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Industrial Electronic Devices

# User Manual
Revision 2.000
English

## M-Bus Slave / Modbus Master - Converter

(Order Code: HD67059-232-B2, HD67059-485-B2)

**Benefits and Main Features:**

Very easy to configure

Electrical isolation

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

**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 |
|---|---|---|---|---|
| 1.002 | 08/04/2011 | Fl | All | Revision |
| 1.010 | 05/10/2011 | Fl | All | Software changed (v1.100) |
| 1.011 | 18/02/2013 | Nt | All | Added new chapters |
| 2.000 | 15/12/2017 | Ff | All | New hardware version |

**WARNING:**

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ADFweb.com is not responsible for any error this manual may contain.

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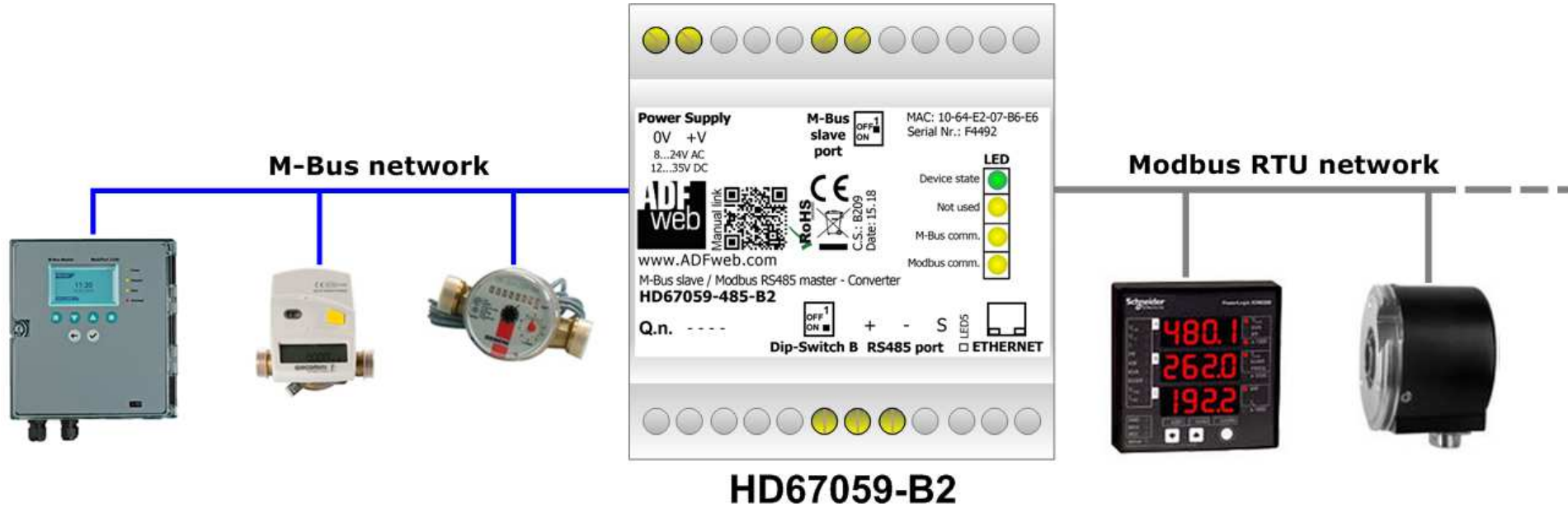
⚠️ This symbol indicates that non-observance of the safety instructions is a danger for people that could lead to serious injury or death and / or the possibility of damage.

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

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**EXAMPLE OF CONNECTION:**



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## CONNECTION SCHEME:



**Connector6:**
RS232 port

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

**Connector2:**
Ethernet Port
(RJ45 Plug)

**Led5:**
Green
Link Ethernet

**Led1:**
Green
Device state

**Led2:**
Yellow
Not used

**Led3:**
Yellow
M-Bus comm.

**Led4:**
Yellow
Modbus comm.

**Connector1:**
Power Supply

0V = Ground
+V = Positive wire

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

**Dip-Switch A:**
-Dip1 – Functioning Mode

= Normal Mode

= Boot Mode

**Connector4:**
Unpolarized
M-Bus Slave

*Figure 1a: Connection scheme for HD67059-232-B2*

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**Dip-Switch B:**
-Dip1 – Termination RS485 line

☐ = Open    ☐ = 120 ohm

**Connector6:**
RS485 port

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

**Connector2:**
Ethernet Port
(RJ45 Plug)

**Led5:**
Green
Link Ethernet

A  B  S

**Led1:**
Green
Device state

**Led2:**
Yellow
Not used

**Led3:**
Yellow
M-Bus comm.

**Led4:**
Yellow
Modbus comm.

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

M-Bus
slave
port

MAC: 10-64-E2-07-B6-E6
Serial Nr.: F4492

LED

Device state
Not used
M-Bus comm.
Modbus comm.

www.ADFweb.com
M-Bus slave / Modbus RS485 master - Converter
**HD67059-485-B2**

Q.n. - - - -

Dip-Switch B  RS485 port  ☐ 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

**Connector4:**
Unpolarized
M-Bus Slave

*Figure 1b: Connection scheme for HD67059-485-B2*

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## CHARACTERISTICS:

The HD67059 is a  M-Bus slave to Modbus master converter.

It allows the following characteristics:

- Electrical isolation between RS232/RS485 - M-Bus – Power Supply;
- Baud Rate and Parity changeable with software;
- 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 SW67059 software on your PC in order to perform the following:

- Define the parameter of Modbus and M-Bus line;
- Define the map between M-Bus and Modbus sides;
- Update the device.

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**POWER SUPPLY:**

The devices can be powered at 8…24V AC and 12…35V DC. The consumption depends to the code of the device. For more details see the two tables below.

| VAC | | VDC | |
|---|---|---|---|
| **Vmin** | **Vmax** | **Vmin** | **Vmax** |
| **8V** | **24V** | **12V** | **35V** |

Consumption at 24V DC:

| Device | [W/VA] |
|---|---|
| HD67059-232-B2 | 4 |
| HD67059-485-B2 | |

**Connector1:**
Power Supply

0V = Ground
+V = Positive wire

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

V+ 0V
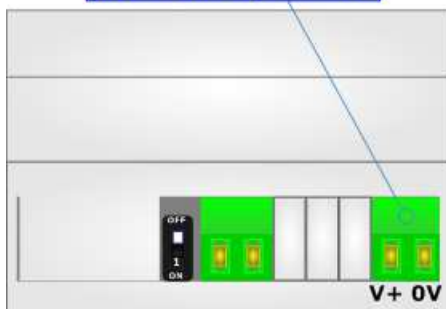
⚠ <u>Warning:</u> Not reverse the polarity power

+V    0V

HD67059

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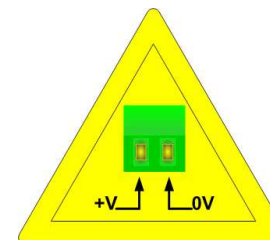
**FUNCTION MODES:**

The device has got two functions mode depending of the position of Dip1 of 'Dip-Switch A' of HD67059-xxx-B2:

- 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 uploading the Project and/or Firmware.

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

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

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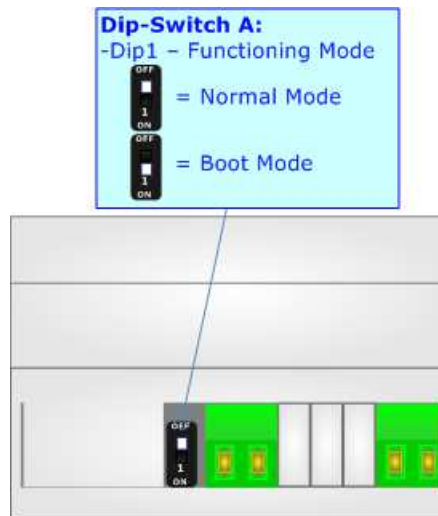
**LEDS:**

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 <br> **Blinks very slowly (~0.5Hz):** update in progress |
| 2: Not used (yellow) | OFF | **Blinks quickly:** Boot state <br> **Blinks very slowly (~0.5Hz):** update in progress |
| 3: M-Bus Comm. (yellow) | Blinks when a M-Bus request is received | **Blinks quickly:** Boot state <br> **Blinks very slowly (~0.5Hz):** update in progress |
| 4: Modbus comm. (yellow) | Blinks when a Modbus response is received | **Blinks quickly:** Boot state <br> **Blinks very slowly (~0.5Hz):** update in progress |
| 5: Ethernet Link (green) | **ON:** Ethernet cable connected <br> **OFF:** Ethernet cable disconnected | **ON:** Ethernet cable connected <br> **OFF:** Ethernet cable disconnected |

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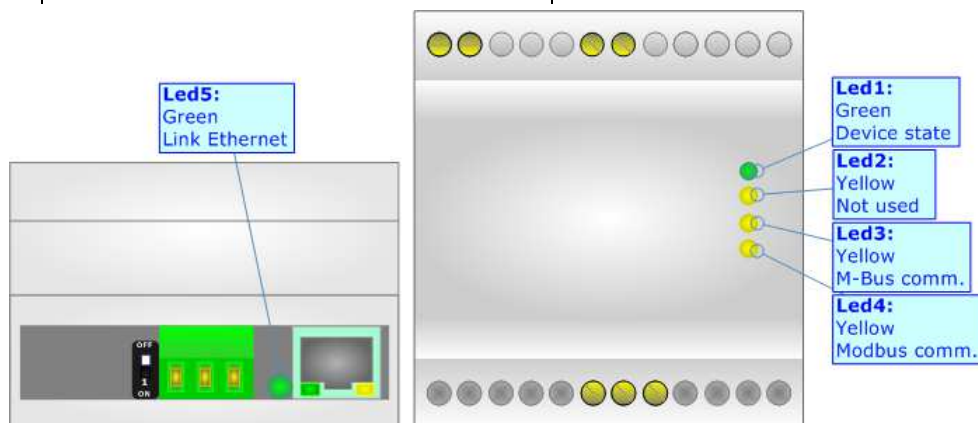
**RS232:**

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.

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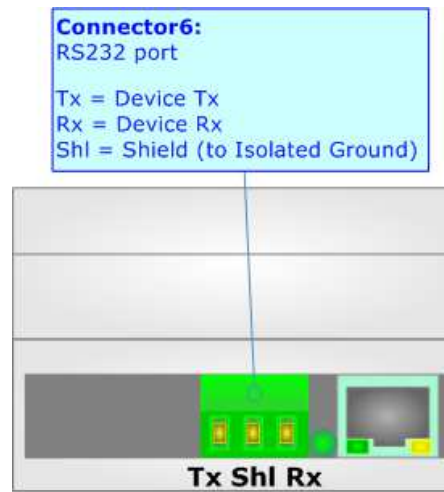
**RS485:**

To terminate the RS485 line with a 120Ω resistor, it is necessary to put dip 1 ON, like in figure.
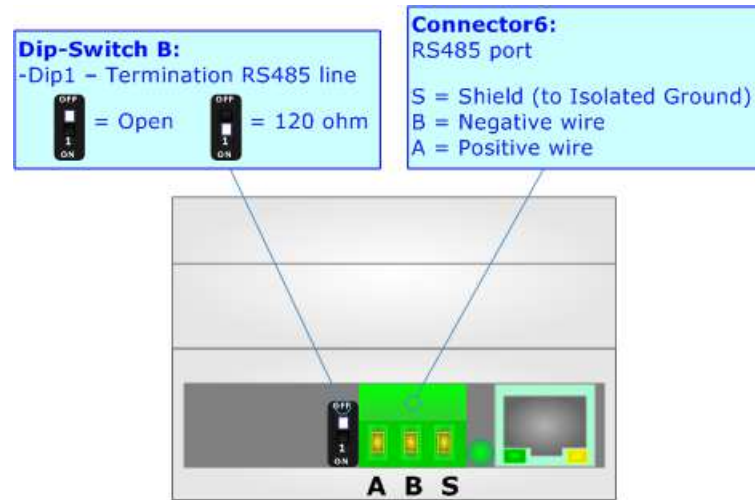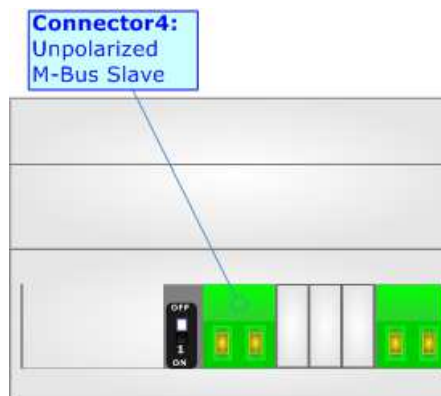


The maximum length of the cable should be 1200m (4000 feet).

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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### M-BUS:

The M-Bus is a unpolarized bus.
A two wire standard telephone cable (JYStY N*2*0.8 mm) is used as the transmission medium for the M-Bus.

Connector4:
Unpolarized
M-Bus Slave

### ETHERNET:

The Ethernet connection must be made using Connector3 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.

Connector2:
Ethernet Port
(RJ45 Plug)

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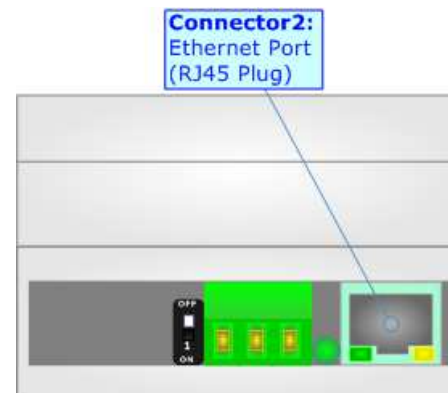
**USE OF COMPOSITOR SW67059:**

To configure the Converter, use the available software that runs with Windows called SW67059. It is downloadable from 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 the web site)*. The software works with MSWindows (XP, Vista, Seven, 8, 10; 32/64bit).

When launching the SW67059, the window below appears (Fig. 2).

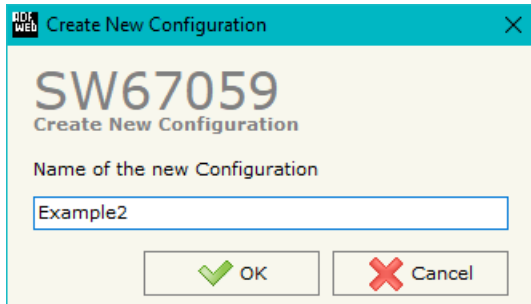Note:
    It is necessary to have installed .Net Framework 4.
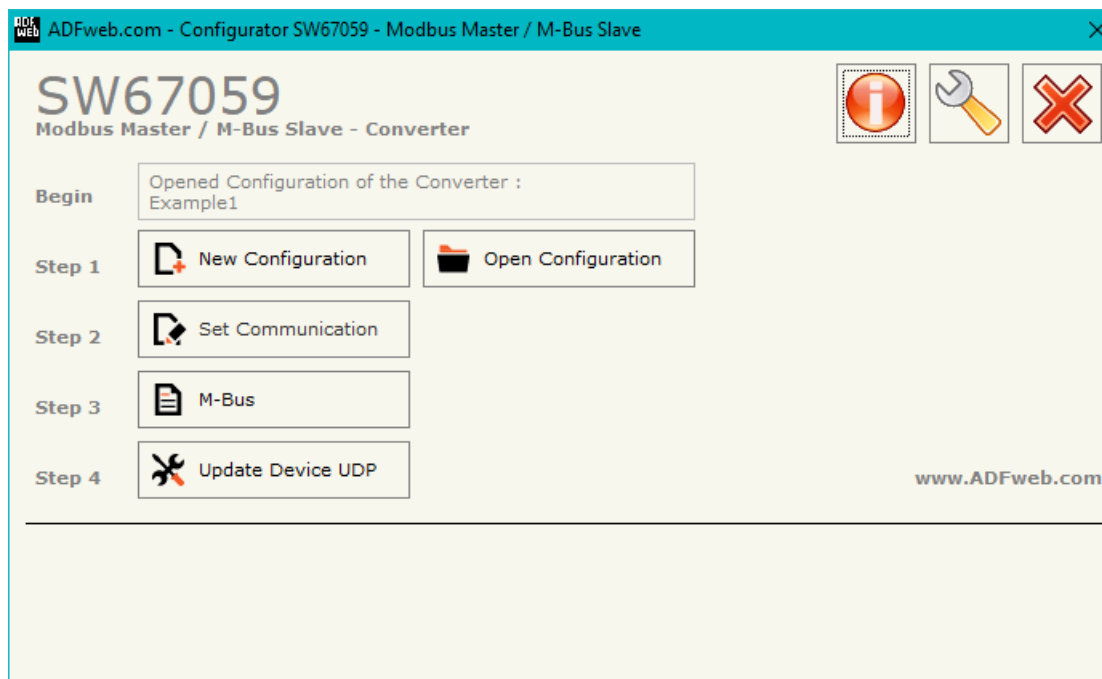
*Figure 2: Main window for SW67059*

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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 "M-Bus Slave / Modbus Master - 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**".
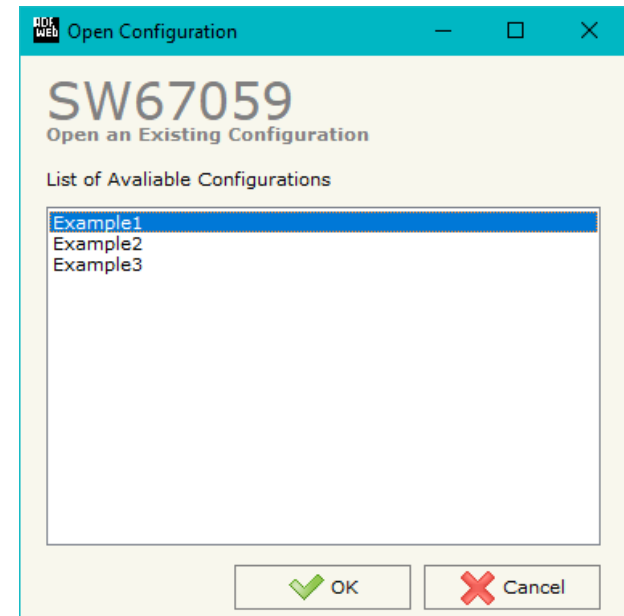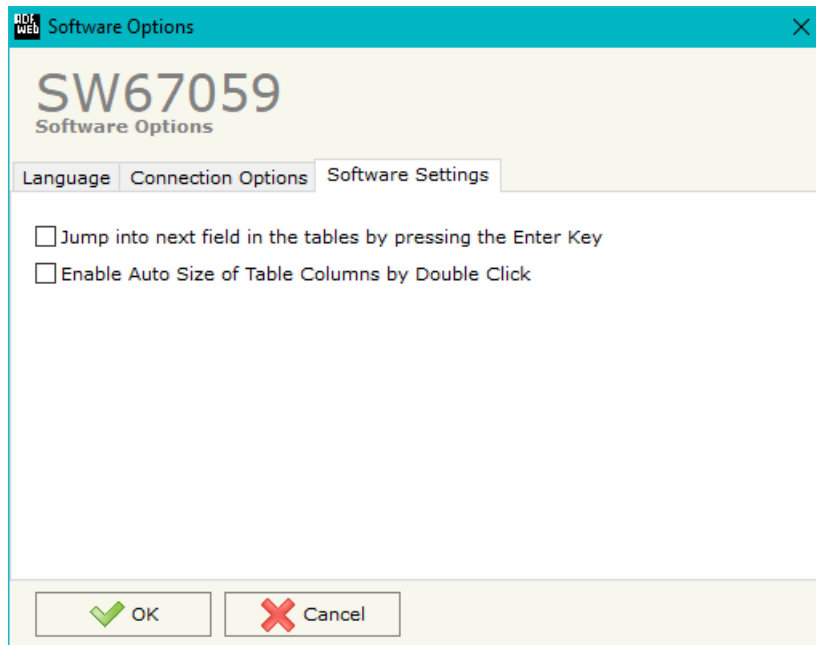
**SOFTWARE OPTIONS:**

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.
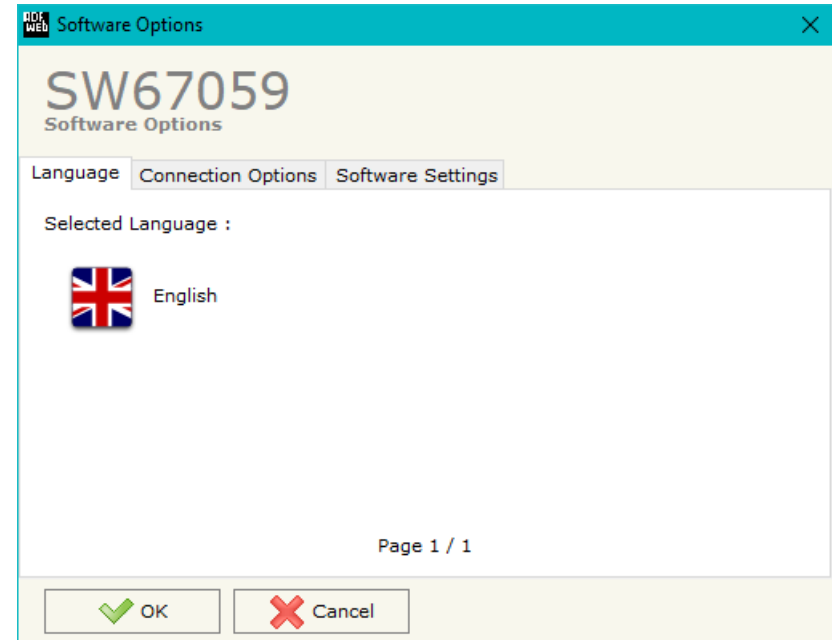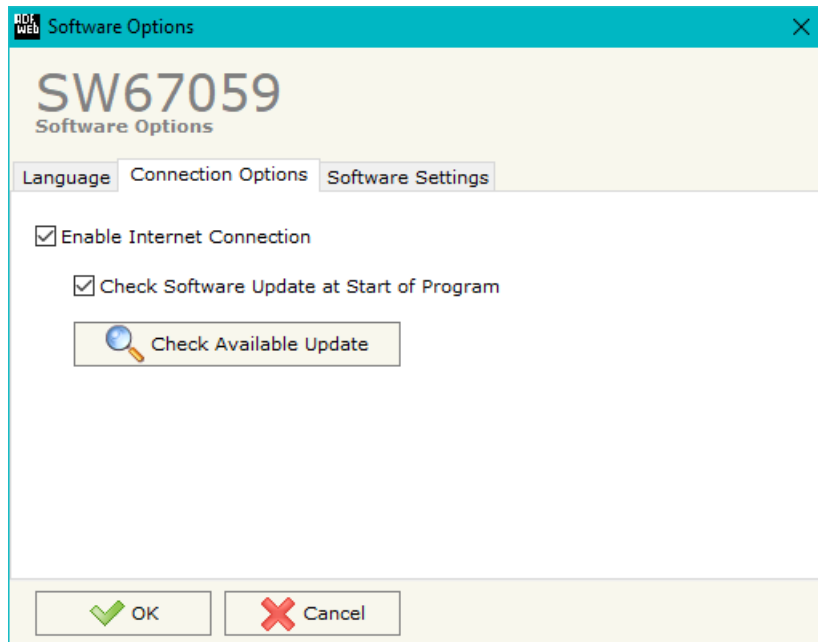
In the section "Connection Options", it is possible to check if there are some updatings of the software compositor in ADFweb.com website.
Checking the option "**Check Software Update at Start of Program**", the SW67059 check automatically if there are updatings when it is launched.

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**Software Options**

# SW67059

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.

**SET COMMUNICATION:**

By Pressing the "**Set Communication**" button from the main window for SW67059 (Fig. 2) the window "Set Communication" appears (Fig. 3).

The window is divided in different sections in order to define the different parameters of the converter:

- Select Device
- M-Bus
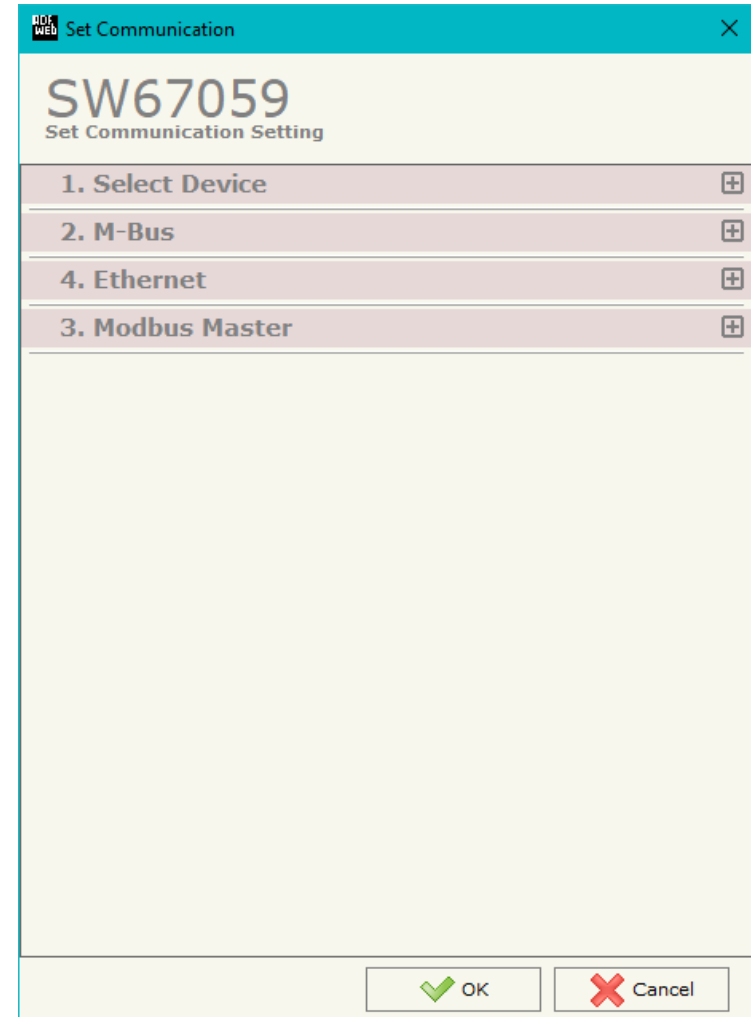- Ethernet
- Modbus Master



*Figure 3a: "Set Communication" window*

**SELECT DEVICE:**

This section is used to define hardware type used:

+ **HD67059M (Serial Update)**: old hardware version (6M box)
+ **HD67059-B2 (Serial Update)**: new hardware version (4M box)

*Figure 3b: "Set Communication → Select Device" window*

**M-BUS:**

This section is used to define the main parameters of M-Bus line. The means of the fields are:

+ In the field "**Baudrate**" the data rate of the M-Bus line is defined;
+ In the field "**Parity**" the parity of the M-Bus line is defined;

*Figure 3c: "Set Communication → M-Bus" window*

**MODBUS MASTER:**

This section is used to define the main parameters of Modbus line. The means of the fields are:

+ In the field "**Serial**" the serial port to use is defined (RS232 or RS485);
+ In the field "**Baudrate**" the baudrate for the serial line is defined;
+ In the field "**Parity**" the parity of the serial line is defined;
+ In the field "**TimeOut (ms)**" the maximum time that the converter attends for the answer from the Slave interrogated is defined;
+ In the field "**Cyclic Delay (ms)**" the delay (idle time) between two Modbus requests is defined;
+ In the field "**Protocol**" the protocol used on serial side is defined.

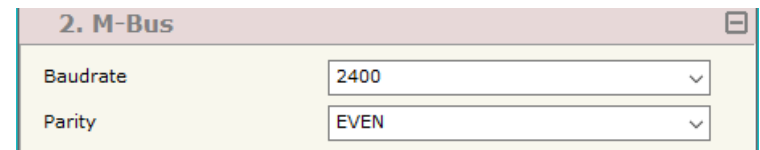*Figure 3d: "Set Communication → Modbus Master" window*

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### ETHERNET:

This section is used to define the general parameters of Ethernet. The means of the fields are:

+ In the field "**Ip Address**" the IP address of the converter is defined;
+ In the field "**SubNet Mask**" the Subnet Mask of the converter is defined;
+ In the field "**Gateway**" the default gateway of the 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;



*Figure 3e: "Set Communication → Ethernet" window*

**M-BUS**

By Pressing the "**M-Bus**" button from the main window for SW67059 (Fig. 2) the window "M-Bus Network" appears (Fig. 4).

In the section "Nodes" it is possible to create the nodes of M-Bus line:

- In the field "**Description**" it is possible to write a short description of the node.
- In order to create a new virtual node it is necessary to define the "**Primary ID**" and the "**Secondary ID**".

After that, pressing the "**ADD NODE**" button, a new node appears in the left side of the window. In order to modify a created node it is necessary to select the desired node, change the wrong items and then press the "**MODIFY NODE**" button.
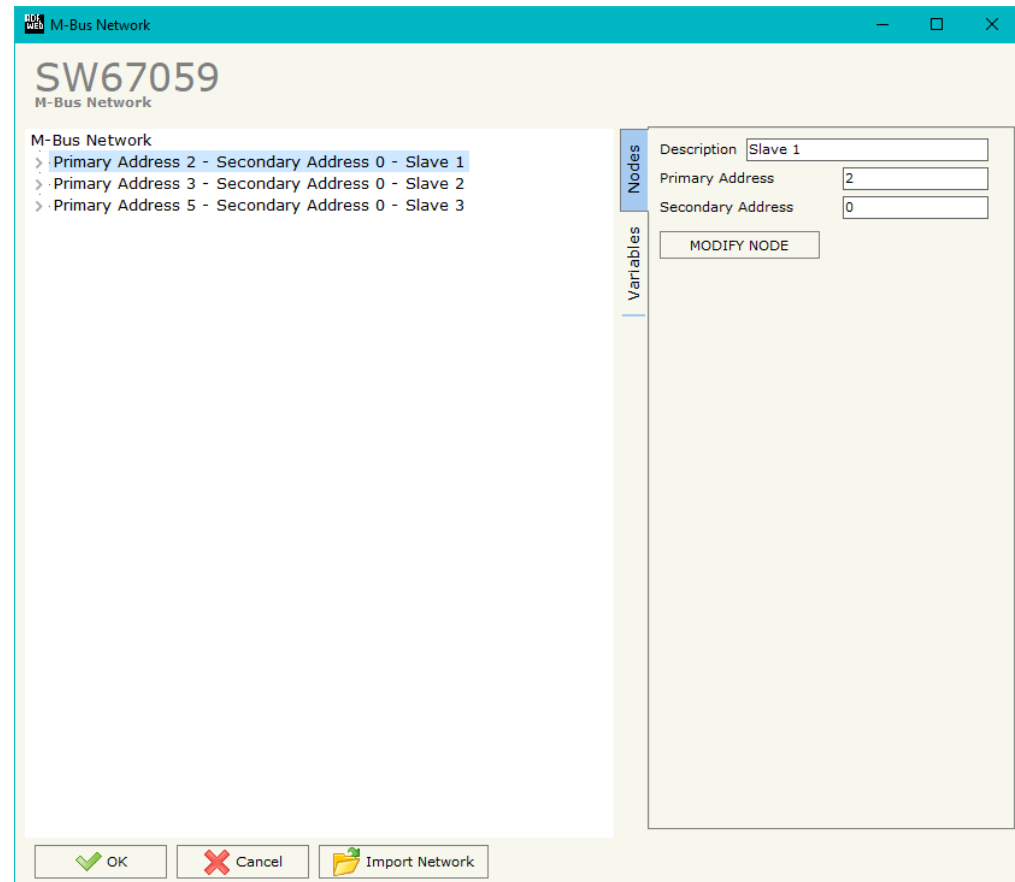


*Figure 4: "M-Bus Network" window*

## SECTION VARIABLES:

Selecting the desired node it is possible to add a variable. In order to create a new variable it is necessary to fill these items:



- To use the created variable the field "**Enable Variable**" must be checked. If you have created a variable but for the moment it is unused, it is possible to uncheck the field "Enable Variable" without deleting it;

- In the field "**Slave ID**" you have to insert the Modbus slave ID of the device that contain the values that you want to import on M-Bus;

- In the field "**Type of Data**" you have to select the type of Modbus data. It is possible to select: Coil Status, Input Status, Holding Register, Input Register;

- In the field "**Modbus Register**" the start address of the register to be read is defined;

- In the field "**Number of Points**" insert the number of consecutive registers to be read;

- In the field "**Swap**" it is possible to change the bytes' order;

- In the field "**Description**" it is possible to write a description of the variable;

- The field "**Type of Data**" is used to select the unit of measure;

- In the field "**Function Field**" it is necessary to select the type of data;

- The field "**Dimension**" is used to select the dimension of the variable (8, 16, 24, 32, 48, 64 bit, 32 bit Real or Variable Length);

- In the field "**Length**" you have to insert the length of the variable only if the "Dimension" is "Variable Length";

- In the field "**Unit**" if it is necessary it is possible to select the unit of that variable. The Unit is used for indicates from which device the data come;

- In the field "**Scale**" it is necessary to select the value of Scale of the measure;

- In the field "**Storage Number**" if it is necessary it is possible to insert the value of storage counter of that variable. With this field the slave can indicate and transmit various stored counter states or historical values, in the order in which they occur;

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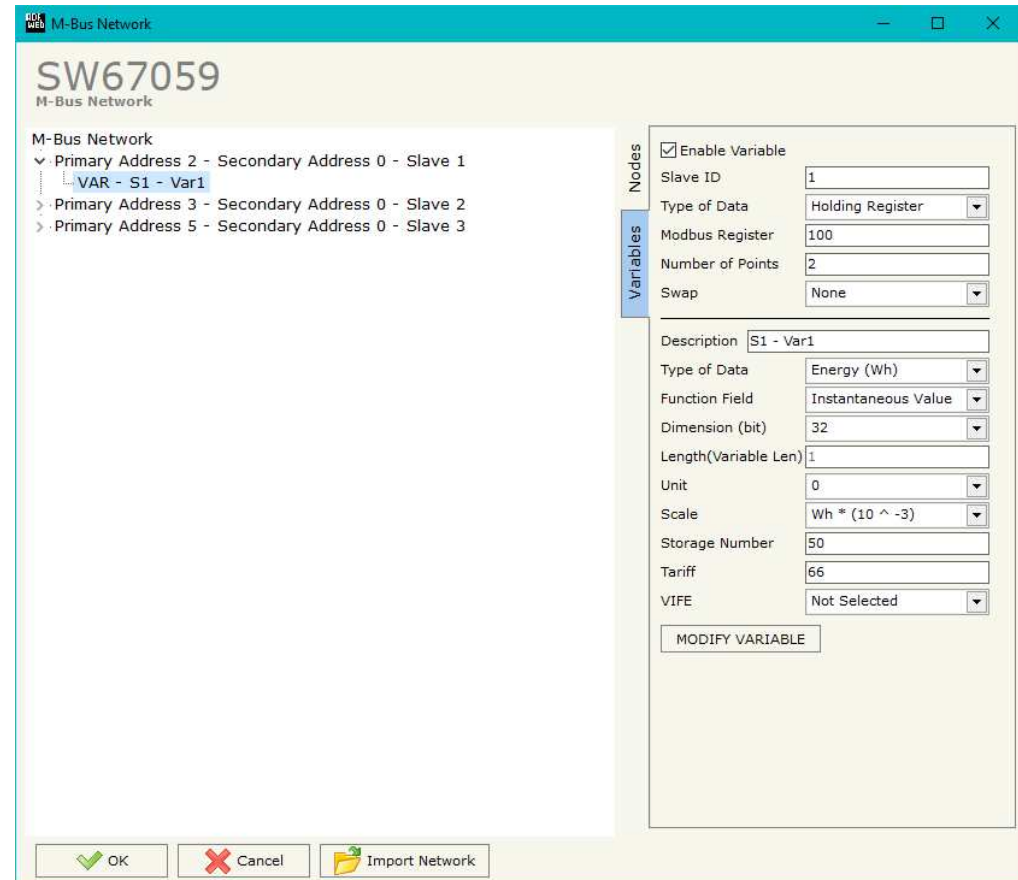
➥ In the field "**Tariff**" if it is necessary it is possible to insert the value of the tariff of that variable. The Tariff is used for indicates from which device the data come;

➥ In the field "**VIFE**" it is possible to select a sub-type of "Type of Data".

Having completed this fields, to add the variable the button "**ADD VARIABLE**" must be pressed.

In order to modify a created variable it is necessary to select the desired variable, change the wrong items and then press the "**MODIFY VARIABLE**" button.

### COPY, PASTE AND DELETE ITEMS:

By pressing the right button of the mouse over an item (Variable or Node)  it is possible to Copy, Paste and Delete.
It is possible to Copy a variable from a Node and copy it to another Node, or copy a Variable from a project and paste in another one.
It is also possible to copy an entire Node with all its Variables.
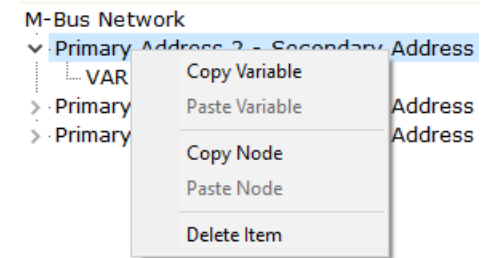
Possible choices for the fields used to create a variable:

**Type of Data:**
|_Energy (Wh)
|_Energy (J)
|_Volume (m$^3$)
|_Mass (Kg)
|_On Time
|_Operating Time
|_Power (W)
|_Power (J/h)
|_Volume Flow (m$^3$/h)
|_Volume Flow Ext. (m$^3$/min)
|_Volume Flow Ext. (m$^3$/s)
|_Mass Flow (Kg/h)
|_Flow Temperature (°C)
|_Return Temperature (°C)
|_Temperature Difference (K)
|_External Temperature (°C)
|_Pressure (bar)
|_Averaging Duration
|_Actuality Duration
|_Type of data in VIFE
|_Time Point
|_VIF is in ASCII
|_Unit for H.C.A.
|_Fabrication No
|_(Enhaced) Identification
|_Bus Address

**Function Field:**
|_Instantaneous Value
|_Minimum Value
|_Maximum Value
|_Value During Error State


**Dimension (bit):**
|_8
|_16
|_24
|_32
|_32 real
|_48
|_64
|_Variable Length

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**VIFE:**

|_ Not Selected
|_ Credit of the nominal local legal currency units
|_ Debit of the nominal local legal currency units
|_ Access Number (transmission count)
|_ Medium (as in fixed header)
|_ Manufacturer (as in fixed header)
|_ Parameter set identification
|_ Model/Version
|_ Hardware Version #
|_ Firmware Version #
|_ Software Version #
|_ Customer Location
|_ Customer
|_ Access Code User
|_ Access Code Operator
|_ Access Code System Operator
|_ Access Code Developer
|_ Password
|_ Error flags (binary)
|_ Error mask
|_ Digital Output (binary)
|_ Digital Input (binary)
|_ Baudrate [Baud]
|_ response delay time [bittimes]
|_ Retry
|_ First storage # for cyclic storage
|_ Last storage # for cyclic storage
|_ Size of storage block
|_ Storage interval [sec(s)..day(s)]
|_ Storage interval month(s)
|_ Storage interval year(s)
|_ Duration since last readout[sec(s)..day(s)]
|_ Start (date/time) of tariff
|_ Duration of tariff (nn=01..11:min to day)
|_ Period of tariff [sec(s) to day(s)]

|_ Period of tariff months(s)
|_ Period of tariff year(s)
|_ dimensionless/ no VIF
|_ Volts
|_ Ampere
|_ Reset counter
|_ Comulation counter
|_ Control signal
|_ Day of week
|_ Week number
|_ Time point of day change
|_ State of parameter activation
|_ Special supplier information
|_ Duration since last comulation [hour(s)..year(s)]
|_ Operation time battery [hour(s)..year(s)]
|_ Date and time of battery change
|_ Energy MWh
|_ Energy GJ
|_ Volume
|_ Mass
|_ Volume 0,1 feet^3
|_ Volume 0,1 american gallon
|_ Volume 1 american gallon
|_ Volume flow 0,001 american gallon/min
|_ Volume flow 1 american gallon/min
|_ Volume flow 1 american gallon/h
|_ Power MW
|_ Power GJ/h
|_ Flow Temperature
|_ Return Temperature
|_ Temperature Difference
|_ External Temperature
|_ Cold/Warm Temperature Limit °F
|_ Cold/Worm Temperature Limit °C
|_ Cumul. count max power

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|_ per second
|_ per minute
|_ per hour
|_ per day
|_ per week
|_ per month
|_ per year
|_ per revolution/measurement
|_ increment per input pulse on input channel
|_ increment per output pulse on output channel
|_ per liter
|_ per m^3
|_ per kg
|_ per K (Kelvin)
|_ per kWh
|_ per GJ
|_ per kW
|_ per (K*l)(Kelvin*liter)
|_ per V (Volt)
|_ per A (Ampere)
|_ multiplied by sek
|_ multiplied by sek/V
|_ multiplied by sek/A
|_ start date(/time) of
|_ VIF contains uncorrected unit instead of corrected unit
|_ Accumulation only if positive contributions
|_ Accumulation of abs value only if negative contributions
|_ upper/lower limit value
|_ # of exceeds of lower/upper limit
|_ Date(/time) of begin/end of first/last lower/upper limit exceed

|_ Duration of limit exceed
|_ Duration of first/last
|_ Date(/time) of first/last begin/end
|_ Multiplicative currection factor
|_ Additive correction constant * unit of VIF (offset)
|_ Moltiplicative correction factor: 10^3
|_ future value
|_ next VIFE's and data of this block are manufacturer specific
|_ None
|_ Too many DIFE's
|_ Storage number not implemented
|_ Unit number not implemented
|_ Tariff number not implemented
|_ Function not implemented
|_ Data class not implemented
|_ Data size not implemented
|_ Too many VIFE's
|_ Illegal VIF-Group
|_ Illegal VIF-Exponent
|_ VIF/DIF mismatch
|_ Unimplemented action
|_ No data available (undefined value)
|_ Data overflow
|_ Data underflow
|_ Data error
|_ Premature end of record

**UPDATE DEVICE (FOR HD67059M):**

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

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

- Turn OFF the Device;
- Connect the RS232 cable from your PC to the Converter;
- Insert the Boot Jumper;
- Select the "**COM port**" and press the "**Connect**" button;
- Turn ON the device;
- Check the "Boot state" Led. It must blink quickly;
- 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;
- Remove the Boot Jumper;
- Disconnect the USB/RS232 cable;
- Turn ON the device.

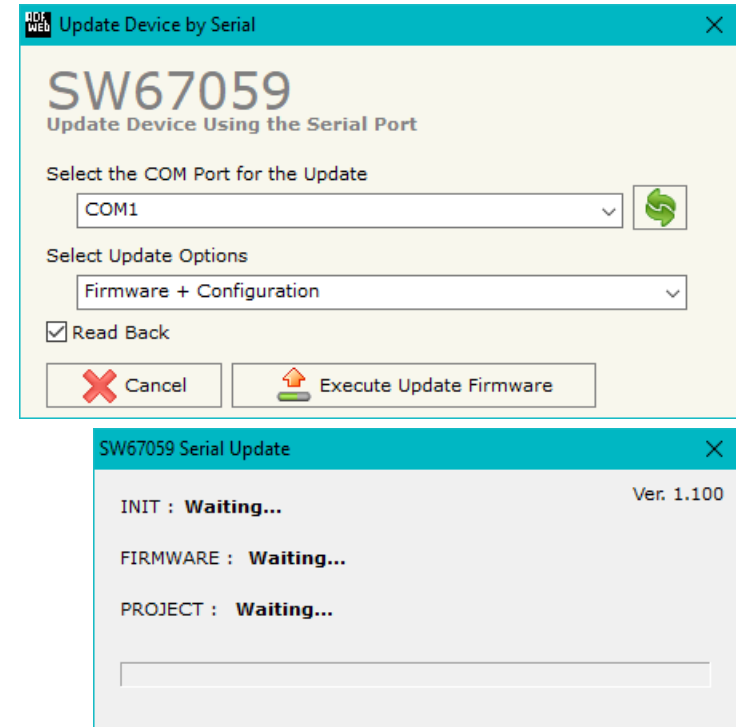At this point the configuration/firmware on the device is correctly updated.

*Figure 5a: "Update Device" windows*

**Industrial Electronic Devices**

**UPDATE DEVICE (FOR HD67059-B2):**

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.

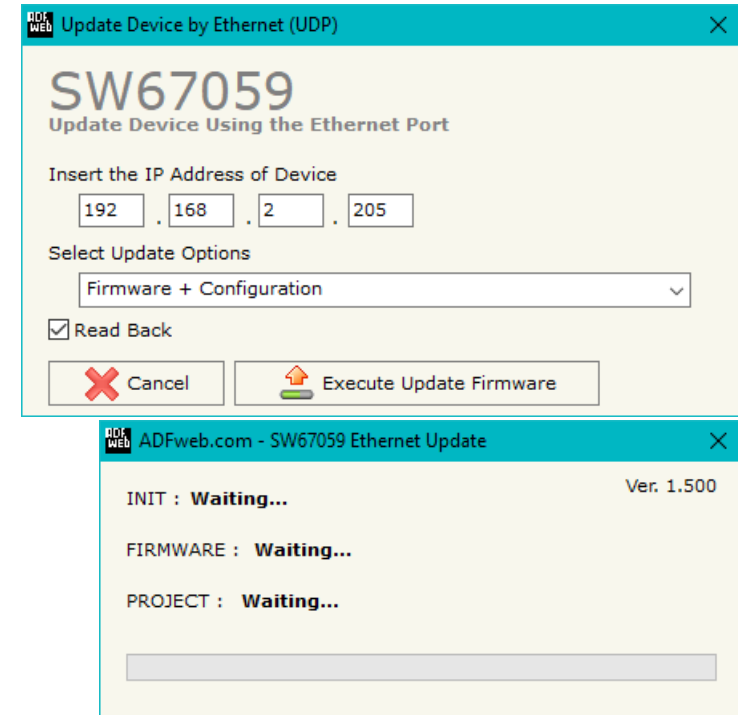At this point the configuration/firmware on the device is correctly updated.

*Figure 5b: "Update device" windows*

**Note:**

When you receive the device, for the first time, you also have to update the Firmware in the HD67059 device.

**Warning:**

If Fig. 6 appears when you try to do the Update try these points before seeking assistance:

- Check if the serial COM port selected is the correct one;
- Check if the serial cable is connected between the PC and the device;
- Try to repeat the operations for the updating;
- 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;
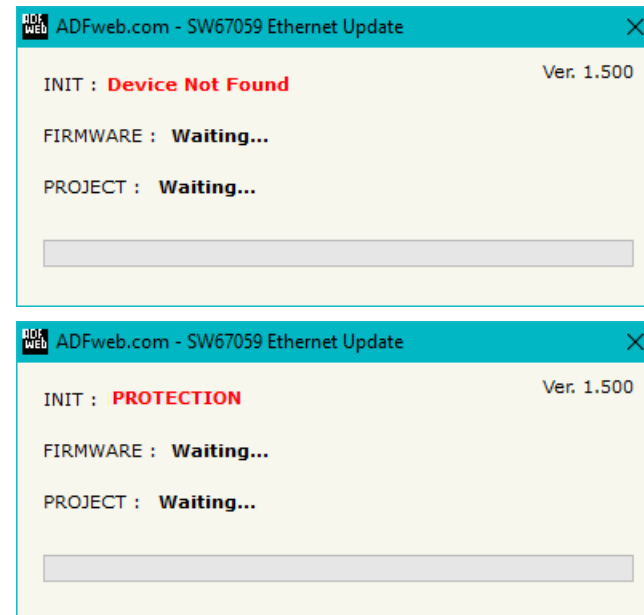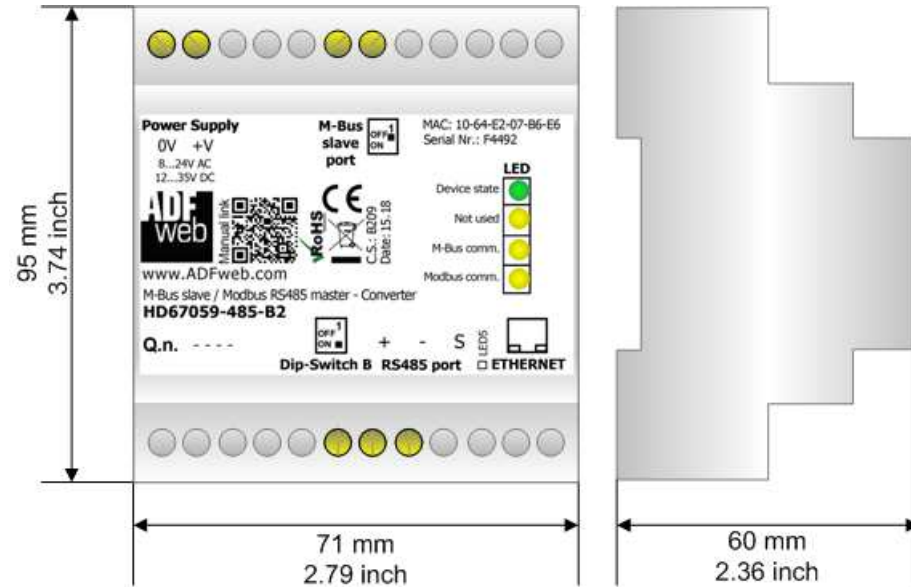- Pay attention at Firewall lock.



*Figure 6: "Error" window*

**Warning:**

In the case of HD67059 you have to use the software "SW67059": www.adfweb.com\download\filefold\SW67059.zip.

Industrial Electronic Devices

**MECHANICAL DIMENSIONS:**
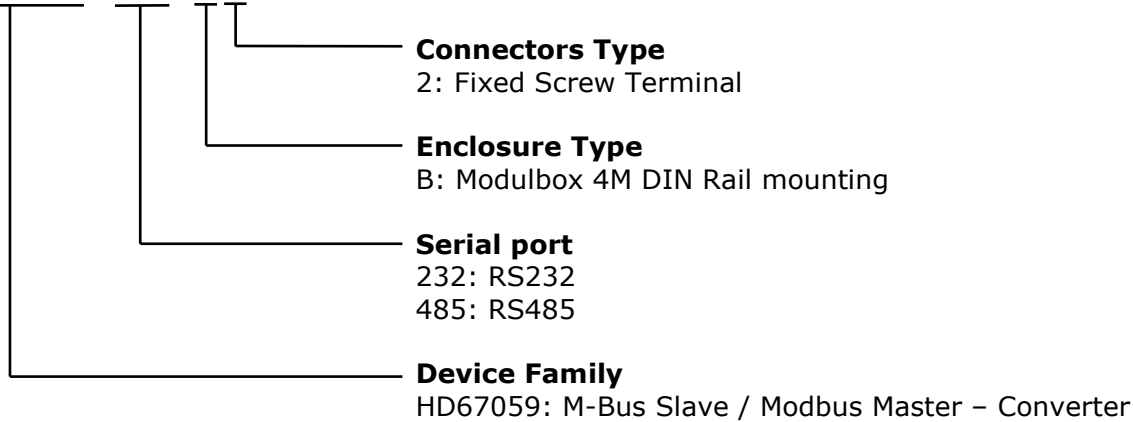


*Figure 7: Mechanical dimensions scheme for HD67059-xxx-B2*

**ORDERING INFORMATIONS:**

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

**HD67059 - xxx– B 2**

**Connectors Type**
2: Fixed Screw Terminal

**Enclosure Type**
B: Modulbox 4M DIN Rail mounting

**Serial port**
232: RS232
485: RS485

**Device Family**
HD67059: M-Bus Slave / Modbus Master – Converter

Order Code:    **HD67059-232-B2  -** M-Bus Slave / Modbus Master (RS232)
Order Code:    **HD67059-485-B2  -** M-Bus Slave / Modbus Master (RS485)

**ACCESSORIES:**

Order Code:    **AC34011**    -    Isolated Converter 100..240V AC to 12V DC stabilized - AC/DC
Order Code:    **AC34012**    -    Isolated Converter 100..240V AC to 24V DC stabilized - AC/DC
Order Code:    **AC34107**    -    Null Modem Cable Fem/Fem DSub 9 Pin 1,5 m
Order Code:    **AC34114**    -    Null Modem Cable Fem/Fem DSub 9 Pin 5 m

**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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