ADFweb

Industrial Electronic Devices

User Manual
Revision 1.000
English

NMEA2000 / CANopen – Converter

(Order Code: HD67461)

For Website information:
www.adfweb.com?Product=HD67461

For Price information:
www.adfweb.com?Price=HD67461

Benefits and Main Features:

⊕ Very easy to configure

⊕ Wide supply input range

⊕ Electrical isolation

⊕ Industrial temperature range:

⊕ -40°C / 105°C (-40°F / 221°F)

User Manual

For others Gateways / Bridges:

J1939 to Modbus

See also the following links:
www.adfweb.com?Product=HD67212 (Modbus RTU)

CANopen to Modbus

See also the following links:
www.adfweb.com?Product=HD67001 (Modbus RTU Master)
www.adfweb.com?Product=HD67002 (Modbus RTU Slave)
www.adfweb.com?Product=HD67004 (Modbus TCP Master)
www.adfweb.com?Product=HD67005 (Modbus TCP Slave)

For others Gateways / Bridges:
For **CAN bus 2.0A** and/or **CAN bus 2.0B** to **Modbus**

See also the following links:
www.adfweb.com?Product=HD67011 (Modbus RTU Slave)
www.adfweb.com?Product=HD67012 (Modbus RTU Master)
www.adfweb.com?Product=HD67014 (Modbus TCP Slave)
www.adfweb.com?Product=HD67015 (Modbus TCP Master)

Do you have an your customer protocol?

See the following links:
www.adfweb.com?Product=HD67003

Do you need to choose a device? do you want help?

Ask it to the following link:
www.adfweb.com?Cmd=helpme

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
1.000	15/06/2020	VDB	All	First released version

WARNING:

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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, legal and safety regulation are required for each individual application. 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 instruments can represent a potential hazard if they are inappropriately installed and operated by untrained personnel. These instructions refer to residual risks with the following symbol:
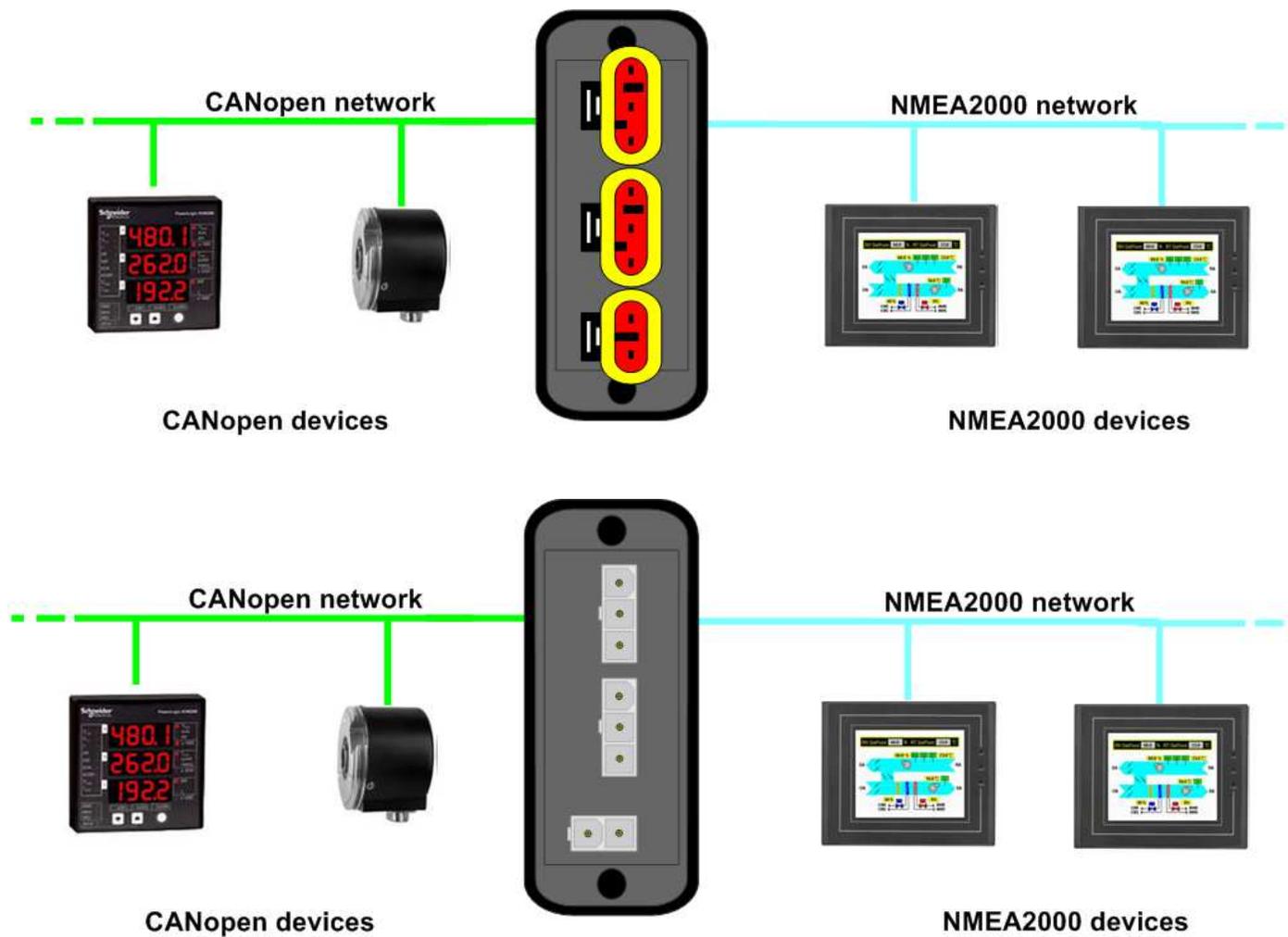
⚠️ This symbol indicates that non-observance of the safety instructions is a danger for people that could lead to serious injury or death and / or the possibility of damage.

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

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EXAMPLE OF CONNECTION:

Industrial Electronic Devices
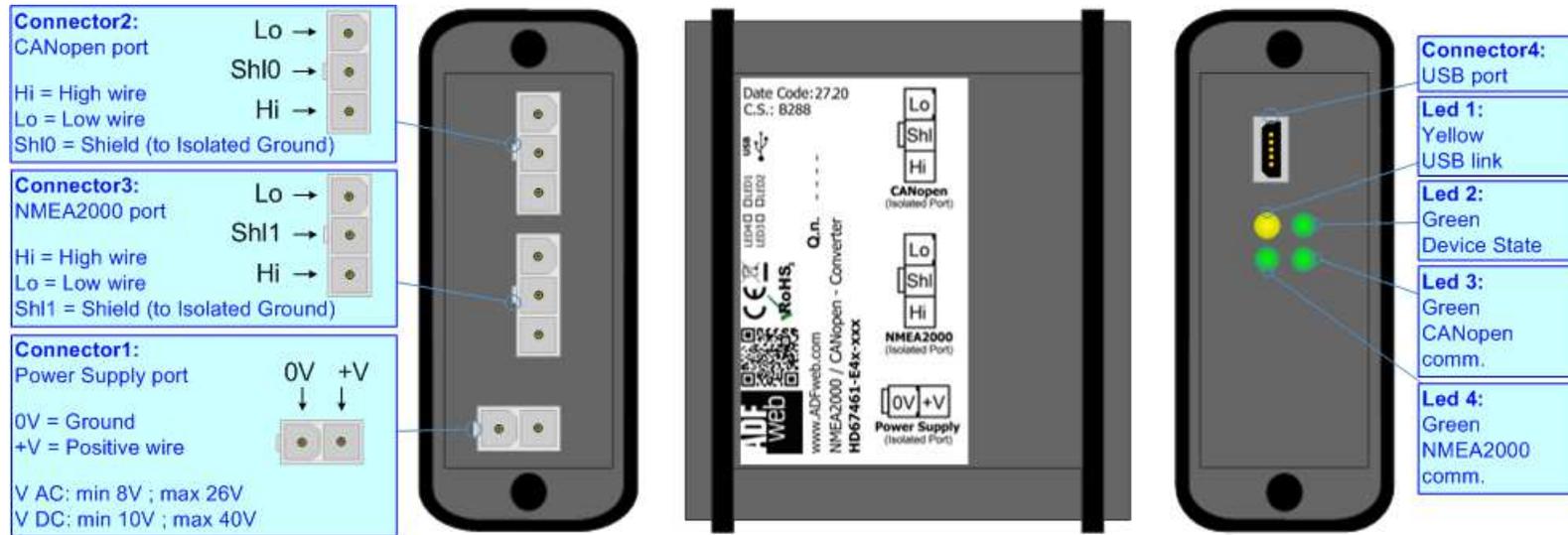
CONNECTION SCHEME:

Figure 1a: Connection scheme for HD67461-E4x-xxx

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Connector2:
CANopen port

Lo →
Shl0 →
Hi →

Hi = High wire
Lo = Low wire
Shl0 = Shield (to Isolated Ground)

Connector3:
NMEA2000 port

Lo →
Shl1 →
Hi →

Hi = High wire
Lo = Low wire
Shl1 = Shield (to Isolated Ground)

Connector1:
Power Supply port

0V →
+V →

0V = Ground
+V = Positive wire

V AC: min 8V ; max 26V
V DC: min 10V ; max 40V

Date Code: 27.20
C.S.: B288

Lo
Shl
Hi
CANopen
(Isolated Port)

Lo
Shl
Hi
NMEA2000
(Isolated Port)

0V
+V
Power Supply
(Isolated Port)

www.adfweb.com
NMEA 2000 / CANopen - Converter
HD67461-E7x-xxx

Connector4:
USB port

Led 1:
Yellow
USB link

Led 2:
Green
Device State

Led 3:
Green
CANopen
comm.

Led 4:
Green
NMEA2000
comm.

Figure 1b: Connection scheme for HD67461-E7x-xxx

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CHARACTERISTICS:

The "HD67461" series are rugged devices used to interface NMEA2000 devices with CANopen devices.

With his particular enclosure, equipped with four fixing lugs, makes available the mounting of the device in any plane surface (horizontal, vertical, oblique).

It is possible to have the device varnished or totally resined and also in both cases with "Mini-Fit®" connectors or "AMP SuperSeal 1.5" connectors. If is resined, the enclosure, like the "AMP SuperSeal 1.5" connectors, is waterproof (IP63).

All the four series have these characteristics:

- Triple 4kV isolation between Power Supply / CANopen / NMEA2000;
- Varnished / Resined (optionally);
- Wide power supply input range: 8…26V AC | 10…40V DC;
- Mini-Fit® / AMP SuperSeal 1.5 connectors;
- Metal enclosure with fixing lugs;
- Possibility to use Metal hose clamps for fixing it without using lugs;
- Microprocessor for data control;
- Wide temperature range: -40°C / 105°C (-40°F / 221°F).

CONFIGURATION:

You need Compositor SW67461 software on your PC in order to perform the following:

- Define the NMEA2000 frames that are read from CANopen;
- Define the NMEA2000 frames that are written from CANopen;
- Define the Receive PDO;
- Define the Transmit PDO;
- Define SDO Server in read;
- Define SDO Server in write;
- Define the NMEA2000 frames to send the SDO client request;
- Define the NMEA2000 frames to send the state of Node Guard of the CANopen devices;
- Update the device.

Industrial Electronic Devices
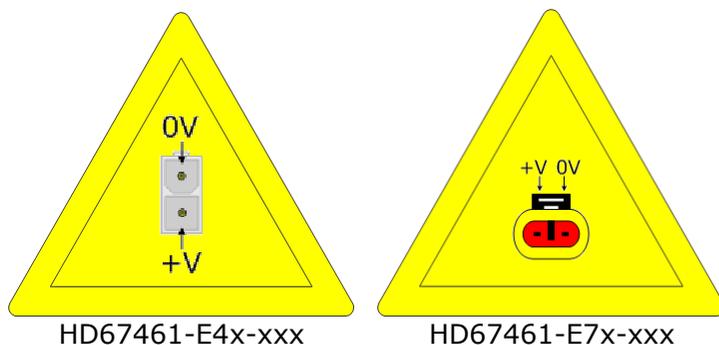
POWER SUPPLY:

The devices can be powered between a wide range of tensions. For more details see the two tables below.

	VAC		VDC	
	Vmin	**Vmax**	**Vmin**	**Vmax**
HD67461-Exx-xxx	**8V**	**26V**	**10V**	**40V**

Consumption at 24V DC:

Device	W/VA
HD67461-Exx-xxx	4

⚠ **Caution: Not reverse the polarity power**

HD67461-E4x-xxx

HD67461-E7x-xxx

✎ Note: It is possible to use also negative tensions. In this case the polarity must be inverted.

Connector1:
Power Supply port

0V = Ground
+V = Positive wire

V AC: min 8V ; max 26V
V DC: min 10V ; max 40V

←0V
←+V

Connector1:
Power Supply port

0V = Ground
+V = Positive wire

V AC: min 8V ; max 26V
V DC: min 10V ; max 40V

+V 0V

Industrial Electronic Devices
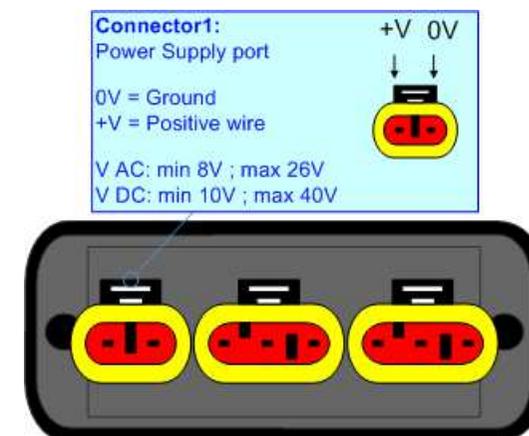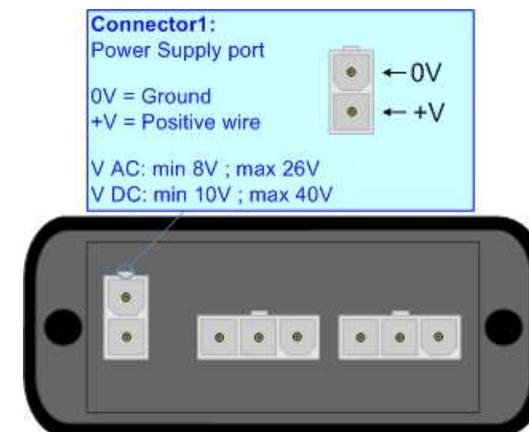
LEDS:

The device has got four 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: USB link (yellow)	**ON**: USB cable inserted **OFF**: USB cable not inserted	**ON**: USB cable inserted **OFF**: USB cable not inserted
2: Device state (green)	Blinks slowly (~1Hz)	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
3:CANopen communication (green)	Blinks when CANopen frames are received	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
4: NMEA2000 communication (green)	Blinks when NMEA2000 frames are received	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress

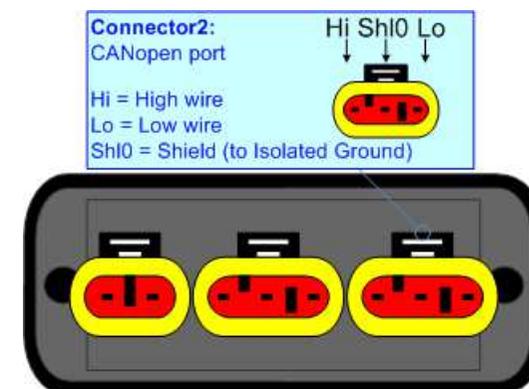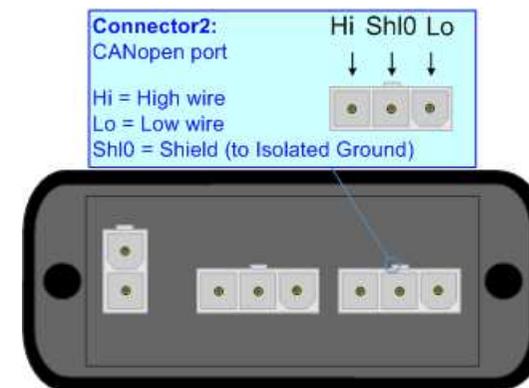Industrial Electronic Devices
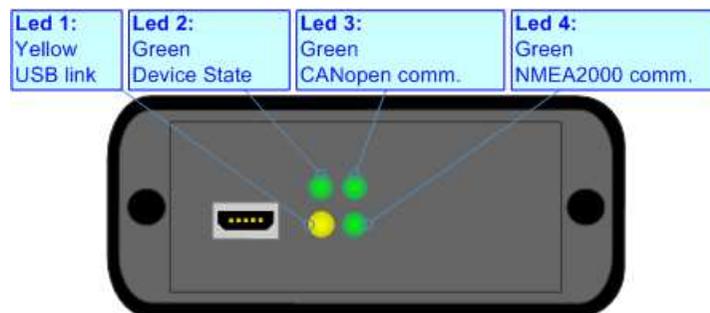
CANopen:

The connection of CANopen in the HD67461-E4x-xxx device must be made with a 3way MiniFit Female connector. The pinout of Male Mini-Fit connector of the board is at right side of the page.

The connection of CANopen in the HD67461-E7x-xxx device must be made with a AMP SuperSeal 1.5 Male connector. The pinout of Female connector of the board is at right side of the page.

The termination of CANopen line, with a 120Ω resistor, in the HD67461-Exx-xxx is made internally of the device; when the order is performed. If the device have the CANopen terminated the code is the follow: HD67461-Exx-Yxx; otherwise is this other: HD67461-Exx-Nxx.

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

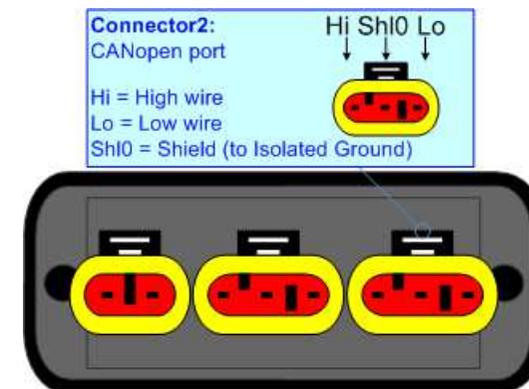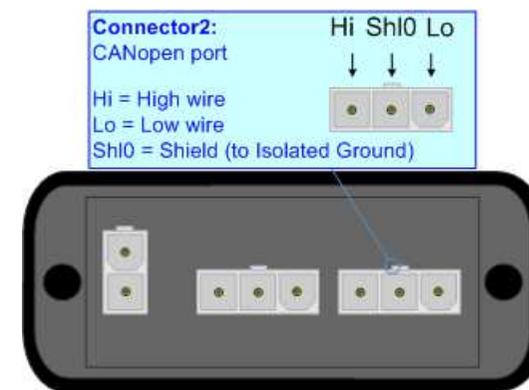Industrial Electronic Devices

NMEA2000:

The connection of NMEA2000 in the HD67461-E4x-xxx device must be made with a 3way MiniFit Female connector. The pinout of Male Mini-Fit connector of the board is at right side of the page.

The connection of NMEA2000 in the HD67461-E7x-xxx device must be made with a AMP SuperSeal 1.5 Male connector. The pinout of Female connector of the board is at right side of the page.

The termination of NMEA2000 line, with a 120Ω resistor, in the HD67461-Exx-xxx is made internally of the device; when the order is performed. If the device have the NMEA2000 terminated the code is the follow: HD67461-Exx-xYx; otherwise is this other: HD67461-Exx-xNx.

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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USB:

The USB port is used to start the converter in Boot Mode and to program the converter. It is necessary to use a Micro USB type B cable.

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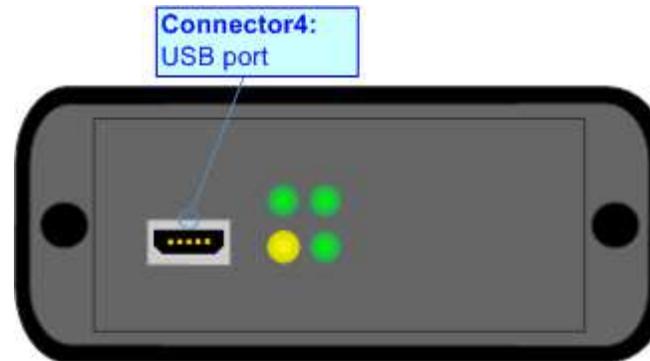
USE OF COMPOSITOR SW67461:

To configure the Converter, use the available software that runs with Windows called SW67461. 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, 10; 32/64bit).

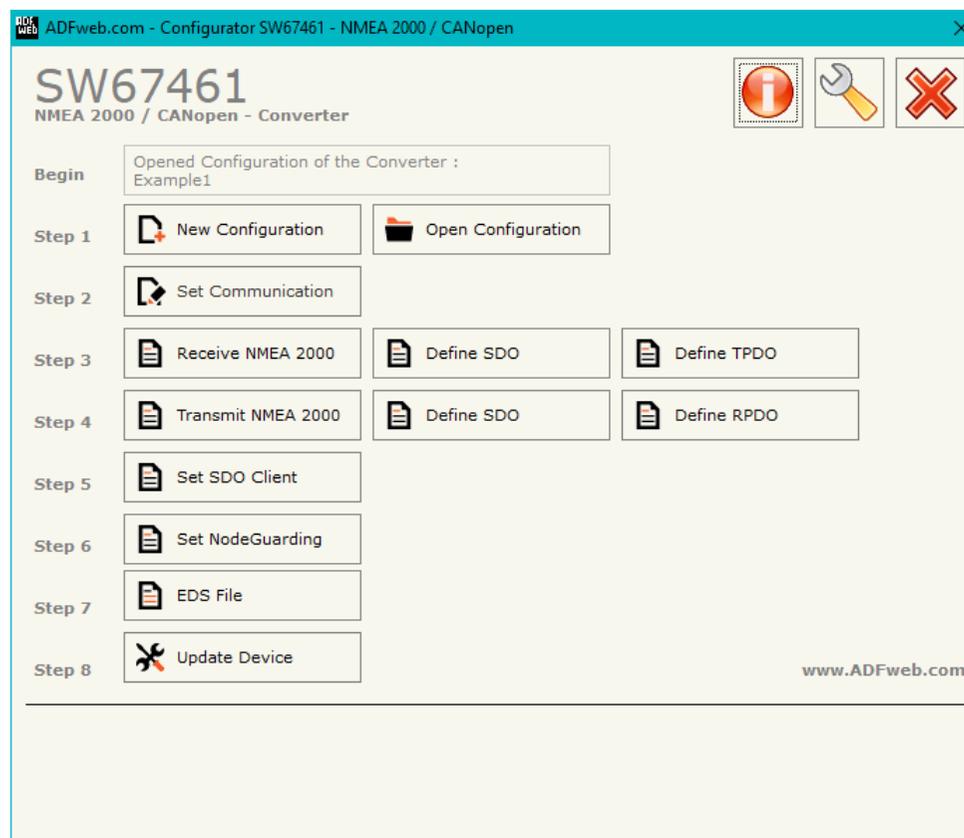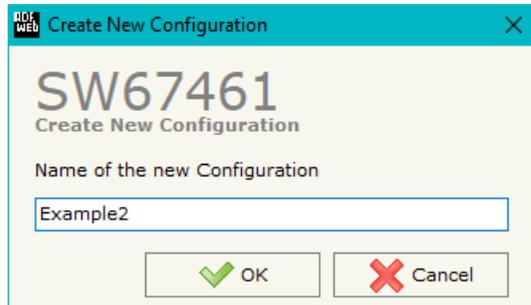When launching the SW67461, the window below appears (Fig. 2).



Figure 2: Main window for SW67461

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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 "NMEA2000 / CANopen - 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**".
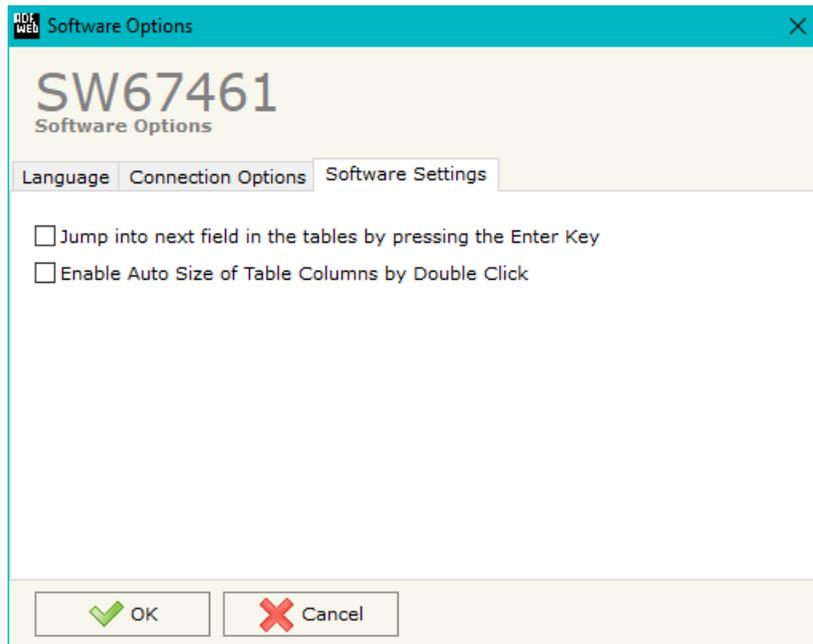
![ADFweb logo] Industrial Electronic Devices
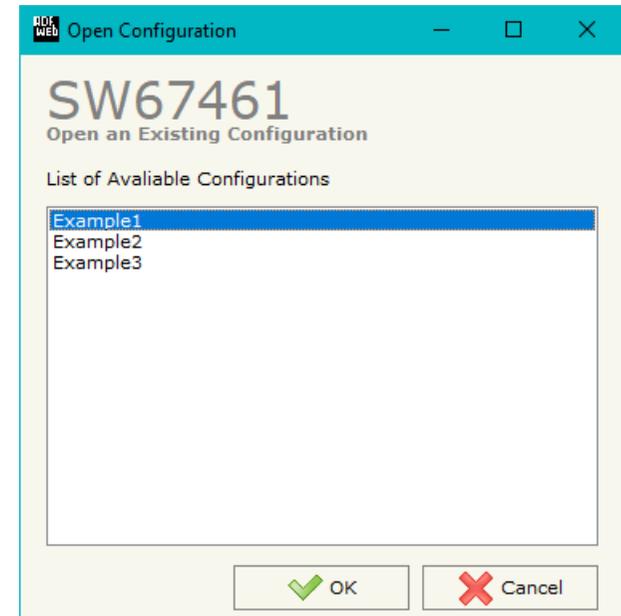
SOFTWARE OPTIONS:

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.
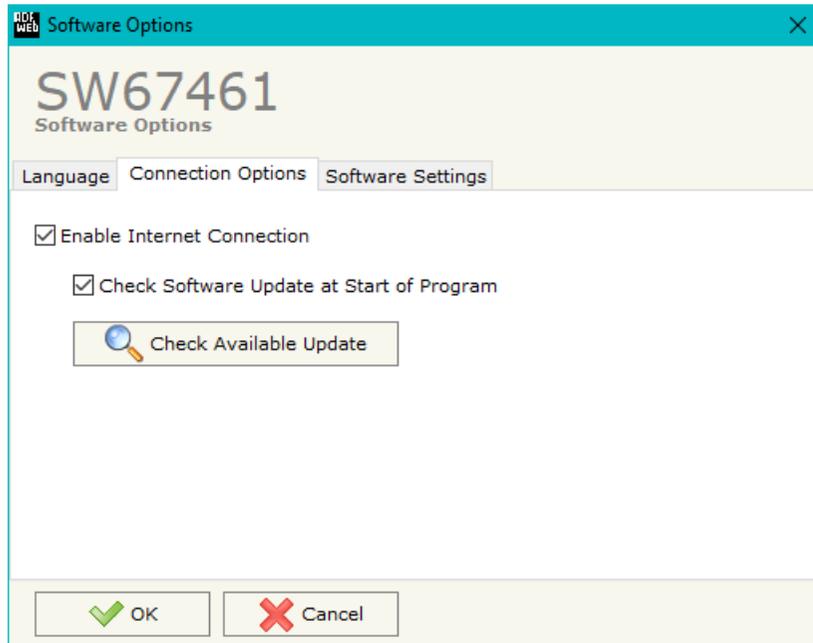
In the section "Connection Options", it is possible to check if there are some updatings of the software compositor in ADFweb.com website.
Checking the option "**Check Software Update at Start of Program**", the SW67461 checks automatically if there are updatings when it is launched.

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Software Options

SW67461

Software Options

| Language | Connection Options | Software Settings |

☐ Jump into next field in the tables by pressing the Enter Key

☐ Enable Auto Size of Table Columns by Double Click

OK   Cancel

In the section "Software Settings", it is possible to enable/disable some keyboard's commands for an easier navigation inside the tables contained in the different sections of the software.

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SET COMMUNICATION:

This section define the fundamental communication parameters of two buses, NMEA2000 and CANopen.

By Pressing the "**Set Communication**" button from the main window for SW67461 (Fig. 2) the window "Set Communication" appears (Fig. 3).

The means of the fields for "NMEA 2000" are:

- ➡ In the field "**Baudrate**" the data rate of CANopen is defined;
- ➡ If the field "**Enable Peer to Peer**" is checked, the gateway will mask the Source Address of the NMEA2000 messages received.
- ➡ In the field "**ID Device**" the NMEA2000 ID for the converter is defined.

The means of the fields for "CANopen" are:

- ➡ In the field "**ID Device**" the CANopen ID for the converter is defined;
- ➡ In the field "**Baudrate**" the data rate of the CANopen is defined;
- ➡ If the field "**Set Operational State at Start-up**" is checked, 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;
- ➡ If the field "**Network Start at Start-up**" is checked, 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. In the field "**Delay (s)**" the delay before sending the network command for the CANopen is defined;
- ➡ If the field "**Enable SDO Client**" is checked, the SDO Client function is enabled. In the field "**TimeOut SDO (1/10ms)**" the timeout for the SDO requests is defined;
- ➡ If the field "**Enable NodeGuarding**" is checked, the NodeGuarding function is enabled. It is possible to send the NodeGuarding information on NMEA2000 checking the option "**Send Nodes State on NMEA2000 Network**" with the defined delay in "**Send Frames every (ms)**" field;

Figure 3: "Set Communication" window

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RECEIVE NMEA2000:

By pressing the "**Receive NMEA2000**" button from the main window for SW67461 (Fig. 2) the window "Receive NMEA2000 Frames" appears (Fig. 4).
This section is used to define the NMEA2000 messages accepted by the converter.
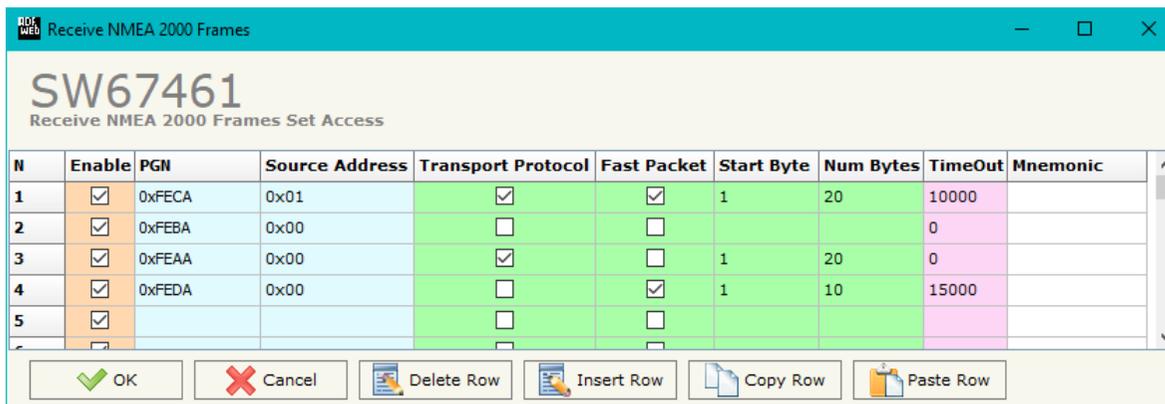
N	Enable	PGN	Source Address	Transport Protocol	Fast Packet	Start Byte	Num Bytes	TimeOut	Mnemonic
1	☑	0xFECA	0x01	☑	☑	1	20	10000	
2	☑	0xFEBA	0x00	☐	☐			0	
3	☑	0xFEAA	0x00	☑	☐	1	20	0	
4	☑	0xFEDA	0x00	☐	☑	1	10	15000	
5	☑			☐	☐				

Figure 4: "Receive NMEA2000 Frames" window

The means of the fields are:

- If the field "**Enable**" is checked, the NMEA2000 variable is enabled;
- In the field "**PGN**" the PGN of the NMEA 2000 message to receive is defined (in the NMEA 2000 protocol, the PGN is an identifier);
- In the field "**Source Address**" the address of the device that sends the frame is defined.
- If the field "**Transport Protocol**" is checked, the frame can use transport protocol functions;
- If the field "**Fast Packet**" is checked, the frame will use the Fast Packet functions;
- In the field "**Start Byte**" the starting byte to save internal memory array is defined;
- In the field "**N Bytes**" the number of consecutive byte from the starting one is defined. For example, if the Start Byte is '20' and Num Bytes is '10', it is possible to read the byte from 20 to 30;
- If the field "**Cancel Data**" is checked, when the data is oldest of the time inserted in the "TimeOut Data", the converter sets "0xFF" in the bytes of the internal memory array reserved for the PGN;
- In the field "**Mnemonic**" the description for the frame is defined.

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DEFINE SDO

By pressing the "**Define SDO**" button near "Receive NMEA2000" from the main window for SW67461 (Fig. 2) the window "Define Read Server SDOs for Receive NMEA2000 Frames" appears (Fig. 5):

- In the field "**List of Receive NMEA2000 Frames**" there is the list of NMEA2000 Frames that you inserted in "Receive NMEA2000" section.
- In the field "**List of Server SDO in Read**" there are the SDOs Objects in read.
- In the field "**Create/Modify a Server SDO**" you can define the Index, SubIndex and the Dimension of the SDO Object to create and the bytes of the NMEA2000 frame which you will map in.

For example:

Click on the NMEA2000 frame, insert the valid parameters in the fields "Index SDO", "SubIndex SDO" and "Dimension SDO", select which bytes of the NMEA2000 frame you want to map inside the SDO, click the "Create" button. In the field "List of Server SDO in Read" appears the new SDO Object created.
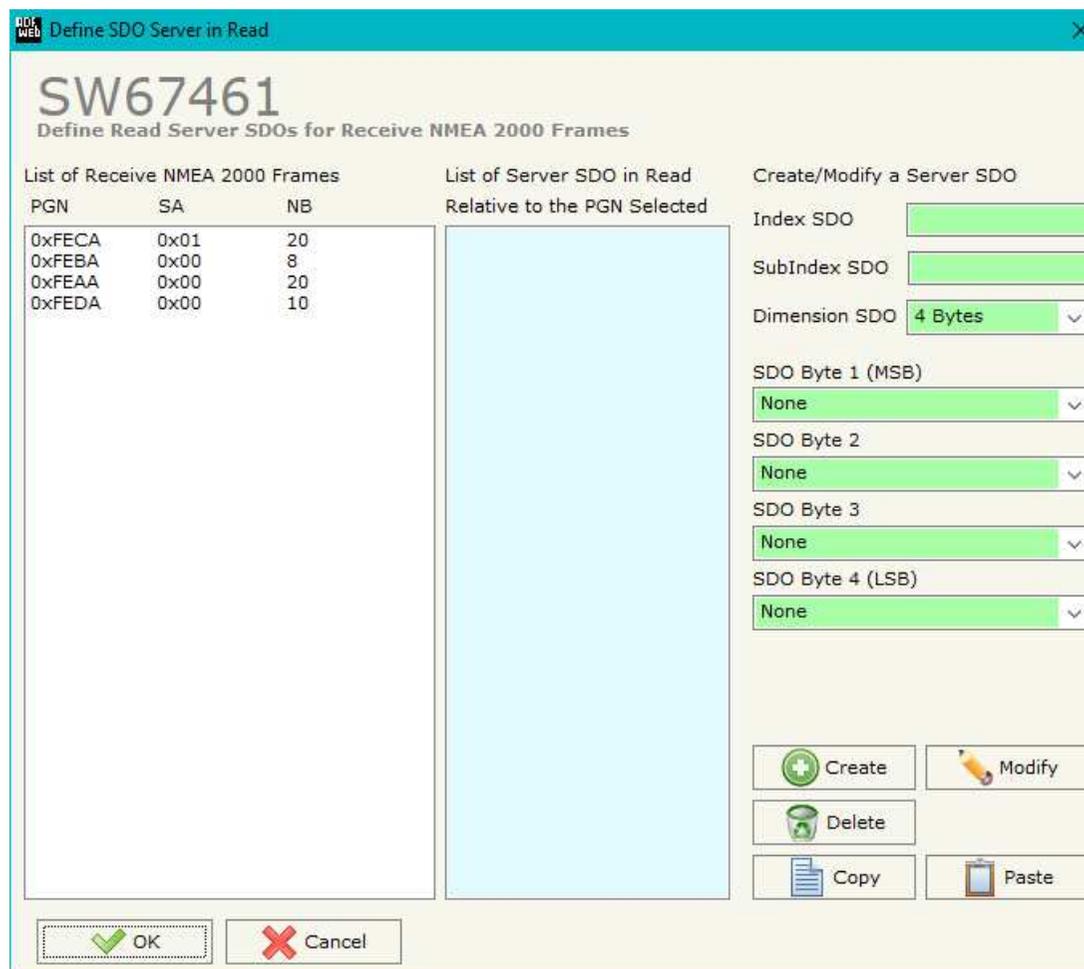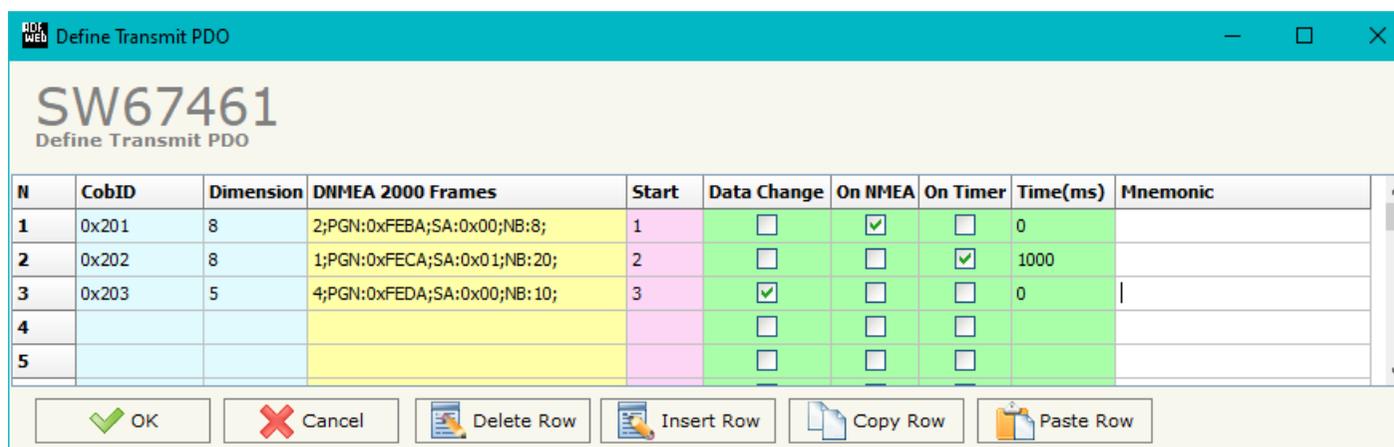

Figure 5: "Define Read Server SDOs for Receive NMEA2000 Frames" window

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DEFINE TPDO:

By pressing the "**Define TPDO**" button from the main window of SW67461 (Fig. 2) the window "Define Transmit PDO" appears (Fig. 6).
This section is used to define the TPDO messages sent by the converter.

Figure 6: "Define Transmit PDO" window

The means of the fields of the table are:

- In the field "**CobID**" the Cob-ID of the PDO is defined;
- In the field "**NMEA200 Frame**" the NMEA2000 frame to link to the TPDO is defined;
- In the field "**Start**" the starting byte of the internal array from which taking the data to map into the TPDOs is defined;
- If the field "**Data Change**" is checked, the TPDO frame is sent when the data into the linked NMEA2000 frame change;
- If the field "**On NMEA**" is checked, the TPDO is transmitted when the NMEA2000 frame linked is received;
- If the field "**On Timer**" is checked, the TPDO is sent cyclically;
- In the field "**Timer (ms)**" the cyclic delay for the "On Timer" option is defined;
- In the field "**Mnemonic**" the description for the frame is defined.

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TRANSMIT NMEA2000:

By pressing the "**Transmit NMEA2000**" button from the main window of SW67461 (Fig. 2) the window "Transmit NMEA2000" appears (Fig. 7).
This section is used to define the NMEA2000 messages sent by the converter.

Figure 7: "Transmit NMEA2000 Frames"

The means of the fields are:

- If the field "**Enable**" is checked, the NMEA2000 variable is enabled;
- In the field "**Priority**" the priority of the NMEA 2000 message is defined. In NMEA 2000 protocol, the priority is a number between 0 and 7. '0' is the highest priority and '7' is the lowest;
- In the field "**PGN**" the PGN of the NMEA 2000 message to send is defined (in NMEA 2000 protocol the PGN is an identifier);
- In the field "**Source Address**" the address of the device that sends the frame is defined;
- If the field "**On RPDO**" the PGN is sent when the associated RPDO from CANopen is received;
- If the field "**Data Change**" is checked, the NMEA 2000 frame is sent when a byte from CANopen side changes value;
- If the field "**On Timer**" is checked, the NMEA 2000 frame is sent cyclically;
- In the field "**Send Timer**" the delay (in milliseconds) with which sending the NMEA 2000 message is defined;
- In the field "**Mnemonic**" a description for the frame is defined.

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DEFINE SDO

By pressing the "**Define SDO**" button near "Transmit NMEA2000" from the main window for SW67461(Fig. 2) the window "Define Write Server SDOs for Transmit NMEA2000 Frames" appears (Fig. 8):

 * In the field "**List of Transmit NMEA2000 Frames**" there is the list of NMEA2000 Frames that you inserted in "Transmit NMEA2000" section.

 * In the field "**List of Server SDO in Write**" there are the SDOs Objects in read.

 * In the field "**Create/Modify a Server SDO**" you can define the Index, SubIndex and the Dimension of the SDO Object to create and the bytes of the NMEA2000 frame which you will map to.

 * With the field "**Send NMEA2000 frame When Write SDO**" it is possible to decide when sending the NMEA2000 frame. If this option is "True", the NMEA2000 frame is transmitted when the selected SDO is written.

For example:

Click on the NMEA2000 frame, insert the valid parameters in the fields "Index SDO", "SubIndex SDO" and "Dimension SDO", select which bytes of the NMEA2000 frame you want to map inside the SDO, click the Object created.
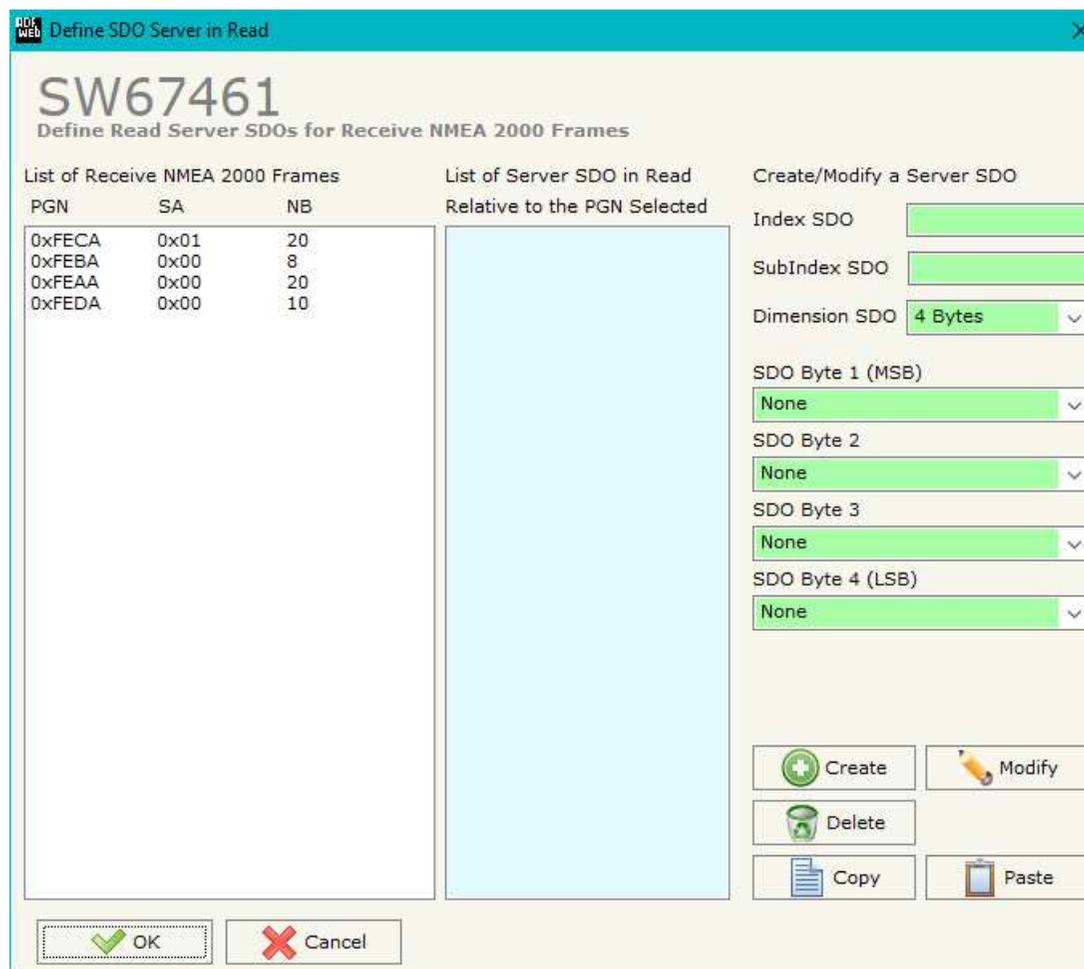
Figure 8: "Define Write Server SDOs for Transmit NMEA2000 Frames" window

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DEFINE RPDO:

By pressing the "**Define RPDO**" button from the main window of SW67461 (Fig. 2) the window "Define Receive PDO" appears (Fig. 9).
This section is used to define the RPDO messages accepted by the converter.

N	CobID	Dimension	NMEA 2000 Frame	TimeOut	Mnemonic
1	0x281	8	2;PGN:0x1235;SA:0x01;	0	
2	0x282	8	1;PGN:0x1234;SA:0x01;	10000	
3					
4					
5					
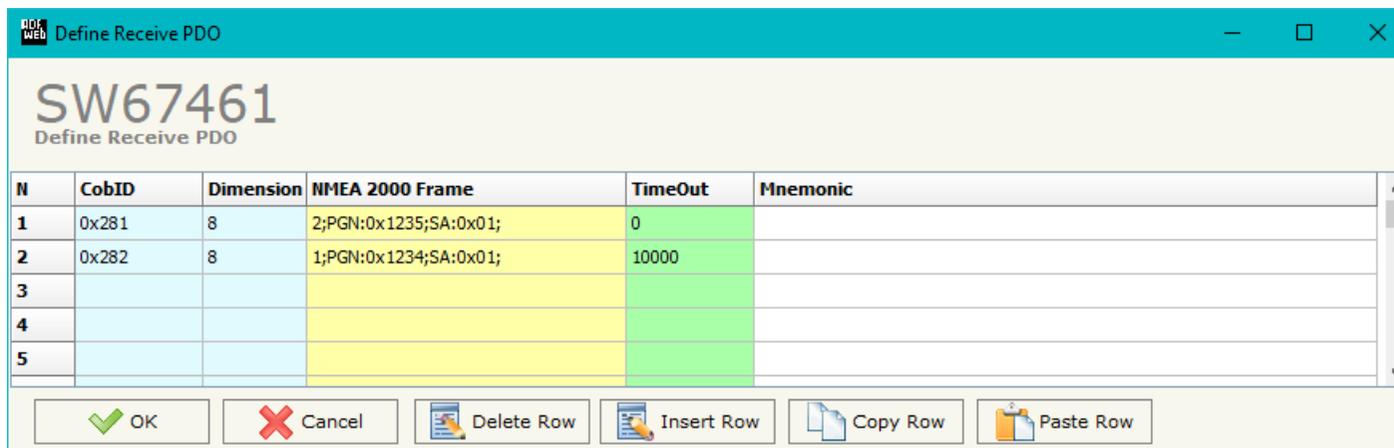
Figure 9: "Define Receive PDO" window

The means of the fields of the table are:

- In the field "**Cob-ID**" the Cob-ID of the PDO is defined;
- In the field "**Dimension**" the dimension of the RPDO is defined;
- In the field "**NMEA2000 Frame**" the NMEA2000 frame to link to the RPDO is defined;
- If the field "**TimeOut**" the TimeOut is defined; after the TimeOut defined, the value of the data of the PDO become "0";
- In the field "**Mnemonic**" a description of the frame is defined.

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SET SDO CLIENT:

By pressing the "**Set SDO Client**" button from the main window of SW67461 (Fig. 2) the window "Define NMEA2000 Frames to use the Client SDO" appears (Fig. 10).

In this window is possible to configure five NMEA2000 messages used to read and write SDO data from other devices in the network CANopen.

The first two frames are used to read a SDO, the last three messages are used to write a SDO.
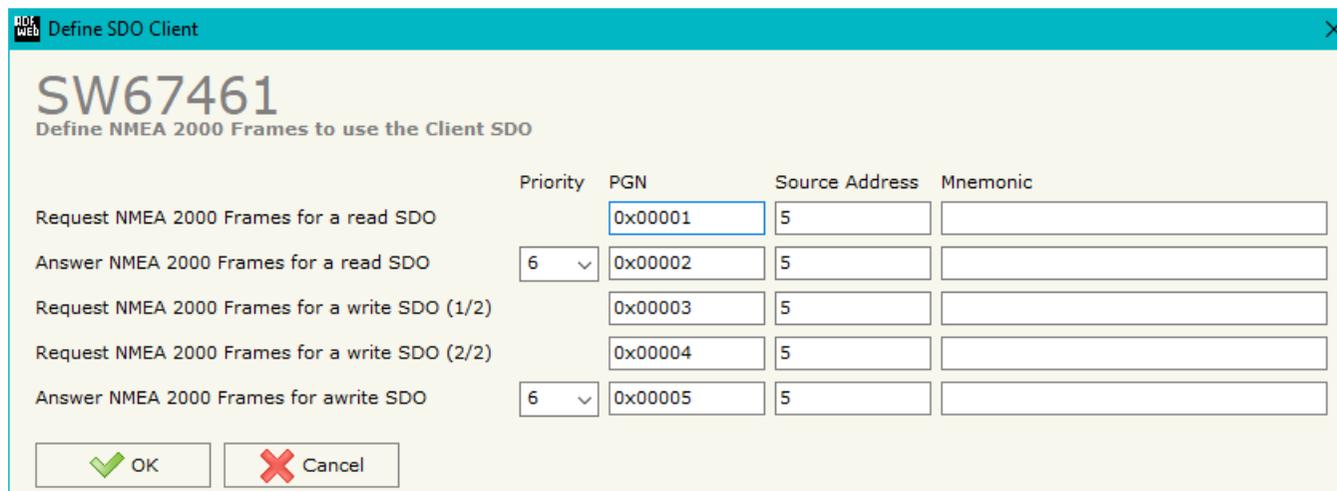
Figure 10: "Define NMEA2000 Frames to use the Client SDO" window

READ SDO

Request frame NMEA2000 to read a SDO
When the gateway receive this message, it sends a read SDO request to CANopen network.
The coordinates of the SDO are inside the data bytes of the NMEA2000 message in this format:

Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7	Byte8
ID Device	Index	Index	SubIndex	Num Byte	Not used = 0	Not used = 0	Not used = 0

Answer frame NMEA2000 of a read SDO
The gateway sends this frame with the answer of the SDO.
The Data bytes of this message are so formed:

Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7	Byte8
ID Device REQ	Index REQ	Index REQ	SubIndex REQ	Data byte 1	Data byte 2	Data byte 3	Data byte 4

WRITE SDO

Request frame NMEA2000 to write a SDO (1/2)
When the gateway receive this message it save the coordinates of write SDO request.
The coordinates of the SDO are inside the data bytes of the NMEA2000 message in this format:

Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7	Byte8
ID Device	Index	Index	SubIndex	Num Byte	Not used = 0	Not used = 0	Not used = 0

Request frame NMEA2000 to write a SDO (2/2)
When the gateway receive this message it send the SDO write request in CANopen network.
The coordinates of the SDO are inside the data bytes of the NMEA2000 message in this format:

Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7	Byte8
Data Byte 1	Data Byte 2	Data Byte 3	Data Byte 4	Not used = 0	Not used = 0	Not used = 0	Not used = 0

Answer frame NMEA2000 of a write SDO
The gateway send this frame when a Write SDO request finish correctly.
The Data byte of this message are so formed:

Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7	Byte8
ID Device REQ	Index REQ	Index REQ	SubIndex REQ	1	Not used = 0	Not used = 0	Not used = 0

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SET NODEGUARDING:

By pressing the "**Set NodeGuarding**" button from the Main Window of SW67461 (Fig. 2) the "Define Node Guarding" window appears (Fig. 11).

➔ In the field "**Node ID**", the address of the CANopen device that you want to control is defined. It is possible to insert up to 32 address;

➔ 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.

In the fields below, it is possible to define the NMEA2000 messages where mapping the informations of the Node Guarding.
The first byte of each NMEA2000 frame will contain the status of 7 CANopen devices (1 = present or 0 = not present). The others 7 bytes will contain the status of the monitored CANopen devices.
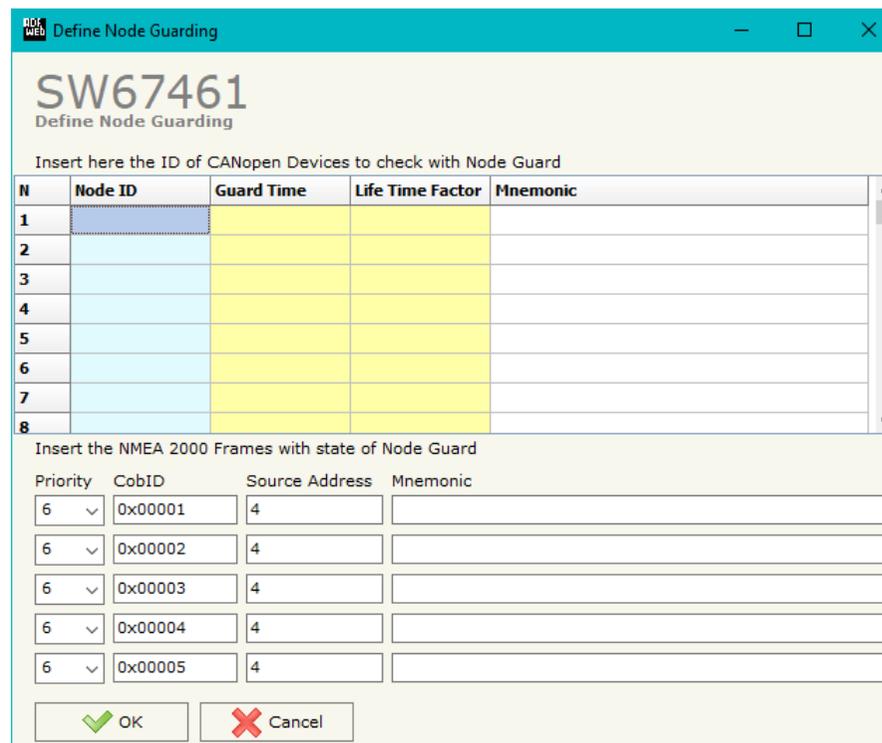

Figure 11: "Define Node Guarding" window

![ADFweb logo] **Industrial Electronic Devices**

UPDATE DEVICE USB:

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

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

➜ Connect the USB cable from your PC to the Converter;
➜ Turn ON the converter (it starts in Boot Mode);
➜ Select the "**COM port**";
➜ Select which operations you want to do.
➜ Press the "**Execute update firmware**" button to start the upload;
➜ When all the operations are "OK", disconnect the USB cable.

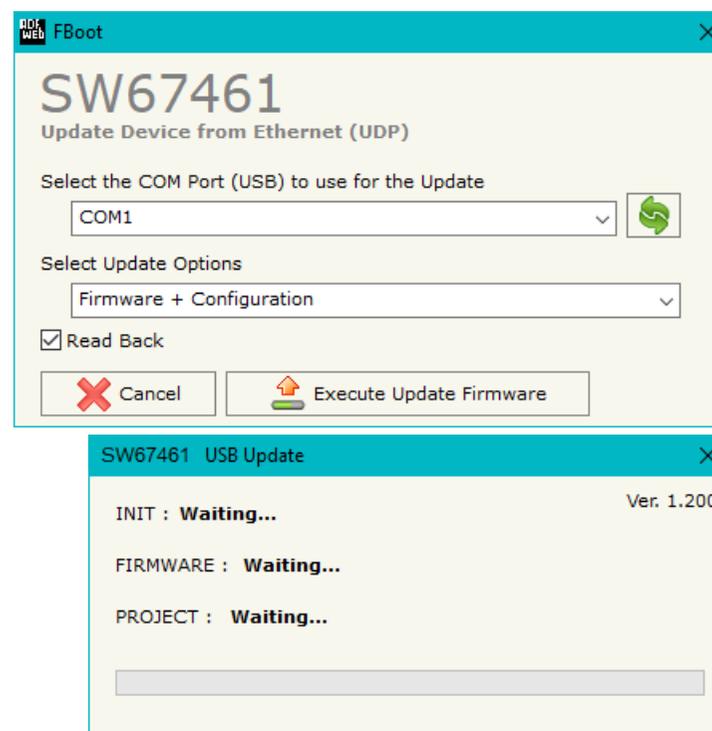*Figure 12: "Update Device" windows*

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Note:
When you install a new version of the software it is better if the first time you do the update of the Firmware in the HD67461 device.

Note:
When you receive the device, for the first time, you have to update also the Firmware in the HD67461 device.

Warning:
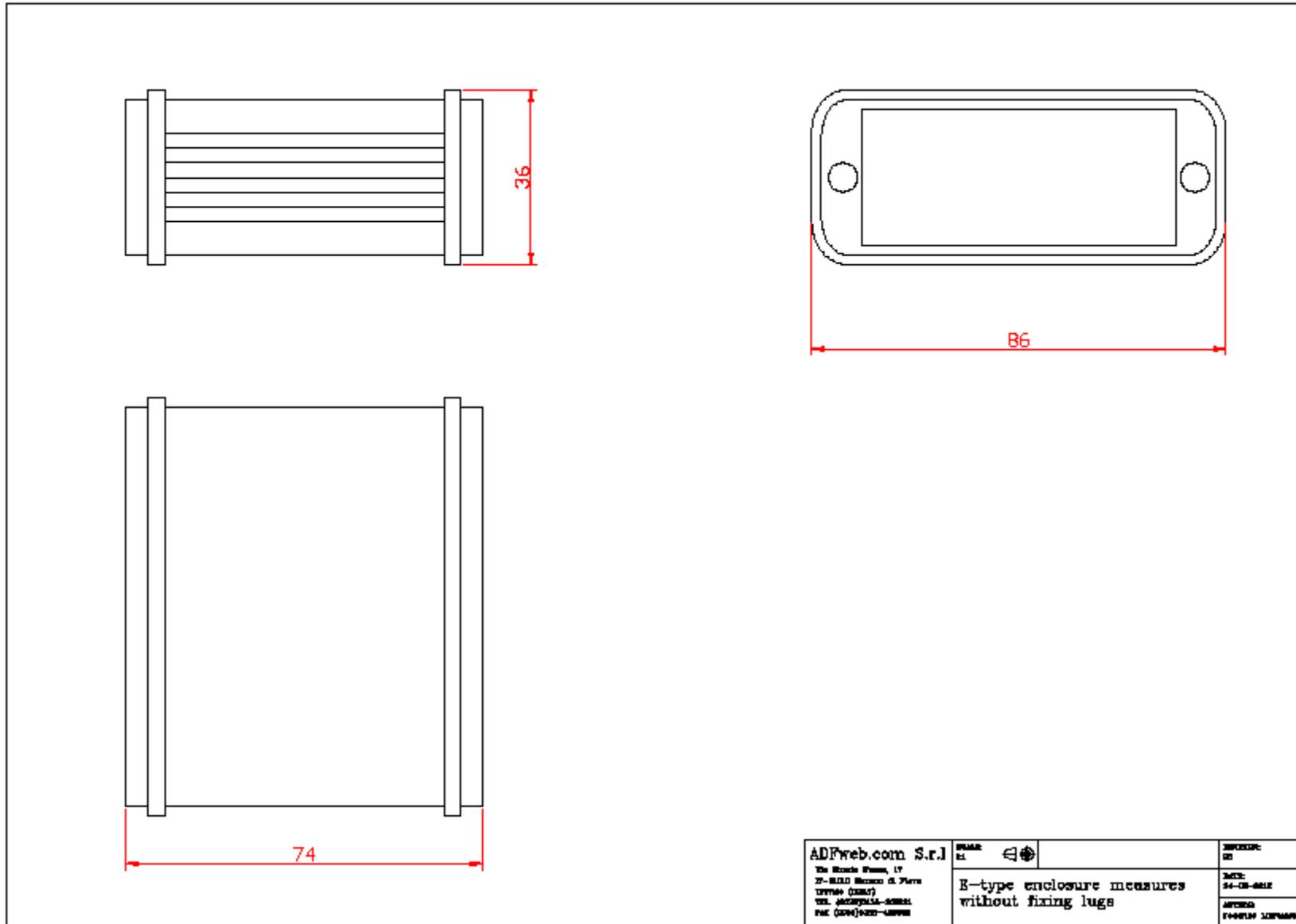If the Fig. 13 appears when you try to do the Update before require assistance try these points:

→ Check if the serial COM port selected is the correct one;
→ Check if the USB cable is connected between the PC and the device;
→ Try to repeat the operations for the updating;
→ Try with another PC;
→ Try to restart the PC;
→ If you are using the program inside a Virtual Machine, try to use in the main Operating System;
→ If you are using Windows Seven or Vista or 8 or 10, make sure that you have the administrator privileges;
→ Pay attention to Firewall lock.

Figure 13: "Protection" window

In the case of HD67461 you have to use the software "SW67461": www.adfweb.com\download\filefold\SW67461.zip.

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MECHANICAL DIMENSIONS:

ADFweb.com S.r.l

E-type enclosure measures
without fixing lugs

Industrial Electronic Devices

Type A

ADFweb.com S.r.l			
Via Strada Nuova, 17 IT-31010 Mareno di Piave TREVISO (ITALY) TEL. +39(0)438-30.91.31 FAX (039)438-49.99.99	E-type enclosure measures with fixing lugs Type A		

![ADFweb logo]

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Type B

ADFweb.com S.r.l			
	E-type enclosure measures with fixing lugs Type B		

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Type C

ADFweb.com S.r.l

E—type enclosure measures
with fixing lugs Type C

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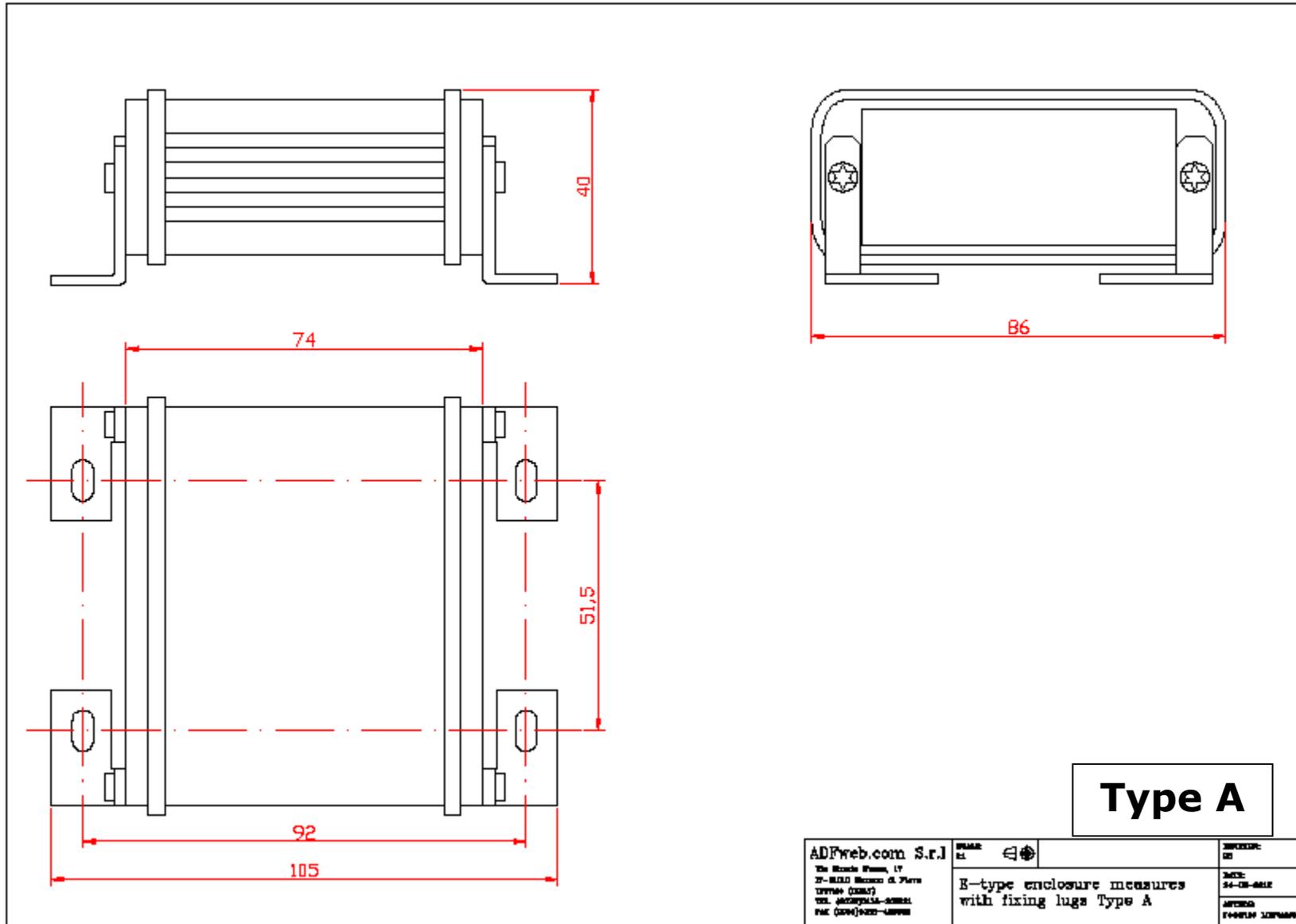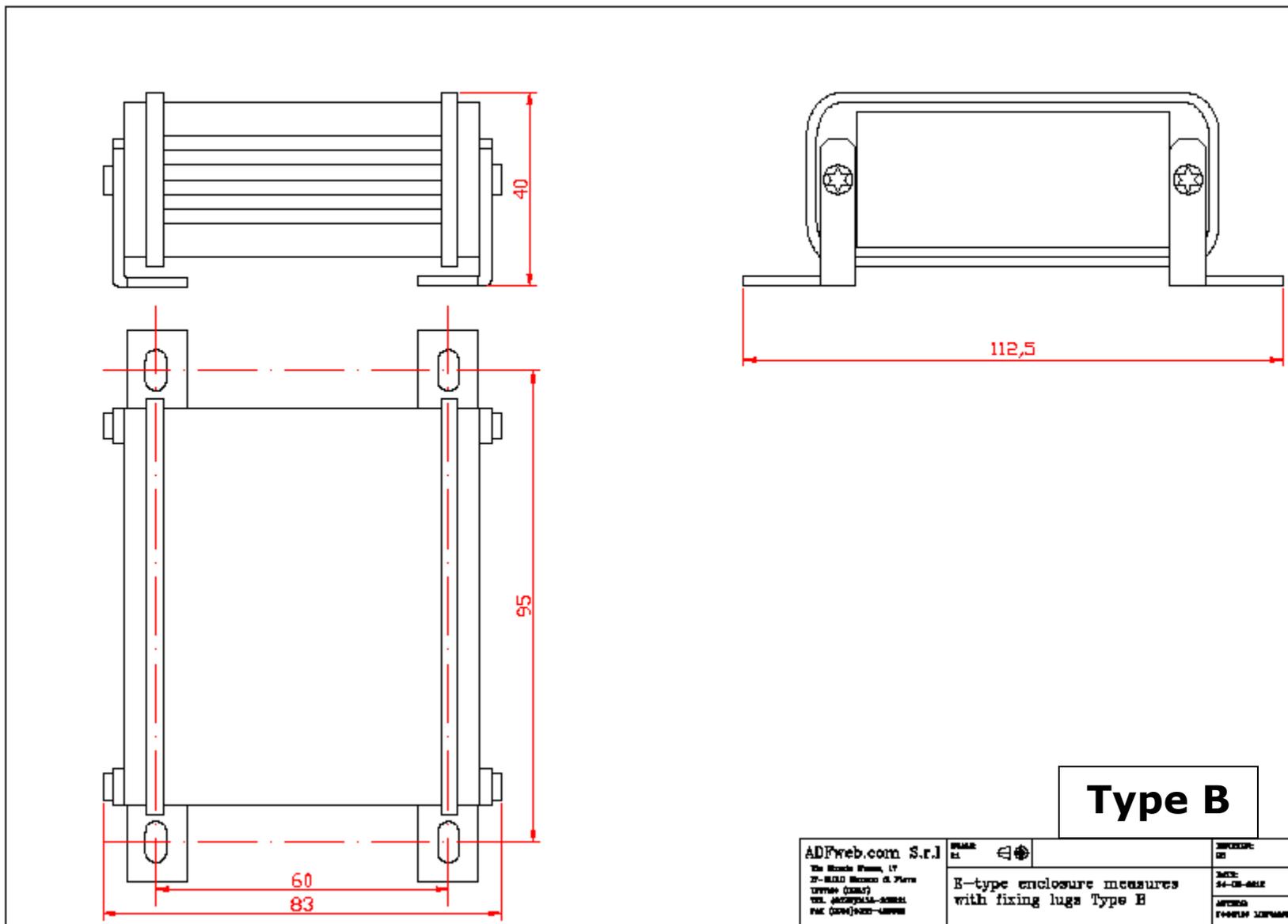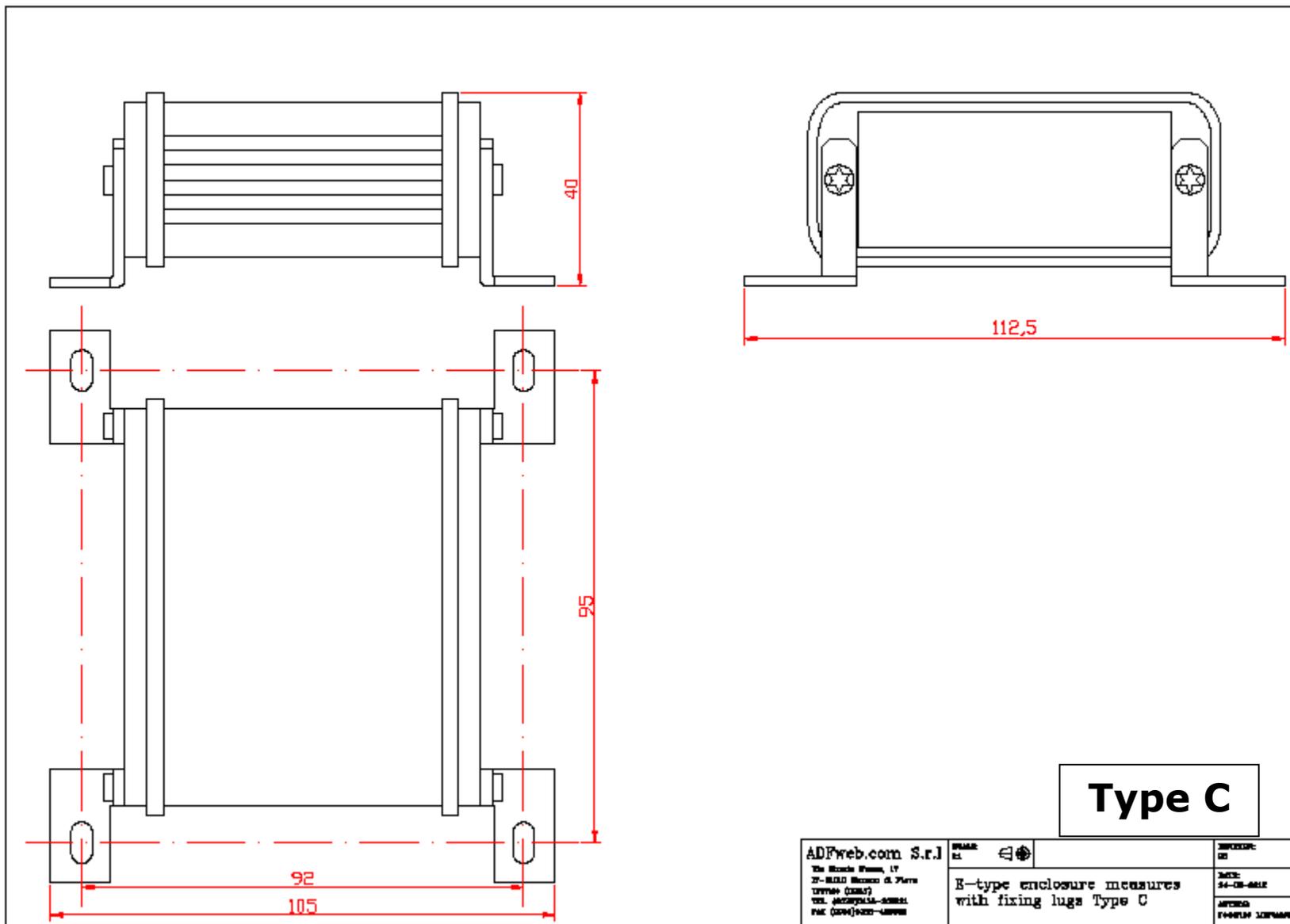
ORDERING INFORMATIONS:

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

HD67461 – E y z – s d f

Fixing lugs
A: Type A
B: Type B
C: Type C
D: without fixing lugs

NMEA2000 Termination
Y: Terminated with 120Ω
N: Not terminated

CANopen Termination
Y: Terminated with 120Ω
N: Not terminated

Varnished/Resinated
V: Varnished
R: Resined

Connectors Type
4: MiniFit
7: SuperSeal 1.5

Enclosure Type
E: Metal enclosure

Device Family
HD67461 = NMEA2000 / CANopen - Converter

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ACCESSORIES:

Order Code: **AC34011**   -   35mm Rail DIN - Power Supply 220/240V AC 50/60Hz – 12 V DC

Order Code: **AC34012**   -   35mm Rail DIN - Power Supply 220/240V AC 50/60Hz – 24 V DC

Order Code: **AC67402**   -   Cable Super Seal 1.5 MALE 2-pole - 1.0 Meter

Order Code: **AC67402-3**   -   Cable Super Seal 1.5 MALE 2-pole - 3.0 Meters

Order Code: **AC67403**   -   Cable Super Seal 1.5 MALE 3-pole - 1.0 Meter

Order Code: **AC67403-3**   -   Cable Super Seal 1.5 MALE 3-pole - 3.0 Meters

Order Code: **AC67410**   -   Accessory Automotive Devices - Support for rail DIN

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DISCLAIMER:

All technical content within this document can be modified without notice. The content of the document is a under continual renewal.
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. ADFweb.com S.r.l. will not be liable for accidental loss of use or inability to use this product, such as loss of business income. ADFweb.com S.r.l. shall not be liable for consequences of improper use.

OTHER REGULATIONS AND STANDARDS:

WEEE ɪɴꜰᴏʀᴍᴀᴛɪᴏɴ

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.

Rᴇsᴛʀɪᴄᴛɪᴏɴ ᴏꜰ Hᴀᴢᴀʀᴅᴏᴜs Sᴜʙsᴛᴀɴᴄᴇs ᴅɪʀᴇᴄᴛɪᴠᴇ

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 ᴍᴀʀᴋɪɴɢ

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

Industrial Electronic Devices

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.