

User Manual

Revision 1.000
English

- ✦
- ✦ Power Supply 18...35V DC and 8...24 V AC
- ✦ Temperature range: -40°C/+85°C (-40°F/+185°F)



User Manual

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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	13/03/2019	Tf	All	First release version

WARNING:

ADFweb.com reserves the right to change information in this manual about our product without warning.
ADFweb.com 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, 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:

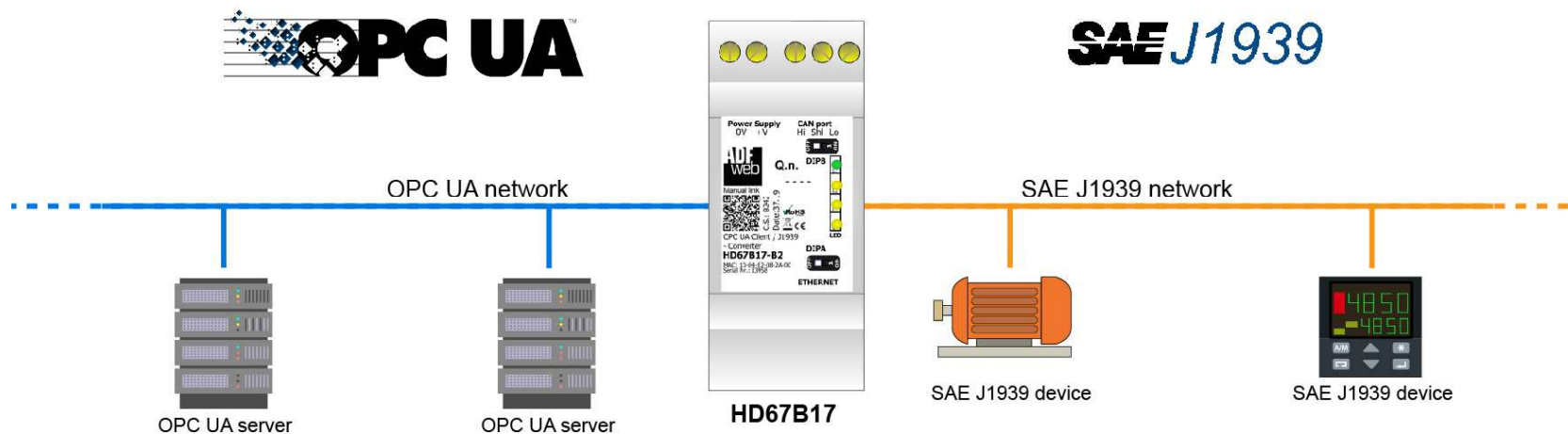


This symbol indicates that non-observance of the safety instructions is a danger for people that could lead to serious injury or death and / or the possibility of damage.

CE CONFORMITY

The declaration is made by our company. You can send an email to or give us a call if you need it.

EXAMPLE OF CONNECTION:



ADFweb.com
 Tel. +39 0438 309 131 - Fax +39 0438 492 099
 info@adfweb-com - www.adfweb.com

CONNECTION SCHEME:

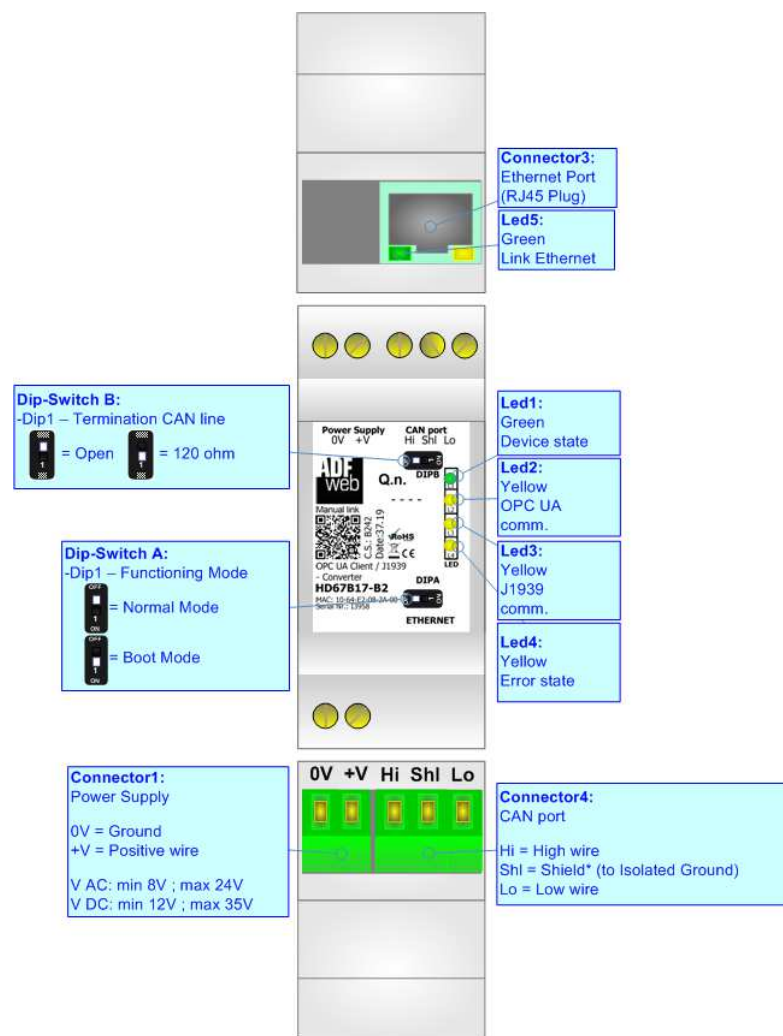


Figure 1: Connection scheme for HD67B17-B2

CHARACTERISTICS:

The HD67B17-B2 is a OPC UA Client / J1939 converter.

It allows the following characteristics:

- Up to 1500 bytes in reading and 1500 bytes in writing;
- Two-directional information between J1939 and OPC UA;
- 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 SW67B17 software on your PC in order to perform the following:

- Define the parameter of OPC UA;
- Define the parameter of J1939 line;
- Define the list of OPC UA servers connected to the converter;
- Define the list of J1939 messages in reception and transmission;
- Update the device.

POWER SUPPLY:

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

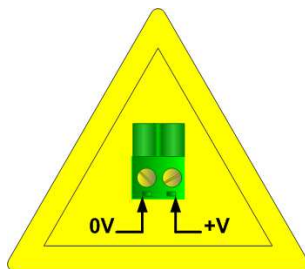
	VAC		VDC	
	Vmin	Vmax	Vmin	Vmax
HD67B17-B2	8V	24V	12V	35V

Consumption at 24V DC:

Device	W/VA
HD67B17-B2	4



Caution: Not reverse the polarity power



HD67B17-B2



Connector1:
Power Supply
0V = Ground
+V = Positive wire
V AC: min 8V ; max 24V
V DC: min 12V ; max 35V

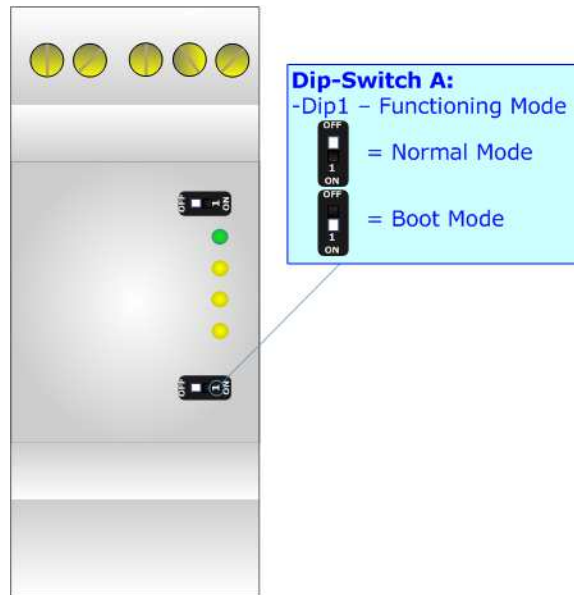
FUNCTION MODES:

The device has got two functions mode depending of the position of the Dip1 of 'Dip-Switch A':

- The first, with Dip1 in Off position (factory setting), is used for the normal working of the device.
- The second, with Dip1 in On position, is used for upload the Project/Firmware.

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

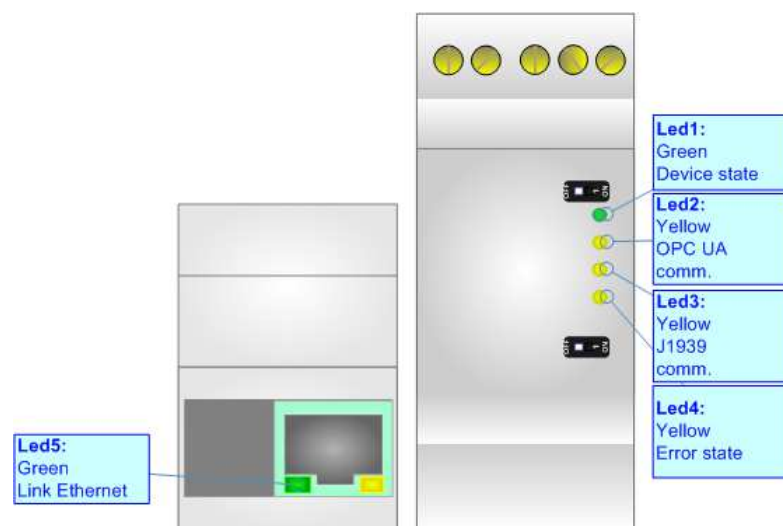
According to the functioning mode, the LEDs will have specifics functions (see 'LEDS' section).



LEDS:

The device has got five 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: Device State (green)	Blinks slowly (~1Hz)	Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress
2: OPC UA comm. (yellow)	Flashing: OPC UA response OFF: No OPC UA response	Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress
3: J1939 comm. (yellow)	Flashing: J1939 communication OFF: No J1939 communication	Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress
4: Error state (yellow)	ON: At least one OPC UA Server is disconnected OFF: all OPC UA Servers are connected	Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress
5: Link Ethernet (green)	ON: Ethernet cable connected OFF: Ethernet cable disconnected	ON: Ethernet cable connected OFF: Ethernet cable disconnected



CAN:

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

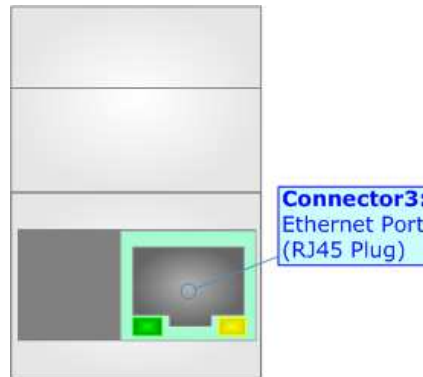


Cable characteristics:

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

ETHERNET:

The Ethernet connection must be made using Connector3 of HD67B17-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 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.



USE OF COMPOSITOR SW67B17:

To configure the Converter, use the available software that runs with Windows called SW67B17. 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 SW67B17, the window below appears (Fig. 2).


 **Note:**
 It is necessary to have installed .Net Framework 4.



Figure 2: Main window for SW67B17

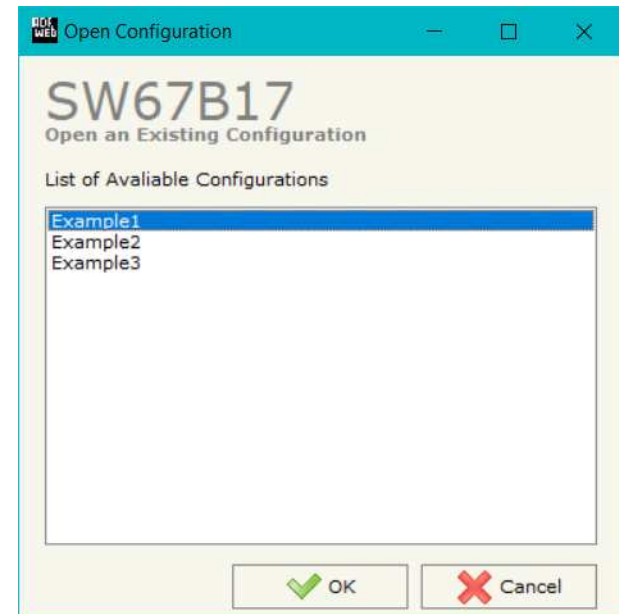
NEW CONFIGURATION / OPEN CONFIGURATION:

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




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

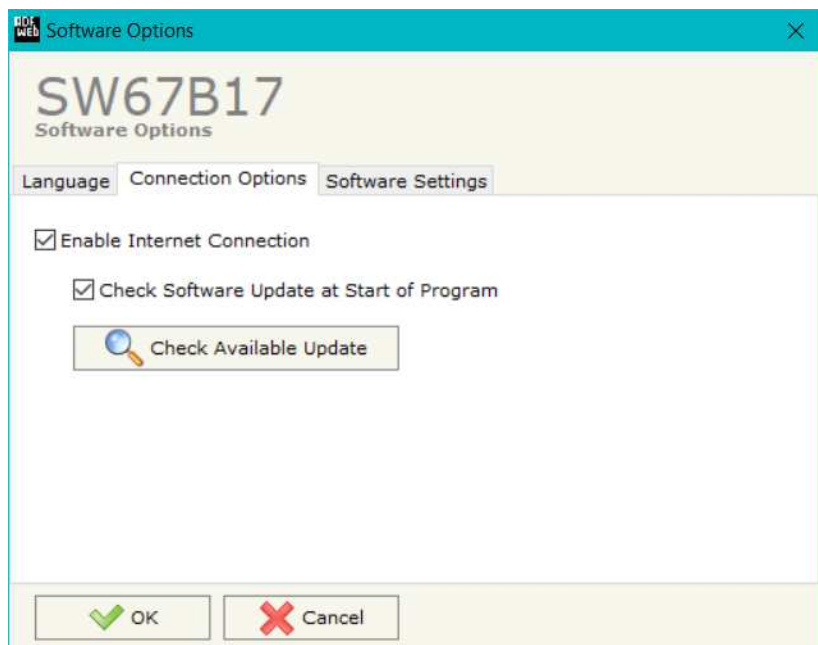
- To clone the configurations of a programmable “OPC UA Client / J1939 - Converter” in order to configure another device in the same manner, it is necessary to maintain the folder and all its contents;
- To clone a project in order to obtain a different version of the project, it is sufficient to duplicate the project folder with another name and open the new folder with the button “**Open Configuration**”.



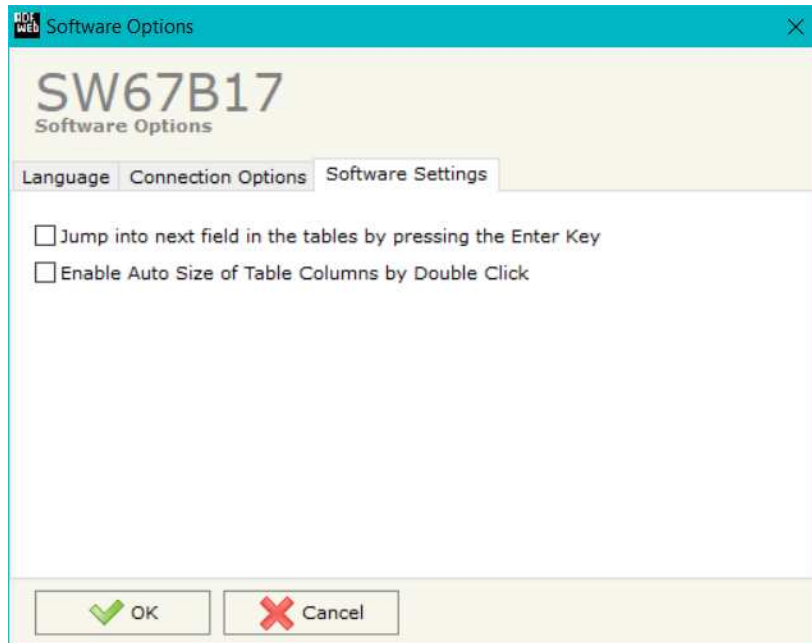
SOFTWARE OPTIONS:

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 SW67B17 check automatically if there are updatings when it is launched.



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.

SET COMMUNICATION:

This section define the fundamental communication parameters of two buses, OPC UA and J1939.

By Pressing the "**Set Communication**" button from the main window for SW67B17 (Fig. 2) the window "Set Communication" appears (Fig. 3).

The means of the fields for "OPC UA Client" are:

- In the field "**IP Address**" the IP address for OPC UA side of the converter is defined;
- In the field "**SubNet Mask**" the SubNet Mask for OPC UA side of the converter is defined;
- In the field "**Gateway**" the default gateway of the net 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 "**DNS**" the IP Address of the DNS server is defined. This feature can be enabled or disabled pressing the Check Box field.

The means of the fields for "J1939" are:

- In the field "**Baudrate**" the data rate of J1939 is defined;
- In the field "**TimeOut Data**" a time is defined. When a J1939 message is not received in this time, the data on MQTT side are set to 0xFF;
- If the field "**Enable Peer to Peer**" is checked, the gateway will mask the Source Address of the J1939 messages received.
- In the field "**ID Device J1939**" the ID of J1939 side of the converter is defined.

The means of the fields for "NTP (Network Time Protocol)" are:

- In the field "**Server URL**" the URL or the IP Address of the NTP Server is defined;
- In the field "**Poll Time (seconds)**" the polling time for the time synchronization is defined.

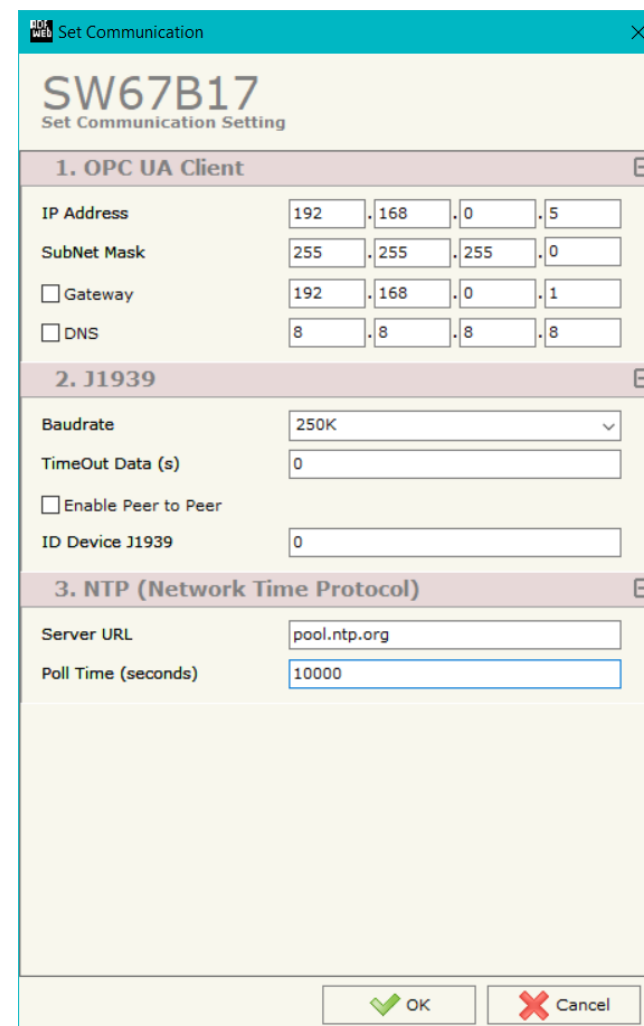


Figure 3: "Set Communication" window

OPC UA ACCESS:

By Pressing the “**OPC UA Client Access**” button from the main window for SW67B17 (Fig. 2) the window “OPC UA Client Access” appears (Fig. 4).

This section is used to define the list of the OPC UA Servers to read/write with the OPC UA Client.

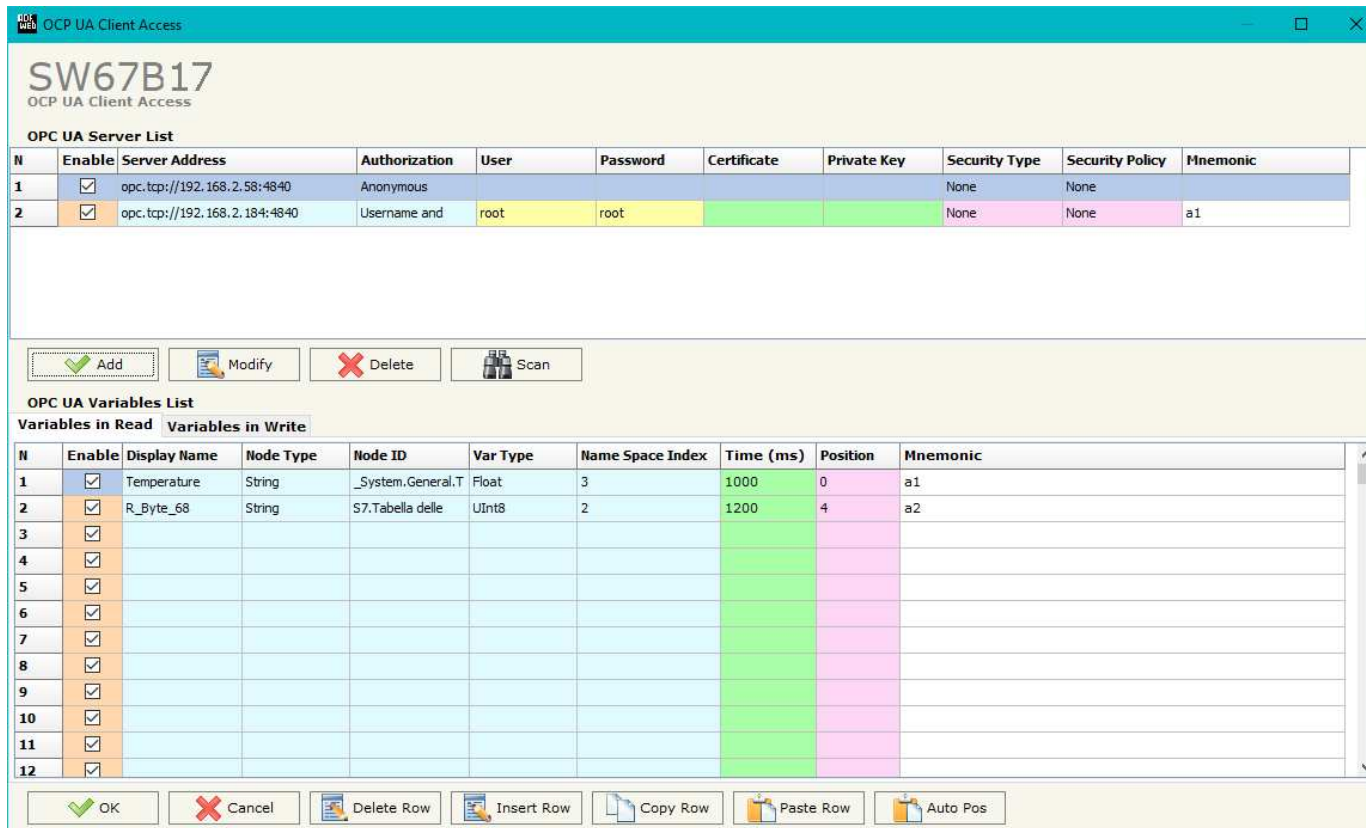


Figure 4: “OPC UA Client Access” window

By clicking on **"Add"**, it is possible to add a new OPC UA Server inserting its characteristics (Server Address, Authorization, Security Type...). The window "Add OPC UA Server" appears (Fig. 5). By clicking on **"Modify"**, it is possible to change these characteristics for the selected Server. The window "Modify OPC UA Server" appears (Fig. 6).

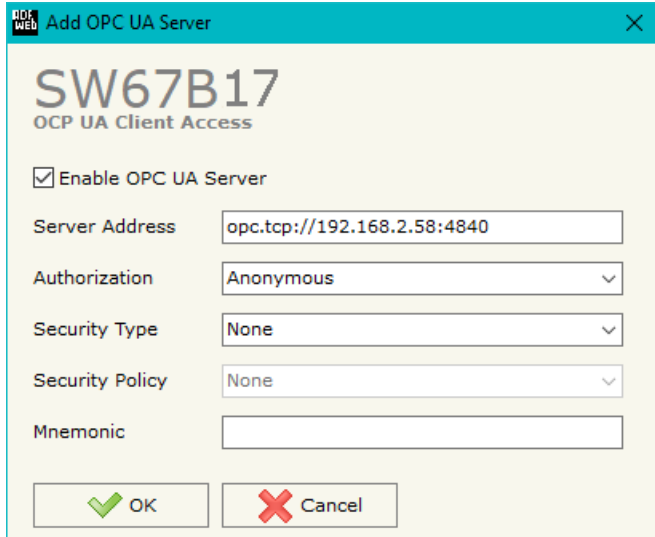


Figure 5: "Add OPC UA Server"

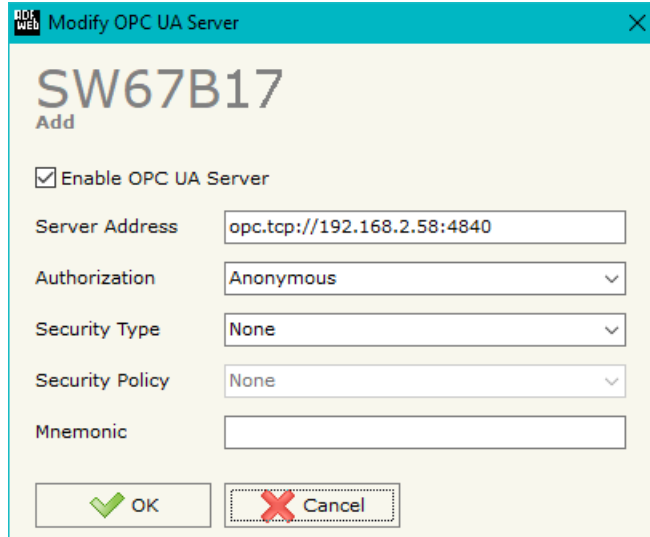


Figure 6: "Modify OPC UA Server"

By clicking on “**Scan**”, it is possible to get the list of available variables from the selected Server. The window “Scan Server OPC UA” appears (Fig. 7).

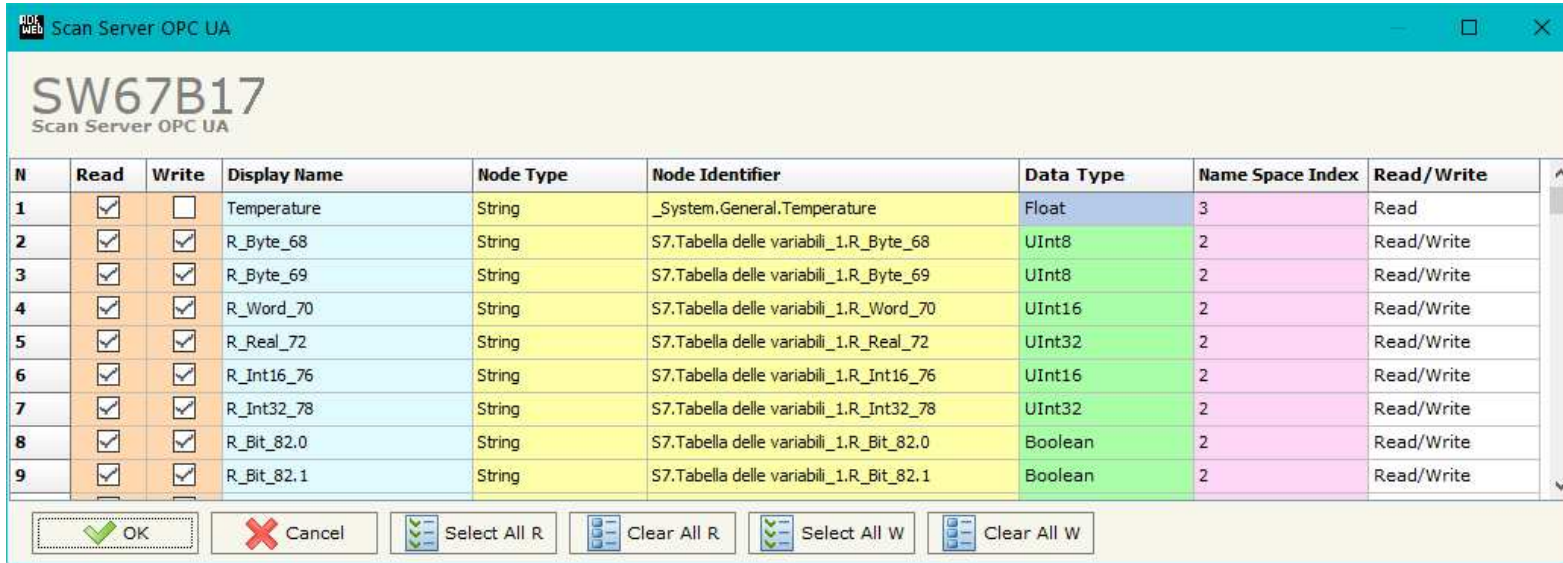


Figure 7: “Scan Server OPC UA” window

The means of the checkboxes inside the table are:

- If the field “**Read**” is checked, the variable can be read;
- If the field “**Write**” is checked, the variable can be written.



Note:

For each variable, it is possible to uncheck these fields and the variable will not be used in read/write.

After the scan, the selected variables will appear in "Variables in Read" and/or "Variables in Write" sections, in the lower part of the window "OPC UA Client Access" (Fig. 4).

The "Variables in Read" section is used to define the OPC UA variables to make available on J1939 side (Fig. 8).

OPC UA Variables List									
Variables in Read Variables in Write									
N	Enable	Display Name	Node Type	Node ID	Var Type	Name Space Index	Time (ms)	Position	Mnemonic
1	<input checked="" type="checkbox"/>	Temperature	String	_System.General.T	Float	3	1000	0	
2	<input checked="" type="checkbox"/>	R_Byte_68	String	S7.Tabella delle	UInt8	2	2000	4	
3	<input checked="" type="checkbox"/>	R_Byte_69	String	S7.Tabella delle	UInt8	2	2000	5	
4	<input checked="" type="checkbox"/>	R_Word_70	String	S7.Tabella delle	UInt16	2	2000	6	
5	<input checked="" type="checkbox"/>	R_Real_72	String	S7.Tabella delle	UInt32	2	2000	8	
6	<input checked="" type="checkbox"/>	R_Int16_76	String	S7.Tabella delle	UInt16	2	2000	12	
7	<input checked="" type="checkbox"/>	R_Int32_78	String	S7.Tabella delle	UInt32	2	2000	14	
8	<input checked="" type="checkbox"/>	R_Bit_82.0	String	S7.Tabella delle	Boolean	2	2000	18	
9	<input checked="" type="checkbox"/>	R_Bit_82.1	String	S7.Tabella delle	Boolean	2	2000	19	
10	<input checked="" type="checkbox"/>	R_Bit_82.2	String	S7.Tabella delle	Boolean	2	2000	20	
11	<input checked="" type="checkbox"/>	R_Bit_82.3	String	S7.Tabella delle	Boolean	2	2000	21	

Figure 8: "Variables in Read" section

The means of the fields are:

- If the field "**Enable**" is checked, the OPC UA variable is enabled;
- In the field "**Display name**" the name of the OPC UA variable is defined;
- In the field "**Node Type**" the type of the OPC UA node, which includes the variable, is defined;
- In the field "**Node ID**" the name of the OPC UA node, which includes the variable, is defined;
- In the field "**Var Type**" the data format of the OPC UA variable is defined;
- In the field "**Name Space Index**" the Name Space Index of the node, which includes the variable, is defined;
- In the field "**Time (ms)**" the delay in ms between two readings of the variable is defined;
- In the field "**Position**" the starting byte of the internal memory arrays where saving the value is defined;
- In the field "**Mnemonic**" a description of the variable is defined.

The “Variables in Write” section is used to define the OPC UA variables to write from J1939 side (Fig. 9).


OPC UA Variables List												
Variables in Read												Variables in Write
N	Enable	Display Name	Node Type	Node ID	Var Type	Name Space Index	On Change	On CMD	On Timer	Time (ms)	Position	Mnemonic
1	<input checked="" type="checkbox"/>	R_Byte_68	String	S7.Tabella delle	UInt8	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0	
2	<input checked="" type="checkbox"/>	R_Byte_69	String	S7.Tabella delle	UInt8	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	1	
3	<input checked="" type="checkbox"/>	R_Word_70	String	S7.Tabella delle	UInt16	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	2	
4	<input checked="" type="checkbox"/>	R_Real_72	String	S7.Tabella delle	UInt32	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	4	
5	<input checked="" type="checkbox"/>	R_Int16_76	String	S7.Tabella delle	UInt16	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	8	
6	<input checked="" type="checkbox"/>	R_Int32_78	String	S7.Tabella delle	UInt32	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	10	
7	<input checked="" type="checkbox"/>	R_Bit_82.0	String	S7.Tabella delle	Boolean	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	14	
8	<input checked="" type="checkbox"/>	R_Bit_82.1	String	S7.Tabella delle	Boolean	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	15	
9	<input checked="" type="checkbox"/>	R_Bit_82.2	String	S7.Tabella delle	Boolean	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	16	
10	<input checked="" type="checkbox"/>	R_Bit_82.3	String	S7.Tabella delle	Boolean	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	17	
11	<input checked="" type="checkbox"/>	R_Bit_82.4	String	S7.Tabella delle	Boolean	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	18	


Figure 9: “Variables in Write” section

In “Variables in Write” section (Fig. 8), the means of the fields are:

- If the field “**Enable**” is checked, the OPC UA variable is enabled;
- In the field “**Display name**” the name of the OPC UA variable is defined;
- In the field “**Node Type**” the type of the OPC UA node, which includes the variable, is defined;
- In the field “**Node ID**” the name of the OPC UA node, which includes the variable, is defined;
- In the field “**Var Type**” the data format of the OPC UA variable is defined;
- In the field “**Name Space Index**” the Name Space Index of the node, which includes the variable, is defined;
- If the field “**On Change**” is checked, the OPC UA variable is sent when the data on J1939 changes the value;
- If the field “**On CMD**” is checked, the OPC UA variable is sent when a J1939 message is received;
- If the field “**On Timer**” is checked, the OPC UA variable is sent cyclically;
- In the field “**Time (ms)**” the delay in ms between two writings of the variable is defined (if “On Timer” is checked);

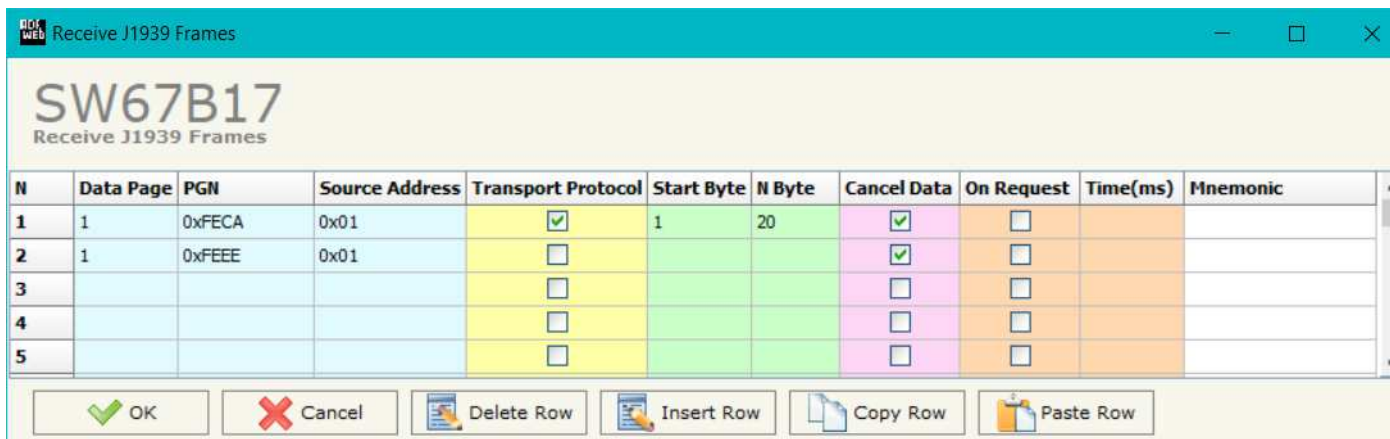
- In the field "**Position**" the starting byte of the internal memory arrays where getting the value is defined;
- In the field "**Mnemonic**" a description of the variable is defined.

 Note:
By clicking on "**Auto Pos**", the position of the internal memory arrays where saving/getting the value of variable is automatically calculated.

 Note:
A variable can be added manually in "Variables in Read" and/or "Variables in Write" sections without scanning the OPC UA Server.

RECEIVE FRAMES:

By pressing the “**Receive Frames**” button from the main window for SW67B17 (Fig. 2) the “Receive J1939 Frames” window appears (Fig. 10). The J1939 frames inserted in this table contains the data to write on OPC UA side. These frames are accepted by the converter.



N	Data Page	PGN	Source Address	Transport Protocol	Start Byte	N Byte	Cancel Data	On Request	Time(ms)	Mnemonic
1	1	0xFECA	0x01	<input checked="" type="checkbox"/>	1	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
2	1	0xFEEE	0x01	<input type="checkbox"/>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
3				<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>		
4				<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>		
5				<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>		

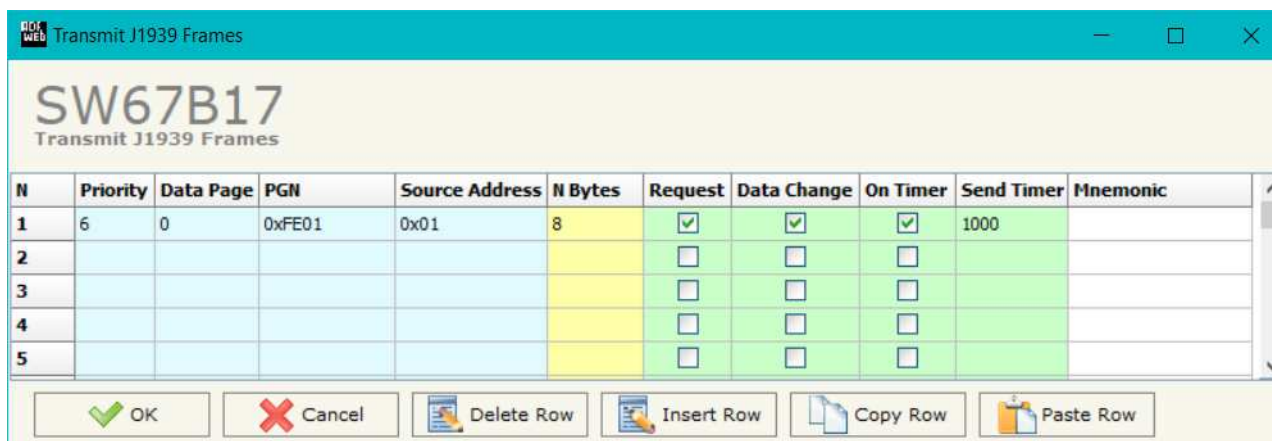
Figure 10: “Receive J1939 Frames” window

The data of the columns have the following meanings:

- In the field “**Data Page**” the Data Page is defined, the value can be 0 or 1 (usually it is 0);
- In the field “**PGN**” the PGN of the data of J1939 message is defined (it 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 use transport protocol functions (used to send more than 8 bytes);
- In the field “**Start Byte**” the start byte of the J1939 message to map into the internal memory is defined;
- In the field “**N° Byte**” the number of bytes to save is defined;
- If the field “**Cancel Data**” is checked, the data in the frame will be erased after the expiration of the “**TimeOut Data**” defined in “Set Communication” section;
- If the field “**On Request**” is checked, the converter will send the request for the selected PGN;
- In the field “**Time (ms)**” the delay between the J1939 requests is defined;
- In the field “**Mnemonic**” a brief description is defined.

SEND FRAMES:

By pressing the **Send Frames** button from the main window for SW67B17 (Fig. 2) the "Send J1939 frames" window appears (Fig. 11). The J1939 frames inserted in this table contains the data read from OPC UA side. These frames are sent by the converter.



N	Priority	Data Page	PGN	Source Address	N Bytes	Request	Data Change	On Timer	Send Timer	Mnemonic
1	6	0	0xFE01	0x01	8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1000	
2						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
5						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Figure 11: "Send J1939 Frames" window

The data of the columns have the following meanings:

- In the field **Priority** the priority of the J1939 message is defined. In J1939 protocol, it is a number among 0,1,2,3,4,5,6,7. The number "0" is the highest priority and "7" is the lowest;
- In the field **Data Page** the Data Page is defined, the value can be 0 or 1 (usually it is 0);
- In the field **PGN** the PGN of J1939 message is defined (it is an identifier);
- In the field **Source Address** the source address to use to send the frame is defined;
- In the field **N Bytes** the number of byte of the frame is defined;
- If the field **Request** is checked, the J1939 message is sent when a J1939 request is received;
- If the field **Data Change** is checked, the J1939 frame is sent when the data from OPC UA change;
- If the field **On Timer** is checked, the J1939 message is sent cyclically with the delay defined in the field **Send Timer**;
- In the field **Mnemonic** a brief description is defined.

UPDATE DEVICE:

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 Dip1 of 'Dip-Switch A' in ON position;
- Turn ON the device
- Connect the Ethernet cable;
- Insert the IP **"192.168.2.205"**;
- 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 Dip1 of 'Dip-Switch A' in 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;
- 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.

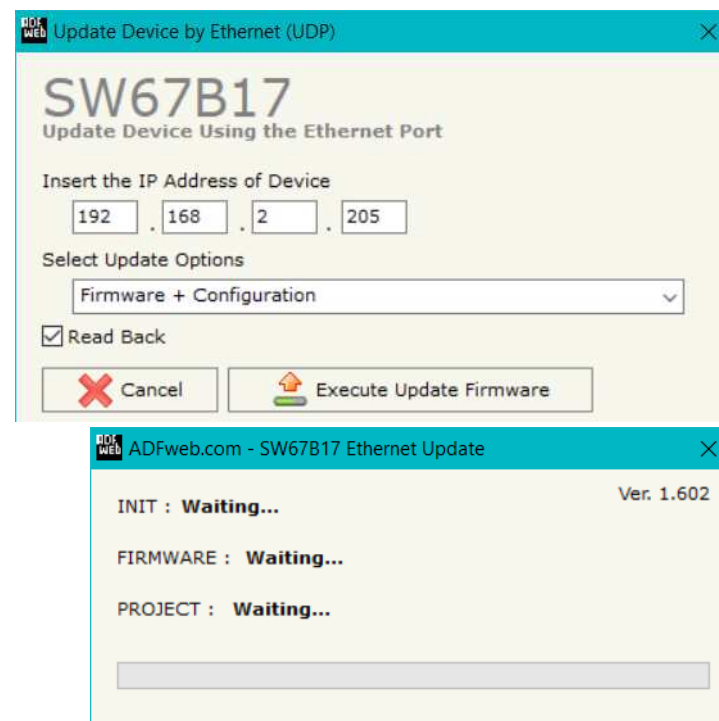


Figure 12: "Update device" windows



Note:

When you receive the device, for the first time, you also have to update the Firmware in the HD67B17 device.



Warning:

If Fig. 13 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;
- 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.

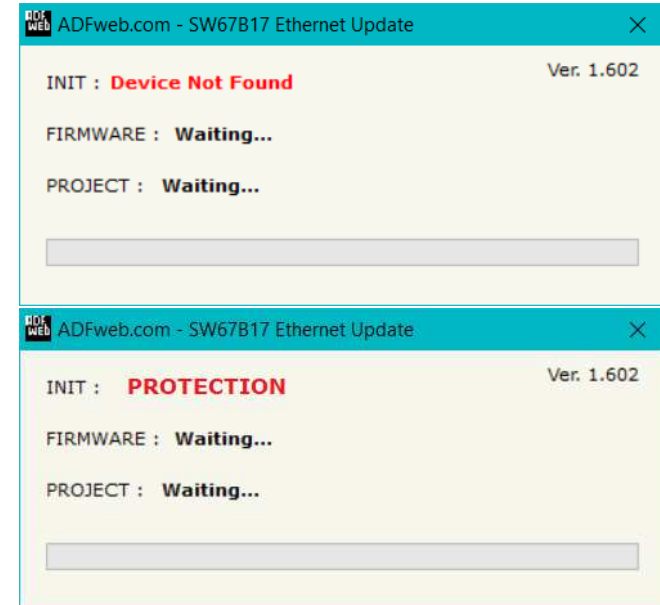


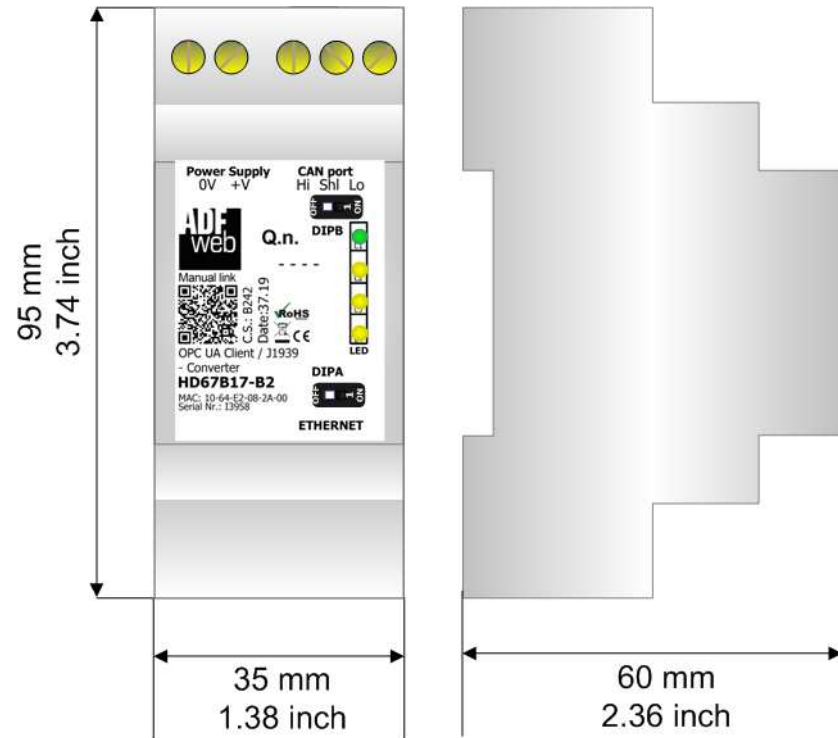
Figure 13: "Error" window



Warning:

In the case of HD67B17 you have to use the software "SW67B17": www.adfweb.com/download/filefold/SW67B17.zip.

MECHANICAL DIMENSIONS:



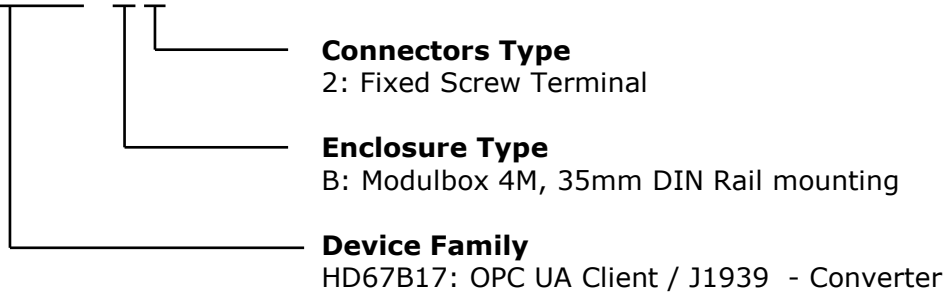
Housing: PVC
 Weight: 200g
 (Approx)

Figure 14: Mechanical dimensions scheme for HD67B17-B2

ORDERING INFORMATIONS:

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

HD67B17 - B 2



Order Code: **HD67B17-B2** - OPC UA Client / J1939 - Converter

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

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 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.

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.



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