User Manual

Revision 2.100
English

CANopen / Ethernet - Converter

(Order Codes: HD67503-A1 – HD67503-B2)

for Website information:
www.adfweb.com?Product=HD67503

for Price information:
www.adfweb.com?Price=HD67503-A1
www.adfweb.com?Price=HD67503-B2

Benefits and Main Features:

- Very easy to configure
- TCP/UDP protocols changeable with software
- Low cost
- 32mm Rail DIN mount

User Manual

HD67503-A1

HD67503-B2

For others products, see also the following links:

RS232 / RS485 / USB / Ethernet

www.adfweb.com?Product=HD67118 (RS232 / RS485 - Converter)
www.adfweb.com?Product=HD67119 (USB / RS485 - Converter)
www.adfweb.com?Product=HD67038 (RS485 / RS232 / Ethernet - Converter)

CAN / CANopen / Modbus / Modbus TCP

www.adfweb.com?Product=HD67001 (CANopen / Modbus Master - Converter)
www.adfweb.com?Product=HD67502 (CANopen / Modbus Slave - Converter)
www.adfweb.com?Product=HD67011 (CAN / Modbus Master - Converter)
www.adfweb.com?Product=HD67012 (CAN / Modbus Slave - Converter)
www.adfweb.com?Product=HD67514 (CAN / Modbus TCP Master – Converter)

Modbus RTU Slave / Modbus TCP Master - Converter

www.adfweb.com?Product=HD67510

Do you have your customer protocol? Then go to:
www.adfweb.com?Product=HD67003

Do you need to choose a device? Do you want help?
www.adfweb.com?Cmd=helpme

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INDEX:

UPDATED DOCUMENTATION:

Dear customer, we thank you for your attention and we remind you that you need to check that the following document is:

- Updated
- Related to the product you own

To obtain the most recently updated document, note the "document code" that appears at the top right-hand corner of each page of this document.

With this "Document Code" go to web page www.adfweb.com/download/ and search for the corresponding code on the page. Click on the proper "Document Code" and download the updates.

REVISION LIST:

Revision	Date	Author	Chapter	Description
1.003	05/05/2010	Dp	All	Revision
2.000	10/11/2011	Fl	All	Codes changed
2.001	07/02/2013	Nt	All	Added new chapters
2.100	04/07/2014	Ff	All	New hardware version

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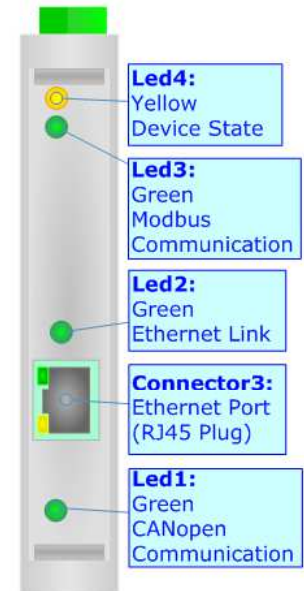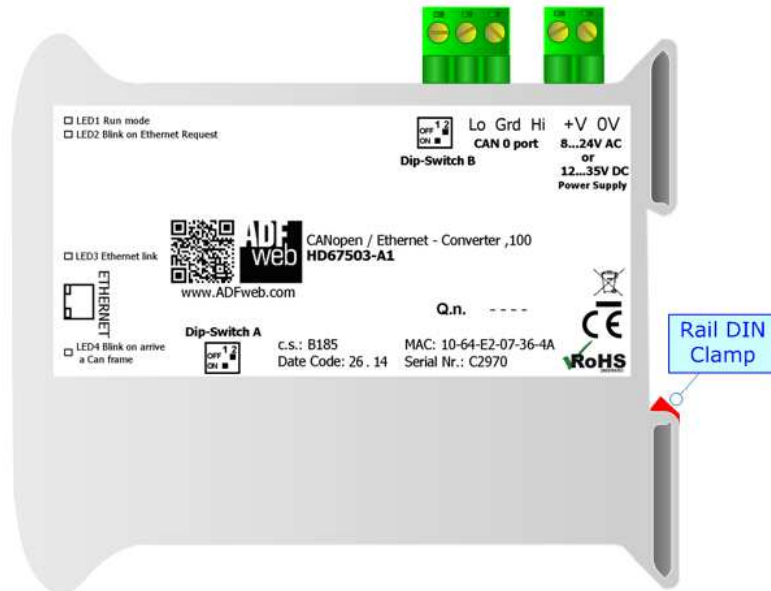The declaration is made by us. You can send an email to support@adfweb.com or give us a call if you need it.

EXAMPLES OF CONNECTION:

HD67503-A1

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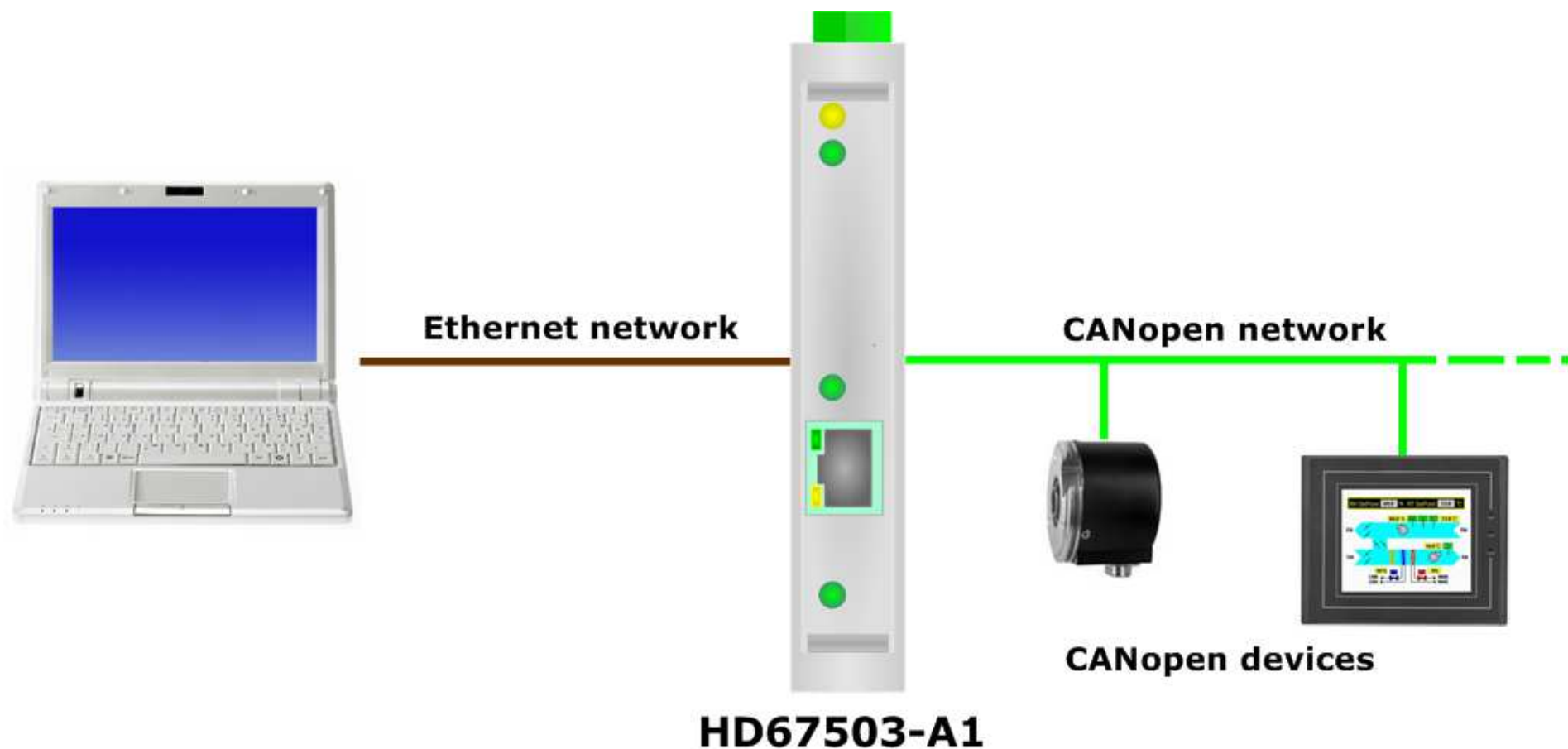
CONNECTION SCHEME:

Dip-Switch A:
-Dip1 – Must be at ON
-Dip2 – Functioning Mode

= Normal   = Boot

LED1 Run mode
LED2 Blink on Ethernet Request

Lo Grd Hi   +V 0V
CAN 0 port   8...24V AC
                   or
Dip-Switch B   12...35V DC
                   Power Supply

LED3 Ethernet link

ETHERNET

CANopen / Ethernet - Converter ,100
HD67503-A1

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Q.n.   - - - -

LED4 Blink on arrive
a Can frame

Dip-Switch A

c.s.: B185   MAC: 10-64-E2-07-36-4A
Date Code: 26 . 14   Serial Nr.: C2970

CE   RoHS

Rail DIN
Clamp

Led4:
Yellow
Device State

Led3:
Green
Modbus
Communication

Led2:
Green
Ethernet Link

Connector3:
Ethernet Port
(RJ45 Plug)

Led1:
Green
CANopen
Communication

Lo Shl Hi   +V 0V

Dip-Switch C:
-Dip1 – CANopen Termination Resistor
-Dip2 – Not used

= Open   = 120 Ohm

Connector2:
CANopen port (Isolated port)

Hi = High wire
Shl = Shield* (to Isolated Ground)
Lo = Low wire

Connector1:
Power Supply port

0V = Ground
+V = Positive wire

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

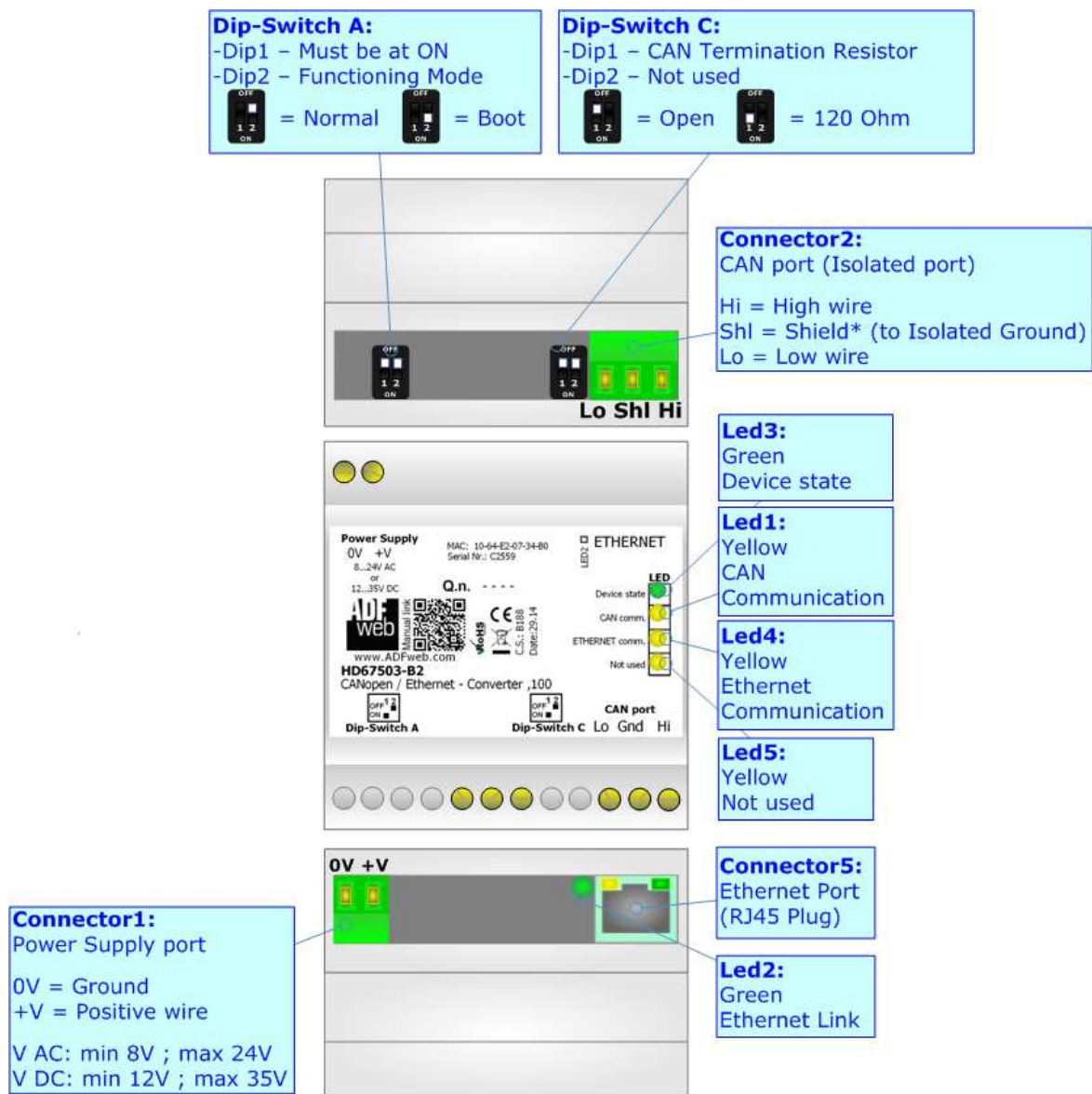*Figure 1a: Connection scheme for HD67503-A1*

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Dip-Switch A:
-Dip1 – Must be at ON
-Dip2 – Functioning Mode

= Normal   = Boot

Dip-Switch C:
-Dip1 – CAN Termination Resistor
-Dip2 – Not used

= Open   = 120 Ohm

Connector2:
CAN port (Isolated port)

Hi = High wire
Shl = Shield* (to Isolated Ground)
Lo = Low wire

Lo Shl Hi

Led3:
Green
Device state

Led1:
Yellow
CAN
Communication

Led4:
Yellow
Ethernet
Communication

Led5:
Yellow
Not used

Power Supply
0V +V
8...24V AC
or
12...35V DC

Q.n. - - - -

MAC: 10-64-E2-07-34-B0
Serial Nr.: C2559

ETHERNET

Device state
CAN comm.
ETHERNET comm.
Not used

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HD67503-B2
CANopen / Ethernet - Converter ,100

Dip-Switch A

CAN port
Dip-Switch C Lo Gnd Hi

0V +V

Connector1:
Power Supply port

0V = Ground
+V = Positive wire

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

Connector5:
Ethernet Port
(RJ45 Plug)

Led2:
Green
Ethernet Link

Figure 1b: Connection scheme for HD67503-B2

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CHARACTERISTICS:

The "CANopen / Ethernet – Converter" allows the following characteristics:

- two-directional information between networks CANopen and Ethernet;
- TCP/UDP Ethernet protocols changeable with software;
- electrical isolation between two Buses;
- Mountable on Rail DIN;
- Temperature range from -40°C to +85°C.

CONFIGURATION:

You need Compositor SW67503 software on your PC in order to perform the following:

- ➢ Define the parameter of the CANopen bus;
- ➢ Define the parameter of the Ethernet;
- ➢ Define the RPDO and TPDO.

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POWER SUPPLY:

The devices can be powered at 8…24V AC and 12…35V DC. For more details see the two tables below.
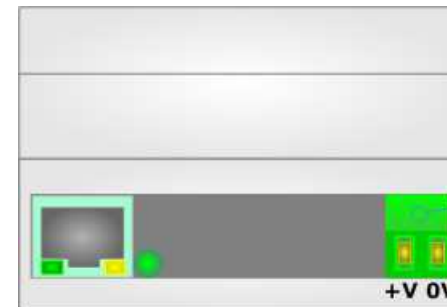
VAC		VDC	
Vmin	**Vmax**	**Vmin**	**Vmax**
8V	**24V**	**12V**	**35V**

Consumption at 24V DC:

Device	Consumption [W/VA]
HD67503-A1	3.5
HD67503-B2	3.5

Caution: Not reverse the polarity power

0V ⌐ ⌐ +V
HD67503-A1
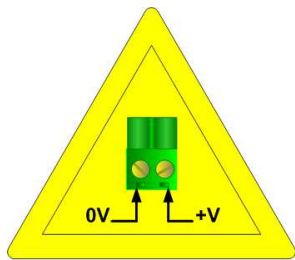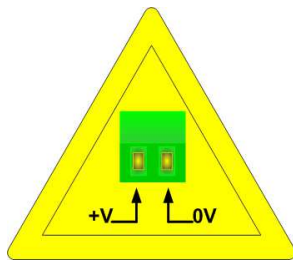
+V ⌐ ⌐ 0V
HD67503-B2

Connector1:
Power Supply port

0V = Ground
+V = Positive wire

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

0V +V

Connector1:
Power Supply port

0V = Ground
+V = Positive wire

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

+V 0V

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FUNCTION MODES:

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

➢ The first, with 'Dip2 of Dip-Switch A' at "OFF" position, is used for the normal working of the device.
➢ The second, with 'Dip2 of Dip-Switch A' at "ON" position, is used for uploading 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 specific functions, see 'LEDS' section.
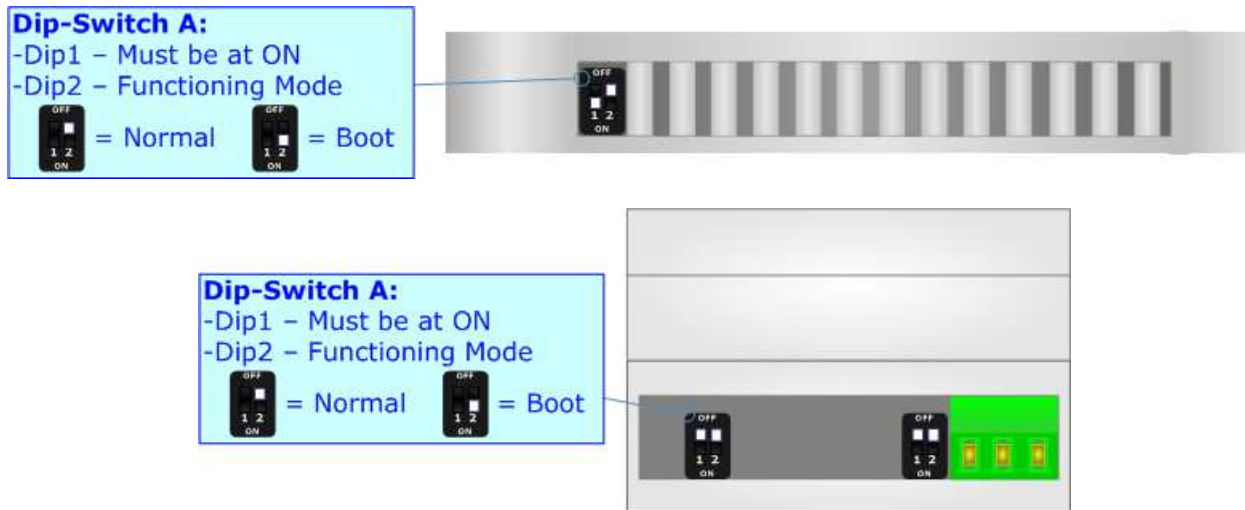

⚠ Warning:
Dip1 of 'Dip-Switch A' must be at ON position to work even if the Ethernet cable is not inserted.

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LEDS:

The devices has got four (five for HD67503-B2) 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: CAN Communication (green)	Blinks when CAN frames are received	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
2: Ethernet Link (green)	**ON:** Ethernet cable connected **OFF:** Ethernet cable disconnected	**ON:** Ethernet cable connected **OFF:** Ethernet cable disconnected
3: Ethernet Communication (green)	Blinks when Ethernet frames are received	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
4: Device State (yellow)	Blinks slowly (~1Hz)	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
5: Not used (yellow) (Present only on HD67503-B2)	OFF	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress

Industrial Electronic Devices
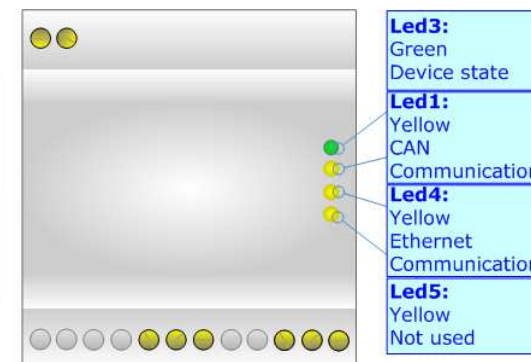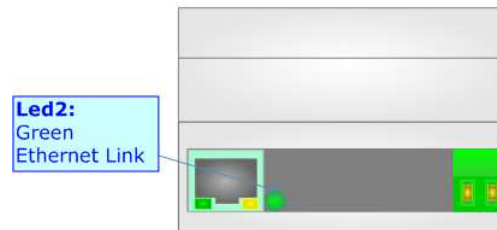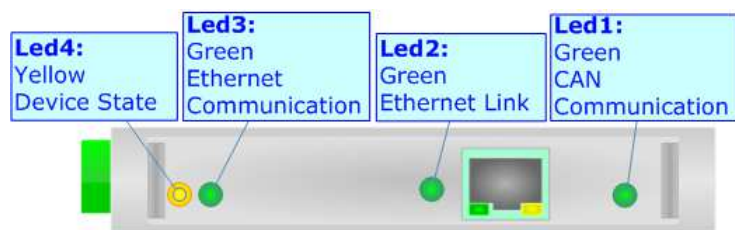
ETHERNET:

The Ethernet connection must be made using Connector5 of HD67503-A1/HD67503-B2 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 a Hub/Switch the use of a straight cable is recommended. To connect the device to a PC/PLC/other the use of a cross cable is recommended.

Connector3:
Ethernet Port
(RJ45 Plug)

Connector5:
Ethernet Port
(RJ45 Plug)

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CANopen:

For terminating the CAN line with a 120Ω resistor it is necessary that the Dip1 of 'Dip-Switch A' is at ON position.
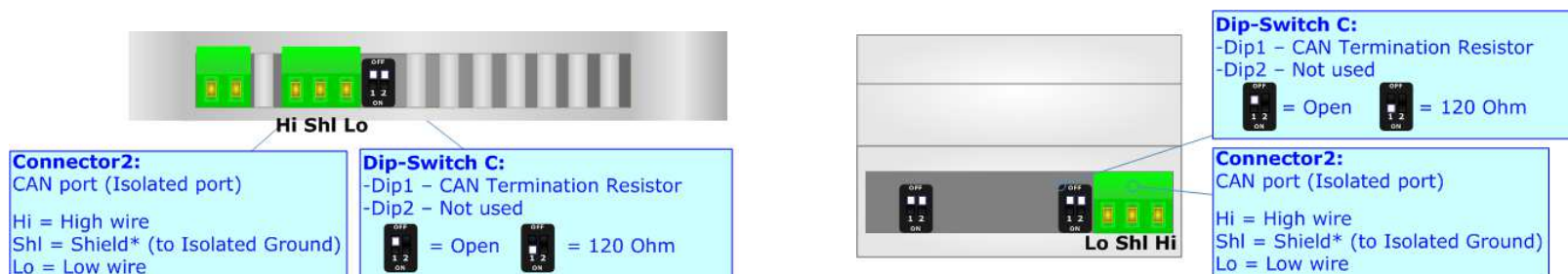
Cable characteristics:

DC parameter:		Impedance	70 Ohm/m

AC parameters:		Impedance	120 Ohm/m
		Delay	5 ns/m

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

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USE OF COMPOSITOR SW67503:

To configure the Converter, use the available software that runs with Windows called SW67503. It is downloadable on the site www.adfweb.com 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 with MSWindows (XP, Vista, Seven, 8; 32/64bit).

When launching the SW67503, the window below appears (Fig. 2).
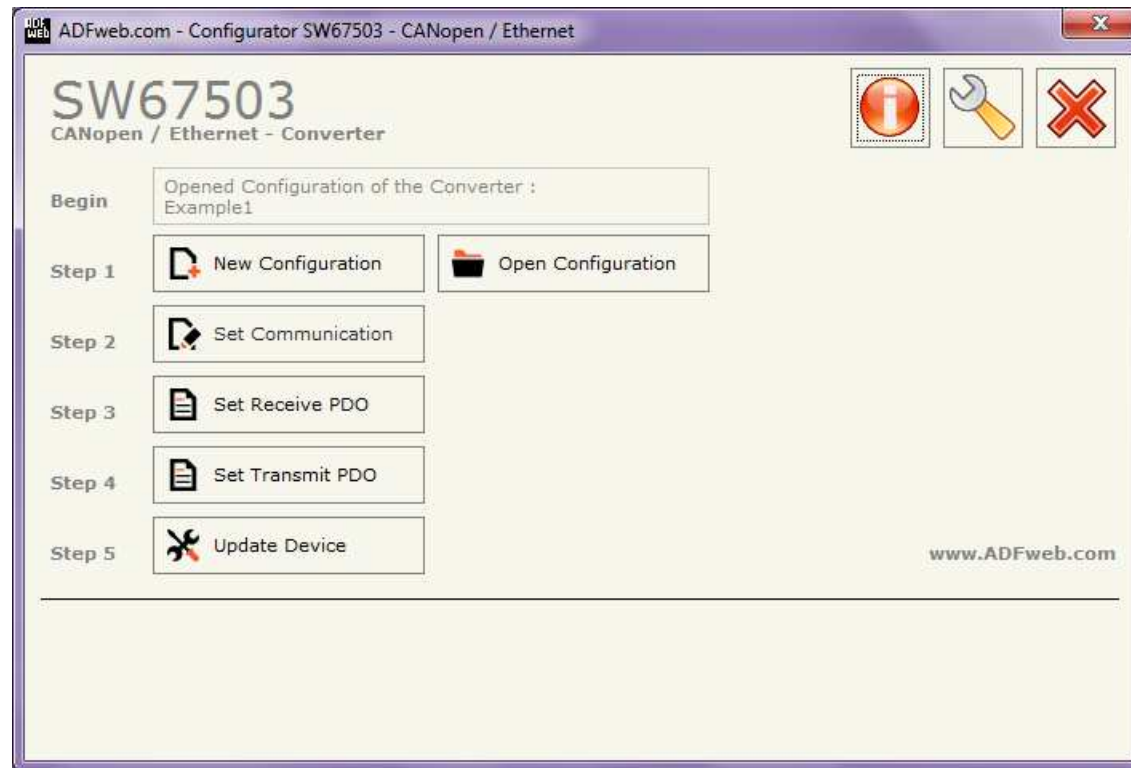
Note:
It is necessary to have installed .Net Framework 4.

Figure 2: Main window for SW67503

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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 "CANopen / Ethernet - Converter" in order to configure another device in the same manner, it is necessary to maintain the folder and all its contents;
- To clone a project in order 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**".

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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.
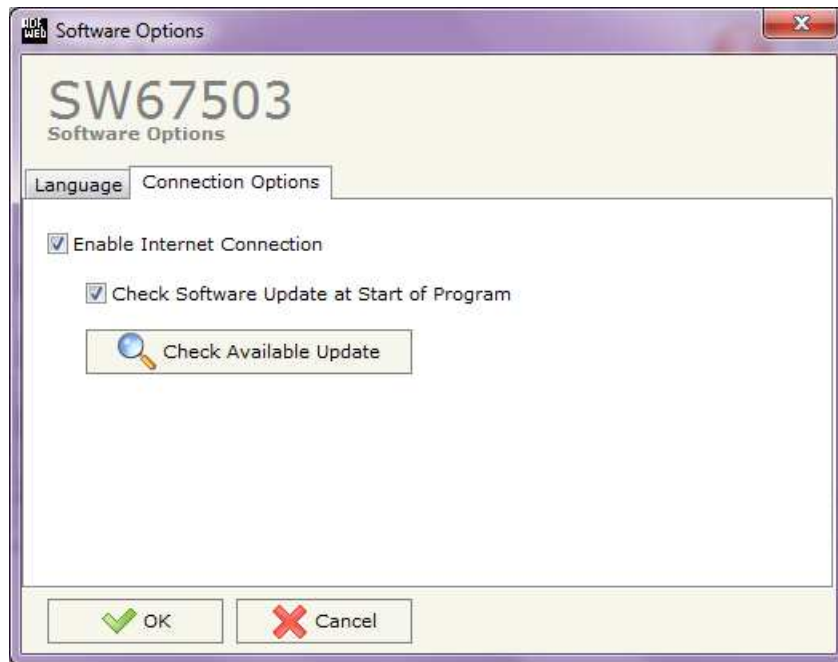
In the section "Connection Options", it is possible to check if there are some updatings of the software compositor in ADFweb.com website.
Checking the option "**Check Software Update at Start of Program**", the SW67503 check automatically if there are updatings when it is launched.

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SET COMMUNICATION:

This section defines the fundamental communication parameters of two Buses, CANopen and Ethernet.

By pressing the "**Set Communication**" button from the main window for SW67503 (Fig. 2) the window "Set communication" appears (Fig. 3).

This window is divided in two sections, one for configure the CANopen Network and the other for the Ethernet.

In the section "Select Device" it is possible to select the type of converter used:

➤ Device till April 2014 (with Jumper);
➤ Device from May 2014 (with Dip-Switches).

I
The means for the fields for the "CANopen" are:

➤ In the field "**Device ID**" the CANopen ID of the converter is defined;
➤ In the field "**Baud Rate**" the baudrate of the CAN 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;
➤ "**SDO Client Timeout (1/10 ms)**" is the is the maximum time that the device attends for the answer from the CANopen Server interrogated;

Figure 3: "Set Communication" window
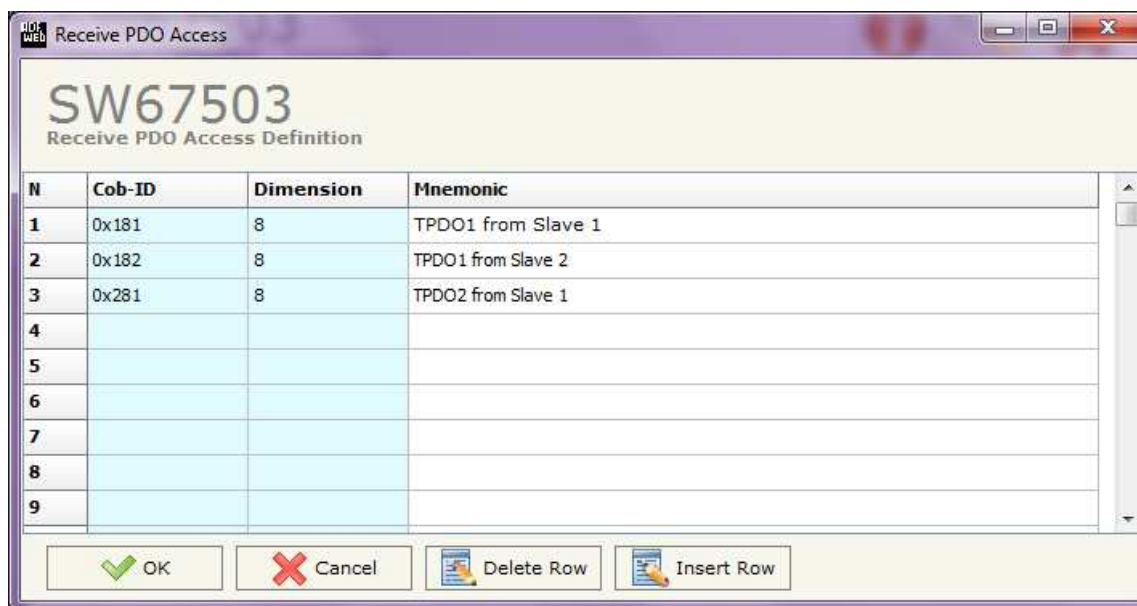
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The means for the fields for "Ethernet" are:

- In the field "**IP Address**", insert the IP address that you want to give to the converter;
- In the field "**SubNet Mask**" insert the SubNet Mask;
- In the field "**Port**" insert the number of the port;
- In the field "**Gateway**", insert the default gateway that you want to use. 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 "**Protocol**" the Ethernet protocol used by the converter is defined (TCP or UDP).

SET RECEIVE PDO:

By pressing the "**Set Receive PDO**" button from the main window for SW67503 (Fig. 2) the window "Receive PDO Access Definition" appears (Fig. 4). In this section, it is possible to define the PDOs that the converter will receive from CANopen network.

If "Device till April 2014 (with Jumper)" is set in the section "Set Communication", the window appears like below:

Figure 4a: "Receive PDO Access Definition" window

- In the field "**Cob-ID**" insert the Cob-ID of the PDO;
- In the field "**Dimension**" insert the number of bytes of the PDO (the maximum dimension is 8 Bytes);
- In the field "**Mnemonic**" a description of the PDO is defined.

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If "Device from May 2014 (with Dip-Switches)" is set in the section "Set Communication", the window appears like below:

Figure 4b: "Receive PDO Access Definition" window

+ In the field "**Cob-ID**" insert the Cob-ID of the PDO;
+ In the field "**Dimension**" insert the number of bytes of the PDO (the maximum dimension is 8 Bytes);
+ If the field "**TimeOut (ms)**" insert the TimeOut; after the TimeOut defined, the value of the data of the PDO become "0";
+ In the field "**Mnemonic**" a description of the PDO is defined.

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SET TRANSMIT PDO:

By pressing the "**Set Transmit PDO**" button from the main window of SW67503 the window "Transmit PDO Access Definition" appears (Fig. 5): in this section, it is possible to define the PDOs that the converter will send to the CANopen network.

If "Device till April 2014 (with Jumper)" is set in the section "Set Communication", the window appears like below:
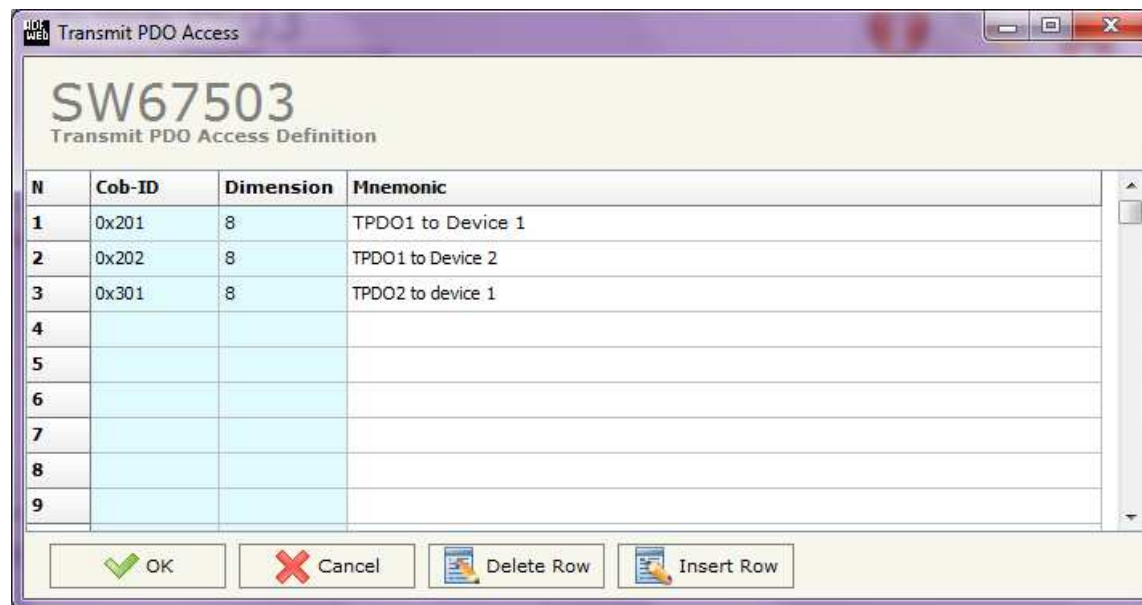

Figure 5a: "Transmit PDO Access Definition" window

- In the field "**Cob-ID**" insert the Cob-ID of the PDO;
- In the field "**Dimension**" insert the number of bytes of the PDO (the maximum dimension is 8 Bytes);
- In the field "**Mnemonic**" a description of the PDO is defined.

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If "Device from May 2014 (with Dip-Switches)" is set in the section "Set Communication", the window appears like below:
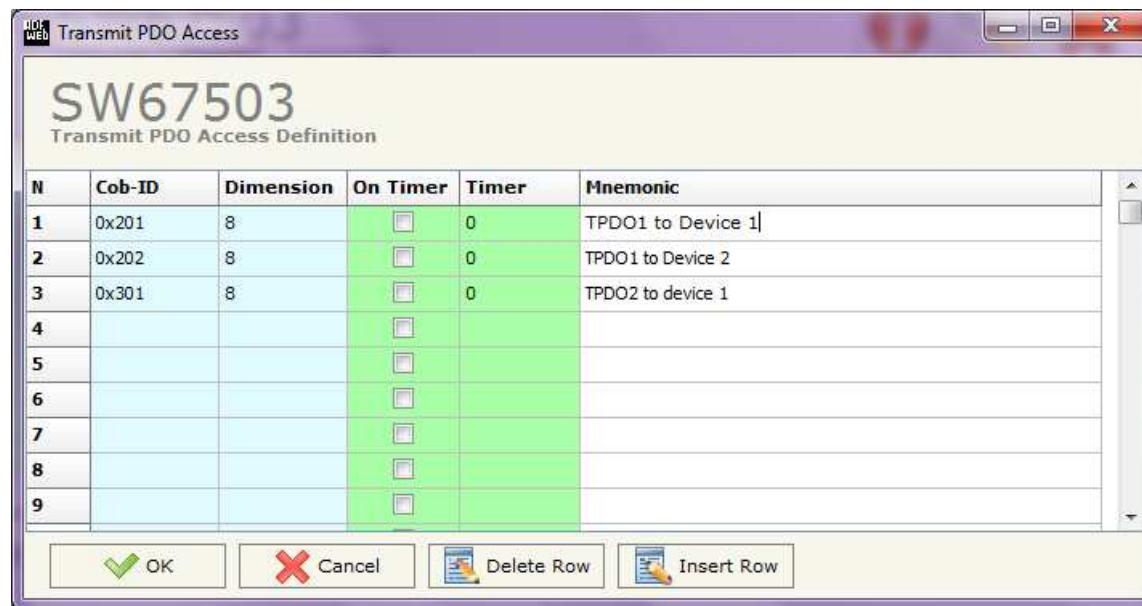
Figure 5b: "Transmit PDO Access Definition" window

- ➢ In the field "**Cob-ID**" insert the Cob-ID of the PDO you would to write from Ethernet to CANopen.
- ➢ In the field "**Dimension**" insert the number of bytes of the PDO (the maximum dimension is 8 Bytes);
- ➢ If the field "**On Timer**" is checked the PDO is sent cyclically;
- ➢ In the field "**Timer**" insert the cyclic delay;
- ➢ In the field "**Mnemonic**" the description for the PDO is defined.

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UPDATE VIA SERIAL (only if "Device till April 2014 (with Jumper)" is set):

By pressing the "**Update Device**" button it is possible to load the created Configuration into the device, and also the Firmware if is necessary, using the RS232 port.

In order to load the parameters or update the firmware in the device, follow these instructions:

- Turn off the Device;
- Connect the RS232 Null Modem cable form your PC to the Converter;
- Put Dip2 of 'Dip-Switch A' in ON position;
- Select the "**COM port**" and press the "**Connect**" button;
- Turn on the device;
- Check the "Device state" Led. It must blink quickly (see "LEDS" section);
- 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' in OFF position;
- Disconnect the RS232 cable;
- Turn on the device.

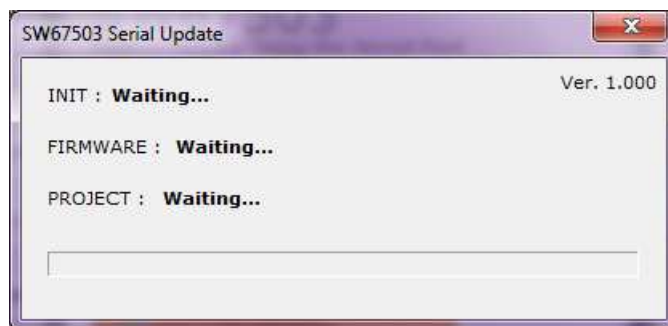At this point the configuration/firmware on the device is correctly updated.

Figure 6a: "Update Device" windows

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UPDATE VIA UDP (only if "Device from May 2014 (with Dip-Switches)" is set):

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

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' in ON position;
- Turn on the device
- Connect the Ethernet cable;
- Insert the IP "**192.168.2.205**";
- Press the "**Ping**" button, "Device Found! must appear";
- 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' in OFF position;
- Turn on the device.

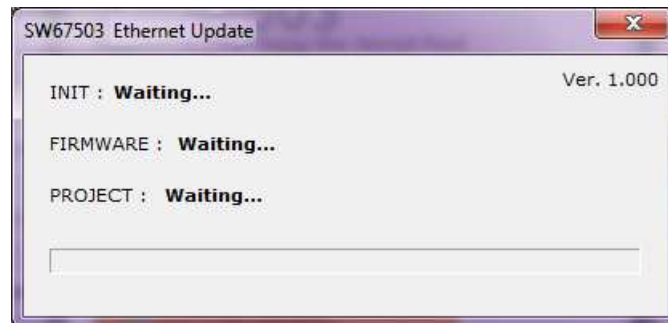At this point the configuration/firmware on the device is correctly updated.

Figure 6b: "Update device" windows

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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 updated.

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 HD67503-A1 or HD67503-B2 device.

Note:
    When you receive the device, for the first time, you also have to update the Firmware in the HD67503-A1 or HD67503-B2 device.

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⚠ Warning:
If Fig. 67 appears when you try to do the Update try these points before seeking assistance:

➔ Check if the serial COM port selected is the correct one;
➔ Check if the serial cable is connected between the PC and the device;
➔ Try to repeat the operations for the updating;
➔ If you are using a USB←→RS232 converter try with a native COM port or change the converter;
➔ Try to repeat the operations for the updating;
➔ Try with another PC;
➔ Try to restart the PC;
➔ Check the LAN 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 and 8 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 you have to launch the "Command Prompt" with Administrator Rights;
➔ Take attention at Firewall lock.

Figure 7: "Protection" window

⚠ Warning:
In the case of HD67503-A1 or HD67503-B2 you have to use the software "SW67503":
www.adfweb.com\download\filefold\SW67503.zip.

✎ Note:
The minimum version of the configuration software must be the 2.000.

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ETHERNET PROTOCOL:

For the CANopen it is possible to use two types of data: SDO and PDO. It is possible to have no more than ten PDO, which must be declared in the "SW67503 Compositor", while SDO should not be reported.

Write Frames

PDO

The transmission of PDO is very simple: it has a fixed structure that consist in a maximum of eleven bytes:

Byte Number	Description
1	Write Identifier (0x02)
2	Type of Data (PDO=0x01)
3	Number of frame to send (number of row of "SW67503 compositor")
4÷n+3	Data

n=number of byte defined in the Compositor

The Byte that compose the respons is only one:

Byte Number	Description
1	Ok=0x01 / Error in sending=0x02

Example:

We want to write the frame number one of SW67503 Compositor:
- Type of Data: PDO; Number of frame to send: 1; Data: 0x01020304

So the string of hexadecimal numbers is:
REQ:[02][01][01][01][02][03][04]
RES:[01]

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SDO

The transmission of SDO is very simple: it has a fixed structure that consist in a maximum of eleven bytes.

Byte Number	Description
1	Write Identifier (Write=0x02)
2	Type of Data (SDO=0x02)
3	Address of CANopen device connect to the HD67503
4	Index SDO Hi
5	Index SDO Lo
6	SubIndex SDO
7	Number of byte of frame to send (n)
8÷n+7	Data

The Number of byte of frame to send (Byte 7) can have three values:
- 0x01: Send one byte;
- 0x02: Send two byte;
- 0x04: Send four byte.

The Byte that compose the respons are this:

Byte Number	Description
1	Ok=0x01 / Parameter Error=0x02 / Error in sending=0x03

Example:

We want to write:
- Address of CANopen device: 0x14; Type of Data: SDO; Index: 0x2000; SubIndex: 0x01; Number of byte of frame to send: 2; Data: 0x1122

So the string of hexadecimal numbers is:
REQ:[02][02][14][20][00][01][02][11][22]
RES:[01]

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Read Frames

PDO

The Bytes that compose the request are three:

Byte Number	Description
1	Read Identifier (Read=0x01)
2	Type of Data (PDO=0x01)
3	Number of frame to send (number of row of "SW67503 Compositor")

The Bytes that compose the respons are:

Byte Number	Description
1	Ok=0x01 / Parameter Error=0x02
2÷n+1	Data

n=number of byte declared in the Compositor for the selected frame
Example:

We want to read the first PDO configured in the "SW67503 Compositor". This PDO contains six bytes. So the string of hexadecimal numbers is:
REQ:[01][01][01]
RES:[01][11][22][33][44][55][66]

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SDO

The Bytes that compose the request are seven:

Byte Number	Description
1	Read Identifier (Read=0x01)
2	Type of Data (SDO=0x02)
3	Address of CANopen device connect to the HD67503
4	Index SDO Hi
5	Index SDO Lo
6	SubIndex SDO
7	Number of byte of frame to read

The Byte that compose the respons is:

Byte Number	Description
1	Ok=0x01 / Parameter Error=0x02 / Error in sending=0x03
2÷n+1	Data

n=number of byte for the selected frame

Example:

We want to read:
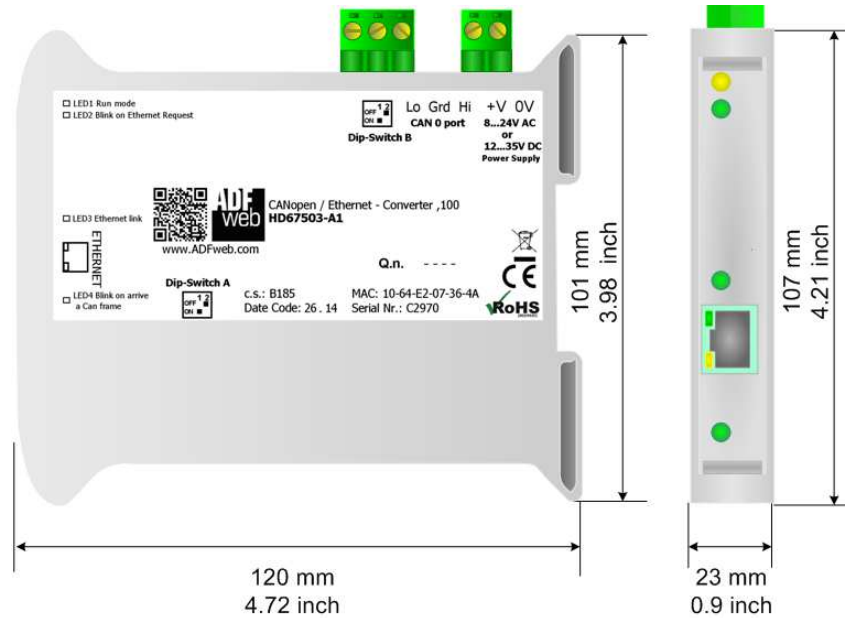- Address of CANopen device: 0x14; Type of Data: SDO; Index: 0x2000; SubIndex: 0x01; Number of byte: 4.

So receive the value 0x1A2B3C4D.
The string of hexadecimal numbers is:
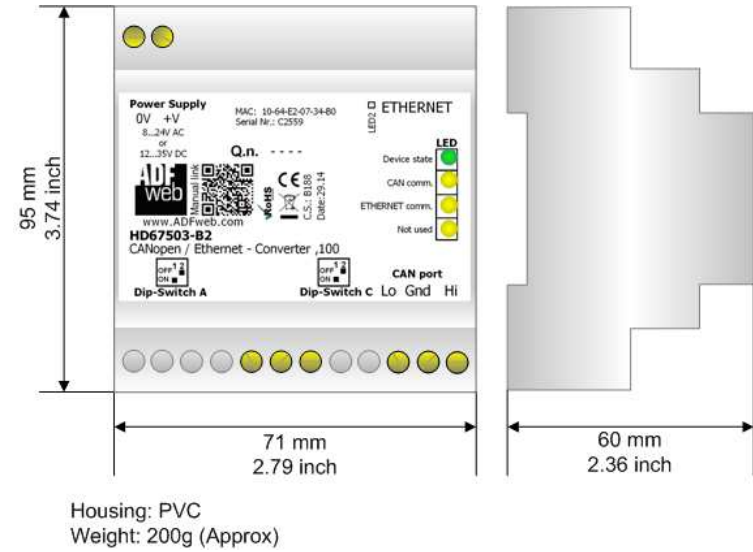REQ:[01][02][14][20][00][01][04]
RES:[01][1A][2B][3C][4D]

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MECHANICAL DIMENSIONS:

Figure 10: Mechanical dimensions scheme for HD67503-A1

Figure 11: Mechanical dimensions scheme for HD67503-B2

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ORDERING INFORMATIONS:

The ordering part number is formed by a valid combination of the following:

HD67503 - x x

Connectors Type
1: Removable 5mm Screw Terminal
2: Fixed 5mm Screw Terminal

Enclosure Type
A: 1M, 35mm DIN Rail mounting
B: 4M, 35mm DIN Rail mounting

Device Family
HD67503: CANopen / Ethernet - Converter
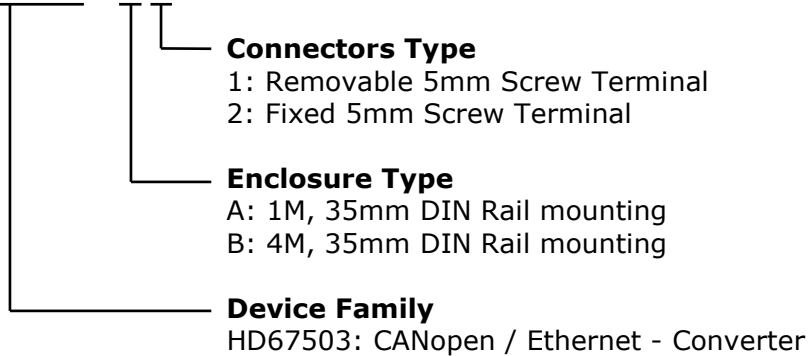
Order Code: **HD67503-A1**   -   CANopen / Ethernet - Converter (Housing type: A, Terminal Blocks Connectors)

Order Code: **HD67503-B2**   -   CANopen / Ethernet - Converter (Housing type: B, Terminal Blocks Connectors)

ACCESSORIES:

Order Code: **AC34107**   -   Null Modem Cable Fem/Fem D-sub 9 Pin 1,5 m

Order Code: **AC34114**   -   Null Modem Cable Fem/Fem D-sub 9 Pin 5 m

Order Code: **AC34001**   -   Rail DIN - Power Supply 220/240V AC 50/60Hz – 12 V AC

Order Code: **AC34002**   -   Rail DIN - Power Supply 110V AC 50/60Hz – 12 V AC

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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 impact of 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.

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WARRANTIES AND TECHNICAL SUPPORT:

For fast and easy technical support for your ADFweb.com SRL products, consult our internet support at www.adfweb.com.
Otherwise contact us at the address support@adfweb.com

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 Number (PRN) from our internet support at www.adfweb.com. Together with the request, you need to provide detailed information about the problem.
- Send the product to the address provided with the PRN, having prepaid the shipping costs (shipment costs billed to us will not be accepted).

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