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User Manual
Revision 1.101
English

BACnet Slave/ Modbus TCP Master - Converter

(Order Code: HD67673-IP-A1, HD67673-MSTP-A1,
HD67673-MSTP-B2)

For Website information:
 www.adfweb.com?Product=HD67673

For Price information:
  www.adfweb.com?Price=HD67673-IP-A1
  www.adfweb.com?Price=HD67673-MSTP-A1
  www.adfweb.com?Price=HD67673-MSTP-B2

Benefits and Main Features:

 ⊕ Electrical isolation

 ⊕ Two Ethernet ports

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

User Manual

For others BACnet products see also the following link:

Converter BACnet to

www.adfweb.com?Product=HD67056	**(M-Bus Master)**
www.adfweb.com?Product=HD67086	**(M-Bus Wireless)**
www.adfweb.com?Product=HD67170	**(SNMP Manager)**
www.adfweb.com?Product=HD67670	**(DMX)**
www.adfweb.com?Product=HD67671	**(Modbus Master)**
www.adfweb.com?Product=HD67672	**(Modbus Slave)**
www.adfweb.com?Product=HD67674	**(Modbus TCP Slave)**
www.adfweb.com?Product=HD67675	**(PROFIBUS Master)**
www.adfweb.com?Product=HD67676	**(PROFIBUS Slave)**
www.adfweb.com?Product=HD67677	**(CAN)**
www.adfweb.com?Product=HD67678	**(CANopen)**
www.adfweb.com?Product=HD67679	**(PROFINET)**
www.adfweb.com?Product=HD67680	**(DeviceNet Master)**
www.adfweb.com?Product=HD67681	**(DeviceNet Slave)**
www.adfweb.com?Product=HD67682	**(EtherNet/IP)**
www.adfweb.com?Product=HD67683	**(NMEA 2000)**
www.adfweb.com?Product=HD67684	**(Ethernet)**
www.adfweb.com?Product=HD67685	**(J1939)**
www.adfweb.com?Product=HD67693	**(SNMP Agent)**
www.adfweb.com?Product=HD67802	**(KNX)**
www.adfweb.com?Product=HD67833	**(DALI)**

Do you have an your customer protocol?
www.adfweb.com?Product=HD67003

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

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INDEX:

UPDATED DOCUMENTATION:

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

 ⬦ Updated
 ⬦ Related to the product you own

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

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

REVISION LIST:

Revision	Date	Author	Chapter	Description
1.000	25/03/2013	Fl	All	First Release
1.010	16/11/2015	Fl	All	Software changed (v1.100)
1.100	18/04/2017	Ff	All	Revision
1.101	17/03/2025	Ln	All	New design

WARNING:

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

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Industrial Electronic Devices

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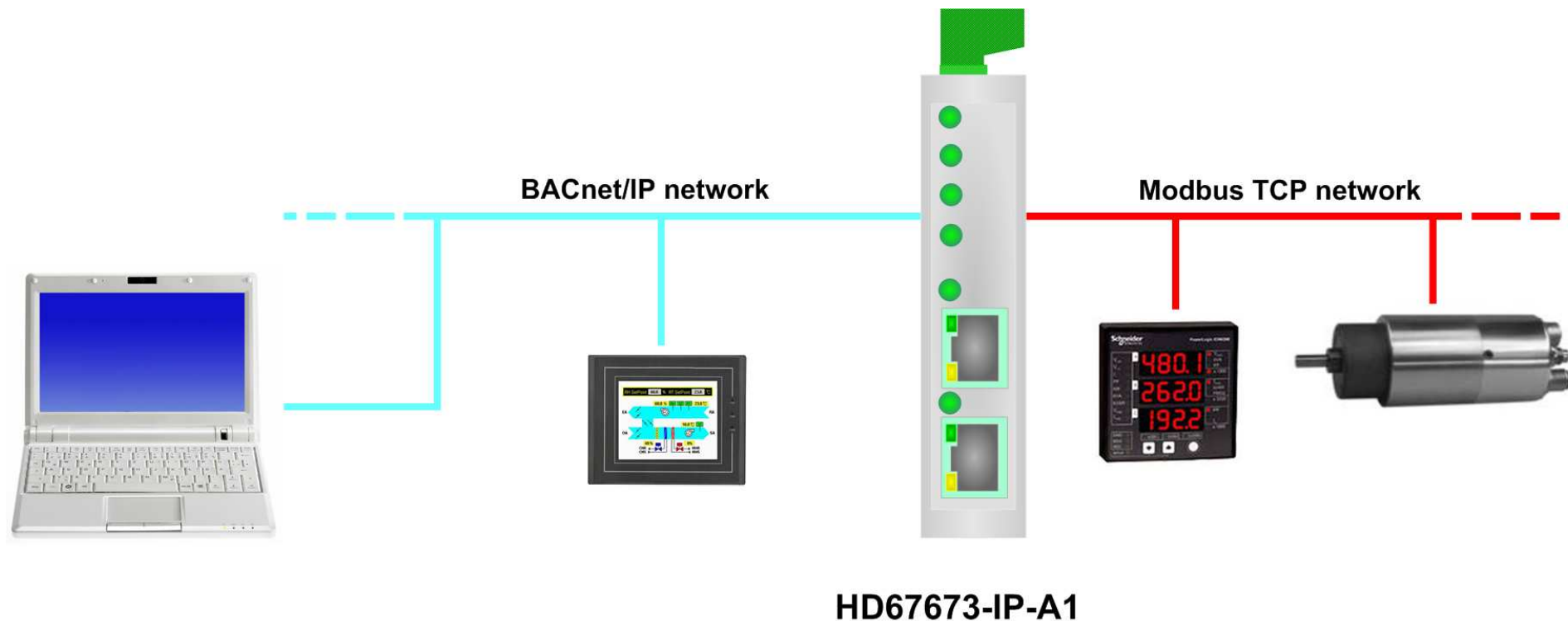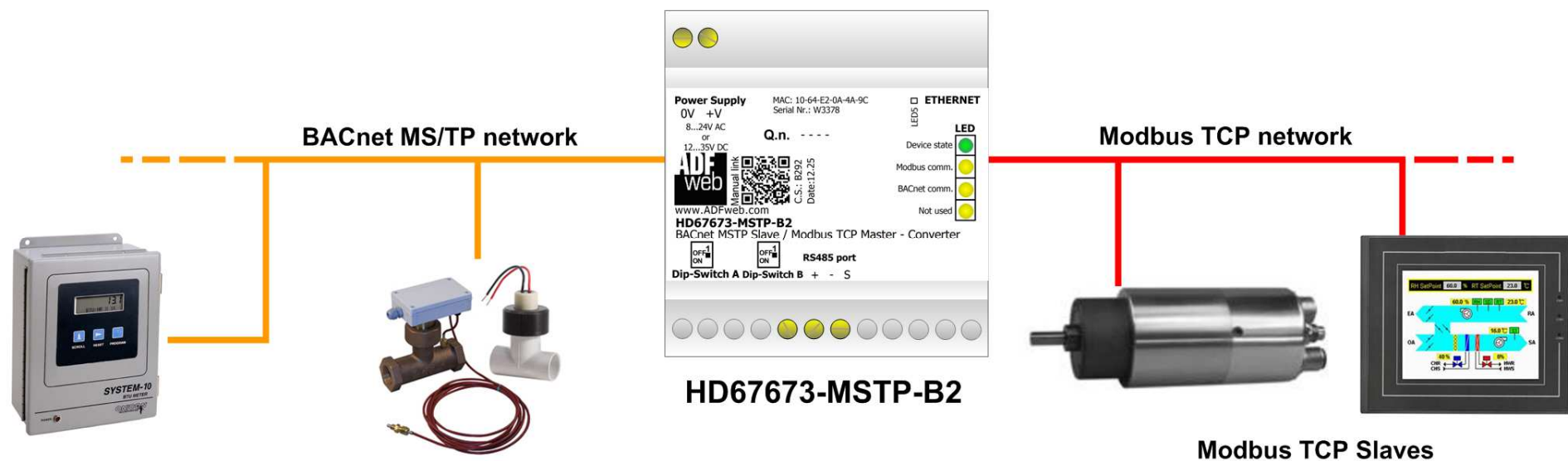
⚠️ This symbol indicates that non-observance of the safety instructions is a danger for people that could lead to serious injury or death and / or the possibility of damage.

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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EXAMPLES OF CONNECTION:

HD67673-IP-A1

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BACnet MS/TP network

Modbus TCP network

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

MAC: 10-64-E2-0A-4A-9C
Serial Nr.: W3378

Q.n.   - - - -

ETHERNET

LED
Device state
Modbus comm.
BACnet comm.
Not used

www.ADFweb.com
HD67673-MSTP-B2
BACnet MSTP Slave / Modbus TCP Master - Converter

Dip-Switch A Dip-Switch B + - S   RS485 port

C.S.: B292
Date:12.25

HD67673-MSTP-B2

Modbus TCP Slaves

SYSTEM-10
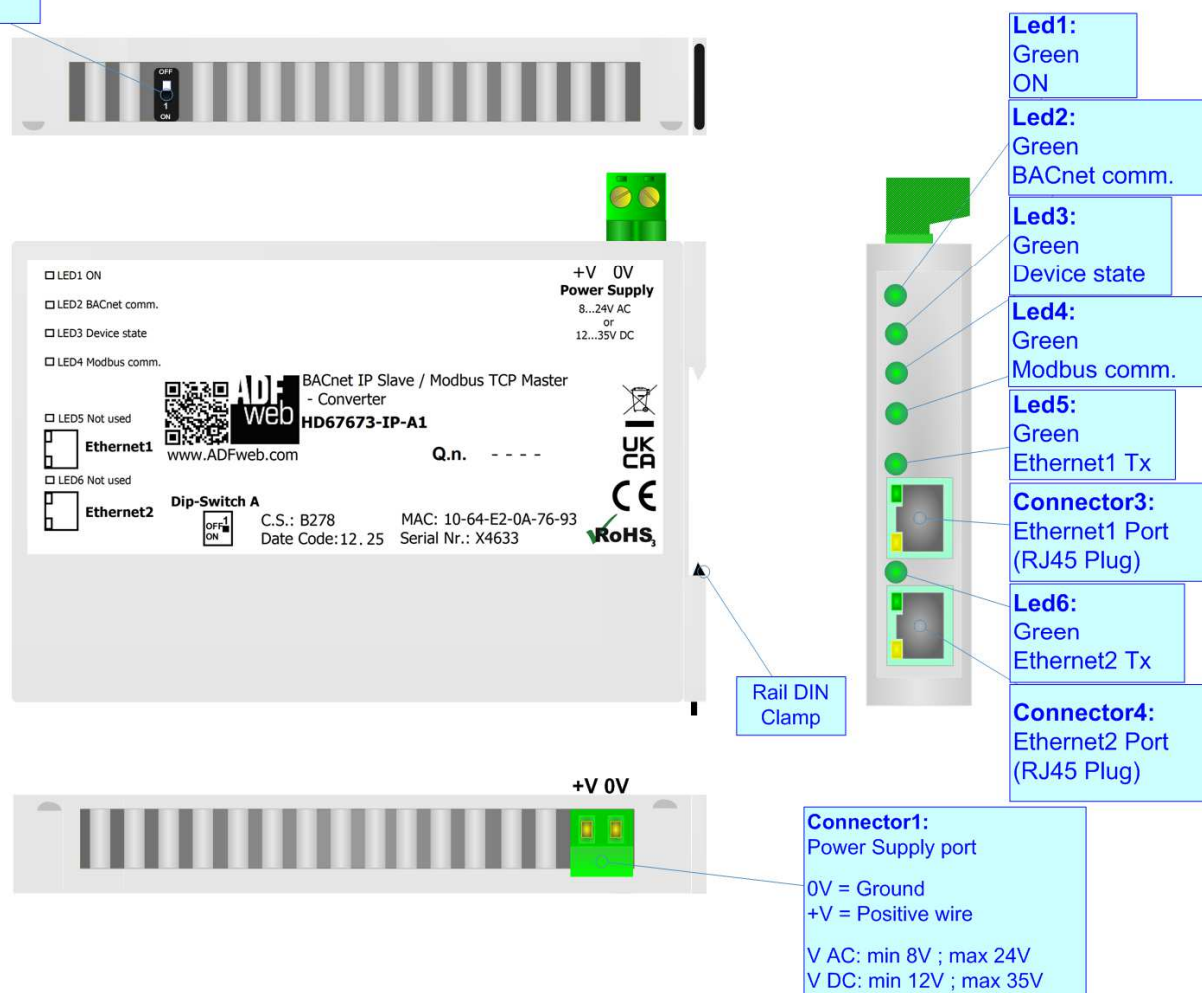
CONNECTION SCHEME:

Figure 1a: Connection scheme for HD67673-IP-A1

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Dip-Switch A:
-Dip1 – Functioning Mode

= Normal   = Boot
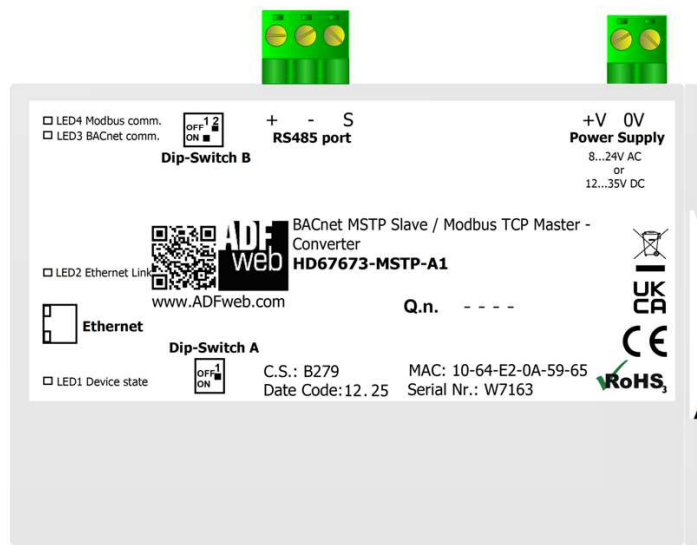
Led4:
Modbus comm.

Led3:
BACnet comm.

Led2:
Ethernet Link

Connector5:
Ethernet Port (RJ45 Plug)

Led1:
Device State

□ LED4 Modbus comm.
□ LED3 BACnet comm.

Dip-Switch B

+ – S
RS485 port

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

□ LED2 Ethernet Link

BACnet MSTP Slave / Modbus TCP Master - Converter
HD67673-MSTP-A1

www.ADFweb.com

Q.n.   - - - -

Ethernet

Dip-Switch A

□ LED1 Device state

C.S.: B279
Date Code:12.25

MAC: 10-64-E2-0A-59-65
Serial Nr.: W7163

Rail DIN Clamp

A B S   +V 0V

Connector1:
Power Supply port

0V = Ground
+V = Positive wire

V AC: min 8V ; max 24V
V DC: min 12V ; max 35V
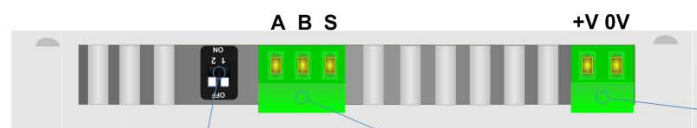
Dip-Switch B:
-Dip1 – RS485 Termination Resistor

= Open   = 120 Ohm

-Dip2 – Not used

Connector3:
RS485 (Isolated port)

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

Figure 1b: Connection scheme for HD67673-MSTP-A1

Industrial Electronic Devices

Dip-Switch A:
-Dip1 – Functioning Mode

= Normal   = Boot

Dip-Switch B:
-Dip1 – RS485 Termination Resistor

= Open   = 120 Ohm

Connector3:
RS485 (Isolated port)

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

A B S

Power Supply
0V +V
8...24V AC
or
12...35V DC
Q.n. - - - -
MAC: 10-64-E2-0A-4A-9C
Serial Nr.: W3378

□ ETHERNET

LED
Device state
Modbus comm.
BACnet comm.
Not used

www.ADFweb.com
HD67673-MSTP-B2
BACnet MSTP Slave / Modbus TCP Master - Converter
Dip-Switch A Dip-Switch B + - S
RS485 port

C.S.: B292
Date:12.25

Led1:
Green
Device state

Led2:
Yellow
Modbus comm.

Led3:
Yellow
BACnet comm.

Led4:
Yellow
Not used

0V +V

Connector1:
Power Supply port

0V = Ground
+V = Positive wire

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

Connector5:
Ethernet Port
(RJ45 Plug)

Led5:
Green
Ethernet Link

Figure 1c: Connection scheme for HD67673-MSTP-B2

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CHARACTERISTICS:

The HD67673 is a BACnet Slave / Modbus TCP Master Converter and vice versa.

It allows the following characteristics:

- Up to 2000 BACnet objects (Read+Write);
- Isolation between BACnet/Modbus - Power Supply;
- Two-directional information between BACnet and Modbus;
- 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 SW67673 software on your PC in order to perform the following:

- Define the parameter of BACnet line;
- Define the parameter of Modbus TCP line;
- Define BACnet objects that contains the data read from the Modbus TCP slaves;
- Define BACnet objects that contains the data to send to the Modbus TCP slaves;
- 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.
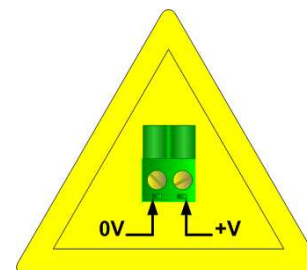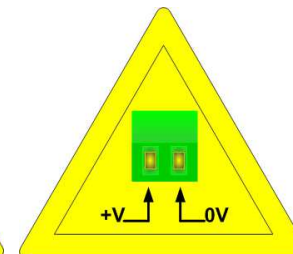
VAC 〜		VDC ▬▬	
Vmin	**Vmax**	**Vmin**	**Vmax**
8V	**24V**	**12V**	**35V**

Consumption at 24V DC:

Device	Consumption [W/VA]
HD67673-IP-A1	3.5
HD67673-MSTP-A1	3.5
HD67673-MSTP-B2	3.5

Connector1:
Power Supply port

0V = Ground
+V = Positive wire

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

0V +V

Connector1:
Power Supply port

0V = Ground
+V = Positive wire

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

0V +V

Connector1:
Power Supply port

0V = Ground
+V = Positive wire

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

+V 0V

Caution: Not reverse the polarity power

0V +V   +V 0V

HD67673-IP-A1   HD67673-MSTP-B2
HD67673-MSTP-A1

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FUNCTION MODES:

The device has got two function modes depending on 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 uploading the Project and/or Firmware.

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

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

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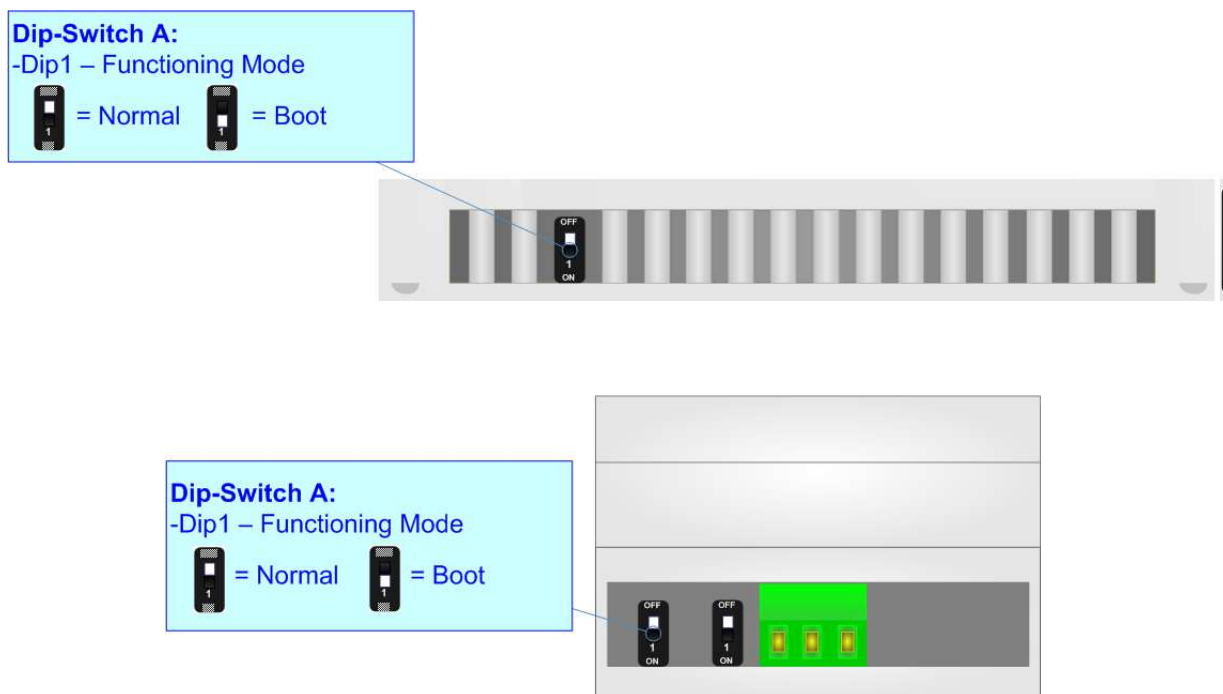
LEDS:

HD67673-IP-A1

The device has got six LEDs that are used to give information about the functioning status.
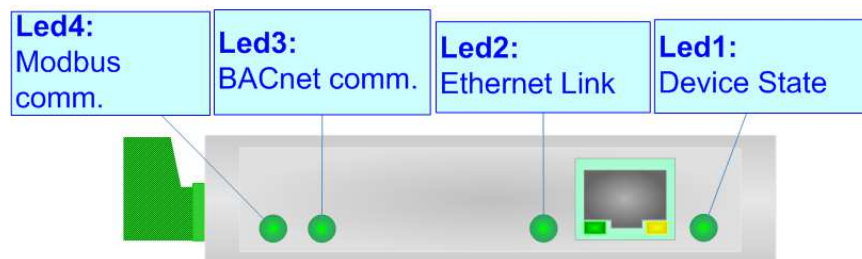The various meanings of the LEDs are described in the table below.

LED	Normal Mode	Boot Mode
1: ON [supply voltage] (green)	**ON:** Device powered **OFF:** Device not powered	**ON:** Device powered **OFF:** Device not powered
2: BACnet comm. (green)	Blinks quickly when a BACnet request is received	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
3: Device state (green)	Blinks slowly (~1Hz)	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
4: Modbus comm. (green)	Blinks quickly when a Modbus response is received	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
5: Ethernet1 Tx (green)	Not used	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
6: Ethernet2 Tx (green)	Not used	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress

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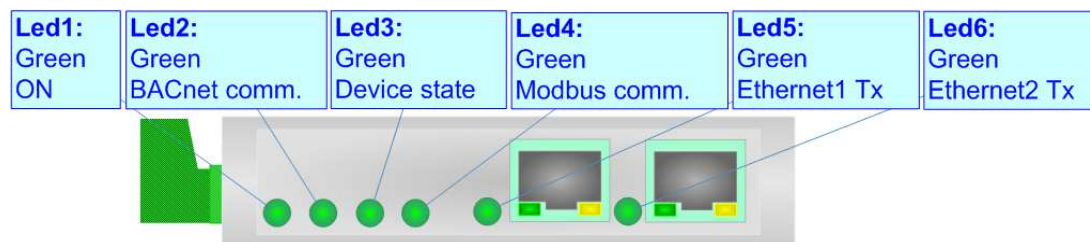
HD67673-MSTP-A1

The device has 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)	Blinks slowly (~1Hz)	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
2: Ethernet Link (green)	**ON:** Ethernet cable connected **OFF:** Ethernet cable disconnected	**ON:** Ethernet cable connected **OFF:** Ethernet cable disconnected
3: BACnet comm. (green)	Blinks quickly when there is BACnet communication	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
4: Modbus comm. (green)	Blinks quickly when a Modbus response is received	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress

Led4:
Modbus comm.

Led3:
BACnet comm.

Led2:
Ethernet Link

Led1:
Device State

Industrial Electronic Devices

HD67673-MSTP-B2

The device has 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 comm. (yellow)	Blinks quickly when a Modbus response is received	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
3: BACnet comm. (yellow)	Blinks quickly when there is BACnet communication	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
4: Not used (yellow)	Not used	**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

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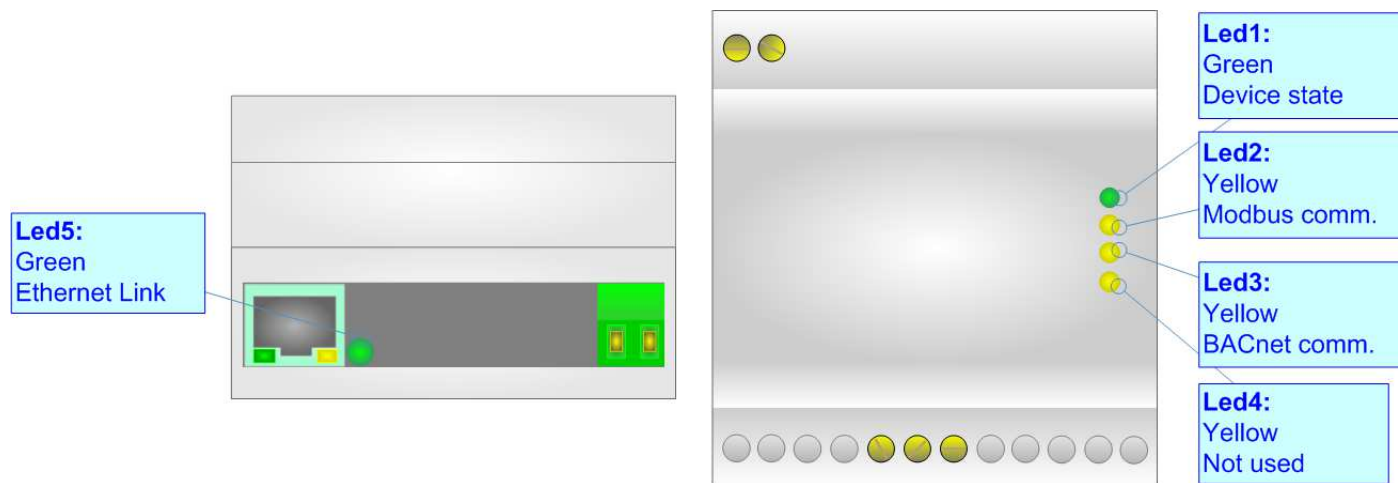
ETHERNET:

The BACnet/IP connection, Modbus TCP connection and the updating of the converters must be made using Connector3 and/or Connector4 and/or Connector5 of HD67673 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.
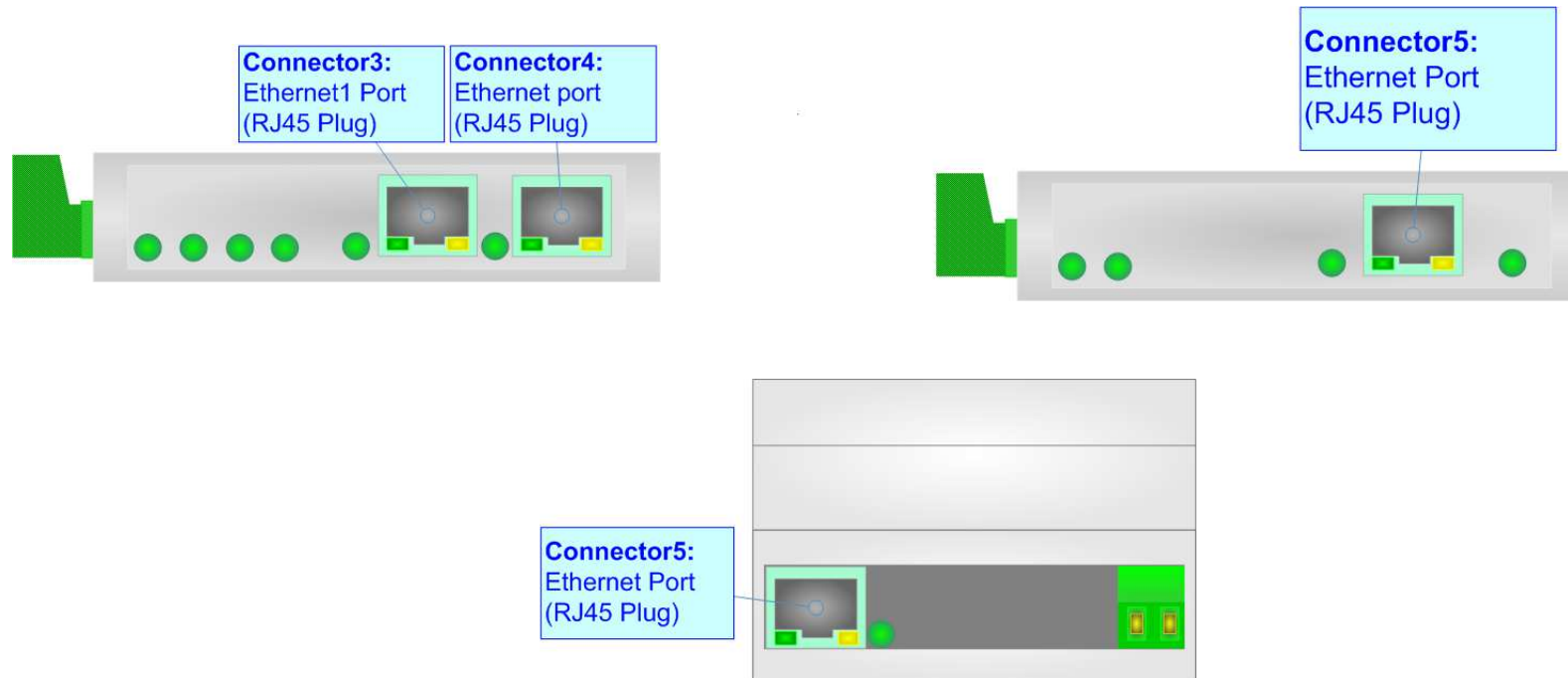
Note:
For HD67673-MSTP-A1 and HD67673-MSTP-B2 the Ethernet port is used only for updating the Converter and for Modbus TCP communication.

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RS485:

To terminate the RS485 line with a 120Ω 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.

Connector3:
RS485 (Isolated port)

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

Dip-Switch B:
-Dip1 – RS485 Termination Resistor

= Open   = 120 Ohm

-Dip2 – Not used

S B A

Dip-Switch B:
-Dip1 – RS485 Termination Resistor

= Open   = 120 Ohm

Connector3:
RS485 (Isolated port)

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

A B S

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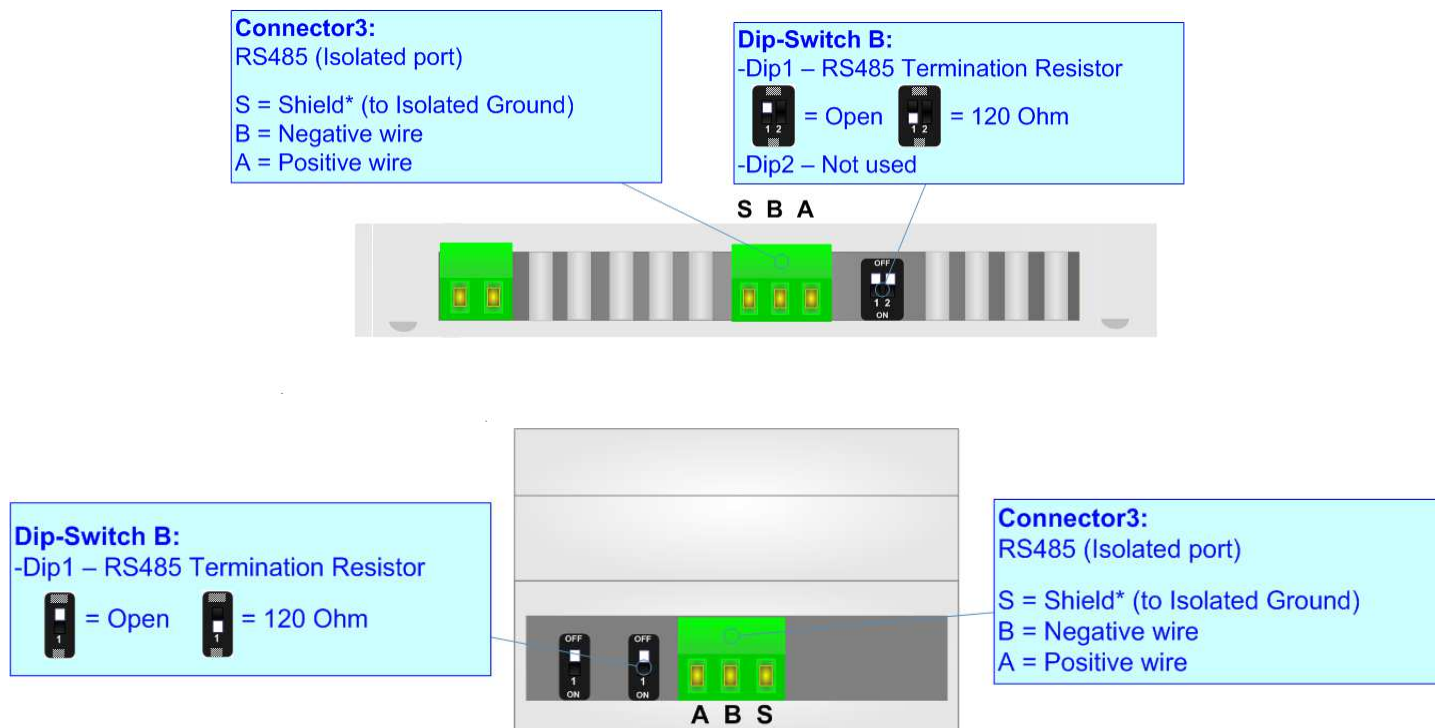
USE OF COMPOSITOR SW67673:

To configure the Converter, use the available software that runs with Windows called SW67673. 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 our web site)*. The software works with MSWindows (XP, Vista, Seven, 8, 10 or 11; 32/64bit).

When launching the SW67673, the window below appears (Fig. 2).

Note:
It is necessary to have installed .Net Framework 4.
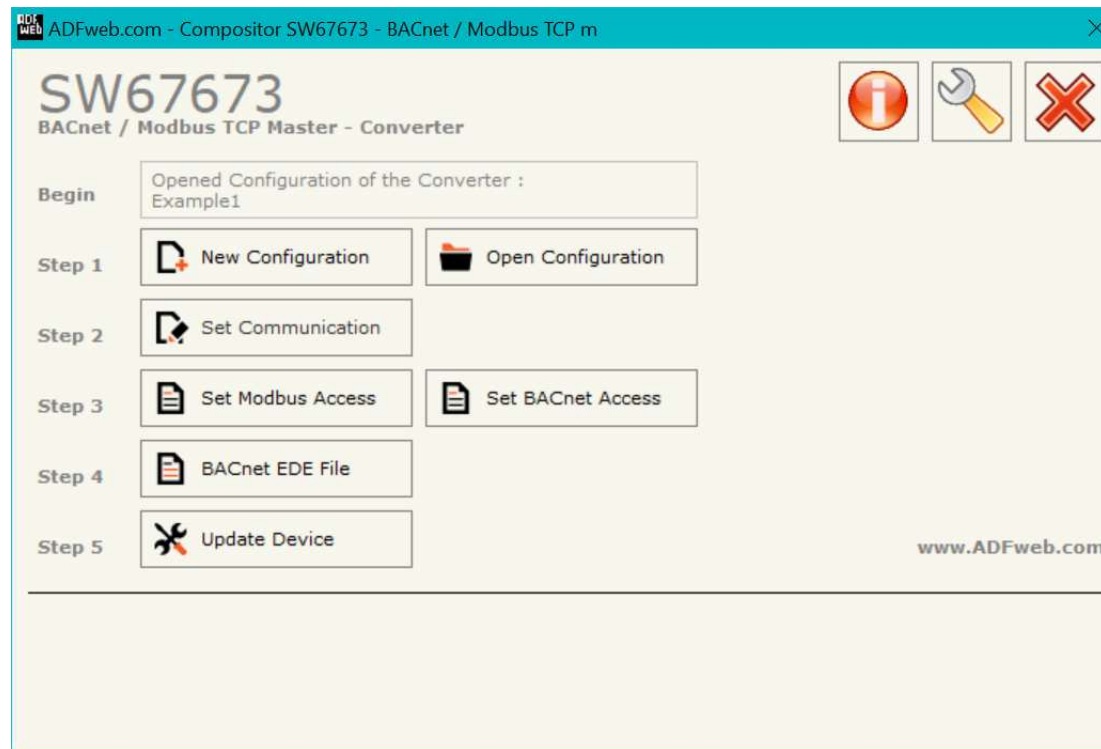
Figure 2: Main window for SW67673

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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 "BACnet Slave / Modbus TCP 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**".

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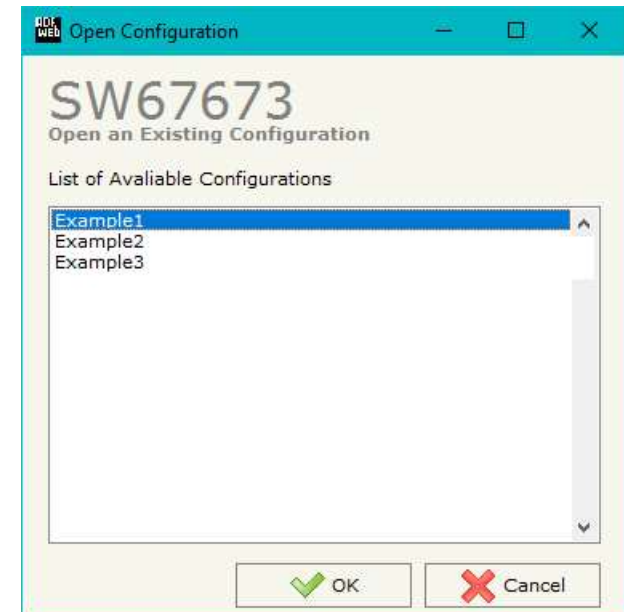
SOFTWARE OPTIONS:

By pressing the "**Settings**" (🔧) button there is the possibility to change the language of the software and check the updatings for the compositor.

In the section "Language" it is possible to change the language of the software.

SW67673
Software Options

Language | Connection Options | Software Settings

Selected Language :

🇩🇪 Deutsch

🇬🇧 English

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✔ OK   ✖ Cancel

SW67673
Software Options

Language | Connection Options | Software Settings

☑ Enable Internet Connection

☑ Check Software Update at Start of Program

🔍 Check Available Update

✔ OK   ✖ Cancel
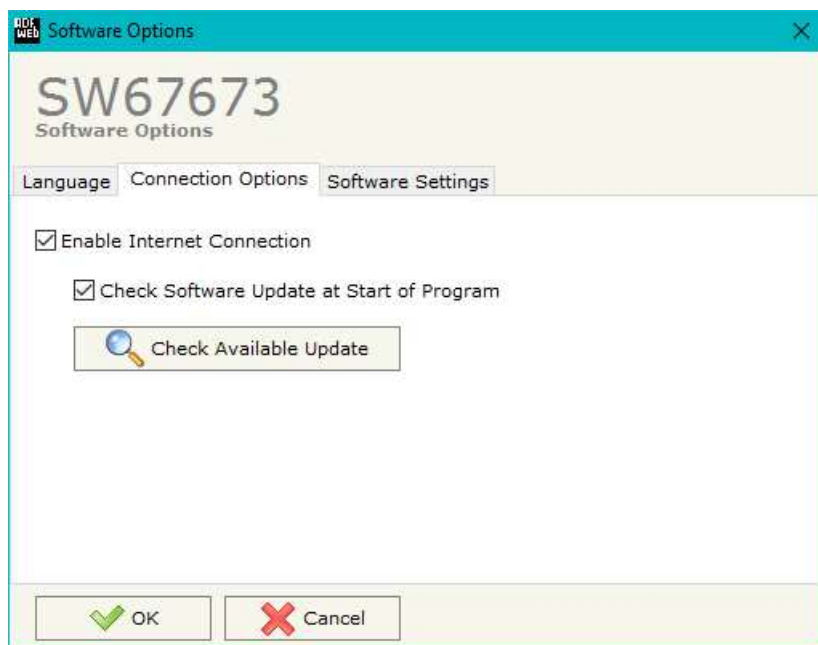
In the section "Connection Options", it is possible to check if there are some updatings of the software compositor in ADFweb.com website.
Checking the option "**Check Software Update at Start of Program**", the SW67673 check automatically if there are updatings when it is launched.

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

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SET COMMUNICATION:

This section define the fundamental communication parameters of two buses, BACnet Slave and Modbus TCP Master.

By Pressing the "**Set Communication**" button from the main window for SW67673 (Fig. 2) the window "Set Communication" appears (Fig. 3).

In the section "BACnet Type" is possible to select the type of BACnet to use from:

➡ BACnet/IP (over Ethernet);
➡ BACnet MS/TP (over RS485).

The means of the fields for "BACnet" are:

➡ In the fields "**IP ADDRESS**" the IP address of the converter is defined;
➡ In the fields "**SUBNET Mask**" the SubNet Mask of the converter is defined;
➡ In the fields "**GATEWAY**" the default gateway of the network is defined. This feature can be enabled or disabled pressing the Check Box field. This feature is used for going out of the net;
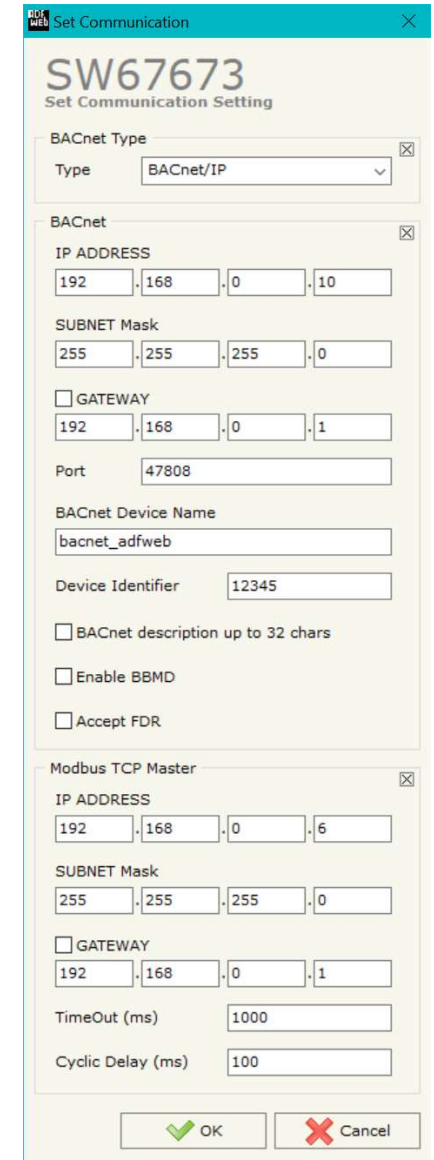➡ In the field "**Port**" the port used for BACnet communication is defined. The default port used for BACnet communication is 47808, but is possible to insert any value (except 10000 and 10001);
➡ In the field "**BACnet Device Name**" the name of BACnet/IP side of the converter is defined;
➡ In the field "**Device Identifier**" the ID of BACnet/IP side of the converter is defined;
➡ If the field "**BACnet description up to 32 chars**" is checked, the description for the BACnet Objects can be up to 32 chars long;
➡ If the field "**Enable BBMD**" is checked, the <u>B</u>ACnet/IP <u>B</u>roadcast <u>M</u>anagement <u>D</u>evice function is enabled;
➡ If the field "**Accept FDR**" is checked, the converter accepts the <u>F</u>oreign <u>D</u>evice <u>R</u>egistration.

The means of the fields for the "Modbus TCP Slave" section are:

➡ In the field "**IP ADDRESS**" the IP address of Modbus TCP side of the converter is defined;
➡ In the field "**SUBNET Mask**" the SubNet Mask of Modbus TCP side of the converter is defined;
➡ In the field "**GATEWAY**" the default gateway of the network 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 3a: "Set Communication" window

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- In the "**TimeOut (ms)**" define the maximum time that the device attends for the answer from the slave interrogated;
- In the field "**Cyclic Delay (ms)**" the minimum delay between two requests is defined.
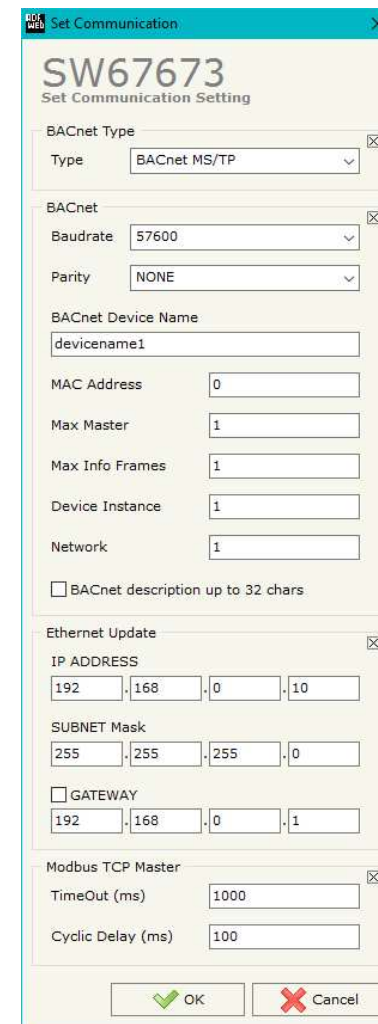
If selected "BACnet MS/TP", the means of the fields for "BACnet" are:
- In the field "**Baudrate**" the data rate of the BACnet line is defined;
- In the field "**Parity**" the parity of the line is defined;
- In the field "**BACnet Device Name**" the name to give to the BACnet node is defined;
- In the field "**MAC Address**" the MAC of BACnet node (from 0 to 254) is defined;
- The field "**Max Master**" specifies the highest allowable address for master nodes. The value shall be less than or equal to 127;
- The field "**Max Info Frames**" specifies the maximum number of information frames the node may send before it must pass the token;
- In the field "**Device Instance**" the of the BACnet MS/TP side of the converter is defined;
- In the field "**Network**" the BACnet MS/TP network number is defined;
- If the field "**BACnet description up to 32 chars**" is checked, the description for the BACnet Objects can be up to 32 chars long.

The means of the fields for the "Ethernet Update" section are:

- In the field "**IP ADDRESS**" the IP address of Modbus TCP side of the converter is defined;
- In the field "**SUBNET Mask**" the SubNet Mask of Modbus TCP side of the converter is defined;
- In the field "**GATEWAY**" the default gateway of the network is defined. This feature can be enabled or disabled pressing the Check Box field. This feature is used for going out of the net.

The means of the fields for the "Modbus TCP Slave" section are:

- In the field "**IP ADDRESS**" the IP address of Modbus TCP side of the converter is defined;
- In the field "**SUBNET Mask**" the SubNet Mask of Modbus TCP side of the converter is defined;
- In the field "**GATEWAY**" the default gateway of the network 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 "**TimeOut (ms)**" define the maximum time that the device attends for the answer from the slave interrogated;
- In the field "**Cyclic Delay (ms)**" the minimum delay between two requests is defined.

Figure 3b: "Set Communication" window

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SET MODBUS ACCESS:

By Pressing the "**Set Modbus Access** " button from the main window for SW67673 (Fig. 2) the window "Set Access Modbus TCP Master" appears (Fig. 4).

Figure 4: "Set Access" window

The window is divided in two parts, the "**Modbus Read**" that contains the Modbus registers/status readable by the Converter and "**Modbus Write**" that contains the Modbus registers/status writeable by the Converter.

The meaning of the fields in the window are the follows:

➔ In the field "**Slave IP Address**" the IP address of the Modbus device to read/write is defined;
➔ In the field "**Port**" the TCP port of the Modbus device to read/write is defined;
➔ In the field "**Slave ID**" the address of the Modbus device to read/write is defined;
➔ In the field "**Type**" the data type of the Register to read/write is defined. It is possible to choose between the following:
  ○ Coil Status;
  ○ Input Status (only readable);
  ○ Holding Register;
  ○ Input Register (only readable).
➔ In the field "**Address**" the starting address of the register/status to read/write is defined;
➔ In the field "**NPoint**" the number of consecutive registers/status to read/write is defined;
➔ In the field "**Poll Time**" the time (expressed in milliseconds) used to read/write the register/status is defined. If '0', the request isn't sent;
➔ If the field "**On Change**" is checked, the Modbus writing request is made only if BACnet data are changed; otherwise it is sent cyclically, using the "Poll Time". This feature is used only on "Modbus Write" section;
➔ In the field "**Max Error**" the number of consecutive errors that the Master waits before discarding the row from the cycle of requests is defined;
➔ In the field "**Position**" the position (byte) where taking/saving the data from/to the internal arrays of the converter is defined;
➔ The field "**Start Bit**" is used for the "Binary" BACnet objects and it allows to select which bit of the selected Position using;
➔ By checking the field "**Float Conv**" it is possible to enable the conversion of the value read in one or two modbus registers, expressed like Integer value, into a Float value. Instead, if the field is enable inside Modbus Write section, the converter converts the Float value that is arrived with BACnet into a Integer value. This command is usefull if the BACnet master uses only Analog-Input and Analog-Output, but on Modbus side it is necessary to have Integer values;
➔ In the field "**Endian**" it is possible to select if the values in the registers follow the Bin-Endian or Little-Endian format. This field has valence only if the NPoint has a value of two. This field is used only if "Float Conv" is checked;
➔ In the "**Operation**" field it is possible to select a post-operation to do to the value before saving it in the case of "Modbus Read" or write it in the case of "Modbus Write". This field is used only if "Float Conv" is checked;
➔ If the field "**Signed**" is checked, it is possible to define if the Integer value after the conversion is signed or unsigned;
➔ If the field "**Swap W**" is checked, the words of the value read/written are exchanged between them;

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- If the field "**Force FC16**" is checked, the Modbus writing function used will be in any case 15 (for Coil Status) or 16 (for Holding Register);
- In the field "**Mnemonic**" a description of the data inserted in the row is defined.

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SET BACNET ACCESS:

By Pressing the "**Set BACnet Access**" button from the main window for SW67673 (Fig. 2) the window "BACnet Set Access" appears (Fig. 5).

The window is divided in two parts, the "**BACnet in Read**" that contains the BACnet objects readable by a BACnet Master (the Modbus registers/status associated to these objects are read by Modbus master); and "**BACnet in Write**" that contains the BACnet objects writeable by a BACnet Master (the Modbus registers associated to these objects are written by Modbus Master).

The meaning of the fields in the window are the follows:

- In the field "**Data Type**" it is possible to select the BACnet object data type;
- In the field "**Eng. Unit**", with double click the window "*Select the BACnet Engineering Unit*" appears (Fig. 6);
- In the field "**Position**" it is possible to select the position (byte) where taking/saving the data from/to the internal arrays of the converter;
- The field "**Start Bit**" is used for the "Binary" BACnet objects and it allows to select which bit of the selected Position using;
- The field "**Length**" is used to define the dimension in bytes of the BACnet Object. For "Binary" Objects, this field must be set to '1'.

SW67673
BACnet Set Access

BACnet in Read | BACnet in Write

N	Data Type	Eng. Unit	Position	Start Bit	Length	Mnemonic
1	Analog Input	95	0	0	2	
2	Positive Integer Value	160	2	0	2	
3	Binary Input	95	4	0	0	
4	Binary Input	95	4	1	0	
5						

OK | Cancel | Delete Row | Insert Row

SW67673
BACnet Set Access

BACnet in Read | BACnet in Write

N	Data Type	Eng. Unit	Position	Start Bit	Length	Mnemonic
1	Positive Integer Value	82	0	0	4	
2	Large Analog Value	55	4	0	8	
3	Binary Out	95	12	0	0	
4						
5						

OK | Cancel | Delete Row | Insert Row

Figure 5: "BACnet Set Access" window

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It is possible to insert directly the Unit (using its unique number) by compiling the "**Selected BACnet Engineering Unit**" field; or by selecting with the fields "**Select the Type**" and "**Select unit**" the Type/Unit desired. If the second way is used, is necessary to press the "**Select Engineering Unit**" button for confirm the choice.
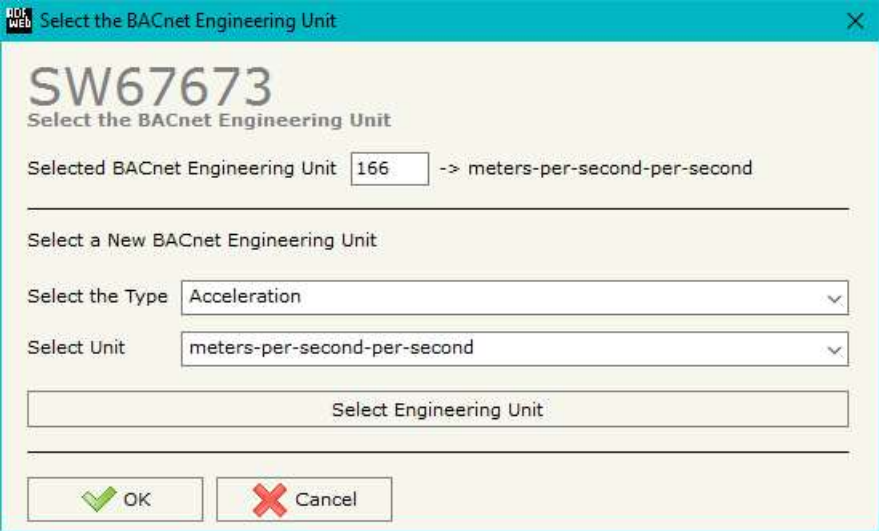

Figure 6: "Select the BACnet Engineering Unit" window

BACNET EDE FILE:

By pressing the "**BACnet EDE File**" button it is possible to save the EDE file for the BACnet Master.

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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.

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' at 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.

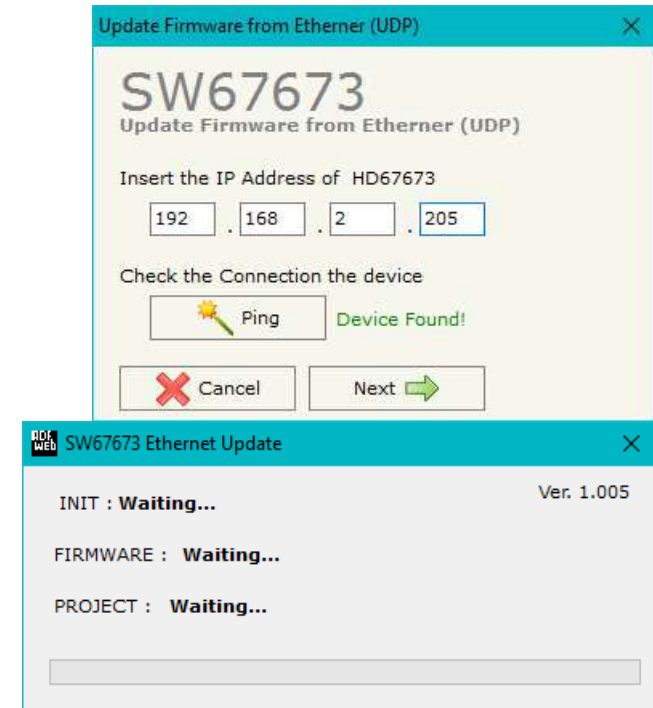At this point the configuration/firmware on the device is correctly updated.

Figure 7: "Update device" windows

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 HD67673 device.

Note:
When you receive the device, for the first time, you also have to update the Firmware in the HD67673 device.

Warning:
If Fig. 8 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;
+ 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, 10 or 11 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 or 11 you have to launch the "Command Prompt" with Administrator Rights;
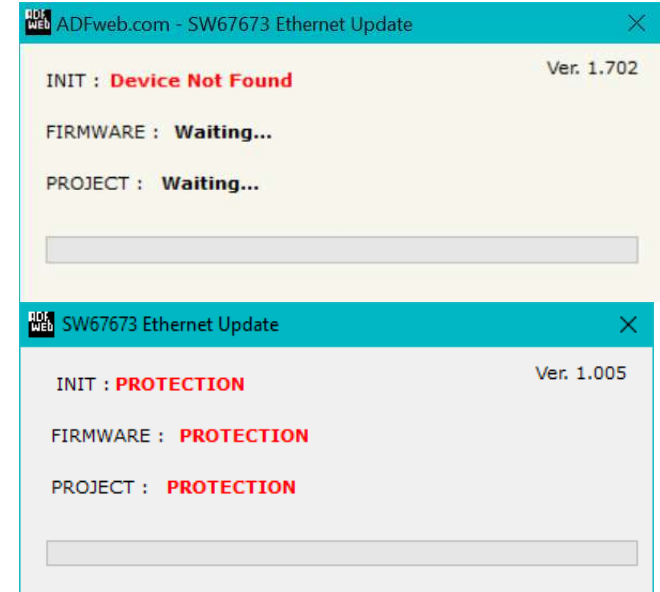+ Pay attention at Firewall lock.

In the case of HD67673 you have to use the software "SW67673": www.adfweb.com\download\filefold\SW67673.zip.

Figure 8: "Protection" window

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MECHANICAL DIMENSIONS:
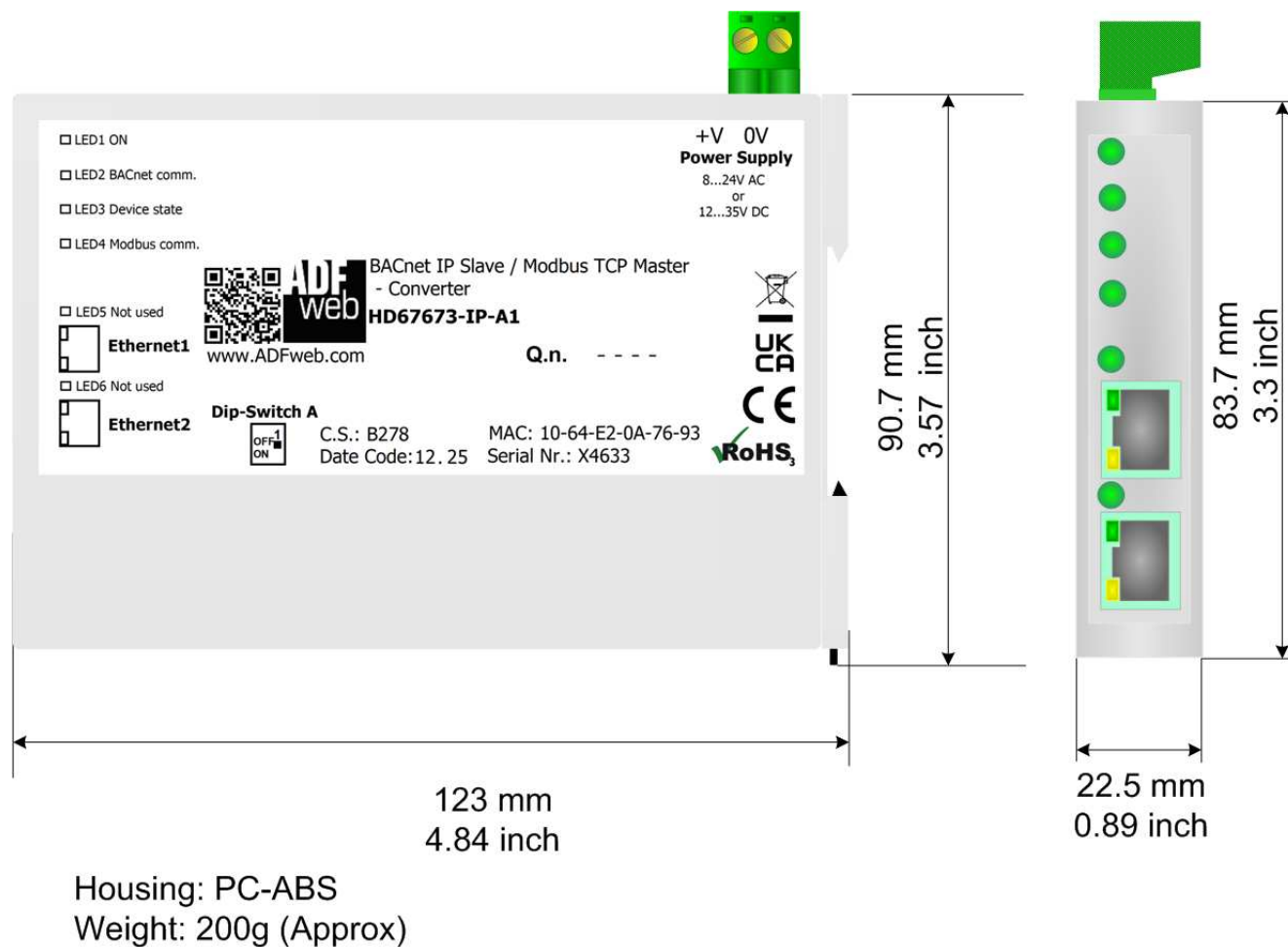
Figure 9a: Mechanical dimensions scheme for HD67673-IP-A1

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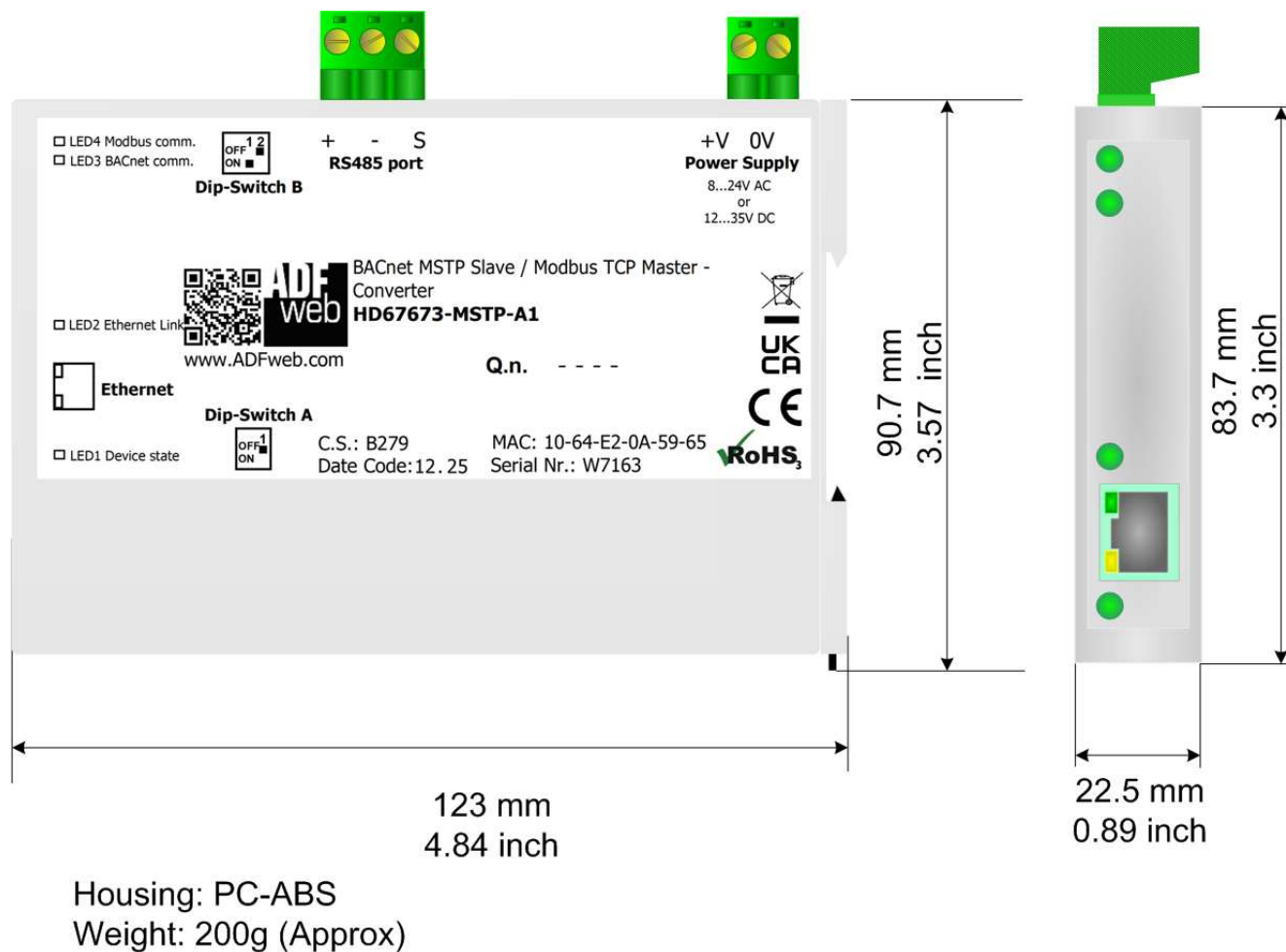
Figure 9b: Mechanical dimensions scheme for HD67673-MSTP-A1

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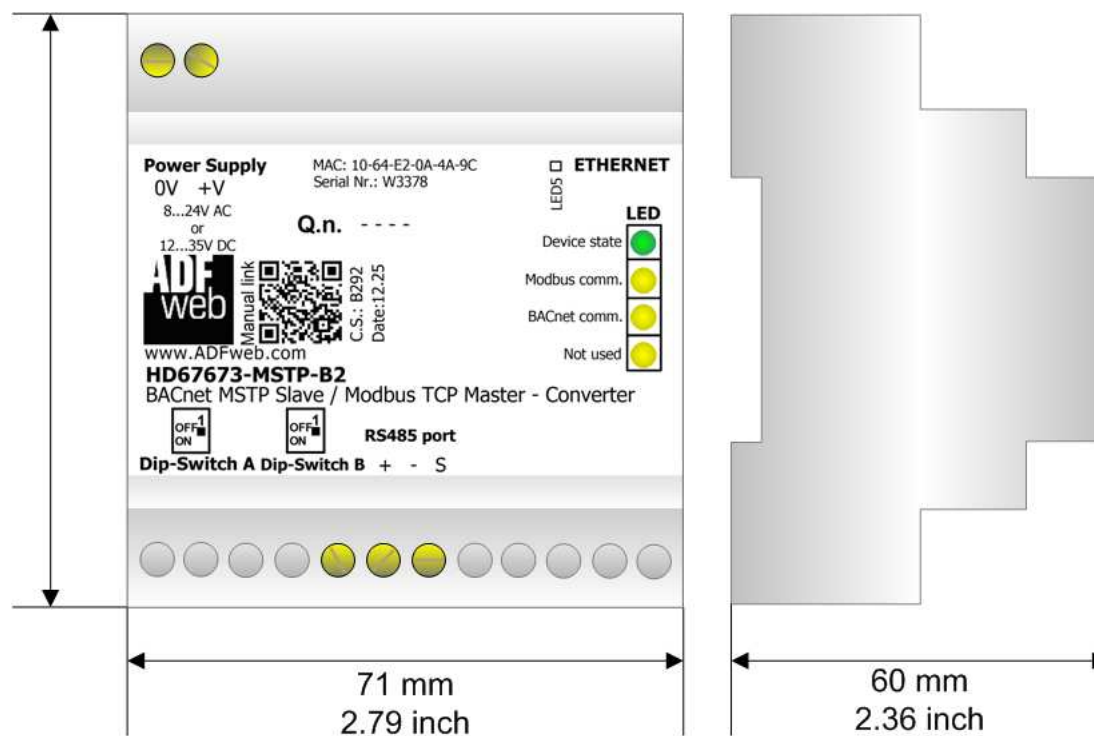
Figure 9c: Mechanical dimensions scheme for HD67673-MSTP-B2

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ORDERING INFORMATIONS:

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

HD67673 - xx – z z

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

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

      BACnet type:
      IP: BACnet/IP
      MSTP: BACnet MS/TP

      Device Family
      HD67673: BACnet Slave / Modbus TCP Master - Converter

Order Code: **HD67673-IP-A1**   -   BACnet/IP Slave/ Modbus TCP Master – Converter
Order Code: **HD67673-MSTP-A1**   -   BACnet MS/TP Slave / Modbus TCP Master – Converter
Order Code: **HD67673-MSTP-B2**   -   BACnet MS/TP Slave / Modbus TCP Master – 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

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OTHER REGULATIONS AND STANDARDS:

WEEE INFORMATION

Disposal of old electrical and electronic equipment (as in the European Union and other European countries with separate collection systems).

This symbol on the product or on its packaging indicates that this product may not be treated as household rubbish. Instead, it should be taken to an applicable collection point for the recycling of electrical and electronic equipment. If the product is disposed correctly, you will help prevent potential negative environmental factors and impact of human health, which could otherwise be caused by inappropriate disposal. The recycling of materials will help to conserve natural resources. For more information about recycling this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

RESTRICTION OF HAZARDOUS SUBSTANCES DIRECTIVE

The device respects the 2002/95/EC Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (commonly referred to as Restriction of Hazardous Substances Directive or RoHS).

CE MARKING

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

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WARRANTIES AND TECHNICAL SUPPORT:

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

RETURN POLICY:

If while using your product you have any problem and you wish to exchange or repair it, please do the following:

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

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

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