

User Manual

Revision 1.001 English

BACnet / J1939 - Converter

(Order Code: HD67685-IP-A1, HD67685-MSTP-A1, HD67685-MSTP-B2)

for Website information:

www.adfweb.com?Product=HD67685

for Price information:

www.adfweb.com?Price=HD67685-IP-A1 www.adfweb.com?Price=HD67685-MSTP-A1 www.adfweb.com?Price=HD67685-MSTP-B2

Benefits and Main Features:

- Electrical isolation
- Two BACnet ports
- Temperature range: -40°C/85°C (-40°F/185°F)



User Manual

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For others BACnet products see also the following link:

Converter BACnet to

www.adfweb.com?Product=HD67056 www.adfweb.com?Product=HD67086 www.adfweb.com?Product=HD67170 www.adfweb.com?Product=HD67670 www.adfweb.com?Product=HD67671 www.adfweb.com?Product=HD67673 www.adfweb.com?Product=HD67674 www.adfweb.com?Product=HD67675 www.adfweb.com?Product=HD67676 www.adfweb.com?Product=HD67677 www.adfweb.com?Product=HD67678 www.adfweb.com?Product=HD67679 www.adfweb.com?Product=HD67680 www.adfweb.com?Product=HD67681 www.adfweb.com?Product=HD67682 www.adfweb.com?Product=HD67683 www.adfweb.com?Product=HD67689 www.adfweb.com?Product=HD67693 www.adfweb.com?Product=HD67738 www.adfweb.com?Product=HD67767 www.adfweb.com?Product=HD67802 www.adfweb.com?Product=HD67833 www.adfweb.com?Product=HD67865 www.adfweb.com?Product=HD67901 www.adfweb.com?Product=HD67938 www.adfweb.com?Product=HD67966 www.adfweb.com?Product=HD67B11 www.adfweb.com?Product=HD67B32 www.adfweb.com?Product=HD67B81 www.adfweb.com?Product=HD67C56 www.adfweb.com?Product=HD67D17 www.adfweb.com?Product=HD67E06 www.adfweb.com?Product=HD67E56 www.adfweb.com?Product=HD67F17

(M-Bus Master) (M-Bus Wireless) (SNMP Manager) (DMX) (Modbus Master) (Modbus TCP Master) (Modbus TCP Slave) (PROFIBUS Master) (PROFIBUS Slave) (CAN) (CANopen) (PROFINET Slave) (DeviceNet Master) (DeviceNet Slave) (EtherNet/IP Slave) (NMEA 2000) (EtherNet/IP Master) (SNMP Agent) (IEC61850 Server) (IEC61850 Client) (KNX) (DALI) (IO-Link Master) (HART) (MOTT) (IO-Link Slave) (OPC UA Client) (OPC UA Server) (PROFINET Master) (EnOcean) (LoRaWAN)

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

INFO: www.adfweb.com

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

(EtherCAT Slave)

(EtherCAT Master)

(LoRaWAN Gateway)



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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.

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REVISION LIST:

Revision	Date	Author	Chapter	Description
1.000	15/07/2013	Fl	All	First Release
1.001	23/02/2024	Ln	All	Revision

WARNING:

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

TRADEMARKS:

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SECURITY ALERT:

GENERAL INFORMATION

To ensure safe operation, the device must be operated according to the instructions in the manual. When using the device are required for each individual application, legal and safety regulation. 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 instrument can represent a potential hazard if they are inappropriately installed and operated by personnel untrained. These instructions refer to residual risks with the following symbol:



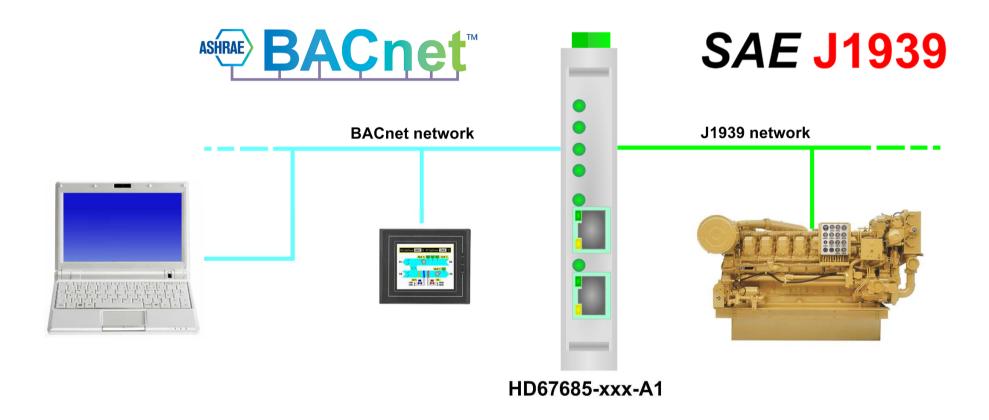
This symbol indicates that non-observance of the safety instructions is danger for people to serious injury or death and / or the possibility of damage.

CE CONFORMITY

The declaration is made by us. You can send an email to support@adfweb.com or give us a call if you need it.



EXAMPLE OF CONNECTION:



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CONNECTION SCHEME:

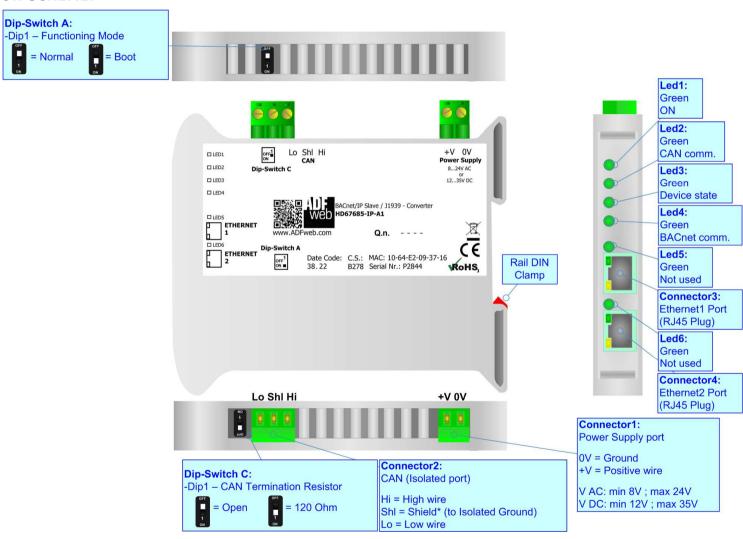


Figure 1a: Connection scheme for HD67685-IP-A1

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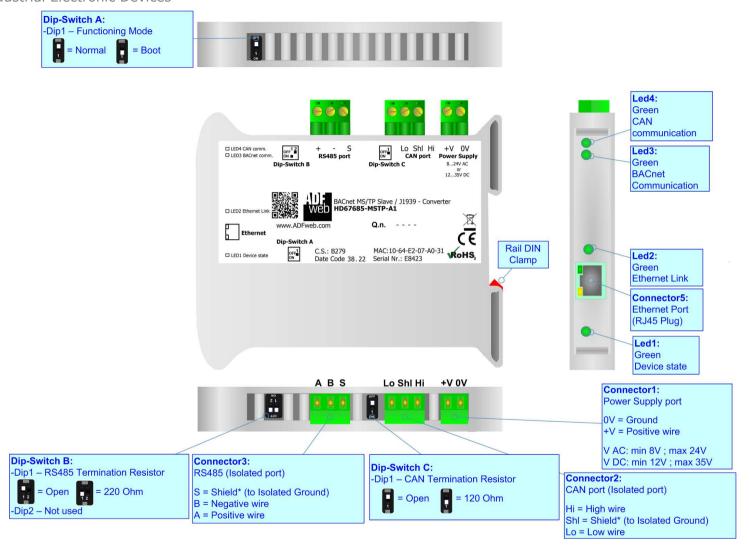


Figure 1b: Connection scheme for HD67685-MSTP-A1

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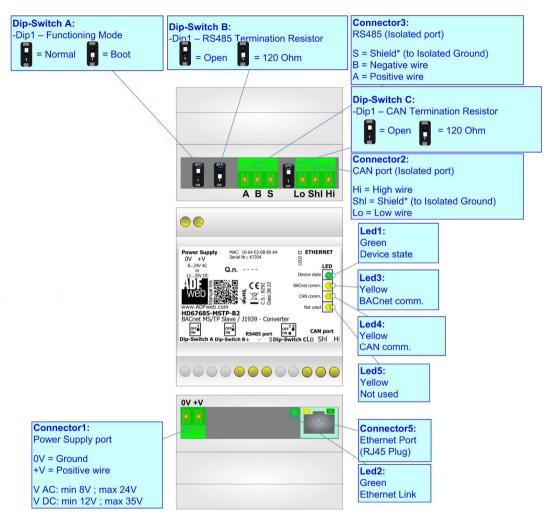


Figure 1c: Connection scheme for HD67685-MSTP-B2



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CHARACTERISTICS:

The HD67685-IP-A1, HD67685-MSTP-A1, HD67685-MSTP-B2 is a BACnet Slave / J1939 Converter.

It allows the following characteristics:

- → Up to 2048 BACnet objects (Read + Write);
- → Triple isolation between BACnet Power Supply, BACnet J1939, Power Supply J1939.
- → Two-directional information between BACnet bus and J1939 bus;
- → 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 SW67685 software on your PC in order to perform the following:

- → Define the parameter of BACnet line;
- → Define the parameter of J1939 line;
- ▶ Define BACnet objects that contains the data from J1939;
- Define BACnet objects that contains the data to to J1939;
- Update the device.

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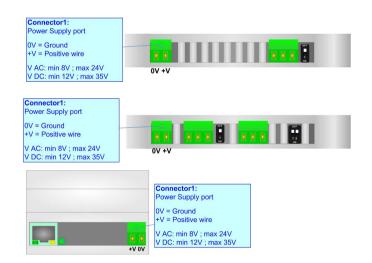
POWER SUPPLY:

The devices can be powered at 8...24V AC and 12...35V DC. For more details see the two tables below.

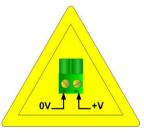
vac ~		VDC	===
Vmin	Vmax	Vmin	Vmax
8V	24V	12V	35V

Consumption at 24V DC:

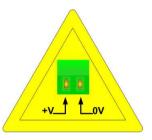
Device	Consumption [W/VA]	
HD67685-IP-A1	3.5	
HD67685-MSTP-A1	3.5	
HD67685-MSTP-B2	3.5	



Caution: Not reverse the polarity power



HD67685-IP-A1 HD67685-MSTP-A1



HD67685-MSTP-B2

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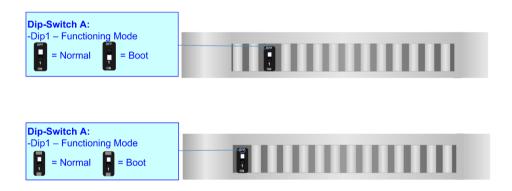
FUNCTION MODES:

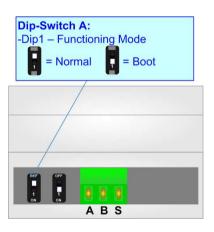
The device has got two functions mode depending of the position of the Dip1 of 'Dip-Switch A':

- ▶ The first, with Dip1 in Off position (factory setting), is used for the normal working of the device.
- → The second, with Dip1 in On position, is used for upload the Project/Firmware.

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

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





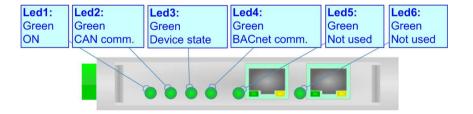
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LEDS:

HD67685-IP-A1

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

LED	Normal Mode	Boot Mode	
1: ON (green)	ON: Device powered	ON: Device powered	
1. ON (green)	OFF: Device not powered	OFF: Device not powered	
2. CAN comm. (groon)	Plinks when a CAN frame is received	Blinks quickly: Boot state	
2: CAN comm. (green)	Blinks when a CAN frame is received	Blinks very slowly (~0.5Hz): update in progress	
2. Davisa state (green)	Plinks slowly (111-)	Blinks quickly: Boot state	
3: Device state (green) Blinks slowly (~1Hz)		Blinks very slowly (~0.5Hz): update in progress	
4. BACnet semm (succe)	Plinks quickly when a PACnet request is received	Blinks quickly: Boot state	
4: BACnet comm. (green)	Blinks quickly when a BACnet request is received	Blinks very slowly (~0.5Hz): update in progress	
F. Naharad (mana)		Blinks quickly: Boot state	
5: Not used (green)	Not used	Blinks very slowly (~0.5Hz): update in progress	
C. Not wood (groop)	Not used	Blinks quickly: Boot state	
6: Not used (green) Not used		Blinks very slowly (~0.5Hz): update in progress	

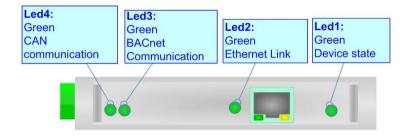


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HD67685-MSTP-A1

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

LED	Normal Mode	Boot Mode
1: Device State	Blinks slowly (~1Hz)	Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress
2: Link Ethernet	ON: Ethernet cable connected OFF: Ethernet cable disconnected	ON: Ethernet cable connected OFF: Ethernet cable disconnected
3: BACnet communication	Blinks when a BACnet request is received	Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress
4: CAN Communication	Blinks when a CAN frame is received	Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress

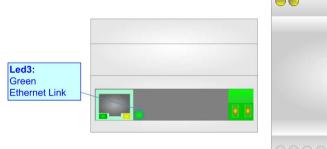


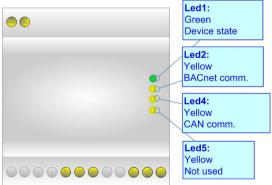
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HD67685-MSTP-B2

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

LED	Normal Mode	Boot Mode
1: Device State (Green)	tate (Green) Blinks slowly (~1Hz) Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in	
2: BACnet Communication (Yellow)	Blinks when a BACnet request is received	Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress
3: Link Ethernet (Green)	ON: Ethernet cable connected OFF: Ethernet cable disconnected	ON: Ethernet cable connected OFF: Ethernet cable disconnected
4: CAN Communication (yellow)	Blinks when a CAN frame is received	Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress
5: Not used (yellow)	Off	Blinks quickly: Boot state Blinks very slowly (~0.5Hz): update in progress

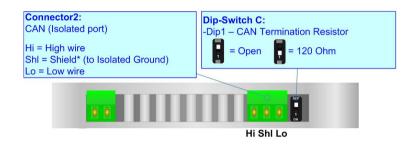




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J1939:

To terminate the J1939 line with a 120Ω resistor it is necessary that the Dip1 of 'Dip-Switch C' is at ON position.



Cable characteristics:

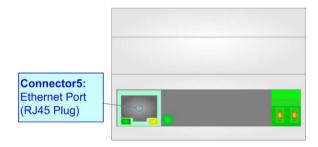
DC parameter:	Impedance	70 Ohm/m
AC parameters:	Impedance	120 Ohm/m
	Delay	5 ns/m
Length	Baud Rate [bps]	Length MAX [m]
	10 K	5000
	20 K	2500
	50 K	1000
	100 K	650
	125 K	500
	250 K	250
	500 K	100
	800 K	50
	1000 K	25

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ETHERNET:

BACnet/IP connection and Ethernet update must be made using Connector3 and/or Connector4 of HD67685 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.



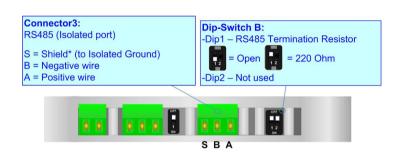


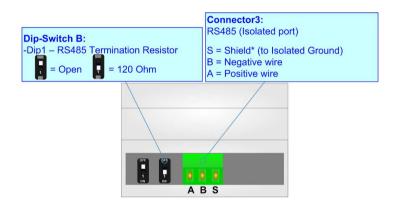
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RS485:

The RS485 port is present only for the BACnet MS/TP devices (HD67685-MSTP-A1 and HD67685-MSTP-B2).

For terminating the CAN line with a 220Ω resistor it is necessary to put Dip1 of 'Dip-Switch B' at ON position.





INFO: www.adfweb.com

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 SW67685:

To configure the Converter, use the available software that runs with Windows, called SW67685. 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 (MS 2000, XP, Vista, Seven, 8, 10 or 11; 32/64bit).

When launching the SW67685 the right window appears (Fig. 2).



Note:

It is necessary to have installed .Net Framework 4.



Figure 2: Main window for SW67685

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NEW CONFIGURATION / OPEN CONFIGURATION:

The "New Configuration" button creates the folder which contains the entire device's configuration.



A device configuration can also be imported or exported:

- → To clone the configurations of a programmable "BACnet Slave / J1939 Converter" in order to configure another device in the same manner, it is necessary to maintain the folder and all its contents;
- ➤ To clone a project in order to obtain a different version of the project, it is sufficient to duplicate the project folder with another name and open the new folder with the button "Open Configuration".

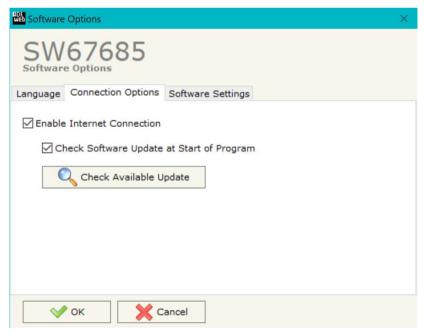


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SOFTWARE OPTIONS:

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

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





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 SW67685 check automatically if there are updatings when it is launched.

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INFO: <u>www.adfweb.com</u> *Phone* +39.0438.30.91.31



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

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SET COMMUNICATION:

This section define the fundamental communication parameters of two buses, BACnet and J1939.

By Pressing the "**Set Communication**" button from the main window for SW67685 (Fig. 2) the window "Set Communication" appears (Fig. 3).

The window is divided in two sections, one for the BACnet and the other for the J1939.

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 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 used for BACnet communication is defined. The port has a fixed value of 47808;
- → 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).
- → If the field "BACnet description up to 32 chars" is checked, the description for the BACnet Objects can be up to 32 chars long;
- ▼ If the field "Enable BBMD" is checked, the BACnet/IP Broadcast Management Device function is enabled;
- ▶ If the field "Accept FDR" is checked, the converter accepts the Foreign Device Registration.

The means of the fields for the "J1939" section are:

- → In the field "Baudrate" the baudrate for the J1939 is defined;
- ▶ In the field "TimeOut Data (s)" insert a time, when this time is elapsed the data of J1939 frame will be cancel;

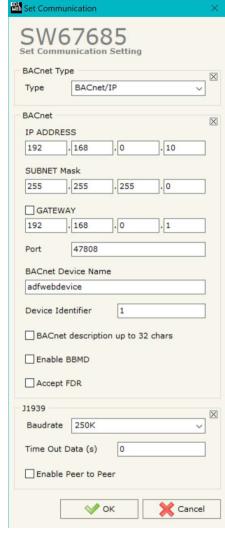


Figure 3a: "Set Communication"



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If the field "Enable Peer to Peer" is checked the gateway accept any ID that have the PGN inserted in the section "Receive Frames".

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

- → In the field "Baudrate" the data rate of the BACnet line is defined;
- In the field "Parity" the parity of the line is defined;
- ★ In the field "BACnet Device Name" the name to give to the BACnet node is defined;
- ▶ In the field "MAC Address" the MAC of BACnet node (from 0 to 254) is defined;
- → The field "Max Master" specifies the highest allowable address for master nodes. The value shall be less than or equal to 127;
- The field "Max Info Frames" specifies the maximum number of information frames the node may send before it must pass the token;
- ▶ In the field "Device Instance" the of the BACnet MS/TP side of the converter is defined;
- ▼ In the field "Network" the BACnet MS/TP network number is defined;
- → If the field "BACnet description up to 32 chars" is checked, the description for the BACnet Objects can be up to 32 chars long.

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

- ▶ In the 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.

The means of the fields for the "J1939" section are:

- → In the field "Baudrate" the baudrate for the J1939 is defined;
- ▼ In the field "TimeOut Data (s)" insert a time, when this time is elapsed the data of J1939 frame will be cancel;
- ▼ If the field "Enable Peer to Peer" is checked the gateway accept any ID that have the PGN inserted in the section "Receive Frames".

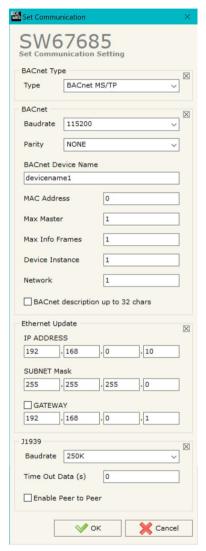


Figure 3b: "Set Communication"

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RECEIVE FRAMES:

By pressing the "Receive Frames" button from the main window for SW67685 (Fig. 2) the window "Receive J1939 Frames" appears (Fig. 4).

The data of the columns have the following meanings:

- → In the field "Data Page" the Data Page is defined, the value can be 0 or 1 (usually it is 0);
- → In the field "PGN" insert the PGN of the data you would like to read from BACnet to J1939, this field include also the DataPage (it is an identifier);

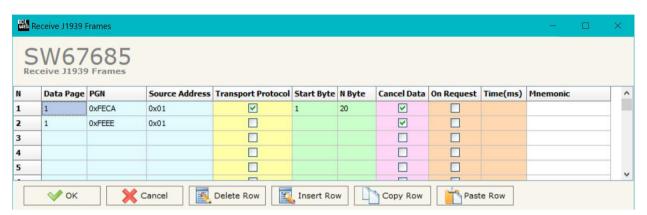


Figure 4: "Receive J1939 Frames" window

- ▶ In the field "Source Address" insert the address of the device that sends the frame;
- ▶ If the field "Transport Protocol" is checked the frame use transport protocol functions;
- → In the field "StartByte" insert the byte which you would start read, this field is enable only when the field Transport Protocol or Fast Packet or both are checked:
- → In the field "N° Byte" insert the number of byte you would read, for example your start byte is 1 an N° byte is 50, you can read the byte from 1 to 50.
- ▶ If the field "Cancel Data" is checked, the data in the frame will be erased after the expiration of the "TimeOut Data";
- ▶ If the field "On Request" is checked, the converter will send the request for the selected PGN;
- ▶ In the field "Time (ms)" the delay between the J1939 requests is defined;
- ▶ In the field "Mnemonic" the description for the frame is defined.

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SEND FRAMES:

By pressing the "**Transmit Frames**" button from the main window for SW67685 (Fig. 2) the window "Transmit J1939 Frames" appears (Fig. 5).

The data of the columns have the following meanings:

- ➤ In the field "Priority" insert the priority of the Frame: in J1939 protocol it is a number among 0,1,2,3,4,5,6,7. The number "0" is the highest priority and "7" is the lowest;
- → In the field "Data Page" the Data Page is defined, the value can be 0 or 1 (usually it is 0);

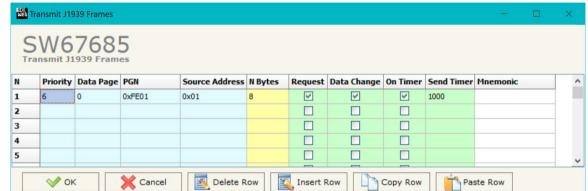


Figure 5: "Transmit J1939 Frames" window

- → In the field "PGN" insert the PGN of the data you would like to write from BACnet to J1939, this field include also the DataPage (in J1939 protocol the PGN is an identifier);
- ▼ In the field "Source Address" insert the address of the device that sends the frame;
- → In the field "Num Byte" the quantity of bytes for the Transport Protocol or Fast Packet Protocol is defined. This field is valid only if the Transport Protocol or Fast Protocol is selected;
- → If the field "Request" is checked, the J1939 message is sent when a J1939 request is received;
- → If the field "Data Change" is checked, the J1939 frame is sent when the data from MQTT change;
- ▶ If the field "On Timer" is checked, the J1939 message is sent cyclically with the delay defined in the field "Send Timer";
- → In the field "Mnemonic" the description for the frame is defined.

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SET BACNET ACCESS:

By Pressing the "Set BACnet Access" button from the main window for SW67685 (Fig. 2) the window "BACnet Set Access" appears (Fig. 6).

The window is divided in two parts, the "BACnet in Read" that contains the BACnet objects readable by a BACnet Master and "BACnet in Write" that contains the BACnet objects writeable by a BACnet 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. 7);
- ▼ In the field "Position" is possible to select the position where take/save the data from a 6000 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;
- → In the field "Mnemonic" the description for the BACnet Object is defined.

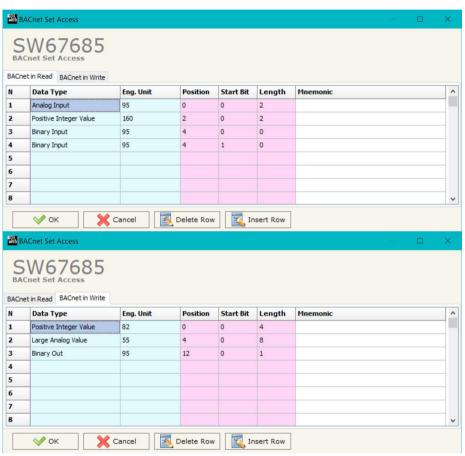


Figure 6: "BACnet Set Access" window

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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.

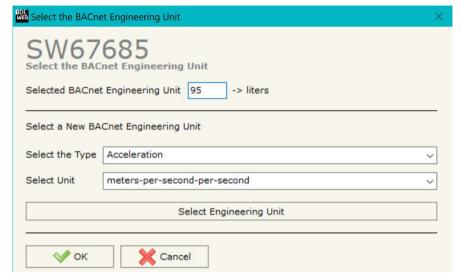


Figure 7: "Select the BACnet Engineering Unit" window

OBJECTS MAP:

By Pressing the "Objects Map" button from the main window for SW67685 (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. This by using the Ethernet port.

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

- → Turn OFF the Device:
- Put Dip2 of 'Dip-Switch A' in ON position;
- → Turn ON the device
- Connect the Ethernet cable;
- Insert the IP "192.168.2.205";
- Select which operations you want to do;
- Press the "Execute update firmware" button to start the upload;
- When all the operations are "OK" turn OFF the Device;
- Put 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;
- 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 8: "Update device" windows



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Note:

When you receive the device, for the first time, you also have to update the Firmware in the HD67685 device.

Warning:

If Fig. 9 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, 10 or 11 make sure that you have the administrator privileges;
- ▶ In case you have to program more than one device, using the "UDP Update", you have to cancel the ARP table every time you connect a new device on Ethernet. For do this you have to launch the "Command Prompt" and write the command "arp d". Pay attention that with Windows Vista, Seven, 8, 10 or 11 you have to launch the "Command Prompt" with Administrator Rights;
- Pay attention at Firewall lock.

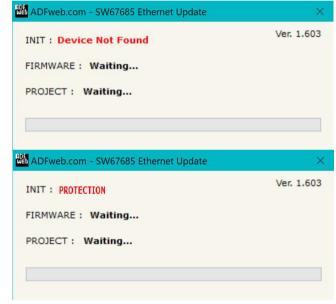


Figure 9: "Error" window



Warning:

In the case of HD67685 you have to use the software "SW67685": www.adfweb.com\download\filefold\SW67685.zip.

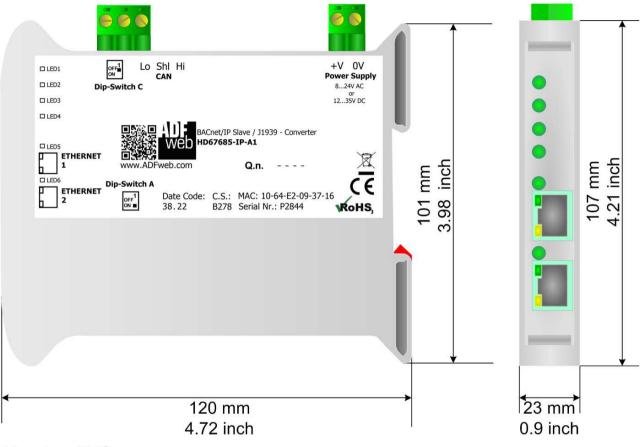
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MECHANICAL DIMENSIONS:



Housing: PVC

Weight: 200g (Approx)

Figure 10a: Mechanical dimensions scheme for HD67685-xxx-A1

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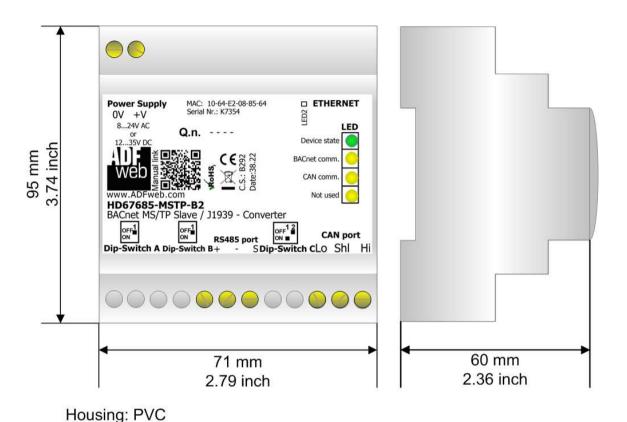


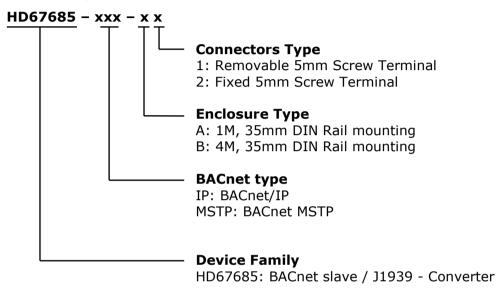
Figure 10b: Mechanical dimensions scheme for HD67685-MSTP-B2

Weight: 200g (Approx)

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ORDERING INFORMATIONS:

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



HD67685-MSTP-A1
 BACnet MSTP Slave / J1939 - Converter
 BACnet MSTP Slave / J1939 - Converter

BACnet IP Slave / J1939 - Converter

ACCESSORIES:

Order Code: **HD67685-IP-A1**

Order Code: **AC34011** - 35mm Rail DIN - Power Supply 220/240V AC 50/60Hz - 12 V DC

Order Code: **AC34012** - 35mm Rail DIN - Power Supply 220/240V AC 50/60Hz - 24 V DC

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All technical content within this document can be modified without notice. The content of the document content is a recurring audit. For losses due to fire, earthquake, third party access or other accidents, or intentional or accidental abuse, misuse, or use under abnormal conditions repairs are charged to the user. ADFweb.com S.r.l. will not be liable for accidental loss of use or inability to use this product, such as loss of business income. ADFweb.com S.r.l. shall not be liable for consequences of improper use.

OTHER REGULATIONS AND STANDARDS

WEEE INFORMATION

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

This symbol on the product or on its packaging indicates that this product may not be treated as household rubbish. Instead, it should be taken to an applicable collection point for the recycling of electrical and electronic equipment. If the product is disposed correctly, you will help prevent potential negative environmental factors and 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 **RoHS** 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:

- 1) 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.
- 2) 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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