![ADFweb logo]
Industrial Electronic Devices

User Manual

Revision 1.001
English

BACnet Slave / SNMP - Converter

(Order Code: HD67693-IP-A1, HD67693-MSTP-A1,
                HD67693-MSTP-B2, HD67693-PTP-A1,
                HD67693-PTP-B2)

For Website information:
www.adfweb.com?Product=HD67693

For Price information:
www.adfweb.com?Price=HD67693-IP-A1
www.adfweb.com?Price=HD67693-MSTP-A1
www.adfweb.com?Price=HD67693-MSTP-B2
www.adfweb.com?Price=HD67693-PTP-A1
www.adfweb.com?Price=HD67693-PTP-B2

Benefits and Main Features:

⊕ Very easy to configure

⊕ 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=HD67671	**(Modbus Master)**
www.adfweb.com?Product=HD67672	**(Modbus Slave)**
www.adfweb.com?Product=HD67673	**(Modbus TCP Master)**
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)**

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

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	25/05/2015	Ff	All	First Release
1.001	02/09/2015	Ff	All	Revision

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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:

SNMP network

BACnet network

SNMP Client

HD67693-IP-A1

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BACnet MS/TP network

Ethernet network

Control System SNMP

HD67693-MSTP-A1

BACnet MS/TP network

Ethernet network

Control System SNMP

HD67693-MSTP-B2

BACnet PTP network

Ethernet network

Control System SNMP

HD67693-PTP-A1

BACnet PTP network

Ethernet network

Control System SNMP

HD67693-PTP-B2

Industrial Electronic Devices

CONNECTION SCHEME:

Dip-Switch A:
-Dip1 – Must be at ON
-Dip2 – Functioning Mode

= Normal   = Boot

Led1:
Green
ON

Led2:
Green
BACnet comm.

Led3:
Green
Device state

Led4:
Green
Not used

Led5:
Green
Ethernet1 Tx

Connector3:
Ethernet1 Port
(RJ45 Plug)

Led6:
Green
Ethernet2 Tx

Connector4:
Ethernet2 Port
(RJ45 Plug)

Rail DIN
Clamp

Connector1:
Power Supply port

0V = Ground
+V = Positive wire

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

□ LED1 ON
□ LED2 BACnet comm.
□ LED3 Device state
□ LED4 Not used
□ LED5 Ethernet1 Tx
ETHERNET 1
□ LED6 Ethernet2 Tx
ETHERNET 2

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

BACnet/IP Slave / SNMP - Converter
HD67693-IP-A1
www.ADFweb.com   Q.n. - - - -

Dip-Switch A

Date Code: C.S.:   MAC: 10-64-E2-07-37-23
30 . 15   B176   Serial Nr.: C3187

Figure 1a: Connection scheme for HD67693-IP-A1

Industrial Electronic Devices

Dip-Switch A:
-Dip1 – Must be at ON
-Dip2 – Functioning Mode

= Normal   = Boot

Led4:
Yellow
Serial
Communication

Led3:
Green
Ethernet
Communication

□ LED4 Serial comm.
□ LED3 Ethernet comm.
Dip-Switch B

\+   \-   S
RS485 port

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

BACnet MSTP Slave / SNMP - Converter
HD67693-MSTP-A1

□ LED2 Ethernet Link

www.ADFweb.com

Q.n. - - - -

Ethernet

Dip-Switch A

□ LED1 Device state

C.S.: B185
Date Code: 30 . 15

MAC: 10-64-E2-07-49-54
Serial Nr.: C6212

RoHS

**Rail DIN
Clamp**

Led2:
Green
Ethernet Link

Connector5:
Ethernet Port
(RJ45 Plug)

Led1:
Green
Device State

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 HD67693-MSTP-A1

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Dip-Switch A:
-Dip1 – Must be at ON
-Dip2 – Functioning Mode

= Normal   = Boot

Dip-Switch B:
-Dip1 – Not used
-Dip2 – RS485 Termination Resistor

= Open   = 120 Ohm

Connector3:
RS485 (Isolated port)

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

Led1:
Green
Device state

Led4:
Yellow
Ethernet communication

Led3:
Yellow
Serial communication

Led5:
Yellow
Not used

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)

Led2:
Green
Ethernet Link

Figure 1c: Connection scheme for HD67693-MSTP-B2

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Dip-Switch A:
-Dip1 – Must be at ON
-Dip2 – Functioning Mode

= Normal   = Boot

Led4:
Yellow
Serial Communication

Led3:
Green
Ethernet
Communication

Led2:
Green
Ethernet Link

Connector5:
Ethernet Port
(RJ45 Plug)

Led1:
Green
Device state

Rail DIN
Clamp

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

BACnet PTP slave / SNMP - Converter
HD67693-PTP-A1
www.ADFweb.com   Q.n.   - - - -
C.S.: B185   MAC: 10-64-E2-07-49-54
Date Code: 30 . 15   Serial Nr.: C6212

Connector 4:
Port RS232 (D-SUB9-Male)
(Isolated Port)

PIN2 = RX
PIN3 = TX
PIN5 = GND* (to Isolated Ground)

Used for:
- BACnet

To connect the device to the COM
port of a PC in order to set it
you have to use the programming
cable AC34107 or a cable made as
showed here:

CABLE
Side A
FEM

CABLE
Side B
FEM

+V 0V

Connector1:
Power Supply port

0V = Ground
+V = Positive wire

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

Figure 1d: Connection scheme for HD67693-PTP-A1

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Industrial Electronic Devices

Dip-Switch A:
-Dip1 – Must be at ON
-Dip2 – Functioning Mode

[1 2 ON] = Normal   [1 2 ON] = Boot

Connector 4:
Port RS232 (D-SUB9-Male)
(Isolated Port)

PIN2 = RX
PIN3 = TX
PIN5 = GND* (to Isolated Ground)

Used for:
 - BACnet

To connect the device to the COM
port of a PC in order to set it you
have to use the programming
cable AC34107 or a cable made as
showed here:

CABLE   CABLE
Side A   Side B
FEM   FEM

Connector1:
Power Supply port

0V = Ground
+V = Positive wire

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

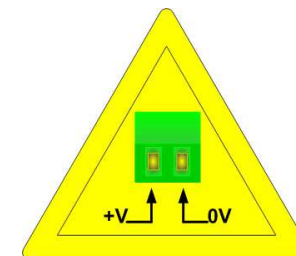**Led1:**
Green
Device state

Led4:
Yellow
Ethernet
communication

Led3:
Yellow
Serial
communication

Led5:
Yellow
Not used

Connector5:
Ethernet Port
(RJ45 Plug)

Led2:
Green
Ethernet Link

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

Q.n. - - - -

www.ADFweb.com
HD67693-PTP-B2
BACnet PTP slave / SNMP - Converter
MAC: 10-64-E2-07-34-B0
Serial Nr.: C2559
Dip-Switch A

RS232   ETHERNET
LED
Device state
Ethernet comm.
Serial comm.
Not used

0V +V

Figure 1e: Connection scheme for HD67693-PTP-B2

Industrial Electronic Devices

CHARACTERISTICS:

The HD67679-xxx-A1 and HD67679-xxx-B2 are BACnet Slave / SNMP Converter.

It allows the following characteristics:

- Up to 1024 BACnet objects (Read+Write);
- Two-directional information between BACnet and SNMP;
- 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 SW67693 software on your PC in order to perform the following:

- Define the parameter of BACnet line;
- Define the parameter of SNMP line;
- Define BACnet objects that contains the data arrived from a SNMP Client (Analog Input, Analog Value, Binary Input, Binary Value, Large Analog Value, Positive Integer Value, Integer Value, Multi State Input, Multi State Value, Life Safety Point, Life Safety Zone, Access Door, Accumulator);
- Define BACnet objects that contains the data to send to the SNMP Client (Analog Output, Analog Value, Binary Output, Binary Value, Large Analog Value, Positive Integer Value, Integer Value, Multi State Output, Multi State Value, Access Door);
- 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]
HD67693-IP-A1	3.5
HD67693-MSTP-A1/B2	3.5
HD67693-PTP-A1/B2	3.5

Connector1:
Power Supply port
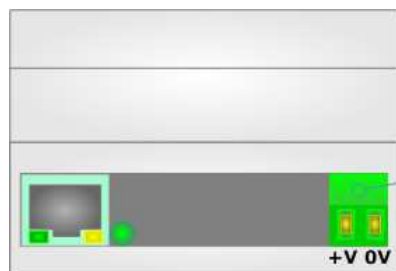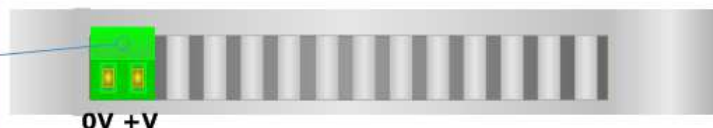
0V = Ground
+V = Positive wire

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

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
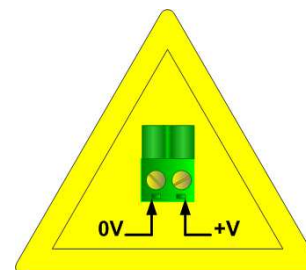
HD67693-IP-A1
HD67693-MSTP-A1
HD67693-PTP-A1

HD67693-MSTP-B2
HD67693-PTP-B2

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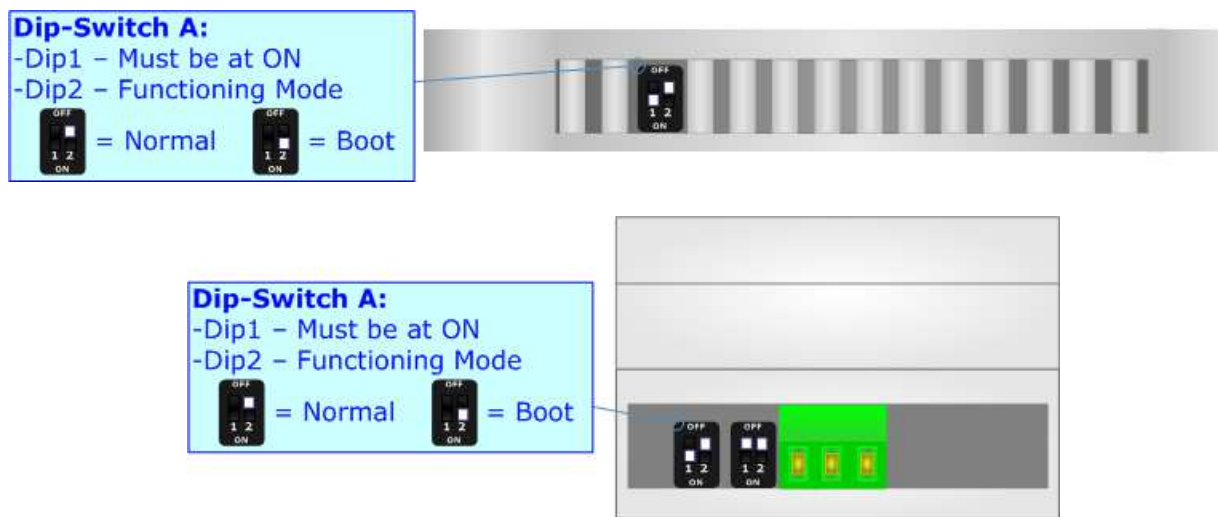
Warning:
Dip1 of 'Dip-Switch A' must be at ON position for working even if the Ethernet cable isn't inserted.

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LEDS (for HD67693-IP-A1):

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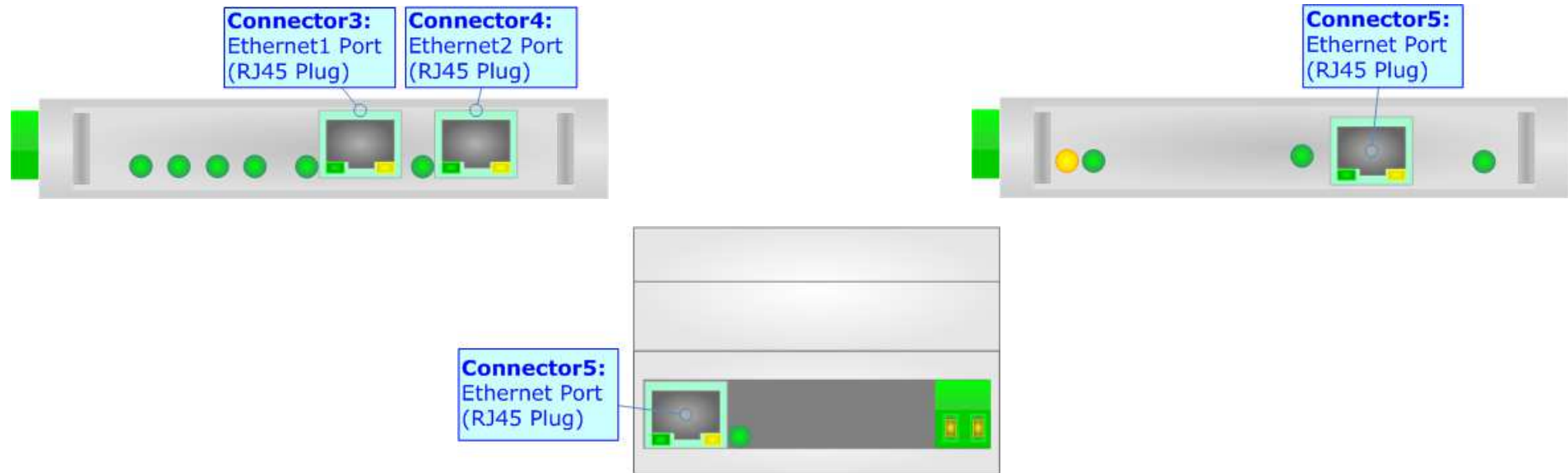The various meanings of the LEDs are described in the table below.

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 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: Not used (green)	**OFF**	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
5: Ethernet1 Tx (green)	Blinks when a Ethernet frame is transmitted	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
6: Ethernet2 Tx (green)	Blinks when a Ethernet frame is transmitted	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress

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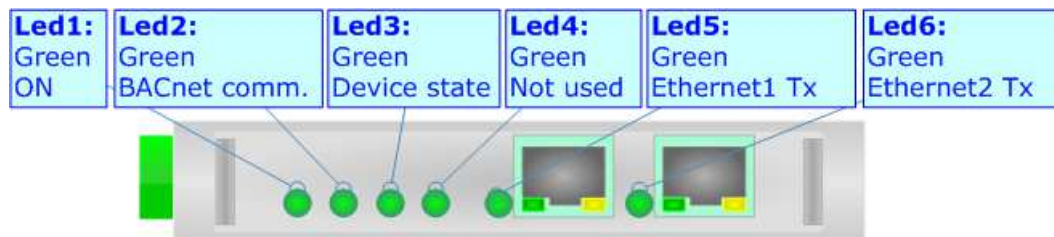
LEDS (for HD67693-MSTP-A1/B2 and HD67693-PTP-A1/B2):

The device has got four LEDs (five the −B2 version) 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: Device State	Blinks slowly (~1Hz)	**ON:** Device powered **OFF:** Device not powered
2: Ethernet Link	**ON:** Ethernet cable connected **OFF:** Ethernet cable disconnected	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
3: Ethernet comm.	Blinks quickly when SNMP request is received	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
4: Serial comm.	Blinks quickly when BACnet request is received	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
5: Not Used	OFF	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress

Industrial Electronic Devices
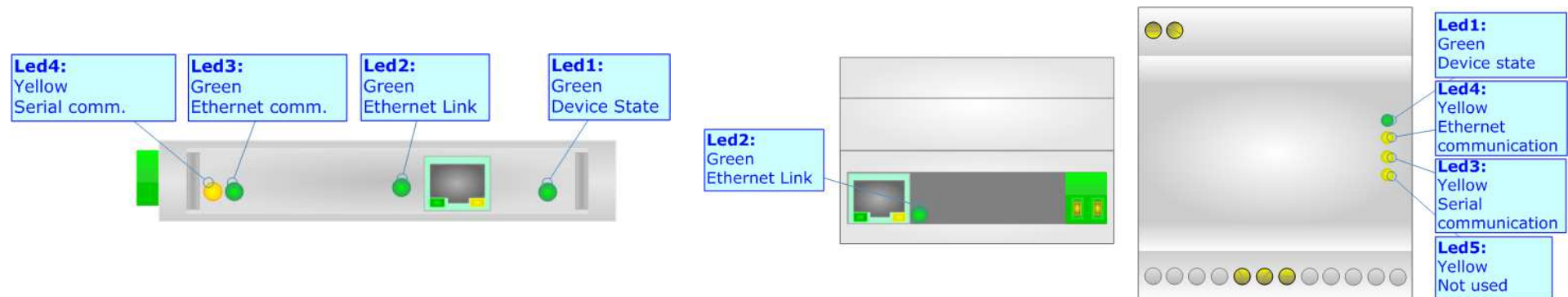
ETHERNET:

The BACnet/IP connection (HD67693-IP-A1), SNMP connection and the updating of the Converter must be made using Connector3 and/or Connector4 of HD67693 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.

Connector3: Ethernet1 Port (RJ45 Plug)

Connector4: Ethernet2 Port (RJ45 Plug)

Connector5: Ethernet Port (RJ45 Plug)

Connector5: Ethernet Port (RJ45 Plug)

RS232 (HD67693-PTP-A1/B2):

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.

Cable Side A Female

Cable Side B Female

Industrial Electronic Devices
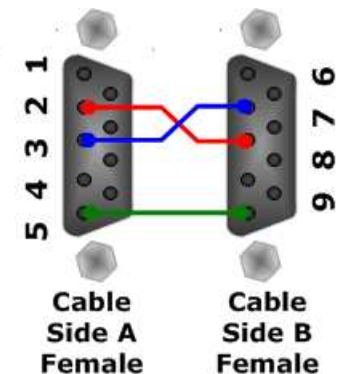
RS485 (HD67693-MSTP-A1/B2):

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

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 – Not used
-Dip2 – RS485 Termination Resistor

= Open   = 120 Ohm

Connector3:
RS485 (Isolated port)

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

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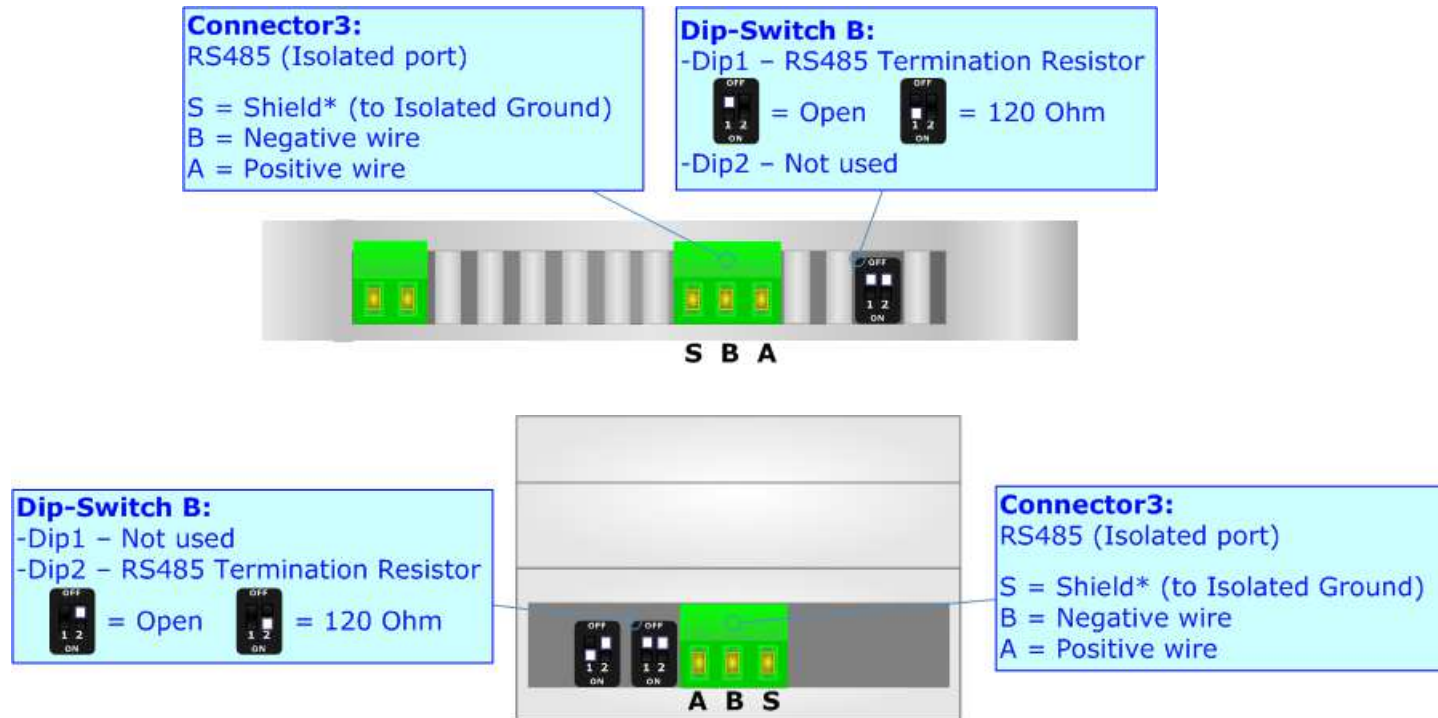
The maximum length of the cable should be 1200m (4000 feet).

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.

Industrial Electronic Devices

USE OF COMPOSITOR SW67693:

To configure the Converter, use the available software that runs with Windows called SW67693. It is downloadable on the site www.adfweb.com and its operation is described in this document. *(This manual is referenced to the last version of the software present on our web site)*. The software works with MSWindows (XP, Vista, Seven, 8; 32/64bit).

When launching the SW67693, the window below appears (Fig. 2).

Note:
   It is necessary to have installed .Net Framework 4.
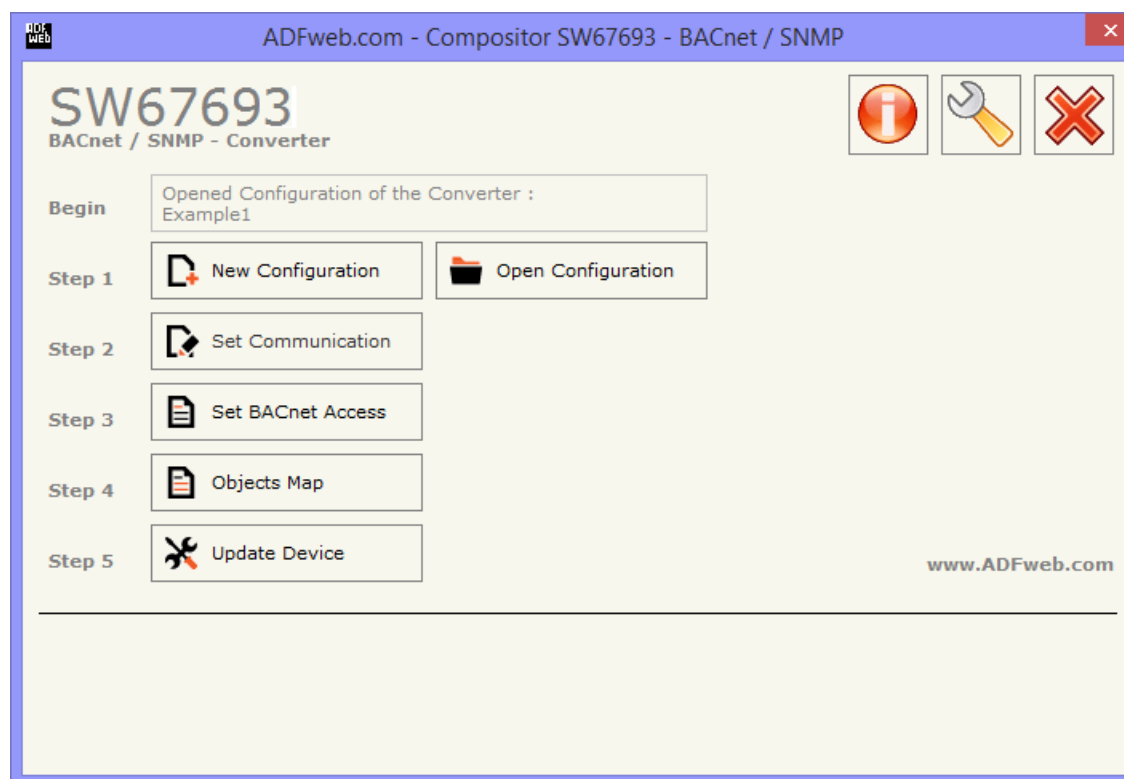
Figure 2: Main window for SW67693

NEW CONFIGURATION / OPEN CONFIGURATION:

The "**New Configuration**" button creates the folder which contains the entire device's configuration.
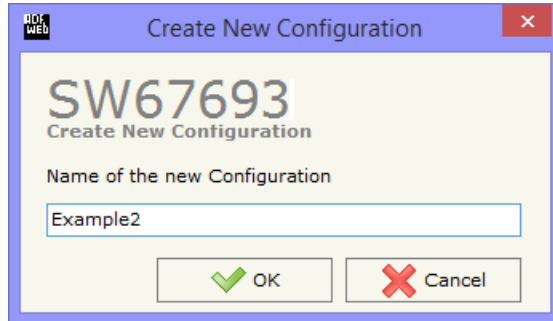
A device's configuration can also be imported or exported:

→ To clone the configurations of a programmable "BACnet slave / SNMP - 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**".

Industrial Electronic Devices
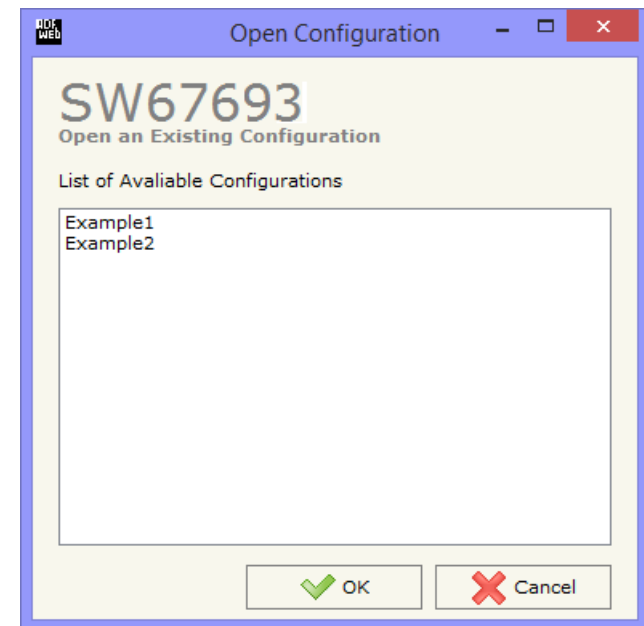
SOFTWARE OPTIONS:

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.
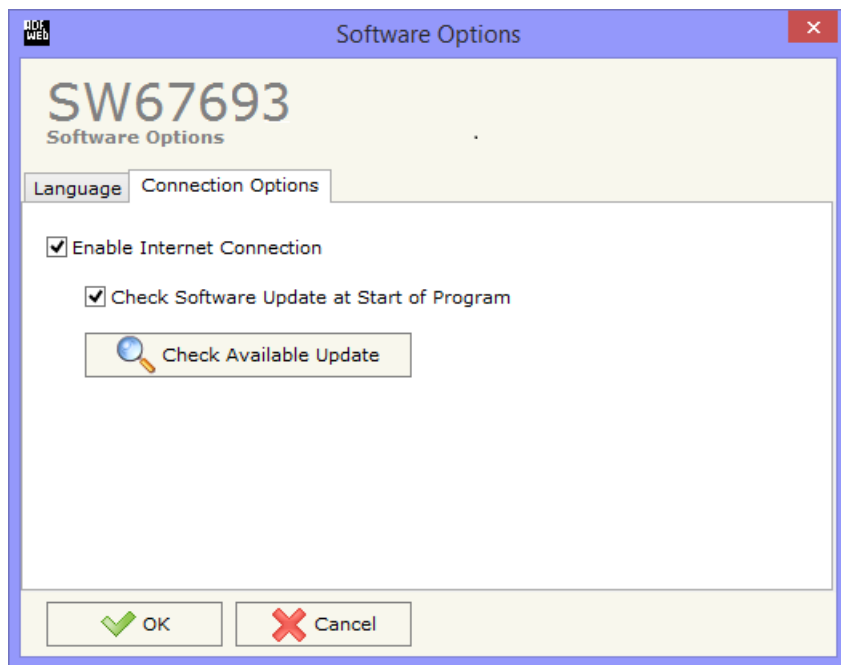
In the section "Connection Options", it is possible to check if there are some updatings of the software compositor in ADFweb.com website.
Checking the option "**Check Software Update at Start of Program**", the SW67693 check automatically if there are updatings when it is launched.

Industrial Electronic Devices

SET COMMUNICATION:

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

By Pressing the "**Set Communication**" button from the main window for SW67693 (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 (use ethernet);
+ BACnet MS/TP (use RS485);
+ BACnet PTP (use RS232).

If selected "BACnet/IP" the means of the fields for "BACnet" are:

+ In the fields "**IP ADDRESS**" insert the IP address that you want to give to the Converter;
+ In the fields "**SUBNET Mask**" insert the SubNet Mask;
+ In the fields "**GATEWAY**" insert the default gateway that you want to use. This feature can be enabled or disabled pressing the Check Box field. This feature is used for going out of the net;
+ In the field "**Port**" the port number 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**" is possible to assign a name to the BACnet node;
+ In the field "**Device Identifier**" is possible to assign a number to the BACnet node (Used for the Device Identifier).
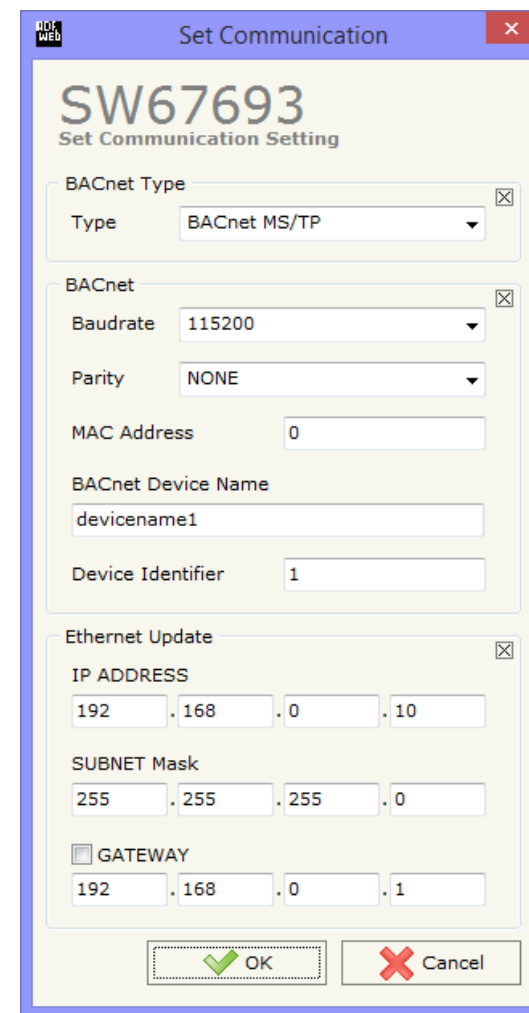
Figure 3: "Set Communication" window

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

➔ In the field "**Baudrate**" it is possible to select the baudrate of the BACnet line (1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200);
➔ In the field "**Parity**" it is possible to select the parity of the line (None, Odd, Even);
➔ In the field "**MAC Address**" is possible to define the MAC of BACnet node (from 0 to 254);
➔ In the field "**BACnet Device Name**" is possible to insert the name to give to the BACnet node (maximum 17 characters).

If selected "BACnet MS/TP" or "BACnet PTP" the means of the fields for "Ethernet Update" are:

➔ In the fields "**IP ADDRESS**" insert the IP address that you want to give to the Converter (updating and SNMP);
➔ In the fields "**SUBNET Mask**" insert the SubNet Mask;
➔ In the fields "**GATEWAY**" insert the default gateway that you want to use. This feature can be enabled or disabled pressing the Check Box field. This feature is used for going out of the net.

Set Communication — SW67693 — Set Communication Setting

BACnet Type
Type: BACnet MS/TP

BACnet
Baudrate: 115200
Parity: NONE
MAC Address: 0
BACnet Device Name: devicename1
Device Identifier: 1

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

OK   Cancel

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SET BACNET ACCESS:

By Pressing the "**Set BACnet Access**" button from the main window for SW6767993 (Fig. 2) the window "BACnet Set Access" appears (Fig. 4).

The window is divided in two parts, the "BACnet in Read" that contains the BACnet objects readable by a BACnet Master (the SNMP data associated to these objects are written by a SNMP Client); and "BACnet in Write" that contains the BACnet objects writeable by a BACnet Master (the SNMP data associated to these objects are read by a SNMP Master).

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

- In the field "**Data Type**" 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. 5);
- In the field "**Position**" is possible to select the position where take/save the data from a 1440 bytes array;
- The field "**Start Bit**" is used for the "Binary In" and "Binary Out" BACnet objects;
- The field "**Length**" is used for all the others BACnet objects (on "BACnet in Write" this field isn't editable).
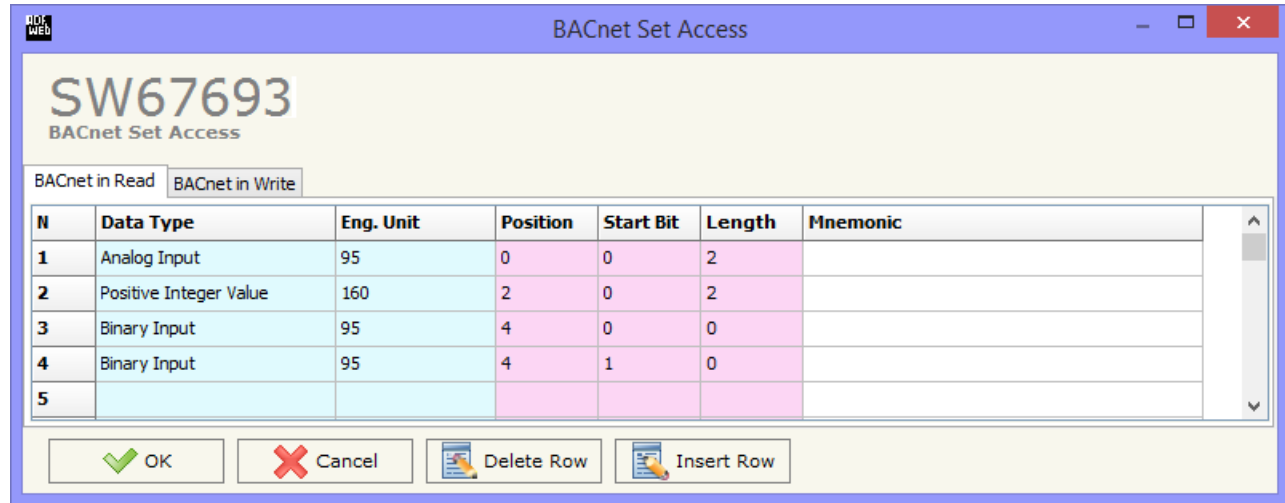
Figure 4: "BACnet Set Access" window

Notes:
On "BACnet in Write" the dimensions (Length) of the variable is fixed. 'Analog Output' occupies 4 bytes, 'Positive Integer Value' occupies 4 bytes, 'Large Analog Value' occupies 8 bytes and 'Binary Out' occupies 1 byte.

The "BACnet in Write" object are also readable.

For writing the data, using 'Present_Value' property, is necessary to use the Type 'Real' for the 'Analog Output', Type 'Double' for the 'Large Analog Value', Type 'Unsigned' for the 'Positive Integer Value' and Type 'Enumerated' for the 'Binary Output'.

The "Mnemonic" field is readable like 'Object_Name' and 'Description' property of BACnet variable.

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.
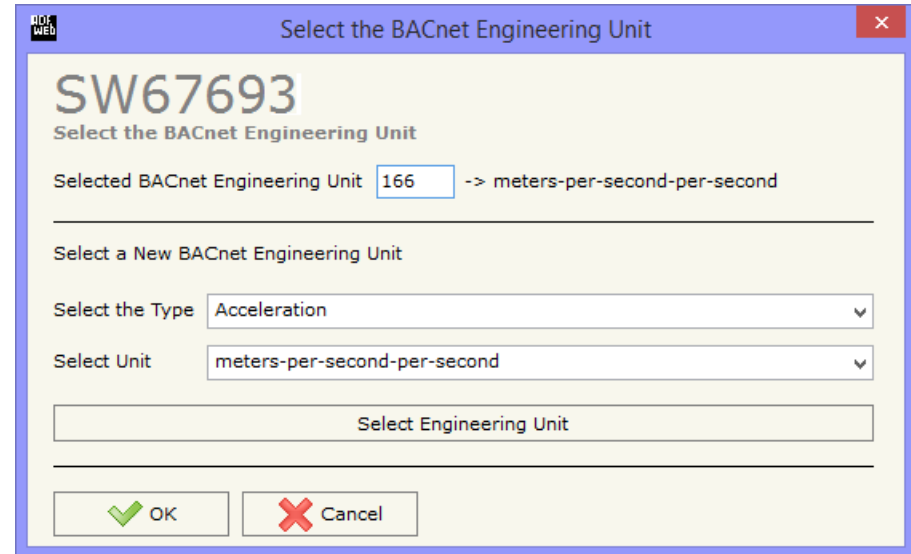

Figure 5: "Select the BACnet Engineering Unit" window

OBJECTS MAP:

By Pressing the "**Objects Map**" button from the main window for SW67693 (Fig. 2) is possible to create a .csv document with the map of BACnet Objects.

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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 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.

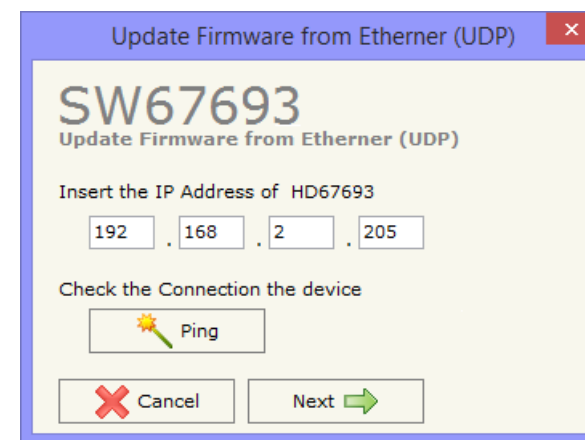At this point the configuration/firmware on the device is correctly updated.
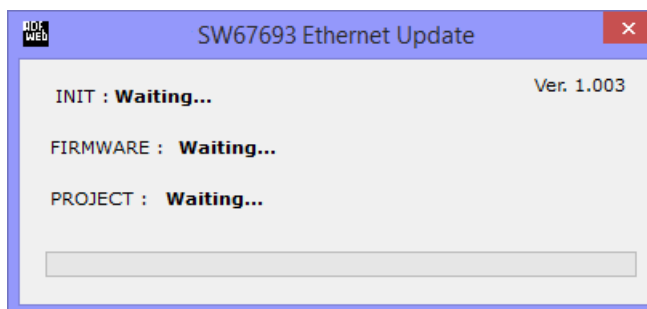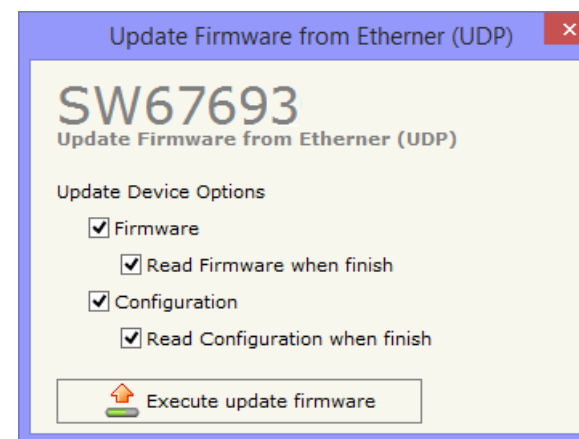
Figure 6: "Update device" windows

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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.

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 HD67693 device.

Note:
When you receive the device, for the first time, you also have to update the Firmware in the HD67693 device.

Warning:
If Fig. 7 appears when you try to do the Update try these points before seeking assistance:

→ Try to repeat the operations for the update;
→ Try with another PC;
→ Try to restart the PC;
→ If you are using the program inside a Virtual Machine, try to use it in the main Operating System;
→ If you are using Windows Seven or Vista or 8, make sure that you have the administrator privileges;
→ Pay attention to the Firewall lock;
→ Check the LAN settings.

Figure 7: "Protection" window

⚠ In the case of HD67693 you have to use the software "SW67693": www.adfweb.com\download\filefold\SW67693.zip.
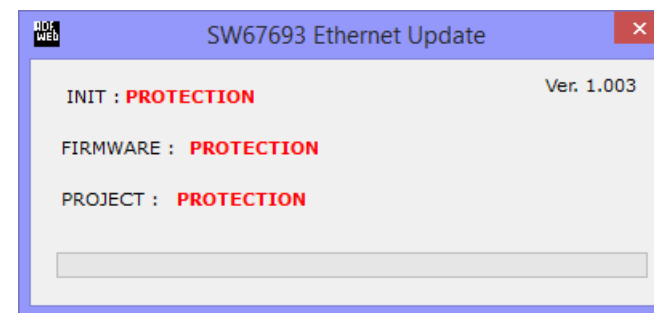
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SNMP COMMUNICATION

In order to read/write the data from/to BACnet side, it is necessary to use specific SNMP commands in order to see the SNMP Input and write the SNMP Output.

Reading BACnet data from SNMP:

In order to read the data from the HD67693-xxx-A1/B2 it is necessary to use the "snmpget" command. The Input array is contained to this internal directory: 1.3.6.1.4.1.33118.1.1.1.4.x.0, where 'x' is the number of data block. Each data block has a dimension of 128 bytes.

Example: you want to read informations of the data block 3. The structure of the command to send is:

snmpget –v1 –cprivate "IP Address of the converter" 1.3.6.1.4.1.33118.1.1.1.4.**3**.0

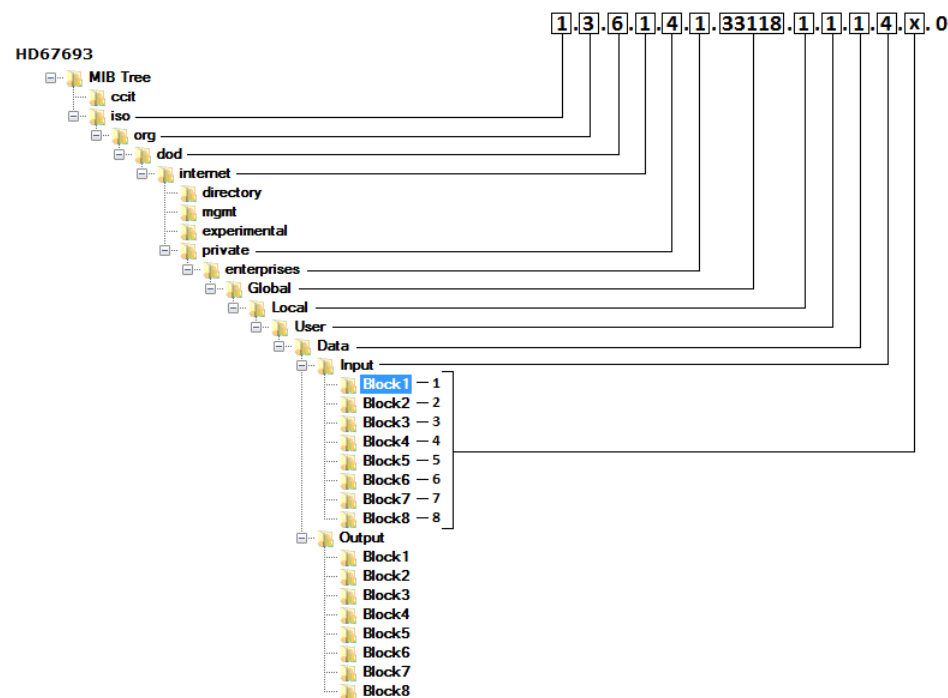*Figure 8a: MIB Tree Input*

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Writing BACnet data from SNMP:

In order to write the data to the HD67693-xxx-A1/B2 it is necessary to use the "snmpset" command. The Output array is contained to this internal directory: 1.3.6.1.4.1.33118.1.1.1.4.x.0, where 'x' is the number of data block. Each data block has a dimension of 128 bytes.

Example: you want to write informations of the data block 3 with the data '0123456789' (ASCII). The structure of the command to send is:

snmpset –v1 –cprivate "IP Address of the converter" 1.3.6.1.4.1.33118.1.1.1.5.**3**.0 s "0123456789"
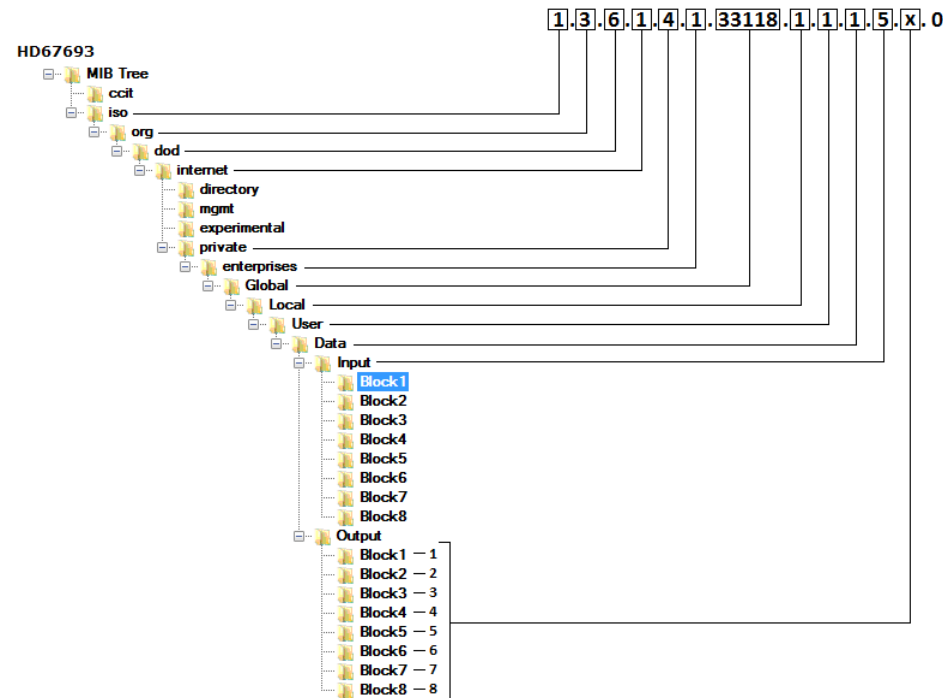
Figure 8b: MIB Tree Output

Note:
    The data blocks from 1 to 8 are used to read/write the entire internal BACnet arrays of the converter. The data are represented in bytes.
Each BACnet Object defined in the section "Set BACnet Access" is associated to a specific MIB too. In order to read/write a specific BACnet Object from SNMP, it is necessary to use the Data Block 9.

The BACnet Objects in write will be mapped consecutively to the BACnet Objects in read. So, in the MIB structure, you will find all the BACnet Objects in read defined and then all the BACnet Objects in write. See the following example for more informations.

Example:

We have defined two Analog Inputs in the section "Set BACnet Access -> BACnet in Read" and two Analog Outputs in the section "Set BACnet Access -> BACnet in Write".

In order to read the first Analog Input (the first raw of the "BACnet in Read" table), the MIB to require will be 1.3.6.1.4.1.33118.1.1.1.4.**9**.**1** where:

-**9**: Data Block 9
-**1**: First raw of the "Set BACnet Access" section

The BACnet Objects in write will be mapped consecutively to the BACnet Objects in read, so, in this example, in order to write the first Analog Output (the first raw of the "BACnet in Write" table), the MIB to require will be 1.3.6.1.4.1.33118.1.1.1.5.**9**.**3** where:
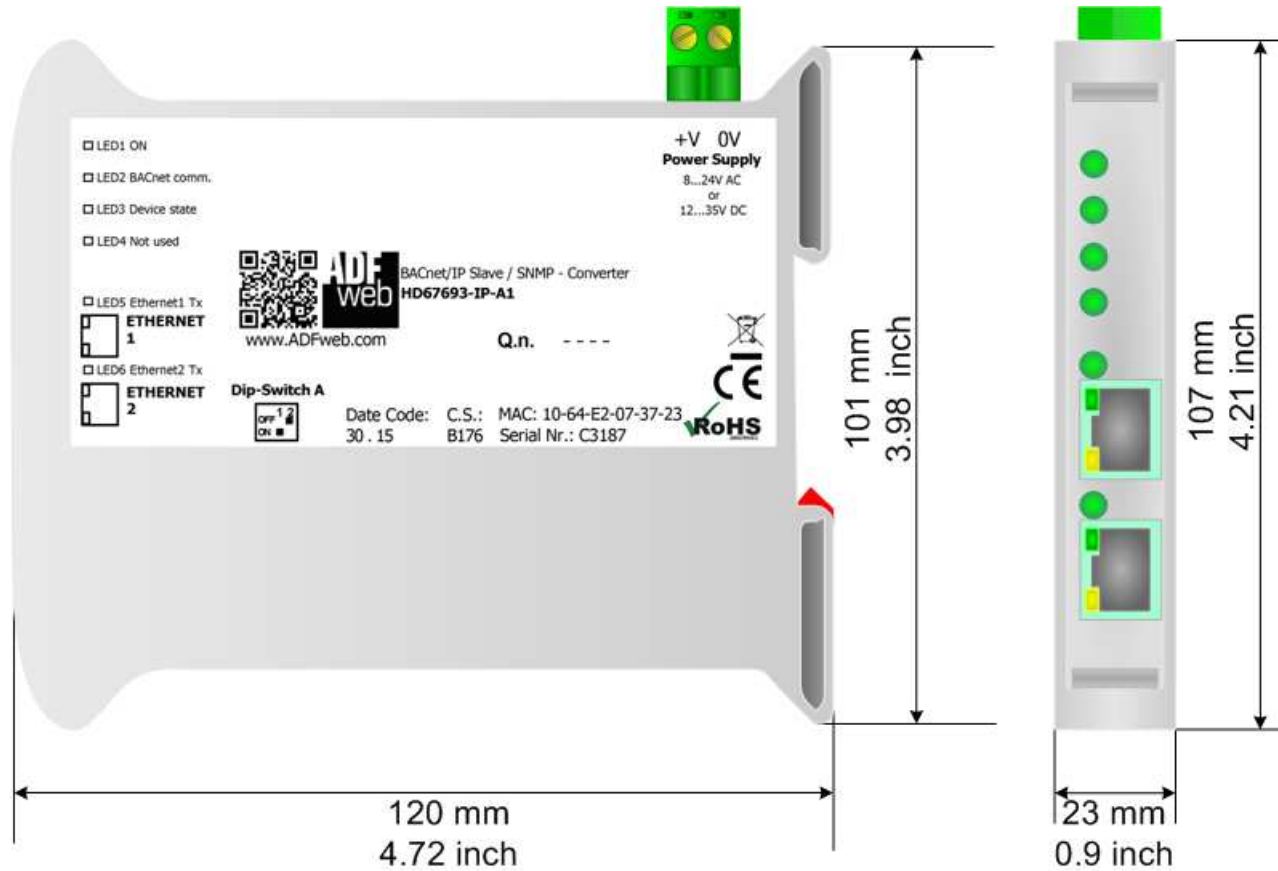
-**9**: Data Block 9
-**3**: n + 1, where 'n' is the last raw's number of the "BACnet in Read" table.

Note:
    It is possible to read an entire data block or only a specific byte/value (for the Data Block 1 to 8). It depends on the MIB used:
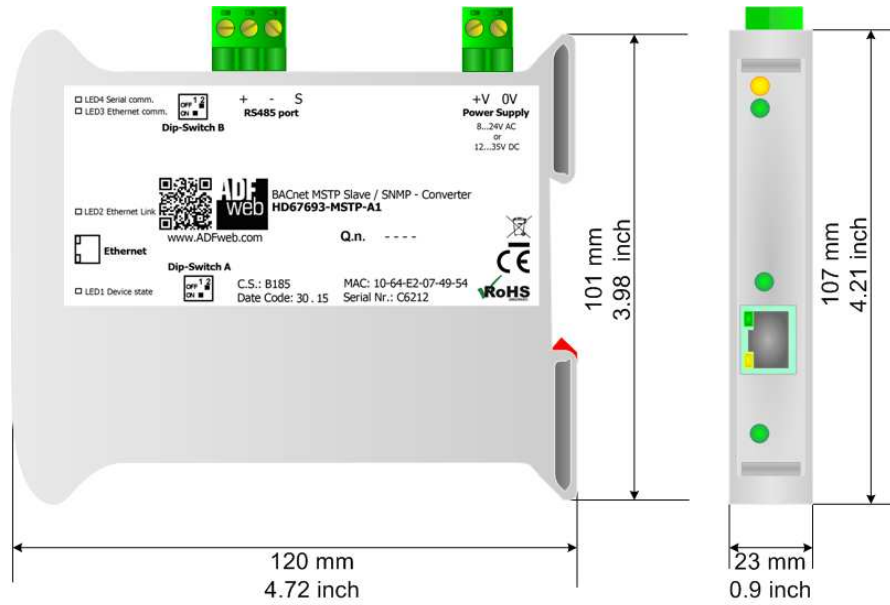- 1.3.6.1.4.1.33118.1.1.1.4.x.0: entire data block
- 1.3.6.1.4.1.33118.1.1.1.4.x.y: value of the data block/specific byte

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MECHANICAL DIMENSIONS:

Housing: PVC
Weight: 200g (Approx)

Figure 9a: Mechanical dimensions scheme for HD67693-IP-A1

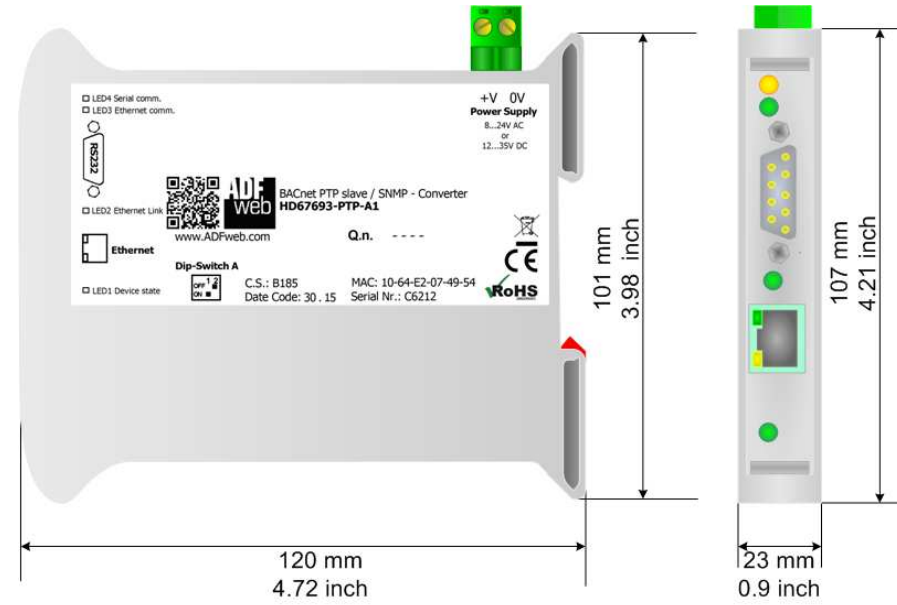**ADFweb**

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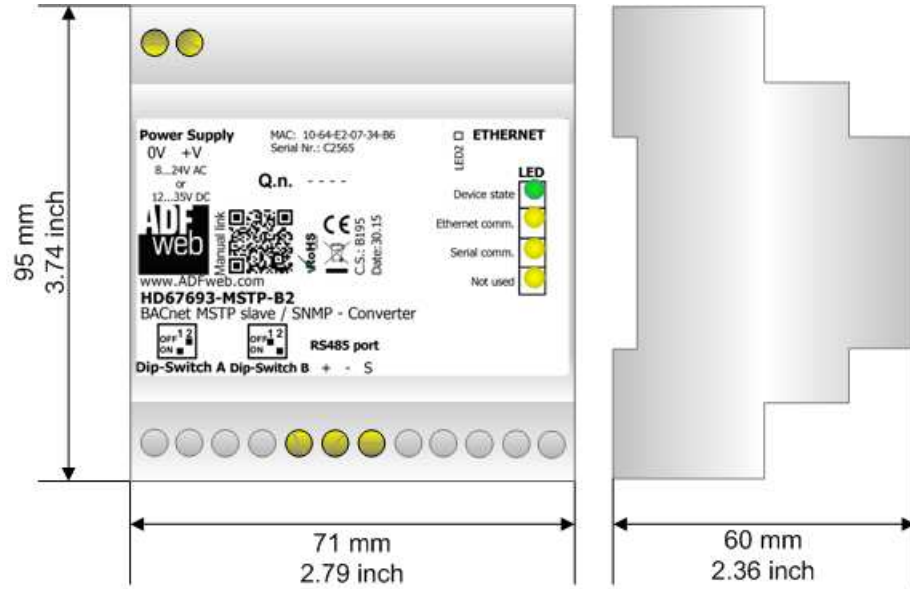

Housing: PVC
Weight: 200g (Approx)

Figure 9b: Mechanical dimensions scheme for HD67693-MSTP-A1
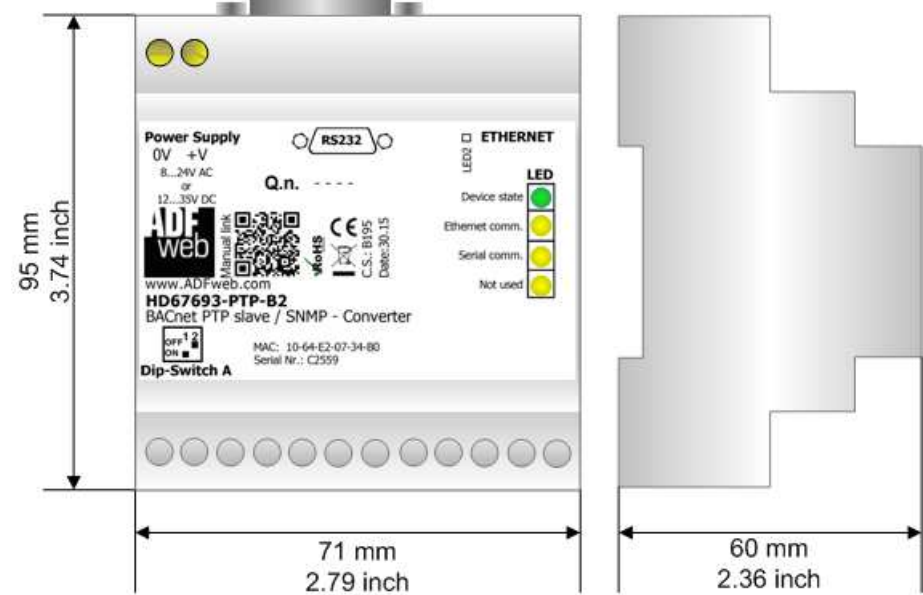

Housing: PVC
Weight: 200g (Approx)

Figure 9c: Mechanical dimensions scheme for HD67693-PTP-A1

Housing: PVC
Weight: 200g (Approx)

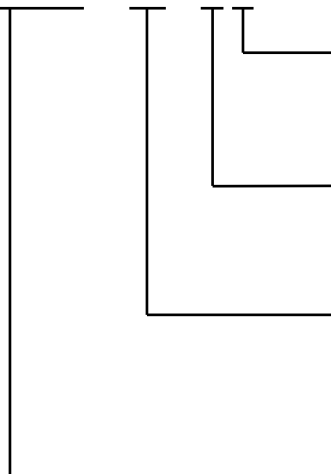*Figure 9d: Mechanical dimensions scheme for HD67693-MSTP-B2*

Housing: PVC
Weight: 200g (Approx)

Figure 9e: Mechanical dimensions scheme for HD67693-PTP-B2

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ORDERING INFORMATIONS:

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

HD67693 – xxx – xx

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
PTP: BACnet PTP

Device Family
HD67693: BACnet slave / SNMP - Converter

Order Code: **HD67693-IP-A1**   -   BACnet/IP slave / SNMP – Converter
Order Code: **HD67693-MSTP-A1**   -   BACnet MS/TP slave / SNMP – Converter
Order Code: **HD67693-MSTP-B2**   -   BACnet MS/TP slave / SNMP - Converter
Order Code: **HD67693-PTP-A1**   -   BACnet PTP slave / SNMP - Converter
Order Code: **HD67693-PTP-B2**   -   BACnet PTP slave / SNMP - 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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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.