

# User Manual

Revision 1.001  
English

## BACnet/IP Master / CAN - Converter

(Order Code: HD67717-IP-A1)

## BACnet MS/TP Master / CAN - Converter

(Order Code: HD67717-MSTP-A1, HD67717-MSTP-B2)

For Website information:

[www.adfweb.com?Product=HD67717](http://www.adfweb.com?Product=HD67717)

For Price information:

[www.adfweb.com?Price=HD67717](http://www.adfweb.com?Price=HD67717)

### Benefits and Main Features:

- ✦ Very easy to configure
- ✦ Triple electrical isolation
- ✦ Temperature range: -40°C/85°C (-40°F/185°F)



For other BACnet Master products see also the following link:

#### Converter BACnet Master to

- [www.adfweb.com?Product=HD67704](http://www.adfweb.com?Product=HD67704)
- [www.adfweb.com?Product=HD67712](http://www.adfweb.com?Product=HD67712)
- [www.adfweb.com?Product=HD67714](http://www.adfweb.com?Product=HD67714)
- [www.adfweb.com?Product=HD67716](http://www.adfweb.com?Product=HD67716)
- [www.adfweb.com?Product=HD67718](http://www.adfweb.com?Product=HD67718)
- [www.adfweb.com?Product=HD67719](http://www.adfweb.com?Product=HD67719)
- [www.adfweb.com?Product=HD67721](http://www.adfweb.com?Product=HD67721)
- [www.adfweb.com?Product=HD67722](http://www.adfweb.com?Product=HD67722)
- [www.adfweb.com?Product=HD67723](http://www.adfweb.com?Product=HD67723)
- [www.adfweb.com?Product=HD67725](http://www.adfweb.com?Product=HD67725)
- [www.adfweb.com?Product=HD67726](http://www.adfweb.com?Product=HD67726)
- [www.adfweb.com?Product=HD67801](http://www.adfweb.com?Product=HD67801)
- [www.adfweb.com?Product=HD67832](http://www.adfweb.com?Product=HD67832)

- (DMX)
- (Modbus Slave)
- (Modbus TCP Slave)
- (PROFIBUS Slave)
- (CANopen)
- (PROFINET)
- (DeviceNet Slave)
- (EtherNet/IP)
- (NMEA 2000)
- (J1939)
- (SNMP Agent)
- (KNX)
- (DALI)

Do you have your customer protocol? Then go to:

[www.adfweb.com?Product=HD67003](http://www.adfweb.com?Product=HD67003)

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

[www.adfweb.com?Cmd=helpme](http://www.adfweb.com?Cmd=helpme)



User Manual



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**UPDATED DOCUMENTATION:**

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

- Updated
- Related to the product you own

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

With this “Document Code” go to web page [www.adfweb.com/download/](http://www.adfweb.com/download/) and search for the corresponding code on the page. Click on the proper “Document Code” and download the updates.

**REVISION LIST:**

| Revision | Date       | Author | Chapter | Description   |
|----------|------------|--------|---------|---------------|
| 1.000    | 15/02/2013 | Ff     | All     | First Release |
| 1.001    | 26/07/2016 | Ff     | All     | Revision      |
|          |            |        |         |               |

**WARNING:**

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

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

**TRADEMARKS:**

All trademarks mentioned in this document belong to their respective owners.

**SECURITY ALERT:****GENERAL INFORMATION**

To ensure safe operation, the device must be operated according to the instructions in the manual. When using the device, legal and safety regulation are required for each individual application. The same applies also when using accessories.

**INTENDED USE**

Machines and systems must be designed so the faulty conditions do not lead to a dangerous situation for the operator (i.e. independent limit switches, mechanical interlocks, etc.).

**QUALIFIED PERSONNEL**

The device can be used only by qualified personnel, strictly in accordance with the specifications.

Qualified personnel are persons who are familiar with the installation, assembly, commissioning and operation of this equipment and who have appropriate qualifications for their job.

**RESIDUAL RISKS**

The device is state-of-the-art and is safe. The instruments can represent a potential hazard if they are inappropriately installed and operated by untrained personnel. These instructions refer to residual risks with the following symbol:

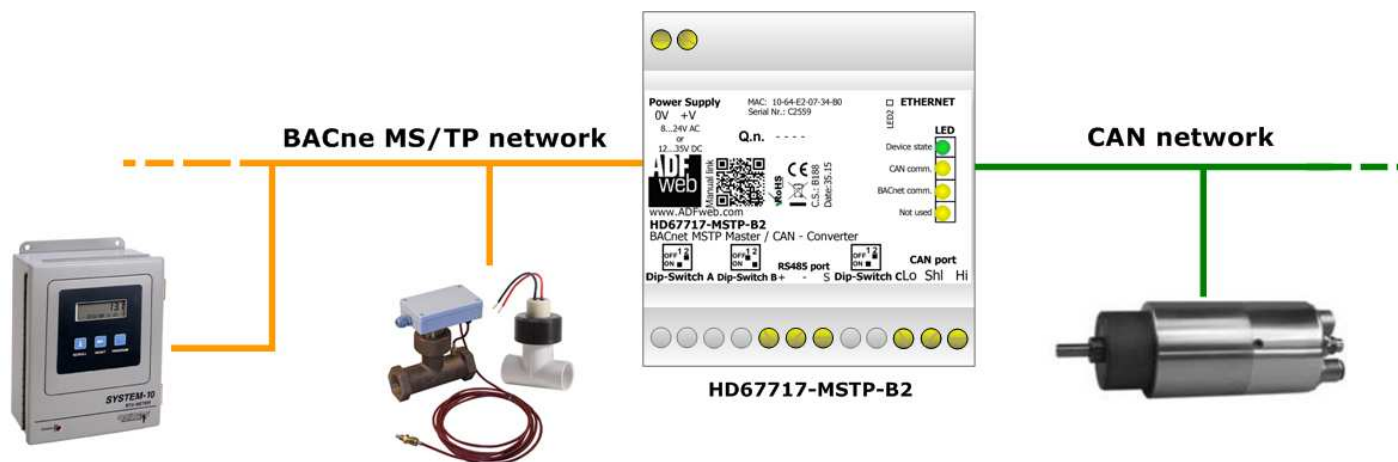
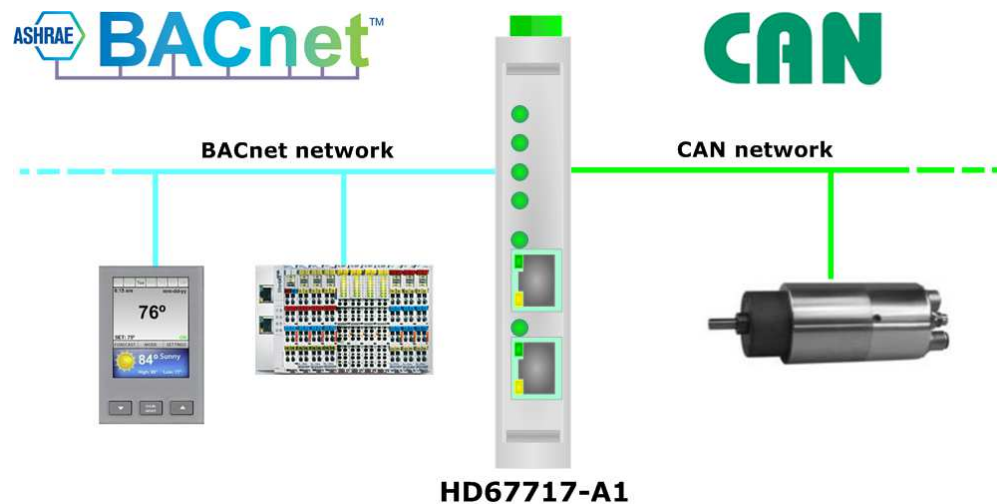


This symbol indicates that non-observance of the safety instructions is a danger for people that could lead to serious injury or death and / or the possibility of damage.

**CE CONFORMITY**

The declaration is made by our company. You can send an email to [support@adfweb.com](mailto:support@adfweb.com) or give us a call if you need it.

**EXAMPLE OF CONNECTION:**



**CONNECTION SCHEME:**

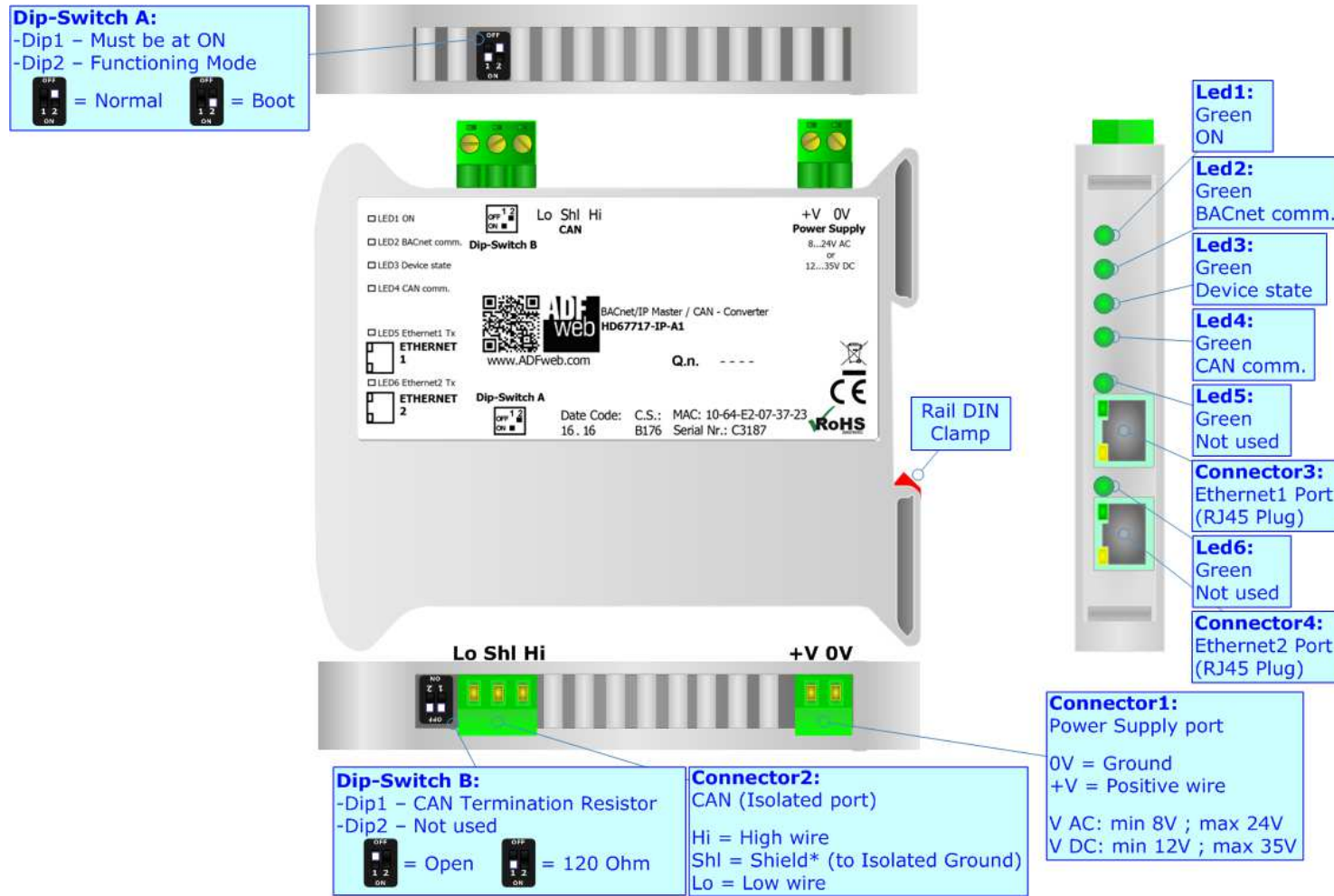


Figure 1a: Connection scheme for HD67717-IP-A1

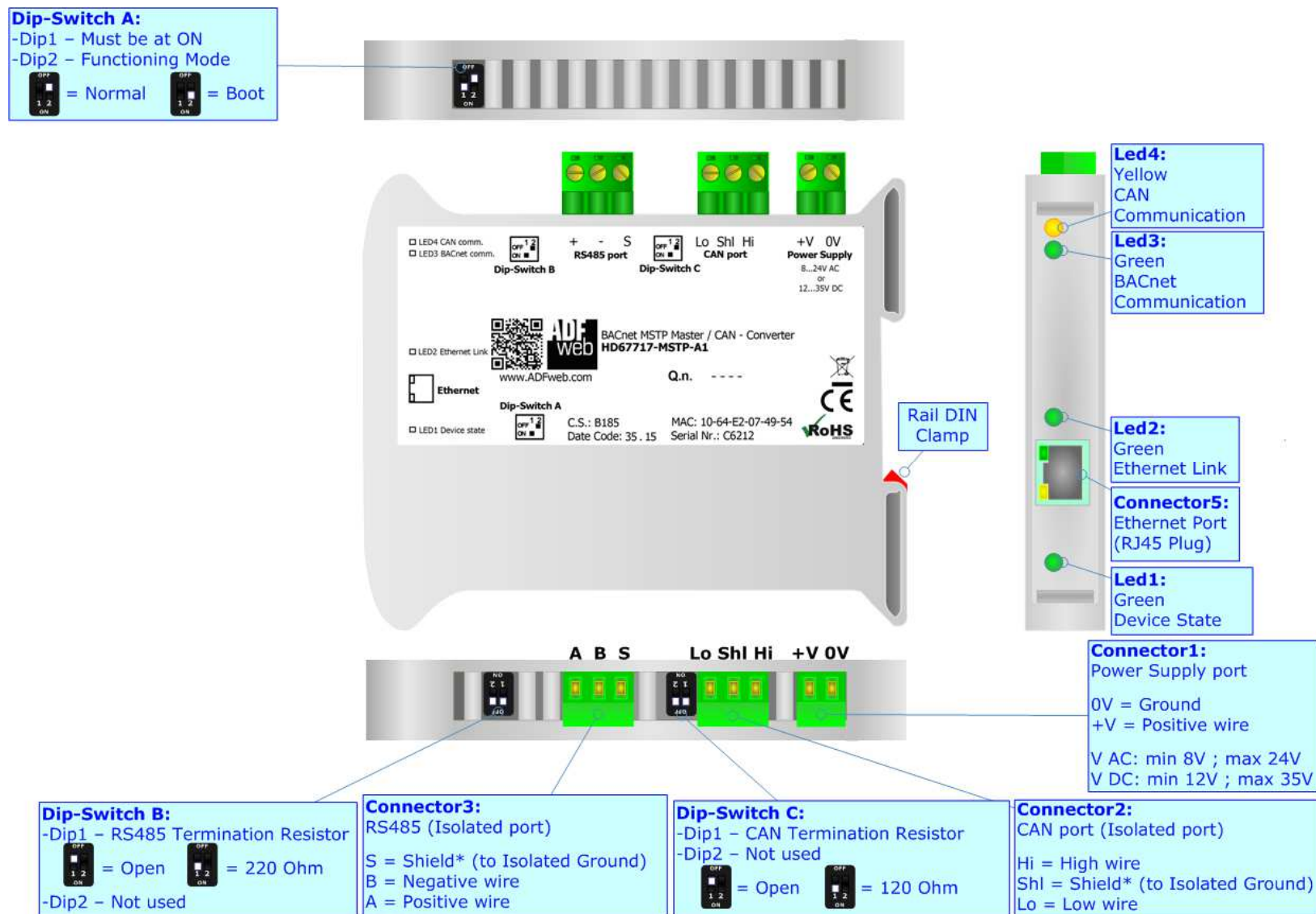


Figure 1b: Connection scheme for HD67717-MSTP-A1

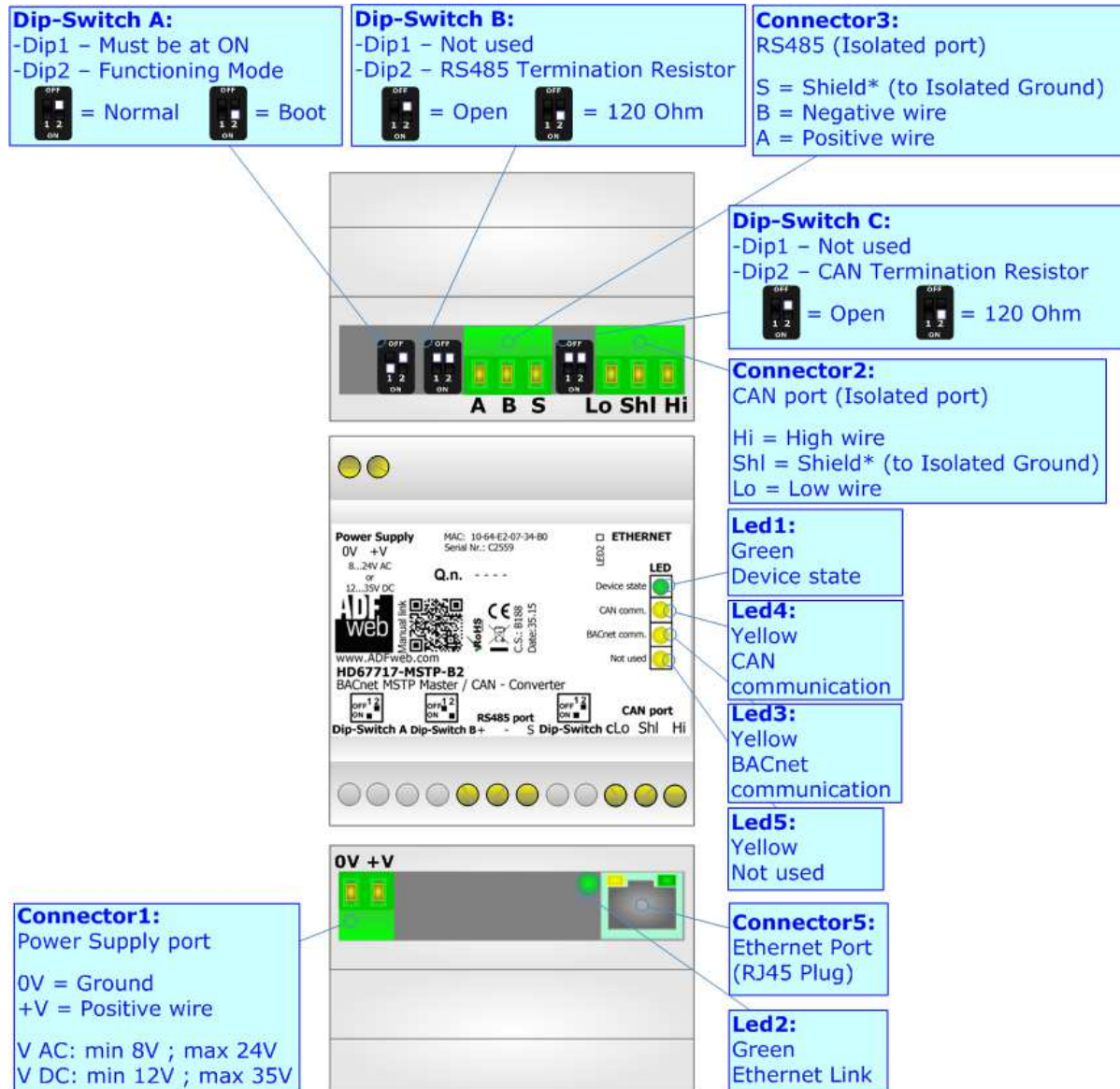


Figure 1c: Connection scheme for HD67717-MSTP-B2

**CHARACTERISTICS:**

The HD67717-IP-A1 and HD67717-MSTP-A1/B2 are BACnet Master / CAN - Converters.

They have the following characteristics:

- Up to 512 BACnet objects in reading and 512 objects in writing;
- Up to 500 CAN frames in reading and 500 CAN frames in writing;
- Triple isolation between BACnet - Power Supply, BACnet - CAN, Power Supply - CAN.
- Two-directional information between BACnet and CAN;
- 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 SW67717 software on your PC in order to perform the following:

- Define the parameter of BACnet line;
- Define the parameter of CAN line;
- Define CAN frames that the converter accepts;
- Define CAN frames that the converter sends;
- Define the BACnet data that the converter reads;
- Define the BACnet data that the converter writes;
- Update the device.



**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  |

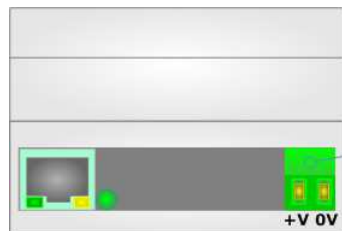
Consumption at 24V DC:

| Device             | Consumption [W/VA] |
|--------------------|--------------------|
| HD67717-IP-A1      | 3.5                |
| HD67717-MSTP-A1/B2 | 3.5                |

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

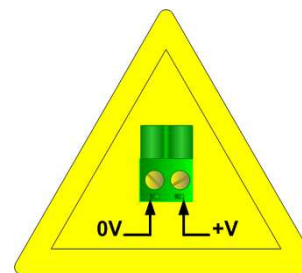


**Connector1:**  
Power Supply port  
0V = Ground  
+V = Positive wire  
V AC: min 8V ; max 24V  
V DC: min 12V ; max 35V

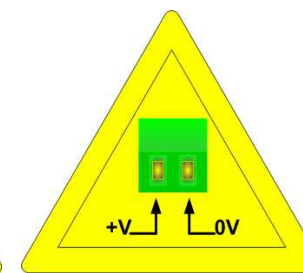


**Connector1:**  
Power Supply port  
0V = Ground  
+V = Positive wire  
V AC: min 8V ; max 24V  
V DC: min 12V ; max 35V

**Caution: Not reverse the polarity power**



HD67717-IP-A1  
HD67717-MSTP-A1



HD67717-MSTP-B2

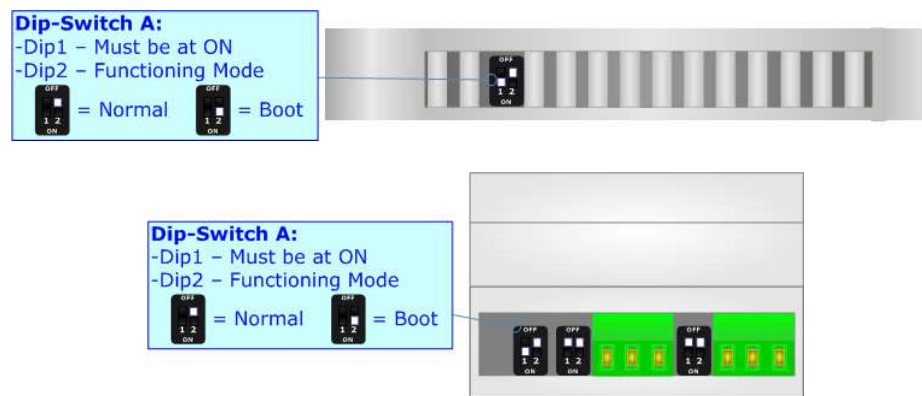
**FUNCTION MODES:**

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

- The first, with 'Dip2 of Dip-Switch A' at "OFF" position, is used for the normal working of the device.
- The second, with 'Dip2 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.

**Warning:**

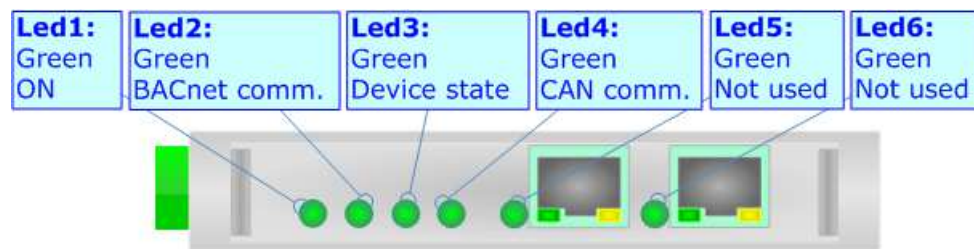
Dip1 of 'Dip-Switch A' must be at ON position for working even if the Ethernet cable isn't inserted.

**LEDS:**

HD67717-IP-A1

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

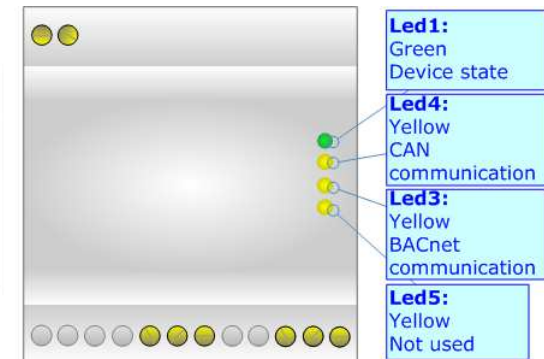
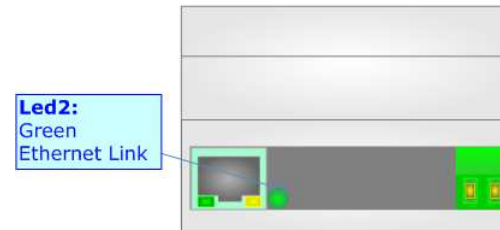
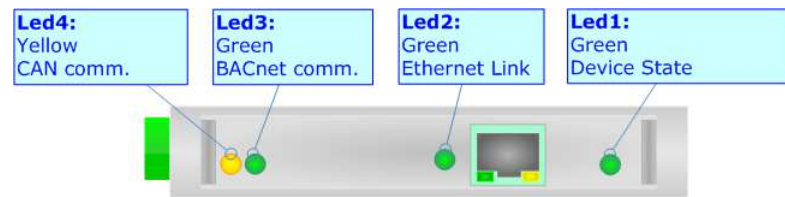
| LED                             | Normal Mode   | Boot Mode   |
|---------------------------------|---|---|
| 1: ON [supply voltage ] (green) | <b>ON:</b> Device powered<br><b>OFF:</b> Device not powered | <b>Blinks quickly:</b> Boot state<br><b>Blinks very slowly (~0.5Hz):</b> update in progress |
| 2: BACnet comm. (green)         | Blinks quickly when a BACnet response is received           | <b>Blinks quickly:</b> Boot state<br><b>Blinks very slowly (~0.5Hz):</b> update in progress |
| 3: Device state (green)         | Blinks slowly (~1Hz)  | <b>Blinks quickly:</b> Boot state<br><b>Blinks very slowly (~0.5Hz):</b> update in progress |
| 4: CAN comm. (green)            | Blinks quickly when a CAN frame is received                 | <b>Blinks quickly:</b> Boot state<br><b>Blinks very slowly (~0.5Hz):</b> update in progress |
| 5: Not used (green)             | OFF   | <b>Blinks quickly:</b> Boot state<br><b>Blinks very slowly (~0.5Hz):</b> update in progress |
| 6: Not used (green)             | OFF   | <b>Blinks quickly:</b> Boot state<br><b>Blinks very slowly (~0.5Hz):</b> update in progress |



HD67717-MSTP-A1/B2

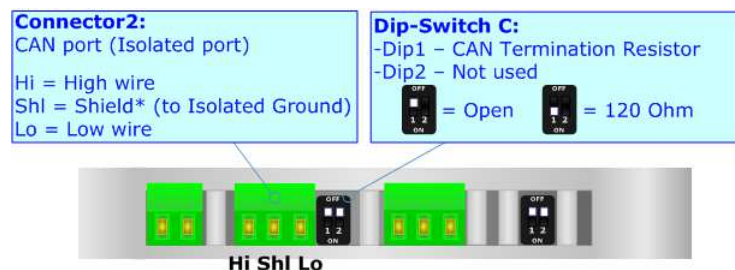
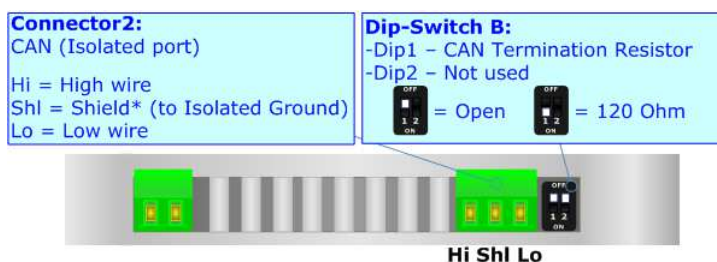
The device has four LEDs (five for the B2 version) that are used to give information of the functioning status.  
The various meanings of the LEDs are described in the table below.

| LED                              | Normal Mode  | Boot Mode   |
|----------------------------------|--|---|
| 1: Device State (green)          | Blinks slowly (~1Hz)   | <b>Blinks quickly:</b> Boot state<br><b>Blinks very slowly (~0.5Hz):</b> update in progress |
| 2: Link Ethernet (yellow)        | <b>ON:</b> Ethernet cable connected<br><b>OFF:</b> Ethernet cable disconnected | <b>ON:</b> Ethernet cable connected<br><b>OFF:</b> Ethernet cable disconnected              |
| 3: BACnet communication (yellow) | Blinks quickly when a BACnet response is received                              | <b>Blinks quickly:</b> Boot state<br><b>Blinks very slowly (~0.5Hz):</b> update in progress |
| 4: CAN Communication (yellow)    | Blinks quickly when a CAN frame is received                                    | <b>Blinks quickly:</b> Boot state<br><b>Blinks very slowly (~0.5Hz):</b> update in progress |
| 5: Not used (green)              | OFF  | <b>Blinks quickly:</b> Boot state<br><b>Blinks very slowly (~0.5Hz):</b> update in progress |



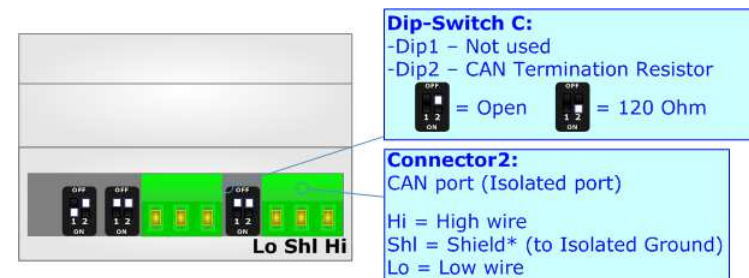
**CAN:**

For terminating the CAN line with a 120Ω resistor it is necessary to put Dip1 of 'Dip-Switch B' (for codes HD67717-IP-A1) or Dip2 of 'Dip-Switch C' (for code HD67717-MSTP-B2 and HD67717-MSTP-B2) at ON position.



Cable characteristics:

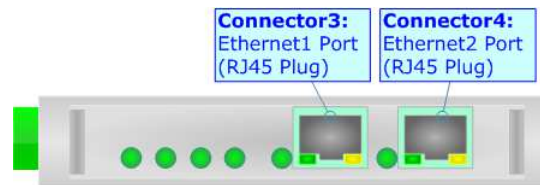
|                       |                        |                       |
|-----------------------|------------------------|-----------------------|
| <b>DC parameter:</b>  | Impedance              | 70 Ohm/m              |
| <b>AC parameters:</b> | Impedance              | 120 Ohm/m             |
|                       | Delay                  | 5 ns/m                |
| <b>Length</b>         | <b>Baud Rate [bps]</b> | <b>Length MAX [m]</b> |
|                       | 10 K                   | 5000                  |
|                       | 20 K                   | 2500                  |
|                       | 50 K                   | 1000                  |
|                       | 100 K                  | 650                   |
|                       | 125 K                  | 500                   |
|                       | 250 K                  | 250                   |
|                       | 500 K                  | 100                   |
|                       | 800 K                  | 50                    |
|                       | 1000 K                 | 25                    |



**ETHERNET:**

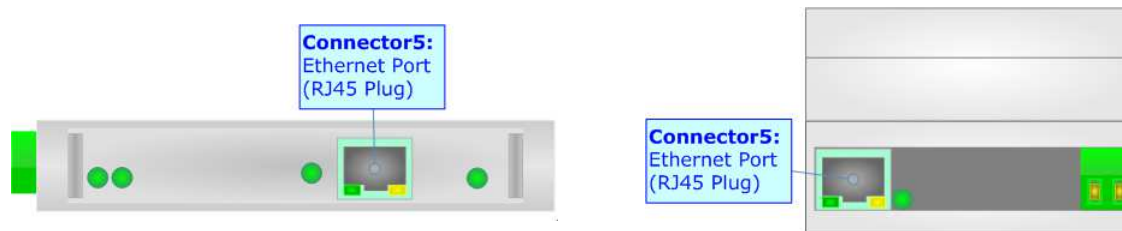
HD67717-IP-A1

The Ethernet ports are used for BACnet/IP communication and for programming the device.  
 The BACnet/IP connection must be made using Connector3 and/or Connector4 of HD67717-IP-A1 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.



HD67717-MSTP-A1/B2

The Ethernet port is used for programming the device.  
 The Ethernet connection must be made using Connector5 of HD67717-MSTP-A1/B2 with at least a Category 5E cable. The maximum length of the cable should not exceed 100m. The cable has to conform to the T568 norms relative to connections in cat.5 up to 100 Mbps. To connect the device to an Hub/Switch is recommended the use of a straight cable, to connect the device to a PC/PLC/other is recommended the use of a cross cable.



**RS485:**

The RS485 port is present only for the BACnet MS/TP devices (HD67717-MSTP-A1 and HD67717-MSTP-B2).

For terminating the RS485 line with a 120Ω resistor it is necessary to put Dip1 of 'Dip-Switch B' at ON position.



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.

### USE OF COMPOSITOR SW67717:

To configure the Converter, use the available software that runs with Windows called SW67717. It is downloadable from the site [www.adfweb.com](http://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 SW67717, the window below appears (Fig. 2).



**Note:**

It is necessary to have installed .Net Framework 4.

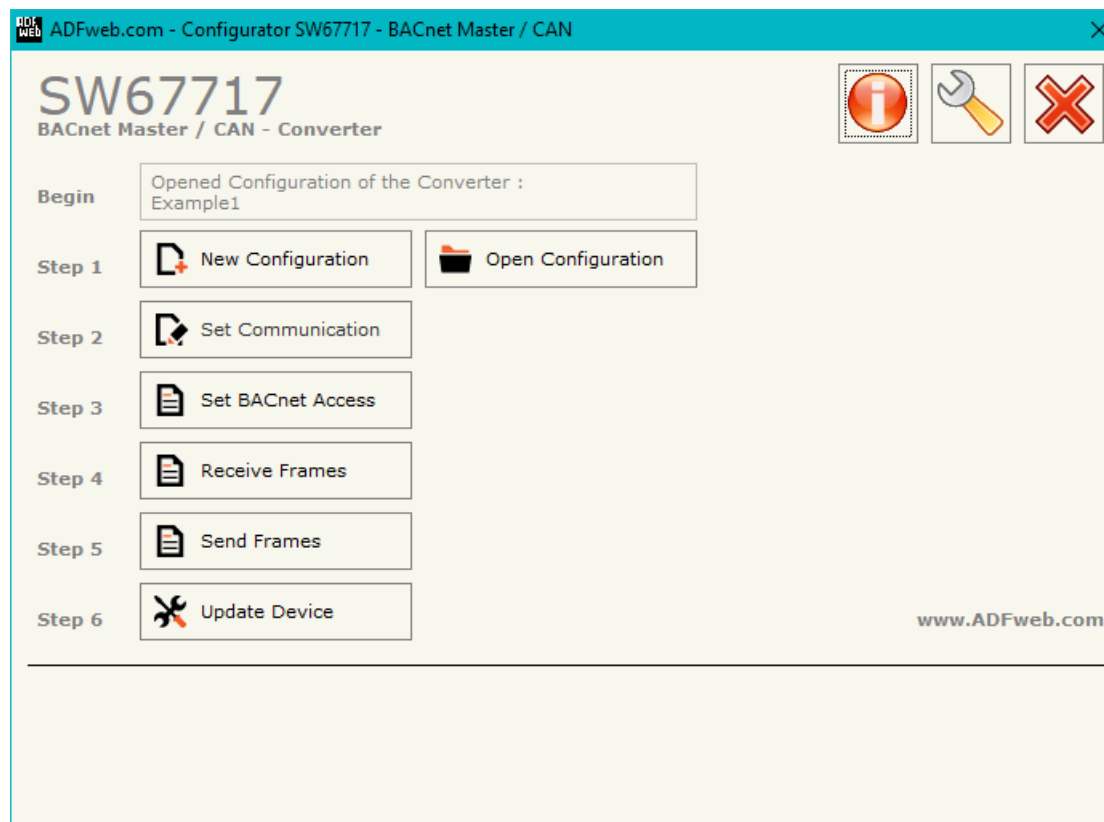
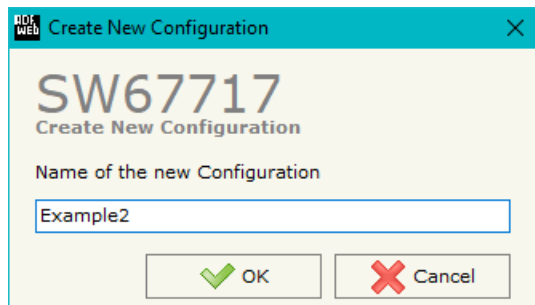


Figure 2: Main window for SW67717



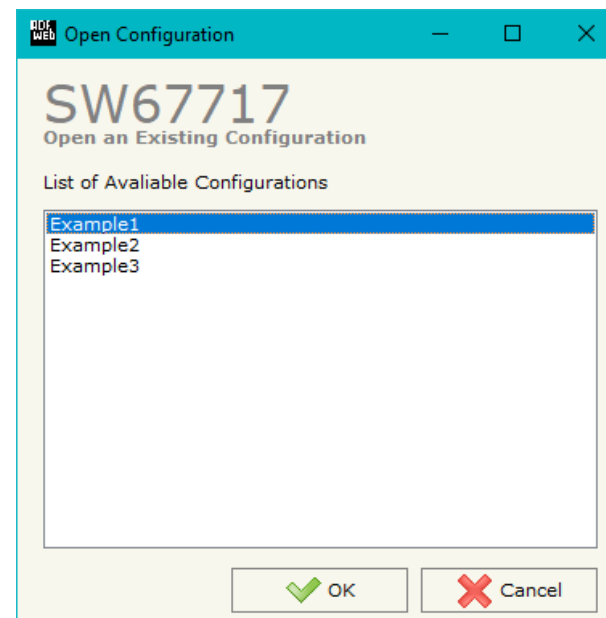
**NEW CONFIGURATION / OPEN CONFIGURATION:**

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




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

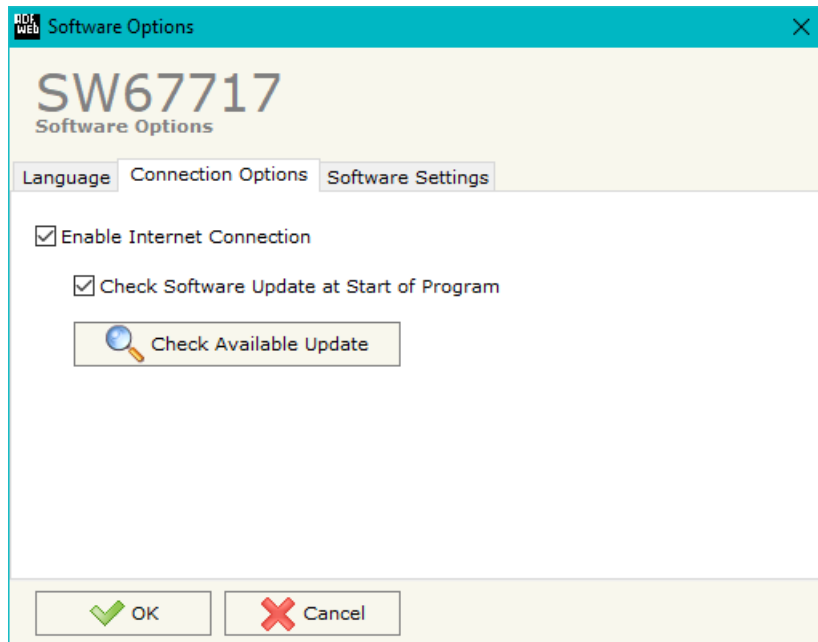
- To clone the configurations of a Programmable “BACnet Master / CAN - Converter” in order to configure another device in the same manner, it is necessary to maintain the folder and all its contents;
- To clone a project in order to obtain a different version of the project, it is sufficient to duplicate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



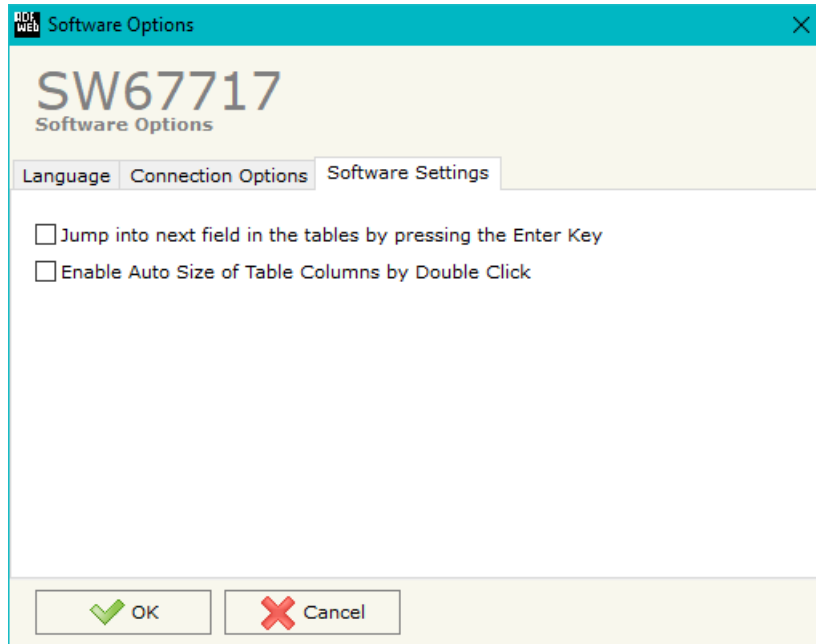
**SOFTWARE OPTIONS:**

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 SW67717 check automatically if there are updatings when it is launched.



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

## SET COMMUNICATION:

This section define the fundamental communication parameters of two buses, BACnet and CAN.

By Pressing the "**Set Communication**" button from the main window for SW67717 (Fig. 2) the window "Set Communication" appears (Fig. 3).

The window is divided in three sections, one for selecting the type of BACnet (in relation to the device used), one for the BACnet parameters and the other for the CAN parameters.

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

- BACnet/IP (uses Ethernet);
- BACnet MS/TP (uses RS485).

The means of the fields for "BACnet" are:

- In the field "**IP ADDRESS**" the IP address of BACnet/IP side 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;
- In the field "**Port**" the port used for BACnet communication is defined;
- In the field "**BACnet Device Name**" the name of the BACnet side of the converter is defined;
- In the field "**Device Instance**" the identifier of the BACnet side of the converter is defined.

The means of the fields for the "CAN" section are:

- In the field "**Baudrate**" the data rate of the CAN line is defined.

The screenshot shows the "Set Communication" window for device SW67717. The window title is "Set Communication" and the device ID is "SW67717". The window is divided into three main sections: "BACnet Type", "BACnet", and "CAN".

- BACnet Type:** A dropdown menu is set to "BACnet/IP".
- BACnet:** This section contains several fields:
  - IP ADDRESS:** Four input boxes containing "192", ".168", ".0", and ".10".
  - SUBNET Mask:** Four input boxes containing "255", ".255", ".255", and ".0".
  - GATEWAY:** A checkbox is checked, followed by four input boxes containing "192", ".168", ".0", and ".1".
  - Port:** An input box containing "47808".
  - BACnet Device Name:** An input box containing "devicename1".
  - Device Instance:** An input box containing "0".
- CAN:** A dropdown menu is set to "1000K".

At the bottom of the window, there are two buttons: "OK" (with a green checkmark icon) and "Cancel" (with a red X icon).

Figure 3: "Set Communication" window

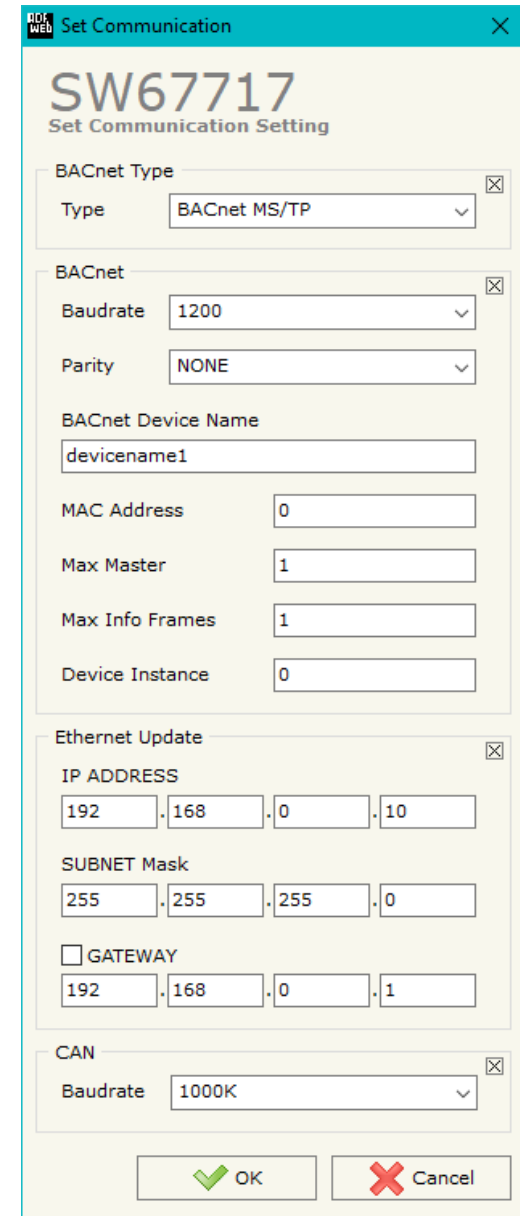
If selected "BACnet MS/TP", the means of the fields for "BACnet" are:

- 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.

The means of the fields for the "Ethernet Update" section 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.

These information are used for programming the Converter.



**SW67717**  
Set Communication Setting

BACnet Type  
Type: BACnet MS/TP

BACnet  
Baudrate: 1200  
Parity: NONE

BACnet Device Name  
devicename1

MAC Address: 0

Max Master: 1

Max Info Frames: 1

Device Instance: 0

Ethernet Update  
IP ADDRESS: 192 . 168 . 0 . 10  
SUBNET Mask: 255 . 255 . 255 . 0  
 GATEWAY: 192 . 168 . 0 . 1

CAN  
Baudrate: 1000K

OK Cancel

### SET BACNET ACCESS:

By Pressing the "Set BACnet Access" button from the main window of SW67717 (Fig. 2), the window "Set BACnet Access" appears (Fig. 4).

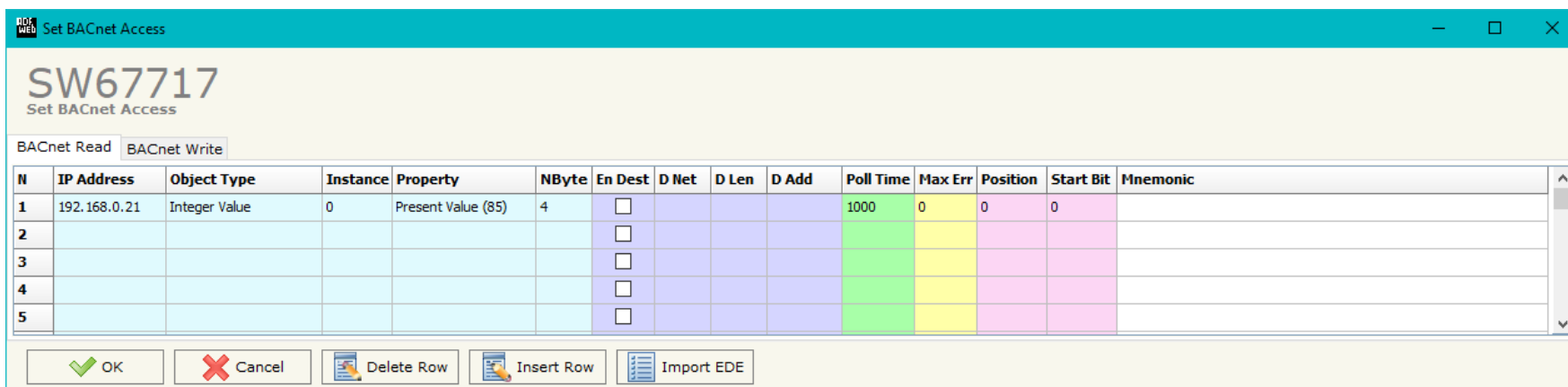


Figure 4a: "BACnet Set Access → BACnet Read" window

The window is divided in two parts, the "BACnet Read" that contains the BACnet objects that the converter reads from the slaves and "BACnet Write" that contains the BACnet objects that the converter writes into the slaves.

The means of the fields in the window (Read) are the follows:

- In the field "IP Address/ID" the IP address/ID of the slave that contains the data to be read is defined;
- In the field "Object Type" the BACnet object to read is defined;
- In the field "Instance", the instance number of the object is defined;
- In the field "Property" the property to use for the reading is defined;
- In the field "NByte" the number of bytes reserved for saving the information on internal array is defined;
- By checking the field "En Dest" it is possible to enable the Destination Network (D Net), Destination Length (D Len) and Destination Address (D Adr). These informations are used for make a request to other segments of network;
- In the field "D Net" the destination network (from 1 to 65535) is defined;
- In the field "D Len" the length of "D Add" field is defined;

- In the field "**D Adr**" the address of the endpoint is defined. If "D Len" is '1', it is possible to insert a number from 1 to 255; if "D Len" is '2', it is possible to insert a number from 1 to 65535; if "D Len" is '6', it is possible to insert an IP and port in this format "192.168.2.188:47808";
- In the field "**Poll Time**" the frequency of the request is defined;
- In the field "**Max Error**" the number of consecutive errors that the Master waits before discard the row from the cycle of requests is defined;
- In the field "**Position**" it is possible to select the position/byte where saving the data into the internal array is defined;
- The field "**Start Bit**" is used for the Binary BACnet objects. It is possible to select the bit in the byte where saving the data;
- By checking the field "**Swap**" it is possible to swap the order of data read from BACnet slave;
- In the field "**Mnemonic**" a description of the data inserted in the row is defined.

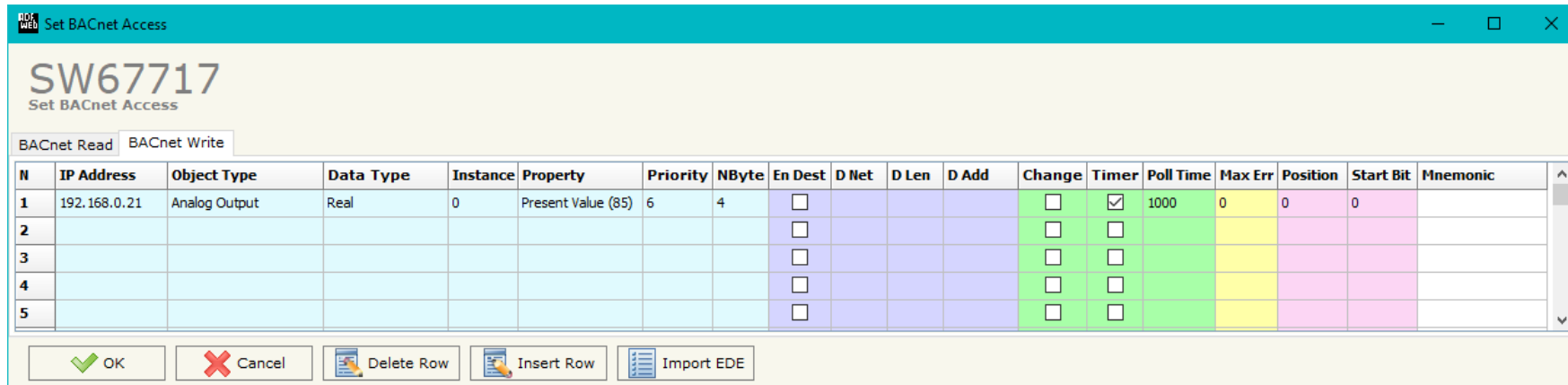


Figure 4b: "BACnet Set Access → BACnet Write" window

The means of the fields in the window (Write) are the follows:

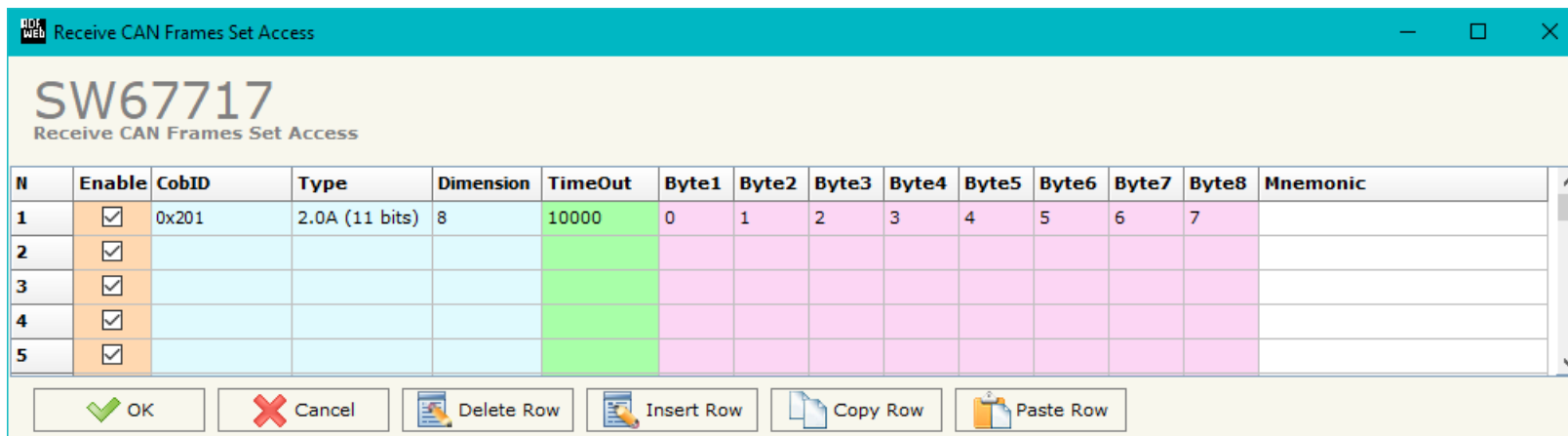
- In the field "IP Address/ID" the IP address/ID of the slave that contains the data to be written is defined;
- In the field "Object Type" the BACnet object to write is defined;
- In the field "Data Type" the data format of the object to write is defined;
- In the field "Instance", the instance number of the object is defined;
- In the field "Property" the property to use for the writing is defined;
- In the field "Priority" the priority to use for the writing request is defined;
- In the field "NByte" the number of bytes to take from internal array is defined;
- By checking the field "En Dest" it is possible to enable the Destination Network (D Net), Destination Length (D Len) and Destination Address (D Adr). These informations are used for make a request to other segments of network;
- In the field "D Net" the destination network (from 1 to 65535) is defined;
- In the field "D Len" the length of "D Add" field is defined;
- In the field "D Adr" the address of the endpoint is defined. If "D Len" is '1', it is possible to insert a number from 1 to 255; if "D Len" is '2', it is possible to insert a number from 1 to 65535; if "D Len" is '6', it is possible to insert an IP and port in this format "192.168.2.188:47808";
- By checking the field "Change" the BACnet write request is made only if data are changed; otherwise (if it is selected the field "Timer") is sent cyclically, using the "Poll Time";
- In the field "Poll Time" the frequency of the request is defined;



- In the field "**Max Error**" the number of consecutive errors that the Master waits before discard the row from the cycle of requests is defined;
- In the field "**Position**" it is possible to select the position/byte where taking the data from the internal array is defined;
- The field "**Start Bit**" is used for the Binary BACnet objects. It is possible to select the bit in the byte from which taking the data;
- In the field "**Mnemonic**" a description of the data inserted in the row is defined.

**RECEIVE FRAMES:**

By pressing the **Receive Frames** button from the main window for SW67717 (Fig. 2) the "Receive CAN Frames" window appears (Fig. 5). The COB-IDs inserted in this table contain the data that the converter will write to the BACnet slaves. These frames are accepted by the converter.



| N | Enable                              | CobID | Type           | Dimension | TimeOut | Byte1 | Byte2 | Byte3 | Byte4 | Byte5 | Byte6 | Byte7 | Byte8 | Mnemonic |
|---|-------------------------------------|-------|----------------|-----------|---------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| 1 | <input checked="" type="checkbox"/> | 0x201 | 2.0A (11 bits) | 8         | 10000   | 0     | 1     | 2     | 3     | 4     | 5     | 6     | 7     |          |
| 2 | <input checked="" type="checkbox"/> |       |                |           |         |       |       |       |       |       |       |       |       |          |
| 3 | <input checked="" type="checkbox"/> |       |                |           |         |       |       |       |       |       |       |       |       |          |
| 4 | <input checked="" type="checkbox"/> |       |                |           |         |       |       |       |       |       |       |       |       |          |
| 5 | <input checked="" type="checkbox"/> |       |                |           |         |       |       |       |       |       |       |       |       |          |

Figure 5: "Receive CAN Frames" window

The data of the columns have the following meanings:

- If the field **Enable** is checked, the CAN message is enabled;
- In the field **Cob-ID** the COB-ID of the CAN frame is defined;
- In the field **Type** the type of CAN format (2.0A (11 bits) or 2.0B (29 bits)) used for the message is defined;
- In the field **Dimension** the number of byte of the CAN message (from 1 to 8) is defined;
- In the field **TimeOut** a time in ms is defined. This time is used to put at '0' the data into BACnet if the CAN frame doesn't arrive with a lower frequency than the time expressed in the field. It is possible to disable this function setting the field to '0';
- In the fields **Byte X** the positions/bytes of the internal array where mapping the data of the CAN message are defined;
- In the field **Mnemonic** a brief description is defined.

**SEND FRAMES:**

By pressing the **Send Frames** button from the main window for SW67717 (Fig. 2) the "Send CAN frames" window appears (Fig. 6). The COB-IDs inserted in this table contain the data that the converter will read from the BACnet slaves. These frames are sent by the converter.

| N | Enable                              | CobID | Type           | Dimension | OnChange                            | OnTimer                             | Time | Byte1 | Byte2 | Byte3 | Byte4 | Byte5 | Byte6 | Byte7 | Byte8 | Mnemonic |
|---|-------------------------------------|-------|----------------|-----------|-------------------------------------|-------------------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| 1 | <input checked="" type="checkbox"/> | 0x181 | 2.0A (11 bits) | 8         | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 1000 | 0     | 1     | 2     | 3     | 4     | 5     | 6     | 7     |          |
| 2 | <input checked="" type="checkbox"/> |       |                |           | <input type="checkbox"/>            | <input type="checkbox"/>            |      |       |       |       |       |       |       |       |       |          |
| 3 | <input checked="" type="checkbox"/> |       |                |           | <input type="checkbox"/>            | <input type="checkbox"/>            |      |       |       |       |       |       |       |       |       |          |
| 4 | <input checked="" type="checkbox"/> |       |                |           | <input type="checkbox"/>            | <input type="checkbox"/>            |      |       |       |       |       |       |       |       |       |          |
| 5 | <input checked="" type="checkbox"/> |       |                |           | <input type="checkbox"/>            | <input type="checkbox"/>            |      |       |       |       |       |       |       |       |       |          |

Figure 6: "Send CAN Frames" window

The data of the columns have the following meanings:

- If the field **Enable** is checked, the CAN message is enabled;
- In the field **Cob-ID** the COB-ID of the CAN frame is defined;
- In the field **Type** the type of CAN format (2.0A (11 bits) or 2.0B (29 bits)) used for the message is defined;
- In the field **Dimension** the number of byte of the CAN message (from 1 to 8) is defined;
- By checking the field **OnChange** the CAN message is sent only if the data from BACnet are changed; otherwise (if it is selected the field **OnTimer**) it is sent cyclically, using the "Time" defined;
- In the field **Time** the frequency of the transmission is defined;
- In the fields **Byte X** the positions/bytes of the internal array from which taking the data of the CAN message are defined;
- In the field **Mnemonic** a brief description is defined.

### UPDATE DEVICE:

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

If you don't know the actual IP address of the device you have to use this procedure:

- Turn OFF the Device;
- Put Dip2 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 Dip2 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;
- 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.

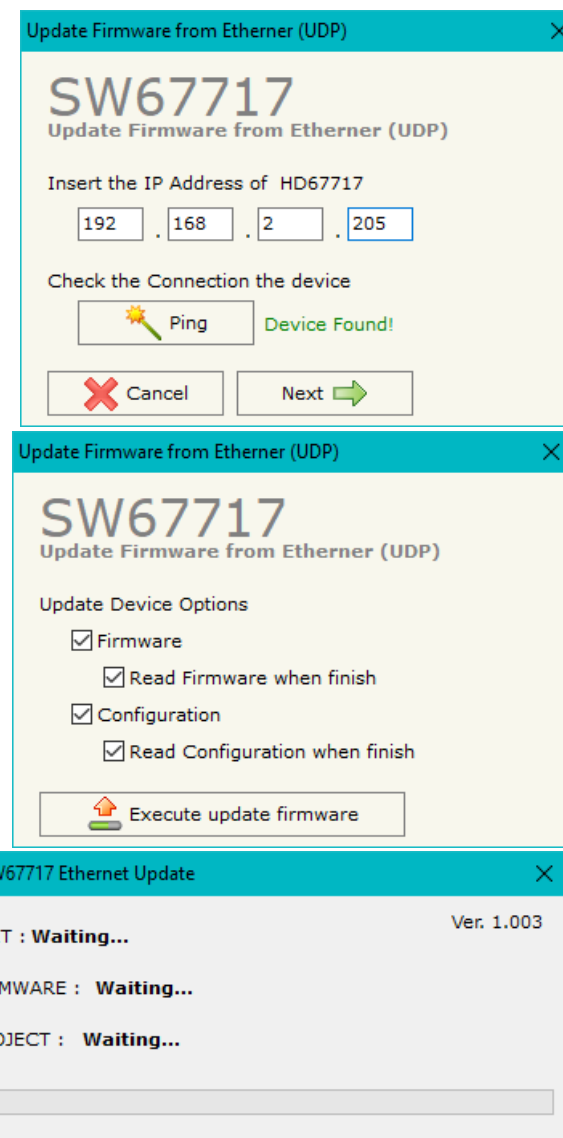


Figure 7: “Update via Ethernet” windows

**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 HD67717 device.

**Note:**

When you receive the device, for the first time, you also have to update the Firmware in the HD67717 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;
- 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 and 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 you have to launch the "Command Prompt" with Administrator Rights;
- Pay attention at Firewall lock.

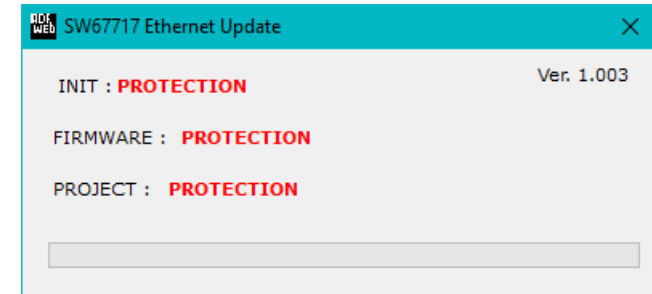
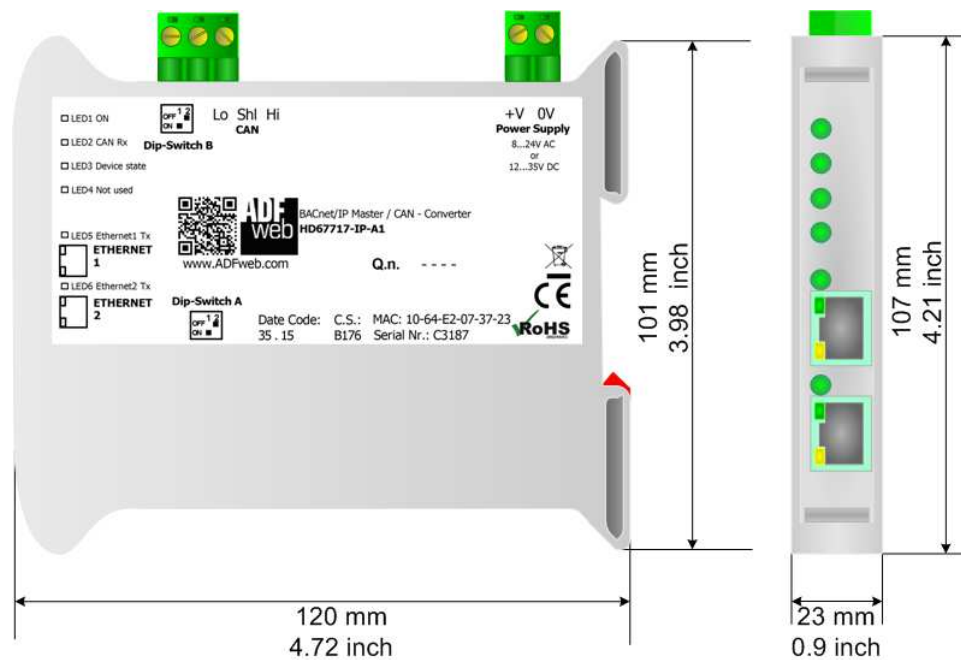


Figure 8: "Protection" window

In the case of HD67717 you have to use the software "SW67717": [www.adfweb.com/download/filefold/SW67717.zip](http://www.adfweb.com/download/filefold/SW67717.zip).

**MECHANICAL DIMENSIONS:**



Housing: PVC  
Weight: 200g (Approx)

Figure 9a: Mechanical dimensions scheme for HD67717-IP-A1

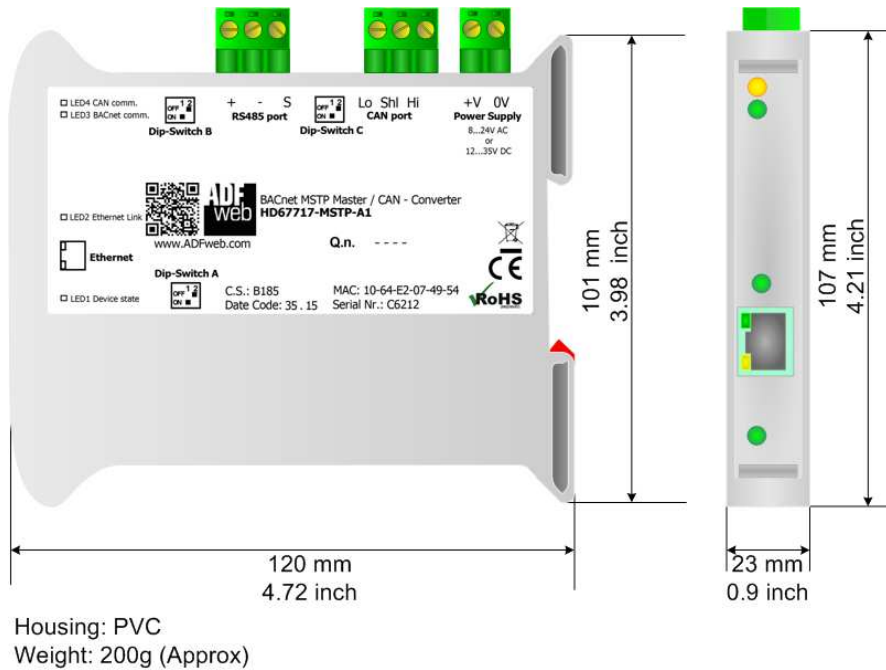


Figure 9b: Mechanical dimensions scheme for HD67717-MSTP-A1

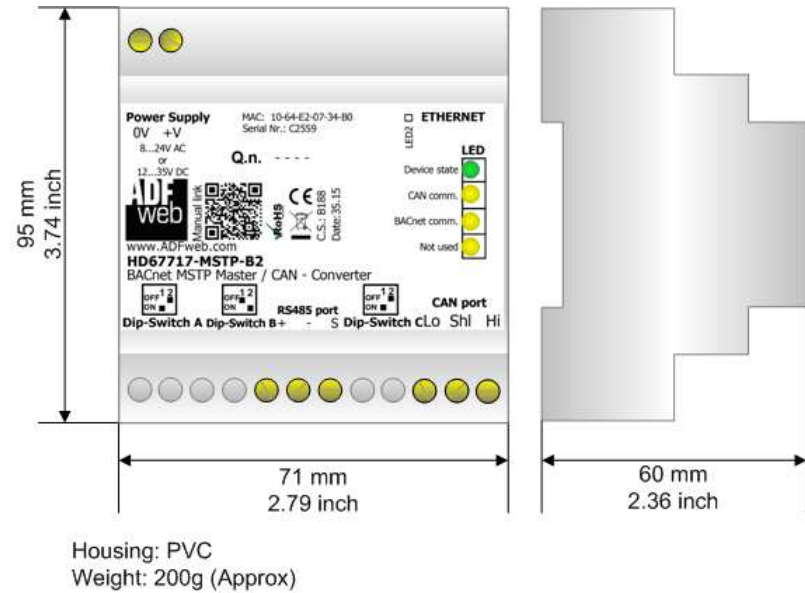
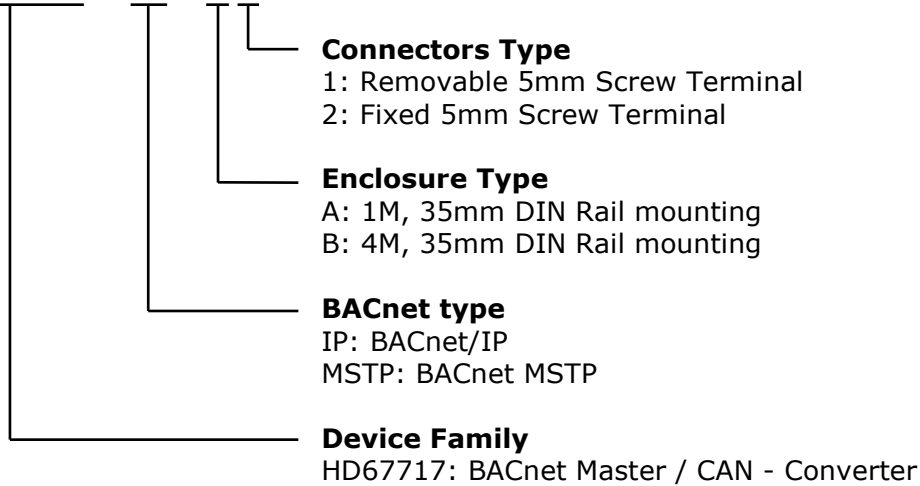


Figure 9c: Mechanical dimensions scheme for HD67717-MSTP-B2

**ORDERING INFORMATIONS:**

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

**HD67717 - xxx - x x**



- Order Code: **HD67717-IP-A1** - BACnet/IP Master / CAN - Converter
- Order Code: **HD67717-MSTP-A1** - BACnet MS/TP Master / CAN - Converter
- Order Code: **HD67717-MSTP-B2** - BACnet MS/TP Master / CAN - Converter

**ACCESSORIES:**

- Order Code: **AC34001** - 35mm Rail DIN - Power Supply 220/240V AC 50/60Hz – 12 V AC
- Order Code: **AC34002** - 35mm Rail DIN - Power Supply 110V AC 50/60Hz – 12 V AC



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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](http://www.adfweb.com).  
Otherwise contact us at the address [support@adfweb.com](mailto: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](http://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.



**ADFweb.com S.r.l.**  
Via Strada Nuova, 17  
IT-31010 Mareno di Piave  
TREVISO (Italy)  
Phone +39.0438.30.91.31  
Fax +39.0438.49.20.99  
[www.adfweb.com](http://www.adfweb.com)

