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Industrial Electronic Devices

User Manual

Revision 1.010
English

BACnet slave / PROFIBUS master - Converter

(Order Code: HD67675-IP-A1, HD67675-MSTP-A1,
                HD67675-PTP-A1)

For Website information:
www.adfweb.com/?Product=HD67675

For Price information:
www.adfweb.com/?Price=HD67675-IP-A1
www.adfweb.com/?Price=HD67675-MSTP-A1
www.adfweb.com/?Price=HD67675-PTP-A1

Benefits and Main Features:

⊕ Very easy to configure

⊕ PROFIBUS DP-V0 up to 6Mbps

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

User Manual

For others PROFIBUS products see also the following link:

PROFIBUS Master from/to …
www.adfweb.com?Product=HD67570   (… **DeviceNet Slave**)
www.adfweb.com?Product=HD67575   (… **Ethernet**)
www.adfweb.com?Product=HD67577   (… **CAN**)
www.adfweb.com?Product=HD67579   (… **Modbus TCP Slave**)
www.adfweb.com?Product=HD67580   (… **Modbus Slave**)

EtherNet/IP from/to …
www.adfweb.com?Product=HD67077   (… **M-Bus**)
www.adfweb.com?Product=HD67589   (… **NMEA 2000**)
www.adfweb.com?Product=HD67590   (… **Serial**)
www.adfweb.com?Product=HD67591   (… **Modbus Master**)
www.adfweb.com?Product=HD67592   (… **Modbus Slave**)
www.adfweb.com?Product=HD67594   (… **PROFIBUS Slave**)
www.adfweb.com?Product=HD67595   (… **CAN**)
www.adfweb.com?Product=HD67597   (… **DeviceNet Master**)
www.adfweb.com?Product=HD67598   (… **DeviceNet Slave**)

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:

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- Updated
- Related to the product you own

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

REVISION LIST:

Revision	Date	Author	Chapter	Description
1.000	26/01/2013	Ff	All	First release version
1.001	19/05/2014	Fl	All	Revision
1.010	17/06/2015	Fl	All	Software changed (v1.100)

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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:

BACnet MS/TP network

PROFIBUS network

Slaves
PROFIBUS

HD67675-MSTP-A1

BACnet PTP network

PROFIBUS network

Slaves
PROFIBUS

HD67675-PTP-A1

CONNECTION SCHEME:

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

= Normal   = Boot

Connector2:
PROFIBUS port (Isolated port)
(D-SUB9-Female)

-PIN3 = wire A
-PIN5 = Shield** (to Isolated Ground)
-PIN8 = wire B

5 4 3 2 1

9 8 7 6

Led1:
Green
Power

Led2:
Green
Device state

Led3:
Green
PROFIBUS comm.

Led4:
Green
PROFIBUS error

Led5:
Green
Ethernet1

Connector3:
Ethernet1 port
(RJ45 Plug)

Led6:
Green
Ethernet2

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 Device state
LED3 PROFIBUS comm.
LED4 PROFIBUS error
LED5 Ethernet1 TX
ETHERNET1
LED6 Ethernet2 TX
ETHERNET2

Dip-Switch A

PROFIBUS

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

BACnet/IP slave / PROFIBUS master - Converter
HD67675-IP-A1

www.ADFweb.com

Q.n.   - - - -

Date Code: C.S.: MAC: 10-64-E2-07-37-23
25 . 15   B184 Serial Nr.: C3187

+V 0V

Figure 1a: Connection scheme for HD67675-IP-A1

Dip-Switch B:
-Dip1 – Must be at ON
-Dip2 – Functioning Mode   = Normal   = Boot

Connector3:
PROFIBUS (Isolated port)
(D-SUB9-Female)

-PIN3 = wire A
-PIN5 = Shield** (to Isolated Ground)
-PIN8 = wire B

5 4 3 2 1

9 8 7 6

Led5:
Green
Ethernet Link

Connector4:
Ethernet port
(RJ45 Plug)

Led4:
Green
PROFIBUS comm

Led3:
Green
Device State

Led1: **Led2:**
Green   Green
Power   BACnet comm

Rail DIN Clamp

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

    = Open   = 220 Ohm

Connector2:
RS485 (Isolated port)

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

Connector1:
Power Supply port

0V = Ground
+V = Positive wire

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

Figure 1b: Connection scheme for HD67675-MSTP-A1

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Dip-Switch B:
-Dip1 – Must be at ON
-Dip2 – Functioning Mode   = Normal   = Boot

Tx Rx S
RS232 port
(Isolated Port)

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

BACnet PTP slave / PROFIBUS master - Converter
HD67675-PTP-A1

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LED5 Ethernet Link

ETHERNET

LED4 PROFIBUS comm.
LED3 Device state
LED2 BACnet comm.
LED1 Power

Dip-Switch A

C.S.: Date Code: MAC: 10-64-E2-07-50-C3
B153 25.15   Serial Nr.: C8115

CE RoHS

Tx Rx Gnd   +V 0V

Connector3:
PROFIBUS (Isolated port)
(D-SUB9-Female)

-PIN3 = wire A
-PIN5 = Shield** (to Isolated Ground)
-PIN8 = wire B

5 4 3 2 1

9 8 7 6

Led5:
Green
Ethernet Link

Connector4:
Ethernet port
(RJ45 Plug)

Led4:
Green
PROFIBUS comm

Led3:
Green
Device State

Led1:   **Led2:**
Green   Green
Power   BACnet comm

Rail DIN Clamp

Connector2:
RS232 (Isolated port)

GND = Ground* (to Isolated Ground)
Rx = Rx line
Tx = Tx line

Connector1:
Power Supply port

0V = Ground
+V = Positive wire

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

Figure 1c: Connection scheme for HD67675-PTP-A1

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CHARACTERISTICS:

The HD67675-xxx-A1 are BACnet slave / PROFIBUS master Converter.

It allows the following characteristics:

- Triple isolation between BACnet/PROFIBUS, BACnet/Power Supply, PROFIBUS/Power Supply;
- Two-directional information between BACnet and PROFIBUS bus;
- Connect PROFIBUS DP-V0 slave devices;
- Available BACnet objects Type: Analog-Input, Analog-Output, Analog-Value, Binary-Input, Binary-Output, Binary-Value, Positive-Integer-value, Integer-Value, Large-Analog-Value, MultiState-Input, MultiState-Output, MultiState-Value, Life-Safety-Point, Life-Safety-Zone, Access-Door, Accumulator;
- Available BACnet Property: Present-Value;
- 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 SW67675 software on your PC in order to perform the following:

- Define the parameter of the PROFIBUS;
- Define the parameter of the BACnet;
- Define the PROFIBUS network;
- Define the BACnet data that a master read;
- Define the BACnet data that a master write;
- Update the device.

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POWER SUPPLY:

The devices can be powered between a wide range of tensions. For more details see the two tables below.

	VAC ⁓		VDC ▦	
	Vmin	**Vmax**	**Vmin**	**Vmax**
HD67675-A1	**8V**	**24V**	**12V**	**35V**

Consumption at 24V DC:

Device	W/VA
HD67675-IP-A1	4
HD67675-MSTP-A1	4
HD67675-PTP-A1	4

⚠ **Caution: Do not reverse the polarity power**

0V   +V

HD67675-IP-A1
HD67675-MSTP-A1
HD67675-PTP-A1

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

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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 at "OFF" position (factory setting), is used for the normal working of the device.
- The second, with Dip2 at "ON" position, is used for uploading the Project and/or Firmware.

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

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

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

= Normal   = Boot

⚠ Warning:
Dip1 of 'Dip-Switch A' must be at ON position to work even if the Ethernet cable is not inserted.

Industrial Electronic Devices

LEDS (for HD67675-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: Power [supply voltage] (green)	**ON:** Device powered **OFF:** Device not powered	**ON:** Device powered **OFF:** Device not powered
2: Device state (green)	Blinks slowly (~1Hz)	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
3: PROFIBUS comm. (yellow)	Blinks quickly when is communicating with at least one PROFIBUS slave device	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
4: PROFIBUS error (red)	**ON:** All slaves are communicating properly with the master. **OFF:** The communication with at least one PROFIBUS slave is not functioning	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
5: Ethernet1 (green)	Ethernet1 link	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
6: Ethernet2 (green)	Ethernet2 link	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress

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LEDS (for HD67675-MSTP-A1 and HD67675-PTP-A1):

The device has got five 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: Power [supply voltage] (green)	**ON:** Device powered **OFF:** Device not powered	**ON:** Device powered **OFF:** Device not powered
2: BACnet comm (green)	Blinks quickly when receive BACnet requests	**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: PROFIBUS comm (green)	Blinks quickly when is communicating with at least one PROFIBUS slave device	**Blinks quickly:** Boot state **Blinks very slowly (~0.5Hz):** update in progress
5: Ethernet Link (green)	**ON:** Ethernet cable connected **OFF:** Ethernet cable disconnected	**ON:** Ethernet cable connected **OFF:** Ethernet cable disconnected

PROFIBUS:

The PROFIBUS uses a 9-pin D-SUB connector. The pin assignment is defined like in the right figure.

Here some codes of cables:

- Belden: p/n 183079A - Continuous Armor DataBus® ISA/SP-50 PROFIBUS Cable;
- Siemens: 6XV1830-0EH10 - Overlapped aluminum-clad foil, sheathed in a braided screen of tinplated copper wires;

Here some codes of connectors:

- VIPA: 972-0DP30 - EasyConn PB 0°;
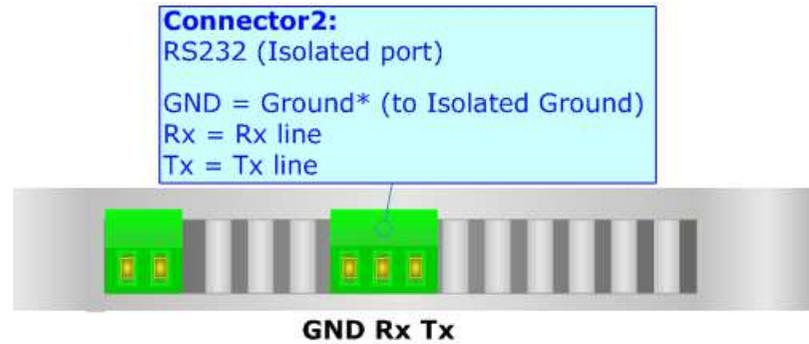- Siemens: 6GK1500-0FC10 - PROFIBUS FC bus connector RS 485 180°.

Connector2:
PROFIBUS port (Isolated port) (D-SUB9-Female)

-PIN3 = wire A
-PIN5 = Shield** (to Isolated Ground)
-PIN8 = wire B

5 4 3 2 1

9 8 7 6

Connector3:
PROFIBUS (Isolated port) (D-SUB9-Female)

-PIN3 = wire A
-PIN5 = Shield** (to Isolated Ground)
-PIN8 = wire B

5 4 3 2 1

9 8 7 6

ETHERNET:

The BACnet/IP connection and the updating of the Converter must be made using Connector3 and/or Connector4 of HD67675-IP-A1 or Connector4 of HD67675-MSTP-A1/HD67675-PTP-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.

Connector3:
Ethernet1 port (RJ45 Plug)

Connector4:
Ethernet2 port (RJ45 Plug)

RS232 (HD67675-PTP-A1):

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.

Connector2:
RS232 (Isolated port)

GND = Ground* (to Isolated Ground)
Rx = Rx line
Tx = Tx line

GND Rx Tx

RS485 (HD67675-MSTP-A1):

To terminate the RS485 line with a 220Ω resistor it is necessary to put ON dip 1, like in figure.

Connector2:
RS485 (Isolated port)

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

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

= Open   = 220 Ohm

S B A

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

Here some codes of cables:

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

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USE OF COMPOSITOR SW67675:

To configure the Converter, use the available software that runs with Windows called SW67675. It is downloadable from the site www.adfweb.com and its operation is described in this document *(this manual is referenced to the last version of the software present on the web site)*. The software works with MSWindows (XP, Vista, Seven, 8; 32/64bit).

When launching the SW67675, the window below appears (Fig. 2).

Note:
    It is necessary to have installed .Net Framework 4.

Figure 2: Main window for SW67675

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

SOFTWARE OPTIONS:

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

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

In the section "Connection Options", it is possible to check if there are some updatings of the software compositor in ADFweb.com website.
Checking the option "**Check Software Update at Start of Program**", the SW67675 check automatically if there are updatings when it is launched.

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SET COMMUNICATION:

This section defines the fundamental communication parameter of two buses, PROFIBUS and BACnet.

By pressing the "**Set Communication**" button from the main window of SW67675 (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).

The means of the fields for "PROFIBUS" are:

- In the field "**ID Dev.**" the address of the PROFIBUS side is defined;
- In the field "**Baud rate**" the baud rate for the PROFIBUS side is defined.

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 "**BACnet Device Name**" is possible to insert the name to give to the BACnet node (maximum 17 characters);
- In the field "**MAC Address**" is possible to define the MAC of BACnet node (from 0 to 254);

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

These information are used for programming the Converter.

SET COMMUNICATION

SW67675
Set Communication Setting

PROFIBUS
ID Dev. : 20
Baudrate : 6.0M

BACnet Type
Type : BACnet MS/TP

BACnet
Baudrate : 9600
Parity : NONE
MAC Address : 0
BACnet Device Name : devicename1

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

✔ OK   ✖ Cancel

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PROFIBUS NETWORK:

By pressing the "**PROFIBUS Network**" button from the main window for SW67675 (Fig. 2) the window "PROFIBUS Network" (Fig. 4) appears.

In this window is possible to:

- Modify the PROFIBUS Master Options ("**Master PROFIBUS Options**");
- Add a PROFIBUS Slave in the Network of the Master ("**Add Slave PROFIBUS**");
- Modify a PROFIBUS Slave in the Network ("**Modify Slave PROFIBUS**");
- Remove a PROFIBUS Slave from the Network ("**Remove Slave PROFIBUS**");
- Define the BACnet objects related to a slave PROFIBUS ("**Set BACnet Access**").

Figure 4: "PROFIBUS Network" window

MASTER PROFIBUS OPTIONS:

By pressing the "**Master PROFIBUS Options**" button from the "PROFIBUS Network" window (Fig. 4) the "PROFIBUS Master Options" window appears (Fig. 5).

In this window is possible to set the WatchDog Time for the PROFIBUS Slaves.

Figure 5: "PROFIBUS Master Options" window

Note:
   Fact1 and Fact2 could be write in decimal o hexadecimal (with prefix "0x" or "$") and the values must between 1 and 255

Warning:
The WatchDog time must be between 200 and 650250 milliseconds.

PROFIBUS DEVICE:

By pressing the "**Add Slave PROFIBUS**" and "**Modify Slave PROFIBUS**" button (or double click above an existent PROFIBUS Slave) from the "PROFIBUS Network" window (Fig. 4) the "PROFIBUS Device" window appears (Fig. 6).

In this window is possible to:

- Set the PROFIBUS Slave ID ("**ID Slave PROFIBUS**");
- Select the Modules present in the PROFIBUS Slave from the Available Modules in GSD file ("**Module Selection**");
- Modify the User Parameters (if present) of the PROFIBUS device ("**User Parameters**");
- Modify the Parameters (if present) of the Module Selected ("**Module Parameters**");
- Watch Features and Baudrate supported from the PROFIBUS device ("**Capabilities**");
- Select the Sync, Freeze and Reset of Data Options ("**Options**").

Figure 6: "PROFIBUS Device" window

MODULE SELECTION:

The section "Module Selection" is used to select which Modules are present in the Slave (Fig. 7).

In this section is possible to:

- Check the list of the Modules selected ("Select Modules") (Fig. 7, point (1)) and the list of Modules Available in GSD file ("Available Modules") (Fig. 7, point (7));
- Add a Module from the list of GSD file (Fig. 7, point (6));
- Remove a Module from selected list (Fig. 7, point (5));
- Add all Modules present in the GSD file (Fig. 7, point (4));
- Remove all Modules from selected list (Fig. 7, point (3));
- Insert a Module not present in the GSD file ("**Manual Module**") (Fig. 7 point (2)). For more info see the section "Manual Module" below.

Figure 7: "PROFIBUS Device – Module Selection" window

(1) List of selected modules

(2) Add a Module Create Manually

(3) Delete all Modules selected

(4) Add all Modules

(5) Delete selected Module

(6) Add selected Module

(7) List of Available Modules in GSD file

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By pressing the "**Manual Module**" button from the "PROFIBUS Device" window (Fig. 6) the "Add Module Manually" window appears (Fig. 8).

In this window is possible to add a Module manually, i.e. writing the configuration of the module (in hexadecimal).

The means of the fields are:

➔ In the field "**Description of Module**" a name of the Module is defined;
➔ In the field "**Insert the Configuration of Module (HEX)**" the configuration of the module is defined. The configuration must be write in hexadecimal mode (without prefix "0x" o "$").

To modify a Module inserted manually, is neccessary to do a double click on the module to change in the "Select Module" list (Fig. 7, point (1)). It is possible to change only the module inserted manually.

Note:
    The Values inserted in the table must between 00 and FF.

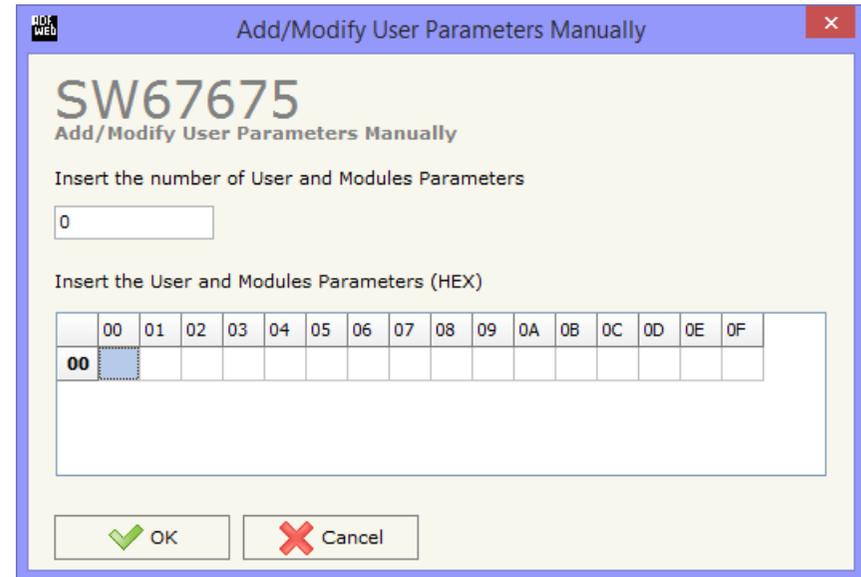*Figure 8: "Add/Modify Module Manually" window*

USER PARAMETERS:

The section "User Parameters" is used to modify the parameters of the PROFIBUS slave (Fig. 9).

In this section there are:

➜ The List of all Parameters available for the PROFIBUS device ("User Parameters") (Fig. 9, point (1));

➜ The Configuration of all parameters in RAW ("Parameters in RAW (Hex)") (Fig. 9, point(2));

➜ The "**Use Parameter Inserted Manually**", enable this option is possible to insert manually the parameters of Device and also of the Modules. Using the "**Modify User Parameters Manually**" button is possible to insert/modify the parametrization of the device (and/or modules). For more info see below. (Fig. 9, point(3));

➜ The admited value for the selected parameter. It is possible to select the value desired and confirm it with the "**Apply**" button. If no value appears in this table, the "Min Value" and "Max Value" are the limit of the parameter. (Fig. 9, point(4));

➜ The "**Apply**" button is used to confirm the new value of the parameter, the "**Default**" button is used to load the factory value for the parameter. In "**New Value**" edit box it is possible to set the new value. (Fig. 9, point(5)).

Figure 9: "PROFIBUS Device – User Parameters" window

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By pressing the "**Modify User Parameters Manually**" button from the "PROFIBUS Device" window (Fig. 6) the "Add Module Manually" window appears (Fig. 10).

In this window is possible to add/modify the User and/or Modules Parameters manually, i.e. writing the configuration of the parameters (in hexadecimal).

The means of the fields are:

- In the field "**Insert the number of User Parameter**" the number of byte for the parameter have to be inserted;
- In the field "**Insert the Configuration of Module (HEX)**" the configuration of the User and/or Modules Parameters is defined. The configuration must be write in hexadecimal mode (without prefix "0x" o "$").

Note:
The Values inserted in the table must between 00 and FF

Figure 10: "Add/Modify User Parameters Manually" window

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MODULE PARAMETERS:

The section "Module Parameters" is used to modify the parameters of the Modules (Fig. 11).

In this section there are:

+ The List of all Module selected in the GSD file ("Available modules") (Fig. 11, point (1));

+ The List of all Parameters available for the Module selected ("Parameters of module") (Fig. 11, point (2));

+ The Configuration of all parameters in RAW for the Module selected ("Parameters in RAW (Hex)") (Fig. 11, point(3));

+ The admited value for the selected parameter. It is possible to select the value desired and confirm it with the "**Apply**" button. If no value appears in this table, the "Min Value" and "Max Value" are the limit of the parameter. (Fig. 11, point(4));

+ The "**Apply**" button is used to confirm the new value of the parameter, the "**Default**" button is used to load the factory value for the parameter. In "**New Value**" edit box it is possible to set the new value. (Fig. 11, point(5)).

Figure 11: "PROFIBUS Device – Module Parameters" window

CAPABILITIES:

The section "Capabilities" is used only to show which features/baudrates available in the PROFIBUS device. The Green Icon indicate that capability/baudrate is available, the Red Icon indicate no compatibilities with that capability/baudrate (Fig. 12).
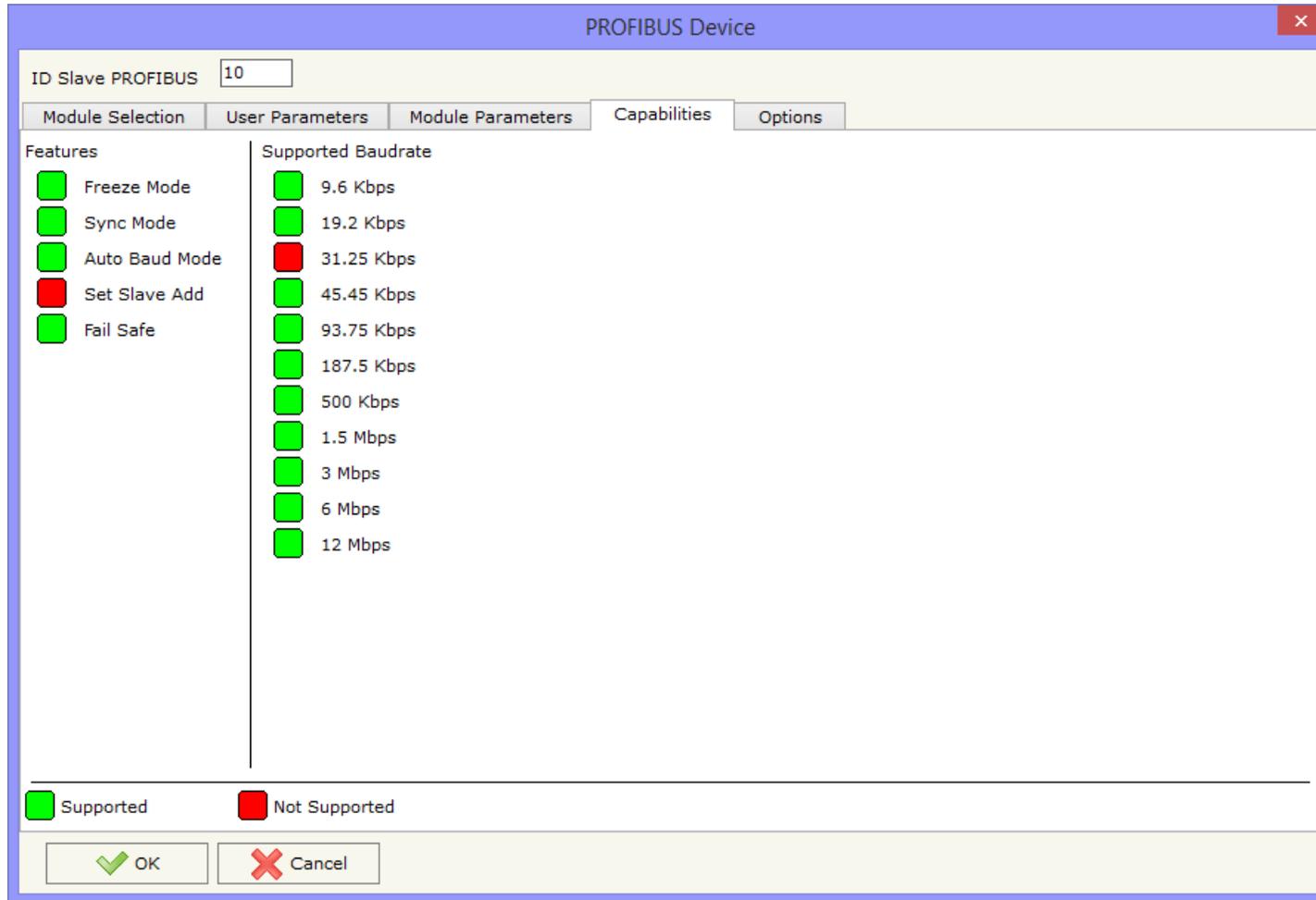
Figure 12: "PROFIBUS Device – Capabilities" window

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OPTIONS:

The section "Options" is used to enable some option for each PROFIBUS device (Fig. 13).

The means of the fields are:

- In the field "**Enable Sync**" the PROFIBUS Sync command is enable. This option is enable only if the "Sync Mode" is supported by the device (see Capabilities section to check it);

- In the field "**Enable Freeze**" the PROFIBUS Freeze command is enable. This option is enable only if the "Freeze Mode" is supported by the device (see Capabilities section to check it);

- In the field "**Reset data if PROFIBUS master loses communication from the slave**" is possible to select to cancel the data of the slave if the Master lost the connection with the device;

- In the field "**Reset data if BACnet Master doesn't write data with slave in ... milliseconds**" is possible to select to cancel the data sended to the slave PROFIBUS if the Converter don't receive a BACnet frame (read/write of present-value property) within the time expressed in the field.

Figure 13: "PROFIBUS Device – Options" window

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SET BACNET ACCESS:

By Pressing the "**Set BACnet Access** " button from the "PROFIBUS Network" window (Fig. 4) the window "Set BACnet Access" appears (Fig. 14).

The window is divided in two parts, the "**BACnet in Read**" that contains the BACnet objects readable by a BACnet master (the PROFIBUS data associated to these objects are the data that the slaves PROFIBUS sends to the converter); and "**BACnet in Write**" that contains the BACnet objects writeable by a BACnet master (the PROFIBUS data associated to these objects are the data that the the converter sends to slaves PROFIBUS).

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. 15);

- ✛ In the field "**Position**" is possible to select the position where take/save the data from the bytes of PROFIBUS;

- ✛ The field "**Start Bit**" is used for the "Binary In" and "Binary Out" BACnet objects;

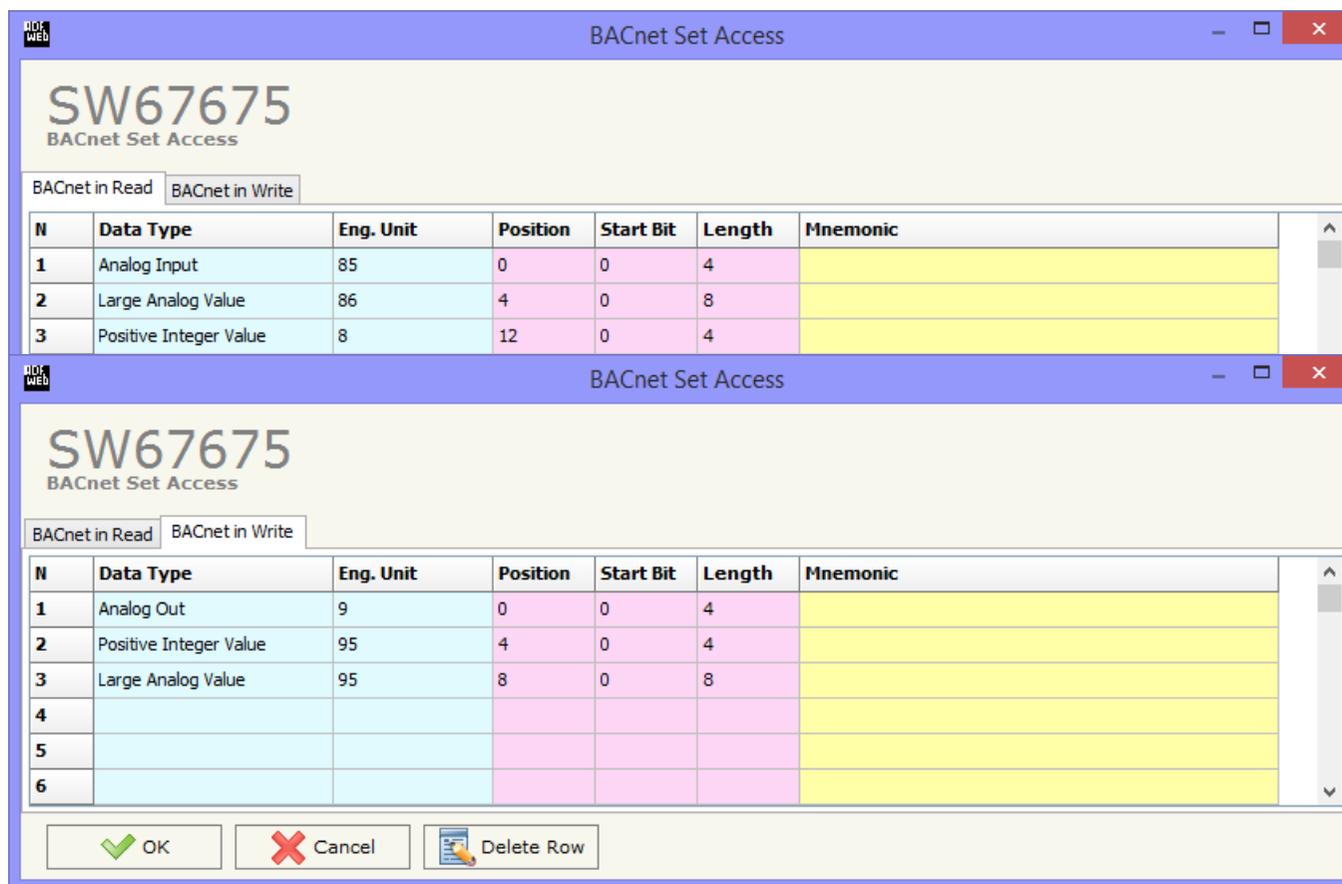- ✛ The field "**Length**" is used for all the others BACnet objects.

Figure 14: "BACnet Set Access" window

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.
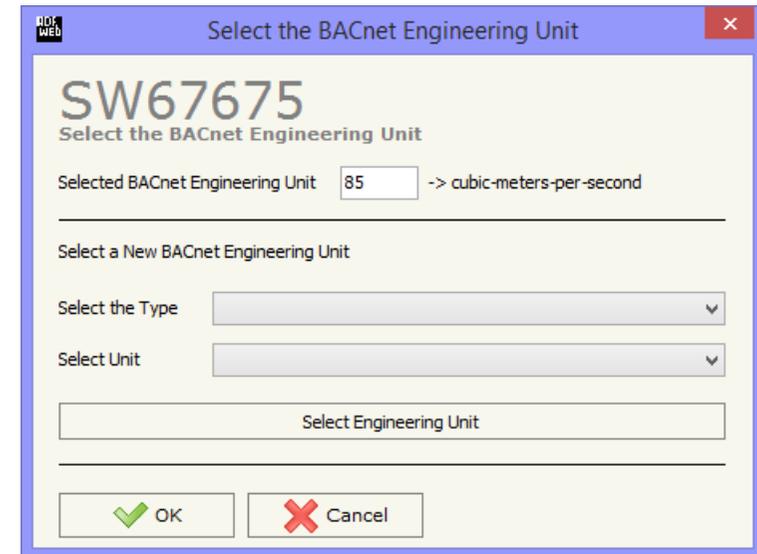

Figure 15: "Select the BACnet Engineering Unit" window

BACNET ACCESS:

By Pressing the "**BACnet Access**" button from the main window of SW67675 (Fig. 2) is possible to see the complete list of BACnet objects related with their PROFIBUS slave module.

BACNET OBJECT MAP:

By Pressing the "**BACnet Object Map**" button from the main window of SW67675 (Fig. 2) is possible to create a .csv document with the map of BACnet Objects.

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.

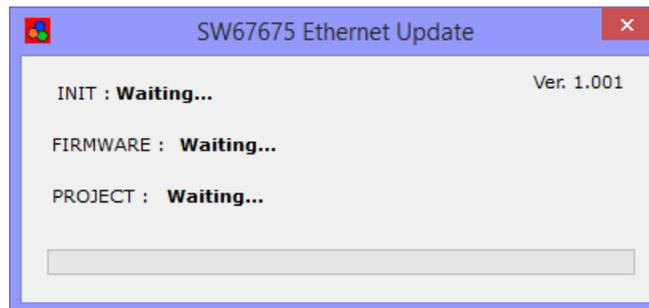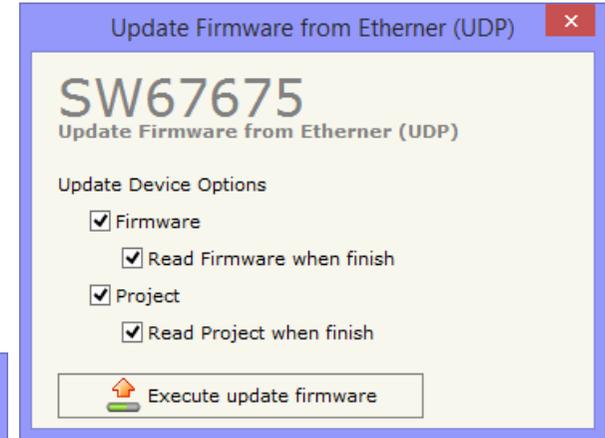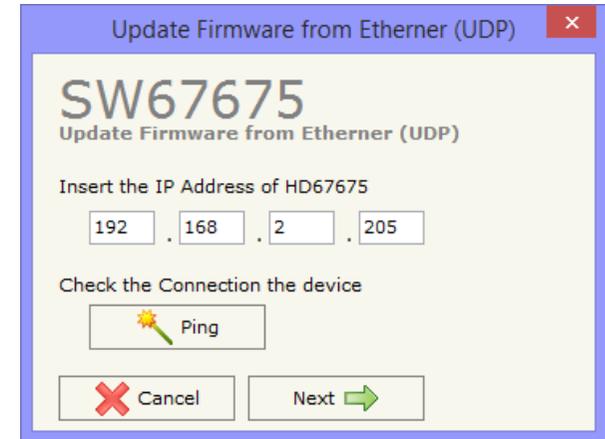At this point the configuration/firmware on the device is correctly updated.

Figure 16: "Update device" windows

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 update.

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 HD67675 device.

Note:
When you receive the device, for the first time, you also have to update the Firmware in the HD67675 device.

Warning:

If Fig. 17 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;
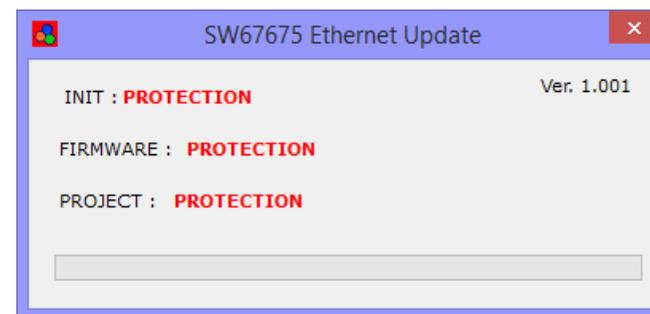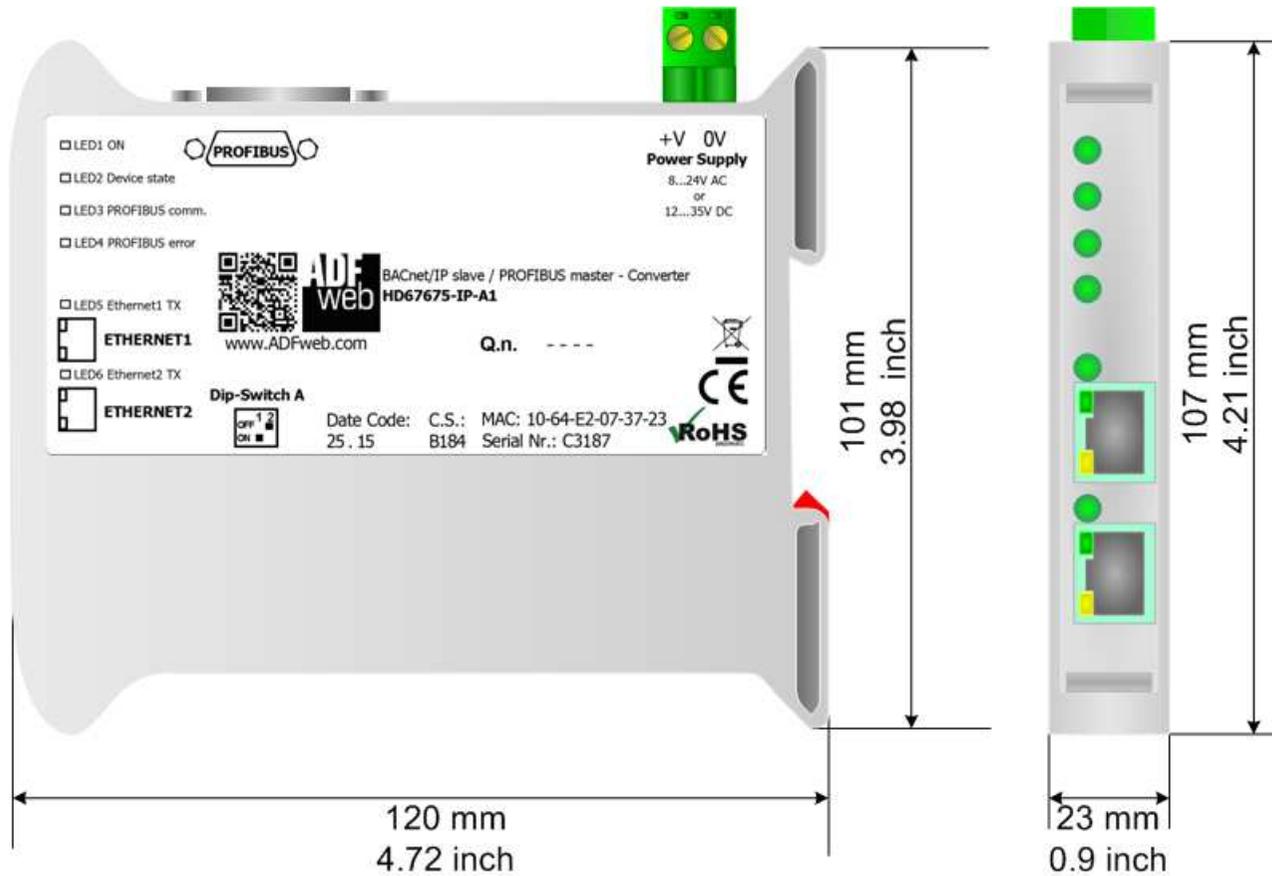- Pay attention to the Firewall lock;
- Check the LAN settings.

In the case of HD67675 you have to use the software "SW67675": www.adfweb.com\download\filefold\SW67675.zip.

Figure 17: "Protection"

MECHANICAL DIMENSIONS:

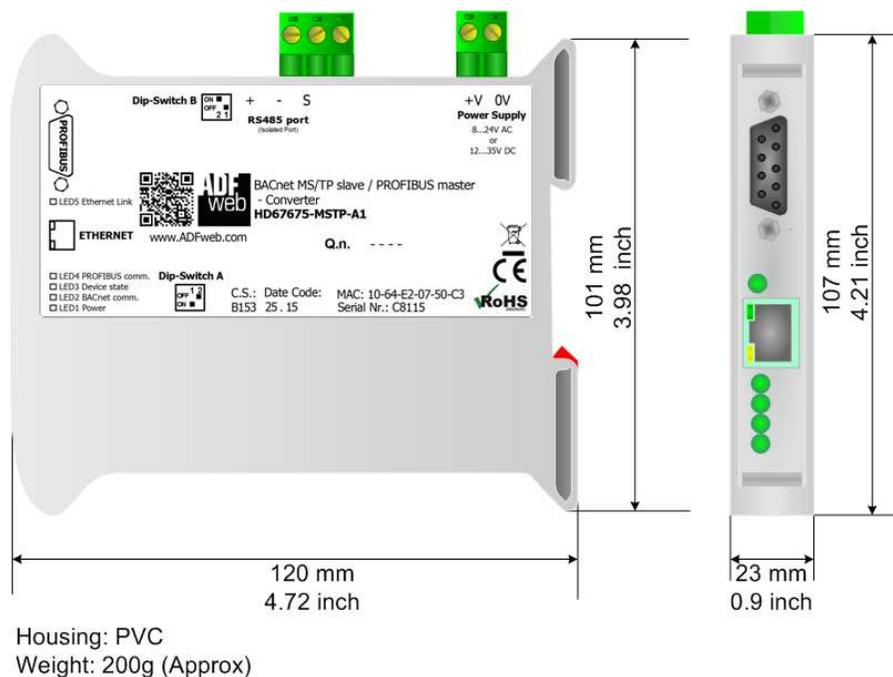*Figure 18a: Mechanical dimensions scheme for HD67675-IP-A1*

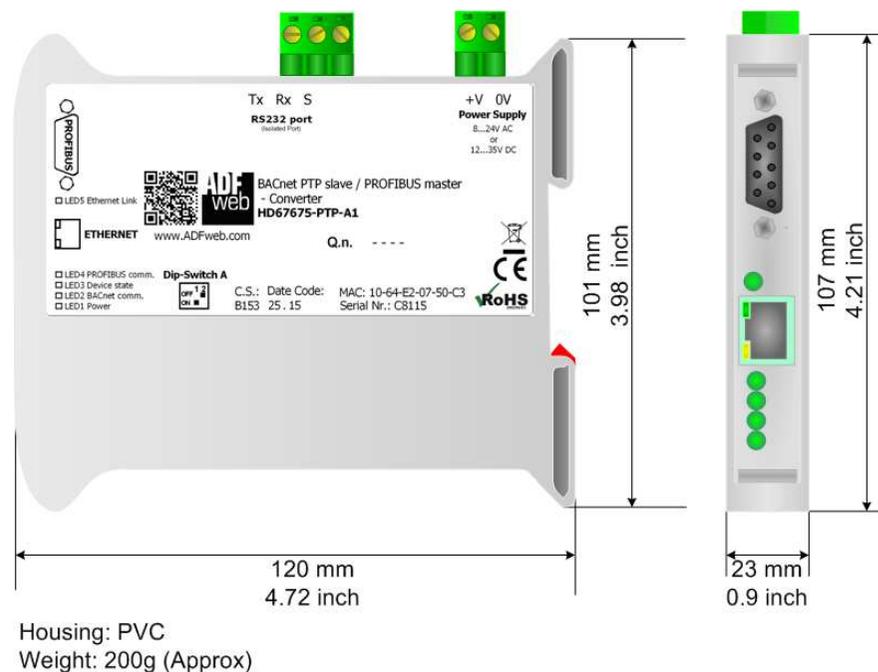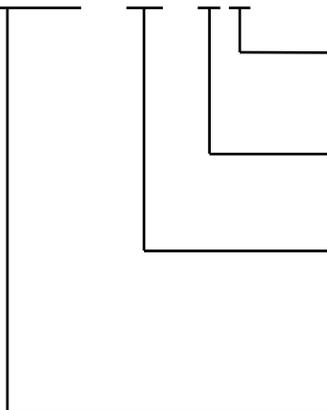*Figure 18b: Mechanical dimensions scheme for HD67675-MSTP-A1*

Figure 18c: Mechanical dimensions scheme for HD67675-PTP-A1

ORDERING INFORMATIONS:

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

HD67675 – xxx – xx

Connectors Type
1: Removable 5mm Screw Terminal

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

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

Device Family
HD67675: BACnet slave / PROFIBUS master- Converter

Order Code: **HD67675-IP-A1**   -   BACnet/IP slave / PROFIBUS master – Converter
Order Code: **HD67675-MSTP-A1**   -   BACnet MS/TP slave / PROFIBUS master – Converter
Order Code: **HD67675-PTP-A1**   -   BACnet PTP slave / PROFIBUS master - 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.

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