ADFweb
Industrial Electronic Devices

User Manual

Revision 1.100
English

Modbus Master/Slave – Datalogger

(Order Code: HD67324-B2-E-232-2GB, HD67324-B2-E-485-2GB, HD67324-B2-U-232-2GB, HD67324-B2-U-485-2GB)

for Website information:
www.adfweb.com?Product=HD67324

for Price information:
www.adfweb.com?Price=HD67324-B2-E-232-2GB
www.adfweb.com?Price=HD67324-B2-E-485-2GB
www.adfweb.com?Price=HD67324-B2-U-232-2GB
www.adfweb.com?Price=HD67324-B2-U-485-2GB

Benefits and Main Features:

⬧ Very easy to configure

⬧ Electrical isolation

⬧ Temperature range: -40°C/85°C (-40°F/185°F)

User Manual

For other M-Bus products:

See also the following link:
Converter M-Bus to
www.adfweb.com?Product=HD67021   (RS232)
www.adfweb.com?Product=HD67022   (RS485)
www.adfweb.com?Product=HD67030   (Ethernet)

Extender and Repeater, M-Bus
www.adfweb.com?Product=HD67032

Gateway M-Bus / Modbus RTU
www.adfweb.com?Product=HD67029M-232   (on RS232)
www.adfweb.com?Product=HD67029M-485   (on RS485)

Gateway M-Bus / Modbus TCP
www.adfweb.com?Product=HD67044-B2

Gateway M-Bus / CANopen
www.adfweb.com?Product=HD67051

Gateway M-Bus / PROFIBUS
www.adfweb.com?Product=HD67053M

Do you have an your customer protocol?

See the following link:
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

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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

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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.

To obtain the updated documentation for the product that you own, note the "Document Code" (Abbreviated written "Doc. Code" on the label on the product) and download the updated from our web site www.adfweb.com/download/

REVISION LIST:

Revision	Date	Author	Chapter	Description
1.001	28/05/2012	Dp	All	Revision
1.002	07/02/2013	Nt	All	Added new chapters
1.003	20/05/2013	Fl	All	Add USB driver location
1.100	23/12/2015	Ff	All	Added Ethernet 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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CONNECTION SCHEME:

Connector6:
RS232 port

Tx = Device Tx
Rx = Device Rx
Shl = Shield (to Isolated Ground)

Led5:
Green
Link Ethernet

Connector2:
Ethernet Port
(RJ45 Plug)

Tx Shl Rx

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

Q.n. - - - -

Led1:
Green
Device state

Led2:
Yellow
Ethernet comm.

Led3:
Yellow
Modbus comm.

Led4:
Yellow
Modbus error

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Modbus Master / Slave - Datalogger
HD67324-B2-E-232-2GB
MAC: 10-64-E2-07-42-27
Serial Nr.: C4375

RS232 port
Tx Shl Rx □ETHERNET

Connector1:
Power Supply

0V = Ground
+V = Positive wire

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

0V +V

Dip-Switch A:
-Dip1 – Functioning Mode

= Normal Mode

= Boot Mode

Figure 1a: Connection scheme for HD67324-B2-E-232-xGB

Industrial Electronic Devices

Dip-Switch B:
-Dip1 – Termination RS485 line

= Open   = 120 ohm

Connector6:
RS485 port

S = Shield (to Isolated Ground)
B = Negative wire
A = Positive wire

Led5:
Green
Link Ethernet

Connector2:
Ethernet Port
(RJ45 Plug)

A B S

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

Q.n. - - - -

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MAC: 10-64-E2-07-42-27
Serial Nr.: C4375

LED
Device state
Ethernet Comm.
Modbus Comm.
Modbus error

RS485 port
+ - S

ETHERNET

Led1:
Green
Device state

Led2:
Yellow
Ethernet comm.

Led3:
Yellow
Modbus comm.

Led4:
Yellow
Modbus error

Connector1:
Power Supply

0V = Ground
+V = Positive wire

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

0V +V

Dip-Switch A:
-Dip1 – Functioning Mode

= Normal Mode

= Boot Mode

Figure 1b: Connection scheme for HD67324-B2-E-485-xGB
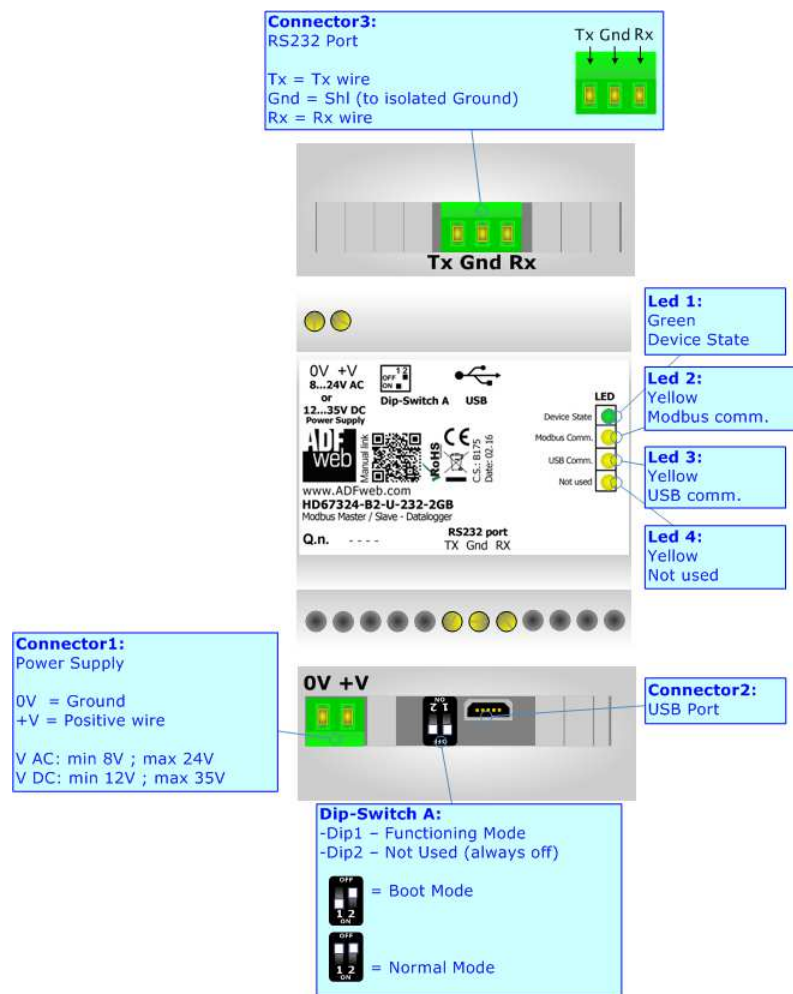
Figure 1b: Connection scheme for HD67324-B2-U-232-xGB

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Dip-Switch B:
-Dip1 – Termination resistor
-Dip2 – Not Used

= 220 ohm termination resistor

= No Termination resistor

Connector3:
RS485 Port

+ = Positive wire (A)
- = Negative wire (B)
Shl = Shl (to isolated Ground)

Led 1:
Green
Device State

Led 2:
Yellow
Modbus comm.

Led 3:
Yellow
USB comm.

Led 4:
Yellow
Not used

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

Dip-Switch A   USB

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Q.n.   - - - -   RS485 port   Dip-Switch B
                        +   -   Gnd

Connector1:
Power Supply

0V = Ground
+V = Positive wire

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

Connector2:
USB Port

Dip-Switch A:
-Dip1 – Functioning Mode
-Dip2 – Not Used (always off)

= Boot Mode

= Normal Mode

Figure 1b: Connection scheme for HD67324-B2-U-485-xGB

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CHARACTERISTICS:

The HD67324 is a Modbus Datalogger.

It has the following characteristics:

- Electrical isolation for bus (RS232, RS485, USB/Ethernet) connection;
- Mountable on Rail DIN;
- Power Supply 8…24V AC or 12…35V DC;
- Temperature range -20°C to 70°C.

CONFIGURATION:

You need Compositor SW67324 software on your PC in order to perform the following:

- Define the parameter of Modbus line;
- Set Time and Date;
- Manage the Datalogger's functions;
- Update the device.

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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]
HD67324-B2-E-232/485-xGB	3.5
HD67324-B2-U-232/485-xGB	1.5

Connector1:
Power Supply

0V = Ground
+V = Positive wire

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

V+ 0V

Connector1:
Power Supply

0V = Ground
+V = Positive wire

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

+V 0V
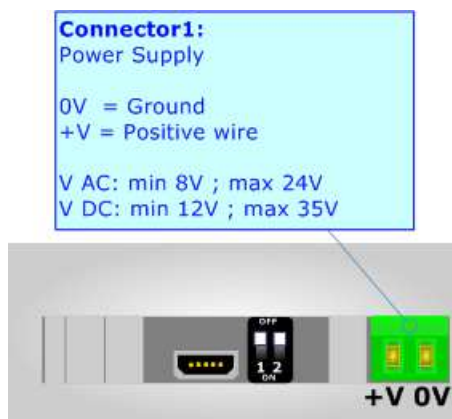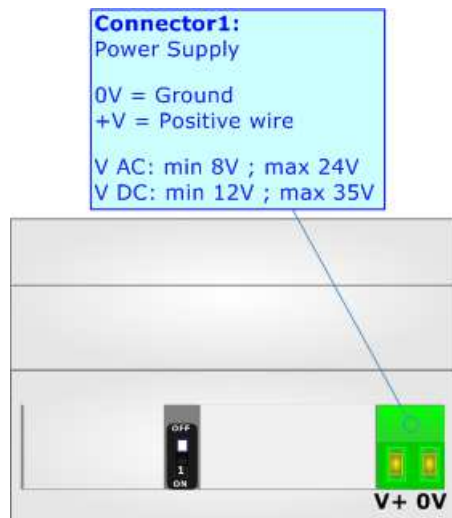
Caution: Not reverse the polarity power

+V   0V
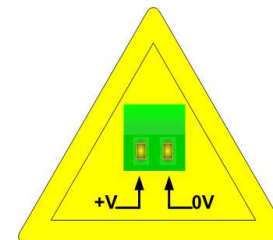
HD67324-B2-E-232/485-xGB
HD67324-B2-U-232/485-xGB

Industrial Electronic Devices

FUNCTION MODES:

HD67324-B2-E-xxx-xGB

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

↓   The first, with 'Dip1 of Dip-Switch A' at "OFF" position, is used for the normal working of the device.

↓   The second, with 'Dip1 of Dip-Switch A' at "ON" position, is used for upload the Project and/or Firmware.

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

According to the functioning mode, the LEDs will have specifics functions, see 'LEDS' section.
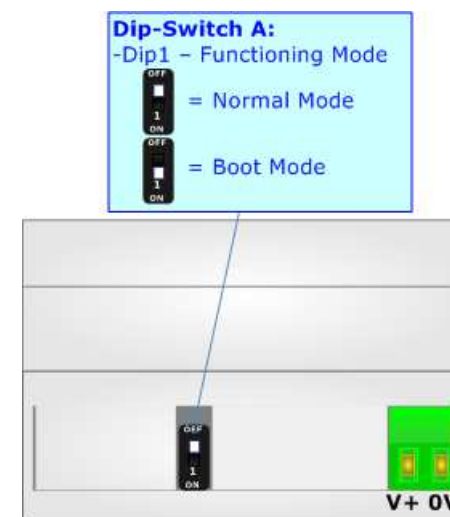
HD67324-B2-U-xxx-xGB

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

↓   The first, with Dip1 in OFF position, is used for the normal working of the device.

↓   The second, with Dip1 in ON position, is used for upload the Project and/or Firmware.

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

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

Industrial Electronic Devices
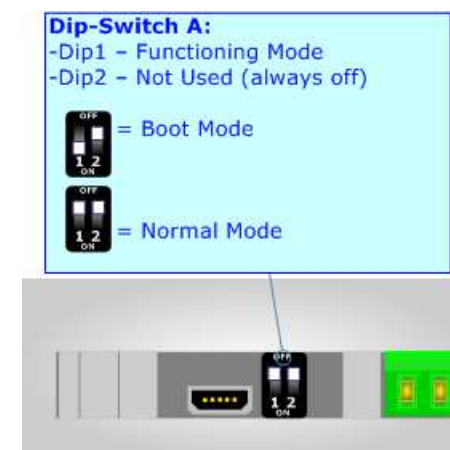
LEDS:

HD67324-B2-E-xxx-xGB
The device has got five LEDs that are used to give information of the functioning status.
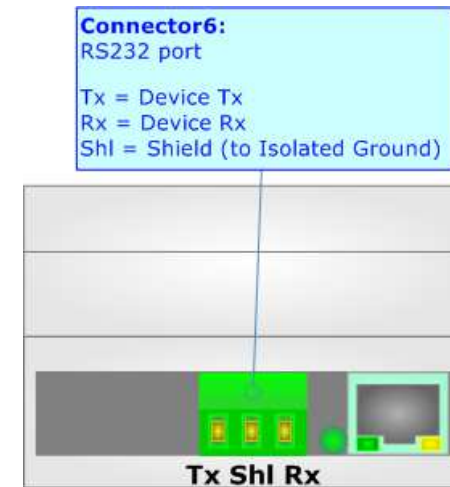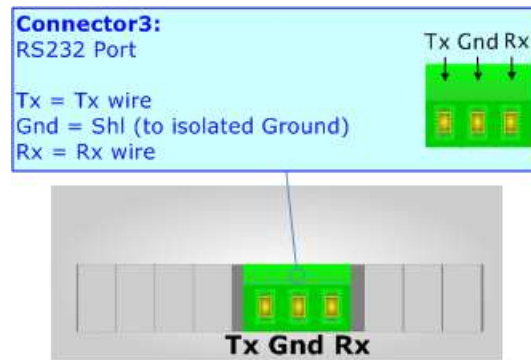The various meanings of the LEDs are described in the table below.

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: Modbus communication (yellow)	Blinks when Modbus frame (RS232/RS485) is received	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
3: Ethernet communication (yellow)	Blinks when Ethernet request is received	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
4: Modbus error (yellow)	**ON:** At least one Modbus request hasn't a correct response **OFF:** No errors are present	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
5: Ethernet Link (green)	**ON:** Ethernet cable connected **OFF:** Ethernet cable disconnected	**ON:** Ethernet cable connected **OFF:** Ethernet cable disconnected
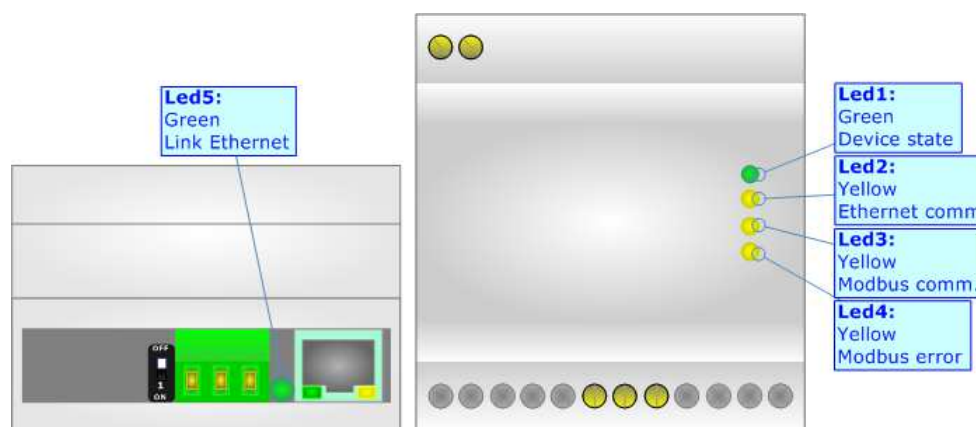
HD67324-B2-U-xxx-xGB
The device has got four LEDs that are used to give information of the functioning status.
The various meanings of the LEDs are described in the table below.

LED	Normal Mode	Boot Mode
1: Device State (green)	**Slow flashing:** normal status **Very slow flashing:** the memory is full, and no other data will be recorded. This function is present only if "Cyclic Memory" field is unchecked.	Blinks quickly
2: Modbus communication (yellow)	**Slow flashing:** normal status **Fast flashing:** correct data from Modbus	Blinks slowly
3: USB communication (yellow)	**OFF:** USB not connected or not initialized. **Slow flashing:** USB Connected and initialized **Fast flashing:** data receiving from PC	**OFF:** USB not connected or not initialized. **Fast flashing:** USB Connected and initialized
4: Not used (yellow)	**OFF**	Blinks slowly
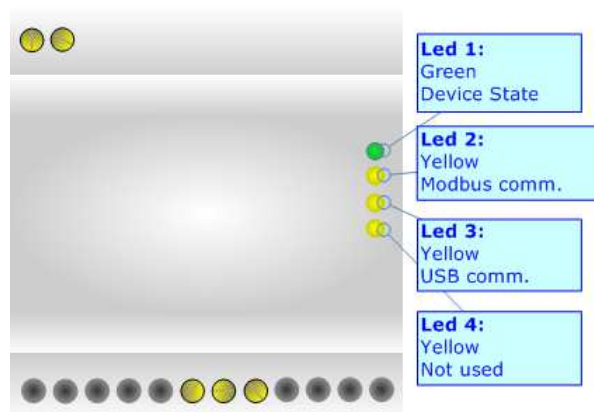
RS232:

The connection from RS232 socket to a serial port (example one from a personal computer) must be made with a NULL MODEM cable (a serial cable where the pins 2 and 3 are crossed).
It is recommended that the RS232 cable not exceed 15 meters.

Connector3:
RS232 Port

Tx = Tx wire
Gnd = Shl (to isolated Ground)
Rx = Rx wire

Tx Gnd Rx

Connector6:
RS232 port

Tx = Device Tx
Rx = Device Rx
Shl = Shield (to Isolated Ground)

Tx Shl Rx

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RS485:

For terminate the RS485 line with a 220Ω resistor it is necessary to put ON dip 1, like in figure.
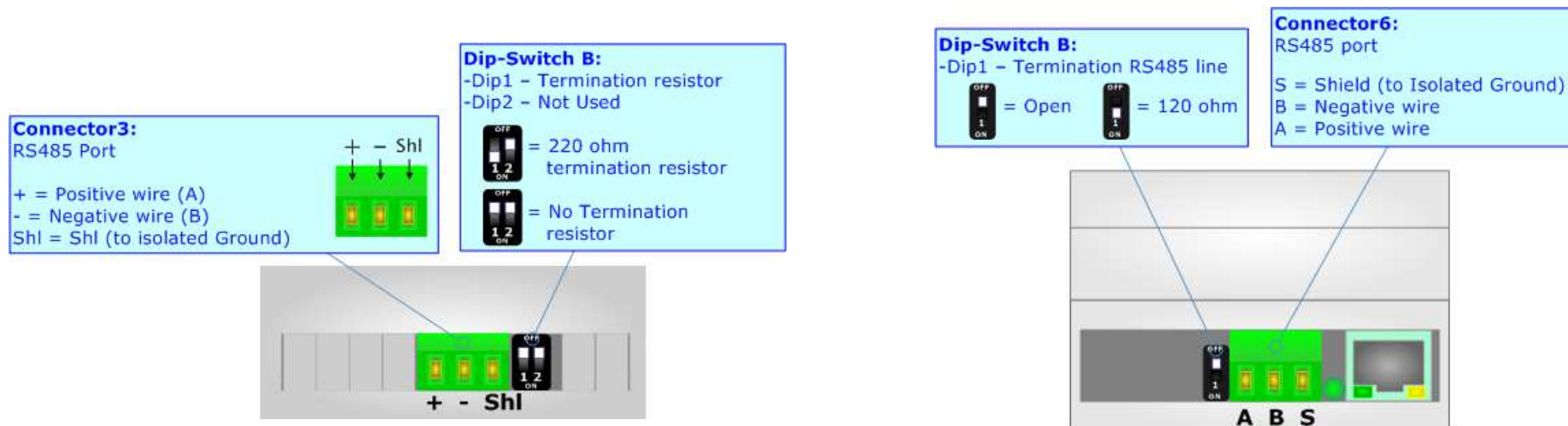
The maximum length of the cable should be 1200m (4000 feet).

Here some codes of cables:

- Belden: p/n 8132 - 2x 28AWG stranded twisted pairs conductor + foil shield + braid shield;
- Belden p/n 82842 - 2x 24AWG stranded twisted pairs conductor + foil shield + braid shield;
- Tasker: p/n C521 - 1x 24AWG twisted pair conductor + foil shield + braid shield;
- Tasker: p/n C522 - 2x 24AWG twisted pairs conductor + foil shield + braid shield.

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ETHERNET (for HD67324-B2-E-xxx-xGB):

The Ethernet port is used for programming the device and managing the functions.
The Ethernet connection must be made using Connector2 of HD67324-B2-E-xxx-xGB 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 is recommended the use of a cross cable.
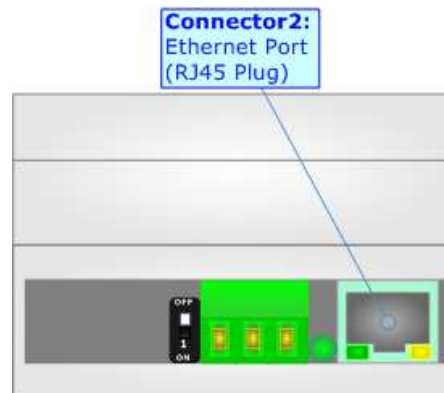
USB (for HD67324-B2-U-xxx-xGB):

The USB connector (Connector2) is a Type-MINI AB Female. So the cable must be a Type-MINI AB Male.

The driver for the USB port can be found in the installation folder of SW67324, under the folder "Extras". Usually the path is the following: C:\<Program Files>\ADFweb\Datalogger_SW67324\Extras.

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USE OF COMPOSITOR SW67324:

To configure the Datalogger, use the available software that runs with Windows called SW67324. 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 SW67324, the window below appears (Fig. 2).

Note:
It is necessary to have installed .Net Framework 4.
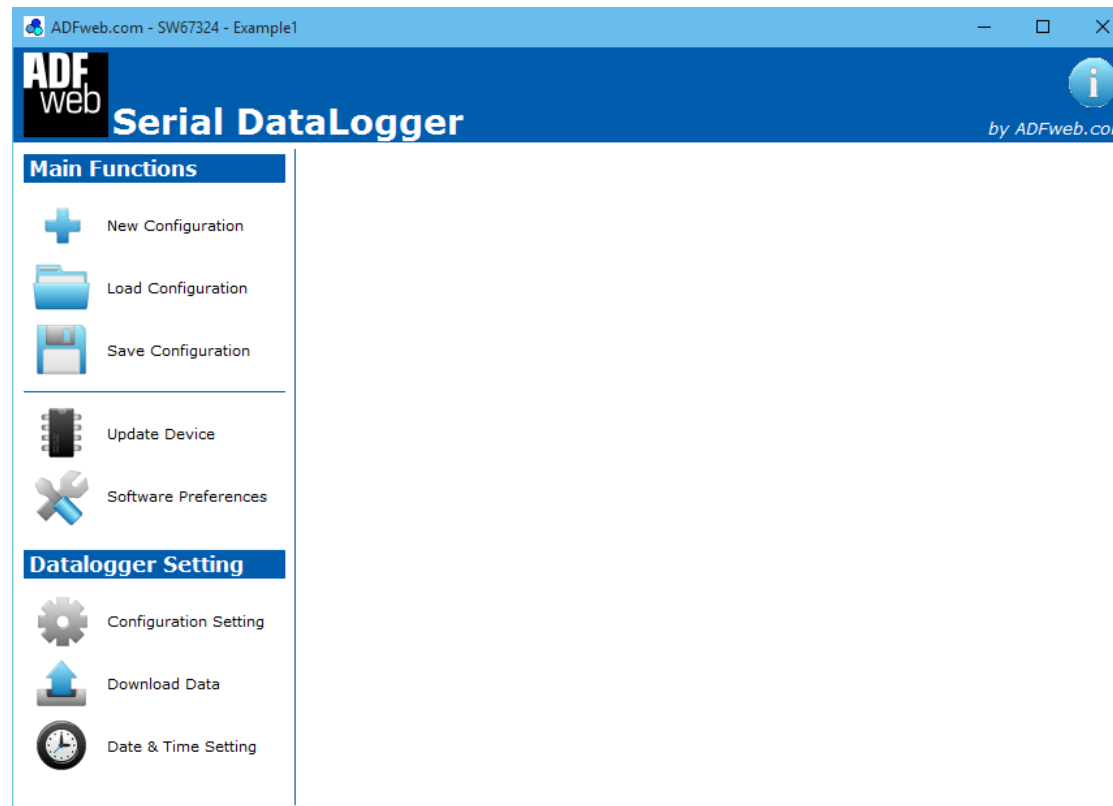
Figure 2: Main window for SW67324

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NEW CONFIGURATION:

Figure 3: "New Configuration" window
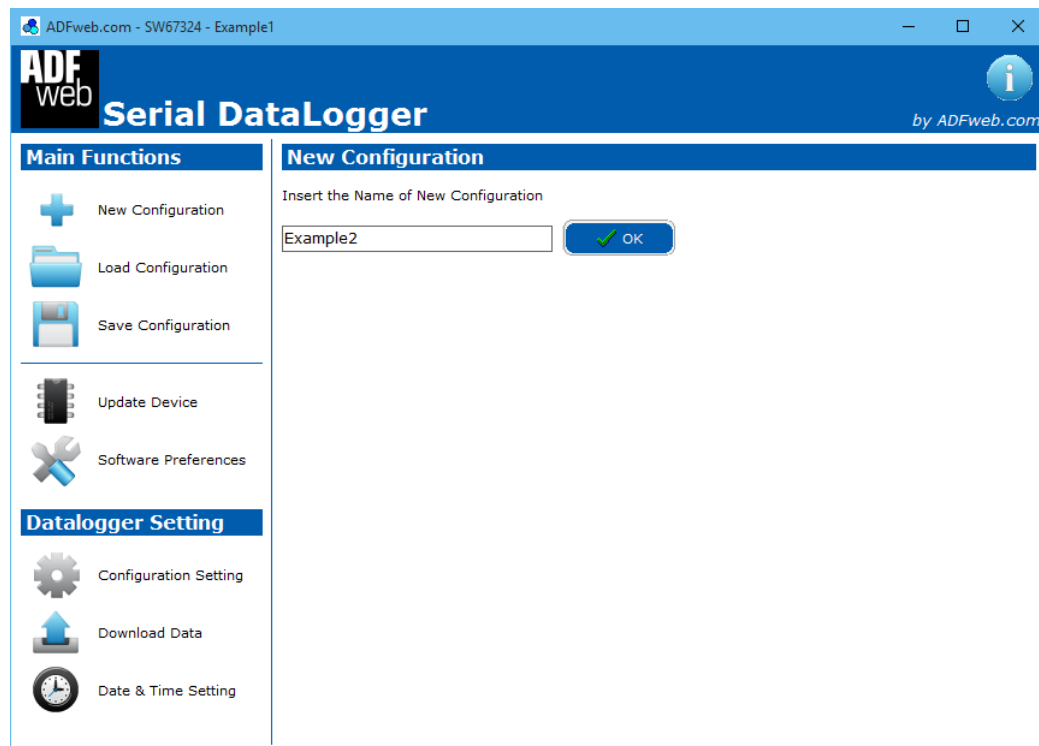
By pressing the "**New Configuration**" button it is possible to create a new project. It is possible to assign the name and confirm it by pressing the "OK" button.

![ADFweb logo]
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LOAD CONFIGURATION:
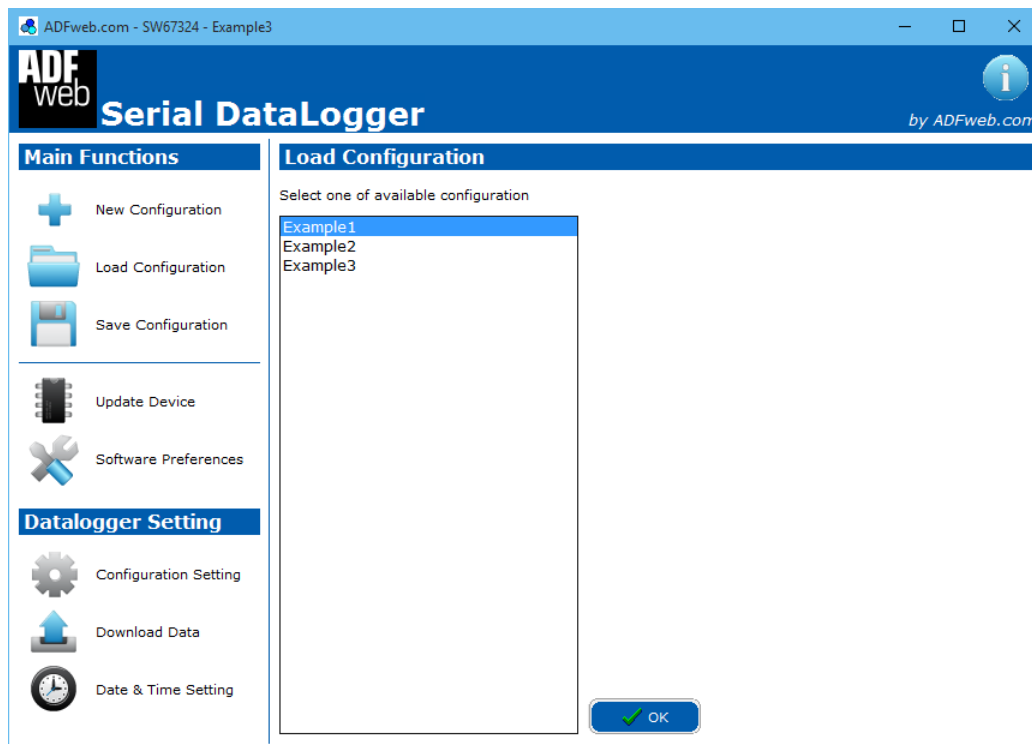
Figure 4: "Load Configuration" window

By pressing the "**Load Configuration**" button it is possible to load an existing project by selecting one of the list that appears.

A configuration can be imported or exported too:

- To clone the configurations of a DataLogger 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 "**Load Configuration**".

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SAVE CONFIGURATION:
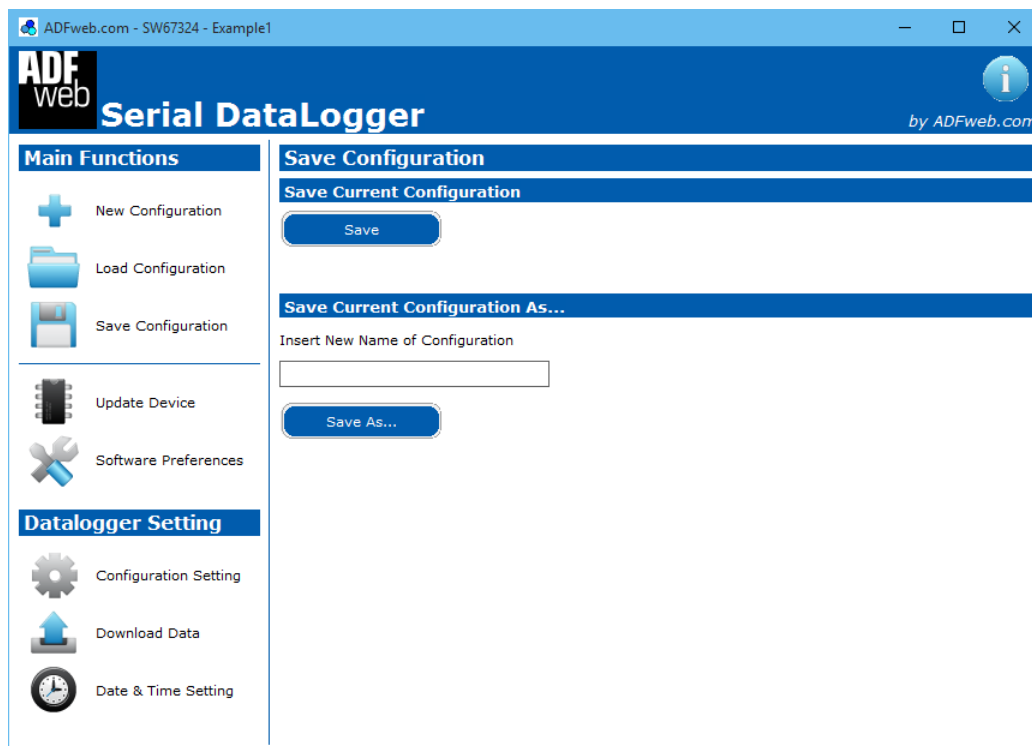
Figure 5: "Save Configuration" window

By pressing the "**Save Configuration**" button it is possible to save the project.

There are two possibilities: saving the current configuration, by pressing the button "**Save**" or saving it with a new name by pressing the button "**Save As...**" and writing the name in the field above the button.

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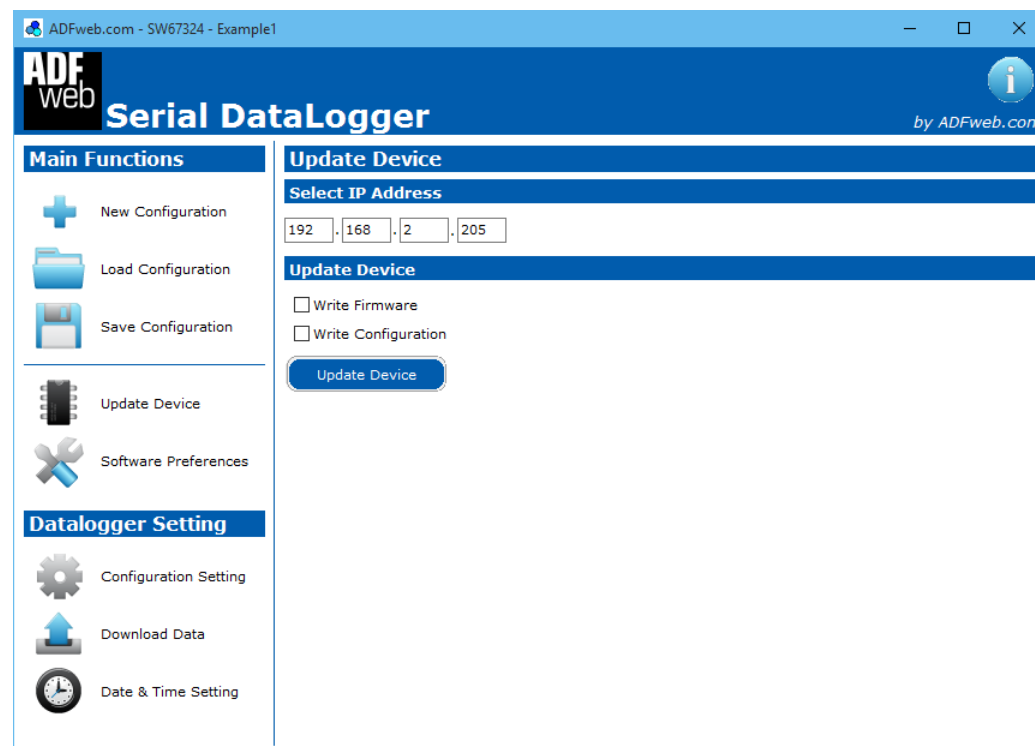
UPDATE DEVICE:

Figure 6a: "Update Device" window (Ethernet version)

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

If the Ethernet version is used, in order to load the parameters or update the firmware in the device, follow these instructions:

- 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**";
- 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 Dip1 of 'Dip-Switch A' at OFF position;
- Turn on the device.

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

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

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If the USB version is used, in order to load the parameters or update the firmware in the device, follow these instructions:
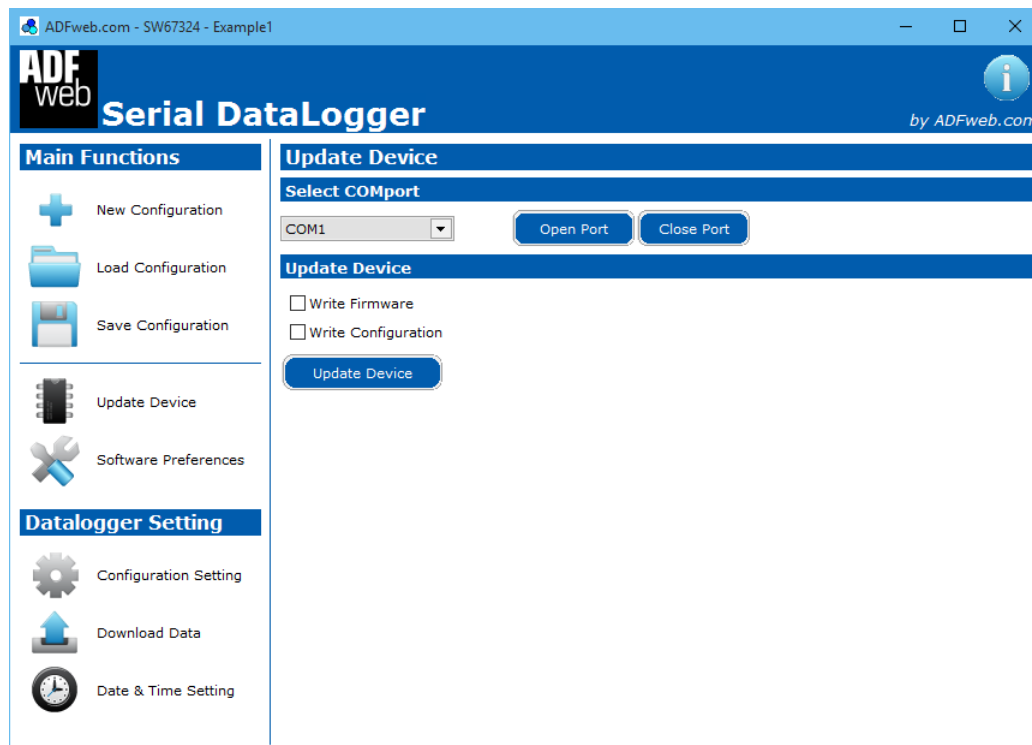
Figure 6b: "Update Device" window (USB version)

- Turn off the Device;
- Connect the USB cable from your PC to the device;
- Put Dip1 of 'Dip-Switch A' in ON position;
- Select the "**COM port**" and press the "**Open Port**" button;
- Turn ON the device;
- Check the "Device state" Led. It must blink quickly (see "LEDS" section);
- Select which operations you want to do;
- Press the "**Update Device**" button;
- When all the operations are "OK" turn OFF the device;
- Press the "**Close Port**" button;
- Put Dip1 of 'Dip-Switch A' in OFF position;
- Turn ON the device.

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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 HD67324 device.

Note:
When you receive the device, for the first time, you also have to update the Firmware in the HD67324 device.

Warning:
If Fig. 7 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 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;
- Check the LAN settings;
- Check the Wi-Fi settings;
- If you are using the program inside a Virtual Machine, try to use in the main Operating System;
- If you are using Windows Seven, Vista, 8 or 10 make sure that you have the administrator privileges;
- In case you have to program more than one device, using the "Ethernet 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.
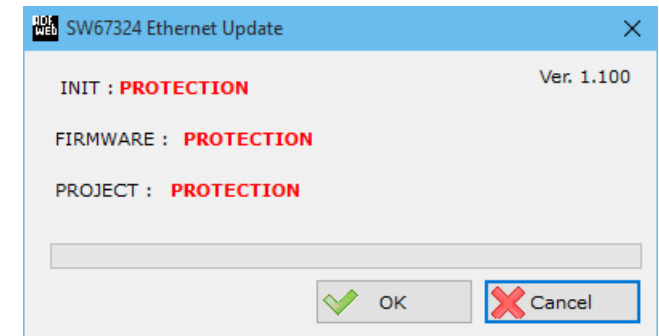
Figure 7: "Protection" window

In the case of HD67324 you have to use the software "SW67324": www.adfweb.com\download\filefold\SW67324.zip.

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SOFTWARE PREFERENCES:
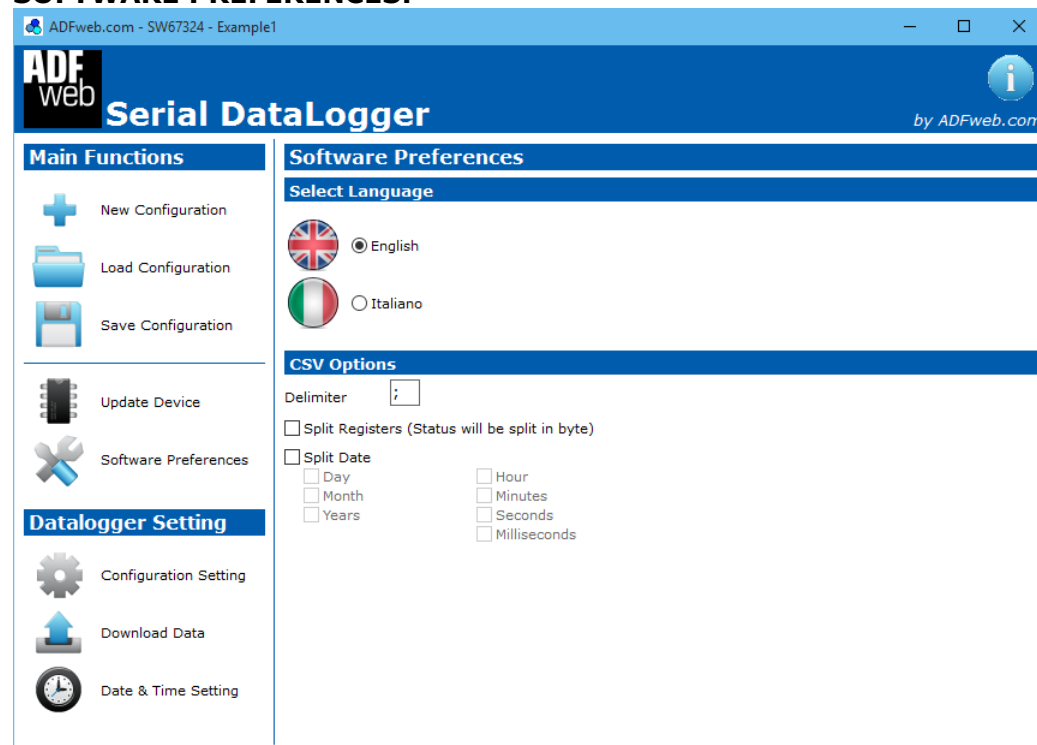
Figure 8: "Software Preferences" window

By pressing the "**Software Preferences**" button it is possible to select the preferences of the software SW67324.

SELECT LANGUAGE
In this section is possible to select the language of the software.

CSV OPTIONS
In this section is possible to select the options of the CSV file.

In the field "**Delimiter**" the character to split the fields in CSV file is defined.

If the field "**Split Register (Status will be split in byte)**" is checked, the data of the Modbus registers are splitted per registers.
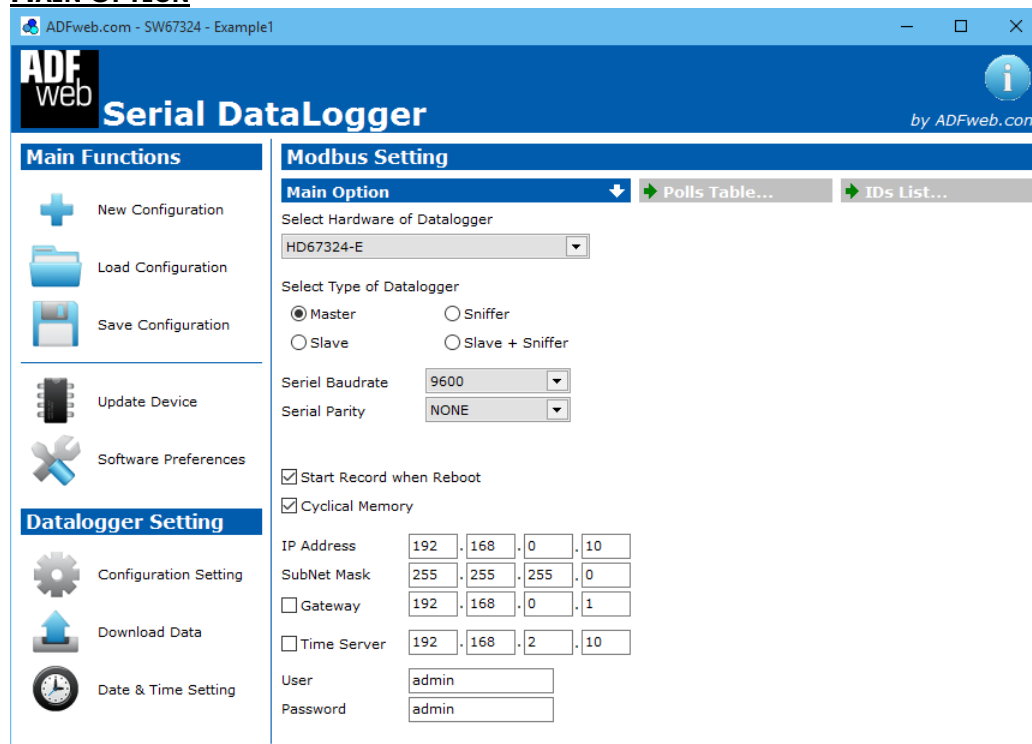
If the field "**Split Date**" is checked, the date and time of the data are splitted. It is possible to select the parts of the date and time to insert in CSV file, the fields selectable are:
Day, Month, Year, Hour, Minutes, Seconds and Milliseconds.

CONFIGURATION SETTING:

By pressing the "**Configuration Setting**" button it is possible to configure the various informations that the DataLogger wants for functioning.

MAIN OPTION

Figure 9a: "Configuration Settings->Main Option" window

In relation to the hardware, it is possible to set:

- HD67324-E (Ethernet interface);
- HD67324-U (USB interface).

The Data Logger can act as '**Master**', '**Slave**', '**Sniffer**' or '**Slave + Sniffer**':

- Like "**Master**" it is the device that makes the requests for read the Coil Status, Input Status, Holding Register and Input Register. The Field "Slave ID" isn't present with this mode.

- Like "**Slave**" it records all frames addressed to it. It answer with an exception if a master makes a Read Request, and answer correctly if a master makes a Write Request. The Field "Slave ID" is present with this mode.

- Like "**Sniffer**" it records all frames that pass in the line. The Field "Slave ID" isn't present with this mode.

- Like "**Slave+Sniffer**" it records all frames that pass in the line. And more, it answer with an exception if a master makes a Read Request, and answer correctly if a master makes a Write Request. The Field "Slave ID" is present with this mode.

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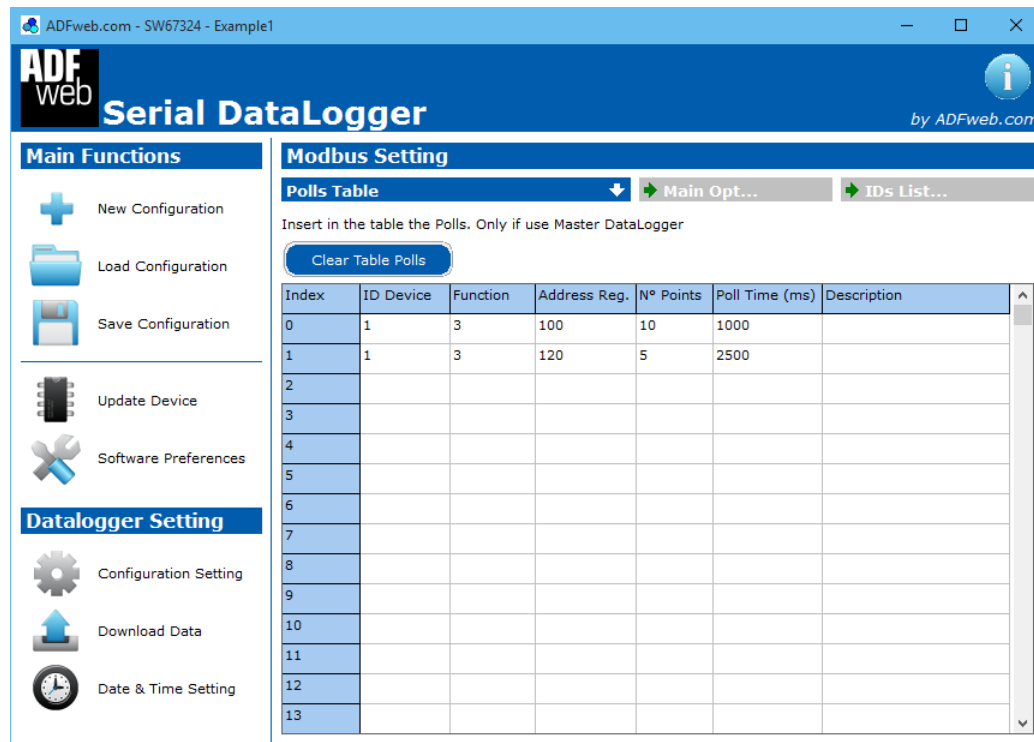
About the meanings of the others fields:

- In the field "**Serial Baudrate**" the Baudrate of the serial line is defined;
- In the field "**Serial Parity**" the parity of the serial line is defined;
- In the field "**Slave ID**" the id of the Data Logger, in the case of 'Slave' and 'Slave+Sniffer', is defined;
- If the field "**Start Record when Reboot**" is checked the Data Logger starts automatically to record data (when is in Normal Mode). Otherwise it is necessary to give the Start/Stop commands manually, by the software;
- If the field "**Cyclic Memory**" is checked the DataLogger when finish the memory restart to save the data from the beginning. Otherwise, if the field isn't checked, when the memory is full the messages aren't stored and the Led1 blinks very slowly;

If the Ethernet version is used (HD67324-E), it will be possible to set the Ethernet parameters too:

- 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 "**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 "**User**", the user name to access to the webserver is defined;
- In the field "**Password**", the password to access to the webserver is defined.

POLLS TABLE

Figure 9b: "Configuration Settings->Polls Table" window

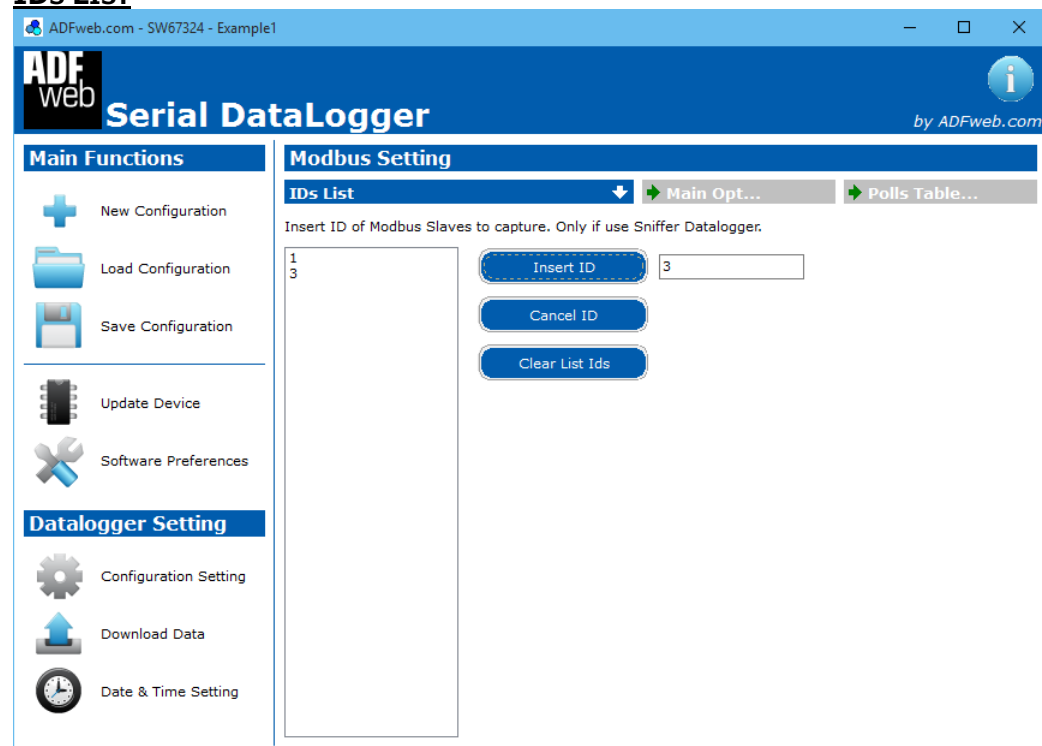This section is used only if the Data Logger is set like 'Master'.

In the table the various requests that the Data Logger sends are defined.

The fields to compile are:

- "**ID Device**": ID of the slave device to which the request will be addressed;
- "**Function**": type of request used. It is possible to define 1: Coil Status, 2: Input Status, 3: Holding Register, 4: Input Register;
- "**Address Reg.**": starting address of the registers to be required;
- "**N° Points**": number of consecutive registers to be required;
- "**Poll Time [ms]**": time between two polls of the row;
- "**Description**": short description of the request.

It is possible to define up to 1024 different requests.

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IDs List

Figure 9c: "Configuration Settings->IDs List" window

This section is used only if the Data Logger is set like 'Sniffer' or "Slave + Sniffer".

In the left list, there are the IDs of the slaves that the Data Logger sniffs: the device will record all the requests/responses addressed to these IDs.

It is possible to define up to 247 IDs.

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DOWNLOAD DATA (USB version):

By pressing the "**Download Data**" button it is possible to download the stored data of the DataLogger and see them in a grid.

GET DATA

Figure 10a: "Download Data->Get Data" window
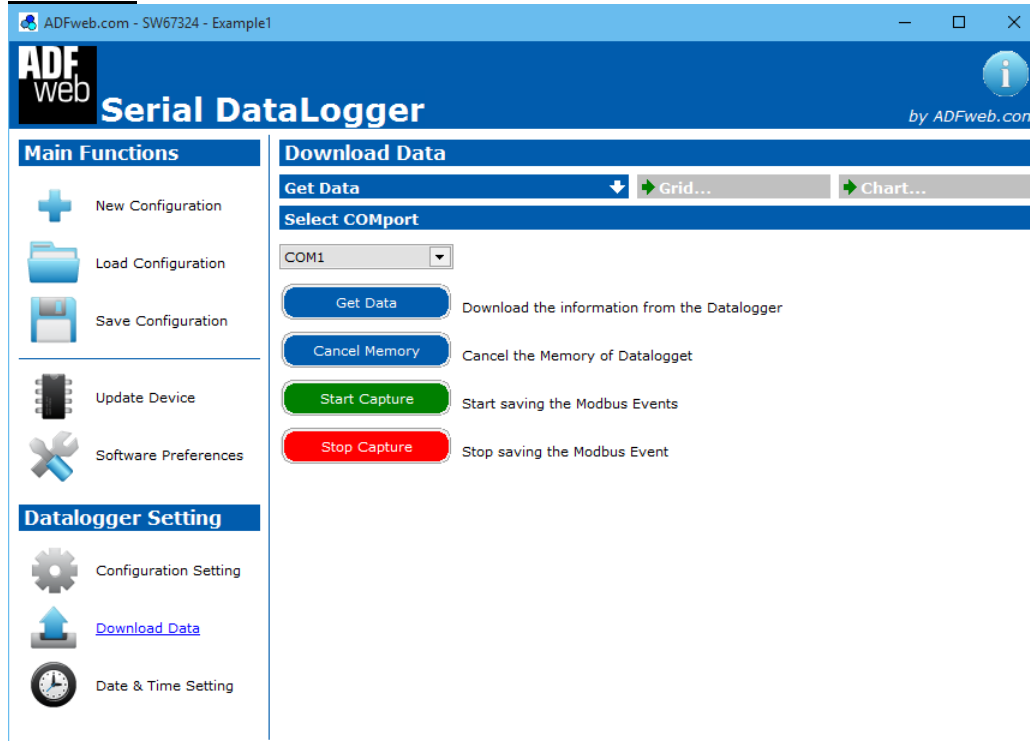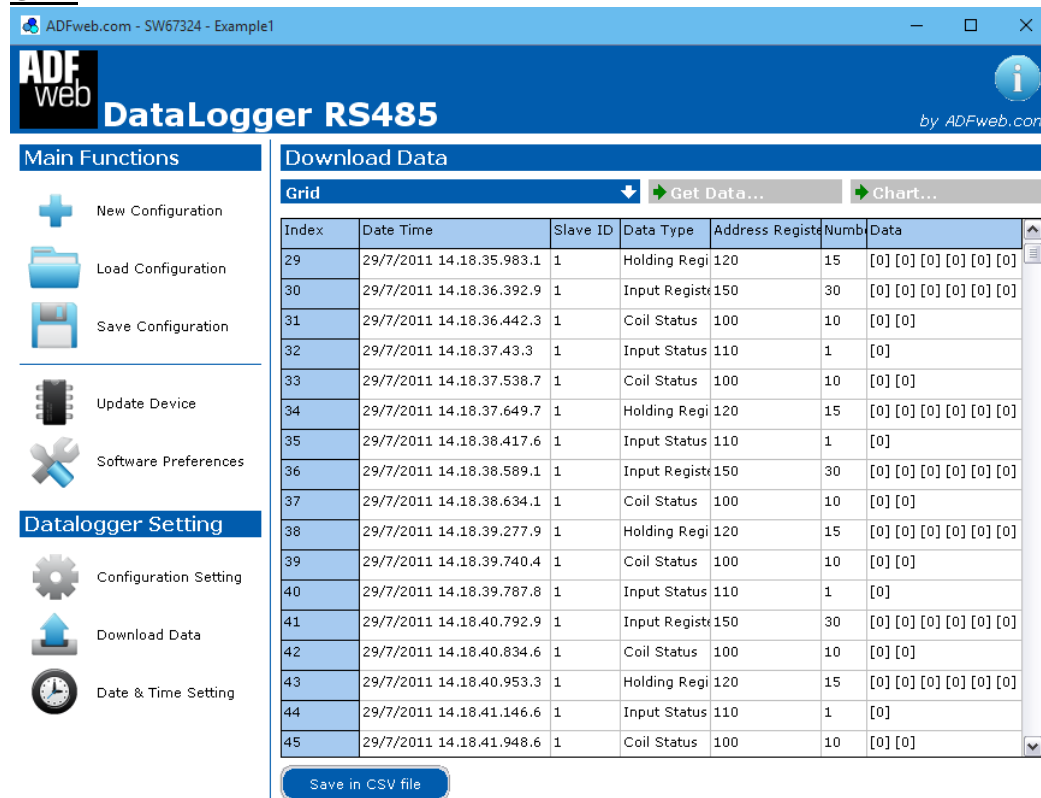
After selecting the correct COM port, by pressing the "**Get Data**" button the software downloads the data from the Data Logger.

If the "**Cancel Memory**" button is pressed, the entire memory of Data Logger is cleared.

It is possible to stop the capturing of data by pressing the "**Stop Capture**" button, or resume by pressing the "**Start Capture**" button.

GRID

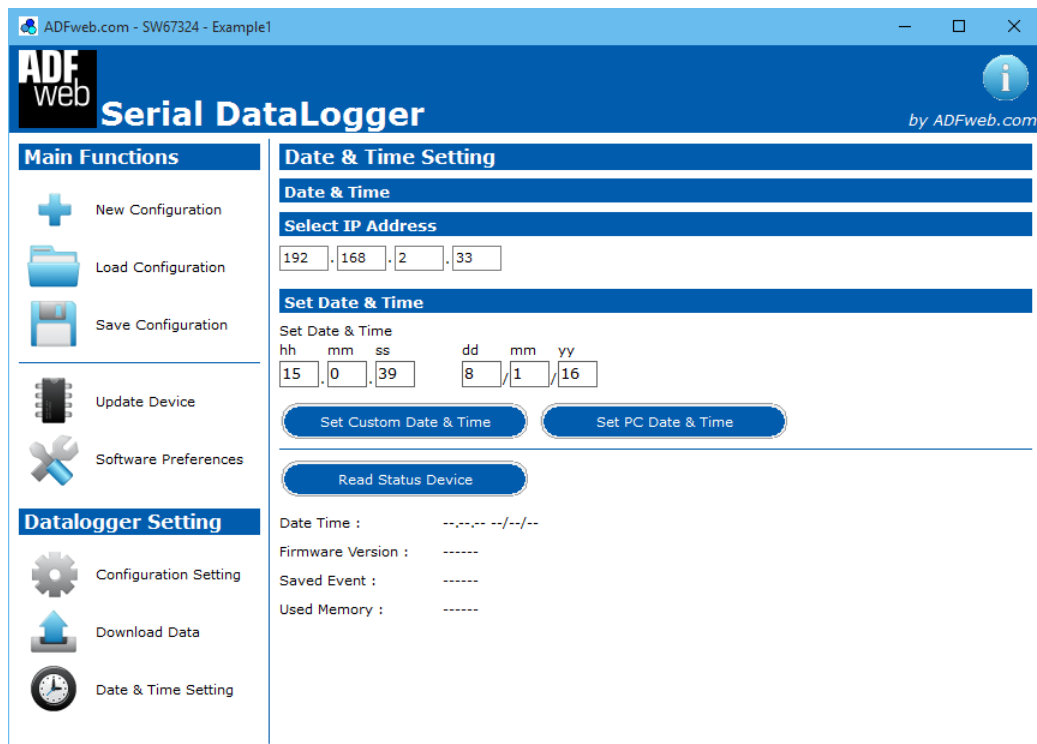*Figure 10b: "Download Data->Grid" window*

In this section there is the grid with the downloaded data.

The grid is composed of the follow fields:

- "**Date Time**": date and time of the request/response;
- "**Slave ID**": ID of the slave device that has replied;
- "**Data Type**": type of reply;
- "**Address Register**": starting address of the reply;
- "**Number of Registers**": number of consecutive registers of the reply;
- "**Data**": data read. The value is expressed in decimal format.

By pressing the "**Save in CSV file**" button it is possible to export the data into a CSV file.

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DATE & TIME SETTING:

Figure 11: "Date & Time Setting" window

By pressing the "**Date & Time Setting**" button it is possible to update/read the Data Logger data/time and having others informations.

After selecting the correct COM port where the Data Logger is connected to the PC (or the IP Address for the Ethernet version), by pressing the "**Set Custom Date & Time**" it is possible to set the data/time that is written in the fields upper; by pressing the "**Set PC Date & Time**" button the data set are the ones of the PC.

By pressing the "**Read Status Device**" are read some information about the Data Logger:

- "**Data Time**": current data and time of the Data Logger;
- "**Firmware Version**": firmware version of the Data Logger;
- "**Saved Event**": number of Modbus events and some other commands saved;
- "**Used Memory**": number of bytes used by the Data Logger for storing data.

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WEBSERVER INTERFACE (Ethernet version):

The HD67324-B2-E-xxx-xGB has an integrated Webserver that allows to managed the Data Logger's functions and download the data as Binary File. It is possible to use the most common browser like Internet Explorer, Google Chrome, Mozilla Firefox by editing the IP Address programmed inside the Data Logger in the address bar of the browser.
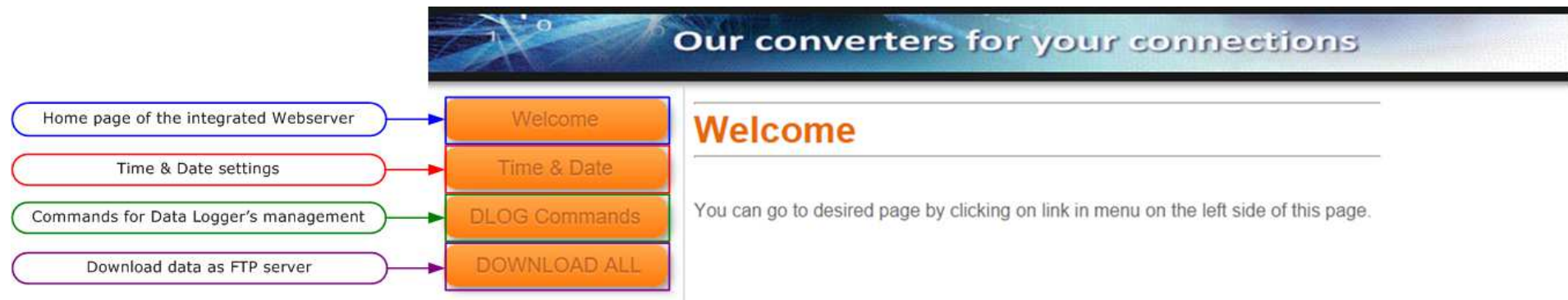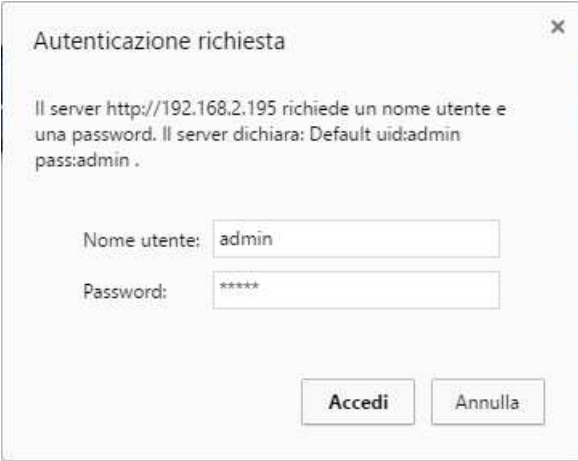
<u>**WELCOME**</u>

Figure 12: "Welcome" window

As soon as the connection to the Webserver interface of the Data Logger is done, "**Welcome**" window appears (Fig. 12). It has the following structure:

- "**Welcome**" button: it is possible to go to the starting page of the Webserver;
- "**Time & Date**" button: it is possible to open the section for the Time and Date setting;
- "**DLOG Commands**" button: it is possible to open the page for the Data Logger Management;
- "**DOWNLOAD ALL**" button: it is possible to download the logged data as Binary File.

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When one of the buttons of the "Welcome" page are pressed, it is necessary to do the login, using the "Admin" and "Password" defined in the section "Configuration Setting → Main Option" of SW67324 (Fig. 13).

Figure 13: "Login" window

TIME & DATE
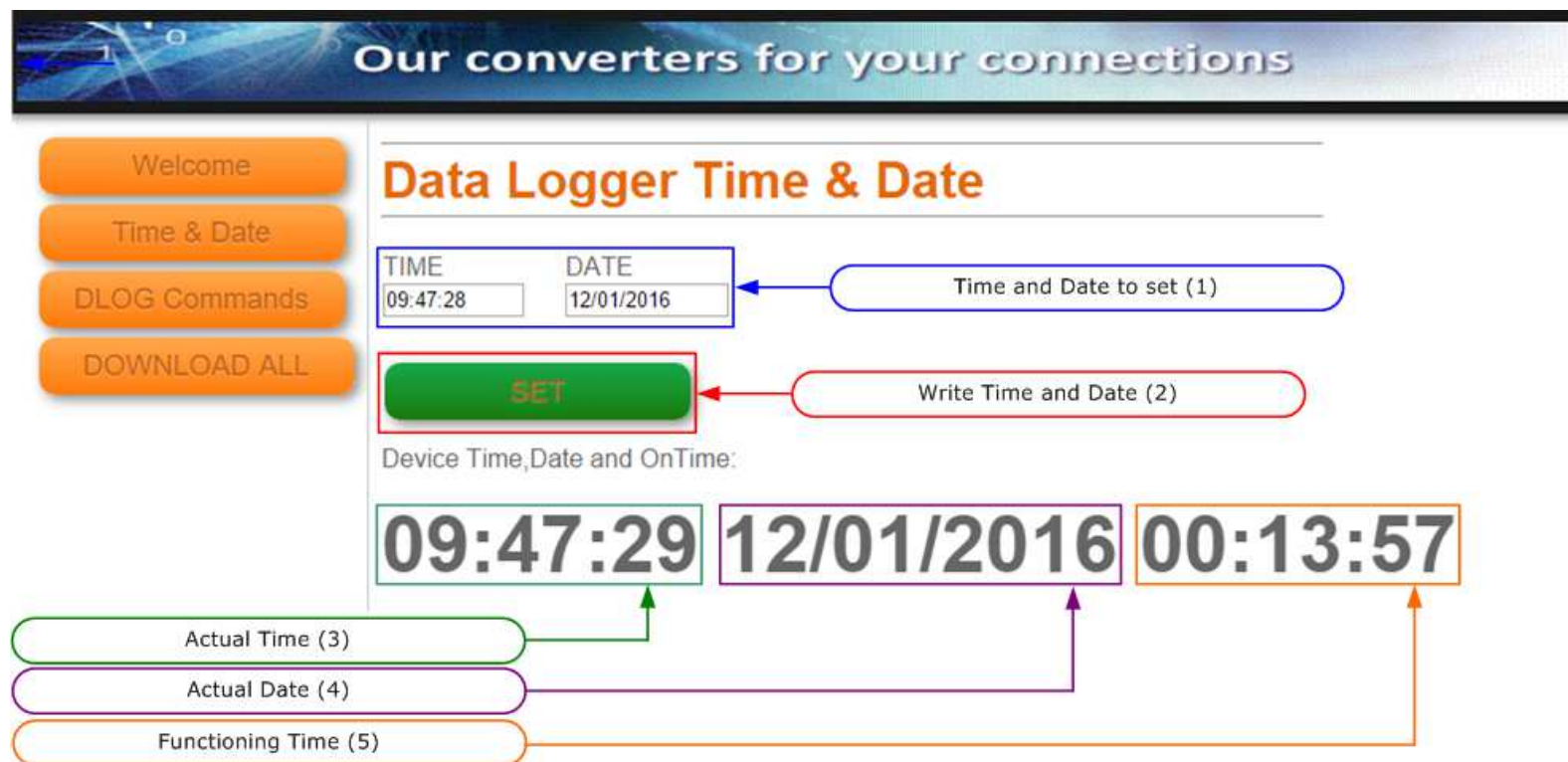
Figure 14: "Data Logger Time & Date" window

When the "Time & Date" button is pressed, the "**Data Logger Time & Date**" window appears (Fig. 14). It has the following structure:

- ◆ "**Time and Date**" fields (Fig. 14, Point 1): the time and the date to be written in the Data Logger is defined;
- ◆ "**Set**" button (Fig. 14, Point 2): it is possible to write time and date defined;
- ◆ "**Actual Time**" (Fig. 14, Point 3): the actual time inside the Data Logger is displayed;
- ◆ "**Actual Date**" (Fig. 14, Point 4): the actual date inside the Data Logger is displayed;
- ◆ "**Functioning Time**" (Fig. 14, Point 5): the functioning time (from the last power ON) is displayed.

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DLOG COMMANDS
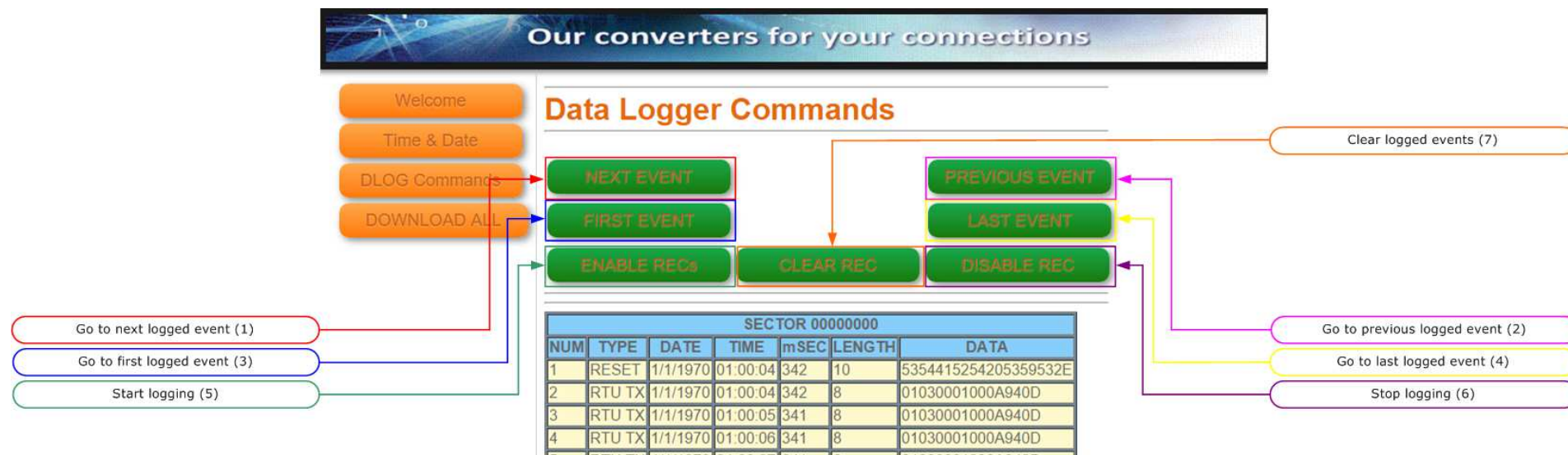

Figure 15: "Data Logger Commands" window

When the "DLOG Commands" button is pressed, the "**Data Logger Commands**" window appears (Fig. 15). It has the following structure:

- "**NEXT EVENT**" button (Fig. 15, Point 1): it is possible to go to the next logged event;
- "**PREVIOUS EVENT**" button (Fig. 15, Point 2): it is possible to go to the previous logged event;
- "**FIRST EVENT**" (Fig. 15, Point 3): it is possible to go to the first logged event;
- "**LAST EVENT**" (Fig. 15, Point 4): it is possible to go to the last logged event;
- "**ENABLE REC**" (Fig. 15, Point 5): it is possible to start the logging;
- "**DISABLE REC**" (Fig. 15, Point 6): it is possible to stop the logging;
- "**CLEAR REC**" (Fig. 15, Point 7): it is possible to clear the logged events.

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When the logged events are displayed, the events' table has these fields:

- "**NUM**" fields: the number of the event is defined;
- "**TYPE**" fields: the type of event is defined;
- "**DATE**" fields: the date when the event was logged is defined;
- "**TIME**" and "**mSEC**" fields: the time when the event was logged is defined;
- "**LENGHT**" fields: the length of the message is defined;
- "**DATA**" fields: the data of the message is defined.

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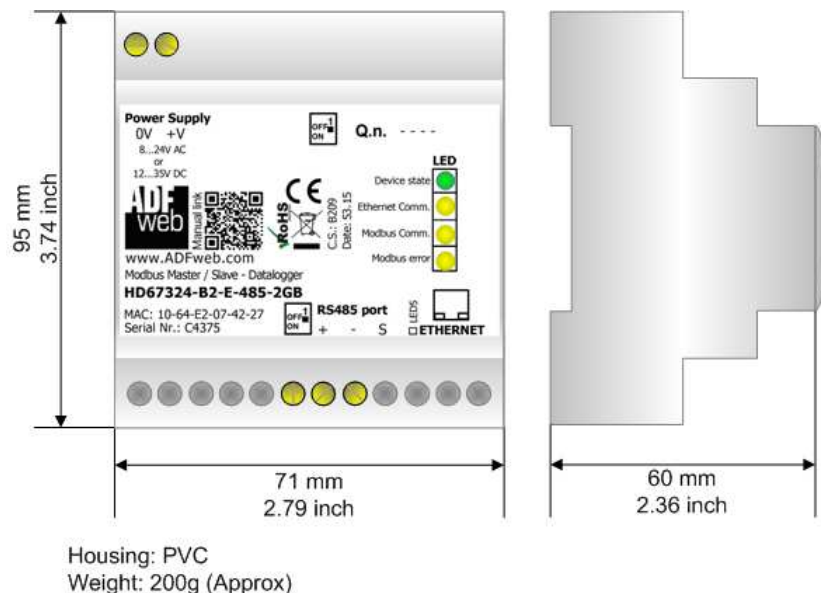
MECHANICAL DIMENSIONS:

Figure 12a: Mechanical Dimensions for HD67324-B2-E-xxx-xGB
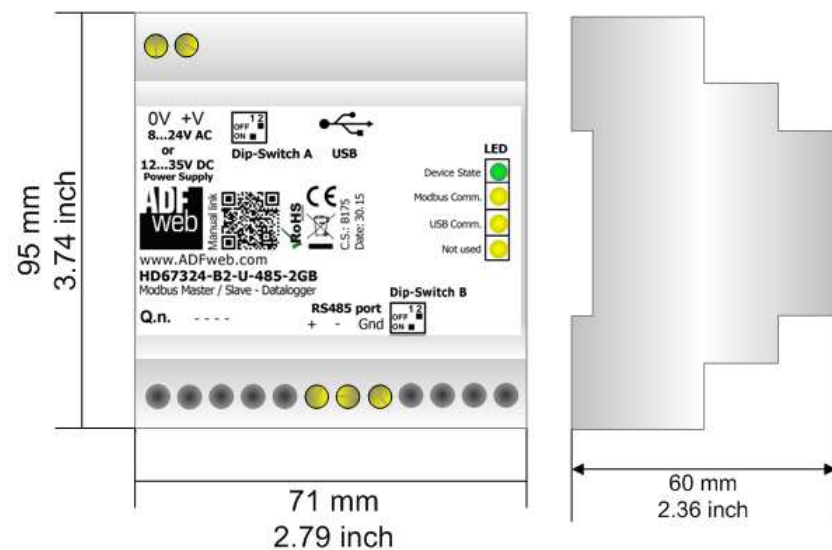
Figure 12b: Mechanical Dimensions for HD67324-B2-U-xxx-xGB

ADFweb

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ORDERING INFORMATIONS:

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

HD67324 – B 2 – x - xxx – 2GB

Memory
2 GB = 2 GigaBytes

BUS connection
485 = RS485
232 = RS232

PC software connection
E=Ethernet interface
U=USB interface

Connectors
2 = Fixed Screw Terminal

Enclosure Type
B = Modulbox 4M DIN Rail mounting

Device Family
HD67324 = Data Logger
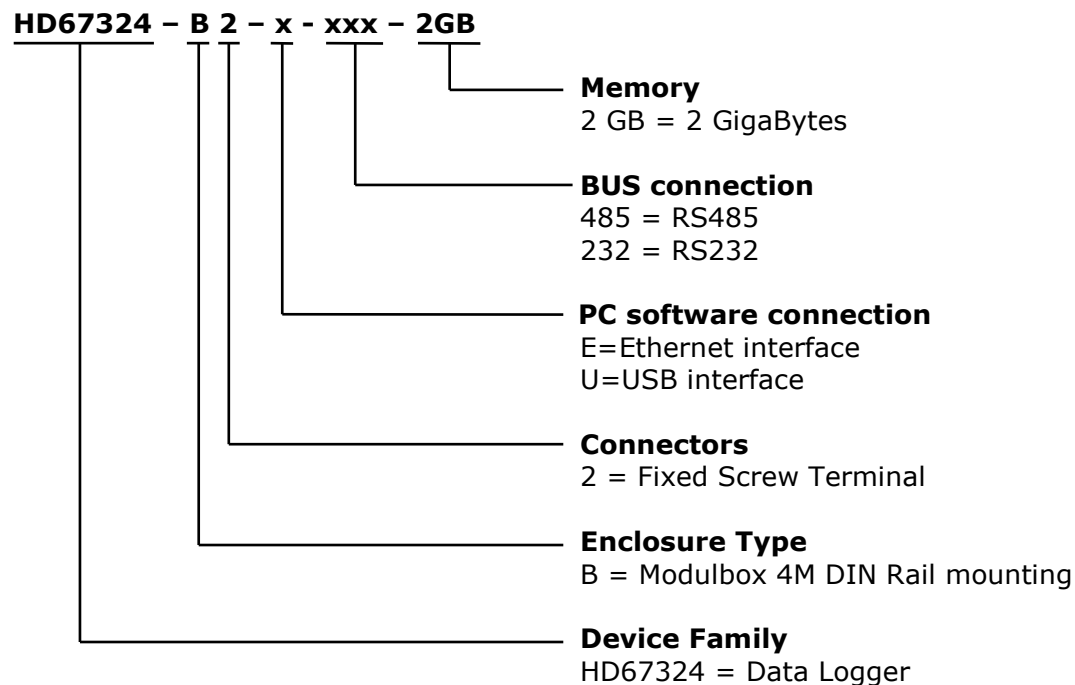
Order Code: **HD67324-B2-E-485-2GB**   Data Logger for Modbus on RS485 with 2 Gigabytes of memory (Ethernet interface)
Order Code: **HD67324-B2-E-232-2GB**   Data Logger for Modbus on RS232 with 2 Gigabytes of memory (Ethernet interface)
Order Code: **HD67324-B2-U-485-2GB**   Data Logger for Modbus on RS485 with 2 Gigabytes of memory (USB interface)
Order Code: **HD67324-B2-U-232-2GB**   Data Logger for Modbus on RS232 with 2 Gigabytes of memory (USB interface)

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ACCESSORIES:

AC34107   -   Null Modem Cable Fem/Fem DSub 9 Pin 1,5 m

AC34114   -   Null Modem Cable Fem/Fem DSub 9 Pin 5 m

AC34001   -   Rail DIN Power Supply 220/240V AC 50/60Hz – 12 VAC

AC34002   -   Rail DIN Power Supply 110V AC 50/60Hz – 12 VAC

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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.