Not used

Cable characteristics:

Length	Baud Rate [bps]	Length MAX [m]
	10 K	5000
	20 K	2500
	50 K	1000
	100 K	650
	125 K	500
	250 K	250
	500 K	100
	800 K	50
	1000 K	25

USE OF COMPOSITOR SW67607:

To configure the Converter, use the available software that runs with Windows called SW67607. It is downloadable on the Pixsys download area (<https://cloud.pixsys.net/>) and its operation is described in this document. *(This manual is referenced to the last version of the software present on our web site)*. The software works only on Microsoft Windows (7, 8, 10; 32/64bit architectures).

When launching the SW67607, the window below appears (Fig. 2).



Note:

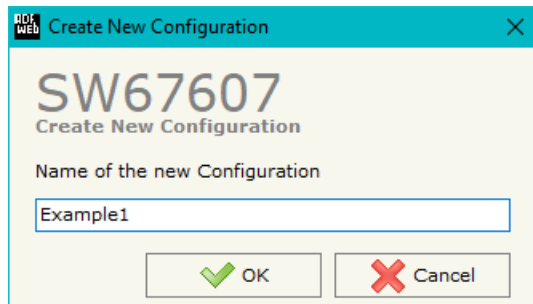
It is necessary to have installed .Net Framework 4.



Figure 2: Main window for SW67607

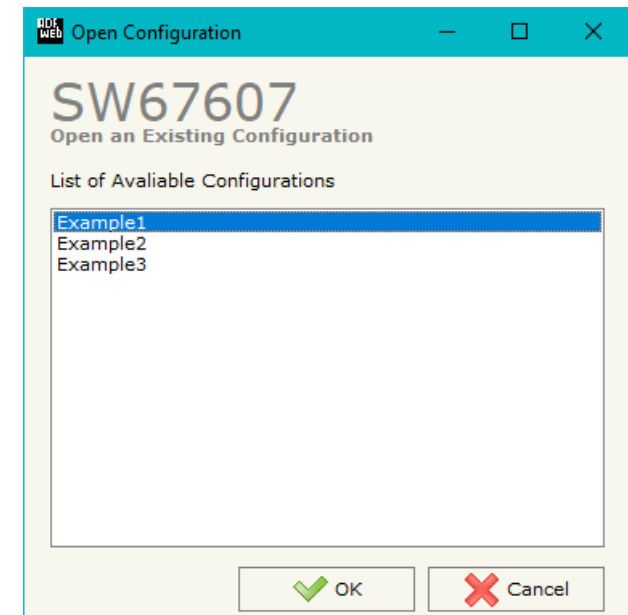
NEW CONFIGURATION / OPEN CONFIGURATION:

The “**New Configuration**” button creates the folder which contains the entire device’s configuration.




A device’s configuration can also be imported or exported:

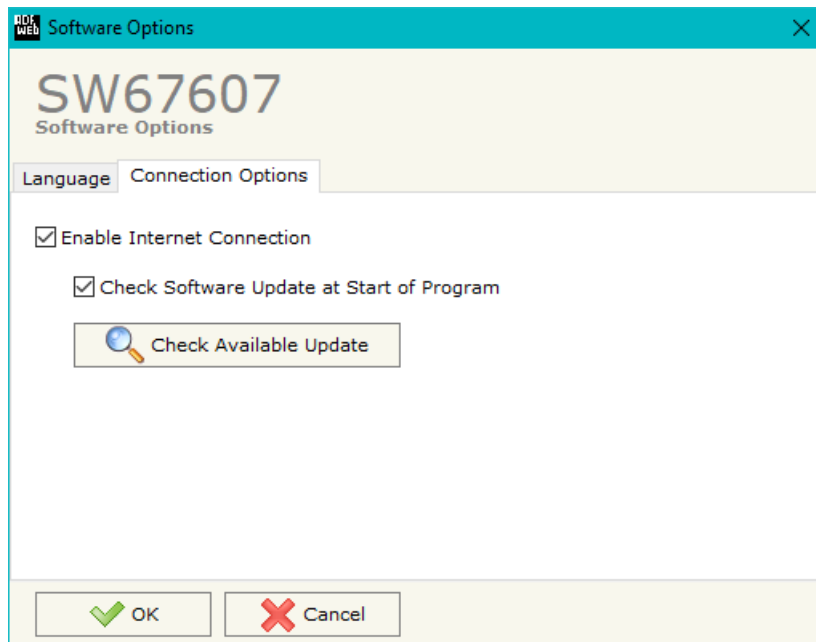
- To clone the configurations of a programmable “PROFINET / CANopen - Converter” to configure another device in the same manner, it is necessary to maintain the folder and all its contents.
- To clone a project to obtain a different version of the project, it is sufficient to duplicate the project folder with another name and open the new folder with the button “**Open Configuration**”.



SOFTWARE OPTIONS:

By pressing the “Settings” () button there is the possibility to change the language of the software and check the updatings for the compositor.

In the section “Language” it is possible to change the language of the software.



In the section “Connection Options”, it is possible to check if there are some updatings of the software compositor in Pixsys srl website.

Checking the option “**Check Software Update at Start of Program**”, the SW67607 checks automatically if there are updatings when it is launched.

SET COMMUNICATION:

This section defines the fundamental communication parameters of two buses, CANopen and PROFINET.

By Pressing the **"Set Communication"** button from the main window of SW67607 (Fig. 2) the window "Set Communication" appears (Fig. 3).

The meaning of the fields of "PROFINET" are:

- In the field **"IP ADDRESS"** the IP address to assign to the converter is defined;
- In the field **"SUBNET Mask"** the SubNet Mask of the converter is defined;
- In the field **"GATEWAY"** the default gateway of the network is defined. This feature can be enabled or disabled pressing the Check Box field. This feature is used for going out of the net;
- In the field **"Tunneling Port"** the port to use for the "Tunneling mode" is defined (see page 28 for more details);
- In the field **"PROFINET Name of Station"** the name of PROFINET side of the converter is defined;
- In the field **"PROFINET -> Gateway"** the number of byte from the PROFINET Master to the converter is defined (it is possible to use up to 1439 byte);
- In the field **"PROFINET <- Gateway"** the number of byte from the converter to the PROFINET Master is defined (it is possible to use up to 1439 byte);
- If the field **"Diagnostic"** is checked, the diagnostic function is enabled. In the field on the right, the starting PROFINET byte where saving the diagnostic is defined (see page 30 for more details);
- If the field **"CANopen CMD Ind"** is checked, It is possible to send asynchronous CAN messages from PROFINET (see page 27 for more details).

The means of the fields for the "CANopen" section are:

- In the field **"Device ID"** the ID of the CANopen side is defined;
- In the field **"Baud Rate"** the data rate of the CANopen line is defined;
- In the field **"Set Operational State at Start-Up"** the state of the CANopen is defined. I.e. If it is checked the board starts in Operational State, else it starts in Pre-Operational;
- In the field **"Network Start at Start-Up"** the state of the CANopen network is defined. I.e. If it is checked the board sends a command to set the Operational State of all the devices present in the network, after the time defined in the "Delay" field;
- In the field **"Delay (s)"** the delay before sending the "Start" command for the CANopen is defined;

The screenshot shows the 'Set Communication' window for the SW67607 device. The window is divided into two main sections: PROFINET and CANopen. The PROFINET section includes fields for IP ADDRESS (192.168.0.10), SUBNET Mask (255.255.255.0), GATEWAY (192.168.0.1), Tunneling Port (10002), PROFINET Name of Station (devicename1), PROFINET -> Gateway (1439), PROFINET <- Gateway (1439), Diagnostic (unchecked, 0), and CANopen CMD Ind (unchecked, 0). The CANopen section includes fields for Device ID (1), Baudrate (1000K), Set Operational State at Start-Up (checked), Network Start at Start-Up, Delay (s) (10), SDO Client TimeOut (1/10 ms) (10000), Enable Sync (ms) (1000), Enable Restart CANopen Devices (unchecked), Enable Reset Data (unchecked), Enable Triggered SDO (unchecked), Address Input Data TSDO (0), and Address Output Data TSDO (0). At the bottom are OK and Cancel buttons.

Figure 3: "Set Communication" window

- In the field "**SDO Client TimeOut (1/10 ms)**" the maximum time that the device attends for the answer from the Slave interrogated is defined;
- If the field "**Enable Sync (ms)**" is checked and a time is defined, the converter can send cyclically a SYNC message to the CANopen network;
- If the field "**Enable Restart CANopen Devices**" is checked, the converter restarts the CANopen devices listed in the section "ReStart Devices" that are not answering to the NodeGuarding;
- If the field "**Enable Reset Data**" is checked, the converter resets data on PROFINET side for the CANopen devices that are not answering to NodeGuarding;
- If the field "**Enable Triggered SDO**" is checked, the it is possible to send asynchronous SDO requests directly from PROFINET side. The starting input byte of the converter to write for sending the SDO requests is defined in the field "**Address Input Data TSDO**" and the response is saved starting from output byte defined in the field "**Address Output Data TDSO**". See page 29 for more info.

SET SDO SERVER:

By pressing the “**Set SDO Server**” button from the main window for SW67607 (Fig. 2) the window “Set SDO Server Access” appears (Fig. 4).

This window is made to create the SDO in read or write in the CANopen side, and to indicate which byte are associated to these SDOs.

It is divided in two parts, the “SDO in read” and the “SDO in Write”. The first part is used to read, using the SDO, the data arrived from the PROFINET Master. The second is used to write, using SDO, the data that will be sent to the PROFINET Master.

The data of the columns have the following meanings:

- In the field “**Index**” the address of the SDO is defined;
- In the field “**SubIndex**” the second address of the SDO is defined;
- If the field “**N Byte**” the dimension of the SDO is defined (it can be 1, 2 or 4);
- In the field “**Address Byte1**” insert the address of the PROFINET arrays where read/write first byte of the SDO;
- In the field “**Address Byte2**” insert the address of the PROFINET arrays where read/write second byte of the SDO (only if N Byte is 2 or 4);
- In the field “**Address Byte3**” insert the address of the PROFINET arrays where read/write third byte of the SDO (only if N Byte is 4);
- In the field “**Address Byte4**” insert the address of the PROFINET arrays where read/write fourth byte of the SDO (only if N Byte is 4);
- In the field “**Mnemonic**” the description for the SDO is defined.

N°	Index	SubIndex	N Byte	Add Byte1	Add Byte2	Add Byte3	Add Byte4	Mnemonic
1	0x3000	0x00	4	0	1	2	3	PPM

N°	Index	SubIndex	N Byte	Add Byte1	Add Byte2	Add Byte3	Add Byte4	Mnemonic
1	0x2501	0	2	0	1			Set Temperature
2	0x2601	0	1	2				Set Umidity
3								
4								
5								

Figure 4: “Set SDO Server Access” window

SET SDO CLIENT:

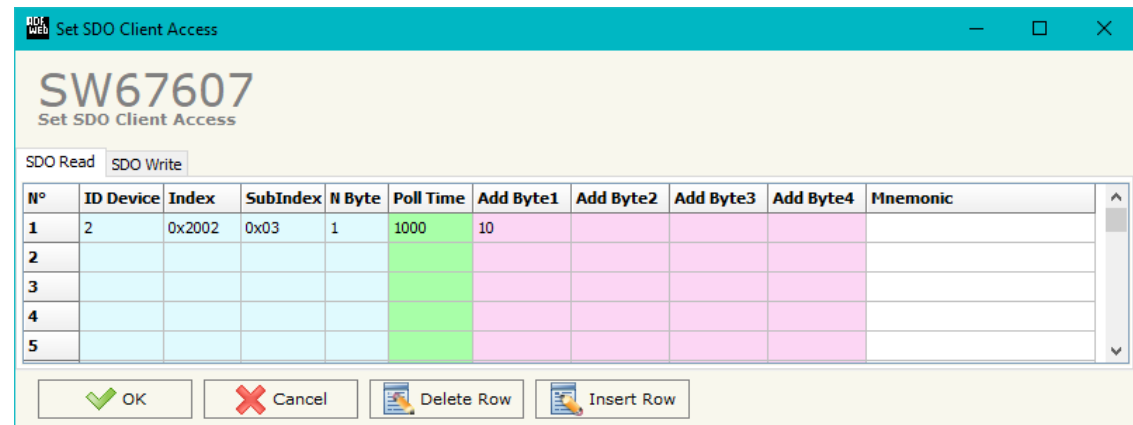
By pressing the **"Set SDO Client"** button from the main window for SW67607 (Fig. 2) the window "Set SDO Client Access" appears (Fig. 5a and 5b).

With the SDO Client the HD67607 Gateway can read and/or write the data from other devices connected in the network CANopen.

It is divided in two parts, the "SDO Read" and the "SDO Write". The first part is used to read, using the SDO, the data in another device and then put them in the PROFINET array. The second part is used to write, using the SDO, the data present in the PROFINET array to others CANopen devices.

The data of the columns in the "SDO Read" have the following meanings:

- ➔ In the field **"Device ID"** insert the ID of the device to read;
- ➔ In the field **"Index"** the address for the SDO is defined;
- ➔ In the field **"SubIndex"** the second address for the SDO is defined;
- ➔ In the field **"N Byte"** the dimension of the SDO is defined (it can be 1, 2, or 4);
- ➔ In the field **"Poll Time"** insert the cyclic time to make this request;
- ➔ In the field **"Address Byte1"** the address of the PROFINET array where coping the first byte of the SDO read is defined;
- ➔ In the field **"Address Byte2"** the address of the PROFINET array where coping the second byte of the SDO read is defined (only if N Byte is 2 or 4);
- ➔ In the field **"Address Byte3"** the address of the PROFINET array where coping the third byte of the SDO read is defined (only if N Byte is 4);
- ➔ In the field **"Address Byte4"** the address of the PROFINET array where coping the fourth byte of the SDO read is defined (only if N Byte is 4);
- ➔ In the field **"Mnemonic"** the description for the SDO is defined.



N°	ID Device	Index	SubIndex	N Byte	Poll Time	Add Byte1	Add Byte2	Add Byte3	Add Byte4	Mnemonic
1	2	0x2002	0x03	1	1000	10				
2										
3										
4										
5										

Figure 5a: "Set SDO Client Access – SDO Read" window

The data of the columns in the “SDO Write” have the following meanings:

- In the field "**Device ID**" insert the ID of the device to write;
- In the field "**Index**" the address for the SDO is defined;
- In the field "**SubIndex**" the second address for the SDO is defined;
- In the field "**N Byte**" the dimension of the SDO is defined (it can be 1, 2, or 4);
- In the field "**Poll Time**" insert the cyclic time to make this request;
- If the field "**On Change**" is checked, the gateway sends the Write SDO request when the data change the value;
- In the field "**Address Byte1**" the address of the PROFINET array where reading the first byte of the SDO write is defined;
- In the field "**Address Byte2**" the address of the PROFINET array where reading the second byte of the SDO write is defined (only if N Byte is 2 or 4);
- In the field "**Address Byte3**" the address of the PROFINET array where reading the third byte of the SDO write is defined (only if N Byte is 4);
- In the field "**Address Byte4**" the address of the PROFINET array where reading the fourth byte of the SDO write is defined (only if N Byte is 4);
- In the field "**Mnemonic**" the description for the SDO is defined.

N°	ID Device	Index	SubIndex	N Byte	Poll Time	On Change	Add Byte1	Add Byte2	Add Byte3	Add Byte4	Mnemonic
1	2	0x2000	0x01	4	1000	<input checked="" type="checkbox"/>	10	11	12	13	
2						<input type="checkbox"/>					
3						<input type="checkbox"/>					
4						<input type="checkbox"/>					
5						<input type="checkbox"/>					

Figure 5b: "Set SDO Client Access – SDO Write" window

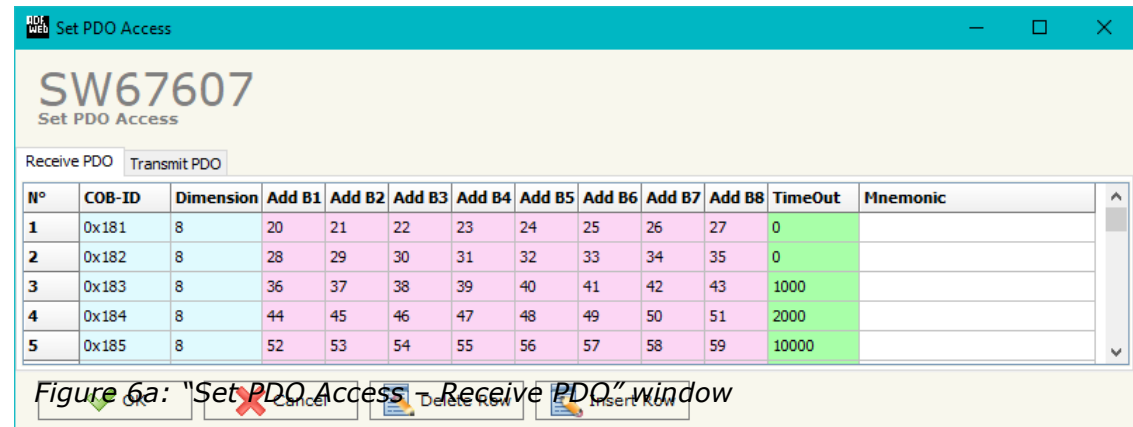
SET PDO ACCESS:

By pressing the "Set PDO Access" button from the main window for SW67607 (Fig. 2) the window "Set PDO Access" appears (Fig. 6a and 6b).

This window is made to create the Receive and the Transmit PDO in the CANopen side, and to indicate which bytes are associated to these PDO. It is divided in two parts, the "Receive PDO" and the "Transmit PDO". The first part is used to receive PDO in the CANopen network and copy the data in the PROFINET array. The second part is used to transmit PDO in the CANopen network with the data of PROFINET array.

The data of the columns in the "Receive PDO" have the following meanings:

- In the Field "**Cob-ID**" the address for the PDO is defined;
- In the Field "**Dimension**" the dimension of the PDO is defined (it can be between 1 and 8);
- In the Field "**Add B1**" the first byte where the data will be saved in the PROFINET array is defined;
- In the Field "**Add B2**" the second byte where the data will be saved in the PROFINET array is defined (only if **Dimension** > 1);
- In the Field "**Add B3**" the third byte where the data will be saved in the PROFINET array is defined (only if **Dimension** > 2);
- In the Field "**Add B4**" the fourth byte where the data will be saved in the PROFINET array is defined (only if **Dimension** > 3);
- In the Field "**Add B5**" the fifth byte where the data will be saved in the PROFINET array is defined (only if **Dimension** > 4);
- In the Field "**Add B6**" the sixth byte where the data will be saved in the PROFINET array is defined (only if **Dimension** > 5);
- In the Field "**Add B7**" the seventh byte where the data will be saved in the PROFINET array is defined (only if **Dimension** > 6);
- In the Field "**Add B8**" the eighth byte where the data will be saved in the PROFINET array is defined (only if **Dimension** > 7);
- The field "**TimeOut**" is used to put at zero the data into PROFINET if the PDO doesn't arrive with a frequency less than the time expressed in the field. If the value in the field is 0, it means that you don't want to use this feature, and so the value is never deleted;
- In the field "**Mnemonic**" the description for the PDO is defined.



The data of the columns in the "Transmit PDO" have the following meanings:

- In the Field "**Cob-ID**" the address for the PDO is defined;
- In the Field "**Dimension**" the dimension of the PDO is defined (it can be between 1 and 8);
- In the Field "**Add B1**" the first byte where the data will be loaded in the PROFINET array is defined;
- In the Field "**Add B2**" the second byte where the data will be loaded in the PROFINET array is defined (only if **Dimension** > 1);
- In the Field "**Add B3**" the third byte where the data will be loaded in the PROFINET array is defined (only if **Dimension** > 2);
- In the Field "**Add B4**" the fourth byte where the data will be loaded in the PROFINET array is defined (only if **Dimension** > 3);
- In the Field "**Add B5**" the fifth byte where the data will be loaded in the PROFINET array is defined (only if **Dimension** > 4);
- In the Field "**Add B6**" the sixth byte where the data will be loaded in the PROFINET array is defined (only if **Dimension** > 5);
- In the Field "**Add B7**" the seventh byte where the data will be loaded in the PROFINET array is defined (only if **Dimension** > 6);
- In the Field "**Add B8**" the eighth byte where the data will be loaded in the PROFINET array is defined (only if **Dimension** > 7);
- In the Field "**Send Time**" insert the interval used to send the PDO. The time is in milliseconds;
- If the field "**On Change**" is checked, the gateway send the Transmit PDO when the data change the value;
- In the field "**Mnemonic**" the description for the PDO is defined.

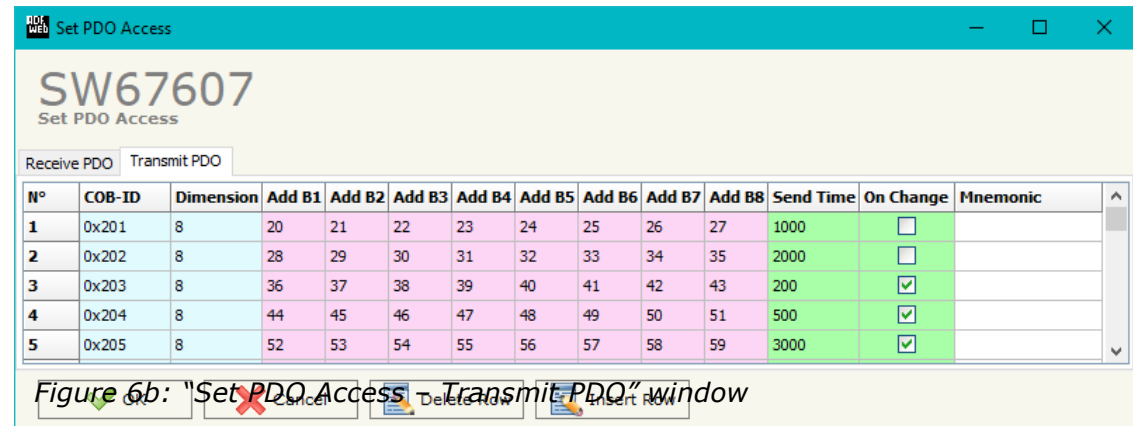
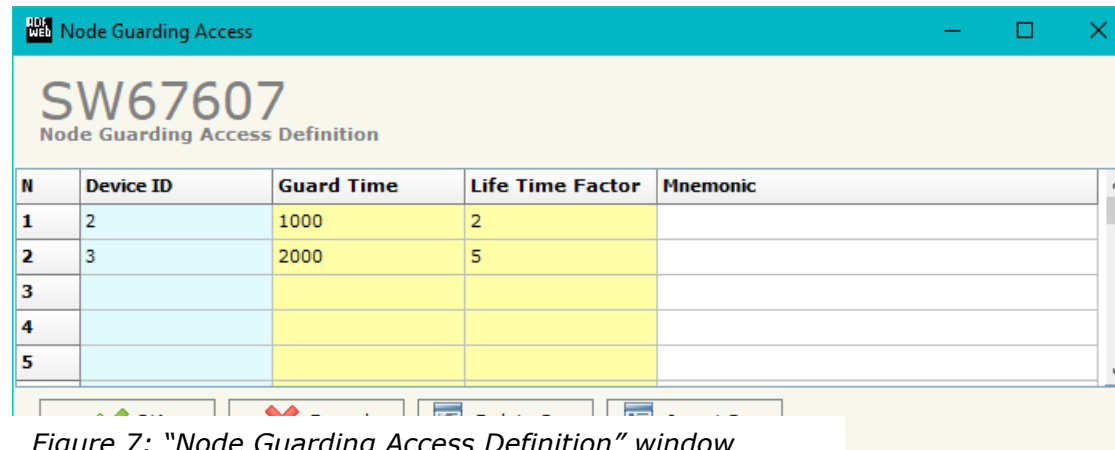


Figure 6b: "Set PDO Access - Transmit PDO" window

SET NODE GUARDING



N	Device ID	Guard Time	Life Time Factor	Mnemonic
1	2	1000	2	
2	3	2000	5	
3				
4				
5				

Figure 7: "Node Guarding Access Definition" window

By pressing the **"Set Node Guarding"** button from the Main Window of SW67607 (Fig. 2) the "Node Guarding Access Definition" window appears (Fig. 7).

The data of the columns have the following meanings:

- ➔ In the field **"Device ID"** the address of the device that you want to control is defined;
- ➔ In the field **"Guard Time"** the Guard Time is defined. This value indicates the delay between two interrogations;
- ➔ In the field **"Life Time Factor"** the number of attempts before considering the device absent is defined;
- ➔ In the field **"Mnemonic"** a description is defined.

RESTART DEVICES

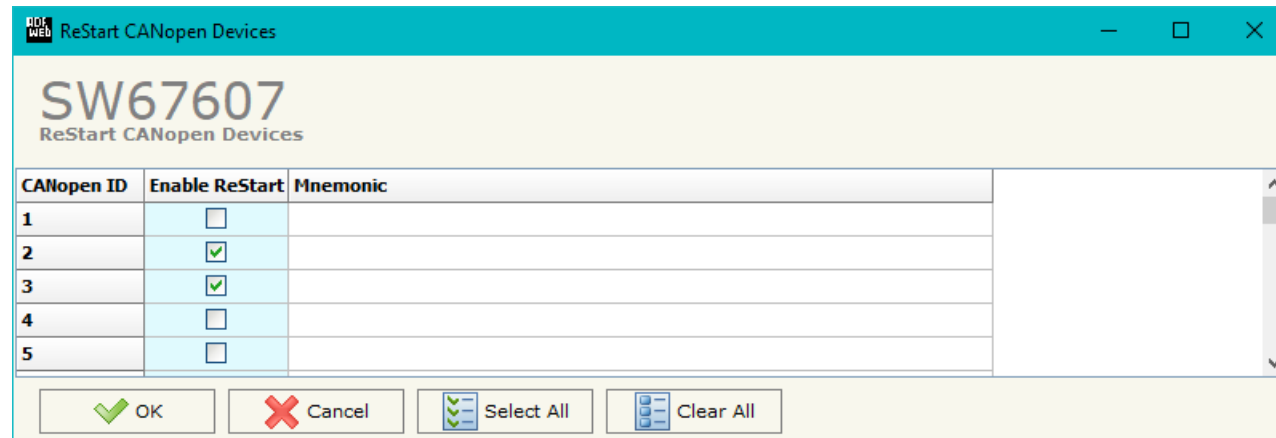


Figure 8: "ReStart CANopen Devices" window

By pressing the **"ReStart Devices"** button from the Main Window of SW67607 (Fig. 2) the "ReStart CANopen Devices" window appears (Fig. 8). This section is used to define which CANopen devices the converter will try to restart if they are not responding to Node Guard.

The data of the columns have the following meanings:

- In the field **"Enable ReStart"** it is possible to select which CANopen devices the converter will restart;
- In the field **"Mnemonic"** a description is defined.

PROFINET XML:

By Pressing the "**PROFINET XML**" button from the main window for SW67607 (Fig. 2) it is possible to generate the xml file to be imported into the master PROFINET.

EDS FILE:

By Pressing the "**EDS FILE**" button from the main window for SW67607 (Fig. 2) it is possible to generate the EDS file to be imported into the master CANopen.

UPDATE DEVICE:

By pressing the **"Update Device"** button it is possible to load the created Configuration into the device; and also the Firmware, if is necessary.

If you don't know the actual IP address of the device you have to use this procedure:

- Turn OFF the Device;
- Put Dip2 of 'Dip-Switch A' at ON position;
- Turn ON the device
- Connect the Ethernet cable;
- Insert the IP **"192.168.2.205"**;
- Press the **"Ping"** button, must appear **"Device Found!"**;
- Press the **"Next"** button;
- Select which operations you want to do;
- Press the **"Execute update firmware"** button to start the upload;
- When all the operations are **"OK"** turn OFF the Device;
- Put Dip2 of 'Dip-Switch A' at OFF position;
- Turn ON the device.

If you know the actual IP address of the device you have to use this procedure:

- Turn ON the Device with the Ethernet cable inserted;
- Insert the actual IP of the Converter;
- Press the **"Ping"** button, must appear **"Device Found!"**;
- Press the **"Next"** button;
- Select which operations you want to do;
- Press the **"Execute update firmware"** button to start the upload;
- When all the operations are **"OK"** the device automatically goes at Normal Mode.

At this point the configuration/firmware on the device is correctly update.

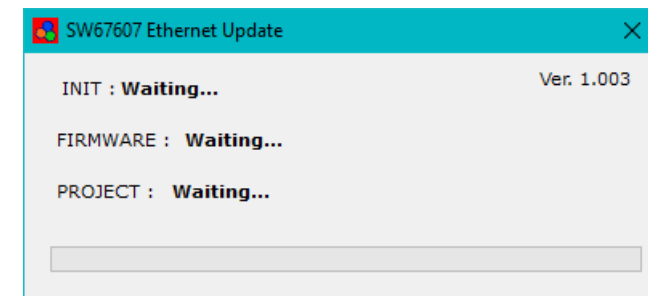
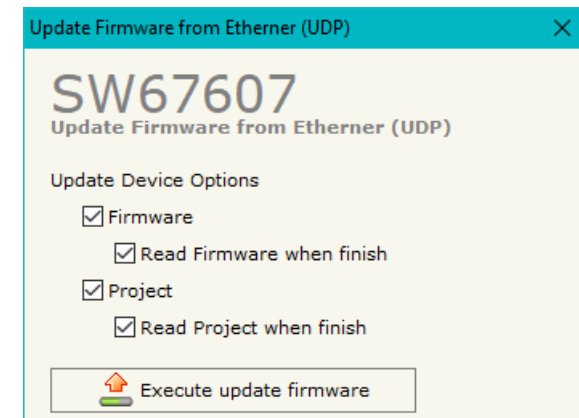
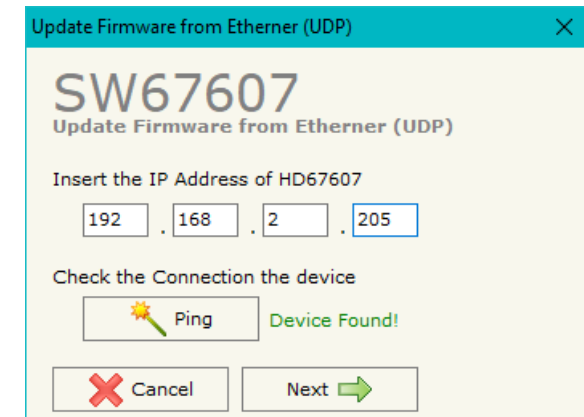


Figure 9: "Update device" windows



Note:

When you install a new version of the software, if it is the first time it is better you do the update of the Firmware in the HD67607 device.



Note:

When you receive the device, for the first time, you also have to update the Firmware in the HD67607 device.



Warning:

If Fig. 10 appears when you try to do the Update try these points before seeking assistance:

- Try to repeat the operations for the updating;
- Try with another PC;
- Try to restart the PC;
- Check the LAN settings;
- Check the Wi-Fi settings;
- If you are using the program inside a Virtual Machine, try to use in the main Operating System;
- If you are using Windows Seven, Vista, 8 or 10 make sure that you have the administrator privileges;
- In case you have to program more than one device, using the "UDP Update", you have to cancel the ARP table every time you connect a new device on Ethernet. For do this you have to launch the "Command Prompt" and write the command "arp -d". Pay attention that with Windows Vista, Seven, 8, 10 you have to launch the "Command Prompt" with Administrator Rights;
- Pay attention at Firewall lock.

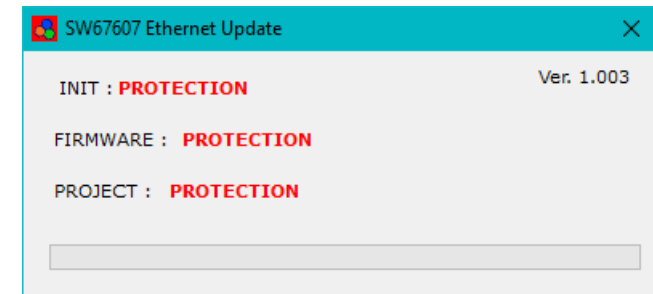


Figure 10: Error window



In the case of HD67607 you have to use the software "SW67607": www.Pixsys srl/download/filefold/SW67607.zip.

SENDING ASYNCHRONOUS CAN MESSAGES

The converter allows to send asynchronous CAN messages (for example a NMT message) directly from Ethernet to CANopen. To send the Ethernet frame to the converter, there are two different ways:

- Using the PROFINET;
- Using the tunneling port of the converter.

MODE 1: PROFINET

In this case, to send a CAN message from Ethernet to CANopen, it is necessary to enable the option “CANopen CMD Ind” in the section “Set Communication”. It is necessary to write the bytes of PROFINET side starting from the first one defined in this way:

Byte Number	Description
1	Counter (increased to send the new CAN message)
2	Number of bytes to send
3÷6	COB-ID of CAN message
7÷14	Data

To choose the type of CAN (2.0A or 2.0B) of the frame that the converter will send, it is necessary to put the most significant bit of the byte 1 to:

- 0: CAN 2.0A;
- 1: CAN 2.0B.

MODE 2: TUNNELING PORT

In this case, to send a CAN message from Ethernet to CANopen, it is necessary to send an UDP message to the Tunneling port of the converter.

The Ethernet message to send to the converter must have this structure:

Byte Number	Description
$1 \div 4$	COB-ID of the CAN message to send
$5 \div (4+n)$	Data of the CAN message

n =Number of Byte to Write

To choose the type of CAN (2.0A or 2.0B) of the frame that the converter will send, it is necessary to put the most significant bit of the byte 1 to:

- 0: CAN 2.0A;
- 1: CAN 2.0B.

Example:

We want to send the NMT message "Start" to the CANopen device 5. The Ethernet frame will have these characteristics:

CAN Type=2.0A; Frame: Cob_ID=0x0000; Data=0x0105.

So the string of hexadecimal numbers to be send to the converter is: [00][00][00][00][01][05].

ASYNCR SDO REQUESTS:

The converter allows to send asynchronous SDO requests directly from PROFINET to CANopen. This function can be enabled by checking the option “Enable Triggered SDO” in the section “Set Communication”.

It is necessary to write the bytes of PROFINET side starting from the first byte defined in the field “Address Output Data TDSO” in this way:

Byte Number	Description
1	Counter (increased to send the new CAN message)
2	ID of the CANopen node to interrogate
3÷4	Index of SDO
5	SubIndex of SDO
6÷9	Data to write (set to ‘0’ in case of reading request)
10	Most Significant bit → 0: W; 1: R Bit 6, 5, 4, 3, 2, 1, 0 → Number of bytes to write

The feedback of the SDO request is saved from the first byte defined in the field “Address Input Data TDSO” in this way:

Byte Number	Description
1÷4	Data read (in case of reading)
5	Status of request (1 → OK; 2 → Not OK)

CANOPEN DIAGNOSTIC OVER PROFINET:

It is possible to save the CANopen Diagnostic on PROFINET array using the field "Diagnostic" of the section "Set Communication".

The status of each CANopen node defined in the section "Set Node Guarding" is saved starting from the byte of the PROFINET array defined in the section "Set Communication". There will be 127 bytes reserved.

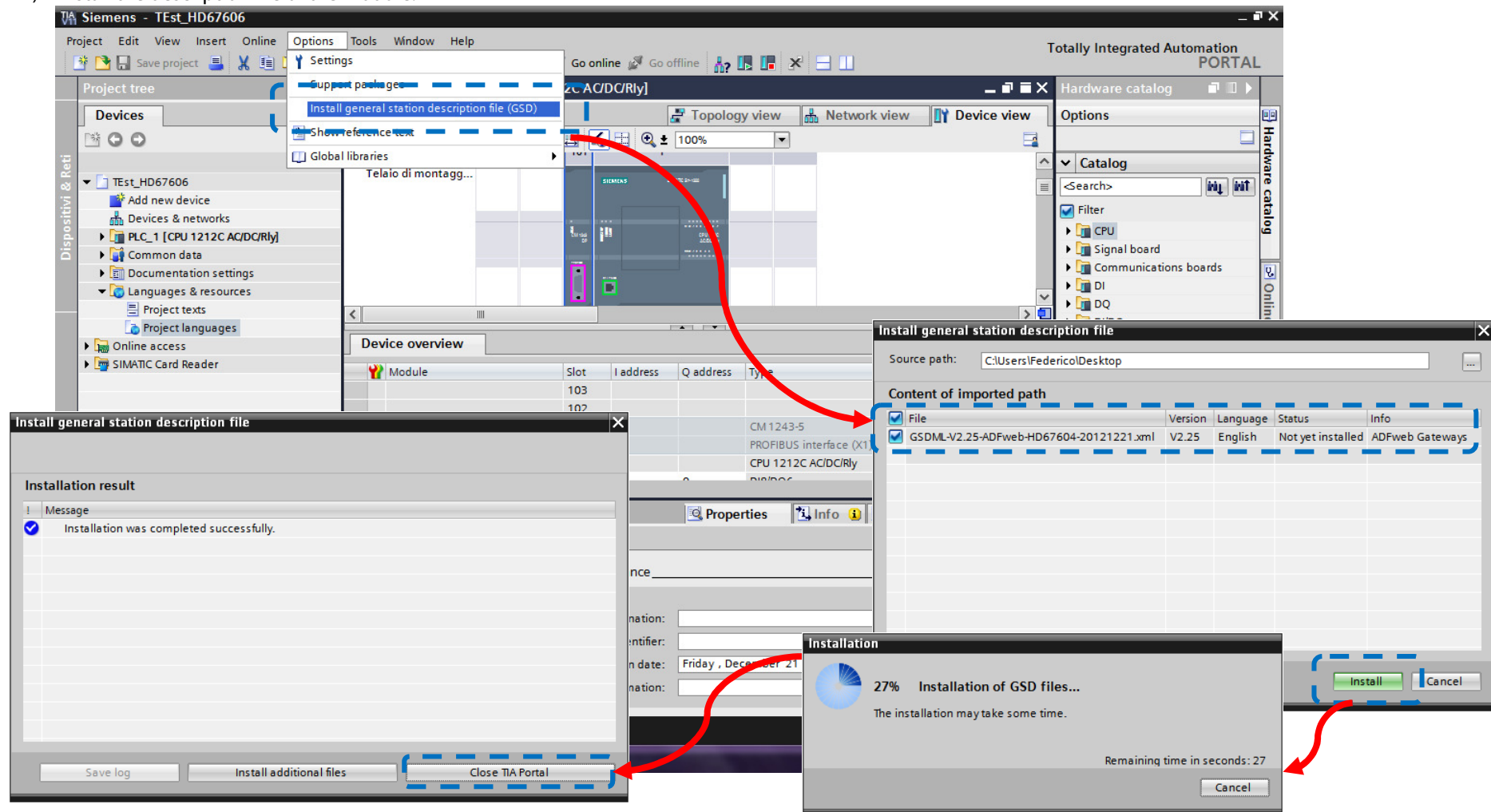
The status of the CANopen nodes can be different in relation to their state:

- 0x04: Node in Stop state;
- 0x7F: Node in Pre-Operational state;
- 0x05: Node in Operational state.

PLC CONFIGURATION:

The configuration and commissioning of the PROFINET Converter as described on the following pages was accomplished with the help of the TIA Portal V11-software of Siemens. In case of using a control system from another supplier please attend to the associated documentation. These are the steps to follow:

- 1) Install the description file of the module.



The screenshot illustrates the process of installing a General Station Description (GSD) file in the Siemens TIA Portal V11. The main window shows the 'Project tree' on the left, the 'Hardware catalog' on the right, and the 'Device overview' table at the bottom. A red arrow points from the 'Install general station description file (GSD)' option in the 'Options' menu to the 'Install general station description file' dialog box. This dialog box shows the 'Source path' as 'C:\Users\Federico\Desktop' and the 'Content of imported path' table, which lists the GSDML file to be installed. A second red arrow points from the 'Install' button in this dialog to the 'Installation' progress window, which shows the progress of the GSD file installation. A third red arrow points from the 'Close TIA Portal' button in the 'Install general station description file' dialog to the 'Close TIA Portal' button in the 'Installation' progress window.

Install general station description file

Source path: C:\Users\Federico\Desktop

Content of imported path

File	Version	Language	Status	Info
GSDML-V2.25-ADFweb-HD67604-20121221.xml	V2.25	English	Not yet installed	ADFweb Gateways

Installation

27% Installation of GSD files...

The installation may take some time.

Remaining time in seconds: 27

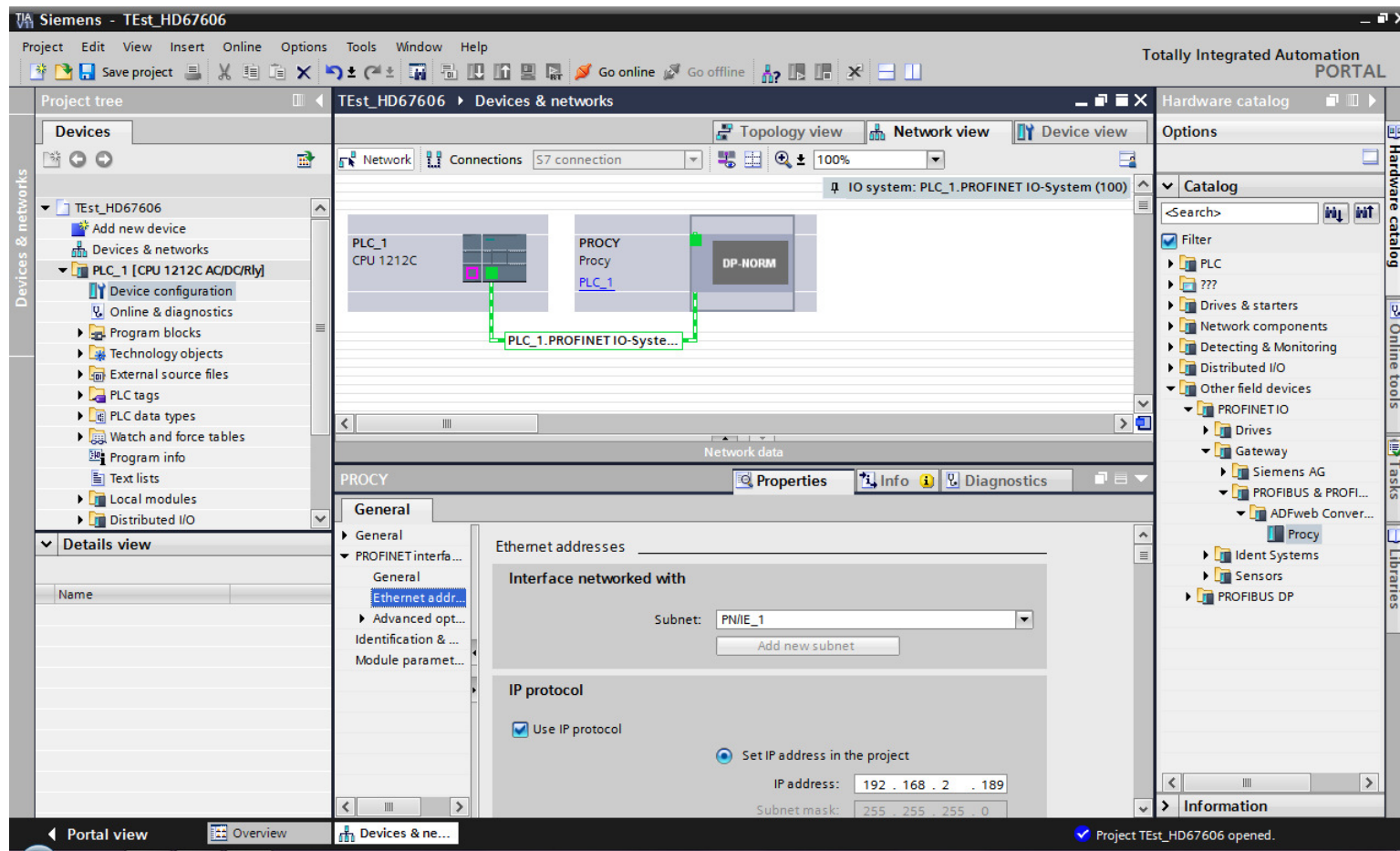
Install general station description file - Installation result

Message

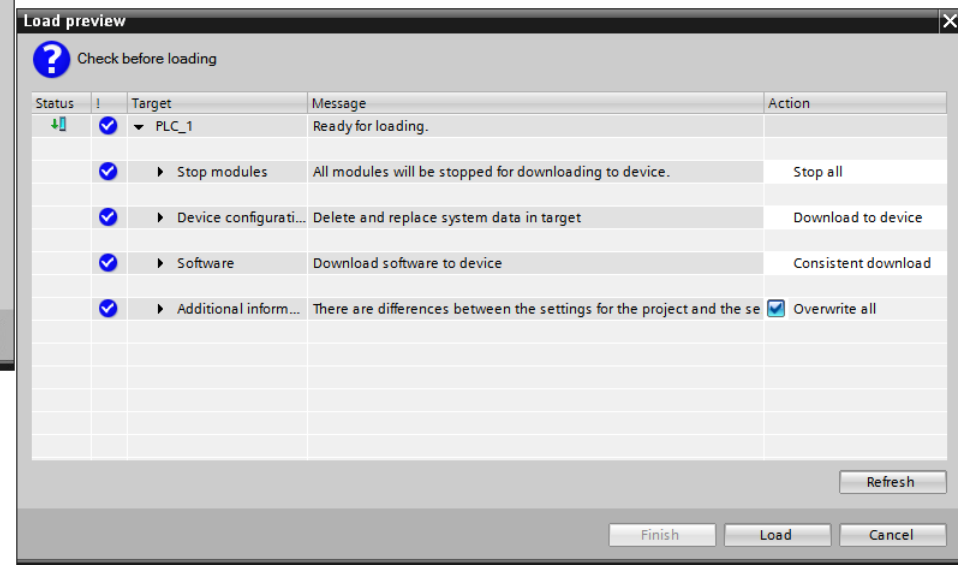
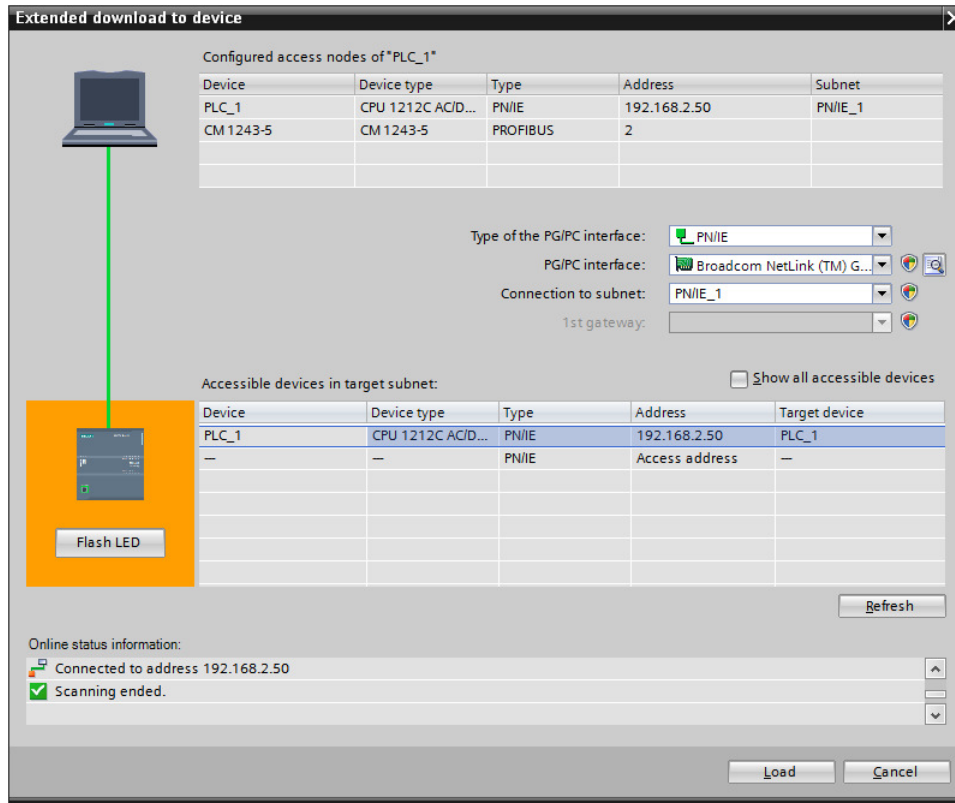
✓ Installation was completed successfully.

Save log Install additional files Close TIA Portal

- 2) Import the module in the network; connect the device to the PLC network and edit the parameters of IP, station name etc.



3) Load the configuration into the PLC.



DISCLAIMER

All technical content within this document can be modified without notice. The content of the document content is a recurring audit.

For losses due to fire, earthquake, third party access or other accidents, or intentional or accidental abuse, misuse, or use under abnormal conditions repairs are charged to the user. Pixsys srl will not be liable for accidental loss of use or inability to use this product, such as loss of business income. Pixsys srl shall not be liable for consequences of improper use.

OTHER REGULATIONS AND STANDARDS

WEEE INFORMATION



Disposal of old electrical and electronic equipment (as in the European Union and other European countries with separate collection systems).

This symbol on the product or on its packaging indicates that this product may not be treated as household rubbish. Instead, it should be taken to an applicable collection point for the recycling of electrical and electronic equipment. If the product is disposed correctly, you will help prevent potential negative environmental factors and human health, which could otherwise be caused by inappropriate disposal. The recycling of materials will help to conserve natural resources. For more information about recycling this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

RESTRICTION OF HAZARDOUS SUBSTANCES DIRECTIVE



The device respects the 2002/95/EC Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (commonly referred to as Restriction of Hazardous Substances Directive or RoHS).

CE MARKING



The product conforms with the essential requirements of the applicable EC directives.

WARRANTIES AND TECHNICAL SUPPORT:

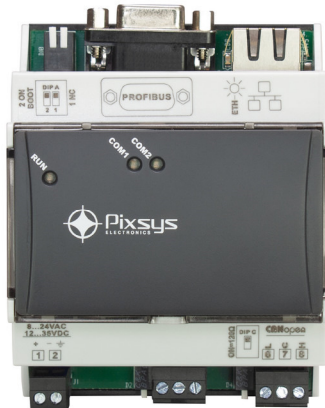
For fast and easy technical support for your Pixsys products, consult our internet Forum at <https://forum.pixsys.net>
Otherwise contact us at the address support@pixsys.net

RETURN POLICY:

If while using your product you have any problem and you wish to exchange or repair it, please do the following:

- Obtain a Product Return Authorization (RMA) from our internet page, in the "Il mio dispositivo / My device" section at www.pixsys.net Together with the request, you need to provide detailed information about the problem.
- Send the product to the address provided with the RMA, having prepaid the shipping costs (shipment costs billed to us will not be accepted).

If the product is within the warranty of 12 months, it will be repaired or exchanged and returned within four weeks. If the product is no longer under warranty, you will receive a repair estimate.



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www.pixsys.net

sales@pixsys.net - support@pixsys.net

online assistance: <http://forum.pixsys.net>

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